



WESTPORT, CONNECTICUT

DEPARTMENT OF PUBLIC WORKS

TOWN HALL, 110 MYRTLE AVE.
WESTPORT, CONNECTICUT 06880
(203) 341 1120

August 17, 2018

Mr. James S. Marpe
First Selectman
Town Hall
Westport, CT 06880

Re: Appropriation from Capital & Non-Recurring Expenditure Fund
Street light buyout program; replacement with LED lights

Dear Mr. Marpe,

This office herein requests an appropriation from the Capital and Non-Recurring Expenditure Fund in the amount of \$1,077,250 for the buyout of the Eversource-owned street lights, and replacement with Town-owned LED streetlights. This initiative is pursuant to a Connecticut Conference of Municipalities, (CCM), program started in 2014 to assist Connecticut municipalities in purchasing the street lights that they currently pay the Electric Utilities to operate. After purchase, the municipality converts the lights to LED lights and pays Eversource a lower rate for the electricity. Even with maintenance costs included, the lower electric rate for the LED's combined with a lower electricity consumption creates a payback period for the investment of approximately five years.

In 2014 CCM prequalified 3 vendors through a competitive RFQ process. The Town recently put out an RFP to each of the prequalified vendors, and received three responses. This office has reviewed the responses and has selected two for a shortlist interview at this time. By the October 3rd Board of Finance meeting we will have selected a vendor.

The above request is based on the higher of the two proposals along with lighting controls on each of the 1273 lights. The use of the higher proposal is to account for the numerous options available for lighting types, along with a 5% contingency for unforeseen items encountered during construction.

Respectfully,

Peter A. Ratkiewich, P.E.
Director of Public Works

cc: Gary Conrad, Finance Director
G:\Pw_off\PAR\APPRQST\Streetlight_buyout_DES_CON

JUSTIFICATION FOR A CAPITAL PROJECT

DEPARTMENT INFORMATION

DEPT NAME: Department of Public Works – Engineering Division Date: 9/13/18

PROJECT NAME AND DESCRIPTION
Streetlight Buyout Program –Program to purchase Streetlights from Eversource, replace High Pressure Sodium and other varieties of lights with LED fixtures, add controls to lights, and take over maintenance and operation. Buyout will result in a lower electric rate paid for the electricity the lights use. LED replacements will result in much lower electricity consumption. The combination of the purchase and conversion will result in savings that will pay for the project in approximately 5 years.

IS IT LISTED IN THE 5-YR CAPITAL FORECAST? YES NO
 If no, why not?
 If yes, answer the following two questions:
 Which FY was the project first proposed? 2019
 Which FY was the project first planned? 2014

| | | |
|-------------------|------------------------------|---------------------------------------|
| APPROXIMATE COST: | \$1,025,950 (incl. controls) | COST IN CAPITAL FORECAST: \$1,000,000 |
| CONTINGENCY (5%): | \$51,298 | |
| | \$1,077,248 | ←TOTAL REQUEST→ \$1,077,250 |

SOURCE OF FUNDS:

| | |
|-------------------------------------|-------------------------------------|
| CAPITAL BOND | GEN'L FUND |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| CNR | GRANT |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| STATE | OTHER |
| <input type="checkbox"/> | |

OTHER, DESCRIBE:
 Depending on the financing terms of the Vendor there is a possibility that Vendor financing may be more favorable than Municipal Bonding. The Finance Department will participate in Vendor Interviews and selection prior to the BOF meeting
PAYBACK PERIOD: Approximately 5 years

| | |
|---|-------------------------------------|
| PROJECTED START DATE: January 2019 | EST. COMPLETION DATE: November 2019 |
| ESTIMATED USEFUL LIFE: LED fixtures are estimated to last 20 years as opposed to 5 to 7 years for the existing HPS lights | |

Is this project part of a larger capital project? NO

Has an RFP been issued? YES NO 3 prequalified vendors have been shortlisted to two. One will be selected prior to the BOF meeting

Have bids been received? YES NO Number of bids received: three

Low bid is not the only deciding factor in choosing a vendor for this work. Past performance, experience, and price are all considered

Was the lowest bid the winner? YES NO If not, why?

Who will benefit from the project? The Town as a whole will benefit from reduced electrical costs for Street lighting, which currently costs the Town approximately \$240,000 per year, by approximately 50-70%.

Is it a replacement? YES NO

Under this program the Town purchases the street lights that we currently pay Eversource to own, maintain and operate. Once they are in the Town's ownership, the electric rate we pay goes down, and in addition by replacing the existing High pressure Sodium lights with LED lighting, they use only about 20% of the power.

If yes, describe condition of what is to be replaced: LED lighting, they use only about 20% of the power.

Pictures attached? YES NO

Proposals from the prequalified vendors are available for review

What other approvals/reviews are necessary to begin this project?

RTM Approval, BOS Award of Contract

**Note this project is endorsed by the Green Task Force

FINANCE

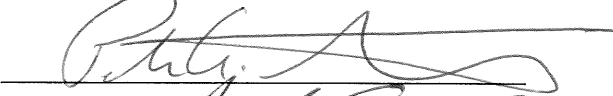

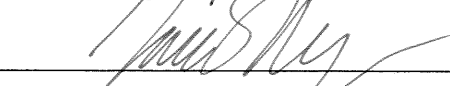
This section to be completed by the Finance Director.

EFFECT ON TOWN FINANCES, INCLUDING DEBT SERVICE:

IF APPROVED:

IF NOT APPROVED:

REVIEW/SIGN-OFF

| | | |
|------------------|--|---------------|
| DEPARTMENT HEAD |  | DATE: 9/17/18 |
| FINANCE DIRECTOR |  | DATE: 9/18/18 |
| FIRST SELECTMAN |  | DATE: 9/17/18 |

FROM TANKO LIGHTING
PROPOSAL
(#2 BIDDER)

APPENDIX A

| Financial Analysis- Eaton/Cooper | | | | |
|---|------------------|---|---|----------------------|
| Existing Fixture Wattages | Fixture Quantity | Replacement Fixture Model No. | Per Fixture All-In Estimated LED Conversion Unit Cost | Extended Cost |
| 70HPS- CH | 716 | ARCH-AF16-30-D-U-T2R-4N7-10MSP-7030-AP | \$ 242.00 | \$ 173,272.00 |
| 100HPS- CH | 187 | ARCH-AF16-40-D-U-T2R-4N7-10MSP-7030-AP | \$ 246.00 | \$ 46,002.00 |
| 150HPS- CH | 40 | ARCH-AF24-70-D-U-T2R-4N7-10MSP-7030-AP | \$ 276.00 | \$ 11,040.00 |
| 250HPS- CH | 275 | ARCH-AF24-90-D-U-T2R-4N7-10MSP-7030-AP | \$ 282.00 | \$ 77,550.00 |
| 400HPS- CH | 11 | ARCH-M-AF48-140-D-U-T2R-4N7-10MSP-7030-AP | \$ 347.00 | \$ 3,817.00 |
| LED | 6 | n/a | \$ - | \$ - |
| 250W- FLOOD | 7 | UFLD-C25-D-U-66-Y-AP-4N7-7030-10MSP | \$ 495.00 | \$ 3,465.00 |
| 400W- FLOOD | 29 | UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$ 528.00 | \$ 15,312.00 |
| 1000W- FLOOD | 2 | UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$ 528.00 | \$ 1,056.00 |
| 1 Total Estimated Cost of Audit and GIS Mapping | | | | \$ 19,095.00 |
| 2 Total Estimated LED Streetlight Conversion Cost | | | | \$ 331,514.00 |
| 3 Total Estimated Acquisition Cost | | | | \$ 445,550.00 |
| 4 Total Estimated Annual Maintenance Cost | | | | \$ 38,190.00 |
| 5 Total Cost | | | | \$ 834,349.00 |
| 6 Total Estimate Rebates | | | | \$ 167,462.00 |
| 7 Total Estimated Annual Energy Cost Savings | | | | \$ 28,853.00 |
| 8 Total Estimated Rate 117 Savings | | | | \$ 11,406.00 |
| 9 Total Savings | | | | \$ 207,721.00 |
| 10 Sample Project Payback (5 Divided by 9) | | | | 4.016681029 |

Note on Controls: Given that the Town did not provide a specification in its RFP for controls, Tanko Lighting will work with the Town to identify its preferences, assist with determining if controls make sense for the Town's needs, and provide specific pricing for controls at that time. In the meantime, Tanko Lighting recommends a budgetary pricing amount of \$150/fixture for controls.

APPENDIX A

PRICE OPTIONS FROM TANKO LIGHTING PROPOSAL, 8-16-18

| Financial Analysis- Eaton/Cooper | | | | |
|----------------------------------|------------------|---|---|---------------|
| Existing Fixture Wattages | Fixture Quantity | Replacement Fixture Model No. | Per Fixture All-In Estimated LED Conversion Unit Cost | Extended Cost |
| 70HPS- CH | 716 | ARCH-AF16-30-D-U-T2R-4N7-10MSP-7030-AP | \$ 242.00 | \$ 173,272.00 |
| 100HPS- CH | 187 | ARCH-AF16-40-D-U-T2R-4N7-10MSP-7030-AP | \$ 246.00 | \$ 46,002.00 |
| 150HPS- CH | 40 | ARCH-AF24-70-D-U-T2R-4N7-10MSP-7030-AP | \$ 276.00 | \$ 11,040.00 |
| 250HPS- CH | 275 | ARCH-AF24-90-D-U-T2R-4N7-10MSP-7030-AP | \$ 282.00 | \$ 77,550.00 |
| 400HPS- CH | 11 | ARCH-M-AF48-140-D-U-T2R-4N7-10MSP-7030-AP | \$ 347.00 | \$ 3,817.00 |
| LED | 6 | n/a | \$ - | \$ - |
| 250W- FLOOD | 7 | UFLD-C25-D-U-66-Y-AP-4N7-7030-10MSP | \$ 495.00 | \$ 3,465.00 |
| 400W- FLOOD | 29 | UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$ 528.00 | \$ 15,312.00 |
| 1000W- FLOOD | 2 | UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$ 528.00 | \$ 1,056.00 |
| | 1 | Total Estimated Cost of Audit and GIS Mapping | | \$ 19,095.00 |
| | 2 | Total Estimated LED Streetlight Conversion Cost | | \$ 331,514.00 |
| | 3 | Total Estimated Acquisition Cost | | \$ 445,550.00 |
| | 4 | Total Estimated Annual Maintenance Cost | | \$ 38,190.00 |
| | 5 | | Total Cost | \$ 834,349.00 |
| | 6 | Total Estimate Rebates | | \$ 167,462.00 |
| | 7 | Total Estimated Annual Energy Cost Savings | | \$ 28,853.00 |
| | 8 | Total Estimated Rate 117 Savings | | \$ 11,406.00 |
| | 9 | | Total Savings | \$ 207,721.00 |
| | 10 | Sample Project Payback (5 Divided by 9) | | 4.016681029 |

Note on Controls: Given that the Town did not provide a specification in its RFP for controls, Tanko Lighting will work with the Town to identify its preferences, assist with determining if controls make sense for the Town's needs, and provide specific pricing for controls at that time. In the meantime, Tanko Lighting recommends a budgetary pricing amount of \$150/fixture for controls.

PRICE OPTIONS FROM TANKO LIGHTING PROPOSAL, 8-16-18

| Financial Analysis- Philips | | | | |
|-----------------------------|------------------|---|---|---------------|
| Existing Fixture Wattages | Fixture Quantity | Replacement Fixture Model No. | Per Fixture All-In Estimated LED Conversion Unit Cost | Extended Cost |
| 70HPS- CH | 716 | RFS-25W16LED4K-G2-R2-UNV-DMG-API-RCD7-GY3 | \$ 253.00 | \$ 181,148.00 |
| 100HPS- CH | 187 | RFS-35W16LED4K-G2-R2-UNV-DMG-API-RCD7-GY3 | \$ 253.00 | \$ 47,311.00 |
| 150HPS- CH | 40 | RFS-54W16LED4K-G2-R2-UNV-DMG-API-RCD7-GY3 | \$ 262.00 | \$ 10,480.00 |
| 250HPS- CH | 275 | RFM-108W48LED4K-G2-R2-UNV-DMG-API-RCD7-GY3 | \$ 299.00 | \$ 82,225.00 |
| 400HPS- CH | 11 | RFL-215W96LED4K-G2-R2-UNV-DMG-API-RCD7-GY3 | \$ 436.00 | \$ 4,796.00 |
| LED | 6 | N/A | \$ - | \$ - |
| 250W- FLOOD | 7 | UFLD-C25-D-U-66-Y-AP-4N7-7030-10MSP | \$ 495.00 | \$ 3,465.00 |
| 400W- FLOOD | 29 | UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$ 528.00 | \$ 15,312.00 |
| 1000W- FLOOD | 2 | UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$ 528.00 | \$ 1,056.00 |
| | 1 | Total Estimated Cost of Audit and GIS Mapping | | \$ 19,095.00 |
| | 2 | Total Estimated LED Streetlight Conversion Cost | | \$ 345,793.00 |
| | 3 | Total Estimated Acquisition Cost | | \$ 445,550.00 |
| | 4 | Total Estimated Annual Maintenance Cost | | \$ 38,190.00 |
| | 5 | Total Cost | | \$ 848,628.00 |
| | 6 | Total Estimate Rebates | | \$ 164,696.00 |
| | 7 | Total Estimated Annual Energy Cost Savings | | \$ 28,790.00 |
| | 8 | Total Estimated Rate 117 Savings | | \$ 11,469.00 |
| | 9 | Total Savings | | \$ 204,955.00 |
| | 10 | Sample Project Payback (5 Divided by 9) | | 4.140557683 |

Note on Controls: Given that the Town did not provide a specification in its RFP for controls, Tanko Lighting will work with the Town to identify its preferences, assist with determining if controls make sense for the Town's needs, and provide specific pricing for controls at that time. In the meantime, Tanko Lighting recommends a budgetary pricing amount of \$150/fixture for controls.

PRICE OPTIONS FROM TANKO LIGHTING PROPOSAL, 8-16-18

| Financial Analysis- GE | | | | |
|---------------------------|------------------|---|---|---------------|
| Existing Fixture Wattages | Fixture Quantity | Replacement Fixture Model No. | Per Fixture All-In Estimated LED Conversion Unit Cost | Extended Cost |
| 70HPS- CH | 716 | ERL1003B330AGRAYR | \$ 265.00 | \$ 189,740.00 |
| 100HPS- CH | 187 | ERL1004B330AGRAYR | \$ 271.00 | \$ 50,677.00 |
| 150HPS- CH | 40 | ERL1008B330AGRAYR | \$ 299.00 | \$ 11,960.00 |
| 250HPS- CH | 275 | ERLH011B330AGRAYR | \$ 349.00 | \$ 95,975.00 |
| 400HPS- CH | 11 | ERL2025B330AGRAYR | \$ 582.00 | \$ 6,402.00 |
| LED | 6 | N/A | \$ - | \$ - |
| 250W- FLOOD | 7 | EFH1010CC77740ADK1BLCKR | \$ 600.00 | \$ 4,200.00 |
| 400W- FLOOD | 29 | EFM1010CC77740ADK1BLCKR | \$ 774.00 | \$ 22,446.00 |
| 1000W- FLOOD | 2 | EFH1010EE77740ADK1BLCKR | \$ 801.00 | \$ 1,602.00 |
| | 1 | Total Estimated Cost of Audit and GIS Mapping | | \$ 19,095.00 |
| | 2 | Total Estimated LED Streetlight Conversion Cost | | \$ 383,002.00 |
| | 3 | Total Estimated Acquisition Cost | | \$ 445,550.00 |
| | 4 | Total Estimated Annual Maintenance Cost | | \$ 38,190.00 |
| | 5 | Total Cost | | \$ 885,837.00 |
| | 6 | Total Estimate Rebates | | \$ 169,726.00 |
| | 7 | Total Estimated Annual Energy Cost Savings | | \$ 27,753.00 |
| | 8 | Total Estimated Rate 117 Savings | | \$ 11,502.00 |
| | 9 | Total Savings | | \$ 208,981.00 |
| | 10 | Sample Project Payback (5 Divided by 9) | | 4.238839895 |

Note on Controls: Given that the Town did not provide a specification in its RFP for controls, Tanko Lighting will work with the Town to identify its preferences, assist with determining if controls make sense for the Town's needs, and provide specific pricing for controls at that time. In the meantime, Tanko Lighting recommends a budgetary pricing amount of \$150/fixture for controls.

APPENDIX D



August 13, 2018

Mr. Morgan Melendrez
Energy Advisor
Tanko Lighting, Inc.
220 Bayshore Blvd
San Francisco, CA 94124

Re: Streetlight Conversion Project - Municipal Lease/Purchase Financing

Dear Mr. Melendrez:

TCF Equipment Finance, a division of TCF National Bank ("TCF") is pleased to propose to the City of Westport, CT the following tax-exempt lease/purchase transaction as outlined below. Under this transaction, the City of Westport, CT would enter into a municipal lease/purchase agreement with TCF for the purpose of financing your street light conversion project. This transaction is subject to formal review and approval by both the Lessor and Lessee.

| | |
|---------------------------|--|
| LESSEE: | City of Westport, Connecticut |
| LESSOR: | TCF Bank, its affiliates or assignees |
| EQUIPMENT: | Streetlight LED Conversion Project. More fully described in the Tanko Lighting proposal |
| FINANCING TERM: | Five (5), Seven (7) or Ten (10) years |
| INTEREST RATE: | Five (5) years – 4.09% Seven (7) years – 4.12% Ten (10) years – 4.25% |
| NET PROJECT COST: | \$538,564.00 |
| MONTHLY PAYMENTS: | Five years - \$10,110.92 Seven years - \$7,519.07 Ten years - \$5,615.31 First payment delayed 6 months to allow for project installation |
| DOCUMENTS SIGNED: | On or about September 15, 2018 |
| FIRST PAYMENT DUE: | March 15, 2019 |

- PRICING:** The Rate and Payments outlined above are locked, provided this transaction is closed/funded prior to **September 15, 2018**. After that date, the final Rate and Payments shall be adjusted commensurately to the market in effect at the time of funding and shall be fixed for the entire lease term. This proposal shall expire if it is not accepted by the Lessee within **10 days** of the proposal date.
- CLOSING FEES:** A \$500.00 escrow fee will be charged and can be added to the amount to finance.
- DOCUMENTATION:** Lessor shall provide all of the documentation necessary to close this transaction. This documentation shall be governed by the laws of the State of Minnesota and shall be subject to annual appropriation.
- TITLE / INSURANCE:** Lessee shall retain title to the equipment during the lease term. Lessor shall be granted a perfected security interest in the equipment and the Lessee shall keep the equipment free from any/all liens or encumbrances during the term. Lessee shall provide adequate loss and liability insurance coverage, naming Lessor as additional insured and loss-payee.
- CREDIT UNDERWRITING:** Transaction has been pre-screened by the Lessor. The Lessee shall provide any additional information that the Lessor may need in order to complete its final credit due-diligence.

We appreciate this opportunity to offer a TCF Financing Solution. Please do not hesitate to contact me if you have any questions at **(713) 206-1252**. Upon acceptance of this proposal, please scan and e-mail to my attention at tborger@tcfef.com. Thank you again.

Sincerely,

Timothy A. Borger

Timothy A. Borger
Municipal Finance Representative



REAL TERM ENERGY PRICE AND FINANCING PROPOSAL

Town of Westport

Municipal Streetlight LED Retrofit, Management & Maintenance Services

5. FINANCIAL ANALYSIS

5.1. Bid Form

| Financial Analysis | | | | |
|----------------------------------|--|--|---|-------------------------|
| Existing Fixture Wattages | Fixture Quantity | Replacement Fixture Model No. | Per Fixture All-In Estimated LED Conversion Unit Cost | Estimated Extended Cost |
| 6300 Lumen 70W HP Sodium | 714 | 24W_ARCH-AF16-20-D-U-T2R-4N7-10MSP-7030_AP | \$260.76 | \$186,181 |
| 9500 Lumen 100W HP Sodium | 185 | 32W_ARCH-AF16-30-D-U-T2R-4N7-10MSP-7030-AP | \$260.76 | \$48,240 |
| 8500 Lumen 100W MH | 1 | 42W_ARCH-AF16-40-D-U-T2R-4N7-10MSP-7030-AP | \$265.70 | \$266 |
| 16,000 Lumen 150W HP Sodium | 39 | 74W_ARCH-AF24-70-D-U-T2R-4N7-10MSP-7030-AP | \$299.03 | \$11,662 |
| 27500 Lumen 250W HP Sodium | 269 | 94W_ARCH-AF24-90-D-U-T2R-4N7-10MSP-7030-AP | \$305.20 | \$82,099 |
| 50000 Lumen 400W HP Sodium | 12 | 141W_ARCH-M-AF48-140-D-U-T2R-4N7-10MSP-7030-AP | \$378.04 | \$4,537 |
| 4100 Lumen LED | 4 | 32W_ARCH-AF16-30-D-U-T2R-4N7-10MSP-7030-AP | \$260.76 | \$1,043 |
| 4800 Lumen LED | 1 | 42W_ARCH-AF16-40-D-U-T2R-4N7-10MSP-7030-AP | \$265.70 | \$266 |
| 13300 Lumen LED | 1 | 141W_ARCH-M-AF48-140-D-U-T2R-4N7-10MSP-7030-AP | \$378.04 | \$378 |
| 27500 Lumen 250W HP Sodium Flood | 29 | 85W_UFLD-C25-D-U-66-Y-AP-4N7-7030-10MSP | \$537.88 | \$15,599 |
| 50000 Lumen 400W HP Sodium Flood | 8 | 128W_UFLD-C40-D-U-66-Y-AP-4N7-7030-10MSP | \$574.92 | \$4,599 |
| 1 | Total Estimated LED Streetlight Cost | | | \$354,870 |
| 2 | Total Estimated Acquisition Cost | | | \$445,550 |
| 3 | Total Estimated Annual Maintenance Cost | | | \$15,156 |
| 4 | TOTAL COST | | | \$815,576 |
| 5 | Total Estimated Rebates | | | \$106,461 |
| 6 | Total Estimated Annual Energy Cost Savings | | | \$63,764 |
| 7 | Total Estimated Rate 117 Savings | | | \$125,479 |
| 8 | TOTAL SAVINGS | | | \$295,703 |
| 9 | Simple Project Payback (4 divided by 8) | | | 2.76 |



The formula in the Financial Analysis accounts for items 5, 6, & 7 as yearly recurring energy cost savings, including rebates, as well as rate 117 savings. However, the rebate would be a single occurrence positive cash flow, very likely right after the installation completion. Therefore, for analysis purposes, we recommended the following as a simple payback formula:

Total cost (excluding annual maintenance cost) minus total estimated rebates equals net project cost, which is then divided by the sum of the total annual energy and cost savings and the total rate 117 savings, including the annual maintenance cost:

| | | |
|----|--|------------------|
| 1 | Total Estimated LED Streetlight Cost | \$354,870 |
| 2 | Total Estimated Acquisition Cost | \$445,550 |
| 4 | TOTAL COST | \$800,420 |
| 5 | Total Estimated Rebates | -\$106,461 |
| 6 | NET PROJECT COST | \$693,959 |
| 7 | Total Estimated Annual Energy Cost Savings | \$63,764 |
| 8 | Total Estimated Rate 117 Savings | \$125,479 |
| 3 | Total Estimated Annual Maintenance Cost | -\$15,156 |
| 9 | TOTAL SAVINGS | \$174,086 |
| 10 | Simple Project Payback (6 divided by 9) | 3.99 |

Proposed LED Replacements

At the RFP stage, RTE is proposing Eaton Lighting (former Cooper Lighting) Archeon Series and UFLD Series LED luminaires as LED replacements. The proposed LED luminaires are smart-ready luminaires with 7-pin receptacles and dimmable drivers.

As described in section 4.3., RealTerm Energy is a product agnostic integrator and therefore will collaborate with the Town to select the most appropriate product(s) following the GIS audit and pilot installation phases.



Lighting Control System

As a value-added option please find below our proposal for a CIMCON Wireless Control System.

| Item | Description | Qty |
|-------------------------------------|--|------------------|
| Gateway-E | Wireless Gateway @ 120-277VAC "Ethernet" Version Note: Connects to customers Router. Does not include any cellular fees for Communications between the Gateway and CIMCON LightingGale Central Management Software (CMS). | 3 |
| iSLC3100-7P-277-INV-A-G-IO-CATC-5-T | CIMCON intelligent Site Lighting Controller "Node" @ 120VAC - 277VAC In/Out 7-Pin Version/W Control System Configuration-Included 0-10VDC Dimming, On/Off, Fault Monitoring, Scheduling, AstroClock metering @ 0.5%, Class C Surge Protection, GPS, 10 Year Warranty NEMA 7-Pin Connector Mount (ANSI C136.41 Receptacle By Others) | 1,263 |
| LG-SaaS | LightingGale Web-based Software (CMS) Hosted by CIMCON the first year only. CIMCON Web-based CMS fee is billed annually, or 24, 36, 48 or 60 MO. contracts are available. | 1,263 |
| LGCONFIG | Control System Configuration Fee (Onetime program & configuration fee). | 1,263 |
| SUPPORT | Project Mgmt, Remote Support & Commissioning, & On-Site Training | 1 |
| Installation | Gateway installation | 3 |
| | TOTAL CONTROL PRICE ADDER | \$109,280 |
| | AVERAGE CONTROL UNIT PRICE ADDER | \$86.50 |



5.2. Financing

| Tax Exempt Lease Financing | |
|---|------------------|
| Item | |
| Estimated Interest Rate | 3.35% |
| Years Financed | 5 |
| Number of Payments | 5 |
| LED Upgrade Project (with Photocells) | \$354,870 |
| Acquisition from Utility | \$445,550 |
| Incentives | -\$106,461 |
| Net Project Cost - Photocell Option | \$693,959 |
| Financing Cost | \$71,274 |
| Estimated Annual Payments | \$153,047 |
| Estimated Project Cost Including Financing Cost | \$765,233 |
| Estimated Annual Savings | \$174,086 |
| Effective Payback | 4.4 |
| LED Upgrade Project with Controls | \$464,150 |
| Acquisition from Utility | \$445,550 |
| Incentives | -\$139,245 |
| Net Project Cost - Control Option | \$770,455 |
| Financing Cost | \$79,131 |
| Estimated Annual Payments | \$169,917 |
| Estimated Project Cost Including Financing Cost | \$849,586 |
| Estimated Annual Savings | \$174,086 |
| Effective Payback | 4.9 |

Annexe E you can find a Tax-Exempt Lease proposal with financing rates for 5,7 and 10 years prepared by Municipal Leasing Consultants (MLC).



| Net Project Savings over 5-year Loan Period (With Photocells) | | | | | | | |
|---|-----------------------------------|----------------------|------------------|------------------------|----------------------------|--------------------|------------------------|
| | Payments ("Outlays") by Town (\$) | | | Project Savings (\$) | | | |
| Year | Total Annual Financing Payments | Maintenance Services | Total (1) | Annual Utility Savings | Cumulative Utility Savings | Annual Net Savings | Cumulative Net Savings |
| 1 | \$153,047 | \$15,156 | \$168,203 | \$189,242 | \$189,242 | \$21,039 | \$21,039 |
| 2 | \$153,047 | \$15,459 | \$168,506 | \$194,919 | \$384,161 | \$26,414 | \$47,453 |
| 3 | \$153,047 | \$15,768 | \$168,815 | \$200,767 | \$584,928 | \$31,952 | \$79,405 |
| 4 | \$153,047 | \$16,084 | \$169,130 | \$206,790 | \$791,718 | \$37,660 | \$117,065 |
| 5 | \$153,047 | \$16,405 | \$169,452 | \$212,994 | \$1,004,711 | \$43,542 | \$160,606 |
| Total | \$765,233 | \$78,872 | \$844,105 | \$1,004,711 | | \$160,606 | |

| Net Project Savings over 5-year Loan Period (With Smart Controls) | | | | | | | |
|---|-----------------------------------|----------------------|------------------|------------------------|----------------------------|--------------------|------------------------|
| | Payments ("Outlays") by Town (\$) | | | Project Savings (\$) | | | |
| Year | Total Annual Financing Payments | Maintenance Services | Total (1) | Annual Utility Savings | Cumulative Utility Savings | Annual Net Savings | Cumulative Net Savings |
| 1 | \$153,047 | \$15,156 | \$168,203 | \$189,242 | \$189,242 | \$21,039 | \$21,039 |
| 2 | \$153,047 | \$15,459 | \$168,506 | \$194,919 | \$384,161 | \$26,414 | \$47,453 |
| 3 | \$153,047 | \$15,768 | \$168,815 | \$200,767 | \$584,928 | \$31,952 | \$79,405 |
| 4 | \$153,047 | \$16,084 | \$169,130 | \$206,790 | \$791,718 | \$37,660 | \$117,065 |
| 5 | \$153,047 | \$16,405 | \$169,452 | \$212,994 | \$1,004,711 | \$43,542 | \$160,606 |
| Total | \$765,233 | \$78,872 | \$844,105 | \$1,004,711 | | \$160,606 | |

5.3. Maintenance Costs

10-Year Routine Maintenance Cost

| | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 | YEAR 7 | YEAR 8 | YEAR 9 | YEAR 10 |
|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Monthly (Per Fixture) | \$1.00 | \$1.02 | \$1.04 | \$1.06 | \$1.08 | \$1.10 | \$1.12 | \$1.14 | \$1.16 | \$1.18 |
| Yearly (Per Fixture) | \$12.00 | \$12.24 | \$12.48 | \$12.72 | \$12.96 | \$13.20 | \$13.44 | \$13.68 | \$13.92 | \$14.16 |
| Estimated Total | \$15,156 | \$15,459 | \$15,762 | \$16,065 | \$16,368 | \$16,672 | \$16,975 | \$17,278 | \$17,581 | \$17,884 |

Clarifications

1. The monthly per-fixture price includes the labor warranty maintenance of the failed LED luminaires and photocells during normal business hours, Monday through Friday, provided that the failure rate does not exceed 1% annually. If this failure rate is exceeded, these failures will be considered catastrophic failures and must be negotiated in good faith between Realterm Energy, the municipality and the failing equipment manufacturer.
2. If a luminaire is not replaced (i.e. photocell failure, wire failure, etc.) its lenses will be cleaned during the repair.
3. Preventive maintenance: Annual visual inspection of all the streetlights to determine maintenance requirements



The routine maintenance cost does not include maintenance costs related to the lighting infrastructure as fuses, wires, brackets, arms and poles, etc. Those items will be billed based on time and materials, as required.

Emergency Repair Services

Emergency Repair Services are based on a time and materials basis.

| Emergency Repair Services | | |
|--|-------------|----------------------|
| ITEM | Unit | Unit Price Y1 |
| Service call rate per hour (including labor and equipment). | Each | \$270.00 |
| Call out rate (minimum fee for a service call). | Lump Sum | \$675.00 |
| Overtime rate per hour, weekday (before 7:00am or after 4:00pm). | Each | \$390.00 |
| Overtime rate per hour, weekend and holidays. | Each | \$474.00 |
| Materials (mark up on cost). | Percentage | 18% |

Please note: The above rates are valid for the first year. From the second year, the rates will increase annually by 2% inflation rate.

5.4. Financing Options

The cash flows associated with implementing energy efficiency projects create unique opportunities for alternative financing structures. RealTerm Energy recommends a Tax Exempt Lease-Purchase (TELP) agreement.

Tax Exempt Lease-Purchase Agreement (TELP)

Numerous municipalities have opted for TELP for their LED upgrades. RealTerm Energy possesses extensive experience in structuring this financing option. **We have provided a preliminary TELP financing model in our fee proposal.**

Advantages of TELP

- No creation of debt
- Typically, no voter approval needed
- Conservation of working capital
- Building of Equity
- Full ownership
- Flexibility, convenience and cost-effectiveness

Several other important factors to consider:

- Provides effective solutions during revenue shortfalls and other unexpected situations
- Enables the prompt acquisition of modern equipment and technology upgrades, and continues to provide quality public services
- Appropriates annually
- Ties to the useful life of the equipment
- Allows for the lowering of costs to administer a lease versus a bond



Energy Performance Contract (EPC)

A growing number of municipalities across North America are achieving performance efficiencies without increasing capital expenses and/or tax payer burden through EPCs. RealTerm Energy has successfully negotiated, installed and is now operating dozens of EPCs across North America.

Advantages of an EPC

RealTerm Energy:

- Finances 100% of the up-front capital investment by the Town with an agreement to provide a fixed repayment structure, based on the calculated energy savings.
- Guarantees the LED upgrade will yield a specified reduction in energy over a contracted term.
- Ensures the guaranteed savings generated will be sufficient to finance the total project without pursuing capital funding.
- Directs a share of the energy and maintenance savings to the municipality from year one.
- Includes streetlight maintenance costs in the monthly payment for a period of 10 years.
- Transfers any operating risks from the Town to itself.
- Ensures that at contract completion, the Town retains the full value of the energy and maintenance savings.

With an EPC, the Town can immediately take advantage of energy-efficient LED technology without having to add stress to its ratepayer base or borrow project funds. This frees up municipal resources that can then be assigned to other uses deemed important by the Town.



6. VALUE-ADDED SERVICES

As an additional element to our submission, we can also explore the economics and benefits of adding adaptive controls and other value-added services to its streetlight network, should the Town be interested.

Please note that we have included a smart controls deployment estimate within the fee proposal. Once the GIS audit is complete, the local infrastructure examined, and the Town’s needs analyzed in more detail, a more accurate smart control fee proposal can be developed.

6.1. Smart City Approach

RealTerm Energy takes a thoughtful approach to Smart City design, emphasizing the need for both citizen and city surveys to identify requirements, pain points, and opportunities. Once the specific benefits are well understood and have been appropriately considered, we can implement an open, scalable, secure and reliable platform which will allow the Town to spend as much, or as little as their needs dictate today, and as far as we can together see into the future.

Our Smart City initiatives are focused on the following four categories: Governance and Government; Society and Community; Environment and Natural Resources; and Urban Development and Infrastructure.

Evaluation and Deployment of Adaptive Controls

RealTerm Energy is uniquely positioned in that it has managed various adaptive controls and Smart City pilot projects on behalf of clients throughout the Northeast United States. RTE takes a thoughtful approach to adaptive streetlight controls and Smart City design, emphasizing the need for both citizen and municipal surveys to identify requirements, pain points, and opportunities. We only select an open, scalable, secure and reliable platform that allows our clients to spend as much or as little as their needs dictate today, and into the future.

We have deployed or are currently deploying adaptive controls and Smart City pilots and municipality-wide projects within the following municipalities:

- City of Brockton, Massachusetts (City-wide deployment)
- Town of Mount Desert, Maine (Pilot)
- Town of Wells, Maine (Pilot)
- Town of Falmouth, Maine (City-wide deployment)
- City of South Portland, Maine (Pilot)
- City of Peterborough, Ontario (City-wide deployment)

In October of 2017, RealTerm Energy conducted a Request for Proposal process for adaptive controls for approximately 7,500 luminaires, inviting 9 of the largest adaptive streetlighting control manufacturers to bid. RTE ran another adaptive streetlighting controls RFP on behalf of the Village of Great Neck in Q4 of 2017. The list of respondents for both RFPs are listed below.

| Peterborough, Ontario (7,446 luminaires) | | Great Neck, New York (832 luminaires) |
|---|----------------------|--|
| RFP Respondents | | |
| DimOnOff Inc. | CIMCON Lighting Inc. | DimOnOff Inc. |
| Current (GE) | Acuity | Echelon Corp. |
| Philips Lighting | Telensa Inc. | Philips Lighting |
| Echelon Corp. | | CIMCON Lighting Inc. |



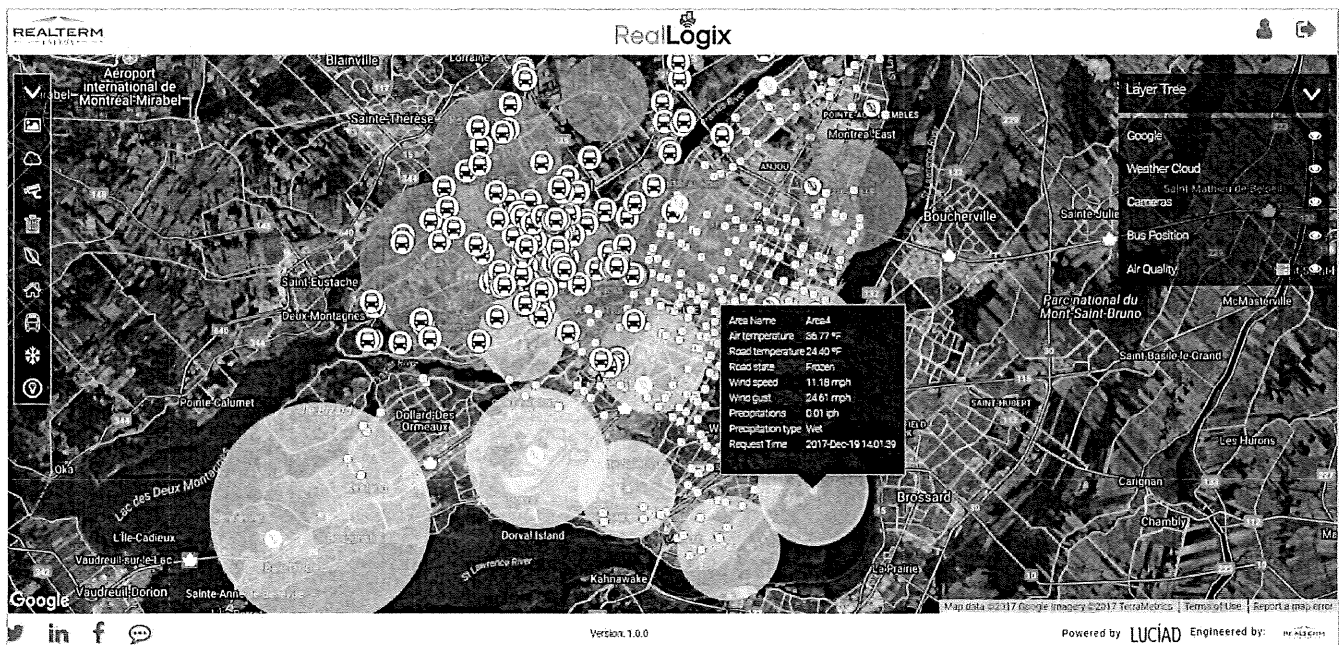
RTE was responsible for developing and evaluating the RFP responses and providing a final award recommendation to both municipalities. We verified the technical requirements (e.g. open communication protocols), company financials, installation base, and checked references. The Town will benefit from RTE’s experience in this space.

RealTerm Energy’s RealLogix Smart City Platform

RealLogix, developed by RealTerm Energy, is the first truly open Smart City platform solution that is hardware independent, and thus able to aggregate data from multiple competing solutions. RealLogix was designed with the goal to connect to and work with all.

RealLogix seamlessly fuses data from multiple sources, sensors, and systems into a single, real-time visualization map-based interface powered by Luciad. The intuitive touch interface provides all the GIS functionalities to pinch & zoom as well as pan & tilt. This platform aggregates real-time data from multiple systems onto a single interactive map, permitting the visualization of real-time information to create a holistic view of the area. RealLogix is accessible from any device with a web browser and uses a military grade GIS distribution engine capable of transmitting millions of data points in real time.

In its 2017 POCD, the Town of Westport cited a number of citizen concerns, among them, traffic congestion and parking. These are both issues that can be addressed with the RealLogix Smart City platform. Using the app, citizens will be able to avoid congested areas, find better routes and locate parking spaces.



Key Features:

- Displays multiple layers of data sources in a real-time geospatial visualization platform (examples: Water Sensors, Buses, Traffic Flow, Live Traffic Cameras, Traffic Accidents, Streetlight Controls, Parking, Citizen Applications)
- Open data ecosystem – enables integration to almost any subsystem for easy connection to third party systems



- Data exchange between layers creates synergies and enhanced value
- Built-in weather information, including valuable street-level micro-climate forecasts for public works crews and first responders
- Option to quickly & easily add private data layers
- Customizable presentation layer allows for a unique look and feel for each organization/city
- Capability to add algorithms to create synergy between the different layers
- Options to provide/extend Public Wi-Fi coverage, Micro Cell for cellular densification, and edge processing for advanced applications



WESTPORT, CONNECTICUT

WESTPORT GREEN TASK FORCE
TOWN HALL, 110 MYRTLE AVE.
WESTPORT, CONNECTICUT 06880
greentaskforce@westportct.gov

September 24, 2018

Westport Board of Finance
Westport Town Hall

Re: October 3, 2018 Agenda items

Dear Board Members,

The Green Task Force has been asked by Public Works Director Peter Ratkiewich to comment on an item on the Agenda for the October 3, 2018 meeting, namely the project to purchase the Town's streetlights from Eversource with the intention of replacing the lights with LED streetlights.

When this program was first established in 2014, the Green Task Force endorsed it. The program will cut the Town's utility usage, which will reduce its greenhouse gas emissions and cost our taxpayers less in electricity bills. Additionally the LED lighting can last for up to a 20-year lifespan instead of the current 5 to 7 year lifespan of typical high-pressure sodium lighting. The savings from the program will pay for itself within 4 to 5 years, after which the Town will realize saving of 40 to 60 percent of its electricity bill. This program is a win-win for the Town and for the environment, and is a step towards the Town goal of Net Zero by 2050. The Green Task Force fully endorses the project.

Sincerely,

A handwritten signature in black ink, appearing to read "David Mann", with a long horizontal line extending to the right.

David Mann
Chairman Westport Green Task Force



WESTPORT, CONNECTICUT

DEPARTMENT OF PUBLIC WORKS
TOWN HALL, 110 MYRTLE AVE.
WESTPORT, CONNECTICUT 06880
(203) 341 1120

September 17, 2018

Mr. James S. Marpe
First Selectman
Town Hall
Westport, CT 06880

Re: Appropriation from Capital & Non-Recurring Expenditure Fund
Burial of Communication Utilities from Avery Place to Gorham Island

Dear Mr. Marpe,

This office herein requests an appropriation from the Capital and Non-Recurring Expenditure Fund in the amount of \$328,000.00 for the burial of the remaining overhead communication utilities at the intersection of Main Street, Avery Place, and Parker Harding Road at Gorham Island. The project involves removing three poles and associated communications cables, one of which is only temporarily supported at this time.

This work will allow us to complete the Main Street streetscape project, complete the Main Street Traffic Signal project, prepare Parker Harding Plaza for reconstruction, and allow us to repave Main Street and Avery Place.

Attached is an Opinion of Probable Cost.

Respectfully,

Peter A. Ratkiewich, P.E
Director of Public Works

cc: Gary Conrad, Finance Director
G:\Pw_off\PAR\APPRQST\BurialCommUtilAveryGorhamCON

JUSTIFICATION FOR A CAPITAL PROJECT

DEPARTMENT INFORMATION

DEPT NAME: Department of Public Works – Engineering Division Date: 9/13/18

PROJECT NAME AND DESCRIPTION: Burial of Communication Utilities from Avery Place to Gorham Island

IS IT LISTED IN THE 5-YR CAPITAL FORECAST? YES [X] NO []
If no, why not?
If yes, answer the following two questions:
Which FY was the project first proposed? 2019
Which FY was the project first planned? 2013

Table with 2 columns: APPROXIMATE COST, CONTINGENCY (10%), and COST IN CAPITAL FORECAST. Values include \$297,675, \$29,767.50, \$327,442.50, and \$290,000. Total request is \$328,000.

SOURCE OF FUNDS: CAPITAL BOND [X], GEN'L FUND [], CNR [], GRANT [], STATE [], OTHER []
OTHER, DESCRIBE:
PAYBACK PERIOD:

PROJECTED START DATE: ASAP EST. COMPLETION DATE: Spring 2019
ESTIMATED USEFUL LIFE: 75 years

Is this project part of a larger capital project? NO

Has an RFP been issued? YES [] NO [X]
Have bids been received? YES [] NO [X] Number of bids received: Bid invitation to be issued 10/18 for winter or spring construction
Was the lowest bid the winner? YES [] NO [] If not, why?

Who will benefit from the project? All who visit the Downtown area. This project is to improve the Streetscape in conjunction with the new Main Street Sidewalks and Downtown Plan by removing the three utility poles going from Avery Place to Gorham Island. Electric utilities have already been buried in 2014. Cable and Frontier are the only utilities left on the poles. The pole at the corner of Avery and Main formerly held the traffic light which was replaced in 2016. The pole at Gorham Island is temporarily guyed off to two Concrete blocks because the mud anchor for the pole let go in 2014. The third pole is in between. The lines need to be buried before we repave Main Street and before we install thermoplastic decorative crosswalks, which was scheduled for 2018 but has been delayed until 2019..

Is it a replacement? YES NO

If yes, describe condition of what is to be replaced: _____

Pictures attached? YES NO

What other approvals/reviews are necessary to begin this project? RTM, and BOS

FINANCE


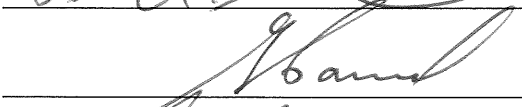
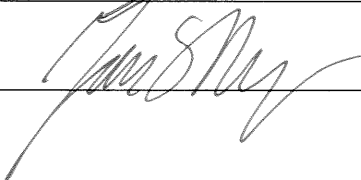
This section to be completed by the Finance Director.

EFFECT ON TOWN FINANCES, INCLUDING DEBT SERVICE:

IF APPROVED:

IF NOT APPROVED:

REVIEW/SIGN-OFF

| | | |
|------------------|---|---------------|
| DEPARTMENT HEAD |  | DATE: 9/17/18 |
| FINANCE DIRECTOR |  | DATE: 9/18/18 |
| FIRST SELECTMAN |  | DATE: 9/17/18 |