EnergIIZE Implementation Manual

Addendum for: *Public School Bus Set-Aside*

THE ENERGY INFRASTRUCTURE INCENTIVES FOR ZERO-EMISSION COMMERCIAL VEHICLES PROJECT (ENERGIIZE) PUBLIC SCHOOL BUS SET-ASIDE

Effective from: February 5, 2024

1/19/2024 Update:

- Updated language in section 6.3 to account for ISO 15118.
- Removed paragraph on wireless charging as that is covered by new language in section 6.3.
- Included appendices in this Public School Bus Set-Aside Implementation Manual Addendum

Summary of Changes – 2023

- General
    - Added HVIP Public School Bus Set-Aside and EnergIIZE Joint Application language.
    - Added Key Terms Section.
    - Removed Federal de minimis rate language from soft costs.
- Costs: Changed per charging equipment cap and soft cost per plug cap to overall project cap.
- Application Process
    - Moving from manual infrastructure application process to online application portal.
    - Added Project Partner language. Eligible public school entities may now work with an Application Partner and/or an Installation Partner.
    - Changed from 5 steps to 4 steps. Some items from step 1 were moved to step 2 and steps 4 and 5 consolidated.
- Requirements
    - Final EnergIIZE terms and conditions will be ready for applicant review at Step 2 in the application process. Sample terms and conditions are available on the website for review now. The next iteration of terms and conditions will serve as a contract with EnergIIZE and the project team. Sample terms and conditions are intended for informational purposes only and do not constitute a legally binding agreement until they are incorporated in an Agreement fully executed by the Parties (CALSTART and Incentive Recipient); and are subject to change.
    - In Equipment eligibility, added ISO 15118-20, applicable UL standard for utility interconnection, and CCS1 connector requirement.
    - For 5-year requirements, specified 5 years after EnergIIZE agreement where needed.
    - Added more information on EnergIIZE Approved Product List (APL).

Contents

1. List of Acronyms

Acronym	Description
AB	Assembly Bill
ADA	Americans with Disability Act
AHJ	Authority Having Jurisdiction
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
BEV	Battery-Electric Vehicle
CaaS	Charging as a Service
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CES 4.0	CalEnviroScreen 4.0
CGA	Compressed Gas Association
CSA	Canadian Standards Association
DCFC	Direct Current Fast Charger
EnergIIZE	Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles
EV	Electric Vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric Vehicle Supply Equipment
EVSP	Electric Vehicle Service Provider
FCEV	Fuel Cell Electric Vehicle
GVWR	Gross Vehicle Weight Rating
HGV	Hydrogen Gas Vehicle
HSP	Hydrogen Safety Plan
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IM	Implementation Manual
IOU	Investor-Owned Utility
IP	Internet Protocol
IPC	Incentive Processing Center
ISO	International Organization for Standardization
kW	Kilowatts
lbs.	Pounds
LIC	Low-Income Community
LOI	Letter of Intent
MD/HD	Medium- and Heavy- Duty
NFPA	National Fire Protection Association

NIST	National Institute of Standards and Technology
NRTL	Nationally Recognized Testing Laboratory
OCPP	Open Charge Point Protocol
OSHA	Occupational Safety and Health Administration
PNNL	Pacific Northwest National Laboratory
PO	Purchase Order
PUC	Public Utilities Code
SAE	Society of Automotive Engineers
SB	Senate Bill
SME	Subject Matter Expert
TLS	Transport Layer Security
V2G	Vehicle to Grid
VGI	Vehicle Grid Integration
ZE	Zero-Emission
ZEV	Zero-Emission Vehicle

2. Key Terms

Adjusted Project Cost

Total project costs adjusted for eligible project expenses and project caps. For example, total project costs minus any non-EnergIIZE reimbursable expenses.

Applicant

The individual, organization, or company who completes and submits all necessary EnergIIZE application forms and is responsible for coordinating all subsequent documentation described in the Implementation Manual (IM) for their infrastructure project. An Applicant may be a commercial fleet or vehicle operator applying on behalf of their organization and is identified by their unique federal tax identification number (tax ID). An Applicant may also be an Application Partner. See further Applicant eligibility criteria in Definition: Public School Bus Set-Aside.

Applicant Team

Composed of the Applicant and the principal parties involved in the project. Members of the Applicant's team must be performing a critical role toward the implementation of the project. This may include an Application Partner, Installation Partner, commercial fleet, vehicle operator, and/or site owner/lessee. The Applicant is considered the prime and primary point of contact for all incentive and project-related communications.

California Environmental Quality Act (CEQA)

Meant to avoid and reduce environmental damage and aid in transparency in public-private decision making. CEQA requires public agencies to "look before they leap" and consider the environmental consequences of their actions. CEQA is intended to inform government decision makers and the public about the potential environmental effects of proposed projects and to prevent avoidable environmental damage. If you are just beginning to learn about CEQA, visit the Governor's Office of Planning and Research's Getting Started page. Users can also see a comprehensive overview of CEQA here.

Commercial Fleet

A group of one or more vehicles utilized by a company for business or organizational objectives.

Community Based Organization (CBO)

A public or private nonprofit organization that is representative of a community or segments of a community.

Disadvantaged Communities (DACs)

California Environmental Protection Agency (CalEPA) formally designates four categories of geographic areas as DACs:

1) Those communities in the 75th to 100th percentile (top 25 percent) of CalEnviroScreen 4.0 (CES 4.0) scores;

2) Census tracts lacking overall scores in CES 4.0 due to data gaps, but receiving the highest 5 percent of CES 4.0 cumulative pollution burden scores;

3) Census tracts identified in the 2017 DAC designation, regardless of their scores in CES 4.0; and

4) Lands under the control of federally recognized Tribes. For purposes of this designation, a Tribe may establish that a particular area of land is under its control even if not represented as such on CalEPA's DAC map and therefore should be considered a DAC by requesting a consultation with the CalEPA Deputy Secretary for Environmental Justice, Tribal Affairs and Border Relations at TribalAffairs@calepa.ca.gov.

For more information, please see https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40 to find out whether a community falls under the definition discussed here and https://webmaps.arb.ca.gov/PriorityPopulations3/ for 2017 DAC designation. In determining whether a project site is within a DAC or low-income community (LIC), EnergIIZE will utilize the site address rather than parcel.

Domiciled (verb)

To reside or be based in a particular location.

Eligible Equipment

Equipment ranging from the customer side make-ready or utility-funded programs to the plug of a vehicle and whose installation directly or indirectly provides the means for recharging of a Class 2B or larger zero-emission vehicle (ZEV) (gross vehicle weight rating (GVWR) of 8,501 pounds (lbs.) and greater) as defined by the U.S. Environmental Protection Agency. For off-road equipment without a GVWR, the vehicle's motor must be at least 19 kilowatts (kW) and if applicable, a lift capacity of at least 8,001 lbs.

In addition, wireless or inductive charging products and pantograph charging products are eligible for EnergIIZE funding. Wireless (inductive) or pantograph charging products must support interoperability and conform to existing or pending standards, such as those published by Society of Automotive Engineers (SAE), International Organization for Standardization (ISO), and other standards bodies, to be listed as eligible for EnergIIZE funding.

An Applicant may not receive double incentives for any single piece of equipment. EnergIIZE staff will validate this requirement through information provided in the application. See EV Charging Equipment Cost Eligibility for specific requirements.

Low-Income Community (LIC)

Residents of census tracts identified as low-income per Assembly Bill (AB) 1550, or a low-income household per AB 1550 (see webmaps.arb.ca.gov/PriorityPopulations).

Priority Communities

Collectively refer to DACs as defined above, or LICs and households with incomes either at or below 80 percent of the statewide median or below a threshold designated as low-income by the Department of Housing and Community Development. Not to be confused with HVIP Applicant Priority Groups.

Project

A new or planned expansion of ZEV infrastructure at a location with an identifiable address where vehicles will be charging with electricity. In the event of the need to install infrastructure at slightly different locations, such as different ends of a shipping or distribution center, this change is still considered one project and maintains all the rights and limitations applicable as defined within this IM.

Project Partners

The terms Vendor, Approved Vendor, and Preferred Vendor have been updated to EnergIIZE Project Partners, Application Partners, and Installation Partners. The roles remain the same.

EnergIIZE maintains a list of partners who can assist in the completion of a ZEV infrastructure incentive application and construction project. EnergIIZE Project Partners fall under two categories: Application Partners and Installation Partners. Application Partners are intended to fulfill more of a project management and advisory role. Installation Partners fulfill more of a contractor's role and perform the physical construction and installation. It is possible for an EnergIIZE Project Partner to be both an Application Partner and an Installation Partner. Detailed definitions for each type of EnergIIZE Project

Partner are provided below:

1) Application Partner – An individual, organization, or company who may apply on behalf of a commercial fleet or site owner and manage the EnergIIZE application process for said client. Application Partners must be vetted by EnergIIZE staff and complete the EnergIIZE Project Partner application (previously called the Approved Vendor/Installer application) which can be found on the EnergIIZE website (www.energiize.org). Vetted Application Partners are not automatically Installation Partners; they must apply to be an Installation Partner, too. Application Partners are not necessarily required to carry a valid Contractors State License Board (CSLB) number, for example, and consultants or project managers could be Application Partners. Application Partners may apply more than once provided the client and site they are applying on behalf of otherwise meets the eligibility requirements listed in Eligibility.

2) Installation Partner – An individual, organization, or company who installs, commissions, or otherwise aids in the completion of a ZEV infrastructure site. Installation Partners may NOT apply on behalf of the public school entity or commercial fleet. Installation Partners must be vetted by EnergIIZE staff and complete the EnergIIZE Project Partner application (previously called the Approved Vendor/Installer application) which can be found on the "Partner" tab of the EnergIIZE website: www.energiize.org). Installation Partners are required to carry a valid CSLB number.

Recipient

The individual, organization, or company selected for an EnergIIZE conditional award to whom incentives shall be dispersed. Unless otherwise noted, the Recipient for EnergIIZE incentives should be the Applicant. By default, the Applicant is the Recipient and primary point of contact for the EnergIIZE project unless stated otherwise. A Recipient may be a commercial fleet, vehicle operator, site owner, site lessee, or authorized representative applying on behalf of their organization and may therefore receive incentives for eligible costs they incur throughout the process of infrastructure completion. A Recipient may also be an EnergIIZE Project Partner provided that they incur eligible project cost(s) and have signed an EnergIIZE agreement. Recipients must provide proper documentation as described below in the application process.

Total Project Cost

Includes all costs associated with building an infrastructure project including but not limited to conduit, wiring, cement, EV supply equipment (EVSE), network equipment and installation costs.

Vehicle to Grid (V2G)

A charging technology that allows energy in an EV battery to be pushed back into the electrical grid. V2G is also commonly referred to as bidirectional charging because of the two-way flow of electrical energy.

3. Introduction and Overview

The Public School Bus Set-Aside for Small and Medium Air Districts (Public School Bus Set-Aside) pairs electric school bus vehicle incentives through the California Air Resources Board's (CARB) Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) with charging infrastructure incentives through the California Energy Commission's (CEC) Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles (EnergIIZE) project. The Set-Aside funding allocation is specifically for public school districts and other qualifying entities located in small- and medium-sized air districts in California.

This document details the infrastructure requirements, while the vehicle and eligible applicant requirements are located in the HVIP Implementation Manual – Appendix G: Public School Bus Set-Aside document. Please see https://californiahvip.org/purchasers/#schoolbus for more information.

Applicants shall complete a phased Public School Bus Set-Aside Joint Application, with Part A consisting primarily of required vehicle information and preliminary EV charging infrastructure questions, and Part B consisting primarily of charging infrastructure required information.

a. In **Joint Application Part A**, eligible Applicants will supply information regarding zero-

emission vehicle (ZEV) **bus** needs. [1]

b. Afterwards, in **Joint Application Part B**, the eligible Applicants will supply information regarding charging **infrastructure** needs.

This process will allow project flexibility, minimize up-front costs, and will assure that high quality infrastructure, site planning, and necessary documentation to assess infrastructure performance are completed in a standardized and accountable way.

4. Definition: Public School Bus Set-Aside

4.1. Public School Bus Set-Aside

If all of the following criteria apply to the public school district or eligible entity, they are eligible for participation during this funding window:

a. Has submitted a vehicle voucher request through the HVIP Public School Bus Set-Aside and EnergIIZE Joint Application Part A, and has completed all required information on the voucher request form concerning the requested electric school bus vehicle voucher.

b. Is included in the CARB HVIP program's list of eligible entities, as specified in the most recent version of the HVIP Implementation Manual – Appendix G: Public School Bus Set-Aside document. Please see https://californiahvip.org/purchasers/#schoolbus for more information.

5. Incentive Structure

The following tables describe the incentive structure for the EnergIIZE Infrastructure portion of the

[1] https://californiahvip.org/purchasers/#schoolbus

Public School Bus Set-Aside including eligible costs and project cap.

Table 1: Incentive Structure

	Public School Bus Set-Aside
Maximum Incentive Offering	100 Percent of Adjustment Project Costs Incurred*
Maximum Project Cap	$275,000

**Adjusted Project Costs are total project costs adjusted for eligible project expenses and project caps. For example, total project costs minus any non-EnergIIZE reimbursable expenses.*

Note that incentives may cover up to but no more than 100 percent of per item costs. The Recipient is awarded an amount up to the applicable maximum incentive offering percentage of total eligible project costs not to exceed the applicable maximum project cap.

5.1. Qualifications to Set-Aside Offerings

- Requests to exceed maximum project cap will be evaluated on a case-by-case basis.
- Finally, requests for EnergIIZE incentives must reflect the amounts and types of equipment needs indicated by the Applicant's vehicle requests and interest in infrastructure as stated in HVIP Public School Bus Set-Aside and EnergIIZE Joint Applications Part A and B. Should equipment offerings be different than were indicated, EnergIIZE team reserves the right to review and perform more analysis on the request.

5.2. Incentive Offerings and Project Caps

The EnergIIZE Public School Bus Set-Aside provides incentives for equipment, extended equipment warranty, network, and charge management software up to described project caps. EnergIIZE funds may be used in conjunction, or stacked, with sources of outside funding such as local or air district

funds, grants, and/or private investments, but they may not be stacked with other CEC funds. Under no circumstances may total incentive, grant, or Applicant/Recipient funds from combined sources exceed total project cost. Incentive contributions must remain separate from other funding sources for purposes of accounting, such that the total cost for an item or piece of equipment is fully assigned to EnergIIZE and/or local match funds, if applicable. Furthermore, dependent upon funding lane, a given project may not receive incentives from EnergIIZE in excess of the maximum project caps described in Table 1. EnergIIZE incentives must be fully redeemed before additional applications are submitted. See Eligibility for more details.

5.3. Milestone Payments

The EnergIIZE Public School Bus Set-Aside provides milestone payments for eligible costs incurred throughout the lifecycle of an infrastructure project. Milestone payments shall not equal more than 50 percent of the Applicant's notice of conditional award.

For example, an Applicant is provided a notice of conditional award for the amount of $275,000 in incentives towards EV equipment and one-time software and network costs. The total dollar amount paid in the form of milestone payments shall not exceed $137,500. Any remaining incentive funds committed for this project shall be paid after the site's completion and receipt of a final paid invoice.

Applicants shall use the milestone payments schedule and request form to detail their anticipated funding needs. This form shall accompany reimbursement requests, in accordance with the project's payment schedule.

6. Eligibility

This section describes the eligibility criteria for participation in EnergIIZE and the types of ZEV infrastructure costs eligible for incentive funding. Unless otherwise stipulated in this IM Addendum, EnergIIZE does not currently provide incentives toward costs outside of those outlined in the following section.

6.1. Eligibility for Participation in EnergIIZE Public School Bus Set-Aside

Participation in the EnergIIZE Public School Bus Set-Aside requires that the Applicant and Recipient

are one of the following:

1) A business, organization, or individual responsible for the operation of a MD/HD ZEV (Class 2B and above) in the State of California who will own and operate infrastructure to support their MD/HD vehicles.[2]

2) A business, organization, or individual responsible for the engineering, construction, procurement, or site in the State of California which shall service MD/HD ZEVs Class 2B or above.[3]

EnergIIZE funds cannot be utilized for a project with another active CEC grant funded project and cannot be combined with other active CEC grant funds. Entities are eligible for incentives for one active project at a time. Active projects are considered anything prior to commissioning.

Site changes are not allowed after submission of the application. If an Applicant wishes to change sites, they will need to submit a separate application during an open application window.

6.2. Requirements for All Infrastructure Equipment

Equipment must meet the following minimum criteria:

1) Must be new equipment installed for the first time. Resale units, rebuilt, rented, received from warranty insurance claims, or new parts installed in existing units are not eligible for incentives. For outdoor ZEV equipment, a rating of NEMA 3R or greater is required.

2) Must, upon installation, include the ability to provide recharging to a MD/HD ZEV.

3) Must have a product warranty that lasts at least the length of the EnergIIZE agreement—five years—from commissioning. This may be an extended warranty or an existing product warranty depending on the service provider.

4) Must be compliant with the most recent revision of National Institute of Standards and Technology (NIST) Handbook 130 and NIST Handbook 44.

[2] For off-road equipment without a GVWR, the vehicle's motor must be at least 19 kW and if applicable, a lift capacity of at least 8,001 lbs.
[3] For off-road equipment without a GVWR, the vehicle's motor must be at least 19 kW and if applicable, a lift capacity of at least 8,001 lbs.

6.3. Requirements for EV Charging Equipment

EV charger selection plays a crucial role in aligning a ZEV infrastructure deployment project with success. For EV chargers using conductive connectors, only Level 2 and direct current (DC) chargers are eligible for EnergIIZE funding. Innovative technologies such as inductive charging systems and bidirectional chargers are also permitted.

All EnergIIZE funded EV chargers must meet certain safety and technical requirements. EV chargers meeting these requirements may be found on the EnergIIZE Approved Product List (APL), Electric Power Research Institute (EPRI) Vetted Product List (VPL), and Southern California Edison (SCE) APL. EV chargers funded through EnergIIZE must meet the following technical requirements and cost eligibility requirements described in section 6.4:

6.3.1. **Must be safety certified** by a Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration (OSHA). OSHA's complete list of NRTLs can be found at https://www.osha.gov/nationally-recognized-testing-laboratory-program .

6.3.2. **Must include a standard charging connector or interface:**

6.3.2.1. Publicly facing EV chargers, including chargers funded through the EV Public Charging Station Funding Lane, shall include at minimum a Society of Automotive Engineers (SAE) J1772/CCS1 connector. Additional connectors are permitted.

6.3.2.2. EV chargers shall utilize charging connectors and charging interfaces that are compatible for use with MDHD vehicles sold by multiple original automotive equipment manufacturers for widespread use across California and North America. Such interfaces shall include SAE J1772/CCS1 and SAE J3105. Ability to receive remote software updates, real-time protocol translation, encryption, and decryption:

6.3.2.3. Should the Applicant want to utilize a non-compliant interface, this must be part of a dual port EV charger where one connector of the dual output shall be a compliant interface. Compliant interfaces shall include SAE J1772/CCS1 and

SAE J3105.

6.3.3. **Must be certified for Open Charge Point Protocol (OCPP) compliance.** All EV chargers must conform to OCPP 1.6 or newer. Beginning January 1, 2024, EV chargers must be certified for OCPP 1.6 or newer with Core/Subset and Security Certificates.[7,8] Beginning January 1, 2025, EV chargers must be certified for OCPP 2.0.1 or newer with Core/Subset and Security Certificates. These certification requirements apply to the EV charger model and do not restrict the network software used in practice.

6.3.4. **Must be International Organization for Standardization (ISO) 15118 ready.** All EV chargers with a SAE J1772/CCS1 or SAE J3400/NACS connector must be ISO 15118 ready. ISO 15118 ready chargers are equipped with onboard hardware that enable high-level communication with the vehicle using ISO 15118. An ISO 15118 ready charger is capable of, at minimum, all the following:

1. powerline carrier based communications as specified in ISO 15118-3;
2. secure management and storage of keys and certificates;
3. Transport Layer Security (TLS) version 1.2, with additional support for TLS 1.3 or subsequent versions recommended to prepare for ISO 15118-20;
4. receiving remote updates to activate or enable ISO 15118 use cases;
5. connecting to a backend network; and
6. selecting the appropriate communication protocol requested by the vehicle.

6.3.5. **Other Requirements**

a) Bidirectional EV chargers must be ISO 15118-20 ready. An ISO 15118-20 ready charger includes all the capabilities of an ISO 15118 ready charger (defined above), and additionally supports TLS 1.3 and receiving remote updates to activate or enable ISO 15118-20 use cases.

b) EV charger pricing must be reasonable and reflect current market rates.

c) EV chargers and parking facilities must include proper regulatory signs.

i. Please visit the Federal Highway Administration's website for more information: https://mutcd.fhwa.dot.gov/resources/policy/rsevcpfmemo/.

ii. In addition, please see the California Department of Transportation guidance on signage for EVs: https://dot.ca.gov/programs/safety-programs/ev-signs.

iii. See California Building Codes, section 11B-812.1 for Americans with Disabilities Act (ADA) requirements and public access.

6.4. EV Charging Equipment Cost Eligibility

EV infrastructure projects must include deployment of chargers for MD/HD Battery Electric Vehicles (BEVs) and may include funding for electrical panels, conduit, and wiring at the facility level as eligible for incentives. EV infrastructure projects may also include upgrades to customer-side distribution infrastructure, including meters and transformers, as incentive-eligible equipment to support deployment of MD/HD BEVs.

In order to be eligible for EnergIIZE incentives, EV equipment must be on the EnergIIZE Approved Product List (APL).[4] The APL is updated periodically and contains equipment meeting industry standards. EnergIIZE staff will make reasonable efforts to ensure an up-to-date listing of eligible equipment is available to all Applicants interested in deploying MD/HD EV charging infrastructure. If a piece of EV charging equipment is listed on an approved equipment list of one of the three investor-owned utilities (IOUs) in California (i.e., Southern California Edison, Pacific Gas & Electric, San Diego Gas & Electric), then it is considered eligible unless specifically indicated otherwise in this IM Addendum.

Size and type of charger selected for a private fleet or shared site shall take into consideration the duty cycle of the fleet vehicle(s), the vehicle on-board charger (if available), and the EV charger output rating (kW). The Applicant shall take reasonable efforts to define the business case for a

[4] www.energiize.org/infrastructure

particular charger and ensure that there is optimal match between fleet needs and charger characteristics, which could include consulting with their utility or electrical professionals. Project efficiency should be taken into consideration when creating equipment manifest (see Section 8.3 Step 2: Provide Supporting Documents) lists.

Costs incurred for the following EV infrastructure equipment are eligible for incentives:

- EVSE, including AC, DC that is not FC, inductive charging systems, pantograph charging systems, and DCFCs.
- Equipment capable of V2G bidirectional charging.
- Transformers.
- One-time network costs: Networked or "SMART" EVSE are required. EnergIIZE provides incentives for the required initial network costs. Incentives for these eligible costs shall only be paid once, after site commissioning, and with the final invoices. Monthly service fees are not eligible for incentives through EnergIIZE.
- Existing or extended equipment product warranty.
- Switchgear, meter mains, and circuit breaker panels.
- Utility service upgrades and stub-outs for future EVSE.
- Sales tax related to the purchase of infrastructure equipment.

6.5. Soft Costs Eligible for EnergIIZE Incentives

Costs associated with constructing an infrastructure site that do not go directly toward the purchase of equipment are considered soft costs. The soft costs eligible for incentives through EnergIIZE are limited to the following categories:

- Labor costs related to construction paid at prevailing wage.

- Architectural, design, or legal fees for infrastructure planning.

Eligible soft costs will be paid on a cost reimbursement basis for costs deemed necessary and reasonable and supported by invoices and relevant supporting documentation. Labor rates must be in compliance with applicable regulation, including but not limited to prevailing wage. The project caps remain the same. Permitting fees are not eligible soft costs.

Supporting documentation requirements:

- Recipient's personnel costs: Each staff position billed will be in accordance with the staff positions listed in the project budget with each employee charged to the project listed individually to include name, title, number of hours worked, and hourly rate. Labor hours billed will be supported by time records, and documentation must be submitted to verify hourly labor rates.

- All other direct costs, to include subcontractor and capital costs, shall be itemized on the invoice and supported by relevant documentation such as a vendor invoice, receipt, or other pertinent third-party provided documentation verifying amounts billed.

7. Infrastructure Vendor/Installer Eligibility

This section describes the requirements for eligibility of a business, organization, contractor, or individual that installs, inspects, commissions, constructs, designs, or otherwise provides aid, assistance, guidance, and/or consulting toward the completed installation of ZEV infrastructure equipment and services.

An Applicant may utilize the EnergIIZE Project Partner Network to help them submit applications and to install infrastructure. An Applicant need not select a vetted EnergIIZE Project Partner to submit their application or perform installation work onsite; the EnergIIZE Project Partner Network is intended to be a helpful resource but is not required. EnergIIZE Project Partners fall under two categories: Application Partner and Installation Partner. Please see Key Terms for detailed definitions of each term, and see www.energiize.org/partners for information on vendors, vendor requirements, and how to become an EnergIIZE Project Partner.

7.1. Requirements for All Vendors/Installers

1) Must conform to the **most recent version** of the following:
    a. California Code of Regulations (CCR) Title 4: Business Regulations, Division 9 Measurement Standards, Chapter 1 Tolerances and Specifications for Commercial Weighing and Measuring Devices, Article 1 National Uniformity, Exceptions and Additions, Sections 4001 and 4002. Additional Requirement, Subsection 4002.9, Hydrogen Gas-Measuring Devices (3.39).
    b. CCR Title 4: Business Regulations, Division 9 Measurement Standards, Chapter 6 Automotive Products Specifications, Article 8 Specifications for Hydrogen Used in Internal Combustion Engines and Fuel Cells, Sections 4180 and 4181.
    c. CCR Title 24: California Building Code, Part 2, Volume I, Chapter 11B, Accessibility to Public Buildings, Public Accommodations, Commercial Buildings and Public Housing.
    d. NFPA 70, electric code, and any other relevant codes or standards imposed by the Planning Department having jurisdiction.
    e. California Health and Safety Code Section 25510(a).
2) Must meet prevailing wage requirements. Projects that receive an award of public funds from CEC are likely to be considered public works under the California Labor Code. See Chapter 1 of Part 7 of Division 2 of the California Labor Code, commencing with Section 1720 and Title 8, CCR, Chapter 8, Subchapter 3, commencing with Section 16000.
3) Must comply with all applicable laws, ordinances, regulations, and standards; all federal, state, and local electrical and building codes for construction; and all ADA codes.
4) Must have secured all required state, local, county, and city permits to build and install eligible infrastructure.
5) Must ensure that pricing for services involved in the completion of infrastructure is reasonable and reflects current market rates.

7.2. Requirements for All Vendors/Installers of EV Infrastructure

1) Must comply with California Public Utilities Code (PUC) section 740.20[5] requiring all EV charging infrastructure and equipment located on the customer side of the electrical meter be installed by a contractor with the appropriate license classification, as determined by CSLB, and at least one member of the crew onsite, at any given time, who holds an Electric Vehicle Infrastructure Training Program (EVITP)[6] certification. Projects that include installation of a charging port supplying 25 kW or more to a vehicle must have at least 25 percent of the total electricians working on the crew for the project, at any given time, who hold EVITP certification. One member of each crew may be both the contractor and an EVITP certified electrician. The requirements stated in this paragraph do not apply to any of the following:

    a. EV charging infrastructure installed by employees of an electrical corporation or local publicly owned electric utility.

    b. EV charging infrastructure funded by moneys derived from credits generated from the Low Carbon Fuel Standard Program[7] (Sub article 7 (commencing with Section 95480) of Article 4 of Subchapter 10 of Chapter 1 of Division 3 of Title 17 of CCR).

8. EnergIIZE Public School Bus Set-Aside Application

This section describes the application process for the Public School Bus Set-Aside, detailing the infrastructure portion. The HVIP Public School Bus Set-Aside and EnergIIZE Joint Application process and the documents required at each step are necessary.

EnergIIZE staff recommend Applicants and other stakeholders involved in the infrastructure planning, development, or construction process engage with the Infrastructure Readiness Center,[8] which can be

[5] For more information, please see https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB841.
[6] For more information, please see https://evitp.org/training/.
[7] For more information, please see https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about.
[8] View the Infrastructure Readiness Center at www.energiize.org/resources.

found through the EnergIIZE website, as well as a brief resource on site planning, installing, and commissioning in Appendix C – Sample Preliminary Site Plan for EV Infrastructure.

Interested parties will find information about the application and participation in this incentive project on the EnergIIZE website.[9] The Incentive Processing Center (IPC) application portal link will be posted on the website when a funding lane is open. The following description includes required documentation for a complete application and timelines for document submission, reservation of funds, and milestone payments.

8.1. Step 1: Submit Application

The following section outlines requirements for initial EnergIIZE funding consideration. An Applicant must first submit Public School Bus Set-Aside Joint Application Part A by visiting https://californiahvip.org/purchasers/#schoolbus **prior** to submitting Joint Application Part B. Incentive offerings may be determined by an Applicant prior to submitting an application by visiting the EnergIIZE website or by using the resources in this document.

EnergIIZE accepts Joint Application Part B through the IPC, an online portal. Please follow instructions on the application instruction sheets for details on how to upload materials. Applicants are required to supply basic project information, and relevant fleet and project partner contact information.

Note that site changes are not allowed after submission of the application. If an Applicant wishes to change sites, they will need to submit a separate application during an open application window.

The Applicant is required to provide the following application materials:

1) Public School Bus Set-Aside Joint Application Part B – Applicants are required to supply basic project information and relevant fleet and project partner contact information.
2) Sample EnergIIZE Terms and Conditions (see www.energiize.org) – In Step 1, it is the Applicant's responsibility to read and understand the sample EnergIIZE Sample Terms and Conditions. If selected for award, the recipient must sign an EnergIIZE agreement to move to Step 2. Please note, sample Terms and Conditions are intended for informational purposes

[9] View the EnergIIZE website at https://energiize.org/.

only and do not constitute a legally binding agreement until they are incorporated in an agreement fully executed by the parties (CALSTART and Recipient); and are subject to change.

3) Confirmation of request for service from the local utility, notice that project site is being assessed for energy load capacity, or notice that Applicant is coordinating with utility. Copy of request for new service from the local utility (e.g., email correspondence with the utility) must contain the ticketed request for new service. This may also entail communications with your utility asking for new service. Proof of participation in available utility programs for make-ready funding for projects in IOU territories where such programs currently exist will also satisfy this requirement. Proof of participation in these programs may include but not be limited to the customer agreement form signed by the site operator. Participation in such programs is not a prerequisite for participation in EnergIIZE.

8.1.1. Contingency List

In case there are opportunities to fund projects in addition to initially awarded funds, the EnergIIZE team will hold completed applications in a contingency list. Should funds become available, the highest Priority Group Applicants from the contingency list will be eligible to receive incentive funding. Applicants who have not submitted all application requirements will not be included on a contingency list and will be considered disqualified.

8.1.2. Conditional Awards

Eligible Applicants will be selected for conditional award based on their Priority Group and availability of funding. Applicants selected for a conditional award, now Recipients, will receive a conditional award letter and will be moved to Step 2 upon execution of an agreement with CALSTART. **The execution of this agreement can be seen as confirmation of reserved funding for a Recipient's infrastructure project.**

The date of this agreement (effective date) serves as the beginning of the project with EnergIIZE and the Recipient. No costs incurred before the effective date of the agreement are eligible for reimbursement. Costs incurred between the effective date of the agreement and when a Recipient becomes eligible to submit for reimbursement is at the Recipient's own risk. Once a

Recipient has signed the agreement and satisfied the conditions of award through Step 3, that Recipient becomes eligible to submit for milestone payment reimbursement (see Step 3 requirements below).

After conditional awards have been granted, Recipients may submit a request for extension. Requests for extensions will be evaluated on a case-by-case basis and may be granted for extenuating circumstances. Extension requests not demonstrating due diligence on behalf of the Recipient may be denied. EnergIIZE Staff has the right to restrict extension requests to no more than 60 calendar days total per awarded project.

If the above requirements have been met, then funds shall be reserved across all Applicant categories consistent with incentive structure outlined in this IM.

8.2. Step 2: Provide Supporting Documents

Once Applicants have been provided with their notice of conditional award, now Recipients, they will have 90 calendar days to provide the following information.

No equipment changes are allowed after Step 2. In addition, awards are based on requested number of vehicles in Joint Application Part A. Any costs incurred as a result of swapping equipment after the EnergIIZE agreement effective date shall be borne by the Recipient.

1) Signed EnergIIZE agreement – In Step 1, it is the Applicant's responsibility to read and understand the sample EnergIIZE terms and conditions. A signed copy of the agreement, including terms and conditions, is required to enter Step 2 (if the Applicant is awarded).
2) Site verification form (Appendix B – EnergIIZE Site Verification Form) – Applicants who intend to install infrastructure on land which they **own** need to fill out the site verification form and provide proof of ownership in attachment. For Applicants who intend to install infrastructure on land which they **do not own**, the site verification form is also required to verify authorization of installation work by the property owner. If new or upgraded equipment is provided by the utility, then proof of easement may be required. Multiple types of easements may be accepted. Please contact the EnergIIZE team (infrastructure@calstart.org) with any questions.

a. If the Applicant Team is unable to obtain a property owner signature on the site verification form at the time of application submittal, then written letter of intent (LOI) demonstrating intent to sign a lease for at least five years and certifying that the installation work is authorized by the property owner and the Applicant may satisfy Step 1. However, the site verification form must be executed by the property owner and submitted to EnergIIZE staff before incentives may be provided in Step 3. If an Applicant believes that they will not be able to submit a site verification form with property owner signature in Step 1, they should contact EnergIIZE staff (infrastructure@calstart.org) as soon as possible to explain the situation, and EnergIIZE staff will advise if an LOI will work for their particular case.

b. Applicants who intend to install infrastructure on land which they are leasing may also submit a copy of their lease, if it explicitly grants them the right to install recharging infrastructure for the specific property site in the incentive application, and a summary indicating where in the lease these rights are granted in lieu of a property owner signature on the site verification form. Applicants are encouraged to communicate with EnergIIZE staff if they plan to submit using this documentation.

3) Site equipment manifest – A list of anticipated one-time hardware, network, and software costs to be incentivized through EnergIIZE funding. Details should include at least manufacturer, make, model, and manufacturer's suggested retail price.

4) Cost share – A list disclosing all public funding sources awarded, external funding, self-contributions, and utility make-ready funding, if applicable, as well as supporting documentation.

5) Confirmation from the local utility that the project site is adequately prepared to receive the necessary energy for the planned infrastructure installation.

6) Preliminary site plans - An example of preliminary site plans can be found in Appendix C – Sample Preliminary Site Plan for EV Infrastructure.

7) Proof of license, insurance, and EVITP certification of the general contractor and/or

subcontractor selected for the project. Insurance must be valid for at least 30 calendar days from the date of document submission. Please include any information about subcontractor(s) used that may meet minority business enterprise, disadvantaged business enterprise, and/or small business designations.

8) Copy of PO for EVSE.

9) Milestone payment schedule and request form to illustrate payment needs and to serve as the reimbursement request form for eligible expenses.

8.3. Step 3: Permitting and Construction

In Step 3, once a project secures all the necessary permits and has satisfied planning department requirements (including ensuring compliance with CEQA and other applicable federal, local, and California state laws, see Key Terms for additional resources), the Recipient may begin construction and must submit the following:

1) Copy of the building permit.

2) Project plan and scope of work including construction timeline.

3) Final site plans – These should include any changes made to the preliminary site plans. Load calculations, panel schedules, necessary utility upgrades, and final selection hardware are expected in the final site plans.

4) Milestone payment schedule and request form and copies of paid invoices showing eligible costs incurred (if requesting milestone payment). Invoice must show serial numbers for all equipment and must be itemized.

Once the project receives a building permit, Recipients may be eligible for milestone payment(s) for costs incurred. Milestone payments shall not equal more than 50 percent of the Recipient's notice of conditional award. Note that costs incurred before the EnergIIZE agreement effective date are not eligible for reimbursement.

8.4. Step 4: Commission Project

Once a project's construction is complete and proof of power at the site has been confirmed, site commissioning should commence. Recipients must provide the following documentation as proof of commissioning to receive any remaining incentives for which they may be eligible and close out

their project:

1) Copy of the signed inspections sheet and closed building permit.
2) Copy of third-party network provider communications contract with 4G cell phone activation and IP registration completed is required only for EV charging.
3) Verification that chargers are in working order.
4) Photo of serial number for all serialized equipment installed on the project site. Serial number must match that on project invoices.
5) Photographic evidence of the site. Photos must be provided of all EVSE and incentivized equipment installed, including, as applicable, switchgear and meter mains, transformers, compressors and pumps, and any applicable markings, signs, and placards with path of travel. Proper signage may include but is not limited to:
    a. State of CA: Caltrans EV signage requirements: https://dot.ca.gov/programs/safety-programs/ev-signs.
    b. CA Building Codes: 11B-228.3 for ADA requirements.
    c. Code of Federal Regulations, Part 309 - Labeling requirements for EVs: https://www.ecfr.gov/current/title-16/chapter-I/subchapter-C/part-309.
    d. Federal Highway Regulations for signage of EVs: https://mutcd.fhwa.dot.gov/resources/policy/rsevcpfmemo/.
6) Milestone payment schedule and request form and copies of paid invoices.

Once all applicable requirements in Step 4 are complete, the project will be fully operational, and a Recipient's project is deemed complete. When a site is fully commissioned and complete, final payment may be requested.

While EnergIIZE staff will consider delays on a case-by-case basis, Recipients must coordinate with EnergIIZE staff for those projects whose deployment timeline (i.e., time from EnergIIZE agreement effective date to final commissioning) exceeds 24 months.

9. Duties and Responsibilities

9.1. EnergIIZE Recipient Responsibilities

1) Must comply with all local, state, and federal safety, permitting, zoning, and other guidelines.
2) Must maintain insurance as required by law. If the installed and commissioned infrastructure is damaged, destroyed, or otherwise becomes permanently inoperable due to accident or negligence by the Recipient or any other party, the Recipient must notify EnergIIZE staff.
3) Must submit reports and respond to surveys put forth bi-annually by EnergIIZE staff for a period of three years from the date of final commissioning.
4) Must report project delays in a timely manner to EnergIIZE staff. Failure to do so may place the Applicant at risk of delayed or cancelled incentive payment(s).
5) Must be available for follow-up inspection if requested by EnergIIZE staff, CEC, or CEC's designee.
6) Must ensure EV equipment shall be maintained and operated for a period of no less than five years from the date of final commissioning.
7) Must disclose all sources of public funding used in combination with EnergIIZE funds.

9.2. EnergIIZE Vendor/Installer Responsibilities

1) Must have reviewed the EnergIIZE requirements for participation and have participated in any training offered by EnergIIZE staff.[10]
2) Must abide by any federal, state, and local laws and regulations applicable to their infrastructure project.
3) Must provide accurate and complete documentation of all eligible ZE infrastructure equipment, and other documents where requested.

[10] See www.energiize.org/partners for information on vendors, vendor requirements, and how to become an EnergIIZE Project Partner.

4) Must complete the required forms and applications as stipulated in the application process portion of this document in the event said vendor is the Applicant.

5) Must ensure the project has complied with all AB 841 (2020) requirements or provide notice to EnergIIZE staff for why the AB 841 requirements do not apply to the project.

6) Must submit EVITP certification numbers of each EVITP-certified electrician that installed EV charging infrastructure or equipment. EVITP certification numbers are not required to be submitted if AB 841 requirements do not apply to the project.

9.3. Data Collection Requirements

9.3.1. Background

Reporting frequency and duration: Each project must provide a minimum of 36 months of data collection on deployed infrastructure equipment, however it is strongly encouraged that Recipients report for five or more years. Data shall be reported quarterly, beginning at the date of final infrastructure commissioning.

Data quality and accessibility requirements: Recipients together with site operators and infrastructure vendors shall pursue automated approaches to reporting data for accuracy of reporting and streamlined processing for all parties involved. Data should be retained and made accessible to EnergIIZE staff for the duration of the project requirements listed here (i.e., 36 months).

In addition to the foregoing requirements for EV charging equipment manufacturers and suppliers of charging equipment, EnergIIZE staff further advises both Applicants and Recipients prepare for compliance with forthcoming legislation on uptime (i.e., AB 2061) which shall impact any charging equipment installed after January 1, 2024.

1) **Units of measurement for reporting**: Reporting shall occur in the units requested by EnergIIZE staff. Where units of measurement are not specified or where information is qualitative, Recipients shall determine the best units in which to report information.

2) **Associated identifier data**: Certain data requirements necessitate associated data like timestamps, site identifiers, port identifiers, and equipment identifiers. Each of these values must be provided along with the data for each piece of equipment, work, or other item/task

within the project toward which EnergIIZE incentives have been used; and in such a way that each required metric is reported on for each unique piece of equipment, down to the lowest level of granularity.

3) **Data collection:** The following metrics may be requested for each charging station on the equipment manifest. Explanations with guidance for collection are provided after the data field.

   a. Port/session/site identifier data:

      i. Port ID: A unique identifier corresponding to the ports of the equipment, active during a charging session (i.e., is not reassigned to another port). Wherever data specific to a port is required, a port ID must be reported.

      ii. Session ID: A unique ID corresponding to the charging session.

      iii. Site ID: A unique ID corresponding to the charging site.

   b. Charging events per 24-hour period (where possible):

      i. Number of charging sessions.

      ii. Charging session duration(s).

      iii. Amount dispensed per session (in kWh).

      iv. Average charger station utilization (planned to actual).

   c. Peak power delivered: Peak power in kW delivered.

   d. Peak energy delivered: Peak energy in kWh delivered.

   e. Total kWh of consumed over time, reported quarterly.

   f. Responses to qualitative questions via Applicant experience survey responses on items including:

      i. Challenges or barriers experienced with charging equipment.

      ii. Whether distributed energy resources have been used.

      iii. Whether renewable energy was used.

      iv. Methods used for managing charging and grid impacts.

v. Any cost-saving measures used.

vi. Methods for collecting usage data.

vii. Methods for managing charging and grid impacts (resiliency methods).

viii. Charging schedule (time of day and duration).

ix. Location type of equipment (e.g., street, parking lot, warehouse facility, intermodal facility, public charging facility, rest stop, transit depot, etc.).

x. Equipment complaints received by manufacturer.

g. Vocation and vehicle or equipment type utilizing equipment.

h. Cost of charging (electricity utility tariff, EVSP service contract, public charging price) in $/kWh.

i. Levelized cost of energy: Reported in dollars per kWh.

j. Number, type, date of installation, and location of chargers installed.

k. Nameplate capacity of installed equipment, in kW for chargers per day.

Appendix A – Site Planning, Installing, and Commissioning

The planning process for deploying zero-emission vehicle (ZEV) infrastructure involves collaboration across several stakeholders including utilities, general contractors, and state government staff. When engaging with these stakeholders, it is important to understand the various stages your project may go through before any construction is performed. In addition, please see the Resources section of the Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles Project (EnergIIZE) website: https://energiize.org/resources.

Project Management may include:

1) Electric vehicle supply equipment (EVSE) specifications review.
2) Preparation and approval of site plans.
3) Preparation of construction drawings and documents.
4) Permit application.
5) Project schedule review and approval.
6) Installation contractor's approval.
7) Maintenance and inspection plan review and approval.
8) EVSE testing and approval.
9) Payment system set-up and field testing.
10) Signage plan review and approval.
11) Installation and commissioning.

Installation may include:

12) Obtaining city permit.
13) Hiring installation subcontractors.
14) Site preparation including concrete cutting and trenching.
15) Running the electrical and communication conduit.

16) Concrete pouring.

17) Forming and pouring of reinforced concrete foundations for the sites.

18) Pre-installation inspection of cement.

19) Electric service upgrades including circuit breakers panels and safety disconnect and transformers.

20) Negotiation with utility over power provision.

21) Installation of ZEV infrastructure equipment (e.g., EVSE, hydrogen compressor, etc.).

22) Signage, placards, labels, markings, and striping as required by Authorities Having Jurisdiction.

23) Lighting per local codes.

24) Final inspection and approval.

25) Network commissioning.

26) Final testing with a ZEV.

Final commissioning may include:

27) Check and validate radio frequency identification cards.

28) Check the internet communication between a charging station and the central server.

29) Turn on, charge/refuel, and test a battery-electric vehicle or fuel cell electric vehicle (FCEV).

30) Check the app (where applicable); validate the sign-up and login as a new customer.

31) Validate all EVSE and direct current fast chargers are functioning per original equipment manufacturer's specifications.

32) Test the remote system control and monitoring system.

33) Test the charging/refueling session and display of state of charge on a test EV or display of hydrogen fuel level on a test FCEV.

Appendix B – EnergIIZE Site Verification Form

This form establishes that the installation work is authorized by the owner of the real property (Property Owner). The purpose of this form is to establish that the program Applicant is able and authorized to make alterations and/or improvements necessary for infrastructure to be constructed and commissioned. Please contact Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles Project (EnergIIZE) staff if you are unable to obtain the proper signature(s) for this site verification form, for any reason.

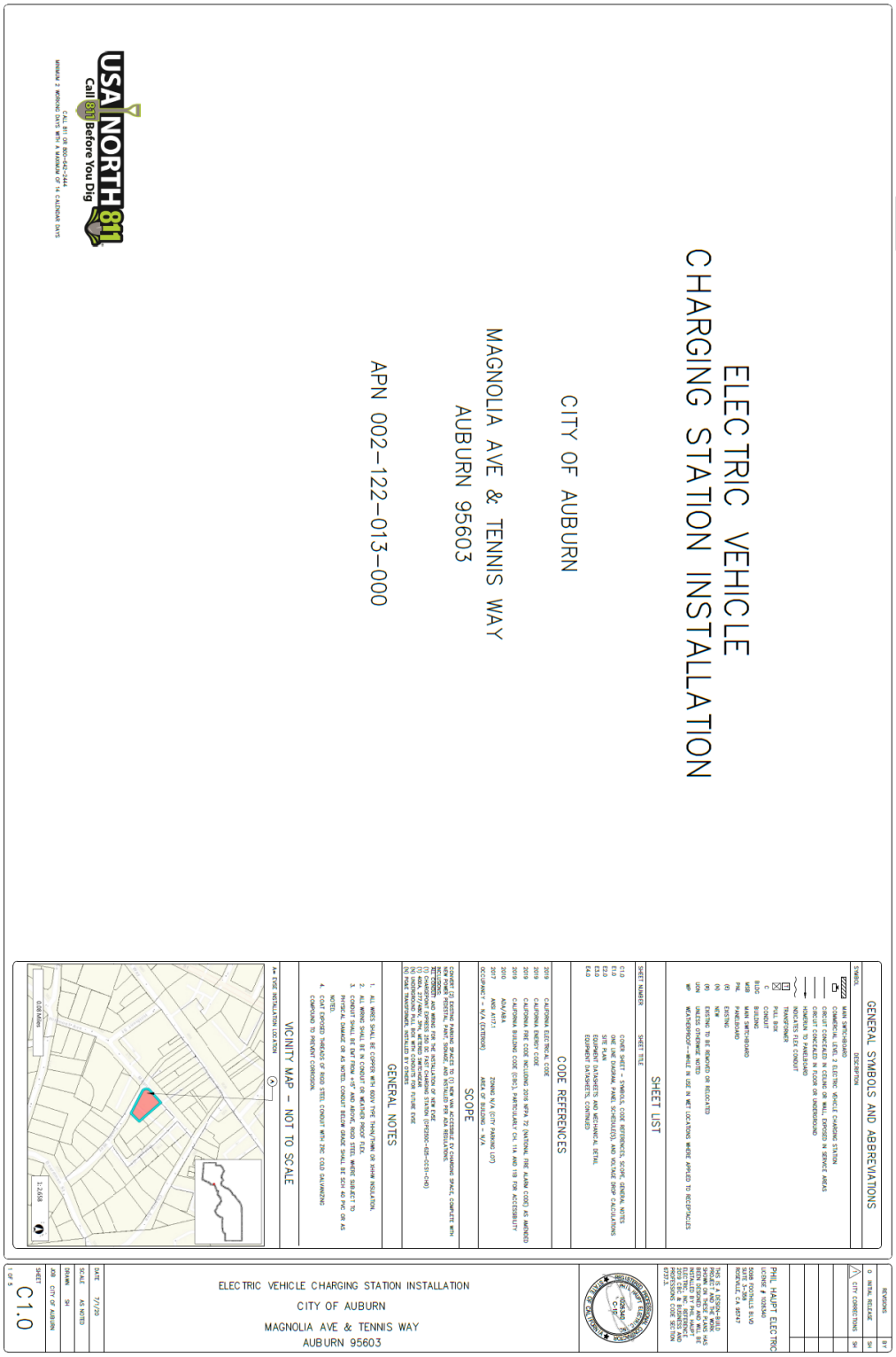
Please note: This form is required by all Applicants. Where Applicants are the Property Owners, they must attach proof ownership to this form. Applicants who are not the Property Owners may provide additional documentation in attachment to this form in lieu of Property Owner's signature only as outlined in Section 8.2 Step 2: Provide Supporting Documents.

EnergIIZE Applicant. Please complete as follows:	
Organization Name:	Enter Applicant/Org. Name
Installation Site Address:	Enter Address
City: Enter City State: Enter State Zip Code:Enter Zip Code	
Applicant hereby represents and warrants to EnergIIZE staff: (i) that all the foregoing information is true and correct; and (ii) that the undersigned has been duly authorized by Applicant to execute and submit this site verification form. Applicant acknowledges and agrees that EnergIIZE staff is relying on Applicant's foregoing certifications in reviewing and approving of Applicant's application.	
Signature of Authorized Applicant or Representative of Applicant:	
Print Name: Print Name	Title: Click or tap here to enter text.
Date:	Click or tap to enter a date.

PROPERTY OWNER. Please complete as follows:	
Provide the name of the company, city, trust, organization or individual that owns the property where the project site will be located ("Owner').	
Property Owner Name:	Print Name
The undersigned, on behalf of Click or tap here to enter text. ("Owner"), hereby represents and warrants to EnergIIZE staff (i) that Owner is the property Owner located at Click or tap here to enter text. ("Property") where infrastructure will be installed; (ii) that Owner has consented to EnergIIZE Applicant/Applicant Team member's installation of certain EV charging station equipment and/or hydrogen fuel cell refueling equipment at the property; and (iii) that the undersigned has been duly authorized to execute and submit this site verification form to EnergIIZE staff. Owner acknowledges and agrees that EnergIIZE staff is relying on Owner's foregoing certifications in reviewing and approving of Applicant's application.	
Signature of Property Owner or Representative of Property Owner:	
Print Name: Print Name	Title: Click or tap here to enter text.
Date: Click or tap to enter a date.	

After completion of this form, please await review from the EnergIIZE team and be prepared to provide additional information if necessary. EnergIIZE staff reserve the right to require that Applicant and Property Owner provide such further information as may be required to review and approve an Applicant's application.

Appendix C – Sample Preliminary Site Plan for EV Infrastructure



ELECTRIC VEHICLE
CHARGING STATION INSTALLATION

CITY OF AUBURN

MAGNOLIA AVE & TENNIS WAY
AUBURN 95603

APN 002-122-013-000

USA NORTH 811 Call 811 Before You Dig
CALL 811 OR 800-642-2444
MINIMUM 2 WORKING DAYS WITH A MAXIMUM OF 14 CALENDAR DAYS

GENERAL SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
MSB	MAIN SWITCHBOARD
	COMMERCIAL LEVEL 2 ELECTRIC VEHICLE CHARGING STATION
	CIRCUIT CONCEALED IN CEILING OR WALL, EXPOSED IN SERVICE AREAS
	CIRCUIT CONCEALED IN FLOOR OR UNDERGROUND
	HOMERUN TO PANELBOARD
	INDICATES FLEX CONDUIT
T	TRANSFORMER
PB	PULL BOX
BLDG	BUILDING
MSB	MAIN SWITCHBOARD
PNL	PANELBOARD
(E)	EXISTING
(N)	NEW
(R)	EXISTING TO BE REMOVED OR RELOCATED
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF—WHILE IN USE IN WET LOCATIONS WHERE APPLIED TO RECEPTACLES

SHEET LIST

SHEET NUMBER	SHEET TITLE
C1.0	COVER SHEET – SYMBOLS, CODE REFERENCES, SCOPE, GENERAL NOTES
E1.0	ONE LINE DIAGRAM, PANEL SCHEDULE(S), AND VOLTAGE DROP CALCULATIONS
E2.0	EQUIPMENT DATASHEETS AND MECHANICAL DETAIL
E4.0	EQUIPMENT DATASHEETS, CONTINUED

CODE REFERENCES

2019	CALIFORNIA ELECTRICAL CODE
2019	CALIFORNIA ENERGY CODE
2019	CALIFORNIA FIRE CODE INCLUDING 2018 NFPA 72 (NATIONAL FIRE ALARM CODE) AS AMENDED
2019	CALIFORNIA BUILDING CODE (CBC); PARTICULARLY CH. 11A AND 11B FOR ACCESSIBILITY
2010	ADA/ABA

SCOPE

SCOPE OF WORK:	CONVERSION OF EXISTING PARKING SPACE(S) TO NEW ADA ACCESSIBLE EV CHARGING SPACE. COMPLETE WITH ACCESSORIES.
	(1) NEW EV CHARGING STATION AND WIRING FOR THE INSTALLATION OF NEW EVSE
	(1) CHARGEPOINT EXPRESS 250 DC FAST CHARGING STATION (DF250K-CCS1-CHD)
	(N) CONCRETE PAD FOR EVSE
	(N) UNDERGROUND PULL BOX WITH CONDUITS FOR
	(N) 75kVA TRANSFORMER, INSTALLED BY OWNER
OCCUPANCY:	M/A (OUTDOOR)
AREA OF BUILDING:	N/A
ZONING:	N/A (OUTDOOR PARKING LOT)

GENERAL NOTES

1. ALL WIRES SHALL BE COPPER WITH 600V TYPE THHN/THWN OR XHHW INSULATION.
2. ALL WIRING SHALL BE IN CONDUIT OR WEATHER PROOF FLEX.
3. CONDUIT SHALL BE EMT FROM 4'-0" AND ABOVE; RIGID STEEL WHERE SUBJECT TO PHYSICAL DAMAGE OR AS NOTED. CONDUIT BELOW GRADE SHALL BE SCH 40 PVC OR AS NOTED.
4. COAT EXPOSED THREADS OF RIGID STEEL CONDUIT WITH ZRC COLD GALVANIZING COMPOUND TO PREVENT CORROSION.

VICINITY MAP – NOT TO SCALE

EVSE INSTALLATION LOCATION

REVISIONS

#	REVISIONS	BY
0	INITIAL RELEASE	SH
1	CITY CORRECTIONS	SH

PHIL HAUPT ELECTRIC
LICENSE # 928540
8000 FOOTHILLS BLVD
SUITE 300
ROSEVILLE, CA 95747
(916) 784-4465

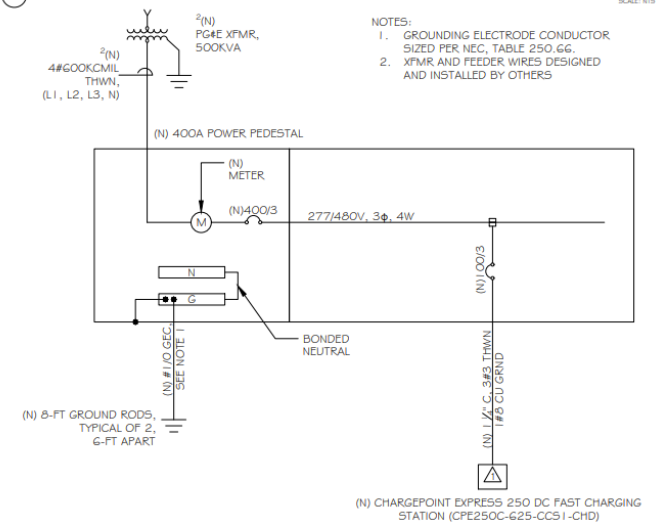
PROJECT AND THE WORK DESIGNED AND WILL BE EXECUTED IN ACCORDANCE WITH THE CALIFORNIA ELECTRIC CODE REFERENCE PUBLICATION NFPA 70 2017 EDITION, CALIFORNIA CODE SECTION 6737.1

ELECTRIC VEHICLE CHARGING STATION INSTALLATION
CITY OF AUBURN
MAGNOLIA AVE & TENNIS WAY
AUBURN 95603

DATE 7/7/20
SCALE AS NOTED
DRAWN SH
JOB CITY OF AUBURN
SHEET C1.0
1 OF 5

1 ONE LINE

SCALE: NTS



2 VOLTAGE DROP CALCULATION

SCALE: NTS

VOLTAGE DROP WORKSHEET [SUPPLEMENT TO FORM NRCC-ELC-01-E (REFERENCE DOCUMENT #1)]

VD = I x L x (CIRCUIT FACTOR*) x OHMS/KLF / 1000 x # CONDUCTORS/PHASE *CIRCUIT FACTOR = 1.73(3P) AND 2 (1P)

CIRCUIT	KVA	VOLTS	PHASE	AMPS	1-WAY CIRCUIT LENGTH (FEET)	WIRE SIZE	COND/ PHASE	A/C OHMS/ KLF	VOLTS DROP	%V.D.	% ALLOWED
EV #1	62500	480	3	75.2	10	#3	1	0.24	0.31	0.07	5

3 PANEL SCHEDULE

SCALE: NTS

PANEL 'EV' DESCRIPTION: POWER PEDESTAL — AIC RATING: 10,000A — MOUNTING: GROUND-MOUNT — ENCLOSURE: NEMA-3R — SUPPLY FROM: UTILITY

SERVICE: 277/480V, 3PH, 4W + G — SUPPLY FROM: SERVICE UTILITY — MAINS: 400A BUS

POLE	LOAD DESCRIPTION	*	CB	CONNECTED-VA	PH	CONNECTED-VA	CB	*	LOAD DESCRIPTION	POLE
1					A	20,833				2
3					B	20,833	100/3	C	EV CHARGER 1	4
5					C	20,833				6
7					A					8
9					B					10
11					C					12
13					A					14
15					B					16
17					C					18

PHASE TOTALS

PHASE	VA	AMPS
A-N	20,833.3	75.2
B-N	20,833.3	75.2
C-N	20,833.3	75.2

LOAD SUMMARY (VA @ 208V)

	CONNECTED	DESIGN FACTOR	DESIGN (VA)	DESIGN (AMPS)
NON-CONTINUOUS LOADS	-	100%	-	-
CONTINUOUS LOADS	62,500	125%	78,125	94
OTHER	-	100%	-	-
TOTAL	62,500		**78,125**	**94**

*C=CONTINUOUS LOAD (>3 HRS PER NEC 100), M = MOTOR, N = NON-CONTINUOUS, P = SUBPANEL, R = RECEPTACLE

REVISIONS	BY
0 INITIAL RELEASE	SH
CITY CORRECTIONS	SH

PHIL HAUPT ELECTRIC
LICENSE # 1026340
5098 FOOTHILLS BLVD
SUITE 3-358
ROSEVILLE, CA 95747

THIS IS A DESIGN-BUILD PROJECT AND THE WORK SHOWN ON THESE PLANS HAS BEEN DESIGNED AND WILL BE INSTALLED BY PHIL HAUPT ELECTRIC, INC. REFERENCE 2019 CBC & BUSINESS AND PROFESSIONS CODE SECTION 6737.3.

PHIL HAUPT ELECTRIC CORPORATION — 1026340 — C-10 — STATE OF CALIFORNIA

ELECTRIC VEHICLE CHARGING STATION INSTALLATION
CITY OF AUBURN
MAGNOLIA AVE & TENNIS WAY
AUBURN 95603

DATE 7/1/20
SCALE AS NOTED
DRAWN SH
JOB CITY OF AUBURN
SHEET E1.0
2 OF 5

1 FULL SITE PLAN

Scale: 0.005372

D SHEET

ADA NOTES:

A. INSTALLATION COMPLIES WITH THE 2019 CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY REQUIREMENTS, PARTICULARLY CHAPTER 11B SECTIONS 228.2 AND 812.

B. PROVIDE NEW ADA ACCESS AISLE. THE WORDS "NO PARKING" TO BE PAINTED ON THE SURFACE WITHIN THE ACCESS AISLE IN CONTRASTING LETTERS 12" IN HEIGHT. STRIPING TO BE PAINTED IN WHITE 4" THICK AND A MAXIMUM OF 36" O.C., PER CBC 11B-812.7.2. VEHICLE SPACES AND ACCESS AISLES SERVING THEM SHALL COMPLY WITH SECTION 11B-302. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE SPACE THEY SERVE. CHANGES IN LEVEL, SLOPES EXCEEDING 1:48, AND DETECTABLE WARNINGS SHALL NOT BE PERMITTED IN VEHICLE SPACES AND ACCESS AISLES, PER 11B-812.3.

C. "EV CHARGING ONLY" LETTERING ON PARKING SPACES TO BE PAINTED IN WHITE 12 INCHES IN HEIGHT.

D. 30" X 48" MINIMUM CLEAR GROUND SPACE, PER CBC 11B-305.3.

E. PER CBC 11B-812.5.4, VEHICLE SPACES AND ACCESS AISLES SHALL BE DESIGNED SO THAT PERSONS USING THEM ARE NOT REQUIRED TO TRAVEL BEHIND VEHICLE SPACES OR PARKING SPACES OTHER THAN THE VEHICLE SPACE IN WHICH THEIR VEHICLE HAS BEEN LEFT TO CHARGE.

F. PER CBC 11B-309.4, "GAS PUMP" NOZZLES AND ELECTRIC VEHICLE CONNECTORS SHALL NOT BE REQUIRED TO PROVIDE OPERABLE PARTS THAT HAVE AN ACTIVATING FORCE OF 5 POUNDS (22.2 N) MAXIMUM. REACH RANGES SHALL COMPLY WITH FORWARD REACH AND SIDE REACH REQUIREMENTS, PER 11B-308".

G. WHERE EV SPACES AND ACCESS AISLES ARE MARKED WITH LINES, MEASUREMENTS SHALL BE MADE FROM THE CENTERLINE OF THE MARKINGS, PER CBC 11B-812.1.

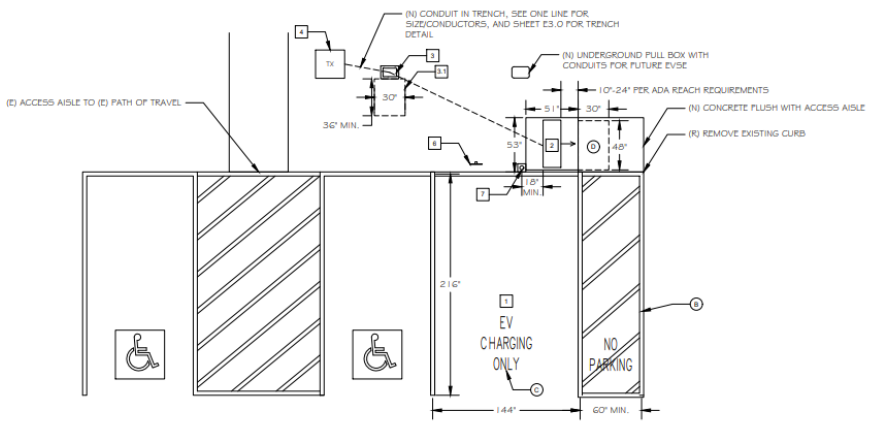
H. VEHICLE SPACES, ACCESS AISLES SERVING THEM, AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98 INCHES MINIMUM. WHERE PROVIDED, OVERHEAD CABLE MANAGEMENT SYSTEMS SHALL NOT OBSTRUCT REQUIRED VERTICAL CLEARANCE. CBC 11B-812.4

INSTALLATION NOTES:

1. CONVERT TWO EXISTING PARKING SPACES TO NEW VAN ACCESSIBLE EVCS SPACE, COMPLETE WITH ACCESS AISLE AND SIGNAGE. REFER TO DETAIL 1 FOR DIMENSIONS. REFER TO 2019 CALIFORNIA BUILDING CODE (CBC) CHAPTER 11B SECTIONS 228.3 AND 812 FOR ACCESSIBILITY REQUIREMENTS.
2. (N) CHARGEPOINT EXPRESS 250 DC FAST CHARGING STATION (CPE250C-625-CCS1-CHD) ON (N) 51" X 51" CONCRETE PAD, 2" MAX. ABOVE TOP OF GRADE.
3. (N) POWER PEDESTAL ON (N) CONCRETE PAD. SEE PAD DETAIL ON SHEET E3.0 AND SPECIFICATIONS ON SHEET E4.0.
   3.1. POWER PEDESTAL WORKING CLEARANCE OF 36" MINIMUM REQUIRED IN FRONT, PER NEC 110.26.
4. (N) PG&E TRANSFORMER, INSTALLED BY OTHERS.
5. CONTRACTOR TO PROVIDE TRENCHING OR DIRECTIONAL BORING AS APPROPRIATE FOR NEW UNDERGROUND CONDUITS TO POWER PEDESTAL. CONTRACTOR TO FIELD ROUTE ON SITE, PATH SHOWN ON DRAWING FOR DEMONSTRATION OF CONCEPT. CONTRACTOR SHALL PERFORM UTILITY LOCATE SERVICE PRIOR TO COMMENCEMENT OF WORK. CALL 811 BEFORE DIGGING.
6. PROVIDE POLE MOUNTED EV AND VAN ACCESSIBLE SIGNAGE. REFER TO SHEET E3.0 FOR SIGNAGE REQUIREMENTS.
7. (N) 4"Ø STEEL BOLLARD IN CONCRETE FOR MECHANICAL PROTECTION.

2 NEW EV PARKING SPACE LAYOUT

Scale: 1/4" = 1'-0"



REVISIONS	BY
0 INITIAL RELEASE	SH
1 CITY CORRECTIONS	SH

PHIL HAUPT ELECTRIC
LICENSE # 1026340
5088 FOOTHILLS BLVD
SUITE 3-358
ROSEVILLE, CA 95747

THIS IS A DESIGN-BUILD PROJECT AND THE WORK SHOWN ON THESE PLANS HAS BEEN DESIGNED AND WILL BE INSTALLED BY PHIL HAUPT ELECTRIC, INC., REFERENCE 2019 CBC & BUSINESS AND PROFESSIONS CODE SECTION 6737.3.

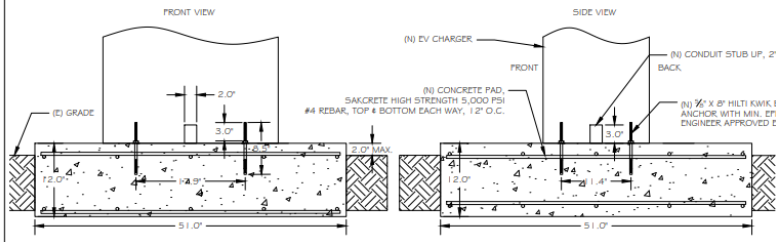
REGISTERED PROFESSIONAL ENGINEER PHIL HAUPT ELECTRIC 1026340 C-10 STATE OF CALIFORNIA

ELECTRIC VEHICLE CHARGING STATION INSTALLATION
CITY OF AUBURN
MAGNOLIA AVE & TENNIS WAY
AUBURN 95603

DATE	7/1/20
SCALE	AS NOTED
DRAWN	SH
JOB	CITY OF AUBURN
SHEET	E2.0
	3 OF 5

1 EV CHARGER ANCHOR DETAIL

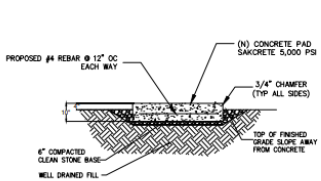
Scale: NTS



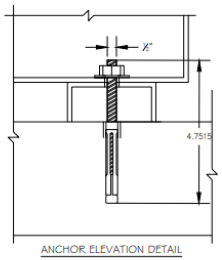
NOTE:
1. EV CHARGING STATION WEIGHT: 551 LBS
2. USE CONCRETE MOUNTING TEMPLATE INCLUDED WITH EVCS FOR ANCHOR BOLTS.
3. THE SERVICE CLEARANCE OF OPEN SPACE (NOT NECESSARILY AT SYSTEM GRADE) EXTENDS A MINIMUM OF 24" BEYOND THE STATION IN FRONT, 50" TOTAL FRONT TO BACK, 84.8" SIDE TO SIDE CENTERED ON THE STATION, AND 12" ABOVE THE STATION.

2 POWER PEDESTAL CONCRETE ANCHOR DETAIL

Scale: NTS



PAD SIDE VIEW
(SEE SITE PLAN FOR AERIAL DIMENSIONS)

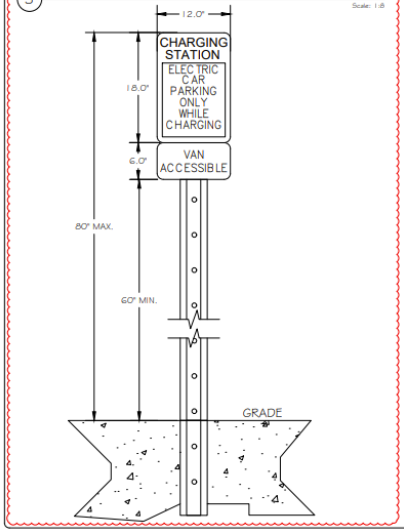


ANCHOR ELEVATION DETAIL

NOTES:
1. SEE SITE PLAN FOR CONCRETE PAD DIMENSIONS.
2. SEE RESPECTIVE TRANSFORMER AND/OR SWITCHGEAR ASSEMBLY DRAWINGS FOR MOUNTING HOLE LOCATIONS.
3. ½" Ø HILTI KWIK BOLT TZ SS 304/316 MECHANICAL ANCHOR WITH MIN. EFFECTIVE EMBEDMENT OF 3 ¼", OR ENGINEER APPROVED EQUAL (ESR #1917)

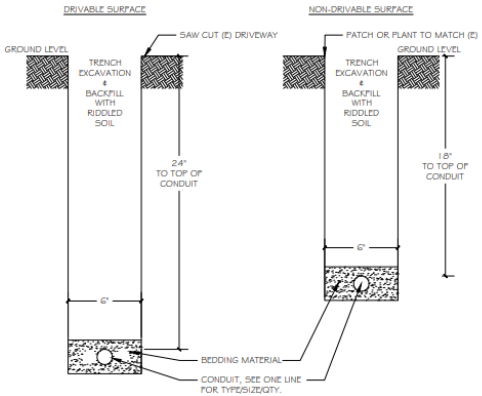
3 SIGNAGE FOR VAN ACCESSIBLE EVCS PARKING SPACE

Scale: 1:8



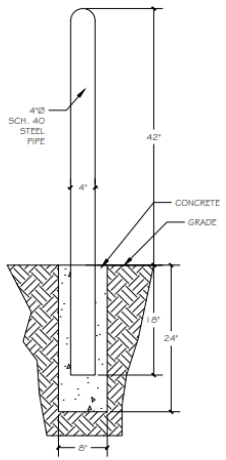
4 TRENCH DETAIL

Scale: NTS



5 BOLLARD DETAIL

Scale: NTS

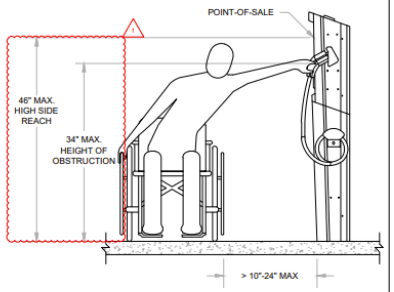


6 ADA REACH REQUIREMENTS

Scale: NTS

NOTE:

OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST, FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM PER CBC 11B-309.4.



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1 CITY CORRECTIONS	SH

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PHIL HAUPT ELECTRIC CONTRACTOR 1026340 C-10 STATE OF CALIFORNIA

ELECTRIC VEHICLE CHARGING STATION INSTALLATION
CITY OF AUBURN
MAGNOLIA AVE & TENNIS WAY
AUBURN 95603

DATE 7/1/20
SCALE AS NOTED
DRAWN SH
JOB CITY OF AUBURN
SHEET E3.0
4 OF 5

Appendix D – Privacy Policy

Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles Project (EnergIIZE) Privacy Policy

Updated September 15, 2022

In accordance with the Information Practices Act (Civ. Code § 1798 et seq.), this privacy policy states how your personal information may be used and who may have access to your information. By submitting your Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles Project (EnergIIZE) application, you consent to EnergIIZE staff collecting any personal information submitted in your EnergIIZE application forms. This information may include your social security number if you are a sole proprietor and do not have an Employee Identification Number (EIN). EnergIIZE would prefer Applicants use EIN numbers on application forms to minimize our collection of sensitive information, however, an Applicant will not be disqualified in the event a sole proprietor does not have an EIN number. Secure file transfer links will be provided for all application materials.

By submitting your application, you consent to being contacted by CALSTART or Tetra Tech as the administrators of EnergIIZE. These essential communications may include updates on the status of your application or requests for follow-up information needed in order to process your application. EnergIIZE staff may also notify you about future zero-emission vehicle (ZEV) or ZEV infrastructure funding opportunities. You may also be contacted by the California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) about ZEV funding opportunities. You will have the opportunity to opt out of any notifications about future opportunities.

All information on application forms is required in order to process incentive applications. The information provided on your application will be used only for the purposes of processing your incentive application and is considered confidential if marked as such. Project address and basic information may be shared on maps to demonstrate the results of this project. No personal details will be included in any such maps. Any personal information will not be disclosed, made available, or otherwise used for purposes other than those specified, except with the consent of the subject of the information, or as authorized by law or by a court. It is essential the EnergIIZE team collect this information in order to process your incentive application. Your information will be housed in a secure cloud storage system accessible only by EnergIIZE staff. You have the right to access this information at any time; such requests can be made by contacting the EnergIIZE team at Infrastructure@calstart.org, or in writing to

the address below.

CALSTART Contact information:

EnergIIZE Project Manager
Southern California Office (headquarters)
48 S Chester Ave
Pasadena, CA 91106
1 (877) 367-4493

Appendix E – Authority Having Jurisdiction (AHJ) Checklist

(Replace with City or County logo)

CITY OR COUNTY OF _____
RESIDENTIAL AND NON-RESIDENTIAL CHECKLIST FOR PERMITTING ELECTRIC VEHICLES AND ELECTRIC VEHICLE SERVICE EQUIPMENT (EVSE)

Please complete the following information related to permitting and installation of Electric Vehicle Service Equipment (EVSE) as a supplement to the application for a building permit. This checklist contains the technical aspects of EVSE installations and is intended to help expedite permitting and use for electric vehicle charging.

Upon this checklist being deemed complete, a permit shall be issued to the applicant. However, if it is determined that the installation might have a specific adverse impact on public health or safety, additional verification will be required before a permit can be issued.

Job Address: Permit No.

☐ Single-Family ☐ Multi-Family (Apartment) ☐ Multi-Family (Condominium)

☐ Commercial (Single Business) ☐ Commercial (Multi-Businesses)

☐ Mixed-Use ☐ Public Right-of-Way

Location and Number of EVSE to be Installed:

Garage _____ Parking Level(s) _____ Parking Lot _____ Street Curb _____

Description of Work:

Applicant Name:

Applicant Phone & email:

Contractor Name: License Number & Type:

Contractor Phone & email:

Owner Name:

Owner Phone & email:

EVSE Charging Level: ☐ Level 1 (120V) ☐ Level 2 (240V) ☐ Level 3 (480V)

Maximum Rating (Nameplate) of EV Service Equipment = _____ kW

Voltage EVSE = _____ V Manufacturer of EVSE: _____

Mounting of EVSE: ☐ Wall Mount ☐ Pole Pedestal Mount ☐ Other _____

System Voltage:

☐ 120/240V, 1ϕ, 3W ☐ 120/208V, 3ϕ, 4W ☐ 120/240V, 3ϕ, 4W

☐ 277/480V, 3ϕ, 4W ☐ Other _____

Rating of Existing Main Electrical Service Equipment = _____ Amperes

Rating of Panel Supplying EVSE (if not directly from Main Service) = _____ Amps

Rating of Circuit for EVSE: _____ Amps / _____ Poles

AIC Rating of EVSE Circuit Breaker (if not Single Family, 400A) = _____ A.I.C.
(or verify with Inspector in field)

Specify Either Connected, Calculated or Documented Demand Load of Existing Panel:

- Connected Load of Existing Panel Supplying EVSE = _____ Amps
- Calculated Load of Existing Panel Supplying EVSE = _____ Amps
- Demand Load of Existing Panel or Service Supplying EVSE = _____ Amps
  (Provide Demand Load Reading from Electric Utility)

Total Load (Existing plus EVSE Load) = _____ Amps

For Single Family Dwellings, if Existing Load is not known by any of the above methods, then the Calculated Load may be estimated using the "Single-Family Residential Permitting Application Example" in the Governor's Office of Planning and Research "Zero Emission Vehicles in California: Community Readiness Guidebook" https://www.opr.ca.gov

EVSE Rating _____ Amps x 1.25 = _____ Amps = Minimum Ampacity of EVSE Conductor = # _____ AWG

For Single-Family: Size of Existing Service Conductors = # _____ AWG or kcmil

- or - : Size of Existing Feeder Conductor Supplying EVSE Panel = # _____ AWG or kcmil

(or Verify with Inspector in field)

I hereby acknowledge that the information presented is a true and correct representation of existing conditions at the job site and that any causes for concern as to life-safety verifications may require further substantiation of information.

Signature of Permit Applicant: _____ Date: _____