



CITY OF ARCADIA

Building Services Division
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| EVSE CHECKLIST | | |
|---------------------------------|--------------------------------|-----------------------|
| BD SECTION | 22 FORM NUMBER | 2022 CODE CYCLE |
| 01/01/2023 EFFECTIVE DATE | 12/13/2022 REVISION DATE | |

CHECKLIST FOR PERMITTING ELECTRIC VEHICLES AND ELECTRIC VEHICLE SERVICE EQUIPMENT (EVSE)

Please complete the following information related to permitting and installation of Electric Vehicle Service Equipment (EVSE) as a supplement to the application for a building permit. This checklist contains the technical aspects of EVSE installations and is intended to help expedite permitting and use for electric vehicle charging.

Upon this checklist being deemed complete, a permit shall be eligible for expedited review. However, if it is determined that the installation might have a specific adverse impact on public health or safety, additional verification will be required before a permit can be issued.

This checklist substantially follows the “Plug-In Electric Vehicle Infrastructure Permitting Checklist” contained in the Governor’s Office of Planning and Research “Zero Emission Vehicles in California: Community Readiness Guidebook” and is purposed to augment the guidebook’s checklist.

| | |
|---------------------------|------------------------|
| Applicant Name: | |
| Applicant Phone & email: | |
| Contractor Name: | License Number & Type: |
| Contractor Phone & email: | |
| Owner Name: | |
| Owner Phone & email: | |

| | | |
|--|-----------------------------|--|
| EVSE Charging Level: <input type="checkbox"/> Level 1 (120V) <input type="checkbox"/> Level 2 (240V) <input type="checkbox"/> Level 3 (480V) | | |
| Maximum Rating (Nameplate) of EV Service Equipment = _____ kW | | |
| Voltage EVSE = _____ V | Manufacturer of EVSE: _____ | |
| Mounting of EVSE: <input type="checkbox"/> Wall Mount <input type="checkbox"/> Pole Pedestal Mount <input type="checkbox"/> Other _____ | | |

| | | |
|--|--|--|
| System Voltage: <input type="checkbox"/> 120/240V, 1φ, 3W <input type="checkbox"/> 120/208V, 3φ, 4W <input type="checkbox"/> 120/240V, 3φ, 4W <input type="checkbox"/> 277/480V, 3φ, 4W <input type="checkbox"/> Other _____ | | |
| Rating of Existing Main Electrical Service Equipment = _____ Amperes | | |
| Rating of Panel Supplying EVSE (if not directly from Main Service) = _____ Amps | | |
| Rating of Circuit for EVSE: _____ Amps / _____ Poles | | |
| AIC Rating of EVSE Circuit Breaker (if not Single Family, 400A) = _____ A.I.C. <i>(or verify with Inspector in field)</i> | | |

Specify Either Connected, Calculated OR Documented Demand Load of Existing Panel:

- Connected Load of Existing Panel Supplying EVSE = _____ Amps
- Calculated Load of Existing Panel Supplying EVSE = _____ Amps
- Demand Load of Existing Panel or Service Supplying EVSE = _____ Amps
(Provide Demand Load Reading from Electric Utility)

Total Load (Existing Load + EVSE Load) = _____ Amps

For Single Family Dwellings, if Existing Load is not known by any of the above methods, then the Calculated Load may be estimated using the "Load Calculation Estimator" located on page 5 of this document

CONDUCTOR SIZING

EVSE Rating _____ Amps x 1.25 = _____ Amps = Minimum Ampacity of EVSE Conductor = # _____ AWG

For Single-Family: Size of Existing Service Conductors = # _____ AWG or kcmil
 - OR - : Size of Existing Feeder Conductor
 Supplying EVSE Panel = # _____ AWG or kcmil
(or Verify with Inspector in field)

MULTIFAMILY

Do the drive aisles and non-accessible parking spaces in the parking lot or parking structure meet the minimum dimensions listed in the table below?

Y N

| Size of Parking Stall (minimum) | | | |
|---------------------------------|------------------------------------|--------|---|
| Width (General) | When Adjacent to Wall or Structure | Length | Back-up Clearance |
| 10 ft | 11ft, 6 in | 20 ft | For lots greater than or equal to 65 ft in width: 25 ft For lots less than 65 ft in width: 23 ft |

COMMERCIAL, INDUSTRIAL, AND MIXED USE

Do the drive aisles and non-accessible parking spaces in the parking lot or parking structure meet the minimum dimensions listed in the table below?

Y N

Standard Vehicle Space Requirements

| Parking Stall Angle | Stall Width ⁽¹⁾ | Stall Length | Aisle Width | |
|---------------------|----------------------------|--------------|-------------|---------|
| | | | One-Way | Two-Way |
| Standard Parallel | 10 ft | 24 ft | 14 ft | 20 ft |
| 30-Degree | 9 ft | 20 ft | 16 ft | 20 ft |
| 45-Degree | 9 ft | 20 ft | 16 ft | 20 ft |
| 60-Degree | 9 ft | 20 ft | 20 ft | 20 ft |
| 65-Degree | 9 ft | 20 ft | 19 ft | 19 ft |
| 90-Degree | 9 ft | 18 ft | 25 ft | 25 ft |

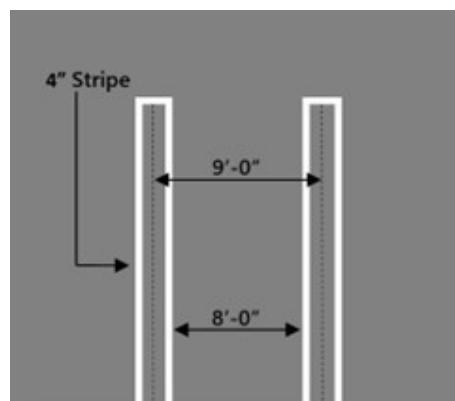
Notes: (1) Minimum stall width for stalls adjacent to a wall shall be 11 feet, six inches

MULTIFAMILY, COMMERCIAL, INDUSTRIAL, AND MIXED USE

Are wheels stops provided for each EV parking space adjacent to and facing a wall, building, walkway, utility cabinet, or structure? The wheel stops shall be set a minimum of 36 inches from the forward end of the parking stall and shall be six inches high and made of concrete.

Y N

Is each EV parking space identified by four-inch-wide stripes of paint, or other durable striping material? All parking stalls shall be clearly outlined with double stripes to provide a parking stall with a nine foot width, measured to the center of the lines.



Y N

EV parking does not occur in the first 20 feet from the street right-of-way, parking lot entrance, or parking lot exit.

Y N

This project does not include any modifications to parking lot lighting.

Y N

Note: This criteria is intended for an expedited EVCS permitting process. If any items are checked NO, please revise plans to fit within the eligibility checklist; otherwise the permit application may go through the standard plan review and approval process.

I hereby acknowledge that the information presented is a true and correct representation of existing conditions at the job site and that any causes for concern as to life-safety verifications may require further substantiation of information.

Signature of Permit Applicant: _____ Date: _____

ELECTRIC VEHICLE CHARGER – LOAD CALCULATION ESTIMATOR

USE THIS FORM TO ESTIMATE IF AN EXISTING ELECTRICAL SERVICE WILL HANDLE THE EXTRA LOAD FROM A VEHICLE CHARGER. (Loads shown are rough estimates; actual loads may vary – for a more precise analysis, use the nameplate ratings for appliances and other loads and consult with a trained electrical professional.)

| Check Applicable Loads | Description of Load | Typical Usage | Watts Used |
|--|---|-----------------|------------|
| GENERAL LIGHTING AND RECEPTACLE OUTLET CIRCUITS | | | |
| | Square Footage of House X 3 | 3 watts/sq. ft. | |
| KITCHEN CIRCUITS | | | |
| | Kitchen Circuits | 3,000 watts | |
| | Electric Oven | 2,000 watts | |
| | Electric Stove Top | 5,000 watts | |
| | Microwave | 1,500 watts | |
| | Garbage disposal under kitchen sink | 1,000 watts | |
| | Automatic dish washer | 3,500 watts | |
| | Garbage compactor | 1,000 watts | |
| | Instantaneous hot water at sink | 1,500 watts | |
| LAUNDRY CIRCUITS | | | |
| | Laundry circuit | 1,500 watts | |
| | Electric clothes dryer | 4,500 watts | |
| HEATING AND AIR CONDITIONING CIRCUITS | | | |
| | Central heating and air conditioning | 6,000 watts | |
| | Window mounted air conditioning | 1,000 watts | |
| | Whole-house or attic fan | 500 watts | |
| | Central electric furnace | 8,000 watts | |
| | Evaporative cooler | 500 watts | |
| OTHER ELECTRICAL LOADS | | | |
| | Electric water heater (storage type) | 4,000 watts | |
| | Electric tankless water heater | 15,000 watts | |
| | Swimming pool or spa | 3,500 watts | |
| | Other (describe) | | |
| | Other (describe) | | |
| | Other (describe) | | |
| ELECTRIC VEHICLE CHARGER CIRCUIT | | | |
| | Electric vehicle charger wattage rating | | |
| TOTAL WATTS USED | | | |

INSTRUCTIONS: Using the “TOTAL WATTS USED” number from the previous page, check the appropriate line across to determine the minimum required size of the electrical service panel shown in column 3. In column 4, write the size of your existing service panel (main breaker size). If your existing service panel (column 4) is smaller than the minimum required size of the existing service (column 3), then you will need to install a new upgraded electrical service panel to handle the added electrical load from the proposed electric vehicle charger.

| 1 | 2 | 3 | 4 |
|----------------------------|---------------------------------------|---|---|
| Check the appropriate line | Total watts used (from previous page) | Minimum required size of existing 240-volt electrical service panel (Main breaker size) | Identify the size of your existing main service breaker (Amps)* |
| | Up to 48,000 | 100 amps | |
| | 48,001 to 63,000 | 125 amps | |
| | 63,001 to 78,000 | 150 amps | |
| | 78,001 to 108,000 | 200 amps | |
| | 108,001 to 123,000 | 225 amps | |

Note that the size of your existing service (column 4) **MUST be equal to or larger than the minimum required size (column 3) or a new larger electrical service panel will need to be installed in order to satisfy the electrical load demand of the EV charger.*

STATEMENT OF COMPLIANCE

By my signature, I attest that the information provided is true and accurate.

Job Address: _____
(Print job address)

Signature: _____
(Signature of applicant) _____
(Date)

In addition to this document, you will also need to provide a copy of the manufacturer’s installation literature and specifications for the electric vehicle charger you are installing.

Note: This is a voluntary compliance alternative and you may wish to hire a qualified individual or company to perform a thorough evaluation of your electrical service capacity in lieu of this alternative methodology. Use of this electrical load calculation estimate methodology is at the user’s risk and carries no implied guarantee of accuracy. Users of this methodology and these forms are advised to seek professional assistance in determining the electrical capacity of a service panel.