

Charging Evaluation Report

EXAMPLE



ABC EXAMPLE APARTMENTS

PROJECT #123456789

1/1/2023

PREPARED FOR ABC Apartments

PREPARED BY CLEAResult

WITH SUPPORT FROM Peninsula Clean Energy

Introduction

Peninsula Clean Energy is San Mateo County's not-for-profit, community led electricity provider. Peninsula Clean Energy's mission is to reduce greenhouse gas emissions by expanding access to sustainable and affordable energy solutions. As part of this mission, Peninsula Clean Energy provides a robust set of community programs to support clean transportation and buildings, as well as renewable generation and storage. This site evaluation is provided as part of the Electric Vehicle (EV) Ready program which provides incentives and technical assistance for accelerated deployment of EV charging, facilitating adoption of EVs which save money and reduce pollution. CLEAResult is Peninsula Clean Energy's partner for site technical assistance.

Overview

The purpose of this document is to define the charging solutions for ABC Apartments. After selection of a preferred solution, the document can also be used to obtain bids for installation from qualified contractors.

There are three sections of the document:

1. **Project Information:** This section provides details about the existing site conditions that informed the solutions
2. **Charging Solution:** This defines the solution scope with the number of chargers by type and location
3. **Bid Request:** A template to be used by Contractors to submit bids for installation of ABC Apartments' chosen solution

Charging Solution Summary

The ABC Apartments site is a good candidate for new EV parking spaces. After conducting a site walk and electrical capacity estimate, we have determined that the technical feasibility of installing new EV parking spaces is good and have identified the following three charging solutions:

Solution #1: This solution is exactly what you asked for.

- Install 12 qty Level 1 Outlets.

Solution #2: This solution maximizes the port quantity based on the available capacity of the existing house panels.

- Install 30 qty Level 1 Outlets.

Solution #3: This solution maximizes the quantity of ports and available incentives and prepares you best for the future.

- Install 40 qty Level 1 Outlets.

Resources

You can review estimates of this solution's installation cost and incentives available to your project on the EV Program Portal at <http://pceev.clearesult.com/>

You can also find these resources to help you as you proceed to installation.

- Peninsula Clean Energy EV Ready Incentive Program:
<https://www.peninsulacleanenergy.com/ev-ready-incentives/>
- Available Level 2 Charging Stations:
https://calevip.org/sites/default/files/docs/calevip/CALeVIP_Eligible_Equipment.pdf

Remember, your Program Advisor is also available to assist you with the review of bids, incentive application, and troubleshooting any issues that arise during installation.

Terms

The following defined terms are used in this document:

Activation Date – The date that the chargers are fully available to provide EV charging for the intended users.

Accessible – A space or equipment conforming to the requirements of the Americans with Disabilities Act (ADA).

DCFC – A direct current fast charger provides rapid charging, typically delivering a full charge in less than one hour.

Electricity Cost – Estimated electricity usage cost based on the site's \$/kWh rate.

Electricity Demand Charges – Estimated electricity demand charge based on the site's peak demand rate.

EV – An electric vehicle (EV) uses electric motors for propulsion. The two types of electric vehicles are Battery Electric Vehicles (BEV) and Plug-in Hybrid Electric Vehicles (PHEV).

EVSE – Electric Vehicle Supply Equipment, also referred to as an EV charger, safely delivers power to charge the battery of an electric vehicle.

EVSE Network Fees – Estimated annual cost paid to an EVSE network provider for managing charger access, transactions, usage, data collection, and other agreed upon services.

Level 1 (L1) Outlet – Level 1 outlets offer charging through a 120V AC circuit, providing about 50 - 60 miles of range over a 12-hour overnight charge. EV drivers bring their own charging cord.

Level 2 (L2) Outlet – Level 2 outlets offer charging through a 208 – 240V AC circuit, providing about 12 - 24 miles of range per hour. EV drivers bring their own charging cord.

L2 EVSE or L2 Charging Port – Level 2 EVSE are charging stations that offer charging on a 208V - 240V AC circuit, providing about 12-24 miles of range per hour. EV drivers plug the charger's cord into their vehicle.

Make Ready – Future-proofing projects that build, construct, and install the electrical infrastructure, including transformers, panels, wire, conduit, breakers, required for an additional L2 charging station port in the future, but do not install the charging station port at this time.

Power Management – A device or software that allows more EVSE to operate within a site's electrical capacity by reducing the power output of the EVSE when multiple EVSE are in use. The EV Ready Program typically uses one of the two following approaches to Power Management:

1. Circuit Sharing: Allowing 3 or more EV charging ports to share a single branch circuit without exceeding the rated load capacity of the circuit using control through the use of an ALMS.
2. Panel Sharing: Allowing 3 or more EV charging ports on independent branch circuits to share a single electrical panel without exceeding the rated load capacity of the panel using control through the use of an ALMS.

1. Project Information

General Information

The following general information applies to all solutions.

Site Contact	John Smith ABC Apartments John.Smith@abcapartments.com (111) 222-3333
Program Advisor	Michael Marking CLEARResult
Site Address	123 Apartment Dr. San Mateo, CA
Site Type	Multi-Family Apartments
Intended Charging Use	The chargers will be used by residents
Target Activation Date	Q4 2023

Site Evaluation

The site evaluation included the following steps:

- Discussion with ABC Apartments started on 1/1/2023 to identify objectives for the project
- Remote data collection and review, including:
 - a. Information submitted by ABC Apartments in the program application
 - b. Aerial/satellite imagery from Google Earth
 - c. Annual energy and demand data from Peninsula Clean Energy
 - d. Local distribution system electrical infrastructure published by PG&E
- An in-person assessment by CLEARResult staff that gathered the following additional detail:
 - a. Electrical panel location, capacity and utilization
 - b. Candidate charging locations and surface conditions
 - c. Distance measurements
- “As Built” architectural drawings were available
- An available capacity estimate was completed by a CLEARResult Engineer

Site Overview

ABC Apartments is a multi-family apartment building constructed in 1962. It is owned and managed by ABC Associates LLC and its primary interest for installing electric vehicle charging is to meet the current and future demand for EV charging stations. There are 39 residential units in this building.

Parking Layout

The parking area consists of the following numbers of parking categories and spaces.

Type	Non-EVSE	L1	L2	DCFC
Standard	58	0	0	0
Van ADA	0	0	0	0
Standard ADA	0	0	0	0

EV Charging Projection

Electric vehicles currently make up approximately 6% of private vehicles in San Mateo County. Projections suggest electric vehicles will exceed 15% by 2025 and 30% by 2030.

The recommended Solutions are designed to prepare ABC Apartments for its likeliest daily charging needs through 2025 and beyond.

Electrical Infrastructure

The following is a simple description of the site electrical infrastructure most relevant to the EV charging project.

Utility Service

ABC Apartments' main service is 800A, 3-Phase, 4-Wire 208Y/120V. The power enters from a dedicated transformer (T-1234) located on a pad mounted and has an unknown kVA capacity.

Main Disconnect

The Main Disconnect is located at the North corner of building. The 3-Phase, 4-Wire 208Y/120V panel has 800A (amps) rating and was installed in 1962. The make/model of the panel is SquareD. There is a peak draw of 171A on this panel and therefore there is an estimated available capacity of 629A, assuming the transformer and feeder is rated to provide the rated service amperage. The contractor shall confirm the available capacity on the service.

Figure 1: Main Disconnect



Figure 2: Main Disconnect Nameplate



House Panel East

The House Panel East is located in the East Laundry Room on the second floor. The 3-Phase, 4-Wire 208Y/120V panel has an assumed 200A rating and was installed in 1962. The manufacturer is SquareD. There is an assumed 150A limiting amps based on conduit size (2"), and assumed downrating of conductors (maximum size 4/0, 230A nominal, 184A downrated). This is a relatively conservative estimate, but the conductor sizes feeding the panel and the panel rating is unknown. The House Panel East has as peak draw of 29A and therefore has an estimated available capacity of 121A.

Figure 3: House Panel East



House Panel West

The House Panel West is located in the West Laundry Room on the second floor. The 3-Phase, 4-Wire 208Y/120V panel has an assumed 200A rating and was installed in 1962. The manufacturer is SquareD. There is an assumed 150A limiting amps based on conduit size (2"), and assumed downrating of conductors (maximum size 4/0, 230A nominal, 184A downrated). This is a relatively conservative estimate, but the conductor sizes feeding the panel and the panel rating is unknown. The House Panel West has as peak draw of 33A and therefore has an estimated available capacity of 117A.

Figure 4: House Panel West



2. Charging Solution

Solution #1

Solution #1 is designed to meet ABC Apartments' initial request for 12 qty Smart Level 1 Outlets. We highly recommend, however, that ABC Apartments choose one of the additional solutions that meets the site's future EV charging needs while simultaneously providing superior project cost performance.

The East and West House service meters are on 2nd floor, with subpanels on 1st and 2nd floor. The existing house panels on the 1st floor lack physical and electrical capacity to support adding circuits. This solution proposes installing a dedicated EV panel on each side of the property on the 1st floor that is tied back to the existing "distribution panel" at each meter. The proposed EV subpanel and feeder conductor should be oversized to allow for future expansion.

Chargers

The following quantities of charging are included.

Type	Quantity	Installation Specifications
Smart Level 1 Outlets	12 Level 1 Outlets	<ul style="list-style-type: none"> • 12 qty 120V, 20A Smart Level 1 Outlets

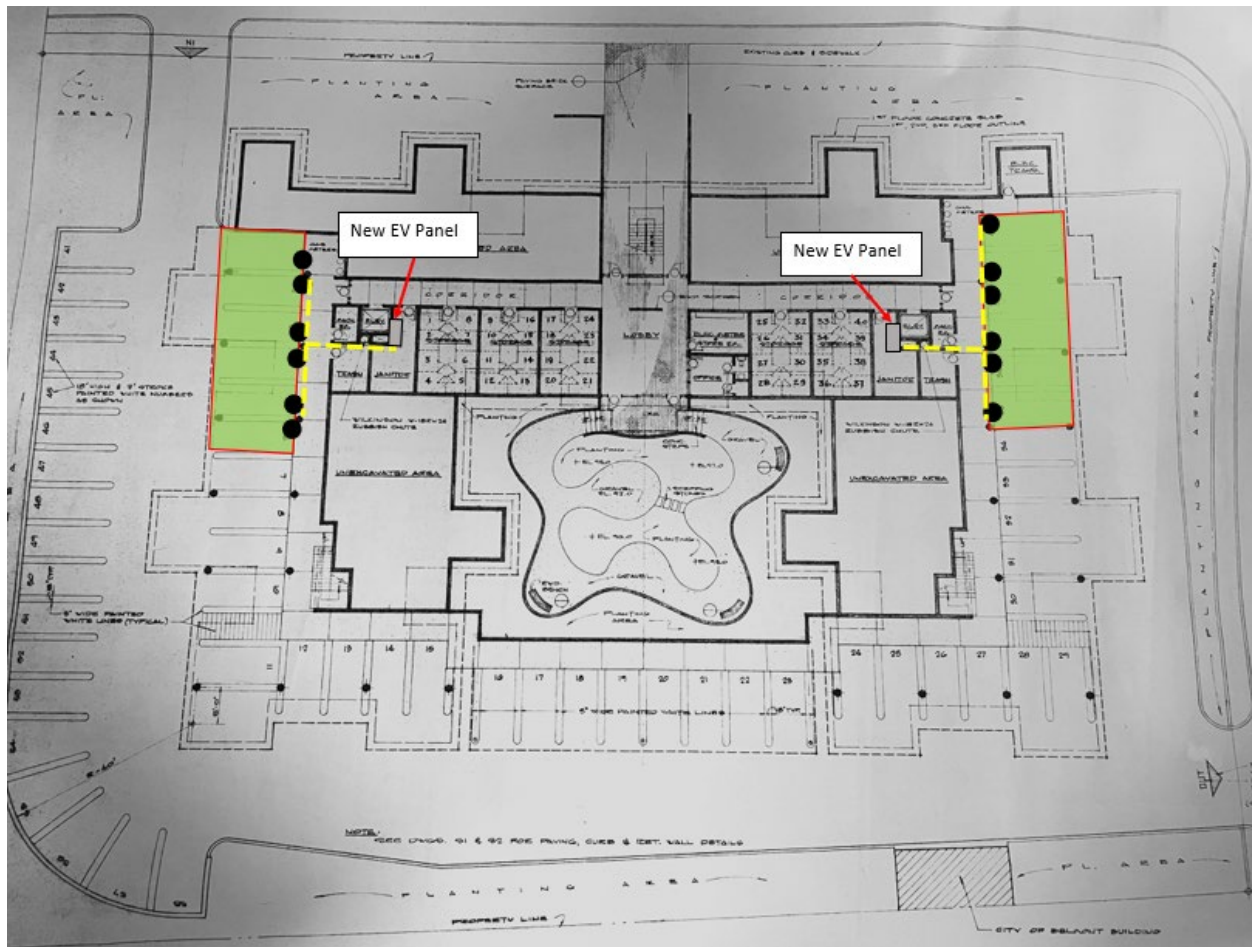
Installation Requirements

1. Requires use of existing service
 - a. Selected contractor shall confirm with utility
2. Requires installation of 2 new 100A EVSE Subpanels (Subpanel EVSE East and Subpanel EVSE West)
 - a. Requires 1 new beaker in each of the 2nd floor house distribution panels to feed the new EVSE Subpanels
3. Requires 6 qty Smart Level 1 Outlets in the East garage that are connected to 6 qty 20A circuits in new Subpanel EVSE East as follows:
 - a. Install 6 qty 20A circuits in new Subpanel EVSE East
 - i. Pull power via new conduit routed through building for 6 qty Level 1 outlets
4. Requires 6 qty Smart Level 1 Outlets in the West garage that are connected to 6 qty 20A circuits in new Subpanel EVSE West as follows:
 - a. Install 6 qty 20A circuits in new Subpanel EVSE West
 - i. Pull power via new conduit routed through building for 6 qty Level 1 Outlets

Layout

The drawing below includes the new proposed EV parking space locations. Based on the recommended quantity of ports in this solution, no new ADA spaces will be required based on California Building Code 2016 Chapter 11B-228.3.2.1.

Figure 5: Proposed EVSE Layout



Infrastructure Requirements

The following site electrical infrastructure will be necessary to enable this solution. Some “existing” equipment is identified in the table. If a connection to the existing equipment is required, the existing equipment type has been identified. The capacity of that existing equipment is expected to be adequate to support this solution.

	System Name	Level 1 Outlets
	Layout Reference	East Side of Garage
EVSE Circuits	<i>New/Existing</i>	New
	<i>Circuit Type</i>	120V, 20A
	<i>Circuit Quantity</i>	6
	<i>Placement</i>	Conduit routed through building
New EVSE Subpanel East	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 100A
House Subpanel East	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 200A
Main panel	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 800A
Utility Service	New/Existing	Existing

	System Name	Level 1 Outlets
	Layout Reference	West Side of Garage
EVSE Circuits	<i>New/Existing</i>	New
	<i>Circuit Type</i>	120V, 20A
	<i>Circuit Quantity</i>	6
	<i>Placement</i>	Conduit routed through building
New EVSE Subpanel West	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 100A
House Subpanel West	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 200A
Main panel	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 800A
Utility Service	New/Existing	Existing

Additional Requirements

In addition to electrical upgrades, the following additional requirements are necessary for safety and accessibility.

Category	Description of Requirements
Structural	The following list provides some of the requirements that will be needed at the time of the installation: 1. N/A
Painting and Signage	The following list provides some of the requirements that will be needed at the time of the installation: 1. Recommend “Low Power EV Charging Only” signage
Landscaping	Landscaping remediation is not anticipated for this project
Other	A contractor or EVSE vendor is recommended to determine if a network signal booster is needed to ensure EVSE connectivity

Operating Model

There are many ways an EVSE site host may structure access and fees to shape the operating cost for their site. Many site hosts choose to provide EVSE as a site amenity, charging little or nothing. Others set fees to break even or even produce net operating income from the chargers.

Based on information ABC Apartments provided about the intended use of the chargers, the program staff has estimated likely annual usage and costs. The following tables present ABC Apartments’ estimated annual operating costs followed by a potential revenue break-even operating model.

Assumptions

Electric vehicles currently make up approximately 6% of private vehicles in San Mateo County. Projections suggest electric vehicles will exceed 15% by 2025 and 30% by 2030. The table below calculates the likely usage and operational costs based on this rapid growth over the next 5 years.

Forecast Operations				
	Off Peak	Partial Peak	Peak	Total
Annual Charge Port Utilization (kWh)				
Level 1 Outlets	5,760	8,807	4,205	18,771
Annual Operating Costs				
Electricity Rate	B-1-B			
L1 Electricity Cost	\$1,773	\$2,642	\$1,421	\$5,837
L1 EVSE Network Fees	\$1,296			
Total Annual Operating Cost	\$7,133			
Potential Revenue Scenario				
Revenue Model				
L1 User Fees	Average per kWh	\$0.38		
L1 Estimate Revenues				\$7,133
Annual Net Operating Revenue				\$0

Solution #2

Solution #2 is designed to meet ABC Apartments' current and future EV charging needs with an optimal balance of 30 qty Smart Level 1 Outlets, available incentives, and electrical infrastructure. This solution maximizes the existing electrical capacity - conservatively assuming 100A available per house panel.

The East and West House service meters are on 2nd floor, with subpanels on 1st and 2nd floor. The existing house panels on the 1st floor lack physical and electrical capacity to support adding circuits. This solution proposes installing a dedicated EV panel on each side of the property on the 1st floor that is tied back to the existing "distribution panel" at each meter.

The conductor runs are proposed to be grouped by number of spaces/circuits, while attempting to optimize cost by having larger trunk conduits. Conductor sizes are increased to account for voltage drop for the long runs. For the circuits going to each outlet, assume that each outlet gets its own conduit (2 conductors/conduit).

Chargers

The following quantities of charging are included.

Type	Quantity	Installation Specifications
Smart Level 1 Outlets	30 Level 1 Outlets	<ul style="list-style-type: none"> • 30 qty 120V, 20A Smart Level 1 Outlets

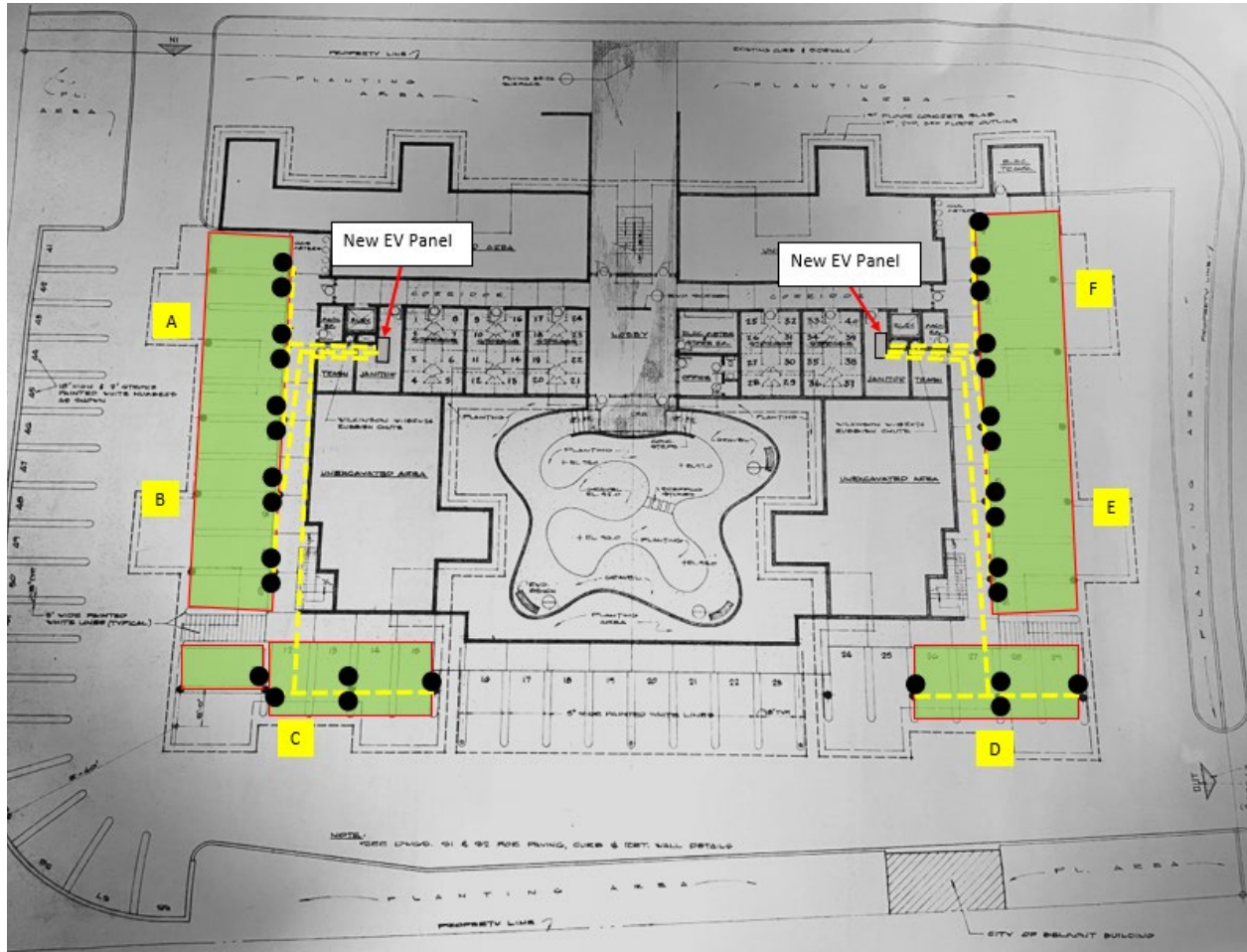
Installation Requirements

1. Requires use existing service
 - a. Selected contractor shall confirm with utility
2. Requires installation of 2 new 100A EVSE Subpanels (Subpanel EVSE East and Subpanel EVSE West)
 - a. Requires 1 new beaker in each of the 2nd floor house distribution panels to feed the new EVSE Subpanels
3. Requires 15 qty Smart Level 1 Outlets in Areas A, B, and C that are connected to 15 qty 20A circuits in new Subpanel EVSE West as follows:
 - a. Install 15 qty 20A circuits in new Subpanel EVSE West
 - i. Pull power via new conduit routed through building to Areas A, B, and C for 15 qty Level 1 outlets
4. Requires 15 qty Smart Level 1 Outlets in Areas D, E, and F are connected to 15 qty 20A circuits in new Subpanel EVSE East as follows:
 - a. Install 15 qty 20A circuits in new EVSE Subpanel East
 - ii. Pull power via new conduit routed through building to Areas D, E, and F for 15 qty Level 1 outlets

Layout

The drawing below includes the new proposed EV parking space locations. Based on the recommended quantity of ports in this solution, no new ADA spaces will be required based on California Building Code 2016 Chapter 11B-228.3.2.1.

Figure 6: Proposed EVSE Layout



<ul style="list-style-type: none"> EV Charging Space ADA Non-Exclusive EV Space ADA Exclusive EV Space Access Aisle 	<p>Legend</p> <ul style="list-style-type: none"> L1 Port / L2 Port / Dual L3 Port / Make Ready Port 	<ul style="list-style-type: none"> Panel/Load Center Transformer Surface Conduit/Raceway Buried Conduit/Raceway
---	---	---

Infrastructure Requirements

The following site electrical infrastructure will be necessary to enable this solution. Some “existing” equipment is identified in the table. If a connection to the existing equipment is required, the existing equipment type has been identified. The capacity of that existing equipment is expected to be adequate to support this solution.

	System Name	Level 1 Outlets
	Layout Reference	Areas A+B+C
EVSE Circuits	<i>New/Existing</i>	New
	<i>Circuit Type</i>	120V, 20A
	<i>Circuit Quantity</i>	15
	<i>Placement</i>	Conduit routed through building
New Subpanel EVSE West	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 100A
House Subpanel West	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 200A
Main panel	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 800A
Utility Service	New/Existing	Existing

	System Name	Level 1 Outlets
	Layout Reference	Areas D+E+F
EVSE Circuits	<i>New/Existing</i>	New
	<i>Circuit Type</i>	120V, 20A
	<i>Circuit Quantity</i>	15
	<i>Placement</i>	Conduit routed through building
New Subpanel EVSE	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 100A
House Subpanel East	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 200A
Main panel	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 800A
Utility Service	New/Existing	Existing

Additional Requirements

In addition to electrical upgrades, the following additional requirements are necessary for safety and accessibility.

Category	Description of Requirements
Structural	The following list provides some of the requirements that will be needed at the time of the installation: 1. N/A
Painting and Signage	The following list provides some of the requirements that will be needed at the time of the installation: 1. Recommend “Low Power EV Charging Only” signage
Landscaping	Landscaping remediation is not anticipated for this project
Other	A contractor or EVSE vendor is recommended to determine if a network signal booster is needed to ensure EVSE connectivity.

Operating Model

There are many ways an EVSE site host may structure access and fees to shape the operating cost for their site. Many site hosts choose to provide EVSE as a site amenity, charging little or nothing. Others set fees to break even or even produce net operating income from the chargers.

Based on information ABC Apartments provided about the intended use of the chargers, the program staff has estimated likely annual usage and costs. The following tables present ABC Apartments’ estimated annual operating costs followed by a potential revenue break-even operating model.

Assumptions

Electric vehicles currently make up approximately 6% of private vehicles in San Mateo County. Projections suggest electric vehicles will exceed 15% by 2025 and 30% by 2030. The table below calculates the likely usage and operational costs based on this rapid growth over the next 5 years.

Forecast Operations				
	Off Peak	Partial Peak	Peak	Total
Annual Charge Port Utilization (kWh)				
Level 1 Outlets	11,520	17,613	8,410	37,543
Annual Operating Costs				
Electricity Rate	B-1-B			
L1 Electricity Cost	\$3,547	\$5,285	\$2,843	\$11,674
L1 EVSE Network Fees	\$2,592			
Total Annual Operating Cost	\$14,266			
Potential Revenue Scenario				
Revenue Model				
L1 User Fees	Average per kWh	\$0.38		
L1 Estimate Revenues				\$14,266
Annual Net Operating Revenue				\$0

Solution #3

Solution #3 is designed to maximize the amount of chargers and available incentives at ABC Apartments' site. This solution includes 40 qty Smart Level 1 Outlets. We highly recommend, however, that ABC Apartments choose this solution to ensure the Bay Area's future EV charging demands are met.

This solution proposes to upgrade the house panels to increase electrical capacity and install outlets in all 40 assigned spaces. The new EV Panels would be installed on the ground floor to supply outlets, with the circuits split between West and East side.

This solution makes two important assumptions: that the feeders and the house panels will need to be upgraded, and that ABC Apartments would prefer 20A circuits. **If 15A circuits are used, it may be possible to install all 40 circuits without upgrading the feeders or house panels (significantly reducing cost).**

The conductor runs are proposed to be grouped by number of spaces/circuits, while attempting to optimize cost by having larger trunk conduits. Conductor sizes are increased to account for voltage drop for the long runs. For the circuits going to each outlet, assume that each outlet gets its own conduit (2 conductors/conduit).

Chargers

The following quantities of charging are included.

Type	Quantity	Installation Specifications
Smart Level 1 Outlets	40 Level 1 Outlets	<ul style="list-style-type: none"> 40 qty 120V, 20A Smart Level 1 Outlets

Installation Requirements

1. Requires use of existing service
 - a. Selected contractor shall confirm with utility
2. Requires installation of 2 new 400A House Distribution Panels
 - a. Requires upgraded feeder from service entrance to upgraded house distribution panel
3. Requires installation of 2 new 225A EVSE Subpanels (Subpanel EVSE East and Subpanel EVSE West)
 - a. Requires 1 new beaker in each of the new 2nd floor house distribution panels to feed the new EVSE Subpanels
4. Requires 20 qty Smart Level 1 outlets in Areas A, B, C, and G are connected to 20 qty 20A circuits in new Subpanel EVSE West as follows:
 - a. Install 20 qty 20A circuits in new Subpanel EVSE West
 - i. Pull power via new conduit routed through building to Areas A, B, C, and G for 20 qty Level 1 outlets
5. Requires 20 qty Smart Level 1 outlets in Areas D, E, F, and H are connected to 20 qty 20A circuits in new Subpanel EVSE East as follows:
 - a. Install 20 qty 20A circuits in new Subpanel EVSE East

- i. Pull power via new conduit routed through building to Areas D, E, F, and H for 20 qty Level 1 outlets

Layout

The drawing below includes the new proposed EV parking space locations. Based on the recommended quantity of ports in this solution, no new ADA spaces will be required based on California Building Code 2016 Chapter 11B-228.3.2.1.

Figure 7: Proposed EVSE Layout

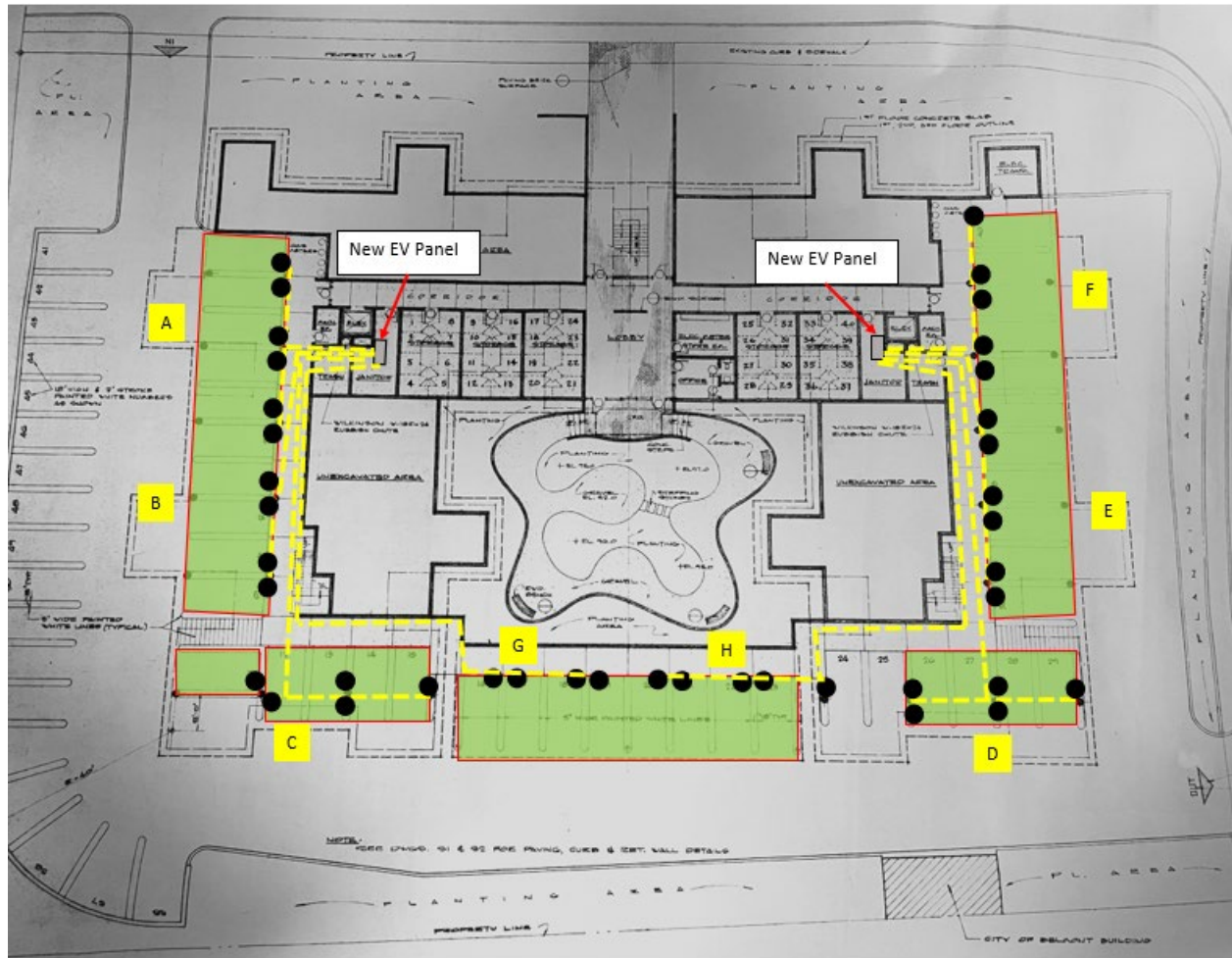
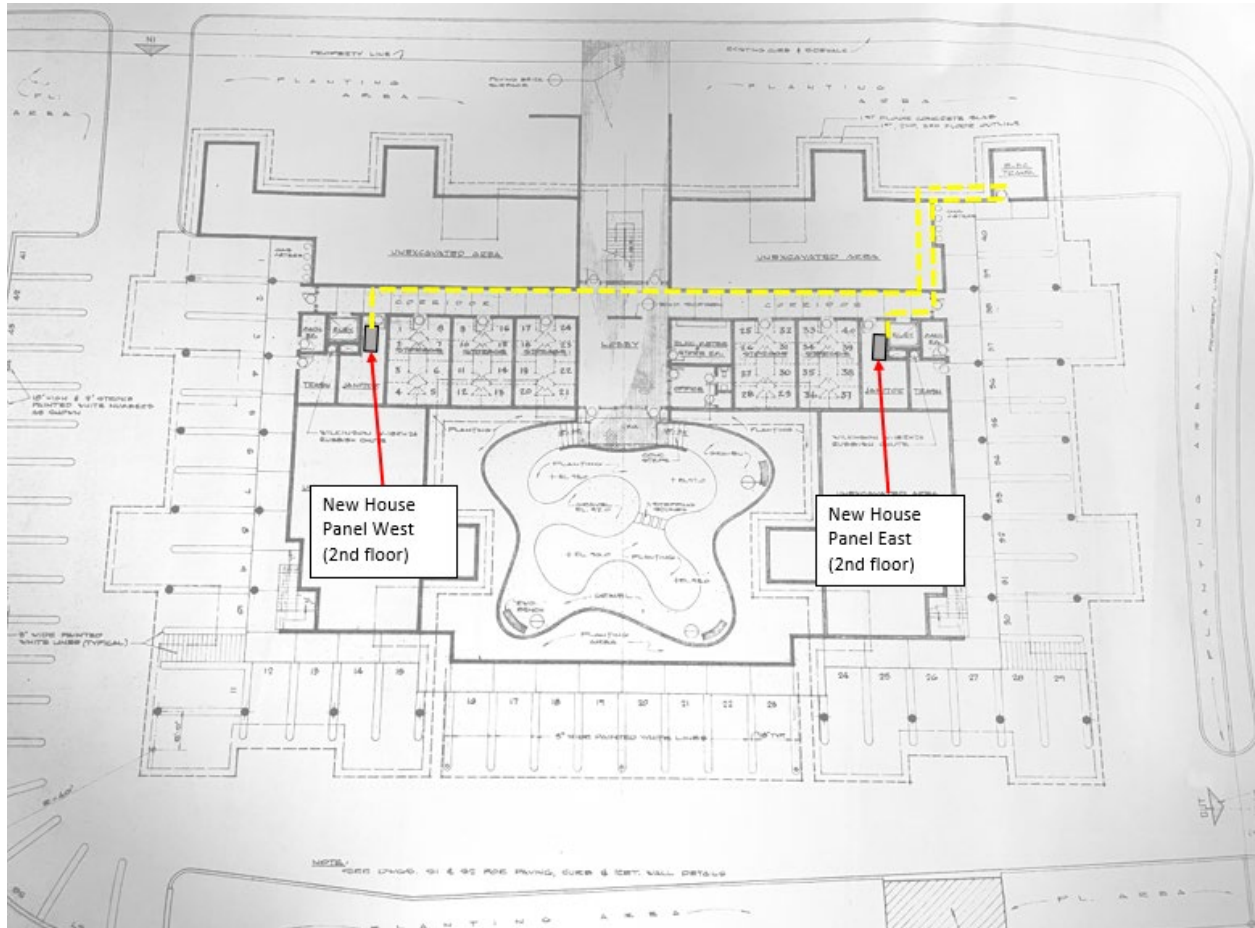


Figure 8: 2nd floor (using 1st floor schematic) - showing runs from upgraded house panel and meters to 800A Service Entrance



Infrastructure Requirements

The following site electrical infrastructure will be necessary to enable this solution. Some “existing” equipment is identified in the table. If a connection to the existing equipment is required, the existing equipment type has been identified. The capacity of that existing equipment is expected to be adequate to support this solution.

	System Name	Level 1 Outlets
	Layout Reference	Areas A+B+C+G
EVSE Circuits	<i>New/Existing</i>	New
	<i>Circuit Type</i>	120V, 20A
	<i>Circuit Quantity</i>	20
	<i>Placement</i>	Conduit routed through building
New Subpanel EVSE West	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 225A
House Subpanel West	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 400A
Main panel	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 800A
Utility Service	New/Existing	Existing

	System Name	Level 1 Outlets
	Layout Reference	Areas D+E+F+H
EVSE Circuits	<i>New/Existing</i>	New
	<i>Circuit Type</i>	120V, 20A
	<i>Circuit Quantity</i>	20
	<i>Placement</i>	Conduit routed through building
New Subpanel EVSE East	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 225A
House Subpanel East	<i>New/Existing</i>	New
	<i>Panel Type</i>	3P, 4W, 208/120V, 400A
Main panel	<i>New/Existing</i>	Existing
	<i>Panel Type</i>	3P, 4W, 208/120V, 800A
Utility Service	New/Existing	Existing

Additional Requirements

In addition to electrical upgrades, the following additional requirements are necessary for safety and accessibility.

Category	Description of Requirements
Structural	The following list provides some of the requirements that will be needed at the time of the installation: 1. N/A
Painting and Signage	The following list provides some of the requirements that will be needed at the time of the installation: 1. Recommend “Low Power EV Charging Only” signage
Landscaping	Landscaping remediation is not anticipated for this project
Other	A contractor or EVSE vendor is recommended to determine if a network signal booster is needed to ensure EVSE connectivity.

Operating Model

There are many ways an EVSE site host may structure access and fees to shape the operating cost for their site. Many site hosts choose to provide EVSE as a site amenity, charging little or nothing. Others set fees to break even or even produce net operating income from the chargers.

Based on information ABC Apartments provided about the intended use of the chargers, the program staff has estimated likely annual usage and costs. The following tables present ABC Apartments’ estimated annual operating costs followed by a potential revenue break-even operating model.

Assumptions

Electric vehicles currently make up approximately 6% of private vehicles in San Mateo County. Projections suggest electric vehicles will exceed 15% by 2025 and 30% by 2030. The table below calculates the likely usage and operational costs based on this rapid growth over the next 5 years.

Forecast Operations				
	Off Peak	Partial Peak	Peak	Total
Annual Charge Port Utilization (kWh)				
Level 1 Outlets	11,520	17,613	8,410	37,543
Annual Operating Costs				
Electricity Rate	B-1-B			
L1 Electricity Cost	\$3,547	\$5,285	\$2,843	\$11,674
L1 EVSE Network Fees ¹	\$2,592			
Total Annual Operating Cost	\$14,266			
Potential Revenue Scenario				
Revenue Model				
L1 User Fees	Average per kWh	\$0.38		
L1 Estimate Revenues				\$14,266
Annual Net Operating Revenue				\$0

3. Bid Request

Instructions to Contractor

1. Carefully review the preferred solution description and Site Assessment above
2. Contact the ABC Apartments and Program contacts identified above if additional information is needed.
3. Complete the bid response template below.
4. Submit your bid response by email to the ABC Apartments and Program contacts **before 5pm on the 20th business day** after receipt of the bid request email.
5. Please ensure the power management specification in the above Installation Requirements section is in your proposed scope.

Scope

The scope of your response should encompass all items marked with an “Y” in the following table:

Include?	Scope Item
Y	Design and permitting including additional site visits
Y	All infrastructure and additional requirements
Y	If a new or upgraded utility service is required, contractor shall request and facilitate upgrades but will not be responsible for any utility fees
Y	Purchase, installation and commissioning of the EVSE, especially for prescribed power management approach*
N	Load study to specify additional project infrastructure support

**For avoidance of doubt, this does not include software licenses that may be required for ongoing EVSE operation*

Response Template

Please populate this exact template and include in your bid response. You may also include additional information to elaborate on your qualifications or proposed solution, but this chart is **REQUIRED** to be included.

Task	Materials			Labor		
	<i>Units</i>	<i>Unit Rate</i>	<i>Price</i>	<i>Hours</i>	<i>Hourly Rate</i>	<i>Price</i>
Level 1 Outlets						
Level 2 EVSE						
EVSE Circuits						
Subpanel						
Transformer						
Main Panel						
Design and Permitting						
Utility Service						
Additional Tasks*						
Subtotal						
Total Bid Price						
Please note any assumptions here that you feel are important:						

*Additional Tasks are proposed tasks that you deem as required for project success but are not found in the chart's standard task list above.