City of Whittier

COMMUNITY DEVELOPMENT
13230 Penn Street, Whittier, California 90602-1716
(562) 567-9320   Fax (562) 567-2872 www.cityofwhittier.org

EV Charger Application

ALL EV CHARGER PERMITS WILL BE ISSUED TO HOME OWNER OR ELECTRICAL CONTRACTOR WITH A CLASSIFCATION OF "C-10" ONLY. CONTRACTOR SHALL POSSESS VALID STATE LICENSE AND CURRENT WORKERS COMPENSATION AT THE TIME OF PERMIT APPLICATION. UPLOAD DECLARATIONS WITH *RECORD NUMBER* ONCE APPLICATION HAS BEEN SUBMITTED.

EVERYTHING IN RED IS REQUIRED BEFORE SUBMISSION

Date: Job Address (Street#, Street Name, Unit#, Zip Code):

	Single Family Dwelling	Multifamily Dwelling
Pick One:		

Property Owner's Name   Contractor's Name Contractor's   Applicant's Name

Property Owner's Phone: Phone Number Contractor's   Applicant's Phone Number:

Property Owners Email   Email   Applicant's Email

Owner Address: #/St/Zip   Contractor Address: #/St/City/Zip   Contractor's State License No:

Description of Work:

EV CHARGER CHECKLIST

Purpose
The purpose of this guideline is to assist permit applicants in streamlining the permitting and inspection process for Residential Single Family EV Chargers.

❑ **Site Plan**
  Provide two copies of the job-specific site plan showing:
  ❑ The location of the building and street name
  ❑ All EV receptacle location(s), conduit type / size, wire type / size, conductors, equipment ground size, and existing or proposed electric meter location
  ❑ Reference, on the site plan, 2022 CBC/CRC/CEC/CENC.
       2023 LOS ANGELES COUNTY FIRE CODE

❑ **Manufacturer's Specifications**
  Provide two copies of the manufacturer's charger specifications. These specifications will show requirements and data for the EV charger being installed as well as a listing agency approval.

OR

❑ **Optional Electrical Service Load Calculation Form**
  Provide two copies of our Electrical Service Calculation Form. Follow steps one (1) thru nine (9) to figure out the minimum amperage needed for your main electric meter.

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Optional Method Service Load Calculation for a Single Dwelling Unit (CEC 220.82)

#	Description	Calculation	Line	Value
1.	General Lighting and Receptacle Loads 220.82(B)(1). Do not include open porches, garages, or unused or unfinished spaces not adaptable for future use.	3 x _____ = (sq ft using outside dimensions)	1	
2.	Small-Appliance Branch Circuits 20.82(b)(2). At least two small-appliance branch circuits must be included. 210.11(C)(2)	1500 x _____ = (minimum of two)	2	
3.	Laundry Brach Circuit(s) 220.82(B)(2). At least one laundry branch circuit must be included. 210.11(C)(2).	1500 x _____ = (minimum of one) NOTE: 1500 VA shall be included for each laundry branch circuit.	3	
4.	Appliances 220.82(B)(3) and (4). Use nameplate rating of all appliances (fastened in place, permanently connected, or connected to a specific circuit), ranges, ovens, cooktops, motors, and clothes dryers. Convert any nameplate rating given in amperes to volt-amperes by multiplying the amperes by the rated voltage.	Do not include any heating or air-conditioning equipment in this section. Total volt-amperes of all appliances. LISTED BELOW water heater/_____ _____/_____ dishwasher /_____ _____/_____ clothes dryer/_____ _____/_____ disposal /_____ _____/_____ range /_____ _____/_____ EV /_____ _____/	4	
5.	Apply 220.82(B) demand factor to the total of lines 1 through 4.	_____ - 10,000 = _____ x 40% = _____ + 10,000 = (total of line 1 through 4)	5	

#	Heating or Air-Condition System 220.82(C)		Value
6.	Heating or Air-Condition System 220.82(C) Use the nameplate ratings in volt-amperes for all applicable systems in lines 'a' through 'c'.	A) Air-Conditioning and cooling systems, including heat pumps without any supplemental electric heating: _____ x 100% =	A
B)	Electric thermal storage and other heating systems where the usual load is expected to be continuous at full nameplate value. Systems qualifying under this section shall not be figured under any other selection in 220.82(C). _____ x 100% =	C) Supplemental electric heating equipment for heat-pump systems. Include the heat-pump compressor(s) at 100%. If the heat-pump compressor is prevented from operating with the supplement heat, omit the compressor. _____ x 65% =	B / C

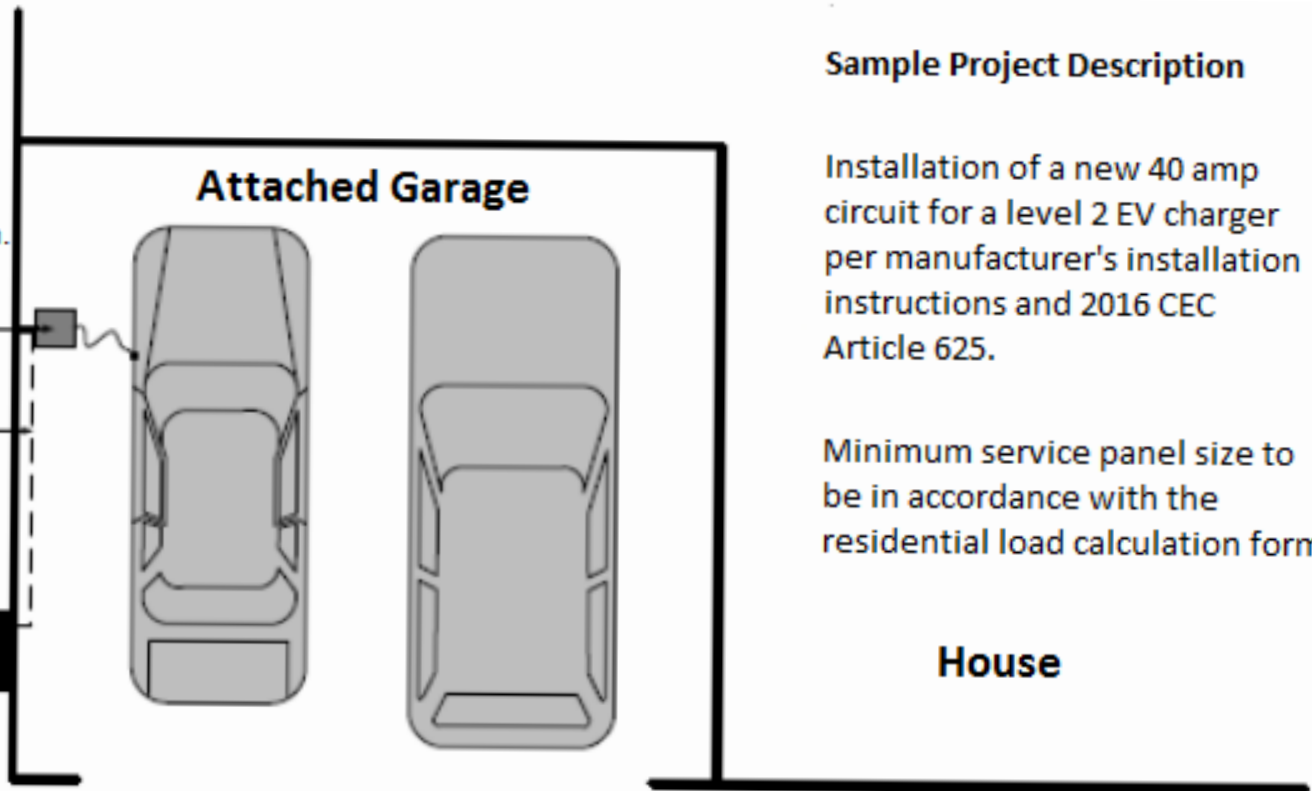| #	Description	Calculation	Line	Value
7.	Total Volt-Ampere Demand Load:	_____ + _____ = (largest VA rating from line 6a through 6c) (line 5)	7	
8.	Minimum Amperes. Divide the total Volt-amperes by the voltage. _____ ÷ _____ = (line 7) (voltage)	8	_____ (minimum amperes)	9. Minimum Size Service or Feeder 240.6(A) → 9 → (minimum is 100 amperes)
10.	Size the Service of Feeder Conductors. Use 310.15(B)(6) to find the service conductors up to 400 amperes. Ratings in excess of 400 amperes shall comply with Table 310.16. 310.15(B)(6) also applies to feeder conductors serving as the main power feeder.	Minimum Size Conductors	10	
11.	Size the Grounding Electrode Conductors. Use line 10 to find the grounding electrode conductor in Table 250.66. Size the Equipment Grounding Conductor (for Feeder). 250.122. Use line 9 to find the equipment grounding conductor in Table 250.122. Equipment grounding conductor types are listed in 250.118.	Minimum Size Conductors	12	

Sample Site Plan

Sample Electrical Requirements

Vehicle batteries listed as suitable for charging indoors without ventilation.

New 40 amp rated level 2 EV Charger

New 3/4" EMT conduit with #8 THHN c.u. and #10 THHN c.u. ground

New 40 amp circuit breaker installed in the existing 200 amp electric meter panel

Attached Garage

Sample Project Description

Installation of a new 40 amp circuit for a level 2 EV charger per manufacturer's installation instructions and 2016 CEC Article 625.

Minimum service panel size to be in accordance with the residential load calculation form.

House