ADOPTION OF THE NATIONAL ELECTRICAL CODE, 2005

That a certain code, three (3) copies of which are now on file and have been on file for a period of not less than 21 days in the office of the Village Clerk of the Village of Tinley Park, Cook and Will Counties, Illinois, being entitled and designated the **National Electrical Code 2005,** be and the same is hereby adopted as a portion of the Comprehensive Building Code for the Village of Tinley Park, Cook and Will Counties, Illinois, and each and all of the regulations for the control of buildings and structures as herein provided; and each and all of the regulations, provisions, conditions, and terms of the **National Electrical Code 2005** are hereby referred to, adopted and incorporated herein and hereby made a part hereof as if fully set out herein, except as hereinafter deleted, modified or amended.

The **National Electrical Code 2005** shall set forth the rules and regulations for the installation of all electrical equipment, appliances, and devices or systems in all buildings or structures, except as modified elsewhere in this Tinley Park Comprehensive Building Code Chapter V, Electrical Work.

CHAPTER V- ELECTRICAL WORK

SECTION 500 - ADMINISTRATION

A. The current provisions of the National Electrical Code 2005 (NEC). have been adopted by the Village of Tinley Park and apply to all electrical installations as though fully written and set forth herein, except as specifically noted otherwise in this code.

B. Registration of Contractors

Any contractors engaged in the performance of electrical work within the Village of Tinley shall be currently registered with the State of Illinois, the City of Chicago, or other city, town, or village in accordance with the State of Illinois. Prior to the issuance of any electrical permit, the contractor shall file with the Building Department the registration number, name of authority issuing registration, and current dates of validation.

C. Bond

All contractors performing electrical work within the Village of Tinley Park shall file with the Building Department a surety bond in amount of $20,000.00 secured by a surety company which is acceptable to the Village of Tinley Park, Illinois. Bond shall be payable to the Village and, in effect, guarantee that the contractor will comply with all requirements of applicable Village ordinances and codes.

D. Permits

1. Permits are required for all electrical work including low voltage systems such as communications cable, alarm, security, telephone and other similar type systems.

2. Permits for electrical work will be issued only to duly licensed and bonded electrical contractors. Electrical permit applications must be signed by the electrical contractor, when work is to be done by contract.

3. Qualified homeowners who can demonstrate their qualifications to properly perform such work, to the satisfaction of the electrical inspector may obtain permits to do electrical work on their own place of residence (excluding multi-family units) but they must follow all provisions of the electrical code. Such work will be subject to the inspection and approval of the Chief Electrical Inspector. When work is to be done by owner, the application shall be signed by the owner.

4. In all cases duly licensed and bonded Electrical Contractors shall install electrical services.

E. The Chief Electrical Inspector or the Village Board of Tinley Park shall administer the Electrical Regulations of this Code.

F. Non-Liability for Damages

The electrical regulations of this Code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, selling, offering for sale or installing any electrical wires, appliances, apparatus, construction, or equipment, for damages to anyone injured by any defect therein by reason of the inspection authorized herein or the certificate of inspection issued by the Building Department or Electrical Inspector, nor shall the Village of Tinley Park be held liable for any damages resulting from the enforcement of the electrical regulations of this code.

G. Special Permission to Waive Requirements

The electrical regulations of this Code may be modified or waived by special permission in particular cases where such modification or waiver is specifically permitted or in particular cases where a advancement in the technology of electricity makes such modification or waiver advisable in the best interest of the Village of Tinley Park. Such "Special Permission" shall in all cases be obtained from the Chief Electrical Inspector in writing prior to the commencement of the work.

H. Breaking Seals

The Chief Electrical Inspector or his designee, are hereby empowered to attach to electrical cabinets and equipment any official notice or seal to prevent use of electricity, and it shall be unlawful for any other person to put or attach such seal, or to break, change, destroy, tear, mutilate, cover, or otherwise deface or injure any such official notice or seal posed by an inspector or the section of Electrical Inspection.

I. Use of Permit Issued to Another

It shall be unlawful for any person to install, alter, or repair any electrical wires or apparatus by authority of a permit issued to and for the use of some other person.

J. Permit for Person Not Entitled to One

It shall be unlawful for any registered electrical contractor to secure or furnish a permit for the installation, alteration and repair of electrical wires and apparatus to any person not entitled to such permit under the electrical regulations of this Electrical Code.

K. Purpose and Scope

The purpose of this Code is the practical safeguarding of persons and of buildings and their contents, from electrical hazards arising from the use of electricity for light, heat, power, audio or visual communications of signal transmission of

convenience. It covers the electrical conductors and equipment installed within or on public and private buildings and other premises, including yards, carnival and parking lots, and private industrial substations; also the conductors that supply street lighting, together with the associated equipment necessary to its safe operation.

By specific State of Illinois and Federal Government exemptions it does not cover installations in mines, ships, railway cars, automotive equipment, or the installations or equipment employed by a railway, railroad, electric or communication utility in the exercise of its function as a utility, and located outdoors or in buildings used exclusively for that purpose.

The provisions of this Code constitute a minimum standard. Compliance therewith and proper maintenance will result in an installation reasonably free from hazard but not necessarily efficient or convenient. This Code is to be regarded neither as a design, specification nor an instruction manual for untrained persons. Good service and satisfactory results will often require larger sizes of wire, more branch circuits, and better types of equipment than the minimum which is here specified.

Disturbance of Existing Wires: It shall be unlawful for any person in anyway to cut, disturb, alter or change any electrical wiring or to permit electrical wiring to be cut, disturbed, altered or changed unless done in conformity with the electrical regulations of this Code.

It shall be unlawful for any person in any way to cut, alter, disturb or change any electrical, appliance, device or equipment or to permit any electrical, appliances, devices of equipment to be cut, altered, disturbed or changed in any manner to render it unsafe or not in accordance with its approved use.

Enforcement and Interpretation. This Code is an integral part of the Municipal ordinances and as such its provisions are mandatory and are enforceable by the electrical inspection department in exercising its legal jurisdiction over electrical installation.
The Chief Electrical Inspector, supervising such enforcement of the Code, has the responsibility for making interpretations of the rules, for deciding upon the approval of equipment and materials, and for granting special permission contemplated in a number of rules.

SECTION 501 – APPROVED EQUIPMENT & INSTALLATION METHODS:

A. The National Electrical Code 2005 is hereby adopted with additions, insertions, deletions, and or changes as set out in the Chapter V of this code is hereby the electrical code of Tinley Park.

B. Only that electrical equipment, appliances and devices, which are listed and approved for use by an approved, independent testing agency (U.L. or C.S.A.) shall be installed in the Village of Tinley Park.

C. All electrical wiring shall be copper. No aluminum or copper clad aluminum wire shall be installed in any electrical installation without written permission from the chief electrical inspector prior to installation.

Exception: Service feeders owned and maintained by Commonwealth Edison.

D. Where rework or rewiring of any building or structure is 50% or more, then all wiring in the entire building shall be as per code.

E. A conduit shall be installed with pull wire for the outside water meter read out. The conduit shall be installed within 6' of the water meter and run to the area by the gas meter, and flush with the outside finished wall. No pull box(es) or pulling type fittings shall be installed in this conduit system without the approval of the Public Works Department.

F. It is the expressed intent of this code that NEC Article 320 to and including Article 343, Article 347, 351 Part B, 352 Part B, 362 Part B, and 363 not be adopted.

All conductors shall be installed in an approved metal raceway.

G. Electrical metallic tubing shall not be installed outside, underground, or in concrete that is in contact with earth.

H. All services shall be ridged metal conduit or intermediate conduit.

I. It is the expressed intent of this code that NEC Article 347-2(a) not be adopted.

Ridged non-metallic conduit may be used only underground or in concrete. Note: Schedule 80 is required when installed under any vehicular traffic.

J. NEC Article 210-4(D) shall be amended to read as:

All three Phase 208v or 240v system shall have phases marked black for A Phase, red for B Phase, and blue for C Phase.

All three Phase 277v or 480v system shall have the phases marked brown for A Phase, orange for B Phase, and yellow for C Phase.

K. NEC 210-8 shall be amended to apply to all structures.

L. NEC 210-8A (5) shall be amended to read:

All general use receptacles installed within 6' of plumbing fixtures shall be GFIC protected.

M. It is the expressed intent of this code that NEC Article 300-4 (A-l) (Exception) not be adopted. All holes will be drilled.

N. NEC Article 300-13B shall be amended to read:

In branch circuits the continuity of a conductor shall not be dependant upon device connections, such as lamp holders, receptacles, etc., where removal of the device would interrupt continuity.

O. NEC Article 450-21A shall be amended to read:

Dry-type transformers installed indoors shall be installed at a minimum of 7 feet above the finished floor, (or) Dry-type transformer installed indoors shall have a physical separation of 2 feet vertically in all directions and 4 feet horizontally.

P. It is the expressed intent of this code that NEC Articles 604 and 605 be deleted.

Q. All motor of ½ horsepower or larger, or any heating system, sump pumps and or ejector pumps shall be on its own circuit.

R. Each tenant space shall have direct access to the breakers or fuses that protects all electrical devices in that tenant unit. (Direct access means a common area that has no locks or the tenant can get to the panel or switchboard without going through another tenant space.)

S. When a sump pump or ejector pump is installed in an area not illuminated, a light shall be provided.

T. All fire alarm systems shall have a lock out device on the over-current device.

U. In buildings over two floors a special purpose, non-energized inlet (No. HUBBLE 47CM16 or equal) shall be installed outside the main entrance two feet above finished grade and no more than five feet from the front entrance. This outlet shall be visible from the entrance (no obstruction shall be located in front of this inlet as bushes, decorations and the like). This special purpose inlet shall be wired with a minimum wire size of #12 copper wire to opening(s) with outlet (No. HUBBLE 4710 or equal). Install outlets at each floor level so as to provide at least one such outlet in all stairwells at each floor level and no more than one hundred feet of travel distance from any point at each floor level to at least one such outlet.

V. If a low voltage fire alarm system is used, wiring shall be piped in walls only, with free air in ceiling with D rings to support wires.

W. Wiring

1. All wiring, fittings and electrical materials not in use shall be removed.

2. All electrical service must have grounding bushings on both ends.

X. GFCI Receptacles

1. GFCI protection is required on recessed can lights over tubs and showers.

2. Double basin bathroom sinks require GFCI receptacles on both ends and within 36 inches of a basin.

3. All bathroom GFCI outlets must be on a separate circuit.

4. GFCI type outlets must be used on all countertop height outlets.

Y. All electrical piping on the inside is required to be in rigid conduit in slab. PVC Schedule 80 can be used on the outside.

Z. Any electrical equipment installed in the public right of way will require a permit and a signed waiver prior to installation..

SECTION 502 – SINGLE FAMILY & MULTI FAMILY DWELLINGS:

A. Smoke detectors shall be installed according to State codes with the addition of:

1. Smoke detector shall be dual voltage type (120V with battery back-up) and wired in series are required on all levels, and in every bedroom.

2. 120V smoke detector shall be installed by all heating units in unoccupied areas (attics, crawl spaces, basements, etc.).

3. Conduits to smoke detector shall be sealed to avoid condensation problems in detector.

4. Carbon monoxide alarm detectors are required effective January 1, 2007 in all new buildings containing bedrooms and sleeping facilities as required by Public Act 094-0741 based on the following criteria:

a. Every dwelling unit must be equipped with at least one operable carbon monoxide alarm within 15 feet of every room used for sleeping purposes.

b. The alarm may be combined with smoke detecting devices provided the unit complies with respective standards and the alarm differentiates the hazard.

c. A dwelling unit means a room or suite of rooms used for human habitation, and includes single family residences, multiple family residences, and mixed use buildings.

d. If a structure contains more than one dwelling unit an alarm must be installed within 15 feet of every sleeping room in each dwelling unit.

e. The owner must supply and install all required alarms. A landlord must ensure that the alarms are operable on the date of initiation of a lease. The tenant is responsible for testing, battery replacement and maintaining the alarm after the lease commences.

f. A landlord is required to furnish one tenant per dwelling unit with written information regarding alarm testing and maintenance.

g. Willful failure to install or maintain in operating condition any alarm is a Class B criminal misdemeanor

B. Stairways, halls, passageways, corridors, garages, and rooms accessible by more then one entry or exit shall be lit by a ceiling light or lights controlled by three-way or four-way switch.

C. Storage space of 5 sq. ft. or more shall be illuminated.

D. In dwelling unit over 2200 square feet or larger a 200 amp service shall be required. All dwelling units under 2200 square feet shall have a minimum of a 125 amp service.

EXCEPTION: Condominiums 1800 square feet or less may be 100 amp.

E. Service upgrades and/or service changes will required:

1. A minimum of 100 amp service.

2. GFCI protected receptacles shall be required as per NEC 2005.

3. 115V smoke detectors shall be installed as per code.

4. No panel shall be more than 80% full.

F. All attic fixtures shall be installed before rough inspection.

G. All light fixtures shall have at least one light bulb installed for final inspection.

H. All single-family dwelling units shall have front and rear electrically operated doorbells.

I. Multi-family dwelling unit shall have an electrically operated remote door latch switching system.

J. All garages shall be required to be on its own circuits (attached or unattached).

SECTION 503 – EMERGENCY LIGHTING:

A. Lighting of Exit Ways. Adequate emergency lighting shall be installed and maintained in buildings of all types of occupancy, except in one and two family dwellings.

B. See, CHAPTER VII Fire Prevention of this code.

C. See NEC 2005 Section 1011 - Exit Signs and Lights.

D. See Life Safety Code Handbook Section 5-10 - Exit Marking.

E. See International Fire Code 2006 Section 3107 Signs and Lighting.

F. In multi-story buildings of over 2 floors a special purpose, non-energized, inlet Hubble # 47CM16 or equal shall be installed outside the main entrance no more than three feet above grade and no more than five feet from the main entrance. There shall be no obstructions in front of this inlet such as bushes, decorations, or the like. This inlet shall have an identifying water-proof cover. This special purpose inlet shall be wired with No. 12 copper wire in a ½" conduit to an opening with outlet, Hubble # 4710 or equal. Install outlets at each floor level so as to provide at least one such outlet in all stairwells at each floor level and no more than one hundred feet of travel distance from any point at each floor level to at least one such outlet.

G. All provisions of this Code apply to single and multi-family residence.

SECTION 504 –RESIDENTIAL STORAGE GARAGE & SIMILAR BUILDINGS:

A. Private, or residential garages shall have not less than one (1) ceiling light, one (1) switch and one (1) receptacle. The garage or building shall be on a separate circuit.

B. The electrical feeder or branch circuit to garage shall be underground (in threaded galvanized conduit not less than 6" below finished grade). If direct burial cable is used a non-current carrying bonding conductor shall be connected between the supply cabinet and the first junction box in the garage, and shall be not less than 24" below finished grade. Conduit and/or cable run underground shall not be covered until inspected and approved by the electrical inspector.
If direct burial cable is used it shall be enclosed in threaded galvanized conduit where it bends to come up out of the trench. Bushings shall be used at the conduit end where the cable enters or exits the conduit.

END OF CHAPTER V