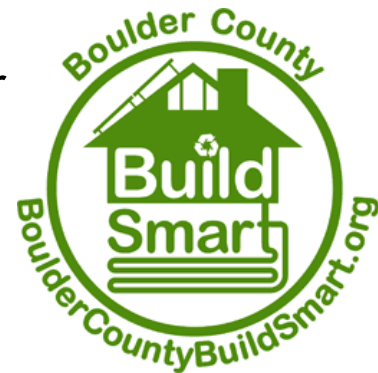




# Electric Vehicle Charging Requirements and Boulder County Building Codes

Ron Flax  
Boulder County Sustainability Examiner



**2014 National Electrical Code** (NFPA 70), as adopted by the Colorado State Electrical Board, published by the National Fire Protection Association (NFPA).

*Note: Boulder County has adopted Appendix K of the International Building Code, which contains additional administrative provisions for the National Electrical Code and an amended Section K111.4 with electric vehicle (EV) charging receptacle outlet requirements.*

### **IBC Appendix K – Administrative Provisions, Section K111**

**K111.4 Electric vehicle (EV) charging receptacle outlets.** Level 2 (240-volt) electric vehicle (EV) charging receptacle outlets are to be installed for all new commercial, industrial or multiple-family residential buildings or additions or alterations to existing such buildings that increase the existing total floor area of the building by either fifty percent or by 5,000 square feet in accordance with Table K111.4. Charging receptacle outlets shall be installed in accordance with the requirements of Article 625 of the Electrical Code.

**TABLE K111.4  
ELECTRIC VEHICLE (EV) CHARGING RECEPTACLE OUTLETS**

<b>TOTAL PARKING SPACES PROVIDED</b>	<b>1-19</b>	<b>20-50</b>	<b>51-100</b>	<b>101-150</b>	<b>151-200</b>	<b>201-250</b>	<b>251-300</b>	<b>301-350</b>	<b>351-400</b>	<b>401-450</b>	<b>451-500</b>	<b>501 and over</b>
<b>REQUIRED MINIMUM NUMBER OF EV CHARGING OUTLETS</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>2% of total</b>

## **IRC Section R329 – Electric Vehicle Charging Pre-wire Option**

**R329.1 Electric vehicle charging pre-wire option.** In addition to the one 125-volt receptacle outlet required for each car space by NEC Section 210.52(G)(1.), every new garage or carport that is accessory to a one- or two-family dwelling or townhouse shall include at least one of the following, installed in accordance with the requirements of Article 625 of the Electrical Code:

- A Level 2 (240-volt) electric vehicle charging receptacle outlet, or
- Upgraded wiring to accommodate the future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet, or
- Electrical conduit to allow ease of future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet.

Notes: Minimum Conduit Size =  $\frac{3}{4}$ "  
Minimum Wire Size = #8  
Minimum Circuit Amperage = 40 amps

**FIGURE N1101.13.3(2)**  
**OPTIONS FOR ADDITIONS, ALTERATIONS, REMODELS,**  
**AND REPAIRS RETROFIT MEASURES**

