

**Proposed Process for Identifying Streetlight Elimination/Retention/Addition in
ESSEX TOWN
Walk-Through Guide for the Energy Committee**

Introduction: This walk-through guide is designed to help energy committee members identify what streetlights should be eliminated, retained, or even added. In Essex Town, outdoor lighting is used for roadways and outdoor public spaces. Roadway lighting serves as a safety measure for busy transportation corridors and a visual signal that travelers have arrived at key town centers, attractions, or intersections. Roadway lighting uses also include improving visibility of unusual road conditions such as sharp or blind curves, high density neighborhoods, roads passing by or through large destination centers, and approach-ways to and through town centers. Public space lighting includes parks with walkways, recreational areas, municipal parking lots, downtown commercial areas, public transit locations, among others.

Evaluation Criteria: Criteria for evaluating where lighting is needed include:

- ***Pedestrian safety:*** Is light essential or otherwise needed for pedestrian safety, particularly to help avoid pedestrian-vehicle conflicts? Well-designed street lighting can help increase visibility of people and objects along the side of the road in areas of high traffic or pedestrian use. Cross-walks are key areas where sufficient lighting is needed.
- ***Traffic safety:*** Would vehicular traffic be unsafe without adequate streetlighting? Well-designed street lighting can help increase visibility of vehicles to avoid vehicle-vehicle conflicts. In general, there should be streetlighting sufficient to signal the location of each intersection of major public roads where there is significant vehicular traffic. Areas where lighting can be valuable for traffic safety include high-volume traffic streets, high-volume intersections, and dangerous or blind curves.
- ***Convenience:*** Streetlighting can also be placed as a convenience to residences, such as illuminating residential sidewalks at night. In general, there should be streetlights sufficient to illuminate sidewalks in residential areas where there is pedestrian movement. Streetlights are not intended to provide security for individual properties. On site lighting is the responsibility of the home owner.
- ***Support economic development and aesthetics:*** In the downtown areas, streetlights illuminate roadways and sidewalks, and highlight architectural and other aesthetic features such as storefronts, parks, statutes, and other public areas.

Lighting Zones: We have developed three lighting zones that correspond with different lighting needs within the Town of Essex, including:

- **Lighting Zone #0: Rural areas.** No municipal lighting provided. Zone is rural, agricultural, and undeveloped or sparse development with little or no pedestrian activity at night and no sidewalks. The area is adjacent to or contiguous with land uses similar to rural or agricultural density. The zone is in an area where the light levels are low and typically expected by the general population to be un-lit. Exceptions include hazardous or challenging roadway conditions, such as dangerous intersections, steep hills, or curves.
- **Lighting Zone #1: Predominately residential areas.** Low-level of lighting provided. There is relatively low-pedestrian activity at night, in residential areas with sidewalks. All crosswalks should be well-illuminated. The character of the area would not be adversely affected or disturbed by low light levels. Lighting is deemed necessary for way-finding by motorists and occasional night travel by vehicles and pedestrians. The character of the area would not be adversely affected or disturbed by low light levels. Exceptions include pedestrian crossings, and hazardous roadway conditions and intersections requiring illumination for safe travel. Estimated 300 to 600 foot of spacing between fixtures.
- **Lighting Zone #2: Multi-family residential and mixed use.** Moderate level of lighting provided. This zone covers mixed use and multi-family residential development, home businesses, and some commercial with low-moderate traffic volumes. That portion of the municipality that is outside of the downtown area but generally within the zone of influence of commercial development and high-density residential, and is characterized by moderate nighttime pedestrian traffic. Sidewalks (or bike lanes) are provided in most of the zone. All crosswalks are marked and intersections are illuminated. Estimated 250 to 400 foot spacing between fixtures.
- **Lighting Zone #3: Commercial areas and high traffic areas.** Highest level of lighting provided. Zone is primarily commercial and high traffic areas, including downtown areas and main thoroughfares. Sidewalks are located along most streets, and traffic levels is moderate-high. Visitors, residents, and employees expect moderate lighting levels for way finding, convenience, and safety. Intersections and cross-walks should be well-lit. Lighting should be uniform and continuous. Estimated 200 to 300 foot spacing between fixtures.

Process for Evaluating Opportunities to Eliminate Lighting

As you conduct your walk/drive through, please keep in mind the following:

- **Streetlighting zone map:** Start with the GIS map provided with lighting zones and the location of streetlights. First, check to see if the map corresponds with the actual fixtures on the poles, and identify any discrepancies. Use the lighting zones as a starting point for determining lighting needs/levels. Opportunities for eliminating lighting have been

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identified on the map. Check to see if these proposed locations for elimination make sense.

- ***Uniformity:*** Look for uniformity (or lack thereof) of lighting within the zone. How far apart are poles with lighting fixtures located? For example, if fixture spacing should be 300 feet apart, but are you find fixtures 100 feet apart? Are there several fixtures within close proximity of each other that might be duplicative?
- ***Intersections and cross-walks:*** Make sure there is lighting at all cross-walks and intersections.
- ***Exceptions to the rule:*** Look for unique circumstance that might justify lighting, such as bus stops, parking machines, steep hills, dangerous curves, historic buildings, trailheads, and monuments.
- ***Opportunities for additional lighting:*** Identify areas where additional lighting might be needed. This can include dangerous curves, areas with limited sight distance, or under-lit cross-walks.

Method:

- **The committee will divide the light survey among the members.**
- **The 136 streets will be done 34 each month for Four (4) consecutive months.**
- **Each member will select a group of 6 to 8 streets for the month.**
- **Marked maps will be returned at the first meeting held within the due date.**
- **Each month the maps will be shared with committee for comment.**
- **After review the maps will be shared with the Essex Town Public Works Director.**
- **Feedback will be provided to the entire committee of the Directors review.**

Process:

- Use the established the criteria (described above).
- Use maps made by Town of Essex Department of Public Works from data provided by the utility company that included pole numbers.
- Visited each streetlight in town at night when practical.
- Make sure to evaluate the role of leaves--if the light is surrounded by branches, it is ineffective, and either a sign that trimming is needed or that the light is NOT needed. If it is darker in an

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area that "needs" to be lit, get the utility to trim the branches first and see if that improves the situation before deciding to add more lights in the area. If it is still adequately lit even with leaved out branches, it is probably a sign that the light is not needed and can be removed;

- For lights in a rural area, drive to each light from both directions to see what it was lighting.
- Mark the maps, Keep (K), Remove(R), or Maybe Remove (MR) for consensus. On the questionable lights, a team will revisit and focus on those particular areas, or leave it for public input.
- Make corrections to the Map, if different than the utility company data.
- Note with pole numbers nearest the places where more lights might be added.
- Note where floodlights could be replaced with streetlights.
- Present the preliminary maps to the Town Public Works Department for review and consultation.
- **Final report to be presented by the professional staff to the Select board with Energy Committee support.**