

LAW and ORDER

Less Vehicle Concerns

by Kevin Gordon

A new video titled "Your vest won't stop this bullet" is being sent to police departments across the country for use in roll call training. The 14-minute video is available in both VHS and DVD format and was developed by the International Association of Chiefs of Police Law Enforcement Stops and Safety Subcommittee (LESS) and the National Highway Traffic Safety Administration.

The video is dedicated to the memory of 717 officers who have died during line-of-duty traffic incidents over the past 10 years. Additional copies can be obtained by calling 1-800-THE-IACP, ext 276. The video is free.

The stated purpose of the video is "intended to heighten your awareness of traffic. Its purpose is to encourage each and every one of you to use all of your training, experience and knowledge during traffic stops and other roadside contacts to enhance your safety.

The video was introduced at the IACP Conference in Miami, held in September during an informational presentation. According to the FBI annual summary, while vehicle crashes are the number one cause of accidental death to officers, being struck by another vehicle is the number two cause.

The LESS committee originally looked at rear end crash vehicle fires of Ford Crown Victoria squad cars. From that starting point, LESS has evolved into a review of many aspects, not just traffic stops, but other roadside contacts, in an effort to find ways to increase officer safety. The committee was broken into three work groups to review three areas of concern: the vehicles, the highway environment and design, and policy and procedures. The findings of the committee work groups were very interesting and the concerns of vehicle equipment will be reviewed here.

Vehicle Concerns

The first recommendation for the vehicle was to ensure the trunk is loaded properly to avoid complications from a rear end crash. A variety of trunk containers including those made of ballistic material are available from various manufacturers. More information is available online at www.cvpi.com.

The color of the vehicle was also considered. Studies have shown that cream, yellow and white objects are easier to see. It also appears by insurance studies that yellow and white cars are involved in fewer crashes. According to the LESS report, a review of 32 rear end collisions showed the majority of police vehicles were black. I can't help but wonder how the concern of black cars being struck from the rear coupled with the return to black and white squads by many departments will affect police work. Maybe the traditional black and white will become white and black.

Reflective vehicle material was reviewed and recommendations included large reflective lettering on the rear of the vehicle. Additional reflectors on the rear of the squad were suggested including the highly visible bumper chevrons.

The sides should have the traditional reflective material and a very effective method is to outline the roof with reflective equipment. The Pennsylvania State Police found red and yellow chevrons worked the best because the public was familiar with them, as they resemble a construction barricade.

Lighting Systems

A 2004 study by Lt. Jim Wells of the Florida Highway Patrol resulted in the FHP installing computer-controlled LED light bars. These have longer life, are more efficient, use less energy, and are

more focused. Another concern is "Blue Advancing-Red Receding." Studies have shown that humans are more sensitive to blue light than red in the dark, but in daylight the reverse is true.

Under dark conditions, the human eye sees a blue light and perceives it is moving toward the person, while a red light will appear to be moving away. To address this concern, the FHP lights, by use of a photocell, turn red lights on during the day and blue lights on at night. Coupled with this information, is the fact that the faster the flash, the more it is noticed by the viewer.

Sirens

Standard sirens range from 700 to 1500 Hz. Lower frequency sirens, those in the 125 to 300 Hz range, were reviewed. The results indicated that the lower frequency sirens could be heard by the human ear 25% farther away. Sirens in the lower frequency 125 to 300 Hz range were reviewed and it was found that they could be heard 25% farther away than the standard sirens. Additionally, low frequency sirens are also less directional and more easily heard inside well insulated vehicles.

Officer Visibility

All American officers are familiar with traffic vests. You can find one in most squad cars, often shoved in the trunk somewhere. When you finally need it and find it, you realize it is too filthy to wear. At least that is how it used to be. Times are changing and U.S. officers are recognizing how important highly visible traffic vests really are.

The American National Standard for High-Visibility Safety Apparel recommends Class 2 or 3 garments. If you visit the United Kingdom you'll see officers on general walking beats wear high visibility vests or raincoats. Unlike many of us, they realize how effective they are and how they can be used for more than just directing traffic.

Studies reviewed by the committee compare clothing colors. A motorist traveling at 60 mph needs 260 feet to recognize a pedestrian and stop in time. This is eye opening; for while the motorist needs those 260 feet, the color study showed blue clothing (the most common police uniform) is noticed at 55 feet!

Red clothing is noticed at 88 feet, yellow at 120 feet, and white and 180 feet. While white is obviously the best of those choices, it is still too short. Reflective clothing is noticed at 500 feet! Now I'm not real fond of math but even I see how important those figures are. Officers should consider ANSI Level II reflective vests and raincoats.

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This article was printed in Law and Order Magazine, April 2006.