

City of San Dimas
 Building and Safety Division
RESIDENTIAL EV CHARGING STATION REQUIREMENTS

PROJECT INFORMATION			
Project Address:		Permit Number:	
Work Description:			

The purpose of this handout is to assist permit applicants in streamlining the permitting, installation and inspection process for residential EV chargers. The following list is not an all-inclusive list of requirements. It is the responsibility of the permit applicant to be familiar with all the code requirements, state laws and local ordinances.

Check one	Type of charging Station(s) Proposed	Power levels (Proposed circuit rating)
<input type="checkbox"/>	Level 1	110/120 volt alternating current (VAC at 15 or 20 Amps)
<input type="checkbox"/>	Level 2 – 3.3 Kilowatt (kw) (low)	208/240 VAC at 20 or 30 Amps
<input type="checkbox"/>	Level 2 - 6.6Kw (medium)	208/240 VAC at 40 Amps
<input type="checkbox"/>	Level 2 – 9.6kw (high)	208/240 VAC at 50 Amps
<input type="checkbox"/>	Level 2 – 19.2kw (highest)	208/240 VAC at 100 Amps
<input type="checkbox"/>	Other (Provide details)	

- 1) The governing Codes for the project are listed below and are required to be noted on the plans prior submittal.
 - a. **2019 California Residential Code**
 - b. **2019 California Mechanical Code**
 - c. **2019 California Electrical Code**
 - d. **2019 California Energy code**
 - e. **2019 California Green Code**
 - f. **City of San Dimas Municipal Code**

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2) SITE PLAN

- a. A site plan must show all property lines.
- b. Show all structures located in the property.
- c. Show the location of the electrical panel and the location of the proposed EV charger.
 - i. **Specify if the conduit is to be installed inside, outside or underground.**
 - ii. **The conduit shall be painted to match the existing surface if installed outdoors.**

3) GENERAL REQUIREMENTS

- a. **A residential electrical load calculation shall be submitted to show that existing panel has sufficient capacity to accommodate the additional load added to the EV charger.**
- b. A single line diagram is to be submitted as part of the plans. Refer to the example provided on page #3.
- c. An electric vehicle charging station (EVCS) manufacturer's specifications and installation guidelines shall be provided.
 - i. **Make sure to highlight all components applicable for the specific charging to be used.**
- d. Identify the amperage of the main electrical panel and the amperage of the EV charging station/receptacle.
- e. Specify the type and size of conductors
 - i. **The conductor's ampacity shall be sized for a continuous load (125%)**
 - ii.
- f. Specify the type and size of the conduit (if applicable).

4) NOTES: INCLUDE THE FOLLOWING IF APPLICABLE.

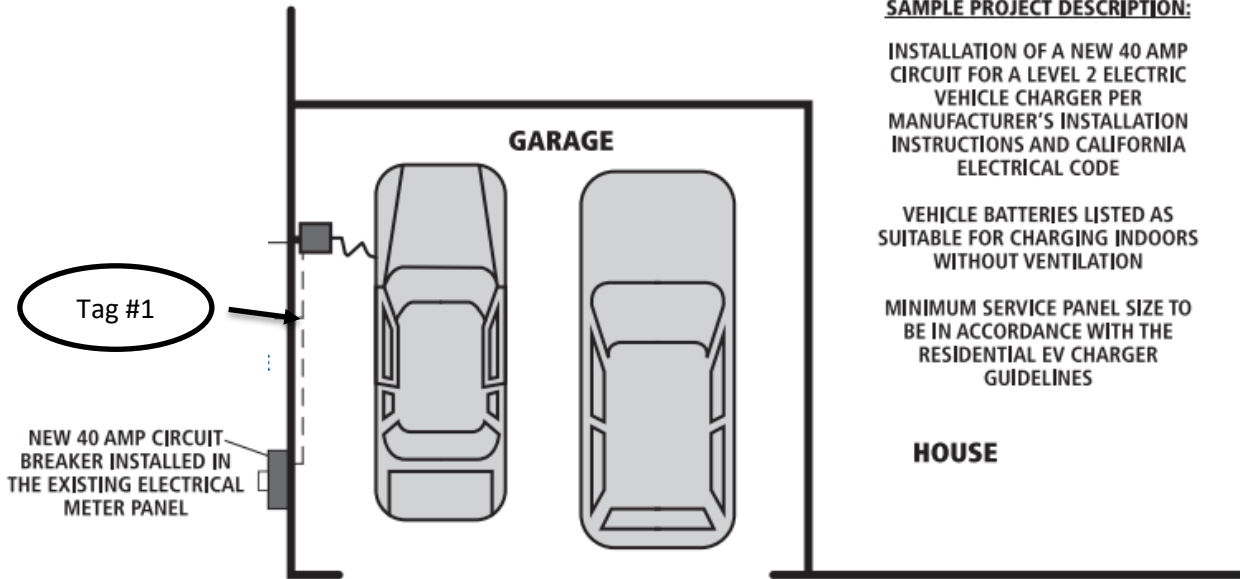
- a. The charging unit of the EVCS shall be stored at a height of not less than 18 inches above the floor level for indoor locations and not less than 24 inches above the grade level for outdoor locations.
- b. All the EVCS's shall be listed by a nationally recognized testing laboratory and shall be highlighted in the manufacturer's specifications.
- c. EVSE shall be protected against vehicle impact when located in the path of a vehicle. A side mount is recommended to avoid the installation of bollards or any other means of protection. Specify how the device will be protected (if applicable)

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EXAMPLE OF SITE PLAN AND SINGLE LINE DIAGRAM.

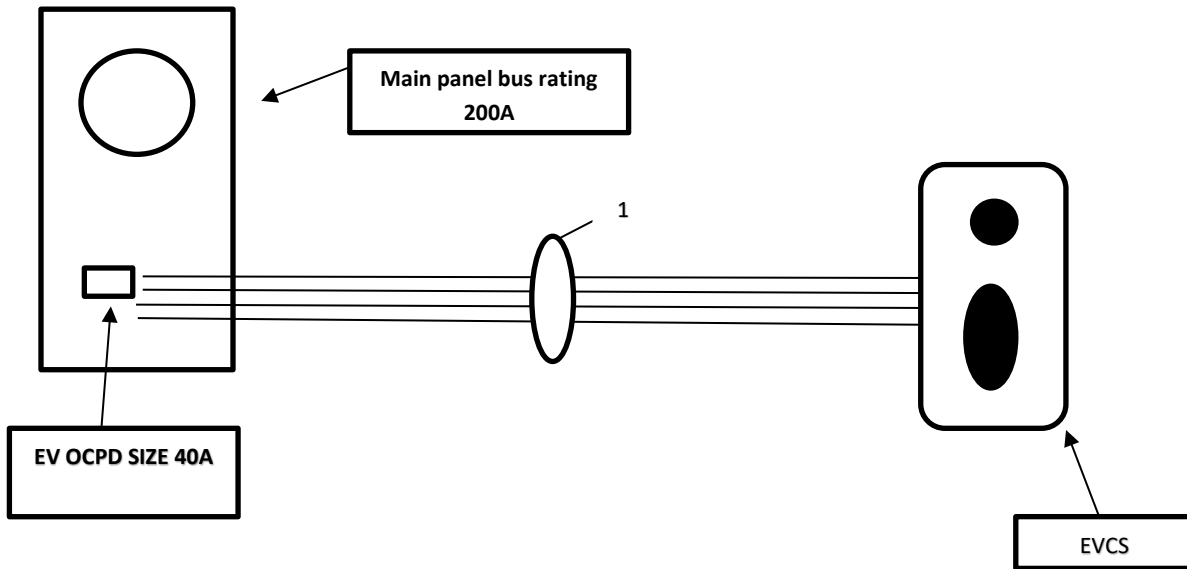


SAMPLE PROJECT DESCRIPTION:

INSTALLATION OF A NEW 40 AMP CIRCUIT FOR A LEVEL 2 ELECTRIC VEHICLE CHARGER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CALIFORNIA ELECTRICAL CODE

VEHICLE BATTERIES LISTED AS SUITABLE FOR CHARGING INDOORS WITHOUT VENTILATION

MINIMUM SERVICE PANEL SIZE TO BE IN ACCORDANCE WITH THE RESIDENTIAL EV CHARGER GUIDELINES



TAG ID	CONDUIT SIZE	CONDUCTOR	NEUTRAL	GROUND
1	¾ EMT tubing	(2) 6AWG THHN	(1) 6AWG THHN	(1) 8AWG THHN