



IN-ROAD CROSSWALK SYSTEM

Designed to target the
tunnel vision of today's
distracted drivers



Understanding the distracted brain

WHY DRIVING WHILE USING HANDS-FREE
CELL PHONES IS RISKY BEHAVIOR

National Safety Council

White Paper
April 2012

making our world safer®

Driving risks of hands-free and handheld cell phones

We now understand how our brains have difficulty juggling multiple cognitive tasks that demand our attention. Next we will discuss specific risks that cell phone conversations bring to driving, with an overview of crash risks and driver errors most often associated with both hands-free and handheld cell phones.

Inattention Blindness – Vision is the most important sense we use for safe driving. It's the source of the majority of information when driving. Yet, drivers using hands-free and handheld cell phones have a tendency to “look at” but not “see” objects.

Estimates indicate drivers using cell phones look at but fail to see up to 50 percent of the information in their driving environment.⁴⁸ Cognitive distraction contributes to a withdrawal of attention from the visual scene, where all the information the driver sees is not processed.⁴⁹ This may be due to the earlier discussion of how our brains compensate for receiving too much information by not sending some visual information to the working memory. When this happens, drivers are not aware of the filtered information and cannot act on it.

Distracted drivers experience inattention blindness.

They are looking out the windshield, but do not process everything in the roadway environment necessary to effectively monitor their surroundings, seek and identify potential hazards, and to respond to unexpected situations. Their field of view narrows.⁵⁰ To demonstrate this, Figure 4 is a typical representation of where a driver would look while not using a phone. Figure 5 shows where drivers looked while talking on hands-free cell phones.⁵¹

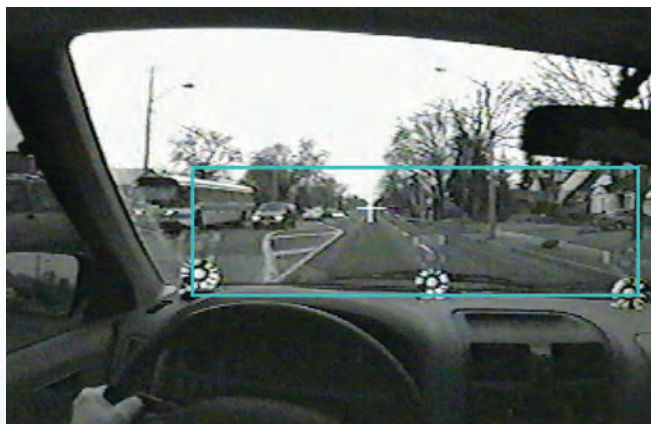


Figure 4. Where drivers not using a hands-free cell phone looked.
Source: Transport Canada

Drivers talking on hands-free cell phones are more likely to not see both high and low relevant objects, showing a lack of ability to allocate attention to the most important information.⁵² They miss visual cues critical to safety and navigation. They tend to miss exits, go through red lights and stop signs, and miss important navigational signage.⁵³ Drivers on cell phones are less likely to remember the content of objects they looked at, such as billboards. Drivers not using cell phones were more likely to remember content.⁵⁴

The danger of inattention blindness is that when a driver fails to notice events in the driving environment, either at all or too late, it's impossible to execute a safe response such as a steering maneuver or braking to avoid a crash.⁵⁵

To explore how cell phone use can affect driver visual scanning, Transport Canada's Ergonomics Division tracked the eye movements of drivers using hands-free phones, and again when these drivers were not on the phone. The blue boxes in Figures 4 and 5 show where drivers looked.⁵⁶ In addition to looking less at the periphery, drivers using hands-free phones reduced their visual monitoring of instruments and mirrors, and some drivers entirely abandoned those tasks. At intersections, these drivers made fewer glances to traffic lights and to traffic on the right. Some drivers did not even look at traffic signals.⁵⁷

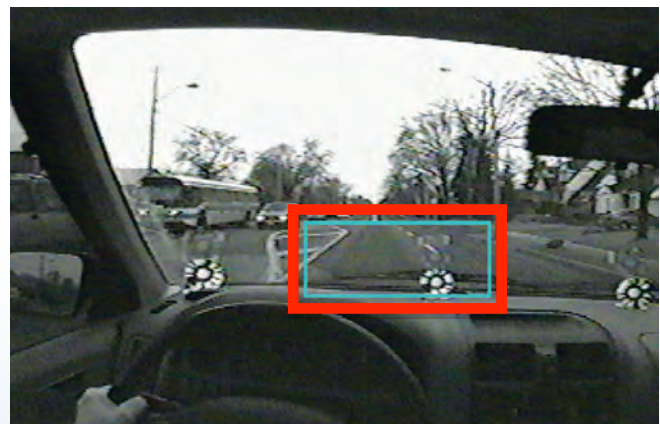


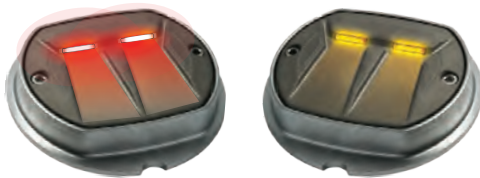
Figure 5. Where drivers using a hands-free cell phone looked.
Source: Transport Canada

OVERVIEW

IN-ROAD LED LIGHTED CROSSWALKS

The LaneLight system creates a barrier of bright flashing lights directly in the driver's line of sight.

- Ideal for mid-block crosswalks
- Industry leading ultra-bright > 3.5 million candela / m2 output
- 3000 foot daytime visibility
- Targets the tunnel vision of a distracted driver
- Low Profile: Snowplow Safe / Bicycle Safe
- Standard or enhanced flash patterns
- Passive activation options available
- Solar or AC power configurations
- Self cleaning design / Near Zero maintenance
- MUTCD Compliant/ FDOT Approved



In-Road Warning Light (IRWL)



Top Pole Mount Enclosure
(Side of Pole Optional)



SN-LED-W112



SN-LED-S11



Rectangular Rapid Flashing Beacon (RRFB)

