

ORDINANCE NO. 729

AN ORDINANCE RELATING TO THE ELECTRICAL CODE
ADOPTING BY REFERENCE THE 1975 NATIONAL
ELECTRICAL CODE, STANDARD OF THE NATIONAL
FIRE PROTECTION ASSOCIATION, 470 ATLANTIC AVENUE,
BOSTON, MASSACHUSETTS 02210, EXCEPT AS AMENDED,
ALTERED, AND DELETED HEREIN; AND, REPEALING
ORDINANCES IN CONFLICT HEREWITH.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GOLDEN, COLORADO:

SECTION 1. Chapter 15.08, Section 15.08.120, UBC Section 303, Table 3B, of the Golden Revised Ordinances of 1965, is hereby repealed and re-enacted as follows:

15.08.120 UBC Section 303, Table 3-B, amended. Electrical permit fees. A fee for each electrical permit shall be paid to the building official as set forth in Table 3-B.

TABLE 3-B ELECTRICAL PERMIT FEES

Fee Schedule "A". This fee schedule is applicable to all residential construction and extensive residential remodeling; fees shall be based on the enclosed living area (unfinished basements and garages to be excluded). Apartments and condominiums shall be based on the enclosed living area of each individual living unit. Fees are as follows:

Enclosed living area not more than 1000 square feet	\$ 7.50
Over 1000 square feet but not more than 1500 square feet	\$10.00
Over 1500 square feet but not more than 2000 square feet	\$15.00
Over 2000 square feet, each additional 100 square feet	\$.25

Fee Schedule "B". This fee schedule is applicable to all commercial and industrial construction, to all work not set forth in Schedules "A" or "C", and to residential minor remodeling (which shall include circuit extensions but exclude the maintenance, repair, or alteration of existing facilities). Fees are based on the valuation of the electrical installation, including fixtures, as follows:

\$300 or less	\$ 6.00
\$301 to \$2,000	\$ 8.00
\$2,001 to \$50,000	\$ 4.00 per \$1,000 valuation
\$50,001 to \$500,000	\$ 50.00 plus \$3.00 per \$1,000 valuation
\$500,001 and over	\$550.00 plus \$2.00 per \$1,000 valuation

Fee Schedule "C". This fee schedule is applicable to the items stated in the fee schedule thereof as follows:

Mobile Home and/or Travel Trailer Parks, per space	\$5.00
Reinspections	\$5.00

SECTION 2. Chapter 15.12, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

CHAPTER 15.12 ELECTRICAL CODE

(1) Section 15.12.010, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.010 National Electric Code adopted by reference. The 1975 National Electrical Code, Standard of the National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts 02210, Copyright 1974, be and the same is hereby adopted by reference in total except as follows in this Chapter, hereinafter referred to as "The NEC."

(2) Section 15.12.011, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.011 NEC Section 90-8 added. Section 90-8 is added to the Electrical Code to read as follows:

Section 90-8 License. No person shall engage in or work at the business, trade or calling of a residential electrician, journeyman electrician, master electrician or electrical contractor in the City of Golden until such person shall have received from the State Electrical Board a license as provided by Volume 5, Title 12, Article 23, Colorado Revised Statutes of 1973.

A person not so licensed shall not engage in or work on any part of any electrical system within any building, structure, area, premise, or use described as commercial or industrial except those persons exempted by Section 12-23-111 of the Colorado Revised Statutes of 1973.

- (3) Section 15.12.012, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.012 NEC Section 90-4 added to. Add to Section 90-4 of the NEC a sentence to read as follows:

The Building Official is hereby authorized and directed to enforce all provision of this code.

- (4) Section 15.12.013, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.013 NEC Section 90-4 added to. Add to Section 90-4 of the NEC a paragraph to read as follows:

In case of emergency, where necessary for safety to persons or property or where electrical equipment may interfere with the work of the Fire Department, the Building Official shall have the authority to disconnect immediately without notice, or cause the immediate disconnection of any electrical equipment.

- (5) Section 15.12.020, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.020 NEC Sections 110-35 thru 110-37 added. Sections 110-35 thru 110-37 are added as follows:

C. Local Installation Requirements.

110-35 Power Company Regulations. Regulations establishing standards for electrical service as published by the Public Service Company of Colorado in their manual "Guide Book for Electric Installations and Use" are herewith adopted by reference. The regulations in the "Guide Book" shall be considered supplementary to the minimum safety provisions of the National Electrical Code.

110-36 Weather Protection and Prior to Installation Approval. Electrical wiring shall not be installed inside of any building until the interiors of such buildings have been physically protected from the weather. Electrical layout schematic drawings and load calculations, when required by the Building Official, shall be submitted to and approved by the Building Official prior to the issuance of an electrical permit.

110-37 Inspection and Meter Release. No electricity supply agency shall render service to any occupancy, building, structure or use within the scope of the National Electrical Code until an electrical inspection has been made and a meter release given to such agency by the Building Official or his designated assistant. Conditions of approval governing the inspection and meter release of the various types of metering situations shall be as follows:

(a) Temporary construction meter. A temporary construction meter shall not be installed until it has been released by the Building Official or his designated assistant. Inspection for

same shall verify that requirements of NEC Article 305 have been satisfied including structural support, grounding, clearances, and safety to user and public. Laxity in the maintenance of the initial requirements of this meter release shall be cause for immediate disconnection of electrical power supply to such meter in accordance with the provisions of the NEC Section 90-4 as amended.

(b) Temporary Meter for Heat. A temporary meter for heat shall not be installed until it has been released by the Building Official or his designated assistant. Inspection for same shall verify that requirements of the NEC Article 305 and NEC Article 230 have been satisfied including grounding, and safety of all energized panels, equipment, and conductors to user, workers, and public by enclosure, separation or insulators. Only one temporary heat meter will be authorized per building and shall be restricted to the energizing of heating circuits and testing building electric facilities.

Maintenance of the initial requirements for a temporary heat meter release shall be the responsibility of both the building contractor and the electrical contractor. Laxity of such maintenance shall be cause for immediate disconnection of the electrical power supply in accordance with the provisions of NEC Section 90-4 as amended. The use of a temporary heat meter shall not exceed 90 days and in no case shall this meter and/or jumpers be used for occupancy.

(c) Final meter. A final meter shall not be installed until it has been released by the Building Official or his designated assistant. Inspection for same shall verify that all requirements of ordinances and codes relative to construction have been satisfied and that the building is eligible for a Certificate of Occupancy.

The Building Official shall have the authority to conditionally release a final meter if all the foregoing requirements have not been met, provided that if such conditions are not corrected within 90 days of the conditional release the Building Official may order such final meter to be removed. A conditional final meter release shall only be made upon written agreement by the building owner to correct such conditions within 90 days of meter release and stating he will hold the City harmless for removal of the final meter in the event such conditions are not corrected.

(6) Section 15.12.030, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.030 NEC Section 110-8 addition. Add to Section 110-8 paragraphs as follows:

All electrical wiring methods used within or on all buildings, structures, areas, premises or uses, including alterations and additions in or on existing buildings, structures, areas, premises, or uses shall be in conformance with the NEC by "Group Occupancy" determined by reference to Section 501 of the Uniform Building Code.

Any wiring method specifically required by the National Electrical Code for a particular use which may be in conflict with the sections added below shall take precedence over the requirements so added:

(a) Group I and J Occupancies. Group I and J (residential) occupancies are defined as dwellings, lodging houses, duplexes, residential garages and carports, sheds, accessory buildings, and premises with a residential use only. Wiring methods for these uses shall conform to the pertinent sections of the NEC governing residential wiring, as well as the following additional requirements:

(1) All exposed ungrounded conductors on non-shielded cable below a 7 foot height above floor, slab, or base shall be enclosed in conduit. Where conduit ends do not terminate in a box and connector, that conduit end shall extend a minimum of 6 inches into any concealed area, shall be mounted to permanent structure with a mounting no weaker than the conduit, and the conduit opening made non-abrasive to conductor or cable.

Exception: Where voltage is less than 50 volts and current is less than 5 amps.

Exception: In crawl spaces or attics.

(2) Residential garages shall not have receptacles, lights or switches lower than 36 inches above foot, slab, or base.

(b) Group H Occupancies. Group H occupancies are defined as multi-family residences and apartment buildings, and for purposes of this section, shall include the mixed occupancy of residential and commercial/industrial uses within the same building and/or premises. Wiring methods for these uses shall conform to the pertinent sections of the NEC governing commercial wiring, as well as the additional requirements of subsections (b1), (c1), (c2), (c3), and (c4) listed below:

(1) All areas, rooms, or uses in a building outside that which is defined as a dwelling unit or apartment dwelling unit shall be designated as of a commercial/industrial nature and shall conform to the NEC governing commercial or industrial wiring; included in those parts of buildings of mixed occupancy which shall be classified as commercial or industrial shall be multi-vehicle garages and carports, stairways, hallways, storage rooms, utility rooms, laundry rooms, mechanical rooms, accessory buildings, crawl spaces, shafts and attics.

(2) Dwelling units of either multi-family residences, apartments or mixed occupancies shall each be considered as a separate residence and shall conform to the pertinent sections of the NEC governing residential wiring, as well as the additional requirements of subsection (A1) listed above. However, the definition and requirements of "service" as given in NEC Article 230, including raceway, conductors, buses, equipment, over current protection and grounding shall be extended up to and including the electric service panel within each dwelling unit or apartment. Each dwelling unit or apartment electric service panel shall have a ground to cold water pipe paralleling the main service ground.

(c) Group B, C, D, J and G Occupancies. Group B, C, D and J (non-residential) occupancies are defined as assembly, educational, day care, hospitals, sanitariums, jails, prisons, reformatories, nurseries, nursing homes, and agricultural buildings, structures, premises, areas or uses. For the purposes of this section, mobile home parks, recreational vehicle parks, and recreational parks, together with accessory buildings, structures, premises, areas and uses associated with same, shall be classified as commercial. Group G occupancies are defined as storage, sales, plants, factories, work shops and accessory buildings, structures, premises, areas and uses which shall be classified as industrial. Both commercial and industrial groups as listed here are differentiated from those listed within subsection (d) below as uses which essentially concern themselves with an environment of non-combustible and non-explosive materials. These uses shall conform to the pertinent sections of the NEC governing commercial or industrial wiring, as well as the following additional requirements.

(1) All conductors and non-shielded cable shall be enclosed within flexible or solid conduit, approved raceway, busways, cable-bus systems, shielded cable and/or approved multi-outlet assemblies.

Exception: Bare ungrounded conductors may be used only where the NEC definitely specifies the use of same.

(2) Flexible conduit or shielded cable shall not be used in place of solid conduit or raceway.

Exception: Where solid conduit or raceway use is impractical, impossible or has conflict with specific requirements of the NEC.

(3) All conduit and raceway systems without a neutral or with a neutral of a potential other than that of ground shall contain a ground conductor.

(4) All driven grounds or earth grounds shall be tested to satisfy the maximum 25 OHM requirement specified in NEC Article 250.

(d) Group A, E, and F Occupancies. Group A, E, and F occupancies are defined as buildings, structures, premises, areas or uses essentially of a hazardous or near hazardous nature, in the vicinity of hazardous use, or are of a high occupant load nature. Group occupancies previously defined may be reclassified into this category by the Building Official if safety warrants would so indicate. These uses shall conform to pertinent sections of the NEC governing commercial and industrial wiring with special emphasis to those requirements of Chapter 5 of the NEC.

(7) Section 15.12.040, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.040 NEC Section 210-19(a) and Section 430-21 added to. Add to Section 210-19(a) and Section 430-21 of the NEC a paragraph to read as follows:

Where ever the wire size of a branch circuit conductor or a motor circuit conductor is specified, and copper, aluminum, or copper clad aluminum conductors are not specified, the wire size shall be considered as copper. Where aluminum or copper clad aluminum is used, the ampacity shall be no less than for the size copper as specified.

(8) Section 15.12.050 is hereby added to Golden Revised Ordinances of 1965 to read as follows:

15.12.050 NEC Section 210-23(a) added to. Add to Section 210-23(a) a paragraph to read as follows:

There shall not be more than ten (10) current consuming outlets, lights, or possible loads connected to a 20 ampere general-use branch circuit, and not more than eight (8) on a 15 ampere general-use branch circuit, nor more than four (4) on a 20 ampere appliance circuit.

(9) Section 15.12.060 is hereby added to Golden Revised Ordinances of 1965 to read as follows:

15.12.060 NEC Section 230-72(c) added to. Add to Section 230-72(c) a paragraph to read as follows:

Service entrance switches or any service equipment shall not be installed within a bathroom, toilet, closet, bedroom, or cabinet not designed for such purpose. Such service equipment may be installed in utility rooms, machinery rooms and storage rooms provided that there is a clear space void of all obstacles and that there are no additional hazards due to location or use of these rooms or areas.

(10) Section 15.12.070, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.070 NEC Section 230-5 added to. Add to Section 230-5 a paragraph to read as follows:

All individual residences (not to include dwelling units within multi-family residence and apartment buildings) hereafter erected or all existing individual residences in or on which electrical service is altered, extended, or remodeled shall be served with a minimum of 100 ampere, three wire service.

- (11) Section 15.12.080, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.080 NEC Section 230-63 partial deletion and added to. Delete from Section 230-63 the exception thereto and add a paragraph to read as follows:

Any section of this code that does not definitely specify service equipment to be ungrounded shall be considered null and void.

- (12) Section 15.12.090, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.090 NEC Section 230-43 added to. Add to Section 230-43 a paragraph to read as follows:

Service entrance conductors shall not be run inside of buildings unless enclosed in approved raceway. Service entrance conductors shall not be run inside of buildings a distance greater than 100 feet without automatic over-current protection on the lead or supply ends. Service entrance conductors run inside of Group H occupancies shall have automatic over-current protection on conductor lead or supply ends.

- (13) Section 15.12.100, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.100 NEC Section 240-80 added to. Add to Section 240-80 a paragraph to read as follows:

Multi-phase circuit breakers that are required to disconnect all ungrounded conductors shall have tie-bars of a type designed and approved for the purpose.

- (14) Section 15.12.110, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.110 NEC Section 210-23(a) added to. Add to Section 210-23(a) a paragraph to read as follows:

When calculating general-use branch circuits for lights, outlets, or possible loads, distribution shall not be on 20 amp circuits where it is possible to use 15 amp circuits.

- (15) Section 15.12.130, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.130 NEC Section 410-16(a) added to. Add to Section 410-16(a) a sentence to read as follows:

In no case shall a fixture be wall or ceiling mounted without screw load displacement devices.

- (16) Section 15.12.140, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.140 NEC Section 210-26(a) added to. Add to Section 210-26(a), second paragraph, a sentence to read as follows:

Any of the aforementioned rooms or areas mentioned above with an access into same shall have a minimum of one light/receptacle combination per 3,000 square feet of floor area or fraction thereof.

- (17) Section 15.12.150, Golden Revised Ordinances of 1965 is hereby repealed and re-enacted as follows:

15.12.150 NEC Section 422-7 added to. Add to Section 422-7 a paragraph to read as follows:

Flexible conduit and shielded cable. Flexible conduit and/or shielded cable shall have ends terminated in approved box and connector or approved flex connector to solid conduit. Free hanging flexible conduit shall be used in conjunction with stranded conductors only.

(18) Section 15.12.160 is hereby added to Golden Revised Ordinances of 1965 to read as follows:

15.12.160 NEC Section 220-15 added to. Add to Section 220-15 a sentence to read as follows:

All one-line electrical drawings and calculations shall contain actual BTU and wattage ratings for fixed electric heating equipment to satisfy the formula: One BTU/HR = 1054.2 watts, or approved label rating.

(19) Section 15.12.170 is hereby added to Golden Revised Ordinances of 1965 to read as follows:

15.12.170 NEC Section 320-4 added. Add Section 320-4 to read as follows:

320-4 Uses Not Permitted. Open wiring shall not be used in commercial garages, theaters, and similar locations, motion picture studios, or hazardous locations.

(20) Section 15.12.180 is hereby added to Golden Revised Ordinances of 1965 to read as follows:

15.12.180 NEC Sections 346-15(d), 347-17(d), and 348-15(a) corrective wording.

In each of these sections change the words "conduit bodies" to "coupling bodies."

SECTION 3. All ordinances or parts or ordinances in conflict herewith are hereby repealed.

Introduced, read and ordered published the 13th day of February, 1975.

Adopted, approved and ordered published the 27th day of March, 1975.

David C. Crawford
Mayor

ATTEST:

Sharon L. Bennetts
City Clerk

Approved as to form:

Daniel T. Moyle, Jr.
City Attorney

I, Sharon L. Bennetts, City Clerk of the City of Golden, Colorado, do hereby certify that the foregoing ordinance was introduced and read at a regular meeting of the City Council of said City, held on the 13th day of February, 1975, and by order of said City Council was published as a proposed ordinance as the law directs more than seven days prior to its passage in the Outlook, legal newspaper; and that on the 27th day of March, 1975, the said proposed ordinance was read and passed by the City Council aforesaid, the said meeting being a regular meeting of said City Council and ordered published in aforesaid newspaper as the law directs.

Witness my hand and official seal of the City of Golden, Colorado, this 28th day of March, A.D., 1975.

(S E A L)

Attest: _____
Sharon L. Bennetts, City Clerk of the
City of Golden, Colorado