

# **Oregon Department of Transportation Report on Photo Radar in Highway Work Zones March 2013**

## **BACKGROUND**

The 2007 Oregon Legislature passed HB 2466, allowing the Oregon Department of Transportation (ODOT) to request the Oregon State Police or other law enforcement jurisdictions authorized under ORS 810.438 to operate photo radar in highway work zones on highways other than interstate highways. Several criteria around the use of photo radar were identified in the law. Signs announcing the use of photo radar must be posted. For a citation to be issued from photo radar in a highway work zone, a uniformed police officer in a marked vehicle and at least one highway worker must be present. The actual speed of the vehicle must also be displayed within 150 feet of the photo radar unit.

The bill required ODOT to deliver a process and outcome evaluation to the Legislative Assembly by March 1 of each odd-numbered year. The law is repealed on December 31, 2014, and the final report will be made by March 1, 2013. Each report must include:

- The effect of the use of photo radar on traffic safety,
- The degree of public acceptance of the use of photo radar, and
- The process of administration of the use of photo radar.

## **PHOTO RADAR PROCESS AND OUTCOME EVALUATION**

### **The effect of the use of photo radar on traffic safety:**

ODOT has completed its first photo radar in highway work zone pilot project and a related research project. The Portland Police Bureau (PPB) provided the photo radar in highway work zone enforcement on the US 30 @ Yeon Avenue Preservation Project within the City of Portland. The project was located on US 30 (Yeon Street) between Nicolai Street and Kittredge Avenue (MP 1.96 to 3.93). The project consisted of repaving the roadway, adding new pavement striping, and correcting substandard sidewalk ramps.

ODOT provided a grant to the PPB to provide photo radar enforcement in a highway work zone. The PPB conducted photo radar enforcement in the same manner as other photo radar enforcement used in Portland, ensuring the unique elements of Oregon law around photo radar in highway work zones were followed. The City of Portland Police Bureau worked closely with ODOT and its contractors to provide photo radar enforcement in the highway work zone while workers were present. ODOT and PPB jointly implemented a communications plan to inform the public of speed enforcement using photo radar in the highway work zone.

The PPB provided citation and other data to ODOT to analyze and include the results in its research findings. ODOT Research staff analyzed speed data before and after work zone signing was in place, when photo radar was active, and when the project was complete and signing and photo radar enforcement had been removed.

Other key players involved in the project and research effort consisted of various staff within ODOT, City of Portland Police Bureau, Multnomah County Circuit Court, David Evans and Associates and Oregon State Police.

Assumptions identified during the research effort:

- Crashes are random events with high variability.
- Within a short corridor and short time frame there may be no crashes.
- Excessive speed correlates with crashes and can be used as a more accurate substitute in these circumstances.

Findings:

- There was a 23 percent reduction in speeders during photo radar deployments.
- No effect on speed the following day after photo radar had been deployed.
- Reduced effect on speed with distance from the photo radar deployment site.

Conclusions:

- Photo radar speed enforcement did reduce the number of speeding drivers.
- The speeding reductions were localized to the location in and around the photo radar deployment.
- The speeding reductions were temporary.

ODOT will continue to evaluate the effectiveness of the use of photo radar and report findings as requested.

ODOT has investigated many additional locations where photo radar in an ODOT work zone could be deployed however for various reasons the locations have not been acceptable for a research project. Projects in both the City of Portland and Medford were investigated. Constraints such as limited pavement width and frequent intersections were identified along with the limited number of state highway work zones conducted within the city limits of the cities currently operating photo radar.

At least one additional location will be investigated during Spring 2013 for potential use as a research project of photo radar in an ODOT work zone in the City of Portland.

**The degree of public acceptance of the use of photo radar:**

ODOT routinely contracts with a private research firm to obtain and document Oregonians' public perceptions on various transportation safety-related issues in order to gain a greater understanding of these safety issues. From an August 2012 ODOT Transportation Safety Division, Statewide Public Opinion Survey, ODOT learned that 68 percent of Oregonians polled favor the use of photo radar traffic enforcement in work zones. Since 2000, motorists continued to identify speeding as the greatest problem observed while traveling through work zones. A highway work zone in comparison to a work zone on any type of roadway was not differentiated in these surveys. ODOT will conduct another public opinion survey later this year.

**The process of administration of the use of photo radar:**

ODOT worked closely with the PPB to assure the unique elements of the law allowing photo radar in a highway work zone were implemented successfully. The Multnomah County Circuit Court was also contacted in advance of the project in order to assure application of the law and pilot project would be conducted to their standards.

ODOT will continue to work with those law enforcement agencies identified in the law to implement and ensure the law is followed around the use of photo radar in highway work zones as other photo radar in ODOT highway work zone projects are identified.

**Project Overview:**

A multi disciplinary team was formed to develop and conduct the necessary research project in coordination with the construction project to evaluate the impact of photo radar on safety in a work zone.

A Wavetronix Radar Unit was installed by ODOT in an inconspicuous location within the construction project. The unit captures speed data and direction for up to 10 lanes of traffic. Data is then available for downloading via a laptop. Data was captured prior to the work zone being established in order to identify a baseline. Data was downloaded at various times before, during and after the construction project.

The construction project included major construction work during April through September 2009. Most work was provided during the evening hours. At times more than one photo radar van was deployed. Approximately six photo radar locations were used for enforcement details within the work zone.