Thurmont Planning and Zoning Commission
Policy on Outdoor Lighting for all Non-Residential Districts

Purpose: In support of the mission of the Planning and Zoning Commission to promote the health, safety and general welfare of the community, this policy provides guidelines for the Commission and applicants concerning outdoor lighting in all non-residential districts.

Basis: This policy was developed based on the Commission's interpretation of the intent of the requirements concerning glare and heat (Article VII, Section 3.2 C)) and concerning lighting of parking areas (Article IX, Section 1.1 f)) in the Town of Thurmont Zoning Ordinance. The quantitative guidelines were based on the standard for glare defined in the Frederick County Zoning Ordinance, Section 1-19-307 (K).

Applicability: The guidelines of this policy apply to all outdoor lighting in all non-residential districts in the Town of Thurmont which adjoin a residential district or a district containing residential uses.

Criterion: Any operation or activity producing glare, including but not limited to outdoor lighting, shall be conducted so that direct or indirect light from the source shall not cause direct glare or illumination in excess of five-tenths (0.5) horizontal footcandles when measured in a residential district or in a district containing residential uses existing at the time of site plan approval. Direct glare is defined as the ability to directly view light emanating from the fixture lamp.

Implementation: Prior to Commission approval of the lighting provisions of the Site Plan, the applicant will submit for Commission approval, a lighting plan containing the following information:

- A 10' x 10' illuminance-grid (point-by-point) plot of maintained footcandles, carried out to an accuracy of 0.0 footcandles, which demonstrates compliance with the above criterion and shows all structures, parking spaces, building entrances, traffic areas, (both vehicular and pedestrian) and adjacent uses that might be adversely impacted by the lighting. It should include a layout of all proposed lighting fixtures by location, mounting height, mounting orientation, and manufacturer's cuts that present a description of the lighting fixtures and lamps including glare reduction devices, shielding, etc.
- Justification for the lighting levels proposed for the activities to be carried out at the site.

The Commission, in reviewing the plan, may grant modifications to the above criterion if necessary to promote the health, safety and general welfare of the community.

Guiding Principle: Outdoor lighting levels and usage should be minimized and carefully matched with the application such that no more light is used than absolutely necessary for safety, health, security, and productivity purposes.

Best Practices:

- Specify outdoor light fixtures (luminaires) that are "full-cutoff" to avoid uplight or glare. Note that these are different from "cutoff" luminaires, which, as defined by IESNA, still allow some uplight. Avoid use of floodlights.
- Keep lighting poles low and space more closely. For more uniform area lighting, such as parking lots, use a larger number of lower, pole-mounted luminaires instead of fewer, taller fixtures. Keep wattage below 250 watts.
- Outdoor lighting fixtures should focus light downward. Even full-cutoff fixtures can contribute to light pollution if they are not properly aimed. A good rule of thumb is to make sure that direct light shines a minimum of 20° below a horizontal plane and in no case above the horizontal plane.
- Where acceptable, use timers to turn outdoor lights off during those hours when they are not needed (e.g., in parking lots after stores close and employees have left).
- For security applications specify motion-sensing controls so that lights will turn on when somebody walks by. Infrared sensors are recommended over ultrasonic sensors for outdoor lighting. Rapid-start lamps (typically fluorescent or incandescent) are required where motion-sensing controls are used – the lamp selected must be compatible for use with motion-sensing controls.
- Wherever possible, avoid uplighting of trees and architectural facades. Lighting buildings from above, however, can be an important component of security lighting because it improves visibility on the streets and sidewalks below.
- After installation, check to make sure that glare will not be a problem for neighbors, pedestrians, or motorists. If glare becomes evident, modify equipment or design.
- In applications where blocking light pollution is absolutely critical, specify low-pressure sodium.
- Avoid mercury vapor lamps. Mercury vapor lamps are very common for streetlights and general outdoor lighting, but high-quality, full-cutoff luminaires are often not available for these lamps. Mercury vapor lamps also have relatively low efficacy. Metal halide or high-pressure sodium lamps are preferable for most applications.
- Illuminate signs from above. Advertising signs and billboards should be illuminated from above only—not from below. Illuminating signs from below results in significant waste when the light beam overshoots or has a larger diameter than the sign being illuminated, and upward-reflected light bouncing off of a sign contributes to sky glow.
- Whenever possible, design the surfaces beneath downlit signs to be light-absorptive rather than reflective. Landscape beneath signs with turf, for example, which has one of the lowest reflectivities of any ground surface.

Effective Date: This policy shall become effective immediately upon adoption by the Thurmont Planning and Zoning Commission

Adopted: Thurmont Planning and Zoning Commission, 9/22/2005