

LED Lighting Proposal

Grayslake Street Lighting Project

Submitted for Acceptance To:
Village of Grayslake

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Presented by:

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1. Executive Summary

Johnson Controls, Inc. is providing a price proposal for a turnkey solution for the Village of Grayslake. The general scope of work includes a one for one retrofit or replacement of 833 existing fixtures at the Village, comprised of (798) Post top metal halide HID pole fixtures, (33) cobra head HID pole fixtures, and (2) shoebox HID pole fixtures. There are an additional (174) fixtures in the Village’s inventory that are not included in the scope as detailed herein.

The design is intended to improve the Village’s lighting quality while generating significant energy and operational cost savings. The current design includes a number of assumptions which are documented in this proposal. Some adjustments to the current design may be required based on existing conditions or site-specific activities that may require higher or lower illuminance levels.

Scope of Work Overview:

1. Disconnect and remove lamps & ballasts from (798) HID post top lantern fixtures
2. Disconnect and remove (33) HID cobra head fixtures.
3. Disconnect and remove (2) HID shoebox fixtures.
4. Recycle and dispose of existing lamps and ballasts in accordance with applicable state and local requirements
5. Retrofit (798) post top lantern fixtures with Keystone LED retrofit lamps.
6. Install (33) new Cooper Lighting LED cobra head fixtures.
7. Install (2) new Cooper Lighting LED shoebox fixtures.

Project Cost	Estimated Rebate	Cost After Rebate
\$577,648	\$4,458	\$573,190

2. Project Assumptions

Existing System Assumptions:

- Total of 1007 units of 5 different fixture types
 - 798 HID post top fixtures
 - 149 HID pendant mount teardrop fixtures
 - 33 HID cobra head fixtures
 - 2 HID shoebox fixtures
 - 20 HID post top Sternberg fixtures
 - 3 LED cobra head fixtures
 - 2 LED shoebox fixtures

This proposal is based upon pole/fixture counts as shown in the Village of Grayslake's existing streetlight GIS inventory/database, provided to JCI via email on 06/23/2021. JCI conducted a preliminary site verification during the month of July 2021, which modified these quantities and resulted in the scope of work herein. A true-up accounting of the final installed scope will occur upon project completion. If additional fixtures are discovered during construction, a contract change order increase will be required. If fewer fixtures are ultimately installed compared to the quantities in this proposal, a contract price reduction will be made upon project conclusion.

Proposed System Assumptions:

- LED retrofit lamps for post top lanterns.
- New LED fixture heads cobra heads and shoeboxes.
- Scope does not include replacement of existing poles.
- Product warranty of 10 years for new fixtures; 5 years for retrofits

3. Proposed Solutions

The design is focused on an energy reduction and maintenance savings by retrofitting or replacing existing HID fixtures with new energy efficient LED technology.

a. Estimated Project Schedule:

Post Top Mockups: 2-4 weeks
Material Lead times: 8-12 weeks
Installation: 10 weeks
Total duration: 22-28 weeks

b. Existing System Overview:

The existing lighting system consists of:

- Total of 1007 units of 5 different fixture types
 - ◆ (798) “Early American” lantern style post top fixtures
 - ◇ 789 - 100W HPS
 - ◇ 3 - 100W MH
 - ◇ 5 - 175W MV
 - ◇ 1 - 400W HPS
 - ◆ (33) cobra head fixtures
 - ◇ 6 - 150W HPS
 - ◇ 5 - 250W HPS
 - ◇ 10 - 400W HPS
 - ◇ 6 - 400W MH
 - ◇ 3 - double head 400W MH
 - ◆ (2) shoebox fixtures
 - ◇ 2 - 250W HPS
 - ◆ (174) Existing fixtures **NOT INCLUDED IN SCOPE**
 - ◇ 20 - 100W HPS Sternberg post top acorn style fixtures
 - ◇ 3 - 140W LED cobra head fixtures
 - ◇ 2 - 140W LED shoebox fixtures
 - ◇ 55 - 100W HPS teardrop fixtures
 - ◇ 11 - 100W MH teardrop fixtures
 - ◇ 7 - 150W HPS teardrop fixtures
 - ◇ 16 - 150W MH teardrop fixtures
 - ◇ 8 - double head 100W HPS teardrop fixtures
 - ◇ 1 - double head 100W MH teardrop fixtures
 - ◇ 21 - double head 100W MH teardrop fixtures

3. Proposed Solutions (continued)

c. Proposed System Overview







The existing fixtures will be retrofit or replaced on a 1-for-1 basis as noted below:

- (833) Fixture retrofits or new fixtures as noted below
 - ◆ Retrofit (798) post top fixtures with 27W, 40W or 100W LED Screw-in Lamps
 - ◇ (792) KT-LED27HID-E26-840-D /G2
 - ◇ (5) KT-LED45HID-E26-840-D /G3
 - ◇ (1) KT-LED100HID-EX39-840-D /G2
 - ◆ Replace (33) cobra head fixtures with 62W, 94W, 141W & 161W LED
 - ◇ (6) Cooper - ARCH-N-PA1-60-730-U-T2U-AP-10K-PR7-10X
 - ◇ (5) Cooper - ARCH-S-PA1-90-730-U-T3-AP-10K-PR7-10X
 - ◇ (12) Cooper - ARCH-M-PA2-140-730-U-T3-AP-10K-PR7-10X
 - ◇ (10) Cooper - ARCH-M-PA2-160-730-U-T3-AP-10K-PR7-10X
 - ◆ Replace (2) shoebox fixtures with 113W LED
 - ◇ (2) Cooper - MEM-E02-LED-E1-T3-SO-BL-BK-7030-SA6122-BK-PR7-10X

d. Benefits

- Significant reduction in energy cost requirements
- Long life LED system (up to 5X that of existing) will minimize ongoing maintenance
- Improved lighting quality and illumination levels

3. Proposed Solutions (continued)

Post Top Fixtures	
Existing	Proposed
	
Cobra head Fixtures	
Existing	Proposed
	
Shoebbox Fixtures	
Existing	Proposed
	

e. Cost and Savings Summary

Site/Building Name	Proposed Qty	kW Saved	kWh Saved/Yr	Total Cost	Estimated Rebate	Total Cost After Rebate
New fixtures for shoeboxes and cobra heads; retrofits for post top lanterns	833	9.8	429,161	\$577,648	\$4,458	\$ 573,190

4. Responsibilities

a. General Customer Responsibilities and Working Conditions

This section details the key assumptions and responsibilities for each party associated with this Proposal. The success of the Project is based on each party fulfilling their respective responsibilities. Customer accepts responsibility to:

1. Provide information, data and decisions to the JCI Project Manager as soon as possible.
2. Document a project escalation process to address critical items (affecting resources or schedule) as well as any potentially critical items.
3. Provide detailed systems and application specifications as needed.
4. Provide a stable working environment throughout the installation.
5. Equipment as detailed herein will be available for the installation by JCI crews on the date specified in Project Dates. Customer to be responsible for keeping the equipment safe and secure while on customer site.

b. Project Management

Prior to the start this project, JCI will designate a Project Manager, to whom all communications will be addressed and who has the authority to act for JCI in all aspects. The responsibilities of the Project Manager are:

1. Serve as the interface between the JCI and customer departments participating in the scope of this project.
2. Attend project status meeting(s).
3. Resolve project plan deviations that are caused by customer or JCI.
4. Help resolve or escalate project issues within the organization, as necessary.
5. Monitor and report installation progress/status on a regular basis to customer's management team.
6. Provide 2-week look ahead schedule to customer on weekly basis.

c. Safety

Johnson Controls is committed to creating and maintaining a culture where safety is fully integrated into every aspect of our business. Comprehensive personnel instruction includes OSHA, DOT, NSC compliant training and practices, and NALMCO technician certifications. Because of this, we lead the industry in workplace safety performance.

Johnson Controls will work in a manner that promotes the safety of all personnel and building occupants, the Johnson controls team members, subcontractor employees, the public, and the environment. Our Corporate Safety Department will audit the project periodically for compliance with Johnson Controls and OSHA safety guidelines.

The major elements of the safety program are:

- Training personnel on the site safety policy, right to know, use, and maintenance of personal protective equipment.
- Documentation, investigation, and reporting of occupational injuries in accordance with Johnson Controls and OSHA guidelines.
- Conducting weekly site safety meetings and posting of OSHA worker safety guidelines.
- Issuance and control of safety related work permits.
- Control of work site access to alleviate work area congestion.
- Maintaining an all-inclusive record of Material Safety Data Sheets
- Implementation of lock-out and tag-out procedures.
- Enforcement of fall protection education.
- Identification and monitoring of confined spaces.
- Hazardous material identification and abatement coordination.

The Safety Plan provides for the safety of the building occupants and the workers and also to ensure customer satisfaction throughout the entire project. Johnson Controls and our partners all have industry leading track records for safe working environments. This is accomplished by standardized weekly Tool Box training and site/project specific safety notifications and discussion.



Johnson Controls is ISNetworld certified provider. ISNetworld is the global resource for connecting corporations with safe, reliable vendors from capital-intensive industries.

d. Standard Inclusions and Exclusions

Standard Inclusions and Assumptions

- Pricing is turnkey which includes material, labor, engineering, design and disposal costs.
- Pricing is valid for 30 days from the quotation date. Executed contract and authorization is required prior to procurement of materials.
- Recycling of lamps and ballasts in compliance with regulations.
- All work to be performed in accordance with industry standards and approved safety practices. Professional performance by licensed, insured and certified personnel skilled in lighting retrofit service.
- Sample pre/post illumination levels (in foot-candles) shall be measured in accordance with procedures recommended by Illuminating Engineering Society.
- Unless specifically stated, this lighting scope was developed with a bias towards energy reduction. The one for one fixture replacements and retrofit solutions are designed to match or exceed the design light levels of the existing system at a reduced wattage.
- All underground infrastructure, poles, hand hold boxes, contactors and switches are assumed to be operational and suitable condition for retrofit.
- If specified materials become either temporarily or permanently unavailable for reasons beyond the control of JCI, then the expected time for performance of the work will be extended to the extent of unavailability and we reserve the right to provide equivalent substitutions at no price increase.
- Labor Warranty – 1 year workmanship warranty in accordance with the terms and conditions of the proposal from the date of acceptance by the customer. Premature failures that occur during the installation phase will be replaced by JCI at no additional cost. However, material failures after substantial completion will be the responsibility of the owner (unless determined to be related to workmanship).
- Manufacturer warranties of lamps and fixtures installed are covered by the individual manufacturers published policies. JCI will furnish contact information for each manufacturer. Alleged defective product may be required for return to factory for analysis.
- Rebate or utility incentive amounts stated in this proposal are estimates based upon published guidelines available as of the submittal date. The stated incentive amounts are not guaranteed and are subject to change at any time.

Existing Poles Notes:

- JCI will conduct a visual inspection of the poles prior to construction to identify obvious existing damage or concerns but JCI is not responsible for any engineering analysis or for any concealed damage.
- JCI is not responsible for inspecting the structural integrity of the utility poles or Village-owned infrastructure.
- Proposal assumes that all engineering and wind load calculations (by others) are completed to confirm the selected poles and infrastructure meet or exceed required structural and wind loading standards.
- Lighting Poles will be checked for contact voltage prior to installation. If any hazardous voltage is noted, work on that pole will be stopped and the customer and/or the utility company be notified immediately to correct the fault before any work will be performed.

Standard Exclusions

- Sales Tax.
- Electrical permits and fees.
- Additional light fixtures in areas where the existing system design does not meet IES minimum requirements. If foot-candle levels do not meet minimum standards, the customer will be notified.
- Reconfiguration of existing fixture layout.
- Correction or repair of electrical system deficiencies.
- Repair or replacement of yellowed, cracked, damaged or missing fixture lenses, louvers or other components.
- Repair and replacement of fuse and/or fuse holders.
- Any electrical wiring other than that required for ballast removal within the existing lighting fixtures, the installation of new fixtures as scheduled, and the installation of photocell controls for cobrahead and shoebox replacements.
- Replacement of existing damaged or faulty photocells (on post top lanterns)
- Situations that could not be documented during the audit i.e. concealed or inaccessible locations.

e. Payment Terms

- Upon contract acceptance and execution, an initial invoice covering design and engineering work will be submitted in the amount of 20% of the total purchase amount
- Upon delivery of materials to the site, a 2nd invoice will be submitted in the amount of 40% of the total purchase amount
- A third invoice will be submitted in the amount of 30% when work is substantially complete
- The final invoice will be submitted at project completion
- Payment terms are NET 30

We are happy to discuss alternate terms if this is not in alignment with Village of Grayslake policy.

5. Review and Acknowledgement

a. JCI Intellectual Property and Confidentiality

JCI shall be the sole and exclusive owner of all intellectual property rights arising out of this proposal. All materials furnished or used by JCI or its third party vendors or subcontractors in connection with this project, including documentation, schematics, test equipment, hardware, software and associated media are and shall remain the exclusive property of JCI or such other third party. Customer agrees not to use such materials for any purpose at any time without the express authorization of JCI.

Each party will treat the other party's written, proprietary business, pricing, or technical information as confidential and shall not use or disclose to any third parties any such confidential information except as specifically permitted in this proposal or as required by law (with reasonable prior notice to the other party).

This proposal shall provide the basis for the contract regarding the subject matter described in this proposal, and shall replace any prior oral and/or written communications between parties regarding this project subject matter.

b. Acceptance

ACCEPTED AND AGREED TO BY THE FOLLOWING AUTHORIZED REPRESENTATIVES OF THE PARTIES:

Johnson Controls

Signed: _____

Print Name: _____

Title: _____

Phone Number: _____

Date: _____

Email Address: _____

Customer

Signed:  _____

Print Name: MICHAEL J. ELLIS

Title: VILLAGE MANAGER

Phone Number: 847-223-8515

Date: 09/09/21

Email Address: CMVSCATO @ VILLAGE OF GRAYS

VILLAGE OF GRAYS LAKE, CO

6. Cut Sheets

Provided as electronic attachments