

**APPENDIX A - TECHNICAL SPECIFICATIONS**  
**IFB 125-18 ARLINGTON EAST WRF ROADWAY LIGHTING UPGRADE**

**SCOPE OF WORK**

This contract shall be executed between JEA and the Electrical Contractor for complete removal and replacement of current roadway lighting infrastructure at Arlington East Water Reclamation Facility (WRF) along the perimeter road. Services include, but are not limited to: installation of new foundations, wiring, poles, splice boxes, LED heads, street light arms, conduit runs and miscellaneous work associated with facility signage repairs. Work to be coordinated with current ongoing site upgrade project. JEA may take action to perform work in house and, thereby, reduce Electrical Contractor workload. These specifications are not intended to supersede Federal, State, or local regulations to which the Electrical Contractor must comply.

**PART 1 GENERAL**

- 1.1 DEFINITIONS*
- 1.2 SUBMITTALS*
- 1.3 QUALIFICATIONS*
- 1.4 QUALITY ASSURANCE*
- 1.5 DELIVERY, STORAGE, AND HANDLING*
- 1.6 SAFETY*
- 1.7 SECURITY*
- 1.8 ENVIRONMENTAL REQUIREMENTS*
- 1.9 WARRANTY*

**PART 2 PARTS AND PRODUCTS**

- 2.1 APPROVAL*

**PART 3 EXECUTION**

- 3.1 GENERAL CONSTRUCTION REQUIREMENTS*
- 3.2 PREPARATORY WORK*
- 3.3 PROJECT EXECUTION*
- 3.4 PROJECT COMPLETION*

**PART 4 APPENDIX**

- 4.1 LED LUMINAIRE*
- 4.2 BRACKET DETAIL*
- 4.3 ANCHOR BASE SPECIFICATIONS*
- 4.4 JEA CONCRETE SPLICE BOX DETAIL*
- 4.5 TRENCH AND CONDUIT STANDARDS*
- 4.6 PHOTO MONTAGE OF PROJECT*

## PART 1 GENERAL

### 1.1 DEFINITIONS

CERTIFIED ELECTRICAL CONTRACTOR	As issued by the State of Florida (FAC 489.111).
FLORIDA BUILDING CODE	Most recently published version (6 <sup>th</sup> Edition or later).
JEA STANDARDS	JEA Standards are identified on JEA's public website ( <a href="http://www.JEA.com">www.JEA.com</a> ).

### 1.2 SUBMITTALS

Electrical Contractor shall deliver the following submittal items in a timely manner to the JEA Contract Administrator for approval.

#### *SUBMITTAL 01 – JEA SAFETY QUALIFICATION*

The Electrical Contractor shall submit applicable safety documents and receive approval from the JEA Contract Administrator prior to the start of work.

#### *SUBMITTAL 02 – MATERIALS FOR COMPLETION OF RENOVATION*

The Electrical Contractor shall submit materials for approval to the JEA Contract Administrator.

#### *SUBMITTAL 03 - INVOICING DOCUMENTS*

Following the completion of work, the Electrical Contractor shall submit invoicing documents in accordance with all applicable sections of this technical specification.

### 1.3 QUALIFICATIONS

- 1.3.1 Electrical Contractor shall possess a valid Certified Electrical Contractor License issued by the State of Florida. Electrical Contractor shall also possess a current business license issued by the City of Jacksonville/Duval County.
- 1.3.2 Electrical Contractor shall meet all minimum qualifications as identified in JEA solicitation documents.
- 1.3.3 Electrical Contractor must obtain permission of JEA Contract Administrator prior to subcontracting of work.

### 1.4 QUALITY ASSURANCE

- 1.4.1 Electrical Contractor shall ensure that all work is to JEA standards. It is the contractor's responsibility to review JEA standards for applicable work. Electrical Contractor shall be aware of all JEA Standards that apply to the tasks executed by the Contractor. Standards are available to the public on JEA's website, [www.JEA.com](http://www.JEA.com).
- 1.4.2 On all installations and repairs, the Electrical Contractor shall confirm that the installation and/or repairs comply with accepted practice as specified in the most update versions of the National Electrical Code NEC. The Contractor shall apply all applicable ASTM standards.
- 1.4.3 Work that does not conform to expected levels of craftsmanship or the specifications shall be redone at Electrical Contractor's expense.
- 1.4.4 The Electrical Contractor shall be in possession of a valid Electrical Contractor Certification. Any worker employed by the Contractor, who exhibits inadequate experience and knowledge or is incapable in his/her field, shall be removed from the work site at the discretion of the JEA Contract Administrator.
- 1.4.5 JEA reserves the right to add/delete quantities, as required. Pricing for added quantities will be set at the current bid price. JEA may take action to perform work in house and, thereby, reduce contractor workload.
- 1.4.6 The Electrical Contractor shall submit invoicing documents annotated on the contractor's letterhead. The invoice (containing company name and address) shall include JEA purchase order and work order numbers. The Electrical Contractor shall include the following information on the invoice: date, location, description of service provided, amount payable, and JSEB forms (if applicable). JEA will not provide payment for deficient invoices that do not contain required information.

- 1.4.7 Electrical Contractor's invoiced pricing must agree with the contract bid pricing established in the agreement between the Contractor and JEA.
- 1.4.8 The administrative cost, profit, travel time, and other indirect contractor costs will not be permitted as separate billable costs. These costs must be included in the bid price provided by the Electrical Contractor in the bid workbook.
- 1.4.9 JEA Contract Administrators will evaluate vendor performance through a Vendor Performance Scorecard. In the event of a deficiency, JEA will coordinate mandatory vendor conference and take any other steps required to resolve the performance deficiency.
- 1.4.10 Electrical Contractors shall work in accordance with the JEA Hot Works Permit Program. JEA Security requires at least two (2) days' notice for putting fire and sprinkler systems into test, and the JEA Contract Administrator shall be notified prior to initiating.

## **1.5 DELIVERY, STORAGE, AND HANDLING**

- 1.5.1 The Electrical Contractor must dispose of all waste generated as a result of the contract at an officially permitted location. Any fees and/or charges associated with this disposal should be included in bid price of work. JEA will not pay additional charges/fees for waste disposal.
- 1.5.2 The Electrical Contractor shall prevent access by the public to materials, tools, and equipment during the course of the work.
- 1.5.3 **The Electrical Contractor is responsible for STOCK MATERIAL PICKUP at Commonwealth/WSSC and delivery of materials to job site. Arlington East WRF has approved a pre-designated lay down area south of the Operations Building for this project.**

## **1.6 SAFETY**

- 1.6.1 The Electrical Contractor shall become JEA Safety Qualified prior to beginning actual work at JEA. All employees of the Electrical Contractor, including Project Managers, who perform work on JEA property, shall be JEA Safety Qualified. Supervisors may be required to have additional training. Site specific training may be required to work at certain job sites (i.e.: substations). Electrical Contractor is responsible for ensuring ALL personnel have received the appropriate training prior to beginning work.
- 1.6.2 The Electrical Contractor shall familiarize all workers with all fire and safety regulations recommended by OSHA and other industry or local governmental groups at the Federal, State, and local levels.
- 1.6.3 Electrical Contractor shall maintain a safe work environment at all times.
- 1.6.4 The Electrical Contractor shall furnish JEA with material safety data sheets on all chemical products utilized.
- 1.6.5 The Electrical Contractor shall also adhere to current JEA Safety and Training regulations at all times. Any persons not following JEA's Safety Rules and Regulations will be removed from the project and not allowed to return. JEA's Safety Department will inspect work in progress, as well as employees, equipment, materials and tools, and may do so at any time. Contractors will be graded on safety. A score of 80 or below requires a meeting with the Safety Department and mandatory corrective actions.
- 1.6.6 Contract workers are required to wear proper Personal Protective Equipment (PPE). PPE minimums include safety footwear with steel toes, hard hat and safety glasses. Hearing protection is required while operating machinery or equipment (including saws). Ripped jeans, shorts, tennis shoes, sleeveless shirts, and shirts with offensive logos or messages are not permitted.
- 1.6.7 The Electrical Contractor shall keep the work area free from accumulation of waste materials or rubbish.
- 1.6.8 The nature of work (cutting, sanding and general work) to be performed may produce heat, smoke, steam, dust or vapors, which may result in the activation of an alarm. To avoid Contractor caused alarms, the Electrical Contractor shall notify the JEA Contract Administrator, whom will issue a hot work permit (permit valid for one (1) day only) before any procedure. After such procedures are concluded, Electrical Contractor shall notify the JEA Contract Administrator who will inspect, and re-arm the alarm system.
- 1.6.9 If the Electrical Contractor's negligence results in a release of a Clean Agent (i.e. FM 200), the Electrical Contractor shall be responsible for all costs incurred to refill and restore the fire suppression system.

## 1.7 SECURITY

- 1.7.1 A JEA issued security badge shall be visible at all times while on JEA property.
- 1.7.2 JEA issued security badges will become deactivated after 90 days of non-activity. It is the Electrical Contractor's responsibility to ensure all employees have active badges prior to commencement of work.
- 1.7.3 Electrical Contractors shall check in and check out with JEA Security and the JEA Contract Administrator daily.
- 1.7.4 When available, Contractor shall wear uniforms/t-shirts displaying company logo whenever working for JEA.
- 1.7.5 The Electrical Contractor shall ensure subcontracted employees obtain background checks, training, and active badge status prior to the start of work.
- 1.7.6 Drawings, sketches, plans, and other items detailing JEA Facilities are to be considered sensitive items. Electrical Contractor shall not release associated documents to any 3<sup>rd</sup> party without the prior consent of JEA.

## 1.8 ENVIRONMENTAL REQUIREMENTS

- 1.8.1 The Electrical Contractor shall conform to environmental regulations of public agencies, including local, state and Federal jurisdiction.
- 1.8.2 Electrical Contractor shall be accountable for timely clean-up and remediation associated with any contaminant spills, accidental or otherwise, including, but not limited to diesel fuel, gasoline, lubricants, and cleaning fluids, etc.

## 1.9 WARRANTY

- 1.9.1 Upon successful completion of work, the Electrical Contractor shall extend the manufacturer warranty on all parts to JEA.
- 1.9.2 The Electrical Contractor shall warrant workmanship for one (1) calendar year from the substantial completion date.

## PART 2 PARTS AND PRODUCTS

### 2.1 APPROVAL

- 2.1.1 JEA Contract Administrator shall approve all parts and products prior to use by the Electrical Contractor.
- 2.1.2 Prior to purchasing, ordering, or installing materials, the Electrical Contractor shall submit approval to the JEA Contract Administrator for the following materials not designated as JEA Stock:

#### **Pole Anchor Base (to be provided out of JEA Stock)**

- Forty (40) On site pour bases per specifications and design
- OR Forty (40) Pre-fab bases per specifications, vendor and/or manufacturer information
- Must meet JEA Specification ANCBA002 – See Appendix 4.3
- Top of anchor base to extend a minimum of 18" above grade

#### **Poles (to be provided out of JEA Stock)**

- Forty (40) Aluminum 27 ft. Poles
- JEA Stock # POLAL002

#### **Brackets (to be provided out of JEA Stock)**

- Forty (40) Aluminum 8 ft. Truss arm Brackets
- JEA Stock # BKTSL002 – See Appendix 4.2

#### **LED Luminaire (to be provided out of JEA Stock)**

- Forty (40) IES TYPE M.N. III LED Luminaire
- JEA Stock # STL LE 002
- Autobahn Series ATBM Roadway Cobra Head or equivalent – See Appendix 4.1

**Shorting Caps (to be provided out of JEA Stock)**

- o Forty (40) Photo Eye Twist Lock “Shorting Caps” for LED Luminaire
- o JEA Stock # STLSC001

**Splice Box (to be provided out of JEA Stock)**

- o Forty (40) Traffic Rated Concrete Splice Boxes
- o JEA Stock # BOXSP002 – See Appendix 4.4
- o 24”W x 32”L x 24”D

**Conduit**

- o Approximately 8450 ft. of Sch 40 2” (this includes the spare run)
- o **PULL STRING TO BE LEFT IN SPARE 2” CONDUIT**
- o Elbows, sleeves and connectors to be installed to JEA specification – See Appendix 4.5

**Trenching**

- o Approximately 4225 ft. of utility depth trench and backfill
- o Includes thirteen (13) road cuts per JEA specification – See Appendix 4.5
- o All crossings to be saw cut 1 ft. wider to allow 6” shoulder on 12” trench per DOT traffic specification and backfilled with 10” of lime rock
- o **All trenching to be “Hand Dug” OR Electrical Contractor has option to employ 3<sup>rd</sup> Party GPR process and use Backhoe. Any damage to existing infrastructure must be repaired at contractors’ expense and functionality of damaged control, fiber or electrical circuits verified by JEA personnel.**

**Conductor**

- o Recommended conductor size is #2 and #4 on longer runs, and #8 and #10 on shorter spurs per engineering recommendation below

Based on the discussion this morning and a drawing review, a West end, 33 fixture run (11.6A) of 1,600’ would need a #2 wire. Similarly, a 17 fixture (6A) run of 690’ near the Admin Bldg needs a #8.

I used an online wiring size calculator. Each fixture is ~0.35A (95W/277V). For instance, a 30 fixture run (10.5A) of 1,200’ would need a #4 wire and a 15 fixture (5.3A) run of 600’ needs a #10.

Regards,  
Jacob  
6238

The screenshot shows the Viking Electric Supply website's 'Wire Size Calculator' interface. The browser address bar displays 'https://www.vikingelectric.com/c/BusinessPage'. The page title is 'Wire Size Calculator'. The calculator form includes the following fields and values:

- Select Voltage:** Radio buttons for 120V, 208V, 240V, 277V (selected), and 480V.
- Select Wire Type:** Radio buttons for Copper (selected) and Aluminum.
- Select Phase:** Radio buttons for Single Phase (selected) and Three Phase.
- Input Amperage:** Text input field containing '10.5'.
- Input One Way Distance (in feet):** Text input field containing '1200'.
- Buttons:** 'Calculate' (blue), 'Clear' (dark blue), and 'Minimum Size Required' (text).
- Result:** A text input field showing '#4'.

- o All conductor splices and connections to industry standard and JEA specification

**Contact**

- One (1) contactor to handle both EAST/WEST roadway lighting circuits to be installed in Blower Building
- Auto On/Off
- Control circuit wired through Aluminum conduit to roof line on Blower Building
- Photo eye installed to control contactor at roof line
- Electrical contractor to provide specs prior to purchase and install to PA

**Monument Signs on Both SE and NW side of Plant**

- All materials required to repair and run new power
  - LED light fixtures needed at sign locations
  - Other manufacturer's with Project Administrator approval
- 2.1.3 Where no material is specified, Electrical Contractor shall prepare submittal for the JEA Contract Administrator prior to purchasing or installing materials.
- 2.1.4 Residential grade materials will not be accepted.
- 2.1.5 The Contractor will not be responsible for the purchase price of materials that have been designated as JEA stock by the JEA Contract Administrator; however, the Contractor must coordinate delivery of JEA stocked materials to the site.

**PART 3 EXECUTION**

**3.1 GENERAL CONSTRUCTION REQUIREMENTS**

- 3.1.1 Electrical Contractor shall provide all labor, tools and equipment needed for the scope of work. Unsafe tools and equipment are never permitted on JEA sites. Hand tools shall be secured with lanyard or safety device to prevent tools from falling off of swing scaffolding.
- 3.1.2 The Electrical Contractor shall obtain all permits required by local agencies and pay all fees which may be required for the performance of the work and removal/disposal of hazardous materials. Bid prices should include this cost.
- 3.1.3 Electrical Contractor shall verify existing conditions and dimensions prior to starting work. Any discrepancies must be brought to the attention of the JEA Contract Administrator. It is the Contractor's responsibility to remove and/or provide additional items as required to comply with the contract documents.
- 3.1.4 Construction schedules are to be provided by the Electrical Contractor and agreed to by all parties before work proceeds. Changes in the schedule shall be coordinated through the JEA Contract Administrator.
- 3.1.5 Electrical Contractor shall provide any and all dust curtains, temporary partitions, walk-off mats or any other barricade or process necessary to keep site clean.
- 3.1.6 Job sites are to be kept clean at all times. Electrical Contractor shall supply necessary cleaning products. In office environments, site shall be vacuumed at the end of work each day and at the end of the job. In field environments, areas shall be kept broom-clean.
- 3.1.7 All work shall meet or exceed applicable building codes.
- 3.1.8 All doors, lids, and gates shall be locked and secured at all times when unattended.
- 3.1.9 Parking is the responsibility of the Electrical Contractor, however, requests may be made to the Contract Administrator to park on JEA property, and shall be granted/denied at the sole discretion of the Contract Administrator.

**3.2 PREPARATORY WORK**

- 3.2.1 Electrical Contractor must receive verbal and/or written agreement from JEA Contract Administrator prior to commencement of construction activities.
- 3.2.2 Electrical Contractor must attend all pre construction meetings prior to the commencement of work.
- 3.2.3 Power and Water are NOT to be turned off at any time, except emergencies, without prior notification and approval by the Project Administrator. Any work interfering with building occupants' use of space must be coordinated in advance.

- 3.2.4 Loading, unloading, material delivery, and contractor site access points will be determined by the Project Administrator. Use of other areas is prohibited.
- 3.2.5 Electrical Contractors are responsible for furnishing sanitary items (temporary toilets, hand-washing stations, clean drinking water, etc.) for their work force. JEA makes no guarantees that access to existing bathrooms will be granted.

### **3.3 PROJECT EXECUTION**

- 3.3.1 Electrical Contractor shall provide JEA weekly progress reports outlining the following:
  - a. Work completed & work remaining
  - b. Delays due to weather and other causes (identify causes)
  - c. Plan to complete work by scheduled date

### **3.4 PROJECT COMPLETION**

- 3.4.1 Punch lists will be created by the Project Administrator, with input as necessary from the Client. The Project Administrator is the deciding authority on punch list matters. Final punch list items will be completed before final invoice is processed for payment.
- 3.4.2 Final cleaning is to be provided by the Electrical Contractor. This includes lay-down areas; loading docks; and stairways, hallways, or other paths of travel used by the contractor during the job. All debris caused by the construction, both interior and exterior, will be removed from the premises and properly disposed of.
- 3.4.3 Electrical Contractor is responsible for organizing and presenting to JEA, in a neat and accessible format, all information concerning warranties, key schedules, installation and operation manuals, as-built drawings, wiring diagrams and other documentation before final invoice will be processed.
- 3.4.4 Electrical Contractor shall remove all debris, demolished items, and construction waste, including the proper and legal disposing of such. At the completion of the work, the building interior, exterior and landscaping, where affected by Electrical Contractor work, shall be restored.
- 3.4.5 Prior to leaving the site, the Electrical contractor shall contact JEA Contract Administrator to confirm completion of work activities. Unless otherwise instructed by the JEA Contract Administrator, Electrical Contractor must fully exit JEA property following completion of work.



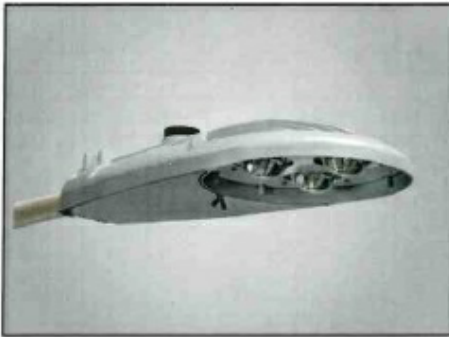
**APPENDIX 4.1**



Consistent with LEED® goals & Green Glazes™ criteria for light pollution reduction

**Autobahn Series ATBM  
Roadway**

**PRODUCT OVERVIEW**



**Applications:**

- Residential streets
- Parking lots
- High speed roadways

**Features:**

**OPTICAL**

**Same Light:** Performance is comparable to 150W – 250W HPS  
**White Light:** Correlated color temperature - 4000K, 70 CRI minimum, 3000K, 70 CRI minimum or optional 5000K, 70 CRI minimum.  
 IP66 rated borosilicate glass optics ensure longevity and minimize dirt depreciation. Unique IP66 rated LED light engines provide 0% uplight and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing.  
 Available distributions are Type II, III, IV, & V roadway distributions.

**ELECTRICAL**

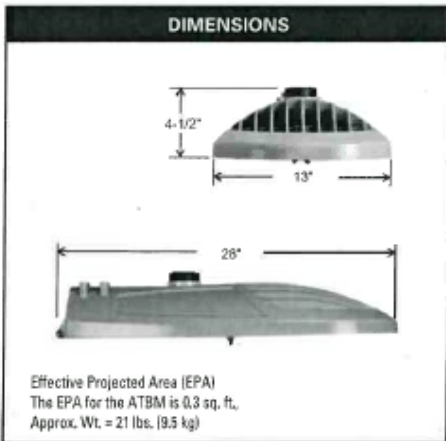
**Expected Life:** LED light engines are rated >100,000 hours at 25°C, L70.  
 Electronic driver has an expected life of 100,000 hours at a 25°C ambient.  
**Lower Energy:** Saves an expected 40-60% over comparable HID luminaires.  
**Robust Surge Protection:** Three different surge protection options provide a minimum of ANSI C136.2 10kV/5kA protection. 20kV/10kA surge protection is also available.

**MECHANICAL**

Includes standard AEL lineman-friendly features such as tool-less entry, 3 station terminal block and quick disconnects. Bubble level located inside the electrical compartment for easy leveling at installation.  
 Rugged die-cast aluminum housing and door are polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).  
 Mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. The 2-bolt and optional 4 bolt clamping mechanism provide 3G vibration rating per ANSI C136.  
 The Wildlife shield is cast into the housing (not a separate piece).

**CONTROLS**

NEMA 3 pin photocontrol receptacle is standard, with the Acuity designed ANSI standard 5 pin and 7 pin receptacles optionally available.  
 Premium solid state locking-style photocontrol – PCSS (10 year rated life) Extreme long life solid state locking-style photocontrol – PCLT (20 year rated life).  
 Extreme long life solid state locking-style photocontrol with on demand remote on/off control - PCCC (15 year rated life).  
 Optional onboard Adjustable Output module allows the light output and input wattage to be modified to meet site specific requirements, and also can allow a single fixture to be flexibly applied in many different applications.



**STANDARDS**

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/DPL](http://www.designlights.org/DPL) to confirm which versions are qualified.  
 Color temperatures of ≤ 3000K must be specified for International Dark-Sky Association certification.  
 Rated for -40°C to 40°C ambient  
 CSA Certified to U.S. and Canadian standards  
 Complies with ANSI: C136.2, C136.10, C136.14, C136.31, C136.15, C136.37

Roadway Lighting ATBM

Note: Specifications subject to change without notice.





# Autobahn Series ATBM Roadway

## ORDERING INFORMATION

Example: ATBM A MVOLT R2

Series	Performance Packages	Voltage	Optics	Mounting
<b>ATBM</b> Autobahn LED Roadway	<b>A</b> 7,000 lumens <b>B</b> 8,000 lumens <b>C</b> 9,000 lumens <b>D</b> 11,600 lumens <b>E</b> 13,400 lumens <b>F</b> 15,700 lumens <b>G</b> 16,600 lumens <b>H</b> 17,400 lumens	<b>MVOLT</b> Multi-volt, 120-277V <b>347</b> 347V <b>480</b> 480V	<b>R2</b> Roadway Type II <b>R3</b> Roadway Type III <b>R4</b> Roadway Type IV <b>R5</b> Roadway Type V	<b>(Blank)</b> 2 Bolt Mounting <b>4B</b> 4 Bolt Mounting

### Options

<u>Color Temperature (CCT)</u> <b>(Blank)</b> 4000K CCT, 70 CRI Min. <b>3K</b> 3000K CCT, 70 CRI Min. <b>5K</b> 5000K CCT, 70 CRI Min.	<u>Control Options</u> <b>(Blank)</b> 3 Pin NEMA Photocontrol Receptacle <b>P5</b> 5 Pin Photocontrol Receptacle (dimnable driver included) <sup>2</sup> <b>P7</b> 7 Pin Photocontrol Receptacle (dimnable driver included) <sup>2</sup> <b>NR</b> No Photocontrol Receptacle <sup>2</sup> <b>AO</b> Field Adjustable Output <sup>4</sup> <b>DM</b> 0-10V Dimmable Driver <sup>5</sup> <b>PCSS</b> Solid-State Lighting Photocontrol <sup>6</sup> <b>PCLL</b> Solid-State Long Life Photocontrol <b>PCCC</b> Solid-State Long Life Photocontrol with remote control on/off <b>SH</b> Shorting Cap	<u>Accessories</u> <b>ATBMHSS</b> House Side Shield <b>ATBMLTS</b> Light Trespass Shield <b>RKATBMMVOLTSPD</b> ATBM Acuity SPD Replacement Kit MVOLT <b>RKATBMHVSPD</b> ATBM Acuity SPD Replacement Kit 347/480V <b>RKATBMMVOLTMP</b> ATBM MOV Pack Replacement Kit <b>RKATBMMVOLTIL</b> ATBM IL SPD Replacement Kit
<u>Paint</u> <b>(Blank)</b> Gray <b>BK</b> Black <b>BZ</b> Bronze <b>DDB</b> Dark Bronze <b>GI</b> Graphite <b>WH</b> White	<u>Packages</u> <b>(Blank)</b> Standard Pack <b>JP</b> Job Pack (36/pallet)	
<u>Surge Protection</u> <b>(Blank)</b> Acuity SPD <b>Z0</b> 20kV/10KA SPD <sup>4</sup> <b>MP</b> MOV Pack <sup>1</sup> <b>IL</b> SPD with Indicator Light <sup>1</sup>	<u>Miscellaneous Options</u> <b>HSS</b> House Side Shield <b>NL</b> NEMA Label Indicating Wattage <b>XL</b> Not CSA Certified – No Terminal Block Cover	

#### Notes:

- 1 Not available with G and H performance packages.
- 2 Dimmable Driver included. Not available with AO, DM or NR.
- 3 Not available with P5, P7.
- 4 Not available with DM, P5 or P7.
- 5 Controls by others. Not available with AO.
- 6 MVOLT only.
- 7 Not available with PCSS or PCLL.
- 8 Not available with G & H packages at 347/480 volts.



AEL Headquarters, 3825 Columbus Road, Granville, OH 43023  
 www.americanelectrlighting.com  
 © 2014-2017 Acuity Brands Lighting, Inc. All Rights Reserved. 03/28/17

**Warranty** Five-year limited warranty. Complete warranty terms located at: [www.aelighting.com/Products/Services/Warranty](http://www.aelighting.com/Products/Services/Warranty) and [www.480v.com](http://www.480v.com). Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

ATBM

# Autobahn Series ATBM Roadway

## PERFORMANCE PACKAGE

Performance Package	Distribution	4000 K CCT			LLD @ 25°C		
		Lumens	Input Watts	LPW	50K Hours	75K Hours	100K Hours
A	R2	7,114	60	118	89	84	80
	R3	7,024		117			
	R4	6,958		116			
	R5	7,469		124			
B	R2	8,090	70	115	89	84	80
	R3	8,016		114			
	R4	7,924		113			
	R5	8,528		121			
C	R2	9,031	81	112	89	84	80
	R3	8,942		111			
	R4	8,827		110			
	R5	9,517		118			
D	R2	11,769	95	124	90	87	84
	R3	11,690		123			
	R4	11,534		121			
	R5	12,388		130			
E	R2	13,601	115	118	90	87	84
	R3	13,416		117			
	R4	13,323		116			
	R5	14,263		124			
F	R2	15,932	133	120	90	86	83
	R3	15,741		118			
	R4	15,476		116			
	R5	16,691		125			
G	R2	17,102	150	114	90	86	83
	R3	16,974		113			
	R4	16,635		111			
	R5	17,938		119			
H	R2	18,085	164	111	90	86	83
	R3	17,929		110			
	R4	17,439		107			
	R5	18,966		116			

**Note:** Information shown above is based on 4000K nominal system data. Individual fixture performance may vary. Specifications subject to change without notice.



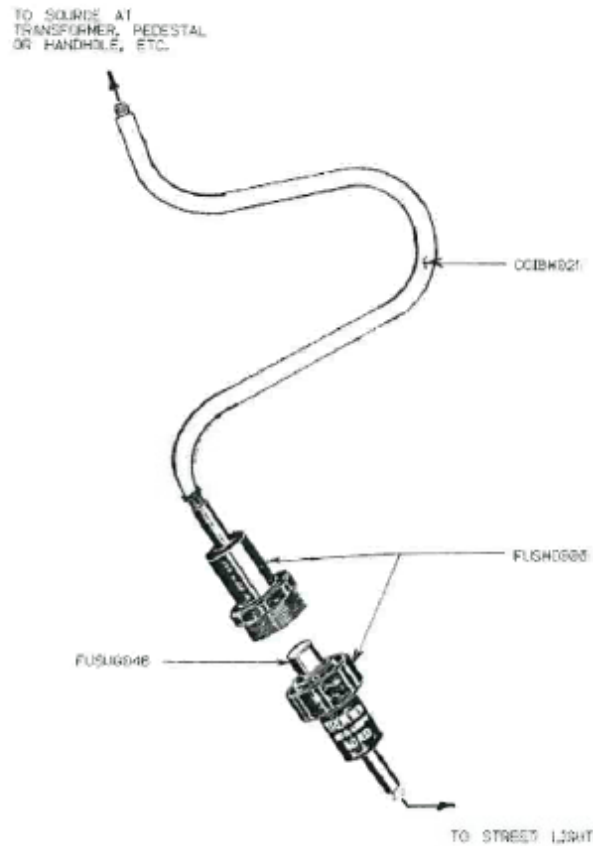
AEL Headquarters, 3625 Columbus Road, Granville, OH 43023  
www.americanelectricleighting.com  
© 2014-2017 Acuity Brands Lighting, Inc. All Rights Reserved. 03/28/17

**Warranty** Five-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/Support/Resource/Forms\\_and\\_Policies.aspx](http://www.acuitybrands.com/Support/Resource/Forms_and_Policies.aspx)  
Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

Please contact your sales representative for the latest product information.

ATBM

**USTSL - STREET LIGHT CONNECTIONS - FUSE**



ITEM	QTY	DESCRIPTION
COI BW 021	2	WIRE, #6STR., THWN INSUL. 600V
FUS HO 003	1	FUSE HOLDER, SECONDARY, STREET LIGHT
FUS UG 046	1	FUSE, FERRULE CONTACT, 20 AMP
COV SP 002	1	COVER, SPLICE, "FLOOD SEAL" 600-VOLT WATERTIGHT COVER EPDM, RANGE #14 - 2/0

Revised: June 06, 2017

Revised By: MOS

Approved By: BTM

**LIGHTING**

**JEA** Street Light Standards

**L1601\_ - 115W LED COBRAHEAD FIXTURE ON 27' ALUMINUM POLE**  
 (200/250W HPS EQUIVALENT)

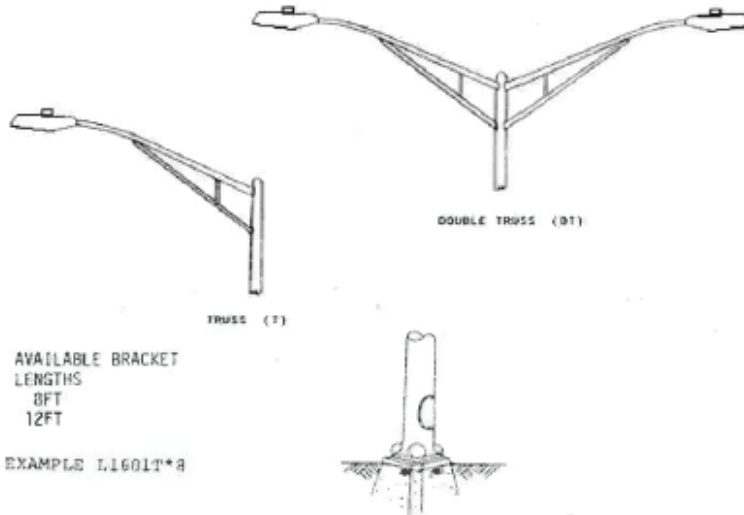


PLATE	ITEM	QTY	DESCRIPTION
L1601T	BKT SL ____	1	GENERAL CODE FOR STREET LIGHT BRACKET
	CAI UF 001	65	CABLE, STREET LIGHT 12/2 UF CU W/O GROUND
	CLA TG 001	1	CLAMP, TRANSFORMER TANK GROUND, "BRONZE" 6 SOL - 1 STR.
	POL AL 002	1	POLE, STREET LIGHT ALUM-TRUSS ARM 27 FT.
	STL LE 002	1	LUMINARE, LED, IES TYPE M.N. III
	STL PC 010	1	PHOTOCONTROL, LONG LIFE FOR LED FIXTURE
L1601DT	BKT SL ____	2	GENERAL CODE FOR STREET LIGHT BRACKET
	CAI UF 001	85	CABLE, STREET LIGHT 12/2 UF CU W/O GROUND
	CLA TG 001	1	CLAMP, TRANSFORMER TANK GROUND, "BRONZE" 6 SOL - 1 STR.
	POL AL 003	1	POLE, STREET LIGHT ALUM-TWIN TRUSS ARM 27 FT.
	STL LE 002	2	LUMINARE, LED, IES TYPE M.N. III
	STL PC 010	2	PHOTOCONTROL, LONG LIFE FOR LED FIXTURE

**OPTIONS:**

- L1601T\*8                      L1601DT\*8
- L1601T\*12                    L1601DT\*12

**NOTE:**

Locations that require a new base, Plate ANCBASE2 (See ANCBASE\_) Height of fixture above ground level is 28.75-ft with respect to anchor base.

Revised: June 06, 2017

Revised By: MOS

Approved By: BTM

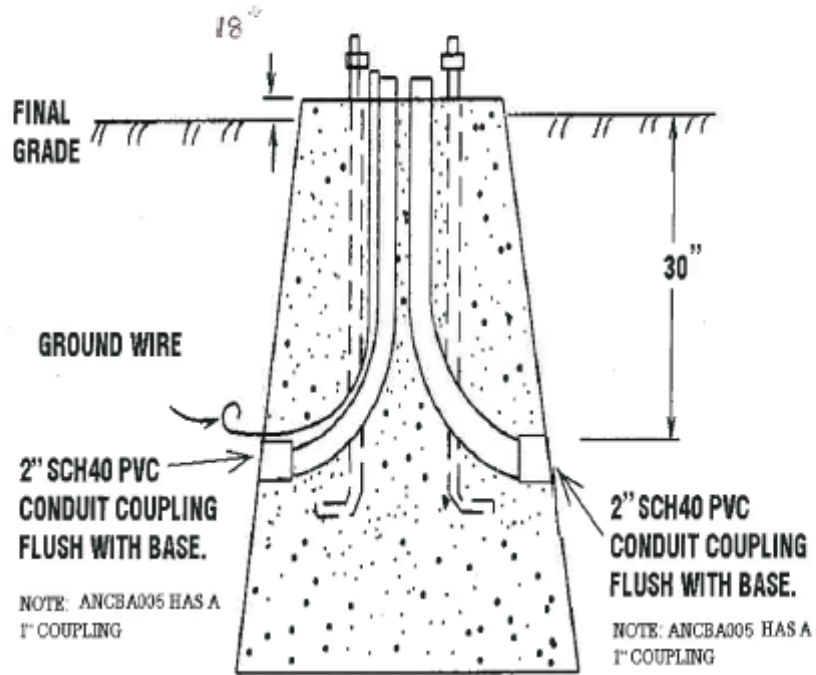
**LIGHTING**





NEW ROADWAY LIGHTING POLES (Stock # POLAL002 @ CWSC)

**ANCBASE LIGHT POLE ANCHOR BASE**



ITEM	QTY	DESCRIPTION
ANC BA 000	1	GENERAL CODE FOR ANCHOR BASE CONCRETE U.G. ST. LIGHT

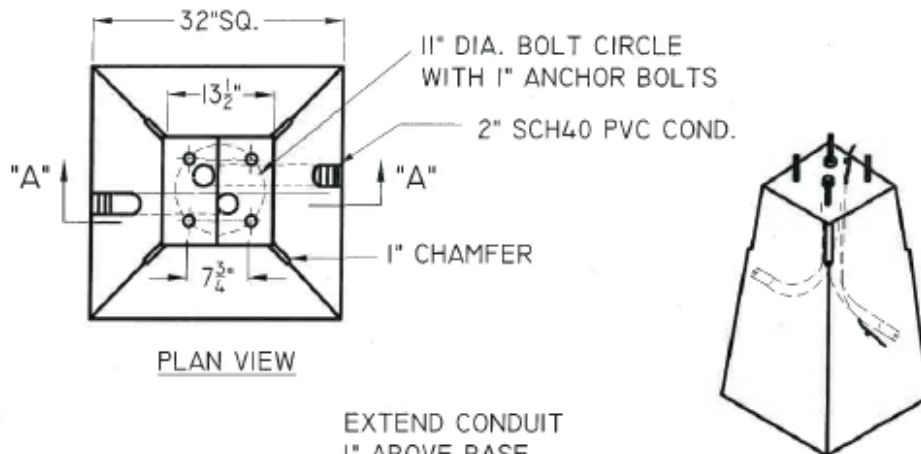
PLATE OPTIONS				
PLATE	ITEM	DESCRIPTION		DIA. BOLT CIRCLE
ANCBASE1	ANC BA 001	DMD-42	18" Sq.	14-1/2"
ANCBASE2	ANC BA 002	DMD-43	13 1/2" Sq.	11"
ANCBASE3	ANC BA 003	DMD-44	13 1/2" Sq.	11"
ANCBASE4	ANC BA 004	DMD-45	24" Sq.	14-1/2"
ANCBASE5	ANC BA 005	DMD-83	24" Sq.	14-1/2"
ANCBASE6	ANC BA 007	DMD-92	20" Cir.	11"

Revised: June 06, 2017

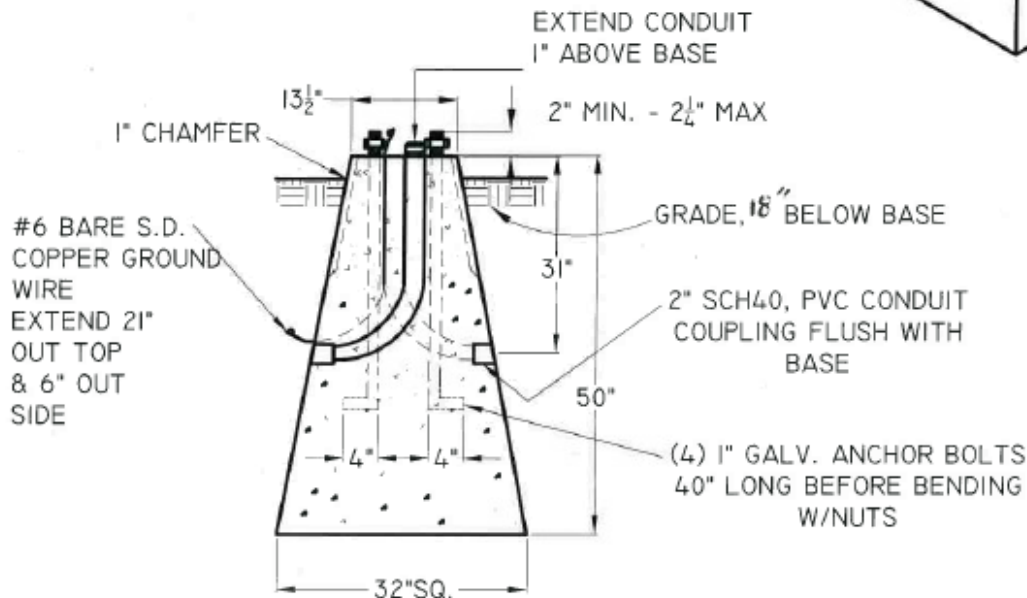
Revised By: MOS

Approved By: BTM

**LIGHTING**



PLAN VIEW



SECTION "A"-A"

NOTES:

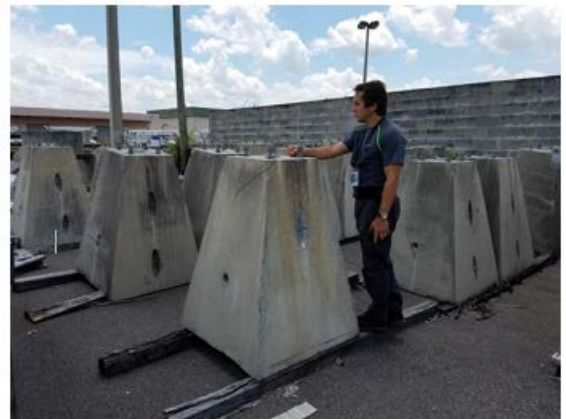
1. **ANCHORAGE:** A SET OF FOUR STEEL ANCHOR BOLTS THREADED 1"-8NC FOR 6" AND HOT DIPPED GALVANIZED AT THE THREADED END FOR AT LEAST 10" SHALL BE SUPPLIED IN EACH ANCHOR BASE. THE BOLTS SHALL INCLUDE A 4" RIGHT ANGLE HOOK AT THE UNTHREADED END. A GALVANIZED NUT, LOCKWASHER AND FLATWASHER SHALL BE SUPPLIED WITH EACH ANCHOR BOLT.
2. 28 DAY CONCRETE COMPRESSIVE STRENGTH=3000 PSI.

DISTRIBUTION MATERIAL DETAIL CONCRETE ANCHOR BASE FOR ALL 11" SHOE BASE STREET LIGHTING STANDARDS				ITEM ID ANCSA002
REVISED BY: SGL	<b>JEA</b>			DMD NO. DMD-43
DATE: REV. 1/8/92	REVIEWED BY:	DATE:	APPROVED BY:	DATE: SHEET NO. 1 OF 1



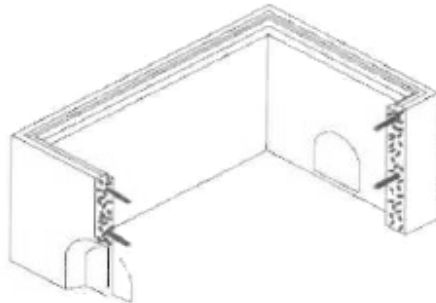
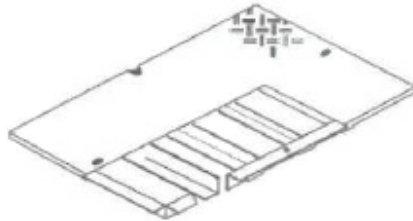


FOUNDATION TO BE "18" ABOVE GRADE" EXPOSURE



LIGHT POLE ANCHOR BASES (Stock # ANCB002 @ CWSC)

**PULL-BOX\***  
CONCRETE SPLICE BOX



**MPULL-BOX OPTIONS**

Installation Conditions:

- C – Cold-New Construction
- H – Hot-Construction around Existing Cables

EXAMPLE: MPULL-BOX\*C

**PULL-BOX OPTIONS**

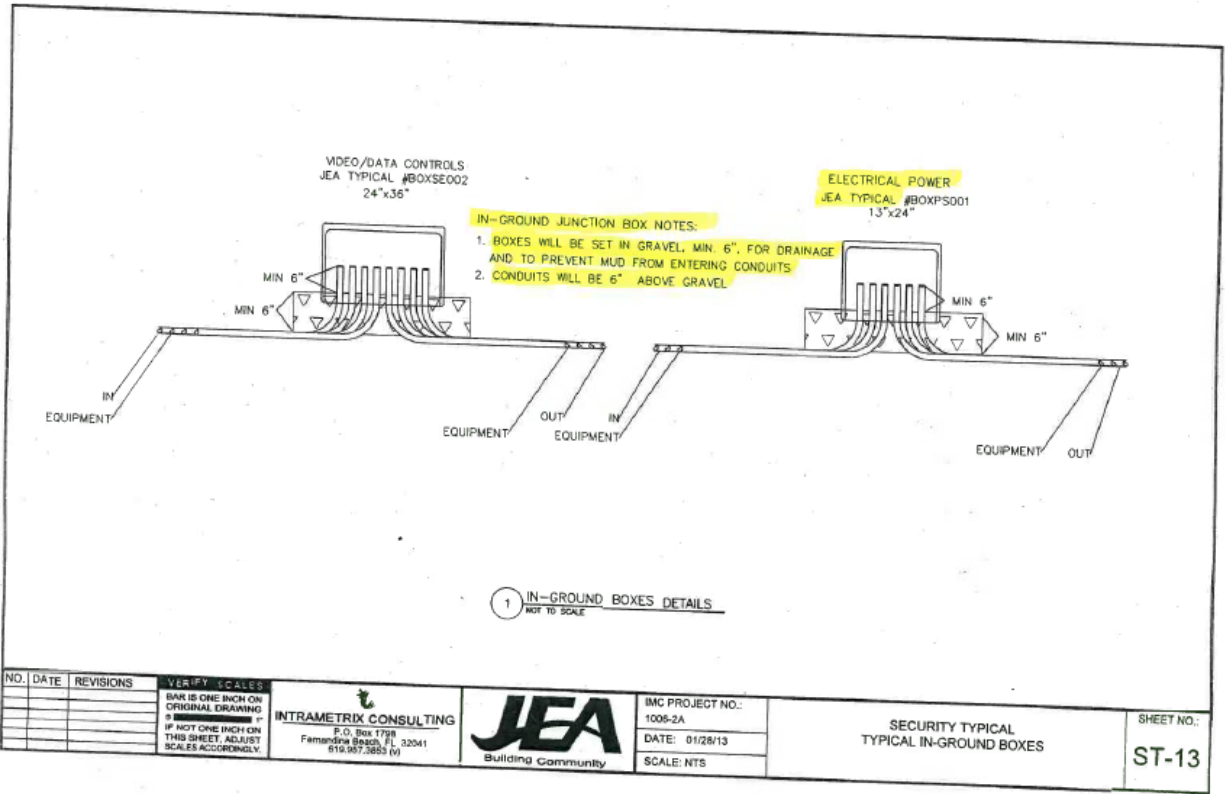
Installation Conditions:

- U - New Undeveloped Area
- D - Existing Developed Area

EXAMPLE: PULL-BOX\*D

Inside Dimensions – 16"W X 24"L X 24"Deep

ITEM	QTY	DESCRIPTION
BOXSP002	1	PULL BOX, CONCRETE ,TRAFFIC BEARING, STEEL COVER



TRAFFIC RATED SPLICE BOX (Stock # BOXSP002 @ CWSC)

**APPENDIX 4.5**

**UC \* \_ \_**  
**INSTALLATION OF CONDUIT IN TRENCH**

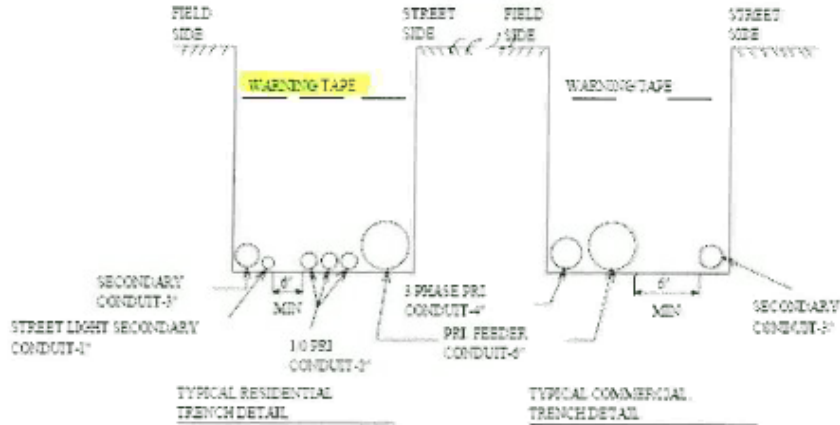


	PLATE	ITEM I.D.	SIZE
POLYVINYL CHLORIDE (PVC) SCHEDULE 40	UC*1	CODPC016	1"
	UC*2	CODPC019	2"
	UC*3	CODPC020	3"
	UC*4	CODPC003	4"
	UC*6	CODPC005	6"
GALVANIZED STEEL	UC*2S	CODST006	2"
	UC*3S	CODST008	3"
	UC*4S	CODST009	4"
	UC*6S	CODST010	6"

**NOTES:**

1. PVC cement must be itemized. Issue one (1) quart can, item I.ADCMI002, for each 500 linear feet of conduit, or for each 25 conduit joints.
2. Install warning tape as specified on UCT plate.
3. Minimum separation of 2" between conduits carrying conductors of the same voltage. Minimum separation of 6" between conduits carrying conductors of different voltage.

Revised: October 10, 2008

Revised By: SGL

Approved By: RHS

**DIRECT BURIED CONDUIT**

V. 1 - Page 3 of 4

## DIRECT BURIED CONDUIT

### I. CONSTRUCTION NOTES

- I.1. Install plug on all empty or temporary conduit openings. See identification section for conduit/cable marker plate.
- I.2. Markers should be installed at the ends of all conduit and ells.
- I.3. Call for plates UC on a "per foot" basis
- I.4. See cable section for conduit size to be used.
- I.5. All conduit in the same trench will be installed at the bottom of the trench arranged as shown in the standard for "Installation of Conduit in Trench".
  - I.5.1. A standard 48" deep trench will be used when installing all conduit.
  - I.5.2. Other depths may be specified by the engineer on an individual basis.

#### ADDITIONAL PLATES

PLATE	DESCRIPTION	UNIT
FOAM-DUCT	EXPANDING FOAM TO SEAL AROUND CABLES	EA (LABOR ONLY)
PLUG-DUCT1	1 - 1" PVC CONDUIT CAP	EA
PLUG-DUCT2	1 - 2" PVC CONDUIT PLUG (I.CODPL001)	EA
PLUG-DUCT3	1 - 3" PVC CONDUIT PLUG (I.CODPL002)	EA
PLUG-DUCT4	1 - 4" PVC CONDUIT PLUG (I.CODPL003)	EA
PLUG-DUCT6	1 - 6" PVC CONDUIT PLUG (I.CODPL004)	EA

PLATE	DESCRIPTION	UNIT
I.CODCO003	2" PVC SCH-40 LONG LINE COUPLING	EA
I.CODCO004	3" PVC SCH-40 LONG LINE COUPLING	EA
I.CODCO005	4" PVC SCH-40 LONG LINE COUPLING	EA
I.CODCO006	6" PVC SCH-40 LONG LINE COUPLING)	EA
I.CODCO025	1" PVC SCH-40 LONG LINE COUPLING	EA

### II. GENERAL

The work under this section consists of installing Single Conduit or Multiple Conduit in Trench, backfilling and compacting.

#### II.1. MATERIAL

One, Two, Three, Four, or Six inch PVC Conduit or Galvanized Steel Conduit.

##### II.1.1. Conduit Material Specifications:

- II.1.1.1. One, Two, Three, Four, or Six inch Schedule 40 PVC Conduit or Schedule 40 Galvanized Steel Conduit. Different conduit may be specified for special applications. All conduit material shall meet the material specifications of JEA.

II.1.1.2. Do not install DB60 or DB120 PVC Conduit in direct buried systems.

II.2. ALIGNMENT

PVC is sufficiently flexible to allow it to conform to minor changes in trench direction or elevation. Any other bends shall be made using pre-formed sweeps. PVC 5 degree bend couplings will not be used.

II.3. BACKFILLING

The backfill surrounding the duct(s) shall be compacted in accordance with the manufacturer's recommendations. Such backfill shall extend to 6" above the top of the Conduit or conduits. Above that level backfill and compaction shall be carried out as specified under excavation, backfill, & compaction paragraphs of the Earthwork section.

II.4. MARKING TAPE

Marking tape shall be installed as specified on an individual basis (See UCT plate).

II.5. MINIMUM COVER REQUIREMENTS

Standard depth of trench will be 48" (to bottom of trench). Other depths may be specified on an individual basis.



**APPENDIX 4.6**



EAST VIEW OF NORTHERN LOOP / **WEST CIRCUIT** (P-3, P-28, AND P-29) P-29 TO BE RELOCATED TO ACCOMMODATE NEW PARKING LOT SEE HAZEN DRAWING C-3





POLE LAYDOWN YARD AREA SOUTH OF OPERATIONS BUILDING – THESE ARE THE POLES TO BE USED FOR THE IN-PLANT PROCESS LIGHTING PROJECT ... CONTRACTOR HAS APPROVAL TO ALSO STORE THE ROADWAY LIGHTING POLES, BRACKETS AT THIS LOCATION...



EAST VIEW NORTHERN LOOP / **EAST CIRCUIT** AT NEW SECONDARY CLARIFIER (NOTE P-35, P-36, P-37 & P-38 HAVE BEEN PULLED HERE)....





EAST VIEW NORTHERN LOOP RAS PUMP STATION



SOUTH VIEW OF EASTERN LOOP / **EAST CIRCUIT** (P-39, P-40, P-41)



SE CORNER OF EASTERN LOOP / **EAST CIRCUIT** (P- 45)





SPUR ROAD AT SE CORNER OF EASTERN LOOP / **EAST CIRCUIT** (P- 44)



WEST VIEW OF SOUTH LOOP / **EAST CIRCUIT** (P-47)





NORTH VIEW OF WESTERN LOOP / **WEST CIRCUIT** (P- 15, P- 14, P- 16, P- 13)



SOUTH VIEW OF WESTERN LOOP / WEST CIRCUIT (P-11)



NORTHWEST GATE / WEST CIRCUIT (P- 9, P- 8)



SOUTHWEST GATE / WEST CIRCUIT (P- 22, P- 23)





EAST VIEW / **WEST CIRCUIT** OF P- 17 AND PROCESS LIGHTING TO BE REPLACED UNDER PLANT PROJECT SCOPE OUTSIDE OF THIS CONTRACT



SOUTH VIEW / WEST CIRCUIT OF P- 18 AND P-19





MONUMENT SIGN WEST SIDE OF PLANT

**WEST CIRCUIT**

POWER SUPPLY TO SIGN FROM EXISTING LIGHT  
POLE P-9 TO BE REPLACED AT BASE IN HAND HOLE





FRONT VIEW OF SOUTH EAST SIGN .....



SIDE VIEW AND BACK VIEW FROM PLANT SIDE ..... NEW POWER WILL NEED TO BE RUN TO THIS SIGN AND TIED INTO THE EAST ROADWAY LIGHTING CIRCUIT. BOTH LIGHTS IN THE MONUMENT WILL NEED TO BE REPLACED. **EAST CIRCUIT**





NEW 277V LIGHTING PANEL AND "PROCESS LIGHTING" CONTACTOR LOCATED IN BLOWER BUILDING...

..... THE NEW "ROADWAY LIGHTING" CONTACTOR TO BE INSTALLED OUT OF THIS PANEL:

- TWO (2) 277V CIRCUITS
- AUTO / OFF SWITCH BUILT IN
- 3/4" ALUMINUM CONDUIT RUN TO EXTERIOR ROOF LINE FOR PHOTO EYE

BREAKER DETAIL BELOW.....



**APPENDIX B - MINIMUM QUALIFICATION FORM  
IFB 125-18 ARLINGTON EAST WRF ROADWAY LIGHTING UPGRADE**

**GENERAL**

**THE MINIMUM QUALIFICATIONS SHALL BE SUBMITTED ON THIS FORM. IN ORDER TO BE CONSIDERED A QUALIFIED BIDDER BY JEA YOU MUST MEET THE MINIMUM QUALIFICATIONS LISTED BELOW, AND BE ABLE TO PROVIDE ALL THE SERVICES LISTED IN THIS SOLICITATION.**

**THE BIDDER MUST COMPLETE THE BIDDER INFORMATION SECTION BELOW AND PROVIDE ANY OTHER INFORMATION OR REFERENCE REQUESTED. THE BIDDER MUST ALSO PROVIDE ANY ATTACHMENTS REQUESTED WITH THIS MINIMUM QUALIFICATIONS FORM.**

**THE BIDDER SHALL SUBMIT ALL OF THE REQUIRED BID FORMS ELECTRONICALLY TO ELAINE SELDERS AT SELDEL@JEA.COM.**

**BIDDER INFORMATION**

COMPANY NAME: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP CODE: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

FAX: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

PRINT NAME OF AUTHORIZED REPRESENTATIVE: \_\_\_\_\_

SIGNATURE OF AUTHORIZED REPRESENTATIVE: \_\_\_\_\_

TITLE OF AUTHORIZED REPRESENTATIVE: \_\_\_\_\_

**MINIMUM QUALIFICATIONS:**

Bidder shall have the following Minimum Qualifications to be considered eligible to submit a Bid in response to this SOLICITATION.

It is the responsibility of the Bidder to ensure and certify that it meets the Minimum Qualifications stated below. A Bidder not meeting all of the following criteria will have their Bids rejected.

- Electrical Contractor shall possess a valid Certified Electrical Contractor License issued by the State of Florida. Electrical Contractor shall also possess a current business license issued by the City of Jacksonville/Duval County.

Certified Electrical Contractor License Number: \_\_\_\_\_

**APPENDIX B - MINIMUM QUALIFICATION FORM  
IFB 125-18 ARLINGTON EAST WRF ROADWAY LIGHTING UPGRADE**

- Electrical Contractor shall provide two (2) account references for similar electrical projects completed in a commercial setting in the last two (2) years ending June 30, 2018 and valued at least \$100,000 each. Only one (1) of the two projects can be work performed for JEA. Bidder shall provide valid references for each contract listed.

**Please provide the reference verification information requested below pertaining to this contract.**

**1. REFERENCE**

Reference Name \_\_\_\_\_

Reference Phone Number \_\_\_\_\_

Reference Company Name \_\_\_\_\_

Address of Work \_\_\_\_\_

Reference E-Mail Address \_\_\_\_\_

Dates of Work/\$ Amount \_\_\_\_\_

Description of Work \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**2. REFERENCE**

Reference Name \_\_\_\_\_

Reference Phone Number \_\_\_\_\_

Reference Company Name \_\_\_\_\_

Address of Work \_\_\_\_\_

Reference E-Mail Address \_\_\_\_\_

Dates of Work/\$ Amount \_\_\_\_\_

Description of Work \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**LIST OF SUBCONTRACTORS**

JEA Solicitation Number #125-18 requires certain major Subcontractors be listed on this form, unless the work will be self-performed by the Company.

The undersigned understands that failure to submit the required Subcontractor information on this form will result in bid rejection, and the Company agrees to employ the Subcontractors specified below: (Use additional sheets as necessary)

Note: This list of Subcontractors shall not be modified subsequent to bid opening, without a showing of good cause and the written consent of JEA.

<b>Type of Work</b>	<b>Corporate Name of Subcontractor</b>	<b>Subcontractor Primary Contact Person &amp; Telephone Number</b>	<b>Subcontractor's License Number (if applicable)</b>	<b>Percentage of Work or Dollar Amount</b>	<b>Will the Provider Self Perform this Category? Yes/No</b>

**Signed:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**APPENDIX B – BID FORM  
IFB 125-18 ARLINGTON EAST WRF ROADWAY LIGHTING UPGRADE**

Company Name: \_\_\_\_\_

Company's Address \_\_\_\_\_

Phone Number: \_\_\_\_\_ FAX No: \_\_\_\_\_ Email Address: \_\_\_\_\_

License: \_\_\_\_\_

**BID SECURITY REQUIREMENTS**

- None required  
 Certified Check or Bond (Five Percent (5%))

**TERM OF CONTRACT**

- One Time Purchase  
 Annual Requirements  
 Other, Specify - Project Completion

**SAMPLE REQUIREMENTS**

- None required  
 Samples required prior to Bid Opening  
 Samples may be required subsequent to Bid Opening

**SECTION 255.05, FLORIDA STATUTES CONTRACT BOND**

- None required  
 Bond required 100% of Bid Award

**QUANTITIES**

- Quantities indicated are exacting  
 Quantities indicated reflect the approximate quantities to be purchased Throughout the Contract period and are subject to fluctuation in accordance with actual requirements.

**INSURANCE REQUIREMENTS**

**Insurance required**

**PAYMENT DISCOUNTS**

- 1% 20, net 30  
 2% 10, net 30  
 Other \_\_\_\_\_  
 None Offered

**SUNSHINE LAW ACKNOWLEDGEMENT**

\_\_\_\_\_ (Initials) I have read and understood the Sunshine Law/Public Records clauses contained within this solicitation. I understand that in the absence of a redacted copy my bid will be disclosed to the public "as-is".

Item	ENTER YOUR BID FOR IFB 125-18	TOTAL BID PRICE
1	<b>Total Bid Price For Perimeter Lighting Project at Arlington East WRF</b>	\$ _____

**BIDDER'S CERTIFICATION**

By submitting this Bid, the Bidder certifies that it has read and reviewed all of the documents pertaining to this Solicitation, that the person signing below is an authorized representative of the Bidder's Company, that the Company is legally authorized to do business in the State of Florida, and that the Company maintains in active status an appropriate contractor's license for the work (if applicable). The Bidder also certifies that it complies with all sections (including but not limited to Conflict Of Interest and Ethics) of this Solicitation, and that the Bidder is an authorized distributor or manufacturer of the equipment that meets the Technical Specifications stated herein.

We have received addenda \_\_\_\_\_

\_\_\_\_\_ through \_\_\_\_\_

\_\_\_\_\_ Handwritten Signature of Authorized Officer of Company or Agent \_\_\_\_\_ Date

\_\_\_\_\_ Printed Name and Title