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City of Corona Community Development Department Building Division

Electric Vehicle Charging Stations: Expedited Online Permits

To be eligible for expedited online submittal and plan check, an applicant for an electric vehicle charging station permit must provide this completed application and checklist, along with the plans in PDF file format (plans must conform to these guidelines to be eligible for online submittal and review) and submit to SolarEXP@CoronaCA.gov, and pay the required plan check fees. The subject line in the e-mail submittal must start with the project street address (for example: "100 S. Main St. - EVCS submittal"). The plan check fees must be paid at the Corona Store prior to plan review by going to <https://secure.ci.corona.ca.us/e-commerce/login.cfm>. The applicant shall coordinate the project with the applicable utility company and process any required plans, forms, or fees. Please see exhibit at the end of these guidelines for a map of areas served by the City of Corona Department of Water and Power.

Application

Project Address: _____

Electric service provider: Southern California Edison (SCE)
City of Corona Department of Water and Power (DWP)
(See requirements in these guidelines for DWP customers)

Type of Project: Single Family Residential Multifamily/Commercial/Industrial

Number of Chargers Installing: _____

Type of Charger: AC DC

Voltage: _____

Amps: _____

Scope of Work: Plug EVCS into existing 120V, 15 or 20 Amp receptacle (no permit required, however please consult with a licensed professional)
 Extend existing circuit and add outlet (see guidelines for load calculations)
 Add dedicated EV circuit

Proposed electric service panel size (Amps): _____

Panel upgrade required: No Yes (Separate Building Permit and fees required)

Line side tap or Second electric meter: No Yes (Requires additional fees and for DWP customers, separate application and review)

Mechanical ventilation required: No Yes (Separate Building Permit and fees required)

Payment ID # (from Corona Store):
Applicant Name:
Applicant Address:
Applicant Phone:
Applicant Email:

Checklist and Guidelines

Plans for a proposed EVCS shall include at a minimum the following:

1. Site Vicinity Plan
2. Overall Site Plan
3. Enlarged Site Plan or Floor Plan
4. Single Line Diagram
5. Panel Schedules
6. Electrical Load Calculations
7. Charger and equipment manufacturer's specification sheets
8. Details, Elevation Views, and Mechanical Plans as needed

All sheets shall include a title block indicating the project address, designer, dates of plan revisions and other relevant information, and shall be numbered (example: 1 of 12). All sheets shall be stamped and signed by a California licensed electrical engineer or a California licensed C-10 electrical contractor. The signature may be electronic. The installation shall comply with all codes in effect and the plans must list the applicable codes, e.g. 2016 California Electrical Code, 2016 California Building Code, etc.

1. Site Vicinity Plan - Must show the location of the project in the city, in relation to city boundary lines, major roadways, and nearest cross streets.

Note: The City of Corona does not serve the communities of El Cerrito, Home Gardens, Coronita, or Temescal Canyon (under County jurisdiction.) Addresses may be verified to be within city limits by going to <https://www.coronaca.gov/services/address-verification>

2. Overall Site Plan - Must depict the entire site and show the location on the property where all work will be performed. Must be dimensioned and show all structures, accessible paths of travel, parking spaces, circulation paths, location of equipment, driveways, etc. If a multifamily/commercial/industrial project, parking calculations must be provided and must indicate compliance with CBC Chapter 11 Accessibility requirements and CAL Green Mandatory Measures.

3. Enlarged Site Plan or Floor Plan - Must be dimensioned and show the proposed location of the EVCS and related equipment and their working space, electrical panels, disconnects, EV parking spaces, signage, conduits, outlets, fans, bollards if electrical equipment is located in the path of a vehicle, access aisles, doorways, and paths of travel. EV supply equipment rated more than 60 amps or more than 150 volts shall have a readily accessible disconnect, capable of being locked open, within site of the equipment.

4. Single Line Diagram - Must indicate size and rating of existing and proposed service(s), voltage configuration, etc. Must show all panels and equipment and indicate their size and rating; overcurrent protective device ratings for all circuits and panels supplying EVSE; conductor type, size, and material feeding EVCS and include ampacity derating calculations for any conditions that may apply; conduit type, size, and material with conduit fill calculations; how grounding of all equipment is to be provided including the number, type, and size of grounding electrodes and conductors. For multifamily/commercial/industrial projects, fault current ratings of all equipment shall be indicated and shall be fully rated or calculations shall be provided for series rated systems. Meters for EVSE need to be labeled with the same address as the building installed at along with the designation EV (for example, "200 S. Main St. EV").

5. Panel Schedules - Must be provided for all electrical panels supplying power to the EVCS. Must indicate the panel's name/ID, voltage, ampacity, and AIC ratings. Must indicate the name and number of all new and existing circuits and their corresponding ampacity. Existing panels must have space available for an additional breaker(s). *For single family dwelling projects only, the attached Panel Schedule Template may be used and attached with the submittal.*

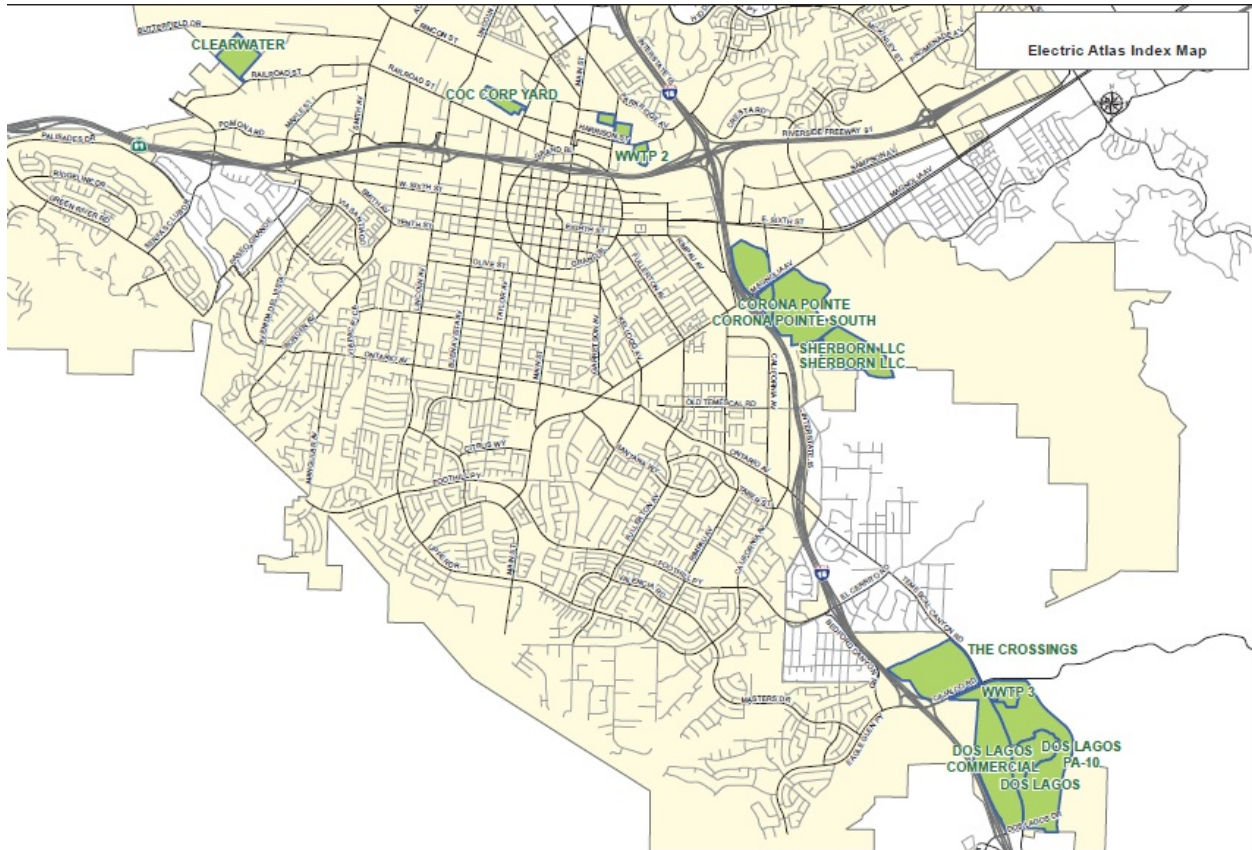
6. Electrical Load Calculations - Must be provided for all panels supplying power to the EVCS. Must clearly indicate how compliance is achieved with CEC Article 220. Overcurrent protection devices for feeders and circuits supplying EVCS shall be rated for continuous duty and shall be rated for not less than 125% of the maximum load of the EV supply equipment. Where noncontinuous loads are supplied from the same feeder or branch circuit, the overcurrent device shall be rated for 100% of the noncontinuous loads plus 125% of the continuous loads. *For single family dwelling projects only, the attached Electrical Load Worksheet may be used and attached with the submittal.*

7. ☐ Charger Manufacturer's Specifications - Cut sheets must be provided for all equipment installed for the EVCS indicating their size, rating, listing, environment rated for, etc. The manufacturer's installation instructions for all equipment must be provided on the jobsite.

8. ☐ Details, Elevations, and Mechanical Plans - May be needed depending on the scope and complexity of the EVSE project. Trenching details must be provided indicating the depth of cover for underground conduits (CEC Table 300.5). Structural details may be provided for equipment mounting, and are required for trenching undermining foundations. Details or Elevations must be provided for multifamily/commercial/industrial projects indicating the height of connector coupling means and other operable parts (CEC 625.50 and CBC 11B-812.2). Mechanical Plans may be needed if ventilation is required for the type of EVSE being installed showing compliance with CEC Article 625.50, the California Mechanical Code, and California Building Code.

Department of Water and Power

Below is a map that shows general areas of the city that have electrical service provided by the City of Corona Department of Water and Power. If your EVCS project will have a line side tap or additional electric meter and is located in these areas, an application for interconnect and plans will need to be submitted directly to DWP at 755 Public Safety Way or by emailing a digital set to Curtis.Showalter@CoronaCA.gov. To verify the serving utility or to obtain more information about the DWP application and interconnection process please contact them at 951-736-2234. An interactive map is available by clicking [here](#).



By signing below, the applicant confirms that they have read and understood the above guidelines, has verified that the plans conform to the above requirements and are eligible to receive expedited review, has verified the project is within city limits, has verified the serving electric utility and that the plans conform to the utility's interconnect policies, acknowledges that the standard review process is available for projects not eligible for expedited review, and affirms that all information provided is true and accurate.

Signature: _____ **Date:** _____



CITY OF CORONA BUILDING DIVISION

PANEL SCHEDULE TEMPLATE

*For Single Family Dwelling projects only

PERMIT #

ADDRESS:

PANELBOARD SCHEDULE ___ VOLT MAIN BREAKER SIZE ___ AMP																					
CKT		VA		BRKR		CKT		VA		BRKR											
NO	USAGE	QTY	PHASE A	A/ PLS	NO	USAGE	QTY	PHASE A	A/ PLS												
1					2																
3					4																
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						PHASE VA TOTALS		0													
						PANEL BOARD VA TOTAL															
						I C I (25%)															
						PANELBOARD AMPS TOTAL															
<p>* Indicates GFI type circuit breaker</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">EQUIPMENT TAG</td> <td style="width: 50%; border: none;">MOUNTING</td> </tr> <tr> <td style="border: none;">LOCATION</td> <td style="border: none;">TYPE</td> </tr> <tr> <td style="border: none;">VOLTAGE</td> <td style="border: none;">PHASE</td> </tr> <tr> <td style="border: none;">MAIN BREAKER</td> <td style="border: none;">WIRE</td> </tr> <tr> <td style="border: none;">BUS SIZE</td> <td style="border: none;"></td> </tr> </table>												EQUIPMENT TAG	MOUNTING	LOCATION	TYPE	VOLTAGE	PHASE	MAIN BREAKER	WIRE	BUS SIZE	
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VOLTAGE	PHASE																				
MAIN BREAKER	WIRE																				
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Electrical Load Worksheet

The following worksheet may be used to calculate electrical loads for EVCS installed at *existing Single Family Dwellings only*. For other occupancies or projects with different scopes of work, load calculations are required to be prepared by a licensed electrical engineer or electrical contractor displaying conformance with the applicable code requirements and load calculation methodology.

INSTRUCTIONS: Review the list of electrical loads in the table below and check (✓) all that exist in the home. For each item checked, fill in the corresponding “Watts Used” (refer to the “Typical Usage” column.) If multiple instances of the load exist be sure to multiply the load by the number of instances. Add up all of the numbers in the “Watts Used” column and write that number in the “TOTAL WATTS” space at the bottom of the table.

Loads shown are estimates; actual loads may vary. For a more precise analysis, use the nameplate ratings of appliances and other loads. This is a voluntary compliance alternative and the applicant may wish to consult with a licensed electrical professional. Use of this electrical load calculation worksheet is at the user’s risk and carries no implied guarantee of accuracy. This worksheet assumes that the existing electrical system at the premises is code-compliant, sized properly, and in good functioning order with no signs of damage or disrepair.

Check All Applicable Loads	Description of Load	Typical Usage	Watts Used
GENERAL LIGHTING AND RECEPTACLE OUTLET CIRCUITS			
✓	Multiply the dwelling square footage by 3	3 watts/sq. ft.	
KITCHEN CIRCUITS			
✓	Kitchen circuits	3,000 watts	3,000 (minimum)
	Electric oven	2,000 watts	
	Electric stove top	5,000 watts	
	Microwave	1,500 watts	
	Garbage disposal under kitchen sink	1,000 watts	
	Automatic dishwasher	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 (minimum)
	Electric clothes dryer	5,000 watts	
HEATING AND AIR CONDITIONING CIRCUITS			
	Central heating (gas) and air conditioning	6,000 watts	
	Window mounted A/C	1,000 watts	
	Whole-house or attic fan	500 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 (describe):		
	Other:		
	Other:		
ELECTRIC VEHICLE CHARGER CIRCUIT			
✓	EVCS rating in Amps X 125% X Volts		

TOTAL WATTS = _____

To determine the minimum size service panel and main service breaker needed (measured in amps), take Total Watts from above and divide by 240. Example: 30,000 watts / 240 volts equals 125 amp main service needed.

Size of existing Main Service Breaker = _____ Size needed from calculation above = _____