LED Street & Outdoor Lighting Program

Funding provided by the District Local Technical Assistance program

Prepared for
MAPC Municipalities

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Executive Summary

The purpose of this project was to facilitate bulk purchasing of light-emitting diode (LED) roadway and outdoor area lighting for cities, towns, and other public entities in the Commonwealth. Under this proposed project, MAPC worked to coordinate demand and create group purchasing opportunities for LED replacements in outdoor lighting applications with interested municipalities and other public entities. MAPC also provided educational and networking opportunities for municipalities and public entities in the state. MAPC worked with key stakeholders to learn about and work to address associated challenges such as LED street light tariffs and streetlight buybacks; and spoke with industry representatives to get the most current information on LED lighting technologies.

In 2012, under DLTA funding, the LED Street & Outdoor Lighting Program became a statewide educational and purchasing effort that included the following activities: setting up a statewide contract for LED street and outdoor lighting products in collaboration with the state Operational Services Division (OSD), holding forums on LED conversions and streetlight buybacks, establishing an online community-of-practice for LED streetlight conversions through the Massachusetts Municipal Energy Group (MMEG), presenting at the annual Municipal Solid State Lighting Consortium (MSSLC) workshop in Boston, drafting and issuing an RFP for Streetlight Energy Management Services (EMS) pursuant to MGL Ch. 25A §11c on behalf of four (4) municipalities, and providing ongoing technical assistance and project support for LED streetlight conversions to municipalities and other public entities statewide.

Although participation in MAPC’s various events, subscription to general news and updates on the project, and use of the state contract is not restricted to the following list, the following entities submitted letters of interest to participate in this 2012 DLTA project throughout the year and are in various stages of considering LED streetlight conversions:

MAPC Region:

<table>
<thead>
<tr>
<th>Ashland</th>
<th>Beverly</th>
<th>Boston</th>
<th>Cambridge</th>
<th>Chelsea</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Dedham</td>
<td>Framingham</td>
<td>Gloucester</td>
<td>Manchester</td>
<td>Melrose</td>
<td>Marlborough</td>
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<tr>
<td>Maynard</td>
<td>Medfield</td>
<td>Medford</td>
<td>Medway</td>
<td>Melrose</td>
<td>Melrose</td>
</tr>
<tr>
<td>Natick</td>
<td>Newton</td>
<td>North Reading</td>
<td>Norwell</td>
<td>Quincy</td>
<td>Quincy</td>
</tr>
<tr>
<td>Reading</td>
<td>Sherborn</td>
<td>Swampscott</td>
<td>Wayland</td>
<td>Weymouth</td>
<td>Weymouth</td>
</tr>
<tr>
<td>Winchester</td>
<td>Winthrop</td>
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</tr>
</tbody>
</table>

Non-MAPC Region:

<table>
<thead>
<tr>
<th>Dennis</th>
<th>Fall River</th>
<th>Greenfield</th>
<th>Lowell</th>
<th>Newburyport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterling</td>
<td>Warwick</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other:

MA Department of Conservation and Recreation
Step 1: Statewide Contract FAC76

MAPC staff collaborated with the Commonwealth’s Operational Services Division (OSD) to incorporate a category for LED street lighting products in their solicitation for statewide contract FAC76: Maintenance, Repair and Operations (MRO) Products, Supplies and Equipment. MAPC developed evaluation criteria, specifications and a price file template for Category 6: Roadway/Street LED and helped review bids and submit clarifying questions in that category. The sample specifications developed by MAPC based on public bid documents from MA procurements and model specifications from the US DOE’s Municipal Solid-State Street Lighting Consortium (MSSLC) can be found in Appendix 1: Sample Specifications.

Minimum discounts were negotiated with qualified suppliers, with the goal of adding additional products and manufacturers as technology evolves and as advised by communities. The pricing structure is set up to provide greater discounts at greater purchase quantities. MAPC is offering the ongoing service of helping connect communities to aggregate purchases and achieve greater savings.

Use of Statewide Contract FAC76 is open to all public entities in the Commonwealth, including municipalities, state agencies, housing authorities and regional school districts. MAPC distributed the following detailed program information to public entities in the state that expressed interest in potential LED retrofits.

State Contract FAC76 & LED Products

MAPC has been working with the state procurement office, the Operational Services Division (OSD), to establish a list of pre-qualified vendors with pre-negotiated minimum discount rates, from which communities can purchase LED lighting products. This list of vendors is part of statewide contract, FAC76: Maintenance, Repair and Operations (MRO) Products, Supplies and Equipment. There are seven (7) categories of goods on this contract. LED street and roadway lighting is Category 6.

This contract is a work-in-progress, and more products/vendors can be added to it at a later point. In order to make it useful for everyone, communities are asked to review the products currently available and submit recommendations to MAPC as soon as possible.

Information on this contract will be posted to the MAPC website at:

http://mapc.org/led-street-lighting

To access the LED lighting category on FAC76, Category 6, on Comm-Pass:

1. Go to http://comm-pass.com/
2. Scroll down to the bottom of the page and click on “Search for a Contract”
3. Enter “FAC76” in the Document Number field and click “Search”

4. Click on the link that appears at the top of the page.
5. Click on the eyeglasses to view the contract.

6. The LED Street & Outdoor Lighting category of products is Category 6. In order to view vendors supplying products in Category 6, click on the Vendor tab.

7. As of 07/02/2012, there are three vendors supplying products under Category 6:
   a. Fred Davis Corporation
   b. Graybar Electric
   c. Standard Electric

8. To view the price file of a vendor on the contract, click on the eyeglasses.
9. Scroll down to the bottom of the page and click on the eyeglasses by the file titled “Category 6 Price File – Roadway/Street LED”

The price file will have information on fixture types based on the existing fixture they would be equivalent to replace, as well as fixture specifications and minimum percent markdowns. Pricing can be negotiated down from this point on an individual purchase basis.

At a glance: Products currently listed on the state contract include:

- Beta, Leotek, Hadco and GE cobraheads
- Beta and Hadco floodlights
- LUMEC and Hadco decorative post-tops
- GardCo wallpacks
Step 2: Roundtables, Workshops & Presentations

For most communities, converting streetlights to LED technology is a multi-step process that can present challenges due to lack of staff familiarity with policies, procurement processes, utility incentives and technologies associated with a retrofit project. In 2012, MAPC provided a series of workshops, presentations, and other services to help educate communities and other public entities considering streetlight retrofits, including:

- **November 3, 2011** – LED Streetlights Roundtable at MAPC
- **June 27, 2012** - LED Streetlights Program Kickoff at MAPC
- **August 2, 2012** – MAPC presentation at the Municipal Solid-State Street Lighting Consortium Workshop in Boston, MA
- **September 20, 2012** – Streetlight Buyback Roundtable at MAPC
- **LED Streetlight Purchasing Program Forum** on the Massachusetts Municipal Energy Group website

MAPC developed educational materials on key issues and challenges, such as utility streetlight tariffs (which had not been formally established at the creation of this program) and streetlight buybacks (a prerequisite to any municipal retrofit project).

MAPC created and distributed information on a variety of topics, here included as:

- Tariffs for LED streetlights;
- Questions to answer prior to beginning a streetlight retrofit;
- Facts on metered vs. unmetered lighting projects
- Accessing the LED streetlight forum on the MMEG website; and
- Streetlight Buybacks.

**Tariffs for LED Streetlights**

In most Massachusetts cities and towns, decorative street lights are individually metered and can be charged for the electricity they use. Cobrahead-style street lights are not. Instead, the utility has a count of these non-metered streetlights, and charges a rate for each pole based on estimated power draw, hours of operation, and maintenance costs (if the utility is responsible for streetlight maintenance). These rates are known as tariffs.
The Massachusetts Program Administrators have not yet established a tariff for LED street lighting technology. This means that when a community installs the more efficient LED technology, they continue to be charged at the less efficient rate, and do not realize the energy cost savings. Although there is cost savings associated reduced maintenance for LED technology, the inability to realize energy cost savings is generally prohibitive for communities that want to implement these street lighting projects.

The City of Boston recently procured 18,000 cobrahead LED streetlights. They have installed approximately 12,000 of the fixtures and report a positive public reception to the new lights. They were able to secure a combination of competitive pricing for equipment and labor, rebates, and an agreement (details uncertain) with NSTAR that will result in an anticipated payback time of under a year. This is significantly shorter than the payback times reported for other large scale LED retrofit projects implemented around the country, which tend to be between 5-7 years. This is due in large part to the inefficiency of Boston's previous fixtures.

**MAPC Project**

MAPC is exploring a group purchase of LED streetlights in collaboration with Boston, Cambridge, and several other MAPC communities in order to secure similarly competitive pricing. To make these projects cost-effective, MAPC would also like to find a way to:

a) negotiate a similar agreement as Boston with NSTAR/National Grid so that communities participating in the RFQ can capture their cost savings for this project; and/or

b) work with the Program Administrators, DPU, DOER, EEA, and any other relevant stakeholders to help write and adopt a new tariff for LED street lighting technology.

**Challenges**

- Lack of clarity on what needs to happen to establish a new tariff and who are the relevant stakeholders
- Complexity/time consuming nature of writing a new tariff for a still-emerging technology
- Lack of knowledge on the municipal side regarding both the tariff issue and the differences in technologies (high pressure sodium vs. induction vs. LED options)

**Streetlight Technology Overview**

<table>
<thead>
<tr>
<th>Technology</th>
<th>Efficiency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incandescent</td>
<td>Least efficient</td>
<td>Earliest streetlighting technology; rarely used</td>
</tr>
<tr>
<td>Mercury Vapor</td>
<td>Less efficient</td>
<td>Largely replaced incandescent in the 50s; most MA cities and towns have also phased these out</td>
</tr>
<tr>
<td>Metal Halide</td>
<td>Less efficient</td>
<td>Better than mercury vapor, but still fairly energy intensive. Light has good color rendering and a cooler color temperature.</td>
</tr>
<tr>
<td>High Pressure Sodium (aka High Intensity Discharge lamps)</td>
<td>Somewhat efficient</td>
<td>Most commonly used today. Light is “yellow” with poor color rendering, and (in Boston) has historically carried negative associations with high-crime neighborhoods.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Induction Lighting (aka Electrodeless Lamps)</td>
<td>More efficient</td>
<td>More efficient than HPS, with better color rendering and cooler color temperature. Sometimes preferred to LEDs as the technology has been around longer; allegedly manufacturers provide longer warranties.</td>
</tr>
<tr>
<td>LED Lighting (aka Solid State Lighting)</td>
<td>Most efficient</td>
<td>LEDs use 25% to 50% less energy than existing technology (usually compared to HPS). Greater efficiencies can also be achieved by installing a remote monitoring/controls system that manages lighting hours. They give off a cool, blue light color and have good color rendering.</td>
</tr>
</tbody>
</table>

**Questions to Answer in Planning a Streetlight Retrofit**

*Municipalities are responsible for administering their own projects on an individual basis, and should begin to answer the following questions as part of their planning process. Please note these questions pertain to retrofits of street or roadway lighting ONLY (e.g. unmetered cobraheads). See the next section for more information on metered, ornamental retrofits.*

1. **Do you own your streetlights?**
   - Currently, streetlight ownership is necessary in order to implement an LED retrofit

2. **Who is your utility?**
   - NSTAR, National Grid, and municipal utilities will have different incentives and tariff structures.
     - NSTAR can currently adjust their tariffs for retrofits on streetlights owned by the municipality.
     - National Grid currently cannot adjust their tariff, however they anticipate releasing a new LED streetlight tariff in 2013.
     - Municipalities should speak with their utility prior to engaging in a retrofit program in order to ensure that incentives are optimized

3. **Have you retrofitted other lights (e.g., parking lots, ornamentals, flood lights, wall packs) or conducted pilots?**
   - What were lessons learned?
   - What did people like? Community input is important to consider.

4. **Have you completed a streetlight inventory & audit?**
   - Compare utility records of lighting fixtures to actual installed lights through audits and testing of individual fixtures
   - Consult with local stakeholders (i.e., town planner, chief of police) on classifications (i.e., areas of high pedestrian conflict)
- Determine required lighting standards (IESNA RP-8)
- Parking lots, ornamentals, flood lights, wallpacks will all be available for purchase off the statewide contract (FAC76).

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**Streetlights vs. Ornamental (Metered) Lights**

MAPC’s LED program will help communities purchase a wide range of lights in addition to traditional cobrahead streetlights, including decorative pole lights, parking lot lights, flood lights and wallpacks. The process for receiving utility incentives and recouping energy cost savings is different for a streetlight as compared to these other lighting types due to the fact that streetlights are billed for electricity based on a tariff calculation, and the other lighting types are billed based on actual metered consumption.

**Streetlights**

Streetlights (e.g. cobraheads) are not individually metered for energy consumption. Instead, they are billed based on a predetermined formula for energy consumption called a **tariff**. Utility incentives for replacements of these types of fixtures are calculated based on kWh savings and are currently determined on a case by case basis.

- **NSTAR** is able to calculate a change in power consumption by comparing your existing fixture with the proposed replacement. This enables you to recoup energy savings. NSTAR currently provides an incentive of up to $0.25 per kWh saved.
- **National Grid** currently CANNOT recalculate their tariff to account for LED replacements. However, they have told LED stakeholders that they anticipate releasing a new tariff for LEDs in 2013.
- **Municipal utility** tariffs and incentives will vary based on the utility; information on municipal utility LED retrofits is limited at this point.

**Metered Lights**

Individually metered lights, such as decorative post-to fixtures, parking lot lights, flood lights, walllighters, etc. are NOT subject to the tariff issues. You can replace these immediately, which may be the preferred course of action for your community to become familiar with LED lights. The incentives for these fixtures are prescriptive (i.e. predetermined based on the fixture), but fixtures must have an EnergyStar rating, be on the MassSave list of eligible fixtures, and/or be on the Design Lighting Consortium list of qualified products.

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**Accessing LED Resources on the MMEG Forums**

The Department of Energy Resources (DOER) and the Massachusetts Municipal Association (MMA) have recently launched a collaborative online resource for staff and volunteers working on energy projects at the local level called the Massachusetts Municipal Energy Group (MMEG).
MAPC has established an invite-only group forum for this LED outdoor lighting program to which project participants can gain access.

To create an MMEG account:

1. Go to http://mma.mymemberfuse.com/
2. Click on “Not a member? Register now” (or click this link directly).
3. Enter your primary email address.
4. You will be sent login instructions from MMEG’s web administrator. Follow those instructions to set up your account on the MMEG site.

To gain access to the private LED forum:

5. Email Helen Aki at haki@mapc.org with the subject line “MMEG LED Forum Invite”
6. Include your name and the email address associated with the MMEG account
7. You will receive an email invite to the LED forum. Click to accept the invite.
8. Access the LED forum under the “Group Forums” tab on the MMEG homepage.

9. The LED Streetlight Purchasing Program Forum will show up on the bottom of the Group Forums page.

   Procurement process for energy-related municipal purchasing, power purchase agreements, net metering; regional electricity supply management; samples of RFP’s.

   **Policy Forum**
   Part of: MMEG (General Forum)
   Group | 15 members | 1 resource | 0 discussions | 0 events | 0 subgroups
   State and Federal government energy policies and legislation that could impact municipal energy; political discussions on climate change and green energy matters.

   **LED Streetlight Purchasing Program**
   Group | 49 members | 7 resources | 0 discussions | 0 events | 0 subgroups
   This is a private group for discussions and resources regarding the LED Streetlight Purchasing Program.

10. Navigate to Resources to read or post group resources, Discussions to start or participate in message board conversations, or Events to view or post new events.
Streetlight Buybacks

In attendance at the September 20, 2012 Roundtable: Representatives from the communities of Gloucester, Lincoln, Marlborough, Malden, Maynard, Medfield, Quincy, Salem, Somerville, Wayland, Winthrop, the Department of Energy Resources, the Dept. of Conservation and Recreation, the Office of Community Development.

Presenting: George Woodbury, RepublicITS

Background

Enabling Legislation, MGL C. 164 s.34A is the enabling legislation that allows cities and towns to purchase their streetlights from their utility. It was adopted as part of the 1997 Restructuring Act.

- This MGL does not currently include state agencies; if amended, it might result in great energy and cost savings for many state agencies.

Streetlight Tariffs. Utilities charge municipalities for their street lights based on rate tariffs, or billing rates, for each type of fixture. These vary based on who owns the lights. The basic rate tariff is the S-1 rate, which applies to lights owned and maintained by the utility. The S-1 rate includes maintenance costs. When a municipality purchases their streetlights, they switch to a rate that does not include maintenance costs. This is where the savings associated with streetlight buyback are achieved.

- For National Grid customers: A municipality that purchases its lights under MGL C.164s.34A pays the S-5 Rate, which is based on the cost of electricity delivery. National Grid has a range of other rate tariffs for street lights as well.
- For NSTAR customers: A municipality that purchases its lights pays the S-2 rate. Because the Massachusetts NSTAR territory was historically served by two separate electric companies (Commonwealth Electric and Boston Edison Company) before they were acquired by NSTAR, the rate tariffs for customers served by NSTAR can vary from town to town, as can the calculation for the purchase price of streetlights. More detailed
information can be found on the NSTAR website.

**Purchase of Lights.** A municipality seeking to acquire its streetlights can choose between purchasing all or some of the lights. For example, a municipality might choose to purchase only the overhead lights, leaving any lights with underground wires to the utility to maintain. Or, a municipality might choose to just purchase the lights in a certain neighborhood.

**Calculating Purchase Price.** The purchase price for streetlights calculated based on the system’s net book value, which is the unamortized (e.g., depreciated) value of the streetlights minus any salvage value the utility can obtain.

- The depreciated value of the streetlights is calculated at the time the municipality tells its utility it wants to purchase its streetlights. This triggers a 60 day window in which the utility must respond with a purchase price. Any depreciation that occurs after the day of notification will not be included in the calculation of purchase price.
- **Standard depreciation rates are set for utilities by the Department of Public Utilities (DPU).** NSTAR recently ramped up their depreciation rate to 13%, meaning their streetlight assets are quickly losing value.
- Municipalities have the option of taking a case to the DPU if they don’t agree with the price proposed or if the utility takes more than 60 days to respond. However, these cases can sometimes take years to resolve, in which time the opportunity costs of lost energy and maintenance cost savings accrue. These lost opportunity costs generally will be far greater than what might be achieved by fighting over the purchase price.

**Maintenance**

Once a municipality purchases their streetlights, they are on the hook for maintenance. The vast majority of communities opt to competitively bid out maintenance services to an outside contractor. A few have chosen to do it in-house, for example:

- **Newton** contracted with the Wellesley Municipal Light Department for maintenance services for a while.
- **Maynard** used the savings they achieved from purchasing their streetlights to buy a bucket truck that could be used for maintaining the lights.
- **Lexington** replaces bulbs and photocells in-house, but brings in a contractor for anything that might expose staff to live wires.
- **MGL C.141s.7** exempts the replacement of street lights from requiring supervision by licensed electricians; only a bucket truck license is needed to replace them.
- The cost of maintenance typically runs $1.00-$1.20 per fixture per month.
- **It’s important to decide what level of risk the municipality is willing to take on.** If the maintenance company holds 100% of the risk, the municipality will pay a higher monthly cost. If the municipality assumes some of the risk, then there will be lower costs in years when fewer incidents occur.
- **Storm repair:** In general, maintenance contracts include a 5 day turnaround clause with penalties for repairs when damage is reported. In extreme cases when the pole is damaged as well as the fixture, the utility company will still need to repair the pole before the maintenance contractor can come and repair the fixture.
- **Approximate failure rates:** Typically, failure rates systemwide for NSTAR are 18-19%. In coastal communities, anticipated failure rates can come closer to 25%. Coastal communities should always make sure any streetlights they install have demonstrated
resiliency to humidity and salt.

**Savings**

Typically 30-60% of streetlighting costs can be saved just by purchasing streetlights. These savings approach 70-80% if the acquisition is accompanied by an LED streetlight retrofit.

- **Note:** For many communities, a streetlight LED conversion project can comprise up to 12% energy reductions overall (out of a 20% reduction target for Green Communities). While you’re at it, convert your traffic signals to LEDs as well!

**Financing**

- **Green Communities funds** can potentially be used to cover the costs of acquisition if acquisition costs are included as part of an overall funding request for LED streetlight retrofits. However, round 1 Green Communities funds can’t be used to pay for streetlight retrofits.
- **Tax-exempt municipal lease financing** is the recommended method for paying for these projects upfront, as it doesn’t affect your municipal bond rating or debt levy. However, some communities also choose to issue bonds for these projects.
- If you choose to implement streetlight retrofits through a **performance contract under Ch.25A**, guaranteed annual energy savings can be put towards the debt service each year.
- **NSTAR currently offers a 25c/kWh incentive** for LED streetlight retrofits.

**Somerville Case Study**

Somerville purchased 100% of their streetlights after a long (two-year) deliberation process. On the plus side, this meant that by the time they made the decision to purchase, the system had completely depreciated. However, they also regret losing out on cost and energy savings during this time.

**Part One:** Somerville staff completed a preliminary audit with support from consultant George Woodbury. They audited 10% of lights by doing a walkby to compare to NSTAR’s records, making sure fixtures were where they were supposed to be, and were the correct wattage.

**Part Two:** Got purchase price from NSTAR. The City had concerns about purchasing the system as-is, as there were a number of deferred repairs that NSTAR hadn’t yet addressed. The 311 “report an outage” line in Somerville meant the city had pretty good records on the condition of the system. For a period of time, the City fought with utility reps to try to convince them to make repairs before the City purchased the assets. However, NSTAR was reluctant to fix lights with expensive underground repairs when they were about to sell the system.

**Part Three:** In the end, Somerville decided to go forward with streetlight buybacks anyway. They built in a contingency to the project such that they would be able to address the backlog of repairs on their own. They competitively bid out a maintenance contract, which RepublicITS won. They were able to negotiate an arrangement by which residents could still call the 311 line to report outages, which has been helpful for the City.
Buying Back Streetlights: Step-by-Step

1. **Ask NSTAR/National Grid for a preliminary cost estimate.** Tip: Be clear that you are not formally notifying them of your intent to purchase, but simply asking for an estimate. Once you indicate to them that you want to buy your streetlights, you have 60 days to settle on a price (based on the way the law is written). The purchase price is set on the date of notice, so you will lose any depreciation that occurs if you end up spending a long time deliberating after you formally notify them.

2. **Based on the estimate provided, calculate the basic economics of the project and decide how to proceed.** Determine whether your community will buy all street lights or just a subset. At this point, your community may find it helpful to hire a consultant or owner’s agent to facilitate the process.
   - Tip: Build a contingency amount into your project from the outside to cover the cost of repairs, etc. Be modest about the amount of potential savings the project might realize when pitching to internal decision makers—at the end of the day, it doesn’t hurt to have excess savings, but it’s better to sell the project on its most modest projections.
   - If you are considering an LED retrofit: Make sure there is a commitment to using the maintenance cost savings to pay for the purchase of LEDs. One option is to bid out the entire project, from acquisition to installation of the LEDs, as a performance contract through Chapter 25A.

3. **Once the decision to purchase has been made, formally notify the utility.** This triggers a 60 day window in which they must submit a definite purchase price and inventory.

4. **Review the purchase price information and inventory that the utility provides.** The price sheet will include price by fixture and poles type, wattages, and quantities. It will differentiate between overhead and underground lights.

5. **You may want to compare the utility inventory with an inventory that you complete yourself to ensure accuracy.** There are two main types of audits:
   - **Basic Wattage Check.** This is a walk-by audit in which you check that poles and fixtures exist, count and confirm their wattage. In general, a 10% audit will be sufficient to determine whether there are any major issues with the inventory provided by the utility.
   - **GIS Survey.** The most accurate inventory is a submeter-level GIS survey. It is also the most labor-intensive and expensive.

6. **Note:** if you discover any lights that were NOT included in the inventory, the utility can bill you for unpaid back charges. On the other hand, if you discover the utility is billing you for lights that don’t exist, you are entitled to ask for a refund. If the utility believes you have made an error, they can have a separate, comprehensive audit completed at your expense.

7. **Decide how to finance** the streetlight purchase – consider municipal lease financing vs. issuing bonds, available operating funds or grant funds.

8. **Competitively procure a maintenance contract.** Determine what level of risk the municipality is comfortable assuming. Tip: Always be clear on what types of labor need to be compensated at prevailing wage in a solicitation for a maintenance contract.

9. **The whole process can take between 90 days to 2 years, with an average of about 6 months.** The law technically mandates 60 days to reach an agreement, and then DPU has 60 days to make a ruling if a case goes to them (although sometimes these cases take years). It is best to incur as little expense as possible before making a decision to move forward, and then move quickly once that decision is made.
Step 3: RFP for Streetlight EMS

MAPC worked with the communities of Arlington, Chelsea, Natick and Woburn to draft and issue an RFP for Streetlight Energy Management Services pursuant to MGL Ch. 25A §11c. This is a comprehensive solicitation that requires respondents to demonstrate experience with identifying, planning, designing, financing, installing, owning, operating and maintaining streetlight conversions (with the intent of installing LED technology).

Bids are due in January 2013 and a winning vendor will be awarded in February 2013. The full RFP is included as Appendix 4 to this report.
Appendix 1: Sample Specifications for LED Roadway and Outdoor Area Lighting

I. Minimum Required Items
Vendors shall complete tables for the following categories of LED lighting with the products they are able to furnish, with proposed percentage discounts on each category of products. LED replacement equivalence shall be based on the test procedure IESNA LM-63-1995 as published by the Illuminating Engineering Society of North America.

A. Roadway

<table>
<thead>
<tr>
<th>Type</th>
<th>Lumen Rating</th>
<th>Nominal Wattage</th>
<th>Description of LED replacement (e.g., 20 LED, 10W unit)</th>
<th>% Discount (per unit, per 100, per 1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP Sodium Vapor</td>
<td>4,000</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5,800</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9,500</td>
<td>121</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16,000</td>
<td>178</td>
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<td>22,000</td>
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B. Post-Top

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<th>Type</th>
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<th>Nominal Wattage</th>
<th>Description of LED replacement (e.g., 20 LED, 10W unit)</th>
<th>% Discount (per unit, per 100, per 1000)</th>
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<tr>
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C. Flood

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<td>45,000</td>
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<tr>
<td>Type</td>
<td>Lumen Rating</td>
<td>Nominal Wattage</td>
<td>Description of LED replacement (e.g., 20 LED, 10W unit)</td>
<td>% Discount (per unit, per 100, per 1000)</td>
</tr>
<tr>
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<td></td>
<td>175</td>
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II. Required Documents
A. Vendor Experience – For each product described above, vendors shall list the quantity of similar products sold and shipped in the past year.
B. Performance Specifications – For each product described above, vendors shall list the following:
   1. Luminaire efficacy (lumens per watt) based on LM-79 test results
   2. Rated luminaire wattage in the on-state and off-state based on LM-79 test results
   3. L70 rating for expected useful lifetime
   4. Life cycle cost analysis that demonstrates project payback time
   5. Correlated Color Temperature (CCT)
   6. Color Rendering Index (CRI)
C. Safety Certifications – For each product described above, vendor shall list safety certification and file number per the NEC. Applicable testing bodies are determined by the US Occupational Safety Health Administration (OSHA) as Nationally Recognized Testing Laboratories (NRTL) and include: CSA (Canadian Standards Association), ETL (Edison Testing Laboratory), and UL (Underwriters Laboratory). Entire fixture including internal components, and as a whole unit, shall be certified.

III. General Requirements
A. Luminaire Requirements
   1. Dark Sky Compliance. Fixtures shall comply with International Dark Sky Association guidelines, and shall be included in their list of Approved Fixtures. Fixtures shall be fully shielded and installed in such a way that no light is emitted above a horizontal plane running through the lowest part of the fixture.
   2. Luminaires shall be rated for operation in -40°C to +50°C ambient temperatures and have a documented history of successful trials in a climate similar to that of Boston, Massachusetts.
   3. Luminaires shall be fully assembled and electrically tested before shipment from factory.
4. 80% of the luminaire material by weight shall be recyclable at end of life. Design luminaire for ease of component replacement and end-of-life disassembly.
5. Luminaire wattage shall not increase by more than 0.2% per °C for ambient temperatures below 25°C.

Quality Assurance

A. Before bulk purchase, a site Owner may request standard production model luminaire samples identical (including LED package) to product proposed to be installed for inspection. Owner may request independent testing of sample luminaires to verify luminaire performance and compliance with the specifications.
B. After installation, site Owner may perform field measurements and/or send luminaires off for independent laboratory testing to enforce warranty provisions for lumen maintenance.

Warranty

A. Provide a written seven year on-site replacement warranty covering material, fixture finish, and workmanship. On-site replacement includes transportation, removal, and installation of new products. Finish warranty shall include warranty against failure or substantial deterioration such as blistering, cracking, peeling, chalking, or fading.
B. Provide a written seven year replacement material warranty for defective or non-starting LED source assemblies.
C. Provide a written seven-year replacement material warranty on all drivers (power supplies).
D. Provide a written seven year replacement warranty for luminaires exhibiting inadequate lumen maintenance at end of warranty period.
E. Warranty shall cover all LED light sources (packages or modules/arrays) including but not limited to the LED die, encapsulate, and phosphor. If the expected useful life of the luminaire system is not maintained, then the manufacturer shall replace the light source(s) or luminaire as needed.
F. Warranty period shall begin on date of possession. The supplier will provide the site Owner with appropriate signed warranty certificates. The site Owner shall receive certificates prior to final payment.

Appendix - Referenced Standards

A. American National Standards Institute (ANSI)
   1. ANSI C63.4-2001. Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9kHz to 40GHz
   2. ANSI C136.2-2004 (R2009), American National Standard for Roadway and Area Lighting Equipment—Luminaire Voltage Classification
5. ANSI C136.13-2004, Roadway and Area Lighting Equipment - Metal Brackets for Wood Poles
11. ANSI C136.32-2006, American National Standard for Roadway and area lighting equipment - enclosed setback luminaires and directional floodlights for high-intensity discharge lamps

B. American Society for Testing and Materials International (ASTM)
2. ASTM G53 – Standard Practice for Operating Light and Water Exposure Apparatus (Fluorescent UV – Condensation Type) for Exposure of Nonmetallic Materials

C. Illuminating Engineering Society of North America (IESNA)
1. DG-403, Design Guide for Roadway Lighting Maintenance
3. LM-79-08, IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
4. LM-80-08, IESNA Approved Method for Measuring Lumen Maintenance of LED Light Sources
5. RP-8-00, ANSI / IESNA American National Standard Practice for Roadway Lighting
6. RP-16-05 and addenda, “Nomenclature and Definitions for Illuminating Engineering”
7. TM-3-95, A Discussion of Appendix E - "Classification of Luminaire Lighting Distribution," from ANSI/IESNA RP-8-83

D. National Electrical Manufacturers Association (NEMA)

E. National Fire Protection Association (NFPA)
1. NFPA 70 – National Electrical Code (NEC)

F. Underwriters Laboratories (UL)
   1. UL 1012 Power Units Other Than Class 2
   2. UL 1310 Class 2 Power Units
   3. UL 1449, Surge Protective Devices
   4. UL 1598, Luminaires
   5. UL 2108 Low Voltage Lighting Systems
   6. UL 8750 Light-Emitting Diode (LED) Light Sources for Use in Lighting Products

G. IP Rating
H. FCC 47 CFR (Consumer Emission Limit)
Appendix 2: MAPC Presentation at MSSLC Workshop, August 2

**Title:** Leveraging Collective Procurement for Regional LED Retrofits

**Description:** The Metropolitan Area Planning Council (MAPC) has set up a statewide public purchasing infrastructure that allows communities to work together and buy LED lights in bulk for their retrofit projects. These regional efforts will not only serve to drive down prices and consolidate the costs associated with complicated public procurement processes, but also build confidence and momentum for local projects through establishing a network of communities that can support one another.
Leveraging Collective Procurement for Regional LED Retrofits
Overview & Introduction to MAPC

Background on LED Project

LED Purchasing Program Scope
- Community prerequisites

Buying from State Contract FAC76
Overview of MAPC

- 1 of 13 Massachusetts Regional Planning Agencies
- Special geographic district established by M.G.L.
- 101 cities & towns

Services include:

- land use, environmental and transportation planning;
- data analysis & GIS;
- policy advocacy;
- municipal services & collective procurement
Energy at MAPC

➢ Regional Energy Services
  ▪ Joint procurement (LED streetlights, ESCO, Solar, contracts for consulting services)
  ▪ Shared services (i.e., regional energy manager)

➢ Local Technical Assistance
  ▪ Local Energy Action Program (LEAP)
  ▪ Green Communities application support
  ▪ Grant writing (DOER, NREL, DOE)

➢ Regional Information Hub
  ▪ Forums & Roundtables
  ▪ Online resources
Background

- History of collective procurement at MAPC
  - Police cars, fire trucks, service contracts
  - Support communities with less purchasing power

- Boston project created momentum/excitement
  - Proof of cost-effectiveness

- Statewide interest in joint purchasing

- Partnership with state purchasing department (OSD)
  - State contract vs. one-time solicitation
LED Streetlight Purchasing Program

1. Networking & Peer Learning
- Informational roundtables
- Vendor panels & demos
- Other ideas as proposed

2. Information Clearinghouse
- MMEG forum tool
- Past projects & existing inventories
- Model documents

3. Collective Procurement
- State contract FAC76
- Grouping Solicitations for Quotes

Goal: Make these services available to communities statewide
Key Questions for Municipal Retrofits

- **Do you own your streetlights?**
  - Currently, streetlight ownership is necessary

- **Who is your utility?**
  - NSTAR, National Grid, and municipal utilities will have different incentives and tariff structures

- **Have you retrofitted other lights or conducted pilots?**
  - Parking lots, ornamentals, flood lights, wallpacks
  - Community input is important

- **Have you completed a streetlight inventory & audit?**
  - Compare utility data to installed lights
  - Consult with local stakeholders on classifications (i.e., areas of high pedestrian conflict)
  - Determine required lighting standards (IESNA RP-8)

Communities should answer these questions individually before purchasing lights for a retrofit.
State Contract FAC 76 Category 6

- Selected vendors offer % discounts
  - Group orders can negotiate further

- “Work in progress”
  - Actively seeking input from communities on additional products/manufacturers

- Includes: street lighting, post-top fixtures, floodlights and wall-lighters
For more information:

http://mapc.org/led-street-lighting

Contact: Helen Aki, Energy Services Coordinator

haki@mapc.org /617-451-2770 x 2054
Appendix 3: Streetlight 101 Info Sheet
TYPES OF STREET LIGHTING TECHNOLOGY:

Incandescent Lights is the most out-dated and least efficient street lighting technology available, although utilities currently maintain a tariff for incandescent lights.

Mercury Vapor (MV) Light replaced incandescent in the 50’s and continues to be a widely used technology today. Nonetheless, most Massachusetts cities and towns have replaced them with alternative technologies that are more efficient.

High Pressure Sodium (HPS) Light is the most commonly used technology by municipalities today. (NSTAR representative Dave Amman claims that most cities and towns have made the conversion to this technology.) Sometimes HPS are associated with “bad neighborhoods” because Boston installed them as “crime lights” during the 70s and 80s.

A typical 150W HPS luminaire system:
- Draws approximately 183W of power
- Has a CCT = 2000K
- Has a CRI = 22

(Note: Low-Pressure Sodium lighting is also used in rare occasions. It is more efficient but the color rendering is worse than HPS.)

Metal Halide (MH) Light is also a commonly used lighting source. This lighting technology emits a very bright white to bluish light. The color of these lamps tends to shift over time. It is not uncommon to find a row of identical MH fixtures, each emitting slightly different color light.

A typical 175W MH luminare system:
- Draws approximately 208W of power
- Has a CCT = 4000K
- Has a CRI = 65

Light-Emitting Diode (LED) aka Solid State Lighting creates a new potential for energy-efficient lighting. This technology can provide directional light emission and has a longer life than conventional light sources. In comparison to HPS and MH technologies,
LED is also improving more rapidly in terms of color quality, optical design, thermal management, and cost. A typical LED luminaire system:

- Draws 150W of power
- Has a CCT = 6000K
- Has a CRI = 75

<table>
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<tr>
<th>Comparison of HPS and LED Outdoor Luminaires for Demonstration Site</th>
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<tr>
<td><strong>Existing 70W HPS</strong></td>
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<tr>
<td>Total power draw</td>
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<tr>
<td>Average illuminance levels</td>
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<tr>
<td>Maximum illuminance</td>
</tr>
<tr>
<td>Minimum illuminance*</td>
</tr>
<tr>
<td>Max/ Min Ratio (uniformity)</td>
</tr>
<tr>
<td>Energy consumption per luminaire***</td>
</tr>
<tr>
<td>Energy savings per luminaire</td>
</tr>
</tbody>
</table>

* Lowest measured or modeled for each luminaire. IESNA guidelines call for at least 0.5 fc.
** Modeled results.
*** Energy consumption for the HPS system is based on manufacturer-rated power levels for lamps and ballasts, multiplied by 4380 hours per year. Energy consumption for the 3-bar LED unit is based on laboratory power measurements multiplied by 4380 hours per year. Energy consumption for the 2-bar unit is based on manufacturer-rated power levels multiplied by 4380 hours per year.

Figure 2 - Table from US DOE "LED Application Series: Outdoor Area Lighting" 1

**Induction Lighting** transfers electric power via electromagnetic fields, rather than electric connections (electrodes). It is a more efficient method of transforming electric power into light. Induction lamps are also referred to as electrode-less lamps.

Current technology of induction lighting provides a much higher color temperate, and yields a cooler/bluer light than HPS lamps.

- A San Diego PILOT study, which implemented a mix of LEDs and induction lights, suggested that municipalities prefer induction lighting because manufacturers are willing to provide up to 10-year warranties, whereas LED manufacturers were not exceeding 5 years in their warranties. ([http://www.ledsmagazine.com/features/7/7/7](http://www.ledsmagazine.com/features/7/7/7))

**CASE STUDIES:**

<table>
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<tr>
<th>PILOTs (US DOE GATEWAY Program) 2</th>
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<tbody>
<tr>
<td><strong>Location</strong></td>
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| Palo Alto, CA | LED Roadway Lighting (June 2010) | • Replaced 70W HPS with 7 LED and 3 induction luminaires on 2 residential streets
• Installed 2 LED and 2 induction luminaires on a commercial street to test a remote streetlight monitoring system

Outcome:
• LED produced more uniform light output than HPS and induction luminaires
• LED had better cutoff on the curbside of the streetlight luminaires, significantly reducing light trespass onto residential properties
• LED used the least energy (44% reduction compared to the baseline HPS)
• Simple payback estimated to be ~12 years for retrofitting existing HPS with an LED luminaire; 10 years in a new construction scenario |
<table>
<thead>
<tr>
<th>Location</th>
<th>LED Street Lighting (Date)</th>
<th>Details</th>
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| Lija Loop, OR     | November 2009             | Replaced 8 HPS cobrahead fixtures with LED  
Payback estimated to be ~7.6 years for new installations; 20 years for replacement scenarios                                                   |
| San Francisco, CA | December 2008             | Replaced 100W nominal HPS luminaries with 4 manufacturers’ LED streetlights on 4 public avenues  
Performance of the 4 manufacturers’ LED fixtures varied, but all 4 demonstrated better lighting quality and efficiency than the baseline HPS |
| Oakland, CA       | Phase II: Jan 2008; Phase III: Nov 2008 | Intended to investigate the energy, economic, and safety impacts of replacing HPS street lights with LED luminaires  
Installed 15 LED street lights (10 on LED-only street and 5 on LED/HPS street)                                             |

**Wide-Scale Implementation**

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<th>Details</th>
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| Ann Arbor, MI     | Retrofitting 1,000 ornamental lamps in downtown  
Existing Fixtures: 120W  
Replacement Fixtures: 56W  
Total Project Cost: $630,000 (grant funded)  
Projected Annual Savings: $100,00  
Projected Payback Time: 4.4 Years |
| Los Angeles, CA   | Replacing 140,000 (out of 242,000 total) streetlights and installing monitoring system over a 5-year period  
Existing Fixtures: Mix of incandescent, MV, MH, HPS (400 separate fixture types!!)  
Grant-funded: Project cost of $57 million  
Projected Annual Energy Cost Savings: $10 million  
Projected Payback Time: 7 Years  
Progress (as of 2009):  
Total # of Units being Replaced: 51,641  
% Energy Savings: 59.1%  
Annual CO2 Reduction: 12,744 Metric Tons  
Annual Energy Savings: 21,553 MWh  
Annual Energy Cost Savings: $1,905,745 |
| Anchorage, AK     | Replacing 150 HPS streetlights with 16,000 (25% of all lights) LED luminaires  
Existing Fixtures: 150W HPS  
Total investment: $2.2 million  
Projected Energy Savings: 50%  
Projected Annual Savings: $360,000 |
| Boston, MA        | Replacing 18,000 MV cobrahead lights with LED streetlights  
Projected Payback Time: Under 1 Year |
| Seattle, WA       | Replacing 5,000 (out of 84,000 total) HPS streetlights to LED luminaries with ARRA funding by 2010; and 40,000 by the end of 2014  
Projected Energy Savings: 40%  
Projected Annual Savings: $2.4 million |

**Resources:**
Appendix 4: RFP for Streetlight EMS

The following is the RFP for Streetlight EMS issued by the MAPC on behalf of the towns of Arlington, Chelsea, Natick and Woburn on December 19, 2012.
Metropolitan Area Planning Council (MAPC)

Request for Proposals (RFP) for
Streetlight Energy Management Services

Under the
Massachusetts General Laws, Chapter 25A, Section 11C
A Guaranteed Energy Savings Contract

December 19, 2012
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   1.1 Proposed Selection Timeline

2. Solicitation and Proposal Process

3. RFP Procedures

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   4.1 Project Description
   4.2 Site Information
   4.3 Required Contract Terms
   4.4 Product Specifications

5. Submission Requirements
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   5.2 Proposer Information Form
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   5.4 Certificate of Non-Collusion
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   5.7 Conflict of Interest Certification
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   5.9 Certificate of Non-Debarment
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6. Appendices
   6.1 Municipal Contact Info
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   6.7 Prevailing Wage Tables
1. Introduction

Awarding Authority: Metropolitan Area Planning Council
Address: 60 Temple Place, 6th Floor, Boston, MA 02111
RFP Primary Contact Person: Heidi Anderson, Manager, Municipal Procurement Services
Email: handerson@mapc.org
Telephone: (617) 451-2770 x 2065
Fax: (617) 423-0584
RFP Secondary Contact Person: Helen Aki, Energy Services Coordinator
Email: haki@mapc.org
Telephone: (617) 451-2770 x 2054

The Metropolitan Area Planning Council (MAPC, or the “Awarding Authority”) seeks proposals, pursuant to M.G.L. c. 25A, §11C, from qualified, interested parties (individually a “Proposer” and collectively the "Proposers"), with the intent of ultimately selecting one (1) to serve as a contractor (“Contractor”), to provide comprehensive, performance-based Streetlight Energy Management Services (EMS) with guaranteed energy savings for street lighting systems within the jurisdiction of Municipalities who are members of the MAPC and who have elected to be listed in this Request for Proposals (RFP).

Eligibility to respond to this RFP is limited to Proposers that are certified by the Division of Capital Asset Management (“DCAM”) as eligible to provide Energy Management Services and that are not debarred from bidding under MGL Ch. 149, §44C, or any other applicable law. In addition to the other information requested herein, all Proposals shall be accompanied by (1) a copy of the DCAM Certificate of Eligibility, and (2) a DCAM Update Statement.

The Proposer to this RFP is required to demonstrate qualification in identifying, assessing, planning, designing, financing, installing, owning, operating and maintaining streetlight conversions. Proposers shall be evaluated on criteria set forth in this RFP. The MAPC may cancel
this RFP, or may reject in whole or in part any and all Proposals if the MAPC determines that cancellation or rejection is in its best interest.

The following Municipalities are participating in this RFP. Such participation does not commit or bind any individual Municipality to entering into any agreement with the selected Contractor.

- Town of Arlington
- City of Chelsea
- Town of Natick
- City of Woburn

### 1.1 Proposed Selection Timeline

- **Notification to the DOER:** December 7, 2012
- **RFP Published in Central Register and Advertised:** December 19, 2012
- **Final Inquiries Due:** January 11, 2013
- **Responses Due:** January 18, 2013
- **Anticipated Interviews:** January 29-31, 2013
- **Anticipated Selection for Negotiations:** February 8, 2013
2. Solicitation and Proposal Process

Stage One: DCAM Contractor Certification Process.

Proposers are advised that advance certification by Massachusetts Division of Capital Asset Management and Maintenance (DCAM) is required pursuant to M.G.L. c. 149 § 44D.

Division of Capital Asset Management & Maintenance
Office of Contractor Qualification
One Ashburton Place, 15th Floor Boston, MA 02108
Tel. (617) 727-4050 x 344 Fax (617) 727-5363

The DCAM web site contains instructions and application forms for the certification process at: http://www.state.ma.us/cam/forms/fi_contractcert.html. Proposers are also required to obtain and complete the Energy Services Update Statement and Energy Services Addendum.

Stage Two: Site Visit (Optional).

Proposers may arrange a site visit with any or all of the participating Municipalities by contacting:

For the Town of Arlington: Mike Rademacher, Director of Public Works (781-316-310)
For the City of Chelsea: Joseph Foti, Director of Public Works (617-466-4200)
For the Town of Natick: William Chenard, Public Works Director, (508-647-6552)
For the City of Woburn: Sarah Stanton, Purchasing Director (781-897-5950)

Site visits are not required to submit a Proposal, but are being offered as a way for prospective Proposers to better inform the development of their Proposals.
Stage Three: Inquiries & Submission of Proposals.

All questions and inquiries concerning this RFP must be submitted in writing no later than 5:00 PM on January 11, 2013. Inquiries will not be answered directly. The MAPC will issue an addendum, which will address the written questions submitted by the deadline, and be publically available on COMM-PASS and the MAPC website. It is the responsibility of the Proposer to contact the MAPC at the e-mail address above prior to the submittal deadline to ensure that the Proposer has received all addenda issued by MAPC.

A qualified Proposer shall submit to MAPC, 60 Temple Place, 6th Floor, Boston, MA 02111, no later than 5:00 P.M. local time on January 18, 2013: one (1) original and four (4) hard copies of its written Proposal in separate, sealed envelopes clearly marked: “RFP: Streetlight Energy Management Services – Price Proposal” and “RFP: Streetlight Energy Management Services – Non-Price Proposal”, as well as one (1) single-file electronic copy (on a portable media), according to the requirements set forth for the format described in Section 5.7 of this RFP. The clock in the offices of the MAPC shall be considered official. No late Proposals shall be considered.

Proposals will be opened publically with a minimum of two witnesses. Each Proposal will be reviewed for completeness, and incomplete Proposals may be rejected without further consideration. A Proposal will be considered complete if all requested sections and information are included in the proper order. Proposers shall use the prescribed format to indicate their experience and qualifications, describe their approach to the project, and explain their proposals.

The MAPC reserves the right to waive any irregularities and formalities in the selection of the Contractor for this project. While Proposers are required to submit Proposals that fully comply with the requirements set forth in this RFP, alternative proposals may also be proposed if the Proposer feels such proposals provide measureable value to the participating Municipalities. Such alternative proposals must meet the requirements set forth in this RFP.
Submission of a Proposal shall be conclusive evidence that the Proposer has examined this RFP and is familiar with all the conditions of any contract awarded. Upon finding any omissions or discrepancy in this RFP, each Proposer shall notify the MAPC immediately so that any necessary addenda may be issued. Failure of a Proposer to investigate completely the RFP and/or to be thoroughly familiar with this RFP shall in no way relieve any such Proposer from any obligation with respect to the Proposal.

By submission of a Proposal, the Proposer agrees that if its Proposal is accepted, then it shall enter into a Contract with each participating Municipality which incorporates all of the requirements of this RFP. By submission of a Proposal, the Proposer further indicates acceptance of all terms and conditions of this RFP.

For further information, please refer to the succeeding sections, with which each Proposer shall comply in submitting a Proposal.

Stage Four: Selection of Vendor and Contract Execution.

The MAPC will assemble a Selection Committee comprised of representatives from the participating Municipalities to evaluate and rank all Proposals based on the criteria listed in this RFP. Top candidates will be identified based on written Proposals as well as answers to additional clarifying questions as requested by the MAPC. The MAPC Selection Committee may hold interviews with top candidates. The Selection Committee reserves the right to select the Contractor that provides the most responsive and responsible Proposal, which best meets the needs of the Municipalities, taking into account the Contractor’s qualifications, submittal quality, total project price and life cycle cost savings, and evaluation criteria. It is expected that a single Contractor will be selected to complete the scope of work described in this RFP.

Following selection of the top-ranked Contractor, the MAPC and the Contractor will negotiate a Memorandum of Understanding (MOU) that permits the selected Contractor to enter into individual contracts with each participating Municipality. If an acceptable agreement cannot be reached, the MAPC may initiate negotiations for an MOU with the second ranked Proposer.
Upon execution of an MOU, the selected Contractor shall first negotiate a Technical Street Light Energy Audit & Project Development Contract to define the project scope, cost and financial terms with each Municipality individually. The selected Contractor may be required by the participating Municipalities to install sample products at various locations for final approval of the design plan prior to execution of a Streetlight EMSA. Upon review of the Technical Street Light Energy Audit and approval of the design plan, each Municipality may then enter into a Streetlight EMSA with the selected Contractor.
3. RFP Procedures

**Modification or Withdrawal of Proposals:** Changes, modifications or withdrawal of Proposals shall be submitted in writing to the MAPC prior to the deadline and shall be contained in a sealed envelope clearly marked, as appropriate, “CORRECTION, MODIFICATION OR WITHDRAWAL OF SEALED PROPOSAL FOR STREETLIGHT ENERGY MANAGEMENT SERVICES – PRICE PROPOSAL” or “CORRECTION, MODIFICATION OR WITHDRAWAL OF SEALED PROPOSAL FOR STREETLIGHT ENERGY MANAGEMENT SERVICES – NON-PRICE PROPOSAL” No corrections, modifications, or withdrawal of Proposals shall be permitted after Proposals have been opened.

**Cost of Proposal Preparation:** Neither the MAPC nor the Municipalities assume liability for and will not reimburse any costs or expenses incurred by any Contractor (whether or not selected) in developing Proposals in response to this RFP.

**References and Disclosure of Information:** Submission of a Proposal shall be deemed permission to the MAPC Selection Committee to make inquiries concerning the Proposer to any persons or firms deemed appropriate by the Selection Committee. The Contractor’s submission of a Proposal shall be deemed acknowledgement that it is familiar with the Massachusetts Public Records Law, MGL c. 66, § 10 and is bound thereby. Disclosure of any information provided by any Contractor in connection with this RFP shall be in strict accordance with the laws and regulations regarding such disclosure pursuant to MGL Ch. 66, § 10.

To review a copy of Proposals submitted to the MAPC after the selection has been awarded, submit a written request in compliance with the Massachusetts Public Records Act to the RFP Contact Person identified in Section 1.
4. **General Information**

4.1 **Project Description**

Through this RFP, MAPC seeks to maximize energy cost savings and minimize life cycle costs of street lighting systems for the participating Municipalities by contracting for the full scope of street lighting operation services, including: a detailed audit; the design, purchase, installation and modification of existing and new equipment that will reduce energy and operating costs associated with the street lighting system; and a long-term operating, maintenance and capital improvement service to guarantee the system reliability. The selected Contractor shall assist each Municipality with the review of their street lighting system in order to assist with the identification, design and implementation of capital improvements to reduce energy and related costs in the street lighting system, and will provide warranty for the improvements and ongoing system operation and maintenance for the warranty period.

The Contractor shall prepare all required incentive paperwork for submission to and coordinate approval letters from the electric utility, NSTAR. As work is completed, the selected Contractor shall be responsible for preparing and submitting required documentation. Incentives will be paid to the Contractor and deducted from the total project cost to each Municipality.

Each Municipality will maintain ownership of their respective street lighting systems. Pursuant to MGL c. 25A, § 11C, each Municipality may individually choose to structure compensation in one of the following ways:

**Option 1 – Annual Payments through Guaranteed Energy Cost Savings.** The full value of the capital improvements and ongoing preventative maintenance services under contract through the Streetlight EMSA will be paid for, in whole or in part, by cost savings attributable to a reduction in energy consumption that result from project and are guaranteed by the Contractor during the term of any contract, which shall not exceed 20 years per the regulations of MGL c, 25A;
Option 2 – Payment in Full Pursuant to Installation. Final payment for the full value of the capital improvements and ongoing preventative maintenance services under any contract through the Streetlight EMSA will be made by the Municipality pursuant to installation completion and a walk-through survey of the properties under contract. Under this project arrangement, the selected Contractor shall still provide warranty for the improvements and ongoing system operation and maintenance, including follow-up monitoring, compliance reporting, and contact maintenance services for a term equal to the provided warranty period. The Contractor shall be required to maintain sufficient spare quantities of all installed types so that any warranty repairs can be completed in five (5) working days or less, and will be responsible for all warranty repairs for the term of the warranty.

4.2 Site Information
Profiles of each Municipality’s existing street lighting facilities to be evaluated pursuant to this RFP are included as Appendix 6.2 of this RFP. An inventory list by pole/street will be made available upon request.

The selected Contractor shall identify a plan for improvements that maximizes energy savings and minimizes life-cycle costs upon completion of a Technical Street Lighting Energy Audit. The final list of upgrades to be implemented through a Streetlight EMSA shall be stipulated in the Streetlight EMSA scope of work to be negotiated individually with each Municipality.

4.3 Required Contract Terms
The Proposers in their Proposals shall agree to conform to the minimum contractual terms listed in Appendix 6.4 of this RFP. Any exception to these terms shall be noted and explained in Proposers’ proposal. The selected Contractor may propose contracts with each participating Municipality that contains additional services or terms; however, the Municipalities reserve the right to deem terms that do not conform to the terms set forth in this RFP void.

4.4 Product Specifications
The Proposers shall refer to the Product Specifications described in Appendix 6.3 of this RFP. These specifications are required for proposed street lighting improvements when negotiating the scope of work in the Streetlight EMSAs, and should be considered when preparing a Proposal to this RFP.
5. Submission Requirements

This section contains the following forms to be fully executed by the Proposer and submitted with their Proposal:

5.1 Cover Letter  
5.2 Proposer Information Form  
5.3 Contractor Authorized Signature Verification Form  
5.4 Certificate of Non-Collusion  
5.5 Certificate of Tax Compliance (MGL c. 62C, § 49A)  
5.6 Affirmative Action Plan Form  
5.7 Conflict of Interest Certification (MCL c. 268A)  
5.8 Certificate of Compliance with MGL c. 151B  
5.9 Certificate of Non-Debarment

In addition, this section contains the following template with instructions for the Proposer to follow in the preparation of their Proposal:

5.10 Proposal Format Template
5.1 Cover Letter & Proposer Information Form

The following information should be typed on Proposer’s letterhead. Fill in all bracketed sections and delete or re-format all brackets, italics, and instructions. Black line or otherwise indicate all changes in wording, additions, or deletions.

Heidi Anderson, Manager, Municipal Procurement Services
Metropolitan Area Planning Council
60 Temple Place, 6th Floor
Boston, MA 02111
Phone: (617) 451-2770 x 2065
E-mail: handerson@mapc.org

RE: Proposer Information Form & Cover Letter for Streetlight Energy Management Services

Dear Ms. Anderson,

In response to your Request for Proposals (“RFP”), we [insert name of Proposer] (the Proposer) hereby submit our Proposal to implement performance-based streetlight improvements with guaranteed energy savings for the facilities listed in your RFP for the participating Municipalities.

We offer the following commitments and representations to the Metropolitan Area Planning Council (“MAPC”):

1) The undersigned is authorized to submit this Proposal on behalf of the Proposer and to bind the Proposer to its terms. We have fully reviewed the RFP and any and all addenda thereto, and we fully understand the scope and nature of the project and contractual arrangements for which Responses are being requested.

2) Our Proposal has been prepared and is submitted without collusion, fraud or any other action taken in restraint of free and open competition for the response to the RFP. Neither the Proposer nor any member of the Proposer’s project team is currently suspended or debarred from doing business with any governmental entity.

3) We certify that all of the information provided in our Proposal is true and accurate and that MAPC may rely on such information in the evaluation of our Proposal. We have read and understand the evaluation criteria in the RFP. We accept that the MAPC reserves the right to waive informalities and to reject in whole or in part any and all Proposals. We accept that the MAPC Selection Committee reserves the right to select the Proposal that they view as most advantageous on the basis of the evaluation criteria listed in the RFP.

4) We acknowledge that the work to be performed under any contract negotiated with a participating Municipality (as defined in the RFP), including work by subcontractors, must
comply with the provisions of the Massachusetts General Laws pertaining to prevailing wage.

5) We agree to take full responsibility for all costs of preparing this Proposal. We waive any and all claims against the MAPC and its employees, representatives and agents related to the cost of preparing, submitting and having the MAPC review and evaluate this Proposal.

6) We have read and understand the common product specifications in this RFP, and agree to meet or exceed such specifications in accordance with the provisions described therein.

7) We have included the following required items as part of our Proposal:

<table>
<thead>
<tr>
<th>Minimum Required Items</th>
<th>Check if Included:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCAM Certificate of Eligibility</td>
<td></td>
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<tr>
<td>DCAM Update Statement</td>
<td></td>
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<tr>
<td>A fully-executed Contractor Authorized Signature Verification Form (5.3)</td>
<td></td>
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<tr>
<td>A fully-executed Certificate of Non-Collusion (5.4)</td>
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<tr>
<td>A fully-executed Attestation Regarding Filing of Tax Returns (5.5)</td>
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<tr>
<td>A fully-executed Affirmative Action Plan Form (5.6)</td>
<td></td>
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<tr>
<td>A fully-executed Conflict of Interest Certification (MCL c. 268A) (5.7)</td>
<td></td>
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<tr>
<td>A fully-executed Certificate of Compliance with MGL c. 151B (5.8)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Certificate of Non-Debarment (5.9)</td>
<td></td>
</tr>
<tr>
<td>Proposal in format of Proposal Format Template (5.10)</td>
<td></td>
</tr>
<tr>
<td>Sample Technical Audit</td>
<td></td>
</tr>
</tbody>
</table>

Sincerely,

[Insert name of proposer]

By: [Insert authorized representative]

[Print or type name]

[Street address]

[City, State, Zip]

[Telephone]

[E-mail]

[Date]
5.2 **Proposer Information Form**

Proposer Point of Contact: _______________________________________________________

Name of Company: ______________________________________________________________

Address: ______________________________________________________________________

Town, State, Zip Code: _____________________________________________________________

Phone: _______________ Fax: ________________________ E-mail ________________________

Federal tax id# (SSN for individuals): ______________________________________________

Organizational structure: Corporation: ______ Partnership: ______ Joint venture: ______

Individual/Proprietorship ______ Other: ______

Ownership: Public stock: ______ Privately owned: ______ Non-profit: ______

Minority and women business enterprise information (check as appropriate):

Minority owned: ______ Women owned: ______ Owned by person with disability: ______

Small Business: ______ SOMWBA Certified: ______

I have read, understand, and agree to comply with the terms and conditions for providing Energy Management Services to the Awarding Authority as stated in the Awarding Authority’s Request for Responses. Furthermore, I hereby certify, under penalties of perjury, that this response has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature ___________________________ Date ___________________________

If applicable, fill in the following:

I acknowledge receipt of Addendum No(s). ________, dated _________________.
5.3 Contractor Authorized Signature Verification Form

Corporations
1. Authorization. Attach a copy of a board of directors corporate resolution that each signatory is authorized to execute contracts and other documents and legally bind the corporation, AND
2. Notarization. Attach a notarized copy of each signatory’s signature.

Partnership, Joint Venture or other non-corporate Entities
1. Authorization. Attach documentation for each signatory of authorization to execute contracts and other documents and legally bind the partnership or other non-corporate entity, AND
2. Notarization. Attach a notarized copy of each signatory’s signature.

Individual/Proprietorship
1. Official Sample of Signature. Attach a copy of a driver’s license, social security card or other acceptable official form or identification containing the authorized signatory’s signature, AND
2. Notarization. Attach a notarized copy of each signatory’s signature.

________________________________________________________________________

THIS SECTION MAY BE USED FOR NOTARIZATION

SIGNATURE: (as it will appear on documents)

_______________________________________________________________
PRINTED NAME:
_____________________________________________________________
PRINTED TITLE: _________________________________________________
DATE: ______________________________

On this ______ day of _______, 20__, before me, the undersigned notary public, personally appeared ______________________ (name of document signer), proved to me through satisfactory evidence of identification, which were ______________________, to be the person whose name is signed on the preceding or attached document in my presence.

_______________________________________________________________(official signature and seal of notary)
5.4 Certificate of Non-Collusion

The undersigned certifies, under penalties of perjury, that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity, or group of individuals.

___________________________________
(Name of Proposer)

___________________________________
(Address of Proposer)

___________________________________
(Telephone Number)

By: ________________________________
(Signature)

___________________________________
(Printed Name)

___________________________________
(Printed Title)

___________________________________
(DATE)
5.5 Certificate of Tax Compliance

To: Metropolitan Area Planning Council

Pursuant to Massachusetts General Laws (MGL) c. 62C, § 49A, I certify under the penalties of perjury that the Proposer named below has complied with all laws of the Commonwealth of Massachusetts pertaining to the payment of taxes, to the reporting of employees and contractors, and to the withholding and remitting of child support.

___________________________________
(Name of Proposer)

___________________________________
(Address of Proposer)

___________________________________
(Telephone Number)

By: __________________________________
(Signature)

___________________________________
(Printed Name)

___________________________________
(Printed Title)

___________________________________
(DATE)
5.6 Affirmative Action Plan Form

IN WITNESS WHEREOF, the undersigned certifies that, under the pains and penalties of perjury, pursuant to Executive Orders 227 and 246, as an employer it is committed to non-discrimination in employment and if awarded this contract shall also be committed to procure commodities, services and supplies from certified minority and women-owned business enterprises, businesses owned by individuals with disabilities and businesses owned and controlled by socially or economically disadvantaged individuals, both in the performance of contracts with the Commonwealth of Massachusetts and in the performance of its business generally.

___________________________________
(Name of Proposer)

___________________________________
(Address of Proposer)

___________________________________
(Telephone Number)

By: __________________________________
    (Signature)

___________________________________
(Printed Name)

___________________________________
(Printed Title)

___________________________________
(DATE)
5.7 Conflict of Interest Certification

The Proposer hereby certifies that:

1. The Proposer has not given, offered, or agreed to give any gift, contribution, or offer of employment as an inducement for, or in connection with, the award of a Contract pursuant to this RFP.
2. No consultant to, or subcontractor for, the Proposer has given, offered, or agreed to give any gift, contribution, or offer of employment to the Proposer, or to any other person, corporation, or entity as an inducement for, or in connection with, the award to the consultant or subcontractor of a Contract by the Proposer.
3. No person, corporation, or other entity, other than a bona fide full time employee of the Proposer has been retained or hired to solicit for or in any way assist the Proposer in obtaining a Contract pursuant to this RFP upon an agreement or understanding that such person, corporation or entity be paid a fee or other compensation contingent upon the award of a Contract to the Proposer.
4. Proposer understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws (M.G.L.), applies to the Proposer and its officers, employees, agents, subcontractors, and affiliated entities with respect to the transaction outlined in the Request for Proposals.
5. Proposer understands that the Proposer and its officers, employees, agents, subcontractors, and affiliated entities, shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

_____________________________  By: _________________________
Name of Proposer  (Signature)

_____________________________
Address of Proposer

_____________________________
Telephone Number

_____________________________
Printed Name

_____________________________
Printed Title

_____________________________
Date
5.8 Certificate of Compliance with MGL c. 151B

The Proposer hereby certifies that it is in compliance with and shall remain in compliance with Massachusetts General Laws (M.G.L.) Chapter 151B and shall not discriminate on any prohibited basis outlined therein. The Proposer also hereby certifies that it shall comply with any and all applicable State Office of Minority and Women Business Enterprise Assistance (SOMWBA) thresholds that have been established in conjunction with this Request for Proposals.

Name of Proposer
____________________________________

Address of Proposer
____________________________________

____________________________________

Telephone Number: ________________

By: ________________________________

(Signature)

____________________________________

Printed Name

____________________________________

Printed Title

____________________________________

Date
5.9 Certificate of Non-Debarment

The Proposer hereby certifies that it is presently not debarred, suspended, or otherwise prohibited from practice by any federal, state, or local agency, and that, should any proceeding arise in which it is debarred, suspended, or otherwise prohibited from practice by any federal, state, or local agency, the Proposer shall inform the MAPC and involved municipalities within one (1) business day of such debarment, suspension, or prohibition from practice.

_____________________________
Name of Proposer

_____________________________
Address of Proposer

_____________________________
Telephone Number

By: _______________________
   (Signature)

_____________________________
Printed Name

_____________________________
Printed Title

_____________________________
Date
5.10 Proposal Format Template

Proposers are encouraged to provide a proposal that specifically addresses each of the items below. MAPC looks favorably upon responses that provide thorough, detailed responses and follow the format below.

1. Qualifications and Capability
   a) Years of Experience. Provide the number of years the Proposer has been engaged in providing energy efficiency, street lighting, and performance contracting services (respectively, if applicable).
   b) Personnel. Provide the number of full-time personnel employed by the Proposer. Please segment the data, as appropriate, into categories of personnel providing services. Provide the number of full-time personnel located in any applicable local or branch office and the site address of that local or branch office.
   c) Professional Accreditations. Discuss any accreditations or pre-qualifications held by your firm’s maintenance and installation employees.
      i. Proposers should note that all work must be performed with personnel having the minimum qualifications of MA Licensed Electricians and Journeyman Lineman certified as IMSA Roadway Lighting Level I technicians or higher, and be paid prevailing wages.
   d) Available Services. Summarize the scope of services (auditing, design, construction, monitoring, operations, maintenance, training, financing, etc.) available from your firm. In particular:
      i. Does your firm offer services to upgrade the following: street lighting, controls, underground feeds, overhead feeds, foundations, pole placement, series circuits, parallel circuits, emergency response, call center operations, and other street lighting systems?
      ii. Describe your firm’s general knowledge of latest street lighting technologies and associated life cycle costs.
iii. Describe your firm’s general ability and approach to help with financing and secure low rates.

iv. Describe your firm’s general ability to secure insurance policies.

v. Does your firm operate a 24 hour call service with a toll free number answered at all times by a person to receive outage reports with the capability for real time work order dispatching for emergency calls? If so, for how long has it been in operation?

e) Lawsuits and Disputes. Discuss whether your firm has ever been involved in a lawsuit or dispute regarding a performance contract. If so, please provide all such incidents and describe the circumstances and outcomes of such lawsuit or litigation. Further, please discuss whether your firm has been barred from providing performance contracting or other services in any states.

2. Experience and Expertise

a) Project Experience. Fully describe at least three (3) or more projects that the Proposer has implemented within the last five (5) years that involve systems similar in type, size or scope to the system described in the technical appendices, and/or in locations with similar geography or climate to municipalities in Massachusetts. Provide detailed project information for all three (3) or more reference projects including: customer name, project dates, total project cost at response stage, total final project cost, projected annual electricity savings, actual realized electricity savings to date, and any shortfalls. The Proposer must also indicate whether the project was completed on schedule and on budget, and if not, explain the reasons for such delay or budget noncompliance. A response in table format is preferred.

i. For each reference, please include the names, addresses, email addresses and telephone numbers. It is understood that the MAPC may contact any or all of the above references regarding the project and personnel performance as part of the RFP review process.

ii. Detailed project descriptions should reference experience the Proposer may have with: verifying billing accuracy, providing detailed financial analysis of lighting alternatives, considering all of the latest proven technologies, life cycle
costing, completing field audits, developing and implementing lighting plans using IESNA guidelines or municipal guidelines, and securing conservation or other available grants; providing monitoring and verification services to include providing to NST AR the required paperwork to effect adjustment of the billing to reflect the changes implemented and verification of the correct billing adjustments and credits due to the community.

b) **Project Lease Purchase Financing.** Describe your firm’s ability to provide project lease purchase financing. Provide examples of specific projects where this was provided and detail the method used to secure the financing.

c) **Maintenance Contracts.** Describe your firm’s existing street lighting maintenance contracts. Provide satisfactory letters of reference from the example contracts provided as well as a list of all related work over the past two years.

d) **Utility Relationships.** Describe your firm’s knowledge of utility tariffs, available incentives and rebates, and application processes.

e) **Supplier Relationships.** List the street lighting fixture, controls, and other related technology suppliers that the Proposer has worked with and describe the relationship with the supplier.

f) **Technology Experience.** List the street lighting fixture, controls, and other related technology suppliers that the Proposer has actually priced or procured and past experience with those technologies.

g) **Staff Capabilities.** Describe the number and quality of staff who Proposer anticipates will be assigned to Project(s) to be developed pursuant to this RFP, and their ability to conduct technical analysis, engineering design, construction management, construction, training and post-contract monitoring. Detail all professional licenses held by key project staff.

3. **Technical Approach**

   a) **Technical Audit Approach.** Describe your firm’s general approach to auditing street lights. What level of information and resources is needed from the customer? Provide an estimate of the amount of time your firm would likely require to
conduct and prepare a complete Technical Street Light Energy Audit of the Street Lighting Facility Profiles described in Appendix 6.2 of this RFP.

i. **Required:** The Proposer should submit a sample technical audit conducted by your firm for a similar project. This audit must include detailed energy and economic calculations. The sample Technical Street Light Audit should be representative of the types of facilities and the type of audit that will be conducted on behalf of the Municipalities. The sample audit must have been conducted by a member of the team proposed for this project; clearly state which member(s) of your project team conducted the audit.

b) **Technical Design Approach.** Describe your firm’s approach to the technical design of any Project to be developed pursuant to this RFP, including any methodology Proposer normally uses to compute the performance of the project.

i. Describe standards that are generally used for street lighting light levels.

c) **Baseline Calculation & Adjustments.** Describe in detail the methodology your firm normally uses to compute a baseline of energy use as well as performance. Describe factors (such as weather, facility use changes, and operating behavioral changes) that would necessitate adjustment.

d) **Commissioning & Utility Coordination.** Describe your process for commissioning and coordinating with local utility to adjust billing to reflect continuing operations and maintenance for the street lighting system.

e) **Billing & Invoices.** Describe your standard billing procedures and attach a sample invoice.

f) **Performance Shortfalls.** Describe protocols related to management of critical path schedule to ensure timely completion, including willingness to post liquidated damages for delays and performance shortfalls. Discuss Proposer’s project management protocols to ensure schedule adherence.

g) **Environmental Liability.** State your firm’s position with respect to the acceptance of liability for any hazardous materials encountered during the course of the project. State whether acceptance of environmental liability and compliance with all state environmental laws for activities related to construction during the contract period is typical for your firm.
i. Proposers should note that it is the expectation of the MAPC that the Proposer will assume all responsibility for proper handling, storage and disposal of environmentally sensitive equipment such as, but not limited to, fluorescent lamp and HID fixture ballasts containing or suspected of containing PCBs, fluorescent or HID lamps containing mercury.

h) Equipment Ownership & Service Responsibility. If any equipment would not become property of the Municipality upon installation, describe the status of equipment ownership and identify which types of equipment would become the property of the Municipality upon installation and which types, if any, of the equipment would be owned by the Proposer, or any other party, at any stage during the contract period. Describe the Proposer’s proposed service responsibility, if any, for each type of equipment during the contract period and at contract expiration.

i) Warranties. State the nature and term of typical warranties and state how warranties on equipment that is expected to become property of the Municipality upon installation would be transferred to the Municipality.

4. Site Specific Approach

a) Project Scope. Summarize the scope of services (auditing, design, construction, monitoring, operations, maintenance, training, financing, etc) offered for this project.

i. Potential Projects. Based on your preliminary assessment of the information provided, describe an equipment modifications, installations or replacements that your firm would consider installing as part of this project. Address all potential energy saving opportunities. Also describe any special features, renewable technologies, or advanced technologies that might be applicable. Describe any special features or services associated with your proposed improvements that would add value to the participating Municipalities.

ii. Critical Phase Projects. Based on your organization’s assessment of street lighting areas identified herein as being priority sites where each
Municipality may require accelerated design, engineering, and construction activity, discuss the ability of your firm to address these critical projects on an accelerated timetable that would result in substantial completion of construction activities at priority locations before ______, 201_.

b) **Performance Specifications.** For each product referenced in the project scope, provide the following:
   i. Luminaire efficacy (lumens per watt) based on LM-79 test results
   ii. Rated luminaire wattage in the on-state and off-state based on LM-79 test results
   iii. L70 rating for expected useful lifetime
   iv. Correlated Color Temperature (CCT)
   v. Color Rendering Index (CRI)

c) **Safety Certifications.** For each product referenced in the project scope, vendor shall list safety certification and file number per the NEC. Applicable testing bodies are determined by the US Occupational Safety Health Administration (OSHA) as Nationally Recognized Testing Laboratories (NRTL) and include: CSA (Canadian Standards Association), ETL (Edison Testing Laboratory), and UL (Underwriters Laboratory). Entire fixture including internal components, and as a whole unit, shall be certified.

d) **Project Cost Sheet.** Attach all computations for the recommended projects with full documentation of methods, assumptions, and input data, and the energy cost savings in units of energy, current dollars, useful life, and savings verification method.

e) **Project Management.** Describe how your firm would work with current facilities management and maintenance personnel in order to coordinate construction and avoid conflicts with other ongoing or scheduled projects.
   i. Describe the nature of work that will likely be conducted by subcontractors. Describe your willingness to use local subcontractors or subcontractors specified by the Municipality.

f) **Project Schedule.** Propose a preliminary project schedule for achievement of all the major project milestones subsequent to approval of the Technical Street Light
Audit through commissioning and commencement of normal operation. Project schedules should have a target of complete installations within 60 days of local contract approval.

g) Operations & Maintenance. Describe any major changes in operations or maintenance of the facilities that your firm foresees based on the information provided. Describe any proposed maintenance responsibilities of your firm. Who would be the key personnel responsible for providing any preventive maintenance services?

h) Standards of Lighting Levels. Describe standards of comfort and functionality that your firm would propose for light levels on various roadways and other lit public areas.

i) (Optional) Addendum Relating to Alternative Financing. In a separate section, the Proposer may propose an alternative to the Municipality purchasing/installing, financing and owning the new equipment to be installed. The Proposal should clearly identify the operational and cost advantages to the Municipality with the identified alternative.

5. Cost and Pricing (Provide All Pricing in a Separate, Sealed Envelope.)

a) List and describe any and all costs such as required for complete project installation, and also include a separate maintenance cost schedule. Fixture pricing information should include:

i. Current Annual Energy Use and Cost (in kWh and current dollars)
ii. Projected Annual Energy Use and Cost (in kWh and current dollars)
iii. Annual Energy Use and Cost Savings (in kWh and current dollars)
iv. Existing Fixture Type, Wattage, Quantity, and Energy Use and Cost (based on 4,200 hours of operation annually)
v. Recommended Fixture Type, Wattage, Quantity, and Energy Use and Cost (based on 4,200 hours of operation annually)
vi. Estimated NSTAR rebate per fixture
vii. Cost of Fixture after Rebate
viii. Total Cost for all Fixtures
6. Appendices

The following section contains the following documents to be considered by the Proposer in the drafting of their Proposal:

6.1 Municipal Contact Info
6.2 Profiles of Existing Street Light Facilities
6.3 Product Specifications
6.4 Minimum Contractual Terms
6.5 Proposal Evaluation Forms
6.6 Sample Contract
6.7 Prevailing Wage Tables
6.1 Municipal Contact Information

**Town of Arlington**  
Adam Chapdelaine, Town Manager  
730 Massachusetts Avenue  
Arlington, MA 02476  
Phone: (781) 316-3010  
Email: achapdelaine@town.arlington.ma.us

**City of Chelsea**  
Joseph Foti, Public Works Director  
500 Broadway  
Chelsea, MA 02150  
Phone: (617) 466-4200  
Email: jfoti@chelseama.gov

**Town of Natick**  
William Chenard, Director, Natick Public Works  
Phone: (508) 647-6552  
Email: chenard@natickma.org

**City of Woburn**  
Sarah Stanton, Purchasing Director  
Phone: (781) 897-5950  
Email: sstanton@cityofwoburn.com
### 6.2 Profiles of Existing Streetlight Facilities

An inventory list by pole/street is available upon request.

<table>
<thead>
<tr>
<th>Town of Arlington</th>
<th>City of Chelsea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type/Wattage/Lumens</strong></td>
<td><strong>Type/Wattage/Lumens</strong></td>
</tr>
<tr>
<td>MV 100w 3,500</td>
<td>HPS 50w 4,000</td>
</tr>
<tr>
<td>HPS 50w 4,000</td>
<td>HPS 70w 5,800</td>
</tr>
<tr>
<td>HPS 100w 9,500</td>
<td>HPS 100w 9,500</td>
</tr>
<tr>
<td>MV 250w 11,000</td>
<td>HPS 150w 16,000</td>
</tr>
<tr>
<td>HPS 250w 25,000</td>
<td>HPS 250w 25,000</td>
</tr>
<tr>
<td>HPS 250w 45,000</td>
<td></td>
</tr>
<tr>
<td><strong>subtotals</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Town of Natick</th>
<th>City of Woburn</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type/Wattage/Lumens</strong></td>
<td><strong>Type/Wattage/Lumens</strong></td>
</tr>
<tr>
<td>HPS 35W 2150</td>
<td>HPS 50w 4,000</td>
</tr>
<tr>
<td>MV 100w 3,500</td>
<td>HPS 100w 9,500</td>
</tr>
<tr>
<td>HPS 50w 4,000</td>
<td>HPS 150w 16,000</td>
</tr>
<tr>
<td>HPS 100w 9,500</td>
<td>HPS 250w 25,000</td>
</tr>
<tr>
<td>MV 250W 11,000</td>
<td>HPS 400w 45,000</td>
</tr>
<tr>
<td>HPS 150 W 16,000</td>
<td>MH 150w 12,000</td>
</tr>
<tr>
<td>HPS 400w 25,000</td>
<td>(Post-Top Decorative Acorn)</td>
</tr>
<tr>
<td>Parking Lot Lights</td>
<td></td>
</tr>
<tr>
<td><strong>subtotals</strong></td>
<td></td>
</tr>
</tbody>
</table>

*250w and 400w fixtures to be replaced with 150w HPS equivalent. Project is Arterials and City Square Common only.*
6.3 Product Specifications

A. Warranty & Replacements

The selected Contractor shall provide a minimum ten (10) year warranty for all electronic components including the photocell and drivers (power supplies) and a ten (10) year warranty on finish and materials. Replacement material warranty shall include warranty against defective or non-starting LED source assemblies, and luminaires exhibiting inadequate lumen maintenance at end of warranty period. Finish warranty shall include warranty against failure or substantial deterioration such as blistering, cracking, peeling, chalking, or fading.

The selected Contractor shall be responsible for replacement of all failed products due to warranty issues, to include the labor and materials, shipping of failed materials to supplier for replacement, and maintaining sufficient stock on hand to ensure prompt repairs to failed units. Additionally, the participating Municipalities wish to engage the services of the Contractor for all minor repairs outside of warranty issues to the street lighting system for the full term of the warranty period. Such repairs will require the prior approval of each Municipality. In the event an unexpected repair will be for a value greater than $5,000, each Municipality may seek additional quotes for the repair and select the offer that is in their best interest. Warranty period shall begin on date of possession. The supplier will provide the site Owner with appropriate signed warranty certificates. The site Owner shall receive certificates prior to final payment.

The selected Contractor shall be required to provide a monthly report on any failures or repairs completed to include the nature of the repair, the date of notice and the date the repair was completed. Such report may be in the form of an online posting accessible to local staff, an electronic report or a written report provided to the Municipalities. The Contractor shall provide a cost-free method for residents to report outages or problems.

B. Quality Assurance

Before bulk purchase, a participating Municipality may request standard production model luminaire samples identical (including LED package) to product proposed to be installed for inspection. A Municipality may request independent testing of sample luminaires to verify luminaire performance and compliance with the specifications.

After installation, a Municipality may perform field measurements and/or send luminaires off for independent laboratory testing to enforce warranty provisions for lumen maintenance.

C. Technical Specifications

Luminaires shall conform to the requirements shown in the following tables. Luminaires furnished under this contract shall be LED and shall be from the same manufacturer for any wattage to be furnished.
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Requirement Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LED Luminaire Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Correlated Color Temperature (CCT)</strong></td>
<td>CCT shall be 4,300 +/- 300 nominal CCT. Color shift during L70 period shall be less than 5%. Acceptable LM80 test results <strong>must</strong> be provided.</td>
</tr>
<tr>
<td><strong>Color Rendering Index (CRI)</strong></td>
<td>Luminaires shall have a minimum CRI of 70.</td>
</tr>
<tr>
<td><strong>Off-state Power Consumption</strong></td>
<td>The power draw of the luminaire (included PE or remote control devices) shall not exceed 0.50 (one half) watts when in the off state.</td>
</tr>
<tr>
<td><strong>On-state Power Consumption</strong></td>
<td>The LM79 test shall exceed 69 lumens per watt at ~700mA, 75 lumens per watt at ~525 mA, and 78 lumens per watt at ~350 mA.</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>The warranty shall provide for the full replacement of the entire lamp (LED) system exclusive of lamp post due to any failure for a minimum of seven (7) years. Warranties shall include all labor up to $50 per unit, materials and equipment necessary to address the deficiency, including field replacement.</td>
</tr>
<tr>
<td><strong>Operating Environment</strong></td>
<td>Luminaires shall be able to operate normally in temperatures from -20°C to 50°C, and have a documented history of successful trials in a climate similar to that of Boston, Massachusetts.</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>Shall consist of a heat sink with no fans, pumps, or liquids, and shall be tested for heat management with debris to ensure buildup does not degrade heat dissipation such that the light operates outside of its design life performance parameters.</td>
</tr>
<tr>
<td><strong>Dimensions (Approx.)</strong></td>
<td>For fixtures to be mounted on mast arms longer than 5 feet long, when any single dimension is more than 10 percent greater than the fixture being replaced, a Wind Load analysis, stamped by an appropriately registered Engineer, shall be provided to prove the existing pole can accommodate the Wind Loading of the proposed fixture.</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>Shall be primarily constructed of metal. Finish shall be gray in color, powder coated and rust resistant. Finish shall have a warranty of not less than 7 years. Fixture shall be self-cleaning. Driver must be mounted internally and be replaceable. Driver must be accessible without tools. All screws shall be stainless steel. Captive screws are needed on any components that require maintenance after installation. No housing parts shall be constructed of polycarbonate (not this does not include optical components but does include all other housing components). Driver and optical systems will be IP rated to not less than 66. Housing must have a rating of 54 (small drain holes on the bottom of the fixture are acceptable) or better and the mounting point must have an installed barrier to restrict entry of birds and bugs.</td>
</tr>
<tr>
<td><strong>Dark Sky Compliance</strong></td>
<td>Fixtures shall comply with International Dark Sky Association</td>
</tr>
<tr>
<td>Certification</td>
<td>Entire fixture including internal components, and as a whole unit, shall be UL certified, CSA International certified, or equivalent.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Mounting Arm Connection</td>
<td>Cobrahead fixtures shall mount on 1 5/8 to 2 3/8 O.D. horizontal tenon with no more than four 9/16-in hex bolts and two piece clamp with vertical tilt adjustment range of +/- 5%. Effective Projected Area (EPA) of luminaire shall not exceed 1.6 and shall withstand 100 MPH wind gusts when mounted on a standard 6’ steel mounting bracket arm without additional reinforcement.</td>
</tr>
<tr>
<td>PE Cell Receptacle</td>
<td>Luminaires shall have a 3-prong twist-lock photo-control receptacle in accordance with ANSI C136.10 such as the Fischer Dark to Light (DTL). The PE socket shall be able to rotate so that the PE window can be positioned to face the north direction. Photocells will be supplied with units.</td>
</tr>
<tr>
<td>House Shield</td>
<td>Shall provide option for house side light control, both field installable and manufacturer installed.</td>
</tr>
<tr>
<td>Experience</td>
<td>Manufacturer of fixture must have shipped a minimum of 5,000 units similar to the ones being sold within the past year and must provide shipping documents including where from and to and contact information. Company must have been in business for not less than ten years and have a financial strength and business history that in the sole opinion of the Awarding Authority indicates their ability to be in business and to honor the warranty through its full term. The City reserves the right to require a warranty bond be posted for the full value of the contract.</td>
</tr>
</tbody>
</table>

### LED Module/Array Requirements

| Lumen Depreciation of LED Light Sources | LED module(s)/array(s) shall deliver at least 70% of initial lumens, when installed for a minimum of 70,000 hours. Submit lumen depreciation (operating life) data for each luminaire supported by the LED chip manufacturers’ IESNA LM80 test data that directly correlates to luminaire level performance. Submit certified photometric reports per IESNA LM79 from an approved Department of Energy Independent testing laboratory to validate manufacturer’s photometric performance claims for each luminaire. |
| Power Factor | Shall have a minimum Power Factor of 0.90 |
| Input Voltage | Shall be standard for multi voltage input from 120 volts to 277 volts. |
| Max amperage at LED | Shall conform to the following: 1) Step increments on current to the driver: ~350 mA (with option of ~525 mA and ~700 mA) |
2) Driver adjustment for multi-current input operation: Standard factory for Equivalent Replacement of 70 W HPS and 100 W HPS shall be 350 mA, 525 mA, and 700 mA as delivered from the factory. Adjustment shall not exceed 1000 mA. L70 shall not be below 70,000 for the highest operating forward current.

3) Fixtures using the smaller chip and operating at lower forward currents or alternate step currents will also be considered so long as the output requirements are met for equivalent light on the roadway.

<table>
<thead>
<tr>
<th>Transient Protection</th>
<th>Per IEEE C.62.41-1991, Class A operation. The line transient shall consist of seven strikes of a 100K HZ ring wave, 6 kV level, for both common mode and differential mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>Power Supply shall operate between -20°C and 50°C.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Output operating frequency must be $\geq 120$ Hz (to avoid visible flicker) and input operating frequency of 60 Hz.</td>
</tr>
<tr>
<td>Interference</td>
<td>Power supplies shall meet FCC 47 CFR Part 15/18 (Consumer Emission Limits).</td>
</tr>
<tr>
<td>Noise</td>
<td>Power Supply shall have a Class A sound rating per ANSI Standard C63.4.</td>
</tr>
<tr>
<td>Terminal Block</td>
<td>Shall be capable of #12 to #6 AWG.</td>
</tr>
</tbody>
</table>

### LED Roadway Application Requirements

<table>
<thead>
<tr>
<th>Minimum Light Output</th>
<th>The 0.2 fc contour line, measured parallel to the luminaire arm on the street side of the fixture, shall fall within +/- 10 percent from the equivalent fixture selected for each location in the lighting plan. The 0.2 fc contour line, measured parallel to the luminaire arm on the house side of the fixture, shall fall no less than 20 percent nor more than 5 percent from the equivalent fixture selected for each location in the lighting plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luminaire Efficacy</td>
<td>Luminaire Light Output (includes fixture efficiency and thermal effects), Luminaire Input Power shall meet DOE Energy Star Criteria.</td>
</tr>
<tr>
<td>Minimum Luminaire Efficacy</td>
<td>72 lm/W at 350 mA and 62 lm/W at all operating temperatures and forward currents.</td>
</tr>
</tbody>
</table>

**D. Referenced Standards**

The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by their basic designation only.
1. American National Standards Institute (ANSI)
   i. ANSI C63.4-2001. Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9kHz to 40GHz
   ii. ANSI C136.2-2004 (R2009), American National Standard for Roadway and Area Lighting Equipment—Luminaire Voltage Classification
   iii. ANSI C136.3-2005, American National Standard for Roadway and Area Lighting Equipment—Luminaire Attachments
   v. ANSI C136.13-2004, Roadway and Area Lighting Equipment - Metal Brackets for Wood Poles
   xi. ANSI C136.32-2006, American National Standard for Roadway and area lighting equipment - enclosed setback luminaires and directional floodlights for high-intensity discharge lamps

   i. ASTM B117-97 – Standard Practice for Operating Salt Spray (Fog) Apparatus
   ii. ASTM G53 – Standard Practice for Operating Light and Water Exposure Apparatus (Fluorescent UV – Condensation Type) for Exposure of Nonmetallic Materials

3. Illuminating Engineering Society of North America (IESNA)
   i. DG-4-03, Design Guide for Roadway Lighting Maintenance
   iii. LM-79-08, IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
   iv. LM-80-08, IESNA Approved Method for Measuring Lumen Maintenance of LED Light Sources
   v. RP-8-00, ANSI / IESNA American National Standard Practice for Roadway Lighting
   vi. RP-16-05 and addenda, “Nomenclature and Definitions for Illuminating Engineering”
   vii. TM-3-95, A Discussion of Appendix E - "Classification of Luminaire Lighting Distribution," from ANSI/IESNA RP-8-83
viii. TM-15-07, “Luminaire Classification System for Outdoor Luminaires”

4. National Electrical Manufacturers Association (NEMA)

5. National Fire Protection Association (NFPA)
   i. NFPA 70 – National Electrical Code (NEC)

6. Underwriters Laboratories (UL)
   i. UL 1012 Power Units Other Than Class 2
   ii. UL 1310 Class 2 Power Units
   iii. UL 1449, Surge Protective Devices
   iv. UL 1598, Luminaires
   v. UL 2108 Low Voltage Lighting Systems
   vi. UL 8750 Light-Emitting Diode (LED) Light Sources for Use in Lighting Products

7. IP Rating

8. FCC 47 CFR (Consumer Emission Limit)
6.4 Minimum Contractual Terms

The following represent minimum contractual terms to be included in the final Energy Management Services Agreement for Streetlights. The Proposers in their Proposals shall consider the following special contract terms and conditions that will be an integral part of the subsequent contracts and are highlighted here to emphasize their importance. Any exception to the Contract Terms should be noted and explained in the Proposal. Proposers may propose to provide additional services or offer terms that are more attractive; however, the Municipalities reserve the right to reject any terms that do not meet the conditions described in this RFP.

1. Technical Street Light Energy Audit Agreement

The Proposer’s proposed contract terms must include the performance of a detailed Technical Street Light Energy Audit, which is a review of the street lighting inventory to determine the proper wattage and lumen outputs needed to meet current lighting levels and to ensure overall uniformity of lighting based on appropriate factors for each roadway, a review of the billing to verify accuracy and the preliminary analysis of claimed savings opportunities and associated costs. If a satisfactory Technical Street Light Energy Audit Agreement is not executed within 30 days of the award, then the MAPC reserves the right to withdraw the award and make an award to the next ranked Proposer at the request of the Municipalities.

A. FORMAT

The Technical Street Light Energy Audit shall include:

1) A summary of proposed retrofits for the project;
2) A summary of project cost;
3) Maintenance services provided by equipment covered, scope, frequency;
4) A cost savings calculation; and
5) A payment schedule.

B. SAVINGS GUARANTEE

Suggested language for the savings guarantee is as follows:
“The selected Contractor guarantees that in each year of the Term following Substantial Completion, the Customer will realize energy savings of at least ________ kWh. At current rates, these energy savings have a value of ___________ Dollars ($____).”

C. COST ESTIMATES
The cost estimate must include an estimate of all costs including design, engineering, installation, maintenance, repairs and debt services as well as other categories presented in the stated costs section in the RFP.

D. ALLOWABLE PAYMENT SOURCES
Payment sources to support the capital investment payments are shown below. The following payment sources will be allowed:

- Tax-exempt municipal lease financing,
- Bonding,
- Zero-interest utility financing.

E. TECHNICAL AUDIT PROCEDURES
1) Identify the size, scope and payback of proposed streetlight retrofit measures by a document analysis of various conservation opportunities as identified in the RFP, the selected Contractor’s Proposal, and as negotiated and listed in the Profile of Existing Facilities;
2) All recommended conservation measures shall meet all the applicable current laws, regulations and codes of federal, state, and local town or city government. The Contractor shall not be expected to resolve any existing code violations but shall make a best effort to report to the Customer any such violations if found;
3) Provide a detailed energy analysis for each of the proposed retrofit measures;
4) For each proposed retrofit measure, provide a proposed implementation schedule;
5) Provide a descriptive hazardous waste disposal plan for the project.

F. UTILITY REBATES
The Contractor shall prepare all applications and process all documents necessitated by rebates offered by the utility company. Any savings generated by rebates shall be credited to the Customer.

2. **Streetlight Energy Management Services Agreement (EMSA)**

   **A. COST PROVISIONS**
   1) Costs provided in the cost component of the Contractor’s Proposal are the maximum costs, provided the size and scope of the project remain similar.
   2) Purchases incurred by the Customer as a Municipality are exempt from Federal Excise Taxes, State or Local Sales Tax, and as such the cost component of the Contractor’s Proposal must exclude any such taxes. Tax Exemption Certifications will be furnished upon request.
   3) All prices are to be firm Freight On Board (FOB) delivered destination [TBD] to the address specified in Section 1 of the RFP or any other department location as requested by the Customer.
   4) In case of error in extension of prices quoted herein, the unit price will govern.

   **B. EQUIPMENT COMPATABILITY OR STANDARDIZATION**
   All equipment installed that is comparable to similar equipment at the facilities shall offer compatibility with existing systems, and/or be of the same manufacturer for standardization of equipment agency-wide, unless excepted by the Customer.

   **C. POST-CONTRACT GUARANTEE**
   Prior to contract termination, the Contractor shall be obligated to perform a walk-through survey of the facility and to prepare an assessment of the condition of the equipment installed as part of the project. The Customer retains the right to hire an independent, certified professional engineer to prepare an assessment of the condition of the equipment installed as part of the contract.

   **D. INDEMNIFICATION**
The selected Contractor shall compensate any involved municipality for all damage to municipal property of any nature arising out of the selected Contractor’s work. To the fullest extent permitted by law, the selected Contractor shall indemnify, defend, and hold harmless the any involved municipality and all of its officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the breach by the selected Contractor of its obligations under any Contract, or the act or omission of the selected Contractor, its subcontractors, or their officers, employees, agents and representatives or anyone directly or indirectly employed by them, or anyone for whose acts or omissions they may be liable, regarding the work to be performed by the selected Contractor under any Contract, or which arise out of the violation of any federal, Massachusetts or local statute, by-law, rule, regulation, order or directive, or which relate to personal injury or property damage suffered by the selected Contractor or any of its officers or employees regarding the subject matter of any Contract. Said costs shall include, without limitation, legal costs, collections fees, and counsel fees incurred in defending any claim or suit that may be brought against any involved municipality and any judgment that may be obtained in any such claim or suit.

E. INSURANCE
The selected Contractor shall provide and maintain throughout the term of any Contract and any extension or renewal thereof insurance as described in Section 6.6 with companies that are authorized and licensed in the Commonwealth of Massachusetts to issue policies for the coverages and limits so required.

F. INDEPENDENT CONTRACTOR
The selected Contractor is not an agent or an employee of the Customer and is not authorized to act on the Customer’s behalf. No employee, agent or representative of the selected Contractor shall be entitled to receive any benefits of employment with the Customer including without limitation salary, overtime, vacation pay, holiday pay, sick leave, health insurance, life insurance, pension or deferred compensation.

G. COMPLETE AGREEMENT
This agreement supersedes all prior agreements and understandings between the parties and may not be changed unless mutually agreed upon in writing by both parties.

H. ASSIGNMENT
The selected Contractor shall not assign the Agreement or any interest therein, without prior written consent of the Customer.

I. SUBCONTRACTING
The selected Contractor shall not award any work to any subcontractor without prior written approval of the Customer. Nothing contained in this Agreement shall create any contractual relation between any subcontractor and the Customer.

J. GOVERNING LAW
This Agreement shall be governed by the laws of the Commonwealth of Massachusetts.

K. ENFORCEABILITY
In the event any provision of this Agreement is found to be legally unenforceable, such unenforceability shall not prevent enforcement of any other provision of the Agreement.

L. TERMINATION
i. If the selected Contractor shall breach any provision of the contract, which breach is not cured within twenty-one (21) days of written notice thereof from the Customer to the selected Contractor, the Customer shall have the right to terminate the contract upon written notice to the selected Contractor.

ii. If any assignment shall be made by the selected Contractor or by any guarantor of the selected Contractor for the benefit of creditors, or if a petition is filed by the selected Contractor or by any guarantor of the selected Contractor for adjudication as a bankrupt, or for reorganization or an arrangement under any provision of the Bankruptcy Act as then in force and effect, or if an involuntary petition under any of the provisions of the Bankruptcy Act is filed against the selected Contractor and such involuntary petition is not discharged within ninety
(90) days thereafter, in any event the Customer may terminate the contract upon written notice to the selected Contractor.

iii. The award of the contract and the continued operation of the contract are contingent upon appropriation of sufficient money to fund the Contract. Should appropriate necessary funds fail to be appropriated therefor, the Customer shall no longer be under any obligation to tender performance, including payment, under the terms of the contract. In that event the Customer may terminate the contract upon written notice to the selected Contractor.

iv. The Customer may terminate the contract upon written notice to the selected Contractor if a source of money to fund the Contract is lost during the Contract term. In the alternative, the parties may agree in writing to amend the Contract to provide for a Contract price which represents a reduced appropriation for the Contract term.

v. The Customer may also terminate the contract for convenience upon thirty (30) days’ written notice to the selected Contractor. In the event of termination the selected Contractor shall be entitled to be paid for services rendered in accordance with the contract prior to termination.

In the event that the contract is terminated pursuant to Section a. or b. above, the Customer may make any reasonable purchase or contract to purchase services in substitution for services due from the selected Contractor and may deduct the cost of any substitute contract, or damages sustained by the Customer due to non performance or non conformance of services together with incidental and consequential damages from the Contract price, and shall withhold such damages from sums due or sums which become due.

vi. Return of Property: Upon termination, the selected Contractor shall immediately return to the Customer, without limitation, all documents, plans, drawings, tools and items of any nature whatsoever, supplied to the selected Contractor by the Customer or developed by the selected Contractor in accordance with this Agreement.

M. NON-DISCRIMINATION
The selected Proposer shall not discriminate against or exclude any person from participation herein on grounds of race, color, religious creed, national origin, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), age, genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap. The previous sentence shall include, but not be limited to, the following: advertising, recruitment; hiring; rates of pay or other forms of compensation; terms; conditions or privileges of employment; employment upgrading; transfer; demotion; layoff; and termination. The selected Contractor shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, color, religious creed, national origin, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), age, genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap.

N. PREVAILING WAGE RATES
The selected Contractor is required to pay minimum wage rates for all employees involved in providing contract services, as determined by the Division of Occupational Safety. Please note wage rates are valid only for 90 days from date of issue. Further inquiry and clarification of prevailing wage laws can be obtained from the Division of Occupational Safety, 300 Washington Street, 5th Floor, Boston, MA 02108-5223, (617) 727-3492.
6.5 Proposal Evaluation Criteria & Form

The MAPC Selection Committee will rank order the Proposals in each area of evaluation assigning a point value of 10 to the best and 1 to a Proposal that is incomplete or poorly done. Where two approaches are deemed equal they may be assigned the same value although it is preferable some differentiation is made. The sum of the points assigned by all evaluators will establish the score of each Proposer. Based on the outcome of the evaluation and scoring the Selection Committee may choose to interview one or more of the Proposers to make a final determination. The following will be evaluated:

<table>
<thead>
<tr>
<th>Minimum Required Items</th>
<th>Provided (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCAM Certificate of Eligibility</td>
<td></td>
</tr>
<tr>
<td>DCAM Update Statement</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Contractor Authorized Signature Verification Form (5.3)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Certificate of Non-Collusion (5.4)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Attestation Regarding Filing of Tax Returns (5.5)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Affirmative Action Plan Form (5.6)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Conflict of Interest Certification (MCL c. 268A) (5.7)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Certificate of Compliance with MGL c. 151B (5.8)</td>
<td></td>
</tr>
<tr>
<td>A fully-executed Certificate of Non-Debarment (5.9)</td>
<td></td>
</tr>
<tr>
<td>Proposal in format of Proposal Format Template (5.10)</td>
<td></td>
</tr>
<tr>
<td>Sample Technical Audit</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparative Evaluation Criteria</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualifications and Capability</td>
<td></td>
</tr>
<tr>
<td>• General Firm Information</td>
<td>30%</td>
</tr>
<tr>
<td>• Personnel Qualifications</td>
<td></td>
</tr>
<tr>
<td>• Available Services</td>
<td></td>
</tr>
<tr>
<td>Experience and Expertise</td>
<td></td>
</tr>
<tr>
<td>• Project Experience (particularly with like projects in MA Municipalities)</td>
<td>20%</td>
</tr>
<tr>
<td>• Technology Experience</td>
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<tr>
<td>• Lease Purchase Financing Experience</td>
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<td>• Existing Contracts &amp; Relationships</td>
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<td>• Staff Capabilities</td>
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Technical Approach

- Technical Audit & Design Approach (including quality of sample audit) 20%
- Engineering Analysis (calculating baseline & savings)
- Description of Responsibility & Warranty

Site Specific Approach

- Project Scope & Recommendations 10%
- Project Management & Scheduling Approach
- Operations & Maintenance Approach

Cost and Pricing 10%

**SELECTION CRITERIA**

**Minimum Evaluation Criteria**

In order to be considered, a Proposal shall comply with the requirements set forth in this section.

**Comparative Evaluation Criteria**

All responsive proposals will be judged against the **Comparative Evaluation Criteria** detailed below. The MAPC will rank each proposal as:

a) Highly Advantageous – the proposal exceeds the standards of the specific criterion;
b) Advantageous – the proposal fully satisfies the standards of the specific criterion;
c) Not Advantageous – the proposal does not fully satisfy the standards of the specific criterion, or is incomplete and/or unclear.

**Qualifications and Capability**

a) **Highly Advantageous** – The proposer’s resumé(s) demonstrate(s) that proposer has superior training, educational background and work experience appropriate to the work described herein and all key work personnel demonstrate(s) professional experience well beyond the minimum requirements and demonstrate(s) a superior approach to the subject material and a superior understanding of the issues addressed by the work.

b) **Advantageous** – The proposer’s resumé(s) do/does not meet the above category for highly advantageous, but demonstrate(s) that proposer has adequate training, educational background and work experience appropriate to the work described herein and all key work personnel demonstrate(s) professional experience that meets or exceeds the minimum requirements and demonstrate(s) a satisfactory
approach to the subject material and understanding of the issues addressed by the work.

c) **Not Advantageous** — The proposer’s resumé(s) do/does not demonstrate that proposer has adequate training, educational background and work experience appropriate to the work described herein or do/does not demonstrate a satisfactory approach to the subject material and understanding of the issues addressed by the work.

**Experience and Expertise**

a) **Highly Advantageous** — The proposal demonstrates a wide depth of experience with five (5) or more similar projects.

b) **Advantageous** — The work proposal does not meet the above category for highly advantageous, but demonstrates a wide depth of experience with three (3) to five (5) similar projects.

c) **Not Advantageous** — The proposer has limited experience in providing services related to the MAPC’s requirements or with less than three (3) similar projects.

**Technical Approach**

a) **Highly Advantageous** — The proposal demonstrates a superior technical approach to the subject material and a superior understanding of the issues addressed by the work.

b) **Advantageous** — The proposal does not meet the above category for highly advantageous, but demonstrates a good technical approach to the subject material and a good understanding of the issues addressed by the work.

c) **Not Advantageous** — The proposal does not demonstrate a good technical approach to the subject material and a good understanding of the issues addressed by the work, and/or the proposal fails to indicate a time schedule that meets the work requirements.

**Site Specific Approach**

a) **Highly Advantageous** — The proposal demonstrates a superior site specific approach to the subject material and a superior understanding of the issues addressed by the work.

b) **Advantageous** — The proposal does not meet the above category for highly advantageous, but demonstrates a good site specific approach to the subject material and a good understanding of the issues addressed by the work.

c) **Not Advantageous** — The proposal does not demonstrate a good site specific approach to the subject material and a good understanding of the issues addressed by the work, and/or the proposal fails to indicate a time schedule that meets the work requirements.
Cost and Pricing

According to a low/high scale, and not qualitatively ranked. A qualifications-type analysis will be used to evaluate costs, with an emphasis on the approach to pricing and reasonableness of pricing. This will involve a combination of “price analysis” and “cost analysis” such that the MAPC Selection Committee will use judgment, knowledge and experience to determine reasonableness and consistency, and to evaluate costs based on established catalog and market prices, historical prices and independent cost estimates.
6.6 Sample Contract

Energy Management Services Agreement

BETWEEN

[Municipality]

AND

[Contractor]

DATE

Please note: This document is a model Energy Management Services Agreement (EMSA) with provisions that institutions may or may not choose to incorporate into their contracts with contractors delivering Energy Management Services under M.G.L. Chapter 25A §11C. This EMSA addresses general requirements only and does not comprise, used alone, a complete EMSA.

It is the sole responsibility of each Municipality to consult with legal counsel in preparing contract documents and to ensure compliance with all applicable federal, state, and local laws, rules, regulations, and procurement procedures.
This Energy Services Agreement (hereinafter “Contract”) is made and entered into as of ________________ (“Effective Date”) by and between _________ [insert name of company] (hereinafter “Contractor”), a ___________ based Corporation having its principal offices at ________________, and ______________ [insert name of Municipality] (hereinafter “the Customer”), having its principal offices at _______________, for the purpose of furnishing certain equipment and work specified herein (“Work”), and assuring the performance of said Work, designed to conserve energy and improve the reliability in the existing street lighting system, at Customer properties as listed in Attachment 1 (hereinafter “the System”, which are more particularly described in Attachment 1 attached hereto). This Contract is conditional upon the Customer obtaining financing from an appropriation, a regulated lender or municipal lessor in an amount net less than the Contract Price under such terms as are satisfactory to the Customer, provided Customer shall diligently pursue such financing and such terms are customary, reasonable and in compliance with pertinent laws and regulations.

1 Definitions

Key terms used within this contract are defined as follows:

Energy Baseline - The energy baseline is a calculation or measure of each type of energy consumed in existing facilities, prior to the installation of energy conservation measures.

Energy Conservation/Efficiency Measure (ECM or EEM) - A set of activities designed to increase the energy efficiency of the facility. The installation of new equipment or modification or alteration to existing equipment to reduce energy costs by improving efficiency.

Energy Savings - The reduction of energy consumption or electrical demand resulting from the Contractor’s energy efficiency measures. Energy savings shall be determined by comparing the energy baseline with the energy consumed (or demand) after the Contractor has implemented energy conservation measures.

Substantial Completion Date - The date on which the Contractor warrants by written notice that the ECMs are substantially complete and producing savings equal to or greater that the guaranteed savings.

Termination Value - The amount the Customer pays to Contractor after the Substantial Completion Date to terminate this agreement.
2  Contract Documents

It is understood and agreed that the following documents, attachments, and schedules and any amendments or addenda thereto, comprise this Agreement:

**List all attachments, schedules and documents, for example:**

- Attachment 1: Description of the System
- Attachment 2: Payment Schedule
- Attachment 3: Certificates
- Attachment 4: Technical Audit (including revisions)
- Attachment 5: Equipment and Material Warranties
- Attachment 6: Baseline Data and Projections
- Attachment 7: Bonds

The provisions of the Request for Proposals for Streetlight Energy Management Services (RFP) and Contractor’s Proposal are incorporated herein by reference. In the event of any conflict among the Contract Documents, the Documents shall be construed according to the following priorities:

- Highest Priority: Amendments to Contract (if any)
- Second Priority: Contract
- Third Priority: Addenda to RFP
- Fourth Priority: RFP
- Fifth Priority: Contractor’s Proposal.

3  Representations and Warranties

Each party hereto represents and warrants to the other that (i) it has adequate power and authority to conduct its business as presently conducted or contemplated hereby to be conducted to enter into this Contract and to perform its obligations hereunder and that (ii) it possesses full authority to execute and deliver this Agreement and that it does not contravene any applicable law, rule or regulation.

The Contractor shall furnish all labor necessary for the performance of the services required by this Contract. The Contractor warrants that it has in its employ, and throughout the term of the Contract or any extension or renewal thereof, will continue to have a sufficient number of persons experienced in developing and providing services required by this Contract, such that the Contractor’s obligations under the Contract will be carried out in a prompt, safe and professional manner.

4  Price and Terms

4.1  Contract Price
As payment for Contractor’s Work, Customer shall pay Contractor the sum of _____________________ dollars ($______), ("Contract Price"). To the extent that materials and supplies are used or incorporated in the performance of Contract, Contractor is considered an exempt purchaser under the Massachusetts Sales Act, Chapter 14 of the Acts of 1966. Contractor shall be responsible for paying all other taxes and tariffs of any sort related to the Work.

4.2 Payment Terms

Describe any agreed upon payment terms. The following is only an example.

Initial Payment: Upon receiving funds from its lender or municipal lessor, an amount of _______ dollars ($____) shall be paid for performance under the Technical Audit Agreement ("Agreement"), mobilization and other costs incurred prior to commencement of Work. Thereafter the Contractor shall receive the agreed on fixed monthly fee for maintenance of the system and any sum due for agreed on Capital improvements satisfactorily completed during the previous month.

Progress and Final Payments: A Payment Schedule as proposed pursuant to the Agreement is attached hereto as Attachment 2. Contractor shall make best and reasonable efforts to comply with said schedule and shall periodically invoice on a progress basis all Work using the appropriate Application and Certification for Payment, Certificate of Substantial Completion or Certificate of Final Completion form attached as Attachment 3. Customer shall pay all amounts due upon receipt of such properly executed form.

In accordance with this Contract, the Customer shall pay the Contractor according to price rate specified in the Contractor’s Price Proposal.

Payment will be due thirty (30) days after receipt of the Contractor’s invoice by the Customer for equipment delivered in accordance with this Contract. The Customer shall not make payments in advance.

If the Customer objects to all or part of any invoice, the Customer shall notify the Contractor in writing within two (2) weeks of the date of receipt of the invoice, and shall pay that portion of the invoice not in dispute within thirty (30) days after the date of receipt of the invoice.

Except as noted in the RFP, this Contract is a fixed rate contract and therefore miscellaneous expenditures associated with the Contractor’s performance shall not be paid by the Customer.

Payment of the amounts due under this Contract shall release the Customer, its officers, employees, boards, commissions, committees, agents and representatives, from any and all claims and liability in any way relating to this Contract or anything done in pursuance thereof.

No payment by the Customer to the Contractor shall be deemed to be a waiver of any right of the Customer under this Contract or a ratification by the Customer of any breach hereof by the Contractor.
4.3 Contract Termination

This Contract shall terminate ten (10) years after Final Completion unless otherwise agreed to in writing pursuant to this Contract. Notwithstanding the foregoing:

a. If the Contractor shall breach any provision of this Contract, which breach is not cured within twenty-one (21) days of written notice thereof from the Customer to the Contractor, the Customer shall have the right to terminate this Contract upon written notice to the Contractor.

b. If any assignment shall be made by the Contractor or by any guarantor of the Contractor for the benefit of creditors, or if a petition is filed by the Contractor or by any guarantor of the Contractor for adjudication as a bankrupt, or for reorganization or an arrangement under any provision of the Bankruptcy Act as then in force and effect, or if an involuntary petition under any of the provisions of the Bankruptcy Act is filed against the Contractor and such involuntary petition is not discharged within ninety (90) days thereafter, in any event the Customer may terminate this Contract upon written notice to the Contractor.

c. The award of this Contract and the continued operation of this Contract are contingent upon appropriation of sufficient money to fund the Contract. Should appropriate necessary funds fail to be appropriated therefor, the Customer shall no longer be under any obligation to tender performance, including payment, under the terms of this Contract. In that event the Customer may terminate this Contract upon written notice to the Contractor.

d. The Customer may terminate this Contract upon written notice to the Contractor if a source of money to fund the Contract is lost during the Contract term. In the alternative, the parties may agree in writing to amend the Contract to provide for a Contract price which represents a reduced appropriation for the Contract term.

e. The Customer may also terminate this Contract for convenience upon thirty (30) days’ written notice to the Contractor.

In the event of termination the Contractor shall be entitled to be paid for services rendered in accordance with this Contract prior to termination.

In the event that this Contract is terminated pursuant to Section 4.3a. or 4.3b. above, the Customer may make any reasonable purchase or contract to purchase services in substitution for services due from the Contractor and may deduct the cost of any substitute contract, or damages sustained by the Customer due to non performance or non conformance of services together with incidental and consequential damages from the Contract price, and shall withhold such damages from sums due or sums which become due.

Return of Property: Upon termination, Contractor shall immediately return to the Customer, without limitation, all documents, plans, drawings, tools and items of any nature whatsoever, supplied to
the Contractor by the Customer or developed by the Contractor in accordance with this Agreement.

5 The Work

5.1 Time for Performance and Final Completion

Contractor shall commence Work within five (5) days of Customer sending the Contractor a Notice to Proceed, which Customer shall send upon closing financing. Contractor shall substantially complete Work within the prescribed timeframe agreed to by both parties for each phase of the conversion and capital improvements. Extension of dates to commence or complete Work is at the sole discretion of the Customer. Approval for an extension of dates to commence or complete Work shall not be unreasonably withheld if the cause for an extension is pursuant to Sections 5.3, 5.6, 5.8, 5.12, 5.13, or 9.2. It is anticipated all work must be substantially complete within 60 days of contract execution, or as soon as possible to take advantage of any available NSTAR incentives. Following the substantial completion of work the Contractor will provide any warranty repairs at no cost to the Customer for the duration of the Warranty period. In addition the Contractor shall provide any minor repairs on an on call basis or as otherwise agreed to by both parties to ensure the full operation of the system.

5.2 Specifications of Work

Contractor’s obligations hereunder are specified in Attachment 4: Technical Audit and related drawings and plans and any subsequent revisions thereto ("Technical Audit"), as approved by the Customer. Excluded from the Work are any modifications or alterations to the properties not expressly included within the Work. The requirements of all applicable laws, regulations and codes of federal, state, and local town or city government shall be met at all times. All Work shall be performed in a good and workmanlike manner.

5.3 Construction Procedures, Changes to Work and Coordination

Contractor shall supervise and direct the Work using its best ability, skill, attention, and oversight. Contractor, in consultation with Customer, shall be responsible for the construction means, methods, techniques, sequences, and procedures. The Customer shall review all proposed modifications to the building and systems and must approve of same prior to commencement of any work; such approval will not be unreasonably withheld. No change to the scope or specifications of Work shall be made without the written consent of the Customer, in the form of a revision to the Technical Audit. If Contractor fails to correct Work which is not in accordance with the specifications or persistently fails to meet specifications herein, Customer, by written order signed personally or by its authorized agent, may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

Contractor shall perform the Work in such a manner as not to harm the structural integrity or operating systems of any building and shall repair and restore any damage caused by the Work at Contractor’s expense.
Contractor shall not create or allow to continue any condition deemed to endanger health or safety as defined in Section 6.0 I and if such a condition exists Customer shall have the right to exercise the remedies described therein.

A detailed operational plan showing the sequence of operations and a recycling and disposal plan which maximizes recycling shall be included in the Technical Audit (Attachment 4). Any changes to these plans are subject to the approval of the Customer.

Contractor shall supply to the Customer the telephone number of a responsible person who may be contacted during non-work hours for emergencies arising in connection with or effecting the Work.

Contractor shall coordinate any utility hookups provided by others under a separate agreement at no additional cost or expense to the Customer.

Contractor and its employees, subcontractors and agents shall not smoke within any building, including basements.

5.4 Relationship with Maintenance Staff

Contractor shall cooperate with Customer’s operating and maintenance personnel, train said personnel in operation and maintenance of any equipment installed as part of the Work, and coordinate the Work on a planned and programmed basis. Contractor shall deliver a preventive maintenance schedule and procedures for any equipment installed as part of the Work. No equipment shall be installed which will require additional personnel to be hired by the Customer for the operation or maintenance of said equipment.

5.5 Material and Equipment Installed

The Customer shall make the final determination whether any material or equipment installed is as specified in Contractor’s Proposal to the Request for Proposals (“RFP”), which is incorporated in this Contract by Section 9. I 3 below, and the Technical Audit. No substitution of any material or equipment specified shall be made without the written consent of the Customer in the form of a revision to the Technical Audit, and any such substitution shall be at least equal in quality, finish, durability, serviceability and performance for the purpose intended.

Contractor shall install and, when applicable, operate and maintain, or, if specified in the Technical Audit, train Customer personnel to operate and maintain equipment in a manner that will provide standards of service to meet requirements of Section 5.2 and equipment manufacturers’ literature, specifications and instructions. Contractor shall prepare and furnish at least three (3) Maintenance Manuals that include product data and which are subject to acceptance by the Customer for all equipment installations at each property.

5.6 Asbestos and Hazardous Materials

Contractor will be responsible for proper disposal of construction demolition debris and other
solid or hazardous wastes. The Contractor will be responsible for proper disposal of all ballast's containing or suspected of containing PCBs and fluorescent lamps containing mercury. Disposal plans must be documented and appropriate transportation and disposal documents prepared before disposal commences and actual disposal must be documented immediately after disposal.

I) Hazardous waste can only be disposed of at a Massachusetts Department of Environmental Protection (DEP)/United States Environmental Protection Agency (EPA) licensed hazardous waste treatment, storage, and disposal facility.

II) "Special Waste", such as asbestos (Asbestos, asbestos-containing material, formaldehyde, or other potentially toxic or otherwise hazardous material. Check Department of Environmental Protection for any updates on the definition of special waste), can only be disposed of at a DEP and Town Board of Health licensed landfill or DEP/EPA licensed recycling facility which is permitted to receive the particular type of special waste involved. The license should reflect the types of wastes that can be received for disposal at the landfill. In the event that friable asbestos is encountered and must be disturbed during the course of this contract, the Customer's Director of Physical Plant or his designee shall be notified and work in the affected area shall cease until a remediation plan is agreed upon. This shall not affect the savings allocation, but an extension of the completion date may be granted equal to the time lost. Contractor shall have taken into account all available asbestos studies provided by the Customer during the audit phase of the project.

III) Demolition debris can only be disposed of at a DEP and Town Board of Health licensed municipal sanitary landfill or DEP/EPA licensed recycling facility. The landfill or recycling facility must be permitted to receive the type of waste involved.

5.7 Subcontracting

Contractor may subcontract part of the Work to others provided any subcontractors are identified in Contractor’s Proposal or in the Technical Audit. Contractor may, with the written consent of the Customer in the form of a revision to the Technical Audit, substitute a subcontractor for one so identified or, if no subcontractor for a certain trade or task has been so identified, engage one. Contractor shall be responsible for the conduct, acts and omissions, whether intentional or unintentional, of its subcontractors, employees, agents, invitees or suppliers. Nothing in this Contract shall create any contractual relationship between any subcontractor, employee, agent, invitee or supplier and the Customer.

5.8 Delays

If Contractor is delayed in the commencement or completion of any part of the Work due to events beyond Contractor’s control and without the fault or negligence of the Contractor, including but not limited to fire, flood, extended labor disputes, unusual delays in deliveries, unavoidable casualties, abnormal adverse weather, war, and acts of God, or due to Customer’s actions or failure to perform its obligations under this Contract or to cooperate with the Contractor in the timely completion of the Work, then Contractor will notify Customer in writing of the existence, extent of, and reasons for such delay. Contractor shall have no claim for
additional compensation on account of such delays but Contractor and Customer may extend the contract time by revision to the Technical Audit for such reasonable time as they shall agree.

5.9 Equipment Location and Access

Buildings will be occupied during construction. Contractor shall take all necessary precautions to ensure the public safety and convenience of the occupants during construction. The Contractor shall complete the Work in accordance with the schedule in Attachment 2. Contractor must use sufficient personnel and adequate equipment to complete the Work pursuant to Section 5.1. The Work must be completed in a continuous uninterrupted operation between the hours of 8:00 AM and 4:30 PM on Monday through Friday, unless otherwise authorized in writing by the Customer. No Work is to be done on holidays, Saturdays, or Sundays other than for emergencies.

The Contractor is responsible for the security of partially completed work and for materials or equipment stored at Customer properties. Only materials and equipment intended and necessary for immediate use shall be brought into the buildings. Equipment and unused materials shall be removed from each building by the end of each workday. The Customer shall provide if available, without charge, a mutually satisfactory location or locations for the storage and operation of materials and equipment and the performance of the Work, including a location for staging and mobilization.

Flammables and combustibles shall be stored only in accordance with Fire Prevention Regulations (527 CMR 1.0050.00). In the event that the Customer is unable to provide a satisfactory location then Contractor shall provide and pay for suitable storage.

5.10 Permits and Fees

Contractor shall secure and pay for building and other permits and governmental fees, licenses, and inspections necessary for proper performance and completion of the Work that are required by federal, state, or town or Town governments. In the event that fees for any permits are reduced or waived by request, standing or intervention of the Customer, then, at the Customer's option, the amount of the savings of the fee shall be deducted from the line item in the Work budget and added to the contingency line item or the Contract Price reduced by that amount.

5.11 Utilities

The Customer shall provide and pay for water, heat, and utilities consumed by the Contractor during performance of the Work. The Contractor shall install and pay for any facilities or modifications not already in existence that are necessary to access such water, heat, and utilities during the Work.

5.12 Concealed or Unknown Conditions

If Contractor finds conditions during the Work that are subsurface or otherwise concealed physical conditions that differ materially from those indicated on the drawings or are unknown physical conditions of an unusual nature that differ materially from those conditions ordinarily
found to exist and generally recognized as inherent in similar construction activities, Contractor shall notify Customer of such conditions promptly, prior to significantly disturbing the same, and in no event later than one (1) business day after first observing the conditions. Such conditions may include, but are not limited to, water damage, termite damage, or structural building defects. If such conditions differ materially and cause an increase in the Contractor’s cost of, or time required for, performance of any part of the Work, the Contractor shall submit a written estimate of the material and labor cost increase and time delay. If the Customer concurs with the need, cost estimate, and time delay, Customer and Contractor shall make an equitable adjustment in the Contract Price or Time for Performance and Final Completion, or both. Pursuant to Section 5.8 above, Contractor shall not be entitled to damages for delay. In no event shall the Contract Price be increased by more than ten percent (10%).

5.13 Casualty, Condemnation, Damage

If any fire, flood, other casualty, or condemnation renders a portion of any property described in Attachment 1 unsuitable for habitation or destroys a substantial part of the area within which the Work is to be performed or which the Work affects, the Customer and Contractor may terminate or modify this Contract by mutual agreement. The Customer shall pay Contractor for all Work completed to the date of termination. If any materials or equipment are damaged by the negligence or willful misconduct of an employee, agent or invitee of Customer, Customer shall repair or replace said item within a reasonable period of time, or, adjust the Contract Price to pay for repair or replacement or adjust Time for Performance and Final Completion, or both.

5.14 Standards of Service and Comfort

The following facility performance requirements of service shall apply throughout the Agreement term:

- Operational rate of 90% will be maintained and existing or approved lighting levels will be maintained for all locations.

5.15 Shutdown of Services

Contractor hereby acknowledges that continuous operation of services, including but not limited to heat, water, domestic hot water, electricity, gas, sanitary facilities, elevators, fire alarms or protections, and access to the property, or common areas is essential to the operation of the Customer’s properties. If any such service, or access to the property, or any common area is to be discontinued for any period of time in order to perform the Work, Contractor shall give the Customer as much notice in writing as is practicable, but in no event less than seven (7) days in which event the Customer shall, by written proposal, approve unconditionally or with conditions, or reject such shutdown of services. Such conditional approval may include a requirement for the Contractor to provide and pay for temporary services, may limit the time period for which services or access may be shut down, or may require other actions, accommodations or expenditures on the part of the Contractor. With respect to fire alarm or other fire protections, Contractor shall also notify the local fire department of any shutdown of service and notify the fire department when such service is restored.
The Customer acknowledges that such shutdowns may be necessary to perform the Work from time to time and will not unreasonably withhold approval. The Customer agrees to communicate with occupants on plans to shut down services or access and temporary measures, if any, which will be made.

5.16 Indemnification and Limitation of Liability

The Contractor shall compensate the Customer for all damage to municipal property of any nature arising out of the Contractor’s work. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Customer and its officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the breach by the Contractor of its obligations under this contract, or the act or omission of the Contractor, its subcontractors, or their officers, employees, agents and representatives or anyone directly or indirectly employed by them, or anyone for whose acts or omissions they may be liable, regarding the work to be performed by the Contractor under this Contract, or which arise out of the violation of any federal, Massachusetts or local statute, by-law, rule, regulation, order or directive, or which relate to personal injury or property damage suffered by the Contractor or any of its officers or employees regarding the subject matter of this contract. Said costs shall include, without limitation, legal costs, collections fees, and counsel fees incurred in defending any claim or suit that may be brought against the Customer and any judgment that may be obtained in any such claim or suit.

1) 5.17 No Personal Liability

Neither the Customer, nor its officers, employees, boards, committees, commissions, agents and representatives shall be under any personal obligation or incur any personal liability by reason of this Contract, the execution thereof or anything relating thereto which arises out of the breach or violation of any provision of this Contract, or the violation of any Federal, Massachusetts or local statute, by-law, rule, regulation, order or directive, or which relates to personal injury or property damage suffered by the Contractor or its employees, regarding the subject matter of this Contract.

6 Performance and Evaluation Subsequent to Work

6.1 Workmanship and Equipment Warranty

Contractor hereby assigns to the Customer all warranties of all equipment and materials used in the Work. Attachment 5 lists equipment and material warranties, however, failure to include any equipment or materials having a warranty neither excludes said equipment or materials from the provisions of this section nor Contractor’s responsibilities hereunder.

Contractor warrants that, for a period of ten (10) years from the date of the Certificate of Final Completion ("Warranty Period"), all installed equipment, materials and Work shall be free from defects in material, manufacture, workmanship and performance as set forth by the catalogs,
bulletins and specifications included within Contractor’s Proposal or Technical Audit, whichever is appropriate. If such defect occurs within the warranty period, Contractor shall correct and pay for correction of all defects including replacement or repair and all parts and labor. Any work other than warranty work shall be paid in accordance with the Contractor’s submitted pricing schedule. All repairs will be completed within five working days of the notice of defect except where repair requires the work of NSTAR.

If Contractor, upon notice from the Customer, fails to correct defective equipment, materials or Work within a reasonable period of time, but no less than one hundred and twenty (120) hours, unless such defect is a condition deemed to endanger health or safety or is a fire hazard or the parties or other agreed to time for completion or the repair requires the work of others, Customer may correct any defect and Contractor shall reimburse Customer for its reasonable expenses incurred in performing such correction subject to any limitations contained within this section. Conditions which are deemed to endanger under the State Sanitary Code (105 CMR 410.000) or are fire hazards under Fire Prevention Regulations (527 CMR 1.00-50.00) shall be addressed promptly and jointly, if necessary, by Contractor and Customer assuring that immediate precautions are taken to avoid risk to persons or property, imminent measures are taken to prevent deterioration of condition, occupants are alerted to any dangers or hazards, and steps for final correction taken within twenty four (24) hours.

6.2 Evaluation of Savings Achieved

The energy savings that occur after the Work shall be determined by the difference between actual consumption and baseline consumption as shown on Baseline Data and Projection (Attachment 6), changes in the manner in which energy may be used other than manner of use which has been incorporated as part of the Work. Contractor shall monitor Customer’s energy bills at properties subject to the Work for energy usage and shall report quarterly, within fifteen (15) business days after receiving bills for said period, comparing actual usage to the baseline and projections with detailed explanations of variations in savings, including shortfalls, to the Customer. The Customer may waive this reporting requirement once he is satisfied the savings are being achieved. The determination and evaluation of savings shall be consistent with procedures and methods described in the RFP and the Technical Audit.

Contractor shall prepare an annual report pursuant to 225 CMR 10.07 for submission to the Customer in a form suitable for review and subsequent forwarding to the DOER.

The Customer shall notify Contractor of substantive changes in the properties or the operation or occupancy thereof which could affect energy use. Such substantive change shall be incorporated in the determination and evaluation of savings.

The obligations under this Article are also described in the RFP and the Contractor’s Proposal, and incorporated herein by reference as described in Section 9.13. Contractor shall be compensated at the rate of ___________dollars ($__ ) per quarter for monitoring and reporting services, payable no later than forty-five (45) days after receipt of the quarterly report as described above, provided such compensation shall be payable only if available from savings after any scheduled financing expenses or interest are paid.
6.3 Performance Guarantee

Contractor guarantees to the Customer the following:

1) Products provided by the Contractor meet or exceed the published catalog ratings and that these ratings were accurately used in the calculation of energy savings estimates,
2) Representations made concerning energy consumption in its estimates are accurate, and
3) Based on the projected use of energy and water for the equipment, conditions and operations in place at the time of completion of the Work, which the Customer and the Contractor have agreed to and documented in Baseline Data and Projection attached hereto as Attachment 6, the Customer will save at least ______ dollars ($____) per year, and/or ____________ dollars ($____) during the term of this Contract.

6.4 Performance Remedies

Contractor shall be bound to both the annual and total guaranteed savings stated in this section. If, during the term of this Contract, the utility savings are less than the guaranteed amount, Contractor shall be required to implement one or more of the following remedies, such remedies to be at the sole and exclusive discretion of the Customer:

1) Within forty five (45) days after determination that actual savings are less than guaranteed, modify the installation at no cost to the Customer so that the guaranteed savings rate as projected in Attachment 6 is attained, and pay or credit, at the Customer’s option, to the Customer an amount equal to the difference in the actual savings, if any, and the guaranteed savings, and/or
2) Pay or credit the Customer, at the Customer’s option, an amount equal to the difference between the actual savings, if any, and the guaranteed savings, as projected in Attachment 6.

6.5 Security for Performance Guarantee

Contractor shall provide security for the guaranteed savings to the Customer in one or more of the following forms as mutually acceptable to Contractor and the Customer:

1) An efficiency bond, so called, prepaid and renewable annually in a face amount equal to the annual projected guaranteed savings, said bond to be placed with a regulated financial institution with a Best Rating of not less than A, or a comparable rating from a recognized financial rating firm,
2) Escrow account equal to the annual projected guaranteed savings, or
3) Letter of credit, prepaid for an amount equal to the annual projected guaranteed savings, from a regulated financial institution with a Best Rating of not less than A, or a comparable rating from a recognized financial rating firm.

The Customer may waive the security requirements herein provided:
1) The actual savings have met or exceeded projected savings for a period of not less than three years, and
2) The actual savings in the most current year exceed projected savings by not less than 25%, and
3) All Work and equipment are functioning as intended and no extraordinary shutdowns or replacements are anticipated, and
4) The financial condition of Contractor, as indicated by standard financial ratio tests applied to audited statements which include contingent liabilities or other Contracts of this kind, is at least as strong as the financial statement submitted with Contractor’s Proposal, and
5) The savings incurred as a result of this waiver inure to the benefit of the Customer, and
6) Said waiver may be cancelled by the Customer upon thirty (30) written notice to Contractor at which time Contractor shall provide security as required herein.

6.6 Independent Audit

The Customer shall have the right to retain, at its own-expense, an independent certified public accountant to complete and submit to the parties an audit of the calculations of Energy Cost Savings made pursuant to this Contract. Any audit so performed must use and incorporate the same methods, procedures, and assumptions as contained in this Contract and used by Contractor to perform the calculations undergoing an audit pursuant to this Section. Any payments between the parties necessary to resolve any irregularities identified in the audit shall be made within thirty (30) days after submission of the audit to the parties. If, after thirty (30) days, the parties are unable to agree upon the adjustment, the matter shall be submitted to resolution pursuant to Section 9.1, and the disputed portion of any additional payment due under this Section shall not be payable until the dispute resolution procedure required in Section 9.1 has been completed.

All actions taken under Section 6, including but not limited to correction of warranties, remedy of performance shortfalls and maintenance of equipment by Contractor, shall conform with sections 5.02 through 5.16 inclusive. Other performance terms and conditions, if any, are described and incorporated herein as Other Performance Terms and Conditions on Attachment 7.

6.7 Contract Closeout Responsibility

Prior to any final payment made pursuant to Section 4 and the termination of the Contract, Contractor shall perform a walk-through survey of the installed properties covered by this Contract and amendments thereto and prepare an assessment of the condition of the equipment and materials installed as part of the Work and subsequent thereto under this Article. This closeout report shall include but not be limited to the following, as appropriate:

1) Operating and maintenance recommendations during the remaining life of equipment installed if different from requirements furnished upon installation or if changes in technology or procedures affecting the equipment could extend the useful life of the equipment or increase the conservation efficiency,
2) An overview of new technology or additional conservation measures for the Customer to consider.
7 Obligations of the Parties

7.1 Obligations of the Contractor

Contractor acknowledges and agrees that Contractor’s obligations hereunder are in the capacity of providing professional services for the purposes described in the Preamble to this Contract and in said capacity is expected to provide energy auditing, engineering, design and monitoring services, construction management including general contracting as necessary, and other related services as solicited in the RFP and as may normally be incidental to these types of professional services. Contractor acknowledges and agrees that any other functions including but not limited to manufacturer’s representative, dealer or distributor of equipment, materials or commodity specified herein or as subcontractor, or ownership in whole or in part or financially affiliated with a company which performs such other function shall constitute a conflict of interest which shall constitute a material breach of this Contract unless 1) fully disclosed in the Contractor’s Proposal, and 2) accepted by the Customer under terms which are specified in the Technical Audit. Contractor acknowledges and agrees that this paragraph applies to all its officers and employees.

The following events or conditions shall constitute a breach by the Contractor and shall give the Customer the right, without an election of remedies, to proceed pursuant to Section 9.01 and/or terminate this Contract by delivery of written notice declaring termination, upon which event the Contractor shall be liable to the Customer for any and all damages sustained by the Customer:

1) Any attempt by the Contractor to increase the Agreement price for reasons other than those related to changes in the Work pursuant to Section 5.3,
2) Any failure by the Contractor to provide quarterly monitoring reports pursuant to Section 6.2,
3) Any failure by the Contractor to remedy a shortfall in the guaranteed savings pursuant to Section 6.4,
4) Any representation or warranty furnished by the Contractor in Contractor’s Proposal, the Technical Audit, or this Contract which is false or misleading in any material respect when made,
5) The filing of bankruptcy by the Contractor or by Contractor’s creditors, an involuntary assignment for the benefit of creditors, or the liquidation of the Contractor,
6) Any failure by the Contractor to perform or comply with any other material term or condition of this Contract, including breach of any covenant contained herein, provided that such failure continues for thirty (30) days after written notice to Contractor demanding that such failure be cured or, if cure cannot be effected in thirty (30) days, the Contractor fails to begin to cure and proceed to completion thereof as quickly as is reasonably possible.

7.2 Obligations of the Customer

The Customer acknowledges and agrees that the implementation of the maximum conservation of energy practical within any pertinent regulatory, operational or physical constraints is of the
essence to this Contract. Customer agrees to respond to all audits, proposed revisions and related requests on a timely basis for the expeditious design, implementation and monitoring of conservation measures.

Each of the following events or conditions shall constitute a breach by Customer and shall give the Contractor the right, without an election of remedies to proceed pursuant to Section 9.1 and terminate this Contract by delivery of written notice declaring termination, upon which event the Customer shall be liable to the Contractor for all Work furnished to date:

1) Any failure by the Customer, without cause, to authorize payment due more than forty-five (45) days after receipt of the invoice therefore,
2) Any representation by Customer in the RFP and this Contract is false or misleading in any material respect when made,
3) Any failure by the Customer to perform or comply with any other material term or condition of this Agreement, including breach of any covenant contained herein, provided that such failure continues for thirty (30) days after written notice to the Customer demanding that such failure be cured or, if cure cannot be effected in thirty (30) days, the Customer fails to begin to cure and proceed to completion thereof as quickly as is reasonably possible.

8 Insurance and Bond Requirements

The Contractor shall provide and maintain throughout the term of the Contract and any extension or renewal thereof the following insurance with companies that are authorized and licensed in the Commonwealth of Massachusetts to issue policies for the coverages and limits so required.

a) Workers’ Compensation Insurance as required by the laws of the Commonwealth of Massachusetts and employer’s liability insurance in the amount of $500,000/$500,000/$500,000.
b) Commercial General Liability Insurance, $1,000,000 each occurrence and $2,000,000 aggregate limit. Commercial General Liability insurance shall include personal injury liability, broad form property damage liability, products/completed operations liability and broad form contractual liability.
c) Automobile Liability Insurance, covering all leased, owned, non-owned, and hired vehicles - Combined single limit of $1,000,000.
d) Excess Liability Insurance, Umbrella Form - $1,000,000 each occurrence and $2,000,000 aggregate, which shall be following form, providing coverage over commercial general liability insurance, automobile liability insurance, and employer’s liability under workers’ compensation insurance.
e) The Customer shall be named as an additional insured on each such policy of Commercial General Liability Insurance, Excess Liability Insurance, Umbrella Form, and Automobile Liability Insurance.
f) All certificates and policies shall contain the following provision: “Notwithstanding any other provision herein, should any of the above policies be cancelled or materially amended before the expiration date thereof, the issuing company will mail thirty (30) days prior written notice thereof to the named certificate holder and to the Customer,
before such cancellation or amendment shall take place.”

g) Certificates evidencing such insurance in five (5) copies shall be furnished to the Customer at the execution of this Contract. Such certificates shall not merely name the types of policy provided, but shall specifically refer to this Contract and shall state that such insurance is as required by this Contract. The Contractor shall make no claims against the Customer or its officers for any injury to any of its officers or employees or for damage to its equipment arising out of work contemplated by the Contract.

h) The Contractor shall also be required to provide to the Customer with its proof of insurance coverage endorsements or riders to the policies of commercial general liability insurance, automobile liability insurance, and excess liability insurance, umbrella form, which indicate that the Customer is named as an additional insured on each such policy.

i) No insurance shall be obtained from an insurer which: (1) is not licensed to sell insurance in the Commonwealth of Massachusetts; (2) is not authorized to provide insurance as an excess or surplus lines insurer, and does not have a current Best’s rating of A or better; or (3) is a risk retention group lawfully providing insurance to its members in Massachusetts.

j) Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of this Contract and shall operate as an immediate termination thereof.

8.1 Bonds

Contractor shall provide the Customer with payment and performance bonds and efficiency bonds, so called, to cover the full term and value of the Contract and issued by a regulated financial institution with a Best Rating of not less than A, or a comparable rating from a recognized financial rating firm, as follows:

1) Performance and payment bonds shall secure 100% of the Contract Price (these bonds apply only to the Work to be performed, and do not cover any guaranteed savings), and

2) Efficiency bond, so called, shall be secured for 100% of the annual guaranteed savings and may be renewed annually, except as otherwise provided in Section 6.5.

9 General Provisions

9.1 Dispute Resolution

Disputes regarding changes in and interpretations of the terms or scope of the Contract and denials of or failures to act upon claims for payment for extra work or materials shall be resolved according to the following procedures:

1) All claims by the Contractor shall be made in writing and submitted to the Customer for a written decision.

2) Contractor shall not delay, suspend, or curtail performance under the Contract as a result of any dispute subject to this section.

3) Within sixty (60) days of submission of the dispute to the Customer, the Customer shall issue a written decision stating the reasons therefore, and shall notify the parties of their
right of appeal under this section. If the official or his designee is unable to issue a decision within sixty (60) days, he shall notify the parties to the dispute in writing of the reasons and of the date by which the decision shall issue.

4) Failure to issue a decision within one hundred and twenty (120)-day period or within the additional period specified in such written notice shall give the petitioner the right to pursue any legal remedies available to him without further delay.

9.2 Conditions Beyond Control of the Parties

Except as otherwise provided herein, if either party shall be unable to carry out any material obligation under this Contract due to events beyond its control, such as acts of God, law, regulation, final judgment or order of a court of competent jurisdiction, insurrections, riots, extended labor disputes, fires, explosions or floods, this Contract shall remain in effect but the affected party’s obligations shall be suspended until the uncontrollable event terminates or is resolved, unless the Contract is terminated by mutual consent, in which event, Customer shall pay Contractor for all parts of the Work furnished to the date of termination or as otherwise agreed.

9.3 Labor Laws

The CONTRACTOR shall obey and abide by all laws and regulations of the Commonwealth of Massachusetts relating to the employment of labor and public work. Contractor shall comply with all federal and state laws, rules and regulations promoting fair employment practices or prohibiting employment discrimination and unfair labor practices. Contractor shall not discriminate in the delivery of services against any person who otherwise meets the eligibility criteria for services, or in the hiring of any applicant for employment nor shall any qualified employee be demoted, discharged or otherwise subject to discrimination in the tenure, position, promotional opportunities, wages, benefits or terms and conditions of their employment because of race, color, national origin, ancestry, age, sex, religion, disability, status as a Vietnam Era Veteran, sexual orientation or for exercising any rights or benefits afforded by law.

9.4 Prevailing Wage Rate

The Division of Occupational Safety has established a Schedule listing the prevailing minimum wage rates that must be paid to all workers employed on the Contract by either the Contractor or its subcontractors. Such Schedule shall continue to be the minimum rate of wages payable to workers on this Contract throughout the term of this Contract. The Contractor shall not have any claim for extra compensation from the Customer if the actual wages paid to employees on the Contract exceeds the rates listed on the Schedule. The Contractor shall cause a copy of the Schedule to be kept in a conspicuous place as agreed to by both parties at the project site during the term of this Contract (see MGL c. 149 § 27). If reserve police officers are employed by the Contractor they shall be paid the prevailing wage rate of regular police officers (see MGL c. 149 § 34B).

9.5 Appropriations

1) The Customer reasonably believes that funds can be obtained sufficient to make all payments
due to Contractor under this Agreement. The Customer hereby covenants that it will make reasonable and diligent efforts to obtain and maintain funds from which such payments may be made, including making provisions for such payments to the extent necessary in each annual or supplementary budgets submitted for the purpose of obtaining funds for the Project, and using reasonable efforts to have such portion of the budget approved. Nothing herein shall obligate the Customer to institute legal action before any court, to commence proceedings before any forum, or to institute proceedings in the nature of mandamus against any public official in attempting to obtain said funds.

2) In the event that the Customer is unable to obtain an appropriation of funds sufficient to discharge the Customer’s obligations under this Agreement the scope of this project may be so modified to stay within the available funds to include cancellation.

9.6 Laws, Regulations, Ordinances and Standard Practices

The Contractor shall comply with all provisions of Federal, Massachusetts and local law applicable to his work including, without limitation, statutes, by-laws, rules, regulations, orders and directives, as amended, and including, without limitation, the Williams-Steiger Occupational Safety and Health Act, as amended, and related regulations, as amended, in effect throughout the term of this Contract and any extension or renewal thereof. Without limitation, the Contractor shall comply with the provisions of Chapter 149, Section 26 to 27D of the Massachusetts General Laws, as amended, and the applicable minimum wage rates as determined by the Massachusetts Commissioner of Labor and Industries. This Contract shall be considered to include in their entirety all terms respecting workers’ compensation insurance and other terms required to be included in it by Chapter 152 of the Massachusetts General Laws, as amended, as though such terms were set forth in their entirety herein.

9.7 Patents and Patent Rights

The Contractor shall indemnify and hold harmless the Customer from all claims and actions by reason of any actual or asserted infringement upon patent rights in any equipment, material, or process used by Contractor in connection with this Contract.

9.8 Access and Inspection

Customer shall have access to inspect, upon reasonable notice, the Work and the books, records, and other compilations of data which pertain to this Contract. Records shall be kept on a generally recognized accounting basis and calculations kept on file in legible form, Records shall be saved or archived for a period of three (3) years after the termination of this Contract and shall be kept or made available within Massachusetts.

Contractor shall have access, upon reasonable notice to the Customer, to inspect the property to assess the condition and operation of material and equipment installed.

9.9 Ownership of Documents
9.10 All drawings, reports and other materials prepared by Contractor specifically in performance of this Contract shall become the property of the Customer as needed or upon the termination of the Contract. Independent Contractor

The Contractor is not an agent or an employee of the Customer and is not authorized to act on the Customer’s behalf. No employee, agent or representative of the Contractor shall be entitled to receive any benefits of employment with the Customer including without limitation salary, overtime, vacation pay, holiday pay, sick leave, health insurance, life insurance, pension or deferred compensation.

9.11 Miscellaneous Provisions

Contractor certifies as follows:

a) Any action at law or suit in equity instituted by the Contractor as a result of the performance, non-performance or alleged breach of this Contract shall be filed in the Superior Court of the Commonwealth of Massachusetts for the county of the involved municipality, and in no other court or jurisdiction.

b) No action or failure to act by the Customer shall constitute a waiver of a right or duty afforded to the Customer under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing. No forbearance or indulgence in any form or manner by the Customer shall be construed as a waiver or in any way limit the legal or equitable remedies available to the Customer. No waiver by the Customer of any default or breach by the Contractor shall constitute a waiver of any subsequent default or breach.

c) If the Contractor discovers or is informed of any discrepancy or inconsistency in the Contract Documents in relation to any law, statute, ordinance, by-law, decree, code, rule, regulation, or order, the Contractor shall promptly, before commencing services under this Contract, report the same to the Customer in writing.

d) The Contractor acknowledges that it has not been influenced to enter into this Contract, nor has the Contractor relied upon any warranties or representations not set forth in this instrument.

e) The Contractor shall maintain the confidentiality of information designated by the Customer as confidential, unless withholding such information would violate the law or create a risk of significant harm to the public, or unless the Contractor has been required to release such information by final judgment or order of a court of competent jurisdiction, or unless the Customer has expressly waived such confidentiality in advance.

f) The Contractor shall not represent or purport to represent that it speaks for the Customer vis-à-vis the media or the public at-large without the Customer’s express, written consent in advance.

g) Prior to commencing services under this Contract, the Contractor shall furnish the Customer, in writing, the names, addresses and telephone numbers of not fewer than two (2) principal employees of his business who are to be contacted in the event of an after-hours emergency.

h) By entering into this Contract, the Contractor certifies under penalties of perjury that its Proposal was made and submitted in good faith and without collusion or fraud with any
person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

i) By entering into this Contract, the Contractor certifies under the penalties of perjury, pursuant to M.G.L. c.62C, Section 49A(b), that it has complied with all laws of the Commonwealth relating to taxes, to reporting of employees and contractors, and to withholding and remitting child support.

j) The Contractor understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws, applies to the Contractor with respect to the services required to be provided under this Contract. The Contractor and its officers, employees, agents, subcontractors and affiliated agencies shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

k) Prevailing wage rates, as contained in the Proposal documents, shall be paid, pursuant to M.G.L. c.149, §§26-27G, if they are applicable.

l) The Contractor shall not discriminate against or exclude any person from participation herein on grounds of race, color, religious creed, national origin, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), age, genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap. The previous sentence shall include, but not be limited to, the following: advertising, recruitment; hiring; rates of pay or other forms of compensation; terms; conditions or privileges of employment; employment upgrading; transfer; demotion; layoff; and termination. The Contractor shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, color, religious creed, national origin, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), age, genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap.

m) To the extent that any of the foregoing sections required by Massachusetts law are inconsistent with other, non-statutory sections in this Contract, any statutorily-mandated provisions contained herein shall control.

n) The Contractor shall not assign or subcontract in whole or in part this Contract or in any way transfer any interest in this Contract without the prior express written approval of the Customer.

o) The Contractor shall not assign any money due or to become due to the Contractor unless the Customer shall have received prior written notice of such assignment. No such assignment shall relieve the Contractor of its obligations under this Contract.

p) This Contract may be amended only by written consent of the parties.

q) This Contract constitutes the entire agreement of the parties and any other agreement, written or oral, that may exist is excluded from this Contract. When executed, this Contract supersedes any other agreement of any of the parties in connection with the transaction contemplated.
r) If any provision, or portion thereof, of this Contract shall be adjudged to be invalid or unenforceable by final judgment or order of a court of competent jurisdiction the remaining provisions shall continue in effect to the extent permitted by law.
s) The provisions of this Contract shall be binding upon and inure to the benefit of the heirs, assigns and successors in interest of the parties.
t) This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, regardless of choice of law issues or principles.
u) This Contract is executed in triplicate as a sealed instrument.

Contract Signatures

IN WITNESS THEREOF, the parties have each caused this Agreement to be executed in triplicate on the dates set forth below (the last of which shall be considered the date of execution hereof) by their duly authorized representatives.

Printed Name of Contractor

By:

______________________________________

Signature

______________________________________

Printed Name

______________________________________

Printed Title

______________________________________

Date

Printed Name of Municipality

By:

______________________________________

Signature

______________________________________

Printed Name
This is to certify that an appropriation in the amount of this Contract is available therefore, and that the __________________________ is authorized to execute this Contract and to approve all requisitions and execute change orders.

__________________________  Dated:  ____________
Accounting Official

APPROVED AS TO FORM:

__________________________  Dated:  ____________
Counsel
6.7 Prevailing Wage Tables

Prevailing wage tables for the participating Municipalities are included as an attachment to this RFP. Proposers are advised that the work to be performed under any contract negotiated with a participating Municipality, including work by subcontractors, must comply with the provisions of the Massachusetts General Laws pertaining to prevailing wage.