ORDINANCE NO. 7172-47

AN ORDINANCE AMENDING THE URBANA CITY CODE
OF 1968 BY ADDING CHAPTER 35

WHEREAS, the City of Urbana desires to have street lighting for all of its streets, and

WHEREAS, the securing of a complete system will require a long period of time and much coordination, and

WHEREAS, improper street lighting systems can be hazardous to health and safety, and

WHEREAS, it is the policy of the Council to operate and maintain only street lighting systems built in accordance with adequate standards, and

WHEREAS, three copies of Adoption of American Standard Practice for Roadway Lighting have been on file in the office of the City Clerk for more than 15 days prior to the adoption of this Ordinance and are herewith adopted by reference as a part of this Ordinance and all the terms and requirements thereof shall be a part of this Ordinance as fully as if such had been set forth in full, except as such is modified or amended expressly by this Ordinance.

BE IT ORDAINED BY THE CITY COUNCIL OF URBANA, ILLINOIS, that:

Chapter 35 of the Urbana City Code, entitled Street Lighting Systems, is herewith enacted.

This Ordinance shall be in full force and effect from and after its passage and publication in accordance with the terms of Section 1 - 2 - 4 of the Illinois Municipal Code.

PASSED by the City Council of Urbana, Illinois, this 20th day of September, 1971.

Duane Eckerty

Duane Eckerty, CITY CLERK

APPROVED by the Mayor of the City of Urbana, Illinois, this 21st day of September, 1971.

Charles M. Zipprodt

Charles M. Zipprodt, MAYOR

CHAPTER 35

STREET LIGHTING SYSTEMS

Article 1. In General

Sec. 35.1 Prohibition of Private Lighting Systems.

No person or firm shall install, maintain or operate any private system of lights on the City streets or alleys of Urbana, Illinois, except under franchise or contract with the City.

Sec. 35.2 City Ownership of Lights.

Any system of street lights installed in accordance with this Ordinance shall belong to the City of Urbana upon completion of the system in accordance with the provisions of this Ordinance unless, however, there is a contract or franchise to the contrary.

Sec. 35.3 Authorization to Energize System.

The City Electrician is hereby authorized and directed to order the purchase of electricity for any street lighting system within the City limits which hereafter may be certified by the City Engineer.

Sec. 35.4 Approval.

(1) The written approval from the City Engineer shall be required before any new street lighting system or an extension of an existing system may be installed within the City or within 1 1/2 miles of the City limits. All systems shall be underground except under written authorization of the City Engineer.

(2) Design documents shall be submitted showing all subdivision plotting and dimensions of streets, sidewalks, easements, utilities, spacing of illuminating standards, wiring, services and control of the system. In addition to this information, illumination on calculations in sufficient detail shall be submitted substantiating the maintained average illumination level. Sufficient information shall be provided to indicate the type of lighting pole and luminaire to be used, including the manufacturer's tested illumination distribution data.

(3) Any other essential data or documents requested by the City Engineer shall be submitted to the City Engineer. Further, if requested by the City Engineer, samples of material or equipment to be used shall be submitted for further consideration or study.

(4) The City Engineer shall officially approve or reject the plan within two weeks of the date that he receives the complete design information, including all documents and other essential design criteria. If additional information

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has been requested for further consideration, the approval time shall be extended at the discretion of the City Engineer, and he shall notify the applicant in writing of such extension.

(5) The exact classification of any street or segment thereof shall be as determined by the City Engineer. The City Engineer shall keep one copy of the classification of streets on file in his office and file one copy with the City Clerk.

(6) The City Engineer shall, within one week of receiving written notice that a lighting system has been completed, make a final inspection. Upon finding the system has been completed in substantial conformance with this Ordinance and the approved plans and specifications, the City Engineer shall prepare a certification of completion and furnish it to the installer.

Article II. Adoption of Standards

Sec. 35.5 Adoption of American Standard Practice for Roadway Lighting.

(1) The American Standard Practice for Roadway Lighting, approved November 7, 1963, by the American Standards Association, Incorporated, and published by the Illuminating Engineering Society, three copies of which are on file in the office of the City Clerk, is a part of this Chapter and all the terms and requirements thereof are a part of this Chapter as fully as if such had been set forth in full, except as such is modified or amended expressly by other Sections of this Chapter.

(2) a. The maintained illumination levels for residential streets and/or sidewalk classifications shall average 0.3 foot candle intensity on the street pavement.

b. The maintained illumination levels for intersections and for converging or diverging roadways shall equal the sum of the maintained illumination levels of the intersecting roadways.

(3) All lighting calculations shall be based on a 0.80 maintenance factor and a coefficient of utilization obtained from the luminaire manufacturer's photometric data.

(4) The ratio of the highest value of illumination to the lowest value of illumination of the roadway between intersections shall not exceed, for residential classified streets, a ratio of 6:1. However, the illumination levels of intersections may exceed six (6) times the lowest level of illumination elsewhere on the street provided that the uniformity ratio not exceed 6:1 for any portion of the street within 150 feet of the intersection.

(5) a. Luminaires shall be mercury vapor type of 100 watt capacity minimum for post lights, or 175 watt capacity minimum for roadway lights, and rated for 240 volt operation.

b. The luminaire for conventional arm bracket (6' - 0" minimum arm length) mounting shall be similar to the Westinghouse Type OV-15 Series, General Electric M-line Series, or approved equal. Each luminaire shall be equipped with a photo-cell control device. The ballast shall be provided with dual ballast 175 - 250 w. The ballast shall provide reliable lamp starting down to -20 Fahrenheit.

c. The luminaire for upright standards shall be a General Electric PMC-116 Type, Holophane RSL Series 350 or approved equal. The ballast shall be a dual ballast 100-175w. Each luminaire shall be equipped with a photo-cell control device. The ballast shall provide reliable lamp starting down to -20 Fahrenheit.

d. All exterior metal surfaces of the luminaires shall be aluminum finish. All screws, bolts and hardware shall be on non-ferrous material except that where steel parts are required for adequate strength, they shall be either stainless steel, cadmium plated or galvanized. Current carrying parts of the socket shall be nickel-plated or equivalent.

(6) Lamps shall be one of the mercury-vapor types conforming to the following listing.

Wattage	U.S.A.S.I. Code (A.S.A.)	Description	Rated Life	Initial Lumens
100	H38-4JA/DX	Deluxe White	24,000	4,200
175	H39-22KC/DX	Deluxe White	24,000	8,150

(7) a. All poles shall be steel-reinforced concrete, precast butt base or an alternative allowed by the City Engineer. Each pole shall be provided with a hand hole large enough to accommodate the necessary splicing and fuse connector kit for each phase wire. The fuse connector kit shall be Elastimold Style 62, with adapter for 10 ampere cartridge fuse unless otherwise directed.

b. The pole height for standards using arm brackets (6' - 0" minimum arm length) shall not exceed 28' - 0" from finish grade.

c. The pole height for upright standards shall not be less than 15' - 0" from finish grade. Each upright standard shall be provided with pole top adapters for mounting slip-fitter luminaire units.

d. All concrete poles shall have a compressive strength of at least 6500 psi. Steel wire and reinforcing bars shall have an ultimate tensile strength of at least 120,000 psi. Poles shall be manufactured by a centrifugal

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spinning process with the concrete pumped into a polished tapered metal mold. The poles shall be cured by wet steam. Poles shall have a hard, smooth, non-porous surface that is resistant to soil acids, road salts, and attacks of water and frost. Poles shall have a water absorption of not greater than three percent. The poles shall be sufficiently elastic to sustain a tensile load to 440 pounds applied 18 inches down from the top without fracture or noticeable distortion. Poles shall not be installed for at least 15 days after manufacture.

e. Precast Butt Base Poles shall be set in a hole that is approximately 8 inches in diameter greater than the diameter of butt base. Fine stone screenings wet compacted by thoroughly tamping during backfill shall be provided at a minimum of 1' - 0" intervals. The base hole shall flare out approximately 7" from the finish pole base and 18" down from finish grade in order to accommodate this method of wet stone tamping installation. Poles shall have a wire entrance hole 18 inches below the ground or finish grade line.

(8) a. Conductors shall be copper, heat and moisture resistant Types USE or UF insulation, 600 volt rating suitable for use at 60 degrees C. in wet locations. Conductors shall be approved by Underwriters' Laboratories, Inc. No conductor smaller than size #6 AWG shall be used.

b. All direct burial conductors parallel with the pavement shall be run in trenches 6 inches from the street side of the sidewalk or proposed sidewalk, unless otherwise directed by the City Engineer.

c. Rigid galvanized steel conduit (2-inch diameter) shall be installed 24 inches below finished grade under all walks or driveways where direct burial cables are to be installed. Where the electrical service is extended from a utility company transformer pole located on backyard lines, such service extensions shall be installed in a 2-inch diameter rigid galvanized conduit, or heavy-wall bituminized conduit to the street side of the nearest sidewalk or proposed sidewalk.

d. All necessary electrical service materials shall be U.L. approved and installed in accordance with the National Electric Code and Power Company requirements. Service Supply arrangements shall be approved by the City Engineer before approval is due for any proposed design.

(9) a. All cables shall be installed in a 4" wide trench or in a conduit under driveways and walks shall be at a minimum depth of 24 inches.

b. All runs shall be continuous without any splices in the cable and installed from pole handhole to pole handhole or to control cabinets or service disconnect switches. Splices will be permitted only in the bases of poles.

c. A splice connection for copper conductors at the handhold of the pole shall be made with tool compressed sleeve connectors. A solder joint is not permitted.

d. Splices in pole bases for phase wires shall be moisture-proof. It shall be encapsulated by a self-hardening resin in a clear plastic sack or mold.

e. Encapsulation of splices shall be performed in accordance with the manufacturer's instructions, a copy of which shall be submitted for approval before splices are made.

(10) a. Pole cable shall be 600 volt single conductor, solid, soft drawn, 10 guage with a polyvinyl chloride insulation and shall meet ASTM Specification D-734. The cable shall be General Electric SI-58051 Flamenol or approved equal. A single green #10 guage ground wire shall be provided for grounding the luminaire to the base ground rod or ground conductor.

b. Pole cable will be installed from the base of the pole to the luminaire.

(11) a. This work shall be constructed in accordance with the applicable provisions of the Illinois Division of Highways Standard Specifications for Traffic Signals and the following additional requirements. Before the cable is installed in the trench, at least a 2-inch layer of clean sand shall be placed in the bottom of the trench and after the cable has been installed it shall be covered with at least 2 inches of clean sand. The remainder of the trench may be backfilled with excavated material provided, however, that it contains no rocks, glass, concrete, brick or other similar debris.

b. Street or driveway surfaces disturbed by the trenching operation shall be restored as near as possible to their condition prior to their disturbance.

c. Specifications for the replacement of lawns and other landscaped areas shall be submitted to and approved by the City Engineer. These areas shall thereafter be repaired in the manner approved.

(12) After the system has been installed and in the presence of the City Engineer, the system shall be tested, and if any defects are encountered, such defects shall be corrected before final approval is made.

Sec. 35.6 Penalty for Violation.

Whoever shall do work or install any portion of a street light system without securing prior approval from the City Engineer, or whoever shall allow any portion of a street lighting system not in conformance with the provisions of this Ordinance to remain after receiving a ten-day notice to remove the same from

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City property or whoever shall fail within ten days of written notice to restore pavement on landscaped areas or to correct any portion of the lighting system not in conformity with this Ordinance violates this Chapter and upon conviction, shall be fined in accordance with Section 1.6 of the City Code.