



RESPONSE TO REQUEST FOR PROPOSALS

# Improvements to the City Streetlight System

City of Sanford, Maine

November 6, 2019

**SUBMITTED BY**

The Efficiency Network (TEN)  
1501 Reedsdale Street, Suite 401  
Pittsburgh, PA 15233

**Jim Schriver**

Director, Smart City Solutions  
412-992-1397  
jim.schriv@tensaves.com





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## 1. Cover Letter

Mr. Ian Houseal, Director of Community Development  
City Manager's Office, 3<sup>rd</sup> Floor  
City Hall, 919 Main Street  
Sanford, ME 04073

Dear Mr. Houseal:

On behalf of The Efficiency Network, Inc. (TEN), I am pleased to present you with TEN's response to your Request for Proposals for the City of Sanford, Maine's project to improve the City's streetlight system. Our team at TEN is excited by the opportunity to work with The City, and believe our experience from projects in **Portland, Scarborough, Lewiston, and Belfast** will bring significant value to The City, should we be fortunate to be selected as your contractor for this important project.

We believe TEN is the right partner for Sanford, primarily for two reasons:

**1. We are best suited to help Sanford reach your objectives as outlined in Section 2 of your RFP.** Specifically, here are our credentials relating to the first and last bullets under "Objectives":

- a. We maintain relationships with large financial institutions to help finance streetlight and Smart City projects; our last two financing arrangements in Maine were municipal leases for 2.05% and 2.79%; we look forward to helping Sanford secure the most competitive rate available in the market.
- b. TEN has the most Smart City experience of any firm currently executing streetlight and Smart City projects in Maine. We look forward to using this experience to help Sanford understand the multiple ways to leverage your fiber network and advance your various Smart City goals.

**2. We have BROAD EXPERIENCE and an EXCELLENT REPUTATION in Maine** for understanding what cities and towns are looking for and providing unbiased advice to our clients. Specifically, we look forward to assisting Sanford with the following:

- a. Being a City advocate with Central Maine Power. We've been working with CMP since 2017, having negotiated the first streetlight buyback in Maine, and establishing the workflow that allowed other cities to buy their lights and move forward with their street lighting project.
- b. Assisting the City with fully reconciling your lighting inventory. Other communities rarely understand exactly what lights they have, where they are located, how much they're paying for them, and what upgrade options exist. TEN looks forward to helping Sanford determine which of the following lights located in your City could be a part of your project:





- c. Cities really appreciate the value we bring—just ask the references we list in the following pages. Cities and towns who work with TEN find our team to be smart and flexible, our advice to be solid and unbiased, and our philosophy to be one of collaboration, not dictating an approach. We work toward the goal of what is always in the best interest of each municipality. We know this project is important to your City, and we'd like to help you get it done right.

Our experience with streetlight maintenance in other cities has shown how beneficial a streetlight control system can be in notifying the City when a failure has occurred. While we recommend Sanford consider the benefits of a control system, we are prepared to provide streetlight maintenance whether you have a control system or not.

It is our hope that TEN's **expertise** and **passion** comes through in this response (the information contained accurately describes the services we provide) and that TEN is granted the opportunity to help the City work through the different lighting and technology decisions associated with this project. We humbly believe that TEN is exactly the type of partner that can drive the greatest results for the City, working diligently, thoughtfully, and with a sense of urgency to deliver a project in a timely manner.

Our goal is to build a relationship with the community that helps deliver tremendous value—in terms of savings and technological improvements—through these projects. We sincerely thank you for the opportunity to submit this response to the City of Sanford and we look forward to working with you to deliver value to your community.

Robert G. Campbell, President



## 2. Descriptions of Relevant and Similar Projects

### City of Portland, ME

#### Portland, Maine

The City of Portland, Maine relied on TEN for the investigation and validation of the various vendor partners for an LED streetlight conversion, intelligent lighting controls, and numerous Smart City technologies. Portland, a community which embraces its environment, green technologies and Smart City opportunities, found TEN to be a dedicated partner in building the foundation of its Smart City.



After working together to uncover and define the needs of the City, TEN brought objective and fact-based assessments to the City for each major component of the project. The partnership between the City and TEN yielded an effort that defined the important components of each decision: balancing cost with lighting quality or system performance, while also including important elements such as support, warranty, and energy consumption.

#### Scope of Services

- Comprehensive Lighting Upgrade
- Smart Cities Upgrades
- 6,500 Lights converted

**"We are very pleased with the job TEN Connected has done and is doing for our City.** They helped us through the complicated process of purchasing the existing streetlights from our utility and have assembled a great team to convert them to LED. They have helped us evaluate the numerous options for lighting equipment, lighting controls, and smart city technologies in a very fair and objective manner. Everyone at TEN Connected has been great to work with. They are helping us maximize our resources for the benefit of our citizens and visitors."

-Troy Moon, Sustainability Coordinator, City of Portland

#### Project Overview

<b>Project Size</b>	<b>\$8.5M</b>
<b>Annual Savings</b>	<b>\$1.1M</b>

**Contact:**  
**Troy Moon**  
Sustainability Coordinator  
207-756-8362  
[thm@portlandmaine.gov](mailto:thm@portlandmaine.gov)



## City of Lewiston, ME

### Lewiston, Maine

The City of Lewiston selected TEN after we proved to be the most qualified and cost effective. TEN’s team worked with Lewiston to determine its luminaire manufacturer and color temperature, assess the value of controls, select a local electrical contractor, and negotiate with CMP on several ownership and policy issues. While the City had owned most of its streetlights, there was some dispute as to whether the City must comply with newer guidelines required by CMP. TEN used its relationship with CMP and technical knowledge to support Lewiston in its conversations, which ultimately resulted in decisions in Lewiston’s favor.

In working with TEN, Lewiston found a partner that was both cost effective and knowledgeable, and ultimately decided to double the size of its project in order to include all the City’s fixtures. TEN Converted 100% of Lewiston’s 2,551 streetlights in 4 months.

### Scope of Services

2,551 Streetlight Fixtures



**"TEN has been great to work with on our street Light conversion project. They staged all materials in preparation of the project, so that once final authorization was given they moved efficiently and professionally to complete the project. They kept the community apprised of their progress on a daily basis through a GIS interface. They performed all their work with very little impact to the traveling public. They replaced over 2,500 fixtures in a seamless and highly professional manner."**

- Dale F. Doughty Public Works Director, City of Lewiston, Maine

### Project Overview

**Project Size**            **\$1.0M**  
**Annual Savings**      **\$122,569**

**Contact:**  
**Dennis Caron**  
Electrical Superintendent  
**207-513-3078**  
**dcaron@lewistonmaine.com**



## City of Harrisburg, PA

### Harrisburg, Pennsylvania

The City of Harrisburg, Pennsylvania selected TEN to convert the City's street lighting system to state-of-the-art LEDs. TEN worked with Harrisburg through its streetlight buyback from local utility PPL and took approximately 6 months to install and commission 6,000+ fixtures. This project was financed through the first major borrowing by the City after going into receivership, creating cash flows that supported a number of community investments.

TEN delivered to Harrisburg as part of the project a comprehensive asset inventory audit of the entire street lighting system, loaded onto Harrisburg's GIS system. All of the roadway and street lighting in Pennsylvania's state capital that was owned by the City, including bridge lighting, is illuminated with LEDs with intelligent controls.

Additionally, TEN delivered through this project other decorative lighting solutions to enhance the community further. In both the Market Street Bridge project and Harrisburg's Band Shell project, TEN delivered color changing artistic LED's that can be set to different schedules with colors and timing in order to engage the community further.



Market Street Bridge, Harrisburg, PA



### Scope of Services

6,100 Streetlight Fixtures



"The new LED streetlights are not only more energy efficient, they are brighter than the old lighting. I am confident a brighter Harrisburg will mean a safer and more beautiful city for us all.

- Mayor Eric Papenfuse

### Project Overview

<b>Project Size</b>	<b>\$3.6M</b>
<b>Annual Savings</b>	<b>\$510,333</b>

### Contact:

**Wayne Martin, P.E.**

City Engineer

717-315-4255

[wsmartin@cityofhbg.com](mailto:wsmartin@cityofhbg.com)



## Town of Scarborough, ME

### Scarborough, ME

When the Town of Scarborough decided to buy their streetlights from CMP and upgrade them to LED, they issued an RFP and ultimately selected TEN as their partner.

TEN helped Scarborough negotiate with CMP for the purchase of roughly 1100 streetlights located in their town, and later assisted with reconciliation of the CMP inventory against the actual lighting inventory, identifying lights on the utility bill which no longer existed.



Scarborough was very interested in obtaining the substantial energy and cost savings associated with an LED upgrade, but also wanted to preserve the intimate aesthetic that existed in their community. TEN assisted the Town in reviewing various color temperatures and fixture manufacturers to select the lights that fit their needs. Additionally TEN helped the Town review the Efficiency Maine rebate programs and eligible products, to provide the most cost-effective project possible.

Beyond just the lighting portion of the project, the Town needed help understanding its options around several Smart City initiatives, including Municipal WiFi and Traffic Flow Improvement technologies. TEN assisted the Town with both projects, helping to educate the decision makers and provide various options for the Town to consider.

**"TEN has been a great part of our team, helping our Town make intelligent decisions regarding our Street Light Conversion project. There are hundreds of possibilities, and TEN has helped us select the components that are most meaningful to us."**

- Kerry Strout Grantham, Sustainability Coordinator, Town of Scarborough, Maine

### Scope of Services

1,100 Streetlight Fixtures



### Project Overview

**Project Size**      **\$750K**  
**Annual Savings**    **\$102,250**

### Contact:

**Mike Shaw**

Director of Public Works

(207) 730-4400

[mshaw@scarboroughmaine.org](mailto:mshaw@scarboroughmaine.org)



### 3. References

Municipality/State	Contact Information	Construction Start	# of Lights Converted	Fiber and Smart City Application Development
Town of Scarborough, ME	Michael Shaw—Public Works Director mshaw@scarboroughmaine.org (207) 730-4400	June 2018	1,100	Yes
City of Portland, ME	Troy Moon—Sustainability Coordinator thm@portlandmaine.gov (207) 756-8362	January 2018	6,500	Yes
City of Lewiston, ME	Dennis Caron—Electrical Superintendent dcaron@lewistonmaine.gov (207) 513-3078	January 2019	2,550	Consulting
City of Belfast, ME	Sadie Lloyd Mudge—City Planner slloyd@cityofbelfast.org (207) 338-1717 x125	June 2019	500	No
City of Harrisburg, PA	Wayne Martin, PE—City Engineer wsmartin@cityofhbg.com (717) 315-4255	November 2015	6,000	Yes



## Customer Feedback from Within the State of Maine

*"We are very pleased with the job TEN has done and is doing for our City. They helped us through the complicated process of purchasing the existing streetlights from our utility and have assembled a great team to convert them to LED. They have helped us evaluate the numerous options for lighting equipment, lighting controls, and Smart City technologies in a very fair and objective manner. Everyone at TEN Connected has been great to work with. They are helping us maximize our resources for the benefit of our citizens and visitors."*

*Troy Moon, Sustainability Coordinator, City of Portland, Maine*

*"TEN has been great to work with on our street Light conversion project. They staged all materials in preparation of the project, so that once final authorization was given they moved efficiently and professionally to complete the project. They kept the community apprised of their progress on a daily basis through a GIS interface. They performed all their work with very little impact to the traveling public. They replaced over 2,500 fixtures in a seamless and highly professional manner."*

*Dale F. Doughty Public Works Director, City of Lewiston, Maine*

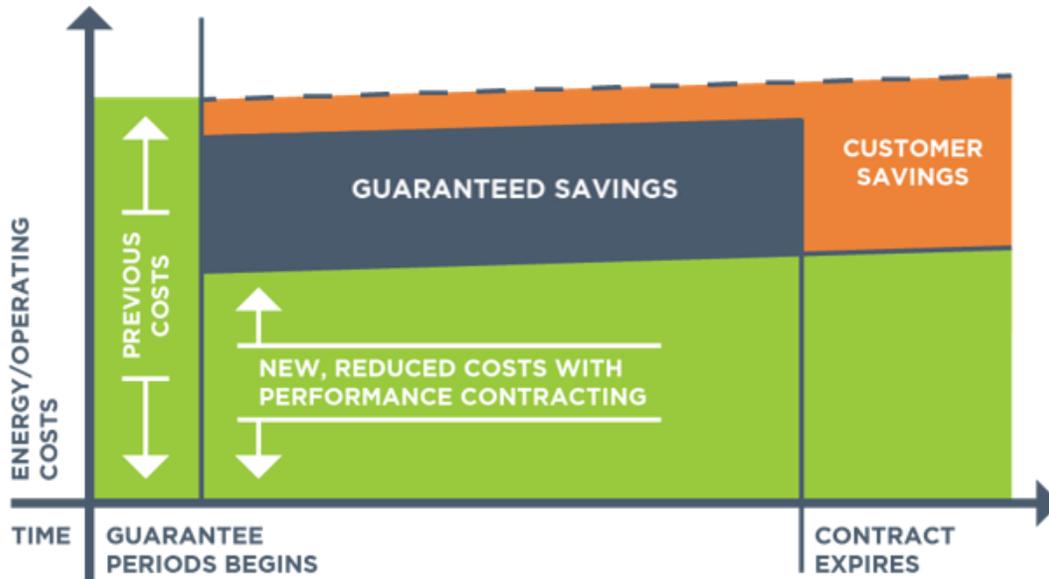
*"TEN has been a great part of our team, helping our Town make intelligent decisions regarding our Street Light Conversion project. There are hundreds of possibilities, and TEN has helped us select the components that are most meaningful to us."*

*Kerry Strout Grantham, Sustainability Coordinator, Town of Scarborough, Maine*



## 4. Experience with Performance Contracting and Project Financing

TEN is well qualified to provide the City of Sanford with custom financing options for funding 100% of the project. Because the economic and financial structure of each project is just as important as the technical outcomes, the proven financial capabilities of our team will result in the lowest possible cost financing options available at the time of financing. Since the streetlight costs are budgeted annually, the significant savings generated by an LED upgrade project will finance the capital costs required to complete the project, and often create additional cash flow that can be invested into important City projects – including Smart City initiatives.



Our team’s experience in creating project financing for municipal customers over the past several decades will enable TEN to assist Sanford in meeting its internal financial requirements. Financing structures can vary based upon the types of equipment and systems to be installed, the available savings to be leveraged, and the type of accounting recognition and treatment requested by the City. TEN will customize the terms of our contract for the City of Sanford to ensure that the City receives the absolute lowest cost financing.

TEN does not have any monetary interest in financing the project, nor will TEN receive any commissions related to a financed project should TEN introduce the City to an eventual funding source.

# 2.05%

## 10 Year Municipal Lease

*TEN recently obtained aggressive finance rates for a Street Light upgrade and Smart City installation*

### Tax-Exempt Lease Purchase Option

A third-party funded, tax-exempt lease is a common method of funding LED street lighting conversion projects. The tax-exempt lease structure generally offers the advantage of quick availability of funding, low issuance costs and flexible payment terms that can match up to the savings cash flow, thereby always assuring the City borrowing the funds is cash flow positive, or at the very least, neutral.



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## 5. Bid Form

Please see the following pages for TEN's completed Bid Form.

# CITY OF SANFORD, MAINE

## IMPROVEMENTS TO THE CITY STREETLIGHT SYSTEM

**BID DATE: WEDNESDAY, NOVEMBER 6, 2019 @ 11:00 AM**

**PRE-BID: WEDNESDAY, OCTOBER 2, 2019 @ 11:00 AM**

### PROPOSAL FORM

TO: Ian Houseal, Director of Community  
Development City of Sanford City  
Hall, 919 Main Street Sanford ME  
04073

Having carefully examined the existing conditions affecting the work, we, the undersigned, hereby agree to provide financing options, labor, material, supplies, equipment, facilities, disposal, photometric analysis, digital reports, processing for all utility rebates and rate schedules, and maintain the streetlight system in strict accordance with, the Specifications dated **September 12, 2019** as prepared by the City of Sanford and that the undersigned will accept in full payment thereof of the following sums and schedules to wit:

1)	Audit / Project Design Phase (audit and project design per fixture installed) <b>Perform services as outlined in Specifications section of RFP</b>	<b>\$ 9.80</b> /fixture
2)	Construction Phase (labor per fixture to install cobra head-type luminaire on utility poles including all associated equipment / fixture) <u>(excluding Police Department Traffic Detail where required.)</u> <b>Perform services as outlined in Specifications section of RFP</b>	<b>\$ 83.87</b> /fixture
3)	Closeout Phase (closeout of the project per fixture installed) <b>Perform services as outlined in Specifications section of RFP</b>	<b>\$ 4.45</b> /fixture

4) System Maintenance Phase

**Routine Maintenance (describe includes and exceptions)**

This Specification sets out the minimum requirements for the routine maintenance of all the equipment associated with the street lighting so that they remain in good condition, operate as designed and meet the specified requirements. Equipment to be replaced as required under this Specification of Routine Maintenance include but are not limited to:

- \* Luminaires, 10 year manufacturer hardware warranty
- \* Photoelectric cells, 10 year manufacturer hardware warranty
- \* Fuses/ HOLDERS
- \* Surge Protection

A key to a fully functional system is the regular inspection, adjustment and minor servicing that is required to keep the streetlights including its support structures in good operating order. The regular inspection and servicing of all lights and associated equipment is necessary to ensure public safety. For the lighting inventory of Sanford, it is recommended to inspect 25% of the lighting inventory per year on a rotating schedule. Regular inspection and servicing of all on-site equipment and must include: (a) Functional Checks (b) Preventative Maintenance Requirements.

Normal working hours for routine maintenance and monitoring: 6am to 6pm Monday to Friday, excluding public holidays.

**Outage detection - LED Street Lighting Monitoring**

If Sanford elects to use a complete or partial Lighting Control system, TEN would actively monitor that system to detect when streetlight outages occur. Typically this results in non-functional lights being repaired before the City residents noticing the outage. If Sanford decides against using a Lighting Control System, then TEN would leverage the existing methods in place to detect streetlights which are not working, and would coordinate the repair in the timeline defined. TEN will provide reports of all reported incidents at a frequency that is acceptable to the City. We're ready to assist you with your service request.

Year 1 (lump sum for routine maintenance/fixture)	<b>\$ 4.40</b> /fixture
Year 2 (lump sum for routine maintenance/fixture)	<b>\$ 4.57</b> /fixture
Year 3 (lump sum for routine maintenance/fixture)	<b>\$ 4.75</b> /fixture
Year 4 (lump sum for routine maintenance/fixture)	<b>\$ 4.95</b> /fixture
Year 5 (lump sum for routine maintenance/fixture)	<b>\$ 5.14</b> /fixture

**Damage and emergency maintenance (describe includes and exceptions)**

This Specification sets out the minimum requirements for the non-routine maintenance of all the equipment associated with the street lighting so that they remain in good condition, operate as designed and meet the specified requirements. The call center will be the same for both routine maintenance and emergency maintenance. The repair and/or replacement of equipment damaged or defective through any cause and shall require equipment to be replaced as required under this Specification of Emergency Maintenance include but are not limited to:

A twenty-four (24) hours per day seven (7) days per week fault attendance service for the purpose of inspection, identification and repair of reported site malfunctions.

An adequate back-up service to enable permanent repairs and rectification of all site deficiencies.

A fully equipped workshop facility for the purpose of testing and repairing equipment removed from the maintenance site

(d) Labor (not material cost) for non-routine maintenance items such as:

- \* Cable inside post to lamp/fixture head
- \* Contactors
- \* Circuit breakers
- \* Power disconnects
- \* Pole replacement, knockdowns
- \* Arm or mast replacements
- \* Pole base repairs
- \* Hand hold cover replacements
- \* Pole painting
- \* Luminaire cleaning
- \* Tree trimming
- \* Utility bill reconciliation

The labor rate represents a bucket truck with two technicians, based per hour from portal to portal. A full hour charged for the first hour with and additional time billed to the half hour. Therefore, each call to Sanford would have a one-hour charge for travel to and from and then the time needed for each repair and travel within the area (pole to pole). With all service customers we recommend grouping a few fixtures together to best utilize the travel expense.

Warranty arrangements would be made by TEN with the lighting manufacturer to provide an inventory of the selected fixtures and photocells (or control nodes) used in the community (as they are all under manufactures warranty during the timeframe that we are discussing). TEN would handle the return logistics to the manufacture for replenishment.

Labor ( <u>specify units</u> ) (repair damaged or emergency maintenance of fixture)	<b>\$ 230/hr</b> / <del>fixture</del> <i>includes bucket truck and qualified labor</i>
Materials mark-up (percentage)	<b>10%</b>

5)	Luminaires and Equipment:	
<p>Cobra-head style luminaires including associated equipment (propose up to six models including all associated equipment installed)</p> <p><i>TEN is proposing two high-quality manufacturers that meet Sanford's requirements – <b>American Electric and Cooper</b>. AEL was selected by Lewiston, ME for their streetlight project. Cooper was selected and installed by Belfast, ME for their streetlight upgrade project. Cooper has the added benefit of having Smart City options built-in, allowing for Sanford's fiber to be connected directly into the luminaire, providing high-bandwidth connectivity for video surveillance or traffic monitoring applications.</i></p> <p><b>As requested, price below includes light, long-life photocell, CMP-approved fuse holder &amp; fuse</b></p>		
1.	Cooper Archeon family, <b>31-watt</b> LED cobra head, with optional internal fiber connectivity	<b>\$ 186.33</b> /fixture
2.	Cooper Archeon family, <b>54-watt</b> LED cobra head, with optional internal fiber connectivity	<b>\$ 198.51</b> /fixture
3.	Cooper Archeon family, <b>83-watt</b> LED cobra head, with optional internal fiber connectivity	<b>\$ 217.44</b> /fixture
4.	AEL Autobahn family, <b>31-watt</b> LED cobra head	<b>\$ 196.33</b> /fixture
5.	AEL Autobahn family, <b>60-watt</b> LED cobra head	<b>\$ 228.20</b> /fixture
6.	AEL Autobahn family, <b>81-watt</b> LED cobra head	<b>\$ 275.52</b> /fixture
<p>Decorative fixture retrofits (<b>OPTIONAL BID</b>) standard </p> <p>(labor and materials per fixture for each type of retrofit fixture)</p> <p><b>As requested, price below includes lamp, CMP-approved fuse holder &amp; fuse, qualified labor</b></p>		
1.	Main St, Sanford <i>TEN believes this fixture can be successfully retrofitted to LED</i>	 <b>\$ 211.48</b> /fixture
2.	Central Park, Sanford <i>TEN believes this fixture can be successfully retrofitted to LED</i>	 <b>\$ 211.48</b> /fixture
3.	Main St, Springvale <i>TEN believes this fixture is already LED – may not need action; if selected, will help City determine if color temp and remaining lamp life is sufficient</i>	 <b>maybe \$0</b> /fixture
4.	Acorn or Traditional Post Top fixtures LED upgrade <i>TEN believes these fixtures can be successfully retrofitted to LED; Due to the wide range of fixture types in the City, TEN may need to use different retrofit methods</i>	 <b>\$ 211.48</b> /fixture
5.	Flood light LED upgrade <i>TEN believes this fixture can be successfully retrofitted to LED</i>	 <b>\$ 230.12</b> /fixture

<p>Brackets necessary for new streetlight locations (propose up to three brackets including all associated equipment installed)</p> <p><b>Price below includes hardware only – no labor or installation included</b></p>		
1.	Bracket, 2" diameter, 2ft long	<b>\$ 83.00</b> /bracket
2.	Bracket, 2" diameter, 4ft-6ft long	<b>\$ 122.00</b> /bracket
3.	Bracket, 2" diameter, 8ft long	<b>\$ 138.00</b> /bracket
Miscellaneous material mark-up where not otherwise stated (percentage)		<b>10%</b>

The below is a tentative/proposed schedule for the Sanford Streetlight project. This supports the estimated completion assertion on the next page.

Task Title	Task Duration in weeks	Task Description
Audit / Project Design Phase	3	TEN Connected shall complete final design from the date of execution of the Guaranteed Energy Savings Agreement.
Final Design Review	1	Customer shall review final design from the date of presentation by TEN Connected and suggest any changes thereto and commence with notice to proceed
Construction Phase	6	Weeks after Customer's Final Design Approval.
* Substantial Project Completion	3	Weeks after installation commencement.
Closeout Phase	4	Weeks after Lighting Substantial Completion, 30 days of operation acceptance
<p>* Task duration represents <u>2 working crews in 2</u> independent areas throughout the City. Crew availability dependent, this time can be increased or decreased to meet the customer's goals for calendar length of completion. To accommodate weather challenges and scheduling delays, the crew will work from dawn to dusk when weather conditions permit.</p>		

List all Sub-Contractors:
<i>TEN has used several contracting partners within the Maine market, and is ready to deploy any or all of the following qualified contractors to provide installation and maintenance services for Sanford:</i>
<ul style="list-style-type: none"> <li>Sargent Electric Company (Installation Services) - Saco, ME</li> </ul>
<ul style="list-style-type: none"> <li>On Target Utility Services (Installation Services) - Gardiner, ME</li> </ul>
<ul style="list-style-type: none"> <li>Camille Electric (Warranty/Maintenance Services) - Biddeford, ME</li> </ul>
<ul style="list-style-type: none"> <li>Wakita Electric (Installation Services) - Shapleigh, ME</li> </ul>
<ul style="list-style-type: none"> <li>Casco Bay Electric (Installation Services) - Portland, ME</li> </ul>
<ul style="list-style-type: none"> <li>Laurel Environmental (Recycling Services) - WBE</li> </ul>

The undersigned certifies that the prices above include the cost of all work to complete the project as herein described, whether specifically stated or not.

<b>The undersigned estimates completion of the work by:</b>	<i>14 weeks after design approval</i>
The undersigned acknowledges the receipt of addenda #	<i>Yes, #1 and #2</i>

The undersigned further agrees that after notification by the City of the acceptance of his/her proposal, he/she will execute a contract with the City within thirty (30) days, Saturdays, Sundays and holidays excepted, and that he/she will commence the work within one hundred twenty (120) days after the execution of the contract unless otherwise specified in Supplemental Specifications or directed by the City in writing, and that he/she will prosecute the work to its completion.

The undersigned hereby further declares that the only person or parties interested in this proposal as principals are named below; that the proposal is made without any connection with any other person or party making any proposal for the same work; and that no person acting for or employed by the City of Sanford is directly or indirectly interested in this proposal or in any contract which may be made under it or in profits expected to arise therefrom, except as provided by the City Charter. The full names and addresses of all persons or parties interested in this proposal as principals are named below; (Give first and last names in full; and in case of a corporation, give names and addresses of President, Treasurer and Manager; and in case of a partnership, give names and addresses of members):

<b>The Efficiency Network (TEN)</b>
<b>President:</b> Robert G. Campbell, 1501 Reedsdale St. Ste. 401 Pittsburgh, PA 15233
<b>Treasurer:</b> Chris Niemiec, 1501 Reedsdale St. Ste. 401 Pittsburgh, PA 15233
<b>Manager:</b> Jim Schriver, 1501 Reedsdale St. Ste. 401 Pittsburgh, PA 15233

<b>FIRM NAME</b>	TEN
<b>INDIVIDUAL NAME</b>	Jim Schriver
<b>TITLE</b>	Director, Smart City Solutions
<b>LEGAL ADDRESS</b>	1501 Reedsdale Street
	Suite 401
<b>PLACE OF BUSINESS</b>	Pittsburgh, PA 15233
	USA
<b>FIRM'S IRS ID #</b>	45-4618116
<b>DATE</b>	November 6, 2019
<b>TELEPHONE #</b>	412-429-8888, ext 131
<b>FAX #</b>	412-429-8889
<b>E-MAIL ADDRESS</b>	Jim.schriver@tensaves.com
<b>SIGNATURE</b>	