



MEMORANDUM

TO: Mayor Laurel Lunt Prussing and Members of the City Council

FROM: William R. Gray, Public Works Director

DATE: May 8, 2008

RE: University District Street Lighting Equipment Standardizations – Request for Proposals

The Committee of the Whole has discussed and accepted by motion the notion of standardizing street lighting equipment in the University District. Discussion was held at the November 26, 2007 and January 14, 2008 Committee of the Whole meetings regarding the type of lamps available such as LED and metal halide, full cutoff fixtures, and designing a system that is LEED compatible and is sustainable.

Attached please find an Executive Summary for a pricing agreement for street lighting equipment. Attached also please find the technical specifications for the lighting assemblies excluding the exhibits and proposal boilerplate. If any one is interested in the full package please let this office know.

The City of Champaign and the University of Illinois will be reviewing the same draft proposal. It is staff's intent to advertise this RFP by the end of the month. Once proposals are received and evaluated the selection committee (representatives from Urbana, Champaign, and the University) will make a recommendation and this information will be provided to the City Council for final approval. The street lighting assembly types are needed in order to complete the Goodwin Avenue Street Improvement Design which has received Highway Safety Improvement Program funds and is scheduled for a bid letting in January, 2009 with construction starting in mid-May.

No formal Council action is required. A Committee of the Whole motion approving the soliciting of Request for Proposals is recommended.

UNIVERSITY OF ILLINOIS
FACILITIES & SERVICES

**UNIVERSITY DISTRICT STREET LIGHTING
EQUIPMENT STANDARDIZATION**

**REQUEST FOR PROPOSALS
RFP #UOI-71**

**EXECUTIVE SUMMARY FOR
A PRICING AGREEMENT FOR STREET LIGHTING EQUIPMENT**

The University of Illinois is seeking proposals to enter into a multi-year purchasing agreement (10-12 years) with a lighting manufacturer for approximately 2000 street lighting assemblies (poles, arms and luminaries) for installation within the University District. The intent is that for any given project, the University will purchase the equipment from the Vendor and then, if the Project is not a University project, it will re-sell the equipment to the entity having jurisdiction according to the terms of an intergovernmental agreement (see attached "Street Ownership Map"). Any Vendor desiring to be considered to offer such purchasing agreement will submit a proposal in accordance with the Request for Proposals (RFP) documents (not attached).

The RFP will consist of requirements that address the qualifications that proposed vendors must meet, as well as details for components, options and configurations of the proposed material to which each Vendor shall formulate its pricing proposal. Proposals will be evaluated on design, energy usage, LEED applicability, operational and manufacturing merits as well as cost, ability to meet required delivery schedules, and commitment to future cost stability. The RFP will allow flexibility in scheduling, quantity of purchase per order and other parameters in order to allow for the manufacturers most advantageous pricing structure.

The intent of the RFP is to locate a Vendor who is willing to provide lighting assemblies that will generally resemble the existing style, appearance, functionality and optical performance of Champaign's Green Street Standard Lighting equipment. In the proposal, the Vendor will be required to respond in writing to the items necessary for the University to determine the capability of the Vendor to meet the requirements of the agreement, including: documentation of references and experience; lighting equipment specifications based on the attached "Detailed Specifications" document; calculations showing the optical performance of the lighting assemblies; complete cost summary with optional alternative cost reduction proposals; LEED certifications applicable to the proposed equipment; etc.

The RFP will be publicly advertised with notice also given to the following potential Vendors: Lumec, Sternberg, Valmont, Holophane, and King.

**UNIVERSITY DISTRICT STREET LIGHTING
EQUIPMENT STANDARDIZATION**

**REQUEST FOR PROPOSALS
RFP #UOI-71**

**TECHNICAL SPECIFICATIONS
LIGHTING ASSEMBLIES**

Description – The Lighting Assemblies shall be as generally described on Page A through Page F of the attached drawings and as detailed on the Request For Proposals (RFP #UOI-71) and in these technical specifications. The Vendor shall furnish all supervision, materials, equipment, accessories, handling, shipping and delivery to provide the specified Lighting Assemblies as detailed herein, complete with lamps, and with ground lug ready for grounding connections. All transportation, handling, shipping costs and manufacturer’s storage shall be included.

Luminaires – The proposed luminaires shall generally match the style and appearance of the Purchaser’s existing Campustown Lighting equipment as shown on the attached drawings (not included in council packet), and shall equal or exceed the photometric performance as specified in the attached (not included in council packet) “Table of Photometric Requirements.”

Housing shall be made of cast 356 aluminum, and shall be formed by a permanent mold. Cast 356 aluminum one-piece frames and doors with integral latches and hinges shall provide access to the optical chamber and ballast compartments. Embedded one-piece silicone rubber memory retentive gaskets shall ensure weatherproofing.

Lenses for the “Pedestrian Luminaires” with induction lamps shall be vandal and impact resistant acrylic, UV stabilized to prohibit yellowing, white in color. Lenses for the “Roadway Luminaires” with Metal Halide (MH) or High Pressure Sodium (HPS) lamps shall be one-piece, seamless, injection-molded borosilicate glass, having an inner prismatic surface complete with a semi-prismatic house-side shield and external glare-softening prisms, clear in color. The roadway luminaire shall have an IES Type 3 hyperextensive (asymmetrical) distribution optical system. Luminaire optical assemblies shall rotate street-side to 90, 180, 270 and 360 degrees to accommodate various placement scenarios.

The lenses shall feature toolless entry to the optical chamber. The optical chamber shall be sealed when the lens is secured to the capital. MH or HPS lamps shall have porcelain mogul base. MH shall have 4kv pulse-rated socket. Induction lamp in pedestrian fixtures shall be 3000 degrees Kelvin CCT. Luminaire optical chamber shall have a minimum IP66 rating, and ballast compartment a minimum IP54 rating.

For “Pedestrian Luminaires” with induction lamps, the hood shall be light-diffusing thermoformed opaline acrylic dome, mechanically assembled to the luminaire. For

“Roadway Luminaires” with MH or HPS lamps, the hood shall be cast 356 aluminum, mechanically assembled to the luminaire.

Ballasts shall meet standards of the Certified Ballasts Manufacturers’ Association. High intensity discharge ballasts shall be constant wattage autotransformer, high power factor type and shall be designed for reliable starting in –20 degrees F. Ballasts for metal halide lamps shall be pulse start. Acceptable manufacturers include Advance, Universal, and General Electric. Ballasts and induction generators shall be multi-tap and shall be delivered wired for 208 or 240 VAC operations as specified per order.

Finish of all fixture metallic parts shall be polyester powder coat paint as specified below under “Powder Coating Process,” below.

Provide luminaires with a "street side" orientation mark located to be aligned perpendicular to the centerline of the street.

Luminaires shall be supplied from the factory with a quick-disconnect connector at the pole top and shall have sufficient length of 3#12 or 3#14 (blue, red and green ground) THWN or TEW wire to reach 18” out of handhole in pole base.

Arms – The arms for the “Pedestrian Luminaires” and the “Roadway Luminaires” shall be made from spun and tapered aluminum 6063-T4 (tempered to T6 after welding), formed into a vertically oriented ellipse of 4” (102mm) by 2-7/8” (73mm) welded onto a plate and mechanically fastened to mounting plate. Mounting plate shall be made from cast 356 aluminum, mechanically fastened to pole by two through-bolts.

Poles –Poles shafts shall be made from 6063-T6 tapered aluminum; minimum 0.188” (4.7mm) wall thickness (or thicker as required to handle structural loading), and include 16 sharp or rounded flutes. With the exception of diameter, the profile of the flutes shall match on all poles. Bolt heads shall be internal to pole. Provide ground lug. All fasteners shall be stainless steel. All exposed fasteners below 10 feet above grade shall have pinned Allen vandal-resistant heads.

The pole shall accommodate four 1-inch diameter anchor bolts arranged in a 12 inch bolt circle installed in a square with its sides parallel and perpendicular to the curbline (X-configuration). An access door shall be provided in the pole base secured with pinned-Allen head vandal proof fasteners.

Pole shaft shall be provided with a dedicated grounding lug easily accessible within the pole’s access door prepared to receive a #6 bonding wire.

Poles shall be delivered to the job site with a factory applied shipping wrap of cardboard or other material to fully protect against scratches and coating stain. Poles shall be blocked and bundled in groups of multiple poles, or use other equivalent means to prevent shifting and damage during transport.

If a clamshell base is used, it shall be cast aluminum, have black oxide finished stainless steel fasteners, be fitted with internal alignment plates to ensure perpendicularity with the pole shaft, and shall include a cast aluminum access plate in the clamshell located directly over the access plate in the pole shaft.

Anchor Bolts – Manufacturer of pole shall provide anchor bolt template for installation and shall provide 1-inch hot-dipped fully galvanized steel anchor bolts in a length that exceeds the maximum wind rating of the pole.

Receptacle – An optional weatherproof duplex receptacle shall be factory installed 12 feet above grade. The duplex GFI receptacle shall be a ground fault circuit interrupting type, full gang size, polarized, duplex, parallel blade, U grounding slot, specification grade, rated at 20 amperes, 125 Vac and have screw terminals (use of push-in terminals is not acceptable). Receptacle cover plate shall be weatherproof with NEMA 3R with cord in place spring-loaded cast aluminum cover door that meets current NEC standards. Receptacle shall be supplied from the factory with a quick-disconnect connector at the receptacle and shall have sufficient length of 3#12 or 3#14 (black, white and green ground) THWN or TEW wire to reach 18” out of handhole in pole base.

Lamp – Furnish and install in the correct orientation according to manufacturer’s specifications a lamp in each luminaire.

For Metal Halide and High Pressure Sodium lamps, provide clear lamps with mogul base. For Metal Halide: color temperature: 3200 degrees K; Minimum CRI: 65; Minimum median rated life at 10+ hours/start: 15,000 hours. For High Pressure Sodium: color temperature: 2100 degrees K; Minimum CRI: 22; Minimum median rated life at 10+ hours/start: 24,000+ hours. All MH and HPS lamps on the project shall be by General Electric, Venture or Phillips and (for each type) shall have the same color temperature and CRI.

Induction lamps shall be 85 watt, 3000K by Phillips and shall be furnished and installed in the luminaire by the manufacturer. The generator for the induction lamp shall be integral to the luminaire housing and shall be furnished and installed by the manufacturer.

Wiring – Color-code all conductors to designate neutral conductor and phases. Phases shall be blue and red, neutral shall be white and ground shall be green.

Vandal-Resistant Fasteners – The Purchaser’s standard vandal-resistant fasteners are a “pinned allen-socket” style requiring a specialized allen wrench to install and remove. The allen wrench contains a hole in the end to allow engagement with the vandal-resistant fasteners. All references to vandal-resistant shall imply the Purchaser’s standard vandal resistant fastener.

Powder Coating Process – Equipment, materials, luminaires and poles that are specified to be "powder coated" shall be polyester powder coated in a “textured” finish with a UV resistant powder designed for outdoor use without color fade. The polyester powder coating pre-treatment process shall have at least the following steps: hot alkaline wash,

clear water rinse, hot phosphoric acid etching, clear water rinse, and chemical seal (for aluminum) or zinc-phosphate application (for steel). The polyester powder coating shall be electrostatically applied thermosetting polyester resin powder coating to a minimum thickness of 100 microns.

The manufacturer shall coat luminaires and poles in its own facility. Out-sourcing of the powder coating process is not allowed.

Warranty – The manufacturer shall warranty the Metal Halide ballast and Induction lamp system for a period of 5 years from the date of installation. The manufacturer shall handle and resolve all freight claims and/or damages associated with the shipping of the material to the Owner’s designated receiving location.

In addition to the standard product warranty, all surfaces featuring a powder-coat finish shall carry a 5-year finish warranty. The coatings on all new poles and luminaries shall carry this 5-year finish warranty from date of installation. This warranty shall provide protection against:

Peeling, Cracking and/or Fading: UV damage and fading of more than 10% of the original color (tint).

Discoloration: Discoloration in excess of 5 E units (CIE 1976 CIELAB) as measured using procedure ASTM D 2244, latest revision, comparing an unexposed sample to an exposed surface after removal of dirt and chalk.

Gloss retention: A minimum of 30 % gloss retention as measured using procedure ASTM D 523, latest revision, comparing an unexposed sample to an exposed surface after removal of dirt and chalk.

Corrosion and lack of adhesion: Corrosion and lack of adhesion in excess of Rust Grade 5, as measured using procedure ASTM D 610, latest revision, based on the complete product assembly. For the purpose of this warranty, this procedure applies to both aluminium and steel.

Warranty shall provide for the full cost of refinishing in the event of a coating failure. Manufacturer shall submit full warranty information with a specific letter for this proposal, detailing the warranty terms and conditions in accordance with this specification.