
Appendix A: Project Status Report

Municipal Streetlight
Redesign and Policy
Development,
Lebanon, NH

Upper Valley Lake Sunapee
Regional Planning Commission
10 Water Street, Suite 225
Lebanon, NH 03766

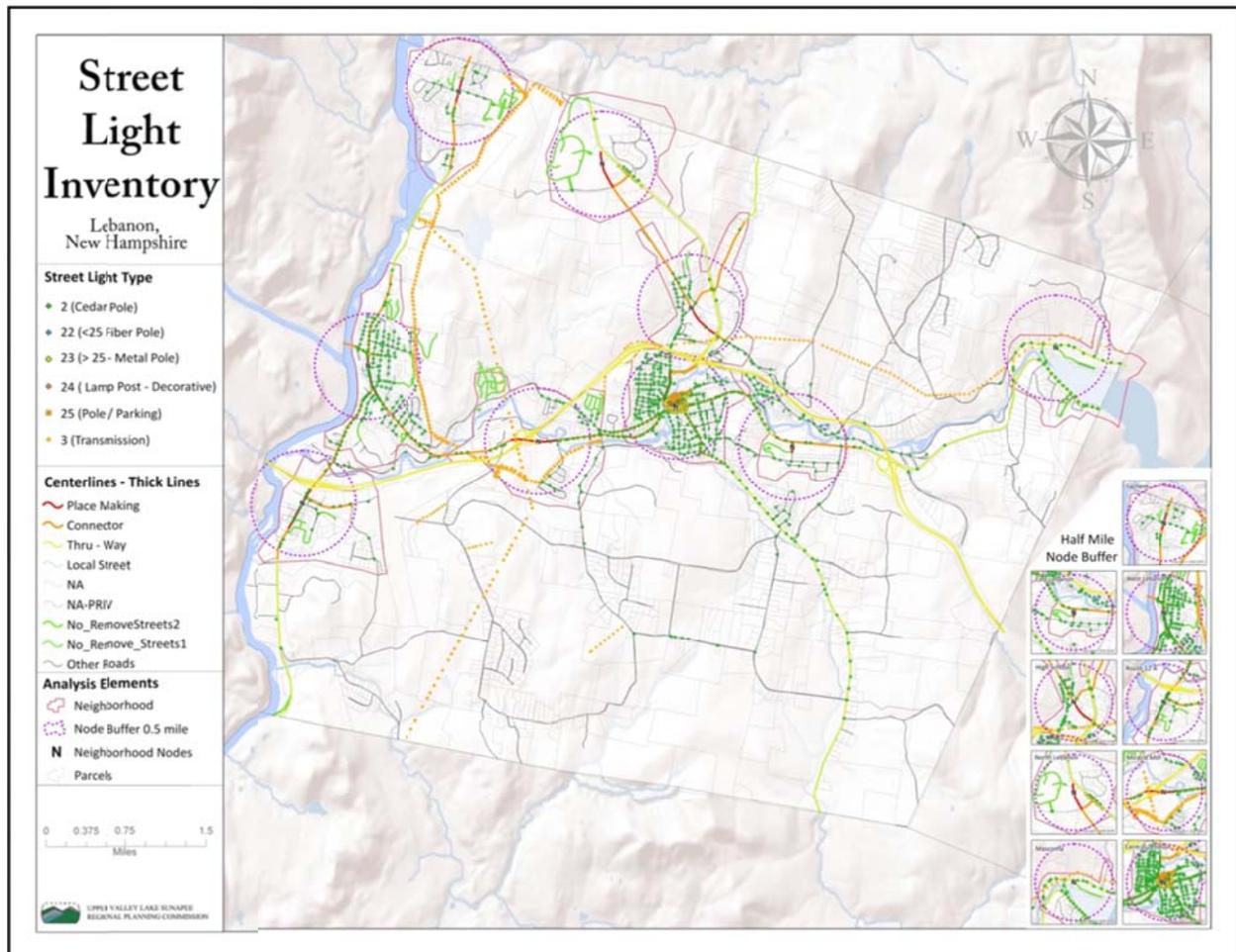
January 10, 2014

BEGINNING OF THE STREETLIGHT REDESIGN INITIATIVE

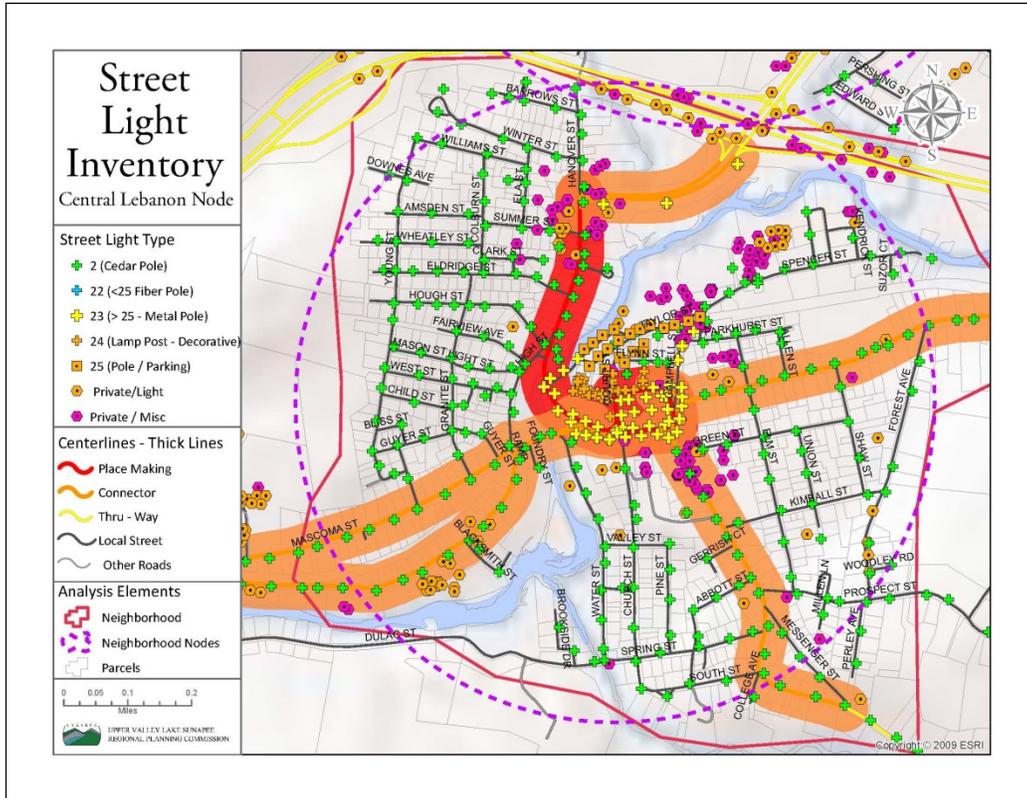
The Lebanon Energy Advisory Committee (LEAC) was formed in 2007 to reduce energy use, increase energy efficiency, explore alternative energy sources, and reduce greenhouse gas emissions for the environmental and fiscal benefit of the City's residents. Soon after its formation LEAC identified streetlights as a priority area to reduce City-wide energy consumption and costs.

Streetlight Inventory

In late 2009 members began a multi-year inventory of streetlights along City streets and lighting on public and private property, particularly parking lots. This work was conducted in conjunction with City staff from the Planning Department and the Department of Public Works to develop a Geographic Information System (GIS) geodatabase of lighting. The immediate goals for this inventory were to accurately map lighting in the City and to develop a reference to ensure the City's streetlight utility bill is accurate.



Overview Map of Lebanon Streetlight Inventory



Downtown Detail of Lebanon Streetlight Inventory

Streetlight Redesign

In 2009 and 2012 LEAC representatives met with the Lebanon City Council Public Safety Committee to discuss plans to reduce the number of streetlights. Based on these meetings the streetlight reduction effort shifted its focus to non-arterial and non-collector local streets. The Public Safety Committee agreed with the concept of removing streetlights along local streets and stressed the importance of maintaining public safety and integrating public outreach and education in the process.

The goals for the streetlight redesign effort are:

- Maintain public safety including public sense of security, pedestrian and vehicle visibility.
- Reduce costs to the City and taxpayers and reduce municipal energy consumption.
- Develop a maintenance program for existing streetlights, including streetlight retrofit and removal.
- Establish streetlight design standards for future City streets.
- Reduce light pollution.

PRELIMINARY STREETLIGHT ANALYSES

In 2013 LEAC received a grant to implement action items from its 2012 Energy Plan. The Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC) assisted with the planning efforts including developing a GIS-based evaluation tool to identify candidate streetlights to retain and remove. LEAC developed a modified approach from streetlight reduction to streetlight

redesign with the understanding the analysis should focus more on effective lighting than light removal.

Streetlight Evaluation Methodology

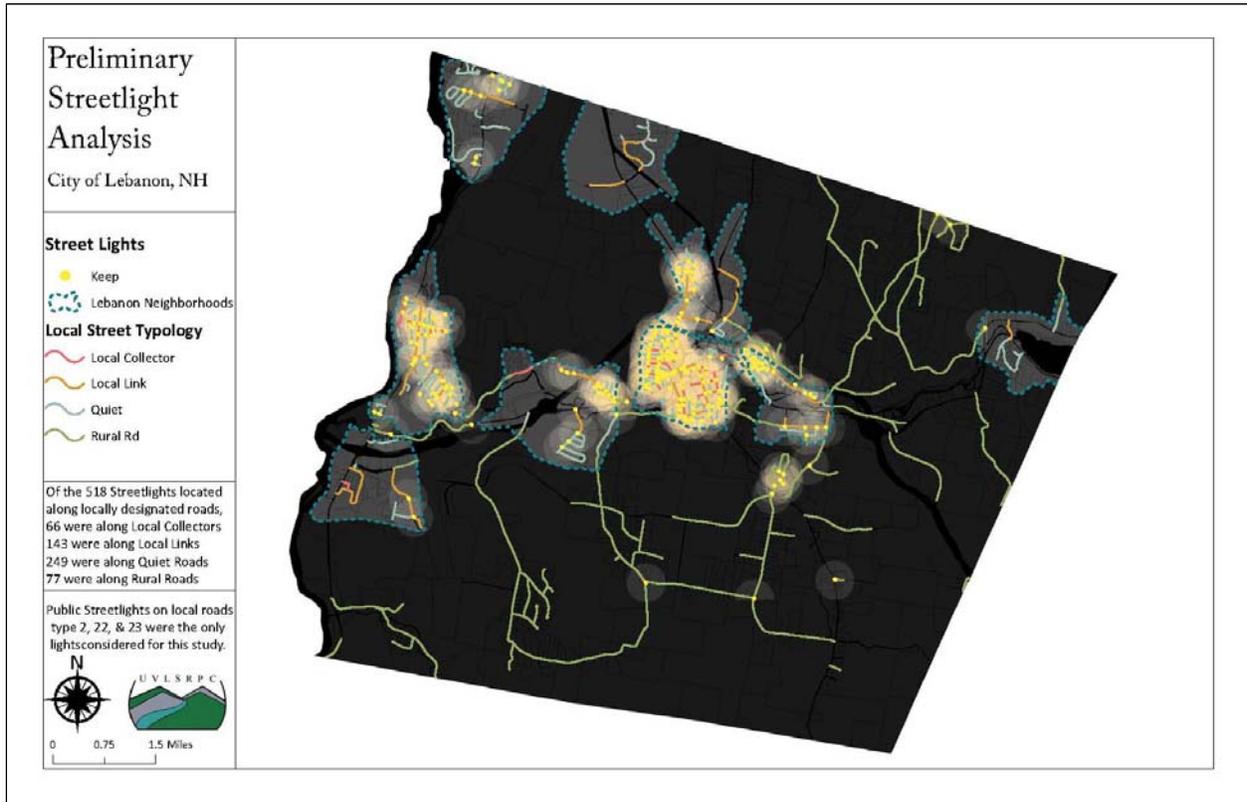
Given the large number of points (streetlights) to be evaluated UVLSRPC and City staff developed an automated process using ArcGIS analysis tools. Concurrent with this effort, the City had already developed GIS databases characterizing village areas and streets, which formed some of the foundational information for evaluating streetlights.

The primary consideration in the analysis standards involved a system of street typographies, or fundamental street characteristics, developed by the Planning Department. The principal street types were: Placemaker, Connector, Thruway, and Local. Consistent with the wishes of the Public Safety Committee to maintain streetlights on high volume arterial and collector roads, this analysis exempted Placemaker, Connector, and Thruway street types. Private and decorative streetlights were also excluded from analysis

The streetlights along these streets were evaluated based on proximity to specific features:

- Within 75 feet of street intersections
- Within 75 feet of bus stops and crosswalks

Additional filtering was conducted to address lights in close proximity to other lights.



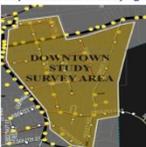
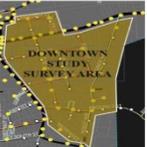
Preliminary Streetlight Analysis Results



Downtown Detail of Preliminary Streetlight Analysis

PUBLIC OUTREACH AND SURVEYS

The City, with assistance from UVLSRPC, hosted neighborhood meetings and administered a survey to assess public response to the preliminary analysis. The public meetings included poster displays of the preliminary analysis and staff were present to discuss streetlight options and opportunities. The public survey included posting notices on individual light poles in targeted neighborhoods. Each notice identified whether that light would be kept or removed based on the preliminary analysis and invited public response agreeing or disagreeing with the notice.

 <h3>Lebanon</h3>  <h4>Streetlight Redesign Project</h4> <p>The City of Lebanon is studying the future of the lighting in its neighborhood streets.</p>  <p>Why is this important?</p> <ul style="list-style-type: none"> • Redesign may result in substantial cost savings • Redesign will set standards for future city streets • Public safety is a priority • Redesign would curb light pollution <p>Which lights can be turned off or reworked? Preliminary Suggestion: KEEP THIS LIGHT Do you agree? Make your voice heard. Take the survey online: http://bit.ly/streetlightsurvey Or call: 603-448-1680</p> <p>Streetlight reference number:</p>	 <h3>Lebanon</h3>  <h4>Streetlight Redesign Project</h4> <p>The City of Lebanon is studying the future of the lighting in its neighborhood streets.</p>  <p>Why is this important?</p> <ul style="list-style-type: none"> • Redesign may result in substantial cost savings • Redesign will set standards for future city streets • Public safety is a priority • Redesign would curb light pollution <p>Which lights can be turned off or reworked? Preliminary Suggestion: REMOVE THIS LIGHT Do you agree? Make your voice heard. Take the survey online: http://bit.ly/streetlightsurvey Or call: 603-448-1680</p> <p>Streetlight reference number:</p>
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Posted Notices for Public Response to Preliminary Analysis

Public Survey Response

Public surveys as described above were conducted for study areas in the West Lebanon village and the Elm Street and Green Street neighborhood in the southwest quadrant of the Downtown Village. The majority of responses were collected in the summer of 2013. There were over 100 online and telephone responses to the survey.

Opposition to Removal

Approximately 80% of the respondents addressed streetlight removal notices. Of those respondents nearly 75% opposed the removal of either specific streetlights or the removal of streetlights overall. Often, individual responses against removing streetlights felt as if there would be a negative impact upon their safety.

One individual in disagreement of removing any streetlights said, “Darkened streets will only be an invitation to people with criminal activity in mind. There have been numerous incidents in this neighborhood over the years already, and making the area darker would only increase the likelihood of future incidents. The "City" would then likely say we need to add to the police force which would cost more than lights.” A few individuals said the light is needed for when they are walking at night, or for cars driving on road. A few other responses read, “If the streetlights worked properly, the City wouldn’t have to take any down.” An individual visited a neighborhood outreach event on June 15, 2013 and made the following comment: “You choose to live in West Lebanon Village for the Village feel. You want the street lights and the night noise because those are all characteristics of living in a village. If you wanted to be able to see the stars or have your property be pitch black, you would live in rural areas.”

Of those respondents to the notices to keep certain streetlights, approximately 75% supported keeping the lights.

Support for Removal

A much lower number of respondents agreed with removing streetlights. They agreed and left comments stating streetlights caused light pollution or that there was more than sufficient lighting on the street already. One respondent said, “The street has few houses, little traffic, and enough light from the buildings to walk safely at night. The streetlight adds to the light pollution, making stargazing more difficult and attracts swarms of flying insects, while illuminating only a small portion of the neighborhood.”

Observations about Survey

Overall, the majority of respondents want their streetlights left on due to issues of safety: criminals, walking/jogging, and traffic. The few individuals who agreed with removing a few streetlights agreed that there was too much light pollution and not enough evening traffic – either vehicle or pedestrian – for all the lighting they have. Most of the individuals who attended the neighborhood event liked how the City was trying to increase streetlight efficiency. Many preferred alternatives to removing streetlights including maintenance of existing streetlights and utilizing more efficient bulbs or lighting technologies.