

BY EUNICE NOELL-WAGGONER  
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## THE BOOMERS

It's no secret that age-related changes to vision and slower reaction time impact older drivers. What is not equally understood, however, is that older drivers are the safest drivers on the road, according to the National Safety Commission. Even though the number of older drivers is increasing, their fatality rates in motor vehicle crashes are actually trending downward. Young people between the ages of 15 and 24 account for 13 percent of licensed drivers but are responsible for 43 percent of all collisions in the U.S. Meanwhile, people 65 and older make up for 15 percent of licensed drivers but account for only 7 percent of collisions in the U.S.

Young people may complain about older people driving more slowly to compensate for their slower reaction time, however cell phone use is the equalizer. One study found that when young people ages 18-25 use their cell phones while driving, their reaction time was equal to the reaction time of older adults ages 65-74.

### GLARE ON THE ROAD

The increased sensitivity to glare and the loss of contrast sensitivity, common to all older adults, pose the biggest challenges to older drivers. Many older people are voluntarily changing their driving to daytime only, or completely giving up driving when their vision limits their ability to drive safely. Others change where they drive, preferring

secondary highways to freeways.

One of the biggest problems for older drivers is the brightness of the blue-white xenon HID headlights of oncoming cars, which increases intraocular light scattering, glare sensitivity and photostress recovery time. Disability glare from the brightness of these lights results in

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light scatter within the eye, causing temporary blindness and preventing the driver from seeing the roadway or sidewalk. The same light that may benefit the user poses a huge problem for approaching drivers to identify pedestrians, bicyclists, road hazards and curves in the road. As many older people prefer driving on two-lane roads, the glare from the oncoming headlights makes it difficult for them to identify the edge of the road.

Drivers are not the only group impacted; passengers, pedestrians and bicyclists may be temporarily blinded by headlight brightness, as well. The question arises: With the increased use of xenon headlights and the growth of the Boomer population, will the fatality rate of older drivers continue to decrease?

Headlights are not the only challenge. Those responsible for light-

ing the roadway should take a hard look at the same issues of intraocular light scattering, glare sensitivity and photostress recovery time. It is easy to find LED street luminaires either being tested by various cities or actually installed. Most of the LEDs have a high Kelvin temperature which is not the best color for

the night. It seems inevitable that LEDs will become the light source for our streets and cars. Somehow we must strike a balance between energy efficiency, maintenance, color rendering, the rush to accept LEDs and the needs of people. Is there a better way to light streets? Do we always have to use pole-mounted luminaires?

### NEW IDEAS

Some people seem to think that a better way is possible. There are futuristic thinkers proposing lighting streets from buildings or creating a glowing roadway. Kaoru Mende of Japan and Marc Fontoynt of France are both exploring ways to light streets and our cities from a different perspective, one that is friendlier to those for whom they were lighted in the first place—people. Perhaps the IES

## EYE ON THE BOOMERS

Roadway Committee should start thinking about how to deal with our aging population and join the dialogue about how to improve what we currently have.

Non-lighting strategies should also be employed. The white stripe on the roadway which defines the edge of the road should be increased in width and made of a reflecting material. Curbs should also be treated in the same way, aiding pedestrians as well as drivers.

Let's start thinking of better ways to light streets and improve car headlights. LEDs are coming, so how about using multiple colored LEDs that change Kelvin temperature automatically depending on the time of day or roadway condi-

tions? One color for day, in rain or cloudy weather, as daytime running lights and another color temperature for night use. What about indirect LEDs that shield the source while still producing the required lighting levels?

We *can* have our cake and eat it too. Good lighting is good for people; it is a win-win. So, all you roadway people and future thinkers, start your engines and give us better street lighting and better headlights so that we can all enjoy the pleasures of being out at night without glare. And we should all add our voices to those who are concerned about regulation for headlights to ensure that the abilities of all older drivers are enhanced rather than

aiding some and blinding the rest.

Our future driving independence relies on action that we take today.



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