

LEVEL 2 ELECTRIC VEHICLE CHARGER - SERVICE LOAD CALCULATION

INSTRUCTIONS: *(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 All Applicable Loads	Description of Load	Typical usage	Watts used
GENERAL LIGHTING AND RECEPTACLE OUTLET CIRCUITS			
✓	Multiply the Square Footage of House X 3	3 watts/sq. ft.	
KITCHEN CIRCUITS			
✓	Kitchen Circuits	3,000 watts	3,000
	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 CIRCUIT			
✓	Laundry Circuit	1,500 watts	1,500
	Electric Clothes Dryer	4,500 watts	
HEATING AND AIR CONDITIONING CIRCUITS			
	Central Heating (gas) and Air Conditioning	6,000 watts	
	Window Mounted AC	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: <i>(describe)</i>	watts	
	Other:	watts	
	Other:	watts	
ELECTRIC VEHICLE CHARGER CIRCUIT			
	Level 2 Electric Vehicle Charger Wattage Rating*		
(Add-up all of the watts for the loads you have checked ✓) TOTAL WATTS USED →			

*Use name plate rating in watts or calculate as: $(\text{Ampere rating of circuit} \times 240 \text{ volts} = \text{Watts})$

1. **GENERAL REQUIREMENTS** - All Electrical Vehicle Charging Systems shall comply with the applicable sections of the California Electrical Code, including Article 625.
2. **EQUIPMENT HEIGHT** - The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 18 – 48 inches above the finished floor. (CEC Art 625.29(B)).
3. **LISTED EQUIPMENT** - All Electric Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.
4. **FASTENED IN PLACE** - Level 2 Electric Vehicle Supply Equipment must be permanently connected and fastened in place in accordance with the manufacturer's installation instructions (CEC Art. 625.13).
5. **PROTECTION FROM PHYSICAL DAMAGE** - Electrical Vehicle Supply Equipment shall be protected against vehicle impact damage when located in the path of a vehicle. In order to avoid the installation of a substantial pipe bollard as an equipment guard, locate the Electrical Vehicle Supply Equipment on a garage side wall, out of vehicular path. (see sample drawing below) (CEC Art. 110.27(B))
6. **IF MORE THAN 60 AMPS**- When EV charging equipment is rated at more than 60 amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked on the open position. (CEC Art. 625.23)

SAMPLE ELECTRICAL PLAN FOR LEVEL 2 ELECTRIC VEHICLE CHARGER CIRCUIT INSTALLATION

