

Planner: Mike King

FILE NUMBER: DCA223-001(MK) **DATE INITIATED:** November 30, 2022

TOPIC: Consideration of amending Chapters 51 and 51A of the Dallas Development Code to update electric vehicle charging regulations

COUNCIL DISTRICTS: All **CENSUS TRACTS:** All

PROPOSAL: Consideration of amending Chapters 51 and 51A of the Development Code, Sections 51-4.212, "Service Station;" 51-4.217(18), "Accessory electric vehicle charging station;" 51A-4.210(a)(19), "Motor vehicle fueling station;" and 51A-4.217, "Accessory electric vehicle charging station;" and related sections with consideration to be given to appropriate zoning districts and developing appropriate standards associated with electric vehicle charging.

SUMMARY: The proposed code amendments update the standards for accessory electric vehicle charging stations and add standards for the location of charging equipment. The purpose of the amendments is also to provide clarity and remove barriers to development with concurrently proposed amendments to Dallas Building Code and the Dallas One-and Two-Family Dwelling Code, which propose to require electric vehicle charging infrastructure in all new construction.

ZONING ORDINANCE ADVISORY COMMITTEE RECOMMENDATION: Approval

STAFF RECOMMENDATION: Approval

APPENDIX

1. Link to the Building Inspection Advisory Examining and Appeals Board proposed amendments: <https://bit.ly/2021DallasBIAEA>
2. Link to proposed amendments to Chapter 53: The Dallas Building Code: <https://bit.ly/3YaOBjp>
3. Link to proposed amendments to Chapter 57: The Dallas One- and Two-Family Dwelling Code: <https://bit.ly/3BaLygV>
4. Link to Dallas Comprehensive Environmental & Climate Action Plan (CECAP): <https://www.dallasclimateaction.com>

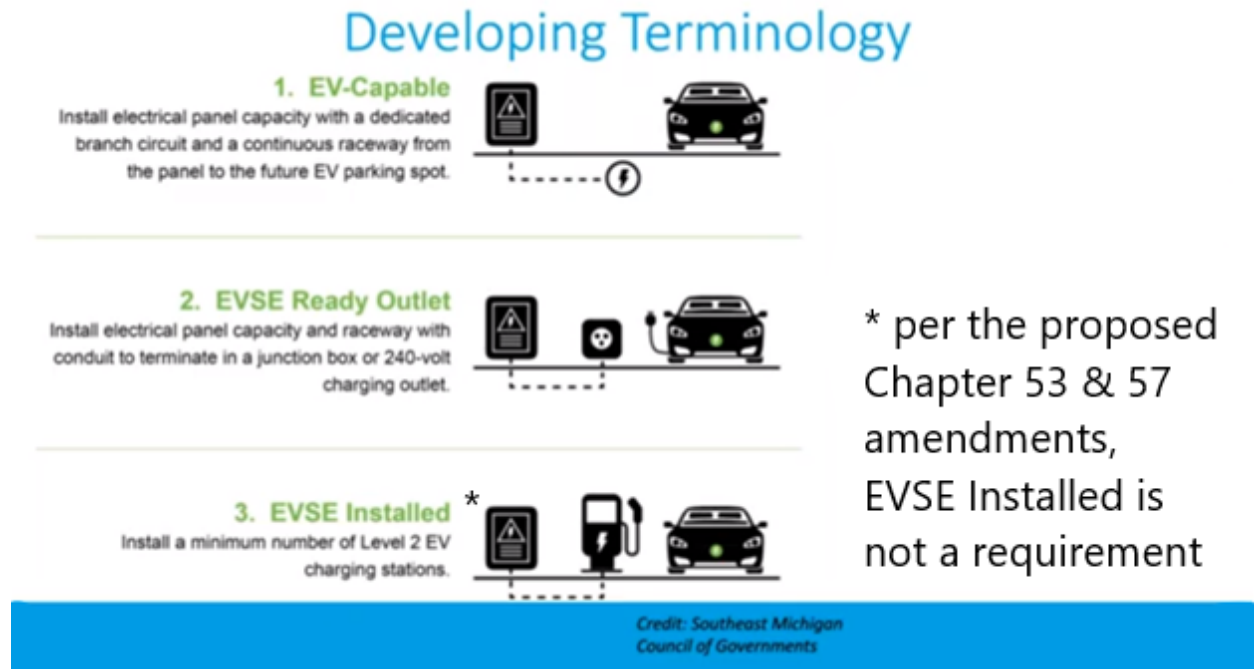
BACKGROUND INFORMATION:

- On August 8, 2012, Council adopted Ordinance No. 28737 which added regulations for electric vehicle (EV) charging and established that when EV charging spaces occupied more than 10 percent of the required parking spaces of a site, it became a main use of “motor vehicle fueling station”.
- On September 6, 2022; the Building Inspection Advisory Examining and Appeals Board (BIAEA) proposed new amendments to the Dallas Building Code and the Dallas One- and Two-Family Dwelling Code. Case reports, meeting minutes, and video recording links can be found on the Development Services Code Amendments [webpage: \(https://bit.ly/2021DallasBIAEA\)](https://bit.ly/2021DallasBIAEA).
- On November 18, 2022, BIAEA posted the final draft ordinances and memos related to the amendments to the Dallas Building Code and the Dallas One- and Two-Family Dwelling Code (abbreviated as “IBC/IRC” in this report). One of the many proposed amendments to those codes requires all new construction to have EV ready or capable spaces, at approximately 15-20 percent of the total provided parking spaces.
- On November 30, 2022, staff inquired with the Development Services Department and discovered that the proposed IBC/IRC amendments establishes a minimum percentage of EV charging spaces that would require all new construction to have a “motor vehicle fueling” main use. Therefore, staff has initiated amendments to the Dallas Development Code to amend the criteria that determines whether electric vehicle charging is accessory to a permitted main use.
- On December 13, 2022, BIAEA voted to recommend approval of the proposed IBC/IRC amendments to City Council.
- On December 13, 2022, ZOAC voted to recommend approval of the proposed Development Code amendments to City Plan Commission (CPC).

Terminology update

As with many new technologies, understanding the terminology is a key component of communication. Electric vehicle (EV) discussions are full of new words, jargon, and trademarked names competing to become part of the mainstream. The proposed amendments from the BIAEA use the currently agreed upon definitions from the electric vehicle industry, as well as the major code-making bodies (the International Code Council (ICC), the National Fire Protection Association (NFPA), and the American Planning Association (APA)). Chapter 51A refers to EVSE as *electric vehicle charging stations*. EVSE is evolving to include more than just providing power to charge batteries. EVSE is typically connected to an online network capable of providing internet access, diagnostics

and troubleshooting, even software and map updates. Staff recommends changing the term 'charging station' to 'electric vehicle supply equipment' to coincide with common terminology in the industry.



STAFF ANALYSIS:

The Development Services Department has initiated amendments to Chapter 53: The Dallas Building Code and Chapter 57: The Dallas One- and Two-Family Dwelling Code (both are abbreviated as “IBC/IRC” in this report) that will conflict with current Dallas Development Code (DDC) sections pertaining to electric vehicle (EV) charging facilities and their associated charging equipment. The purpose of these development code amendments is to align them with the concurrently proposed IBC/IRC amendments of the Dallas City Code to avoid conflicts that would cause barriers to development and to update the 10-year-old regulations.

Specifically, the separate but concurrent IBC/IRC proposals require minimum standards for electric vehicle (EV) charging infrastructure for new construction which exceed the standard set to consider EV charging as an accessory use. Therefore, every new commercial and residential construction project must be in a zoning district which allows a “motor vehicle fueling station” as a main use.

The proposed Development Code amendments (Chapters 51 and 51A) do not require a minimum amount of EV infrastructure, unlike the IBC/IRC amendments; however, the current development code regulations have a limitation on how many parking spaces can have EV charging equipment before it is considered a main use: motor vehicle fueling station. Currently, Chapter 51A allows a maximum of 10 percent of the required parking spaces to have electric vehicle charging equipment (EVSE) as an accessory use and it allows accessory electric vehicle charging in all zoning districts.

The Dallas Comprehensive Environmental Climate Action Plan (CECAP) outlines the specific activities that the city can undertake to reduce greenhouse gas emissions and improve environmental quality in the city. There are eight major goals with ninety-seven actions. At this time, each city department is actively engaged and a dashboard to view the progress is located at dallasclimateaction.com. The Electrical Vehicle Charging provisions are incorporated in the goals of the CECAP and the charge to implement the actions is one against which the Development Services department is measured. The actions include milestone B11: Update the building code to require wiring conduits for solar photovoltaics and electric vehicle charging infrastructure in new construction.

The separate and concurrently proposed IBC/IRC amendments do not require installation of EV charging equipment, but it does require the infrastructure to be in place for 'plug and play' installation of electric vehicle charging equipment (EVSE) at a percentage that exceeds what the Development Code allows as accessory. When new construction is completed and compliant with the proposed IBC/IRC amendments, it would allow charging equipment to be easily installed in an "EV Ready Space" (a parking space with wiring and an outlet connected to an electrical source) without any special tools or equipment, making it difficult to monitor the quantities of parking spaces with charging equipment installed. The proposed IBC/IRC amendments also have requirements for an EV Capable Space which requires conduit to be installed so that an electrician could easily install wiring and a plug or a permanent charging station with a permit. However, since electrical permits are trade permits, no zoning review is required in standard permitting procedures.

Additionally, the minimum requirements in the proposed IBC amendments (Chapter 53, Table 430.1.1) require over 10 percent EV Ready Spaces for any commercial property where one to 20 parking spaces are provided, which conflicts with Chapter 51A-4.217(b)(1.1)(e), which limits accessory use of EVSE to 10 percent. The minimum requirements in the proposed IRC amendments (Chapter 57, Table R333.1.2) also require over 10 percent EV Ready Spaces for any residential property where 1 to 20 parking spaces are provided, which also conflicts with Chapter 51A-4.217(b)(1.1)(E), which limits accessory use of EVSE to 10 percent. Therefore, it is recommended the code

should move away from relying on a percentage of parking spaces that are EVSE parking spaces as the basis of determining if EV charging is an accessory use.

When the threshold to be accessory is exceeded (10 percent or more of the required spaces are EVSE), it is considered a main use as a motor vehicle fueling station and are permitted by right in the following zoning districts: CR, RR, CS, industrial, central area, mixed use, and multiple commercial districts; as a limited use only in MO(A) and GO(A) districts; and by SUP only in MF-3(A), MF-4(A), and NS(A) districts. Because the proposed IBC/IRC amendments will require new construction to construct infrastructure that could easily exceed the current accessory electric vehicle charging station use threshold, it is recommended that the standard to determine if the use is accessory should refocus from a percentage of spaces with EVSE to instead consider if EVSE is located on the same lot as another main use other than parking and fueling related main uses.

The following sections of this report outline the notable changes and factors which staff used in formulating the proposed amendments. These sections will discuss terminology updates, comparison cities, and equity in transportation.

Comparison Cities

Jurisdiction	Multifamily Parking	Commercial Parking	Code Citation
Atlanta, GA	NA	20% of spaces must be EV-ready	Appendix B §101.8
Chicago, IL	20% of spaces must be EV-ready or EV-installed	20% of spaces must be EV-ready or EV-installed	§17-10-1011
Honolulu, HI	Buildings with 8+ spaces: 25% must be EV-ready	Buildings with 12+ spaces: 25% must be EV-ready	§32-1.1(20)
Issaquah, WA	10% of spaces must be EV-installed; 30% must be EV-ready	5% of spaces must be EV-installed; 10% must be EV-ready	§18.09.140
Madison, WI	2% of spaces must be EV-installed; 10% must be EV-ready (increases by 10% every 5 years)	1% of spaces must be EV-installed (increases by 1% every 5 years); 10% must be EV-ready (increases by 10% every 5 years)	§28.141(8)(e)
San Jose, CA	10% of spaces must be EV-installed; 20% must be EV-ready; 70% must be EV-capable	10% of spaces must be EV-installed; 40% must be EV-ready	§24.10.200
St. Louis, MO	2% of spaces must be EV-installed; 5% must be EV-ready (increases to 10% in 2025)	2% must be EV-installed; 5% must be EV-ready	§25.01.020-406.2.7
Washington, DC	Buildings with 3+ spaces: 20% must be EV-ready	Buildings with 3+ spaces: 20% must be EV-ready	§6-1451.03a

Source: Great Plains Institute for Sustainable Development

Because these proposed amendments are running concurrently with the proposed IBC/IRC amendments which are expected to get to Council in March 2023, staff has provided a table of comparison cities from the Great Plains Institute for Sustainable Development in lieu of our typical comparison cities. The requirements in the table below refer to EV capable, EV ready, and EVSE installed. There is great diversity in opinions among U.S. cities on if and how electric vehicle charging equipment shall be mandated. Requiring the complete installation of EVSE places an undue burden on both builders and customers. It is recommended that the end customer should have the choice of the best and most affordable technology. Placing the burden on the builder or developer does not guarantee customers will have access to the appropriate supply equipment. BIAEA and staff believe an EV ready outlet should be required in limited numbers through the construction codes. While EV ready outlets provide plug and play functionality, the wiring and terminations can be cost prohibitive and an enticement for copper thieves. Most cities that have EVSE mandates require roughly 20 percent EV ready spaces, twice what the City of Dallas considers the maximum amount of spaces for EVSE as an accessory use.

Equity in Transportation

Equity means that each person has the resources and services necessary to thrive in each person's own unique identities, circumstances, and histories. Equity focuses on eliminating disparities while improving outcomes for all. Racial equity is a situation that is achieved when people are thriving and neither race nor ethnicity statistically dictates, determines, or predicts one's social outcome or ability to thrive. [City Ordinance 210503](#), Section 5 states: "The City is committed to continuing to make equity a priority for its residents of all racial, ethnic, and national origins, and will make equity a focal point through all policies, initiatives, and programs of the city." Staff believes if siting of EVSE is left to private developers and charging operators, rather than addressed in the construction codes, access to underserved communities will likely be limited. An equitable City Code helps ensure that a project's benefits and costs are fairly distributed throughout the community, including to low-income communities, communities of color, and the disability community. Approaches to advance equity in EVSE implementation include accessibility of equipment, multifamily supportive policies, right-of-way supportive policies, and geographic coverage improvement, which is elaborated in the following pages.

1. Accessibility of equipment – Section 51A-4.217(b)(1.1)(E)(iii) already addresses cord management as an equity tool to comply with accessibility standards. The City of Dallas does not use accessibility plan reviewers in the permitting process, leaving the burden on licensed architects and engineers to ensure ADA compliance. The site planning considerations for accessible EV spaces will also be for the architects and engineers to determine in the future. There is currently no

state or federal standard that applies to accessible EVSE parking. Should state and federal accessibility requirements be added, staff's proposed amendments are not anticipated to conflict with those updates.

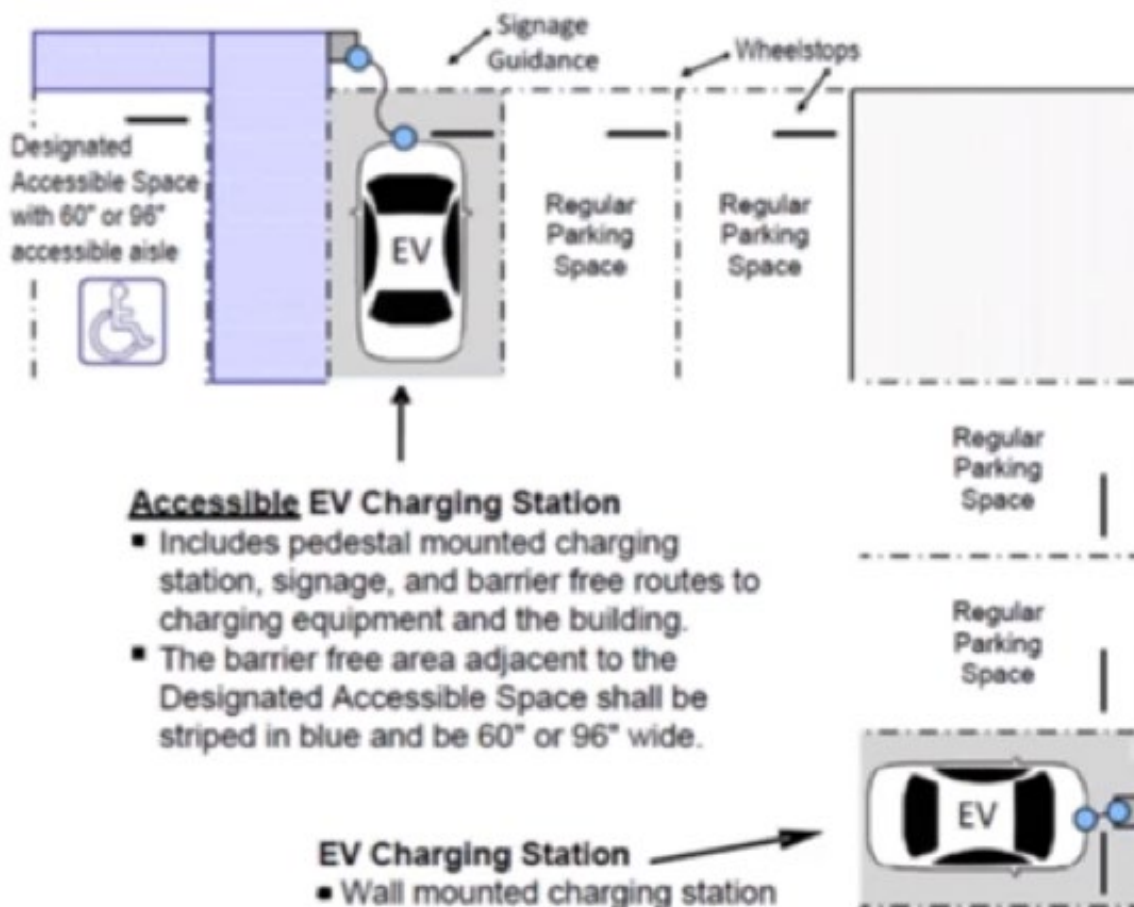


Photo Credit: South Windsor, CT, §11.8.3

2. Multifamily supportive policies – the amendments providing for EVSE in multifamily developments is addressed through the BIAEA Chapter 53 and 57 code amendments. By making them a requirement in new construction, and an inspection item to comply with the certificate of occupancy, implementation of EV infrastructure will be applied uniformly and made available to multifamily tenants. When all new construction must provide EV infrastructure and flexibility is added to allow it as an accessory use, it will bring EV charging capabilities close to home and will make it easier for residents to have access to electric vehicle charging.
3. Right-of-way (ROW) supportive policies – while on-street parking does not contribute to the minimum off-street parking requirements in Chapters 51 and 51A, having EVSE available in existing ROW should be considered as an amenity

where it is available. With proper licensing from the City Real Estate Division, it is foreseeable that EVSE can be installed similar to parking meters.

Right-of-way

Allowing charging stations in the public ROW can benefit underserved communities and people with disabilities.

Possible scenario if ROW is not allowed:

- Private off-street parking is not available
- EV user may park along the curb and lay charging cable across ROW
- Limits a person using an assistive device from navigating the sidewalk



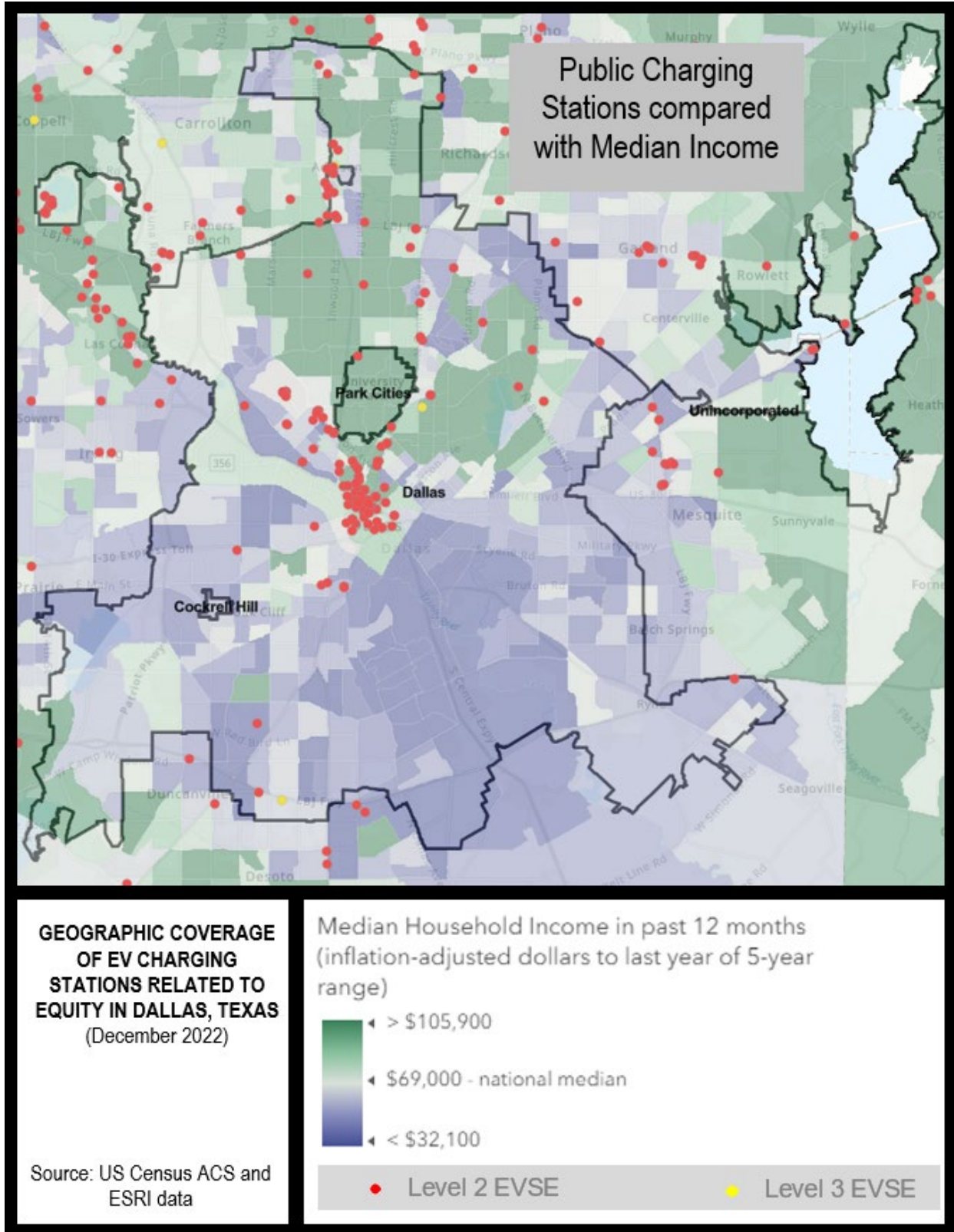
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4. Geographic coverage improvement – Staff believes that one of the best ways to improve EVSE infrastructure in the city is to reevaluate the criteria for which it can be accessory and support the concurrently proposed IBC/IRC amendments which require EVSE infrastructure in new construction. While state and federal programs to improve EV infrastructure are still developing, standards are being discussed on a nation-wide level and in international standard making bodies. When reviewing publicly available fueling stations or charging facilities in Dallas, staff found less stations were located in the southern sector of Dallas (see illustration on the following page). Amending the threshold for accessory electric vehicle charging stations to no longer be capped at 10 percent of required parking is expected to encourage more installations of EVSE and will increase the likelihood of EV adoption across the city.



DISCUSSION TOPICS FROM THE ZONING ORDINANCE ADVISORY COMMITTEE

Signage for EVSE

No changes are proposed regarding on- or off-premise sign regulations, which are regulated through Chapter 51A, Article VII. Current sign regulations prohibit signs advertising accessory electric vehicle charging stations in residential districts which is proposed to remain unchanged with the proposed amendments. Coincidentally, with the existing internet connectivity of electric vehicles with EVSE, on-premise signs are rarely utilized, except for small wayfinding once on-site. Most EVs communicate wirelessly via the internet with remote servers, GPS location, and mapping software to locate the nearest available publicly accessible charging equipment. In the event signs for EVSE in nonresidential districts enlarge, the sign regulations in Article VII would continue to regulate the size and location of any signs.

EVSE Parking Spaces and Off-Street Parking Regulations

Currently, the Dallas Development Code does not exclude EVSE parking spaces from being considered as off-street parking spaces when EVSE parking spaces comply with the dimensional standards of Chapters 51 and 51A. There are also no known prohibitions in the City Code for non-EVs from parking in an EVSE equipped parking space. Parking management on private property will remain the responsibility of the property owner.

EVSE in New and Existing Construction

The proposed IBC/IRC amendments apply to new construction only. Existing construction was not addressed when the BIAEA amended the 2021 International Existing Building Code with Dallas amendments in early 2022. The BIAEA may choose to add amendments related to EVSE and existing construction at some later date. However, the recommended amendments to the Development Code give existing buildings and property owners flexibility to retrofit or add more EVSE on their properties, whether the BIAEA amendments are passed or not. Updating the zoning regulations improve the opportunities for early adoption and implementation in all areas of the city.

ZOAC RECOMMENDED AMENDMENTS TO CHAPTER 51

SEC. 51-4.212. MOTOR VEHICLE RELATED USES.

(13) Service station.

(A) Definition: A facility for the retail sale of motor vehicle fuel, lubricating oils, and parts for use in motor vehicles and a facility for the retail sale of motor vehicle fuel dispensed from electric vehicle supply equipment (EVSE) excluding an accessory electric vehicle charging station use.

(B) Districts permitted: SC, GR, LC, HC, central area, and industrial districts; limited use in O-2, LO, MO, and GO districts; specific use permit required in an NS district.

(C) Required off-street parking:

(i) One space for each 500 square feet of floor area; minimum of four spaces required.

(ii) Parking spaces that are used to repair motor vehicles and located in a structure are not counted in determining the required parking.

(D) Required off-street loading:

SQUARE FEET OF FLOOR AREA IN STRUCTURE	TOTAL REQUIRED SPACES OR BERTHS
0 to 10,000	NONE
10,000 to 60,000	1
Each additional 60,000 or fraction thereof	1 additional

(E) Limited use regulations:

(i) This use is subject to the following limited use regulations instead of the regulations contained in Section 51-4.218.

(ii) The service station use as a limited use must be secondary to a main use, and may be available only to the owner and tenant of the main building and not available to the general public.

(iii) The dispensing of motor vehicle fuel must be limited to one pump for each main building.

(iv) The motor vehicle fuel pump and any sign relating to this use must not be visible from the public street. No sign may be erected indicating the availability of gasoline.

(v) All storage tanks for motor vehicle fuel must be located underground.

(F) Additional provisions:

(i) A gasoline service station pump island or station canopies may be located 18 feet or more from a property line.

(ii) The rental of trailers that can be pulled by passenger automobiles is permitted as an accessory use.

(iii) A gasoline pump island must be constructed in a manner that allows vehicular access adjacent to the gasoline pump island without interference with or obstruction to off-street parking. Determination of the proper placement of gasoline pump islands must be based on the dimensions in the City of Dallas manual, "Layout and Design Standards for Parking Lots," which is expressly adopted as part of this subsection. A person shall obtain approval from the director for the placement of a gasoline pump island before the building official may issue a building permit for the construction.

(iv) Except for compression cylinder tanks used in connection with compressed natural gas fueling facilities, all storage tanks for motor vehicle fuel must be located underground.

(v) Compression cylinder tanks used in connection with compressed natural gas fueling facilities must be screened from adjacent streets, alleys, and residential uses.

(vi) Charging equipment may not obstruct a required off-street parking space. A charging cord may not cross over a sidewalk or pedestrian walkway.

(vii) When six feet or less in height, structures and equipment associated with this use may be located where an off-street parking space is allowed.

SEC. 51-4.217. ACCESSORY USES.

(b) Specific accessory uses. The following accessory uses are subject to the general provisions in Subsection (a) and the regulations below:

(18) Accessory electric vehicle charging station.

(A) Definition: A facility that provides electric[~~al charging for~~] vehicle[s] supply equipment (EVSE) on a site with a main use excluding commercial parking lot or garage, commercial motor vehicle parking, motor vehicle fueling, liquefied natural gas fueling station, and truck stop uses.

(B) Districts permitted: Residential and nonresidential districts.

(C) Required off-street parking: None.

(D) Required off-street loading: None.

(E) Additional provisions:

(i) Any amount [Up to 10 percent] of parking [counted as required parking] for a main use on the property may be electric vehicle charging spaces.

(ii) If this accessory use is located in a residential district, it may not have a sign advertising its services.

(iii) Charging equipment may not obstruct a required off-street parking space. A charging cord may not cross over a sidewalk or pedestrian walkway.

(iv) When six feet or less in height, structures and equipment associated with this use may be located where an off-street parking space is allowed.

ZOAC RECOMMENDED AMENDMENTS TO CHAPTER 51A

SEC. 51A-4.210. RETAIL AND PERSONAL SERVICE USES.

(b) Specific uses.

(19) Motor vehicle fueling station.

(A) Definition: A facility for the retail sale of motor vehicle fuel dispensed from pumps or electric vehicle **supply equipment (EVSE) excluding accessory electric vehicle** charging station[s] uses. This use does not include a truck stop or a liquefied natural gas fueling station as defined in this section.

(B) Districts permitted: By right in CR, RR, CS, industrial, central area, mixed use, and multiple commercial districts. By right as a limited use only in MO(A) and GO(A) districts. By SUP only in MF-3(A), MF-4(A), and NS(A) districts.

(C) Required off-street parking: Two spaces.

(D) Required off-street loading: Sufficient space must be provided to allow for the unloading of a fuel truck.

(E) Additional provisions:

(i) Except for compression cylinder tanks used in connection with compressed natural gas fueling facilities, all storage tanks for motor vehicle fuel must be located underground.

(ii) A fuel pump island must be constructed in a manner that allows vehicular access adjacent to the island without interfering with or obstructing off-street parking. The building official shall not issue a permit to authorize the construction of a pump island until its placement has been approved by the director.

(iii) Fuel pumps are permitted as an accessory use only if they comply with the following subparagraphs:

(aa) The pumps must be available only to the owner and tenant of the main building and not available to the general public.

(bb) The fuel pump and any sign relating to the pump must not be visible from the public street. No sign may be erected indicating the availability of motor vehicle fuel.

(iv) Fuel pumps must be located at least 18 feet from the boundary of the site.

(v) Compression cylinder tanks used in connection with compressed natural gas fueling facilities must be screened from adjacent streets, alleys, and residential uses.

(vi) Charging equipment may not obstruct a required off-street parking space. A charging cord may not cross over a sidewalk or pedestrian walkway.

(vii) When six feet or less in height, structures and equipment associated with this use may be located where an off-street parking space is allowed.

SEC. 51A-4.217. ACCESSORY USES.

(b) Specific accessory uses. The following accessory uses are subject to the general provisions in Subsection (a) and the regulations and restrictions outlined below:

(1.1) Accessory electric vehicle charging station.

(A) Definition: A facility that provides electric~~[al charging for]~~ vehicle[s] supply equipment (EVSE) on a site with a main use other than a commercial parking lot or garage use or commercial motor vehicle parking use.

(B) District restrictions: Residential and nonresidential districts.

(C) Required off-street parking: None.

(D) Required off-street loading: None.

(E) Additional provisions:

(A) Any amount [Up to 10 percent] of parking [counted as required parking] for a main use on the property may be electric vehicle charging spaces. The area restrictions in Subsection (a)(3) do not apply to this use.

(ii) If this accessory use is located in a residential district, it may not have a sign advertising its services.

(iii) Charging equipment may not obstruct a required off-street parking space. A charging cord may not cross over a sidewalk or pedestrian walkway.

(iv) When six feet or less in height, structures and equipment associated with this use may be located where an off-street parking space is allowed.

APPENDIX

Please note that the proposed amendments in this appendix are provided as reference only and are not under the jurisdiction of the City Plan Commission.

Links to the Building Inspection Advisory Examining and Appeals Board Proposed Amendments to Chapter 53: The Dallas Building Code and Chapter 57: The Dallas One- and Two-Family Dwelling Code

Proposed amendments to Chapter 53 - The Dallas Building Code (abbreviated to IBC in this report) are located on lines 92 through 116, and lines 834 through 864: <http://bit.ly/3YaOBjp>.

Proposed amendments to Chapter 57 - The Dallas One- and Two-Family Dwelling Code (abbreviated to IRC in this report) are located on lines 44 through 75, and lines 1013 through 1053: <http://bit.ly/3BaLygV>. *Please note that the same definitions from Chapter 53 are applied to Chapter 57.*