	<b>TRAFFIC CONTROL DEVICE APPLICATION GUIDELINES</b> <b>OFFICE OF TRAFFIC AND SAFETY</b>			
	<b>Issuing Unit</b> <b>TEDD</b>	<b>Application Guideline</b> <b>No. 11-X9</b>	<b>Originally Issued:</b> <b>07/16/2001</b>	<b>Revision Date:</b> <b>11/13/2023</b>

## PEDESTRIAN LIGHTING POLICY

### BACKGROUND AND PURPOSE

In response to the increasing emphasis on urban revitalization programs and pedestrian and bicyclist safety, the Maryland Department of Transportation State Highway Administration (SHA or Administration) is placing a new focus on the issue of pedestrian lighting. This focus also aligns with the Department of Transportation’s increased emphasis on multi-modal transportation. Pedestrian lighting, when properly designed and installed, has benefits that include enhancing revitalization projects, increasing nighttime pedestrian use and commerce, increasing safety and security, improving aesthetics, and adding to the sense of pride of a community. Pedestrian lighting may also have adverse effects that include glare, light trespass, increased energy consumption and sky glow that should be considered when deciding to install pedestrian lighting. In some instances it may be preferable not to install pedestrian lighting due to environmental, financial or other considerations.

This policy addresses the issues pertaining to the warranting, funding, design, construction, and maintenance of pedestrian lighting systems in which the Administration will be involved. These issues are touched on below and explained in greater detail on the following pages.

While the Administration is proactively seeking to participate in the installation of pedestrian lighting, the Criteria for Eligibility section addresses certain elements that are considered to determine the extent to which it will participate and the priority it will be given. These include the proximity to transit centers, educational and other similar facilities, nighttime pedestrian and business activities, safety and security issues, and the availability of an Administration project as a construction vehicle. In addition, the Local Jurisdiction’s commitment to participate in the design, construction, operation and maintenance of the lighting system is a consideration. Refer to **Figure 1** for typical project types covered by the SHA Pedestrian Lighting Policy.

### PROJECT TYPES COVERED BY MDOT SHA PEDESTRIAN LIGHTING POLICY

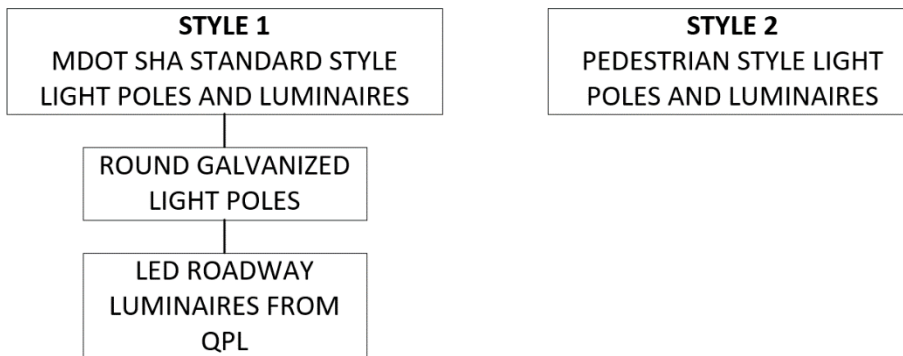


**Figure 1: SHA Pedestrian Lighting Policy Project Types**

The Financial Responsibility section outlines the respective financial responsibilities for the Administration and Local Jurisdictions for the design, construction, operation and maintenance of

pedestrian lighting systems. Given the large selection of light poles and luminaires with an equally wide range in prices, along with the flexibility a designer has to vary the number and spacing of luminaires to obtain a desired result, the extent of the Administration’s participation will vary. Refer to **Figure 2** for typical light pole and luminaire styles covered by SHA Pedestrian Lighting Policy.

**LIGHT POLE AND LUMINAIRE STYLES COVERED BY MDOT SHA PEDESTRIAN LIGHTING POLICY**



**Figure 2: Pedestrian Light Pole and Luminaire Styles**

It is the intent of the Administration to allow flexibility for the Local Jurisdiction with regard to pedestrian lighting systems within given engineering parameters so that the final product will enhance the image of the community, and where necessary maintain historic and aesthetic sensitivity. This sensitivity to individual historical settings will result in variations in pedestrian lighting costs. The Design Standards and Responsibilities section specifies who will perform the design of the system addressing the selection of luminaires, photometric calculations, integration with roadway lighting systems, material specifications, obtaining permits and easement agreements, as well as the review and final approval process. Modification or installation of lighting in historic districts or on historic structures should be coordinated with Office of Planning and Preliminary Engineering.

The Construction section specifies how pedestrian lighting systems will be constructed including who will perform the construction, inspection, and acceptance of the project, as well as the required coordination between contractors and utility companies.

The effectiveness and benefits of the system depend upon periodic maintenance and quick repair of damaged luminaires. Pedestrian safety projects which include pedestrian lighting (Project Type A) will utilize Style 1 light poles and luminaires to allow for faster deployment and allow for SHA maintenance (any deviation must be approved as part of the Design Request approval). It is essential that the local jurisdiction be committed to the long-term upkeep of the pedestrian lighting systems which utilize pedestrian style light poles and luminaires (Style 2). The Maintenance and Operations section will address the need for a memorandum of understanding between the Administration and the local jurisdiction regarding the requirements and obligations for the maintenance responsibility and energy costs associated with the pedestrian lighting systems which utilize pedestrian style light poles and luminaires (Style 2).

## **CRITERIA FOR ELIGIBILITY**

The Administration intends to participate in the design and construction of pedestrian lighting systems that are to be included as part of a proposed highway improvement, streetscape, revitalization or other transportation related project where sidewalks are either present or to be installed (Project Type B). Pedestrian safety projects which include pedestrian lighting may also be initiated by the Administration (Project Type A). The following criteria are to be considered in determining where pedestrian lighting may be utilized most effectively.

1. The system is within ½ mile of a transit center or ¼ mile of a major transit stop or is along a connection between two or more transit centers.
2. The system falls within a designated urban revitalization area.
3. The system is within ½ mile of an educational or similar facility that generates significant pedestrian and/or bicyclist traffic during hours of darkness.
4. The total number of pedestrians and/or bicyclists within any one-hour period of darkness is relatively high.
5. The system is within a commercial area with significant nighttime activities.
6. Pedestrian and/or bicyclist safety issues have been documented.

For pedestrian lighting projects initiated by the Administration as part of a pedestrian safety improvement (Project Type A), the need for pedestrian lighting will be documented in a Design Request and may be accompanied by the SHA Evaluation Form for Pedestrian Lighting provided in the SHA Lighting Design Guidelines.

## **FINANCIAL RESPONSIBILITY**

### **Administration Financial Responsibilities:**

In general, when pedestrian lighting is warranted, the Administration will participate in the costs associated with design and construction of a pedestrian lighting system in one of its transportation related projects. However, due to the wide range of available styles, materials, poles, and luminaires, the Administration has established a limit for participation in the construction/installation. SHA's participation will be contingent upon the local jurisdiction's acceptance of the following conditions:

1. SHA will be responsible for the design costs of the pedestrian lighting system when the lighting system is designed by SHA or its consultants for Type A and Type B projects. SHA will not participate in design costs incurred by other entities other than a regulated public utility.

2. SHA will be responsible for the costs associated with the installation of the pedestrian lighting infrastructure for Type A and Type B projects. For purposes of this policy, infrastructure is defined as conduits, manholes and handholes.
3. For Type B projects, SHA will fund 50% of the actual cost to furnish and install the wiring, light pole foundations, basic level pedestrian light poles, basic level pedestrian luminaires, and lighting control cabinets, including metered service pedestals. The limits of SHA participation will be based upon a basic lighting system that is in conformance with the design standards noted elsewhere in this policy.
4. For Type A projects, SHA will fund 100% of the actual cost to furnish and install wiring, light pole foundations, light poles (Style 1), luminaires (Style 1) and lighting control cabinets. If the local jurisdiction elects to participate in the costs of the system to select Style 2 light poles and luminaires, the costs responsibilities outlined in Item 3 would apply.
5. The local jurisdiction may select light poles and luminaires of a more ornamental style they find in keeping with the local community's environment or theme. Any additional costs associated with the selected light poles and luminaires will be the responsibility of the local jurisdiction. These selections must meet the design standards stated herein.
6. The purchase of the lighting systems and their installation will be accomplished through the State of Maryland Procurement process. Separate purchases by the local jurisdiction will not be subject to participation by the Administration, except as part of an agreement with a regulated public utility for long term maintenance.
7. For Type B projects, the local jurisdiction must agree to maintain the lighting system. For Type A projects with Style 2 light poles and luminaires, the local jurisdiction must agree to maintain the lighting system. SHA will only be required to maintain lighting systems for Type A projects with Style 1 light poles and luminaires.

The Administration will be responsible for all costs of lighting associated with intersections of public roads where engineering studies indicate there is a significant safety risk involving vehicles. This lighting will be provided using equipment acceptable to the Administration.

### **Local Jurisdiction Financial Responsibilities**

The local jurisdiction will assume operational and maintenance costs for the pedestrian lighting systems which utilize Style 2 light poles and luminaires. This includes energy costs, maintenance and damage repair or replacement. A Memorandum of Understanding or a signed letter of intent from the local jurisdiction must be obtained before the project is advertised. The decision to include lighting in a project should be made by the 30% design milestone to ensure design can accommodate proposed lighting.

1. For Type A projects with Style 2 light poles and luminaires or Type B projects, the local jurisdiction will be responsible for funding 50% of the actual cost to furnish and install the

- wiring, light pole foundations, basic level pedestrian light poles, basic level pedestrian luminaires, and lighting control cabinets, including metered service pedestals for a basic lighting system.
2. The local jurisdiction will be responsible for funding 100% of the increased cost associated with any ornamental style light poles or luminaires.
  3. The local jurisdiction will be responsible for any utility connection charges from the local utility company.
  4. Should the local jurisdiction elect to purchase and install pedestrian lights subsequent to the construction of the highway improvement project, SHA will install the infrastructure as specified under condition 2 of Administration Financial Responsibilities. The local jurisdiction will be required to install the pedestrian lighting systems within 3 years of the completion of the highway project. Should the local jurisdiction fail to install an operational pedestrian lighting system within this time frame, SHA will make deductions from the local jurisdictions' share of Highway User Funds equal to the cost of the installed infrastructure and system design costs incurred by SHA.
  5. In some instances, at the request of the local jurisdiction, the local utility company may design and construct the pedestrian lighting. In such instances, the local jurisdiction shall be responsible for all design, furnishing, installation, energy, maintenance, and amortized design and construction costs.
  6. The local jurisdiction shall be responsible for any accessory equipment not required for the lighting system. This includes additional wiring and fixtures for the installation of outlets within the poles, banner attachments, etc.

## **DESIGN STANDARDS**

The factors that shall be considered when designing pedestrian lighting are:

- The “theme” of the community as defined by previous projects, by historical considerations, or by the vision of the community. Many Maryland communities have local historic district design guidelines that should be considered and coordination with Office of Planning and Preliminary Engineering is recommended.
- The environmental effect of the lighting including glare, light trespass, sky glow, and, energy and maintenance costs.
- The Illuminating Engineering Society of North America recommendations and design levels for pedestrian walkways.
- State and federal safety design guidelines.

- The National Electric Code requirements.
- Adverse effects on vehicles on the traveled roadway including light trespass on the road, and glare or veiling luminance for the driver.
- Local utility company requirements and capabilities.
- Right of way and easement needs.

### **DESIGN RESPONSIBILITIES**

For Type A projects with Style 1 light poles and luminaires, SHA will be responsible for all design activities. For Type B projects or Type A projects which are approved to use Style 2 light poles and luminaires, the following requirements will apply:

#### **Administration Responsibilities:**

In all cases, the Administration must review and approve the design of a pedestrian lighting system to be constructed under an Administration Contract, or in Administration right of way. The Administration will provide design services for the lighting, electrical system and other lighting infrastructure needs where not provided by the local utility company or an agent of the local jurisdiction. As noted above SHA will only participate in design costs provided by a regulated public utility. SHA design efforts will include coordination with pertinent agencies including the Maryland Historical Trust.

Other agencies that may design pedestrian lighting systems are:

- The local utility company. Many of the local utility companies are proficient in the design and installation of lighting.
- The local jurisdiction or their consultant. Often it is beneficial for the local jurisdiction to engage a consultant who is familiar with the many sources of lighting supplies, and who can guide them in making a choice that is aesthetically acceptable. Many suppliers will provide these services free of charge.

#### **Local Jurisdiction Responsibilities:**

The local jurisdiction will be responsible for identifying the style of lighting desired.

The local jurisdiction will be responsible for determining the limits of the lighting provided they meet the criteria noted above. Note that these may not exceed the limits stated in this policy.

The local jurisdiction will be responsible for determining, if they wish, for the local utility company to design and install the lighting.

The local jurisdiction will be responsible for determining how they anticipate having maintenance performed. If the local utility is to maintain the lighting, this may impact the design standards to be used.

The local jurisdiction will be responsible for completing the items above, and requesting that pedestrian lighting be included prior to the completion of 30% plans (Preliminary Investigation) by the Administration. The Administration cannot initiate a design or switch from a utility company design to Administration design after the project has reached this level of completion.

The local jurisdiction will be responsible for obtaining needed easements or right of way for the lighting by a sidewalk ordinance or other means. This must be completed before the project is advertised. Failure by the local jurisdiction to obtain the necessary right-of-way prior to the scheduled advertisement date will result in the removal of the pedestrian lighting system from the contract.

### **CONSTRUCTION**

There are three scenarios for installing pedestrian lighting systems:

1. The Administration's contractor shall install the system as part of their construction contract. The Administration will be responsible for advertising and awarding the contract including plans and specifications for the pedestrian lighting system. It will also administer the contract, approve materials and perform construction inspection of the system. Final acceptance of the system will be the responsibility of the Administration in conjunction with the local jurisdiction.
2. Where available, the local jurisdiction or SHA may opt to have the local utility company install the pedestrian lighting system. This is most often accomplished when the lighting is to be leased from the utility company or when the local jurisdiction has made arrangements with the utility company to maintain the system. The Administration will be responsible for the coordination of work by the utility company with that of the prime contractor performing the transportation project.
3. Subject to prior agreement, the SHA will install the infrastructure (handholes, manholes and conduit) as a part of the SHA construction project. The local jurisdiction will then contract separately for completion of the system within 3 years of construction completion on SHA's project.

### **MAINTENANCE AND OPERATIONS**

For Type A projects with Style 2 light poles and luminaires or Type B projects, the local jurisdiction will be required to enter into a maintenance agreement with the Administration to assume all associated maintenance costs, and ensure that routine maintenance and damage repair and replacement is performed in a timely manner. The jurisdiction may perform the maintenance with its own forces, through a contract agreement with an electrical maintenance contractor, or through the local utility company where available.



Details regarding energy costs, the timeliness of repairs, and the percentage of lights to be operational at all times will be specified in the maintenance agreement.

For Type A projects with Style 1 light poles and luminaires, SHA will own and maintain the pedestrian lighting.

**SUMMARY FIGURES**

**Figure 3, Figure 4, Figure 5 and Figure 6** include a summary of financial, design, maintenance and operations responsibility for SHA and local jurisdiction based on project type and light pole/luminaire style:

**Figure 3: Project Type A with Style 1 Light Poles and Luminaires**

<b>Responsibilities</b>	<b>SHA (Administration)</b>	<b>Local Jurisdiction</b>
Design (refer to Design Responsibilities Section for additional details and restrictions)	100%	0%
Pedestrian Lighting Infrastructure (Conduits, Handholes, Manholes)	100%	0%
Wiring, Foundations, Light Poles, Fixtures/Luminaires, Cabinets, Service Pedestals	100%	0%
Utility Connection Fees	100%	0%
Maintenance, Energy Consumption, Pole Knockdowns	100%	0%

**Figure 4: Project Type A with Style 2 Light Poles and Luminaires**

<b>Responsibilities</b>	<b>SHA (Administration)</b>	<b>Local Jurisdiction</b>
Design (refer to Design Responsibilities Section for additional details and restrictions)	100%	0%
Pedestrian Lighting Infrastructure (Conduits, Handholes, Manholes)	100%	0%
Wiring, Foundations, Light Poles, Fixtures/Luminaires, Cabinets, Service Pedestals	50% (subject to limitations)	50%
Increased Costs for Ornamental Light Poles, Fixtures/Luminaires	0%	100%
Utility Connection Fees	0%	100%
Maintenance, Energy Consumption, Pole Knockdowns	0%	100%
Intersection Lighting where Study Indicates a Safety Risk	100%	0%



**Figure 5: Project Type B with Style 1 Light Poles and Luminaires**

<b>Responsibilities</b>	<b>SHA (Administration)</b>	<b>Local Jurisdiction</b>
Design (refer to Design Responsibilities Section for additional details and restrictions)	100%	0%
Pedestrian Lighting Infrastructure (Conduits, Handholes, Manholes)	100%	0%
Wiring, Foundations, Light Poles, Fixtures/Luminaires, Cabinets, Service Pedestals	50% (subject to limitations)	50%
Utility Connection Fees	0%	100%
Maintenance, Energy Consumption, Pole Knockdowns	0%	100%
Intersection Lighting where Study Indicates a Safety Risk	100%	0%

**Figure 6: Project Type B with Style 2 Light Poles and Luminaires**

<b>Responsibilities</b>	<b>SHA (Administration)</b>	<b>Local Jurisdiction</b>
Design (refer to Design Responsibilities Section for additional details and restrictions)	100%	0%
Pedestrian Lighting Infrastructure (Conduits, Handholes, Manholes)	100%	0%
Wiring, Foundations, Light Poles, Fixtures/Luminaires, Cabinets, Service Pedestals	50% (subject to limitations)	50%
Increased Costs for Ornamental Light Poles, Fixtures/Luminaires	0%	100%
Utility Connection Fees	0%	100%
Maintenance, Energy Consumption, Pole Knockdowns	0%	100%
Intersection Lighting where Study Indicates a Safety Risk	100%	0%

