




SUBJECT Illumination Design	FINAL NUMBER TR07-10(B)	EFFECTIVE DATE 9/28/2007	VALIDATION DATE 12/18/2009	SUPERSEDES or RESCINDS TR 05-11
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TOPIC/PROGRAM Illumination	APPROVED SIGNATURE  Edward L. Fischer, P.E., PTOE State Traffic Engineer			

PURPOSE

To clarify and document ODOT’s Strategy for providing illumination design resources.

DEFINITIONS

Experienced Illumination Designer: Designer with a minimum of 2 years of roadway illumination/street lighting and electrical power distribution system design experience.

All complex illumination projects (e.g. ornamental illumination; linear illumination; Or illumination for tunnels, interchanges or rest areas) require the use of an experienced illumination designer.

BACKGROUND/REFERENCE

The ODOT Lighting Policy and Guidelines, approved by the Oregon Transportation Commission on January 15, 2003 and available on the Traffic-Roadway web site at http://www.oregon.gov/ODOT/HWY/TRAFFIC/TEOS_Publications/PDF/Lighting_Policy_and_Guidelines.pdf, must be used to determine whether illumination is included on construction or reconstruction projects.

The ODOT Traffic Lighting Design Manual contains standards, criteria and guidance for the completion of illumination designs on Oregon state highways.

Experienced illumination designers are available through discipline specific contracts through the Alternative Delivery Unit in the Office of Project Delivery.

EXPLANATION

During the meetings to discuss the decentralization of design responsibilities within ODOT, the Strategic Alignment Steering Committee (SASC) decided that illumination design resources were sufficiently available through consultants and that ODOT would not retain internal illumination design resources. This policy to outsource all illumination design has not been practical to implement, so this technical bulletin attempts to clarify

when illumination design may be considered with internal traffic design resources and when consultants should be used while staying as consistent as possible with the original policy decision.

As a practical matter, illumination design is often an integral part of a signal design with illumination provided through signal pole extensions. For simple intersection illumination designs, it makes sense to at least have an option for the signal designer to include the illumination design as part of the signal design package. Traffic Engineering and Operations Section is preparing training that will provide signal designers with some basic background on illumination design allowing signal designers to complete this type of illumination design work.

Other more complex illumination design work such as that associated with full or partial interchange illumination, linear illumination of highway facilities, tunnel illumination, or rest areas should be performed by experienced illumination designers. These projects involve electrical design associated with 480 volt power distribution systems (and in some cases three phase distribution systems) and transformer design that is beyond the experience for signal designers and those providing consultant design oversight. Further, there are a limited number of illumination projects making development and maintenance of these design skills within ODOT impractical.

RESPONSIBILITIES

Traffic-Roadway

The Traffic-Roadway Section will make illumination training available for traffic designers to allow traffic design staff to complete simple illumination projects that are an integral part of signal design projects.

Upon request, the Traffic-Roadway Section will assist Regions in selecting illumination design consultants and in reviewing scopes of work, consultant designs, or internally prepared designs.

Region Traffic Managers

On simple intersection illumination projects involving power distribution system of 240 volts or less, the Region Traffic Manager will make the determination whether to use internal or consultant resources to complete the illumination design.

CONTACT INFORMATION

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