



PROPOSAL TO THE CITY OF ELLSWORTH, ME

FOR STREETLIGHT ACQUISITION,
INVENTORY MAPPING, & LED
CONVERSION SERVICES

AUGUST 21, 2025

SUBMITTED BY:

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SUBMITTED TO:

CITY OF ELLSWORTH
IT SYSTEMS ADMIN
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COVER LETTER

August 21, 2025

City of Ellsworth – IT Systems Admin
Jason Ingalls
1 City Hall Plaza, Ellsworth, Maine 04605
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Dear Mr. Ingalls,

Tanko Streetlighting, Inc. ("Tanko Lighting") appreciates the opportunity to submit this proposal for Streetlight Acquisition, Inventory Mapping, and LED Conversion Services to the City of Ellsworth.

We understand the City's desire to select a partner that can assist with reducing the City's streetlight costs by acquiring its streetlight assets from the utility and retrofitting the assets to LED technology.

We are the only streetlight experts in the market – the only national firm with over twenty years of experience focused exclusively on municipal streetlighting projects. Our primary operations include municipal streetlight ownership support, LED conversion, and ongoing maintenance services nationwide. Our technical experience (developed through decades of energy efficiency conversions, design, auditing, and maintenance services) is likely unmatched by any other bidder. We have been involved with more than 280 contracts in 27 states with 55 utilities, representing more than 948,000 streetlight fixtures. We have also successfully completed similar projects for the Cities of Brewer, ME and Orono, ME. Our objective is to ensure that our municipal clients have optimized, efficient and well-maintained streetlight systems owned and controlled by the communities within which they are located.

Given our extensive involvement with municipal streetlight LED conversions nationwide – and within the State of Maine – our team can leverage its expertise to provide the necessary context and value to assist the City with all the support, recommendations and coordination necessary to ensure the success of this project.

Please let us know should you have any questions. We look forward to your feedback.

Regards,



Jason Tanko
Chief Executive Officer

Why Tanko Lighting?



128+
Streetlight
Acquisitions



948,000+
Streetlights in
Contract



80,000+
Fixtures
Maintained



280+
Nationwide
Projects

FIRM BACKGROUND

Including relevant municipal LED conversion experience.

Our History

For more than 20 years – since 2003, Tanko Lighting has assisted municipalities with their streetlighting needs and is a national firm solely focused on providing professional services for turn-key municipal streetlighting projects. We started as a sole proprietorship and incorporated in 2008. In our early days, we focused on re-manufacturing High Pressure Sodium (HPS) fixtures, providing a cost-effective waste diversion strategy by rebuilding existing fixtures to be re-deployed back into the field. This kept costs low and was a better option for clients than buying new streetlights. However, with the advent of Light Emitting Diode (LED) technology, we realized that we could no longer compete with commodity-priced and energy efficient LED streetlight fixtures. Thus, in 2011, we shifted our business model to focus on services to help municipalities comprehensively upgrade their streetlight systems to the most energy efficient and municipally owned options, as well as properly maintain them over time.

Our Structure

Our firm is a private S corporation and a financially stable company that has successively operated with the same ownership structure for more than two decades. As a privately held company with just two shareholders, our firm is tightly controlled, enabling sound financial and business decisions.

Tanko Lighting holds electrical contractor licenses in the States of California and Arizona. Additionally, our firm is a Certified Contractor by the Commonwealth of Massachusetts' Division of Capital Management and Maintenance (DCAMM), a Qualified Vendor with the Connecticut Conference of Municipalities, a registered Energy Services Company (ESCO) with the United States Department of Energy, a registered entity with SAM.gov, and a registered Small Business Entity with the Small Business Administration.

Our Leader

Jason Tanko – also known as the Streetlight Whisperer on social media (find him on LinkedIn, TikTok and Instagram) – will be the principal-in-charge, engineer, design, and technical lead for this project. He has had a lifelong interest in streetlights – he is absolutely passionate about them and thrilled to have made a career in streetlighting. As Tanko Lighting's founder, Chief Executive Officer, and leader, Jason Tanko has been involved in every project since the company's inception in 2003. Mr. Tanko has decades of experience with municipal lighting, electrical engineering and project management, as well as experience with photometric modeling of roadway and pathway lighting, the use of pertinent software, and familiarity with IES standards for lighting. Prior to founding Tanko Lighting, Mr. Tanko enjoyed a long career in energy efficiency and electrical engineering. As a Project Manager for Newcomb Anderson Associates, Mr. Tanko implemented an energy efficiency program for small businesses in San Francisco. During his tenure as an Electrical Engineer for the Massachusetts Institute of Technology Lincoln Laboratory, Mr. Tanko designed energy efficient low and medium voltage power and lighting systems. As an Electrical Engineer/Project Manager with Wilson Construction Engineering Services, Mr. Tanko engineered and managed new construction and major electrical infrastructure projects. Mr. Tanko served as a District Engineer for Puget Sound Energy, in which he coordinated outage management, operations, budget and maintenance activities and supervised line crews for East King County, WA. As a Senior Engineer with Boeing Commercial Airplane Group, Mr. Tanko designed and drafted electrical systems for airplane equipment. During his tenure as an Electrical Engineer/Designer with Team Engineering, Inc., Mr. Tanko designed and drafted power distribution, lighting, and building control systems for commercial and public buildings. Mr. Tanko holds a California C-10 Electrical Contractor's License, an Arizona A-17 Electrical Contractor's License, has a Bachelor of Science degree in Electrical Engineering and a Master of Business Administration degree from Seattle University, is well-versed in electrical principles and has remarkable acumen for business.



Our CEO, Jason Tanko.

Our Capabilities

Our Experience.

We are the oldest firm in the nation dedicated solely to municipal streetlighting. We have the largest and deepest knowledge base. We have worked in more than twenty-seven states, and fifty-five utilities – with more than 948,000 streetlights and 280 contracts. Our expertise has been forged by diverse project types – including various sized projects, as well as incredibly complex projects, derived from such factors as square mileage/area, complicated data, inconsistent

existing design, and aging infrastructure.

Most of our projects involve LED streetlight conversions and some also involve direct ongoing streetlight maintenance projects. This means that our team has a deep understanding of not only LED streetlight retrofits, but how to design and implement successful LED streetlight conversions that future proof maintenance and ensure streamlined, ongoing operations of a streetlight system. This truly differentiates our team from other potential bidders, as many focus only on LED streetlight conversions, but very few have the maintenance experience that we do – which provides a deeper technical understanding.

Why This Matters:

The City's project is complex, technical, and a significant investment. To ensure the success of this project, the City must partner with the municipal streetlight expert – Tanko Lighting. We are skilled in identifying existing field conditions and providing clear and actionable recommendations. The City can absolutely rely on our team of streetlight professionals to seamlessly guide it through this important process, knowing that it can trust a firm with more than twenty years of relevant experience and unparalleled customer service.

Our Experience with Ownership Projects.

There is a growing nationwide industry trend in which municipalities are acquiring their streetlight infrastructure from their local private utility companies. This poses tremendous advantages to the municipality, in that not only does it allow the municipality to control the management of the system within its geographic borders, but it also involves tremendous cost savings – particularly related to maintenance and energy (as many utilities charge exorbitant fees for energy and maintenance rates for the systems). Further, once a municipality purchases its system, it can reap additional savings benefits by converting to LED fixtures. Tanko Lighting has been working with several municipalities nationwide to assist in their streetlight ownership strategies from investor-owned utilities. Our team's experience with ownership projects includes providing valuation, field data collection, ownership feasibility analysis, and ownership negotiations with the utility on behalf of the client. A list of our projects involving ownership support includes the municipalities outlined in the table to the right.

Why This Matters:

Our experience with streetlight ownership transfer from utilities will streamline this project and ensure that the project is cost effective and on schedule.

We Are Data Experts.

Inaccurate field data can detrimentally impact the ongoing operations and maintenance of a

streetlight system. But these challenges never occur in our projects because we have in-house field auditors and analysts who are experts in both streetlight field conditions and GIS software to accurately assess what is in the field and whether it is properly accounted for. Our field auditors have successfully collected data on hundreds of thousands of streetlight fixtures using Esri's Survey 123 and Collector applications with a custom proprietary data dictionary that optimizes spatial accuracy, data collection time, and accurate attribute values at each location. Additionally, unlike other data collection firms, we do not hire temporary auditors everywhere we work. This is because auditing work requires field experts – seasoned professionals with deep technical streetlighting knowledge.

Tanko's Utility-Owned Streetlight Acquisition Projects		
Utility	# of Projects	# of Streetlights
Ameren (MO)	2	6,613
American Electric Power (OH)	1	1,100
CenterPoint Energy (TX)	1	175,000
Duke Energy (OH)	1	18,000
Eversource (CT, MA)	31	48,024
Emera/Versant Power (ME)	2	840
Entergy (AR)	1	16
First Energy (OH)	1	1,000
Georgia Power (GA)	1	10,000
The Illuminating Company (OH)	1	2,497
National Grid (NY, MA)	43	103,156
New York State Electric & Gas (NY)	2	6,889
Northwest Edison (MT)	1	6,000
Oncor Electric (TX)	4	11,238
Pacific Gas & Electric (CA)	2	1,745
Poudre Valley (CO)	1	1,229
Puget Sound Energy (WA)	1	741
San Diego Gas & Electric (CA)	1	532
Seattle City Light (WA)	1	392
Southern California Edison (CA)	23	116,511
United Power (CO)	1	915
Xcel Energy (CO)	6	21,313
Total	128	533,751

Why This Matters:

When auditing and data analysis tasks are performed in-house, they lead to efficient project implementation and increased accountability and accuracy. Our highly trained, professional auditors and data analysts are specifically trained to identify key attributes in the field and to document and process the data efficiently. Our GIS team ensures that our data seamlessly integrates with the City's existing systems. The City will thus have peace of mind that our firm can handle the data management necessary to yield value for this project.

We Know Lighting Design.

As a streetlight design expert, our firm is equipped to provide a comprehensive approach to the design process. We are product neutral and have worked with all the major LED streetlight manufacturers, including cobra head, as well as decorative products. In addition to keeping up to date with each manufacturer's latest streetlighting fixtures, we run our own in-field light measurement studies and create as photometric studies and photometric layouts. We utilize industry guidelines (including Illuminating Engineering Society (IES) RP-8 guidelines), which form the basis of design. Additionally, our team obtains client feedback, considers areas of concern that are currently over or under-lit, and applies customized solutions to these locations so that a municipality's project results in a comprehensive re-design that improves public safety and meets the needs of the current community. We believe that customized approaches to design are integral to successful projects, so our team places significant focus on this critical process. This is in contrast with other firms, which often apply a cookie-cutter approach to design that oversimplifies areas that are currently being over or under-lit.

Why This Matters:

Our technical knowledge of field conditions allows us to accurately identify needs and develop prioritized recommendations. We won't just recommend a watt-for-watt replacement but will provide a thorough and customized design that will keep the light on the streets and not in windows. This is in contrast with other firms that can be careless with design. The City can rely on our recommendations – just like our countless previous clients – to make informed project decisions.

Our Familiarity with Streetlight Controls.

To date, our team has managed the installation, networking, and functionality of 19 streetlighting projects with smart controls systems from a variety of manufacturers – which totaled 45,000+ control nodes. We have also completed additional projects with a variety of other smart controls on the streetlight system, such as roadway temperature monitor systems (Spencer, MA, and Saugus, MA), air quality sensors (Saugus, MA), noise level sensors (Saugus, MA), and traffic analytics (Grafton, MA). Our team feels confident that it can help the City make an informed decision about whether controls are right for it, and if so, which manufacturer(s) offers the benefits the community needs, as well as how best to implement the technology.

Why This Matters:

Our pragmatic approach to controls will ensure that we provide unbiased recommendations and advocate for the City's best interests. This means that we won't push the City into unnecessary product purchases that inflate the project's costs and steal the project's energy savings while lining our pockets (like other firms do). Instead, we will be surgical in our recommendations to minimize unnecessary products and costs.

We Do Streetlight Maintenance.

Our team has provided maintenance services for 28 municipalities nationwide, representing more than 80,000 streetlight fixtures. Whether assisting with warranty issues, routine and emergency maintenance, or transitioning a municipality to maintain a system after a recent system acquisition – our expertise is unmatched. This differentiates us because we stick around – and more importantly, our clients want us to stick around – long after the initial LED conversion project ends.

Tanko Lighting Maintenance Experience	
Municipality	Number of Fixtures
City of Santa Clarita, CA	17,568
City of Rancho Cucamonga, CA	15,000
City of Simi Valley, CA	7,199
City of Chino Hills, CA	4,816
City of Meriden, CT	4,159
City of Pico Rivera, CA	3,865
Town of Berlin, CT	2,537
Town of Montville, CT	1,777
Town of Farmington, CT	1,728
Town of Vernon, CT	1,669
City of La Puente, CA	1,620
Town of Groton, CT	1,517
Town of East Lyme, CT	1,498
City of Goleta, CA	1,331
Town of Palmer, MA	954
City of Bell, CA	844
Town of Mansfield, CT	800
Town of Darien, CT	792
Town of Wolcott, CT	737
Town of Suffield, CT	692
Town of Williamstown, MA	554
Town of Warren, MA	467
Town of Old Lyme, CT	391
Town of Middlefield, CT	343
Town of Chester, CT	313
Town of Granby, CT	159
Total Fixtures:	80,388

Why This Matters:

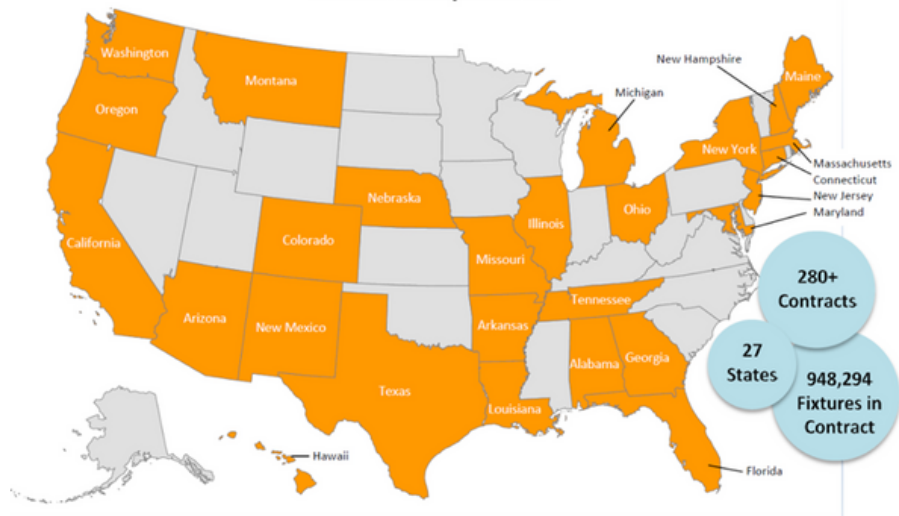
Our maintenance experience demonstrates our clients' ongoing trust in our performance and expertise. It will bring a significant knowledge base to the development of the replacement design so that we design to optimize future operations and maintenance. Our recommendations will be centered on this tremendous experience as opposed to just theoretical options. In contrast, contracting with a vendor that has never directly done streetlight maintenance before is risky and a significant liability.

We Are Experienced in Installation Management.

Once a project is in the fieldwork phase, our primary role is to provide oversight for streetlight installations and maintenance. Our breadth of experience with this includes directly hiring subcontractors and directly ordering from suppliers. Because we have been involved in a variety of roles, we know how to properly establish the necessary requirements and expectations. Additionally, our GIS capabilities enable us to track installation progress in real time. For this project, we are partnered with RL Todd & Son, Inc. (RL Todd) as our

subcontractor. RL Todd has significant municipal streetlighting experience and will provide all in-field installation services for this project. We selected RL Todd as our partner because we have a proven work history with the firm – having utilized them successfully as our LED conversion installation contractor in our Orono, ME and Brewer, ME projects.

National Experience



Why This Matters:

Our proven approach and significant experience with construction administration will allow us to streamline communications, track progress efficiently, and minimize costs. It also minimizes costs because we do not mark up installation and materials costs.

Why Choose Us

The City's project is complex, technical, and a significant investment. Here's a summary as to why the City should select Tanko Lighting for this project:

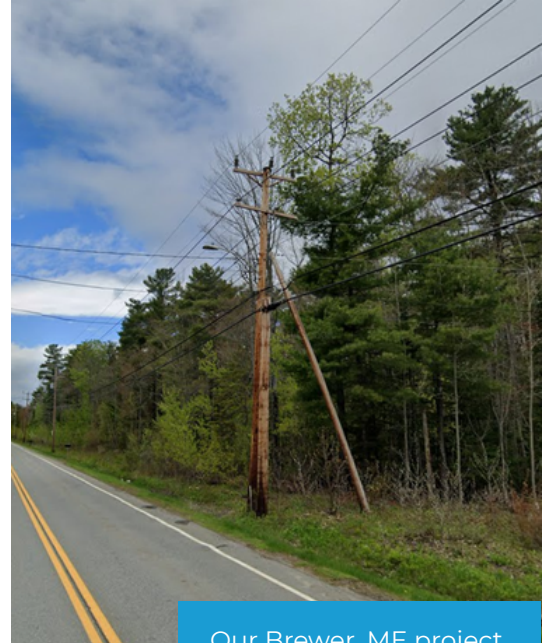
- We have the best experience in the US with municipal streetlighting projects – including 948,000+ streetlight fixtures.
- We are likely the only firm bidding with extensive maintenance experience. We are directly responsible for the maintenance services of more than 80,000 municipal streetlight systems nationwide. This really distinguishes our team from others – who may only have a theoretical understanding of streetlight operations but no “in the trenches” experience.
- We handle all GIS data collection, analysis, and mapping in-house, which minimizes costs and maximizes our team's ability to understand the current streetlight system and properly design LED replacements. Our data team has the right blend of both streetlighting technical expertise and data analysis skills to collect accurate and reliable project data. Our field auditors have accurately collected data on thousands of streetlight fixtures – ensuring that the City's audit will be conducted by highly qualified professionals with tremendous field experience.
- We have extensive experience dealing with streetlight acquisitions from utilities and are fluent in streetlight billing – for example, we recently reviewed a maintenance client's streetlight bills and identified significant discrepancies that led to the utility crediting our client over \$200,000 from incorrect billings.
- We are a one-stop shop for all things streetlight-related. We do it all in-house and can expand our services if needed to meet any of the City's additional needs.

Our Projects

Please see Appendix A for a full list of our projects nationwide. A few of our notable projects include:

- **Town of Berlin, CT** – This was a turn-key project which involved an acquisition and LED conversion of the Town's streetlights from its utility. We identified billing discrepancies involving overhead fixtures that the Town was being charged for by its utility at the underground (costlier) rate, resulting in significant cost savings for the Town. Further, our audit identified the current field conditions that substantiated the valuation that the utility provided to the Town, which enabled the Town to feel confident in the fair market value of the assets it acquired from the utility. We also provided ongoing maintenance services for the Town's streetlight system.

- **City of Brewer, ME** – The City of Brewer was the first municipal streetlight acquisition with Emera Utility in Maine. We worked diligently with the City and Emera to develop a strategy for the acquisition. We completed a comprehensive GIS audit of the existing inventory and cross-referenced that with Emera's records to confirm a complete data set that the City referred to during the acquisition process. We leveraged the experience working with other utilities through acquisition to guide the City throughout the transfer of ownership to maximize potential savings. Finally, we managed the design and installation of the LED streetlight conversion to enable the City to gain significant energy savings.
- **City of Gloversville, NY** – This was a turn-key streetlight acquisition and LED conversion project that we implemented for the City of Gloversville. This was one of the initial acquisition and LED conversion projects in New York State Electric and Gas's (NYSEG) territory and was groundbreaking for municipal acquisition efforts. Our scope of work included a GIS audit, acquisition support, data reconciliation, design, procurement, installation management, commissioning, rebate/rate change, and reporting.
- **City of Lowell, MA** – This was a turn-key LED streetlight conversion project. Because of our thorough audit and data management, we discovered that the City acquired upwards of 200 fixtures from its utility that did not actually exist, and that the City had been overcharged for these fixtures for the past seven years. By accurately collecting the data and properly reconciling it with City and utility records, we successfully remedied these discrepancies and uncovered tremendous savings for the City.
- **Town of Lyndon, VT** – We are currently assisting the Town with the design and installation management of new decorative LED fixtures in its downtown area. This includes an inventory audit, data reconciliation, in-field photometrics, design, and construction management.



Our Installation Partner

For this project, we are partnered with RL Todd & Son, Inc. (RL Todd) as our subcontractor. RL Todd has significant municipal streetlighting experience and will provide all in-field installation services for this project. We selected RL Todd as our partner because we have a proven work history with the firm – having utilized them successfully as our LED conversion installation contractor in our Orono, ME and Brewer, ME projects.

Established in 1964, the business began with a focus on the agricultural industry but soon grew and developed into a complete Electrical Contracting business. Incorporated in 1991, Tim Todd joined the company in 1994 as the second generation after he completed his degree in Electrical Engineering at the University of Maine. RL Todd has developed its work to include expertise in all areas – Low, Medium, and High Voltage work, including system Maintenance and Line construction. Its Utility division provides these services, as well as Directional Drilling, Cable Locating, System outage Services. This is done with its trained crew or Master, Journeyman, and Medium Voltage Line staff. A focus on Energy Efficient Lighting and building development, including projects certified under LEED programs are always a priority. RL Todd's employees take pride in a commitment to the customer that they will look out for their best interest regarding value and safety.

APPROACH & METHODOLOGY

Description of how the project will be managed, scheduled, and executed.

Project Methodology

We are experts in municipal streetlight consulting. The breadth of our experience has led to our proven process to ensure a streamlined project. Please find our approach to this project below, which consists of the following tasks:

PROJECT METHODOLOGY



TASK 1

ACQUISITION SUPPORT

This task will finalize the value of the streetlight assets and result in transfer of ownership to the City.

ASSET INVENTORY AND MAPPING

This task will collect the field data necessary to analyze current conditions, locations of all streetlight assets – including current City-owned fixtures – and determine any billing discrepancies.

TASK 2A: STREETLIGHT INVENTORY AUDIT

TASK 2B: BILLING INVENTORY REVIEW

TASK 2



TASK 3

LED CONVERSION PLAN

This task will develop a replacement design for the existing streetlight system – including current City-owned fixtures – and provided recommended upgrades, along with their estimated costs and savings.

TASK 3A: IN-FIELD PHOTOMETRICS

TASK 3B: DESIGN

TASK 3C: ENERGY SAVINGS & FINANCIAL ANALYSIS

PROCUREMENT AND INSTALLATION

This task will include the LED conversion and installation work.

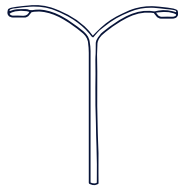
TASK 4A: COMMUNITY OUTREACH AND NOTIFICATION

TASK 4B: PRE-CONSTRUCTION COORDINATION

TASK 4C: INSTALLATION MANAGEMENT

TASK 4D: COMMISSIONING COORDINATION

TASK 4



TASK 5

PROJECT CLOSEOUT

This task will include the LED conversion and installation work.

TASK 5A: OUTAGE INSPECTION

TASK 5B: RATE CHANGE COORDINATION

TASK 5C: FINAL REPORTING

Task 1 – Acquisition Support

ITanko Lighting is well-versed in the process of assisting municipalities nationwide with acquiring their streetlight assets from their utilities – and we have done it twice previously in the State of Maine. We will leverage our expertise to assist the City with developing and documenting an independent initial assessment of valuation based on the billing data. This process will entail determining fair market value by analyzing the billing inventory data to determine key elements of existing field conditions (such as vintage of the system, pole types, etc.) and comparing regional acquisition data to provide valuation context from other neighboring jurisdictions. Once a fair market valuation has been determined, we will assist the City in negotiations with Versant Power to complete the purchase of the remaining system – this includes remote participation in three meetings. We will also assist with navigating applicable PUC and legal requirements for transfer of ownership.

Deliverables:

- Valuation Analysis: Written feedback analyzing the utility's valuation of the City's streetlight system.
- Acquisition Assistance: Ongoing participation in negotiations with the utility during the acquisition process.

Task 2 – Asset Inventory and Mapping

Task 2a: Streetlight Inventory Audit

In our experience, a proper GIS audit is essential to equipping the client with a comprehensive and accurate understanding of its existing infrastructure. The GIS audit is pivotal, as the data collected positions the municipality or its contractor to effectively create a conversion plan and maintain the system.

Our data-driven approach to project implementation has defined our success. From GPS location coordinates to fixture wattages, accurate data collection and data management is the backbone from which our methodology stems. As most of our clients are interested in performing streetlight system upgrades, our auditors collect more than thirty fields of data per streetlight fixture to ensure that after the ownership transfer, the same data set can be used to create an LED streetlight design customized to our clients' needs and tailored to each streetlight's unique location. This approach also enables us and our clients to streamline maintenance processes, as we know exactly where each light is, the type of pole it is on, the type of fixture that is installed, existing wattage, etc., so that maintenance crews can be prepared ahead of time to respond to requests and minimize visiting the same fixture multiple times.

The preparation phase for the audit will involve the following activities that are critical to the accuracy of data collection. Our team will:

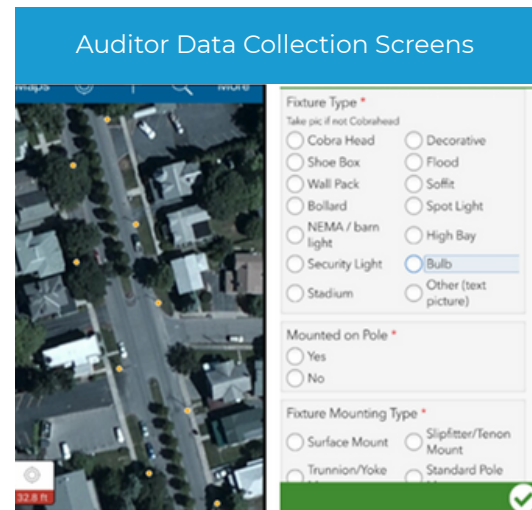
- Work with City staff to clearly define audit scope, including priority areas, municipal boundaries, and any areas outside the right-of-way that should be included.
- Develop a list of the attributes that will be collected at each light during the audit.
- Review City and utility streetlight records (provided by the City) to prepare for the audit and determine which should be utilized for the data reconciliation phase.
- Develop audit maps, schedule, and dispatch auditors to the field.

Tanko Lighting's approach to the audit is an in-field strategy that poses the following advantages:

- The most up-to-date data. Deploying trained professional auditors to the field at the onset of the project enables our team to obtain the most accurate data set possible. While we supplement our field data with digital data sources (e.g., aerial imagery, street-level imagery, and municipal/utility inventories), the integrity of our audit is never dependent on the age or accuracy of available digital data sources.
- The greatest accuracy. In person, we can identify potential safety issues, such as leaning poles or structural damage to the pole/arm/fixture. We can also verify pole numbers/labels and confirm any locations where numbers/labels are damaged or missing. This in-person verification of pole labels and exact locations is also invaluable in reconciling the utility billing inventory with what we find in the field (see Task 2b). Additionally, unlike other data collection firms, we do not hire temporary auditors everywhere we work. This is because auditing work requires field experts – seasoned professionals with deep technical streetlighting knowledge – which significantly increases our accuracy rate.
- Better planning for future phases. The precision of our data means that should the municipality move forward with system-wide updates, the municipality will be able to budget and procure for exactly what is in the field - money is not wasted on over-ordering, nor is project completion delayed by under-ordering. This precision also minimizes sloppy design (and inherent lower energy savings) – which are more likely from a subcontracted audit.

Once the preparation phase is complete, the audit will commence. We will collect data on all the existing inventory in the field – including both Versant Power-owned fixtures and City-owned fixtures – and identify over thirty attributes on-site, including (but not limited to):

- Global Positioning Service (GPS) coordinates (latitude, longitude) of each fixture location and date of capture
- Fixture technology
- Lamp type and wattage
- Pole material, mounting height, and arm length



Our GIS auditing team uses dedicated tools, refined over hundreds of similar streetlighting projects, to ensure the accuracy of the data collection.



- Pole ID number
- Date of data capture
- Approximate street address
- Street width and configuration (e.g., intersection, crosswalk, cul-de-sac)
- Electrical feed (overhead, underground)
- Visible issues (e.g., pole leaning, fixture damage, tree obstruction)

During the field audit, we will ensure to inspect every fixture and pole specified by the City and will provide City staff with a weekly pdf report that will display the daily and overall progress of the audit, any issues encountered, and a map that can be explored.

Our pricing for the audit assumes the existing utility data quality is decent. Poor utility data quality is typically defined by such issues as (but not limited to):

- Typos in pole numbers or street names
- Incorrect addresses
- Blank values
- Duplicate records
- Outdated records that do not match current field conditions
- Non-unique or non-sequential pole numbers in the field
- Mismatched pole numbers in the field compared with utility records
- Missing pole numbers
- Lack of addresses and/or GIS coordinates
- An audit scope that does not include all lights listed in the utility inventory

These types of issues can be rare, but depending on the details, they can require considerable additional time to reconcile the data. If the City's utility data is poor, we may provide the City with a scope of services and an estimated additional price to remedy such issues.

Deliverables:

- Weekly Audit Report PDE: An overview map listing the locations completed during the data collection phase (showing both weekly and comprehensive progress), along with a description of any issues that the City would need to devote immediate attention to – including electrical hazards, tree trimming needs, etc.
- Audit Data: Finalized inventory summary detailing fixture lamp type and wattage, conversion/design details and other attributes, to be provided in a file suitable for use in common GIS software (e.g., ESRI, ArcMap), as well as Microsoft Excel (this deliverable will be provided after the completion of the project).

Task 2b: Billing Inventory Review

Our team has developed a methodology to capture every streetlight asset owned by and/or billed to a municipality. Using precise GPS technology and expert streetlighting GIS Analysts, our team reviews every asset it locates in the field with the goal of matching each audited light with every record in the utility's billing inventory. In our team's experience, cross-reference of these various data sources results in extremely precise and clean data. Projects typically have a utility billing discrepancy of approximately 5 – 10 percent of the inventory quantity, which can translate to cities being over-billed by their utility. Any such discrepancies will be identified during this phase of the project and included in a billing inventory review report that will be provided to the City in an Excel spreadsheet.

Reconciling against the utility data is the best way to identify any billing errors and correct the inventory data set with the utility. As such, our recommended approach is to reconcile the audit data with the utility billing data and then present a cleaned data set to the City to be used to replace its existing GIS data set (if existing) at the end of the project. However, please note that we have had recent issues with other clients' projects in which the utility has not provided the requested billing inventory. Thus, if we are unable to obtain the utility's billing inventory by the end of the audit, we will use the City's GIS data to reconcile against and then provide the reconciled data to the utility. If the utility provides its billing inventory after we have already commenced reconciling the audit data with the City's GIS data, and we have to do additional reconciling, we reserve the right to adjust pricing accordingly.

We will begin reviewing the data upon commencement of the audit. The billing inventory review report will include an analysis of the following items:

- Streetlights confirmed during the audit
- Streetlights appearing in the utility records but not in the confirmed audit records
- Streetlights confirmed in the audit records but not in the utility records



Our Orono, ME project.

It should be noted that no field audit is perfect because varying and unknown field conditions can impact the data collected. As such, there is sometimes an error rate associated with data collection that may require the development of an Audit Punch List and a plan to remedy. Depending on the quantity of fixtures and the nature of the issues, there are typically three options to remedy the Audit Punch List:

1. Our team revisits specific locations to collect additional audit points (note this may involve additional costs for the City, which we can provide estimates for once the Audit Punch List is developed); or
2. City staff revisits specific locations to collect additional audit points and provides the streetlight information to our team; or
3. The City opts not to remedy the Audit Punch List – in which case, anything on the Audit Punch List will be removed from the project's scope of work. This option may result in missing opportunities to remove lights from the field that are currently on the utility's billing inventory.

“

“Most notably, their responsiveness and customer service to go above and beyond the regular call of duty was very important to a community...They worked as a team to answer all questions and directives in a very efficient and swift manner. Any project of these sorts has many hurdles... and Tanko and their staff triaged every hurdle with professionalism and accuracy every time. We truly felt like they were a member of our own staff and always looking out for our best interests, as we all the taxpayers of the community.”

Jamie Hellen

Deputy Town Administrator
Town of Franklin, MA

”

Once the audit is completed, we will inform the City if there is a need for an Audit Punch List, as well as potential remedies for the City to decide which one best meets its needs.

Deliverables:

- Billing Inventory Review Report: A report detailing discrepancies found between field data and utility billing records, as well as cleanly matched records (including nearest address and pole number, if applicable). Further, addressing these discrepancy locations with the utility will be the responsibility of the City, unless it requests our team to do so (which will require an additional scope and cost).

Task 3 – LED Conversion Plan

Task 3a: In-Field Photometrics

In our experience, a critical initial step in optimizing streetlight systems involves photometric analysis – which is an examination of the distribution or “spread” of light from the fixture onto the ground. Whereas a typical HPS fixture indiscriminately throws the light in all directions and produces a “hot spot” of concentrated light directly beneath the fixture, a typical LED fixture directs the light spread to where it is needed most – on the roadway or walkway. In addition, we have seen that some municipalities’ systems that have converted to LED were not designed with proper light distributions, resulting in light trespass and unintentional dark areas. Confirming the current streetlight illumination patterns is essential to determining how to optimize the system via enhancements.

This type of modeling requires an expert – and we are seasoned in it. Our proven process involves theoretical photometrics modeling (demonstrating the light distribution from an aerial perspective at the fixture location). However, our approach often includes photopic (which measures the light that the cones of the eyes typically perceive) and scotopic (which measures the light that the rods of the eyes typically perceive) field measurements obtained from directly under the fixture and at varying distances to the sides of and across the street from the fixture. The results from these models portray the most accurate existing conditions.

Our recommended approach includes the following elements:

- We will conduct a maximum of 12 in-field pre-conversion photometric measurements for each roadway classification:
 - Residential – 4 contiguous fixture locations
 - Collector – 4 contiguous fixture locations
 - Arterial – 4 contiguous fixture locations
- We will conduct a maximum of 30 in-field pre-conversion photometric measurements for the following areas (outlined in the City's RFP):
 - Main Street – 6 contiguous fixture locations
 - Oak Street – 6 contiguous fixture locations
 - High Street – 6 contiguous fixture locations
 - Commerce Park – 6 contiguous fixture locations
 - Myrick Street – 6 contiguous fixture locations
- At each location, we will take readings:
 - At the curbline
 - Every 25 feet
 - At the corners of each intersection
 - In the middle of all marked crosswalks
- The results of the photometric measurements will justify the importance of improving existing lighting conditions.

- We will develop a report documenting existing photopic and scotopic readings.
- We will utilize the wattage and fixture information from the in-field audit data to prepare photometric renderings of the proposed new fixtures selected by the City. Each fixture overlay will be an approximation based on theoretical manufacturer representations of the proposed fixtures.
- Our team will guide the City through how to interpret the photometrics, review the current light distribution, the quality and quantity of light surrounding the fixtures, and the general containment of light in the road/right-of-way/walkway. The interpretation of the photometrics data will enable proper planning for any enhancements.

Deliverables:

- Light Measurements Report: A report that will include a list of the City's current designated lighting infrastructure, the current lighting level and illumination quality for the City by representative locations, and a list of City streets and blocks that were included in the field evaluation.
- Photometric Renderings: Theoretic photometric overlays of the City's proposed fixtures based on manufacturer representations.

Task 3b: Design

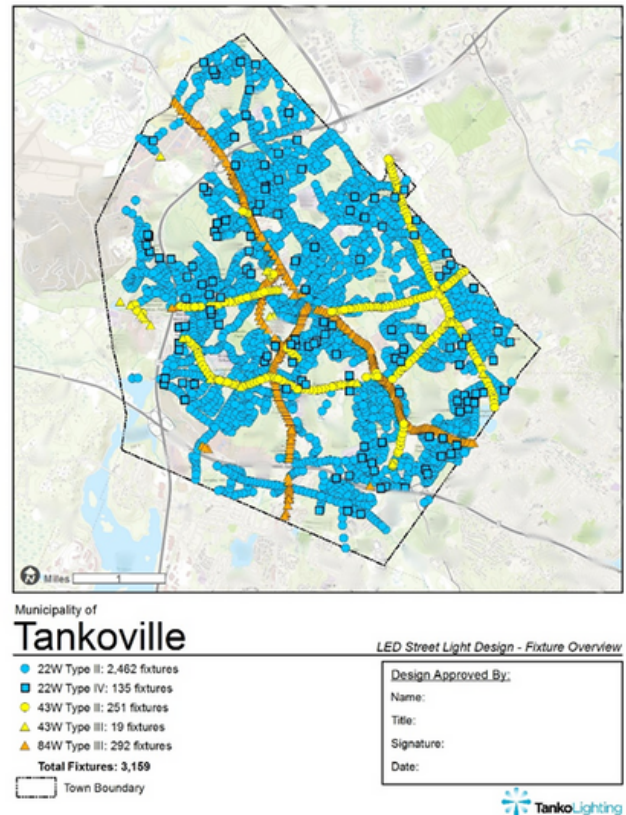
In our experience, a comprehensive LED streetlight conversion project is the ideal opportunity for a municipality to reassess its entire streetlighting design and ensure that field conditions are optimized for all applications in the design. To achieve this, our team routinely conducts municipal-wide design processes for our streetlighting projects. This experience has led to our team's streamlined approach to design.

Our team utilizes Illuminating Engineering Society (IES) RP8 standards for roadways and right of ways. However, there are many instances when municipal customers need to alter these standards to best meet their specific needs. Thus, our team uses these types of industry accepted standards as guidelines and works closely with the City to develop customized proposed standards of comfort and functionality that match its needs.

Our goal will be to provide the City with an appropriate replacement design that includes the brand of fixture, photocell, replacement wattages, color temperatures, distribution patterns, and other appropriate settings and options to optimize the LED streetlight retrofit.

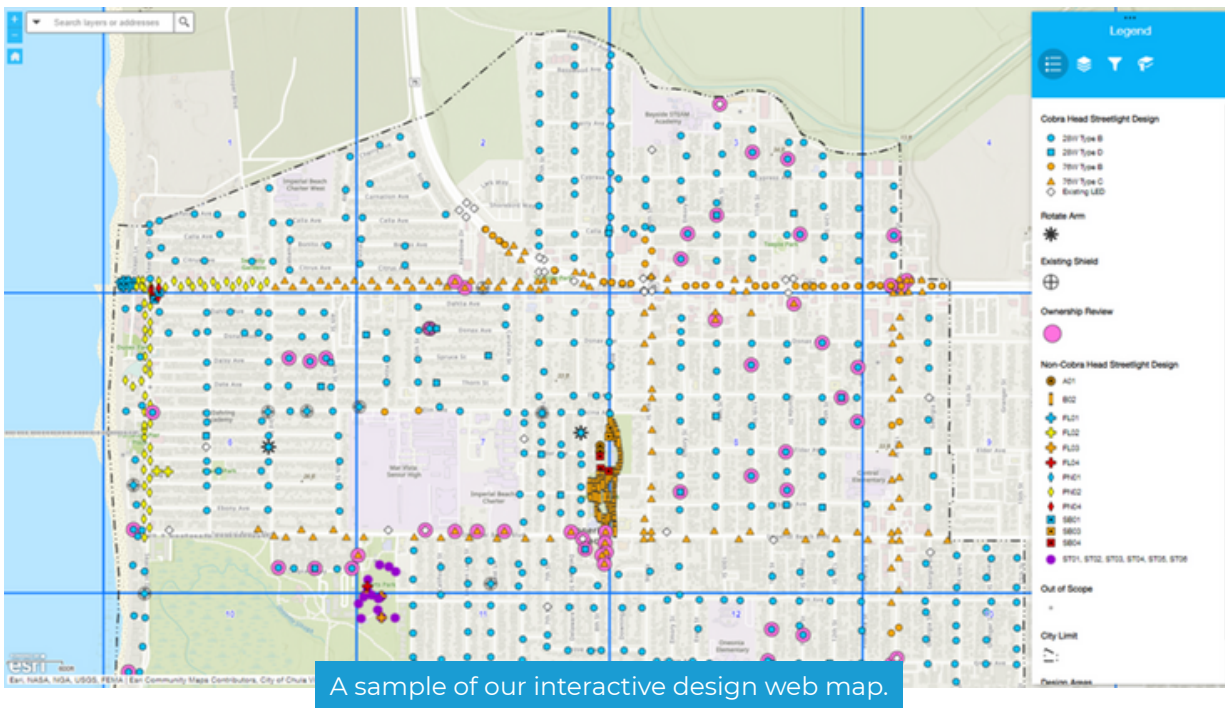
Our approach to comprehensive design for this project will include the following elements:

- Applying standard LED replacement wattage recommendations based on the location of each existing fixture.
- Conferring with the City's selected staff (for example, safety coordinators and police officers) to solicit feedback on areas that are currently over- or under-lit and are public safety concerns.
- Coordinating an (optional) pilot of potential products (note that the optional pilot is not included in our pricing but can be provided upon request).
- Selecting appropriate wattages and distribution types for replacement fixtures to meet the City's needs, while maintaining the objective of providing a simplified design that standardizes inventory (so that the system has consistency and can be more easily maintained over time).
- Developing replacement designs for any existing City-owned streetlights.
- Providing product submittals for the City's review and approval, which, once approved, will be used for procurement. Note that our approach is brand-neutral for all products – we look for the highest rated fixtures that meet the City's needs, regardless of brand.
- Applying industry best practices aligned with ANSI/IES RP-8-22 (or more recent version) where practical.
- Incorporating recommendations outlining opportunities for smart controls or lighting automation.
- Recommending a consistent method for tagging/labeling streetlight poles with unique identifiers linked to GIS records. Typically, we specify a tag recommendation that consists of five to seven digits. We will provide a recommended numbering sequence, material specifications, and installation strategy for this task.
- Applying the City's preferred products, typical models and special considerations to its GIS inventory to produce maps of the type and wattages by location (see sample map below), as well as an analysis of the total cost, incentives, savings, and payback for the potential retrofit design.



Tanko Lighting's Municipal Overview Map shows an entire municipality with recommended replacement fixtures.

We provide an interactive design web map to facilitate our design process. Please see the following graphic.



A sample of our interactive design web map.

Please note that we assume that an estimated ten percent of the City's existing system is comprised of decorative fixtures – which is typical for most municipalities. Decorative streetlight fixtures are particularly challenging to convert to LED, so it is best that the City work with an expert to assist with this project. We have converted more than 65,000 decorative streetlight fixtures throughout the nation and are masters of ensuring the most cost-effective option that meets the City's lighting needs while balancing aesthetics.

The overall benefits of our design approach include:

- **Standardization** – The City is ensured that there is a consistent design method resulting in wattage continuity on its streets. Standardization also leads to a reduction in the variety of fixtures that the City must keep in its inventory
- **Safety** – Based on the most updated field conditions, the City can be assured that the design matches the system's current needs and results in improved public safety from streets no longer being under or over lit
- **Efficiency** – The process takes a very thorough approach by examining all relevant field factors and thereby maximizes the available savings by utilizing the most efficient design, while meeting light output needs
- **Streamlined Installation** – The process allows for the development of a detailed scope of work (via a map of all replacements) by fixture for the installers to follow in the field – which enables more efficient materials gathering at the start of each work day during the LED conversion

Deliverables:

- **Pole Labeling Recommendation:** Specific tag characteristics, pole location, and numbering sequence delivered to the City for approval.
- **Replacement Plan Maps:** City-wide online maps with recommended LED replacement wattages for the City to review and approve. These maps will remain available to City staff for one month after the submission of the final project reporting (Task 5).
- **Finalized Product Submittals and Design Maps:** Technical specification submittal sheets for selected products, as well as design maps corresponding to the City's selected fixture(s).

“The Town staff was impressed by Tanko Lighting's knowledge and professionalism with these projects and developed a successful working relationship with the firm...”
Tyler Kesler
Sustainability & Water Conservation Specialist
Town of Erie, CO

Task 3c: Energy Savings & Financial Analysis

We are seasoned experts in applying accurate estimates to determine cost/benefits of municipal streetlight projects. Based on the approved design, we will provide the City with an energy savings and financial analysis that includes:

- A comparison of existing and proposed fixture wattages by type and quantity
- Projected annual kWh savings based on fixture replacement and operating hours
- Estimated annual cost savings based
- A simple payback calculation that accounts for estimated material, labor, and installation costs (based on budgetary pricing)
- Estimated annual twenty-year projected savings
- Description of assumptions included in the analysis

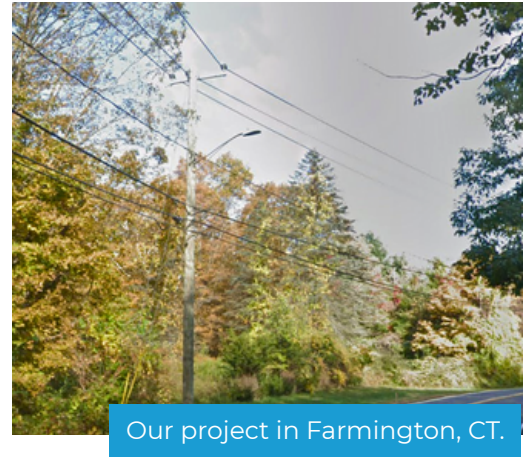
Deliverables:

- Financial Analysis: A report outlining the City's streetlight system options, cost/benefits, assumptions, budgetary pricing, and savings.

Task 4 – Procurement and Installation

Task 4a: Community Outreach and Notification

Proper coordination of information and outreach to stakeholders is an essential part of ensuring a successful streetlight conversion project. To that end, our team will coordinate with the City's media office to help develop a community outreach and notification plan prior to the commencement of any project activities. The plan will ensure project awareness and minimize public disturbance. Specifically, our team will develop the message and provide the schedule to the City's media staff for distribution through the City's existing media outlets (press releases, website, etc.).



Deliverables:

- Project Messaging and Schedule: Specific language, draft press release, and timelines related to project activities to assist with notifying community members of the project.

Task 4b: Pre-Construction Coordination

We will ensure that our installation subcontractor – RL Todd – stages the receipt of fixture shipments for installation in a manner that ensures the secured storage of materials. We routinely coordinate this in all our projects and are familiar with how to optimize material shipments in releases so as to allow the installation subcontractor ample time to receive, process and securely store the materials. We will provide the City with a schedule of anticipated shipping dates for materials once the materials order is placed.

Further, we will ensure that all logistics are carefully coordinated for the project. Our team will work with the City's main point of contact to develop an installation plan that minimizes inconvenience to the City and includes ordering schedules, traffic control plans, waste disposal and recycling procedures (that comply with all applicable State and Federal laws), and installation and commissioning schedules as required to the City.

Our team is very familiar with the traffic control needs of a municipal streetlight conversion project, as traffic control is an element of virtually every one of our projects. Given that a streetlight conversion project is a mobile operation requiring just a few minutes of work at each location, it can easily be likened to the same traffic control needs as the typical trash collection service in a city. As such, we will work closely with the City and the installation subcontractor during this task to confirm the traffic control plan that will seamlessly maintain safe traffic conditions, including locations where police details will be needed.

Our team will facilitate a pre-construction Kick-Off meeting with City staff and our installation subcontractor to review the traffic control plans, work safety, public safety and waste material handling procedures and requirements prior to the start of installation. We will also coordinate and remotely participate in regularly scheduled progress meetings with City staff.

Deliverables:

- Pre-Construction Details: Ordering, traffic control plans, required permits, disposal strategy, pre-construction meeting, ongoing meetings, installation and commissioning schedules.

Task 4c: Installation Management

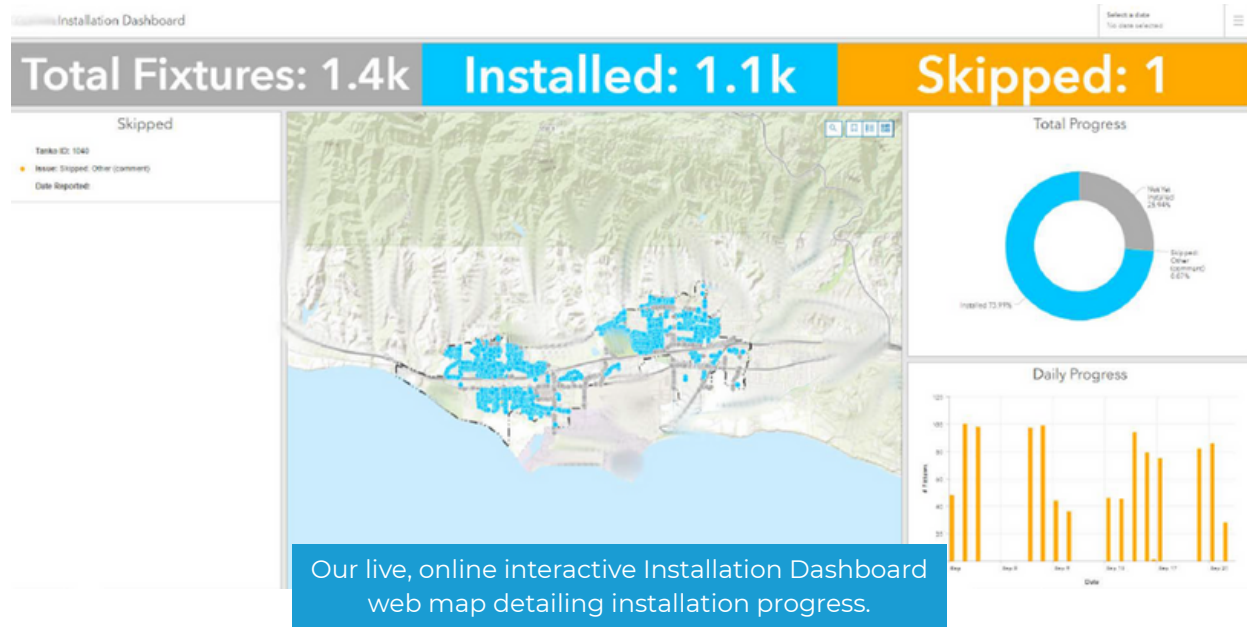
Our team will ensure that RL Todd utilizes highly trained professionals, properly instructed in and abiding by all company and industry safety standards. RL Todd is fully insured and will be responsible for meeting all federal, state, and local codes and laws.

RL Todd will provide safety, installation, traffic control, and environmental disposal services for this project. RL Todd's efforts will be directed by a foreman, who will be responsible for all logistics and field installation, including safety and traffic control, and all management of field staff. RL Todd will provide all required safety equipment for the project and will also install a sequenced pole tag on each City-owned pole as the crews install each LED fixture.

Completion of the project commissioning (see Commissioning section below) will coincide at the end of the installation phase to quickly address any errors, punch list items, or troubleshooting needs.

Utilizing the data from the design process, we will develop installation maps and provide to installers and relevant City staff for accurate project tracking.

We will use the installation data to provide real-time installation progress in a live, online interactive web Installation Dashboard (see graphic below).



Upon installation, the City or its standard maintenance contractor, will be responsible for serving as first-responder to all outages, shall identify locations where warranty-related work is necessary, and will notify RL Todd of the warranty-related locations so that a remedy can be implemented.

Deliverables:

- Online Installation Dashboard: Online maps with locations and fixture information used to dispatch installation crews and allow City staff to monitor installation progress.

Task 4d: Commissioning Coordination

Given our significant focus on thorough data collection during both the audit and installation phases, approximately ninety-five percent of the commissioning efforts take place during the time of installation. This is because our team can quickly validate the installation data against the confirmed audit data and accurately identify any locations where both data sets do not match. This ensures tremendous precision that establishes a finite subset of the installation locations that require additional review.

Upon completion of the installation, we will ensure that the installers perform final inspection on all fixtures, correct any "punch list" items, test lights to ensure that they work, and identify locations where the repair needs City assistance. We will provide the City with a complete commissioning report outlining any errors and actions taken to correct errors.

Deliverables:

- Commissioning Report: Detailed analysis of final installation verification and testing, including an outline of any errors and actions taken to correct errors.

Task 5 – Project Closeout

Task 5a: Outage Inspection

We believe that conducting a full system outage inspection is the most efficient and thorough way to confirm proper operations of the newly-installed system. To accomplish this task, we will deploy our auditors to canvass the City. We will identify any non-functioning streetlight fixtures in the right-of-way and collect the spatial coordinates (latitude/longitude) and pole ID number for each outage. We will then coordinate with the installer to ensure the outages are remedied. We will inspect up to a maximum of 600 fixtures. (Note that our pricing is based on an estimated quantity of 600

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"Tanko Lighting was the right partner to assist us with the LED conversion. They effectively managed the project to alleviate burden from staff and performed their service exceptionally well. As a result, the City is very happy with the final product of this project. I highly endorse Tanko Lighting as an ideal partner."

Stacey Cuevas
Public Works Manager
City of Tustin, CA

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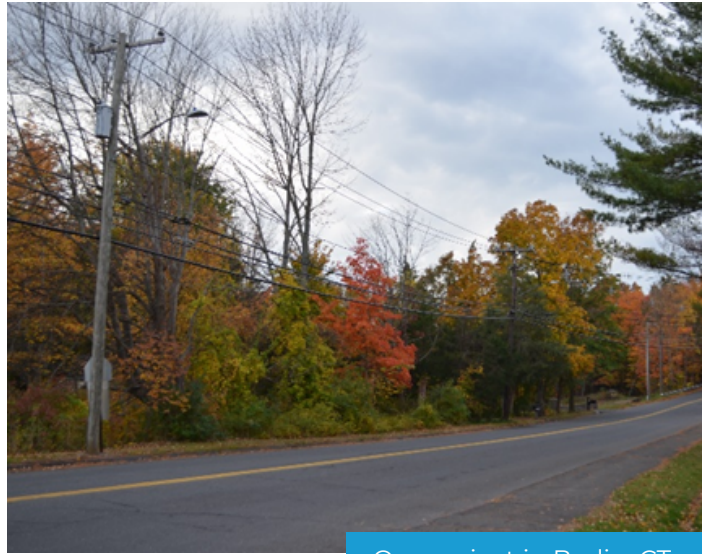
fixtures. If more are identified during the audit, we reserved the right to adjust pricing.)

Deliverables:

- Streetlight Outage Inspection Report: A report (in Excel spreadsheet format) outlining the spatial coordinates (latitude/longitude) and any existing pole ID numbers of any outage locations.

Task 5b: Rate Change Coordination

We will coordinate with the utility to update the rates of the newly installed LED fixtures. We will prepare the necessary documentation and submit to the utility, confirm the materials have been received and obtain the timing for the modification to be processed. If known, we will provide contact information for the appropriate party addressing any rate changes for the City. Based on the timeframe provided by the utility, the City staff will need to confirm that the modification appears in the City utility bills. If there are any inquiries from the utility to the City regarding the submitted rate changes, we will assist the City with responding to any questions.



Our project in Berlin, CT.

Deliverables:

- Rate Change Documentation: A compilation of copies of paperwork submitted to the utility regarding rate changes.

Task 5c: Final Reporting

A project is never completed until the final documentation and administrative requirements are met. We understand that proper follow-through is essential to considering a project successfully executed and will coordinate all final reporting and data requirements to ensure that the City considers the project is compliant and complete. This includes finalizing the GIS layer with design and construction data and updating the analysis of gross cost, savings, incentives, net cost, and payback of finalized design, including any operation and maintenance of costs and savings. We will also provide contacts and the process whereby the City can obtain warranty support with the manufacturer(s) should it be necessary.

Deliverables:

- Final Reporting Documentation: Final requirements necessary to process the available rate changes with the utility, as well as post-construction electronic GIS records for all newly installed streetlights in the City, including all wattages, badge numbers, locations, and other associated attributes, and environmental disposal documentation.

SAMPLE DELIVERABLES

Examples of inventory maps, fixture spec sheets, or project reports.

Please find a few sample deliverables in Appendix B.

REFERENCES

Minimum of three municipalities for which similar work has been completed.

Please find our references below.

Project Name & Location: Town of Darien, CT	
Scope of Services	Client Contact Info
We provided streetlight acquisition support, audit, data reconciliation, and LED turnkey conversion, for the Town's streetlight fixtures. Additionally, we developed an analysis of the Town's streetlight bills that resulted in a significant reimbursement to the Town. Further, we continue to provide ongoing regular and emergency maintenance services for the Town.	Edward L. Gentile Jr., PE Director of Public Works 203-656-7364 egentile@darienct.gov
Project Name & Location: Town of Farmington, CT	
Scope of Services	Client Contact Info
We provided streetlight acquisition support, audit, data reconciliation, and LED turnkey conversion, for the Town's 1,700+ streetlight fixtures. Additionally, we continue to provide ongoing regular and emergency maintenance services for the Town.	Shannon Rutherford, P.E. Assistant Town Planner rutherford@s@farmington-ct.org 860-675-2327
Project Name & Location: Town of Walpole, MA	
Scope of Services	Client Contact Info
We provided the Town of Walpole with turn-key support to implement its LED streetlight conversion project of 2,092 streetlights, as well as the LED conversion of 329 exterior facility lights. We provided project management, GIS auditing, design, equipment selection, financial analyses, materials procurement, installation management, commissioning, rebate/rate change coordination and final reporting.	Patrick Shield Assistant Town Administrator 508-660-6353 pshield@walpole-ma.gov

COST PROPOSAL

Itemized costs for each major component: acquisition support, mapping, design, materials, and installation.

Please find our Cost Proposal in Appendix C.

ADDITIONAL INFORMATION

The proposer may provide any other information that may be relevant for the review and evaluation of the prospective vendor's experience or capabilities.

Our Optional Services

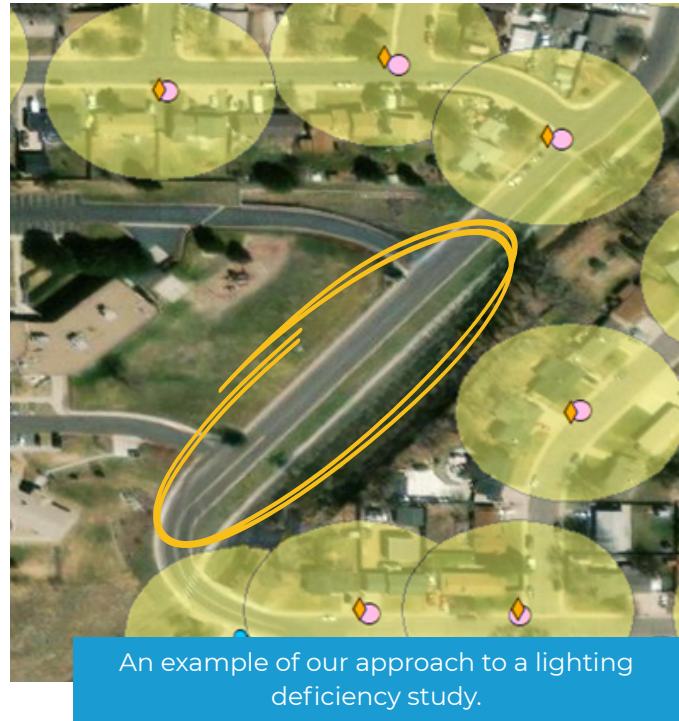
One advantage of selecting Tanko Lighting as the City's partner is that we are a one-stop shop for all things streetlight-related. This means we can provide additional services that the City may be interested in. Below is a list of additional (optional) services that our team can provide. Pricing can be provided upon request.

- **Extensive Pole Assessments:** For many of our clients, we conduct comprehensive streetlight pole assessments and rate each pole based on its existing condition into several categories of varying priority. We then determine both near and long-term plans – with recommended pole replacements and estimated costs – based on level of priority, for clients to utilize as a blueprint to integrate into their capital improvement plans.



Our project in Walpole, MA.

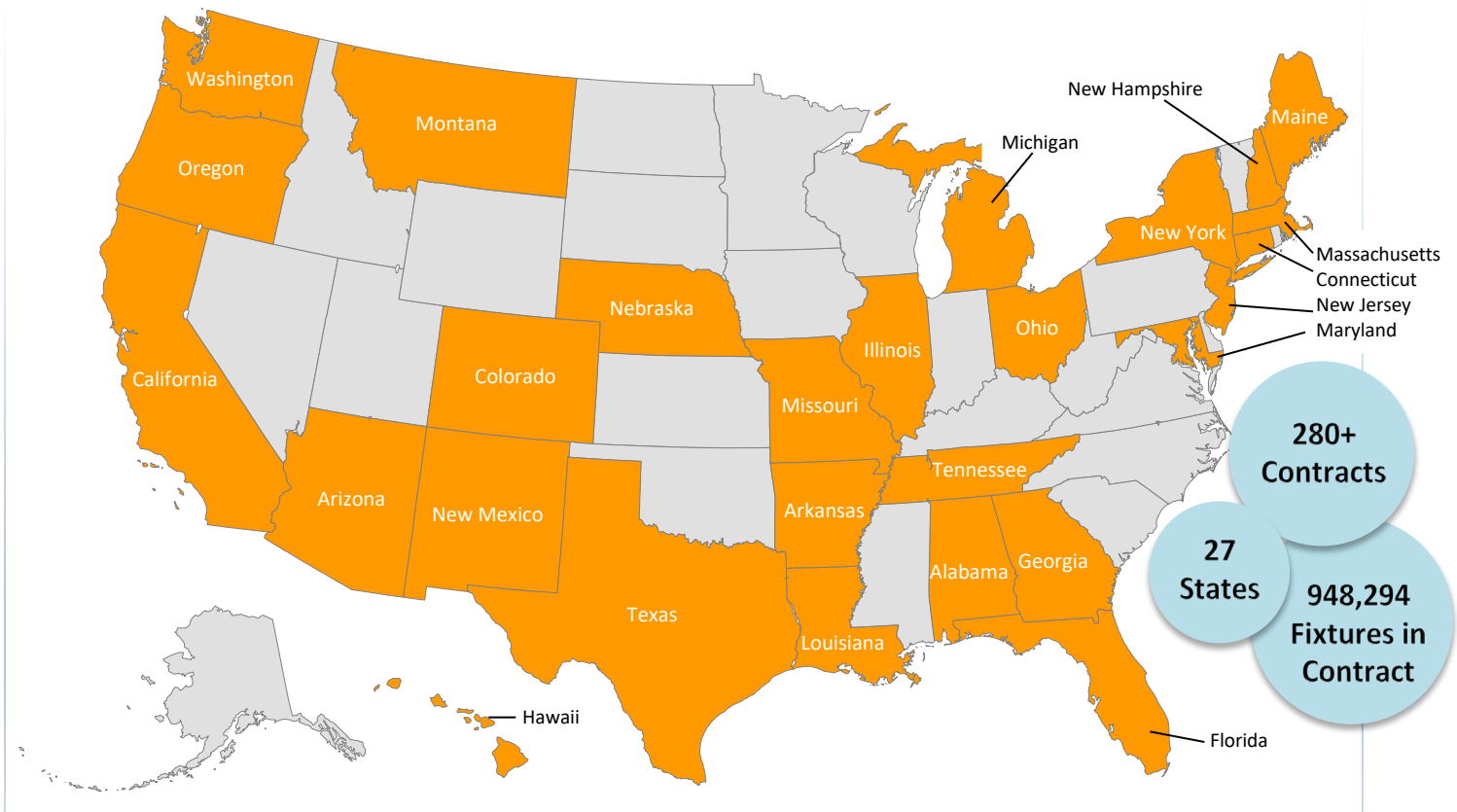
- **Maintenance:** We have an in-house team solely responsible for ongoing municipal streetlight maintenance projects – representing more than 80,000 fixtures. We provide a variety of services – including assisting with the direct implementation of maintenance services (including oversight of both routine and emergency services, direct contractor management, dispatch, reporting, GIS data management, call center, public website, procurement, insurance claims, etc.). This experience is critical for projects because we have the specific knowledge base from which to provide accurate options and recommendations for how streetlight systems should be maintained over time. Our approach to all municipal streetlight maintenance also includes developing preventative maintenance plans (often as part of our streetlight master plan development work) to ensure optimal ongoing streetlight operations for our clients. We do this via inventory field audits, pole condition audits, updating material inventory records, maintaining updated maintenance dispatch records, routine nighttime field audit checks, prioritized maintenance needs, routine billing reviews, replacement schedules, and security enhancement/vandalism abatement strategies.
- **Streetlight Master Plan:** A Streetlight Master Plan can include both the details of day-to-day maintenance operations, as well as indicate the broader policies and procedures involved with a streetlight system. This is particularly useful as a community grows, and developers install new streetlights – because it provides the standards and processes by which the system is developed over time. Our team has significant experience with developing and implementing comprehensive streetlight master plans for our municipal clients. Some of the broader topics we typically cover in our master plans include:
 - Definitions of roadway classifications – residential, collector, arterial
 - Streetlight design standard specifications – including cobra head and decorative fixtures and poles, as well as photometric requirements, correlated color temperature, color rendering, etc.
 - Installation standards – mounting heights, location requirements, undergrounding efforts, tree shading and other obstructions, etc.
 - Intersection standards
 - Existing streetlight procedures for existing developments
 - New streetlight installation procedures for existing developments
 - New streetlight installation procedures for new developments
 - Ownership acceptance and transfer
 - Tax assessment fee schedules (if applicable)
- **Lighting Deficiency Study:** We can provide an analysis of the current spacing configurations for the standard streetlights to determine any under-lit areas throughout the City. Where deficiencies are identified, we can provide recommendations for remedies.
- **Utility Reimbursement Analysis:** We can perform activities to identify and remedy any incorrect historic streetlight bills, including:
 - Identifying any relevant time periods based on installation dates or age of assets (if available)
 - Determining if there is any amount that should be reimbursed to the City by the utility based on any mis-billings
 - If a reimbursement amount is determined:
 - Calculating the interest based on the time-value of money
 - Coordinating and leading meetings with the utility and the City to present the analysis and negotiate for reimbursement to the City
 - If the utility is unwilling to negotiate:
 - Support the City in a legal case against the utility for the reimbursements:
 - Assist with the development of legal claim documents
 - Serve as the City's subject matter expert
 - Testify as an expert witness in court on behalf of the City



APPENDICES

- [Appendix A – Projects List](#)
- [Appendix B – Sample Deliverables](#)
- [Appendix C – Cost Proposal](#)

National Experience



State	Project Count	Fixture Count
Alabama	1	2,557
Arkansas	1	16
Arizona	1	40,000
California	93	335,957
Colorado	15	31,199
Connecticut	49	63,141
Florida	2	4,966
Georgia	2	12,311
Hawaii	1	3,500
Illinois	1	1,800
Louisiana	2	9,085
Maryland	2	3,903
Massachusetts	58	85,047
Maine	2	840
Michigan	1	3,300
Missouri	2	6,613
Montana	1	6,000
Nebraska	4	4,343
New Jersey	1	9,300
New Hampshire	4	803
New Mexico	1	535
New York	6	43,808
Ohio	6	41,678
Oregon	1	1,019
Tennessee	2	3,349
Texas	14	220,340
Washington	9	12,715

Proven Process



Sole Focus on Municipal Streetlighting



523,000+ Streetlights Acquired



70,000+ Fixtures Maintained

California			
Contracts Total: 93 Total Fixtures: 335,957			
Municipality	Type	Fixture Count	Scope of Work
Alameda, CA	Municipal Utility	3,200	Audit, Data Reconciliation, & Design
Antioch, CA (Project 1)	City	9,924	Audit, Data Reconciliation, Design, & Photometric Study
Antioch, CA (Project 2)			Turnkey LED Conversion
Bakersfield, CA	City	3,000	Turnkey Decorative LED Conversion
Baldwin Park, CA	City	450	Turnkey LED Conversion
Bell, CA (Project 1)	City	1,600	Turnkey LED Conversion
Bell, CA (Project 2)			Maintenance Services
Berkeley, CA (Project 1)	City	8,000	Turnkey LED Conversion
Berkeley, CA (Project 2)		3,200	Pole Inspection & Conditions Assessment
Berkeley, CA (Project 3)			Streetlighting Master Plan
California Eminent Domain Law Group	Law Firm	9,900	Audit, Data Reconciliation, Streetlight System Analysis, & Municipal Process Support
Capitola, CA	City	1,500	Streetlight Ownership Feasibility Analysis
Chino Hills, CA (Project 1)	City	4,450	Turnkey LED Conversion
Chino Hills, CA (Project 2)			Maintenance Services
Chino Hills, CA (Project 3)		1,200	Ownership Support
Chino Hills, CA (Project 4)		929	Citywide Parks & Walkways LED Conversion & Pole Tagging
Chino Hills, CA (Project 5)			Maintenance Services
Chino Hills, CA (Project 6)			Community Center & Tennis Court LED Conversion
Claremont, CA	City	1,300	Turnkey LED Conversion
Clearlake, CA (Project 1)	City	262	Streetlight Ownership Feasibility Analysis
Clearlake, CA (Project 2)			Audit & Data Reconciliation
Clovis, CA	City	9,400	Streetlight Ownership Feasibility Analysis
Coalinga, CA (Project 1)	City	750	Streetlight Ownership Feasibility Analysis
Coalinga, CA (Project 2)			Ownership Support
Corona, CA	City	8,700	Material Procurement, Installation (Fixtures & Controls), & Rebate/Rate Change
Corte Madera, CA	Town	819	Turnkey LED Conversion
Cupertino, CA (Project 1)	City	3,000	Turnkey LED Conversion
Cupertino, CA (Project 2)		374	Streetlight Ownership Feasibility Analysis
Fresno, CA	City	360	LED Streetlight Material & Install
Fullerton, CA	City	6,600	Turnkey LED Conversion
Glendora, CA	City	2,500	Ownership Support
Goleta, CA (Project 1)	City	1,575	Turnkey LED Conversion & Maintenance Services
Goleta, CA (Project 2)			Maintenance Services
Goleta, CA (Project 3)			Maintenance Services
Hayward, CA	City	7,700	Turnkey LED Conversion
Imperial Beach, CA (Project 1)	City	1,010	Audit & Data Reconciliation
Imperial Beach, CA (Project 2)		532	Ownership Support
La Puente, CA (Project 1)	City	2,100	Turnkey LED Conversion
La Puente, CA (Project 2)			Maintenance Services
La Verne, CA	City	2,500	Audit, Data Reconciliation, Design, Streetlight Ownership Feasibility Analysis, & Ownership Support
Larkspur, CA	Town	770	Turnkey LED Conversion
Lawrence Berkeley National Laboratory (Project 1)	Lab	1,400	Audit, Data Reconciliation, Specifications Development, & Controls Installation (30 fixtures)
Lawrence Berkeley National Laboratory (Project 2)		300	Exterior Fixture LED Conversion & Controls Installation
Lodi, CA	Municipal Utility	7,200	Turnkey LED Conversion
Modesto, CA	Municipal Utility	9,000	Turnkey LED Conversion
Monrovia, CA	City	35	Pilot - Streetlight LED Conversion
Morgan Hill, CA	City	2,500	Turnkey LED Conversion
Mountain View, CA	City	4,206	Design Assistance & LED Replacement Streetlight Fixtures
Napa, CA	City	4,500	Turnkey LED Conversion
Oakland, CA (Project 1)	City	37,000	Audit, Commissioning, & Data Reconciliation
Oakland, CA (Project 2)		526	Turnkey LED Conversion
Oakley, CA	City	3,395	Streetlight Ownership Feasibility Analysis
Orange, CA	City	4,400	Streetlight Ownership Feasibility Analysis
Paso Robles, CA (Project 1)	City	557	Downtown Streetlight Master Plan
Paso Robles, CA (Project 2)			Streetlight Audit & Data Reconciliation
Paso Robles, CA (Project 3)		2,630	Streetlight Ownership Feasibility Analysis
Pico Rivera, CA (Project 1)	City	4,500	Turnkey LED Conversion
Pico Rivera, CA (Project 2)			Maintenance Services

California (Continued)

Contracts Total: 93 Total Fixtures: 335,957

Pico Rivera, CA (Project 3)		1,100	Ownership Support
Pico Rivera, CA (Project 4)			Maintenance Services
Pleasanton, CA	City	4,400	Inventory Audit, Data Reconciliation, Design, & Project Management Services
Poway, CA	City	3,600	Turnkey LED Conversion
Rancho Cordova, CA	City	6,500	Turnkey LED Conversion
Rancho Cucamonga, CA (Project 1)			Turnkey LED Conversion
Rancho Cucamonga, CA (Project 2)	City	15,000	Maintenance Services
Redlands, CA	City	5,577	Turnkey LED Conversion
San Bruno, CA	City	2,000	Turnkey LED Conversion
San Joaquin County, CA	County	3,694	Audit, Data Reconciliation, Field Condition Report, & Design
San Rafael, CA	City	813	Turnkey LED Conversion
Santa Ana, CA	City	11,500	Audit, Design, Data Reconciliation, & Ownership Support
Santa Clara, CA	Municipal Utility	3,000	Turnkey LED Conversion
Santa Clarita, CA (Project 1)			Pole Inspection, Turnkey LED Conversion
Santa Clarita, CA (Project 2)	City	22,936	Maintenance Services
Santa Clarita, CA (Project 3)			Maintenance Support Services & Streetlight Master Plan
Santa Cruz, CA	City	995	Ownership Support
Santa Fe Springs, CA	City	6,500	LED Pilot Installation, Financial, & Streetlight Ownership Feasibility Analysis
Signal Hill, CA	City	1,300	Audit, Data Reconciliation, Design, Streetlight Ownership Feasibility Analysis, & Ownership Support
Simi Valley, CA (Project 1)	City	8,000	Turnkey LED Conversion
Simi Valley, CA (Project 2)	City	7,202	Maintenance Services
Sonoma, CA	City	1,200	Turnkey LED Conversion
Stanton, CA	City	1,300	Turnkey LED Conversion
Sunnyvale, CA	City	7,000	Turnkey LED Conversion
Thousand Oaks, CA	City	7,900	Ownership Support & Smart City Feasibility Analysis
Tustin, CA (Project 1)		3500	Turnkey LED Conversion
Tustin, CA (Project 2)	City	500	Ownership Support
Twentynine Palms, CA (Project 1)		616	Audit & Data Reconciliation
Twentynine Palms, CA (Project 2)	City	168	Sports Lighting LED Conversion
Vacaville, CA	City	3,980	Inventory Audit, Data Reconciliation, & Design Services
Vallejo, CA	City	9,000	Turnkey LED Conversion
Ventura, CA	City	9,000	Ownership Support
Vista, CA	City	2,300	Turnkey LED Conversion
Walnut Creek, CA	City	3,122	Streetlight Ownership Feasibility Analysis
West Hollywood, CA	City	2,500	Audit, Data Reconciliation, Streetlight Ownership Feasibility Analysis, Pilot Installations, Distribution Pole Ownership Assistance, & Maintenance Services

Colorado

Contracts Total: 15 Total Fixtures: 31,199

Municipality	Type	Fixture Count	Scope of Work
Arvada, CO	City	7,675	Streetlight Audit, Data Reconciliation, & Streetlight Ownership Feasibility Analysis
Broomfield, CO	City	4,987	Streetlight Ownership Feasibility Analysis
Centennial, CO	City	2,953	Ownership Support
Erie, CO (Project 1)			Streetlight Ownership Feasibility Analysis
Erie, CO (Project 2)	Town	1827	Audit & Data Reconciliation
Erie, CO (Project 3)			Ownership Support
Louisville, CO	City	143	Streetlight Ownership Feasibility Analysis, Decorative LED Design, Audit, Data Reconciliation, & Ownership Support
Northglenn, CO	City	2,231	Audit, Data Reconciliation, & Lighting Deficiency Analysis
Thornton, CO	Town	8,899	Streetlight Ownership Feasibility Analysis
Timnath, CO	Town	506	Streetlight Ownership Feasibility Analysis
Windsor, CO (Project 1)			Streetlight Ownership Feasibility Analysis
Windsor, CO (Project 2)			Audit, Data Reconciliation, & Ownership Support
Windsor, CO (Project 3)	Town	1,978	Streetlight Master Plan
Windsor, CO (Project 4)			Streetlight Maintenance Support
Windsor, CO (Project 5)			LED Conversion

Connecticut

Contracts Total: 49 Total Fixtures: 63,141

Municipality	Type	Fixture Count	Scope of Work
Berlin, CT (Project 1)			Turnkey LED Conversion
Berlin, CT (Project 2)	Town	2,537	Maintenance Services
Bristol, CT	Town	5,500	Turnkey LED Conversion
Chester, CT (Project 1)	Town	313	Turnkey LED Conversion

Connecticut (Continued)			
Contracts Total: 49 Total Fixtures: 63,141			
Chester, CT (Project 2)			Maintenance Services
Darien, CT (Project 1)	Town	843	Turnkey LED Conversion
Darien, CT (Project 2)			Maintenance Services
East Lyme, CT (Project 1)	Town	1,498	Turnkey LED Conversion
East Lyme, CT (Project 2)			Maintenance Services
Farmington, CT (Project 1)	Town	1,728	Turnkey LED Conversion
Farmington, CT (Project 2)			Maintenance Services
Gales Ferry, CT	Town	87	Turnkey LED Conversion
Glastonbury, CT	Town	1000	Turnkey LED Conversion
Granby, CT (Project 1)	Town	157	Turnkey LED Conversion
Granby, CT (Project 2)			Maintenance Services
Groton Utilities, CT	Municipal Utility	2,256	Turnkey LED Conversion
Groton, CT (Project 1)	Town	1,550	Turnkey LED Conversion
Groton, CT (Project 2)			Maintenance Services
Jewett City, CT	Borough	220	Turnkey LED Conversion
Ledyard, CT	Town	292	Turnkey LED Conversion
Mansfield, CT (Project 1)	Town	800	Turnkey LED Conversion
Mansfield, CT (Project 2)			Maintenance Services
Meriden, CT (Project 1)	City	4,799	Turnkey LED Conversion
Meriden, CT (Project 2)			Maintenance Services
Middlefield, CT (Project 1)	Town	351	Turnkey LED Conversion
Middlefield, CT (Project 2)			Maintenance Services
Middletown, CT (Project 1)	City	5,080	Turnkey LED Conversion
Middletown, CT (Project 2)			Maintenance Services
Montville, CT (Project 1)	Town	1,777	Turnkey LED Conversion
Montville, CT (Project 2)			Maintenance Services
New London, CT	City	2,516	Turnkey LED Conversion
Norwich, CT	Municipal Utility	5049	Turnkey LED Conversion
Old Lyme, CT (Project 1)	Town	396	Turnkey LED Conversion
Old Lyme, CT (Project 2)			Maintenance Services
Putnam (Spc District), CT	Town	858	Audit, Data Reconciliation
Rocky Hill, CT	Town	1,683	Audit, Data Reconciliation
South Norwalk Electric & Water, CT	Municipal Utility	1,116	Turnkey LED Conversion
Sprague, CT	Town	157	Turnkey LED Conversion
Sterling, CT	Town	75	Turnkey LED Conversion
Stonington, CT	Town	1,700	Ownership Support & Turnkey LED Conversion
Suffield, CT (Project 1)	Town	680	Full Turnkey LED Conversion
Suffield, CT (Project 2)			Maintenance Services
Vernon, CT (Project 1)	Town	1,669	Turnkey LED Conversion
Vernon, CT (Project 2)			Maintenance Services
Waterbury, CT	City	7250	Audit, Data Reconciliation, Design, & Rebate/Rate Changes
Waterford, CT	City	1,976	Full Turnkey LED Conversion
West Hartford, CT	Town	6,500	Full Turnkey LED Conversion
Wolcott, CT (Project 1)	Town	728	Turnkey LED Conversion
Wolcott, CT (Project 2)			Maintenance Services
Florida			
Contracts Total: 2 Total Fixtures: 4,966			
Municipality	Type	Fixture Count	Scope of Work
Miami Lakes, FL	City	900	Turnkey LED Conversion
Palm Bay, FL	City	4,066	Streetlight Ownership Feasibility Analysis
Georgia			
Contracts Total: 2 Total Fixtures: 12,311			
Municipality	Type	Fixture Count	Scope of Work
Columbia County, GA	County	10,000	Streetlight Master Plan
Powder Springs, GA	City	2,311	Turnkey LED Conversion

Maine

Contracts Total: 2 Total Fixtures: 840

Municipality	Type	Fixture Count	Scope of Work
Brewer, ME	City	600	Turnkey LED Conversion
Orono, ME	Town	240	Turnkey LED Conversion

Massachusetts

Contracts Total: 58 Total Fixtures: 85,047

Municipality	Type	Fixture Count	Scope of Work
Acton, MA	Town	900	Audit, Data Reconciliation, & Outage Inspection
Andover, MA	Town	1,564	Turnkey LED Conversion
Ayer, MA	Town	520	Turnkey LED Conversion & Controls
Billerica, MA	Town	2,600	Turnkey LED Conversion
Boston, MA	City	4,000	Audit, Data Reconciliation of Decorative Fixtures
Bridgewater, MA	Town	1,286	Turnkey LED Conversion
Burlington, MA	City	2,400	Turnkey LED Conversion
Clinton, MA	Town	923	Turnkey LED Conversion
Dalton, MA	Town	740	Turnkey LED Conversion
Dracut, MA	Town	1,555	Turnkey LED Conversion
Dudley, MA	Town	600	Turnkey LED Conversion
Duxbury, MA	Town	343	Turnkey LED Conversion
Erving, MA	Town	163	Turnkey LED Conversion
Everett, MA	City	2,965	Turnkey LED Conversion
Franklin, MA	Town	1,648	Turnkey LED Conversion
Gardner, MA	City	1,532	Turnkey LED Conversion
Grafton, MA	Town	860	Turnkey LED Conversion
Hanover, MA	Town	505	Turnkey LED Conversion
Hopkinton, MA	Town	563	Turnkey LED Conversion
Leominster, MA	City	3,637	Turnkey LED Conversion & Controls
Lexington, MA	Town	2,700	Turnkey LED Conversion
Longmeadow, MA	Town	1,500	Turnkey LED Conversion
Lowell, MA	City	7,000	Turnkey LED Conversion
Malden, MA	City	3,694	Turnkey LED Conversion
Manchester-by-the-Sea, MA	Town	363	Turnkey LED Conversion
Marion, MA	City	350	Turnkey LED Conversion
Medford, MA	City	4,618	Turnkey LED Conversion
Millis, MA	Town	436	Turnkey LED Conversion
Nahant, MA	Town	565	Turnkey LED Conversion
Nantucket, MA	Town	798	Streetlight Ownership Feasibility Analysis
Newbury, MA	Town	500	Turnkey LED Conversion
North Andover, MA	Town	1,302	Turnkey LED Conversion
Northbridge, MA	Town	1,181	Turnkey LED Conversion
Oxford, MA	Town	945	Turnkey LED Conversion
Palmer, MA (Project 1)	Town	902	Turnkey LED Conversion
Palmer, MA (Project 2)			Maintenance Services
Rockport, MA	Town	771	Audit, Design, & Ownership Support
Saugus, MA	Town	2,850	Turnkey LED Conversion, Controls
Sharon, MA	Town	1,600	Turnkey LED Conversion
Somerville, MA	City	4,842	Audit, Design/Installation Management
Spencer, MA	Town	885	Turnkey LED Conversion
Sudbury, MA	Town	591	Turnkey LED Conversion
Walpole, MA (Project 1)	Town	2,092	Turnkey LED Conversion
Walpole, MA (Project 2)		224	Exterior Lights Audit & Data Reconciliation
Walpole, MA (Project 3)		105	Exterior Lighting Design & Conversion
Ware, MA	Town	823	Turnkey LED Conversion
Warren, MA (Project 1)	Town	437	Turnkey LED Conversion
Warren, MA (Project 2)			Maintenance Services
Watertown, MA	City	783	Turnkey LED Conversion
Wayland, MA	Town	714	Turnkey LED Conversion
Webster, MA	Town	1,485	Turnkey LED Conversion
Westfield Electric MUNI Utility, MA	Municipal Utility	4,000	Design and Photometrics
Westport, MA	Town	205	Turnkey LED Conversion
Weymouth, MA	Town	3,720	Turnkey LED Conversion & Controls
Williamstown, MA (Project 1)	Town	627	Turnkey LED Conversion

Massachusetts (Continued)

Contracts Total: 57 Total Fixtures: 84,147

Williamstown, MA (Project 2)	Town		Maintenance Services
Winchendon, MA	Town	564	Turnkey LED Conversion
Winchester, MA	Town	1,571	Turnkey LED Conversion

Missouri

Contracts Total: 2 Total Fixtures: 6,613

Municipality	Type	Fixture Count	Scope of Work
Ballwin, MO	City	2,113	Ownership Support
O'Fallon, MO	City	4,500	Ownership Support

Nebraska

Contracts Total: 4 Total Fixtures: 4,343

Municipality	Type	Fixture Count	Scope of Work
Aurora, NE	City	200	Audit & Data Reconciliation
Howells, NE	Village	200	Audit & Data Reconciliation
Kearney, NE	City	3,306	Audit & Data Reconciliation
Nebraska Public Power District, NE	Municipal Utility	637	Audit, Data Reconciliation, & Design

New Hampshire

Contracts Total: 4 Total Fixtures: 803

Municipality	Type	Fixture Count	Scope of Work
Goffstown, NH	Town	460	Turnkey LED Conversion
Jaffrey, NH	Town	151	Turnkey LED Conversion
Londonderry, NH	Town	143	Turnkey LED Conversion
North Stratford, NH	Town	49	Turnkey LED Conversion

New York

Contracts Total: 6 Total Fixtures: 43,808

Municipality	Type	Fixture Count	Scope of Work
Buffalo, NY	City	33,000	LED Conversion & Streetlight Ownership Feasibility Analysis
East Rochester, NY	City	887	Streetlight Ownership Feasibility Analysis
Geneva, NY	City	1,696	Turnkey LED Conversion
Gloversville, NY	City	1,243	Streetlight Ownership Feasibility Analysis, Ownership Support, & Turnkey LED Conversion
Hamburg, NY	City	6,049	Audit, Data Reconciliation, & Design
Ogdensburg, NY	City	933	Turnkey LED Conversion

Ohio

Contracts Total: 6 Total Fixtures: 41,678

Municipality	Type	Fixture Count	Scope of Work
Athens, OH	City	1,100	Audit, Data Reconciliation, Design, Streetlight Ownership Feasibility Analysis, & Ownership Support
Cincinnati, OH	City	31,762	Audit, Data Reconciliation, Streetlight Repair Support
Independence, OH	City	1,000	Audit, Data Reconciliation, Design, Streetlight Ownership Feasibility Analysis, & Ownership Support
Warren, OH (Project 1)	City	5,319	Streetlight Ownership Feasibility Analysis
Warren, OH (Project 2)	City		Audit, Data Reconciliation, & Ownership Support
Zanesville, OH	City	2,497	Audit & Data Reconciliation

Tennessee

Contracts Total: 2 Total Fixtures: 3,349

Municipality	Type	Fixture Count	Scope of Work
Paris, TN	City	2,541	Turnkey LED Conversion (Subcontractor to Prime)
Rockwood, TN	City	808	Turnkey LED Conversion (Subcontractor to Prime)

Texas

Contracts Total: 14 Total Fixtures: 220,340

Municipality	Type	Fixture Count	Scope of Work
Coppell, TX	City	3,152	Streetlight Ownership Feasibility Analysis
Corinth, TX	City	898	Audit, Data Reconciliation, Design, & Ownership Support
Georgetown, TX	City	6,522	Streetlight Audit
Grapevine, TX	City	2,700	Audit & Streetlight Ownership Feasibility Analysis
Houston, TX	City	175,000	Streetlight Ownership/Maintenance Plan
Keller, TX	City	3,200	Streetlight Ownership Feasibility Analysis
Killeen, TX	City	4,440	Audit, Data Reconciliation, Design, & Ownership Support
League City, TX (Project 1)	City	5,546	Streetlight Ownership Feasibility Analysis

Texas (Continued)

Contracts Total: 14 Total Fixtures: 220,340

League City, TX (Project 2)			New Streetlight Installation Policies for Developments
League City, TX (Project 3)	City	742	Streetlight Ownership Feasibility Analysis
Lewisville, TX	City	3,437	Streetlight Ownership Feasibility Analysis
Round Rock, TX (Project 1)			Ownership Support
Round Rock, TX (Project 2)	City	10,000	Audit & Data Reconciliation
Victoria, TX	City	4,703	Lighting Deficiency Analysis

Washington

Contracts Total: 9 Total Fixtures: 12,715

Municipality	Type	Fixture Count	Scope of Work
Bremerton, WA (Project 1)			Streetlight Ownership Feasibility Analysis
Bremerton, WA (Project 2)	City	1,675	Lighting Deficiency Study
Bremerton, WA (Project 2)			Lighting Deficiency Study
Chelan County Public Utility District, WA	Municipal Utility	7,000	Audit, Data Reconciliation, & Design
Des Moines, WA	City	1,719	Streetlight Ownership Feasibility Analysis
Maple Valley, WA	City	419	Streetlight Ownership Feasibility Analysis
Newcastle, WA	City	769	Streetlight Ownership Feasibility Analysis
SeaTac, WA (Project 1)			Streetlight Ownership Feasibility Analysis
SeaTac, WA (Project 2)	City	1,133	Ownership Support

Various States

Contracts Total: 14 Total Fixtures: 81,015

Municipality	Type	Fixture Count	Scope of Work
Carbondale, IL	City	1,800	Audit & Data Reconciliation
Gilbert, AR	Town	16	Ownership Support
Gulf Shores, AL	City	2,557	Streetlight Ownership Feasibility Analysis
Hyattsville, MD (Project 1)			Streetlight Ownership Feasibility Analysis
Hyattsville, MD (Project 2)	City	1,403	Audit, Data Reconciliation, Design, Utility Negotiations, & LED Conversion
Kauai Island Utility Cooperative, HI	Municipal Utility	3,500	Turnkey LED Conversion & Controls
Lincoln City, OR	City	1,019	Audit, Data Reconciliation, & Ownership Support
Mesa, AZ	City	40,000	Development of Street Light Master Plan
Missoula, MT	City	6,000	Streetlight Ownership Feasibility Analysis
Monroe, LA (Project 1)			Streetlight Ownership Feasibility Analysis
Monroe, LA (Project 2)	City	9,085	Streetlight Outage Inspection
Royal Oak, MI	City	3,300	Audit & Data Reconciliation
Socorro, NM	City	535	Streetlight Ownership Feasibility Analysis
Toms River, NJ	Township	9,300	Audit, Data Reconciliation, Design, & Ownership Support

Sample Street Light Field Audit Attributes List (Field Data Collection)

Fixture Characteristics

Pole Number

Additional Pole Numbers

Fixture Type

- Cobra Head
- Post Top
- Shoe Box
- Pendant
- Flood
- Wall Pack
- Soffit
- Bollard
- Spot Light
- Other

If Post Top, Post Top Style:

- Acorn
- Lollipop/Globe
- Colonial
- Contempo
- Other

If Shoe Box, Pole Shape:

- Square
- Round
- Other

If Flood, Mounting Style:

- Slipfitter Mount
- Trunnion Mount
- Conduit Mount
- Other

Photocell or Shorting Cap

- Photocell
- Shorting Cap
- Neither



Bringing passion to light.

Number of heads on pole

- Single
- Twin
- Other

Lamp Type

- LPS
- HPS
- LED
- INC
- IND
- MH
- MV
- Unsure (pic)

Fixture Wattage

- 35
- 55
- 50
- 70
- 90
- 100
- 150
- 175
- 200
- 250
- 400
- Other
- No Sticker (pic)

Other Wattage [free form]

Pole Material

- Aluminum
- Cement
- Fiberglass
- Steel
- Wood
- Other/Unknown
- None

Stand Alone Pole

- No
- Yes

Feed Type

- Powered Overhead
- Powered Below Ground

Pole Height

- Under 25
- 25-30 ft
- Over 30
- No Pole

Pole distance to street (ft)**Length of Arm (ft)**

- 2-4
- 5-7
- 8-10
- >10
- None

Design Considerations**Arm direction**

- 90 degree (perpendicular)
- 45 degree
- Other angle
- Not on street

Is pole at an intersection

- No
- Yes

Approx. distance to intersection (ft)**Is fixture attached to a traffic signal?**

- No
- Yes

Recommended Fixture Distribution

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Review
- N/A

Does fixture light crosswalk

- No
- Yes

Cul-de-sac

- No
- Knuckle
- Cul-de-sac Center
- Cul-de-sac Side
- Cul-de-sac Corner

House-Side Shield

- No
- Yes

Infrastructure Repairs Needed

Tree Issue

- No
- Minor Tree Issue (blocks light)
- Major Tree Issue (blocks install)

Pole Leaning

- No
- Pole Leaning

Double Wood Pole

- No
- Double Pole

Fixture damage

- No
- Damaged Fixture

Is fixture door open

- No
- Fixture Door Open

Pole damage

- No
- Damaged Pole

Arm damage

- No
- Damaged Arm



Bringing passion to light.

Arm Condition

- Normal
- Rust
- Bent
- Compromised

Hand hole cover missing or damaged

- No
- Hand hole cover missing or damaged

Ownership Review

- Appears to be in scope
- Needs further Review

Field notes -general notes about field conditions, data, equipment, etc.

Photo if fixture type is unknown

Photo if ownership is unclear

Autopopulated Data

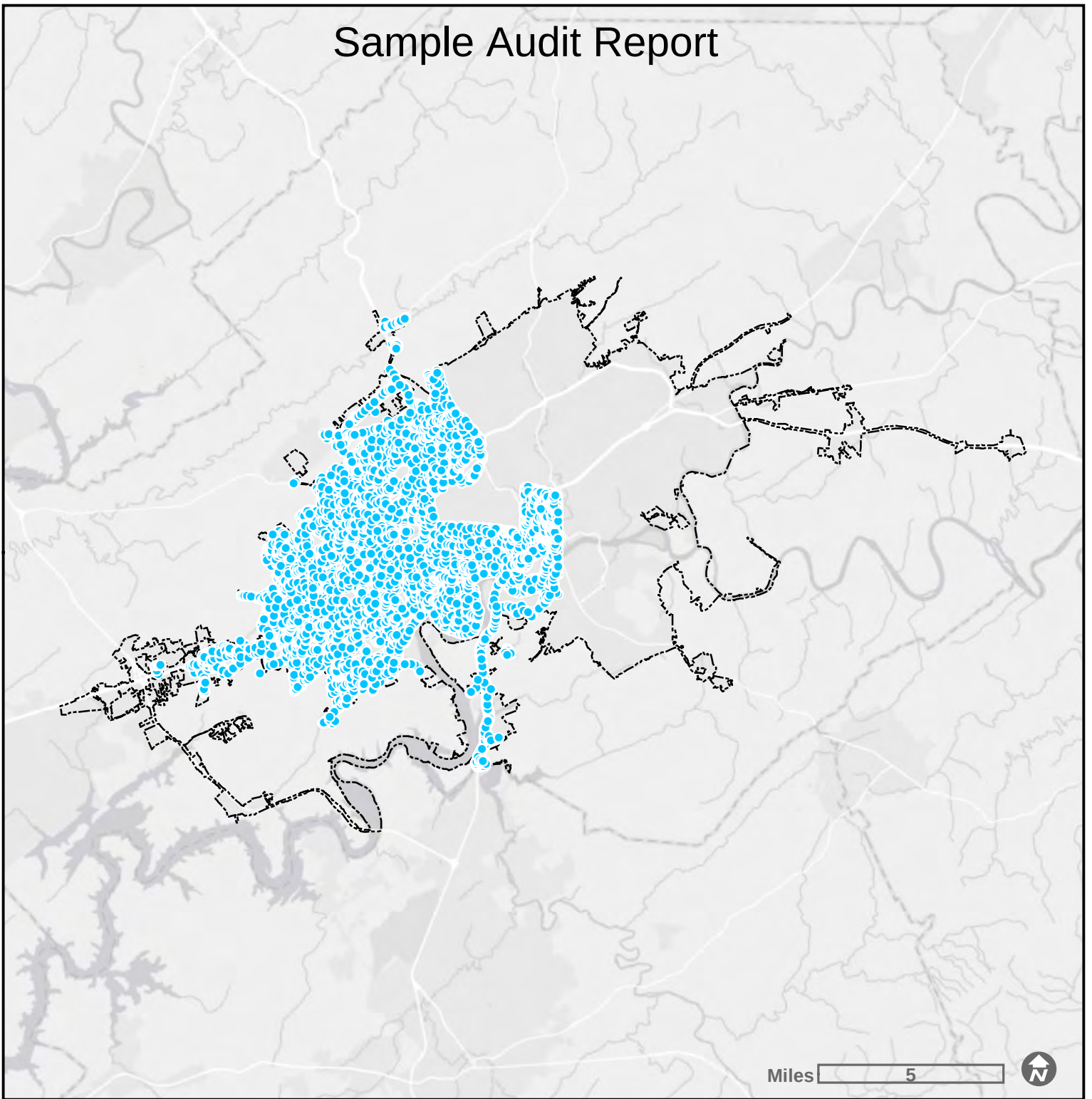
Coordinates (Latitude and Longitude)

Audit Date/Time

Auditor

Unique ID

Sample Audit Report



City of Tankoville

Audit Report

- Audit Complete
- City Boundary

Street Light Audit Summary for January 3rd - 7th, 2025

Total Fixtures (Approx):	29,458	Remaining Fixtures:	16,814
Fixtures Audited:	12,644	Percent Complete:	43%

City of Tankoville

LED Streetlight Conversion: Audit Phase Reported
Issues: January 3 - January 7, 2025



POLE NUMBER	ISSUE REPORTED	AUDIT DATE	APPROX. ADDRESS	COORDINATES
34131	Major Tree Obstruction (Blocks Installation)	1/3/2017	38.462089, -122.176626	2392 Lansdowne Blvd
49036	Pole Damaged	1/5/2017	38.46168, -122.176697	2354 Lansdowne Blvd
52290	Pole Damaged	1/5/2017	38.259741, -122.177123	2326 Lansdowne Pl
55661	Pole Leaning	1/5/2017	38.564279, -122.182153	2362 Shade Overlook Dr
49034	Arm Bent	1/6/2017	38.462007, -122.180102	2326 Lansdowne Pl
49033	Pole Leaning	1/7/2017	38.462007, -122.180103	2362 Shade Overlook Dr
49043	Pole Leaning	1/7/2017	38.46168, -122.176697	2563 Shade Cir

Sample Billing Inventory Review Report

(List of Fixture Found in Field)



City of Tankoville

Street Light Audit

Data Reconciliation Report

Legend:

Tanko Data
Utility Data

Fixture Status	Tanko Note	Field Pole Number	Fixture Type	Pole Material	Street Design	Head	Lamp Type	Old Wattage	Latitude Y	Longitude X	Latitude, Longitude	Approximate Address	Tanko ID	TYPE	WATTS	LAMP TYPE	ARM LENGTH	HEAD TYPE	LENS TYPE	LIGHT_COUNT	OUTLET	OWNERSHIP	PHOTOCELL	SHIELDING	STATUS	INSTALL DA	TIME_CONTR	DIRECTION	RTS	UTIL_ID		
Matched to Utility Record		954213	Cobra Head	Wood	None	Single	HPS	150	99.999999	99.999999	99.999999, 99.999991	201 Washington Ave	1143	Unknown	150 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840581
Matched to Utility Record		900389	Cobra Head	Wood	None	Single	HPS	200	99.999999	99.999999	99.999999, 99.999992	205 Washington Ave	1144	Unknown	200 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840580
Matched to Utility Record		949437	Cobra Head	Wood	None	Single	HPS	200	99.999999	99.999999	99.999999, 99.999993	212 Washington Ave	1145	Unknown	200 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840579
Matched to Utility Record		986114	Cobra Head	Wood	None	Single	HPS	150	99.999999	99.999999	99.999999, 99.999994	220 Washington Ave	1146	Unknown	150 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840578
Matched to Utility Record		931286	Cobra Head	Wood	None	Single	HPS	150	99.999999	99.999999	99.999999, 99.999995	315 Washington Ave	1147	Unknown	150 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840576
Matched to Utility Record		992070	Cobra Head	Steel	Intersection - Safe	Single	HPS	250	99.999999	99.999999	99.999999, 99.999996	304 Washington Ave	1148	Unknown	250 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840575
Matched to Utility Record		967244	Cobra Head	Steel	Intersection - Safe	Single	HPS	250	99.999999	99.999999	99.999999, 99.999997	307 Washington Ave	1149	Unknown	250 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840574
Matched to Utility Record		954381	Cobra Head	Wood	Dead End	Single	HPS	100	99.999999	99.999999	99.999999, 99.999998	110 Washington Ave	1150	Unknown	100 Watts	High Pressure Soil 6		Cobra	Unknown	1	Unknown	Unknown	Nema Twist Lock	Unknown	Existing	9/22/2016	Unknown				069W01S08	630840573
Matched to Utility Record		659127	Decorative	Cast Iron	None	Single	HPS	70	99.999999	99.999999	99.999999, 99.999999	852 Front St	1011	Unknown	70 Watts	High Pressure Soil N/A		Pedestrian	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239253382	
Matched to Utility Record		590255	Decorative	Fiberglass	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	847 Front St	1013	Standard	250 Watts	High Pressure Soil 10		Cobra Drop L	Unknown	1	no	Company Owned Unknown	Nema Twist Lock	Unknown	Existing	12/5/2006	no				107534794	
Matched to Utility Record		X	Decorative	Aluminum	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	891 Walnut St	1014	Unknown	70 Watts	High Pressure Soil 10		Globe	Unknown	1	Unknown	Company Owned Unknown	Nema Twist Lock	Unknown	Existing		Unknown				239177766	
Matched to Utility Record		X	Decorative	Cast Iron	Bridge	Single	HPS	70	99.999999	99.999999	99.999999, 99.999999	972 Walnut St	1018	Unknown	70 Watts	High Pressure Soil N/A		Globe	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239177770	
Matched to Utility Record		X	Decorative	Cast Iron	Bridge	Single	HPS	70	99.999999	99.999999	99.999999, 99.999999	956 Walnut St	1019	Unknown	70 Watts	High Pressure Soil N/A		Globe	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239177775	
Matched to Utility Record		X	Decorative	Cast Iron	Bridge	Single	HPS	70	99.999999	99.999999	99.999999, 99.999999	926 Walnut St	1020	Unknown	70 Watts	High Pressure Soil N/A		Globe	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239177747	
Matched to Utility Record		X	Decorative	Aluminum	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	910 Walnut St	1021	Unknown	70 Watts	High Pressure Soil N/A		Post Top	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239087517	
Matched to Utility Record		X	Decorative	Aluminum	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	909 Walnut St	1022	Unknown	70 Watts	High Pressure Soil N/A		Post Top	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239087510	
Matched to Utility Record		X	Decorative	Cast Iron	Bridge	Single	HPS	70	99.999999	99.999999	99.999999, 99.999999	927 Walnut St	1023	Unknown	70 Watts	High Pressure Soil N/A		Globe	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239177754	
Matched to Utility Record		437328	Decorative	Fiberglass	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	955 Walnut St	1024	Unknown	250 Watts	High Pressure Soil 6		Globe	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239177782	
Matched to Utility Record		X	Decorative	Cast Iron	Bridge	Single	HPS	70	99.999999	99.999999	99.999999, 99.999999	971 Walnut St	1025	Unknown	70 Watts	High Pressure Soil N/A		Globe	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239177758	
Matched to Utility Record		780127	Decorative	Cast Iron	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	824 Front St	1026	Unknown	70 Watts	High Pressure Soil N/A		Pedestrian	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239253396	
Matched to Utility Record		710509	Decorative	Cast Iron	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	814 Front St	1027	Unknown	70 Watts	High Pressure Soil N/A		Pedestrian	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239253403	
Matched to Utility Record		715997	Decorative	Aluminum	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	740 Front St	1028	Unknown	70 Watts	High Pressure Soil N/A		Decorative	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239253410	
Matched to Utility Record		646059	Decorative	Cast Iron	None	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	830 Front St	1029	Unknown	70 Watts	High Pressure Soil N/A		Pedestrian	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239253389	
Matched to Utility Record		646006	Decorative	Cast Iron	None	Twin	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	808 Front St	1030	Unknown	70 Watts	High Pressure Soil N/A		Pedestrian	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown	N			239123026	
Matched to Utility Record		646006	Decorative	Aluminum	None	Twin	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	808 Front St	1031	Unknown	70 Watts	High Pressure Soil N/A		Decorative	Unknown	2	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown	S			239236251	
Matched to Utility Record		648935	Decorative	Cast Iron	None	Twin	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	790 Front St	1033	Unknown	70 Watts	High Pressure Soil N/A		Pedestrian	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown	N			239212949	
Matched to Utility Record		648935	Decorative	Aluminum	None	Twin	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	790 Front St	1034	Unknown	70 Watts	High Pressure Soil N/A		Decorative	Unknown	2	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown	S			239236257	
Matched to Utility Record		600935	Decorative	Aluminum	Intersection	Single	Unsure	No Sticker	99.999999	99.999999	99.999999, 99.999999	791 Front St	1035	Unknown	70 Watts	High Pressure Soil Unknown		Decorative	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239121970	
Matched to Utility Record		601946	Decorative	Aluminum	None	Single	HPS	100	99.999999	99.999999	99.999999, 99.999999	990 Spruce St	1036	Unknown	250 Watts	High Pressure Soil Unknown		Decorative	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				238444433	
Matched to Utility Record		429945	Decorative	Aluminum	None	Single	HPS	100	99.999999	99.999999	99.999999, 99.999999	944 Spruce St	1037	Unknown	250 Watts	High Pressure Soil 10		Decorative	Unknown	1	Unknown	Unknown	Unknown	Unknown	Existing		Unknown				239046851	
Matched to Utility Record		X	Decorative	Aluminum	None	Single	HPS	100	99.999999	99.999999	99.999999, 99.999999	928 Spruce St	1038	Unknown	70 Watts	High Pressure Soil N/A		Decorative	Unknown	1	Unknown	Company Owned Unknown	Unknown	Unknown	Existing		Unknown				239087831	
Matched to Utility Record		283949	Decorative																													

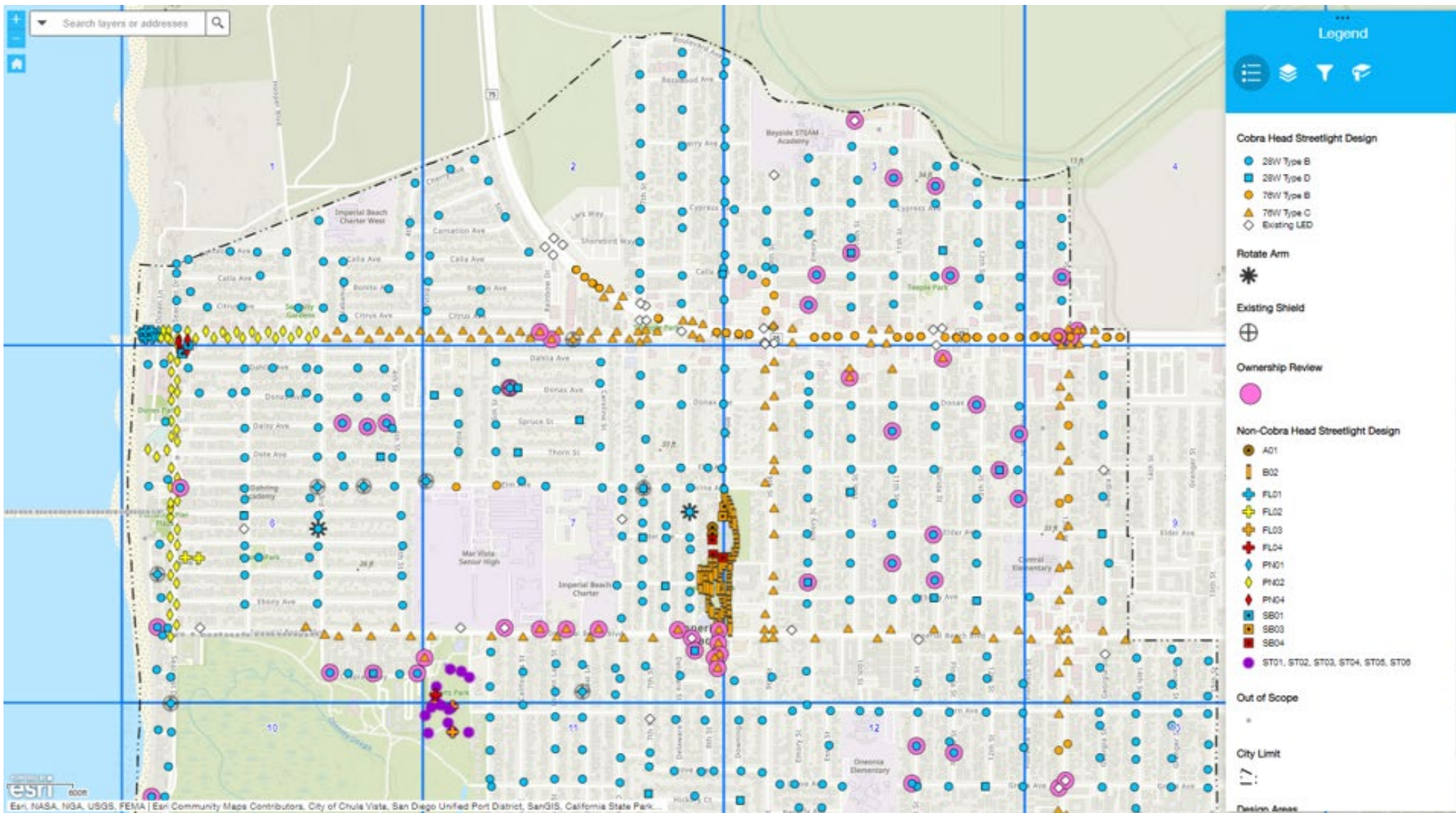
(List of Utility Records Not Found in Field)

[illegible]

(List of Fixtures Found in Field without Utility Record)

[illegible]

Sample Interactive Design Map





Sample Light Measurements Report

Tankoville, ME

Light Measurements Report - Depot St. from Main St. to Elm St.

Label
x / y
Scotopic / Photopic

Legend
● Existing Streetlight
■ Photometric Reading Location



Photometric Readings

Photometric readings measure the brightness and quality of visible light emitted by a light source. Tanko Lighting records scotopic and photopic measurements for a comprehensive measurement.

Scotopic Values refer to how light is perceived under poorly-lit conditions, such as in a dimly lit room, and represent the sensitivity of the rods in the human eye to the light. Higher scotopic readings indicate better quality of light and an increased ability to perceive the full spectrum in darker conditions.

Photopic values refer to how light is perceived under well-lit conditions, such as in daylight, and represent the sensitivity of the cones in the human eye to the light. Higher photopic readings indicate higher lumen output, but not necessarily better quality light.

Tankoville, ME

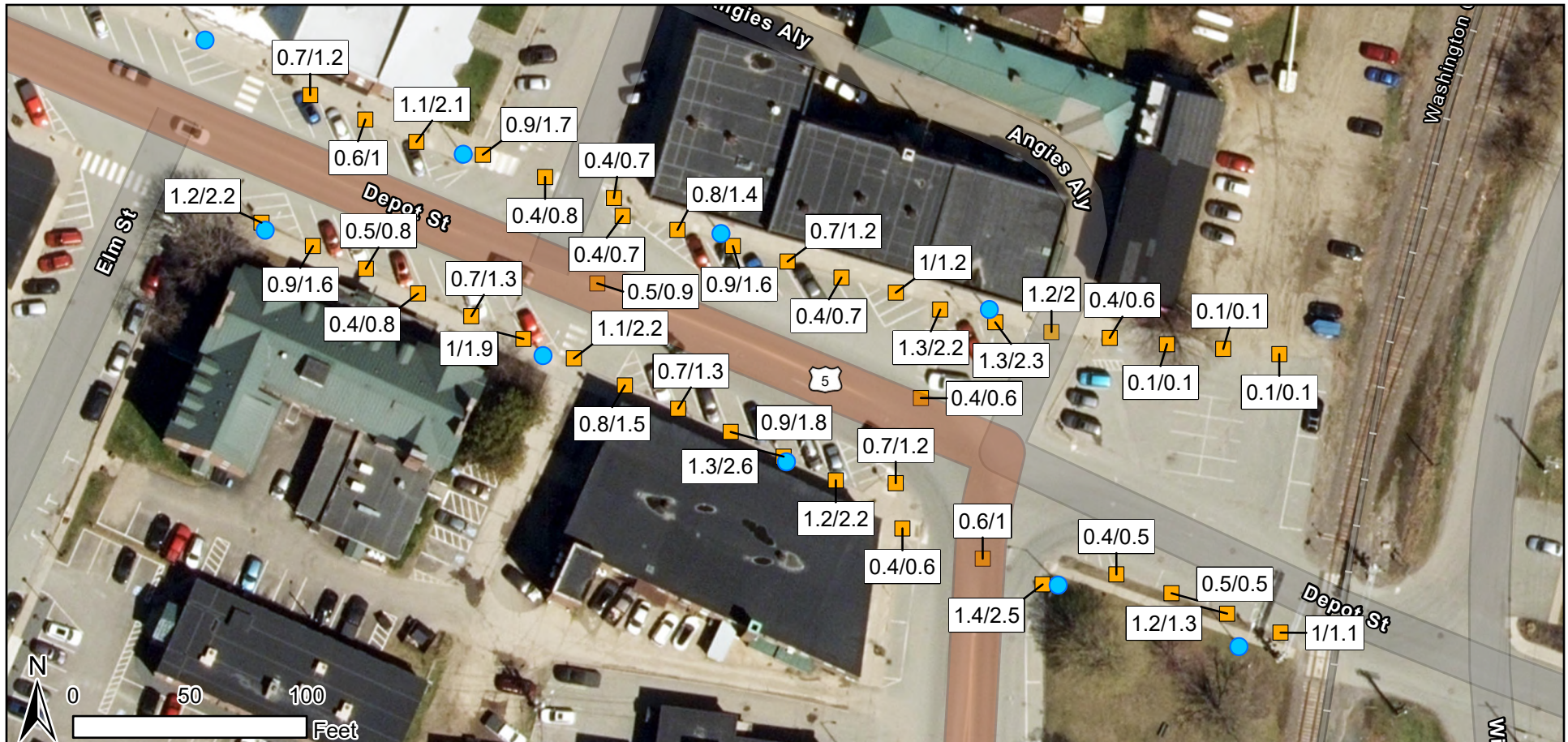
Light Measurements Report - Depot St. from Elm St. to Broad St.

Label

x / y
Scotopic / Photopic

Legend

- Existing Streetlight
- Photometric Reading Location



Photometric Readings

Photometric readings measure the brightness and quality of visible light emitted by a light source. Tanko Lighting records scotopic and photopic measurements for a comprehensive measurement.

Scotopic Values refer to how light is perceived under poorly-lit conditions, such as in a dimly lit room, and represent the sensitivity of the rods in the human eye to the light. Higher scotopic readings indicate better quality of light and an increased ability to perceive the full spectrum in darker conditions.

Photopic values refer to how light is perceived under well-lit conditions, such as in daylight, and represent the sensitivity of the cones in the human eye to the light. Higher photopic readings indicate higher lumen output, but not necessarily better quality light.

Sample Street Light Installation Survey (Field Data Collection)

Fixture Characteristics

Existing Lamp Type

- LPS
- HPS
- LED
- INC
- IND
- MH
- MV
- Unsure (pic)

Existing Lamp Wattage

- 35
- 55
- 50
- 70
- 90
- 100
- 150
- 175
- 200
- 250
- 400
- Other

Voltage

- 120
- 208
- 240
- 277

New Fixture

- 41W Type A - ERS1-0-23-A1-7-30-A-GRAY-093-XXX
- 41W Type D - ERS1-0-23-D1-7-30-A-GRAY-093-XXX
- 41W Type E - ERS1-0-23-E1-7-30-A-GRAY-093-XXX
- 90W Type A - ERS1-0-10-A1-X-30-A-GRAY-093
- 90W Type D - ERS1-0-10-D1-X-30-A-GRAY-093
- 90W Type E - ERS1-0-10-E1-X-30-A-GRAY-093

Installation Tracking

Installation Status

- Not Yet Installed
- Installed
- Skipped: Construction/Obstruction
- Skipped: Pole Not Found
- Skipped: Power Line Obstruction
- Skipped: Tree Obstruction
- Skipped: Other

Photocell Installed

- No
- Yes

Issues

- None
- No Power
- Can't Test Power/Contactor
- Damaged Arm
- Damaged Pole
- Other Issue (comment)

Comments [free form]

Autopopulated Data

Survey Date/Time

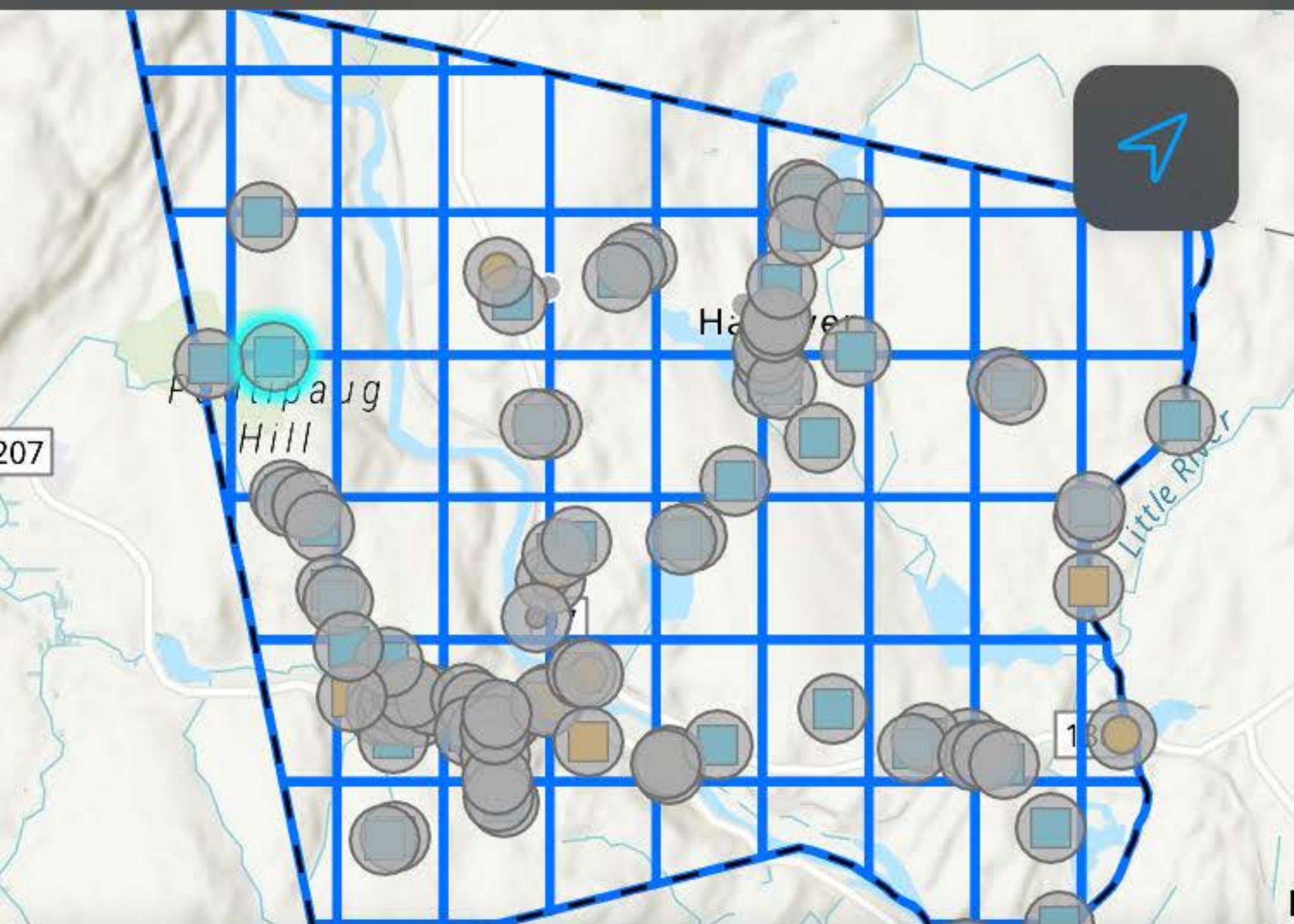
Installer

Unique ID

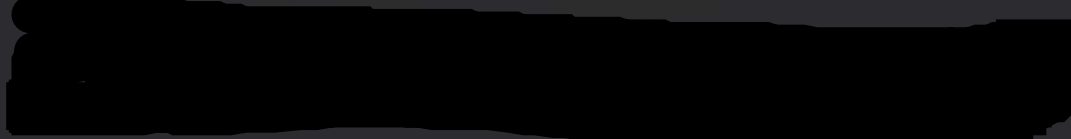
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Sample Installer Map



Tanko ID: 1000



2,658.8 mi

Edited by
redthread · Aug 11, 2025

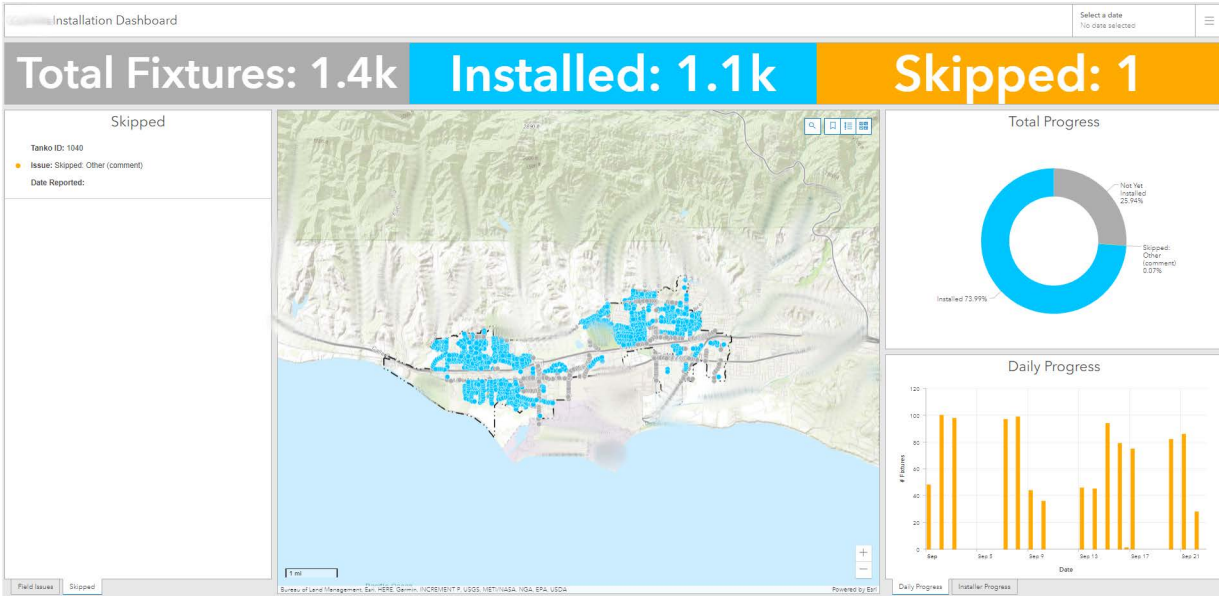
Fields



Pole Number
30141



Sample Installation Dashboard





Sample Outage Inspection Report

City of Tankoville

Street Light Outage Inspection

Pole Number	Fixture Type	Decorative Classification	Street Design	Note	Latitude and Longitude	Approximate Address	Tanko ID	Status
X	Bollard	N/A	None	N/A	REDACTED	5513 Operations Rd	1781	Second Priority
X	Cobra Head	N/A	Bridge	Missing fixture	REDACTED	US-165	2268	Second Priority
X	Cobra Head	N/A	None	Missing fixture	REDACTED	US-165	2406	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	800 Richwood Road 2	1001	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	800 Richwood Road 2	1002	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	800 Richwood Road 2	1003	Second Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	3305 Wilson St	1054	First Priority
X	Cobra Head	N/A	None	N/A	REDACTED	3300 Wilson St	1058	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	US-165	1079	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	US-165	1080	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	US-165	1081	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	US-165	1082	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	I-20	1153	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	I-20	1154	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	I-20	1155	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	1300 Texas Ave	1247	Second Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	140 N 4th St	1447	First Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	400 Harrison St	1448	First Priority
X	Cobra Head	N/A	None	N/A	REDACTED	266 Catalpa St	1449	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	548 Jackson St	1457	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	I-20	1458	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	150 St John St	1469	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	240 Harrison St	1473	Second Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	100 N 5th St	1478	First Priority
X	Cobra Head	N/A	None	N/A	REDACTED	149 Depot St	1479	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	220 Depot St	1480	Second Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	I-20	1482	First Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	I-20	1483	First Priority
X	Cobra Head	N/A	Intersection - T Top	N/A	REDACTED	164 Desiard St	1490	First Priority
X	Cobra Head	N/A	Intersection - T Top	N/A	REDACTED	147 Desiard St	1491	First Priority
X	Cobra Head	N/A	Intersection - T Top	N/A	REDACTED	400 US-165 Bus	1505	First Priority
X	Cobra Head	N/A	None	N/A	REDACTED	533 US-165 Bus	1506	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	600 Pine St	1507	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	517 Breard St	1512	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	760 Grammont St	1513	Second Priority
X	Cobra Head	N/A	Intersection	N/A	REDACTED	594 US-165 Bus	1514	First Priority
X	Cobra Head	N/A	None	N/A	REDACTED	594 US-165 Bus	1515	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	524 US-165 Bus	1516	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	606 US-165 Bus	1517	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	400 US-165 Bus	1518	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	824 US-165 Svc Rd	1613	Second Priority
X	Cobra Head	N/A	None	N/A	REDACTED	US-165	1648	Second Priority

APPENDIX C

COST PROPOSAL

Itemized costs for each major component: acquisition support, mapping, design, materials, and installation.

There are three components of our cost proposal for this project. The first includes the tasks for which Tanko Lighting will be directly responsible. The second component includes the in-field installation costs. The third component includes budgetary pricing for materials.

Cost Proposals 1 and 2 are fixed prices. Note that the Cost Proposal 2 pricing is a passthrough – we do not have any markup included (and do not intend to mark up these prices). Given that the City has not yet selected its products for this project, we are unable to give a fixed price for materials and have thus provided budgetary estimated pricing in Cost Proposal 3.

Assumptions/Notes:

- Pricing assumes a maximum quantity of 600 streetlights. If more are identified, we reserve the right to alter pricing.
- We will invoice the City monthly, based on the percentage of each task completed each month.
- Task 3a: In-Field Photometrics – we assume this task will be conducted immediately after the audit and will include a total of 42 readings in 8 designated locations.
- We assume that 10% or fewer of the fixtures in this project are decorative fixtures.
- Project bond costs are excluded from our pricing (as these were not required in the City's RFP).

1. Cost Proposal (Tanko Lighting's Tasks)	
Tasks	Price
Task 1: Acquisition Support	\$3,680
Task 2: Asset Inventory & Mapping	\$36,596
Task 3: LED Conversion Plan	\$12,115
Task 4: Procurement & Installation	\$21,110
Task 5: Project Closeout	\$12,435

2. Cost Proposal (In-Field Installation)	
Installation Activity	Per Unit Price
Cobra head install	\$ 105.00
Fuse + Fuse Holder Install (Including Material)	\$ 41.00
Fixture Storage	\$ 3.00
Total	\$ 149.00
Decorative install	\$ 195.00
Fuse + Fuse Holder Install (Including Material)	\$ 41.00
Fixture Storage	\$ 3.00
Total	\$ 239.00

3. Cost Proposal (Budgetary Material)	
(General LEDs - Material Only)	Per Unit Price
Cobrahead Fixture (Low Wattage)	\$ 125.00
Cobrahead Fixture (Medium Wattage)	\$ 175.00
Cobrahead Fixture (High Wattage)	\$ 225.00
Decorative Fixture Retrofit Kit	\$ 175.00