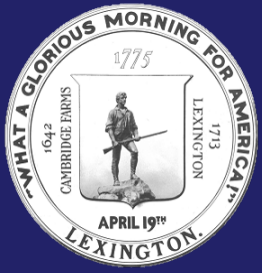


Special Town Meeting

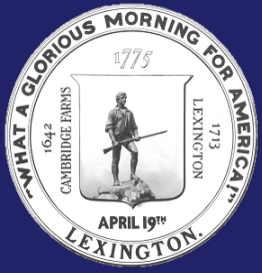
November 12, 2019

Article 9 - LED Streetlight Conversion



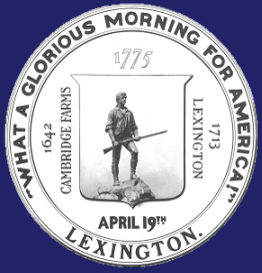
Streetlight Recap

- In 2010 the Town replaced all mercury vapor, high pressure sodium, metal halide and incandescent streetlights with induction lighting.
- LED streetlights were not a viable option in 2010.
- Immediately following installation there were a number of issues with the induction lights including faulty ballasts, fixtures, weather proofing, and wiring.
- The manufacturer has since gone out of business.



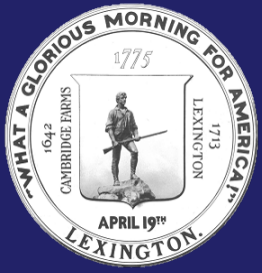
Streetlight Recap

- The Town did recognize energy savings with the switch to induction lighting.
- The maintenance and repair cost have continued to increase due to the issues with the lights.
- The Metropolitan Area Planning Council (MAPC) reached out to the Town in August 2019 about a grant opportunity to convert our streetlights to LED technology.



LED Proposal

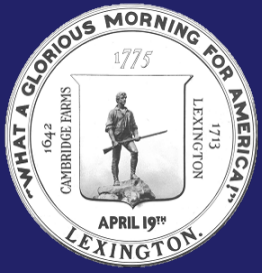
- The Town has contracted with Tanko Lighting to assess our current streetlight system.
- 3,167 streetlights were identified as eligible for conversion to LED lights.
- The color temperature will be 2700 – 3000 Kelvin.
- The streetlight conversion must be completed by May 31, 2020 to receive the grant and rebate funds.



LED Project Cost

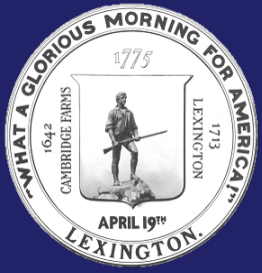
Project Costs

| | |
|--|------------------|
| Total Acquisition and Retrofit Cost* | \$875,858 |
| Acquisition Cost (included in total retrofit cost) | \$0 |
| Rebate Incentive | \$96,813 |
| Additional Rebates/Grants | \$194,764 |
| Sales Tax % | 0.00% |
| Net Project Cost (rebate included) | \$584,282 |
| Payback Period - Energy & Maintenance Savings | 5.5 years |



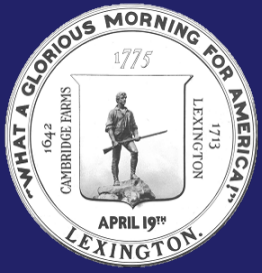
LED Energy & Maintenance Analysis

| Year 1 Analysis | Existing | New | Savings |
|-------------------------|-----------------|-------------|----------------|
| Energy Usage [kWh] | 674,016 | 373,031 | 300,985 |
| Energy Usage Cost | \$122,354 | \$67,716 | \$54,638 |
| Maintenance Cost | \$129,214 | \$76,008 | \$53,206 |
| Total | \$251,568 | \$143,724 | \$107,843 |
| 20 Year Analysis | Existing | New | Savings |
| Energy Usage [kWh] | 13,480,320 | 7,460,628 | 6,019,692 |
| Energy Cost | \$2,694,116 | \$1,491,047 | \$1,203,068 |
| Maintenance Cost | \$3,847,733 | \$2,601,075 | \$1,246,658 |
| Total | \$6,541,849 | \$4,092,123 | \$2,449,726 |



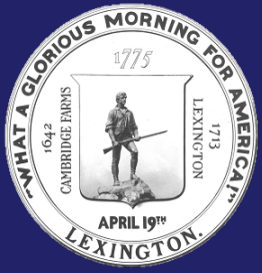
Project Timeline

- Town Meeting approval - November 2019
- Bids received - December 2019
- Contractor begins project - March 2020
- Project completion - May 31, 2020
- Submit to utility for rebate - June 2020
- Submit final paperwork to MAPC for grant funding - June 30, 2020

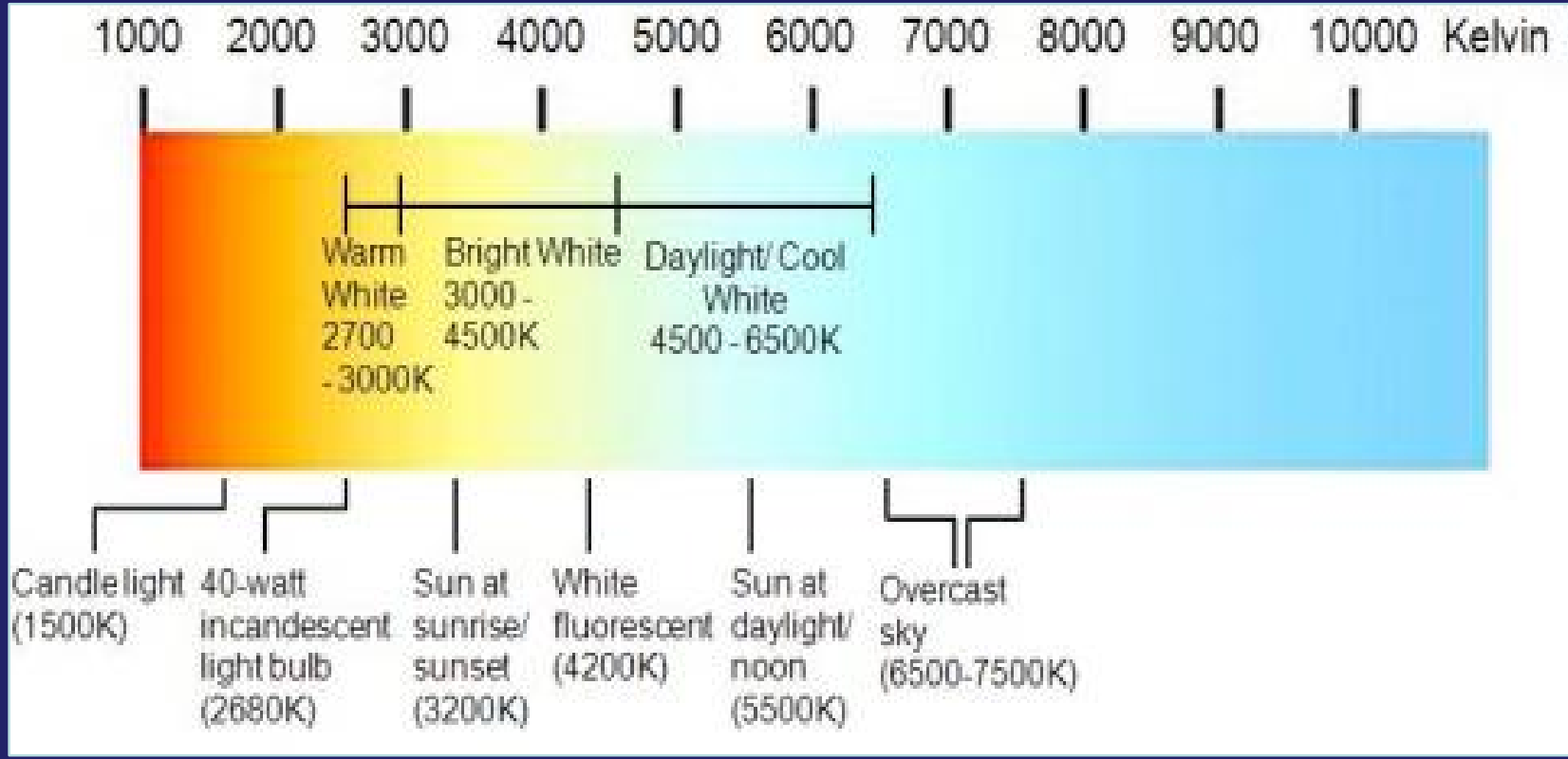


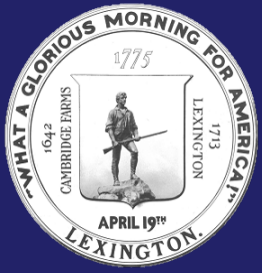
Color Temperature Reference Materials





Color Temperature Reference Materials





Sample LED Cobra Head Fixture

Manufacturer: Cree

Product Line: RSW Series

