

# ELECTRICAL VEHICLE CHARGING STATIONS

## EXPEDITED REVIEW CHECKLIST

INFORMATION  
GUIDELINE

**30**

August 2017

CITY OF ESCONDIDO • BUILDING DIVISION • 201 N. BROADWAY, ESCONDIDO, CA 92025 • (760) 839-4647

---

### **PURPOSE**

The purpose of this guideline is to assist permit applicants in streamlining the permitting, installation and inspection process for EV chargers.

### **TYPES OF ELECTRICAL VEHICLE (EV) CHARGERS**

Be aware that there are different types of Electrical Vehicle (EV) chargers. There are 2 basic types of EV chargers (Level 1 and Level 2).

#### **LEVEL 1**

Level 1 chargers are smaller units that plug directly into standard 120- volt receptacle outlets. These types of chargers typically require a longer period of time to recharge a vehicle. If the receptacle outlet used to plug in the Level 1 charger is existing, building permits are not required. If a new receptacle outlet is needed for the charger, permits for the electrical work will be required.

#### **LEVEL 2**

A Level 2 EV charging system requires a 240- volt electrical circuit and charges the vehicle battery much faster than a Level 1 charger. Level 2 chargers require permits and inspections of the system. In order to obtain a permit some basic information will be needed to verify adequacy of the existing electrical service to handle the additional electrical loads.

### **SUBMITTAL REQUIREMENTS**

This EV Charging Permit Guideline has been developed to streamline the permitting process. The following information is needed to review your application: 1. Complete the attached Checklist. 2. Attach the manufacturer's installation instructions to the plans. 3. Provide a site plan or floor plan showing the location of all EV and electrical components. 4. Include any electrical load calculations, single line drawings or service upgrades. 5. Show any disabled access requirements as indicated by the responses on the Checklist for an over-the-counter review and permit issuance.

If all of the information is provided and the proposal complies with the applicable codes, the review and approval process can usually be performed over-the counter or within a day or two. Once the permit is issued, the installation may begin.

Plans may be submitted electronically. Visit our website at [www.escondido.org/city-departments/community-development/building/electronic](http://www.escondido.org/city-departments/community-development/building/electronic) EV submittal. Please format your plans to allow for a maximum 11" X 17" printed sheets. We are not able to accept on-line payment at this time. Please visit the Building counter at Escondido City Hall to pay the permit fees in person and pick up a printed copy of your plans and permits.

Call 760-839-4646 to schedule an inspection of the work. Inspections are performed on the next work day following your request for inspection. Someone may need to be present during the inspection to allow access to the electrical and EV equipment.

## **THINGS TO LOOK FOR IN YOUR SUBMITTAL**

### **CALIFORNIA ELECTRICAL CODE**

All Electrical Vehicle Charging Systems shall comply with the 2016 CEC, Article 625.

### **EQUIPMENT HEIGHT**

The coupling means of the Electrical Vehicle Supply Equipment shall be stored at a height of not less than 18 inches above the floor for indoor locations and not less than 24 inches above grade for outdoor locations. (CEC 625.50).

### **LISTED EQUIPMENT**

All Electrical Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.

### **FASTENED IN PLACE**

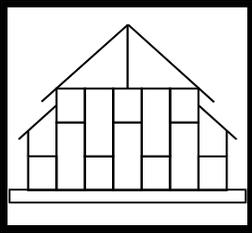
Show that the Electrical Vehicle Supply Equipment is permanently fastened in place in accordance with the manufacturer's installation instructions.

### **PROTECTION FROM PHYSICAL DAMAGE**

Electrical Vehicle Supply Equipment shall be protected against vehicle damage when located in the path of a vehicle. If the equipment cannot be located out of the path of a vehicle, pipe bollards may need to be installed.

### **IF MORE THAN 60 AMPS**

When the EV charging equipment is rated at more than 60 amps, the disconnecting means shall be protected and installed in a readily accessible location and shall be capable of being locked in the open position. (CEC 625.42).



# ELECTRICAL VEHICLE CHARGING STATIONS

## EXPEDITED REVIEW CHECKLIST

**INFORMATION GUIDELINE**

# 30

August 2017

CITY OF ESCONDIDO • BUILDING DIVISION • 201 N. BROADWAY, ESCONDIDO, CA 92025 • (760) 839-4647

TYPES OF CHARGING STATION(S)	POWER LEVELS (CIRCUIT RATING)	CHECK ONE
RESIDENTIAL		
COMMERCIAL		
LEVEL 1	110/120 volt alt current (VAC) at 15 or 20 amps	
LEVEL 2 – 3.3 KW (low))	208/240 (VAC) at 20 or 30 amps	
LEVEL 2 – 6.6 KW (med)	208/240 (VAC) at 40 amps	
LEVEL 2 – 9.6 KW (high)	208/240 (VAC) at 50 amps	
LEVEL 2 – 19.2 KW (highest)	208/240 (VAC) at 100 amps	
OTHER (provide detail):	Provide rating:	

### PERMIT APPLICATION

**Yes No**

A. Does the application include the EVCS manufacturer’s specs and installation Guidelines.		
--	--	--

### SITE PLAN & SINGLE LINE DRAWING

**Yes No**

A. Is a site plan and electrical plan with single line diagram included with the permit Application.		
B. Does the site plan show the location, size, use of all structures and the location of the electrical panel and charging station.		

**ELECTRICAL LOAD CALCULATIONS****Yes No**

<b>A.</b> Are electrical load calculations included.		
<b>B.</b> Based on the load calculations, is a new electrical panel upgrade required.		
<b>C.</b> If yes to B, do plans include the SDG&E work order for the panel upgrade.		
<b>D.</b> Is the charging circuit appropriately sized for continuous loads (125%).		
<b>E.</b> If a Level 2-9.6 kw system with a circuit rating of 50 amps or higher is proposed, is a completed circuit card, single line drawing and load calculations provided.		

**2016 CALIFORNIA ELECTRICAL CODE****Yes No**

<b>A.</b> Does the plan identify the ampere rating of the existing electrical panel.		
<b>B.</b> Is the charging unit rated more than 60 amps or more than 150 V to ground.		
<b>C.</b> If yes to <b>B</b> , are disconnecting means provided in a readily accessible location in line of site within 50' of the EVCS.		
<b>D.</b> Does the charging equipment have an approved listing approval.		

**CALIFORNIA GREEN BUILDING CODE****Yes No**

<b>A.</b> Do the plans show conformance with the mandatory measure for 3% of total parking spaces in lots with 51+, EV capable spaces. (multifamily, commercial)		
--	--	--

**2016 CBC ACCESSIBILITY (multifamily, commercial)****Yes No**

<b>A.</b> Is there at least one EVCS parking stall out of 4 EVCS parking stalls that meet Chapter 11B for van accessible parking spaces.		
<b>B.</b> For parking areas with 5 to 25 EVCS, is there one EVCS parking stall that meets Chapter 11B for a van accessible space and one EVCS stall that meets the standard accessible space requirements.		
<b>C.</b> Is the path of travel to the EVCS shown to be unobstructed.		
<b>D.</b> Is the accessible path of travel from the EVCS stall within 200 feet of a main building entrance.		