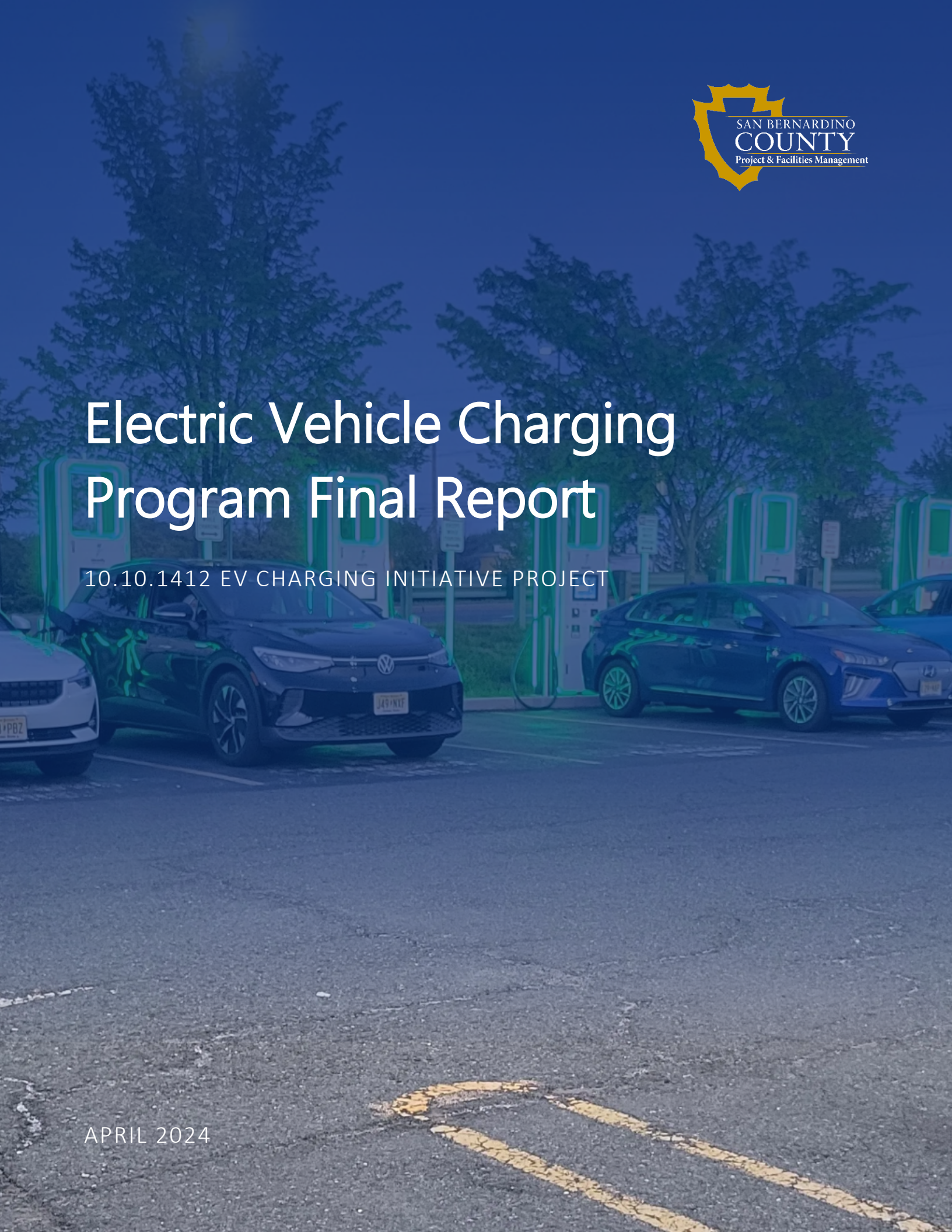
SAN BERNARDINO COUNTY

Attachment II

EV Charging Initiative Report



SAN BERNARDINO COUNTY
Project & Facilities Management

Electric Vehicle Charging Program Final Report

10.10.1412 EV CHARGING INITIATIVE PROJECT

APRIL 2024

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EXECUTIVE SUMMARY

Objective:

Anser Advisory was selected to analyze and assist the County of San Bernardino with the Countywide Electric Vehicle (EV) Charging Program via 10.10.1412 EV Charging Initiative Project. Scope of services related to sixteen (16) prioritized locations as identified by the County to provide project conceptualization, cost estimation, grant/ utility support, and additional program analysis related to ownership models, lifecycle costs, and utility rates.

Approach:

The Anser team first hosted a kickoff meeting with Project & Facilities Management Department staff for introductions and to align on project goals, timeline, and communication/ governance expectations for the project. Next, the Anser team worked to develop clear and concise metrics that would be used determine site prioritization, metrics were validated using stakeholder input, consensus, and industry best-practices. Next, Anser collected site-specific information during 16 physical site assessments, ranking each potential project location based on prioritization criteria scoring and feasibility (see Chapter 1). Data and observations collected on each site's existing infrastructure capabilities was then used to create conceptual site designs which included guidance on required improvements that would need to be made to accommodate charging infrastructure such as new electrical service and compliance with CalGreen accessible charging requirements (see Chapter 2). Anser developed Rough Order of Magnitude Engineering and Construction Estimate (ROM) for each design using a comprehensive EVSE Schedule of Values to understand the capital intensity of each project (see Chapter 3). Anser then compiled a comprehensive list of funding opportunities related to EV infrastructure and applied specific grant/ incentive eligibility criteria to the 16 prioritized locations to generate a curated list of site-specific qualified opportunities for the County to target (see Chapter 4). The Anser team then supported coordination on funding opportunities as necessary. Additionally, the Anser team estimated the cost of electricity and operation in different usage scenarios for County-operated chargers at workplace and public parking lots to validate the EV charging fee structure for end-users (see Chapter 5). Finally, a cost-benefit analysis was provided for two charger ownership models: lease and own (see Chapter 6).

Results:

Ultimately, the Anser team used all the information compiled from the tasks described above to provide the County with guidance on the best path forward for each site based on the quantity of proposed chargers, evaluation criteria, cost, and applicability for external funding. See Figure 1 below for a summary of results and Exhibit B for Conceptual designs.

Figure 1 - Summary of site prioritization details

Site Rank	Site	# Level 2 Charge Ports Per Site	# DC Fast Charge Ports Per Site	Estimated Price	Priority Site Score
1	County Government Center - Hesperia	12	0	$271,084	76
2	Rancho Cucamonga Courthouse (Public Lot)	10	4	$419,792	76
3	Kessler Park (Jurupa Lot)	6	0	$164,295	75
4	Yucaipa Regional Park (Lot 3A)	8	2	$310,664	72
5	222/268 Hospitality Lane	28	0	$517,569	72
6	Cucamonga-Guasti Regional Park	14	0	$301,811	70
7	Twin Peaks Sheriff Station	4	0	$162,248	69
8	County Government Center - Joshua Tree	8	2	$302,545	69
9	Glen Helen Regional Park (Pool)	14	0	$379,977	69
10	Lake Gregory Regional Park	8	0	$245,575	68
11	Calico Ghost Town	0	12	$750,153	67
12	8575 Haven Avenue	4	0	$140,611	66
13	Phelan Memorial Library	4	0	$112,697	64
14	Prado Regional Park (Lots 5 & 6)	6	0	$206,001	64
15	Chino Airport (Kimball Lot)	8	0	$214,444	61
16	Needles Sheriff Station	4	0	$170,634	56
	TOTAL	**138**	**20**	**$4,670,000**	

It is recommended that the County pursue funding support both internally through budget allocations and externally through grant funding opportunities, to further develop the EV charging initiative program. Additional sites should be considered for charging infrastructure to broaden the portfolio of locations across the County and strengthen the initiative. If sites are to be developed piece-meal, priority should be placed on sites with the highest Priority Scores as shown above.

CHAPTER 1: EV Charging Project Site Prioritization

Approach

As part of the scope of work, the Anser team worked to develop clear and concise metrics to determine priority of the 16 proposed locations using stakeholder input, consensus, and industry best-practices to develop actionable next steps for EVCS deployment throughout the County. Anser collected site-specific information during physical site assessments to create an evaluation criteria score, ranking each potential project location in order of easiest to most difficult electric vehicle charger installation. The sites were ranked based on the "3Ps", Parking, Power, and Pricing. The Parking category reviews all parking lots and location-specific characteristics such as the size and usage of the lot and whether there are other public chargers in the area. The Power section of the scoring refers to all utility and building power-related information such as if the site is close to power or if there are any circuit constraints. The third category, Pricing, considers factors that affect pricing such as ADA upgrades along with the estimated cost per port of the project. The cost per port score was determined in conjunction with conceptual site designs and incorporated after initial scoring.

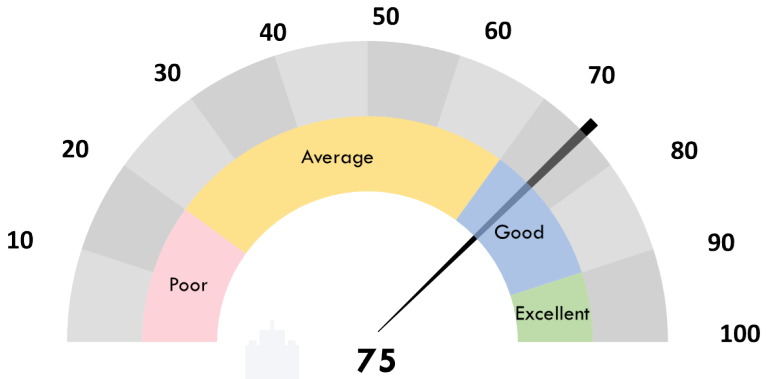
The bottom-up approach to evaluation criteria scores allows for the bucketing of project characteristics into different categories, which transparently show where project difficulties may lie. Exhibit A shows site prioritization criteria evaluated for evaluation criteria scores.

Maximum possible score is 100 points and site-specific scoring is presented on Sheet 2 of each Conceptual Design deliverable, a sample is shown below for reference in Figure 2 and Figure 3. The scores are meant to create an unbiased ranking of sites where each criterion and broader category is comparatively scored. Criteria scores are defined differently but follow the basic sentiment of Poor, Average, Good, and Excellent and are color-coded. Individual scores provide quantitative information about which locations have more desirable traits for installing EV chargers. Each criterion is weighted to reflect its importance to project viability; factors of higher importance are assigned a greater percentage of total points as they are more likely to be deciding factors in ranking the sites.

Figure 2 - Sample Criteria score card

CATEGORY	EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PARKING	PUBLICALLY ACCESSIBLE PARKING	5	5
	LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
	NEARBY AMMENITIES	4	5
	PARKING FEE COLLECTION	3	3
	PARKING STALL QUANTITIES	5	6
	NEARBY ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)	1	3
	AVERAGE LOT USAGE	2	3
	EVSE DEMAND	2	4
	EVSE SUPPORTS STAFF & PUBLIC	2	3
	LOCATION MAXIMIZES VISIBILITY	1	1
	EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
	SUFFICIENT LIGHTING PRESENT	1	1
	PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
	EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
POWER	PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
	POWER AND CELL SERVICE	8	8
	KNOWN CIRCUIT CONSTRAINTS	5	5
	SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
	POTENTIAL FOR FUTURE SOLAR PV	1	2
	BACKUP GENERATION ON SITE	0	1
PRICING	TRIGGERS ADDITIONAL ADA UPGRADES	5	5
	NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
	EVSE PROTECTION	2	2
	PARKING AREA CONDITION	2	4
	TRENCH ROUTE DIFFICULTY	2	3
	ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	3	4
	EJ OR DISADVANTAGED COMMUNITY	2	2
	RELEVANT PENDING SITE IMPROVEMENTS	0	1
	PROJECT COST	4	10
TOTAL		75	100

Figure 3 - Sample criteria score gauge



Results

Figure 4 presents site-specific project scores by category for all sites. Values in the "Total" column represent the site prioritization score for each location and are the scores presented on each sites' conceptual design. Sites are organized from highest to lowest score. If sites received the same score, the sites were then ranked by total project price. The sites with lower total project costs were ranked higher and the sites with higher total project costs were ranked lower.

Figure 4 –Location rankings

Rank	Location	Parking Score	Power Score	Pricing Score	Total
1	County Government Center - Hesperia	28	22	26	76
2	Rancho Cucamonga Courthouse (Public Lot)	32	21	23	76
3	Kessler Park (Jurupa Lot)	30	21	24	75
4	Yucaipa Regional Park (Lot 3A)	28	21	23	72
5	222/268 Hospitality Lane	30	21	21	72
6	Cucamonga-Guasti Regional Park	27	19	24	70
7	Twin Peaks Sheriff Station	30	21	18	69
8	County Government Center – Joshua Tree	31	20	18	69
9	Glen Helen Regional Park (Pool)	26	19	24	69
10	Lake Gregory Regional Park	28	19	21	68
11	Calico Ghost Town	24	21	22	67
12	8575 Haven Avenue	29	23	14	66
13	Phelan Memorial Library	25	17	22	64
14	Prado Regional Park (Lots 5 & 6)	25	19	20	64
15	Chino Airport (Kimball Lot)	25	23	13	61
16	Needles Sheriff Station	24	16	16	56

Analysis

San Bernardino County stakeholders pre-selected 16 priority locations across the County to analyze the feasibility of electric vehicle supply equipment (EVSE) projects. Sites were evaluated on a range of criteria and were ranked in order of most feasible to least feasible projects. The scores ranged from 76 to 56 out of a possible 100 points, with an average score of 68 points. Several sites scored the same number of points and thus received the same ranking. Since the purpose of this activity is to demonstrate which sites are the strongest candidates for EVSE development, the repetition of scores did not impact the prioritization.

The results present a relatively narrow range of scores across all locations. This is not altogether unexpected since the sites went through an initial pre-vetting by the County and all of the final 16 sites are generally good candidates for EV charger development. It is also notable that there was further siting refinement done by the Anser team during site visits where the best possible areas within each site were scored and less desirable areas eliminated. For example, three locations were evaluated at Prado Regional Park but only the most feasible of locations within the park went through final design and scoring. It is also noteworthy that two of the original 16 sites were eliminated after initial site visits due to technical infeasibility, 24171 Lake Drive and 23484 Lake Drive in Crestline. These two locations were replaced with alternatives that scored closer to the average, Lake Gregory Regional Park (Lot 2) and Twin Peaks Sheriff Department.

As described above, sites were scored based on three categories that determine the ease of EVSE project development, the "3P's" or **Parking**, **Power**, and **Pricing**. For the Parking category, Rancho Cucamonga Courthouse scored the highest with 32 out of 40 possible points and Calico Ghost Town and Needles Sheriff Station scored the

least points with 24 points. Rancho Cucamonga scored the highest in the Parking category due to its large public lot paired with ample parking available, which allows for more space or less impact from converting stalls to EV only parking. Calico Ghost Town and Needles Sheriff Station scored low in this category due to their lack of EV charging demand and low space availability in the primary lots.

For the Power category, 8575 Haven and Chino Airport scored the highest with 23 out of a possible 25 points and Phelan Memorial Library and Needles Sheriff Station score the lowest with 17 and 16 points respectively. 8575 Haven and Chino Airport scored the highest since their EV charger locations were closest to the electrical infrastructure/ point of connection and thus limiting the trench, conduit, and wire scope. Phelan Memorial Library and Needles Sheriff Station both scored the least points in the Power category because they had unreliable cellular service and power, which are necessities for public charging stations.

Finally, for the Pricing category, County Government Center – Hesperia scored the highest with 26 out of a possible 35 points due to the condition of its parking lot and accessible stalls, which require minimal upgrades. On the other end, 8575 Haven and Chino Airport scored the least points with 14 and 13 points respectively. Although these sites were close to power, the parking lots require greater civil upgrades specific to accessible charging stalls and poor parking lot conditions. These upgrades would come with a significant financial burden and thus the sites scored low overall in the ranking.

Generally, the sites at the top of the ranking, Rancho Cucamonga Courthouse, County Government Center – Hesperia, and Kessler Park, scored within the top three scores in each category. Conversely, sites that did poorly, Prado Regional Park, Chino Airport, and Needles Sheriff Station mostly scored within the bottom scores per category. It is important to note that Prado Regional Park scored lower than average due to many factors including the small number of EV chargers specified. With only eight charging ports recommended, fixed fees associated with construction drive of the cost per kW of charger power. Even though it scored lower than average, it is still a great area to bring chargers to a highly trafficked location. Sites evaluated tended to score better if they had a larger parking lot with ample space to integrate chargers. Sites with more space will be able to install more chargers, which makes infrastructure more cost effective and impact a lower percentage of the total parking stalls. This was shown in the Cost score, where sites with more chargers or higher charger power earned more points. Sites that did not rank as well tended to have more parking lot and accessibility issues that would need to be addressed and thus would have more infrastructure costs associated with said lots. Furthermore, most parks earned less points due to the entry fees they charge to visitors. This entry fee could be a deterrent to potential EV charger users and thus these chargers may be less utilized.

Summary

In summary, this study evaluated a range of potential EV charger locations in San Bernardino County and assigned relative scores for ease of development. Sites ranged from parks to County government centers to sheriff stations and libraries. This analysis successfully prioritized the locations from strongest to weakest candidate. Rancho Cucamonga Courthouse, County Government Center – Hesperia, and Kessler Park scored the highest while Prado Regional Park, Chino Airport, and Needles Sheriff Station scored the lowest. Scores were tightly grouped between 56 and 76 points meaning that many of the sites offer a similar ease of development/ feasibility. It is recommended that the County consider all of the locations for potential projects but that if resources are limited, projects be prioritized for development by the ranking in Figure 2.

See *Exhibit A - Basis of Scoring* for detailed information about the scoring criteria that were used for this analysis.

CHAPTER 2: Identification of Infrastructure Capabilities and Required Improvements

Approach

To complete the scope of work for this task, the Anser team worked with County staff to gather basic information for each site, including usage and parking patterns, pending facility upgrades/ maintenance projects, and electrical service location(s). This was accomplished through meetings with Facilities and Parks Departments, RFIs, and on-site site evaluations.

The following information was documented during site visits through visual inspections, photographs, 360° video and stakeholder input:

- Visual inventory of electrical infrastructure such as existing utility service points/ metering, service and panel sizes, location, and sizing of distribution structures such as power poles, underground vaults, pad-mount transformers, etc.
- Assessment of existing parking areas and ADA improvements including total parking counts, ADA path of travel, curb cuts, access aisles, etc.
- Review of available area for new equipment including service panels, transformers, distribution panels, and EV charging stations.
- Inventory of additional site characteristics including lighting, ingress/ egress routes, parking configuration, landscape and irrigation arrangements, and existing civil improvements such as walkways, curbs, and signage.

Once site visit activities were completed, the Anser team identified electrical service load requirements based on the number of chargers and the voltage available at each location, as well as infrastructure requirements, sizing, and specification to provide the County with a holistic bill of materials and inform cost estimation activities. All of this information was made available to the County in the form of a binder of conceptual site designs as shown in **Exhibit B – Conceptual Site Design Binder**. Plans are conceptual only and present design options and site-specific details that can be leveraged for stakeholder engagement, funding opportunity requests, and general visualization.

Figure 5 – Conceptual site design sample

EV CHARGER SITE ASSESSMENT
222/268 HOSPITALITY LANE - 222 WEST HOSPITALITY LANE

SHEET: 1 OF 2
DATE: 2/8/24

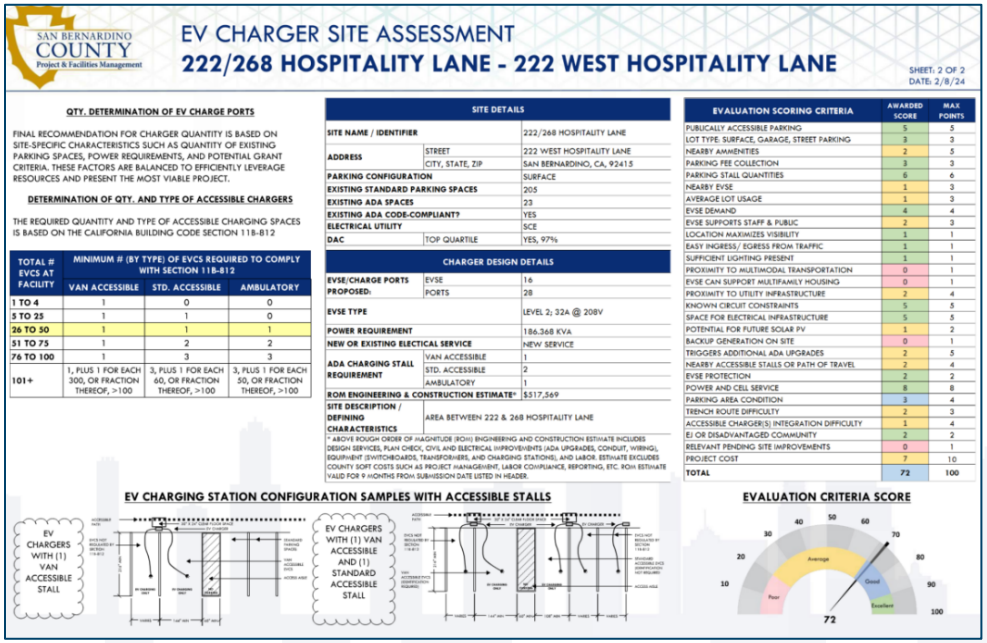
PROJECT SUMMARY	
SITE TYPE	COUNTY BUILDING LOT
RECOMMENDED SCOPE	(28) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$517,569
EVALUATION CRITERIA SCORE	72 OF 100

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- AMBULATORY STALL, 10'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING PATH OF TRAVEL
- TRUNCATED DOMES & RELOCATE LIGHT STANDARD
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE AND DISTRIBUTION 700A, 208V
- NEW UTILITY TRANSFORMER 12KV/208V
- SINGLE/DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- UTILITY SERVICE FEED, APPROX. 60' TO POWER SOURCE
- EXISTING SCE PME SWITCH, POWER SOURCE
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

AREA OF DETAIL
COMMERCENTER W
W HOSPITALITY LN

Sheet 1 illustrates a map of the site with the proposed EV charging stall locations, any required electrical service and accessible charger upgrades, and a summary table including information about the type of site, the recommended number of charging ports that should be installed, the ROM cost estimate, and the evaluation criteria score for the site. The legend provides a description on the different symbols used on the site plan.



EV CHARGER SITE ASSESSMENT
222/268 HOSPITALITY LANE - 222 WEST HOSPITALITY LANE

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		222/268 HOSPITALITY LANE
ADDRESS	STREET	222 WEST HOSPITALITY LANE
	CITY, STATE, ZIP	SAN BERNARDINO, CA, 92415
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		205
EXISTING ADA SPACES		23
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	YES, 97%

CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	16
	PORTS	28
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		186.368 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	2
	AMBULATORY	1
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$517,569
SITE DESCRIPTION / DEFINING CHARACTERISTICS		AREA BETWEEN 222 & 268 HOSPITALITY LANE

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	4	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	2	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	2	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	3	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	1	4
EJ OR DISADVANTAGED COMMUNITY	2	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	7	10
TOTAL	72	100

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

EV CHARGERS WITH (1) VAN ACCESSIBLE STALL

EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL

EVALUATION CRITERIA SCORE

10 20 30 40 50 60 70 80 90 100
Poor Average Good Excellent
72

Sheet 2 provides more in-depth information about the site conditions and factors used to determine the appropriate number of EV charging ports, quantity and type of accessible EV charging stalls, electrical load requirements, and cost breakdown by category of work. Also included is the completed Criteria Score Card used to develop the evaluation score for the site.

Results

Conceptual designs for all 16 sites can be accessed in **Exhibit B – Conceptual Site Design Binder** and by navigating the hyperlinks in the figure below:

Figure 6 - Conceptual site design links

#	Location & Link	# Level 2 Charge Ports Per Site	# DC Fast Charge Ports Per Site
1	County Government Center - Hesperia	12	0
2	Rancho Cucamonga Courthouse (Public Lot)	10	4
3	Kessler Park (Jurupa Lot)	6	0
4	Yucaipa Regional Park (Lot 3A)	8	2
5	222/268 Hospitality Lane	28	0
6	Cucamonga-Guasti Regional Park	14	0
7	Twin Peaks Sheriff Station	4	0
8	County Government Center – Joshua Tree	8	2
9	Glen Helen Regional Park (Pool)	14	0
10	Lake Gregory Regional Park	8	0
11	Calico Ghost Town	0	12
12	8575 Haven Avenue	4	0
13	Phelan Memorial Library	4	0
14	Prado Regional Park (Lots 5 & 6)	6	0
15	Chino Airport (Kimball Lot)	8	0
16	Needles Sheriff Station	4	0
	TOTAL	138	20

CHAPTER 3: EV Charging Project Cost Estimation

Approach

This memo addresses the task of providing cost estimates for prioritized sites based on infrastructure capabilities and needs. Anser collected site-specific information during physical site assessments to develop EV charger designs for each priority location. Once conceptual designs were drafted, Anser generated estimated project costs for all prioritized locations by deploying our comprehensive EVSE Schedule of Values (SOV) tool. The SOV was assembled using actual costs from California-based EV infrastructure projects and is regularly maintained to ensure that it is up to date with the market and industry. The SOV is broken out into unitized line items including civil, electrical, and construction-related improvements. Using the SOV, we developed cost estimates for each of the conceptual designs.

The bottom-up approach to cost estimation allows for the bucketing of costs into different categories which transparently shows where project capital is concentrated. Figure 7 shows cost criteria evaluated as well as inclusions and exclusions.

Figure 7 - ROM cost categories and assumptions

Cost Criteria	Inclusions	Exclusions
Design/ Plan Check	Pre-construction design services, plan check, construction support services/ RFI & submittal response, as-built plan conformation	Permit, environmental studies, CEQA exemptions, PFMD project management, consulting services
Electrical Infrastructure	General conditions, conduit, wiring, transformers, electrical switchboards, service equipment, breakers, disconnects, and labor.	N/A
Civil Improvements	General conditions, demolition, clearing & grubbing, trenching, backfill & compaction, grading, surface restoration, paving, signage, restriping, concrete equipment pads, ADA upgrades and labor.	N/A
EV Charging Equipment	Charging station equipment cost and installation.	Service Level Agreements (SLA), monthly/ recurring operational fees, cellular fees
Construction Contingency	20% of ROM estimate for construction subtotal (civil & electrical improvements)	Contingency for charger equipment and Design/ Plan Check

All costs in Figure 7 feed into a Rough Order of Magnitude Engineering and Construction Estimate (ROM). The ROM provides high-level guidance on the cost of an EV infrastructure construction project at each of the County's prioritized locations. Site-specific ROMs can be used for budgetary estimates when developing a program budget. The ROM estimate is valid for nine (9) months from the submission date.

Results

Figure 8 presents site-specific project costs by category. Values in the "Subtotal" column represent the ROM Engineering and Construction Estimate for each location and is the cost presented on each sites' conceptual design.

Figure 8 - ROM cost breakdown by cost category

#	Priority Location	Design/ Plan Check	Electrical Infrastructure	Civil Improvements	EV Charging Equipment	Construction Contingency (20%)	Subtotal
1	County Government Center - Hesperia	$34,623	$58,944	$98,107	$48,000	$31,410	$271,084
2	Rancho Cucamonga Courthouse (Public Lot)	$34,623	$88,931	$82,043	$180,000	$34,195	$419,792
3	Kessler Park (Jurupa Lot)	$34,623	$32,680	$55,380	$24,000	$17,612	$164,295
4	Yucaipa Regional Park (Lot 3A)	$34,623	$57,417	$87,617	$102,000	$29,007	$310,664
5	222/268 Hospitality Lane	$34,623	$117,011	$192,111	$112,000	$61,824	$517,569
6	Cucamonga-Guasti Regional Park	$34,623	$79,937	$96,053	$56,000	$35,198	$301,811
7	Twin Peaks Sheriff Station	$34,623	$31,184	$61,837	$16,000	$18,604	$162,248
8	County Government Center - Joshua Tree	$34,623	$56,472	$81,796	$102,000	$27,654	$302,545
9	Glen Helen Regional Park (Pool)	$34,623	$128,009	$113,119	$56,000	$48,226	$379,977
10	Lake Gregory Regional Park	$34,623	$38,507	$110,620	$32,000	$29,825	$245,575
11	Calico Ghost Town	$34,623	$127,327	$118,948	$420,000	$49,255	$750,153
12	8575 Haven Avenue	$34,623	$24,928	$50,062	$16,000	$14,998	$140,611
13	Phelan Memorial Library	$34,623	$16,557	$35,171	$16,000	$10,346	$112,697
13	Prado Regional Park (Lots 5&6)	$34,623	$40,936	$81,879	$24,000	$24,563	$206,001
15	Chino Airport (Kimball Lot)	$34,623	$60,291	$62,893	$32,000	$24,637	$214,444
16	Needles Sheriff Station	$34,623	$32,073	$67,936	$16,000	$20,002	$170,634
	TOTAL	**$553,968**	**$991,204**	**$1,395,572**	**$1,252,000**	**$477,355**	**$4,670,099**
	AVERAGE % OF PROJECT COST	**12%**	**21%**	**30%**	**27%**	**10%**	

White the results in Figure 8 above present the distribution of expenses by cost criteria category, they do not indicate the relative expense of each project to the next. To present a comparative cost or cost efficiency, we analyze the Cost per kW of charger power ($/kW). We use $/kW in lieu of $/charge port since several designs include a combination of higher power DC chargers and lower power Level 2 chargers; since DC chargers are more expensive but provide a higher level of operation and different level of service, evaluating on a $/charge port unfairly penalizes projects using this equipment. Figure 9 below shows which projects most efficiently leverage capital across the required infrastructure.

Figure 9 - Cost per kW of charger power

Rank	Priority Location	Port Quantity (L2 6.7kW)	Port Quantity (L3 50kW)	Charger kW	Cost Subtotal	Cost per kW
1	County Government Center - Hesperia	12		79.87	$271,084	$3,394
2	Rancho Cucamonga Courthouse (Public Lot)	10	4	266.56	$419,792	$1,575
3	Kessler Park (Jurupa Lot)	6		39.94	$164,295	$4,114
4	Yucaipa Regional Park (Lot 3A)	8	2	153.25	$310,664	$2,027
5	222/268 Hospitality Lane	28		186.37	$517,569	$2,777
6	Cucamonga-Guasti Regional Park	14		93.18	$301,811	$3,239
7	Twin Peaks Sheriff Station	4		26.62	$162,248	$6,094
8	County Government Center - Joshua Tree	8	2	153.25	$302,545	$1,974
9	Glen Helen Regional Park (Pool)	14		93.18	$379,977	$4,078
10	Lake Gregory Regional Park	8		53.25	$245,575	$4,612
11	Calico Ghost Town	12		600.00	$750,153	$1,250
12	8575 Haven Avenue	4		26.62	$140,611	$5,281
13	Phelan Memorial Library	4		30.72	$112,697	$3,669
14	Prado Regional Park (Lots 5&6)	6		39.94	$206,001	$5,158
15	Chino Airport (Kimball Lot)	8		53.25	$214,444	$4,027
16	Needles Sheriff Station	4		26.62	$170,634	$6,409
	TOTAL	**150**	**8**	**1922.62**	**$4,670,099**	
	WEIGHTED AVERAGE COST PER KW CHARGER POWER					**$2,429**

One way to achieve a lower Cost per kW of charger power is to increase the number of chargers at a given location. This only works when: (1) the site can accommodate the additional charging stalls and (2) the service can support the added electrical load. Some programs such as SCE's Charge Ready customer program evaluate applicants by the Cost per Charge Port and will not fund projects that are outside of their funding thresholds. In these cases, it is important to ensure that the Cost per Charge Port is under ~$15,000 or that the County is open to adding more charge ports to meet the threshold. Flexibility in this respect will allow the County to fit the project into specific funding requirements.

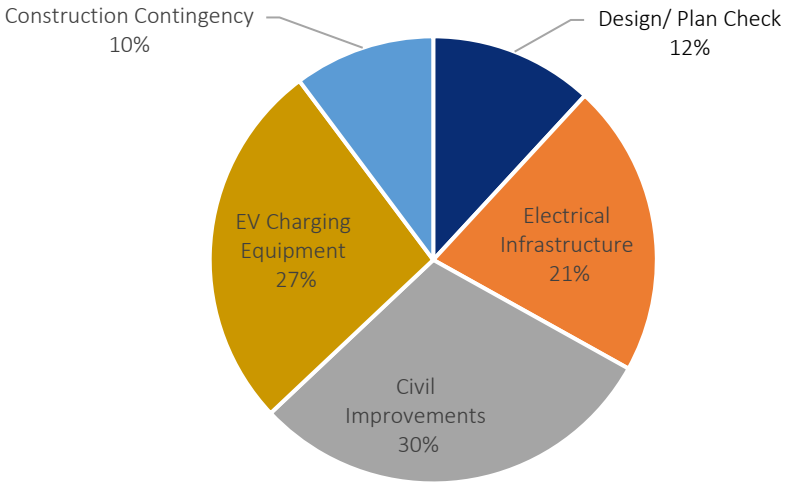
Analysis

County prioritized locations ranged in project cost from $112,697 for Phelan Library to $750,153 for Calico Ghost Town with an average cost across all sites of $291,881. The low relative cost of Phelan Library was a result of the limited scope (4 - Level 2 charge ports), availability of existing power, and limited accessible improvements required while the high relative cost for Calico Ghost Town was a result of expansive scope (12 - DC charge ports), installation of new service, and a larger portion of the parking area being impacted. The total cost estimate of executing all the EV infrastructure designs conceptualized is estimated at $4.67MM.

While the total capital cost is essential for budgeting, it does not present an accurate representation of the cost effectiveness of a project, for that we must look to Figure 9. Here we see that Calico Ghost Town has the lowest cost per kW of charger power with a value of $1,250/kW. This illustrates the fact that this site delivers more charging capacity per dollar spent than any other project on the list. In general, the projects with a greater number of chargers achieve greater cost efficiency since fixed/ base costs such as general conditions, site utility work, and design are spread over a greater number of assets. Prado Regional Park (Lots 5 & 6), 8575 Haven Avenue, Twin Peaks Sheriff Station, and Needles Sheriff Station are on the lower end of cost efficiency and each have six or less charge ports and a cost >$5,100/kW. In some cases, additional charge ports or power could be added to these locations to improve cost efficiency but this is not always possible since some locations have smaller parking lots where transitioning more stalls to EV only may be an operational hinderance to the site or where power is limited.

When we look across all locations we can determine where costs are concentrated as a percentage of the project ROM estimates. Figure 10 below displays average percentage of project cost by category across all locations. From the pie chart we see that Civil Improvements make up the largest percentage of project cost at 30% followed by EV chargers and Electrical Infrastructure.

Figure 10 – Average cost category contribution to ROM estimates



The category of EV Charging Equipment is distinct from Civil and Electrical categories in that charging equipment estimates are fixed per unit ($4,000/ Level 2 port and $35,000/ DC charger port) and as such, increase linearly with the number of ports. While there may be achievable project savings in this category, there are few levers available to gain savings other than procure less expensive equipment. If we shift our focus to the categories of Civil Improvements and Electrical Infrastructure (combined 51% of total project cost) we can evaluate the major drivers in project cost as a means to understand how costs are impacted by specific project and field conditions.

Major contributors to project cost for Civil Improvements include:

Trench distance

Length of trench increases the number of possible utility crossings, potholes needed to locate underground utilities, saw cutting, exported material (if not reused onsite), slurry backfill/ native compaction, and paving restoration. The longer the trench the higher the civil cost to a project

Accessible charger stall improvements

New path of travel, including curb cuts, ramps, truncated dome installation, concrete flatwork, striping, signage, regrading, and repaving all drive civil costs. The first EV charger on a site triggers CalGreen accessible charging requirements meaning that these costs impact small and large projects. A project of one to four charge ports requires one Van Accessible stall whereas a project of five to 24 charge ports requires one Van Accessible plus one Standard Accessible stall. The additional Standard Accessible stall requires a greater area be graded to meet ADA specifications and be connected to a path of travel. For this reason, smaller projects are often capped at four charge ports to avoid this added requirement and cost. That said, after five ports are installed, there are no further civil requirements related to CalGreen accessibility until you reach a quantity of 25 meaning that if you are to install more than five ports, bigger is better up to 24.

Major contributors to project cost for Electrical Infrastructure include:

Conduit length

Length of conduit, often closely associated with trench length from the Civil category, drives the size, and installation cost of copper wire conductors; longer conduit runs may require larger wire to manage voltage drop and meet code and charger specifications.

Supply Voltage

The voltage available at the point of interconnection to the utility or existing service determines what additional equipment may be necessary to achieve a useful voltage. Level 2 chargers operate at 208V or 240V AC, as such, if only 480V is available, an additional step-down transformer and subpanel is required in addition to the meter/service panel. Customer-owned transformation drives up the cost of electrical infrastructure, in equipment, wire, installation, and civil improvements like reinforced concrete equipment pads and trenching. When both DC chargers and Level 2 chargers are deployed on the same site, transformation will be required as well.

Main Switchboard

The service equipment required for each project is selected based on the specific power requirements, the greater the quantity and higher the power of charger, the higher the service equipment rating and physical size. Service equipment including utility pull section, meter cabinet, and distribution board increases in cost with the rating.

Summary

Anser generated Rough Order of Magnitude Engineering and Construction Estimates for each of the County priority locations reviewed for the EV Charging Initiative Project. Project costs were estimated by completing a quantity takeoff of the Conceptual Designs developed within a separate task. Total capital cost for the portfolio of 16 sites reviewed was $4.67MM and as shown in Figure 11. Cost estimates are intended to be used for budget development, review concentration of resources by cost category, and analyze individual project cost efficiency as shown in Figure 9.

Figure 11 - Summary cost table

Total One-Time Costs	Design/ Engineering	$553,968
	Construction Costs (includes 20% contingency)	$2,864,131
	Hardware (EV Chargers)	$1,252,000
	Other Costs[1]	
	Total One-Time Costs	**$4,670,099**

See Exhibit C – Cost Estimates for additional information.

[1] Soft costs to be developed by County, see Figure 7 for exclusions.

CHAPTER 4: Grant & Rebate Support

Approach

For this task, Anser compiled a comprehensive list of funding opportunities related to EV infrastructure. Next, the team applied specific grant/ incentive eligibility criteria to the 16 prioritized locations to generate a curated list of site-specific qualified opportunities. In cases where there were multiple eligible funding opportunities and the opportunities were in conflict with one another, they were prioritized in order of best to worst. Cases where funding opportunities could be stacked were noted and ranked in order of importance to the project.

Lastly, grantors such as the California Energy Commission (CEC) constantly release new funding opportunities for large-scale or innovative programs related to EV infrastructure. Anser reviewed a few recent opportunities to provide potential pathways that the County could pursue a comprehensive award as a means to develop the Charging Initiative as a whole.

Results

Figure 12 below lists the grants programs evaluated within this task.

Figure 12 - Programs reviewed

#	Program Name/ Hyperlink (A-Z)	Fund Source	Type	EV Sector
1	Alternative Fuel Vehicle Refueling Property Credit	IRS	Tax Credit	Level 2, DCFC, and more
2	CalEVIP1.0	CEC	Grant	Level 2 & DCFC
3	CalEVIP2.0	CEC	Grant	DCFC
4	California NEVI	Caltrans & CEC	Grant	DCFC w/i 1 mile of a highway on/off ramp
5	SCE Charge Ready – Charging Infrastructure and Rebate	SCE	Infrastructure Build and Equipment Rebate	Level 2
6	SCE Direct Current Fast Charge Program (DCFC)	SCE	Infrastructure Build and Equipment Rebate	DCFC
7	SCE Charge Ready – Small Site Rebate	SCE	Equipment Rebate	Level 2
8	CFI Discretionary Grant Program	DOT	Grant	Level 2, DCFC, and more
9	Communities in Charge	CEC	Grant	Level 2
10	CHiLL-2	CEC	Grant	Level 2
11	EnergIIZe EV Fast Track Funding	CEC	Grant	DCFC
12	EnergIIZe EV Jump Start Funding	CEC	Grant	Level 2 & DCFC
13	EnergIIZe Public Charging Station Funding	CEC	Grant	DCFC
14	LCFS Credits	CARB	Performance-Based Credit	Level 2 & DCFC
15	Rule 29	SCE	Infrastructure Build	Level 2 & DCFC
16	ZEV Infrastructure Grant App Technical Assistance	CEC	Application Support Services	Level 2 & DCFC

Figure 13 presents site-specific funding opportunities in a matrix format as well as opportunity notes and relevant information directly below. While some funding opportunities are not active or not applicable to the County's priority locations, information on the funding source may be relevant in the future for additional sites.

Figure 13 - Funding matrix and notes

Site Details					Potential Eligibility 3/2024											
#	Site	Address	DAC or Borders a DAC?	Utility	SCE Charge Ready - Small Site Rebate	SCE Charge Ready - Charging Infrastructure and Rebate	SCE Direct Current Fast Charging Program (DCFC)[4]	CalEVIP1.0	CalEVIP2.0	California NEVI[8]	CFI Discretionary Grant Program[10]	Alternative Fuel Vehicle Refueling Property Credit[11]	CPRG Program: Implementation Grants General Competition[13]	LCFS Credits	Rule 29	ZEV Infrastructure Grant App Technical Assistance
1	County Government Center - Hesperia	15900 Smoke Tree St. Hesperia, CA	No	SCE	No	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
2	Rancho Cucamonga Courthouse (Public Lot)	8303 Haven Ave, Rancho Cucamonga	Borders	SCE	No	Unavailable[2]	Yes	Unavailable[5]	Unavailable[7]	No	Yes	No	Yes	Yes	Yes	Yes
3	Kessler Park (Jurupa Lot)	18401 Jurupa Ave, Bloomington	Yes	SCE	No	Yes	No	Unavailable[6]	No	No	Yes	No	Yes	Yes	Yes	Yes
4	Yucaipa Regional Park (Lot 3A)	33900 Oak Glen Rd	No	SCE	No	Unavailable[2]	Yes	Unavailable[5]	Unavailable[7]	No[9]	Yes	No	Yes	Yes	Yes	Yes
5	222/268 Hospitality Lane	222/268 Hospitality Ln	Yes	SCE	No	Yes	No	Unavailable[6]	No	No	Yes	No	Yes	Yes	Yes	Yes
6	Cucamonga-Guasti Regional Park	800 N Archibald Ave, Ontario	Borders	SCE	No	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
7	Twin Peaks Sheriff Station	24000 Lake Dr, Crestline	No	SCE	Yes[1]	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
8	County Government Center - Joshua Tree	63665 Twentynine Palms Hwy	No	SCE	No	Unavailable[2]	Yes	Unavailable[5]	Unavailable[7]	No	Yes	No	Yes	Yes	Yes	Yes
9	Glen Helen Regional Park (Pool)	2555 Glen Helen Pkwy	Borders	SCE	No	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
10	Lake Gregory Regional Park	24171 Lake Dr, Crestline	No	SCE	No	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
11	Calico Ghost Town	36600 Ghost Town Rd	Borders	SCE	No	Unavailable[2]	Yes	Unavailable[5]	Unavailable[7]	No	Yes	No	Yes	Yes	Yes	Yes
12	8575 Haven Avenue	8575 Haven Ave, Rancho Cucamonga	Borders	SCE	Yes[1]	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
13	Phelan Memorial Library	9800 Clovis Rd.	No	SCE	Yes[1]	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
14	Prado Regional Park (Lots 5 & 6)	16700 Euclid Ave, Chino	No	SCE	No	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
15	Chino Airport (Kimball Lot)	8354 Kimball Ave, Chino	Borders	SCE	No	Unavailable[2]	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	Yes	Yes
16	Needles Sheriff Station	1111 Bailey Ave	Borders	Needles	No	No	No	Unavailable[5]	No	No	Yes	No	Yes	Yes	No	Yes

KEY	
	Technically qualifies / funding available
	Technically qualifies / no current funding available OR potentially able to qualify
	Does not qualify

Figure 13 - Funding matrix and notes (Continued)

Program	Footnote #	Note	Deadline
SCE Charge Ready – Small Site Rebate	1	Small Site Rebate: Maximum of 4 Ports (L2 Only) Up to $10,000 per Port. Costs not to exceed 100% of customer installed costs.	Applications are ongoing until funds run out
SCE Charge Ready – Charging Infrastructure and Rebate	2	At this time, SCE is only accepting applications for the Charge Ready - Charging Infrastructure and Rebate/ Customer Side Make-Ready waitlist for sites that are in state-designated Disadvantaged Communities for Charging Infrastructure and Rebate Program and Customer-side Make Ready rebate.	Applications are ongoing until funds run out
	3	A case can be made for sites that border DACs, since they most likely serve the users commuting from said DACs and therefore could be eligible. It is advised to check with SCE before applying for non DAC locations.	
SCE Direct Current Fast Charging Program (DCFC)	4	Funds will be made available for 205 total charge ports. The rebate program offers eligible participants a rebate of up to $40,200 per port (depending on DAC status) to help offset the costs associated with purchasing and installing a minimum of two (2) DCFC charging stations. SCE covers the cost of installing utility-side infrastructure. The customer-side infrastructure rebate offsets some of the cost for the customer-side infrastructure installation.	Applications accepted from April 1st – May 31st 2024
CalEVIP1.0	5	Currently, all funds for CALEVIP 1.0 are reserved and applications are not being accepted. Southern California Level 2 Incentive Project, for Level 2 chargers: Up to $3,500, or 75% of project costs, whichever is less AND Southern California Incentive Project (SCIP), for DCFC Chargers: up to $70,000 per DCFC for installations at new sites and sites with stub-outs	Funding cycle closed
	6	Currently all funds for CALEVIP 1.0 are reserved and applications are not being accepted. Southern California Level 2 Incentive Project, for Level 2 chargers: Up to $3,500, or 75% of project costs, whichever is less + additional $500 per connector for projects located in DACs AND Southern California Incentive Project (SCIP), up to $80,000 per DCFC regardless of installation site type or 80% of total project cost, whichever is less	Funding cycle closed
CalEVIP2.0	7	Currently no funding available through the Golden State Priority Project Eastern Region. DCFC rebates up to 50% of a project's total approved costs, capped at up to $100,000 per active connector	Funding cycle closed

Program	Footnote #	Note	Deadline
California NEVI	8	Currently no sites qualify for NEVI funding. Sites must be within 1 mile of an on or off ramp of a highway and must install DCFC chargers.	Funding cycle closed January 26, 2024
	9	This site is located within 1 mile of a highway, however it does not currently have DCFC in the conceptual design. If DCFC are used instead, it will be eligible for potentially receiving NEVI funding.	Funding cycle closed January 26, 2024
CFI Discretionary Grant Program	10	The CFI (Charging and Fueling Infrastructure) Discretionary Grant Program provides two funding categories of grants: (1) Community Charging and Fueling Grants (Community Program); and (2) Alternative Fuel Corridor Grants (Corridor Program). The Bipartisan Infrastructure Law provides $2.5 billion over five years for this program. This first round of funding makes $700 million from Fiscal Years 2022 and 2023 funding available to strategically deploy electric vehicle (EV) charging infrastructure and other fueling infrastructure projects in urban and rural communities in publicly accessible locations, including downtown areas and local neighborhoods, particularly in underserved and disadvantaged communities.	Funding cycle closed June 13, 2023P anticipated new funding cycle in 2024
Alternative Fuel Vehicle Refueling Property Credit	11	The credit for qualified refueling property subject to depreciation equals 6% with a maximum credit of $100,000 for each single item of property. The qualified alternative fuel vehicle refueling property must be for clean burning fuels, as defined in the statute, and must be located in low-income or rural areas. Must have a tax burden to claim credit, as such, is non-applicable to the County.	Applications are ongoing until funds run out
LCFS Credits		The LCFS (Low Carbon Fuel Standard) Credit Program established a market for credit transactions in excess of $2 billion. Credits are generated based on the greenhouse gas emissions reductions associated with the alternative transportation fuel. EV chargers registered with CARB generate credits by providing electric fuel to vehicles. One LCFS credit is equal to 1 metric ton CO2-equivalent and in March of 2024 the average value of one LCFS credit was $65 (historically the value of a credit was $100-200). Generated credits can be transferred by the County at will and proceeds belong to the County.	2030
Rule 29		Under Rule 29, SCE will coordinate and pay for the design and deployment of eligible electrical service extension work from SCE's electrical distribution line facilities to the customer installed meter panel or meter pedestal on the utility side of the meter for separately metered EV charging station projects. Customer cannot be participating in SCE Charge Ready programs, must enroll in a commercial EV time-of-use rate, and commit to install, maintain, and operate the EV charger(s) for a minimum of five years.	Unknown
EnergIIZe EV Fast Track Funding		EV Fast Track is intended for EV charging infrastructure projects with an associated commercial fleet or vehicle operator with existing or purchased/leased MD/HD ZEV vehicles. Participants are asked to show that they have a well-defined plan along with elements of project groundwork already in process.	Opened February 7, 2024 - Closing date unknown

Program	Footnote #	Note	Deadline
EnergIIZe Public Charging Station Funding		EV Public Charging is one of four funding lanes under EnergIIZE. The application process is competitive and applications are scored on criteria demonstrating project readiness, cost effectiveness and community benefit. Applicants interested in deploying public EV charging infrastructure for MD/HD vehicles may be eligible for up to $500k per public charging project. Additional funding is available if the applicant is an EV public or shared charging station developer, site owner, authorized lessee, or an authorized representative of a site where MD/HD EV Infrastructure will be installed and open to the public.	Unknown
EnergIIZe EV Jump Start Funding		Projects are eligible if Commercial fleet recharging infrastructure is in a designated Disadvantaged Community	Unknown
ZEV Infrastructure Grant App Technical Assistance		The purpose of this grant is to develop a solicitation for a third-party implementer to provide technical assistance for applicants seeking federal and state funding for ZEV infrastructure. It is expected that technical assistants will help with education and awareness, provide guidance on eligibility, and identify grants.	Opening August 2024 - Closing date unknown

Analysis

The funding landscape for EV infrastructure projects is constantly changing. 4-5 years ago, significant grant funding was being directed towards Level 2 public charging projects; since then, funding dollars have been redirected towards fleet electrification, heavy-duty vehicle charging, and public DC fast charging. While public Level 2 charging funding opportunities have greatly reduced, there are still options available, especially for disadvantaged communities and areas serving multi-family housing. It is also important to note that new rounds of funding and new incentives are still being released making it necessary to monitor and research funding opportunities and to prepare for new, scheduled rounds of funding.

Target Funding Opportunities

Below are a series of tables and funding opportunity descriptions with identified next steps:

Figure 14 - Funding opportunity 1

SCE Charge Ready Small Site Rebate		
Applicable Sites	Phelan Memorial Library 8575 Haven Twin Peaks Sheriff Station	$40,000 $40,000 $40,000
Total Funding Potential	Program provides rebate of $10,000 per charge port installed	**$120,000**
Logic	Since these sites only have four chargers per site and they are in SCE service territory, they fit within the criteria for SCE Charge Ready Small Site Rebate.	
How it Works	After your application is submitted and program funds are reserved, applications will qualify for the Small Site Rebate provided the program has available funds, and that the site/participant agrees to meet all program requirements. Once SCE approves the application, participants can then move forward with design and construction activities. If utility-side infrastructure upgrades are required for new dedicated service, participants will coordinate with SCE to address the necessary upgrades. Following the completion of the charging equipment installation process, participants will submit the final documentation to SCE for review and determine final rebate amount to be issued. SCE will issue rebates in the form of a bank check which will be mailed to the program participant	
First Steps	1) Request a meeting with your SCE account representative for each site. 2) Submit an online application to request a reservation of program funds by visiting the program enrollment website (https://www.sce.com/evbusiness/chargeready). SCE will review applications and notify applicants once the application is approved. Applicants must first apply and receive project approval prior to purchasing any charging equipment or performing any related construction at the site	

Figure 15 - Funding opportunity 2

SCE Charge Ready Charging Infrastructure and Rebate		
Applicable Sites	222/268 Hospitality Lane Kessler Park	~$405,569 ~$140,295
Total Funding Potential	Program covers design and installation of new service and EV infrastructure. Customer responsible for charger equipment purchase and installation/ commissioning of chargers	**~$545,864**
Potentially Applicable Sites	Cucamonga-Guasti Regional Park, Rancho Cucamonga Courthouse, Calico Ghost Town, Glen Helen Regional Park, 8575 Haven. If SCE confirms that any of these sites can apply to waitlist and that the waitlist is "optimistic," consider applications.	
Logic	Since these sites are in state-designated Disadvantaged Communities they can apply to the Charge Ready waitlist. If projects can make it through waitlist most of the project design and construction costs are covered by SCE.	
How it Works	After your application is submitted you will be added to a waitlist. If sufficient funding is available, your project will be added to the program. Once SCE approves the application, they will complete a conceptual design and utility infrastructure study. Upon customer acceptance of the conceptual design, you will sign an agreement and full design and switchgear procurement will ensue. SCE's selected contractors will install all infrastructure to-the-meter (utility-side) and beyond-the-meter (switchgear to the charger location. Customer will hire charger installation vendor to install chargers after SCE accepts contractor's work. SCE will issue charger rebates in the form of a bank check which will be mailed to the program participant (subject to rebate availability).	
First Steps	1) Request a meeting with your SCE account representative for each site 2) Submit an online application to request a reservation of program funds by visiting the program enrollment website (https://sce-te.dsmcentral.com/traksmart4/html/pux/commercial/auth/login)	

Figure 16 - Funding opportunity 3

SCE Direct Current Fast Charging Program (DCFC)		
Applicable Sites	Yucaipa Regional Park County Government Center – Joshua Tree Calico Ghost Town Rancho Cucamonga Courthouse (Public Lot)	~$80,400 ~80,400 ~482,400 ~$160,800
Total Funding Potential	Program covers design and installation of new service and EV infrastructure. Customer responsible for charger equipment purchase and installation/ commissioning of chargers.	**~$804,000**
Logic	Charge Ready will be accepting applications starting April 1, 2024 until all 205 ports are reserved	
How it Works	Participants must submit an online application with detailed site plans, and it must be approved by SCE before any infrastructure work may begin. Participants must install at least two (2) SCE-approved DCFC charging stations. DCFC stations will be required to include at least one (1) CCS and one (1) CHAdeMO or NACS connector to ensure accessibility and optimize usage. Participants must purchase, install, own, and operate the equipment and keep charging equipment operating for at least ten (10) years. SCE's selected contractors will install all infrastructure to-the-meter (utility-side) and the County's contractor will install infrastructure beyond-the-meter (switchgear to the charger location. Customer will hire charger installation vendor to install chargers. SCE will issue charger rebates in the form of a bank check which will be mailed to the program participant, not to exceed total project cost.	
First Steps	1) Request a meeting with your SCE account representative to review application process 2) Submit an online application to request a reservation of program funds by visiting the program enrollment website through the County's SCE account page (https://www.sce.com/evbusiness/chargeready/ready-to-apply)	

Figure 17 - Funding opportunity 4

CFI Discretional Grant Program		
Applicable Sites	All sites	
Total Funding Potential	Program covers up to 80% of the total project cost	**$3,736,079**
Logic	The first tranche of funding was closed last year but this is a five-year program and we are expecting the Notice of Funding Opportunity (NOFO) to open soon for fiscal years 2024 and 2025 ($900MM in funding). The County should be prepared for this NOFO as it could fund the entire EV charging initiative.	
How it Works	The County can apply for the Community Grant when made available. This grant can cover development phase activities, real property acquisition to expand access to eligible infrastructure, acquisition and installation of eligible infrastructure, construction, maintenance, and operation. No more than 5% of grant funds can be used for education and outreach.	
First Steps	1) Request a meeting with a current grant recipient for background and feedback. Suggested contacts are City of Palmdale ($14.8MM), San Joaquin COG ($15MM), or County of Contra Costa ($14.9MM). 2) Request a meeting with the local Federal Highway Administration office for technical support at the following website: (https://www.fhwa.dot.gov/bipartisan-infrastructure-law/technical_support.cfm) 3) Workshop a proposal concept based on feedback and County Initiative	

Additional Programs

Low Carbon Fuel Standard Credit Program

LCFS is a key state program to cut greenhouse gas (GHG) emissions and other smog-forming and toxic air pollutants by improving vehicle technology, reducing fuel consumption, and increasing transportation mobility options. The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector.

Any chargers installed by the County can be registered with the California Air Resources Board (CARB) as Fuel Supply Equipment (FSE). Once registered, quarterly electricity dispensed from chargers can be reported through the LCFS reporting process and credits generated. One LCFS credit is equal to 1 metric ton CO2-equivalent and in March of 2024 the average value of one LCFS credit was $65 (historically the value of a credit was $100-200). Generated credits can be transferred by the County at will and proceeds belong to the County. Potential LCFS credit revenue depends on the EV charger power as well as its utilization; however, anticipated annual revenue per L2 charger may range from $250 - $900.

Currently the County permits the EV charger vendor/ operator to collect LCFS revenue for existing chargers. The vendor takes on the responsibility for registering and claiming credits and reduces the cost of services to the County. This is a reasonable approach provided that the County is realizing benefit from assigning the rights to credits to the EV charger vendor.

California Public Utilities Commission Rule 29

In 2022 the CPUC completed rulemaking approving the use of ratepayer funds to cover new utility-side infrastructure to support EV charging. In SCE territory, this is known as Rule 29 and in practice means that the customer does not directly pay for the cost-of-service line extension and electrical distribution infrastructure on the utility-side of the meter. This could include trenching in the street, new power poles, transformers, switches, and conductors.

California Energy Commission (CEC) Grant Opportunities

The CEC consistently releases new grant opportunities. While CEC grant application preparation can be involved, the awards can be substantial and fund a comprehensive program. It is good practice to subscribe to CEC mailing lists to stay informed of pre-solicitation workshops and active grants. In March 2024 CEC hosted a pre-solicitation workshop for *ZEV Infrastructure Grant App Technical Assistance*. This funding opportunity is anticipated in August 2024 and intended to help local communities prepare to apply for future rounds of Clean Transportation Program funding and Charging and Fueling Infrastructure (CFI) program funding, as well as other zero emission vehicle-related state and federal funding opportunities. Website: (https://www.energy.ca.gov/event/workshop/2024-03/pre-solicitation-workshop-zev-infrastructure-grant-application-technical). Technical support grants like this one can help open the door to additional opportunities. Note that any awardee of an active CEC grant cannot pursue other CEC grants simultaneously.

Summary

Anser provided funding opportunity information for the County's prioritized EV infrastructure sites based on eligibility requirements and known open or upcoming opportunities. Anser then curated the target funding opportunities based on application priority and provided next steps for each. While the total volume of the funding opportunities for Level 2 chargers has decreased over the years, there are still a few options and new opportunities are released all the time.

Figure 18 below presents a shortlist of funding opportunities and the order in which they should be pursued. If a higher priority opportunity is unsuccessful, then the next in the priority chain should be pursued. None of the opportunities listed below are in conflict with one another, however, in some cases where a higher priority opportunity is secured there may not be a need for additional construction funding.

Figure 18 - Funding opportunity prioritization

Site	Priority			
	1st	2nd	3rd	4th
Phelan Memorial Library	SCE Small Site Rebate	ZEV Infrastructure Grant App Technical Assistance (grant assistance)	CFI Discretionary Grant Program (construction)	LCFS Credits (operational cost recovery)
8575 Haven	SCE Small Site Rebate			
222/268 Hospitality Lane	SCE Charge Ready - Charging Infrastructure and Rebate			
Kessler Park	SCE Charge Ready - Charging Infrastructure and Rebate			
Calico Ghost Town	SCE Direct Current Fast Charge Program			
Rancho Cucamonga Courthouse	SCE Direct Current Fast Charge Program			
Yucaipa Regional Park	SCE Direct Current Fast Charge Program			
County Government Center – Joshua Tree	SCE Direct Current Fast Charge Program			
All other sites				

SCE Charge Ready Charging Infrastructure and Rebate, Small Site Rebate, and Direct Current Fast Charge programs should be prioritized for sites that qualify. For the Charge Ready Charging Infrastructure and Rebate program, currently only applications from disadvantaged communities (DAC) are being accepted to the waitlist. However, a case may be made for those sites that border or serve DACs. San Bernardino County should discuss this with its SCE account representative.

It is also recommended that San Bernardino County prioritize anticipated CEC opportunities for ZEV Infrastructure Grant App Technical Assistance (grant assistance) and CFI Discretionary Grant Program when they open for FY 2024 & 2025. CEC opportunities allow multiple sites to be listed in one application and can create funding efficiencies while propelling the County's EV Charging Initiative.

CHAPTER 5: Analyze Rate Adjustments

Anser developed a preliminary presentation powered by an estimation tool to determine the cost of electricity and operation in different usage scenarios for County-operated chargers for workplace and public parking lots. Additionally, a cost recovery analysis was created to estimate the net cost or benefit to the County based on fees set for charging services. This memo addresses the task of analyzing the anticipated cost to the County to provide charging services at County-owned locations as a means to validate the fee passed on to end users.

Approach

In order to estimate the anticipated costs to the County to provide EV charging services at County-owned locations, Anser had to consider several variables, including the **quantity** of chargers at each location (#), the **power rating** of those chargers (kW), the **utilization** of those chargers (time; how often and when), and the **utility rate schedule** under which the metered consumption would be billed ($). The following is a breakdown of the assumptions and analysis that went into each of those variables.

Quantity

The number of EV charging stations at each priority location varies and is detailed in the conceptual design task. For the purposes of this analysis, Anser has assumed an average quantity of 10 electric vehicle chargers per site.

Power Rating

The electrical power consumed by each EV charger ranges depending on the make and model selected. However, the most common Level 2 charger option is rated to dispense 32 Amps at 208 Volts, or a total of 6.66 kW per charge port. Therefore, for the purpose of this analysis, each EV charger is modeled at 6.66 kW.

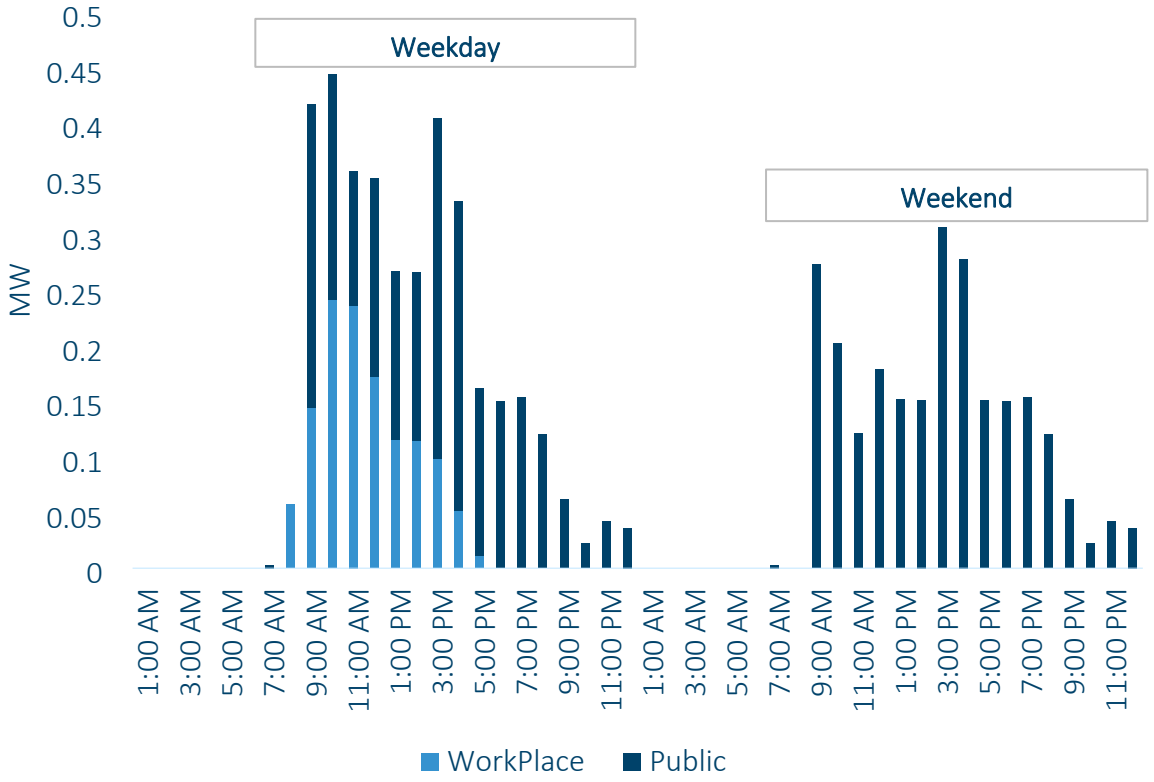
Utilization

The exact utilization of the EV charger is difficult to predict, therefore, Anser relied on raw data obtained from Avista's Semi-Annual Report on Electric Vehicle Supply Equipment Pilot Program[2]. This report generated typical load profiles for different use cases: home, workplace, and public, with workplace and public being most relevant to the county.

The simulated daily load profiles for these use cases are summarized in the image below for a typical weekday and a typical weekend. For the purpose of this analysis, the public use case was isolated and utilized to simulate an expected load profile. Although some seasonal variation is likely in many cases, for this analysis, the load profile was assumed to be consistent throughout the year. Lastly, a scaling factor was applied to the load profile to account for variations in overall usage (high, medium, or low) with the high scaling factor being used here.

[22] https://www.myavista.com/energy-savings/green-options/electric-transportation

Figure 19 - Typical EV charger load profiles by use case



The major trends identified in the workplace case can be summarized with the following points:

- Bulk of charging takes place between 8AM and 4PM
- Ramps up quickly and peaks around 10AM, tapers off slowly from there
- Zero overnight and weekend charging loads

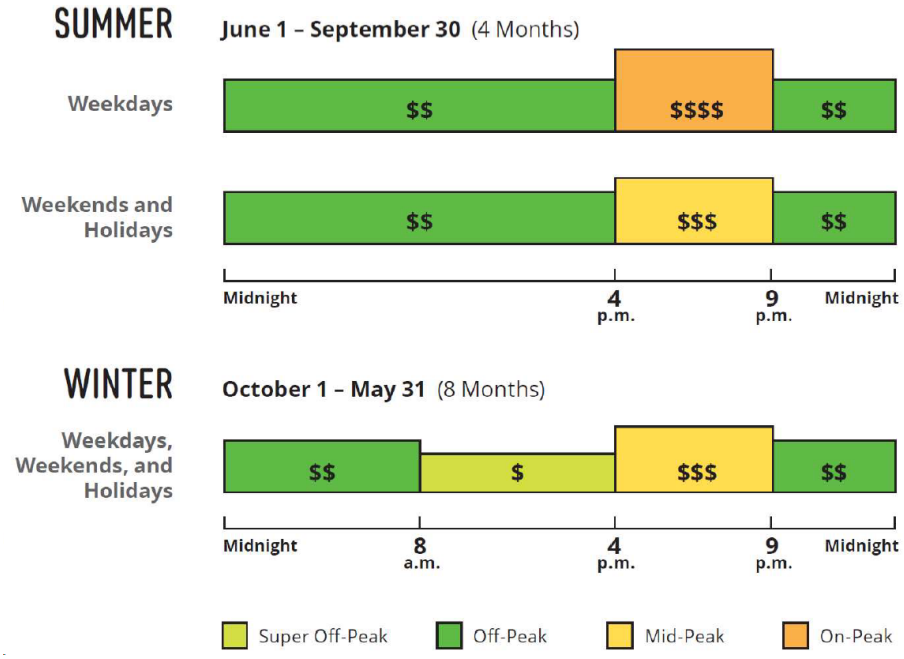
The major trends identified in the public case can be summarized with the following points:

- Bulk of charging takes place between 9AM and 8PM
- Ramps up very quickly and peaks almost immediately, followed by a more consistent load and another peak around 3PM, tapers off from there
- Zero overnight loads with minimal difference between weekdays and weekends

Utility Rate Schedule

Southern California Edison (SCE) has published EV-only rate tariffs that utilize the same Time-Of-Use (TOU) rate structure as other SCE rate schedules. The TOU structure is summarized in Figure 20 below.

Figure 20 – SCE EV-Only tariff



One major difference between the EV-only rates and most other SCE rates, is the EV-only rates do not currently have demand charges ($/kW) associated with them, but those demand charges are scheduled to be phased in over the next few years. For this analysis, we have assumed a demand charge of $15 per kW per month for on-peak times, and another $5 per kW per month for all other times (non-coincident peak), which aligns with how other similar rate tariffs are structured, such as TOU-GS3-R.

To understand the difference between **energy charges ($/kWh)** and **demand charges ($/kW)**, we need to identify the difference between energy and power using the most common units when discussing electricity: Kilowatt-hours (kWh) and Kilowatts (kW) respectively. Energy as an accumulation over a period of time, such as a day or billing period whereas power is an instantaneous measurement, for example the kW provided by the utility at 5:15 PM on April 17th.

An analogy that highlights the difference between power and energy relates to traveling in a car. The number of miles driven during a specific trip is akin to energy in that it is an accumulation or a sum. Speed in this analogy is equivalent to power and represents how fast the car is moving at any given moment.

Now, imagine that every month, in addition to the cost to fill one's tank (kWh energy charge), one also receives a bill that is based on the highest speed the vehicle achieved for that month (an automatic speeding ticket); this is how utility demand charges work. If one sticks to local travel and never exceeds 35 MPH, then the bill will be based on that. However, if one gets on the highway and travels at 70 MPH, then the demand charge portion of the bill would increase.

For visual learners, please refer to Figure 19. This graph illustrates the change in power demand throughout the day. If this day turns out to be the day on which the peak demand occurred, then the mont

hly demand charge would be based on this day. In this case, the peak demand occurs at 10 am, reaching nearly 0.45 MW, equivalent to 450 kW.

Furthermore, since this graph is created using hourly data, each bar represents a certain amount of energy, measured in MWh (1 MWh = 1,000 kWh). Using the peak demand example, if the demand was a consistent 450 kW for one hour, then the amount of energy consumed is 450 kW * 1 hour = 450 kWh. To determine the total energy consumed over the day, one could add up each of the bar graphs to get a sum (50 kWh + 400 kWh + 450 kWh + etc. = total kWh consumed that day).

To further complicate matters, the utility often leverages two different types of demand charges, referred to as coincident and non-coincident. Returning to the car example, this would be akin to paying two different speeding tickets: one for the highest speed traveled at any point during the month (non-coincident) and another for the highest speed traveled during peak rush hour times (coincident). This strategy is effectively a time-of-use-based demand charge strategy designed to incentivize conservation during times when the grid is most stressed, similar to how a road toll may vary based on the time of day the road is being utilized.

Figure 21 below summarizes the various EV-only rates offered by SCE.

Figure 21 – Available SCE EV-Only tariffs

BUNDLE RATE FACTORS EFFECTIVE JUNE 1, 2023	Customer Charge	Facilities Related Demand (FRD) Charges	Summer Season			Winter Season		
			Energy Charges			Energy Charges		
Rate Schedule	$/month	$/kW*	On-Peak kWh	Mid-Peak kWh	Off-Peak kWh	Mid-Peak kWh	Off-Peak kWh	Super-Off-Peak kWh
Demands 20 kW and below								
TOU-EV-7 (Option E)	23.6 ¢/Day	N/A	$0.67435	$0.38629	$0.25485	$0.46835	$0.27785	$0.14649
TOU-EV-7 (Option D)	23.6 ¢/Day	N/A	$0.67435	$0.38629	$0.25485	$0.46835	$0.27785	$0.14649
Demands between 20 kW to 500 kW								
TOU-EV-8	$188.15	N/A	$0.73075	$0.37754	$0.23185	$0.43918	$0.25084	$0.12574
Demands above 500 kW (Below 2 kV)								
TOU-EV-9	$353.69	N/A	$0.57797	$0.32820	$0.19571	$0.38648	$0.21043	$0.11634
Demands above 500 kW (From 2 kV to 50 kV)								
TOU-EV-9	$365.95	N/A	$0.52418	$0.30030	$0.17792	$0.36328	$0.19151	$0.10934
Demands above 500 kW (Above 50 kV)	Voltage Discount for 220 kV and above are excluded							
TOU-EV-9	$3,429.29	N/A	$0.41168	$0.18923	$0.12933	$0.23839	$0.14148	$0.08300

*No Facility-Related Demand (FRD) charges. Future FRD charges may change pending FERC decision. Please refer to tariff sheet on sce.com

Note the column on the left which bins rate options based on demand ranges. Given the assumption of 6.66 kW per EV charger, sites with more than two and less than 75 Level 2 EV chargers will fall into the TOU-EV-8 category. Therefore, this analysis uses TOU-EV-8 as the basis for cost calculations, since most, if not all, of the county's locations will have a quantity of EV charger that falls within this range.

Administrative Soft Costs & Cost Recovery

The County has estimated the internal soft costs to support this initiative to be $0.03 per kWh. This added fee will cover the cost of administrative duties necessary to provide the initiative with the support it needs from County staff members. In total, this brings the fee levied by the county up from $0.32 per kWh to $0.35 per kWh. However, the focus of this analysis does not include these administrative costs, which is why $0.32 per kWh was used instead.

Process

By combining the assumptions related to the quantity of chargers, power rating, and utilization, a simulated load profile was created that represents a year's worth of electricity usage across 8,760 hours (number of hours in a year). The assumptions related to the utility rate schedule were used to create an energy cost profile for those same 8,760 hours. Next, the energy usage in each hour was multiplied by

the unit cost of energy in that hour to calculate the energy cost, which was then summed to get the annual cost of energy.

Although demand charges do not presently exist under the EV-only rate tariffs offered by SCE, in preparation for the phase-in of demand charges over the next few years, this analysis also identified the peak demand occurring in each month and multiplied that peak demand by an assumed demand rate. This allows for a more realistic approximation of the total cost to charge EVs under future SCE EV-only rate tariffs.

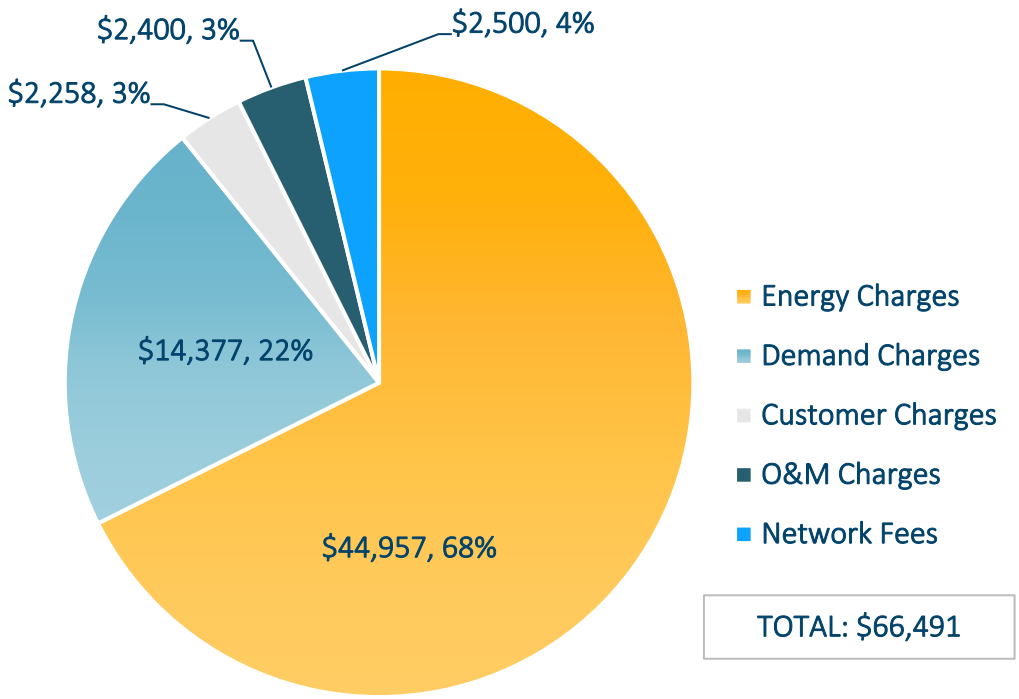
There are additional charges associated with owning and operating EV charger infrastructure, which include operations & maintenance (O&M) contracts, network operator fees, and customer charges. This analysis considers these charges as well, to create a more complete picture of the total cost of operation. Anser assumed the O&M fees would be $30 per EV charger per month, with operator fees of $250 per EV charging port per year. The customer chargers are set directly by SCE at $188.15 per meter per month under the TOU-EV-8 rate schedule.

See Exhibit D – Excel workbook calculations for additional information.

Results

The results of this analysis are summarized in Figure 22 below for the theoretical sample site with 10 EV chargers.

Figure 22 – EV charger operating costs breakdown



In total, these charges add up to $66,491 for the total annual energy consumed of 171,301 kWh. Dividing the total cost by the total energy consumed gives an average unit cost of energy equal to $0.3882 per kWh. Note, that removing the theoretical demand charges from this total drops the unit cost of energy to $0.3042 per kWh.

At the energy-based fee of $0.32 per kWh, the County would be able to recover $54,816 of operational costs based on the assumptions above. Under the scenario that includes demand charges, this would equate to 82.4% of the County's operating expenses for this service, ultimately costing the County $11,675 per year for a site of 10 chargers. Excluding theoretical demand charges would result in the County recouping all $52,115 of the operating expenses, plus an additional $2,702 of revenue.

Note, this analysis does not include administrative soft costs, estimated to be an additional $0.03 per kWh, which would be recovered by adding that incremental cost to the total fee of $0.32, arriving at a total of $0.35 per kWh.

Summary

Publicly available EV chargers installed at County-owned facilities provide a service to EV drivers and help support transportation electrification growth initiatives from the County, state, and federal levels. As a site host for EV charging, there are costs to owning and operating chargers including electricity supplied by the utility, operation contracts with a charger network vendor, and maintenance in the form of Service Level Agreements. Further, specific utility tariffs and rate options impact the cost of charging based on the time of day, peak power delivered, and whether the chargers are on a dedicated EV service or fed from an existing County meter. It is important for agencies to understand and estimate these expenses to appropriately determine the fee passed on to end users.

Given that demand charges[3] are not presently being applied under the EV-only rates but are planned to be phased in over the next few years, it is the opinion of Anser Advisory that the $0.32 per kWh fee, excluding soft costs, being applied to the public for use of County EV chargers is a fair and appropriate amount. Depending on actual number of chargers at a site and utilization, there may be some small benefit to the County in the short term, on the order of a few hundred dollars per charger per year (under high-use cases). This will likely shift to a neutral benefit in the mid-term as demand charges are phased in and may eventually lead to a cost to the County in the long term when demand charges are fully integrated.

Therefore, the Anser team recommends that the County maintain the rate set at $0.32 per kWh, excluding soft costs, and revisit this analysis in 2 to 5 years once actual usage data for the EV chargers is collected and analyzed, and the specifics of the demand charges levied by SCE are known.

[3] Demand charges are utility fees levied based on the maximum instantaneous delivery of power during a billing cycle. They are explained in greater detail within the *Approach* section of this Chapter.

CHAPTER 6: Charger Ownership Model Cost-Benefit Analysis

There are several EV Charging Station (EVCS) procurement and ownership models to consider when pursuing electrification programs and an agency's approach should be individualized to their specific goals, capacities, and budget. The elements of these various models can be broken down into two basic approaches for deploying and operating EV Charging Stations: leasing and owning. Generally speaking, maintaining ownership of EVSCs will provide the County with full control over operations, maintenance, and revenue, while leasing stations from a third-party service provider may help alleviate risk and responsibility related to financing the equipment and maintenance. Ultimately, selecting the right ownership model will depend on the County's priorities for control and costs of chargers under the EV charging initiative.

The figure below presents some key considerations to help the County decide which ownership model may work best to help meet County needs. It should be noted that many of the elements described below can be negotiated with the EV charging network operator allowing for customization of service level agreements and contracts. For example, O&M can be layered on top of either operational model therefore selecting a lease vs own will not preclude the County from adding operational support.

Figure 23 - Charging equipment ownership models

Ownership Model Considerations				
Model	Lease		Own	
Considerations	Pros	Cons	Pros	Cons
Incentives	3rd party can support pursuit of funds and complete necessary administrative activities. Many funding sources are agnostic whether the EVCS is leased or owned, for example SCE does not require customer ownership for Charge Ready participation		If the County is pursuing significant funding for EV projects, there is the opportunity of having a grant pay for the chargers along with the infrastructure so that the County holds ownership of all assets,	
Tax Credits	3rd parties may be able to leverage tax benefits such as asset depreciation and tax credits then pass a portion of the savings on to the County.			The County cannot collect tax benefits as a non-tax-paying entity so potential savings may not be realized.
CapEx / OpEx	Shifts responsibility for high upfront costs to build out infrastructure to a 3rd party. The County pays for the equipment over time through OpEx.			County bears responsibility for upfront costs to build out infrastructure. Higher initial investment must be supported by CapEx budget.

Asset Control	Since the County does not control the chargers, Contractual terms can be enforced to ensure that the chargers are being managed properly by the 3rd party.	County would not have full control over EVCS and be bound by contractual terms that may have termination clauses or other penalties for early modification.	County would have full control over EVCS, providing more autonomy for customization.	County may invest additional soft costs and administrative support to operate chargers.
Maintenance	3rd party will be responsible for maintenance costs, and have incentive as owner to maintain EVCS.	County may not be able to use other vendors for maintenance in cases of delays in service.	County will have flexibility to use any vendor for maintenance, potentially allowing for quicker & more price-competitive service.	County would be responsible for maintenance costs.
Revenue	Is used to pay 3rd party service for installation and O&M over time, mitigating high upfront costs.	3rd party is largely in control of usage pricing, meaning costs passed onto consumers through prices may be high and discourage use. Additionally, County may not generate as much revenue to support cost recovery.	County will have full control over pricing for consumers and can reduce prices to encourage usage if needed. County can recoup/ offset investment over time via revenue generated.	County is responsible for all costs and admin associated with managing customer payment.
Technology	Since the 3rd party owns the charger, the County is not at risk for owning a stranded asset or outdated technology.			County bears the risk of the charger equipment/ technology becoming outdated, requiring replacement at County expense.

CHAPTER 7 – Report Summary

Anser evaluated 16 County locations for EV charging infrastructure in San Bernardino County by identifying prioritization attributes, conceptual designs, cost estimates, and funding opportunities (see Figure 1 below). All locations included in this report present feasible EV charging infrastructure projects and should be considered for further development.

It is recommended that the County pursue funding support both internally through budget allocations and externally through grant funding opportunities, to advance the EV charging initiative program. Additional sites should be considered for charging infrastructure to broaden the portfolio of locations across the County and strengthen the initiative. If sites are to be developed piece-meal, priority should be placed on sites with the highest Priority Scores as shown below.

Figure 1 - Summary of site prioritization details

Site Rank	Site	# Level 2 Charge Ports Per Site	# DC Fast Charge Ports Per Site	Estimated Price	Priority Site Score
1	County Government Center - Hesperia	12	0	$271,084	76
2	Rancho Cucamonga Courthouse (Public Lot)	10	4	$419,792	76
3	Kessler Park (Jurupa Lot)	6	0	$164,295	75
4	Yucaipa Regional Park (Lot 3A)	8	2	$310,664	72
5	222/268 Hospitality Lane	28	0	$517,569	72
6	Cucamonga-Guasti Regional Park	14	0	$301,811	70
7	Twin Peaks Sheriff Station	4	0	$162,248	69
8	County Government Center - Joshua Tree	8	2	$302,545	69
9	Glen Helen Regional Park (Pool)	14	0	$379,977	69
10	Lake Gregory Regional Park	8	0	$245,575	68
11	Calico Ghost Town	0	12	$750,153	67
12	8575 Haven Avenue	4	0	$140,611	66
13	Phelan Memorial Library	4	0	$112,697	64
14	Prado Regional Park (Lots 5 & 6)	6	0	$206,001	64
15	Chino Airport (Kimball Lot)	8	0	$214,444	61
16	Needles Sheriff Station	4	0	$170,634	56
	TOTAL	138	20	$4,670,000	

EXHIBIT A – Basis of Scoring

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Parking	Publicly Accessible Parking	Is the parking publicly accessible?	Yes - 5 pts No - 0 pts	The EV Charging Initiative prioritizes publicly accessible charging infrastructure. Sites that meet these criteria receive full points and sites that do not, receive no points.
Parking	Lot Type: Surface, Garage, Street Parking	Is the parking/ charging area in a surface parking lot, garage, street, or other?	Surface Lot - 3 pts Garage - 2 pts Street - 1 pts	The parking lot type changes how difficult it is to trench and/ or install above-grade conduit to the charger locations. Surface lots provide the simplest infrastructure design and are generally the most easily retrofitted due to the flexibility of space. Parking garages may pose additional challenges due to minimum clear height of the garage and overhead conduit clearance, fixed grades, tight clearances to walls, lack of unsloped drive surfaces, and pre- or post-tensioned concrete slabs that cannot be penetrated. Street charging poses additional design complexity due to parallel and angled parking requirements, charger placement, and cord management. In assigning more points to simpler lot types, the most feasible locations are preferred.
Parking	Nearby Amenities	Are there nearby amenities and services available to EVSE users?	Retail/ Dining - 5 pts Parks/ Rec w/ alt rev op - 4 pts Parks/ Rec w/o alt rev op - 3 pts Business - 2 pts Bathrooms - 1 pt None - 0 pts	If the chargers are located near amenities or services, it makes the chargers more desirable to users. These amenities are ranked based on the ability to produce revenue for the County. Since the County will not be profiting from the use of the chargers, sites are ranked higher if they are located where the County can collect another source of revenue.
Parking	Parking Fee Collection	Is there a parking fee at the site?	No - 3 pts Yes - 0 pts	If there is a parking fee to access the site in addition to the fee to charge a vehicle it may deter potential users that are looking for charging services only. Sites that are free to access/ park receive a higher score.

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Parking	Parking Stall Quantities	How many parking stalls are located at the site?	101 + - 6pts 76 - 100 - 5pts 51 - 75 - 4pts 26 - 50 - 3 pts 11 - 25 - 2 pts 6 - 10 - 1 pts 0 - 5 - pts	It is generally easier to convert existing parking stalls to EV charging stalls at larger sites because a lower percentage of the total stalls available result in conversion. For example, installing four charger ports at a 20-stall parking lot has a significantly larger impact on site operations and the remaining quantity of non-EV stalls than installing the same four charger ports at a 100-stall lot. Larger lots generally have more open space and area available for associated EV infrastructure. Since larger sites can accommodate more chargers, the base infrastructure required is spread over greater number of charge ports leading to project and cost efficiencies. Larger parking lots receive a higher score.
Parking	Nearby Electric Vehicle Supply Equipment (EVSE)	Is the site near other charging locations?	11+ mi away - 3 pts 5 - 10 mi away - 2 pts 2 - 4 mi away - 1 pt 0 - 1 mi away - 0 pts	Higher scores are assigned to sites that are further away from existing EV charging locations to expand the EVSE network and provide additional access in areas with less coverage.
Parking	Average Lot Usage	Most frequently, what percent of spaces are occupied?	0 - 25% - 3 pts 26 - 50% - 2 pts 51 - 75% - 1 pts 76 - 100% - 0 pts	Lots with high levels of occupancy may pose initial operational challenges since standard non-EV stalls must be converted to EV-only stalls, resulting in the loss of parking for standard internal combustion engine (ICE) vehicles. The challenge will fade as EV adoption increases and more drivers need charging services, but it is noteworthy in the near-term.
Parking	Electric Vehicle Supply Equipment (EVSE) Demand	Is the EV demand high, medium, or low for this site?	High - 4 pts Medium - 2 pts Low - 0 pts	Sites with higher perceived demand for EV charging receive a higher score. Demand is measured in the number of EV's observed in the lot and/ or any requests the site has received for charger services. This information is gathered through conversation and interview of site stakeholders as well as visual inspection.
Parking	EVSE Supports Staff & Public	Can the site support staff charging along in addition to public charging?	Public, Staff, and Fleet - 3 pts Staff or Fleet and Public - 2 pts Public - 1 pt No public - 0 pts	Sites that have the ability to leverage multiple users including fleet, staff, and the public, are considered more valuable than sites that cannot. These sites would only need to install one set of chargers to serve the various user groups. This is a more fiscally efficient and better use of space than if chargers needed to be installed separately for different user groups.

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Parking	Location Maximizes Visibility	Are the chargers located in an area to maximize visibility?	Yes – 1 pt No – 0 pts	The easier it is for users to find the chargers, the higher the likelihood of utilization. Sites that are visible receive a point.
Parking	Easy Ingress/Egress from Traffic	Is there easy ingress/egress from traffic?	Yes – 1 pt No – 0 pts	If it is difficult to access the lot or the chargers, it could be a potential safety risk to the drivers and their vehicles. Sites with easy ingress and egress receive a point.
Parking	Sufficient Lighting Present	Is lighting available after dark to create a safe environment?	Yes – 1 pt No – 0 pts	Sufficient lighting is important to keep users safe as they charge their vehicles. It also makes it easier to access and operate the chargers. Sites with sufficient lighting receive a point.
Parking	Proximity to Multimodal Transportation	Is there proximity to multimodal transportation such as buses and trains?	Yes – 1 pt No – 0 pts	Sites with access to multimodal transportation can use chargers and access transit while their vehicles are charging. Sites with access to transit receive a point.
Parking	EVSE Can Support Multifamily Housing	Is there multifamily housing nearby?	Yes – 1 pt No – 0 pts	Tenants of multifamily housing often do not have the ability to charge their vehicles at home. As such, EV adoption amongst tenants has lagged behind the general population. By providing charging near multifamily housing units, site hosts have the ability to expand access to EV charging services for an important segment of the population. Sites that are within 1/4 mile of multifamily housing units receive a point.
Power	Proximity to Utility Infrastructure	Is the site close to utility infrastructure or power source?	0 – 25 ft – 4 pts 25 – 100 ft – 2 pts 101+ ft – 0 pts	The cost of utility infrastructure is a significant driver of total project cost. Sites with shorter distances to utility infrastructure or power source result in lower construction costs related to demolition, trenching, conduit, wire, and restoration. Projects that are closer to a power source receive more points.
Power	Known Circuit Constraints	Are there known circuit constraints?	No – 5 pts Yes – 0 pts	If there are known electrical circuit constraints, the addition of load to a circuit can result in costly and long duration upgrades which can render a project infeasible. A utility circuit upgrade typically takes a minimum of 2 years to complete and can generate significant customer fees. Circuits feeding potential sites are screened through interactive utility circuit maps and any projects targeting a constrained circuit receive no additional points.

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Power	Space for Electrical Infrastructure	Is there enough physical space to install electrical infrastructure?	Yes – 5 pts No – 0 pts	Each project requires some level of electrical infrastructure. Physical space needs to be allocated for this use and cannot serve dual purposes. For example, a utility transformer needs to be located outside, bollard-protected if it is subject to vehicular damage, and have clearances from other equipment and structures for safety and access. Electrical panelboards may be located indoors or outdoors and also have required clearances and access. Insufficient space for infrastructure complicates the project and increases the project cost. Sites that can accommodate necessary infrastructure receive full points; projects that have insufficient space receive no additional points.
Power	Potential for Future Solar PV	Could the site support solar PV or BESS in the future?	Existing and working - 2 pts Yes - 1 pt No - 0 pts	Sites with solar PV, battery storage, and other clean energy resources not only help future-proof the buildings and potentially the chargers, but they also provide an image to the public that SB County is at the forefront of using cleaner energy and newer technology. These sites are assumed to have a positive effect on the public and may be more likely to be used. Thus, these sites receive points.
Power	Backup Generation on Site	Is there backup generation?	Yes - 1 pt No - 0 pts	Sites with backup generation are ranked higher since they are able to provide resiliency and future proof. Currently, the backup generation may not tie into the EV chargers, but it creates the capability in case chargers need backup generation. Sites with backup generation receive one point.
Pricing	Triggers Additional ADA Upgrades	Does the site require ADA upgrades?	No - 5 pts Yes - 0 pts	CalGreen Section 11B-812 mandates a minimum number of EV charging stations that are Van Accessible, Standard Accessible and Ambulatory based on the total number of charging stalls planned to be installed. These accessible charging stalls must meet specific size, slope, identification, and access requirements and provide or tie into an existing path of travel (POT). Accessible upgrades can include the regrading of parking surfaces, installation of ramps and truncated domes, removal of curbs, and regrading of concrete surfaces. Sites requiring more upgrades to meet code result in higher civil costs. Projects requiring little to no upgrades receive full points while projects that require improvements receive no additional points.

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Pricing	Nearby Accessible Stalls or Paths of Travel	Are there nearby accessible stalls or Path of Travel?	Yes - 4 pts No - 0 pts	CalGreen Section 11B-812 mandates a minimum number of EV charging stations that are Van Accessible, Standard Accessible, and Ambulatory based on the total number of charging stalls planned to be installed. These accessible charging stalls must meet specific size, slope, identification, and access requirements and provide or tie into an existing path of travel (POT). If there is a nearby POT that can be leveraged for the accessible EV charging stalls, it can reduce the civil improvements required to meet code and result in a less costly project. Projects that can tie into a nearby and existing POT receive full points while projects that require a new POT receive no additional points.
Pricing	EVSE Protection	Will extra protection be needed to prevent charger vandalism or damage?	No - 2 pts Yes - 0 pts	Charger and associated equipment placement in parking lots can make them vulnerable to vandalism or damage. Sites that are most vulnerable to damage may require additional measures to protect the infrastructure including fencing around service equipment, surveillance cameras, etc. Secure or low-risk locations receive full points while locations that may require additional protection receive no points.
Pricing	Power and Cell Service	Does the site have reliable access to power and cellular service?	Both - 8 pts At least 1 unreliable - 4 pts Neither - 0 pts	Both reliable power and communication are base requirements for a functional and dependable charger network. EV drivers often choose charging locations based on vehicle battery level and remaining range and those who arrive onsite to charge and cannot, may struggle to find other chargers to complete their trips. Chargers that are offline due to reliability issues jeopardize trust in the charger network and may lead to lower utilization levels. Addressing reliability issues can drive the project cost by requiring additional infrastructure. Locations lacking reliability receive lower points.
Pricing	Parking Area Condition	What is the condition of the parking area?	Excellent - 4 pts Good - 3 pts Average - 2 pts Poor - 1 pts Needs Improvement - 0 pts	If the parking lot is not in good condition, it may need to be fixed, which can be costly. It can also cause hazards, such as tripping issues, for the users.

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Pricing	Trench Route Difficulty	What material(s) would need to be removed and replaced to install required infrastructure?	Softscape - 3 pts Asphalt - 2 pts Concrete - 1 pt Pervious Pavement - 0 pts	Materials trenching will need to go through are factors in determining the costs of the project. Softscape is the easiest and most cost-efficient way to trench for conduit and install chargers in. Sites were scored based on the most difficult material trenching would need to go through.
Pricing	Accessible Charger(s) Integration Difficulty	Will it be hard, medium, or easy to add ADA?	Easy - 4 pts Medium - 2 pts Hard - 0 pts	It is important that the lots are evaluated for the difficulty of adding Van Accessible, Standard Accessible, and Ambulatory charging stalls. Projects with significant slope or POT challenges are more costly. Projects that can easily accommodate accessible charger stalls receive more points.
Pricing	EJ or Disadvantaged Community	Is the site considered to be in an EJ/Disadvantaged Community?	Yes - 2 pts Almost - 1pt No - 0 pts	If the project area is in an Environmental Justice or Disadvantaged Community, it may qualify for additional funding sources, will promote lower vehicle emissions in the region, and expand access to charging amenities. Projects within these areas receive points.
Pricing	Relevant Pending Site Improvements	Are there any planned site improvements or maintenance projects that EVSE installation could tie into?	Yes - 1 pt No - 0 pts	EV charging projects require civil and electrical improvements including trenching, grading, repaving, new electrical service entry, etc. It is most efficient when these projects are coordinated with other maintenance or capital improvement projects such as parking lot restoration/ slurry seal or construction projects. When the EV project can coordinate with other site projects, there are cost efficiencies and therefore receive points.

Category	Site Prioritization Criteria	Explanation	Scoring	Rationale
Pricing	Project Cost	What is the cost per kW of charger power?	<$1,500 – 10 pts $1,501 - $1,950 – 9 pts $1,951 - $2,400 – 8 pts $2,401 - $2,850 – 7 pts $2,851 - $3,300 – 6 pts $3,301 - $3,750 – 5 pts $3,751 - $4,200 – 4 pts $4,201 - $4,650 – 3 pts $4,651 - $5,100 – 2 pts $5,101 - $5,550 – 1 pt >$5,551 – 0 pts	Project cost is calculated by assessing the overall charger power in kilowatts (kW) required for the site. KW depends on the types of chargers being recommended, for each Level 2 charger, 6.6 kW is assumed and for each DC Fast charger, 50 kW is assumed. The overall project cost, which includes both chargers and infrastructure costs, is divided by the total kW to determine a $/kW price. A lower $/kW indicates a more cost efficient project and a more viable project. Therefore, cost per kW is the highest weighted criteria section. Points are assigned based on the Rough Order of Magnitude (ROM) estimate assigned to each design when evaluated on a per kW expenditure. Small projects tend to result in high cost per kW since the design, infrastructure, and construction minimum requirements are spread across less chargers.

EXHIBIT B – Conceptual Site Design Binder

EV CHARGER SITE ASSESSMENT
GOVERNMENT CENTER HESPERIA - 15900 SMOKE TREE ST

SAN BERNARDINO COUNTY
Project & Facilities Management

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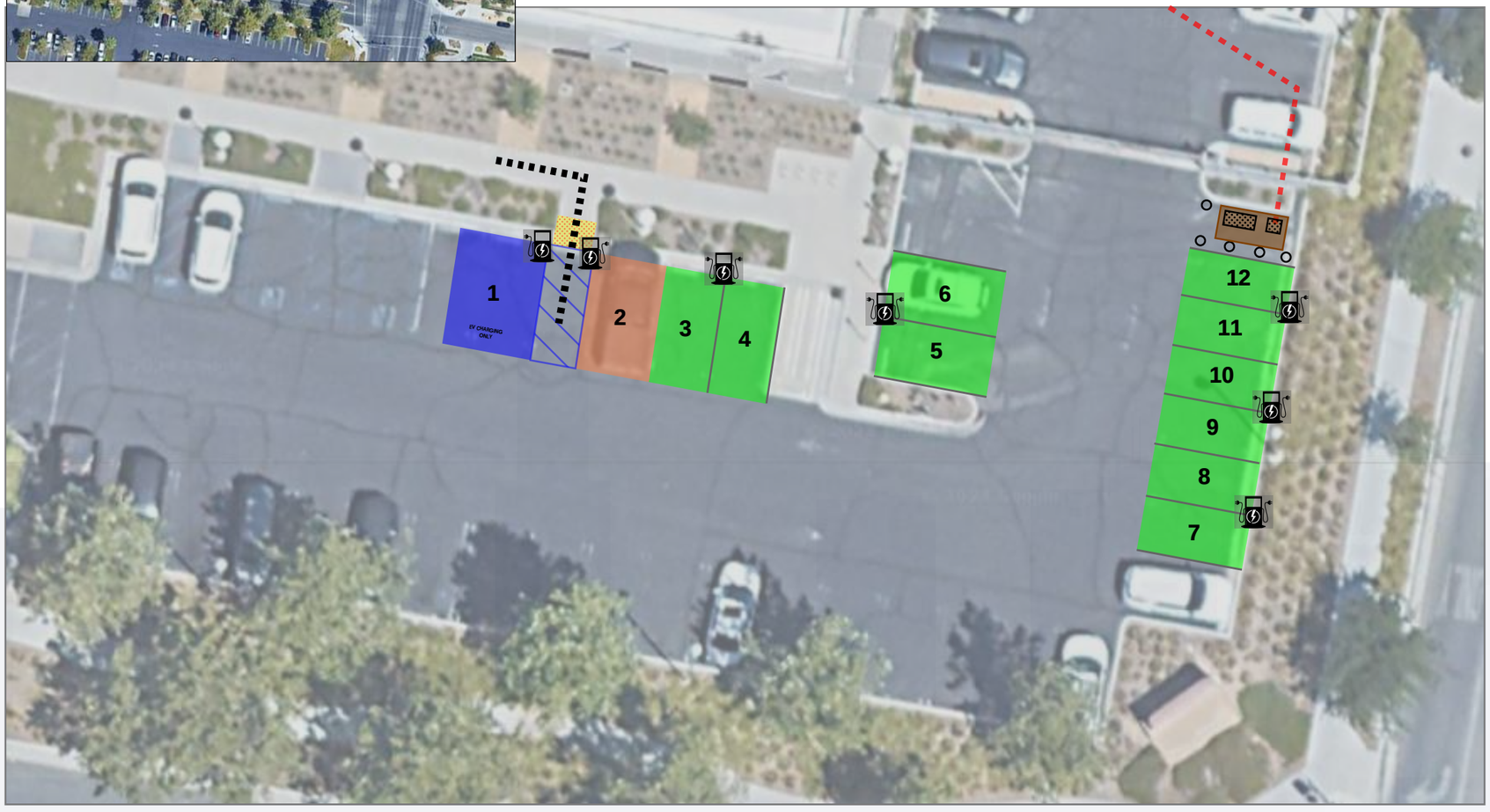
PROJECT SUMMARY	
SITE TYPE	COUNTY GOVERNMENT CENTER
RECOMMENDED SCOPE	(12) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$271,084
EVALUATION CRITERIA SCORE	76 OF 100



LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW CURB CUT AND RAMP
- CONCRETE EQUIPMENT PAD, 480V SUBPANEL, STEP-DOWN TRANSFORMER, AND 208V DISTRIBUTION
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- UTILITY SERVICE FEED, APPROX. 100' TO POWER SOURCE
- SPARE 200A BREAKER IN PANEL "MSD" IN MAIN ELECTRICAL ROOM, 480/277V
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

EV CHARGER SITE ASSESSMENT
GOVERNMENT CENTER HESPERIA - 15900 SMOKE TREE ST

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		COUNTY GOVERNMENT CENTER - HESPERIA
ADDRESS	STREET	15900 SMOKE TREE STREET
	CITY, STATE, ZIP	HESPERIA, CA, 92345
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		219
EXISTING ADA SPACES		8
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 50%

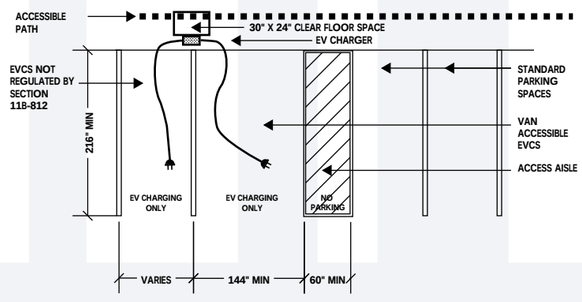
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	7
	PORTS	12
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		79.872 KVA
NEW OR EXISTING ELECTICAL SERVICE		EXISTING
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$271,084
SITE DESCRIPTION / DEFINING CHARACTERISTICS		ACROSS FROM CITY HALL, POWERED FROM EXISTING SERVICE

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

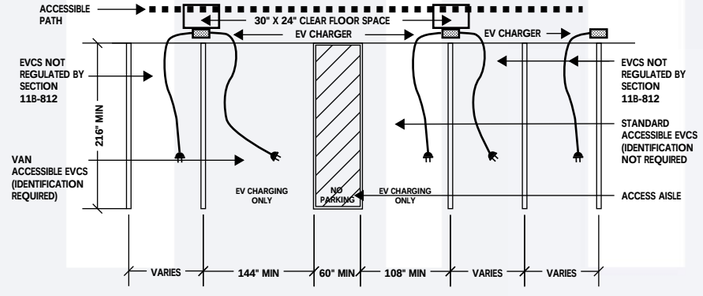
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	0	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	1	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	1	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	4	4
TRENCH ROUTE DIFFICULTY	3	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	3	4
EJ OR DISADVANTAGED COMMUNITY	0	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	5	10
TOTAL	**76**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

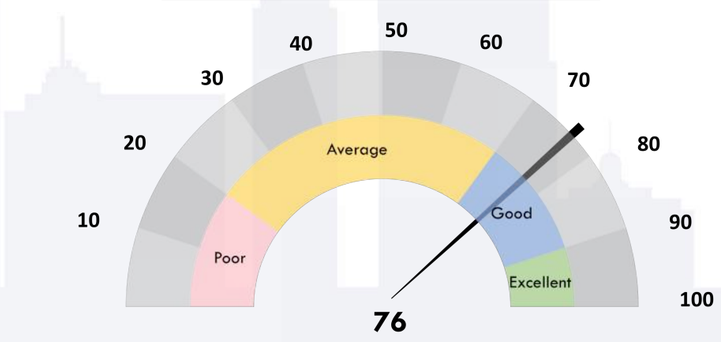
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE



EV CHARGER SITE ASSESSMENT
RANCHO CUCAMONGA COURTHOUSE - 8303 HAVEN AVE

SHEET: 1 OF 2
DATE: 2/8/24

N

PROJECT SUMMARY	
SITE TYPE	COURTHOUSE (PUBLIC LOT)
RECOMMENDED SCOPE	(10) L2, (4) DC CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$381,272
EVALUATION CRITERIA SCORE	76 OF 100

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW ADA RAMP
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE TRANSFORMATION, AND DISTRIBUTION, 700A @ 480/277V
- PROTECTIVE BOLLARD
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- SINGLE PORT 50KW DC EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 35' TO POWER SOURCE
- NEW INTERCEPT STRUCTURE ON EXISTING 12KV LINE
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

EV CHARGER SITE ASSESSMENT
RANCHO CUCAMONGA COURTHOUSE - 8303 HAVEN AVE

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		RANCHO CUCAMONGA COURTHOUSE (PUBLIC LOT)
ADDRESS	STREET	8303 HAVEN AVENUE
	CITY, STATE, ZIP	RANCHO CUCAMONGA, CA, 91730
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		937
EXISTING ADA SPACES		6
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 74%

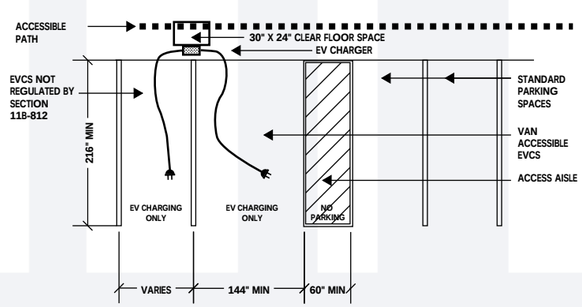
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	10
	PORTS	14
EVSE TYPE		LEVEL 2; 32A @ 208V AND LEVEL 3; 50KW @ 480V
POWER REQUIREMENT		266.56 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$381,272
SITE DESCRIPTION / DEFINING CHARACTERISTICS		EAST SIDE OF COURTHOUSE, PUBLIC PARKING

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

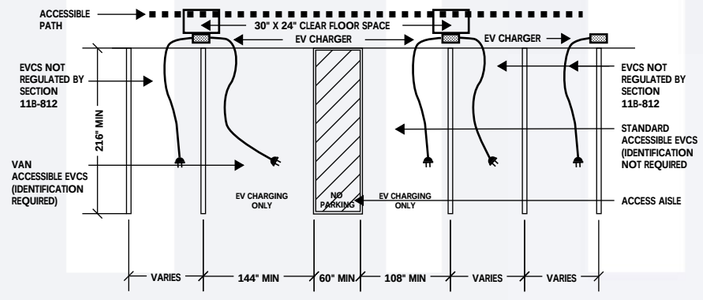
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	0	3
AVERAGE LOT USAGE	3	3
EVSE DEMAND	4	4
EVSE SUPPORTS STAFF & PUBLIC	3	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	1	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	2	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	3	4
TRENCH ROUTE DIFFICULTY	1	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	1	4
EJ OR DISADVANTAGED COMMUNITY	0	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	9	10
TOTAL	**76**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

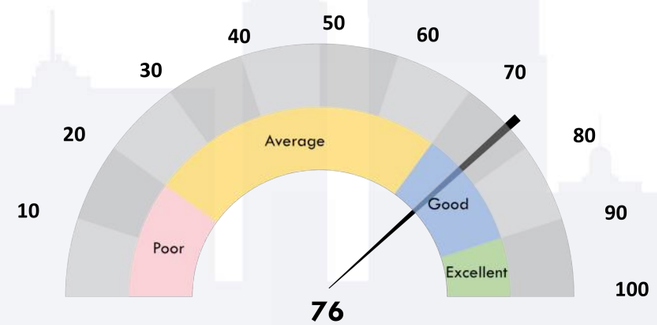
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE

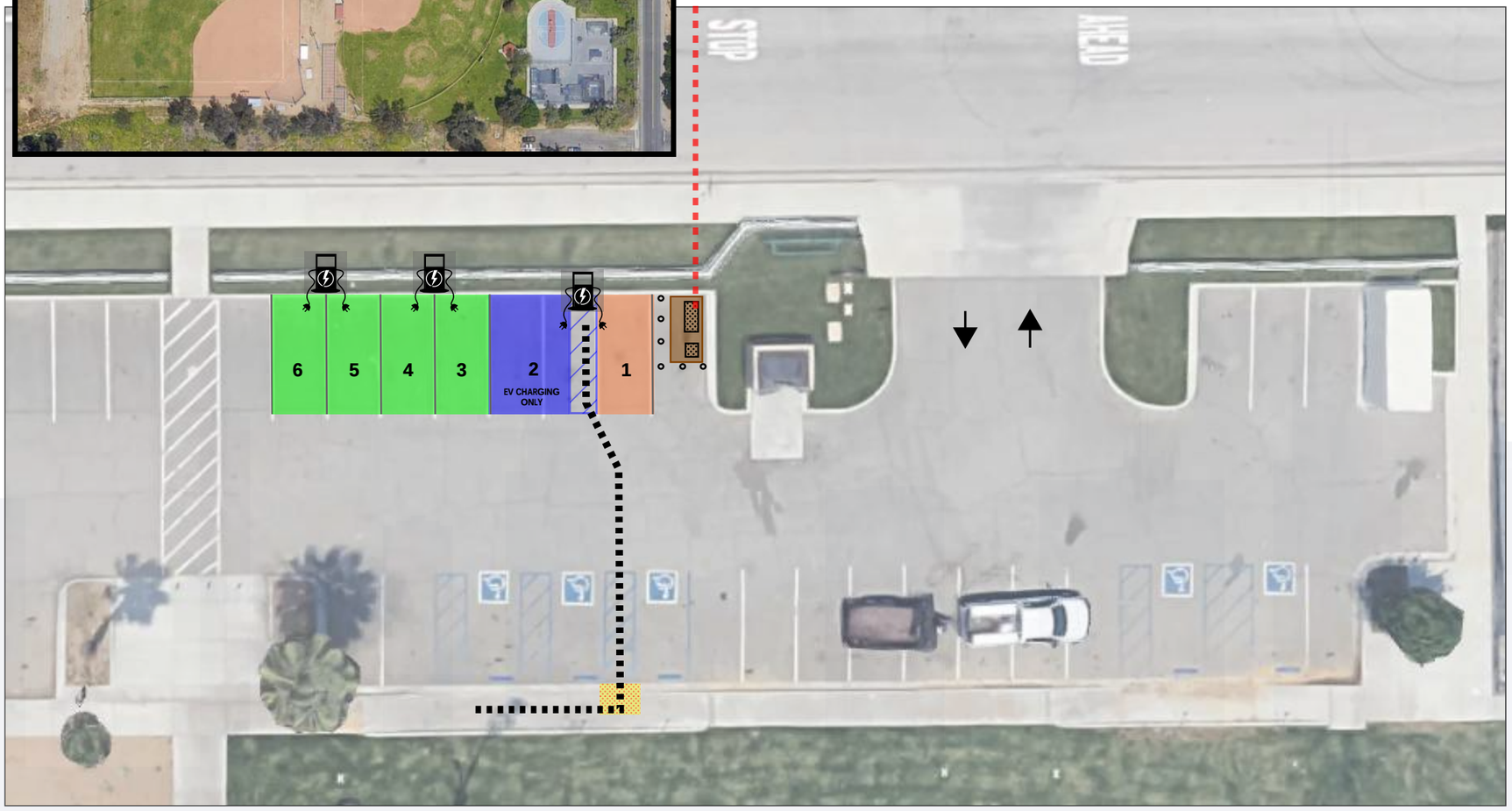


EV CHARGER SITE ASSESSMENT
KESSLER PARK (JURUPA LOT) - 18401 JURUPA AVENUE

SHEET: 1 OF 2
DATE: 2/8/24

N

PROJECT SUMMARY	
SITE TYPE	COUNTY PARK
RECOMMENDED SCOPE	(6) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$164,295
EVALUATION CRITERIA SCORE	75 OF 100



LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING ADA RAMP
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE SWITCHBOARD, TRANSFORMATION, AND DISTRIBUTION
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- UTILITY SERVICE FEED, APPROX. 110' TO POWER SOURCE
- NEW INTERSET POWER POLE WITH POLE-MOUNTED TRANSFORMER NORTH SIDE OF JURUPA AVE
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

EV CHARGER SITE ASSESSMENT
KESSLER PARK (JURUPA LOT) - 18401 JURUPA AVENUE

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		KESSLER PARK (JURUPA LOT)
ADDRESS	STREET	18401 JURUPA AVENUE
	CITY, STATE, ZIP	BLOOMINGTON, CA, 92316
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		93
EXISTING ADA SPACES		5
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	YES, 94%

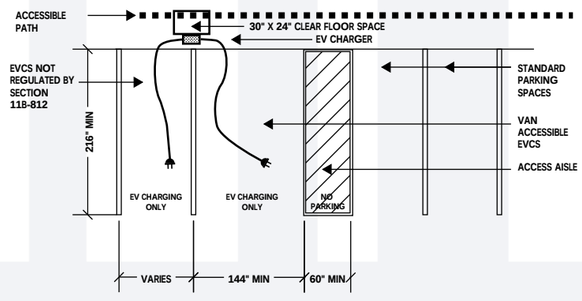
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	3
	PORTS	6
EVSE TYPE		LEVEL 2; 32A @ 208VAC
POWER REQUIREMENT		39.936 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$164,295
SITE DESCRIPTION / DEFINING CHARACTERISTICS		SITE IS IN DAC MAKING IT A CANDIDATE FOR SCE CHARGE READY PRIORITY

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

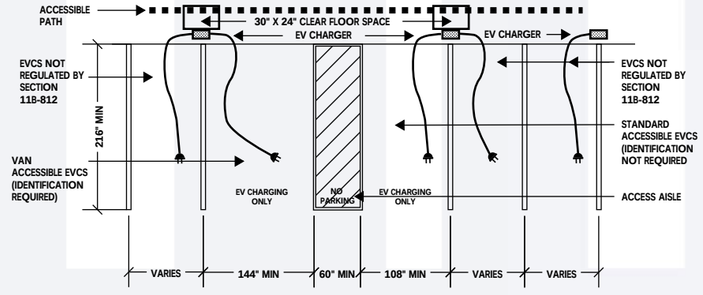
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	4	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	5	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	2	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	3	4
EJ OR DISADVANTAGED COMMUNITY	2	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	4	10
TOTAL	**75**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

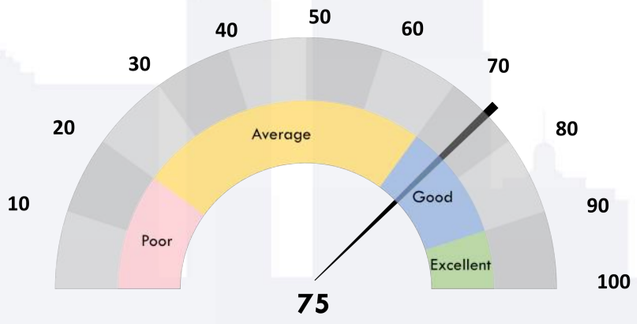
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



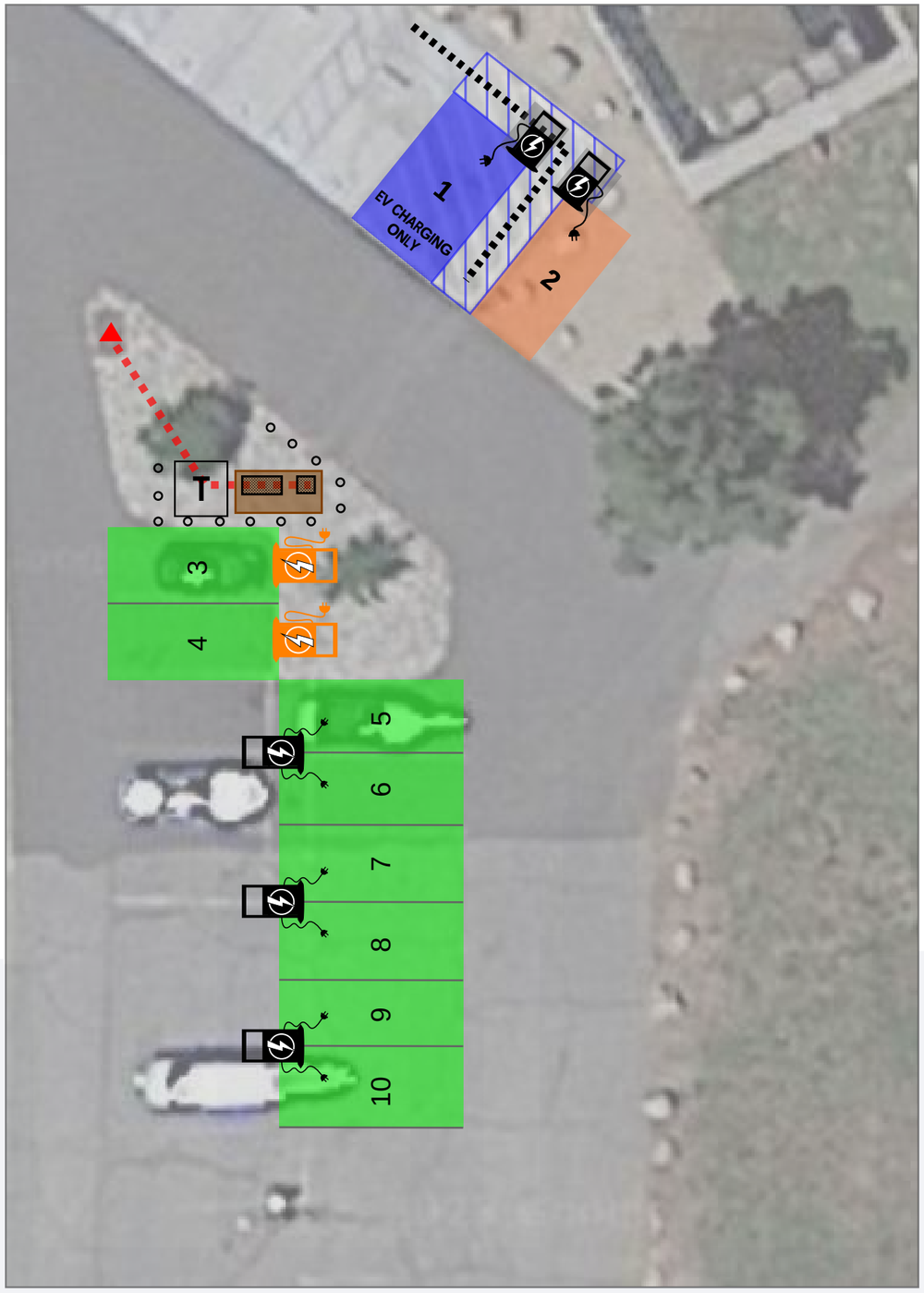
EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
YUCAIPA REGIONAL PARK: AREA 3A - 33900 OAK GLEN RD

SHEET: 1 OF 2
DATE: 2/8/24



PROJECT SUMMARY	
SITE TYPE	REGIONAL PARK
RECOMMENDED SCOPE	(8) L2 & (2) DC CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$310,664
EVALUATION CRITERIA SCORE	72 OF 100

N

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP PAVE LANDSCAPE TO ACCOMMODATE
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE, 250A, 480V, 75KVA STEP-DOWN TRANSFORMER, AND 200A, 208V DISTRIBUTION
- T — NEW SCE TRANSFORMER, 12KV/480V
- PROTECTIVE BOLLARD, 4" TYP
- SINGLE/ DUAL PORT LEVEL 2 EV CHARGING STATION
- SINGLE PORT 50KW DC EV CHARGING STATION
- PROPOSED PATH OF TRAVEL, SLOPE VERIFIED
- UTILITY SERVICE FEED, APPROX. 30' TO POWER SOURCE
- EXISTING SCE MAIN FEEDER AND U/G PULLBOX

EV CHARGER SITE ASSESSMENT
YUCAIPA REGIONAL PARK: AREA 3A - 33900 OAK GLEN RD

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		YUCAIPA REGIONAL PARK (LOT 3A)
ADDRESS	STREET	33900 OAK GLEN ROAD
	CITY, STATE, ZIP	YUCAIPA, CA 92399
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		167
EXISTING ADA SPACES		6
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 30%

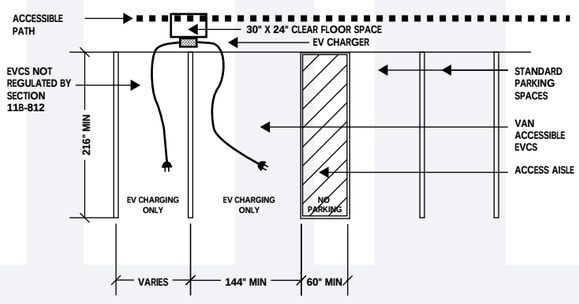
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	7
	PORTS	10
EVSE TYPE		LEVEL 2; 32A @ 208V AND LEVEL 3; 50KW @ 480V
POWER REQUIREMENT		153.248 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$310,664
SITE DESCRIPTION / DEFINING CHARACTERISTICS		NEAR SWIM AREA AND RESTROOM FACILITIES, AREA 3

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

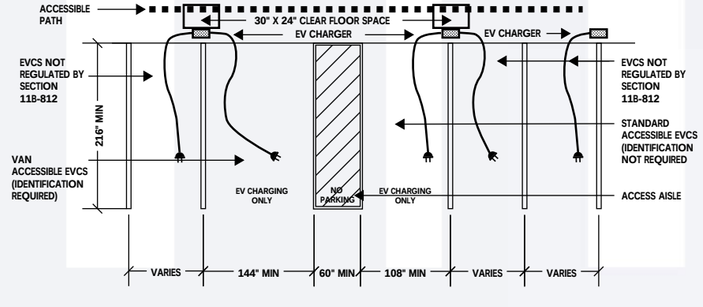
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	4	5
PARKING FEE COLLECTION	0	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	4	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	3	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	2	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	2	4
EJ OR DISADVANTAGED COMMUNITY	0	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	8	10
TOTAL	**72**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

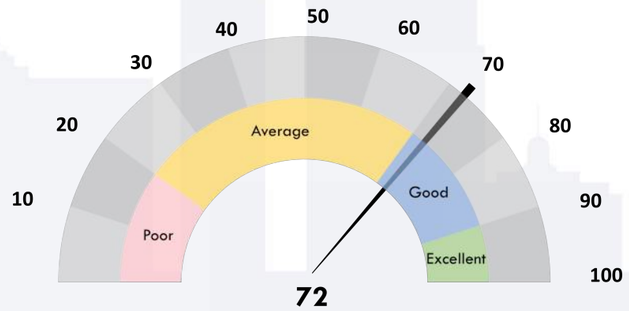
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



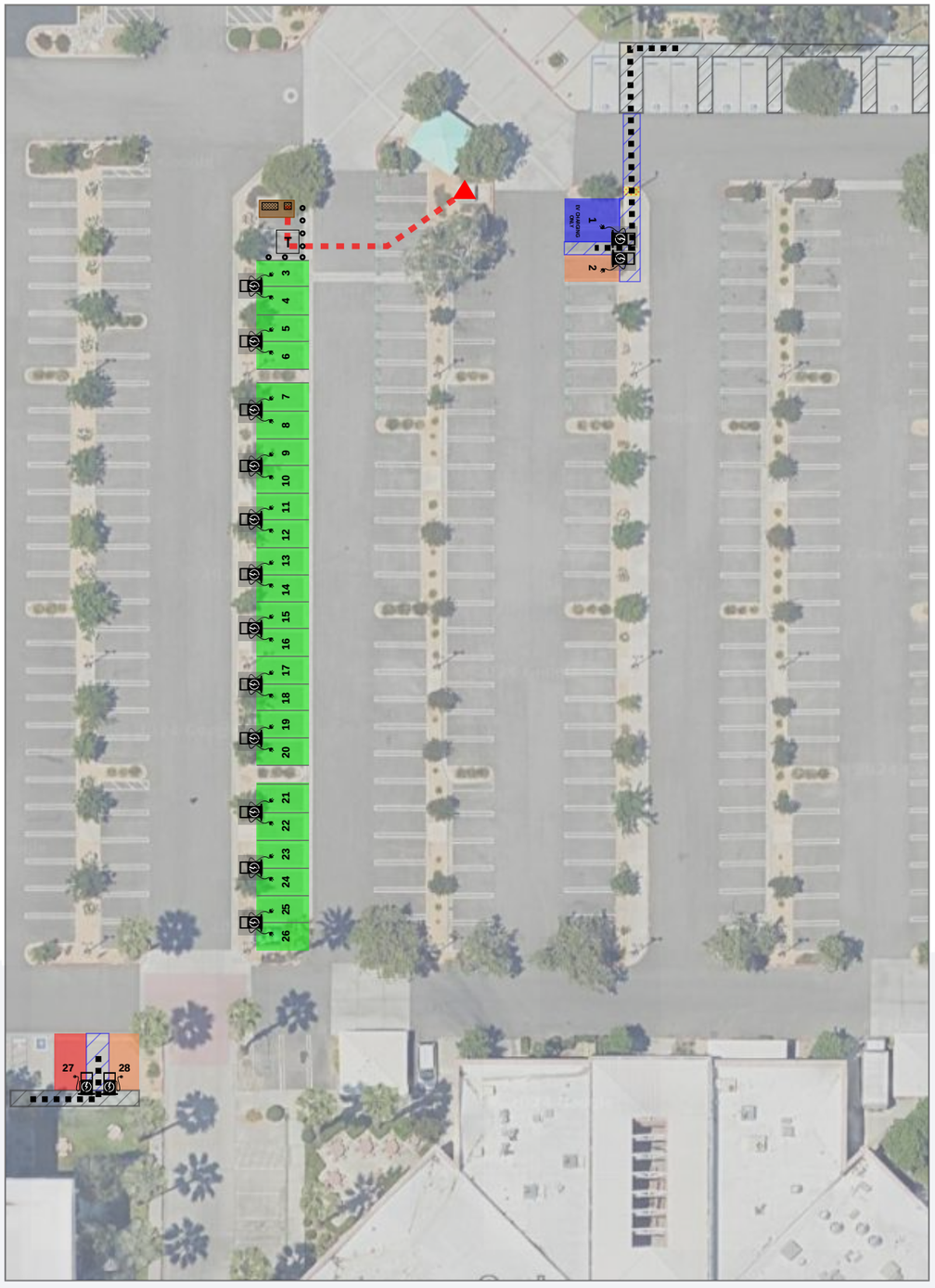
EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
222/268 HOSPITALITY LANE - 222 WEST HOSPITALITY LANE

DATE: 2/8/24



PROJECT SUMMARY

SITE TYPE	COUNTY BUILDING LOT
RECOMMENDED SCOPE	(28) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$517,569
EVALUATION CRITERIA SCORE	72 OF 100

N

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- AMBULATORY STALL, 10'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING PATH OF TRAVEL
- TRUNCATED DOMES & RELOCATE LIGHT STANDARD
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE AND DISTRIBUTION 700A, 208V
- T — NEW UTILITY TRANSFORMER 12KV/208V
- SINGLE/DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- UTILITY SERVICE FEED, APPROX. 60' TO POWER SOURCE
- EXISTING SCE PME SWITCH, POWER SOURCE
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
222/268 HOSPITALITY LANE - 222 WEST HOSPITALITY LANE

DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		222/268 HOSPITALITY LANE
ADDRESS	STREET	222 WEST HOSPITALITY LANE
	CITY, STATE, ZIP	SAN BERNARDINO, CA, 92415
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		205
EXISTING ADA SPACES		23
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	YES, 97%

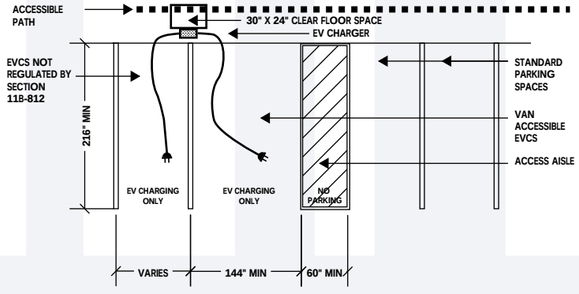
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	16
	PORTS	28
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		186.368 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	2
	AMBULATORY	1
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$517,569
SITE DESCRIPTION / DEFINING CHARACTERISTICS	AREA BETWEEN 222 & 268 HOSPITALITY LANE	

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

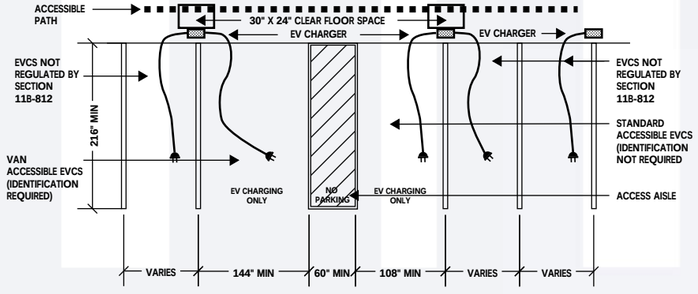
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	4	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	2	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	2	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	3	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	1	4
EJ OR DISADVANTAGED COMMUNITY	2	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	7	10
TOTAL	**72**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

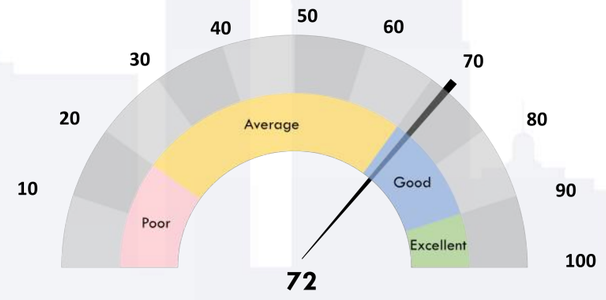
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL

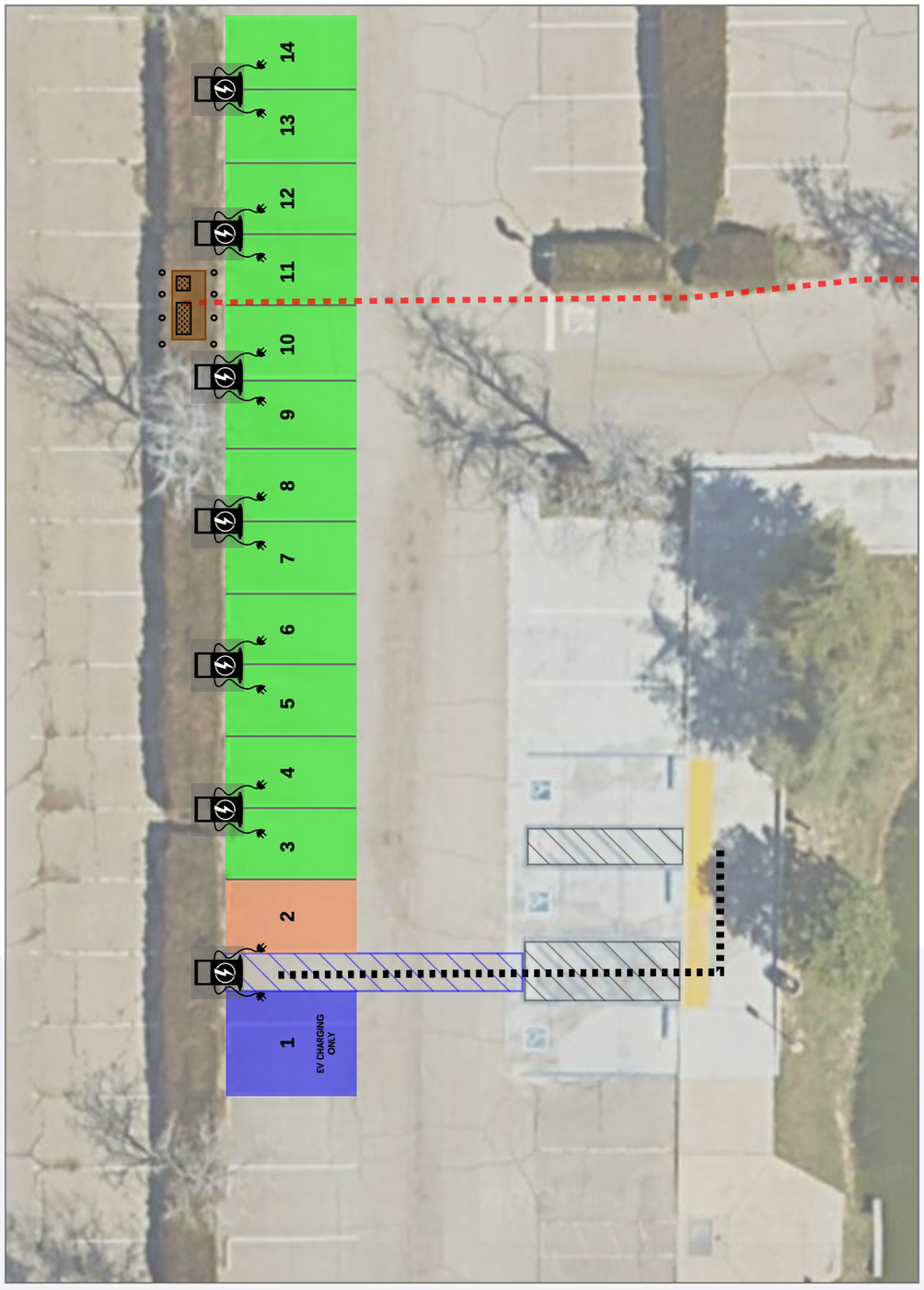


EVALUATION CRITERIA SCORE

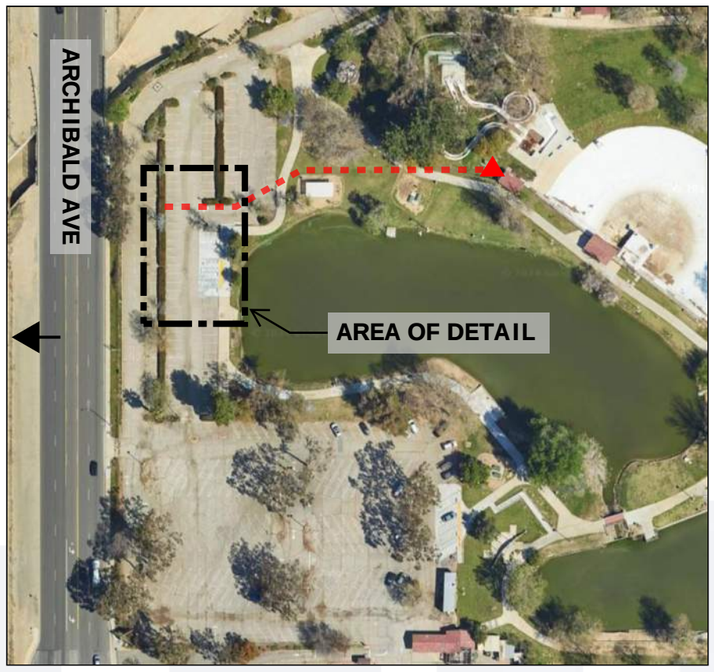


EV CHARGER SITE ASSESSMENT
CUCAMONGA-GUASTI REGIONAL PARK - 800 N ARCHIBALD AVE

SHEET: 1 OF 2
DATE: 2/8/24



PROJECT SUMMARY	
SITE TYPE	REGIONAL PARK
RECOMMENDED SCOPE	(14) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$301,811
EVALUATION CRITERIA SCORE	70 OF 100



LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING ACCESS AISLE
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE SWITCHBOARD, TRANSFORMATION, AND DISTRIBUTION
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 370' TO POWER SOURCE
- EXISTING 300KVA TRANSFORMER 12KV/480V. UPGRADE TO 500KVA AND ADD EV SERVICE
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
CUCAMONGA-GUASTI REGIONAL PARK - 800 N ARCHIBALD AVE

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		CUCAMONGA-GUASTI REGIONAL PARK
ADDRESS	STREET	800 N ARCHIBALD AVENUE
	CITY, STATE, ZIP	ONTARIO, CA, 91764
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		250
EXISTING ADA SPACES		7
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 54%

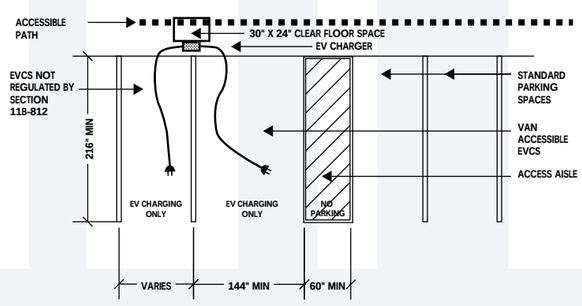
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	7
	PORTS	14
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		93.184 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$301,811
SITE DESCRIPTION / DEFINING CHARACTERISTICS		NEAR FISHING AREA & PICNIC STRUCTURES. NO CAMPING/ OVERNIGHT USE AT THIS PARK

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

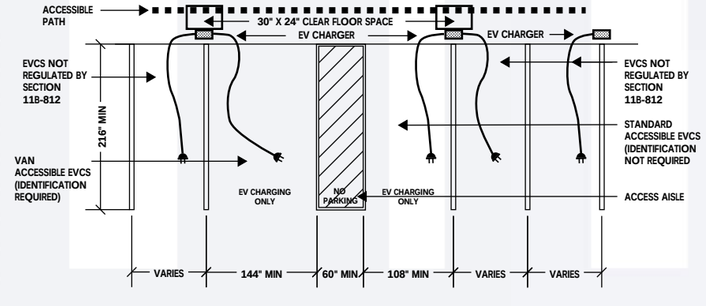
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	3	5
PARKING FEE COLLECTION	0	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	1	1
PROXIMITY TO UTILITY INFRASTRUCTURE	0	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	1	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	3	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	6	10
TOTAL	**70**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

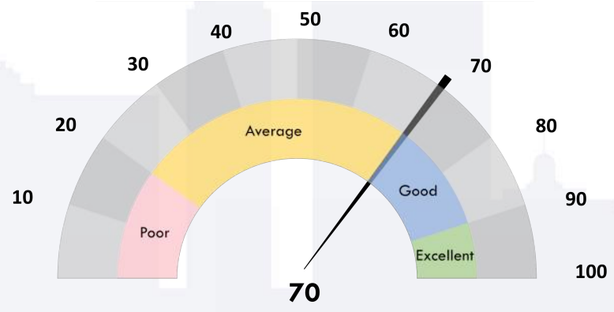
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
TWIN PEAKS SHERIFF STATION - 26010 CA-189

DATE: 2/8/24

N

PROJECT SUMMARY	
SITE TYPE	SHERIFF STATION
RECOMMENDED SCOPE	(4) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$162,248
EVALUATION CRITERIA SCORE	69 OF 100

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING ACCESS AISLE AND PATH OF TRAVEL
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE SWITCHBOARD, AND DISTRIBUTION
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 26' TO POWER SOURCE
- NEW FEED OFF EXISTING SCE TRANSFORMER 1500KVA
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

EV CHARGER SITE ASSESSMENT
TWIN PEAKS SHERIFF STATION - 26010 CA-189

SAN BERNARDINO COUNTY
Project & Facilities Management

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		TWIN PEAKS SHERIFF STATION
ADDRESS	STREET	26010 CA-189
	CITY, STATE, ZIP	TWIN PEAKS, CA 92391
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		48
EXISTING ADA SPACES		3
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 13%

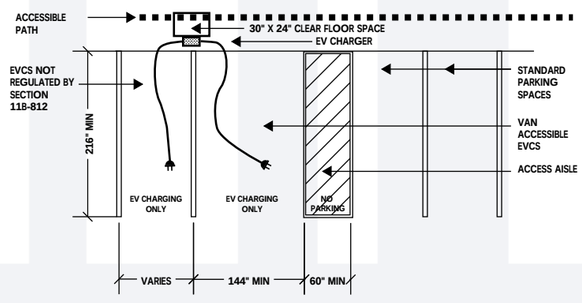
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	3
	PORTS	4
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		26.624 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	0
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$162,248
SITE DESCRIPTION / DEFINING CHARACTERISTICS	MAIN LOT WEST OF SHERIFF STATION	

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

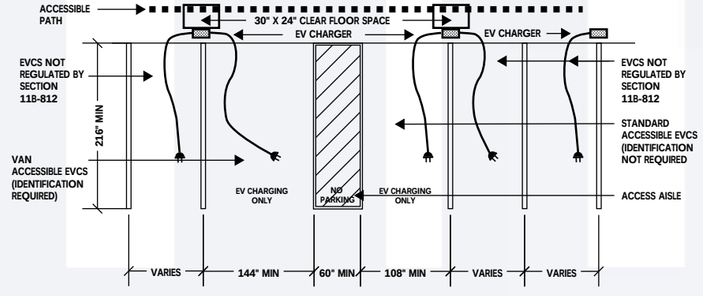
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	3	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	3	6
NEARBY EVSE	3	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	3	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	0	2
BACKUP GENERATION ON SITE	1	1
TRIGGERS ADDITIONAL ADA UPGRADES	3	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	4	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	2	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	0	10
TOTAL	**69**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

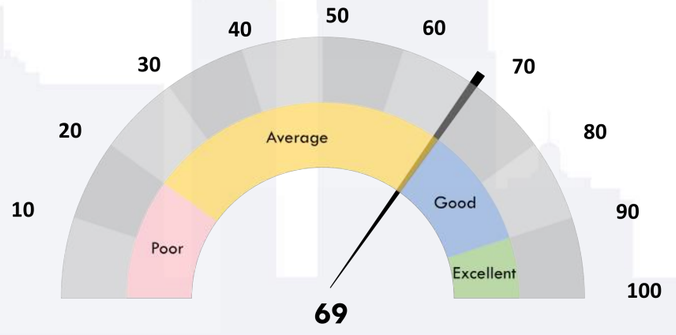
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



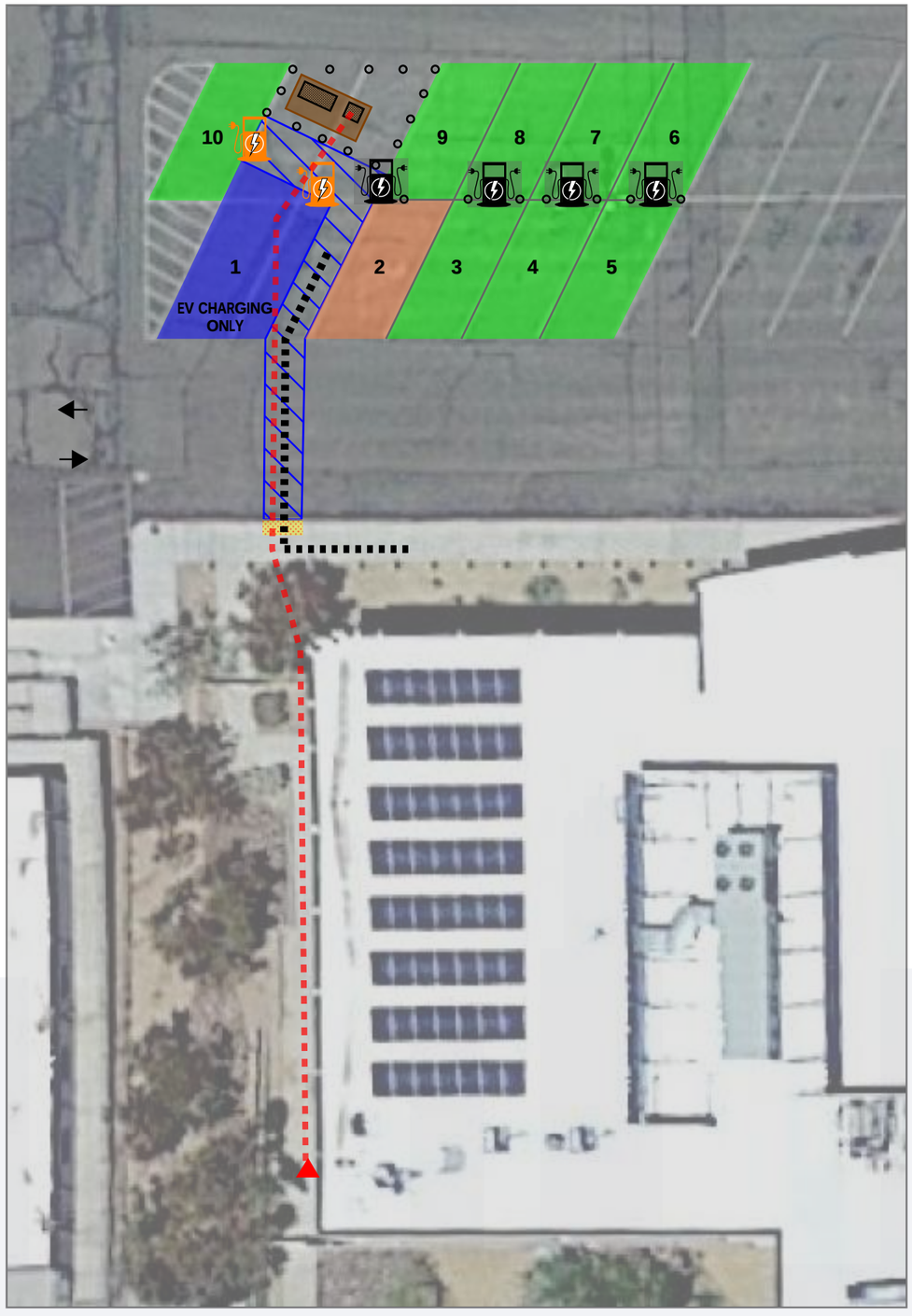
EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
GOVERNMENT CENTER: JOSHUA TREE - 63665 29 PALMS HWY

SHEET: 1 OF 2
DATE: 2/8/24



PROJECT SUMMARY	
SITE TYPE	COUNTY GOVT CENTER
RECOMMENDED SCOPE	(8) L2 & (2) DCFC CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$302,545
EVALUATION CRITERIA SCORE	69 OF 100

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LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW CURB-CUT, ADA RAMP, AND TRUNCATED DOMES
- CONCRETE EQUIPMENT PAD, 480 PANELBOARD, TRANSFORMER 480/208V, AND 200A, 208V DISTRIBUTION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- SINGLE PORT 50KW DC EV CHARGING STATION
- FEEDER CONDUIT, WALL-MOUNTED THEN UNDER-GROUNDED TO TRANSFORMER IN PARKING LOT, APPROX. 130' TO POWER SOURCE
- EXISTING PANEL "MSB," UTILIZE SPARE 225A, 3P, 480V BREAKER IN POSITION 9
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP

EV CHARGER SITE ASSESSMENT
GOVERNMENT CENTER: JOSHUA TREE - 63665 29 PALMS HWY

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		COUNTY GOVERNMENT CENTER - JOSHUA TREE
ADDRESS	STREET	63665 TWENTYNINE PALMS HIGHWAY
	CITY, STATE, ZIP	JOSHUA TREE, CA, 92252
PARKING CONFIGURATION		SURFACE, DIAGONAL
EXISTING STANDARD PARKING SPACES		73
EXISTING ADA SPACES		2
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 31%

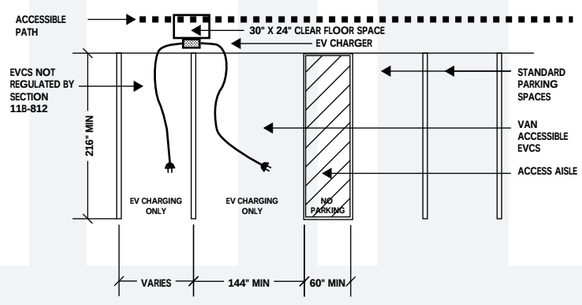
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	6
	PORTS	10
EVSE TYPE		LEVEL 2; 32A @ 208V AND LEVEL 3; 50KW @ 480V
POWER REQUIREMENT		153.248 KVA
NEW OR EXISTING ELECTICAL SERVICE		EXISTING
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$302,545
SITE DESCRIPTION / DEFINING CHARACTERISTICS		NEAR SHERIFF'S BUILDING WITH GOOD VISIBILITY FROM THE ROAD

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

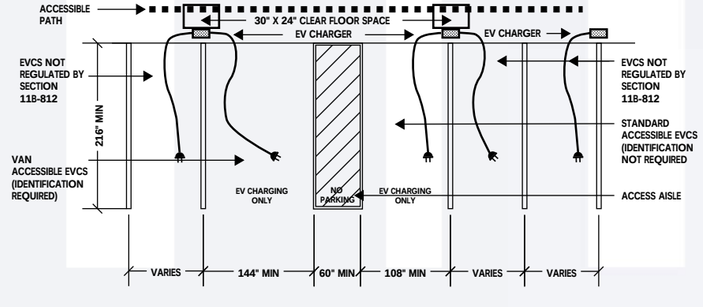
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	5	6
NEARBY EVSE	2	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	3	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	1	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	0	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	1	1
TRIGGERS ADDITIONAL ADA UPGRADES	3	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	0	4
EVSE PROTECTION	0	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	4	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	1	4
EJ OR DISADVANTAGED COMMUNITY	0	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	8	10
TOTAL	**69**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

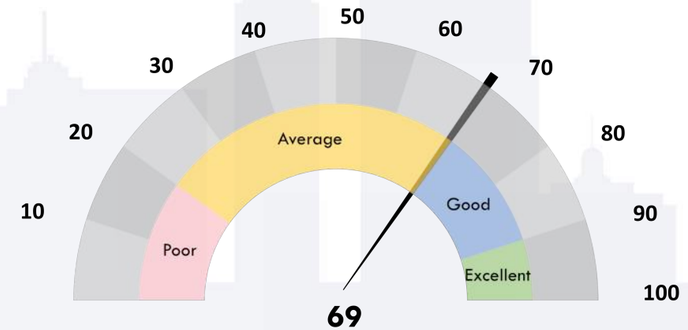
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE



EV CHARGER SITE ASSESSMENT
GLEN HELEN REGIONAL PARK - 2555 GLEN HELEN PKWY

SAN BERNARDINO COUNTY
Project & Facilities Management

SHEET: 1 OF 2
DATE: 2/8/24

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PROJECT SUMMARY	
SITE TYPE	REGIONAL PARK
RECOMMENDED SCOPE	(14) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$379,997
EVALUATION CRITERIA SCORE	69 OF 100

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW TRUNCATED DOMES AND ZERO HEIGHT CURB
- NEW ADA-COMPLIANT SIDEWALK SECTION TO TIE INTO EXISTING
- NEW CONCRETE EQUIPMENT PAD, STEP-DOWN TRANSFORMER AND 208V SUBPANEL "EV"
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 400' TO POWER SOURCE
- EXISTING SCE TRANSFORMER, UPGRADE AND REPLACE 600A, 480V SERVICE W/ 800A SERVICE

EV CHARGER SITE ASSESSMENT
GLEN HELEN REGIONAL PARK - 2555 GLEN HELEN PKWY

SAN BERNARDINO COUNTY
Project & Facilities Management

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		GLEN HELEN REGIONAL PARK (POOL)
ADDRESS	STREET	2555 GLEN HELEN PARKWAY
	CITY, STATE, ZIP	SAN BERNARDINO, CA, 92407
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		260
EXISTING ADA SPACES		5
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 70%

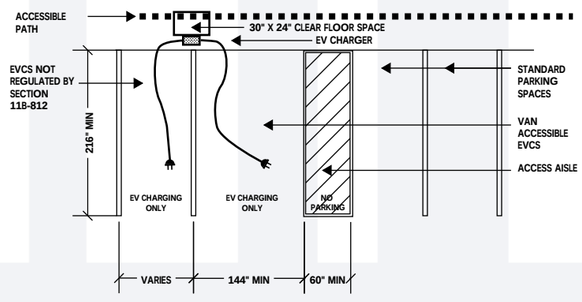
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	8
	PORTS	14
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		93.184 KVA
NEW OR EXISTING ELECTICAL SERVICE		EXISTING, UPGRADE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$379,977
SITE DESCRIPTION / DEFINING CHARACTERISTICS		NEAR POOL & WATERSLIDE, SAME AREA AS MEADOWLARK PAVILLION

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

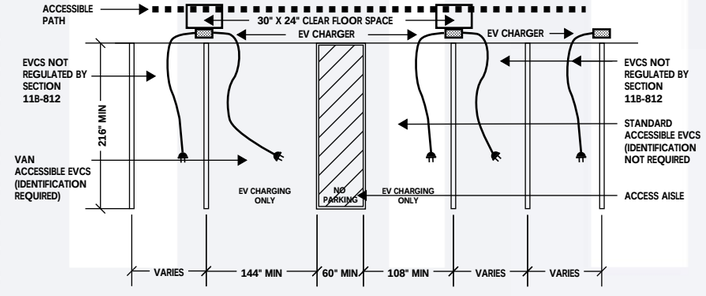
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	4	5
PARKING FEE COLLECTION	0	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	2	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	1	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	0	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	0	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	4	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	2	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	4	10
TOTAL	**69**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

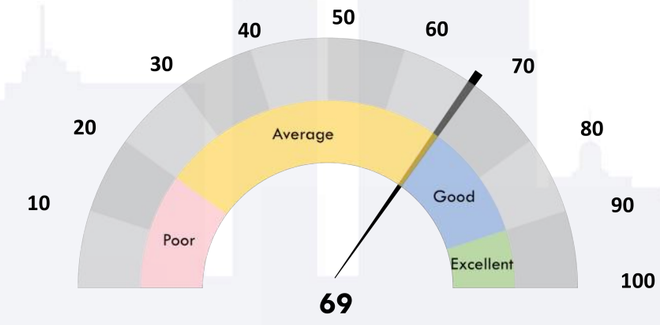
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



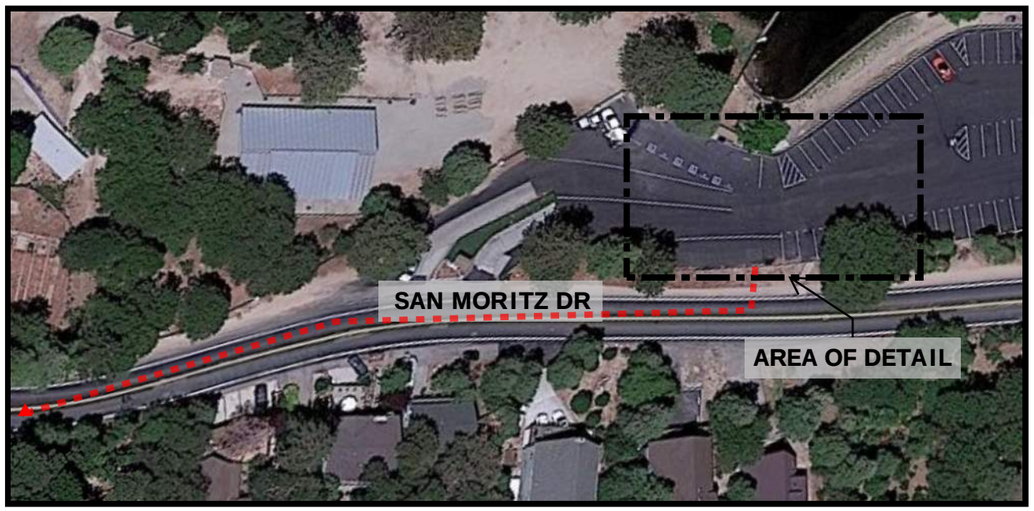
EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
LAKE GREGORY REGIONAL PARK - 24271 SAN MORITZ DRIVE

SHEET: 1 OF 2
DATE: 2/8/24



PROJECT SUMMARY	
SITE TYPE	REGIONAL PARK
RECOMMENDED SCOPE	(8) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$258,900
EVALUATION CRITERIA SCORE	68 OF 100

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- EXISTING ACCESS AISLE
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW ADA RAMP
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE 200A, 208/120V SWITCHBOARD
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- UTILITY SERVICE FEED, APPROX. 650' TO POWER SOURCE
- SCE VAULT ON SAN MORITZ DRIVE
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

EV CHARGER SITE ASSESSMENT
LAKE GREGORY REGIONAL PARK - 24271 SAN MORITZ DRIVE

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		LAKE GREGORY REGIONAL PARK
ADDRESS	STREET	24271 SAN MORITZ DRIVE
	CITY, STATE, ZIP	CRESTLINE, CA, 92325
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		171
EXISTING ADA SPACES		10
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 43%

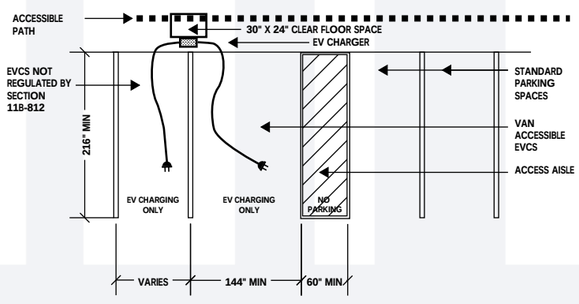
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	4
	PORTS	8
EVSE TYPE		LEVEL 2; 32A @ 208VAC
POWER REQUIREMENT		53.248 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$258,900
SITE DESCRIPTION / DEFINING CHARACTERISTICS		REGIONAL PARK SOUTH PARKING LOT. IT IS CLOSE TO TOWN AMMENITIES AND THE BUSIEST PART OF THE PARK.

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

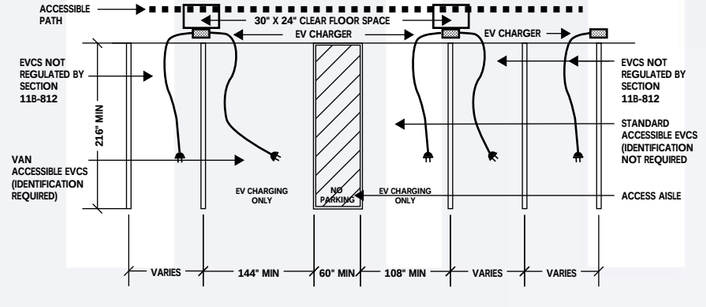
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	3	5
PARKING FEE COLLECTION	0	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	3	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	1	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	0	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	3	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	2	4
EJ OR DISADVANTAGED COMMUNITY	0	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	3	10
TOTAL	**68**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

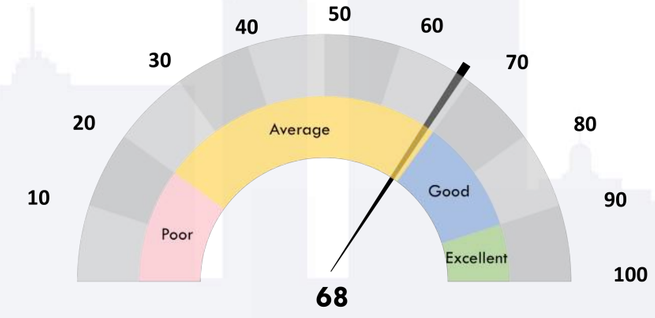
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL

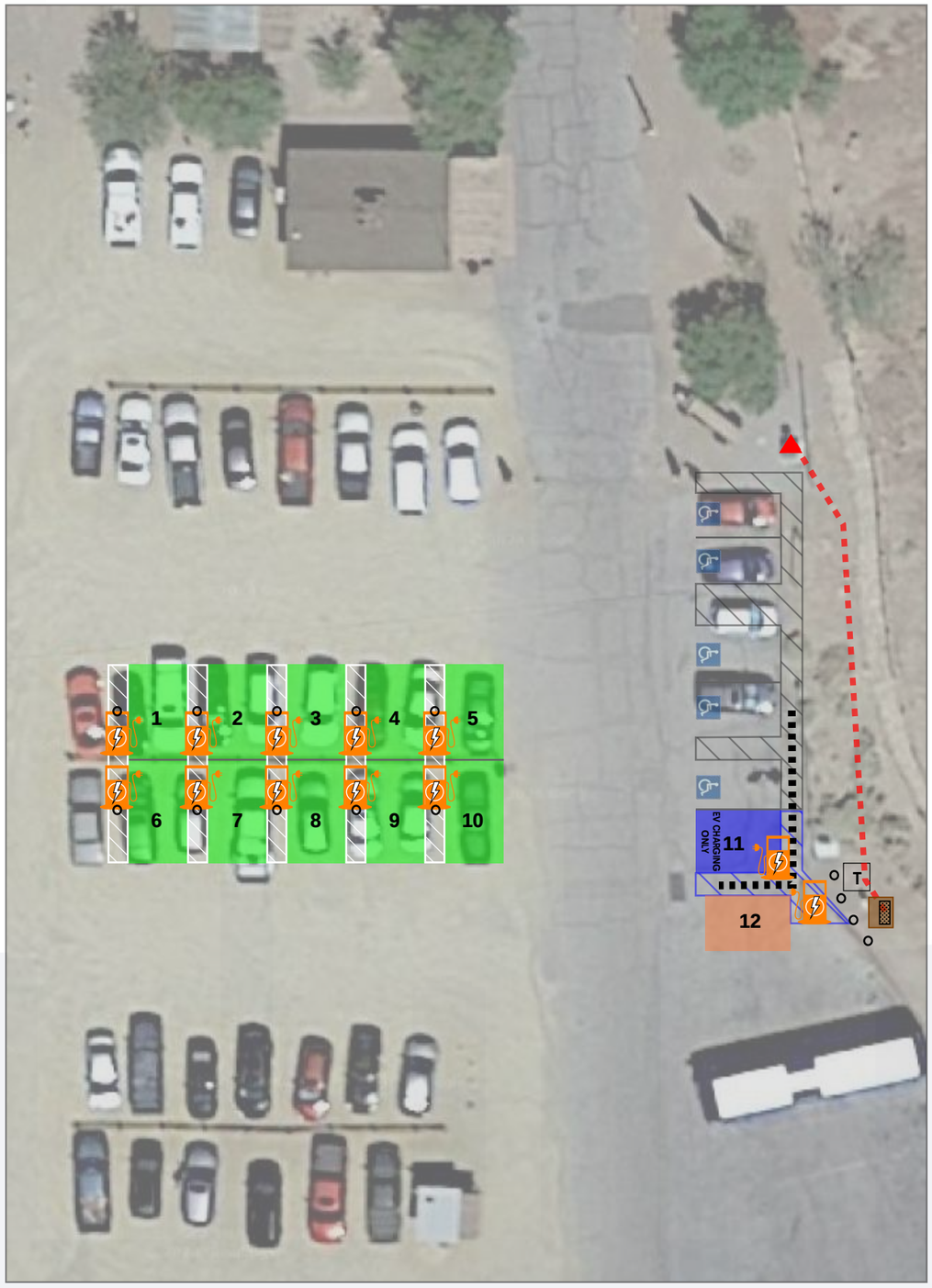


EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
CALICO GHOST TOWN - 36600 GHOST TOWN ROAD



PROJECT SUMMARY	
SITE TYPE	COUNTY PARK
RECOMMENDED SCOPE	(12) DC CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$750,153
EVALUATION CRITERIA SCORE	67 OF 100

N

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING ACCESS AISLE AND PATH OF TRAVEL
- NEW CONCRETE EQUIPMENT PAD FOR NEW MAIN SERVICE PANEL 1000A, 480V SWITCHGEAR
- T — NEW UTILITY TRANSFORMER, 12KV/480V
- PROTECTIVE BOLLARD, 4" TYP
- SINGLE PORT 50KW DC EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 75' TO POWER SOURCE
- EXISTING SCE XFMR, 12KV/240V. LOOP TO NEW UTILITY XFMR, 12KV/480V
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
CALICO GHOST TOWN - 36600 GHOST TOWN ROAD

DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		CALICO GHOST TOWN
ADDRESS	STREET	36600 GHOST TOWN ROAD
	CITY, STATE, ZIP	YERMO, CA 92311
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		92
EXISTING ADA SPACES		5
EXISTING ADA CODE-COMPLIANT?		NO
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 57%

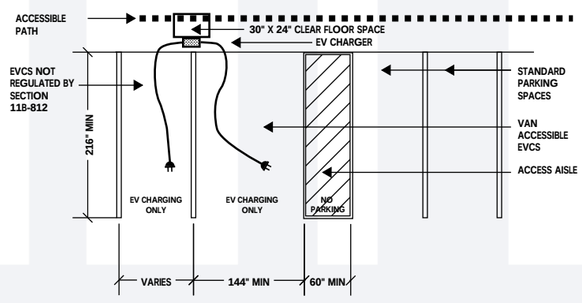
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	12
	PORTS	12
EVSE TYPE		LEVEL 3; 50KW @ 480V
POWER REQUIREMENT		600 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$750,153
SITE DESCRIPTION / DEFINING CHARACTERISTICS		UPPER PARKING LOT ADJACENT TO GHOST TOWN

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

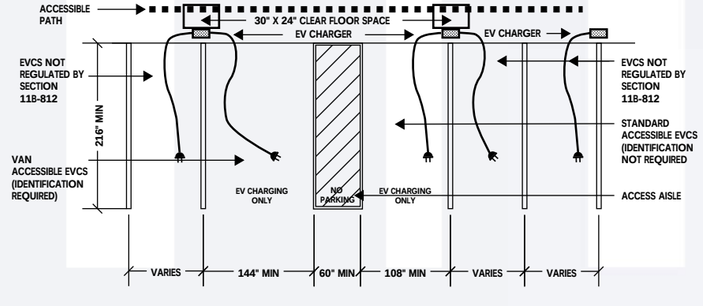
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	4	5
PARKING FEE COLLECTION	0	3
PARKING STALL QUANTITIES	5	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	0	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	3	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	0	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	0	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	2	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	2	4
TRENCH ROUTE DIFFICULTY	3	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	2	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	10	10
TOTAL	**67**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

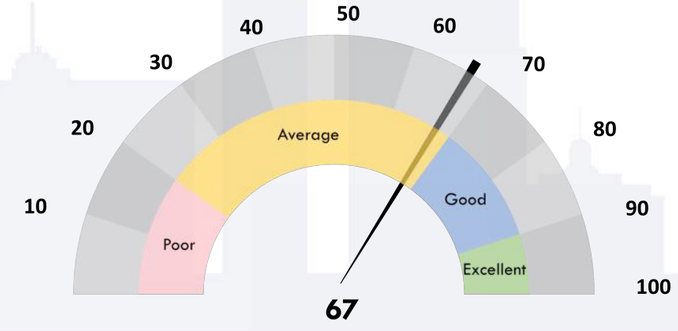
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
8575 HAVEN AVENUE, RANCHO CUCAMONGA

DATE: 2/8/24

N

PROJECT SUMMARY	
SITE TYPE	COUNTY OFFICES
RECOMMENDED SCOPE	(4) LEVEL 2 EV CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$140,612
EVALUATION CRITERIA SCORE	66 OF 100

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW CURB CUT AND ADA RAMP UP TO SIDEWALK GRADE
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE SWITCHBOARD, AND DISTRIBUTION 150A, 208/120V
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 32' FROM POWER SOURCE
- EXISTING SCE TRANSFORMER
- CHARGER POWER TRENCH THROUGH ASPHALT
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
8575 HAVEN AVENUE, RANCHO CUCAMONGA

DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		8575 HAVEN AVENUE
ADDRESS	STREET	8575 HAVEN AVENUE
	CITY, STATE, ZIP	RANCHO CUCAMONGA, CA, 91730
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		95
EXISTING ADA SPACES		5
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 74%

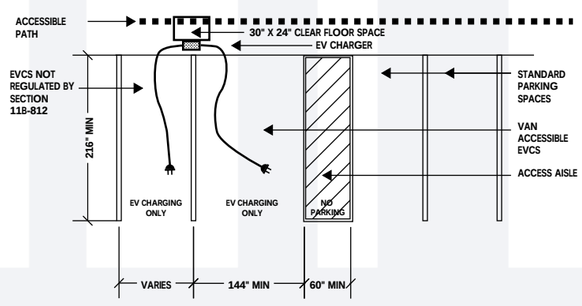
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	3
	PORTS	4
EVSE TYPE		LEVEL 2; 32A @ 208VAC
POWER REQUIREMENT		26.624 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	0
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$140,611
SITE DESCRIPTION / DEFINING CHARACTERISTICS		VETERAN'S HALL & OTHER SERVICES, NEARBY FOOD COURT. NO EXISTING CAPACITY IN ELECTRICAL ROOM FOR CHARGER LOADS.

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

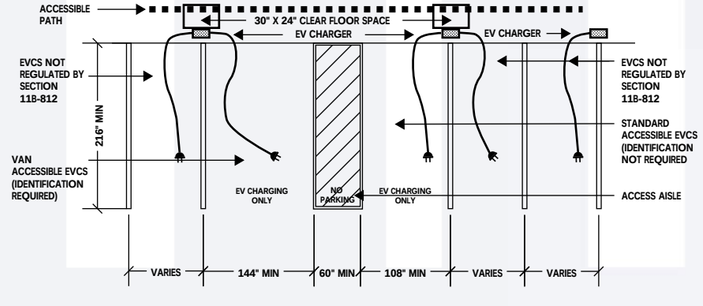
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	0	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	3	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	1	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	4	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	2	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	2	4
TRENCH ROUTE DIFFICULTY	1	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	0	4
EJ OR DISADVANTAGED COMMUNITY	0	2
RELEVANT PENDING SITE IMPROVEMENTS	1	1
PROJECT COST	1	10
TOTAL	**66**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

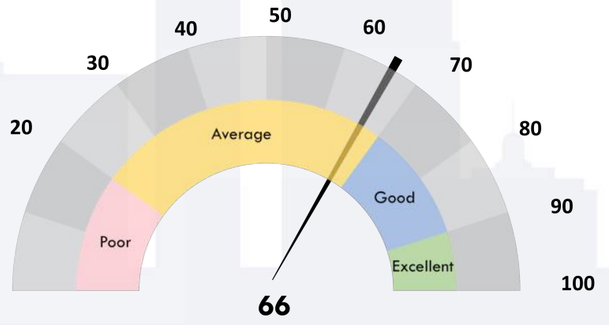
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
PHELAN MEMORIAL LIBRARY - 9800 CLOVIS ROAD

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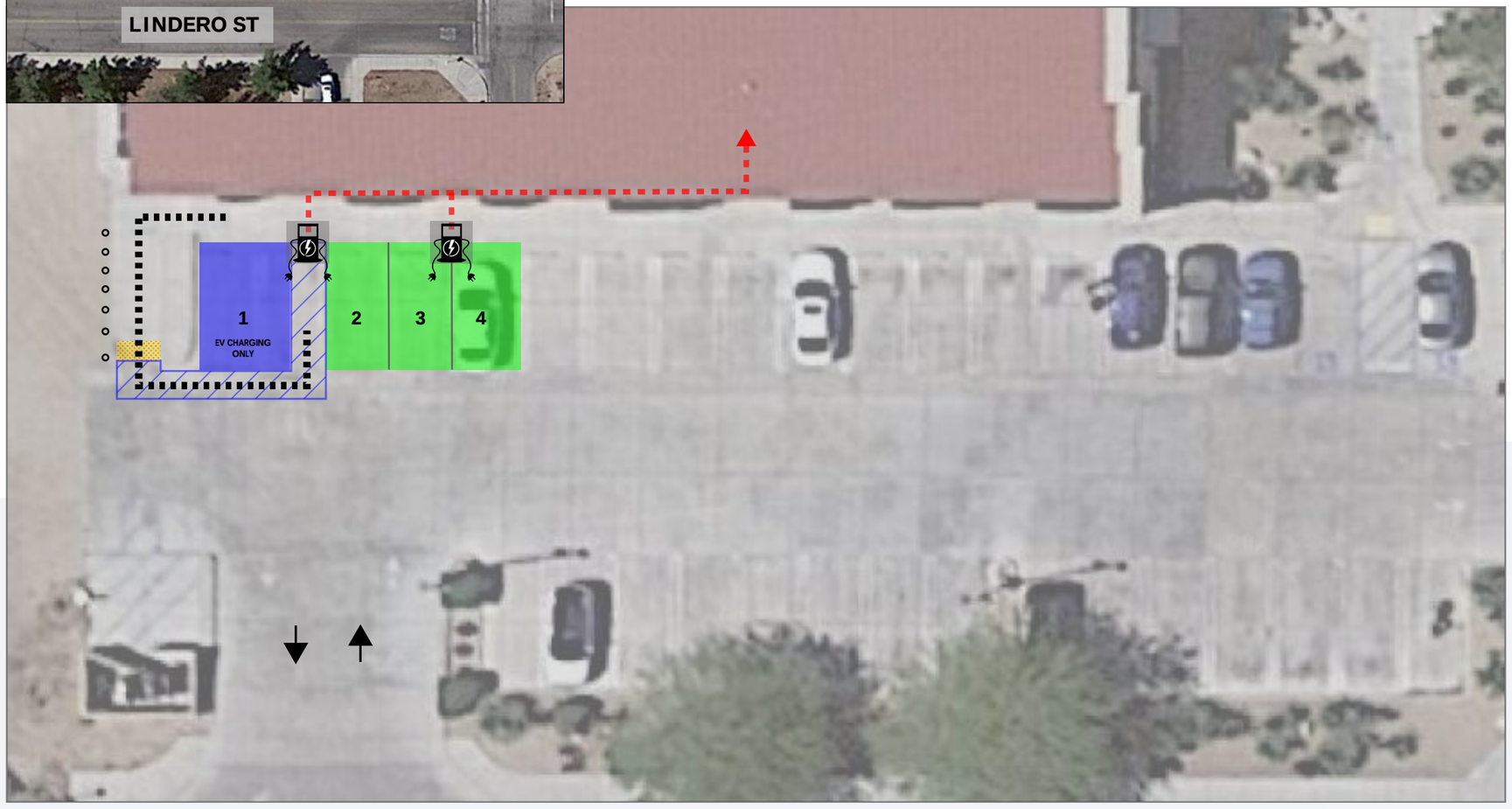


PROJECT SUMMARY	
SITE TYPE	PUBLIC LIBRARY
RECOMMENDED SCOPE	(4) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$112,697
EVALUATION CRITERIA SCORE	64 OF 100

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- EXISTING ACCESS AISLE
- NEW TRUNCATED DOMES AT BASE OF EXISTING RAMP
- DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- CHARGER CONDUIT ROUTE, RUN (2) 1.5" CONDUITS UNDER SOFFIT ABOVE-GRADE, APPROX. 85' TO POWER SOURCE
- EXISTING EXISTING ELECTRICAL ROOM, TIE INTO PANEL A"" 120/240V. VERIFY SPARE CAPACITY W/ 30-DAY LOAD STUDY
- PROPOSED PATH OF TRAVEL - SLOPE VERIFIED

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
PHELAN MEMORIAL LIBRARY - 9800 CLOVIS ROAD

DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		PHELAN MEMORIAL LIBRARY
ADDRESS	STREET	9800 CLOVIS ROAD
	CITY, STATE, ZIP	PHELAN, CA, 92371
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		32
EXISTING ADA SPACES		2
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 29%

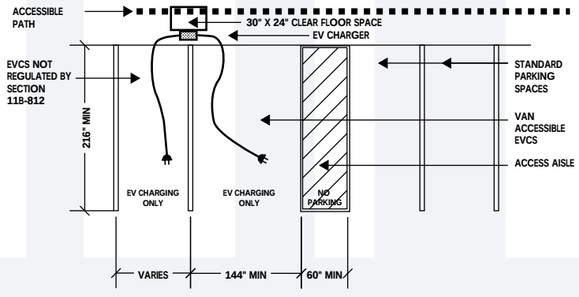
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	2
	PORTS	4
EVSE TYPE		LEVEL 2; 32A @ 240V
POWER REQUIREMENT		30.72 KVA
NEW OR EXISTING ELECTICAL SERVICE		EXISTING
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	0
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$112,697
SITE DESCRIPTION / DEFINING CHARACTERISTICS	PUBLIC LIBRARY	

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

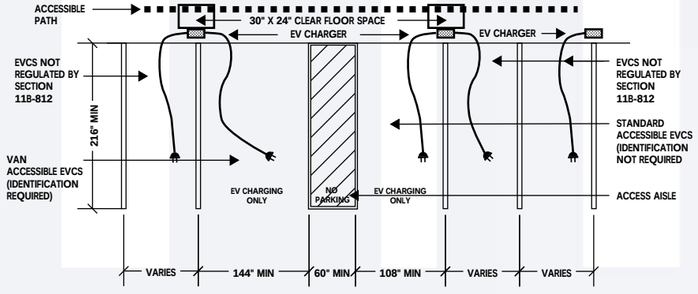
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	3	6
NEARBY EVSE	2	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	0	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	1	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	2	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	5	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	0	2
POWER AND CELL SERVICE	4	8
PARKING AREA CONDITION	3	4
TRENCH ROUTE DIFFICULTY	1	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	3	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	5	10
TOTAL	**64**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

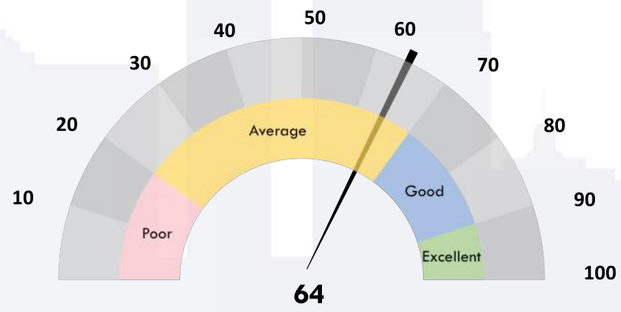
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



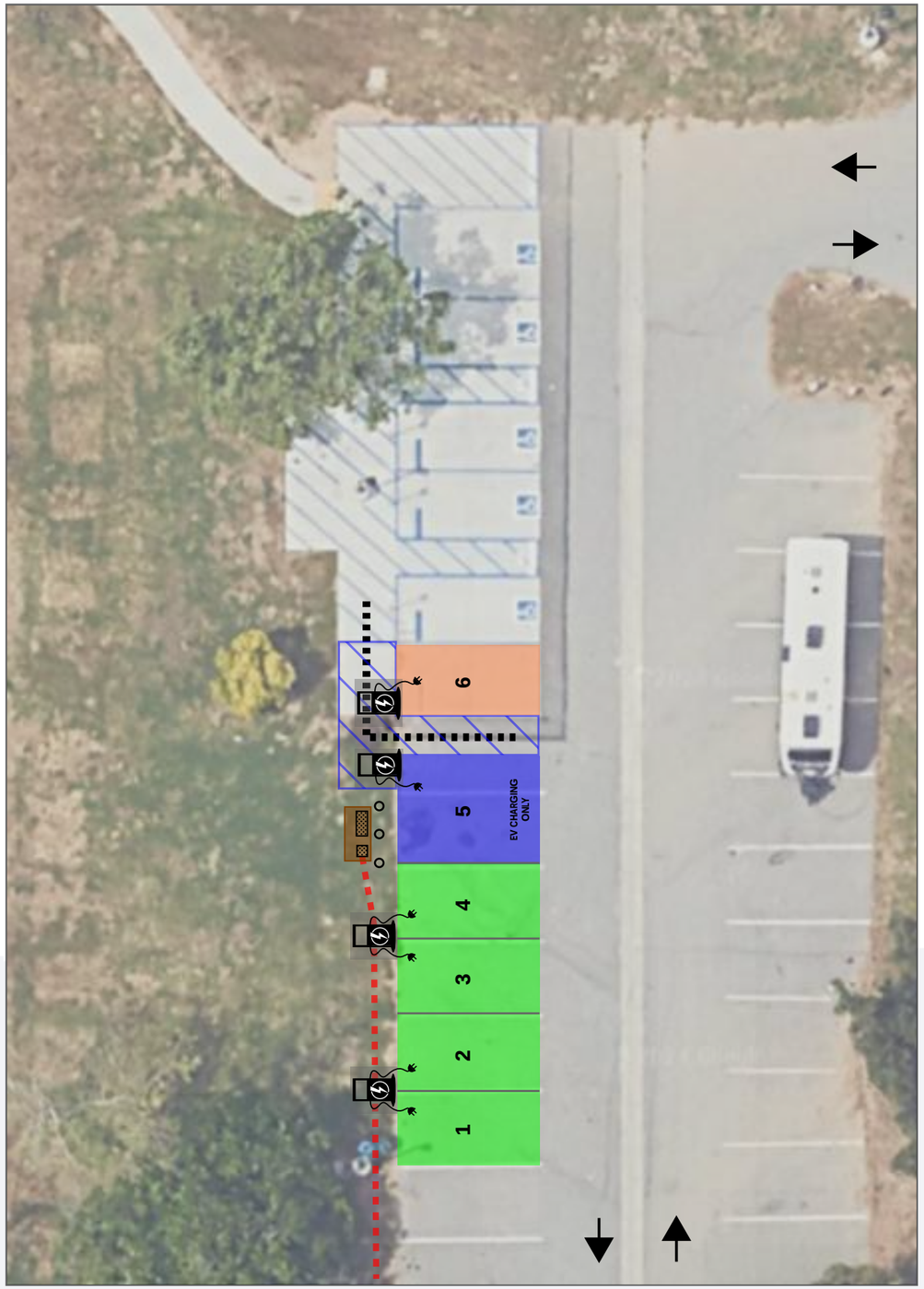
EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
PRADO REGIONAL PARK (LOT 5/6) - 16071 EUCLID AVE

DATE: 02/08/24



PROJECT SUMMARY	
SITE TYPE	REGIONAL PARK
RECOMMENDED SCOPE	(6) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$206,001
EVALUATION CRITERIA SCORE	64 OF 100

N

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- CONCRETE EQUIPMENT PAD, STEP-DOWN TRANSFORMER AND 200A SUBPANEL "EV"
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD, 4" DIAMETER STEEL TYP
- POWER FEED, APPROX. 350' TO POWER SOURCE, TIE CONDUIT INTO EXISTING 2.5" SLEEVE 5' FROM DISTRIBUTION BOARD PER NOTE 9 ON SHEET E-003 OF ELECTRICAL SWITCHGEAR UPGRADE PROJECT #3R01
- EXISTING SERVICE IN FENCED AREA OF SUBSTATION 2, PANEL "DB-2"
- PROPOSED PATH OF TRAVEL - SLOPE FIELD VERIFIED

EV CHARGER SITE ASSESSMENT
PRADO REGIONAL PARK (LOT 5/6) - 16071 EUCLID AVE

SAN BERNARDINO COUNTY
Project & Facilities Management

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		PRADO REGIONAL PARK (LOTS 5&6)
ADDRESS	STREET	16701 EUCLID AVENUE
	CITY, STATE, ZIP	CHINO, CA, 91709
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		97
EXISTING ADA SPACES		8
EXISTING ADA CODE-COMPLIANT?		YES
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 72%

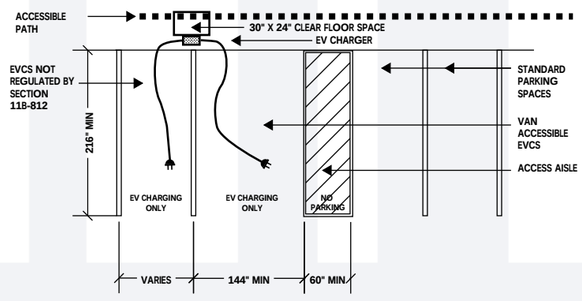
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	4
	PORTS	6
EVSE TYPE		LEVEL 2; 32A @ 208VAC
POWER REQUIREMENT		39.936 KVA
NEW OR EXISTING ELECTICAL SERVICE		EXISTING
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$206,001
SITE DESCRIPTION / DEFINING CHARACTERISTICS		CENTRAL LOCATION NEAR SPORTS FIELDS, RESTROOMS & SNACK BAR

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

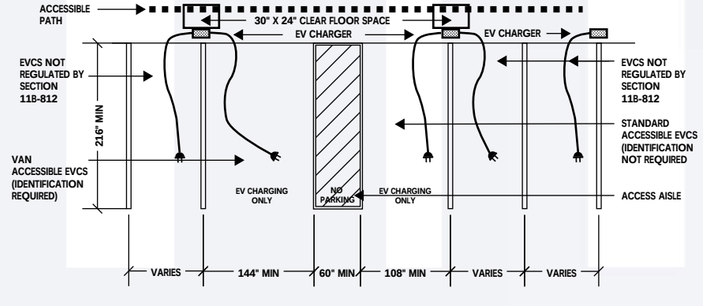
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	4	5
PARKING FEE COLLECTION	0	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	2	4
EVSE SUPPORTS STAFF & PUBLIC	1	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	0	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	3	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	4	4
TRENCH ROUTE DIFFICULTY	3	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	2	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	1	10
TOTAL	**64**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

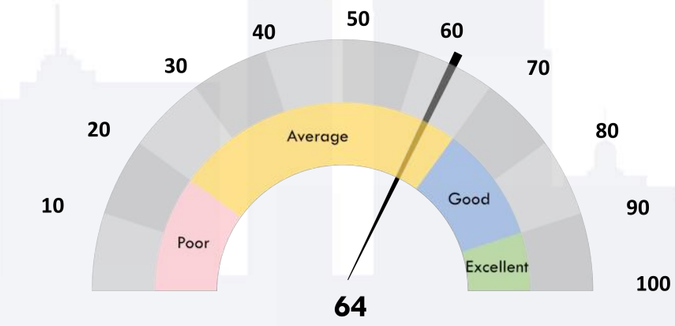
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL

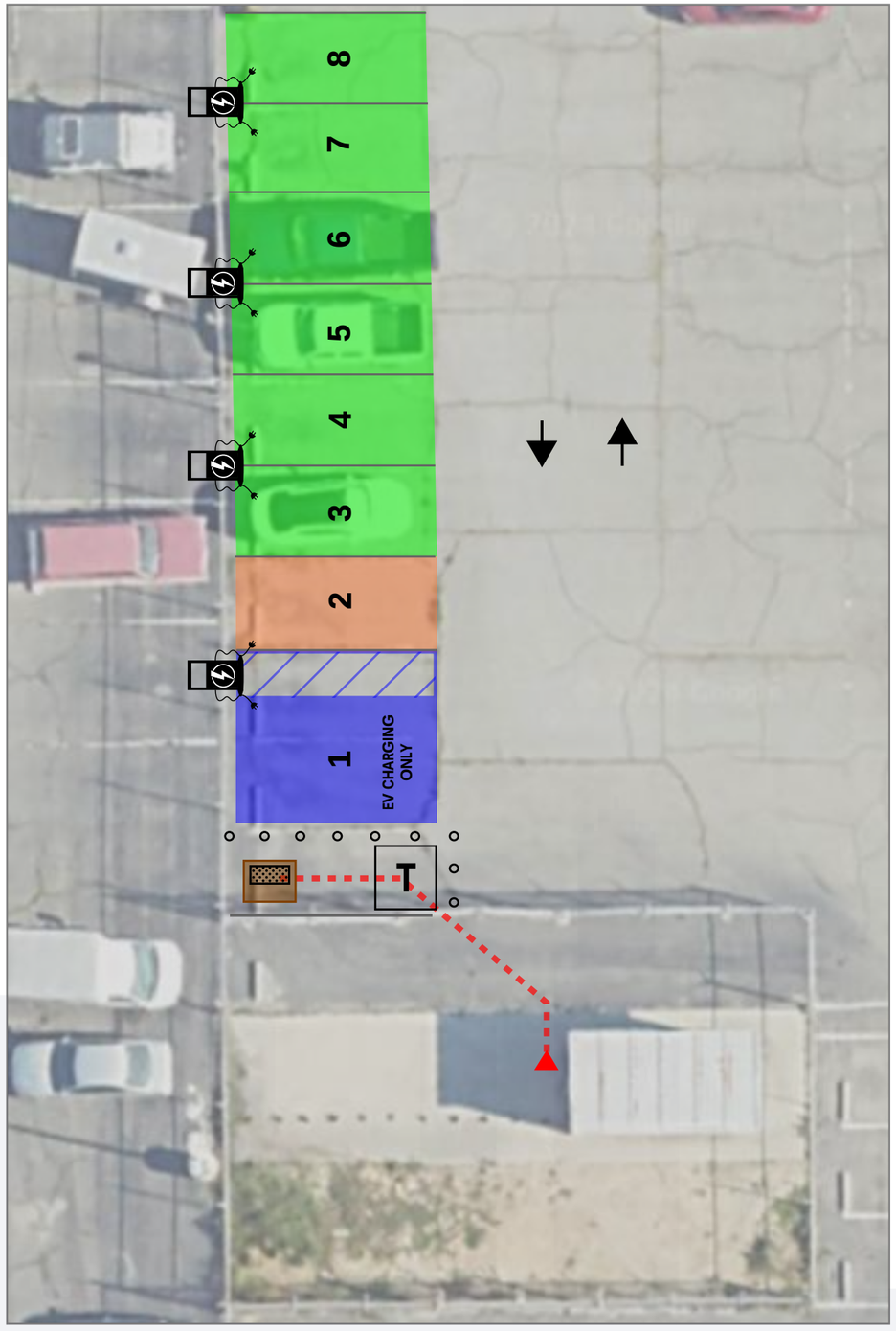


EVALUATION CRITERIA SCORE



EV CHARGER SITE ASSESSMENT
CHINO AIRPORT (KIMBALL LOT) - 8354 KIMBALL AVENUE

SAN BERNARDINO COUNTY
Project & Facilities Management



PROJECT SUMMARY	
SITE TYPE	PUBLIC LOT
RECOMMENDED SCOPE	(8) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$214,444
EVALUATION CRITERIA SCORE	61 OF 100

N

LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- STANDARD ACCESSIBLE EV CHARGING STALL, 9'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE SWITCHBOARD, 200A, 208/120V
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- PROTECTIVE BOLLARD
- UTILITY SERVICE FEED, APPROX. 40' TO POWER SOURCE
- 12KV MEDIUM VOLTAGE SWITCHGEAR
- T — UTILITY TRANSFORMER 12KV / 208V

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
CHINO AIRPORT (KIMBALL LOT) - 8354 KIMBALL AVENUE

DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		CHINO AIRPORT (KIMBALL LOT)
ADDRESS	STREET	8354 KIMBALL AVENUE
	CITY, STATE, ZIP	CHINO, CA, 91710
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		156
EXISTING ADA SPACES		NONE
EXISTING ADA CODE-COMPLIANT?		NO
ELECTRICAL UTILITY		SCE
DAC	TOP QUARTILE	NO, 72%

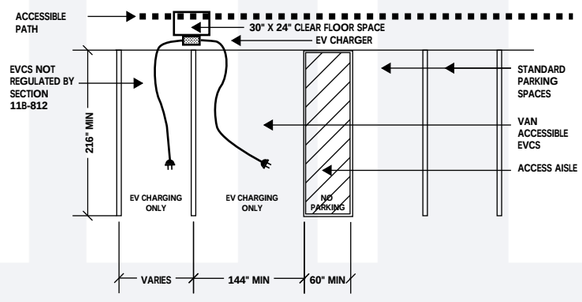
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	4
	PORTS	8
EVSE TYPE		LEVEL 2; 32A @ 208VAC
POWER REQUIREMENT		53.248 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	1
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$214,444
SITE DESCRIPTION / DEFINING CHARACTERISTICS		ADJACENT TO AIRPORT COMMERCIAL HANGERS. PUBLIC LOT ACCESSIBLE FROM KIMBALL RD

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

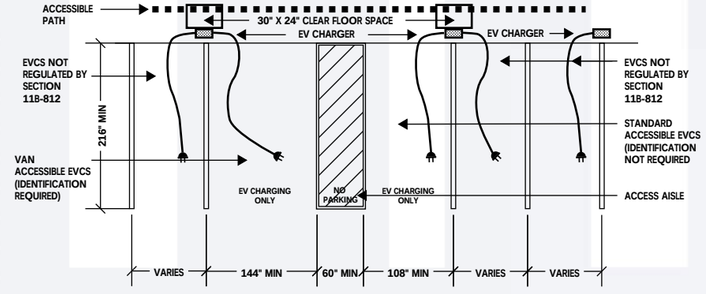
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	6	6
NEARBY EVSE	1	3
AVERAGE LOT USAGE	1	3
EVSE DEMAND	0	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	0	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	0	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	4	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	0	1
TRIGGERS ADDITIONAL ADA UPGRADES	0	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	0	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	8	8
PARKING AREA CONDITION	3	4
TRENCH ROUTE DIFFICULTY	2	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	1	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	4	10
TOTAL	**61**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

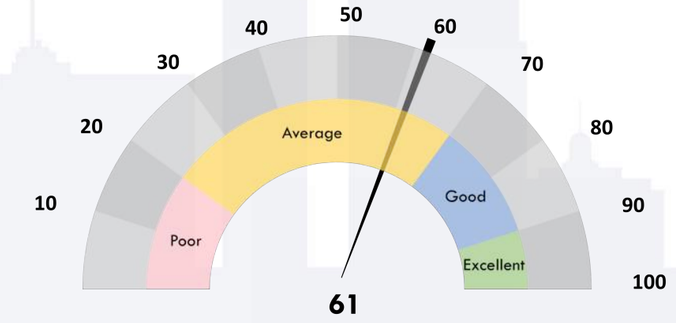
EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE



SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
NEEDLES SHERIFF STATION - 1111 BAILEY AVE

SHEET: 1 OF 2
DATE: 2/8/24

PROJECT SUMMARY	
SITE TYPE	SHERIFF STATION
RECOMMENDED SCOPE	(4) LEVEL 2 CHARGE PORTS
ROM ENG. & CONSTRUCTION ESTIMATE	$170,634
EVALUATION CRITERIA SCORE	56 OF 100

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LEGEND

- STANDARD EV CHARING STALL, 9' TYP
- VAN ACCESSIBLE EV CHARGING STALL, 12'X18' TYP
- NEW ACCESS AISLE, 5' WIDE TYP
- NEW TRUNCATED DOMES
- PROPOSED PATH OF TRAVEL
- DEMO EXISTING RAMP, LOWER WALKWAY TO ZERO CURB HEIGHT. POUR WALKWAY TO ACCOMMODATE VAN ACCESSIBLE STALL.
- CONCRETE EQUIPMENT PAD, METERED ELECTRICAL SERVICE SWITCHBOARD, AND DISTRIBUTION
- T — UTILITY TRANSFORMER
- PROTECTIVE BOLLARD, 4" TYP
- SINGLE PORT LEVEL 2 EV CHARGING STATION
- DUAL PORT LEVEL 2 EV CHARGING STATION
- UTILITY SERVICE FEED, APPROX. 280' TO POWER SOURCE
- TIE INTO EXISTING U/G DISTRIBUTION

SAN BERNARDINO COUNTY
Project & Facilities Management

EV CHARGER SITE ASSESSMENT
NEEDLES SHERIFF STATION - 1111 BAILEY AVE

SHEET: 2 OF 2
DATE: 2/8/24

QTY. DETERMINATION OF EV CHARGE PORTS

FINAL RECOMMENDATION FOR CHARGER QUANTITY IS BASED ON SITE-SPECIFIC CHARACTERISTICS SUCH AS QUANTITY OF EXISTING PARKING SPACES, POWER REQUIREMENTS, AND POTENTIAL GRANT CRITERIA. THESE FACTORS ARE BALANCED TO EFFICIENTLY LEVERAGE RESOURCES AND PRESENT THE MOST VIABLE PROJECT.

DETERMINATION OF QTY. AND TYPE OF ACCESSIBLE CHARGERS

THE REQUIRED QUANTITY AND TYPE OF ACCESSIBLE CHARGING SPACES IS BASED ON THE CALIFORNIA BUILDING CODE SECTION 11B-812

TOTAL # EVCS AT FACILITY	MINIMUM # (BY TYPE) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	VAN ACCESSIBLE	STD. ACCESSIBLE	AMBULATORY
1 TO 4	1	0	0
5 TO 25	1	1	0
26 TO 50	1	1	1
51 TO 75	1	2	2
76 TO 100	1	3	3
101+	1, PLUS 1 FOR EACH 300, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 60, OR FRACTION THEREOF, >100	3, PLUS 1 FOR EACH 50, OR FRACTION THEREOF, >100

SITE DETAILS		
SITE NAME / IDENTIFIER		NEEDLES SHERIFF STATION
ADDRESS	STREET	1111 BAILEY AVENUE
	CITY, STATE, ZIP	NEEDLES, CA, 92363
PARKING CONFIGURATION		SURFACE
EXISTING STANDARD PARKING SPACES		34
EXISTING ADA SPACES		2
EXISTING ADA CODE-COMPLIANT?		NO
ELECTRICAL UTILITY		NEEDLES PUBLIC UTILITY AUTHORITY
DAC	TOP QUARTILE	NO, 66%

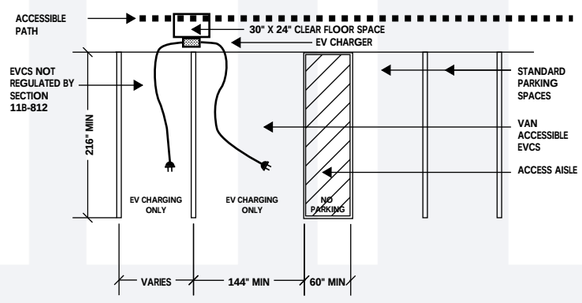
CHARGER DESIGN DETAILS		
EVSE/CHARGE PORTS PROPOSED:	EVSE	3
	PORTS	4
EVSE TYPE		LEVEL 2; 32A @ 208V
POWER REQUIREMENT		26.624 KVA
NEW OR EXISTING ELECTICAL SERVICE		NEW SERVICE
ADA CHARGING STALL REQUIREMENT	VAN ACCESSIBLE	1
	STD. ACCESSIBLE	0
	AMBULATORY	0
ROM ENGINEERING & CONSTRUCTION ESTIMATE*		$170,634
SITE DESCRIPTION / DEFINING CHARACTERISTICS		NEAR LIBRARY & RECREATION CENTER

* ABOVE ROUGH ORDER OF MAGNITUDE (ROM) ENGINEERING AND CONSTRUCTION ESTIMATE INCLUDES DESIGN SERVICES, PLAN CHECK, CIVIL AND ELECTRICAL IMPROVEMENTS (ADA UPGRADES, CONDUIT, WIRING), EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, AND CHARGING STATIONS), AND LABOR. ESTIMATE EXCLUDES COUNTY SOFT COSTS SUCH AS PROJECT MANAGEMENT, LABOR COMPLIANCE, REPORTING, ETC. ROM ESTIMATE VALID FOR 9 MONTHS FROM SUBMISSION DATE LISTED IN HEADER.

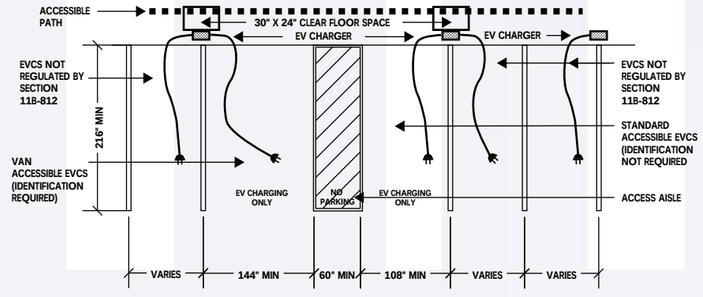
EVALUATION SCORING CRITERIA	AWARDED SCORE	MAX POINTS
PUBLICALLY ACCESSIBLE PARKING	5	5
LOT TYPE: SURFACE, GARAGE, STREET PARKING	3	3
NEARBY AMMENITIES	2	5
PARKING FEE COLLECTION	3	3
PARKING STALL QUANTITIES	3	6
NEARBY EVSE	0	3
AVERAGE LOT USAGE	2	3
EVSE DEMAND	0	4
EVSE SUPPORTS STAFF & PUBLIC	2	3
LOCATION MAXIMIZES VISIBILITY	1	1
EASY INGRESS/ EGRESS FROM TRAFFIC	1	1
SUFFICIENT LIGHTING PRESENT	1	1
PROXIMITY TO MULTIMODAL TRANSPORTATION	1	1
EVSE CAN SUPPORT MULTIFAMILY HOUSING	0	1
PROXIMITY TO UTILITY INFRASTRUCTURE	0	4
KNOWN CIRCUIT CONSTRAINTS	5	5
SPACE FOR ELECTRICAL INFRASTRUCTURE	5	5
POTENTIAL FOR FUTURE SOLAR PV	1	2
BACKUP GENERATION ON SITE	1	1
TRIGGERS ADDITIONAL ADA UPGRADES	3	5
NEARBY ACCESSIBLE STALLS OR PATH OF TRAVEL	4	4
EVSE PROTECTION	2	2
POWER AND CELL SERVICE	4	8
PARKING AREA CONDITION	4	4
TRENCH ROUTE DIFFICULTY	1	3
ACCESSIBLE CHARGER(S) INTEGRATION DIFFICULTY	1	4
EJ OR DISADVANTAGED COMMUNITY	1	2
RELEVANT PENDING SITE IMPROVEMENTS	0	1
PROJECT COST	0	10
TOTAL	**56**	**100**

EV CHARGING STATION CONFIGURATION SAMPLES WITH ACCESSIBLE STALLS

EV CHARGERS WITH (1) VAN ACCESSIBLE STALL



EV CHARGERS WITH (1) VAN ACCESSIBLE AND (1) STANDARD ACCESSIBLE STALL



EVALUATION CRITERIA SCORE

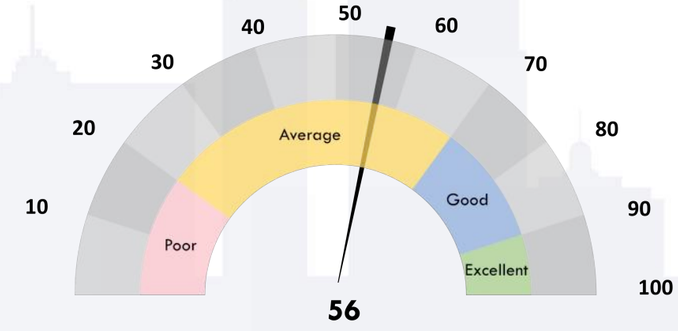


EXHIBIT C – Cost Estimates

8575 HAVEN AVENUE

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	4	$800	$1,600	$1,600	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	2	$1,383	$2,766		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	3	$1,600	$4,799		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	149	$59	$8,813		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	281	$11		$3,202	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 120/208V panel	EA	1	$2,968		$2,968	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	4	$702		$2,808	
	200A	EA	1	$1,396		$1,396	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	1400	$2.28		$3,185	
	3/0 Cu Wire	LF	320	$9.82		$3,141	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	200	$11	$2,104		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	150	$8	$1,132		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	420	$12	$4,864		
Replacement of concrete hardscape	3" to 6"	SF	100	$28	$2,797		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	24	$43	$1,042		
Concrete hardscape	Curb	LF	15	$49	$736		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	5	$534	$2,670		
	>10 tons	Per Ton	3	$375	$1,126		
Replacement of truncated domes	Materials and labor	Per SF	12	$53	$638		
Concrete wheel stop	per charger stall	EA	4	$207	$830		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	80	$12	$1,000		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 50,062
Electrical	$ 24,928
EV Chargers	$ 16,000
Construction Contingency	$ 14,998
Total	**$ 140,611**

222/268 HOSPITALITY LANE

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	16	$800	$6,400	$6,400	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
	Below grade, 17"x30", 3' deep	EA	1	$1,291	$1,291		
	Below grade, 24"x36", 3' deep	EA	1	$2,442	$2,442		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	16	$1,600	$25,595		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	12	$795	$9,543		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	520	$59	$30,755		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	2311	$11		$26,334	
	2" to 4"	LF	140	$22		$3,097	
Install new meter/panel Pedestal 100% rated (for utility meter)	800A 3 Phase, 120/208V pedestal	EA	1	$19,402		$19,402	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	28	$702		$19,653	
	800A	EA	1	$7,734		$7,734	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	4500	$2.28		$10,238	
	6 AWG Cu Wire	LF	2500	$2.62		$6,550	
	4 AWG Cu Wire	LF	2000	$3.23		$6,460	
	1 AWG Cu Wire	LF	100	$5.89		$589	
	3/0 Cu Wire	LF	400	$9.82		$3,926	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	700	$11	$7,364		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	500	$8	$3,773		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	1400	$12	$16,212		
Replacement of concrete hardscape	3" to 6"	SF	200	$28	$5,594		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	200	$43	$8,682		
Concrete hardscape	Curb	LF	20	$49	$981		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	30	$375	$11,260		
Replacement of truncated domes	Materials and labor	Per SF	30	$53	$1,595		
Concrete wheel stop	per charger stall	EA	28	$207	$5,810		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Temporary removal and replacement of traffic/parking lot signage	Including safe storage and placement of concrete footing	EA	1	$1,357	$1,357		
Clearing and grubbing	<= 1,000 SF	SF	300	$12	$3,749		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Furnish and Plant 24-inch Box Tree	Trunk diameter greater than or equal to 6 inches	EA	15	$877	$13,150		
Repair and/or Replace Landscape and Landscape Irrigation	Lateral water line repair (3/4" to 1-1/2")	LF	75	$56	$4,200		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	4	$2,230	$8,919		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 192,111
Electrical	$ 117,011
EV Chargers	$ 112,000
Construction Contingency	$ 61,824
Total	**$ 517,568**

CALICO GHOST TOWN

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	12	$800	$4,800	$4,800	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	4	$854	$3,417		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	12	$1,600	$19,196		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	26	$795	$20,676		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	260	$59	$15,378		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	2" to 4"	LF	1294	$22		$28,623	
Install new meter/panel Pedestal 100% rated (for utility meter)	1000A 3 Phase, 480/277V pedestal	EA	1	$28,032		$28,032	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	100A	EA	12	$886		$10,636	
	1000A	EA	1	$11,721		$11,721	
Install Cu Wire/Conductor	6 AWG Cu Wire	LF	1560	$2.62		$4,087	
	3 AWG Cu Wire	LF	6240	$4.43		$27,643	
	2 AWG Cu Wire	LF	150	$5.13		$769	
	1/0 Cu Wire	LF	624	$7.03		$4,387	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	300	$11	$3,156		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	200	$8	$1,509		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	700	$12	$8,106		
Replacement of concrete hardscape	3" to 6"	SF	111	$28	$3,105		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	200	$43	$8,682		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	7	$375	$2,627		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	100	$12	$1,250		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	2	$2,230	$4,460		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 118,948
Electrical	$ 127,327
EV Chargers	$ 420,000
Construction Contingency	$ 49,255
Total	**$ 750,153**

CHINO AIRPORT

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	4	$800	$1,600	$1,600	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	2	$1,383	$2,766		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	4	$1,600	$6,399		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	8	$795	$6,362		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	120	$59	$7,097		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	250	$11		$2,849	
	2" to 4"	LF	50	$22		$1,106	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	300 kVA	EA	1	$17,055		$17,055	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 120/208V panel	EA	1	$2,968		$2,968	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	8	$702		$5,615	
	200A	EA	1	$1,396		$1,396	
	1600A	EA	1	$16,589		$16,589	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	800	$2.28		$1,820	
	2/0 Cu Wire	LF	150	$7.96		$1,193	
	3/0 Cu Wire	LF	150	$9.82		$1,472	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	300	$11	$3,156		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	200	$8	$1,509		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	600	$12	$6,948		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	150	$43	$6,512		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	7	$375	$2,627		
Concrete wheel stop	per charger stall	EA	8	$207	$1,660		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 62,893
Electrical	$ 60,291
EV Chargers	$ 32,000
Construction Contingency	$ 24,637
Total	**$ 214,444**

COUNTY GOVERNMENT CENTER - HESPERIA

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	7	$800	$2,800	$2,800	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	7	$1,600	$11,198		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	5	$795	$3,976		
Above grade: Provide and install rigid conduit (including conduit bodies up to 3 in) and all conduit-related materials, including fastening and installation	2" to 4"	LF	30	$86		$2,579	
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	320	$59	$18,926		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	417	$11		$4,752	
	2" to 4"	LF	120	$22		$2,654	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	112 kVA	EA	1	$7,439		$7,439	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 480/277V panel	EA	1	$3,442		$3,442	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	400 Amp panel, 3 Phase 120/208V	EA	1	$6,829		$6,829	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	12	$702		$8,423	
	200A	EA	1	$1,396		$1,396	
	400A	EA	1	$2,583		$2,583	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	1626	$2.28		$3,699	
	1 AWG Cu Wire	LF	150	$5.89		$884	
	2/0 Cu Wire	LF	608	$7.96		$4,837	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	300	$11	$3,156		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	400	$8	$3,018		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	1000	$12	$11,580		
Replacement of concrete hardscape	3" to 6"	SF	100	$28	$2,797		
	6-1/2" to 12" Ramp	SF	16	$39	$630		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	80	$43	$3,473		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	14	$375	$5,255		
Replacement of truncated domes	Materials and labor	Per SF	20	$53	$1,063		
Concrete wheel stop	per charger stall	EA	14	$207	$2,905		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	5	$332	$1,659		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 98,107
Electrical	$ 58,944
EV Chargers	$ 48,000
Construction Contingency	$ 31,410
Total	**$ 271,085**

COUNTY GOVERNMENT CENTER - JOSHUA TREE

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	6	$800	$2,400	$2,400	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
Above Grade J-Boxes, Nema 3R - material and installation	12"x12" NEMA 3R	EA	1	$414	$414	$414	
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	6	$1,600	$9,598		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	22	$795	$17,495		
Above grade: Provide and install rigid conduit (including conduit bodies up to 3 in) and all conduit-related materials, including fastening and installation	2" to 4"	LF	80	$86		$6,877	
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	100	$59	$5,915		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	130	$11		$1,481	
	2" to 4"	LF	150	$22		$3,318	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	75 kVA	EA	1	$6,220		$6,220	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	200 Amp panel, 3 Phase 120/208V	EA	1	$3,780		$3,780	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	8	$702		$5,615	
	100A	EA	2	$886		$1,773	
	200A	EA	2	$1,396		$2,792	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	500	$2.28		$1,138	
	3 AWG Cu Wire	LF	60	$4.43		$266	
	1/0 Cu Wire	LF	380	$7.03		$2,671	
	3/0 Cu Wire	LF	676	$9.82		$6,635	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Install Service Disconnect Switch, with NEMA 3R enclosure	400A Pedestal Mounted	EA	1	$4,463		$4,463	
Temporary fencing	8' screened chain-link fence	LF	200	$11	$2,104		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	100	$8	$755		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	250	$12	$2,895		
Replacement of concrete hardscape	6-1/2" to 12" Ramp	SF	100	$39	$3,940		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	100	$43	$4,341		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	5	$534	$2,670		
Replacement of truncated domes	Materials and labor	Per SF	15	$53	$797		
Concrete wheel stop	per charger stall	EA	10	$207	$2,075		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	100	$12	$1,250		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Repair and/or Replace Landscape and Landscape Irrigation	Non-turf Landscape Replacement	SF	50	$19	$929		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	2	$2,230	$4,460		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	5	$332	$1,659		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 81,796
Electrical	$ 56,472
EV Chargers	$ 102,000
Construction Contingency	$ 27,654
Total	**$ 302,545**

CUCAMONGA-GUASTI REGIONAL PARK

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	7	$800	$2,800	$2,800	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	7	$1,600	$11,198		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	8	$795	$6,362		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	480	$59	$28,390		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	268	$11		$3,054	
	2" to 4"	LF	370	$22		$8,184	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	225 kVA	EA	1	$12,647		$12,647	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 480/277V panel	EA	1	$3,442		$3,442	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	600 Amp panel, 3 Phase 120/208V	EA	1	$8,410		$8,410	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	14	$702		$9,826	
	200A	EA	1	$1,396		$1,396	
	600A	EA	1	$6,006		$6,006	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	1045	$2.28		$2,378	
	3 AWG Cu Wire	LF	370	$4.43		$1,639	
	1/0 Cu Wire	LF	1924	$7.03		$13,526	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	500	$11	$5,260		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	200	$8	$1,509		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	300	$12	$3,474		
Replacement of concrete hardscape	3" to 6"	SF	64	$28	$1,790		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	100	$43	$4,341		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	6	$534	$3,204		
Concrete wheel stop	per charger stall	EA	14	$207	$2,905		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	200	$12	$2,499		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	6	$332	$1,991		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 96,053
Electrical	$ 79,937
EV Chargers	$ 56,000
Construction Contingency	$ 35,198
Total	**$ 301,810**

GLEN HELEN REGIONAL PARK (POOL)

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	8	$800	$3,200	$3,200	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	8	$1,600	$12,797		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	600	$59	$35,487		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	602	$11		$6,860	
	2" to 4"	LF	400	$22		$8,848	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	225 kVA	EA	1	$12,647		$12,647	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 480/277V panel	EA	1	$3,442		$3,442	
Install new meter/panel Pedestal 100% rated (for utility meter)	800A 3 Phase, 480/277V pedestal	EA	1	$20,719		$20,719	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	400 Amp panel, 3 Phase 120/208V	EA	1	$6,829		$6,829	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	20A	EA	4	$675		$2,700	
	40A	EA	15	$702		$10,528	
	100A	EA	3	$886		$2,659	
	200A	EA	2	$1,396		$2,792	
	400A	EA	1	$2,583		$2,583	
	800A	EA	1	$7,734		$7,734	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	2500	$2.28		$5,688	
	1 AWG Cu Wire	LF	520	$5.89		$3,063	
	3/0 Cu Wire	LF	2080	$9.82		$20,415	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	4	$337		$1,349	
Temporary fencing	8' screened chain-link fence	LF	400	$11	$4,208		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	100	$8	$755		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	240	$12	$2,779		
Replacement of concrete hardscape	6-1/2" to 12" Ramp	SF	350	$39	$13,790		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	150	$43	$6,512		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	8	$534	$4,273		
Replacement of truncated domes	Materials and labor	Per SF	49	$53	$2,605		
Concrete wheel stop	per charger stall	EA	14	$207	$2,905		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	100	$12	$1,250		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	2	$2,230	$4,460		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 113,119
Electrical	$ 128,009
EV Chargers	$ 56,000
Construction Contingency	$ 48,226
Total	**$ 379,977**

KESSLER PARK (JURUPA LOT)

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	3	$800	$1,200	$1,200	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	3	$1,600	$4,799		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	6	$795	$4,771		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	140	$59	$8,280		
Trenching for below grade utility installation, including excavation and slurry backfill.	<= 24" wide by <= 4' below improvements	LF	30	$120	$3,586		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	120	$11		$1,367	
	2" to 4"	LF	110	$22		$2,433	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	75 kVA	EA	1	$6,220		$6,220	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 120/208V panel	EA	1	$2,968		$2,968	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	6	$702		$4,211	
	200A	EA	1	$1,396		$1,396	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	500	$2.28		$1,138	
	2/0 Cu Wire	LF	500	$7.96		$3,978	
	4/0 Cu Wire	LF	100	$11.41		$1,141	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	250	$11	$2,630		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	100	$8	$755		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	200	$12	$2,316		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	100	$43	$4,341		
Concrete hardscape	Curb and gutter	LF	6	$70	$421		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	4	$534	$2,136		
Concrete wheel stop	per charger stall	EA	6	$207	$1,245		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Clearing and grubbing	<= 1,000 SF	SF	50	$12	$625		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Repair and/or Replace Landscape and Landscape Irrigation	Turf Replacement	SF	20	$12	$233		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	5	$332	$1,659		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 55,380
Electrical	$ 32,680
EV Chargers	$ 24,000
Construction Contingency	$ 17,612
Total	**$ 164,295**

LAKE GREGORY REGIONAL PARK

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	4	$800	$1,600	$1,600	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	4	$1,600	$6,399		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	3	$795	$2,386		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	450	$59	$26,615		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	373	$11		$4,250	
	2" to 4"	LF	350	$22		$7,742	
Install rack or wall-mounted electric meter/panel. Main	200A 3 Phase, 120/208V panel	EA	1	$2,968		$2,968	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	4	$702		$2,808	
	200A	EA	1	$1,396		$1,396	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	1134	$2.28		$2,580	
	3 AWG Cu Wire	LF	396	$4.43		$1,754	
	1 AWG Cu Wire	LF	1150	$5.89		$6,774	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	300	$11	$3,156		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	100	$8	$755		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	890	$12	$10,306		
Replacement of concrete hardscape	3" to 6"	SF	386	$28	$10,796		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	100	$43	$4,341		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	30	$375	$11,260		
Concrete wheel stop	per charger stall	EA	8	$207	$1,660		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	170	$12	$2,124		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	2	$2,230	$4,460		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	4	$332	$1,327		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 110,626
Electrical	$ 38,500
EV Chargers	$ 32,000
Construction Contingency	$ 29,825
Total	**$ 245,575**

NEEDLES SHERIFF STATION

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	3	$800	$1,200	$1,200	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 17"x30", 3' deep	EA	1	$1,291	$1,291		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	3	$1,600	$4,799		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	6	$795	$4,771		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	100	$59	$5,915		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	120	$11		$1,367	
	2" to 4"	LF	280	$22		$6,194	
Install rack or wall-mounted electric meter/panel. Main Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	100A 3 Phase, 120/208V panel	EA	1	$1,992		$1,992	
	40A	EA	4	$702		$2,808	
	100A	EA	1	$886		$886	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	450	$2.28		$1,024	
	2 AWG Cu Wire	LF	300	$5.13		$1,538	
	1/0 Cu Wire	LF	1200	$7.03		$8,436	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	200	$11	$2,104		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	80	$8	$604		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	300	$12	$3,474		
Replacement of concrete hardscape	3" to 6"	SF	160	$28	$4,475		
	6-1/2" to 12" Ramp	SF	50	$39	$1,970		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	60	$43	$2,605		
Concrete hardscape	Curb	LF	10	$49	$490		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	10	$375	$3,753		
Replacement of truncated domes	Materials and labor	Per SF	44	$53	$2,339		
Concrete wheel stop	per charger stall	EA	4	$207	$830		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	200	$12	$2,499		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 67,936
Electrical	$ 32,073
EV Chargers	$ 16,000
Construction Contingency	$ 20,002
Total	**$ 170,633**

PHELAN MEMORIAL LIBRARY

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	2	$800	$800	$800	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	2	$1,600	$3,199		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	5	$795	$3,976		
Above grade: Provide and install rigid conduit (including conduit bodies up to 3 in) and all conduit-related materials, including	3/4" to 1-1/2"	LF	150	$34		$5,174	
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	30	$59	$1,774		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	50	$11		$570	
Branch Circuit Breaker - Max frame size includes all trip plugs	40A	EA	4	$702		$2,808	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	550	$2.28		$1,251	
Temporary fencing	8' screened chain-link fence	LF	200	$11	$2,104		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	25	$8	$189		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	100	$12	$1,158		
Replacement of concrete hardscape	3" to 6"	SF	60	$28	$1,678		
PCC Concrete pavement (Reinforced)	3" to 6"	SF	75	$29	$2,178		
Concrete hardscape	Curb	LF	4	$49	$196		
Replacement of truncated domes	Materials and labor	Per SF	12	$53	$638		
Concrete wheel stop	per charger stall	EA	4	$207	$830		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	50	$12	$625		
Hedge Removal	Remove 36" wide, 72" tall hedge	LF	8	$95	$759		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 35,171
Electrical	$ 16,557
EV Chargers	$ 16,000
Construction Contingency	$ 10,346
Total	**$ 112,697**

PRADO REGIONAL PARK

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	4	$800	$1,600	$1,600	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 10"x17", 3' deep	EA	1	$854	$854		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	4	$1,600	$6,399		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	3	$795	$2,386		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	350	$59	$20,701		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	70	$11		$798	
	2" to 4"	LF	350	$22		$7,742	
Install 208V to 480/277 Service Voltage Step-Up Dry	75 kVA	EA	1	$6,135		$6,135	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	200 Amp panel, 3 Phase 120/208V	EA	1	$3,780		$3,780	
Branch Circuit Breaker - Max frame size includes all trip plugs	40A	EA	6	$702		$4,211	
up to, but not to exceed listed frame size	200A	EA	1	$1,396		$1,396	
	8 AWG Cu Wire	LF	400	$2.28		$910	
Install Cu Wire/Conductor	3 AWG Cu Wire	LF	350	$4.43		$1,551	
	1 AWG Cu Wire	LF	1050	$5.89		$6,185	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	300	$11	$3,156		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	100	$8	$755		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	400	$12	$4,632		
Replacement of concrete hardscape	3" to 6"	SF	386	$28	$10,796		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	80	$43	$3,473		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	7.5	$534	$4,005		
Concrete wheel stop	per charger stall	EA	6	$207	$1,245		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	86	$12	$1,075		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	4	$332	$1,327		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 81,880
Electrical	$ 40,936
EV Chargers	$ 24,000
Construction Contingency	$ 24,563
Total	**$ 206,002**

RANCHO CUCAMONGA COURTHOUSE (PUBLIC LOT)

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	10	$800	$4,000	$4,000	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	10	$1,600	$15,997		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	8	$795	$6,362		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	225	$59	$13,308		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	450	$11		$5,128	
	2" to 4"	LF	150	$22		$3,318	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	112 kVA	EA	1	$7,439		$7,439	
Install new meter/panel Pedestal 100% rated (for utility meter)	800A 3 Phase, 480/277V pedestal	EA	1	$20,719		$20,719	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	400 Amp panel, 3 Phase 120/208V	EA	1	$6,829		$6,829	
	40A	EA	10	$702		$7,019	
Branch Circuit Breaker - Max frame size includes all trip plugs	100A	EA	4	$886		$3,545	
up to, but not to exceed listed frame size	200A	EA	2	$1,396		$2,792	
	400A	EA	1	$2,583		$2,583	
	600A	EA	1	$6,006		$6,006	
	8 AWG Cu Wire	LF	1400	$2.28		$3,185	
	2 AWG Cu Wire	LF	150	$5.13		$769	
Install Cu Wire/Conductor	1 AWG Cu Wire	LF	100	$5.89		$589	
	2/0 Cu Wire	LF	150	$7.96		$1,193	
	3/0 Cu Wire	LF	500	$9.82		$4,908	
	4/0 Cu Wire	LF	200	$11.41		$2,281	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	450	$11	$4,734		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	200	$12	$2,316		
Replacement of concrete hardscape	6-1/2" to 12" Ramp	SF	75	$39	$2,955		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	150	$43	$6,512		
Concrete wheel stop	per charger stall	EA	14	$207	$2,905		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	100	$12	$1,250		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	2	$2,230	$4,460		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 82,043
Electrical	$ 88,931
EV Chargers	$ 180,000
Construction Contingency	$ 34,195
Total	**$ 419,791**

TWIN PEAKS SHERIFF STATION

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	3	$800	$1,200	$1,200	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Handholes, traffic rated - material and installation	Below grade, 24"x36", 3' deep	EA	1	$2,442	$2,442		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	3	$1,600	$4,799		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	4	$795	$3,181		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	120	$59	$7,097		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	200	$11		$2,279	
	2" to 4"	LF	80	$22		$1,770	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	112 kVA	EA	1	$7,439		$7,439	
Install rack or wall-mounted electric meter/panel. Main	100A 3 Phase, 120/208V panel	EA	1	$1,992		$1,992	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	4	$702		$2,808	
	100A	EA	1	$886		$886	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	780	$2.28		$1,775	
	1 AWG Cu Wire	LF	100	$5.89		$589	
	2/0 Cu Wire	LF	480	$7.96		$3,818	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	2	$337		$675	
Temporary fencing	8' screened chain-link fence	LF	225	$11	$2,367		
Saw cut existing hardscape surface for trench installation	3" to 6" thick. All Types: Concrete, asphaltic concrete, curb and gutter.	Per Feet of Trench Length	80	$8	$604		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	400	$12	$4,632		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	100	$43	$4,341		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
	>10 tons	Per Ton	5	$375	$1,877		
Concrete wheel stop	per charger stall	EA	4	$207	$830		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	100	$12	$1,250		
Maintain landscape irrigation during construction	per site	EA	1	$2,181	$2,181		
Repair and/or Replace Landscape and Landscape Irrigation	Non-turf Landscape Replacement	SF	40	$19	$743		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	1	$2,230	$2,230		
Traffic Rated Trench Plate	Install Trench plate for site accessibility	EA	5	$332	$1,659		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 61,837
Electrical	$ 31,184
EV Chargers	$ 16,000
Construction Contingency	$ 18,604
Total	**$ 162,249**

YUCAIPA REGIONAL PARK (LOT 3A)

Description of Work	Type	Unit	Qty.	Unit Rate	CIVIL	ELEC	DESIGN
Compliance with General Conditions	Includes, but not limited to items of work such as construction waste management, bathroom facilities, vehicular access and parking.	Per Site	1	$11,909	$5,954	$5,954	
Plan Check Corrections & Final 'As Built' Documentation	Contract to make and submit legible redline corrections	Per Site	1	$2,623			$2,623
Design & Plan Check		Per Site	1	$32,000			$32,000
Charger installation scope	Cost per charger to install and commission	EA	7	$800	$2,800	$2,800	
Potholes for existing utilities	Potholing to locate u/g utilities. Pavement R&R	EA	3	$1,383	$4,150		
Install concrete foundation/pad for charger Pedestal	Field poured 3'x3'x6" concrete pad for charger	EA	7	$1,600	$11,198		
Bollard - material and installation	4" dia by 48" tall with 24" below grade, filled and encased in concrete	EA	15	$795	$11,928		
Trenching for below grade utility installation, including excavation and backfill to 95% compaction.	<= 24" wide by <= 4' below improvements	LF	120	$59	$7,097		
Below grade: Provide and install PVC conduit with all conduit-related materials, excluding ground excavation and backfill	3/4" to 1-1/2"	LF	300	$11		$3,419	
	2" to 4"	LF	70	$22		$1,548	
Install 480V-to-208Y/120V Service Voltage Step-Down Dry	75 kVA	EA	1	$6,220		$6,220	
Install new meter/panel Pedestal 100% rated (for utility meter)	400A 3 Phase, 480/277V Pedestal	EA	1	$13,328		$13,328	
Subpanel for distribution to EVSE. Pedestal mounted NEMA-3R,	200 Amp panel, 3 Phase 120/208V	EA	1	$3,780		$3,780	
Branch Circuit Breaker - Max frame size includes all trip plugs up to, but not to exceed listed frame size	40A	EA	8	$702		$5,615	
	100A	EA	2	$886		$1,773	
	200A	EA	1	$1,396		$1,396	
	400A	EA	1	$2,583		$2,583	
Install Cu Wire/Conductor	8 AWG Cu Wire	LF	1300	$2.28		$2,958	
	1 AWG Cu Wire	LF	75	$5.89		$442	
	1/0 Cu Wire	LF	300	$7.03		$2,109	
	2/0 Cu Wire	LF	312	$7.96		$2,482	
5/8"x 8' ground rod, materials and install	2 AWG Cu wire	EA	3	$337		$1,012	
Temporary fencing	8' screened chain-link fence	LF	250	$11	$2,630		
Removal of harden surfacing	Concrete, asphaltic concrete, curb and gutter.	SF	250	$12	$2,895		
Replacement of concrete hardscape	6-1/2" to 12" Ramp	SF	180	$39	$7,092		
PCC Concrete pavement (Reinforced)	6-1/2" to 12"	SF	200	$43	$8,682		
Concrete hardscape	Curb	LF	4	$49	$196		
Replacement of asphalt concrete , with aggregate base	First 10 tons per site	Per Ton	10	$534	$5,341		
Concrete wheel stop	per charger stall	EA	10	$207	$2,075		
Parking lot striping	per site	EA	1	$1,868	$1,868		
Installation of new signage	Per site for ADA stalls	EA	1	$3,094	$3,094		
Clearing and grubbing	<= 1,000 SF	SF	250	$12	$3,124		
Tree Removal	Trunk diameter <= 6"	EA	1	$1,177	$1,177		
Repair and/or Replace Landscape and Landscape Irrigation	Non-turf Landscape Replacement	SF	100	$19	$1,857		
Install Required ADA stalls for Chargers	ADA Van Accessible Stall	EA	2	$2,230	$4,460		

Soft Costs/ Permitting & Design	$ 34,623
Trenching/Civil	$ 87,617
Electrical	$ 57,417
EV Chargers	$ 102,000
Construction Contingency	$ 29,007
Total	**$ 310,664**

EXHIBIT D – Excel workbook calculations

Workbook can be downloaded through the following link: https://anseradvisory.egnyte.com/dl/2DYwNl8SpS