



# Hybrid Street Light installation

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Prentiss Creek Subdivision

November 4, 2009

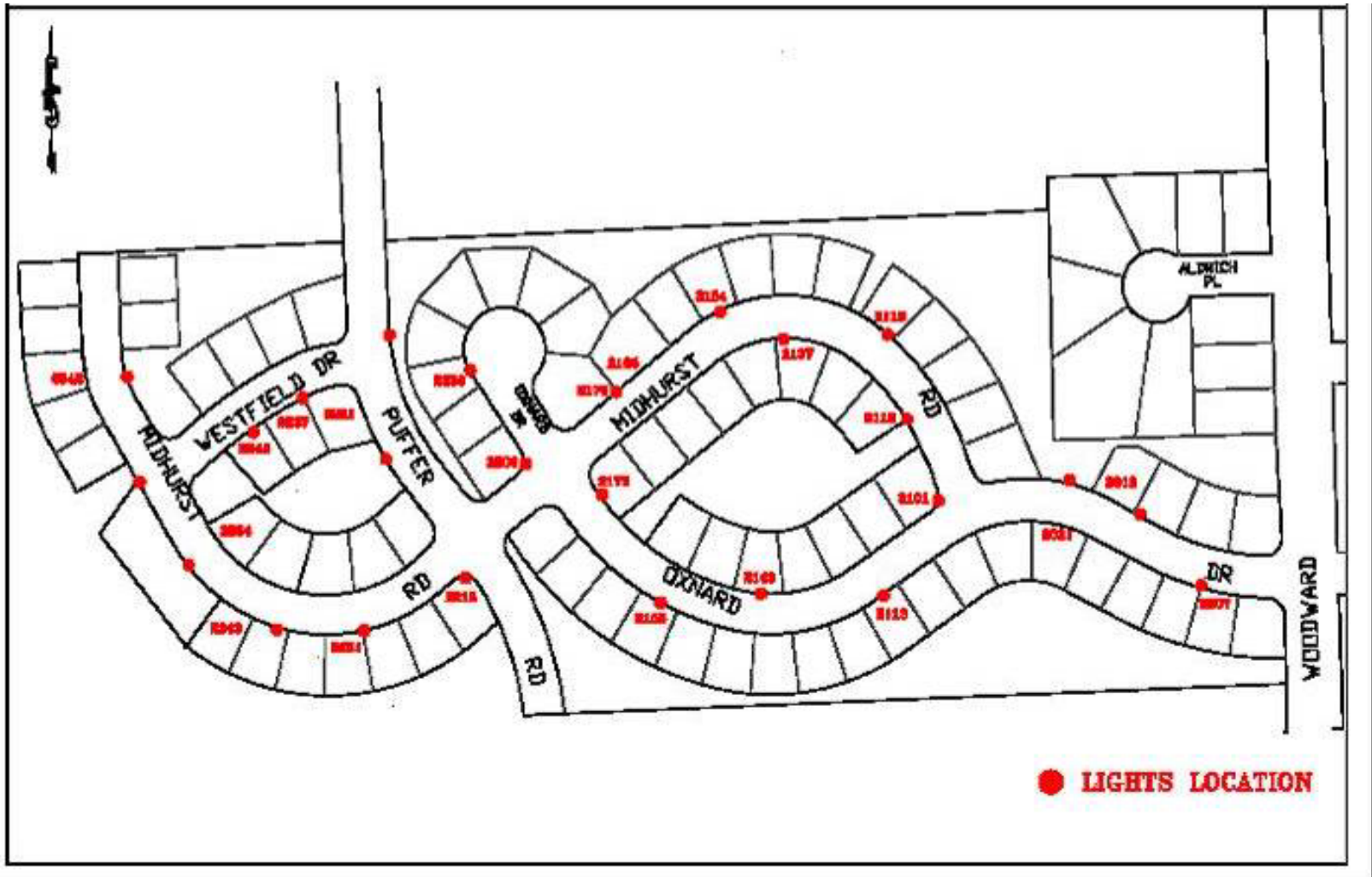


# Streetlight Locations

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- The Village carefully considered the final locations for the 25 hybrid streetlights. They have been located and marked with wood stakes.
- In order to achieve optimum performance while still maintaining the required footcandles, the Village worked to find the best locations possible to avoid tree removal and minimize tree pruning while working around existing utilities.

# Prentiss Creek Streetlight Locations





## Streetlight Locations (cont.)

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- Although the current planned locations may not solve all concerns of residents in the Prentiss Creek neighborhood, we will have the options to install a deflective shield on any light fixture that causes concern after installation.
- One of the benefits of the LED fixture being installed is that LED lighting is much more focused and controlled than conventional street lighting which means more light will be focused on the roadway with less wasted light behind the light pole.



# Installation Timeline

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- November 16<sup>th</sup> streetlight materials will be delivered to the dead end of Puffer Road.
- Puffer Road will also be used as a staging area for materials and equipment.
- November 17<sup>th</sup> The contractor, Ground Hog Utility Construction Company, will begin work.
- Installation should be complete by December 11<sup>th</sup>.



# Things to expect during the installation:

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- **At each location a machine will auger a 32" hole approximately 6' deep.**
- **The pole will be set and the soil will be compacted to the requirements of the pole manufacturer.**
- **At times piles of soil may be left on the road as they are transferred for disposal by the contractor.**
- **No open holes will be left overnight.**
- **Once the poles are set, the contractor will install the components and wiring.**
- **Once installation is complete, parkway restoration will take place, weather permitting.**

# Hybrid Pole Being Installed

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# Installation: Ground Disturbance

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# Things to expect after installation:

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- These streetlights are a hybrid system that require wind or solar energy to function.
- With installation taking place late in the year, we will not experience the prime solar conditions for charging the batteries. This was a consideration for having a hybrid system so that we would have alternate wind power to charge the batteries.
- We expect to be able to run this system dusk to dawn. Should there be trouble generating enough power such as in the winter, we will have the option of controlling the amount of time the lights are actually on.



# Example: Conservation of Power

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- Example: Should we need to conserve power, the controllers will allow us to operate the lights from 5PM to midnight then shut them off from midnight until 5AM and then have them on from 5AM to 7AM.
- There are several configurations for the timers if we need to adjust the light cycles at any point to meet the times there is the most demand for lighting.

# Hybrid Light Operating at Night

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# Stresscrete/GUS Hybrid Street Light Pole

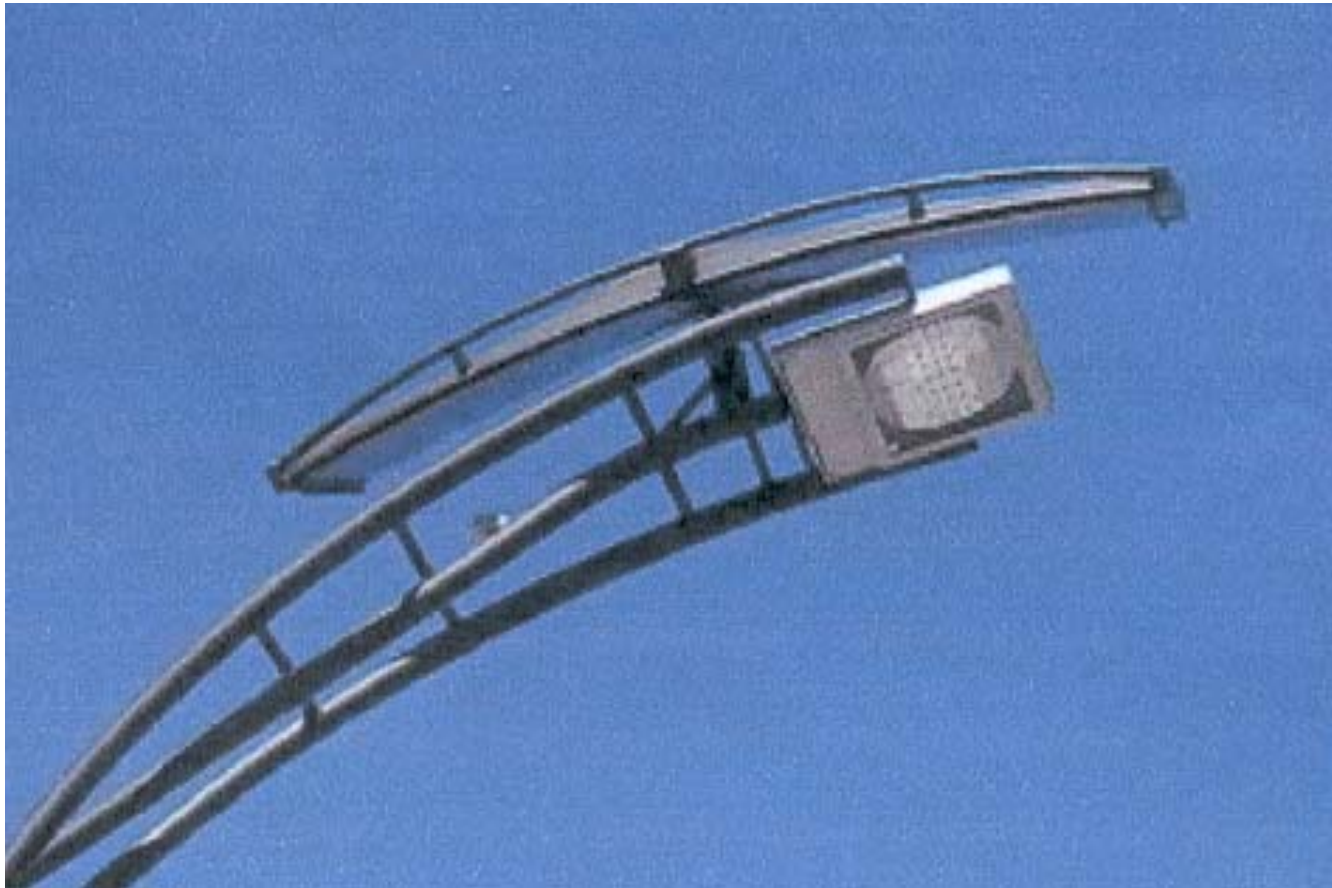
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# Stresscrete/GUS Hybrid Street Light Pole

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- Mast Arm Fixture and Solar Panel





# Advantages of the Hybrid System

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- Hybrid light system using both wind and solar to provide a constant charge to the batteries.
- Aesthetically pleasing design with a decorative concrete pole and arm.
- With this system, power can be obtained 24 hours per day when wind is present, as well as the power generated during daylight hours.
- If neither is available, the system still provides approximately 2½ days of power reserve.
- The turbine produces no noise and is bird and bat friendly due to its vertical design.