



LED Streetlight Project

Joseph C. Foti
Director of Public Works
City of Chelsea

History



- **Fall 2002-** Streetlights purchased from NSTAR
- **Fall 2007-** Conversion of mercury vapor fixtures to high pressure sodium (HPS)
- **Fall 2011-** Pilot program
 - purchased 108 LED streetlights from City of Boston
- **Winter 2012-** City Council approved \$750,000 allocation for city-wide LED streetlight project
- **Summer 2013-** Conversion of HPS to LED
 - RFP # 1 Fall 2012 - withdrawn
 - RFP # 2 via MAPC Spring 2013

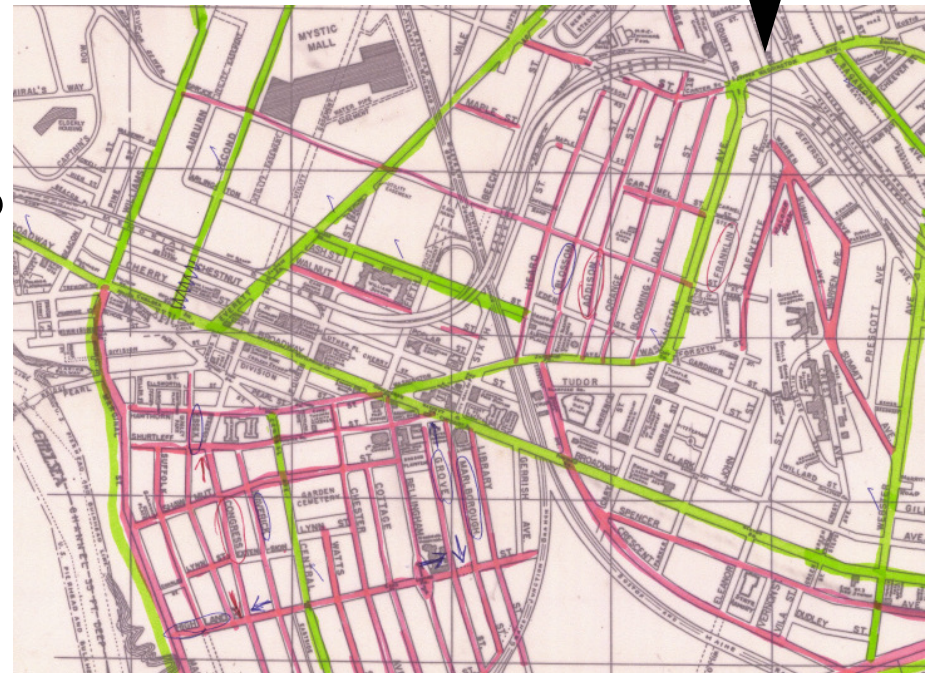
LED Streetlights Project Goals

- Improve lighting levels for public safety
- Reduce energy costs
- Reduce maintenance costs
- Improve the nighttime appearance of the City in residential and commercial areas



Process

- Teamed with MAPC to develop the RFP
- Review submittals, interview, & select ESCO
- Work with ESCO on fixture selection/design
- Revise contract w/ other dept's & execute
- Project management
 - Pilot install?
 - Available staging area?
 - Nighttime checks
 - Review invoices
 - Project close-out



Project Statistics

- Number of streetlights: 1,622
- Approximate time to complete: 90 days
- Est. annual kilowatt hour savings: 520,000
- Est. gross project cost: \$615,000
- Est. net project cost w/ rebate: \$485,000
- Annual energy savings: \$78,000
- Payback (years): 6.2



How is 25A Procurement Different?

- Goal: best life cycle cost, not best initial cost
- Balance trade-offs between energy savings and desired lighting levels
- Allows 10-year parts & labor warranty to be tied to energy savings guarantee
 - Contractor assumes all risk for fixture failure
 - City's maintenance costs are fixed for 10 years

Group Procurement

PROS:

- Increased buying power via a larger project
- Diverse expertise of the group
 - Public Works
 - Procurement/Financial
 - Legal

CONS:

- Can sometimes slow down the process
- Communities have different needs

Lessons Learned

- New procurement method may increase lead time to execute contract (e.g., legal review).
- A pilot install is useful to get buy-in from elected officials, City manager, etc.
- Procurement via MAPC reduced City staff time & resources to develop related documents.
- LED retrofit generated very positive feedback from residents and public safety officials.