## PERMIT APPLICATION AND PLAN REVIEW CHECKLIST FOR ELECTRIC VEHICLE CHARGING STATION (EVCS)

|  |  |  |
| --- | --- | --- |
| Check One | Charging Station(s) Proposed | Associated Power Levels(proposed circuit rating) |
|  | Level 1 | 110/120 volt alternating current (VAC) at 15 or 20 Amps |
|  | Level 2 - 3.3 kilowatt (kW) (low) | 208/240 VAC at 20 or 30 Amps |
|  | Level 2 - 6.6kW (medium) | 208/240 VAC at 40 Amps |
|  | Level 2 - 9.6kW (high) | 208/240 VAC at 50 Amps |
|  | Level 2 - 19.2kW (highest) | 208/240 VAC at 100 Amps |
|  | Other (provide detail) |  |

**INSTRUCTIONS:** This Checklist shall be used during a residential Electric Vehicle Charging Station (EVCS) installation permit application and plan review. If any discrepancies are found on the application and/or supplemental documentation, record the details of needed corrections on this sheet and provide to the applicant.

[ ]  **COMPLETED PERMIT APPLICATION:**Application must include project address, parcel number, builder/owner name, contractor name, valid contractor license number, phone numbers and any other requirements.

[ ]  **ELECTRIC VEHICLE CHARGING STATION MANUFACTURER’S SPECIFICATIONS**

[ ]  **ELECTRIC VEHICLE CHARGING STATION INSTALLATION GUIDELINES**

[ ]  **COMPLETED ELECTRICAL LOAD CALCULATIONS PER CEC[[1]](#footnote-1) 220**

1. Based on the load calculation worksheet, is a new electrical service panel upgrade required[[2]](#footnote-2)? Yes [ ]  No [ ]

*If new service or upgrade is required, plans and the utility work order must be included with submittal*.

1. Is the charging circuit appropriately sized for a continuous load (125%)? Yes [ ]  No [ ]
2. If charging equipment proposed is a Level 2 - 9.6kW station with a circuit rating of 50 amps or higher, is a completed circuit card with electrical calculations included with the single-line diagram? Yes [ ]  No [ ]  Not Applicable [ ]

[ ]  **SITE PLAN & SINGLE LINE DRAWING**

Site Plan must be fully dimensioned and drawn to scale showing the following:

* 1. Location, size, and use of all structures
	2. Location of electrical panel to charging system
	3. Type of mounting for charging system
1. Is a site plan and electrical plan with a single-line diagram included with the permit application?

Yes [ ]  No [ ]

1. If mechanical ventilation requirements are triggered for indoor venting requirements (CEC 625.50(B)), is a mechanical plan included with the permit application?

Yes [ ]  No [ ]  Not Applicable [ ]

**COMPLIANCE WITH 2016 CALIFORNIA ELECTRCIAL CODE (TITLE 24, PART 3)**

1. Does the electrical plan identify the amperage and location of existing electrical service panel? Yes [ ]  No [ ]
	1. Does the existing panel schedule show room for additional breakers? Yes [ ]  No [ ]
	2. Are sizes for the conduit and conductor included? Yes [ ]  No [ ]
2. Is the charging unit rated more than 60 amps or more than 150V to ground? Yes [ ]  No [ ]
	1. If rated >60 amps, are disconnecting means provided in a readily accessible location in line of site and within 50’ of EVCS? (CEC 625.42) Yes [ ]  No [ ]
3. Does the charging equipment have a Nationally Recognized Testing Laboratory (NRTL) approved listing mark? (UL 2202/UL 2200) Yes [ ]  No [ ]
4. If trenching is required, is the trenching detail called out? Yes [ ]  No [ ]
	1. Is the trenching in compliance with electrical feeder requirements from structure to structure? (CEC 225) Yes [ ]  No [ ]
	2. Is the trenching in compliance of minimum cover requirements for wiring methods or circuits? (18” for direct burial per CEC 300) Yes [ ]  No [ ]

**COMPLIANCE WITH 2016 California Green Building Standards Code (CALGreen)** **FOR NEW CONSTRUCTION**[[3]](#footnote-3) **(TITLE 24, PART 11)**

1. Is this project considered new construction? Yes [ ]  No [ ]

*If yes, plans must include installation of a listed raceway, adequate panel capacity and identification as “EV Capable” in compliance with Section 4.106.4.1 &4.106.4.1.1)*

## PERMIT APPLICATION AND PLAN REVIEW CHECKLIST FOR MULTI-UNIT DWELLINGS (MUD) AND COMMERCIAL ELECTRIC VEHICLE CHARGING STATION (EVCS)

**INSTRUCTIONS:** This checklist shall be used during a multi-unit dwelling and commercial Electric Vehicle Charging Station (EVCS) installation permit application and plan review. If any discrepancies are found on the application and/or supplemental documentation, record the details of needed corrections on this sheet and provide to the applicant.

|  |  |  |  |
| --- | --- | --- | --- |
| Check One | Charging Station(s) Proposed | Associated Power Levels(proposed circuit rating) | Typical Non-Residential Charging Locations |
|  | Level 1 | 110/120 volt alternating current (VAC) at 15 or 20 Amps | * Commercial office building
 |
|  | Level 2 - 3.3kW (low) | 208/240 VAC at 20 or 30 Amps | * Multi-unit dwellings (MUD)
* Commercial office building
* Public access
 |
|  | Level 2 - 6.6kW (medium) | 208/240 VAC at 40 Amps |
|  | Level 2 - 9.6kW (high) | 208/240 VAC at 50 Amps |
|  | Level 2 - 19.2kW (highest) | 208/240 VAC at 100 Amps |
|  | DC Fast Charging | 440 or 480 VAC | * Public access
* Large commercial office buildings or parks
* Hospitality & recreation
 |
|  | Other (provide detail) |  |  |

**Check type of Electric Vehicle Charging Station Proposed:**

[ ]  **MUD EVCS** [ ]  **COMMERICAL EVCS**

[ ]  **COMPLETED PERMIT APPLICATION**

1. Application must include project address, parcel number builder/owner name, contractor name, valid contractor license number phone numbers and any other requirement.

[ ]  **ELECTRIC VEHICLE CHARGING STATION MANUFACTURER’S SPECS & INSTALLATION GUIDELINES**

[ ]  **COMPLETED ELECTRICAL LOAD CALCULATIONS PER CEC[[4]](#footnote-4) 220**

1. Based on the load calculation worksheet, is a new electrical service panel upgrade required[[5]](#footnote-5)? Yes [ ]  No [ ]

*If new service or upgrade is required, plans and the utility work order must be included with submittal.*

1. Is the charging circuit appropriately sized for a continuous load (125%)? Yes [ ]  No [ ]
2. If charging equipment proposed is a DC Fast Charging station or a Level 2 - 9.6kW station with a circuit rating of 50 amps or higher, is a completed circuit card with electrical calculations included with the single-line diagram? Yes [ ]  No [ ]  Not Applicable [ ]

[ ]  **SITE PLAN & SINGLE LINE DRAWING**

1. If mechanical ventilation requirements are triggered for indoor venting requirements (CEC 625.50(B)), is a mechanical plan included with the permit application?

Yes [ ]  No [ ]  Not Applicable [ ]

1. Site Plan must be fully dimensioned and drawn to scale showing the following:
	1. Location, size, and use of all structures
	2. Location of electrical panel to charging system
	3. Type of mounting for charging system
	4. Parking and circulation areas

**PLAN COMPLIANCE WITH 2016 CALIFORNIA ELECTRCIAL CODE (TITLE 24, PART 3)**

1. Does the electrical plan identify the amperage and location of existing electrical service panel? Yes [ ]  No [ ]
	1. If yes to Q2, does the existing panel schedule show room for additional breakers? Yes [ ]  No [ ]
	2. Are sizes for the conduit and conductor included? Yes [ ]  No [ ]
2. Is the charging unit rated more than 60 amps or more than 150V to ground? Yes [ ]  No [ ]
	1. If yes to Q3, are disconnecting means provided in a readily accessible location in line of site and within 50’ of EVCS? (CEC 625.23) Yes [ ]  No [ ]
3. Does the charging equipment have a Nationally Recognized Testing Laboratory (NRTL) approved listing mark? (UL 2202/UL 2200) Yes [ ]  No [ ]
4. If trenching is required, is the trenching detail called out? Yes [ ]  No [ ]
	1. Is the trenching in compliance with electrical feeder requirements from structure to structure? (CEC 225) Yes [ ]  No [ ]
	2. Is the trenching in compliance of minimum cover requirements for wiring methods or circuits? (18” for direct burial per CEC 300) Yes [ ]  No [ ]

**PLAN COMPLIANCE WITH 2016 MANDATORY CALGREEN CODE FOR NEW CONSTRUCTION AND CHAPTER 11B ACCESSIBILITY REQUIREMENTS**

2016 CALGreen Mandatory EVCS Requirements for New Construction[[6]](#footnote-6)

1. For **MUD EVCS,** do CALGreen EV Readiness installation requirements apply? Yes [ ]  No [ ]
	1. Do the plans demonstrate conformance with mandatory measures for 3% of total parking spaces, but no less than one, for new multifamily dwellings with 17+ units that must be EV capable per Section 4.106.4.2? Yes [ ]  No [ ]
2. For **Commercial EVCS**, do CALGreen EV Readiness installation requirements apply to this project? Yes [ ]  No [ ]
	1. Do the plans demonstrate conformance with mandatory measures of 3% of parking spaces in lots with 51+ spaces being EV capable per Section 5.106.5.3? Yes [ ]  No [ ]

**2016 Chapter 11B Accessibility Requirements for Public and Common Use EVCS[[7]](#footnote-7)**

1. Is there at least 1 EVCS parking stall out of 4 EVCS parking stalls that meet Chapter 11B accessibility dimension requirements for a van accessible parking space (144 inches wide with an adjacent access aisle)? Yes [ ]  No [ ]

*Access aisles shall comply with Section 11B-302.*

1. For parking stalls with 5 to 25 EVCS, is there 1 EVCS parking stalls that meets Chapter 11B accessibility dimension requirements for a van accessible parking space (144 inches wide with an adjacent access aisle) and 1 EVCS parking stall that meets the standard accessible parking space (108 inches wide with an adjacent access aisle)? Yes [ ]  No [ ]
2. Is the path of travel to the EVCS from the accessible parking stall demonstrated to be unobstructed? Yes [ ]  No [ ]
3. Is the accessible path of travel from the EVCS parking stall demonstrated to be with 200 feet of a main building entrance? Yes [ ]  No [ ]
1. 2016 California Electrical Code. Article 220 Branch-Circuit, Feeder, and Service Calculations [↑](#footnote-ref-1)
2. **Load Calculation Worksheet review instructions:** The size of the existing service MUST be equal to or larger than the Minimum Required Size of main service breaker. If the existing service panel is **smaller** than the minimum required size of existing electrical services, then **a new upgraded electrical service panel must be installed** in order to handle the added electrical load from the proposed EVCS. [↑](#footnote-ref-2)
3. 2016 California Green Buildings Standards Code. Title 24, Part 11, Section 4.106.4.1 &4.106.4.1.1 *One-and two family dwellings* [↑](#footnote-ref-3)
4. 2013 California Electrical Code. Article 220 Branch-Circuit, Feeder, and Service Calculations [↑](#footnote-ref-4)
5. **Load Calculation Worksheet review instructions:** The size of the existing service MUST be equal to or larger than the Minimum Required Size of main service breaker. If the existing service panel is **smaller** than the minimum required size of existing electrical services, then **a new upgraded electrical service panel must be installed** in order to handle the added electrical load from the proposed EVCS. [↑](#footnote-ref-5)
6. 2016 California Green Buildings Standards Code. Title 24, Part 11, Section 4.106.4.2 *Multi-family dwellings and* Section 5.106.5.3 *Electric Vehicle (EV) Charging* [↑](#footnote-ref-6)
7. 2016 California Building Code. Title 24, Part 2, Chapter 11B *Accessibility to Public Buildings, Public Accommodations, Commercial Buildings and Publicly Funded Housing*, Section 228.3 *Electric Vehicle Chargers* [↑](#footnote-ref-7)