

Attachment A

Narrative – Bromfield School Hall Lighting project

Purpose

The purpose of this project is to reduce electrical consumption and overall maintenance and operating cost for the hallway lighting system. This will be achieved with the installation of LED's with the reduced wattage and increased life span of the product.

Benefits

The new lighting will have a positive impact on the facility with increased level security and comfort for the occupants. Also the added controls will give enhanced abilities to control the LED lighting so that the illumination levels can be set during occupied and unoccupied times.

Timeline

This is a 'shovel ready' project and Guardian estimates that the project will take 4-6 weeks to implement upon order receipt. The following process defines a typical installation schedule:

Week 1

- Order material.

Week 3

- Permits are secured for installation to proceed.
- Project Manager coordinates installation schedule with building manager.
- Material arrives for inventory review, then prepped to be sent onsite for installation.

Weeks 5-6

- Crew arrives and begins installation.
- Installation completed.
- Final walk through with customer to ensure installation meets their satisfaction.
- Training as required.

Procurement required and status

Harvard will coordinate with the Town's purchasing agent to procure the services in the attached proposal consistent with the Town's procurement guidelines. Harvard

intends to contract for services for energy conservation projects allowed under M.G.L c.25A. The total project is less than \$100,000 and Guardian is a provider of energy conservation services authorized under c. 25A.

Anticipated impact, qualitatively and quantitatively

The quantitative impact is defined in the proposal. The qualitative impact is the installation of more efficient equipment will show the community that the town government is taking steps to reduce energy use to control costs and reduce emissions.

How the project supports the municipality's five year Energy Reduction Plan

The target energy savings from this project is highlighted in the attached proposal. and provides an important contribution to the Town's 20% energy reduction plan.

Why grant funding is required to complete the project

Grant funding is required for this important energy project to supplement an already tight Town financial budget.

Identify any and all permits required and the status of each

Guardian will pay for and obtain local permits.

Identify any other approvals required, e.g. local, state, federal, and the status of each

N/A

Opportunities for education and outreach and a concrete plan to accomplish them

The projects will be communicated through Town Government and covered in the local Harvard Press paper.

Provide a complete accounting/proposed budget for the project.

Please refer to the attached proposal from Guardian Management Solutions.

Other sources of funding, including any utility or Mass Clean Energy Center incentives

We propose to apply to National Grid's Utility Incentive program

Justification for any funds to be used for administrative costs

There are no resources within Town government dedicated to monitoring and reporting for these projects. Volunteers are helping to oversee the projects but dedicated resources that have access to Town employees and are able to complete reports in a timely manner are needed to meet the Green Community requirements.

Provide a description of the applicant and the project team

Applicant

The applicant for this proposal is the Harvard Energy Advisory Committee (HEAC), a committee appointed by the Board of Selectmen of the Town of Harvard to reduce energy usage in town buildings and chaired by Brian Smith. The members of the Energy Advisory Committee are all retired or active professionals with engineering backgrounds. Brian Smith or an assigned Committee member will be the liaison between Guardian and the Manager responsible for the operations and maintenance of the applicable building.

Guardian team

The Lighting projects will be performed by Guardian and the HVAC project will be performed by a subcontractor.

Energy Efficiency Specialist: Matt Whittemore,
Licensed electricians with site foreman (installation)
Project Manager (project oversight, planning and scheduling)
Lighting Design/Engineer Specialist (energy calculations, design)

March 24, 2015

Town of Harvard
13 Ayer Road
Harvard, MA 01451
Attn: Brian Smith

Dear Brian,

We are pleased to provide you with the following proposal for consideration. In reviewing the opportunity to improve the energy efficiency and reduce operational, we are proposing the attached measures for your consideration. Please note that this energy conservation project will reduce your associated energy consumption by **75%** annually, which will result in approximately **\$6,713** in savings each year.

Guardian is projecting utility incentives based upon previous projects and current incentive amounts available through your utility company's incentive program. We will submit utility incentive applications on your behalf, and the utility company will issue a final letter of commitment so that you can proceed with this project.

If this project is of interest, I would suggest that we submit incentive applications as quickly as possible. There is no commitment required to submit your incentive application, but this application will reserve incentive funding should you wish to move forward with this project. Incentive funding for these projects is made available on a first come, first serve basis, and are subject to change or diminish unless an application has been submitted for the project.

If you have any questions, or if you would like to discuss specifics, please contact me directly at **(781) 629-0106**.

Thank you again for the opportunity to provide this proposal to you. We will look forward to working with you on this project.

Sincerely,

Matt Whittemore
Energy Efficiency Specialist

Email: mattw@guardian-energy.com

Direct: (781) 629-0106

Energy Efficiency Project Order Form

Date: March 24, 2015

Customer:

Town of Harvard
13 Ayer Road
Harvard, MA 01451
Attn: Brian Smith

Project Type: Lighting Upgrade

Project Pricing & Utility Incentives

Project Cost	\$67,451
(minus) Utility Incentive	-\$21,400
Final Cost	\$46,051

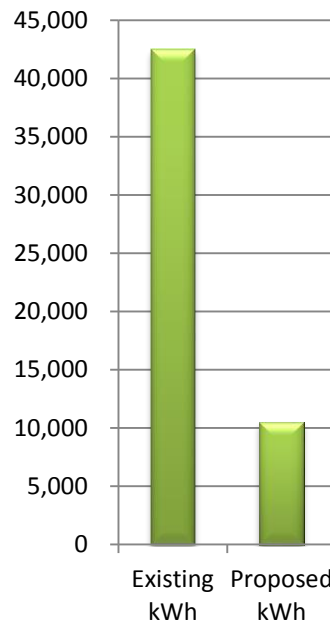
Return on Investment Estimates

Return on Investment Rate	12%
Payback Timeframe (years)	8.46
Ten Year Payback Scenario	\$8,375
Annual Cost Existing System	\$7,221
Annual Cost Proposed System	\$1,779
Estimated Annual Savings	\$5,443
Average Monthly Savings	\$454
MMBTU Saved	109.3
Tons of CO2 Saved	24.3

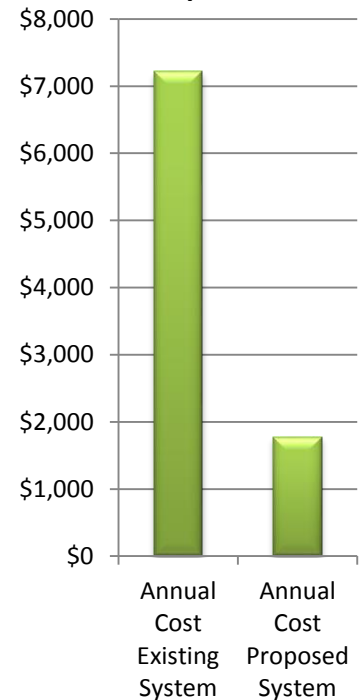
Annual Estimated Electrical Savings

Existing kWh	42,477
Proposed kWh	10,462
Saved kWh	32,015
Annual Electric Savings	\$5,443
Annual Maintenance Savings	\$1,271
Total Annual Savings	\$6,713

**Annual kWh
Usage Comparison**



**Annual Operating
Cost Comparison**



Energy Efficiency Specialist: Matt Whittemore, (781) 629-0106

Payment Terms: Guardian will submit an invoice for 50% of the Final Project Cost (\$23,025.50) upon receipt of the signed Project Agreement. The remaining balance (\$23,025.50) will be invoiced upon project completion. All invoices are payable with **Net30** payment terms unless otherwise noted. Late fees of 1.5% monthly are assessed after Net30 days. The approved Utility Incentive and/or On Bill Repayment amounts shown will be paid directly to Guardian by the utility upon project completion.

Additional Notes:

All pricing is valid for 30 days. Equipment costs may increase or decrease based on market trends. We are happy to present an update proposal should you not make a decision in the 30 day period. This proposal will expire 30 calendar days from 3/24/2015.

Please see attached Project Scope, Terms & Conditions work for project details. Guardian is licensed and fully insured to perform this work. If your project includes a utility incentive to buy down the total project cost, the utility company releases payment after the project has been completed.

Project Terms & Conditions



Project: Town of Harvard, Bromfield School Exterior Lights with Cree Advance Controls
Energy Efficiency Specialist: Matt Whittemore, (781) 629-0106

This project involves a lighting retrofit that is designed to reduce the overall operational cost for the building owner, while improving the lighting for building occupants. The following Terms & Conditions apply to this project.

- We are proposing a turn-key project with fixed project costs. Guardian will provide all labor (licensed electricians paid at prevailing wage rates), materials, fixtures & lamps described under Proposed Lighting System.
- Guardian will provide any equipment, jacks or lifts required.
- Guardian will pay for and obtain any required permits.
- Trash clean up will be handled by Guardian. The customer will be responsible for providing a dumpster/trash containers and final disposal of trash.
- Lamp & ballast recycling will be handled & paid for by Guardian.
- Material will be shipped directly to the customer and will require secure storage. If this is not possible, please contact us immediately so we can make alternate arrangements.
- Guardian will also submit utility incentive application forms and help obtain funding to buy down the cost of this project. At the end of the project, the utility company will inspect all work and submit utility incentive payment to **Guardian** to help buy down the total cost of this project.
- Guardian assumes that all work can be completed during normal working hours (8am-6pm), Monday through Friday.
- Guardian is not responsible for the repair or alteration of equipment above and beyond the scope of work stated. Should Guardian identify any existing code violations, maintenance related issues to existing equipment or hazardous material (i.e. asbestos, faulty wiring, existing code violations, etc.) during the installation phase, we will alert the customer immediately and it will be the customers responsibility to rectify the issue. Please keep in mind that we are proposing a basic lighting retrofit project and are not responsible for existing conditions that were unknown to Guardian that may incur additional costs.
- Guardian will provide a Certificate of Insurance prior to the start of any work.
- Guardian will be responsible for the design, engineering and project management of this project.

Proposal Acceptance

By signing below, you are agreeing to contract with Guardian Energy Management Solutions on this project. Any changes to the utility incentive may change the final amount due.

Printed Name

Title

Signature

Date

Please return this signed document via fax to Matt Whittemore at (508) 597-1335, or email a scanned copy to: mattw@guardian-energy.com

Scope of Work Detail

EXISTING LIGHTING SYSTEM				PROPOSED LIGHTING SYSTEM			
Measure #	Location	Qty.	Lamp/ Ballast Type	Proposed Qty.	Lamp/ Ballast Type	Add Occupancy Sensor?	Total kWh Reduction
1	upper building E	10	2L4' 28W T8EE/ELEE LOW PWR	10	15 Watt LED	Bi-Level	1,445
2	upper building E	7	2L4' 28W T8EE/ELEE LOW PWR	7	24 WATT LED	Occ Sensor	780
3	upper building E	26	2L4' 28W T8EE/ELEE LOW PWR	26	17 WATT LED	Bi-Level	3,615
4	upper building E	6	3L2' 17W T8EE/ELEE LOW PWR	6	16 WATT LED	Bi-Level	771
5	lower level E	10	2L4' 28W T8EE/ELEE LOW PWR	10	15 Watt LED	Bi-Level	1,445
6	lower level E	1	4L4' 28W T8EE/ELEE LOW PWR	1	48 WATT LED	Occ Sensor	218
7	lower level E	6	2L4' 28W T8EE/ELEE LOW PWR	6	24 WATT LED	Occ Sensor	668
8	lower level E	2	2/26W COMPACT HW ELIG	2	14 WATT LED	Occ Sensor	391
9	Main level Building D	12	3L2' 17W T8EE/ELEE LOW PWR	12	16 WATT LED	Bi-Level	1,542
10	Main level Building D	7	2L4' 28W T8EE/ELEE LOW PWR	7	15 Watt LED	Bi-Level	1,012
11	Main level Building C	12	3L4' 28W T8EE/ELEE LOW PWR	12	23 WATT LED	Bi-Level	2,585
12	Main level Building C	2	2L4' 28W T8EE/ELEE LOW PWR	2	15 Watt LED	Bi-Level	289
13	Main level Building C	13	3L2' 17W T8EE/ELEE LOW PWR	13	16 WATT LED	Bi-Level	983
14	Main level Building B	16	2L4' 28W T8EE/ELEE LOW PWR	16	15 Watt LED	Bi-Level	2,313
15	Main level Building A	8	2L4' 28W T8EE/ELEE LOW PWR	8	15 Watt LED	Bi-Level	1,156
16	Main level Building A	11	2/26W COMPACT HW ELIG	11	14 WATT LED	Occ Sensor	2,149
17	Building B lower level	8	32W COMPACT HW ELIG	8	14 WATT LED	Occ Sensor	856
18	Building B lower level	9	2L4' 28W T8EE/ELEE LOW PWR	9	15 Watt LED	Bi-Level	1,301
19	Building B lower level	17	2L4' 28W T8EE/ELEE LOW PWR	17	17 WATT LED	Bi-Level	2,364
20	Building B lower level	1	3L2' 17W T8EE/ELEE LOW PWR	1	16 WATT LED	Bi-Level	129
21	Building A lower level	12	2L4' 28W T8EE/ELEE LOW PWR	12	15 Watt LED	Bi-Level	1,734
22	Building A lower level	4	2/26W COMPACT HW ELIG	4	14 WATT LED	Occ Sensor	781
23	Building A lower level	17	32W COMPACT HW ELIG	17	14 WATT LED	Occ Sensor	1,818
24	Building A lower level	12	2L4' 28W T8EE/ELEE LOW PWR	12	17 WATT LED	Bi-Level	1,669
Totals		229		229			32,015

Invoicing: Please provide the invoicing details for this project below. If tax exempt, include tax exempt certificate with this order form.

Bill to: _____

Address: _____

City, State & Zip: _____

Invoicing Contact: _____

Phone: _____ Email: _____

Purchase Order # (If applicable): _____

GC project Info

Purposes, Benefits and Impacts

The purpose of this project is to reduce electrical consumption along with reducing overall maintenance and operating cost for the exterior lighting system. This will be achieved with the installation of LED's with the reduced wattage and increased life span of the product. The new lighting will have a positive impact on the facility with increased level security and comfort for the pedestrians. Also the added controls will give enhanced abilities to control the LED lighting so that the illumination levels can be set during occupied and unoccupied times.

Interior Lighting Installation Plan and Schedule

This is a 'shovel ready' project and Guardian estimates that the project will take 4-6 weeks to implement upon order receipt. The following process defines a typical installation schedule:

Week 1

- Order material.

Week 3

- Permits are secured for installation to proceed.
- Project Manager coordinates installation schedule with building manager.
- Material arrives for inventory review, then prepped to be sent onsite for installation.

Weeks 5-6

- Crew arrives and begins installation.
- Installation completed.
- Final walk through with customer to ensure installation meets their satisfaction.
- Training as required.

Note: All **permits** are included in this installation. This project is subject to a basic permitting process. All lifts are provided by Guardian. Schedule is dependent upon availability of lighting fixtures and the speed at which they can be delivered, as well as the utility company's ability to process and approve applications in a timely manner.

Guardian will apply the following resources to complete this project:

- Licensed electricians with site foreman (installation)
- Project Manager (project oversight, planning and scheduling)
- Lighting Design/Engineer Specialist (energy calculations, design)

About Guardian Energy Management Solutions

Guardian Energy Management Solutions is a Massachusetts based company that provides comprehensive energy efficiency solutions for non-residential buildings throughout New England. Guardian offers a turn-key solution for the analysis, design, engineering and implementation of energy conservation measures.

Our energy reduction solutions include:

- ASHRAE Level 1, ASHRAE Level 2 and ASHRAE Level 3 Energy Audits.
- Energy Data Logging Services and Solutions.
- Energy Metering & Sub Metering to Track and Report Energy Usage.
- Lighting Retrofits for Indoor Lighting and Outdoor Lighting.
- LED Streetlight Retrofit Solutions.
- Energy Conservation Solutions for a wide variety of HVAC (Heating, Ventilation and Air Conditioning) Equipment.
- Steam Trap Studies and Replacement Services.
- Energy Management Systems and Building Automation Software.
- Building Envelope & Weatherization Solutions.
- Low E (Emissivity) Ceiling Installations.
- Installation of Energy Efficient Motors.
- Variable Frequency Drives/Variable Speed Drives.
- Freezer and Refrigeration Controls.
- Utility Incentive Funding Services.

Utility Incentives

Guardian Energy Management Solutions works closely with local utility companies throughout New England to identify and implement energy reduction solutions. Guardian's process is designed to save energy while driving down energy costs. We combine energy conservation solutions with available utility incentive funding to reduce project costs for our clients. By offering a wide variety of energy reduction solutions, Guardian ensures that all of your bases are covered when it comes to developing cost reduction strategies. Guardian is an approved vendor with National Grid and NStar.

Guardian's Green Community Roadmap Program

Guardian also partners with communities that are working to become or have been designated a Massachusetts Green Community through the Massachusetts Department of Energy Resources (DOER). A key element under this program is to design a roadmap to identify energy reduction solutions and save energy across all municipal buildings - with a commitment in energy reduction by 20% over a 5 year period. Guardian provides comprehensive energy efficiency solutions to help Massachusetts cities and towns design, develop and implement energy conservation solutions to help meet these goals.

Massachusetts' Accelerated Energy Program (AEP)

Guardian is an approved vendor under the Massachusetts Accelerated Energy Program and provides energy audits and implementation services for energy efficiency projects under DCAM (Division of Capital Asset Management) for a variety of state owned and/or operated facilities. Guardian supports the State of Massachusetts goals to reduce energy usage at state facilities over the next several years.