ORDINANCE NO. _____
UPPER MERION TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

AN ORDINANCE OF THE TOWNSHIP OF UPPER MERION, MONTGOMERY COUNTY, PENNSYLVANIA AMENDING CHAPTER 165, ZONING, SECTION 165-5, WORD USAGE, DEFINITIONS, TO ADD DEFINITIONS RELATED TO ELECTRIC VEHICLES AND ELECTRIC VEHICLE CHARGING STATIONS; AND AMENDING CHAPTER 165, ARTICLE XXXI, GENERAL REGULATIONS, TO PROVIDE NEW SECTIONS ESTABLISHING REGULATIONS ON THE PLACEMENT OF AND REQUIREMENTS FOR ELECTRIC VEHICLE CHARGING STATIONS

WHEREAS, the Pennsylvania Second Class Township Code and the Pennsylvania Municipalities Planning Code, 53 P.S. § 10101, *et seq.,* authorizes the Board of Supervisors of Upper Merion Township ("Board") to make, amend, and adopt ordinances that are consistent with the constitution and laws of the Commonwealth when necessary for the proper management, care and control of Upper Merion Township ("Township") and the maintenance of peace, good government, health and welfare of the Township and its citizens;

WHEREAS, the Board desires to advance, foster, and promote national, commonwealth and/or Township goals and policies that transition the use of fossil fuels to 100% renewable energy sources and encourage net-zero greenhouse gas emissions;

WHEREAS, to further such goals, the Township desires to implement policies that encourage the use of electric vehicles instead of gasoline powered vehicles within the Township;

WHEREAS, the use of electric vehicles is becoming more prevalent in and around the Township, and the Township desires to plan for the parking and charging of electric vehicles;

WHEREAS, electric vehicles are commonly powered by an electric motor that uses energy stored in batteries that are charged by plugging the vehicle into an electric power source;

WHEREAS, there has been documented instances of electric vehicle batteries, including lithium-ion batteries, overheating and causing thermal runaway, combustion, fires, and explosions;

WHEREAS, in many instances, thermal runaway, and the resulting electric vehicle fire, occurs while the vehicle is parked and the electric vehicle's battery is charging;

WHEREAS, when thermal runaway occurs, the fire is driven by a sustained chemical reaction that does not respond to regular firefighting efforts. For example, a battery fire in an electric vehicle could take up to twenty-four (24) hours and require at least 2,600+ gallons of water to extinguish. Further, there is an increased risk of the fire reigniting due to the battery's stored energy;

WHEREAS, in addition to the length of the fire, the fire tends to burn at a significantly higher temperature. Namely, electric vehicles typically burn at approximately 5,000 degrees Fahrenheit, whereas a gasoline-powered vehicles typically burn at approximately 1,500 degrees Fahrenheit;

WHEREAS, due to the difficulties in extinguishing an electric vehicle fire and the resulting heat, surrounding structures and combustible materials are at an increased risk of ignition from the fire, which may cause structural instability and a faster spread of the fire. In addition, electric vehicle fires occurring inside of structures may not be sufficiently accessible by fire personnel to the extent required to readily extinguish such an enduring and intense fire;

WHEREAS, current fire sprinkler protection is not designed to meet the hazards caused by electric vehicle fires and may provide a false sense of security;

WHEREAS, the Board is committed to adapting Electric Vehicle Charging Station zoning code requirements as fire suppression technology improves;

WHEREAS, for the above reasons, the Board desires to regulate the placement and requirements of Electric Vehicle Charging Stations to minimize the increased risks and damage that comes from an electric vehicle fire, and to better maintain the peace, good government, health, safety and welfare of the Township and its citizens;

WHEREAS, the Board has met the procedural requirements of the Pennsylvania Municipalities Planning Code, for the adoption of the proposed ordinance, including advertising, submission to the planning commissions, and holding a public hearing; and

WHEREAS, the Board, after due consideration of the proposed ordinance at a duly advertised public hearing, has determined that the health, safety and general welfare of the residents and guests of the Township will be served by this amendment of the Upper Merion Township Zoning Code as set forth below:

NOW, THEREFORE, BE IT ORDAINED AND ENACTED by the Board of Supervisors of Upper Merion Township, Montgomery County, Pennsylvania, as follows:

SECTION I: CODE AMENDMENTS. The Upper Merion Township Code is hereby amended as follows:

A. Chapter 165, Section 165-5, Word usage, Definitions, shall be amended to add the following definitions:

ELECTRIC VEHICLE (EV)
A motor vehicle that derives all or part of its power from electricity received by plugging the vehicle into an outlet and storing electricity in its batteries. EVs include, but are not limited, to all electric vehicles and plug-in hybrid electric vehicles.

ELECTRIC VEHICLE CHARGING STATION (EVCS)
A public or private parking space that is served by battery charging station equipment, including any electrical component, assembly, or cluster of component assemblies, that is designed to, or has a primary purpose of, the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an EV.

LEVEL 1 ELECTRIC VEHICLE CHARGING STATION
An electric vehicle charging station that operates on a 15 to 20 amp breaker on a 120 volt AC circuit

LEVEL 2 ELECTRIC VEHICLE CHARGING STATION
An electric vehicle charging station that operates on a 40 to 100 amp breaker on a 220 or 240 volt AC circuit

LEVEL 3 ELECTRIC VEHICLE CHARGING STATION
An electric vehicle charging station that operates on a 60 amp or higher breaker on a 480 volt or higher three phase circuit with special grounding equipment. Level 3 stations can also be referred to as rapid charging stations that are typically characterized by industrial grade electrical outputs that allow for faster recharging of electric vehicles.

SURFACE PARKING LOT
Parking which is not enclosed or created by a structure and is an area 'at grade,' or on ground level.

STRUCTURED PARKING LOT
Parking which is an above-grade, ramp access, open-air structure specifically designed to accommodate vehicle parking, a below-grade structure specifically designed to accommodate vehicle parking or on-grade parking that is sheltered under a building that is elevated on piers.

B. Chapter 165, Article XXXI, General Regulations, shall be amended to provide for a new Section 165-219.10, to provide as follows:

§165-219.10. **Placement of Electric Vehicle Charging Stations.**

A. An EVCS providing a Level 3 charge, or an EVCS providing a 480+ volt charging outlet, shall not be installed inside or under any structures or buildings, or inside, under, or on the top of any parking garage or parking structure.

B. In a surface parking lot, the entirety of an EVCS providing a Level 2 or Level 3 charge, including the vehicle parking space area, shall be separate from the following materials and structures by the defined distance:

Item	**Distance (ft)**
Means of Ingress/Egress or Emergency Exit Pathway	50
Buildings/Structures	25
Utility Poles	25
Utility Distribution Infrastructure deemed to Pose a Potential Public Safety Hazard	25
Fuel Tank or Gas Pump	25
Electrical Meters, Gas Meters, or Gas Pipes	25
Trees	10
Ground Vegetation or Mulching[1]	5

C. In a structured parking lot, the entirety of an EVCS providing a Level 2 charge, including the vehicle parking space area, shall be separate from the following materials and structures by the defined distance:

[1] Not including grass

Item	Distance (ft)
Means of Ingress/Egress or Emergency Exit Pathway	50
Utility Poles	25
Utility Distribution Infrastructure deemed to Pose a Potential Public Safety Hazard	25
Electrical Meters, Gas Meters, or Gas Pipes	25

D. All Level 2 and Level 3 EVCS shall be installed at parking spaces with at least a 9.5' x 19' parking stall.

E. All Level 2 and Level 3 EVCS shall not be installed under a canopy.

F. All Level 2 and Level 3 EVCS shall include the following information: voltage and amperage levels, hours of operation, tow-away provisions, usage fees, safety information and contact information for reporting when the EVCS is not operating or other problems.

G. All Level 2 and Level 3 EVCS equipment shall be separated from associated parking spaces by curb stops, curbing, or bollards to protect the EVCS from errant vehicles and snowplows.

H. An emergency disconnect approved by the Township's Fire Code Official shall be installed a minimum of 25 feet from the EVCS that shall shut off all electrical power to the associated EVCS(s). The emergency disconnect switch shall contain a readily legible sign that provides "Fire Department Use Only - Electric Vehicle Charger Shutoff."

I. These subsection requirements shall apply to parking and loading areas for all non-residential buildings and multifamily dwellings and shall not apply to single-family or two-family dwelling types.

C. Chapter 165, Article XXXI, General Regulations, shall be amended to provide for a new Section 165-219.11, to provide as follows:

§165-219.11. **Permitting Process of Electric Vehicle Charging Stations.**

A. All EVCS shall obtain an approved Electric Vehicle Charger Permit from the Township prior to installation or upgrade in voltage. The electrical installation/upgrade shall be approved and accepted by Upper Merion

Township Code Inspectors and an approved Certified Registered Electrical Inspection Agency.

B. EVCS Plans must show compliance for voltage drops, a load study, and wiring methods in accordance with applicable NEC/NFPA provisions.

C. All proposed EVCS in standalone parking structures shall provide an NFPA 13 compliant automatic fire sprinkler system that protects Ordinary Hazard (Group 2) with a Sprinkler Density of 0.2/1500 or greater. The design requirements shall be for the entire parking structure. The design requirements shall be approved by the Township Fire Chief or Fire Marshal.

D. All proposed EVCS in parking structures located under a building shall be protected with an NFPA 13 compliant automatic fire sprinkler system protecting Ordinary Hazard (Group 2) classification with Sprinkler Density of 0.2/1500 or greater. An automatic smoke evacuation system shall be installed, that activates when smoke is detected by a fire alarm smoke detection device inside the parking structure. The smoke evacuation system shall have a fire department override switch that can turn on or off the smoke evacuation system as needed by the fire department. The design requirements shall be for the entire parking structure. The design requirements shall be approved by the Township Fire Chief or Fire Marshal.

E. All existing EVCS installed in standalone parking structures without an approved permit from the Township shall retrofit the existing automatic fire sprinkler system to comply with a design requirement of protecting Ordinary Hazard (Group 2) with a Sprinkler Density of 0.2/1500 or greater. The design requirements shall be for the entire parking structure. The design requirements shall be approved by the Township Fire Chief or Fire Marshal.

F. All existing EVCS in parking structures located under a building without an approved permit from the Township shall retrofit the existing automatic fire sprinkler system to comply with a design requirement of protecting Ordinary Hazard (Group 2) classification with Sprinkler Density of 0.2/1500 or greater. An automatic smoke evacuation system shall be installed, that activates when smoke is detected by a fire alarm smoke detection device inside the parking structure. The smoke evacuation system shall have a fire department override switch that can turn on or off the smoke evacuation system as needed by the fire department. The design requirements shall be for the entire parking structure. The design requirements shall be approved by the Township Fire Chief or Fire Marshal.

SECTION II: REPEALER. All Ordinances or parts of Ordinances inconsistent herewith or in conflict with any of the specific terms enacted hereby, to the extent of said inconsistencies or conflicts, are hereby specifically repealed.

SECTION III: REVISIONS. The Upper Merion Township Board of Supervisors does hereby reserve the right, from time to time, to adopt modifications of, supplements to, or amendments of its Ordinance, including this provision.

SECTION IV: SEVERABILITY. If any section, sentence, clause, phrase or word of this Ordinance shall be declared illegal, invalid or unconstitutional by any Court of competent jurisdiction, such declaration shall not prevent, preclude or otherwise foreclose enforcement of any of the remaining portions of this Ordinance.

SECTION V: EFFECTIVE DATE. This amendment shall become effective five (5) days after date of adoption.

SECTION VI: FAILURE TO ENFORCE NOT A WAIVER. The failure of Upper Merion Township to enforce any provision of this Ordinance shall not constitute a waiver by the Township of its rights of future enforcement hereunder.

ORDAINED AND ENACTED by the Board of Supervisors for Upper Merion Township, Montgomery County, Pennsylvania, this _____ day of _____, 2024.

ATTEST:

UPPER MERION TOWNSHIP
BOARD OF SUPERVISORS:

__ By:

Anthony Hamaday, Township Secretary

Tina Garzillo, Chairperson