

lighting can increase security and encourage pedestrian activity at night, specifically at and near transit stops. This can improve the safety and security of transit riders while boarding, alighting from, or waiting for transit. The American Public Transportation Association (APTA) developed the document *Security Lighting for Transit Passenger Facilities* as a resource for these situations.⁴



Figure 3. Intersection at night with street lighting. Source: WSP.

One pedestrian population that may especially benefit from improved lighting is school-age children. Walking or biking to or from school during the early morning or evening hours may cause students to travel in reduced lighting, increasing the risk of a crash.

Furthermore, children are particularly vulnerable to vehicular traffic as they are not as experienced at judging the direction of sounds, estimating the speed and distance of oncoming vehicles, or anticipating other road users' behavior. Children are often smaller in stature and less visible to motorists, and thus more difficult for motorists to see, particularly at intersections and other crossings. The Safe Routes to School (SRTS) Online Guide identifies pedestrian-scale street lighting as an important measure for improving safety and security for children walking to school <http://guide.saferoutesinfo.org/>.

The Primer presents an overview of a four-step process that involves selecting design criteria, selecting equipment, determining the control strategy, and conducting the

lighting design and verification. As the Primer illustrates, lighting of pedestrian facilities is key to increasing the safety performance of the roadway network for all users. Effective pedestrian lighting, such as that shown in figures 3 and 4, is a means of addressing the vulnerability of pedestrians during dark conditions and improving the safety and security of all road users spanning different ages and abilities. This *Primer*, along with the companion FHWA research report, *Street Lighting for Pedestrian Safety*, can help transportation practitioners realize the benefits of lighting designs and provide safer facilities for pedestrians at night.²

References

1. Federal Highway Administration (2022, April). Pedestrian Lighting Primer. FHWA-SA-21-087. Washington, D.C.
2. Terry, T., Gibbons, R., Kassing, A., Bhagavathula, R., & Lutkevich, P. (2020). *Research Report: Street Lighting for Pedestrian Safety*. Federal Highway Administration. FHWA-SA-20-062. Washington, D.C.
3. Painter, K. (1996). The influence of street lighting improvements on crime, fear, and pedestrian street use, after dark. *Landscape and Urban Planning*, 35, 193-201. <https://www.sciencedirect.com/science/article/abs/pii/S0169204696003118?via%3Dihub>
4. APTA. (2009). *Security Lighting for Transit Passenger Facilities*. American Public Transportation Association, Washington, DC. https://www.apta.com/wp-content/uploads/Standards_Documents/APTA-SS-SIS-RP-001-10.pdf.



Figure 4. Roadway at night with street lighting. Source: WSP.