Austin Energy Electric Vehicle Service Equipment (EVSE)
Installation Checklist

General EVSE Installation

☐ All electrical materials, devices, fittings, and associated equipment should be listed

☐ All electrical components have voltage and current ratings necessary for application and installed per manufactured specifications.

☐ All equipment is electrically certified by OSHA such as UL, CSA, ETL listed

☐ Label and ID as stand-alone or interactive power supply

☐ All EVSE equipment should be marked with “FOR USE WITH ELECTRIC VEHICLES”

☐ Ensure the EVSE is securely fastened to the structure

☐ Equipment is protected from physical damage

☐ Dissimilar metals that have galvanic action are isolated

☐ Has an appropriate NEMA rated enclosure (NEC 110.28) based on environmental factors and possible deterioration through water or elements.

☐ Ensure sufficient space exists around electrical equipment for safe operation and maintenance (NEC 110.26)

☐ Building penetrations are sealed and fire resistance is maintained.

☐ Cable management apparatus is used to control and organize cable

☐ Electric vehicle coupler is polarized (unless part of listed EVSE), noninterchangeable, guarded, and prevents unintentional disconnection

☐ Grounding pole in EV coupler is first and last to break connection

☐ Cord length should be less than 25’ in length (NEC 625.17) does not have excessive slack

☐ Height of outlet should have easily accessible disconnect meeting ADA standards section 4.2.5/4.2.6 (48in.)

☐ EV power outlet terminated in a normal NEMA-type receptacle
Bubble cover to prevent contact on outlet

Make sure the outlet is installed with ground pin on top

Circuit over 60A requires lockable safety switch next to EVSE

Ensure that no back feeding is possible through the EV and the EVSE unless permitted by 625.48 (interactive systems)

Interlock is not required for portable cord-and-plug connected EVSE or 125 volt, single phase, 15 and 20 amps rated

Ensure that during strain or possible cable rupture or cable separation from live parts, there is a mechanism in place to automatic de-energization per NEC 625.19

Load Calculation

Load calculations must be done to prevent INSUFFICIENT LOAD SUPPLY

Record the wattage of load calculation

Check if circuit breaker is compatible with existing panel and make upgrades as necessary

Power supply has an ampacity for 8 AWG and larger

Protection

Interconnection at panel requires OCPD sized main panel busbars according to articles 690 and 705

Overcurrent protection for feeders and branch circuits supply EVSE shall be sized for continuous duty and have a rating of higher than 125% of maximum load of the EVSE.

A listed system of protection against personal electric shock is present

Circuit breakers for (a) level 1 requires a single pole breaker or (b) level 2 requires two pole breaker with dedicated circuitry
Conductors

☐ Conductor is sized to 125% of the rated value

☐ Grounding conductor is 6 AWG or sized according to code and continuous or irreversibly spliced

☐ Color code all conductors

☐ Check electrical connection of circuit conductors and equipment grounding conductors

☐ Neutral should be full-size per AE Design Criteria Manual

☐ EVSE should de-energize the cable conductors and electric vehicle connector upon exposure to strain that may lead to cable rupture or exposure of live parts. Not required for portable cord-and-plug connected EVSE for 125V, single-phase, 15 and 20A

Raceways

☐ Individual branch circuit for EVSE should be installed

☐ Branch and feeder should be sized to 125% of rated current

☐ Check all conduit is properly connected (wrench tight), no loose fittings, no cross threadings

☐ Check fished and surface wiring

☐ Size bonding jumpers meets NEC 250.102(C) and 250.66

☐ Securely fasten the conduit at least every 10’ and within 3’ of each outlet box, junction box, device box, cabinet, conduit body or other termination

Service & Disconnects

☐ Check service grounding and bonding

☐ Manual disconnect switch should be mounted in proximity to the metering equipment, as well as other switches per NEC article 690 and connected per NEC article 404.6

☐ Check the service disconnects as appropriate for system
Workmanship

☐ Referred to AE Design Criteria, Interconnect Guide, COA Electrical Code, & NFPA 70 2017 for install

☐ All work was done in a neat and workmanlike manner

☐ All electrical work done by a licensed electrician

☐ System works as intended