

General Requirements for Electric Vehicle Charging Stations (EVCS)

The following requirements apply to: Multifamily, Commercial and Mixed Us Buildings (All Occupancies except R-3 & R-3.1)

INFORMATION TO APPLY FOR PERMIT

The city of Glendale has prepared an expedited procedure for the issuance of **electric vehicle charging stations (EVCS)** for **Multifamily, Commercial and Mixed Us Buildings (All Occupancies except R-3 & R-3.1)**.

Single Family homeowners please see separate requirements for Single Family Residence, Duplex, ADU/JADU, Attached/Detached Garages & Carports on the BUILDING & SAFETY DIVISION web page.

All applications for permit(s) are a **digital process** through the Glendale Permits website. Paper submittals are no longer processed. The EVCS application review and issuance process will be expedited in accordance with California Assembly Bill AB 970.

Timeline for review: The EVCS applications shall be reviewed for completeness within 5 working days for an application that includes 1 thru 25 EVCS on a single site and 10 working days for an application that including 26 or more EVCS on a site.

<u>Please read the information below</u>, for permitting procedures and City requirements. For EVCS facilities proposed in streets, alleys, or other public right-of-way locations, contact <u>Public Works</u> for instructions to submit to Public Works directly and for their specific design requirements.

Permits shall be issued to a **California Licensed Contractors** in accordance with Contractors State License Board laws and regulations.

Electric Service Upgrade, require the application for a separate permit in addition to the EVCS permit.

Submittals: You will be required to submit applications for a minimum of two permits:

<u>Electrical permit</u> for the review of electrical plans for California Electrical Code and California Green Code compliance.

<u>Building permit</u> for the review of building plans for compliance with the California Building Code including egress and accessibility, California Green Code, California Fire Code and other codes that may apply to your project's unique conditions.

Multifamily, Commercial and Mixed Us Buildings require Planning Division clearance before submitting to Building & Safety. For more information, click <u>Planning Division</u>

Buildings and properties designated as **historical building or located in historic districts** will be required to comply with City of Glendale historic requirements. *Please contact the Planning division immediately*. Click <u>Planning Division</u>

A separate **<u>permit for main electric New/Upgrade Service</u>**, will be required if you are upgrading the current service meter and panel or applying for separate meter dedicate to Electric Vehicle Charging Stations.

New/upgrade Services meters and panels must be included in the submitted electrical plans design and locations must identified on the submitted Building plans.

APPLY FOR PERMIT

Before you begin applying, you will need to **create an account** if you have not done so already. Please follow the instructions by clicking <u>Glendale Permits</u>.

Before Applying, see additional information below under Plan Check Review Comments and Inspection Review Comments.

To apply for a EVCS permit, please review Plan Check Review Comments below prior to clicking: Apply for A Permit

Next, click on Electric Vehicle Charging Station and follow the instructions for submittal that will lead you to: Next, search in Glendale Permits and click on the Apply button in the box and follow the instructions.

	Electrical (Multi-family, Condominium, Commercial) - Electrical Vehicle Charging Station			
4 h	Category Name:	Description:		
	Building (Electrical)	Electrical Vehicle (EV) charging station is for multi-family, condominium, and commercial.		
		Include a picture of where the EV charging station is located along with measurements.		
		Diagram of the interior showing the proposed installation with dimensions. How far from		
		the wall and how high off the ground. Planning/Zoning will need to approve this Electrical		
		Vehicle Charging Station.		

Please answer all questions as you apply for an EVCS permit. Remember to read, sign, and upload complete sets of drawings and all documents including the

- Owner Building Form
- o Construction Declaration Form
- o Provide contact information of owner and contractor

To apply for the **Building Permit**, choose the appropriate application type based on:

- If it is a (Commercial, Commercial and Mixed Use) or (Multi-family or Condominium) building.
- Next, if Alteration/Repair within an existing building, Addition to existing building, and/or New if proposing a new
 detached building or facility

Building (Commercial, Commercial and Mixed Use) – New	Apply
Building (Commercial, Commercial and Mixed Use) – Addition	Apply
Building (Commercial, Commercial and Mixed Use) - Alteration/Repair	Apply
Building (Multi-family or Condominium) – New	Apply
Building (Multi-family or Condominium) – Addition	Apply
Building (Multi-family or Condominium) - Alteration/Repair	Apply
click on the Apply button in the box and follow the instructions.	

Please answer all questions as you apply for an EVCS permit.

Remember to read, sign, and upload complete sets of drawings and all documents including the

- Owner Building Form
- Construction Declaration Form
- Provide contact information of owner and contractor

Electric Vehicle Charging Stations (EVCS) Multifamily, Commercial and Mixed Us Buildings

Should you require an **Electric Service Upgrade** you will need to apply for a separate permit in addition to the EVCS permit Contact GWP-Electric immediately <u>GWPElectricEngineeringInfo@Glendaleca.gov</u>. To apply for a **New/Upgrade Service**, click: <u>Apply for A Permit</u>

Next, click on Mechanical, Electrical/Service Upgrade or Plumbing and follow the instructions for submittal. Next, search in Glendale Permits and click on the Apply button in the box and follow the instructions.



You may visit GWP-Electric for additional information regarding Electric vehicles or Meter & Main Panel Upgrade by clicking the links at:

<u>Electric Vehicles</u> <u>Electric Service Requirements</u>

Contractors: if your City Contractor's Business License is not current, please apply separately but concurrently with the EVCS permit (and the Electric Service Upgrade if necessary for EVCS system) Next, search in Glendale Permits and click on the Apply button in the box and follow the instructions.

 Electrical (Multi-family, Contominum, Commercial) - New/Upgrade Service
 Apply

 Category Name:
 Description:

 Building (Electrical)
 This electrical permit is only for service changeout, upgrade, or new service.

 Glendale Water and Power (GWP) electrical needs to approve this permit before we can issue it. Please contact them at GWP Electrical Engineering (818) 548-3921 or GWPElectricEngineeringInfo@Glendaleca.gov.

Additional Information

Should you require additional information from Planning Division please click on: Planning Website

Should you require additional information from Building & Safety Division please click on: Building & Safety

Upon permit issuance you will be provided instructions for on-line inspection requests. Next day inspections are available when requests are received into Glendale Permits by **1:30 pm** on day prior to inspection.

PLAN CHECK AND INSPECTION REVIEW COMMENTS

GENERAL

- 1. All work must be done in compliance with the latest California Building, Electric, and Green Codes, as well as the Glendale Building & Safety Code Amendments and the Glendale Reach Codes. The EVSC must also be installed per the listed manufacture's installation specifications.
- Electric vehicle charging facilities in new buildings shall comply with the California Green Code (CGnC) 2022 and Glendale Reach Code (GRC) 2023 whichever is more restrictive. See Glendale Reach code (GRC) by clicking on <u>GRC 2023</u>
- 3. All work must be done in compliance with the latest California Building, Electric, and Green Codes, as well as the Glendale Building & Safety Code Amendments (and the Glendale Reach Codes.
- 4. Building Codes can be found at: Building Codes
- 5. The EVSC must also be installed per the Manufacture's Listed Installation Specifications.
- 6. Electric vehicle charging facilities in **new buildings** shall comply with the **California Green Code (CGnC) 2022** and **Glendale Reach Code (GRC) 2023** whichever is more restrictive.
 - 7. Scope of work beyond the installation of a EVCS may require additional permits.
 - 8. Review and Approval is required by the following City agencies:
 - Building & Safety Division
 - for verification of 2022 California Building Code Standards, 2023Glendale Building & Safety Code Amendments and 2023 Glendale Reach Code.
 - Planning Division
 - for verification of Zoning Ordinance Compliance
 - Fire Department
 - for verification of California Fire Code Compliance
 - Glendale Water & Power, GWP-Electrical
 - for verification of service supply and equipment compliance
 - Public Works Engineering
 - (for installations outside of buildings)
 - Public Works Arborist
 - (for installations outside of buildings)
 - Glendale Water & Power, GWP-Water
 - (for installations outside of buildings)

9. Unusual conditions may need additional documentation and design for review. City staff can guide you for any specific needs.

10. Buildings and properties designated as **historical building or located in historic districts** will be required to comply with City of Glendale historic requirements. *Please contact the Planning division immediately if you are installing EVCS equipment*.

- 11. Building Plans submittals shall be drawn to scale (1/8" = 1'-0" scape minimum) on 11x17 minimum size digital sheets and structural plans when design affecting the building or building components strength and stability.
 - a. Provide adequate horizonal dimensions and vertical clearances to show how the vehicle stations are integrated on the site and into the building(s).
 - b. Provide layout of parking spaces and adjoining areas to verify that egress is maintained and accessibility if provided as required by code as well as any other unusual items needing code verification.
- 12. Architectural plans shall identify and detail all installation of hidden equipment and conducts with detailing of required fire rated assemblies for repairs of walls and ceiling, roof and floor, penetration protections and recovery of exterior finishes to match existing building facades.
- 13. The building plans submitted shall be stamped and **signed by a California Licensed Architect or Civil Engineer** performing the design drawing and in responsible charge for the coordination of the total project.
- 14. **Electrical plans** shall be submitted by a California Licensed Electrical Engineer or a California Licensed Electrical Contractor only if he or she is the one contracting the work to be done.

STRUCTURAL

- 15. Structural changes to the building will require a design, layout and detailing on plans by a California Licensed Civil/Structural Engineer addressing the vertical and lateral strength and stability of the building or facility including but not limited to the removal, relocation of existing, or installation of new: partitions, walls, columns, beams, ceilings, floors, or roofs.
- 16. Structural design is required by a California Licensed Civil/Structural Engineer for the additions of large, tall or heavy equipment installed or relocated, or for the removal, relocation of existing, or installation of new: architectural features, mechanical, electrical or plumbing equipment, fire equipment or other elements/features as defined in the California Building Code and ASCE 7-16. A design shall be provided to include the layout and detailing on plans and shall include the verification of the capacities and detailing of the existing building support components.

ACCESSIBILITY

17. Accessibility Requirements: All EVCS installations intended for public or common use are required to comply with applicable sections of California Building Code (CBC) Chapters 11A and/or 11B designed such that it meets all applicable accessibility requirements. Provide dimensioned layouts and details showing compliance with all the accessibility requirements including but not limited to: the required number and type of accessible EVCS equipment, accessible path of travel, access aisles, striping, signage, equipment, clear space and reach ranges, detectible warning, and curb ramps.

18. See additional comments below, EV CHARGING STATION ACCESSIBILITY PLAN CHECK COMMENTS for specific detailed requirements.

ELECTRICAL

- 19. Provide Single-Line Diagram (SLD): Shall include the existing electrical distribution system, all proposed subpanels, disconnects, EVCS equipment, and the size and type of all raceways and conductors. The SLD shall include the electrical characteristics of all equipment shown
- 20. Provide **Electrical Load Calculations and Panel Schedules**: To demonstrate that the existing electrical distribution system has adequate capacity to support the added load
- 21. **Manufacturer's Electrical Data**: One copy of manufacturer's specification data sheets and installation manual for the proposed EVCS equipment shall be provided with the submittal, as well as provided on-site at the time of inspection.
- 22. Equipment Listing Requirement: All devices and components of an EVCS installation must be listed by a nationally recognized agency, such as UL.
- 23. Do <u>not</u> cover installations prior City inspector viewing and approved for work done.
 - 24. The installation shall comply with the California Electrical Code (CEC) 2022 and specifically with Article 625, Electric Vehicle Power Transfer System, including but not limited to providing the following:
 - a. a dedicated branch circuit,
 - b. proper overcurrent and GFCI protection,
 - c. proper sizing of conductors,
 - d. proper means of disconnect where required,
 - e. ventilation where required by equipment listing specifications, and
 - f. proper electrical installation.
 - 25. All equipment shall be protected for vehicle impact per CEC Art. 110.27 (B) either by locating in area away from vehicle impact or by use of bollard or other approved means of protection.
 - 26. Exterior outlet boxes shall be waterproof protected per CEC 625.56 and equipment shall be rated for exterior use per the manufacture's listed specifications.
 - 27. The main panel shall be rated for the additional demand for power in compliance with CA Electrical Code (CEC), the electrical panel List Manufacture's Listed Specifications and GWP requirements.
 - 28. Unusual conditions may need additional documentation and design for review. City staff can guide you for any specific needs.
 - 29. The main panel shall be rated for the additional demand for power in compliance with CEC and panel manufacture's listed specifications.

EV CHARGING STATION ACCESSIBILITY PLAN CHECK COMMENTS

Electric Vehicle Charging Stations (EVCS) Multifamily, Commercial and Mixed Us Buildings

DRIVE-UP ELECTRIC VEHICLE CHARGING STATION. An electric vehicle charging station in which use is limited to 30 minutes maximum and is provided at a location where the electric vehicle approaches in the forward direction, stops in the vehicle space, charges the vehicle, and proceeds forward to depart the vehicle space. The arrangement of a drive-up electric vehicle charger and its associated vehicle space is similar to a gasoline filling station island.

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, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For the purpose of this code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE (EV) CONNECTOR. A device that, when electrically coupled (conductive or inductive) to an electric vehicle inlet, establishes an electrical connection to the electric vehicle for the purpose of power transfer and information exchange. This device is part of the electric vehicle coupler.

ELECTRIC VEHICLE (EV) CHARGER. Off-board charging equipment used to charge an electric vehicle.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). A space intended for charging electric vehicles.

ELECTRIC VEHICLE CHARGING STATION (EVCS). One or more electric vehicle charging spaces served by an electric vehicle charger or other charging equipment. Where a multiport electric vehicle charger can simultaneously charge more than one vehicle, the number of electric charging stations shall be considered equivalent to the number of electric vehicles that can be simultaneously charged.

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 apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

FODEIC USE AND COMMON USE						
Total Number of	Minimum Number (by type) of EVCS Required to Comply with Section 11B-812 ¹					
EVCS at a Facility ¹	Van Accessible	Standard Accessible	Ambulatory			
1 to 4	1	0	0			
5 to 25	1	1	0			
26 to 50	1	1	1			
51 to 75	1	2	2			
76 to 100	1	3	3			
101 and over	1, plus 1 for each 300, or fraction thereof, over 100	3, plus 1 for each 60, or fraction thereof, over 100	3, plus 1 for each 50, or fraction thereof, over 100			

TABLE 11B-228.3.2.1 ELECTRIC VEHICLE CHARGING FOR PUBLIC USE AND COMMON USE

Where an EV charger can simultaneously charge more than one vehicle, the number of EVC provided shall be considered equivalent to the number of electric vehicles than can be simultaneously charged.

GENERAL

- 1. Show that new EVCS installations are in compliance with Section 11B-812.
- 2. Alterations to existing EVCS shall comply with current access requirements. §11B-228.3
- 3. Revise the plans and parking summary to provide a minimum of _____ van accessible, _____ standard accessible and _____ ambulatory EV spaces. Table 11B-228.3.2.1
- 4. The required number and type of compliant EVCS spaces shall be based on the proposed total of both existing and new EV spaces. **§11B-228.3.2.1**
- 5. Where EV spaces are provided in more than one parking facility on a site, the number and type of complying EV spaces shall be calculated and provided separately for each parking facility. **§11B-228.3.2**

- 6. Fully dimension and detail all Drive-up EVCS to show compliance with the current access requirements. §11B-812 & 11B-812.6.4
- 7. Provide sitework or topography plans with point elevations sufficient to show the proposed finished surface slopes and cross-slopes of all EV spaces, access aisles, and accessible routes. Access aisles shall be level with the EV space served, and slopes/cross-slopes shall not exceed 1:48. **§11B-302**
- 8. Relocate the detectable warnings shown on the plans to be outside the minimum required area of all EV spaces and access aisles. **§11B-302**
- 9. Provide building sections and dimension the actual vertical clearances along the full length of the vehicle spaces, access aisles and vehicular routes serving the EVCS. A minimum vertical clearance of 98 inches shall be maintained under all vertical obstructions, including cable management systems. **§11B-812.4**

ACCESSIBLE ROUTES & ACCESS AISLES

- 10. Show locations of all EV spaces and accessible routes on the site plan. Compliant EV spaces shall be located on an accessible route to an accessible building entrance. §11B-206.4 & 11B-812.5
- 11. Provide and clearly identify the accessible route on the plans between each EV space and the EV charger which serves the space. §11B-402 & 11B-812.5
- 12. Provide curbs, wheel stops, bollards, or other barriers to prevent encroachment of vehicle over the required clear width of accessible routes. **§11B-812.5.3**
- 13. Relocate the EVCS accessible spaces and access aisles so that persons using them are not required to travel behind vehicles or parking spaces other than their own. **§11B-812.5.4**
- 14. EVCS shall be designed so accessible routes are not obstructed by cables or other elements. §11B-812.5.5
- 15. Fully dimension all EV spaces on the plans. The minimum dimensions shall be: §11B-812.6
 - a. 144 inches by 216 inches long for van accessible EV spaces;
 - b. 108 inches by 216 inches long for standard accessible EV spaces;
 - c. 120 inches by 216 inches long for ambulatory EV spaces; and,
 - d. 204 inches by 240 inches long for drive-up EVCS spaces.
- 16. Dimension and provide access aisles adjacent to each accessible/ambulatory EV space, complying with the following: §11B-812.7
 - a. Minimum 60 inches wide;
 - b. Minimum length equal to the length of the vehicle spaces served;
 - c. Shall not overlap the vehicular way; and
 - d. Shall be located on the passenger side of van accessible EV spaces.

STRIPING & MARKINGS

- 17. Revise the striping plan and details to accurately dimension the accessible vehicle spaces and access aisles. The required dimensions shall be provided from the centerline of the markings. **§11B-812.1**
- 18. Provide complete striping details and notes for the EV spaces and access aisles, to show compliance with the following: **§11B-812.7**
 - a. Access aisles shall be marked with painted borderlines around their perimeter;
 - b. The area within the borderlines shall be marked with hatched lines a minimum of 36 inches on center;
 - c. The color of the borderlines, hatched lines, and letters shall contrast with that of the surface of the access aisle;
 - d. The color of all striping and markings shall <u>not</u> be the blue color used for identification of accessible parking spaces per 11B-502.3.3;
 - e. The words "NO PARKING" shall be painted within each access aisle in letters a minimum of 12 inches in height and located to be visible from the adjacent vehicular way; and,
 - f. The words "EV CHARGING ONLY" shall be painted at the lower end of each EV space in letters a minimum of 12 inches in height. The centerline of the text shall be 6 inches maximum from the centerline of the vehicle space and its lower corner at, or lower side aligned with, the end of the parking space. **§11B-812.8.9**

SIGNAGE

19. Detail and provide identification signage as follows: §11B-812.8

- a. Accessible signage is not required where a total of four or fewer EV spaces are provided;
 - b. Five to twenty-five total EV spaces are provided:
 - i. One van accessible EV space shall be identified by ISA signage;
 - ii. Accessible signage is not required at the standard accessible EV spaces.
 - c. Twenty-six or more EV spaces are provided:
 - i. All required van accessible and standard accessible EV spaces shall be identified by ISA signage.

- 20. Identification signs shall be reflectorized with a minimum area of 70 square inches. § 11B-812.8.6
- 21. The identification sign shall be visible from the EV space it serves.
- 22. Signs identifying van accessible EV spaces shall contain the words "van accessible."
- 23. Identification signs shall be permanently posted either immediately adjacent to the vehicle space or within the projected vehicle space width at the front end of the vehicle space. §11B-812.8.7
- 24. Mounting height of identification signs shall be
 - a. 60 inches minimum above the finish floor or ground surface measured to the bottom of the sign; or,
 - b. 80 inches minimum above the finish floor or ground surface measured to the bottom of the sign, when the sign projects over an access aisle or other circulation path.

EQUIPMENT

- 25. EV chargers shall be adjacent to, and within the projected width of the EV space being served. §11B-812.10.4
- 26. Provide typical plan and elevation views of the EV chargers showing required clear ground space and all operable parts. §11B-305, 11B-308, 11B-309 & 11B-812.10
- 27. Dimension the height above the clear ground space to all operable parts and controls. All operable parts and control shall be 15 to 48 inches above the clear ground space for both forward and side approaches. §11B-308
- 28. Where point-of-sale (POS) devices are separate from the EV charger equipment, provide plan and elevation views for the POS in addition to the EV chargers, to show compliance with Section 11B-707.9. §11B-812.10.3