

**MEMORANDUM**

March 4, 2014

TO: Planning, Housing, and Economic Development Committee  
FROM: Jeff Zyontz,  Legislative Attorney  
SUBJECT: ZTA 14-01, Parking Design - Charging Stations

Zoning Text Amendment (ZTA) 14-01, sponsored by Councilmembers Berliner and Navarro, was introduced on January 28, 2014. The sponsors believe that future large parking lots should make accommodations for electrically powered vehicles. To that end, ZTA 14-01 would require new parking lots with 50 or more spaces to provide at least one space for charging electric vehicles for every 50 spaces in the lot.

The Council conducted a hearing on February 25, 2014. The only speaker was Diane Schwartz Jones, representing the County Executive. The testimony suggested that the ZTA may be premature, given the cost of parking spaces and the relatively few all-electric cars on the road. The Planning Board supported the amendment with a recommendation to require more detailed design elements and distinctions between levels of charging stations. The Planning Board would recommend allowing the fastest charging stations (high voltage class 3) only in commercial mixed-use zones.

**Issues**

***Is ZTA 14-01 premature?***

The Executive reported that there are only 2,000 all-electric vehicles registered in the entire state. In 2011, there were 2 million private cars registered in Maryland. Assuming all-electric vehicles are cars (and not trucks or motorcycles), electric vehicles comprise 0.1 percent of the Maryland car fleet. Reserving 2% of parking spaces for electric cars (a 1 to 50 ratio) will result in empty parking spaces for some time to come. The ratio of charging station to cars is aggressive and intended to add an advantage for electric charges.

Given that structured parking space can easily cost \$30,000 per space without charging facilities, the cost of this incentive for electric vehicles may be disproportionate to the benefit. The Council could choose any one of the following alternatives:

- 1) Disapprove ZTA 14-01 as premature.

- 2) Require that the design of some space accommodate the future installation of charging stations. (The City of Auburn Hills, Michigan encourages, but does not require, electric charging stations and gives specification on how that accommodation may be made.)
- 3) Require some charging stations but allow non-electric vehicles to park there until demand starts to warrant their future use.
- 4) Reduce the costs by reducing the percentage of required charging stations. (*See next issue.*)
- 5) Reduce costs by counting a parking space with a charging station as 3 spaces required for the minimum amount of parking. (This approach is used in Georgia’s model code for electric vehicles.)

***Is the 1 to 50 requirement in ZTA 14-01 appropriate?***

Hawaii requires 1 charging station for every 100 parking spaces in new lots. Reducing the number of required parking spaces reduces the costs. ZTA 14-01 as introduced would require 20 times the current demand for charging stations.

***Should ZTA 14-01 distinguish between classes of charging stations?***

DPS would consider electric charging stations to be an accessory use to a primary structure. Electrical permits would be required, and setbacks for any structures would be enforced. Whereas ZTA 14-01 is an effort to mandate some electric charging stations, the Planning Board recommendation is to restrict a class of charging stations to commercial and mixed-use zones.

***Should ZTA 14-01 include design standards?***

The Planning Board draft recommends detailed provisions for signage, height, and protection for the facility against vehicle intrusion. It mentioned light by referencing another code requirement. ZTA 14-01 as introduced lacked those standards.<sup>1</sup> Staff questions the need for such standards.

***How will ZTA 14-01 be addressed after October 30, 2014?***

The Council approved the Zoning Ordinance Rewrite with an effective date of October 30, 2013. ZTA 14-01 would not amend that code without a specific action of the Council. Staff proposes to track all ZTAs from now until September 29 and ask for Council introduction of a corrective ZTA to incorporate all newly approved provisions, including ZTA 14-01. Planning Staff submitted the Planning Board’s proposed revisions to the Zoning Rewrite. (*See* © 23 -26)

<u>This packet contains</u>	<u>© Number</u>
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<sup>1</sup> Rather than do a term paper on “the potential positive interactions of inter-species relationships between homosapiens and small amphibians”, Staff would rather complete a paper entitled “Our Friend the Frog”.



**MONTGOMERY COUNTY PLANNING BOARD**  
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

OFFICE OF THE CHAIR

February 28, 2014

TO: The County Council for Montgomery County, Maryland, sitting as the District Council for the Maryland-Washington Regional District in Montgomery County, Maryland

FROM: Montgomery County Planning Board

SUBJECT: Zoning Text Amendment No. 14-01

**BOARD RECOMMENDATION**

The Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission reviewed Zoning Text Amendment No. 14-01 at our regular meeting on February 27, 2014. By a vote of 4-0, the Planning Board recommends approval of the text amendment as modified by the Board for plain language clarifications. The text amendment language as modified is included as an attachment to this memorandum, separate from the technical staff report (Attachment 1).

ZTA No. 14-01 would amend the provision for parking design standards, size and arrangement, and minimum required parking spaces for the charging of electric vehicles. Currently, the Zoning Ordinance does not have such provisions for electric vehicle charging stations (EVCS). Electric vehicles, although not prevalent in Montgomery County, are on the rise as a viable transportation choice. Electric vehicles are powered by rechargeable battery packs, and rely on non-traditional fueling capabilities, unlike combustion engines that “recharge” using gasoline filling stations.

Testimony from Councilmember Berliner offered the intent of this zoning text amendment to support Montgomery County’s move towards a sustainable community, which includes green infrastructure such as providing electric vehicle charging stations that allow for “refueling” in many parts of the county. No other testimony was taken during this public hearing.

The Planning Board discussed the effect of the proposed language on the current zoning code rewrite, comparing the proposed language for the existing code to that of the rewrite. The Board supported further plain language revisions for the existing Zoning

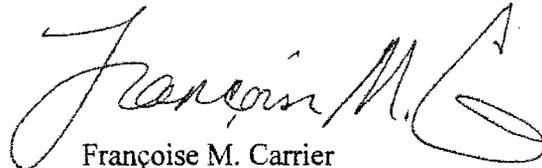
February 28, 2014

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Ordinance prepared by staff to anticipate translation into the Council's zoning rewrite draft and further clarify previous recommendations provided to allow transition from one code to the other. (Attachment 2). The Board agreed that if only one electric vehicle charging space is required, it should be designed to be accessible to a disabled person, but be available to any who need to recharge their vehicle. The design of such spaces can be determined through site design, and should be marked clearly to indicate that although accessible to disabled persons, any electric vehicle is able to use the space to charge. The Board recommends adding design standards and what could be considered a baseline in the design process, as well as the most appropriate locations by zone for the level of charge being provided. Attached for reference are marked-up pages that would incorporate ZTA 14-02 in the Council's draft zoning code rewrite (Attachment 3).

### CERTIFICATION

This is to certify that the attached report is a true and correct copy of the technical staff report and the foregoing is the recommendation adopted by the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission, at its regular meeting held in Silver Spring, Maryland, on Thursday, February 27, 2014.



Françoise M. Carrier  
Chair

FC:RMK  
Encl.



**Zoning Text Amendment (ZTA) No. 14-01, Electric Vehicle Parking Standards- Updated**

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 Renée M. Kamen, AICP, Senior Planner, [renee.kamen@montgomeryplanning.org](mailto:renee.kamen@montgomeryplanning.org), (301) 495-4723

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Completed: 2/20/14

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### Description

ZTA No. 14-01 amends the provision for parking design standards, size and arrangement, and minimum required parking spaces for the charging of electric vehicles. Specifically, the ZTA would allow electric vehicle charging stations under certain circumstances.

### Summary

**Staff recommends approval with modifications of ZTA 14-01 to allow electric vehicle charging stations under certain circumstances. The staff recommendations include plain language; add definitions, general development standards and maintenance requirements.**

Council members Berliner and Navarro sponsored Zoning Text Amendment 14-01 to require electric vehicle charging stations under certain circumstances. The sponsors would require spaces for the charging of electric vehicles in instances where 50 or more parking spaces are required, as well as design and accessible requirements if 25 or more electric charging stations are required.

### Background/Analysis

Electric vehicles (EVs) have re-entered the market and will be available to consumers in all 50 states. The growth of EVs is anticipated increase as a transportation choice, and the incorporation of electric vehicle supply equipment (EVSE) will become a critical element of planning and designing<sup>1</sup>. EVs run on electric only, powered by rechargeable battery packs, and rely on non-traditional fueling capabilities, unlike combustion engines that “recharge” using gasoline filling stations.

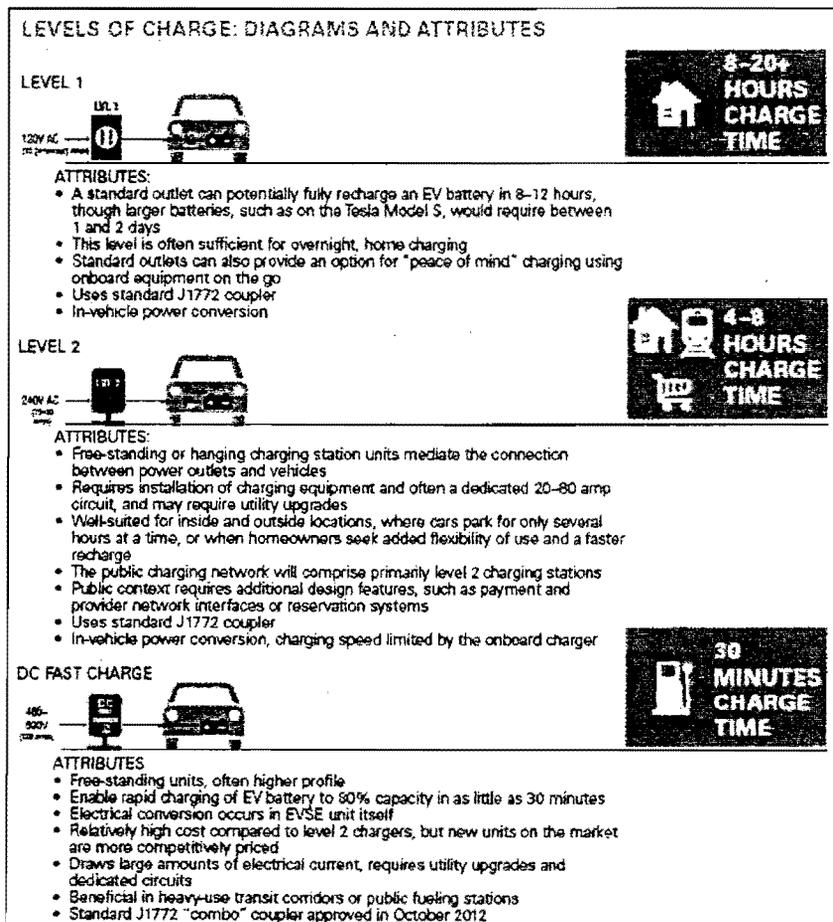
Since 2010, multiple jurisdictions in several states have created standards in zoning ordinances, road codes, building codes, etc. that allow for the incorporation of EVSE in the development of private or public property, including street designs. Site design and locational requirements are

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<sup>1</sup> *Siting and Design Guidelines for Electric Vehicle Supply Equipment* (2012), WXY Architecture + Urban Design.

part of zoning ordinances nationwide; however, siting and installation of EVSE depends on a variety of considerations, including the proposed use, proximity to power supply, parking space size and orientation, pedestrian circulation, and lighting<sup>2</sup>.

Simply stated an EVSE delivers electricity to charge the batteries connected to a charging station. There are currently three levels of charging stations: Level 1 (slow charging), Level 2 (moderate charging) and Level 3 (rapid charging). Figure 1 below shows the attributes of each level for electric vehicle charging stations. Most all municipal governments permit by-right Level 1 and Level 2 in any zoning district, provided they are ancillary to the primary use. Level 3 charging stations are permitted by-right in certain commercial, mixed use and industrial zones, again, if the charging stations are ancillary to the primary.



**Figure 1: Levels of Charging Stations**

Source: *Siting and Design Guidelines for Electric Vehicle Supply Equipment (2012)*

Many zoning ordinances vary with respect to the number of required parking spaces for EV charging stations. Most states do not require minimum thresholds for parking spaces;

<sup>2</sup> Ibid.

however, all require a minimum of one accessible EV charging station, located in close proximity to the building or facility entrance and connected to a barrier-free accessible route of travel (see Figure 2 below for a possible configuration). In all cases, it is not necessary to designate the accessible electric vehicle charging station exclusively for use of disabled persons, since accessible parking is available for those not needing a charge. Those ordinances that were cited as having mandatory measures for non-residential uses provide as few as one EV charging space between 10 – 25 parking spaces, incrementally increasing one per each additional 25 parking spaces. Once a parking facility increases to 201 spaces or more, at least 8% of the total spaces must be for EV charging station spaces. One such ordinance provided that no more than 20% of the parking facility could be for EV charging stations. In all instances electric vehicle charging stations were included in the calculation for minimum required parking spaces.

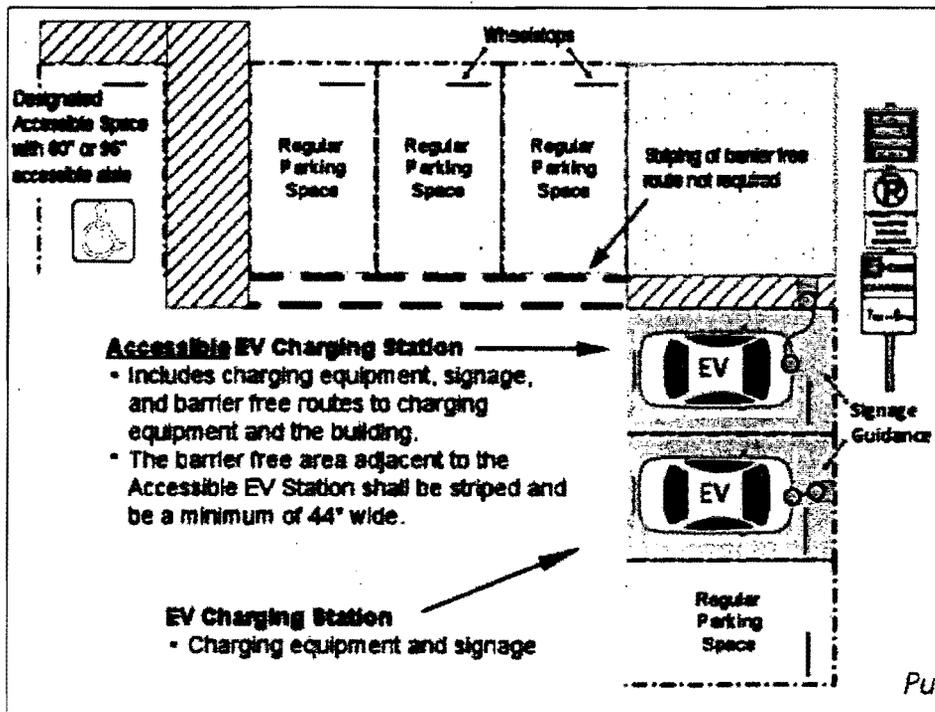


Figure 2: Off Street Accessible Electric Vehicle Charging Station Option 1  
 Source: *Electric Vehicle Infrastructure: A Guide for Local Governments in Washington State (2010)*

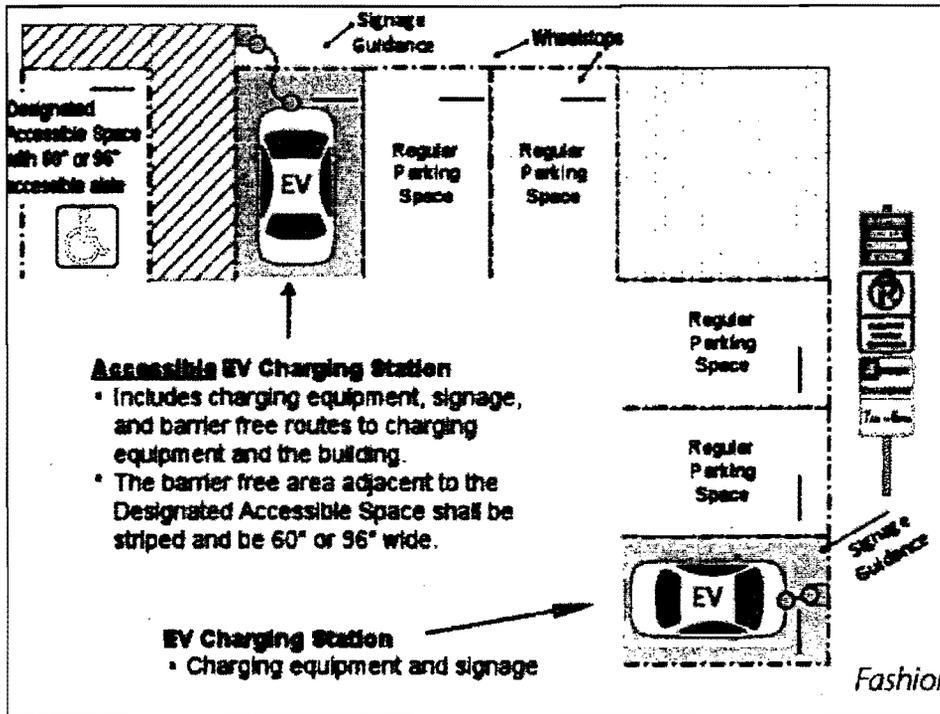


Figure 3: Off Street Accessible Electric Vehicle Charging Station Option 2  
 Source: *Electric Vehicle Infrastructure: A Guide for Local Governments in Washington State (2010)*

In reviewing the proposed text amendment, staff identified several items for Planning Board discussion and consideration:

- As proposed, this text amendment does not differentiate between primary or accessory use of these stations. Most, if not all zoning ordinances that outline where this use is permitted, by level of charging station, and defines what where the electric charging station is a primary or accessory use. This may affect future automobile filling stations that may install rapid charge (or Level 3) electric charging stations, alongside regular fueling stations.
- As proposed, this text amendment does not consider "EV-readiness", in that the ordinance does not have provisions to anticipate future need or growth of electric charging stations throughout the County.
- As proposed, this amendment does not differentiate between types of charging stations, nor defines the terms used in the section.

- As proposed, electrical charging stations for those with disabilities would be required after 25 or more electric vehicle charging stations, when typically these are designed to be included with the first required space, but not mandated to only disabled persons.

Staff included language in the proposed amended text amendment that would address staff's discussion points, including reducing the point at which accessible electric charging parking spaces are required. Staff recommends the following considerations into the amended text

- Define whether electric charging stations are a primary or accessory use, and what zone will permit the level of charging station;
- Define the terms used in the code which reference electric vehicle charging stations;
- Require one accessible electric vehicle parking space when required to do a minimum of one electric vehicle charging space per fifty parking spaces, but this space would be available to any person needing to use the space, since assumedly ADA accessible stalls will already be available in the parking lot or garage.
- Staff did not recommend an optional, "EV-readiness" language, although it is a viable option for smaller parking facilities in order to anticipate growth of this transportation sector.

### **Conclusion**

With the proposed changes to the ZTA language as depicted in Attachment 1, staff recommends approval of ZTA 14-01. Incorporating electric vehicle technology in the zoning ordinance amendments includes a holistic approach when determining the location and site design of electric vehicle charging stations and allows uniform requirements regarding electric vehicle charging stations in all zones. These changes will define new terminology relating to electric vehicles, identify permitted locations, and define site design requirements when approving development plan applications.

### **Attachments**

1. ZTA No. 14-01, as modified by Staff

1 **Sec. 1. DIVISION 59-E-2 is amended as follows:**

2 Division 59-E-2. PLANS AND DESIGN STANDARDS.

3 **Sec. 59-E-2.2. Size and arrangement of parking spaces.**

4 \* \* \*

5 **59-E-2.23. Spaces for handicapped.**

6 Parking spaces for handicapped persons shall be provided in accordance with the  
7 standards specified in the Maryland Building Code for the Handicapped as  
8 contained in the Code of Maryland Regulations 05.01.07,\* dated September 5,  
9 1980, and as subsequently amended.

10 **59-E-2.24. [[Space for charging electric vehicles.]] Electric Vehicle**

11 **Infrastructure**

12 **59-E-2.24.1. Intent**

13 **The intent of this section is to facilitate and encourage the use of electric vehicles**  
14 **and to expedite the establishment of a convenient, cost-effect electric vehicle**  
15 **infrastructure that such use necessitates.**

16

17 **59-E2.24.2. Applicability**

18 **These requirements apply to all parking facilities constructed after {effective date},**  
19 **of Section 59-E-2.24, Electric Vehicle Infrastructure.**

20

21 **59-E-2.24.3. Definitions**

22 **For the purpose of this Section, the following definitions shall apply.**

23 **a) Accessible electric vehicle charging station means an electric vehicle**  
24 **charging station where the batter charging station is located within accessible reach**  
25 **of a barrier-free access aisle and the electric vehicle.**

26 **b) Battery charging station** means an electrical component assembly or  
27 cluster of component assemblies designed specifically to charge batteries within  
28 electric vehicles.

29 **c) Battery electric vehicle** means any vehicle that operates exclusively on  
30 electrical energy from an off-board source that's stored in the vehicle's batteries,  
31 and produces zero tailpipe emissions or pollution when stationary or operating.

32 **d) Charging levels** means that standardized indicators of electrical force, or  
33 voltage, at which an electric vehicle's battery is recharged. The terms 1, 2 and 3,  
34 are the most common charging levels, and include the following specifications:

35 1) Level 1 is considered slow charging. Voltage including the range  
36 from 0 through 120.

37 2) Level 2 is considered medium charging. Voltage is greater than  
38 120 and includes 240.

39 3) Level 3 is considered fast or rapid charging. Voltage is greater  
40 than 240.

41 **e) Electric vehicle** means any vehicle that is licensed and registered for  
42 operation on public and private highways, roads, and streets; either partially  
43 or exclusively, on electrical energy from the grid, or an off-board source that  
44 is stored on-board via a battery for motive purpose. "Electric vehicle"  
45 includes a battery electric vehicle and a plug-in hybrid electric vehicle.

46 **f) Electric vehicle charging station** means a public or private parking space  
47 that is served by battery charging station equipment that has as its primary  
48 purpose the transfer of electric energy (by conductive or inductive means) to  
49 a battery or other energy storage device in an electric vehicle. An electric  
50 vehicle charging station equipped with Level 1 or Level 2 charging  
51 equipment is permitted outright as an accessory use to any principal use.

52 **g) Electric vehicle charging station – private restricted use means an**  
53 **electric vehicle charging station that is as follows:**

- 54 1) privately owned and restricted access (e.g., single-family home,  
55 executive parking, designated employee parking) or  
56 2) publically owned and restricted (e.g., fleet parking with no access  
57 to the general public).

58 **h) Electric vehicle charging station – public use means an electric vehicle**  
59 **charging station that is publicly owned and publicly available (e.g., Park & Ride**  
60 **parking, public library parking lot, on-street parking) or privately owned and**  
61 **available to visitors of the use (e.g., shopping center parking).**

62 **i) Electric vehicle infrastructure means conduit/wiring, structures,**  
63 **machinery and equipment necessary and integral to support an electric vehicle,**  
64 **including battery charging stations and rapid charging stations.**

65 **j) Electric vehicle parking space means any marked parking space that**  
66 **identifies the use to be exclusively for the parking of an electric vehicle.**

67 **k) Non-electric vehicle means any motor vehicle that does not meet the**  
68 **definition of electric vehicle.**

69 **l) Plug-in hybrid vehicle means an electric vehicle that contains an internal**  
70 **combustion engine and also allows power to be delivered to drive wheels by an**  
71 **electric motor; charges its battery primarily by connecting to the grid or other off-**  
72 **board electrical source; may additionally be able to sustain battery charge using an**  
73 **on-board internal-combustion –driven generator and has the ability to travel**  
74 **powered by electricity.**

75

76 **E-59.2.24.4. Permitted Locations**

77 **a) Level 1 and Level 2 electric vehicle charging stations are permitted in**  
78 **every zoning district when accessory to the primary permitted use. Such stations**

79 located at one-family, multi-family and mobile home park dwellings shall be  
80 designated as private restricted use only. Installation shall be subject to permit  
81 approval administered by the Department of Permitting Services.

82 **b) Level 3 electric vehicle charging stations** are permitted in the C-2, C-3,  
83 C-6, CBD, R & D, LSC, I-2 and I-3 Zone when accessory to the primary permitted  
84 use. Installation is subject to permit approval administered by the Department of  
85 Permitting Services.

86

87 **59-E.2.24.5. General Requirements**

88 **a) Parking**

89 1. An electric vehicle charging station space may be included in the  
90 calculation for minimum required parking spaces required in accordance  
91 with Section 59-E-3.7.

92 2. Public electric vehicle charging stations are reserved for parking  
93 and charging electric vehicles only. Electric vehicles may be parked in any  
94 space designated for public parking, subject to the restrictions that would  
95 apply to any other vehicle that would park in that space.

96 **b) Number**

97 1. The minimum number of electric vehicle charging stations required is 1  
98 electric vehicle charging station per 50 parking spaces.

99 2. Accessible parking spaces

100 A minimum of one accessible electric vehicle charging station is required in  
101 any parking facility that is required to have one electric vehicle parking  
102 space. For parking facilities required to have 51-75 electric vehicle parking  
103 spaces the number of accessible spaces will increase to two (2). Between 76  
104 – 100 electric vehicle parking spaces increases to three (3) and each  
105 thereafter increment of 25 electric charging station shall increase by one

106 additional accessible electric vehicle charging space. Accessible electric  
107 vehicle charging stations should be located in close proximity to the building  
108 or facility entrance and connected to a barrier-free accessible route of travel.  
109 It is not necessary to designate the accessible electric vehicle charging  
110 station exclusively for the use of disabled persons.

111 **c) Location and Design**

112 The provision of electric vehicle parking will vary based on the design and  
113 use of the primary parking facility. The following required and additional  
114 location and design criteria are provided in recognition of the various  
115 parking facility layout

116 **1) Lighting**

117 Site lighting shall be provided where an electric vehicle charging station is  
118 installed, unless charging is for daytime purposes only.

119 **2) Size**

120 The minimum width for a parking space for charging electric vehicles is 9  
121 feet.

122 **2) Equipment Standards and Protection**

123 (a) Battery charging station outlets and connector devices shall be no less  
124 than 36 inches and no higher than 48 inches from the surface where  
125 mounted. Equipment mounted on pedestals, lighting posts, bollards or other  
126 devices shall be designed and located as to not impede pedestrian travel or  
127 create trip hazards on sidewalks.

128 (b). Adequate battery charging station protection, such as concrete-filled  
129 steel bollards shall be used. Curbing may be used in lieu of bollards, if the  
130 battery charging station is setback a minimum of 24 inches from the face of  
131 the curb.

132 **3) Signage**

133 (a) Information shall be posted identifying voltage and amperage levels and  
134 any time of use, fees or safety information related to the electric vehicle  
135 charging station.

136 (b) Each electric vehicle charging station space shall be posted with signage  
137 indicating the space is only for electric vehicle charging purposes. For  
138 purposes of this subsection “charging” means that an electric vehicle is  
139 parked at an electric vehicle station and is connected to the battery charging  
140 station equipment. Restrictions shall be included on the signage, if removal  
141 provisions are to be enforced.

142 **4) Maintenance**

143 Electric vehicle charging stations shall be maintained in all respects,  
144 including the functioning of the equipment. A phone number or other  
145 contact information shall be provided on the equipment for reporting when it  
146 is not functioning or other problems are encountered.

147 **e) Usage Fees**

148 The property owner is not restricted from collecting a service fee for the use  
149 of an electric vehicle charging station made available to visitors of the  
150 property.

151 \_\_\_\_\_  
152 [(a) All parking facilities constructed after {effective date}, containing more than  
153 50 parking spaces, must provide one space within their parking requirement  
154 with a station for charging electric vehicles for each 50 automobile parking  
155 spaces in the facility.

156 b) The minimum width for a parking space for charging electric vehicles is 9  
157 feet.

158 c) Any parking space with a charging station must have signage indicating that  
159 the space is for the exclusive use of electric vehicles.

160 d) Any parking facility required to have 25 or more spaces for charging electric  
161 vehicles must provide one space for handicapped persons with a facility for  
162 charging electric vehicles for each 25 spaces with electric charging  
163 stations.]]

164 \* \* \*

165 **Sec. 3. Effective date.** This ordinance becomes effective 20 days after the  
166 date of Council adoption.

167

168 This is a correct copy of Council action.

169

170

171 \_\_\_\_\_  
Linda M. Lauer, Clerk of the Council

## ATTACHMENT 2

Zoning Text Amendment No.: 14-01  
Concerning: Parking Design- Charging  
Stations

Draft No. & Date: 1 – 1/10/14  
Introduced: January 28, 2014  
Public Hearing:  
Adopted:  
Effective:

**COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND  
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION OF  
THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN  
MONTGOMERY COUNTY, MARYLAND**

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By: Councilmembers Berliner and Navarro

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**AN AMENDMENT** to the Montgomery County Zoning Ordinance to:

Require electric vehicle charging stations under certain circumstances

By adding the following subsection of the Montgomery County Zoning Ordinance,  
Chapter 59 of the Montgomery County Code:

DIVISION 59-E-2. "PLANS AND DESIGN STANDARDS."  
Section 59-E-2.2. "Size and arrangement of parking spaces."  
Subsection 59-E-2.24. "Space for charging electric vehicles."

<p><b>EXPLANATION:</b> <i><b>Boldface</b> indicates a Heading or a defined term.</i> <i><u>Underlining</u> indicates text that is added to existing law by the original text amendment.</i> <i>[Single boldface brackets] indicate that text is deleted from existing law by original text amendment.</i> <i><u>Double underlining</u> indicates text that is added to the text amendment by amendment.</i> <i>[[Double boldface brackets]] indicate text that is deleted from the text amendment by amendment.</i> <i>* * * indicates existing law unaffected by the text amendment.</i></p>
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### ORDINANCE

*The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following ordinance*

1 **Sec. 1. DIVISION 59-E-2 is amended as follows:**

2 Division 59-E-2. PLANS AND DESIGN STANDARDS.

3 **Sec. 59-E-2.2. Size and arrangement of parking spaces.**

4 \* \* \*

5 **59-E-2.23. Spaces for handicapped.**

6 Parking spaces for handicapped persons shall be provided in accordance with the  
7 standards specified in the Maryland Building Code for the Handicapped as  
8 contained in the Code of Maryland Regulations 05.01.07,\* dated September 5,  
9 1980, and as subsequently amended.

10 **59-E-2.24. [[Space for charging electric vehicles.]] Electric Vehicle**

11 Infrastructure

12 **59-E-2.24.1. Intent**

13 The intent of this section is to facilitate and encourage the use of electric vehicles  
14 and to expedite the establishment of a convenient, cost-effect electric vehicle  
15 infrastructure that such use necessitates.

17 **59-E2.24.2. Applicability**

18 These requirements apply to all parking facilities constructed after {effective date},  
19 of Section 59-E-2.24, Electric Vehicle Infrastructure.

21 **59-E-2.24.3. Definitions**

22 For the purpose of this Section, the following definitions shall apply.

23 **a) Accessible electric vehicle charging station means an electric vehicle**  
24 charging station where the battery charging station is located within accessible  
25 reach of a barrier-free access aisle and the electric vehicle.

26 [[b) Battery charging station means an electrical component assembly or  
27 cluster of component assemblies designed specifically to charge batteries within  
28 electric vehicles.]]

29 [[c) Battery electric vehicle means any vehicle that operates exclusively on  
30 electrical energy from an off-board source that's stored in the vehicle's batteries,  
31 and produces zero tailpipe emissions or pollution when stationary or operating.]]

32 [[d]]b) Charging levels means that standardized indicators of electrical  
33 force, or voltage, at which an electric vehicle's battery is recharged. The terms 1, 2  
34 and 3, are the most common charging levels, and include the following  
35 specifications:

36 1) Level 1 is considered slow charging. Voltage including the range  
37 from 0 through 120.

38 2) Level 2 is considered medium charging. Voltage is greater than  
39 120 and includes 240.

40 3) Level 3 is considered fast or rapid charging. Voltage is greater  
41 than 240.

42 [[e]] c) Electric vehicle means any vehicle that is licensed and registered for  
43 operation on public and private highways, roads, and streets; either partially  
44 or exclusively, on electrical energy from the grid, or an off-board source that  
45 is stored on-board via a battery for motive purpose. [[“Electric vehicle”  
46 includes a battery electric vehicle and a plug-in hybrid electric vehicle.]]

47 [[f]] d) Electric vehicle charging station means a [[public or private  
48 parking space]] that is served by battery charging station equipment that has  
49 as its primary purpose the transfer of electric energy (by conductive or  
50 inductive means) to a battery or other energy storage device in an electric  
51 vehicle. An electric vehicle charging station equipped with Level 1 or Level

52 2 charging equipment is permitted outright as an accessory use to any  
53 principal use.

54 [[g) Electric vehicle charging station – private restricted use means an  
55 electric vehicle charging station that is as follows:

56 1) privately owned and restricted access (e.g., single-family home,  
57 executive parking, designated employee parking) or

58 2) publically owned and restricted (e.g., fleet parking with no access  
59 to the general public).]]

60 [[h) Electric vehicle charging station – public use means an electric  
61 vehicle charging station that is publicly owned and publicly available (e.g., Park &  
62 Ride parking, public library parking lot, on-street parking) or privately owned and  
63 available to visitors of the use (e.g., shopping center parking).

64 [[i) Electric vehicle infrastructure means conduit/wiring, structures,  
65 machinery and equipment necessary and integral to support an electric vehicle,  
66 including battery charging stations and rapid charging stations.

67 j) Electric vehicle parking space means any marked parking space that  
68 identifies the use to be exclusively for the parking of an electric vehicle.

69 k) Non-electric vehicle means any motor vehicle that does not meet the  
70 definition of electric vehicle.

71 l) Plug-in hybrid vehicle means an electric vehicle that contains an internal  
72 combustion engine and also allows power to be delivered to drive wheels by an  
73 electric motor; charges its battery primarily by connecting to the grid or other off-  
74 board electrical source; may additionally be able to sustain battery charge using an  
75 on-board internal-combustion –driven generator and has the ability to travel  
76 powered by electricity.]]

77

78 E-59.2.24.4. Permitted Locations

79 a) Level 1 and Level 2 electric vehicle charging stations are permitted in  
80 every zoning district when accessory to the primary permitted use. Such stations  
81 located at one-family, multi-family and mobile home park dwellings shall be  
82 designated as private restricted use only. Installation shall be subject to permit  
83 approval administered by the Department of Permitting Services.

84 b) Level 3 electric vehicle charging stations are permitted in the C-2, C-3,  
85 C-6, CBD, R & D, LSC, I-2 and I-3 Zones when accessory to the primary  
86 permitted use. Installation is subject to permit approval administered by the  
87 Department of Permitting Services.

88

89 **59-E.2.24.5. General Requirements**

90 **a) Parking**

91 1. An electric vehicle charging station space may be included in the  
92 calculation for minimum required parking spaces required in accordance  
93 with Section 59-E-3.7.

94 [[2. Public electric vehicle charging stations are reserved for parking  
95 and charging electric vehicles only. Electric vehicles may be parked in any  
96 space designated for public parking, subject to the restrictions that would  
97 apply to any other vehicle that would park in that space.]]

98 **b) Number**

99 1. The minimum number of electric vehicle charging stations required is 1  
100 electric vehicle charging station per 50 parking spaces.

101 **2. Accessible parking spaces**

102 At least 1 accessible electric vehicle charging station is required in any  
103 parking facility that is required to have one electric vehicle parking space.

104 This space is not required to be designated only for use of a disabled person

105 [[For parking facilities required to have 51-75 electric vehicle parking

106 spaces the number of accessible spaces will increase to two (2). Between 76  
107 – 100 electric vehicle parking spaces increases to three (3) and each  
108 thereafter increment of 25 electric charging station shall increase by one  
109 additional accessible electric vehicle charging space. Accessible electric  
110 vehicle charging stations should be located in close proximity to the building  
111 or facility entrance and connected to a barrier-free accessible route of travel.  
112 It is not necessary to designate the accessible electric vehicle charging  
113 station exclusively for the use of disabled persons.]] For any parking facility  
114 required to have 25 or more electric vehicle parking spaces must provide at  
115 least 2% of those spaces to be handicapped accessible.

116  
117 **c) Location and Design**

118 The provision of electric vehicle parking will vary based on the design and  
119 use of the primary parking facility. The following required and additional  
120 location and design criteria are provided in recognition of the various  
121 parking facility layout

122 **1) Lighting**

123 [[Site lighting shall be provided where an electric vehicle charging station is  
124 installed, unless charging is for daytime purposes only.]] Lighting shall be  
125 installed in accordance to 59-E-2.6.

126 **2) Size**

127 The minimum width for a parking space for charging electric vehicles is 9  
128 feet.

129 **2) Equipment Standards and Protection**

130 (a) Battery charging station outlets and connector devices [[shall be no less  
131 than 36 inches and no higher than 48 inches]] must be located between 3 to 4  
132 feet from the mounted surface [[from the surface where mounted]].

133 [[Equipment mounted on pedestals, lighting posts, bollards or other devices  
134 shall be designed and located as to not impede pedestrian travel or create trip  
135 hazards on sidewalks.]]

136 (b) Equipment mounted on pedestals, lighting posts, bollards or other  
137 devices shall be designed and located as to not impede pedestrian travel or  
138 create trip hazards on sidewalks.

139 (((b)) c). Adequate battery charging station protection, such as concrete-  
140 filled steel bollards shall be used. Curbing may be used in lieu of bollards, if  
141 the battery charging station is set back a minimum of 24 inches from the  
142 face of the curb.

143 **3) Signage**

144 [[a) Information shall be posted identifying voltage and amperage levels  
145 and any time of use, fees or safety information related to the electric vehicle  
146 charging station.

147 (b) Each electric vehicle charging station space shall be posted with signage  
148 indicating the space is only for electric vehicle charging purposes. For  
149 purposes of this subsection “charging” means that an electric vehicle is  
150 parked at an electric vehicle station and is connected to the battery charging  
151 station equipment. Restrictions shall be included on the signage, if removal  
152 provisions are to be enforced.]] Each electric vehicle charging station must  
153 have a sign indicating voltage and amperage levels; time of allowed use;  
154 fees; safety and maintenance information; and that the space is for the  
155 exclusive use of an electric vehicle while the vehicle is charging.

156 **[[4) Maintenance**

157 Electric vehicle charging stations shall be maintained in all respects,  
158 including the functioning of the equipment. A phone number or other

159 contact information shall be provided on the equipment for reporting when it  
160 is not functioning or other problems are encountered.]]

161 **e) Usage Fees**

162 The property owner is not restricted from collecting a service fee for the use  
163 of an electric vehicle charging station made available to visitors of the  
164 property.

166 [[a) All parking facilities constructed after {effective date}, containing more than  
167 50 parking spaces, must provide one space within their parking requirement  
168 with a station for charging electric vehicles for each 50 automobile parking  
169 spaces in the facility.

170 b) The minimum width for a parking space for charging electric vehicles is 9  
171 feet.

172 c) Any parking space with a charging station must have signage indicating that  
173 the space is for the exclusive use of electric vehicles.

174 d) Any parking facility required to have 25 or more spaces for charging electric  
175 vehicles must provide one space for handicapped persons with a facility for  
176 charging electric vehicles for each 25 spaces with electric charging  
177 stations.]]

178 \* \* \*

179 **Sec. 3. Effective date.** This ordinance becomes effective 20 days after the  
180 date of Council adoption.

181

182 This is a correct copy of Council action.

183

184

185 \_\_\_\_\_  
Linda M. Lauer, Clerk of the Council



**Sec. 3 DIVISION 3.7 is amended as follows:**  
Division 3.7. Miscellaneous Uses

**Section 3.7.4. Accessory Miscellaneous Use**

\* \* \*

**C. Electric Vehicle Charging Station**

**1. Defined**

A structure for the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

**2. Use Standards**

Where a Electric Vehicle Charging Station is allowed as a limited use, only Charging Levels 1 and 2 are allowed.

**[C.] D. Security Pavilion**

\* \* \*

**Sec. 4 DIVISION 6.2 is amended as follows:**  
Division 6.2. Parking, Queuing, and Loading

**Section 6.2.3. Calculation of Required Parking**

\* \* \*

**E. Electric Vehicle Parking**

1. Any parking facility with more than 50 parking spaces must provide at least one Electric Vehicle Charging Station parking space per 50 parking spaces in the facility.
2. At least one Accessible Electric Vehicle Charging Station is required in any parking facility that is required to have one Electric Vehicle Charging Station. The associated space is not required to be designated only for handicapped use.
3. Any parking facility with more than 25 Electric Vehicle Charging Station park-

ing spaces must provide at least 2% of such spaces as handicapped accessible.

**[E.] F. Bicycle Parking**

1. Long-term bicycle parking spaces are for residents and employees. Short-term bicycle parking spaces are for patrons and visitors.
2. Section 6.2.4.C shows the percent of total bicycle spaces that must be for long-term parking. The rest of the bicycle spaces must be short-term spaces.

**[F.] G. Off-Site Parking by Agreement**

An applicant may satisfy the required number of vehicular parking spaces through off-site parking on property located within ¼ mile of the subject property if the off-site property is plat-restricted, deed-restricted, or is under a joint use agreement. The plat or deed restrictions must specify that the property provides the required number of parking spaces for a use on another property. The plat or deed restrictions may be lifted if substitute off-site parking is provided, or if the use requiring the parking ceases to exist. A joint use agreement must:

1. be for a property under the control of the involved parties;
2. be approved by the deciding body;
3. have a minimum term of 5 years; and
4. require the parties to notify DPS within 3 days after any changes to the joint use arrangement and provide DPS with a minimum of one month notice of any pending termination of the agreement.
5. If the parking available under a joint use agreement is reduced the use-and-occupancy permit for the development that was approved in reliance on the joint use agreement must be amended, or revoked, as appropriate, due to the reduced parking unless an alternative compliance plan is approved.
6. A property owner must obtain a new use-and-occupancy permit, including proof of sufficient parking, if there is a change in use of the property or in the joint use agreement.

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**[G.] H. Parking Minimums and Maximums**

**1. Parking Lot District**

- a. In a Parking Lot District, an applicant may provide fewer parking spaces than required, after all adjustments are made under Section 6.2.3.H, if payment is made under Chapter 6o.
- b. In a Parking Lot District, the maximum number of allowed parking spaces is equal to the parking maximum indicated in the parking table under Section 6.2.4.B, and may not be exceeded.

**2. Reduced Parking Area**

- a. In a Reduced Parking Area, an applicant may provide fewer parking spaces than required, after all adjustments are made under Section 6.2.3.H, only under Alternative Compliance (see Division 6.8).
- b. In a Reduced Parking Area, an applicant may provide more parking spaces than allowed by the maximum if all of the parking spaces provided in excess of the maximum number allowed are made available to the public and are not reserved, or if approved under Alternative Compliance (see Division 6.8).

**[H.] I. Adjustments to Vehicle Parking**

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**Section 6.2.5. Vehicle Parking Design Standards**

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**J. Electric Vehicle Parking**

- 1. The minimum width of an Electric Vehicle Charging Station parking space is 9 feet.
- 2. Each Electric Vehicle Charging Station must have a sign indicating:
  - a. voltage and amperage levels;
  - b. time of allowed use;
  - c. fees;

d. safety and maintenance information; and

e. that the space is for the exclusive use of an electric vehicle while the vehicle is charging.

- 3. Site lighting must be provided where an Electric Vehicle Charging Station is installed, and must satisfy Section 6.4.4.
- 4. Electric Vehicle Charging Station outlets and connector devices must be located between 3 to 4 feet from the surface where mounted.
- 5. The Electric Vehicle Charging Station must not interfere with pedestrian walkways.
- 6. The Electric Vehicle Charging Station must have adequate protection, such as concrete-filled steel bollards. Curbing may be used instead of bollards, if the Electric Vehicle Charging Station is setback a minimum of 2 feet from the face of the curb.

**[J.] K. Facilities for Conditional Uses in Residential Detached Zones**

Any off-street parking facility for a conditional use that is located in a Residential Detached zone where 3 or more parking spaces are provided must satisfy the following standards:

**1. Location**

Each parking facility must be located to maintain a residential character and a pedestrian-friendly street.

**2. Setbacks**

- a. The minimum rear parking setback equals the minimum rear setback required for the detached house.
- b. The minimum side parking setback equals 2 times the minimum side setback required for the detached house.
- c. In addition to the required setbacks for each parking facility:
  - i. the required side and rear parking setbacks must be increased by 5 feet for a parking facility with 150 to 199 parking spaces; and
  - ii. the required side and rear parking setbacks must be increased by 10 feet for a parking facility with more than 199 parking spaces.

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**[K.] L. Commercial Vehicle Parking for Properties with a Residential Use**

**1. In General**

- a. Vehicles and machinery used primarily for Farming may be parked without restriction.
- b. Parking of a tow truck with a vehicle attached is prohibited.
- c. A commercial vehicle under Section 6.2.5.K must be owned or used by an occupant of the dwelling.

**2. AR, R, RC, and RNC Zones**

- a. On any lot or parcel up to 0.5 acre, one light commercial vehicle and one unoccupied recreational vehicle may be parked at any one time.
- b. On any lot or parcel more than 0.5 acre and less than 2 acres, up to 3 light commercial vehicles and one unoccupied recreational vehicle may be parked at any one time. One additional recreational vehicle may be used for dwelling purposes on the property for up to 3 days in any month.
- c. On any lot or parcel more than 2 acres, there are no restrictions on commercial and recreational vehicle parking.

**3. RE-2, RE-2C, and RE-1 Zones**

- a. Up to 3 light commercial vehicles and one unoccupied recreational vehicle may be parked on any lot or parcel in the RE-2, RE-2C, or RE-1 zone at any one time. One additional recreational vehicle may be used for dwelling purposes on the property for up to 3 days in any month.
- b. Any property zoned RE-1 that does not have a minimum lot area of 40,000 square feet, must satisfy the requirements for Surface Parking in R-200, R-90, and R-60 under Section 6.2.5.L.

**4. R-200, R-90, R-60, and R-40 Zones**

One light commercial vehicle and one recreational vehicle may be parked on any lot or parcel in the R-200, R-90, R-60, or R-40 zone; however, the recreational vehicle may only be used for dwelling purposes for up to 3 days in any month.

**5. TLD, TMD, THD, R-30, R-20, and R-10 Zones**

One light commercial vehicle may be parked in a garage on any lot or parcel in the TLD, TMD, THD, R-30, R-20, or R-10 zone.

**[L.] M. Surface Parking in R-200, R-90, R-60, and R-40 Zones**

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**TESTIMONY ON BEHALF OF COUNTY EXECUTIVE ISIAH LEGGETT  
ON ZONING TEXT AMENDMENTS 14-01 AND 14-02  
February 25, 2014**

Good afternoon Council President Rice and members of the District Council. My name is Diane Schwartz Jones and I am pleased to be here on behalf of County Executive Isiah Leggett to testify on Zoning Text Amendments 14-01, Parking Design – Charging Stations, and 14-02 Solar Panels introduced on January 28, 2014. As with the package of environmental bills introduced on the same day, Mr. Leggett supports the Council's efforts to address the need for more sustainable development in Montgomery County and steps to create both demand and place for sustainability measures.

ZTA 14-01 would require that new parking lots and garages with more than 50 parking spaces provide at least one parking space with an electric vehicle charging station for each 50 automobile spaces. Any space with a charging station must be reserved for the exclusive use of electric vehicles. Making it easy to ensure availability of energy sources is important for the emerging electric vehicles industry. According to recent Motor Vehicle Administration data, there are an estimated 2000 electric vehicles in the entire State of Maryland, only a portion of which are in Montgomery County. While the number of vehicles will continue to grow, this zoning text amendment, in its current form, may be premature. A parking garage with 1500 spaces would be required to have 30 spaces with charging stations which could only be used for electric vehicles. With structural costs at an estimated \$25,000 - \$50,000 per space, the costs of construction are significant. Until demand increases, such a restriction will likely have a serious impact on the financial feasibility of constructing such spaces as there would not be a ready source of revenues to cover the carry costs. Rather than mandate 1 charging station space for every 50 spaces, the County Executive recommends either requiring that 1 space per every 100 spaces be equipped with a charging station and that, for the time being, the spaces not be reserved for charging vehicles, or that the prohibition against use by non-electric vehicles be phased in so that revenue can be generated as demand builds. Alternatively, facilities could be constructed so that regular spaces are readily convertible to charging station spaces as demand increases. As the market for electric vehicles increases such that there is a dependable demand, additional regulatory requirements can be put in place.

ZTA 14-02 would exempt solar panels from height limits and allow them to extend 2 feet into any side or rear setback. The County Executive supports the height exemption. The 2 feet setback, however, conflicts with National Fire Protection Association code provisions because roofs require a clearance to allow access to fire department staff for combating fire, inspections and placement of ladders. The setback proposed in this zoning text amendment (extending 2 feet into any side or rear setback) is inconsistent with NFPA requirements on a rooftop and may impair access at ground level as well. The significance of this issue is a safety consideration for our emergency responders and those within a structure experiencing a fire emergency. While we want to facilitate solar power, it must be done safely. We would like to better understand the specific concern that is behind the setback proposal and explore whether other solutions might address the concern without implicating NFPA or interfere with the clearances needed by emergency responders.

County Executive Leggett thanks the Council for the opportunity to comment on these Zoning Text Amendments and looks forward to working with the Council to develop workable zoning provisions.

Zoning Text Amendment No.: 14-01  
Concerning: Parking Design- Charging  
Stations

Draft No. & Date: 1 – 1/10/14

Introduced: January 28, 2014

Public Hearing:

Adopted:

Effective:

**COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND  
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION OF  
THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN  
MONTGOMERY COUNTY, MARYLAND**

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By: Councilmembers Berliner and Navarro

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**AN AMENDMENT** to the Montgomery County Zoning Ordinance to:

- Require electric vehicle charging stations under certain circumstances

By adding the following subsection of the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code:

DIVISION 59-E-2. “PLANS AND DESIGN STANDARDS.”

Section 59-E-2.2. “Size and arrangement of parking spaces.”

Subsection 59-E-2.24. “Space for charging electric vehicles.”

<p><b>EXPLANATION:</b> <i><b>Boldface</b> indicates a Heading or a defined term.</i> <i><u>Underlining</u> indicates text that is added to existing law by the original text amendment.</i> <i>[Single boldface brackets] indicate that text is deleted from existing law by original text amendment.</i> <i><u>Double underlining</u> indicates text that is added to the text amendment by amendment.</i> <i>[[Double boldface brackets]] indicate text that is deleted from the text amendment by amendment.</i> <i>* * * indicates existing law unaffected by the text amendment.</i></p>
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**ORDINANCE**

*The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following ordinance*

1 **Sec. 1. DIVISION 59-E-2 is amended as follows:**

2 Division 59-E-2. PLANS AND DESIGN STANDARDS.

3 **Sec. 59-E-2.2. Size and arrangement of parking spaces.**

4 \* \* \*

5 **59-E-2.23. Spaces for handicapped.**

6 Parking spaces for handicapped persons shall be provided in accordance with the  
7 standards specified in the Maryland Building Code for the Handicapped as  
8 contained in the Code of Maryland Regulations 05.01.07,\* dated September 5,  
9 1980, and as subsequently amended.

10 **59-E-2.24. Space for charging electric vehicles.**

11 a) All parking facilities constructed after {effective date}, containing more than  
12 50 parking spaces, must provide one space within their parking requirement  
13 with a station for charging electric vehicles for each 50 automobile parking  
14 spaces in the facility.

15 b) The minimum width for a parking space for charging electric vehicles is 9  
16 feet.

17 c) Any parking space with a charging station must have signage indicating that  
18 the space is for the exclusive use of electric vehicles.

19 d) Any parking facility required to have 25 or more spaces for charging electric  
20 vehicles must provide one space for handicapped persons with a facility for  
21 charging electric vehicles for each 25 spaces with electric charging stations.

22 \* \* \*

23 **Sec. 3. Effective date.** This ordinance becomes effective 20 days after the  
24 date of Council adoption.

25

26 This is a correct copy of Council action.

27

28 \_\_\_\_\_

29 Linda M. Lauer, Clerk of the Council