

## **PLANNING AND DEVELOPMENT SERVICES STAFF REPORT**

**For Planning Commission Meeting of July 7, 2020**

**SUBJECT: Amendment to Chapter 55 (Unified Development Code) to require electric vehicle charging facilities as part of the off-street parking requirements.**

### **PROPOSED CITY PLANNING COMMISSION MOTION**

The Ann Arbor City Planning Commission hereby recommends that the Mayor and City Council approve the amendments to Chapter 55 Unified Development Code, Section 5.19 to require electric vehicle charging facilities as part of the City's Off-Street Parking requirements.

### **STAFF RECOMMENDATION**

Staff recommends that the amendments to the Unified Development Code (UDC) be approved because the proposed amendments will result in the increase in the number of electric vehicle (EV) charging facilities which is consistent with the City's policies regarding the pursuit of carbon neutrality and environmental sustainability.

### **SUMMARY**

Amendments to the Unified Development Code are proposed to require EV charging facilities for proposed development projects that request a Site Plan for City Council approval. Although this proposed amendment will not result in an increase in the total number of required vehicle parking spaces, it will result in a number of the required spaces being required to have EV charging facilities.

### **HISTORY AND BACKGROUND**

At its January 2013 meeting, the City of Ann Arbor Energy Commission approved a resolution supporting increased planning for EV infrastructure in Ann Arbor. In March 2013, City Council approved a resolution called, "Resolution of the City of Ann Arbor in Support of Plug-In Electric Vehicles Readiness". This resolution directed the City Administrator to, "review the city permit process, zoning code...to ensure that EV infrastructure installation is encouraged and that there are no inappropriate barriers".

In 2014, the City Council adopted a Climate Action Plan which included recommendations to, "encourage electric vehicles (EV's) and EV infrastructure...". In 2019, City Council pass a resolution in support of creating a plan to achieve community wide climate neutrality by 2030. In 2020, the City's Office of Sustainability produced the A2ZERO Plan for Carbon Neutrality which City Council accepted. The Plan will function as the framework for the City to achieve carbon neutrality by 2030. The Plan identifies ways for the City to pursue the reduction in carbon emissions and includes a section called, "Expand Electric Vehicle Charging Infrastructure".

In 2018, the City's Office of Sustainability partnered with staff from the Ann Arbor Ecology Center and members of the City's Energy Commission to pursue amendments to Chapter 55 (UDC) to require EV charging stations with new development. Staff members and citizen volunteers worked to produce a draft of possible amendments to off-street parking standards to require EV charging stations. Once a draft was produced, Planning & Development Services staff reviewed the proposed amendments and provided comments to the team developing the proposed amendments. Planning staff also provided proposed amendments to a Technical Advisory Committee consisting of developers, architects, and civil engineers for their feedback. Planning and Office of Sustainability staff then brought the amendments to the Planning Commission's Ordinance Revisions Committee on February 25, 2020 for feedback. Additional modifications were made. The revised draft of the amendments was then brought to a Planning Commission Working Session on April 14, 2020 for review by the full Planning Commission. Additional modifications were made to the draft amendments.

The intent of the proposed amendments is to encourage the use of electric vehicles which generate lower carbon emissions than gasoline powered automobiles. By requiring that new Site Plans for City Council provide some EV charging facilities, the proposed amendments will result in an increasing number of charging stations throughout the City of Ann Arbor over time. It is anticipated that the expansion of the supply of EV charging stations throughout the community will increase access and convenience for owners of EV's and will therefore likely result in additional EV's being purchased in the region instead of conventional gasoline powered vehicles.

To date, a number of American cities have adopted EV friendly zoning ordinance amendments including:

- Los Angeles, CA
- Portland, OR
- Santa Monica, CA
- Denver, CO
- New Orleans, LA
- Auburn Hills, MI
- Boston, MA
- Atlanta, GA
- Indianapolis, IN
- Grand Rapids, MI
- Hartford, CT
- Palo Alto, CA
- Salt Lake City, UT
- San Francisco, CA
- Kansas City, MO
- Pittsburg, PA
- Honolulu, HI
- Santa Cruz, CA
- Bellevue, WA
- Davis, CA
- Lansing, MI

- Columbus, OH
- Chicago, IL

### **PROPOSED AMENDMENTS**

Attached are proposed amendments, which reflect Planning Commission feedback at the Ordinance Revisions Committee meeting and the Working Session. The proposed amendments include:

- Adding the following terms to the Definitions section of the UDC: a) Electric Vehicle, b) Plug-in Hybrid Electric Vehicle, c) Electric Vehicle Supply Equipment, d) Electric Vehicle Supply Equipment System, e) Electric Vehicle Charging System, f) EV Capable, g) EV Ready, h) EV Installed, and i) EV Parking Space.
- Amendments to Section 5.19 Parking Standards including: a) language on applicability, b) EV charging levels and configurations, c) distribution of EV stations, and d) barrier free parking considerations and requirements for the installation of new EV facilities.
- Detailed description of the 3 major types of EV charging infrastructure including: EV Capable, EV Ready, and EV Installed.
- Proposed Amended Table of Off-street Parking Space Requirements which shows how many EV parking spaces will need to be installed for a proposed Site Plan for City Council.

The amendments also include a section called “Renewable Electrical Supply” which encourages developers to attempt to source their electric power from renewable energy sources. Although this section does not include a code requirement, the Office of Sustainability and partners felt that it was important information to include within Section 5.19 of the UDC.

Additionally, the Office of Sustainability and partners highly recommend that the City find ways to record the number and type of EV charging stations as they are installed throughout the City. Planning Staff will work with representatives from the City Building and Information Technology departments to determine the best way to record this information and make it available to the Office of Sustainability.

Prepared by Jeff Kahan  
Reviewed by Brett Lenart  
6/26/20

Attachment: Draft EV Readiness Ordinance  
Draft Off Street Parking Table with Proposed Requirements by Use

c: Systems Planning  
City Attorney’s Office

*NOTE: This is a proposed amendment to the Ann Arbor Unified Development Code. Specifically, it concerns the required installation of three electric vehicle charging infrastructures for a new building or major renovation to an existing building: EV-Capable, EV-Ready, and EV-Installed.*

**The Ann Arbor Unified Development Code shall be amended by adding the following terms to *Article VIII: Definitions***

**Electric Vehicle (EV)**

An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current which is charged by being plugged into an electrical source.

**Plug-in Hybrid Electric Vehicle (PHEV)**

A type of electric vehicle intended for on-road use with the ability to store and use off-vehicle electrical energy in a rechargeable energy storage system, and having a second source of motive power.

**Electric Vehicle Supply Equipment (EVSE)**

The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatuses installed specifically for the purpose of transferring energy between the premise wiring and the electric vehicle.

**Electric Vehicle Supply Equipment System (EVSES)**

A system of components that provide an alternating current (AC) output that is supplied to the vehicle for the purpose of providing input power to an on-board charger.

**Electric Vehicle Charging System (EVCS)**

A system of components that provide a direct current (DC) output that is supplied to the vehicle for the purpose of recharging electric vehicle storage batteries, commonly referred to as DC fast charging (DCFC).

**EV-Capable (EV-C)**

An installed electrical panel capacity with dedicated branch circuit(s) and cable/raceway that is capped for future EV parking space(s).

**EV-Ready (EV-R)**

An installed electrical panel capacity with a dedicated branch circuit(s) including conductor in a raceway or direct buried, terminated in an approved method in a junction box, for an EV parking space(s).

### EV-Installed (EV-I)

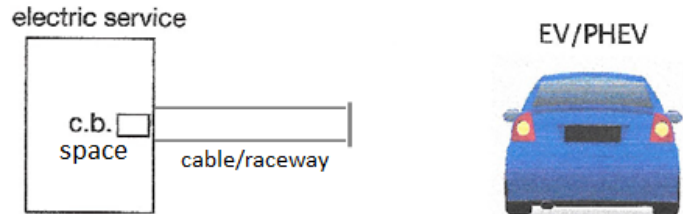
An installed electrical panel capacity with a dedicated branch circuit(s) including conductor in a raceway or direct buried, and an EVSES charging station capable of providing charge energy to an EV parking space(s).

Include this schematic representation of the above three types of EVSE levels:

### EVSE Classifications

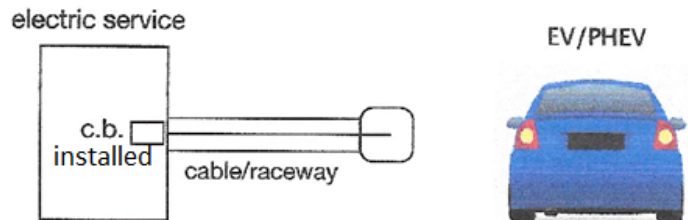
#### EVSE Capable (EV-C)

Install electrical panel capacity and dedicated cable/raceway(s) that is capped for future EV parking space(s)



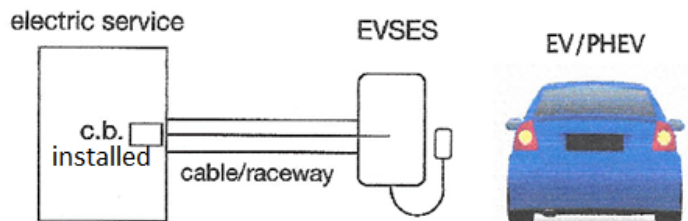
#### EVSE Ready (EV-R)

Install electrical panel capacity with a dedicated branch circuit(s) including conductors in a cable/raceway that is terminated in an approved method for a future EV parking space(s)



#### EVSE Installed (EV-I)

Install electrical panel capacity with a dedicated branch circuit(s) including conductors in a cable/raceway and an EVSES charging station capable of providing charge energy to an EV(s)



Note: c.b. = circuit breaker

### EV Parking Space

A parking space that is to be EV-C, EV-R or EV-I.

**The following Amendments are to be made to Article IV Section 5.19 Parking Standards**

**Add to Section 5.19.1 Applicability**

A. No New Building shall be erected unless the parking for bicycles, motor vehicles and **electric vehicles** required by this section 5.19 is provided.

E. All new Site Plans for City Council are required to provide EV charging facilities consistent with the requirements of section 5.19.

**Replace current Table 5:19-1 Off-Street Parking Spaces Required with the revised Table which includes the new column: Required Electric Vehicle Charging Spaces**

**Add to Table 5:19-2 Stall and Aisle Standards**

**Add to footnote C:** Barrier Free Spaces shall have electric vehicle charging access according to Table 5:19-3

**Add to Section 5.19.8 Design of Vehicle Parking Facilities:**

**G. All Parking shall have at least the percent of EV charging infrastructure noted in Table 5.19.1. If the percentage results in a fraction, the number of EV charging sites shall be rounded up to the next whole number. The following provisions must be met in accordance with the apportioned EV-designated parking spaces contained in Table 5.19.1.**

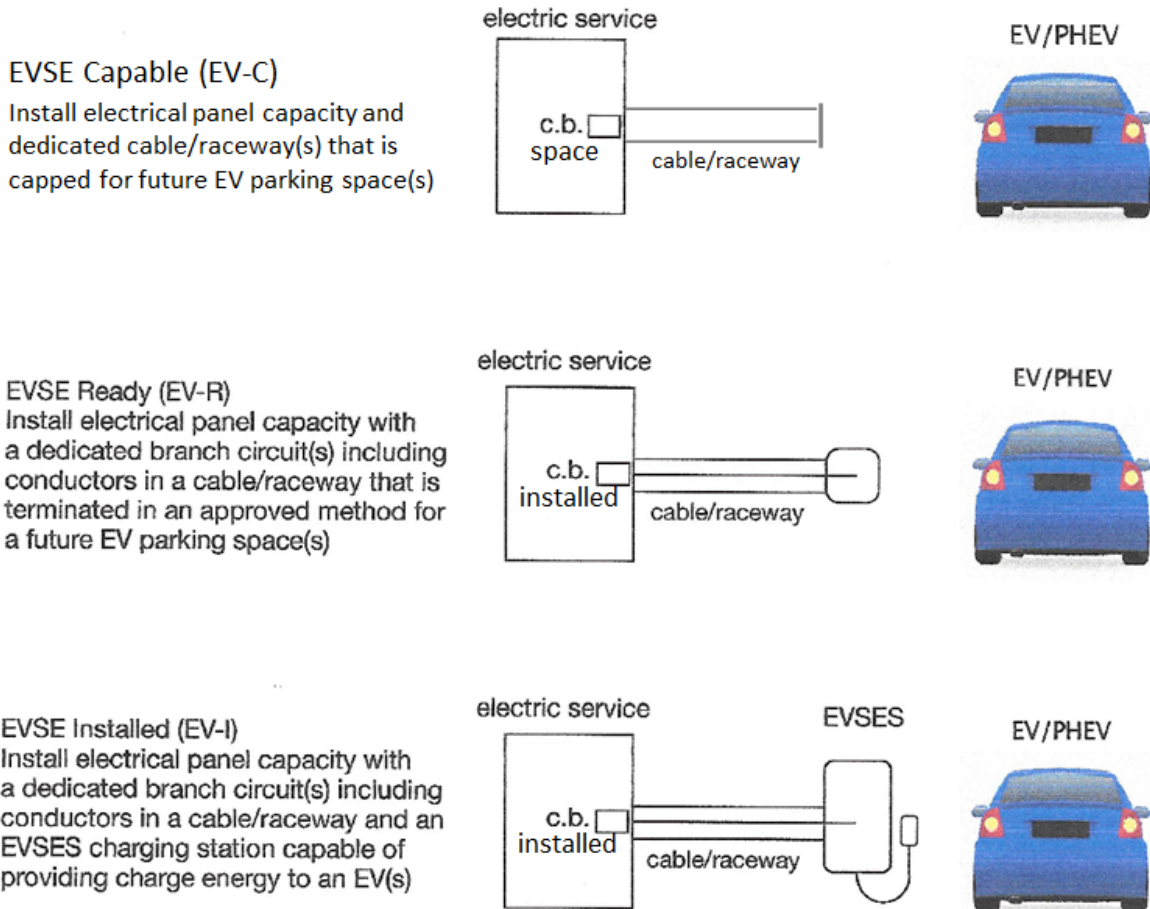
1. **EV-Capable infrastructure (EV-C)** shall include an installed electrical panel capacity with dedicated branch circuit(s) and cable/raceway for future EV parking space(s).  
In addition, the dedicated branch circuit panel space shall be stenciled or marked legibly with the following text: "FUTURE ELECTRIC VEHICLE CHARGING CIRCUIT".
2. **EV-Ready infrastructure (EV-R)** shall include an installed electrical panel capacity with a dedicated branch circuit(s) including conductor in a raceway or direct buried, terminated in an approved method in a junction box, for an EV parking space(s). The junction box shall be clearly marked and labeled "EV READY CIRCUIT".
3. **EV-Installed infrastructure (EV-I)** shall include an installed electrical panel capacity with a dedicated branch circuit(s) including conductor in a raceway or direct buried, and an EVSES charging station capable of providing charge energy to an EV parking space(s). EV-I spaces must include signage indicating that the parking space is to be exclusively used for electric vehicle charging
4. **The following charging levels and configurations are allowed:**
  - a. EVSES Level 2 charging alternating current (AC) ratings (voltage/circuit breaker rating): 240/208 V / 20, 30, 40, 50, and 60 A. The range of acceptable voltages and current capacities can be alternatively used for specific expected conditions of use in consideration of electric power supply capacity for compliance. One EVSES can be used to provide charging to more than one parking space providing a minimum of 20 A per space is available.
  - b. EVCS Level 3 direct current (DC) charging may be used in place of EVSES for specific conditions of use and classified as EV-I, as approved by the City

Planning Department. At least one EVSES Level 2 charging station must also be provided.

- The placement of EV charging infrastructure shall not create a trip hazard or violation of the accessible path of travel when the cord is connected to an EV or PHEV.

**Graphic 5:19-1 EVSE Classifications**

### EVSE Classifications

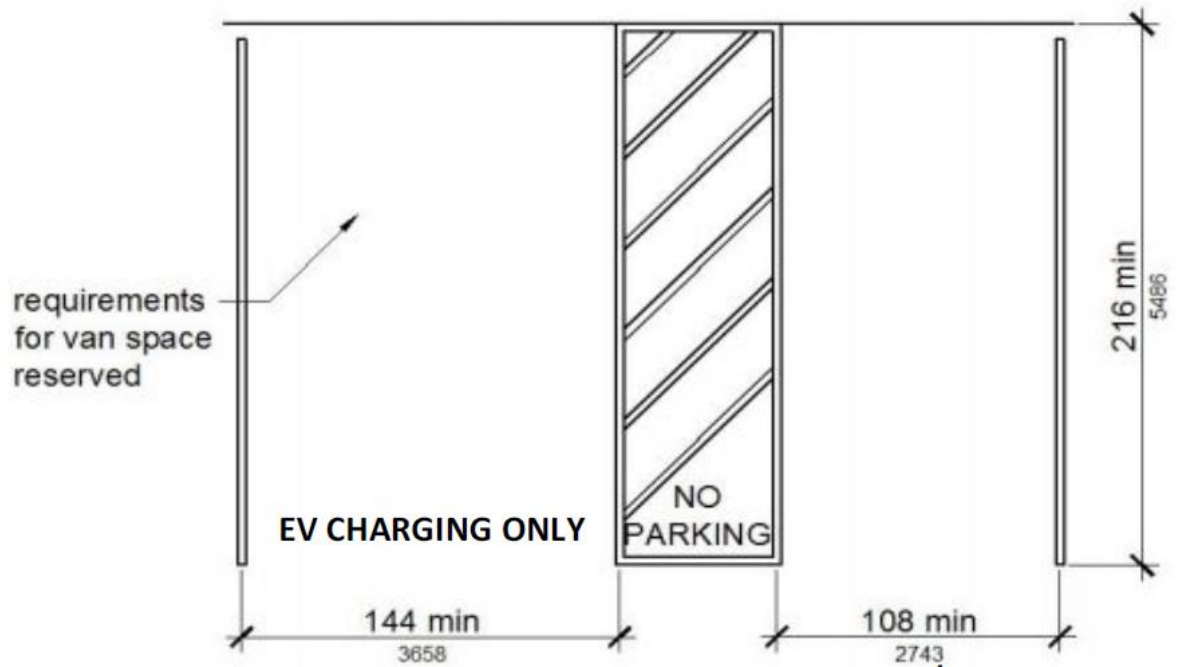


Note: c.b. = circuit breaker

**H. Where parking spaces are separated into distinct areas, separate garages or lots, EV charging infrastructure (EV-C, EV-R, EV-I) shall be evenly distributed among all separate areas by their required percentages. Exceptions to this dispersal may be made by the Planning Department at its discretion. Where a project is to be phased, EV infrastructure shall be distributed according to the final plan and installed as part of each phase according to that distribution.**

**I. The proposed placement and installation of EV infrastructure or equipment shall not allow for any violation of the Americans with Disabilities Act of 1990 (42 U.S.C. § 12101).**

1. The minimum number of EVSES as dictated by **Table 5:19-3** shall meet the accessibility requirements as shown in **Graphic 5:19-1**. Where the Parking Table 5:19-1 requires EV-I(s), at least one EV-I shall be adjacent to and accessible from an ADA compliant parking space.
2. **Graphic 5:19-2**



**3. Table 5:19-3 Accessible EVSES EV-I Charging Stations Required**

Total number of EV-I Spaces	Minimum Number of EVSES EV-I Required	
	Van Accessible	Standard Accessible
1 to 4	1	0
5 to 50	1	1
51 to 75	1	2
76 to 100	1	3



<b>101 and over</b>	1, plus 1 for each 300, or fraction thereof, over 100	3, plus 1 for each 60, or fraction thereof, over 100
---------------------	---	--

**J. Renewable Electrical Supply**

In order for EVs to provide the maximum environmental and, in most cases, financial benefits to their owners, and, in support of the City of Ann Arbor’s carbon neutrality goals, it is recommended that EV chargers be powered by a renewable energy source. Options can be on-site solar power generation, or subscribing with a utility or a third party for renewable energy.

**K. Parking Lot Design for Accommodating Level 2 EV Charging Stations**

1. EV-Installed spaces must include signage indicating that the parking space is to be exclusively used for electric vehicle charging.
2. Installation of new EV Charging Stations shall not encumber the required size of parking stalls.
3. Free-standing EV charging stations require bollards, bumper blocks or raised curbs to protect the charging device.
4. Private sidewalks that abut parking spaces shall be a minimum of 5 feet wide to accommodate EV charging stations and allow 4 feet for pedestrian movement.
5. Charging stations shall be wall mounted, or located in the corner of parking stalls to accommodate the charging of more than one vehicle.
6. Required landscape islands shall not be used to accommodate EV charging stations, or charging station infrastructure.

# Proposed Ann Arbor EV-Readiness Parking Table

Table 5:19-1 Off-Street Parking Spaces Required

Use [See Sec. 5.19.3 for Uses in D1 and D2 Downtown Districts:]	Required Parking Spaces	Required Bicycle Spaces	Required Bicycle Class	Required Electric Vehicle Charging Spaces [see notes 3 and 6] <i>(round up number of EV charging spaces to next integer)</i>	
<b>Residential Uses</b>					
<b>Household Living</b>	Adult Foster Care	1 space per Dwelling Unit	None	None	None
	Dwelling, Assisted Living	For R4A: 2 spaces per Dwelling Unit For R4B, R4C, R4D and R4E: 1 ½ spaces per Dwelling Unit For any Nonresidential District: 1 space per Dwelling Unit	1 space per 5 Dwelling Units	A 50% C 50%	25% EV-C plus 15% EV-R plus 10% EV-I
	Dwelling, Multi-Family	For R4A:  2 spaces per Dwelling Unit  For R4B, R4C, R4D, and R4E: 1 ½ spaces per Dwelling Unit  In any Nonresidential District: 1 space per Dwelling Unit	1 space for 5 Dwelling Units	A 50%  C50%	65% EV-C plus 25% EV-R plus 10% EV-I [see notes 4 and 5]
	Dwelling, Single-Family	1 space per Dwelling Unit	None	None	100% EV-R [see notes 4 and 5]
	Dwelling, Townhouse	2 spaces per Dwelling Unit	1 space per 5 Dwelling Units	A 50%, C 50%	100% EV-R [see notes 4 and 5]

	Dwelling, Two Family	1 ½ spaces per Dwelling Unit	None	None	100% EV-R [see notes 4 and 5]
	House Trailer Park	1 space per Dwelling Unit	None	None	100% EV-C
<b>Group Living</b>	Emergency Shelter	None	None		15% EV-C plus 10% EV-R plus 10% EV-I
	Fraternities, sororities, student cooperatives	1 space for each 5 beds	1 space per 2 beds	A 50% B 50%	65% EV-C plus 25% EV-R plus 10% EV-I
	Group Housing	1 space for each 3 beds	1 space per 5 beds	A 50% B 50%	65% EV-C plus 25% EV-R plus 10% EV-I
	Guest House	1 space for each 3 beds	1 space per 5 beds	A 50% B 50%	65% EV-C plus 25% EV-R plus 10% EV-I
<b>Public/Institutional Uses</b>					
<b>Airports, Municipal</b>		Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30% C 70%	15% EV-C plus 10% EV-R plus 10% EV-I
	Cemetery	None	None		None
	Club Headquarters or Community Center	1 space per 200 sq. ft. of Floor Area	1 space per 1,000 sq. ft. of Floor Area	C 100%	15% EV-C plus 10% EV-R plus 10% EV-I
	Conference Center	1 space per 100 sq. ft. of Floor Area	1 space per 1,000 sq. ft. of Floor Area	C 100%	25% EV-C plus 15% EV-R plus 10% EV-I
			1 space per 3,000 sq. ft. of	A 30%	

<b>Community and Cultural</b>	Correctional Facility	Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area used for Office and administration purposes, none for Floor Area used for any other purpose [1]	Floor Area used for Office and Administrative purposes, none for Floor Area used for any other purpose	C 70%	15% EV-C plus 10% EV-R plus 10% EV-I
	Museum, Art Gallery	Minimum of 1 space per 310 sq. ft. of Floor Area, maximum of 1 space per 265 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
	Funeral Services	1 space per 100 sq. ft. of Floor Area used for viewing services. City must provide	None	None	None
	Government Offices and Courts	Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30% C 70%	15% EV-C plus 10% EV-R plus 10% EV-I
	Library	Minimum of 1 space per 310 sq. ft. of Floor Area, maximum of 1 space per 265 sq. ft. of Floor Area [ 1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
	Park, Recreation and Open Space	None	None		15% EV-C plus 10% EV-R plus 10% EV-I
	Religious Assembly	1 space per 3 seats or 1 space per 6 feet of pew. Public off-street spaces within 1,000 feet of the Site may be counted if approved as part of a site plan	1 space per 50 seats or 100 feet of pew	C 100%	10% EV-R plus 10% EV-I
<b>Day Care</b>	Adult Day Care Center	1 off-street space per caregiver required to staff facility at the state-licensed capacity, and 2 drop off spaces (off-street or on street within 250 feet of the Lot) for the first 20 adults that the facility is licensed to care for plus 1 space for each additional 20 adults.	1 space per 10 caregivers	B 100%	15% EV-C plus 10% EV-R plus 10% EV-I

<b>Day Care</b>	Child Care Center	1 off-street space per caregiver required to staff facility at the state-licensed capacity, and 2 drop off spaces (off-street or on street within 250 feet of the Lot) for the first 20 children that the facility is licensed to care for plus 1 for each additional 20 children.	1 space per 10 caregivers	B 100%	15% EV-C plus 10% EV-R plus 10% EV-I
<b>Educational</b>	Institutions of Higher Learning, Private	5 spaces per classroom	5 spaces per classroom	C 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Institutions of Higher Learning, Public	None	None		25% EV-C plus 15% EV-R plus 10% EV-I
	School, Private	High School: 5 spaces per classroom  Elementary and Middle Schools: 3 spaces per classroom	5 spaces per classroom	C 100%	25% EV-C plus 15% EV-R plus 10% EV-I
					25% EV-C plus 15% EV-R plus 10% EV-I
	School, Public	As required by the State	As required by the State		High School: 25% EV-C plus 15% EV-R plus 10% EV-I
					Elementary and Middle: 25% EV-C plus 15% EV-R plus 10% EV-I
School, Trade/Industrial	5 spaces per classroom	5 spaces per classroom	C 100%	25% EV-C plus 15% EV-R plus 10% EV-I	

<b>Health Care</b>	Hospital	1 space for each 6 beds	1 space per 60 beds	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Nursing Care Facility	1 space for each 6 beds	1 space per 60 beds	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I

### Commercial Uses

<b>Lodging</b>	Bed and Breakfast	1 space per room	1 space per 4 rooms	B 100%	25% EC-C plus 50% EV-R plus 25% EV-I
	Hotel	1 space per room	1 space per 30 rooms	A 100%	25% EC-C plus 50% EV-R plus 25% EV-I
	Adult Entertainment Business	Minimum of 1 space per 310 sq. ft. of Floor Area, maximum of 1 space per 265 sq. ft. of Floor Area [ 1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
	Artist Studio	1 space per 600 sq. ft. of Floor Area	1 space per 6,000 sq. ft. of Floor Area	B 100%	15% EV-C plus 10% EV-R plus 10% EV-I
	General Entertainment	Minimum of 1 space per 310 sq. ft. of Floor Area, maximum of 1 space per 265 sq. ft. of Floor Area [ 1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
		Athletic Club/Roller Rink = 1 space per 200 sq. ft. of Floor Area	1 space per 1,000 sq. ft. of Floor Area	B 100%	15% EV-C plus 10% EV-R plus 10% EV-I

<b>Recreation, Entertainment, and Arts</b>	Indoor Recreation	Bowling Alley = 5 spaces per alley	1 space per 5 alleys	C 100%	15% EV-C plus 10% EV-R plus 10% EV-I
		Indoor Court Game Facilities = 1 space per 1,000 sq. ft. of Floor Area	1 space per 2,000 sq. ft. of Floor Area	B 100%	15% EV-C plus 10% EV-R plus 10% EV-I
	Outdoor Recreation	Swimming Club, Private (Building) = 1 space per 200 sq. ft. of Floor Area	1 space per 1,000 sq. ft. of Floor Area	C 100%	10% EV-R plus 10% EV-I
		Stadia Auditorium = 1 space per 3 seats or 1 space per 6 feet of bench	1 space per 100 seats or 200 feet of bench	C 100%	None
		Enclosed Theater = 1 space for each 3 seats	1 space per 150 seats	C 100%	None
	Automobiles, Motorcycles, Recreational Vehicles, Equipment (Sales and Rental)	1 space per 310 sq. ft. of Floor Area	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
	Fueling Station	1 space per 200 sq. ft. of Floor Area	1 space.	C	15% EV-C plus 10% EV-R plus 10% EV-I
	Outdoor Sales, Permanent	Minimum of 1 space per 310 sq. ft. of area devoted to outdoor sales, maximum of 1 space per 265 sq. ft. of area devoted to outdoor sales [1]	1 space per 3,000 sq. ft. of area devoted to outdoor sales	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
	Medical Marijuana	Minimum of 1 space per 310 sq. ft. of Floor Area maximum of 1 space per 265	1 space per 3,000 sq. ft. of	B 50%	15% EV-C plus 10% EV-R plus

**Sales**

Provisioning Center	Floor Area, maximum of 1 space per 200 sq. ft. of Floor Area [1]	3,000 sq. ft. of Floor Area	C 50%	10% EV-R plus 10% EV-I
Restaurant, Bar, Food Service	1 space for each 100 sq. ft. of Floor Area	1 space per 750 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
Retail Sales, General Merchandise	Retail stores and Retail Centers less than 300,000 sq. ft. of Floor Area = Minimum of 1 space per 310 sq. ft. of Floor Area; maximum of 1 space per 265 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	10% EV-R plus 10% EV-I
	Retail stores and Retail Centers between 300,000 – 600,000 sq. ft. of Floor Area = Minimum of 1 space per 285 sq. ft. of Floor Area; maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	10% EV-R plus 10% EV-I
	Retail stores and Retail Centers more than 600,000 sq. ft. of Floor Area = Minimum of 1 space per 265 sq. ft. of Floor Area; maximum of 1 space per 235 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	10% EV-R plus 10% EV-I
	Furniture, Home Furnishings and Appliance Stores = 1 space per 600 sq. ft. of Floor Area	1 space per 7,500 sq. ft. of Floor Area	C 100%	10% EV-R plus 10% EV-I
	Wholesale, Resale, Building Material and Supplies	1 space per 600 sq. ft. of Floor Area	1 space per 6,000 sq. ft. of Floor Area	C 100%
Automobile, Truck, Construction Equipment Repair	1 space per 200 sq. ft. of Floor Area	1 space.	C	10% EV-R plus 10% EV-I



<b>Service and Repair</b>	Contractors, General Construction, and Residential Building	1 space per 333 sq. ft. of Floor Area	1 space per 3,000 sq. ft. of Floor Area	A 30% C 70%	10% EV-R plus 10% EV-I
	Laundry, Cleaning, and Garment Services	Minimum of 1 space per 310 sq. ft. of Floor Area, maximum of 1 space per 265 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	10% EV-R plus 10% EV-I
	Parking Lot or Structure	None	1 space per 10 parking stalls	A 30%  C 70%	Lot: 10% EV-R plus 10% EV-I
					Structure: 25% EV-C plus 15% EV-R plus 10% EV-I
	Personal Services	1 space per 100 sq. ft. of Floor Area	1 space per 750 sq. ft. of Floor Area	C 100%	15% EV-C plus 10% EV-R plus 10% EV-I
	Vehicle Wash	Automatic: 1 space per 500 sq. ft. of Floor Area	1 space.	C	10% EV-R plus 10% EV-I
		Self-serve: 1 space per bay			None
Veterinary, Kennels and Animal Boarding	Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30% C 70%	10% EV-R plus 10% EV-I	
<b>Office and Research</b>					
	Bank, Credit Union, Financial Services	Minimum of 1 space for each 220 sq. ft. of Floor Area and maximum of 1 space per 180 sq. ft. of Floor Area [1]	1 space per 2,000 sq. ft. of Floor Area	C 100%	10% EV-R plus 10% EV-I
				A 30%	25% EV-C plus

<b>Office-Type</b>	Office, General	Minimum of 1 space per 333 sq. ft. of Floor Area; maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	C 70%	25% EV-C plus 15% EV-R plus 10% EV-I
	Medical/Dental	Minimum of 1 space per 220 sq. ft. of Floor Area; maximum of 1 space per 180 sq. ft. of Floor Area [1]	1 space per 1,500 sq. ft. of Floor Area	A 30% C 70%	15% EV-C plus 10% EV-R plus 10% EV-I
	Nonprofit Corporations	Minimum of 1 space per 333 sq. ft. of Floor Area; maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30% C 70%	15% EV-C plus 10% EV-R plus 10% EV-I
<b>Research and Development</b>	Laboratories	1 space per 600 sq. ft. of Floor Area	1 space per 6,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Medical Laboratory	1 space per 600 sq. ft. of Floor Area	1 space per 6,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Research/ Development	1 space per 600 sq. ft. of Floor Area	1 space per 6,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
<b>Transportation</b>					
	Railroad and Public Transportation Rights-of-Way	None	None	None	None
	Transit Center, Station, or Depot	1 space per 333 sq. ft. of Floor Area used for Offices or administration of center, Station or Depot	1 space per 3,000 sq. ft. of Floor Area used for Offices or administration of center Station or Depot	A 30% C 70%	50% EV-C plus 40% EV-R plus 10% EV-I
	Transportation Facilities	None	None	None	None
<b>Industrial</b>					
	Agriculture/	None	None	None	None

<b>Agricultural</b>	Greenhouse				None
	Barns	None	None	None	None
	Borrow Pits	None	None	None	None
	Medical Marijuana Grower	Minimum of 1 space per 333 sq. ft. of Floor Area used for Offices, maximum of 1 space per 250 sq. ft. of Floor Area used for Offices. 1 space per 2,000 sq. ft. of Floor Area used for cultivation.	1 space per 3,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
<b>Manufacturing, Processing, Assembly, and Fabrication</b>	Asphalt, Concrete Mixing Plant, Sand and Gravel Pit	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft. of Floor Area	B 100%	10% EV-R plus 10% EV-I
	Coal and Coke Dealer	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft. of Floor Area	B 100%	10% EV-R plus 10% EV-I
	Heavy Manufacturing	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft.	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Laundry and Dry Cleaning Plant	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Light Manufacturing	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft.	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Oil and Gas Well	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft. of Floor Area	B 100%	10% EV-R plus 10% EV-I
	Pilot Manufacturing	1 space per 600 sq. ft. of Floor Area	1 space per 6,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I

	Scrap and Waste Material	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
	Slaughterhouse	1 space per 1,500 sq. ft. of Floor Area	1 space per 25,000 sq. ft. of Floor Area	B 100%	25% EV-C plus 15% EV-R plus 10% EV-I
<b>Utilities and Communications</b>	Broadcasting Facility	Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30%  C 70%	25% EV-C plus 15% EV-R plus 10% EV-I
	Data Processing and Computer Centers	Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30%  C 70%	25% EV-C plus 15% EV-R plus 10% EV-I
	Electric, Gas, and Sanitary Services	None	None	None	None
	Power and Fuel	None	None	None	None
	Wireless Communication Facilities	None	None	None	25% EV-C plus 15% EV-R plus 10% EV-I
	Outdoor Storage	None	None	None	
<b>Warehousing and Storage</b>	Warehousing and Storage	1 space for 2,000 sq. ft. of Floor Area	1 space per 20,000 sq. ft. of Floor Area	B 100%	100% EV-R
<b>Accessory Uses</b>					
Bed and Breakfast, Accessory		1 space, plus that required for the Principal Use	1 space, plus that required for the Principal Use	B 100%	100% EV-R
Community Recreation		1 space per 200 sq. ft. of Floor Area	1 space per 1,000 sq. ft. of Floor Area	C 100%	10% EV-R plus 10% EV-I
Dwelling Unit, Accessory		3 spaces on the Lot	None	None	100% EV-R
Dwelling Unit, Manager's		1 space per Dwelling Unit	None	None	100% EV-R

Family Day Care Home	None	None	None	100% EV-R
Group Day Care Home	1 space per caregiver not living in the dwelling, plus that required for the	None	None	100% EV-R
Home Occupation	None	None	None	100% EV-R
Management/Maintenance Office and Storage	Minimum of 1 space per 333 sq. ft. of Floor Area, maximum of 1 space per 250 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	A 30% C 70%	15% EV-C plus 10% EV-R plus 10% EV-I
Restaurant, Bar, Food Service	1 space per 100 sq. ft. of Floor Area	1 space per 750 sq. ft. of Floor Area	B 50% C 50%	15% EV-C plus 10% EV-R plus 10% EV-I
Retail Sales, General Merchandise	Minimum of 1 space per 310 sq. ft. of Floor Area, maximum of 1 space per 265 sq. ft. of Floor Area [1]	1 space per 3,000 sq. ft. of Floor Area	B 50% C 50%	10% EV-R plus 10% EV-I
Roadside Stand	Two spaces.	None	None	None

### Temporary Uses

Christmas Tree Sales	None.	None	None	None
Outdoor Sales, Temporary by Others	By Special Exception			None
Special Event Sales	By special ordinance			None

#### NOTES:

[1] Additional parking may be provided if it does not increase Impervious Surfaces beyond that which would be provided by meeting the maximum parking required. Examples of additional parking may include, but not be limited to, under-Structure parking, Rooftop parking, or Structured parking above a surface Parking Lot.

[2] Other uses: parking and bicycle spaces for uses not specified shall be determined by the Planning Manager, Based upon requirements for similar use.

[3] EV-C = EV-Capable; EV-R = EV-Ready; EV-I = EV-Installed. Definitions of EV-C, EV-R, and EV-I can be found in **Article VIII: Definitions of the Code of Ordinances, City of Ann Arbor, Michigan, Chapter 55, Unified Development Code.**

[4] Total number of EV-C/R/I shall be equivalent to the total number of dwelling units. If total number of parking spaces is less than the number of dwelling units, the total number of EV-C/R/I spaces shall equal *total Proposed* parking spaces.

[5] Where 1 or 2 car garages are part of the proposed parking those garages shall have one (1) EV-R space per garage; the requirements in this table for "Dwelling Multi-Family shall apply to the remainder of the proposed parking"

[6] All new Site Plans for City Council are required to provide EV charging facilities consistent with the requirements of this code section.