



city commission agenda

November 11,
2019
2:30 PM
Commission
Chamber

mayor & commissioners

seat 1
Gregory Seidel

seat 2
Sarah Sprinkel

Mayor
Steve Leary

seat 3
Carolyn Cooper

seat 4
Todd Weaver

1. Electric Vehicle Readiness Ordinance

a. Electric Vehicle Ordinance

TIMELINE

12:00 -1:30 p.m. Electric Vehicles Ride and Drive
(City Staff)

1:30 - 2:30 p.m. Electric Vehicles Ride and Drive
(City Commissioners)

2:30 - 3:30 p.m. Electric Vehicle Ordinance Work
Session

Appeals and Assistance

"If a person decides to appeal any decision made by the Commission with respect to any matter considered at such meeting or hearing, he/she will need a record of the proceedings, and that, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based." (F.S. 286.0105)

"Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office (407-599-3277) at least 48 hours in advance of the meeting."



city commission **agenda item**

item type	Electric Vehicle Readiness Ordinance	meeting date	11/11/2019
prepared by	Sustainability	approved by	
board approval	final vote		
strategic objective	Exceptional Quality of Life, Intelligent Growth and Development, Investment in Public Assets and Infrastructure, Fiscal Stewardship, Public Health and Safety		

subject

Electric Vehicle Ordinance

TIMELINE

12:00 - 1:30 p.m. Electric Vehicles Ride and Drive (City Staff)

1:30 - 2:30 p.m. Electric Vehicles Ride and Drive (City Commissioners)

2:30 - 3:30 p.m. Electric Vehicle Ordinance Work Session

motion / recommendation

Recommendation to move forward with the public hearing process to adopt ordinance. Electric vehicles produce fewer emissions, resulting in improved air quality, reduction of carbon emissions, quieter and more livable streets; increase electric utility revenue; and are consistent with the City's Vision and Sustainability Action Plan goals.

background

The City of Winter Park's Off-Street Parking and Loading Regulations portion of the Land Development Code does not currently contain provisions for off-street parking facility requirements for electric vehicles. According to the U.S. Department of Energy, the benefits of electric vehicles include improved air quality, reduction of carbon emissions, quieter and more livable streets, and decreased dependency on fossil fuels. Florida ranks within the top five states nationally for sales of electric vehicles. The number of EVs on the road is projected to reach 18.7 million in 2030, about 7 percent of the vehicles expected to be on U.S. roads in 2030. A significant number of industry stakeholders are urging electric utilities to support the buildout of electric vehicle infrastructure to aid the development of electric vehicle usage which in turn will decarbonize the transportation sector, promote energy independence, and increase electric retail sales resulting in a net benefit to all ratepayers. The installation of electric vehicle charging infrastructure is made cost effective when the infrastructure is installed

during the initial construction phase as opposed to retrofitting existing buildings to accommodate the new electrical equipment. The proposed amendment is consistent with the City's Vision of Winter Park as the city of arts and culture, cherishing its

traditional scale and charm while building a healthy and sustainable future for all generations. It is also consistent and furthers the City's Sustainability Action Plan.

alternatives / other considerations

fiscal impact

ATTACHMENTS:

Description	Upload Date	Type
EV Ordinance Work Session Presentation	11/3/2019	Presentation
Draft Ordinance - Local Technical Amendment	11/3/2019	Ordinance
Draft Ordinance - Land Development Code	11/3/2019	Ordinance

EV Ordinance Workshop

Electric Vehicle (EV) Background



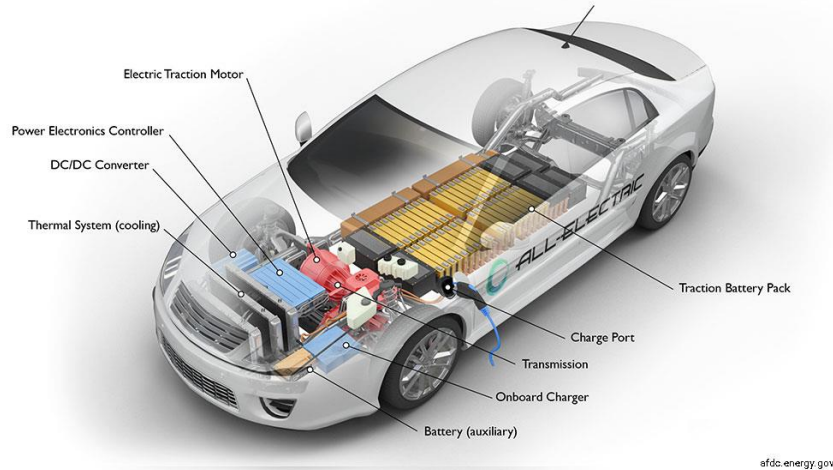
- Over 38,000 EVs are currently registered in the State of Florida, with nearly half of those vehicles being in the Central Florida Region
- The number of EVs on the road is projected to reach 18.7 million in 2030, this about 7 percent of the 259 million vehicles expected to be on U.S. roads in 2030
- Annual sales of EVs will exceed 3.5 million vehicles in 2030, reaching more than 20 percent of annual vehicle sales in 2030
- To date, the majority of EV charging occurs at home. However, having charging infrastructure at workplaces or in public settings allows EV owners to drive more miles on electric, enables longer trips, and reduces range anxiety



Electric Vehicles 101



All-Electric Vehicle



All-electric vehicles (EVs) use a battery pack to store the electrical energy that powers the motor. EV batteries are charged by plugging the vehicle in to an electric power source.

AC Level 1 Charging

2 to 5 miles of range per
1 hour of charging



J1772 charge port

AC Level 1 equipment (often referred to simply as Level 1) provides charging through a 120 volt (V) AC plug. Most, if not all, plug-in electric vehicles (PEVs) will come with an AC Level 1 cordset, so no additional charging equipment is required. On one end of the cord is a standard **NEMA** connector, (for example, a NEMA 5-15, which is a common three-prong household plug) and on the other end is an SAE J1772 standard connector. The SAE J1772 connector plugs in to the car's J1772 charge port, and the NEMA connector plugs in to a standard **NEMA** wall outlet.

AC Level 1 is typically used for charging when there is only a 120V outlet available but can easily provide charging for all of a driver's needs. For example, 8 hours of charging at 120V can replenish about 40 miles of electric range for a mid-size PEV.

AC Level 2 Charging

10 to 20 miles of range per
1 hour of charging



J1772 charge port

AC Level 2 equipment (often referred to simply as Level 2) offers charging through 240V (typical in residential applications) or 208V (typical in commercial applications) electrical service. Most homes have 240V service available, and because AC Level 2 equipment can charge a typical EV battery overnight, it will commonly be installed at EV owners' homes for **home charging**. Level 2 equipment is also commonly used for **public charging**. This charging option can operate at up to 80 amperes and 19.2 kW. However, most residential AC Level 2 equipment operates at lower power. Many of these units operate at up to 30 amperes, delivering 7.2 kW of power. These units require a dedicated 40-amp circuit.

AC Level 2 equipment uses the same SAE J1772 connector and charge port that Level 1 equipment uses. All commercially available PEVs have the ability to charge using AC Level 1 and AC Level 2 charging equipment. Although Tesla vehicles do not have a J1772 charge port, Tesla does sell an adapter.

DC Fast Charging

60 to 80 miles of range per
20 minutes of charging



J1772 combo CHAdeMO Tesla combo

Direct-current (DC) fast charging equipment, sometimes called DC Level 2 (typically 208/480V AC three-phase input), enables rapid charging along heavy traffic corridors at installed stations. There are three types of DC fast charging systems, depending on the type of charge port on the vehicle: a J1772 combo, CHAdeMO, or Tesla.

The **J1772 combo** (also known as the combined charging system or CCS) connector is used by Chevrolet and BMW and is unique because a driver can use the same charge port when charging with Level 1, 2, or DC Fast equipment. The only difference is that the DC Fast Charge connector has two additional bottom pins.

The **CHAdeMO** connector is the most common of the three connector types and is used by Nissan, Mitsubishi, and Toyota.

Tesla vehicles have a unique charge port and connector that works for all their charging options including their fast charging option, called a supercharger.

Source: U.S. Department of Energy. Alternative Fuels Data Center.

Electric Vehicle (EV) Benefits



- Produce Fewer Emissions
 - Zero Direct, Tail-Pipe (improve local air quality)
 - Lower Life Cycle Emissions (electricity fuel/RE mix)
- Quieter and more livable streets
- Energy Security (U.S. produced energy)
- Increased utility revenue
- Fuel and maintenance cost savings to drivers (stable rates)
- Consistent with the City's Vision and Sustainability Goals
- Policies which reduce pollutants in the air ultimately protect public health, safety and welfare of residents and visitors



Volkswagen Settlement



- **Florida's Share of the \$11 billion dollar VW settlement is \$166 million.**
- **Florida's Draft Plan released in June 2019**
- **The primary goal of the Mitigation Plan is to reduce emissions of NO_x (oxides of nitrogen), particulate matter, and hazardous air pollutants in areas where people live, work, and visit.**
- **Factors**
 - **Prioritizing projects that replace eligible units with electric-powered and/or alternative-fueled units**
 - **Identifying the areas in Florida where the largest number of people are impacted by higher levels of emissions from diesel-powered vehicles and equipment; and**
 - **Identifying mitigation projects that achieve the lowest cost per ton of pollutants reduced.**

Eligible Mitigation Action	Allocation
School, Transit, and Shuttle Buses	70%
Light-Duty ZEV Supply Equipment	15% (Maximum Allowable)
Diesel Emissions Reduction Act (DERA)	15%

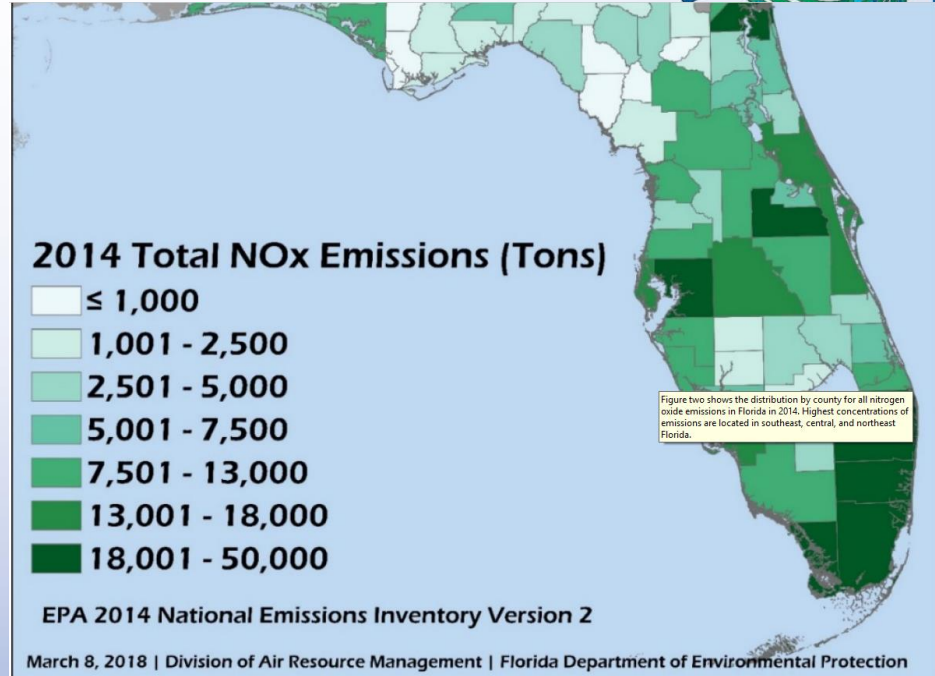
Volkswagen Settlement



- **Additional requirements**
 - **Inform the public on key elements of the Final Settlement Agreement**
 - **Provide details on air quality in Florida relevant to the air quality improvement objectives of the Final Settlement Agreement.**

Emissions of NO_x from Mobile Diesel Sources

County	Total NO _x (TPY)
Miami-Dade	15,646
Monroe	14,699
Broward	11,944
Palm Beach	11,698
Hillsborough	11,160
Orange	9,205
Duval	8,608
Lee	6,832
Pinellas	6,044
Brevard	5,455



Volkswagen Settlement

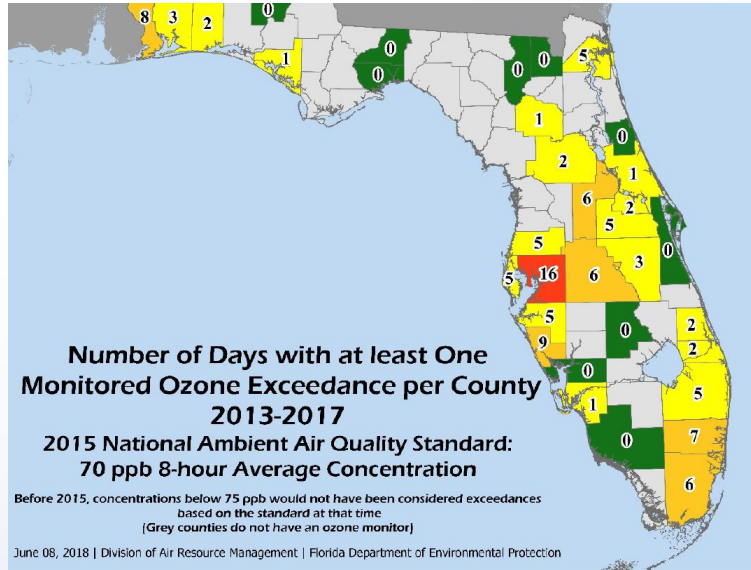


Figure 13. Emissions Benefits Estimate Based on Selected Eligible Mitigation Actions

NO _x Emissions Benefit in Tons Per Year (TPY) Based on Possible Cost-Share Amounts							
Unit Type (Assuming 100% Funding Within Each Category)	Unit Cost	100% Cost-Share (Public)		50% Split Share (Public)			
		Number of New Units	TPY	Cost/Ton/Year	Number of New Units	TPY	Cost/Ton/Year
School Bus Electric Replacement (70% or \$116.4M)	\$350,000	332	41	\$2,874,000	665	81	\$1,434,674
School Bus Diesel Replacement (70% or \$116.4M)	\$100,000	1163	142	\$820,000	2327	284	\$409,995
Transit Bus Electric Replacement (70% or \$116.4M)	\$900,000	129	114	\$1,023,000	258	228	\$511,501
Transit Bus Diesel Replacement (70% or \$116.4M)	\$400,000	290	241	\$482,000	581	483	\$240,788

Volkswagen Settlement Regional Utility Discussion



RECHARGE MOBILITY HUB

OUC
The Reliable One





Electric Vehicle (EV) Ordinances



Date Passed	Jurisdiction	Ordinance	Code Section(s)	Exemptions	EV Charging Station Infrastructure Requirement			EV Charging Station Installation Requirement	
					Single Family Residential	Multi-family Residential	Commercial	Multi-family Residential	Commercial
03/11/14	Surfside, FL	14-1617	Zoning, Off-street Parking			MF with ≥20 units , must provide access to 220 volt capability throughout the garage to offer charging opportunities to residents and guests as needed.	Hotels with ≥20 units , must provide access to 220 volt capability throughout the garage to offer charging opportunities to residents and guests as needed.		
1/13/16	Miami Beach, FL	2016-3988	Zoning, Off-street Parking	Single-family		MF with ≥20 units must install & provide access to electrical power supply rated ≥240 volts	Hotels with ≥20 units must install & provide access to electrical power supply rated ≥240 volts	If ≥20 parking spaces required, min. of 2% of spaces (min. of 1 parking space) must be equipped with, at a min., Level-2 EV charging station Fee in Lieu Option: \$8,000 per space not provided	If ≥20 parking spaces required, min. of 2% of spaces (min. of 1 parking space) must be equipped with, at a min., Level-2 EV charging station Fee in Lieu Option: \$8,000 per space not provided
01/20/17	Hollywood, FL	O-2016-02	Building, Mandatory Green Building Practices		Infrastructure necessary for future installation of an EV Charging Station. Minimally, an empty 3/4 inch raceway from the branch circuit panel board to a location in the garage or a designated parking with two-gang junction box with a blank plate or a fully functional electric vehicle charging station may be installed.	Infrastructure necessary for future installation of an EV Charging Station. Minimally, an empty 3/4 inch raceway from the branch circuit panel board to a location in the garage or a designated parking with two-gang junction box with a blank plate or a fully functional electric vehicle charging station may be installed.	Infrastructure necessary for future installation of an EV Charging station. Minimally, an empty 3/4 inch raceway from the branch circuit panel board to a location in the garage or a designated parking with two-gang junction box with a blank plate or a fully functional electric vehicle charging station may be installed.		

Electric Vehicle (EV) Ordinances (cont'd)



Date Passed	Jurisdiction	Ordinance	Code Section(s)	Exemptions	EV Charging Station Infrastructure Requirement			EV Charging Station Installation Requirement	
					Single Family Residential	Multi-family Residential	Commercial	Multi-family Residential	Commercial
11/20/17	Atlanta, GA	17-0-1654	Electrical Code Amendments	Single-family units without designated parking space on premise	Infrastructure necessary for the future installation of EV Supply Equipment. Sufficient electrical capacity for a 40-ampere 240-volt branch circuit: if no garage, must include raceway electrical conduit (>1" in size) with pull rope/line, sealed and labeled for future use.	20% of parking spaces required must have infrastructure necessary for the future installation of EV Supply Equipment. Must include raceway (>1" in size) with pull rope/line, sealed and labeled for future use. Electrical equipment room must have a dedicated space for the future installation of EV Supply Equipment and be labelled "Future EV Charging Equipment & Panels"	20% of parking spaces required must have infrastructure necessary for the future installation of EV Supply Equipment. Must include raceway (>1" in size) with pull rope/line, sealed and labeled for future use. Electrical equipment room must have a dedicated space for the future installation of EV Supply Equipment and be labelled "Future EV Charging Equipment & Panels"		
12/17/17	Boca Raton, FL	5420	Zoning, Off-street Parking	Single-family		MF with ≥50 units must install & provide access to electrical power supply rated at 3 240 volts in all off-street parking facilities to allow the installation of additional EV parking spaces in the future.	Hotels, apartment hotels and motels with ≥50 rooms must install & provide access to electrical power supply rated at 3 240 volts in all off-street parking facilities to allow the installation of additional EV parking spaces in the future.	If ≥50 parking spaces required, min. of 2% of spaces must be equipped with, at a min., Level-2 EV charging station	If ≥50 parking spaces required, min. of 2% of spaces must be equipped with, at a min., Level-2 EV charging station
03/05/19	Miami Dade County, FL	19-17	Zoning, Off-street Parking	Single-family, duplex, townhouses, church or religious use		If ≥10 parking spaces required, min. of 10% of parking spaces must have full circuitry installed in accordance with the FBC and ready for the charger to be connected; increases to 20% in Jan. 2022	If ≥10 parking spaces required, min. of 10% of parking spaces must have full circuitry installed in accordance with the FBC and ready for the charger to be connected; increases to 20% in Jan. 2023		

Electric Vehicle (EV) Ordinances (cont'd)



Date Passed	Jurisdiction	Ordinance	Code Section(s)	Exemptions	EV Charging Station Infrastructure Requirement			EV Charging Station Installation Requirement	
					Single Family Residential	Multi-family Residential	Commercial	Multi-family Residential	Commercial
03/26/19	Coral Gables, FL	2019-19	Zoning, Development Standards	Single-family, duplexes, and townhouses		If ≥20 parking spaces required, min. of 3% of spaces must be EV-Ready by including 40-Amps on an independent 240-volt AC circuit for every EV space; AND min. of 15% of spaces must be EV-Capable by having raceway and electric capacity sized to accommodate 60A or 40A breakers for each parking space. If calculation results in fractional space, rounded up to next whole number	If ≥20 parking spaces required, min. of 3% of spaces must be EV-Ready by including 40-Amps on an independent 240-volt AC circuit for every EV space; AND min. of 15% of spaces must be EV-Capable by having raceway and electric capacity sized to accommodate 60A or 40A breakers for each parking space. If calculation results in fractional space, rounded up to next whole number	If ≥20 parking spaces required, min. of 2% of spaces (min. 1 space) must be reserved for EV parking and provide a Level-2 EV charging station for each space. If calculation results in fractional space, rounded up to next whole number	If ≥20 parking spaces required, min. of 2% of spaces (min. 1 space) must be reserved for EV parking and provide a Level-2 EV charging station for each space. If calculation results in fractional space, rounded up to next whole number
09/05/19	Boynton Beach, FL	19-	Land Development Regulations, Site Development Standards	Single-family, duplexes				2 spaces/50 units must be served by Level-2 charging station	1 space/50,000 sq. ft. must be served by Level-2 charging station
	Winter Park, FL		Buildings, Amendments to the Florida Building Code; Zoning, Off-street Parking		SF/Duplex with individual garages must provide 220-240 volt / 40 amp outlet on a dedicated circuit and in close proximity to one designated vehicle parking space per unit for the potential future installation of a Level-2 charging station. SF/Duplex without individual garages must provide underground electrical conduit between dwelling and designated parking space for the potential future installation of a Level-2 charging station.	MF with individual garages must provide 220-240 volt / 40 amp outlet on a dedicated circuit and in close proximity to one designated vehicle parking space per unit. MF with common use surface parking or spaces within a parking garage, min. of 20 % of parking spaces required must have the electrical capacity and buried raceway necessary for the future installation of a Level-2 charging.	Non-residential with common use surface parking or spaces within a parking garage, min. of 20 % of parking spaces required must have the electrical capacity and buried raceway necessary for the future installation of a Level-2 charging.	If ≥50 parking spaces required, min. of 2% of spaces (min. 2 spaces) must be equipped with, at a min., Level-2 EV charging station	If ≥50 parking spaces required, min. of 2% of spaces (min. 2 spaces) must be equipped with, at a min., Level-2 EV charging station

DRAFT EV ORDINANCES

Single-Family and Duplex



- **Most likely would require a local technical amendment**
- **Readiness Requirement for Single-Family and Duplex**
 - With Individual Garage
 - 220-240 volt/40 amp outlet on a dedicated circuit
 - In close proximity to one designated vehicle parking space
 - Without Individual Garage
 - Underground electrical conduit between the dwelling and the designated parking space

Costs Comparison During and After Construction

R-3


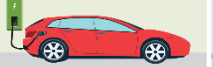

New Costs for EVSE infrastructure	Retrofit Costs for EVSE infrastructure
\$40-\$100	\$1,000-\$1,200

Groups A, B, E, I, M, R-1, R-2, S-2

New Costs for EVSE infrastructure per space (30ft-120ft)	Retrofit Costs for EVSE infrastructure per space
\$850-\$1,650	\$3,500-\$12,500
	Average surface retrofit: \$6,975
	Average garage retrofit: \$3,750

Source: City of Atlanta, GA

KNOW YOUR EV CHARGING STATIONS

AC Level One	AC Level Two	DC Fast Charge
		
VOLTAGE 120v 1-Phase AC	VOLTAGE 208V or 240V 1-Phase AC	VOLTAGE 208V or 480V 3-Phase AC
AMPS 12-16 Amps	AMPS 12-80 Amos (Typ. 32 Amps)	AMPS <125 Amos (Typ. 60 Amps)
CHARGING LOADS 1.4 to 1.9 kW	CHARGING LOADS 2.5 to 19.2 kW (Typ. 7 kW)	CHARGING LOADS ~90 kW (Typ. 50 kW)
CHARGE TIME FOR VEHICLE 3-5 Miles of Range Per Hour	CHARGE TIME FOR VEHICLE 10-20 Miles of Range Per Hour	CHARGE TIME FOR VEHICLE 80% Charge in 20-30 Minutes

Source: Utah Drive Electric

DRAFT EV ORDINANCES

Multi-family and Non-residential



➤ Readiness Requirement for Multi-family and Non-Residential (Commercial, Office, Central Business District, Industrial)

- With Individual Garages
 - 220-240 volt/40 amp outlet on a dedicated circuit and in close proximity to one designated vehicle parking space per unit.
- Without Individual Garages
 - Underground electrical conduit between the dwelling and the designated parking space for min. of 20% of required parking spaces

➤ Electrical Vehicle Parking Space Requirement for All Development of a Certain Intensity


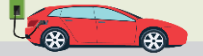

- Development requiring 50+ parking spaces
- Installation of EV Level 2 Charging Station for 2% of required parking spaces (min. 2 spaces)
- EV Parking Spaces count toward meeting overall parking req.

Costs Comparison During and After Construction

R-3		Groups A, B, E, I, M, R-1, R-2, S-2	
New Costs for EVSE Infrastructure	Retrofit Costs for EVSE Infrastructure	New Costs for EVSE Infrastructure per space (30ft-120ft)	Retrofit Costs for EVSE Infrastructure per space
\$40-\$100	\$1,000-\$1,200	\$850-\$1,650	\$3,500-\$12,500
			Average surface retrofit: \$6,975
			Average garage retrofit: \$3,750

Source: City of Atlanta, GA

KNOW YOUR EV CHARGING STATIONS

AC Level One	AC Level Two	DC Fast Charge
		
VOLTAGE 120v 1-Phase AC	VOLTAGE 208V or 240V 1-Phase AC	VOLTAGE 208V or 480V 3-Phase AC
AMPS 12-16 Amps	AMPS 12-80 Amos (Typ. 32 Amps)	AMPS <125 Amos (Typ. 60 Amps)
CHARGING LOADS 1.4 to 1.9 kW	CHARGING LOADS 2.5 to 19.2 kW (Typ. 7 kW)	CHARGING LOADS <90 kW (Typ. 50 kW)
CHARGE TIME FOR VEHICLE 3-5 Miles of Range Per Hour	CHARGE TIME FOR VEHICLE 10-20 Miles of Range Per Hour	CHARGE TIME FOR VEHICLE 80% Charge in 20-30 Minutes

Source: Utah Drive Electric



Board & Staff Feedback



- **Draft EV Ordinance (had both ordinances combined) presented to:**
 - **4/2 Keep Winter Park Beautiful & Sustainable (KWPB&S) Advisory Board**
 - **4/16 Economic Development Advisory Board**
 - **4/23 Planning & Zoning Board**
 - **4/24 Utilities Advisory Board**
 - **5/2 Transportation Advisory Board**
- **Boards provided comments/suggests and were generally supportive of the ordinance**
- **Draft EV Ordinance Discussion Item at 6/24 City Commission meeting**
- **Revised Draft includes relatively minor technical updates resulting from City Board, Commission, Staff and External Experts discussions**

ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY OF WINTER PARK, FLORIDA,
AMENDING CHAPTER 22 "BUILDINGS AND BUILDING
REGULATION", ARTICLE II "BUILDING CODE", SECTION 22-28
"AMENDMENTS TO THE FLORIDA BUILDING CODE" SO AS TO
ADD REGULATIONS FOR ELECTRIC VEHICLE CHARGING
INFRASTRUCTURE, PROVIDING FOR VESTING, CONFLICTS,
CODIFICATION, SEVERABILITY, AND AN EFFECTIVE DATE.**

WHEREAS, the Florida Building Code Act of 1998 directed the Florida Building Commission to establish a statewide uniform building code known as the Florida Building Code;

WHEREAS, the Sixth Edition Florida Building Code is in effect throughout the State of Florida as of December 31, 2017;

WHEREAS, the enforcement of the Florida Building Code is the responsibility of local governments;

WHEREAS, the City of Winter Park actively participates in the enforcement of building construction regulation for the benefit of the public safety of its citizens;

WHEREAS, the City of Winter Park desires to facilitate the enforcement of the Florida Building Code by enacting administrative and technical amendments which meet the needs of its citizens;

WHEREAS, according to the U.S. Department of Energy, the benefits of electric vehicles include improved air quality, reduction of carbon emissions, quieter and more livable streets, and decreased dependency on fossil fuels;

WHEREAS, a significant number of industry stakeholders are urging electric utilities to support the buildout of electric vehicle infrastructure to aid the development of the electric vehicle usage which in turn will decarbonize the transportation sector, promote energy independence, and increase electric retail sales resulting in a net benefit to all stakeholders;

WHEREAS, Florida ranks within the top five states nationally for sales of electric vehicles;

WHEREAS, the City should continue its support of plug-in electric vehicles and its efforts in constructing electric vehicle and plug-in hybrid electric vehicle charging infrastructure as this further supports the City's Sustainability Action Plan;

WHEREAS, the proposed amendment is consistent with the City's Vision of Winter Park as the city of arts and culture, cherishing its traditional scale and charm while building a healthy and sustainable future for all generations;

WHEREAS, the Construction Board of Adjustments & Appeals, after notice and public hearing, has considered the proposed amendment to Building Code, more specifically described herein, and submitted its recommendation to the City Commission;

WHEREAS, the City Commission, after notice and public hearing, has considered the proposed amendment to Building Code, the recommendations of the Board of Adjustments and all public comments;

NOW THEREFORE, BE IT ENACTED BY THE CITY COMMISSION OF THE CITY OF WINTER PARK:

SECTION 1. That Chapter 22 "Buildings and Building Regulation", Article II "Building Code" is hereby amended and modified within Section 22-28 "Amendments to the Florida Building Code", adding subsection (XXXX) "Electric Vehicle Charging Station Infrastructure Readiness Requirement" in the "Building Code" Article of the Buildings and Building Regulations to read as follows:

Sec. 22-28. Amendments to the Florida Building Code.

(XXXX) *Electric Vehicle Charging Station Infrastructure Readiness Requirement.*

- a) *Intent and purpose.* The intent of this section is to facilitate and encourage the use of electric vehicles and to expedite the establishment of a convenient, cost-effective electric vehicle infrastructure that will also accommodate future technology advancements.
- b) *Definitions.* For the purposes of this section, the following definitions shall apply:
 - 1. *Electric vehicle* means any motor vehicle registered to operate on public roadways that operates either partially or exclusively on electric energy. Electric vehicles include: (a) Battery-powered electric vehicles; (b) Plug-in hybrid electric vehicles; (c) electric motorcycles; and (d) Fuel cell vehicles.
 - 2. *Electric vehicle charging level* means the standardized indicators of electrical force, or voltage, amps and kilowatts by which an electric vehicle's batteries are recharged. EV recharging equipment is commonly known as Electric Vehicle Service Equipment (EVSE) and can output either Alternating Current (AC) or Direct Current (DC). EVSE are technically not chargers, they are power supply units, the charger is onboard the vehicle. The onboard charger helps manage the charging session and converts an AC input to DC to charge the vehicle's batteries; if a DC input is supplied the charger passes the power directly to the batteries. The terms Level1 (L1), Level2 (L2), and Level3 (L3) are the most common charging levels; L3 is also referred to DCFC or DC Fast Charging, and include the following specifications:
 - a) Level-1 is considered slow charging. Voltage including the range

- from 0 through 120.
- b) Level-2 is considered medium charging. Voltage is greater than 120, up to 240.
 - c) Level-3 is considered fast or rapid charging, is also referred to DCFC or DC Fast Charging. Voltage is greater than 240.
- 3. *Electric vehicle charging station* means battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.
 - 4. *Electric vehicle charging station infrastructure* means conduit/wiring, structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations and rapid charging stations.
 - 5. *Electric vehicle parking space* means any off-street parking space that is equipped with an electric vehicle charging station that is exclusively for use by electric vehicles.
- c) *Readiness requirements.* In order to proactively plan for and accommodate the anticipated future growth in market demand for electric vehicles, all new single-family and duplex residential development are required to provide electric vehicle charging station infrastructure per this section.
- 1. The infrastructure shall be installed per the requirements of the current edition of the National Electrical Code (NFPA 70) as adopted and amended by the State of Florida for enforcement by the City of Winter Park.
 - 2. Properties with individual garages shall be constructed to provide a 220-240-volt / 40 amp outlet on a dedicated circuit and in close proximity to one designated vehicle parking space to accommodate the potential future hardwire installation of, at the minimum, a Level-2 vehicle charging station.
 - 3. Properties without individual garages shall provide an underground electrical conduit between the dwelling and the designated parking space for the dwelling to accommodate the potential future hardwire installation of, at the minimum, a Level-2 vehicle charging station.
- d) *Exceptions.* Where the installation of one or more electric vehicle parking spaces, and/or the installation of electric vehicle charging station infrastructure to allow for the future installation of electric vehicle charging stations, are required by this article, an exception may be granted by the Building Official through the site plan approval process only where it is demonstrated that the extension of the electrical power supply to the effected location is physically impractical. Financial impracticality is not a valid criterion for granting such an exception.

SECTION 2. VESTING. In order to not adversely affect development projects

that may be in process and for which expenditures have been made in reliance upon the existing code provisions, the City will allow such development or building permit applications to be subject to the parking code existing prior to the adoption of this Ordinance, provided such development projects or permits have been submitted prior to the effective date of this Ordinance.

SECTION 3. SEVERABILITY. If any Section or portion of a Section of this Ordinance proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of the remainder of this Ordinance.

SECTION 4. CODIFICATION. It is the intention of the City Commission of the City of Winter Park, Florida, and it is hereby ordained that the provisions of this Ordinance shall become and be made a part of the Code of Ordinance of the City of Winter Park, Florida.

SECTION 5. CONFLICTS. All Ordinances or parts of Ordinances in conflict with any of the provisions of this Ordinance are hereby repealed.

SECTION 6. FLORIDA BUILDING COMMISSION. This Ordinance enacting amendments to the Florida Building Code shall be transmitted to the Florida Building Commission within 30 days.

SECTION 7. EFFECTIVE DATE. This Ordinance shall become effective immediately upon its passage and adoption.

ADOPTED at a regular meeting of the City Commission of the City of Winter Park, Florida, held in City Hall, Winter Park, on this _____ day of _____, 2019.

Steve Leary, Mayor

ATTEST:

City Clerk

ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY OF WINTER PARK, FLORIDA
AMENDING CHAPTER 58 "LAND DEVELOPMENT CODE", ARTICLE
III, "ZONING REGULATIONS" SUBSECTION 58-86 "OFF-STREET
PARKING AND LOADING REGULATIONS" SO AS TO ADD
REGULATIONS FOR ELECTRIC VEHICLE CHARGING
INFRASTRUCTURE, PROVIDING FOR VESTING, CONFLICTS,
CODIFICATION, SEVERABILITY, AND AN EFFECTIVE DATE.**

WHEREAS, the City of Winter Park's Off-Street Parking and Loading Regulations portion of the Land Development Code does not currently contain provisions for off-street parking facility requirements for electric vehicles;

WHEREAS, according to the U.S. Department of Energy, the benefits of electric vehicles include improved air quality, reduction of carbon emissions, quieter and more livable streets, and decreased dependency on fossil fuels;

WHEREAS, a significant number of industry stakeholders are urging electric utilities to support the buildout of electric vehicle infrastructure to aid the development of the electric vehicle usage which in turn will decarbonize the transportation sector, promote energy independence, and increase electric retail sales resulting in a net benefit to all stakeholders;

WHEREAS, Florida ranks within the top five states nationally for sales of electric vehicles;

WHEREAS, the City should continue its support of plug-in electric vehicles and its efforts in constructing electric vehicle and plug-in hybrid electric vehicle charging infrastructure as this further supports the City's Sustainability Action Plan;

WHEREAS, the proposed amendment is consistent with the City's Vision of Winter Park as the city of arts and culture, cherishing its traditional scale and charm while building a healthy and sustainable future for all generations;

WHEREAS, the Planning and Zoning Board, after notice and public hearing, has considered the proposed amendments to the Off-Street Parking and Loading Regulations portion of the Land Development Code, more specifically described herein, and submitted its recommendation to the City Commission;

WHEREAS, the City Commission, after notice and public hearing, has considered the proposed amendments to the Off-Street Parking and Loading Regulations portion of the Land Development Code, the recommendations of the Planning and Zoning Board and all public comments;

WHEREAS, the proposed amendment to the Off-Street Parking and Loading Regulations portion of the Land Development Code is consistent with the City of Winter Park Comprehensive Plan;

WHEREAS, the portions of Chapter 58, Land Development Code, Article III, Zoning Regulations that are to be amended and modified as described in each section and amended to read as shown herein.

NOW THEREFORE, BE IT ENACTED BY THE CITY COMMISSION OF THE CITY OF WINTER PARK:

SECTION 1. That Chapter 58 "Land Development Code", Article III "Zoning" of the Code of Ordinances is hereby amended and modified within Section 58-86 "Off-street Parking and Loading Regulations", adding subsection (5) "Electric Vehicle Charging Station Infrastructure and Electric Vehicle Parking Space Requirements" in the "Zoning" Article of the Land Development Code to read as follows:

Sec. 58-86. Off-Street Parking and Loading Regulations.

(5) *Electric Vehicle Charging Station Infrastructure and Electric Vehicle Parking Space Requirements.*

- a) *Intent and purpose.* The intent of this section is to facilitate and encourage the use of electric vehicles and to expedite the establishment of a convenient, cost-effective electric vehicle infrastructure that will also accommodate future technology advancements.
- b) *Definitions.* For the purposes of this section, the following definitions shall apply:
 1. *Electric vehicle* means any motor vehicle registered to operate on public roadways that operates either partially or exclusively on electric energy. Electric vehicles (EVs) include: (a) Battery-powered electric vehicles; (b) Plug-in hybrid electric vehicles; (c) electric motorcycles; and (d) Fuel cell vehicles.
 2. *Electric vehicle charging level* means the standardized indicators of electrical force, or voltage, amps and kilowatts by which an electric vehicle's batteries are recharged. EV recharging equipment is commonly known as Electric Vehicle Service Equipment (EVSE) and can output either Alternating Current (AC) or Direct Current (DC). EVSE are technically not chargers, they are power supply units, the charger is onboard the vehicle. The onboard charger helps manage the charging session and converts an AC input to DC to charge the vehicle's batteries; if a DC input is supplied the charger passes the power directly to the batteries. The terms Level1 (L1), Level2 (L2), and Level3 (L3) are the most common charging levels; L3 is also referred to DCFC or DC Fast Charging, and include the following specifications:

- a) Level-1 is considered slow charging. Voltage including the range from 0 through 120.
 - b) Level-2 is considered medium charging. Voltage is greater than 120, up to 240.
 - c) Level-3 is considered fast or rapid charging, is also referred to DCFC or DC Fast Charging. Voltage is greater than 240.
- 3. *Electric vehicle charging station* means battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.
- 4. *Electric vehicle charging station infrastructure* means conduit/wiring, structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations and rapid charging stations.
- 5. *Electric vehicle parking space* means any off-street parking space that is equipped with an electric vehicle charging station that is exclusively for use by electric vehicles.
- c) *Readiness requirements.* In order to proactively plan for and accommodate the anticipated future growth in market demand for electric vehicles, all new development shall provide electric vehicle charging station infrastructure per this section. The infrastructure shall be installed per the requirements of the current edition of the National Electrical Code (NFPA 70) as adopted and amended by the State of Florida for enforcement by the City of Winter Park.
 - 1. Multi-family properties with individual garages shall be constructed to provide a 220-240-volt / 40 amp outlet on a dedicated circuit and in close proximity to one designated vehicle parking space per unit to accommodate the potential future hardwire installation of, at the minimum, a Level-2 vehicle charging station.
 - 2. Multi-family residential properties with common use surface parking or spaces within a parking garage, and non-residential properties shall provide the electrical capacity and buried raceway necessary to accommodate the future hardwire installation, at the minimum, a Level-2 vehicle charging station, for a minimum ratio of 20% of the total required parking spaces.
- d) *Electric vehicle parking space requirement for multi-family residential and non-residential properties of a certain intensity.* All sites in which multifamily residential, commercial, office, or industrial uses, or any combination thereof, that are required to provide 50 or more motor vehicle parking spaces, shall provide a minimum of two (2) percent of the required off-street parking spaces or a minimum of two (2) parking spaces, whichever is greater, to be electric vehicle parking spaces (such spaces shall be counted toward meeting the overall parking requirement) in accordance with the following standards:

1. Minimum standards. Electric vehicle parking spaces shall, at a minimum, be equipped with an electric vehicle charging station rated at electric vehicle charging Level 2.
2. Exclusive use. Electric vehicle parking spaces shall be reserved for the exclusive use of electric vehicles, actively engaged in a recharging session.
3. Fees. Nothing herein shall prohibit the charging of a fee for the use of an electric vehicle charging station by a resident, guest, invitee or employee.
4. ADA Accessible Spaces. A minimum of one (1) electric vehicle parking space must be located adjacent to a required accessible parking space such that the electric vehicle charging station can be shared between an accessible parking space and electric vehicle parking space.
5. Lighting. Site lighting shall be provided where an electric vehicle charging station is installed.
6. Equipment Standards and Protection. Battery charging station outlets and connector devices shall be no less than 36 inches and no higher than 48 inches from the surface where mounted. Equipment mounted on pedestals, lighting posts, bollards, or other devices shall be designed and located as to not impede pedestrian travel or create trip hazards on sidewalks. Adequate battery charging station protection, such as concrete-filled steel bollards, shall be used. Curbing may be used in lieu of bollards, if the battery charging station is setback a minimum of 24 inches from the face of the curb.
7. Signage. (1) Information shall be posted identifying voltage and amperage levels and any time of use, fees, or safety information related to the electric vehicle charging station. (2) Each electric vehicle charging station space shall be posted with signage indicating the space is only for electric vehicle charging purposes. For purposes of this subsection, "charging" means that an electric vehicle is parked at an electric vehicle charging station and is connected to the battery charging station equipment and is actively charging. (3) Restrictions shall be included on the signage, if removal provisions are to be enforced by the property owner pursuant to state statutes.
8. Maintenance. Electric vehicle charging stations shall be maintained in good condition in all respects, including the functioning of the equipment, by the property owner. Removal of any required EV charging stations is prohibited. A phone number or other contact information shall be provided on the equipment for reporting when the equipment is not functioning or other problems are encountered.

- e) *Exception.* Where the installation of one or more electric vehicle parking spaces, and/or the installation of electric vehicle charging station infrastructure to allow for the future installation of electric vehicle charging stations, are required by this article, an exception may be granted by the Building Official through the site plan approval process only where it is demonstrated that the extension of the electrical power supply to the effected location is physically impractical. Financial impracticality is not a valid criterion for granting such an exception.

SECTION 2. VESTING. In order to not adversely affect development projects that may be in process and for which expenditures have been made in reliance upon the existing code provisions, the City will allow such development or building permit applications to be subject to the parking code existing prior to the adoption of this Ordinance, provided such development projects or permits have been submitted prior to the effective date of this Ordinance.

SECTION 3. SEVERABILITY. If any Section or portion of a Section of this Ordinance proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of the remainder of this Ordinance.

SECTION 4. CODIFICATION. It is the intention of the City Commission of the City of Winter Park, Florida, and it is hereby ordained that the provisions of this Ordinance shall become and be made a part of the Code of Ordinance of the City of Winter Park, Florida, except for Sections 6-10;

SECTION 5. CONFLICTS. All Ordinances or parts of Ordinances in conflict with any of the provisions of this Ordinance are hereby repealed.

SECTION 6. EFFECTIVE DATE. This Ordinance shall become effective immediately upon its passage and adoption.

ADOPTED at a regular meeting of the City Commission of the City of Winter Park, Florida, held in City Hall, Winter Park, on this _____ day of _____, 2019.

Steve Leary, Mayor

ATTEST:

City Clerk