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HIAWATHA FIRE-RESCUE

MEMORANDUM

TO: HONORABLE MAYOR, HIAWATHA CITY COUNCIL, CITY ADMINISTRATOR

FROM: MIKE NESSLAGE, FIRE CHIEF

SUBJECT: LED LIGHTING UPGRADE FOR FIRE STATION

DATE: 8/31/2016

The lighting on the exterior of the fire station is 16 years old, the original exterior lighting. As you are well aware, the technology of lighting has improved considerably over that time period. We have been researching options for some time. Last year, you included $17,000 in the CIP for lighting upgrades at the fire station. We invited four Hiawatha vendors to submit quotes for replacing the exterior lighting; Hawkeye Electric, Munson Electric, Gleeson Electric, and Premier Electric. Three vendors returned quotes, Gleeson Electric did not.

I asked each vendor to provide a quote for replacing the exterior lights. My request included replacing the fifteen smaller 200w metal halide lights that are on an automatic sensor, and the four-400w Metal Halides that are work lights on a switch. Munson Electric has the lowest quote. In addition to the being the lowest, he included some additional items that I did not ask for originally; replacement of several small can lights above pedestrian doors, and the flagpole light. The quotes are as shown below. I believe Munson is the best quote and is also the lowest. The estimated payback on electrical savings on this project should be about three years, and we should experience an annual saving in maintenance cost of about $400.

I am asking you to approve $6,125 from already allocated CIP money for this project. We will move forward with the interior lighting at a later date.

Quotes:

Vendor	Total Quote	Lights	Comments
Munson Electric	$6,152	15-40 watt, 4-85watt	Also included can and flag pole lights.
Premier Electric	$6,748	15-30 watt, 4-85 watt	
Hawkeye	$7,940	15-35 watt, 4-85 watt	

Munson Electric Inc.

Quotation

925 N Compton Dr
Hiawatha,Ia 52233
Phone (319) 364-6654 Fax (319) 364-4913

DATE July 27, 2016
Quotation # 1820
Customer ID

Submit To: Hiawatha Fire Dept.
101 Emmons Street
Hiawatha, Iowa 52233

Quotation valid until: August 27, 2016
Prepared by: Dan Ries

Description	AMOUNT
Electrical work to replace exterior lighting on the Hiawatha fire station as per walk through with Michael Nesslage	
Scope of Work	
-remove 15 small exterior lights and replace with 40 watt LED exterior fixtures	
-remove 4 large exterior lights and replace with 80 watt LED exterior fixtures	
-remove 2- 6" recessed can trim and lamps and replace with LED retrofit trims	
-remove flagpole light and replace with 60 watt LED exterior fixture	
Material	$4,350.00
Labor	$1,400.00
Notes-	
-all new fixtures will be 400K light color, and full cut-off to comply with city code	
-all new fixtures are same design, different wattages for different applications	
-large 80 watt fixtures and flagpole light will have adjustable brackets to direct light	
Subtotal	$5,750.00
Sales Tax	$402.50
TOTAL	$6,152.50

If you have any questions concerning this quotation, contact
Dan Ries 319-432-4962, Office 319-364-6654

Thank You For Your Business!

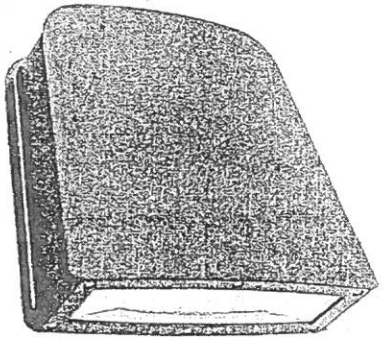
LED Architectural Slim Wall Pack / Flood

Recommended Use:
- Security
- Perimeter lighting
- When control of spill light is important
- Flood and uplighting with adjustable mounting accessories

Typical Mounting Height: 8 to 20 feet (Small)
8 to 25 feet (Large)
Typical Spacing: 1 to 2 times the mounting height

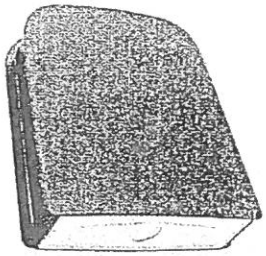
Large

Dimensions: 5" L x 14-1/5" W x 12-4/5" H
Product Weight: 11.2 lbs. (80W)
12.2 lbs. (150W)



Small

Dimensions: 2-4/5" L x 7-1/2" W x 8" H
Product Weight: 3.6 lbs.



WALL PACKS

4

	SKU	E-WF2L08CZ	E-WF2L08NZ	E-WF2L15CZ	E-WF2L15NZ
LARGE	LIGHT OUTPUT	8110 Lumens	8110 Lumens	15,800 Lumens	15,800 Lumens
	COLOR TEMP	Cool White (5000K)	Neutral White (4000K)	Cool White (5000K)	Neutral White (4000K)
	POWER CONSUMPTION	80W LED	80W LED	150W LED	150W LED
	COLOR ACCURACY	≥ 70	≥ 70	≥ 70	≥ 70
	REPLACES	250W MH	250W MH	400W MH	400W MH

14 Flagpole

	SKU	E-WF1L04CZ	E-WF1L04NZ	E-WF1L06CZ	E-WF1L06NZ
SMALL	LIGHT OUTPUT	3900 Lumens	3900 Lumens	5100 Lumens	5100 Lumens
	COLOR TEMP	Cool White (5000K)	Neutral White (4000K)	Cool White (5000K)	Neutral White (4000K)
	POWER CONSUMPTION	40W LED	40W LED	60W LED	60W LED
	COLOR ACCURACY	≥ 70	≥ 70	≥ 70	≥ 70
	REPLACES	100W PSMH	100W PSMH	175W MH	175W MH

Lifespan: Estimated 133,000 (40W, 60W, 150W), 50,000 (80W) hours of maintenance-free operation to L_{70} at 25°C (77°F)
Input Voltage: Universal (120V through 277V Operation)
Operating Minimum: -40°C (-40°F)
Housing: Sturdy, die-cast aluminum housing
Dark bronze polyester powder-coat finish
Lens Assembly: Tempered glass lens is thermal, shock and impact resistant
Mounting: Included mounting plate mounts over 4" square or octagonal junction box
UL Listed: Wet locations

5 YEAR WARRANTY

NON-DIMMABLE

CREE LEDs

e-

HAWKEYE ELECTRIC

1711 Hawkeye Dr. * Hiawatha, IA 52233
Phone (319) 743-9891 Fax (319) 743-9893
nickm@hawkeye-electric.com

Hiawatha Fire Department - 110 Emmons Street

Attn: Mike Nesslage - Fire Chief

RE: Exterior Building Lights

Date: 7/8/2016

SCOPE:

- **Option # 1**
  - Remove and dispose of (15) existing 200W Metal Halide light fixtures
  - Provide and install (15) 35W LED light fixtures
    - Fixtures to be controlled by existing photocell sensor

BASE PRICE: $5,235.00

- **Option # 2**
  - Remove and dispose of (4) existing 400W Metal Halide light fixtures
  - Provide and install (4) 85W Refractive LED light fixtures
    - Fixtures to be controlled by existing light switch

BASE PRICE: $2,255.00

Pricing Includes:

- Material
- Labor

$ 7940.00

Thanks,

Nick Morris

Premier ELECTRICAL SERVICES

It's what we do!

106 Emmons Street
Hiawatha, Iowa 52233

Price Quote

Date: July 22nd, 2016
Location: Hiawatha Fire Department
Attention: Fire Chief, Michael V. Nesslage

Project description: Small Wall Pack Lights

- Provide and install (15) replacement 30 Watt LED light fixtures to replace the existing fixtures.

Estimated cost: $4,814.00

Project description: Large Wall Pack Lights

- Provide and install (4) replacement 85 Watt LED light fixtures to replace the existing fixtures.

Estimated cost: $1,934.45

Notes:

1. **Please see attachments for lighting layouts, pay back calculations and rebate estimates.**
2. **Thank you for the opportunity to quote this project, it is good for 30 days.**

This quote has been accepted by:
Print Name: _____
Sign Name: _____
Today's date: _____

Dan Nunemaker
V.P/Owner
Premier Electrical Services Co
319-784-8002 cell
319-393-4531 office
319-393-4532 fax
dan@premierelectricalservicesco.com
www.premierelectricalservicesco.com

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	15	XTOR3A	SINGLE	N.A.	1.000	XTOR3A

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking	Illuminance	Fc	2.06	13.7	0.0	N.A.	N.A.

VAN METER

A 100% EMPLOYEE-OWNED COMPANY

Project

Lighting Analysis Prepared for:

Hiawatha Fire Station
Hiawatha, Iowa

Prepared By:

Shaun Myers
Lighting Specialist
Email: smyers@vanmeterinc.com
Cell: (319) 389-4153

Disclaimer and Copyright:
*Final project cost and savings could vary slightly from our proposal. Upon agreement to move forward with the project all costs and savings are subject to change until final walk

*This information is intellectual propoerty of Van Meter Inc. and is not to be shared with any third party without the written consent of Van Meter Inc.

VAN METER

A 100% EMPLOYEE-OWNED COMPANY

Financial Payback Analysis

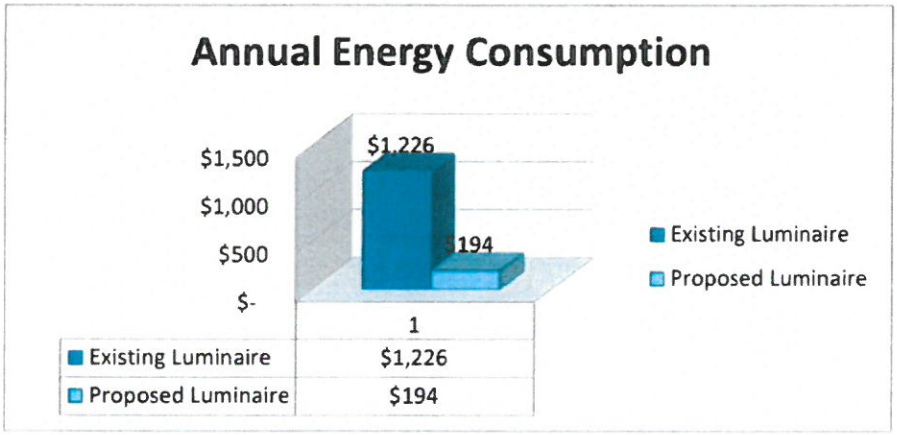
Material Cost	$3,214.00
Est. Install and Disposal Cost	$1,600.00
Total Project Cost	$4,814.00
(Est. Utility Rebate)	$800.00
Other Incentives	$0.00
Est. Project Cost after Incentives	$4,014.00
Est. Annual Energy Savings	$1,032.00
Est. Annual Maintenance Savings	$439.44
Est. Total Annual Savings	$1,471.44
Monthly Cost of Waiting	$122.62
IRR	36.66%
SIMPLE PAYBACK (YRS)	**2.73**

VAN METER

A 100% EMPLOYEE-OWNED COMPANY

Area:	Small Wall		
Fixture Type:	150w HPS	Cost Per kWh	0.100
		Annual Operating Hrs	4,300
		Lighting Control Factor if Adding Controls	100%

System Information	Existing	Proposed
Luminaire Description	150w HPS	LED
Input Watts Per Luminaire	190	30
Quantity	15	15
System Watts	2,850	450
System kW	2.85	0.45
Annual kWh	12,255	1,935
Annual KWH Saved		10,320
Annual Energy Costs	$ 1,226	$ 194
Monthly Costs	$ 102	$ 16
Annual Energy Savings ($)		$ 1,032
Annual Energy Savings (%)		84%
Cost of Waiting (Monthly)		$ 86



Note: These are estimated savings only. These annual and monthly savings are based on a number of variables and assumptions that could change over time. The actual savings derived by your firm may be higher or lower.

VAN METER

A 100% EMPLOYEE OWNED COMPANY

Area:	Small Wall		
Fixture Type:	150w HPS		
		Annual Operating Hours	4,300
		Lighting Control Factor if Adding Controls	100%

System Information	Existing System	Proposed System
Description of System	150w MH	LED
Quantity	15	15
Type of Lamp	150w MH	LED
Lamp Life (hrs)	20000	100000
Cost of Lamp	$ 34.19	$ 10.00
Number of Lamps Per Fixture	1	1
Labor Cost to Spot Relamp per Lamp	$ 75.00	$ 75.00
Annual Lamp Maintenance Cost	$ 352.12	$ 54.83
Quantity of Lamps Replaced Annually	3	1
Ballast Life (hrs)	60000	100000
Cost of Ballast	$ 101.23	$ 15.00
Number of Ballasts per Fixture	1	1
Labor Cost Change a Ballast	$ 100.00	$ 100.00
Annual Ballast Maintenance Cost	$ 216.32	$ 74.18
Quantity of Ballasts Replaced Annually	1	1
Annual Maintenance Cost of System at	$ 568.44	$ 129.00
Summarized 10 Year Cost	$ 5,684.45	$ 1,290.00
10 Year Savings Summary		$ 4,394.45
10 Year Average Annual Savings Summary		$ 439.44

DRAFT

RESOLUTION NO. 16-
City Council

RESOLUTION AUTHORIZING THE FIRE DEPARTMENT REPLACEMENT OF EXTERIOR LIGHTING FOR THE FIRE STATION

WHEREAS, The Fire Department has the need to replace the exterior lighting on the fire station to upgrade the current lighting which is 16 years old; updating the exterior lighting will lead to an electrical savings and annual savings in maintenance cost, and

WHEREAS, the Fire Chief solicited proposals and after receiving and reviewing proposals from three (3) qualified companies, hereby recommends the lowest responsive responsible bid as follows:

Company	**Lights**	**Total Cost**	**Notes**
Munson, Electric of Hiawatha, Iowa	(15) 40 watt, (4) 85 watt	$6,152.00	Includes can and flag pole lights

, and

WHEREAS, the City Council deems it necessary to update aging fixtures at the fire station to keep the city facilities in good condition and provide energy efficiency, and authorizes the purchase of office exterior lighting in an amount not to exceed $6,125.00, and

WHEREAS, funding for the purchase and installation of exterior lighting for the fire station was previously budgeted in the Capital Improvement Plan (CIP), and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HIAWATHA, IOWA, to authorize the purchase and installation of exterior lighting for the fire station at a total cost not to exceed $6,152.00, with Munson Electric of Hiawatha, Iowa, utilizing available funding in Capital Improvement Plan (CIP).

AYES:
NAYS:
ABSENT:

PASSED AND APPROVED this 7th day of September, 2016.

_____
Bill Bennett, Mayor

ATTEST:

_____
Kelly Kornegor, City Clerk