

PUBLIC LIGHTING AUTHORITY LIGHTING PLAN



Public Lighting Authority



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Office Location: 65 Cadillac Square, Suite 2900 Detroit, MI 48226

Project Location: City of Detroit

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Date Amended 6/11/14



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A. Project Information

1. Project Background

The Public Lighting Authority ("PLA") was authorized by the Michigan Legislature in 2012 pursuant to a three-bill package that included: (1) the Michigan Municipal Lighting Authority Act, 2012 PA 392, MCL 123.1261 -MCL 123.1295 ("Act 392"), which authorized the creation of lighting authorities and granted the statutory authority for their operations; (2) an amendment to the City Utility Users' Tax Act, 1990 PA 100 as amended, MCL 141.1151 -MCL 141.1177 ("Act 100"), which required a city that creates a lighting authority to direct Twelve Million, Five Hundred Thousand Dollars (\$12,500,000) to the authority from the revenues authorized under Act 100 (the "Act 100 Payment"); and (3) an amendment to the City Income Tax Act, 1964 PA 284 as amended, MCL 141.501 - MCL 141.787, which authorized a city that creates a lighting authority to continue to assess an increased income tax rate in order to hold harmless the public safety departments from the mandatory diversion of revenues under Act 100.

The City Council and Mayor of the City of Detroit ("City") properly incorporated and perfected the formation of the PLA as required under Act 392, with an effective formation date of April 5, 2013. The approved Articles of Incorporation ("Articles ") commit the City to the annual payment of \$12.5M to the Authority. The PLA and the City have executed an Amended & Restated Trust Agreement with Wilmington Trust, N.A. as Trustee, wherein the City has irrevocably directed all of the Utility Users' Tax Revenue to the Trustee to be disbursed pursuant to the Trust terms. The disbursement terms provide that the revenues will be directed as follows: of the first \$12.5M, first to any holders of bonds or debt of the PLA and second to the PLA, if any is left; and third, to City for all of the revenues exceeding \$12.5M.

Consistent with Act 392 and the Articles, the PLA is overseen by an independent, five-member board. The PLA board includes Dr. Lorna Thomas, Treasurer, David Jones, J.D., Nicole Spieles, P.E., and Eva Garza Dewaelsche. As stated under Act 392, the purpose of the PLA is to provide an equitable and reasonable method and means of financing, operating, and maintaining a lighting system to supply lighting in sufficient quantities to the City. The PLA anticipates making a multi-year, large scale, city-wide investment in the public lighting infrastructure including poles, ballasts, circuits, transformers, and distribution connections. The PLA anticipates funding the improvements through: (i) a bridge loan in the amount of \$60M; and (ii) the subsequent sale of approximately \$180M in bonds. The financing will be paid back with the mandatory payment of \$12.5 million per year as required under Act 100.

2. Facility Background

The City street light system is in need of repair and improvement. The system of 88,000 lights is in disrepair, with approximately 55,000 lights being fed by DTE Electric and the remaining 33,000 being fed by the City Public Lighting Department ("PLD"). Initial survey results reveal that approximately half of the lights in the system are not working. Most of the underground fed lighting circuits within Detroit are made up of series circuits consisting of multi-generation light fixtures.



3. Scope and Schedule

The lighting plan will be implemented in two discrete phases: an overhead-fed light phase to be completed in 4th Quarter 2015; and an underground-fed light phase to be completed in 4th Quarter 2016. Generally, overhead lights are located in residential neighborhoods, on collector roads, and on select portions of major thoroughfares. Underground-fed lights are generally located on major thoroughfares, in addition to select residential neighborhoods that contain ornamental street lights. The work plan consists of survey, design and construction work. All contracts will be awarded pursuant to a competitive bid process, and shall include credit pursuant to the PLA's best value policy. The owner's engineer will provide engineering, material specifications and work packages for construction. The overhead and underground construction contractors will perform all field installations and provide field records. Quality and safety audits will be performed throughout the project.

Each phase of the Lighting Plan will be implemented progressively by Detroit zip code. (See Appendix A, Zip Code Schedule Summary).

B. Lighting Plan Criteria

1. Number of Lights.

- The City of Detroit street lighting system shall consist of approximately 64,500 lights upon completion of the capital improvements.

2. Location of Lights and Other Criteria.

a. Light Locations

- i. All intersections & dead ends will have one street light.
- ii. Residential blocks greater than 300 feet will generally have one mid-block street light.
- iii. Residential blocks greater than 700 feet will generally have two (2) or more mid-block street lights.
- iv. Lights on major thoroughfares will be located based on the results of an engineering analysis.
- v. Lights that do not meet the preceding criteria located in alleys or on blocks less than 300 feet long will be phased out as they cease functioning. Such non-conforming lights that are currently



functioning will not be repaired, replaced, or removed. Such non-conforming lights that are not currently functioning will be removed during construction in that zip code. Lights located at former alley entrances (typically on blocks less than 300') will be treated in the same manner as the other alley lights.

vi. Lights that do not meet the preceding criteria will generally be removed as part of the capital construction project.

b. Materials:

i. Luminaires:

- Three sizes of lights shall generally be used, as follows:
- Residential Streets: LED-Equivalents of 150W HPS
- Collector Streets: LED-Equivalents of 250W HPS
- Major Thoroughfares: LED-Equivalents of 400W HPS

High-pressure sodium lights may be used in lieu of LEDs only if necessary, e.g. ornamental lamps.

ii. Poles:

- Except as provided for herein, light pole reconstruction will generally be like-for-like (e.g., wood pole for wood pole, steel pole for steel pole).

Certain decorative and ornamental lights will be replaced either on a like-for-like basis, or with a standardized, non-decorative light.

c. Design Criteria:

i. 85% of street lights will be wired overhead, and 15% will be wired underground.

ii. Underground series circuits fed by the PLD distribution grid will be reconstructed to multiple circuits fed by the DTE distribution grid.

d. These lighting plan criteria may be modified as necessary in certain, specific instances based on on-the-ground conditions.

C. Operation & Maintenance



The PLA and the City have executed an operations & maintenance agreement ("O&M Agreement") that requires the PLA to assume operational responsibility for the lighting system as upgrades are completed in each zip code. The O&M Agreement services include general system maintenance according to industry standards to ensure that the refurbished street light system is fully operational with an anticipated 30 year expected useful life. This includes both preventative and reactive maintenance services. The maintenance program will also include outage notification methods with repair time requirements.

The estimated annual operations and maintenance costs upon project completion is roughly \$8.4M, inclusive of PLA administrative costs.

The City will be responsible for the purchase of electricity to power the street lights directly from DTE Energy Co. The estimated annual energy cost upon project completion is \$2.8M.

D. Best Value Practices

The PLA shall implement the best value policies authorized by Act 392 for all services, equipment, and materials procurement by providing additional consideration and points in the competitive procurement process for both Detroit-based businesses and for businesses that hire Detroit residents for PLA work.

E. Project Funding and Budget Items

The total estimated project cost for capital improvements, excluding O&M and PLA administrative expenses, is \$181 million. The PLA's bond indebtedness used for the capital improvement costs will be repaid by the Act 100 Payment for a projected 30 years (*See Appendix B, Cash Flow and Budget*). The Cash Flow and Budget establishes:

- The anticipated expenses of administration, operation, and maintenance of the PLA and the lighting system; and
- The amounts necessary to retire all principal and interest on PLA bonds maturing during the effective period this Lighting Plan.

The rates and charges paid by the City pursuant to the O&M Agreement shall be used for the payment during each fiscal year of all current expenses of administration, operation, and maintenance as necessary to preserve the lighting system in good repair and working order. The PLA shall use the Act 100 Payment to make all payments required for principal and interest payments on the PLA's bonded indebtedness pursuant to Act 392 and the applicable bond documents.

F. Appendices

1. Appendix A -Zip Code Schedule Summary
2. Appendix B -Cash Flow and Budget