

The Balance of Roadway and Outdoor Lighting

Theme: Measurement & Modeling

Ronald Gibbons¹ Second A. Author,² and Third Author¹

¹ *Virginia Tech Transportation Institute,
Blacksburg, Virginia, USA
rgibbons@vti.vt.edu*

Lighting has long been shown to have an impact on roadway safety. Analyses have determined that the addition of lighting to a roadway can have a positive impact on the reduction of vehicle crashes. Historically, these crash reductions have been as high as 50%. Similarly, lighting is being shown to have an impact on the driver behavior and speed choices. However, as these positive impacts of lighting are being more well understood, more evidence is available on the negative impacts of these lighting systems on the environment, the users and adjacent flora and fauna.

A balance must be struck between the positive and negative aspects of roadway lighting. Considering the use of light as similar to the use of a drug, the correct dose must be selected to provide light when and where it is needed and reduce or remove light when it is not needed. This discussion will consider this balance.

