



RESIDENTIAL EV CHARGER CHECKLIST

PERMIT APPLICATION & SUBMITTAL REQUIREMENTS

- Complete a building permit application online by visiting our [Online Permitting Portal](#)
- Provide ICC Electric Vehicle Charger installation contractor number
- Electrical contractor shall provide a letter of intent and a copy of their electrical license
- Complete and submit the attached electrical panel schedule
- Submit a one-line diagram indicating:
 - Conduit size
 - Wire size
 - Ground size
- Complete and submit the attached electrical panel load calculation per NEC 2023 Article 220.83:
- Submit the vehicle charger specifications
- The individual dwelling unit shall be equipped with carbon monoxide and smoke detectors located as required per the 2024 International Residential Code as amended by EGV.
 - **At least one (1) hardwired detector is required on the level of the home being modified within the general vicinity of the modification work. All other detectors are permitted to be battery operated and must be interconnected. One detector is required on each floor.**

Must comply with the following Codes:

- 2024 International Residential Code
- 2023 National Electrical Code (NEC)

INSPECTIONS:

Inspections are scheduled by calling (847) 357-4220 between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday. Please have the **permit number** and **site address** ready. In addition, please allow a minimum of 24 hours when scheduling an inspection.

- FINAL**

RESIDENTIAL EV CHARGER REQUIREMENTS

General:

- Circuit must be rated and calculated at 125% continuous load per NEC Article 625.41 and 625.42.
- Wire size must be one size larger per NEC Article 625.41 and 625.42.
- Charger must be on a dedicated circuit per NEC Article 625.40.
- EV Chargers must comply with NEC Article 625

RESIDENTIAL - EXISTING PANEL LABEL _____ AMPS

PANEL SIZE (proposed): NEW REPLACEMENT
 100-AMP 200-AMP 400-AMP OTHER _____

VOLTAGE: 120/240 120/208 277/480

PHASE: 1-PHASE 3-PHASE

TYPE OF SERVICE: OVERHEAD UNDERGROUND

CIRCUIT	CIRCUIT BREAKER SIZE	CIRCUIT DESCRIPTION	WIRE SIZE
1			
3			
5			
7			
9			
11			
13			
15			
17			
19			
21			
23			
25			
27			
29			
31			
33			
35			
37			
39			
41			

CIRCUIT	CIRCUIT BREAKER SIZE	CIRCUIT DESCRIPTION	WIRE SIZE
2			
4			
6			
8			
10			
12			
14			
16			
18			
20			
22			
24			
26			
28			
30			
32			
34			
36			
38			
40			
42			

EXISTING DWELLING UNIT LOAD ADDITION NEC 220.83

PANEL SIZE:	QTY	BREAKER	WATTAGE
Square Footage X (3):			
Kitchens:	1		3000
Laundry Rooms:	1		1500
Electric Dryers: 100% NP			
Electric ranges, ovens & cooktop			
Well 100% NP			
Pumps 100% NP			
Furnace(s) 100% NP			
AC unit 1: 100% NP			
AC unit 2: 100% NP			
AC unit 3: 100% NP			
AC unit 4: 100% NP			
Electric Water Heater 100% NP			
Garage Door opener 100% NP			
Fans/bath rm & ceiling 100% NP			
Garbage Disposal 100% NP			
Dishwasher 100% NP			
Trash Compactor 100% NP			
Microwave/built in 100% NP			
Welders/Compressors: 100% NP			
Jacuzzi 120V 100% NP			
Hot Tub 240V 100% NP			
Pool Equipment: 100% NP			
Steamer: 100% NP			
EV Charger 1 125% NP			
EV Charger 2 125% NP			
Electric Heat: 100% NP			
Other: 100% NP			
TOTAL VA:			
DEMAND FACTOR FIRST 8000 VA OF LOAD AT 100%:			-8000
TOTAL VA:			
REMAINDER OF LOAD AT 40%:			
DEMAND FACTOR:			+8000
TOTAL VA:			
DIVIDED BY VOLTAGE/ CALCULATED AMPS REQUIRED:			
EVSE CHARGER MUST BE ON A DEDICATED CIRCUIT			NEC 625.40
EVSE IS RATED AT 125% AS A CONTINUOUS LOAD			NEC 625.42
20-AMP @ 125% = 6000	50-AMP @ 125% = 15000		
30-AMP @ 125% = 9000	60-AMP @ 125% = 18000		
40-AMP @ 125% = 12000			

SHALL COMPLY WITH THE VILLAGE OF ELK GROVE VILLAGE CURRENTLY ADOPTED 2023 EDITION OF
NFPA-70 – NATIONAL ELECTRICAL CODE