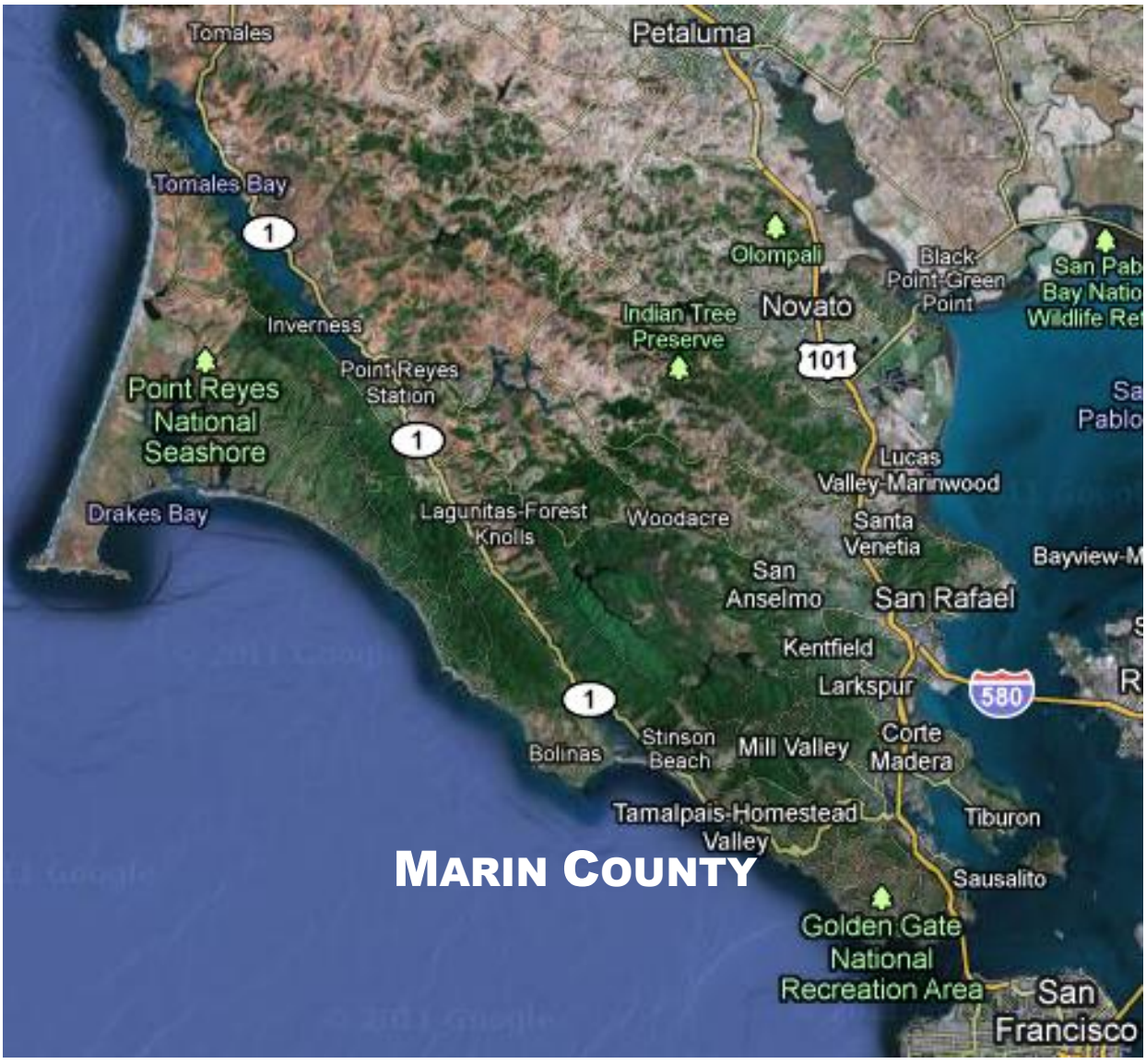
Transportation Authority of Marin

Marin Community Foundation

How Change Happens

Report on Preliminary Plans for the Siting and Placement of Publicly-Accessible Electric Vehicle Charging Stations Throughout Marin County

June 2011



This report was developed by the Transportation Authority of Marin, in cooperation with Electric Vehicle Communities Alliance, under a grant from the Marin Community Foundation.

Lead Author: Leah R. Reich, EV Outreach Consultant, Transportation Authority of Marin

Key Contributors:

Michael J. Calise, EVadvise

Jim Helmer, LightMoves

Richard Schorske, EV Communities Alliance

Marin County Jurisdictions Represented:

City of Belvedere

Town of Corte Madera

Town of Fairfax

City of Larkspur

City of Mill Valley

City of Novato

Town of Ross

Town of San Anselmo

City of San Rafael

City of Sausalito

Town of Tiburon

County of Marin

OUTLINE OF CONTENTS

APPENDICES

I. EXECUTIVE SUMMARY

"The only thing between us and the future is a plan."
~ smallcore.org

This document, "Report on Preliminary Plans for the Siting and Placement of Publicly-Accessible Electric Vehicle Charging Stations Throughout Marin County," is a working document designed to accelerate the transition to electrified transportation and thereby reduce greenhouse gas emissions by providing preliminary plans identified by jurisdictions for the potential siting and placement of electric vehicle charging stations throughout Marin County.

Specifically, this document:

1) Identifies the need and opportunity for a transition to electrified transportation in Marin County, supporting the Transportation Authority of Marin (TAM) and Marin County goal to reduce greenhouse gas emissions;
2) Describes educational outreach sessions initiated with local jurisdictions throughout Marin County;
3) Highlights key principles and priorities for the siting and placement of electric vehicle charging stations;
4) Identifies and maps specific, potential locations and types of electric vehicle charging stations targeted by local jurisdictions, and
5) Provides recommendations for future actions to simplify and accelerate the successful deployment of electric vehicles into the mainstream transportation system of Marin County.

This report, while preliminary in scope, provides recommendations regarding Marin County's potential leadership role in the shift to cleaner, less-expensive electrified transportation in the San Francisco Bay Area.

II. VEHICLE ELECTRIFICATION

Electric vehicles are coming to California, and Marin County will play a key role in their successful introduction. Marin County, with its strong economy and progressive environmental policies, is poised to advance strategies to substantially reduce greenhouse gas emissions and boost local economic vitality by accelerating the deployment of electric vehicles.

The Transportation Authority of Marin (TAM), the congestion management agency and the transportation sales tax authority for Marin County, is in a pivotal position to help Marin's 11 cities and towns and the County of Marin do their part to establish the San Francisco Bay Area as the "EV Capital of the United States." TAM, in its continued support of statewide goals to reduce greenhouse gas emissions from the transportation sector, is working with Marin communities to build a comprehensive Electric Vehicle (EV) infrastructure that will encourage and meet expected demand for a rapid shift to electrified transportation.

THE NEED

The County of Marin released a "Greenhouse Gas Reduction Plan" in October 2006, which indicated that *"the increase in greenhouse gases (GHGs) resulting from human activities is changing the climate in ways that pose serious risks to Marin County's health, economy, and environment."* [1]

Reports at all levels of government and in the global scientific community have highlighted the urgency of climate change and "peak oil". These factors, along with escalating gasoline prices and concern over air quality have raised awareness of the multiple reasons for accelerating the transition to electrified transportation.

Environmental Factors

According to the Bay Area Air Quality Management District (BAAQMD), transportation accounts for more than 40 percent of greenhouse gas emissions in the San Francisco Bay Area, making it the single largest source by sector. In Marin County, the numbers are even more staggering – with emissions from vehicles constituting 62 percent of Marin's carbon footprint. [2] Ongoing reliance on conventional internal combustion engine vehicles poses a serious environmental threat to the region and beyond.

Economic Concerns

The California Energy Commission, the state's primary energy policy and planning agency, reports that California is the world's fifth largest consumer of energy and ranks second in gasoline consumption only behind the entire United States.[3] According to a 2009 Congressional Report, transportation accounts for one third of household spending and a third of fossil fuel consumption.[4] This growing addiction to oil is a habit that costs U.S. citizens about $1 billion a day, creating a huge negative economic impact at a time when local jurisdictions are already struggling to overcome serious financial challenges.

National Security

The United States is heavily reliant on petroleum. The Department of Energy reports that 94 percent of energy delivered to the U.S. transportation system is petroleum-based today.[5] This reliance on finite supplies of petroleum presents not only environmental and economic consequences, but it provides a significant threat to national security. The importance of oil has given it a place of prominence in foreign and military policy. The United States faces the burden of securing the world's oil supply from large individual oil producers while simultaneously establishing foreign policy when dealing with problems in these nations.

To overcome these threats to environmental, economic, and physical well-being, national, state, and local leaders are seeking to overcome reliance on oil. At the state level, The California Air Resources Board "Vision 2050" strategy for alternative fuels deployment has announced a goal that nearly 80% of all vehicles in California will be electrically driven by 2050.

THE OPPORTUNITY

Electrification of transportation remains the most promising near-term opportunity for fundamentally reducing U.S. dependence on petroleum.

Though important challenges remain, the global automotive industry is investing heavily in electric drive technology. 2011 marks the first year that plug-in electric vehicle products, services and infrastructure are being deployed on a large-scale. One can now find the *Nissan Leaf* and *Chevy Volt* quietly zipping along Marin County streets and highways. By 2012, some 10 to 20 models of highway capable electric vehicles will be available to consumers, including models by BMW, Chrysler, Ford, Hyundai, Mercedes, Mitsubishi, Tesla, Toyota and more.

California, the eighth largest economy in the world, is a leader in low-carbon and renewable energy, making California's electric-fueled cars much cleaner than the national average.

Taking into account the carbon footprint generated by California's mix of energy sources, a pure battery electric vehicle (BEV) can reduce greenhouse gas (GHG) emissions by as much as 75 percent compared to a traditional gasoline-powered vehicle.[6] A plug-in hybrid electric vehicle (PHEV) with a 20-mile all-electric range can reduce GHG emissions by 60 percent, depending on driving habits.[7]

This is a turning point in transportation history, made possible by developments in automotive technology and energy innovation. More EVs will soon appear in Marin County and throughout the Bay Area. EV drivers will be drawn to cities, towns, and businesses that offer a robust network of charging stations and pass by others that do not. Fortunately, with federal, state, and private funding and technical assistance, communities throughout Marin have the opportunity to introduce EV-friendly policies, and lead the charge in the installation of EV infrastructure.

WHY EVS IN MARIN COUNTY?

The Transportation Authority of Marin (TAM) and Marin County are actively pursuing strategies to replace petroleum fuel-driven vehicles with cleaner, more efficient electric vehicles.

To accelerate this shift, EVdrivers, from Marin and travelling through Marin, will need access to publicly-accessible stations where they can stop to charge their vehicles, while doing business, shopping, working, and visiting in Marin.

Marin County is the ideal location for jurisdictions to offer public use of EV charging stations made available for visitors, commuters, residents, town employees, and future fleet vehicles.

Marin County has long been a Mecca for athletes and outdoors enthusiasts and has opportunity to promote increased use of electric bicycles in place of cars.

Marin County local governments tend to lead by example and have opportunity to encourage environmentally-minded employees to commute via electric vehicles.

For Marin County, the early acquisition and installation of EV charging equipment between now and 2012 makes a strong statement to prospective EV drivers that Marin County is "EV-ready" and a strong statement to the state as a whole that Marin views EVs as vital to our future economic vitality, air quality, and environmental sustainability.

These are the overarching reasons why Marin County is well-suited to be statewide leader in the shift to electrified transportation:

1. Widespread Bay Area EV adoption is imminent and, based on industry projections, tens of thousands of EVs will be driven in the Bay Area in a few short years. [8, 9, 10, 11]

2. For the first time, practical Electric Vehicles such as the *Nissan Leaf*, *Chevy Volt*, and many others are now available.

3. Various opportunities for federal, state, and private funding are available within 2011 to help cover the costs of charging station equipment and installation.

4. Marin County recognizes that support for EV owners is important for business vitality, quieter streets, and to keep Marin communities and attractions as preferred destinations.

5. Marin County is known for its commitment to promoting "green" technologies, as evidenced by the high number of "early-adopters" who purchased hybrid electric vehicles and will be a target audience for plug-in electric vehicles.

6. Marin County is an ideal EV charger destination for commuters and visitors due to its positioning as a gateway from San Francisco to Sacramento and points north and east.

7. Marin has long supported public-private partnerships and, by supporting the installation of publicly-accessible EV chargers, local jurisdictions will encourage private investment in the purchase of EVs by local citizens and businesses.

PROJECT MISSION AND SCOPE

This document is the key deliverable by the Transportation Authority of Marin (TAM) for Marin Community Foundation Grant #2010-02379 for the Marin Electric Vehicle Project.

The Marin Electric Vehicle (EV) Project is an initiative of the EV Communities Alliance aimed at substantially reducing greenhouse gas (GHG) emissions and boosting local economic vitality by accelerating the deployment of electric vehicles throughout Marin County.

TAM roles in support of the Marin EV project are focused on:

(1) Developing a robust, publicly accessible EV charging network
(2) Coordinating siting and installation of EV chargers
(3) Educating local leaders on the environmental and economic benefits of an accelerated EV transition.

Specifically, measurable deliverables from TAM as part of this project include:

(1) Conducting outreach and education with local jurisdictions on the siting and placement of EV charging stations;
(2) Identifying infrastructure development principles and priorities; and
(3) Developing a "Countywide Plan for Siting and Placement of EV Charging Infrastructure," including an initial 34 charging points in Year 1 of the project.

This document constitutes deliverable #3 and describes TAM's work on deliverables #1 and #2.

III. DELIVERABLE #1: EDUCATIONAL OUTREACH

The Transportation Authority of Marin (TAM) conducted educational outreach activities with jurisdictions in Marin County as part of its overall effort to (1) highlight EV infrastructure principles and priorities and (2) identify proposed site locations for publicly-accessible chargers.

Participants in these outreach sessions were determined by the jurisdictions and typically included the public works director, city engineer, parking manager, planner, or other individual(s) with an interest in the siting and placement of EV chargers within the jurisdiction.

Outreach sessions were conducted by the TAM EV Outreach Consultant, accompanied in some cases by technical expert Michael J. Calise, president of EVadvise. Sessions were conducted as small meetings in which discussion was guided by a survey instrument sent to participants prior to the meeting. This survey instrument served to both educate local jurisdiction representatives on key issues associated with the siting and placement of EV charging stations and also to solicit input from local jurisdictions on their priorities and concerns regarding the siting and placement of EV chargers at specific locations within the jurisdictions.

Initial outreach sessions were followed by actions to advance EV infrastructure. A list of outreach activities and a copy of the survey instrument used to guide discussion are included as Appendix A and B.

While EV knowledge varied, it was discovered that many local government representatives proved themselves relatively knowledgeable about pertinent EV issues.

At the request of jurisdiction representatives, TAM prepared a brief introduction to EVs and EV chargers for distribution to council members and other key stakeholders in the jurisdictions. This piece, "A Glimpse of Electric Vehicles and Public Charging Infrastructure" is included as Appendix C.

IV. DELIVERABLE #2: HIGH-IMPACT EV INFRASTRUCTURE PRINCIPLES AND PRIORITIES

Prior to determining specific locations for the siting and placement of EV chargers, it is essential to identify key principles or considerations that impact the success of an EV charging unit. To help inform siting decisions of local jurisdictions, TAM researched EV infrastructure design principles and priorities and presented these for discussion and evaluation with jurisdictions.

Considerations relating to cost, safety, and aesthetics have been well-researched in various reports. To prepare for local stakeholder meetings, TAM representatives consulted materials from: EVadvise, Electric Transportation Engineering Corporation, LightMoves, Pacific Gas & Electric, Puget Sound Regional Council, San Francisco Auto Association, Virginia Clean Cities Coalition, and others. Based on this research and feedback from Marin local government staff, TAM identified the following principles to guide EV charger installation in Marin:

(1) Primary Global Principles – Those factors that are of highest importance when deciding on overall sites to locate EV charging stations.

(2) Secondary Global Principles – Additional factors of secondary importance to consider when selecting overall locations for EV charging stations.

(3) Site Specific Principles – Priority factors to consider when determining the specific location within a general site where the EV charging station(s) will be installed.

Please note that some criteria are listed both under global principles and under site specific principles. In the case of global principles, it is a question of whether the overall location meets the principle. In the case of site specific principles, it is a question of which particular spot at that overall location will best meet the principle.

Primary Global Principles

1. **Location:** Select a high-impact, visible location (especially for the first few chargers)

2. **Electricity:** Select a location where Level 2 (240V/40A) electrical supply is or can be made available with relative ease and minimal cost. (See Appendix C for descriptions of EV charger levels.)

3. **Access:** Consider and comply with ADA guidelines for disabled access, and take precautions to ensure that chargers are placed with the user's convenience in mind (avoiding injury from tripping on cords and cables, etc.)

4. **Security:** Select a secure location with adequate lighting to enhance security and provide the customer with a good charging experience.

5. **Signage:** Provide enforcement and other signs that comply with the Manual on Uniform Traffic Control Devices **(**MUTCD) and California Vehicle Codes (CVC), ensuring that signs are high enough, easily visible, and provide clear and accurate information.

6. **Equipment Protection:** EV chargers should be placed where they can be best protected from physical damage by such measures as curbs, wheel stops, setbacks, bumper guards, and concrete-filled steel bollards, while simultaneously taking into consideration ease of access to the charger, mobility of users, and foot traffic in the area.

7. **Fleet Use:** Consider "dual purpose" sites that could also benefit the jurisdiction's fleet vehicles, as well as the general public, where feasible and appropriate.

Secondary Global Principles

While the principles above received the highest priority ratings from Marin jurisdictions, many other criteria are also to be considered in the siting of EV chargers:

- **Diversity of Intended Users:** EV chargers should (progressively) be located in sites that will appeal to the diversity of users (e.g., local residents, visitors and tourists, and fleet drivers)

- **Public Safety:** Chargers should be located in areas with proper ventilation and away from potential hazards including traffic, explosive materials, flammable vapors, liquids and gases, combustible dust or fibers, materials that ignite spontaneously on contact with air, flood-prone areas, and away from areas that might be prone to vandalism.

- **Duration of Use:** Level 2 Charger sites should focus on locations where EV owners will be parked for a significant period of time (e.g., one to three hours). DC Fast Chargers sites should focus on locations where the EV owner will be parked for a relatively short period of time (e.g., 15 minutes).

- **Economics:** The costs of charger installation and potential loss of parking space revenue should be weighed against the benefits of projected revenues, positive publicity, and increased visitor spending in the jurisdiction, as well as the broader societal benefits of spurring the transition to clean, low-carbon transportation.

- **Location Markings:** Indication of parking spaces, striping, driveways, and walkways.

- **Cord Management:** To avoid injury from tripping, cords should not cross sidewalks or pedestrian traffic patterns.

- **Shelter:** When possible, shelter is desirable to protect users from weather when connecting their vehicle to the charger. (However, chargers are designed to be safely operated in exposed locations in the rain, with no danger of electrical shock.)

- **Aesthetics:** Some areas benefit from the installation of landscaping or screening walls to shield the electrical transformer, panel, or other equipment from the public eye.

- **Solar Power:** Some jurisdictions may choose sites where solar panels can provide energy to power the charging unit.

- **Other EVs:** Locations may be chosen to cater not only to freeway-capable battery-powered EVs (BEVs) and plug-in hybrid EVs (PHEVs) – which typically utilize the 240 volt "Level 2" connections for faster charging – but also to Neighborhood EVs (NEVs), electric bicycles, electric scooters, and electric motorcycles – which typically utilize a 110 volt electrical connection.

Site Specific Principles

- **Accessibility:** EV charger location within a site should comply with ADA access requirements. Specifically, the first two EV chargers installed in any one location should take into consideration requirements in California Building Code Chapter 11C and DSA 97-03. (See Appendix E.)

- **Electrical Supply:** Select a location where it is as inexpensive as possible to provide Level 2 (240V/40A) electrical supply. (See Appendix C for descriptions of EV charger levels.)

- **Benefits vs. Loss of Revenue:** When selecting the specific location of an EV charger at a particular site, a jurisdiction should consider the balance of anticipated benefits (including "EV readiness," revenue potential, and increased patronage of nearby business) versus potentially negative aspects of taking an available parking space (including negative impact on conventional vehicle drivers and lost revenue).

- **Cord Management:** When determining where to install an EV charger, a location should be selected where cords will not interfere with the path of travel of the user or other pedestrians in the vicinity.

- **Security:** A location should be selected that is secure for users at all times of day and night and relatively secure from vandalism (e.g., in well-lighted areas and in well-travelled areas).

Jurisdictions in Marin County considered all of these principles as they identified options and recommended potential sites for EV chargers.

V. DELIVERABLE #3: PROPOSED SITES FOR EV CHARGING INFRASTRUCTURE

INTRODUCTION

Recognizing the critical role that publicly-accessible EV chargers will play in accelerating "EV readiness" and the resulting reduction of greenhouse emissions, TAM has conducted outreach to local jurisdictions to identify proposed sites for EV charger placement during the next five years (2011-2015). The charts that follow document initial sites identified through TAM-sponsored education and outreach. In this effort, a few key factors merit highlighting.

Preliminary Plan

The identification of these sites constitutes a preliminary list and starting point for planning efforts. It is anticipated that the list will be further refined as jurisdictions gain input and experience.

Selection Process

Sites listed for placement in Year One were selected as part of concurrent but separate competitive grant opportunities. Sites for Years Two through Five were identified through outreach and consultation with representatives from local jurisdictions. The list does not represent a formally approved plan, either by TAM or by the local jurisdictions involved. Rather, it represents an initial effort by staff in each jurisdiction to apply the global principles identified earlier. For additional information on the selection process, please refer to Appendix G – Proposed EV Charger Sites by Jurisdiction.

Municipal Versus Private

The primary focus of TAM has been identification of "publicly-accessible charging stations" planned for installation by municipalities and the County of Marin. Charging stations accessible to the public may be installed on either public property or private property generally accessible to the public (e.g., in mall parking lots and major office complexes). In most (though not all) cases, installations that are directly sponsored by public entities are installed on public property. However, given that some high-priority, publicly-accessible locations are on private property, many local jurisdictions also obtained information on high-impact private property sites.

It is anticipated that most early EV charger installations will be completed by municipal governments – given that many public agencies seek to "lead by example" with progressive environmental strategies.

At the same time, jurisdictions anticipate that private enterprise will follow their lead, especially as EVs become a more common sight on local streets. Local jurisdictions will look for opportunities to partner with local business, and magnify the attractiveness of Marin to the region's growing population of EV drivers.

Publicly Accessible Versus Fleet

This report also includes information on EV charging sites that will be publicly-available during some hours and utilized by fleet vehicles during other hours. In the early stages of the shift to electrified transportation, shared use of EV chargers among public fleet and private vehicles has been identified as a principle to facilitate rapid deployment of EV infrastructure. As long as an

EV charging station is likely to be available to the general public for a significant period of time, information on that site is included in this report.

SITE LOCATIONS – OVERVIEW CHARTS

The following charts identify desired locations for EV chargers in Marin County. This is an initial "working list" and starting point for discussions and potential funding allocation. It is likely to be updated frequently as Marin gains experience with EV infrastructure.

EV chargers listed for Year One are ones for which funding has been secured and are likely to be installed. They are divided into three categories: publicly-owned Level 1-2 sites, privately-owned (but publicly-accessible) Level 1-2 sites, and Fast Chargers. All other EV chargers listed represent sites that are most likely to be deployed in Years Two through Five, although it is possible that some may be installed in Year One if additional funding is secured. Jurisdictions are listed alphabetically, with sites in Marin County unincorporated areas listed last.

For additional information on how these sites were selected and maps of each site, please refer to Appendix G – "Proposed EV Charger Sites by Jurisdiction."

NOTE: In the charts that follow, it is important to distinguish between the number of "chargers" and the number of "charge points." A "charger" refers to an electrical component assembly designed specifically to charge batteries within an electric vehicle. A "charge point" is a point of connection with a connector that is inserted into the electric vehicle inlet to transfer electric power to recharge the batteries on the EV. One "charger" may include multiple "charge points," including different levels of charging points. For example, a "Dual Level 1 & 2" charger would include one Level 1 and one Level 2 charge point.

YEAR ONE – MUNICIPAL JURISDICTIONS / LOCAL GOVERNMENT SITES

Jurisdiction	# Chargers	Type of Charger	# Charge Points	Location of Charger
Belvedere *	2	Dual Level 1 & 2	2 Level 1 2 Level 2	City Hall Parking Lot Community Road
Corte Madera[12] *	3	Dual Level 1 & 2	3 Level 1 3 Level 2	Marin Municipal Water District 220 Tamal Vista Blvd.
Fairfax[12] *	2	Dual Level 1 & 2	2 Level 1 2 Level 2	Parkade between Sir Francis Drake Blvd. and Broadway
Larkspur[12] *[*]	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Larkspur City Hall 400 Magnolia Avenue
Larkspur[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Parking Lot Magnolia Ave. & Ward Street
Larkspur[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Piper Park Parking Lot 250 Doherty Drive
Novato[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Novato Council Chambers 901 Sherman Ave.
Novato[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Margaret Todd Senior Center 1560 Hill Road
Novato[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Gymnastics/Teen Center 950 Seventh Street
Novato[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Hamilton Community Center 503 South Palm Road
Novato[12] *	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Zenk Parking Lot 913 Reichart Avenue
San Anselmo[12] *	2	Dual Level 1 & 2	2 Level 1 2 Level 2	Creek Parking Lot 249 Sir Francis Drake Blvd.
San Rafael	2	Dual Level 1 & 2	2 Level 1 2 Level 2	C Street Parking Garage 900 C Street
San Rafael[12] *	2	Dual Level 1 & 2	2 Level 1 2 Level 2	Third Street Parking Garage 1116 Third Street
Marin County	1	Dual Level 1 & 2	2 Level 1 2 Level 2	Marin Health & Wellness Campus 3240 Kerner Blvd., San Rafael
Marin County	1	Dual Level 1 & 2	2 Level 1 2 Level 2	Marin County Civic Center 3501 Civic Center Drive, San Rafael
Marin County	1	Dual Level 1 & 2	2 Level 1 2 Level 2	Marin Center 10 Avenue of the Flags, San Rafael
Total Chargers:	24	Dual Level 1 & 2	48	

*** Note:** Procurement and installation of these chargers is being covered by grant monies from the California Energy Commission (CEC) and matching funds secured by TAM, including funds from the Bay Area Air Quality Management District (BAAQMD) Congestion Management Agency's Transportation Fund for Clean Air (TFCA) program.

YEAR ONE – PRIVATE PROPERTIES

Jurisdiction	# Chargers	Type of Charger	# Charge Points	Location of Charger
Novato[13]	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Marin Community Foundation 5 Hamilton Landing
San Rafael[13]	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Office Building 555 Northgate
San Rafael[13]	1	Dual Level 1 & 2	1 Level 1 1 Level 2	The Justice Center 30 North San Pedro
San Rafael[13]	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Marin Youth Center 1115 3rd Street
San Rafael[13]	1	Dual Level 1 & 2	1 Level 1 1 Level 2	Deer Valley 2500 Deer Valley Road
Total Chargers:	5		10	

Note: It is likely that only four of these five locations will prove feasible. Please see Endnote [13] for a description of the selection of these private locations.

YEAR ONE – FAST CHARGERS

Jurisdiction	# Chargers	Type of Charger	# Charge Points	Location of Charger
Corte Madera[14]	1	350 Green Dual Fast Charger & Level 2	1 Fast 1 Level 2	Safeway 137 Corte Madera Town Center
Total Chargers:	1		2	

TOTAL EV CHARGERS DESIRED BY MARIN COUNTY JURISDICTIONS FOR YEAR ONE: **30 EV CHARGERS (60 CHARGING POINTS)**

Year One Summary

These chargers represent 30 chargers to be installed during Year One at 23 different locations, providing 29 Level 1 charge points and 29 Level 2 charge points – a total of 58 charge points – and at least one Fast Charger, providing a Level 2 and a Fast Charge connect point, for a total of 30 chargers providing 60 charge points in Marin County.

YEARS TWO THROUGH FIVE — PUBLIC LOCATIONS

Jurisdiction	# Chargers	Type of Charger	# Charge Points	Location of Charger
Corte Madera	1	Level 2	2	Corte Madera Town Square at Tamalpais Drive & Corte Madera Ave. by Menke Park
Corte Madera	1	Level 2	2	Corte Madera Library 707 Meadowsweet Drive
Mill Valley	1	Level 2	2	Miller Avenue near 85/87 Throckmorton
Novato	1	Level 2	2	Novato Corporation Yard 550 Davidson
Novato	1	Level 2	2	Novato Library 1720 Novato Blvd.
Ross	1	Level 2	2	Post Office North Parking Lot 1 Ross Common
San Anselmo	1	Level 2	2	Magnolia Avenue Parking Lot 20 Magnolia Avenue
San Anselmo	1	Level 2	2	Pine Street Parking Lot 353 San Anselmo Avenue
San Anselmo	1	Level 2	2	Town Hall Parking Lot 525 San Anselmo Avenue
San Anselmo	1	Level 2	2	Downtown Fire Station 777 San Anselmo Avenue
San Anselmo	1	Level 2	2	Memorial Park Parking Lot Veteran's Place
San Anselmo	1	Level 2	2	San Anselmo Recreation Department 1000 Sir Francis Drake Blvd.
San Anselmo	1	Level 2	2	San Anselmo Library 110 Tunstead Avenue
San Rafael	2	Level 2	4	City Hall 1400 Fifth Avenue
San Rafael	2	Level 2	4	Long-Term Parking Lot Upper Third Street & Lootens Place
San Rafael	2	Level 2	4	Long-Term Parking Lot 5th Ave. and C Street (top)
San Rafael	2	Level 2	4	Long-Term Parking Lot 5th Ave. and Lootens Place
Sausalito	1	Fast Charger	2	City Hall 420 Litho
Sausalito	1	Fast Charger	2	Municipal Parking Lot #1 El Portal/Anchor Way
Sausalito	1	Level 2	2	Municipal Parking Lot #2 Humboldt Avenue

Continued…

YEARS TWO THROUGH FIVE — PUBLIC LOCATIONS (CONTINUED)

Jurisdiction	# Chargers	Type of Charger	# Charge Points	Location of Charger
Sausalito	1	Level 2	2	Municipal Parking Lot #3 Humboldt Avenue (between Bay & Johnson)
Sausalito	1	Level 3	2 Level 3	Police Station 29 Caledonia
Tiburon	1	Level 2	2	Blackie's Pasture Tiburon Blvd. & Trestle Glen Road
Tiburon	1	Level 2	2	Town Hall 1505 Tiburon Blvd.
Tiburon	1	Level 2	2	Downtown Tiburon Main Street
Tiburon	1	Level 2	2	Multi-Modal Parking Lot, Tiburon Blvd. & Lyford Drive
Marin County	5	Level 2	10	Civic Center 3501 Civic Center Drive
Marin County	1	Level 2	2	Marin County Health & Human Services 120 N. Redwood Drive, San Rafael
Marin County	1	Level 2	4	Marin County Health & Human Services 10 N. San Pedro Rd., San Rafael
Marin County	1	Level 2	4	Marin County Health & Human Services 20 N. San Pedro Rd., San Rafael
Marin County	1	Level 2	2	Fairfax Library 2097 Sir Francis Drake Blvd., Fairfax
San Quentin	1+	Level 2	2+	San Quentin State Prison
Total Chargers:	40+		80+	

YEARS TWO THROUGH FIVE — PRIVATE PROPERTIES

Jurisdiction	# Chargers	Type of Charger	# Charge Points	Location of Charger
Larkspur Landing	1+	Level 2	2+	Larkspur Ferry Terminal 101 East Sir Francis Drake Blvd.
Larkspur Landing	1+	Level 2	2+	Larkspur Landing Shopping Center Sir Francis Drake Blvd. & Larkspur Landing Circle
Mill Valley	1	Level 2	2	Whole Foods Market 414 Miller Avenue
Mill Valley	1	Level 2	2	Whole Foods Market 731 East Blithedale
Novato	1	Level 2	2	College of Marin Indian Valley Campus
Novato	1+	Level 2	2+	Vintage Oaks Shopping Center 208 Vintage Way
Ross	1+	Level 2	2+	Marin Art & Garden Center 30 Sir Francis Drake Blvd.
San Anselmo	1	Level 2	2	San Francisco Theological Seminary 105 Seminary Road
San Rafael	1+	Level 2	2+	San Rafael Corporate Center 750 Lindaro Street
San Rafael	1+	Level 2	2+	Montecito Shopping Center 323 Third Street
San Rafael	1+	Level 2	2+	Northgate Mall 5800 Northgate Mall
Marin County	1+	Level 2	2+	TAM Junction Shoreline Hwy. & Almonte Blvd.
Marin County Unincorporated Towns:				
Greenbrae	1	Level 2	2	Bon Air Shopping Center Sir Francis Drake Bl. and Elisio Drive
Kentfield	1	Dual Level 1 & 2	1 Level 1 1 Level 2	College of Marin Kentfield Campus
Lucas Valley/ Marinwood	1+	Level 2	2+	McGinnis Park Golf Center 350 Smith Ranch Road
	1	Level 2		Regency Cinemas 280 Smith Ranch Road
Marin City	1+	Level 2	2+	Gateway Shopping Center 100 Donahue Street
Strawberry	1+	Level 2	2+	Strawberry Village Redwood Highway Frontage Road (Between Reed Bl. & Belvedere Dr.)
Total Chargers:	18+		36+	

TOTAL EV CHARGERS DESIRED BY MARIN COUNTY JURISDICTIONS FOR YEARS TWO THROUGH FIVE: 58 EV CHARGERS (116 CHARGING POINTS)

TOTAL EV CHARGERS DESIRED BY MARIN COUNTY JURISDICTIONS FOR YEARS ONE THROUGH FIVE: 88 EV CHARGERS (176 CHARGING POINTS)

Summary

While proposed locations are tentative and will depend on funding availability and usage, these Year Two Through Five sites represent 58 or more EV chargers to be installed at 49 new locations, providing potentially 116 or more charging points during Years Two through Five. Combined with the totals for Year One, this represents a potential total ─ during the next five years ─ of 88 new charging stations with 176 charging points at 72 locations in Marin County.

VI. RECOMMENDATIONS

The rapid deployment of electric vehicles and electric vehicle infrastructure in Marin County requires an EV readiness plan that encompasses efforts in multiple areas. This report on the siting and placement of publicly-accessible EV chargers is a major initial part of that effort.

To support the installation of EV infrastructure in the sites identified in this report, additional efforts are also needed to facilitate a smooth transition to electrified transportation.

Based on research and experiences documented in other communities and states, it is recommended that actions be taken in the following four areas to accelerate the deployment of electric vehicles in Marin County:

- Model Ordinances and Regulations
- Incentives
- Infrastructure Installation
- Educational Awareness and Public Outreach

The information included here is not intended to be exhaustive, but provide a brief overview of current work and future EV readiness needs.

MODEL ORDINANCES AND REGULATIONS

Local governments can accelerate adoption of EV infrastructure by providing robust and consistent EV infrastructure installation policies and guidelines.

Work in this arena has already been undertaken by the State of Washington, which developed the *Electric Vehicle Infrastructure ─ Guide for Local Governments in Washington State*. See Appendix D for a "Sample Model Ordinance." To download a copy of the entire report, visit http://www.psrc.org/transportation/ev/model-guidance.

In California, the development of statewide regulations and guidelines is also underway with plans for recommended regulations to be presented for statewide adoption.

This effort is being undertaken as part of the Greater Bay Area EV Corridor Project, a multicounty effort led by the Association of Bay Area Governments (ABAG), as Lead & Fiscal Agent, and EV Communities Alliance, as Project Manager, in partnership with counties, cities, business partners, and public agencies with the goal of building a comprehensive, publicly accessible EV charging infrastructure to accelerate the shift to electrified transportation.

Given ongoing work in this area, it is recommended that, rather than "re-inventing the wheel," TAM should (1) stay apprised of work being performed in this area, and (2) help disseminate information to jurisdictions and assist them in tailoring ordinances and regulations to meet their specific needs and requirements.

To that end, an overview of ongoing work in key domains is provided in Appendix E – "Focus Areas for Regulations and Guidelines Relating to EVs."

INCENTIVES

During the early stages of the transition to electrified transportation, the availability of funding and incentives can play a key role in accelerating the deployment of EV infrastructure and EVs.

In research on the diffusion of innovations, there are considered to be five categories of consumers in the new technology adoption curve: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards.[15] To be most effective, incentives are typically targeted at Innovators and Early Adopters, because they determine the rate of penetration of new innovations. At the same time, other incentives may be appropriate for the medium and longer-term adoption cycle.

Many funding opportunities exist from federal, state, local, and private sources – to encourage the purchase of electric vehicles and the installation of EV charging infrastructure.

Appendix F – "EV and EVI Incentives" provides a brief summary of such opportunities.

Marin County can spur more rapid adoption of EVs by securing funding to support infrastructure installation and related incentives.

INFRASTRUCTURE INSTALLATION

Providing technical and advisory support for the installation of EV infrastructure may be one of the most cost-effective activities to accelerate the EV transition in Marin County. The following overview provides an initial introduction to key infrastructure challenges.

For residential locations, installation of an EV charger will consist of installing a dedicated branch circuit from an existing premise distribution panel to an EV outlet receptacle (120 V) in the case of Level 1 charging, or a 240 volt receptacle for Level 2 charging.

For jurisdictions preparing to install EV chargers, the following steps may also be necessary: (1) evaluation by an electrical contractor to determine whether the existing service panel is sufficient to support the circuit; (2) obtaining CEQA clearance (if required by the funding source) and the required permit; and (3) trenching and related concrete work if new underground conduit is required.

The EV installation process can be made significantly easier through local government EV infrastructure policy development and careful planning. Recommendations include:

- Disseminate EV infrastructure installation guidelines and flow chart for residential EV charger installation in Marin County (based on forthcoming state guidelines).
- Develop and disseminate EV infrastructure guidelines and flow chart for commercial EV charger installation in Marin County.

- Provide cost estimates for EV charger installation – at both residential and commercial locations in Marin County.

- Provide consultation to jurisdictions on public charging infrastructure installation in Marin County.

EDUCATIONAL AWARENESS AND PUBLIC OUTREACH

As progress is made on all fronts ─ EV charger site identification, deployment of model EV readiness policies and guidelines, and resource and incentives development ─ it will be essential to provide accurate, robust, and consistent messages to all stakeholders and the general public.

Specifically, TAM recommends that local and regional stakeholders work together to develop a comprehensive EV readiness campaign that includes:

- Media talking points
- Internet, social media, and digital communications
- Traditional print materials
- Traditional audiovisual presentations
- Demonstrations and events that provide opportunities for show and tell presentations, car shows, and ride and drives.
- Participation in local EV-promoting community groups

Materials should also be made available at the state, regional and local level that include these elements:

- Glossary of terms with definitions
- Basic frequently asked questions
- User testimonials
- Tax and other incentives
- Vehicle efficiency comparisons
- Owner cost comparisons
- Battery life investment
- Electricity rates and sources, including renewable energy sources
- Environmental benefits
- Public charging site locations

It is recommended that key local and regional partners and stakeholders work together to disseminate the information described above and to develop educational awareness related to EVs and EV infrastructure.

VII. CONCLUSION

Marin County can take a leading role in making the San Francisco Bay Area the "EV Capital of the U.S." The proposed EV charger sites identified in this report are a starting point. It is hoped that identification of these sites, along with implementation of the recommendations included in this report, will indeed accelerate the mass adoption of EVs into the mainstream transportation system of Marin County and beyond.

The effort of local jurisdictions to develop EV-ready infrastructure is just a beginning, yet it demonstrates the commitment of Marin local governments to develop an efficient and effective network of publicly-accessible charging stations and promote the mass adoption of electric vehicles.

Marin localities are not taking a "wait and see" approach. Marin is stepping forward and taking action to prompt a fundamental shift to electrified, environmentally sustainable transportation.

ENDNOTES

[1] Marin County Community Development Agency, *Marin County Greenhouse Gas Reduction Plan,* October 2006.

[2] Bay Area Air Quality Management District (BAAQMD), *Source Inventory of Bay Area Greenhouse Gas Emissions,* December 2008.

[3] California Energy Commission, *An Overview of the California Energy Commission,* http://www.energy.ca.gov/commission/overview.html.

[4] Project Get Ready, *Plugging In: A Stakeholder Investment Guide for Public Electric-Vehicle Charging Infrastructure,* June 2009.

[5] Electrification Coalition, *Fleet Electrification Roadmap: Revolutionizing Transportation and Achieving Energy Security,* November 2010.

[6] California Plug-In Electric Vehicle Collaborative, *Taking Charge: Establishing California Leadership in the Plug-In Electric Vehicle Marketplace,* December 2010.

[7] Ibid.

[8]Energy Efficiency News, *Electric Vehicle Infrastructure charges ahead in San Francisco,* February 4, 2011

[9] Center for Automotive Research, *Deployment Rollout Estimate of Electric Vehicles 2011-2015,* January 2011.

[10] Energy and Environmental Economics, Inc., *Plug-in Hybrid Electric Vehicle Adoption Estimation and System Load Impact in San Francisco County: 2010-2020,* 2010.

[11] Center for Entrepreneurship & Technology, University of California, Berkeley, *Electric Vehicles in the United States ─ A New Model with Forecasts to 2030,* August 24, 2009.

[12] These chargers represent 34 charge points whose procurement and installation are being covered by grant monies in the amounts of $125,999 from the California Energy Commission (CEC) and matching funds of $119,612 in other resources, including the Bay Area Air Quality Management District (BAAQMD) Congestion Management Agency funds allocated by TAM for this project. The total amount for this local government project is $245,611. These funds will procure a total of 17 chargers at local government sites, providing 34 charge points total (17 Level 1 and 17 Level 2).

The site selection process for these chargers included solicitation by TAM to jurisdictions prepared to quickly assess potential locations in their communities. TAM acknowledges the limitations of this grant opportunity and is working with agencies not able to participate in this initial round of funding to achieve funding for future installation of EV chargers. These public locations meet the top global principles identified in this report for the siting of EV chargers.

[13] These chargers represent 4-5 chargers, providing 8 to 10 charge points, that are valued at $10,000 each and whose procurement and installation are being funded entirely by the CEC and Coulomb Technologies matching funds for a total value of $40 to $50K.

As with site selection of the original 17 chargers described above, the site selection process for these chargers took place quickly when additional monies suddenly became available. The selection process did not include participation by TAM, but by other partners in the EV Corridor Project collaborative who, in addition to placing chargers on public property, also placed emphasis on selecting commercial properties in Marin that will be available for public use.

In selecting these properties, priority was given to properties that serve nonprofit organizations such as the Marin Community Foundation and multi-unit dwellings, especially those in priority development areas identified in Plan Bay Area. Plan Bay Area is the joint effort led by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in partnership with the Bay Area's two other regional government agencies, the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC). (See Appendix G, page 68.)

As with the 17 public locations for EV chargers to be installed during Year One, these private properties selected for placement of publicly-accessible EV chargers meet the top global principles identified in this report for the siting of EV chargers.

[14] This charger represents a Fast Charger funded by a combination of $15K in CEC funds and $64,500 in private sector match from the charger company 350 Green. This charger provides one Fast Charge connector and one Level 2 charge point (with the option to expand up to four charge points total).

The site selection for the Fast Charger to be provided by 350 Green was accomplished through the same process described above for private properties, with additional criteria identified by 350 Green, namely to be a high-visibility, high-traffic location such as a supermarket. The location selected for the Fast Charger was also coordinated with and supported by the local jurisdiction of Corte Madera. As with the public and private locations selected for placement of Level 2 chargers, the location selected for this Fast Charger meets the top global principles identified in this report for the siting of EV chargers.

[15] Rogers, Everett, *Diffusion of Innovations, 1962.*

RESOURCES

Business Council on Climate Change, *Electrify Your Business: Moving Forward with Electric Vehicles A Bay Area Business Guide,* April, 2011.

Calise, Mike, EVadvise, *Preliminary EV Readiness Plan for Los Gatos Public Electric Vehicle Charging Infrastructure,* November, 2010.

Electric Drive Transportation Association, *Driving Forward: An Action Plan for the Electric Drive Era,* 2011.

Electric Transportation Engineering Corporation, *Electric Vehicle Charging Infrastructure Deployment Guidelines British Columbia,* July 2009.

Electric Transportation Engineering Corporation, *Electric Vehicle Charging Infrastructure Deployment Guidelines for the Oregon I-5 Metro Areas of Portland, Salem, Corvallis and Eugene,* April, 2010.

Electrification Coalition, *Fleet Electrification Roadmap: Revolutionizing Transportation and Achieving Energy Security,* November 2010. www.electrificationcoalition.org/electrification-roadmap.php.

Ornelia, Efrain, Pacific Gas and Electric Company, *Electric Vehicle Charging Retrofit Project: Lessons Learned,* September, 2009.

Pacific Gas & Electric Company, *Electric Vehicle Infrastructure Installation Guide,* March 1999.

Plug-in Hybrid & Electric Vehicle (PH&EV) Research Center program of the Institute of Transportation Studies at the University of California, Davis under the guidance of the California Plug-in Electric Vehicle Collaborative. *Taking Charge: Establishing California Leadership in the Plug-In Electric Vehicle Marketplace.* December 2010. www.evcollaborative.org.

U.S. Department of Energy – Energy Efficiency and Renewable Energy Alternative Fuels and Advanced Vehicles Data Center, http://www.afdc.energy.gov/afdc/laws/laws/CA/tech/3270

Virginia Clean Cities, *Virginia Get Ready: Electric Vehicles Plan,* October, 2010, www.hrcc.org.

Washington Department of Commerce and Puget Sound Regional Council, *Electric Vehicle Infrastructure ─ A Guide for Local Governments in Washington State,* July 2010.

APPENDIX A

EDUCATIONAL OUTREACH SESSIONS WITH MARIN COUNTY JURISDICTIONS

Jurisdiction	Representatives
Belvedere	Felicia Wheaton, Associate Planner
Corte Madera	Dan Ring, Engineer
Larkspur	Phiroze Wadia, Engineer
Novato	Jason Nutt, Director Public Works Mike Brunelle, Equipment Supervisor
San Anselmo	Steve Myrter, Public Works Director Charles Maynard, Police Chief/Assistant Town Manager
San Rafael	Vince Guarino, Parking Services Manager
Sausalito	Jonathon Goldman, Public Works Director
Tiburon	Nicholas Nguyen, Town Engineer
County of Marin	Jenny Choi, Administrative Services Manager Saaid Fakharzadeh, Assistant Director of Public Works

TELEPHONE AND ELECTRONIC FEEDBACK EXCHANGE

Jurisdiction	Representatives
Fairfax	Kathleen Wilkie, Public Works Director
Mill Valley	Jill Barnes, Senior Civil Engineer
Ross	Mel Jarjoura, Public Works Director Christine O'Rourke, Planner
College of Marin	Nanda Schorske, Dean, Workforce Development & College-Community Partnerships

Appendix B

EV INFRASTRUCTURE SURVEY

1

Thank you for participating in this Marin EV Infrastructure Project, sponsored by the Marin Community Foundation, to identify and document desired locations for the siting and placement of publicly-accessible EV Infrastructure in Marin County. The information you provide will help the Transportation Authority of Marin (TAM) document a report that identifies proposed locations for EV charging stations countywide. The following questions will be asked during our interview.

Contact: Leah Reich, EV Outreach Coordinator, 415.455.0544 or leah.reich@att.net

Note: For this survey, each EV charging "station" or "unit" is considered to have multiple charging "points." Thus, three "dual-point charging units" would have six charging "points" to accommodate six electric vehicles.

Contact Information **Date: _____**

Name:

Jurisdiction:

Position:

Telephone:

Email:

1. Please provide a brief description of your jurisdiction, including:
   - Year founded
   - Current population
     - General characterization of population

2. Please give a brief synopsis of electric vehicle use in your jurisdiction —
   - In the past?
   - Current day?
   - Anticipated for the future?

3. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with the following statement:

   "The type of EV user identified below is likely to use EV charging units in our jurisdiction."

Type of EV User	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Local resident of our jurisdiction	1	2	3	4	5
Visitors from other jurisdictions, including those traveling from one location to another and wanting to "top off" their electric supply	1	2	3	4	5
Employees of our jurisdiction	1	2	3	4	5
Employees of local businesses	1	2	3	4	5
Employees of a neighboring jurisdiction's business, such as fleet users	1	2	3	4	5
Other: _____	1	2	3	4	5

Comments:

4. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with the following statement:

   "The type of EV user identified below is likely to use EV charging units in our jurisdiction at the times indicated."

Type of EV User	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Local resident charging during the day	1	2	3	4	5
Local resident charging at night	1	2	3	4	5
Visitor charging during the day	1	2	3	4	5
Visitor charging at night	1	2	3	4	5
Employee charging during the day	1	2	3	4	5
Employee charging at night	1	2	3	4	5
Other: _____	1	2	3	4	5

5. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with each, and all, of the following statements related to fees for EV charging station use:

Statement RE: Fees for Use	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Our jurisdiction is likely to fund the use of EV charging units and offer free energy to users.	1	2	3	4	5
Our jurisdiction is likely to charge an EV driver for the energy they use plus a small fee to cover the cost of installation and maintenance of the EV charging units.	1	2	3	4	5
Our jurisdiction views EV charging units as a revenue provider and is likely to charge a higher service fee on top of the energy costs.	1	2	3	4	5
Our jurisdiction is likely to use a combination of methods described above for collecting fees for EV charging station use.	1	2	3	4	5

Comments:

6. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you think EV drivers would agree or disagree with the following statements:

Statement RE: Duration of Use	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
User would be likely to spend under one hour charging EV.	1	2	3	4	5
User would be likely to charge EV between one to two hours while shopping or dining.	1	2	3	4	5
User would be likely to charge EV for more than two hours while shopping or dining.	1	2	3	4	5

Comments:

7. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with the following statement for each of the potential sites for EV charging units located below:

   "I believe this location is an ideal location for an EV charging unit."

Potential EV Location	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Street parking in center of jurisdiction	1	2	3	4	5
Town/city square	1	2	3	4	5
Town/city hall/government building	1	2	3	4	5
Library	1	2	3	4	5
Park	1	2	3	4	5
Parking lot/garage in busy location	1	2	3	4	5
Parking lot/garage in obscure location	1	2	3	4	5
Entertainment Center (movie theater, performing arts center, etc.)	1	2	3	4	5
Sports Complex	1	2	3	4	5
Shopping Center	1	2	3	4	5
Fitness Center	1	2	3	4	5
Public or Private School	1	2	3	4	5
Business Center (office building or complex)	1	2	3	4	5
Hotel	1	2	3	4	5
Restaurant	1	2	3	4	5
Other: _____	1	2	3	4	5

Comments:

8. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with the following statements:

Statement RE: Clustering of Stations	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Our jurisdiction is likely to install a single charging station in each location with stations spread throughout the jurisdiction.	1	2	3	4	5
Our jurisdiction is likely to cluster two to three charging stations in a single location.	1	2	3	4	5
Our jurisdiction is likely to locate multiple charging stations to accommodate more than six EVs in a single location.	1	2	3	4	5
Our jurisdiction is likely to use a combination of methods described above for locating EV charging stations.	1	2	3	4	5

Comments:

9. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you think EV drivers would agree or disagree with the following statements:

Statements RE: "Choiceness" of Locations	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Users should receive preferential treatment by having EV charging stations located in a highly visible, priority location.	1	2	3	4	5
Users would be willing to drive out of their way to a more remote, less "choice" location to be able to charge their EVs.	1	2	3	4	5
In some locations, users would be willing to drive to a more remote spot to charge their EVs, but in other locations, they would prefer a more highly visible, priority spot.	1	2	3	4	5

Comments:

10. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with the following statement for each of the factors listed.

    "I believe this factor is an important consideration when selecting EV charging station sites."

Factors Impacting EV Charging Station Site Selection	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Traffic flow & volume	1	2	3	4	5
Efficient connection to electrical source	1	2	3	4	5
Security considerations	1	2	3	4	5
Signage	1	2	3	4	5
Accessibility	1	2	3	4	5
Lighting					
Shelter	1	2	3	4	5
Equipment protection (e.g., wheel stops, bumper guards, and steel bollards)	1	2	3	4	5
Other: _____	1	2	3	4	5
Other: _____	1	2	3	4	5

Comments:

11. Do you intend that EV charging points will be available for electric vehicles other than Plug In EVs, such as electric bicycles, scooters, motorcycles, etc.?

12. Do you expect to locate EV charging stations in locations where solar power is available, such as carports with solar panels?

13. What are some of the key criteria you think are important in deciding on the best locations for EV charging stations? Please list all that you can think of.

14. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with each of the statements listed.

Statement RE: Shared Use	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Parking spots designated for EV charging should be exclusively available to EVs only.	1	2	3	4	5
Parking spots designated for EV charging could be available to EVs certain hours of the day and available to non-EVs (i.e., internal combustion engine (ICE) vehicles) for certain hours of the day.	1	2	3	4	5
Parking spots designated for EV charging should be available to any vehicles including EVs and ICE vehicles any time of the day, on a first-come, first-serve basis.	1	2	3	4	5

Comments:

15. Given the definitions listed, please indicate the degree to which you agree or disagree with the statements listed below.

Definitions:
Levels refer to the type of electrical charging connection and are defined as follows:

Level I – This refers to the average household outlet that provides 120 volts (V). Plug In Hybrid EVs (PHEVs) will require overnight charge, and a full Battery EV (BEV) will take more than 12 hours to recharge.

Level II – This is equivalent to an appliance plug that many households have already (as for a clothes dryer) and provides 240 V. At this level, PHEVs will attain a full charge in about 3 hours, and BEVs with large batteries can attain a full charge in 4 to 8 hours, depending on the amps.

Level III – This refers to an industrial grade outlet that provides 480 V and allows for "fast" or "rapid" charging that can deliver a full charge in less than 20 minutes. This level requires more extensive infrastructure.

Statement RE: Cost as a Factor	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
The cost of EV charging station equipment and installation will be a primary factor in determining the number and type of EV charging stations our jurisdiction installs.	1	2	3	4	5
Our jurisdiction is likely to be interested in "retrofitting" existing locations to meet current standards for EV charging.	1	2	3	4	5
Our jurisdiction is primarily interested in including the capacity for EV charging in locations with new construction.	1	2	3	4	5
Despite the cost, our jurisdiction may be interested in installing one or more fast charging units.	1	2	3	4	5
Our jurisdiction is primarily interested in EV charging station installations accompanied by some type of incentive or subsidy.	1	2	3	4	5

Comments:

16. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree with the following statement for each item listed:

"I believe this issue is a potential concern in the siting and installation of EV charging stations."

Statement RE: Potential Concerns	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Initial costs of equipment and installation	1	2	3	4	5
Ongoing maintenance	1	2	3	4	5
Potential vandalism	1	2	3	4	5
Safety issues related to equipment use	1	2	3	4	5
Adequate lighting	1	2	3	4	5
Accessibility	1	2	3	4	5
Appropriate Signage	1	2	3	4	5
Public opinion/reactions	1	2	3	4	5
Other: _____	1	2	3	4	5

Comments:

17. Please circle the number below or place a checkmark in the appropriate column, indicating the degree to which you agree or disagree that each of the following is a primary benefit of installing EV charging stations in your jurisdiction.

Statement RE: Potential Benefits	Definitely Disagree	Tend To Disagree	Neither Agree Nor Disagree	Tend To Agree	Definitely Agree
Our jurisdiction will be viewed as being "green" and environmentally conscious.	1	2	3	4	5
They will bring in more business from EV drivers who "stop off & top off" in our town.	1	2	3	4	5
They will attract prospective workers to our jurisdiction's employers.	1	2	3	4	5
Other: _____	1	2	3	4	5

Comments:

18. Please indicate with a checkmark, how many EV charging points you would like to see installed in your jurisdiction over the next five years – by December 31, 2015?

_____ 1 to 5
_____ 6-15
_____ 16-25
_____ 26-50
_____ More than 50

19. If money or other circumstances were not factors and you could create a special "wish list" of everywhere you would like to see EV charging stations installed over the next five years, what locations would be on your list? Please list specific locations and addresses where you would like to see EV charging stations installed over the next five years. (Please use additional pages if needed.)

THANK YOU FOR YOUR TIME. WE LOOK FORWARD TO MEETING WITH YOU TO DISCUSS THESE QUESTIONS.

A GLIMPSE OF ELECTRIC VEHICLES AND PUBLIC CHARGING INFRASTRUCTURE

WHY ELECTRIC VEHICLES?

According to the Bay Area Air Quality Management District, transportation accounts for 62 percent of Marin County greenhouse gas emissions, making it the single largest source by sector. Accelerating the deployment of electric vehicles (EVs) is the most promising near-term strategy for reducing emissions and providing a cleaner, healthier environment.

Economic vitality is also a key factor in the decision to lead the charge in EV adoption. EV drivers will choose to visit and do business with towns that have smart charging stations, passing by towns that do not. Leading the charge in the installation of EV charging infrastructure is a smart business choice.

A unique opportunity now exists with the introduction of new, long-range, high-performance electric vehicles attractive for mass-market adoption, and the availability of government funds and incentives. By 2012, some 10 to 20 models of highway capable electric vehicles will be available to consumers. But… accelerating EV deployment can only be achieved when local jurisdictions work in partnership with chambers of commerce and local businesses to promote the message of sustainability along with regional, national and international communities.

WHICH COMES FIRST: THE ELECTRIC VEHICLES OR THE ELECTRIC VEHICLE CHARGING STATIONS?

Stakeholders are understandably reluctant to build EV charging stations before it is clear that there will be a strong demand for their use. Until now, the presence of electric vehicles has been sparse. That is about to change.

The year 2010 was a watershed year for electric vehicles as it marked the first time in nearly a century that major auto companies introduced plug in electric cars into the mass market. One can now find the Nissan Leaf and Chevrolet Volt quietly zipping along Marin County streets. In addition, other major automakers are planning the introduction of highway-worthy EVs over the next several years, including models by BMW, Chrysler, Ford, Hyundai, Mercedes, Mitsubishi, Tesla, Toyota, and more. **The drivers of these vehicles will be attracted to and will likely choose to do business in the towns and cities that offer electric vehicle charging stations.**

THE VEHICLES

The term “electric vehicle” is a generic term that includes all types of vehicles that use a plug to access electricity from the electric grid to power the vehicle, either fully or partially. The term includes:

- **Battery Electric Vehicles (BEVs)** that operate exclusively on electric power.
- **Plug In Hybrid Electric Vehicles (PHEVs)** that use both electricity and gasoline and have a plug to access electricity directly from the grid.
- **City Electric Vehicles** with moderate speeds, for use on public roads, but not highways.
- **Neighborhood Electric Vehicles (NEVs)**, with a top-speed of 25 miles per hour, typically for local use.
- **Electric Motorcycles, Scooters, and Bicycles**

Nissan Leaf (BEV)

Chevy Volt (PHEV)

Nissan *Leaf* (BEV)	
Range:	100 miles in city driving (varies between 62 to 138 mph on single charge)
Top Speed:	90 mph (electronically limited)
Acceleration:	0 to 60 in 10 seconds
Description:	5-door hatchback powered by lithium-ion battery pack
Charging Receptacle:	Two receptacles: ▪ J1772 standard receptacle for Level I and II charging ▪ TEPCO connector for Level III fast charging
Charging Times:	Level I – 20 hours Level II – 8 hours Level III – 30 minutes *(fully-depleted vehicle to fully-charged)*
Price:	$ 32,780 - 7,500 Federal tax credit - 5,000 CA statewide rebate
Lease:	$349/month
Internet:	www.nissanusa.com/leaf

General Motors Chevy Volt (PHEV)	
Range:	40 miles all-electric power/ 300 miles electric and gasoline combined
Top Speed:	90 mph (electronically limited)
Acceleration:	0 to 60 in 9 seconds
Description:	4-door with liftgate, powered by lithium-ion battery pack
Charging Receptacle:	A single J1772 receptacle for Level I and II charging
Charging Times:	Level I – 20 hours Level II – 8 hours Level III – 30 minutes *(fully-depleted vehicle to fully-charged)*
Price:	$ 40,280 - 7,500 Federal tax credit - 5,000 CA statewide rebate
Lease:	$350/month
Internet:	www.chevrolet.com/volt/

EV CHARGING STATIONS

Electric vehicle charging stations come in three technologies or classes:

Nissan *Leaf* charger port

Level I – Household plug. This operates on a 110/120 volt alternating current (AC) circuit. Plug In Hybrid EVs (PHEVs) will require overnight charge, and a full Battery EV (BEV) will take more than 12 hours to recharge.

Level II – Appliance plug. This is expected to be the "most popular" plug and is equivalent to an appliance plug that many households have (as for a clothes dryer or hot tub). It operates on a 208/240 volt alternating current (AC). At this level, PHEVs will attain a full charge in about 3 hours, and BEVs with large batteries can attain a full charge in 4 to 8 hours.

Level III – Fast Charge. This refers to an industrial grade outlet that typically operates on a 440/480 volt direct current (DC). It allows for "fast" or "rapid" charging that can deliver a full charge in less than 30 minutes. This level requires more extensive infrastructure, and is intended to perform in a manner similar to commercial gas stations along highways, delivering rapid recharge.

Level II EV Charger by Coulomb Technologies

EV Charger Siting at Public Locations

Most EV drivers will charge their vehicles at their residence or place of employment. EV charging stations that are accessible to the public are also important, and expert studies have identified key criteria to consider when determining the best locations for installing EV charging equipment. These criteria include such factors as:

- High demand/visible locations
- Efficient connection to electrical source
- Security considerations
- Lighting/shelter
- Signage
- Possible dual use by fleet vehicles

Level III Fast Charger

EV Charger Operation and Maintenance

Today's publicly-accessible EV charging stations can offer high-reliability at convenient locations wherever EVs park. The chargers integrate aesthetics and ergonomics with sturdy construction – ideal for commercial and outdoor public applications.

EV stations are embedded with an on-board computer and are network-enabled, capable of reporting energy usage. A smart or networked charging station can transact a driver's power usage and send a TEXT message about their charger session, including start and completion time. Drivers get all this while shopping, doing research at the library, enjoying a meal at a local restaurant, seeing a movie, or playing golf or tennis.

For jurisdictions, networked charging is extremely valuable. The town can see charging status, station utilization, energy delivered, and more. Multiple options for point-of-sale operations are available, including credit/debit cards, smartcard readers, parking meters, and radio-frequency identification subscription services. The town has the option of offering free energy, or free parking with user paid energy, or paid for parking and energy metering. These options and more are available.

EV charger equipment and installation costs vary considerably, depending on a number of factors. The retail price for a smart Level II charger is estimated at approximately $5,000 (with an additional $1,000 for one unit that acts as the "gateway" to the network). Installation averages $4,300 per unit, depending on the need for electrical upgrade. Equipment *and* installation for a Level III fast charger may range as high as $50,000 to $70,000. Warranty and maintenance programs are available to ensure that all parts are in good working condition.

The Benefits of Being an "EV-Friendly" Community

With the introduction of new models, more EVs will soon appear on Marin County roads. EV drivers will visit towns that offer smart charging stations and pass by towns that do not. Why not make the choice to stand for local business vitality, job creation, better air quality, quieter streets, plus reduction in fossil fuel dependence. Why not become an EV-friendly community today?

APPENDIX D

SAMPLE MODEL ORDINANCE[1]

The growth of an electric vehicle industry will be facilitated by a consistent regulatory framework that provides model ordinances, regulations, and guidelines related to electric vehicle infrastructure and batteries.

Several states have already taken the lead in developing such provisions. One of the early states to do so is Washington State, which developed a model ordinance that has been customized and adopted by at least 19 local jurisdictions to date.

In California, no state law regulating the use of electric vehicles and EV charging stations is currently in effect and local jurisdictions are not under any state mandate. Nevertheless, it is desirable for local jurisdictions within California to develop their own ordinances and regulations. Two driving factors for doing this are Senate Bill 375 and Assembly Bill 32, both directed at Greenhouse Gas reduction.

Given coordinated efforts to pursue state and regional goals to reduce greenhouse gases, the model ordinance developed by Washington State is provided as reference. Following is introductory information and the text of this model ordinance.

THE PURPOSE OF THE MODEL ORDINANCE

In 2009, the Washington State Legislature passed and the Governor signed into law House Bill 1481 an Act relating to electric vehicles. The purpose of the law is to encourage the transition to electric vehicle use and to expedite the establishment of a convenient and cost-effective electric vehicle infrastructure that such a transition necessitates.

To assist local governments in meeting the purpose and requirements of the new law, in 2010, the State of Washington developed and approved a model ordinance, and development regulations and guidance, that could be taken by local jurisdictions and adopted to fit each jurisdiction's specific needs and circumstances.

This model ordinance provides ordinance language that jurisdictions may utilize for their adopting ordinances. The language from the model ordinance can be used unchanged or modified to suit local government needs. Following is the text of this model ordinance.

MODEL ORDINANCE

Proposed Ordinance No._____

Revisions to Title [Insert List of Amended Titles] for the Purpose of Compliance with [Insert RCW (Revised Code of Washington) Sections Applicable to Jurisdiction] and the Development of Electric Vehicle Infrastructure.

Comment:
"Whereas" text for jurisdictions to use in their adopting ordinances is suggested in the language shown below. Local governments may also choose to add language from the following original bill finding:

"The legislature finds the development of electric vehicle infrastructure to be a critical step in creating jobs, fostering economic growth, reducing greenhouse gas emissions, reducing our reliance on foreign fuels, and reducing the pollution of Puget Sound attributable to the operation of petroleum-based vehicles on streets and highways.

Limited driving distance between battery charges is a fundamental disadvantage and obstacle to broad consumer adoption of vehicles powered by electricity. In order to eliminate this fundamental disadvantage and dramatically increase consumer acceptance and usage of electric vehicles, it is essential that an infrastructure of convenient electric vehicle charging opportunities be developed. The purpose of this act is to encourage the transition to electric vehicle use and to expedite the establishment of a convenient, cost-effective, electric vehicle infrastructure that such a transition necessitates. The state's success in encouraging this transition will serve as an economic stimulus to the creation of short-term and long-term jobs as the entire automobile industry and its associated direct and indirect jobs transform over time from combustion to electric vehicles."

Whereas, During the 2009 session the Washington State Legislature passed House Bill 1481 (HB 1481), an Act relating to electric vehicles. The Bill addressed electric vehicle infrastructure including the structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

Whereas, The purpose of HB 1481 is to encourage the transition to electric vehicle use and to expedite the establishment of a convenient and cost-effective electric vehicle infrastructure that such a transition necessitates. The Legislature agreed that the development of a convenient infrastructure to recharge electric vehicles is essential to increase consumer acceptance of these vehicles. The State's success in encouraging this transition will serve as an economic stimulus to the creation of short-term and long-term jobs as the entire automobile industry and its associated direct and indirect jobs transform over time from combustion to electric vehicles.

Whereas, Greenhouse gas emissions related to transportation constitute more than fifty percent of all greenhouse gas emissions in the State of Washington.

Whereas, The use of electricity from the Northwest as a transportation fuel instead of petroleum fuels results in significant reductions in the emissions of pollutants, including greenhouse gases, and reduces the reliance of the state on imported sources of energy for transportation.

Whereas, With the potential emerging market for plug-in electric vehicles, new industry standards have been adopted to ensure universal compatibility between vehicle manufacturers. Broad-based installation of new universally compatible charging stations is intended to ensure that plug-in electric vehicles will be a viable alternative to gasoline-powered vehicles.

Whereas, This ordinance regarding electric vehicle infrastructure and batteries, revising [Local government to insert list of amended Titles], contains [Local government to insert # of sections, as applicable to jurisdiction standard practice] sections of findings, as follows:

Section I ─ Procedural and Substantive Findings

Comment:
Text below to be modified by local governments, as applicable. For example, not all jurisdictions that are required to allow EVI are fully planning GMA jurisdictions so the "Whereas" findings related to GMA are not applicable to those jurisdictions. Also, some jurisdictions, after evaluating their Comprehensive Plans, may determine that no amendments to their comprehensive plans are required in order to adopt development regulations to implement EVI. For those jurisdictions, a "Whereas" finding in that regard would be provided.

Additionally, jurisdictions may choose to provide text regarding regional and state coordination (e.g., countywide planning policies and development regulations that implement these policies). Last, while the statute provides an exception for areas zoned for residential or resource use or critical areas, allowing electric vehicle infrastructure in these zones may be appropriate and beneficial. As such, these "Whereas" statements can be revised to identify the zones in which the infrastructure will be allowed.

Whereas, [insert section of RCW] requires that [insert jurisdiction name] must allow electric vehicle infrastructure as a use in all areas except those zoned for residential or resources use or critical areas by [insert deadline for compliance with RCW]; and

Whereas, because most of the recharging for private electric vehicles will be done in residential settings, which includes residences in residential as well as some resource areas or critical areas, and therefore allowing electric vehicle infrastructure in these areas is in the public interest; and

Whereas, because businesses in resource areas and in some critical areas may want to install electric vehicle infrastructure and therefore allowing this infrastructure in these areas is in the public interest; and

Whereas, pursuant to [Insert section of RCW], this ordinance proposes to amend development regulations found in [insert Title(s) and Chapter(s) of local code containing development regulations] to allow electric vehicle infrastructure as a use in [local government to insert where EVI is allowed]; and

Whereas, an amendment to the [insert GMA jurisdiction name] Comprehensive Plan is required in order to ensure consistency with the proposed development regulations, as required by RCW 36.70A.040; and

Whereas, RCW 36.70A.130(2)(b) authorizes the adoption of comprehensive plan amendments outside appropriate public participation; and

Whereas, [jurisdiction name] finds that the need to amend the [insert GMA jurisdiction name] Comprehensive Plan to ensure consistency with the proposed development regulations constitutes an emergency under RCW 36.70A.130(2)(b);

Comment:
It should be noted that an "emergency" under RCW 36.70A.130(2)(b) is not the same as other types of emergencies that may be declared by cities and counties, such as "public" emergencies under RCW 35A.12.130 or "nondebatable" emergencies under RCW 36.40.180. A finding of "emergency" under RCW 36.70A.130(2)(b) allows local government to amend the comprehensive plan outside of the normal annual cycle and to limit public participation to what is "appropriate" under the circumstances. For example, see Clark Revocable Living Trust v. City of Covington, WWGMHB Case No. 02-3-005 (September 27, 2002) (holding that amendments within the exception of RCW 36.70A.130(2)(b) are not subject to normal GMA process requirements). However, unlike a finding of "public" emergency under RCW 35A.12.130 or a finding of "nondebatable" emergency under RCW 36.40.180, a finding of "emergency" under RCW 36.70A.130(2)(b) does not make the ordinance effective upon adoption or automatically allow action to be taken without a hearing or public notice.

Section II — Attachments

[Local government to add amended or new sections of code, as applicable]

Now, Therefore, be it Ordained as Follows:

Adopted this _____day of _____,

[Insert local government signature block]

✧✧✧✧✧✧✧✧✧

[1]Washington Department of Commerce and Puget Sound Regional Council, *Electric Vehicle Infrastructure ─ A Guide for Local Governments in Washington State,* July 2010. To download a copy of the entire report, visit http://www.psrc.org/transportation/ev/model-guidance.

APPENDIX E

FOCUS AREAS FOR REGULATIONS AND GUIDELINES RELATING TO EVS

When public agencies or private entities are preparing to install EV charging stations, model regulations and guidelines are desirable to assist jurisdictions to efficiently and effectively install EV infrastructure.

In California, much work is underway to develop statewide regulations and guidelines in several key areas. Updates and clarifications are occurring regularly and progress is moving quickly. It is anticipated that recommended regulations and guidelines will be presented for statewide adoption and implementation in the very near future. A current overview of the following key areas of focus for such provisions is included below:

- Zoning
- Parking Enforcement
- Signage
- Accessibility Requirements
- Battery, Building, and Electrical Codes
- Permits and Inspections

ZONING

Jurisdictions may wish to consider adopting provisions or guidelines that specify which zoning districts are most suitable for specific types of EV infrastructure. For example, Washington State has enacted a law to allow electric vehicle charging stations in all areas, except for those zoned for residential or resource use or critical areas.

Washington State also adopted guidelines on appropriate zoning districts for the location of Level 1 and 2 charging stations, Rapid Charging, and Battery Exchange stations. Figure 1 provides a simplified version of a table identifying permitted use. Areas highlighted indicate where EV infrastructure must be allowed as opposed to residential and resource areas where it is not required by statute in Washington State.

EVI Type	Zoning District						
	Low-Density Residential	High-Density Residential	Mixed Use	Commercial	Industrial	Institutional	Resource
Level 1 & 2 Chargers	P	P	P	P	P	P	P
Level 3 Fast Chargers	P	P	P	P	P	P	P
Battery Exchange Station				P	P	P	

"P": Use is permitted. Absence of "P": Use is not allowed in the given zoning district.

Figure 1: Permitted EV Chargers By Zone

Currently, no laws exist in California that encourage or inhibit placement of EV infrastructure in different zones. It is conceivable that regulations limiting the placement of high-voltage (480 v) fast chargers to certain zones could be approved in the future, but none exist at this time.

PARKING ENFORCEMENT

Jurisdictions may also adopt regulations for when to authorize enforcement for non-electric vehicles that park in EV charging station spaces or for EVs parked out of compliance with posted days and hours of charging operation. Such regulations may be especially important when spots are shared between EVs and Internal Combustion Engine (ICE) vehicles or between a jurisdiction's fleet vehicles and publicly owned EVs. Identification of and consistency in fines for parking violations is also desirable.

Currently, two California Vehicle Codes, effective January 2003, address parking enforcement:

- **CVC Section 22511.1**
  Zero Emission Vehicles Display of Decal
  "(a) A person may or may not park or leave standing any vehicle in a stall or space designated pursuant to Section 22511 unless a valid zero-emission vehicle decal identification issued pursuant to Section 22511 is displayed on that vehicle.
  (b) A person may not obstruct, block, or otherwise bar access to parking stalls or spaces described in subdivision (a) except as provided in subdivision (a).
  (c) A person shall not display a decal issued pursuant to Section 22511 on a vehicle that does not use electricity as the motive power."

- **CVC Section 42001.6**
  Zero Emission Vehicle Parking Violation Fine
  "Every person convicted of an infraction for a violation of section 225.11.1 is punishable by a fine of one hundred dollars ($100).

  No part of any fine imposed shall be suspended, except the court may suspend that portion of the fine above twenty-five dollars ($25) for a violation of Section 225.11 if the person convicted possessed at the time of the offense, but failed to display, a valid zero-emission vehicle decal identification issued pursuant to subdivisions (a) and (b) of Section 5205.5. The fine may be paid in installments if the court determines that the defendant is unable to pay the entire amount in one payment."

Additional issues related to parking enforcement and fines currently under discussion include:

- Whether to cite a vehicle with a ZEV decal that is occupying an EV charging station parking spot, but <u>not in the act of actively charging</u>.
- Allowances for an internal combustion engine (ICE) vehicle with a Disabled Person Parking Placard that is occupying an ADA accessible parking spot with an EV charger.

<u>Note 1:</u> An amendment, AB 475, has been introduced by Assembly Member Butler, Existing law authorizes a local authority to designate parking stalls or spaces for the exclusive purpose of fueling and parking a vehicle that displays a ZEV decal and, for purposes of these provisions, defines a "zero emission vehicle" to mean any car, truck, or other vehicle that produces no tailpipe or evaporative emissions. AB 475 would instead make these provisions applicable to an electric vehicle, and would define "electric vehicle" to mean nay car, truck, or other vehicle that does not produce tailpipe or evaporative emissions or is a plug-in hybrid electric vehicle (PHEV), as that term is used by the State Air Resources Board. At the time this report went to publication, this amendment had not yet been approved.

Note 2: Jurisdictions may enact their own ordinances rather than relying on CVC 22511.1 and 42001.6 which relate exclusively to ZEVs, since these codes would prohibit use of EV charging stations by PHEVs like the Chevrolet Volt and forthcoming Plug-In Toyota Prius, which are not certified as ZEVs.

Clearly, more work in this area needs to be done and clarification of parking enforcement regulations is necessary prior to design and placement of appropriate signage.

SIGNAGE

To support the successful use of EV charging stations, proper signage is required. Following is an overview of information related to EV charging station signage.

Any sign on a public street or highway open to public travel that is intended to regulate, warn or guide traffic is considered a traffic control device. The Code of Federal Regulations recognizes the Manual on Uniform Traffic Control Devices (MUTCD) to be the national standard for all traffic control devices. The California Manual on Uniform Traffic Control Devices (CA MUTCD) is published by the State of California and is issued to adopt uniform standards and specifications for all official traffic control devices in accordance with the California Vehicle Code (CVC). Traffic control signs in public or private or private parking facilities are not considered to be "open to public travel" for purposes of MUTCD applicability. However, local agencies normally utilize standard signs in public parking facilities to be consistent with those used on adjoining public roadways.

Electric vehicle charging station signage for public charging purposes needs to exist in two forms:

(1) Guide (general service) signs designed to help EV drivers locate charging stations, and

(2) Regulatory (enforcement) signs prohibiting non-EV vehicles from parking in charging station spots or identifying specific days and times when a parking spot is available for shared use between EVs and non-EVs or between publicly operated EVs and fleet EVs.

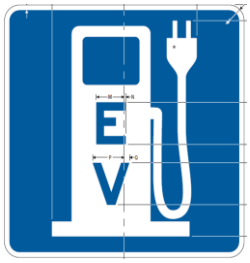
Both types of signs are required to meet the retroreflectivity or illumination requirements, and be sized, placed and oriented as called for in the CA MUTCD.

Following are the General Service Signs with recommended sizes currently approved in the CA MUTCD.

The G66-21 (CA) sign was added to the CA MUTCD to be used on conventional roads or at a battery charging station.

 G66-21 (CA)	 D9-11bP	 D9-11b
Charging Station 12" x 12" 18" x 18" Conventional Road 24" x 24"	Freeway 30" x 24" Expressway 30" x 24" Conventional Road 24" x 18"	Freeway 30" x 30" Expressway 30" x 30" Conventional Road 24" x 24"

On April 1, 2011, the Federal Highway Administration (FHWA) issued an Interim Approval for an alternate D9-11b sign to the States of Oregon and Washington. The FHWA considered the substitution of the electrical cord in place of the gas hose and nozzel as a more appropriate representation of a battery charging station. The use of this sign as an alternate to the D9-11b will be granted to other states or public agencies that request its use. When and if an official rule making occurs and the sign is included in the MUTCD, then it can be used as a permanent sign on public roadways by any agency in the United States. The same dimensions of the D9-11b apply to the alternate sign.



D9-11b (Alternate)

Regulatory signs are required for enforcing the time duration and days that EVs are permitted to park and/or charge at public charging stations. Qualifying EVs should be defined in local codes (e.g, ZEVs only, PHEVs, and so on), as well as if being plugged in and charging is required when a vehicle is parked at an EV charging station. Currently, no regulatory signs exist for EV charging purposes in either the CA MUTCD or the federal MUTCD. However, signs have been developed for testing in Oregon and Washington, and jurisdictions in Marin County may find it desirable to use those signs until such time as California adopts standard signs.

Regulatory signs are generally "prohibitive" or "permissive," and there are certain color designations for each. Green/white regulatory parking signs are considered permissive signs and are intended to provide motorists with the allowable time and days to park. Red/black/white regulatory parking signs are considered prohibitive and are intended to advise motorists of an action that shall not be taken.

To be lawful, the above signs should be no smaller than 12"W x 18"H and placed at heights and locations as prescribed in the CA MUTCD. The sign on the far right would allow for parking of an EV that is not plugged in, while the sign in the center would require the EV to be plugged in and charging. Both prohibitive signs above are intended to make it unlawful for any non-electric vehicle to occupy the space. If a permissive sign is used in combination with a prohibitive sign it shall be installed below or to the right of the prohibitive sign.

Finally, a third type of sign may be used with EV charging equipment and may be referred to as "informational" or "warning" signs. These signs are not regulated by MUTCD, are designed to ensure safety and proper operation of EV charging infrastructure, and may include safety warnings designated by the National Electric Code (NEC) and EV industry organizations.

Accessibility Requirements

When establishing EV charging site spaces that are intended for use by the general public, jurisdictions should make reasonable accommodations and accessibility provisions in the planning, design, installation and operation of the EV charging stations.

Accessibility standards specific to the installation of publicly-accessible electric vehicle charging stations are not currently established in the California Code of Regulations, however, two separate documents pertaining to accessibility requirements for EV charging stations exist:

(1) *Standards for Card Readers at Gasoline Fuel-Dispensing Facilities*, contained in Chapter 11C of the 2010 California Building Code (CBC).

(2) DSA 97-03—Accessibility Guidelines for Electric Vehicle Charging Stations, an internal State policy, issued by the Department of General Services.

CBC Chapter 11C includes electricity and many other fuels besides gasoline as a motor fuel. The 11-C Standard provides explicit detail on accessible height, reach, clearance to obstructions and allowable slope, but no indication of space size and configuration.

DSA 97-03 provides guidance on the size and number of accessible charging stations and placement of an access aisle and signage, but no guidance on accessibility to the battery charging station controls.

According to DSA 97-03, *"when EV charging is coupled with regular parking, the EV charging is considered the primary service."* The numbers in Figure 2 should be used in determining the required number of accessible charging stations.

Number of Chargers Provided at a Site	Number of Accessible Charger Spaces Required
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4

Figure 2: Accessible Charging Station Requirements

NOTE: The Division of the State Architect (DSA) refers to the State policy as "interim guidelines" and states: *"This policy is applicable to projects under DSA jurisdiction only. DSA's Access Compliance jurisdiction encompasses state-funded buildings, facilities and universities, as well as publicly-funded elementary schools, secondary schools, and community colleges. Local jurisdictions may or may not adopt similar methods of administering current code requirements, determining equivalent facilitation or defining acceptable parameters when enforcing the California Building Standards Code."*

A number of other requirements stipulated in DSA 97-03 may conflict with requirements for disabled access in California Building Code Chapter 11C Standards for Card Readers at Gasoline Fuel Dispensing Facilities.

The inconsistencies between the State standard on motor fuel dispensers spelled out in CBC Chapter 11C and the guidelines on accessible electric vehicle charging stations in DSA 97-03 leave local authorities the challenge of deciphering between a set of conflicting standards and guidelines. This is resulting in broadly different interpretations and inconsistent practices.

The matter is further complicated by the fact that the vast majority of battery charging stations being installed over the next several years will occur in existing parking facilities where the source of electrical power, location of accessible parking spaces, natural terrain, landscaping and other features already exist.

Currently, several groups are researching the differences between CBC Chapter 11C and DSA 97-03 and developing recommended practices regarding accessibility, including:

- County of Sonoma Electric Vehicle Infrastructure (EVI) Deployment Team
- Association of Bay Area Governments (ABAG), in partnership with EV Communities Alliance (EVCA), Clean Fuel Connection, Inc. (CFCI), and Bay Area Climate Collaborative (BACC), for an "EV Streamlining Project" funded by a Balance Foundation RFG Grant
- Tri-Chapter Uniform Code Council Committee (TUCC), which represents International Code Council chapters in the region – Peninsula, East Bay and Monterey Bay – and provides interpretation on building codes and has produced permitting guidelines for residential electric vehicle chargers that may be extended to development of permitting guidelines for commercial EV chargers.

It is anticipated that the work outputs of these groups, along with model regulations developed by the Puget Sound Regional Council, may provide guidance to Marin County jurisdictions and that they will be used as key resources in the development of recommendations to be taken for statewide consideration and that will ultimately lead to a single standard to be applied statewide.

It appears that, in the absence of California law, the tendency seems to be toward the practice that: "the first two EV chargers should be accessible."

Note 1: If one EV charger offers two charging points, this would count as two EV chargers.

Note 2: The major decision for jurisdictions is which criteria to use in defining "accessible."

Until such time that statewide standards and guidelines are available, jurisdictions are encouraged to carefully review requirements of both CBC Chapter 11C and DSA 97-03 to determine which requirements apply in any given situation.

BATTERY, BUILDING, AND ELECTRICAL CODES

Another recommended area where regulations and guidelines need to be developed to support the deployment of an effective electric vehicle charging infrastructure relates to codes dealing with battery handling, new building construction, and electrical standards. For example, guidelines need to be researched, developed, and communicated with regard to such issues as:

- Battery Recycling and Handling, including location and management of battery exchange stations.

- Building codes and building occupancy classifications that allow for the installation of certain types of EV Infrastructure, including Fast Charge and Battery Exchange stations.

  Note: One example is SB 209, approved February 8, 2011, which ensures that electric vehicle owners can install charging stations at their homes, even if they live in a community interest development such as an apartment complex or condominium project.

- Electrical codes and appropriate wiring standards for specific locations and proper labeling which identifies that EV infrastructure equipment conforms to appropriate safety standards as designated by an approved testing authority.

  Note: As with any electrical installation, EV charging infrastructure is governed by various federal, state, and local electrical codes, including the National Electrical Code (NEC) and California Electrical Code (CEC). Appropriate codes for different levels of EV charging must be identified and complied with to ensure safe operation of equipment. (See PG&E Electric Vehicle Infrastructure Installation Guide, March 1999.)

In addition to identifying existing codes that must be complied with, some states and jurisdictions are pursuing development of new regulations to accelerate the deployment of EVs and EV infrastructure. For example, the State of Virginia Board of Housing and Community Development have mandated the pre-wiring of new homes with and/or the installation of in inexpensive conduit for cables for future EV service equipment wiring. British Columbia has also instituted a requirement similar to this. This requirement drastically decreases the potential installation cost for a Level 2 residential EV charger. The adoption of a new home building code would require homebuilders to install wiring for Level 2 EV chargers at the time of any new construction. Costs for this type of pre-installation are negligible, and pre-installation protects against the future substantial EV charger installation cost. (See Virginia study referenced at end of this Apprendix.)

In addition to new residential construction, a similar regulation could be required by jurisdictions for new construction of parking garages, lots, and buildings, reducing the future cost of adding EV chargers. While certain public and commercial locations may not be deemed initially as priority sites for the location of EV chargers, as demand increases, this may change. The requirement to pre-wire new municipal buildings and parking facilities could drastically reduce future costs when the addition of EV chargers is deemed necessary to meet increasing demand.

PERMITS AND INSPECTIONS

One of the most important ingredients to the successful deployment of electric vehicle infrastructure – at residential and commercial locations – will be the existence of an expedited and streamlined permitting and inspection process. Thus, it is highly recommended that efforts be made by local jurisdictions to overcome potential barriers associated with the installation of EV charger equipment by streamlining the permitting process.

The process for installing an electric vehicle charging station can range from very complex to relatively easy based on the preparedness of the local governing bodies. Much work has been completed across the nation to streamline and simplify permitting processes, and this information can be leveraged to assist Marin jurisdictions in streamlining their own processes. For example, some recommendations include:

- Allow localities to interact directly with the EV charger owner's electrical contractor;
- Establish online permit request *and approval* process;
- Establish an over-the-counter process with same-day approval;
- Simplify and consolidate permitting fees;
- Limit the information required for approval;
- Streamline the number of agencies involved in the EV charger permitting process;
- When possible, limit the inspections required, and streamline the inspection process;
- Simplify and consolidate inspection fees (e.g., loop into permit fee);
- Clearly identify each required process step, and decrease time required for each step

Work in this area has been done by others (See Virginia Get Ready Initial Electric Vehicle Plan, October 13, 2010), and is currently being pursued in California. Progress needs to be researched, documented, and communicated to aid Marin jurisdictions in their efforts to streamline the permitting process for EV installation at both residential and commercial sites.

RESOURCES

Information in this Appendix has been drawn from work being performed by the State of Washington, the Commonwealth of Virginia, the County of Sonoma, California, and other organizations and reports referenced herein and in the main report Resources section, including the following:

Sonoma County, Working Drafts of: *Electric Vehicle Infrastructure Installation Guidelines*, anticipated for release in June, 2011.

Virginia Clean Cities, *Virginia Get Ready: Electric Vehicles Plan,* October 2010, http://www.hrccc.org/

Washington Department of Commerce and Puget Sound Regional Council, *Electric Vehicle Infrastructure ─ A Guide for Local Governments in Washington State,* July 2010.

APPENDIX F
EV AND EVI INCENTIVES

During the early stages of the transition to electrified transportation, incentives can play a key role in accelerating the deployment of EV infrastructure and EVs. This Appendix provides a brief description of incentives available for EV purchasers and installers of EV Infrastructure.

Incentives for EV Purchasers

A wide variety of incentives may be offered to encourage the purchase of electric vehicles.

The following federal and state incentives are up-to-date as of May 2011. Please refer to the provided web sites for the most current information.

- **Federal Tax Credit for Qualified Plug-In Electric Drive Motor Vehicles** – For each zero-emission plug-in hybrid or electric vehicle purchased, a tax credit between $2,500 and $7,500 is available. The amount of tax credit is based upon the battery capacity of the car purchased. The tax credit for a given electric vehicle will be reduced after the manufacturer has sold 200,000 units. For up-to-date information on the federal tax credit. Please visit: http://www.afdc.energy.gov/afdc/laws/law/US/409. For up-to-date information on federal funding for specific electric vehicles, please see: http://fueleconomy.gov/fegtaxevb.shtml.

- **California State Rebate** – The Clean Vehicle Rebate Project, funded by Assembly Bill 118, provides rebates of up to $5,000 per zero-emission or plug-in light duty vehicle. Additionally, certain zero-emission commercial vehicles are eligible for a rebate up to $20,000. Only vehicles approved by the California Air Resources Board (ARB) are eligible for rebates. For information, please see: http://www.afdc.energy.gov/afdc/laws/law/CA/8161. To apply for a state EV tax rebate, please go to: www.ebergycenter.org/cvrp.

- **HOV Lane Stickers** – Stickers that allow single occupancy use of High Occupancy Vehicle (HOV) lanes are an important tool in promoting early adoption of Advanced Clean Cars. Currently, two types of stickers exist, white stickers and yellow stickers, with a third option, green stickers, starting in 2012. White stickers are available to qualifying Federal Inherently Low Emission Vehicles (typically pure zero emission vehicles (100% battery electric and hydrogen fuel cell) and compressed natural gas (CNG) vehicles). The expiration date for the white stickers has been extended to January 1, 2015. Yellow stickers were limited to the first 85,000 applicants of qualifying hybrids and expire July 1, 2011. Green stickers will be available January 1, 2012 and be valid through January 1, 2015 to the first 40,000 applicants that purchase or lease cars meeting California's enhanced advanced technology partial zero emission vehicle requirements. For information, please see http://www.arb.ca.gov/msprog/carpool/carpool.htm.

- **Electric Vehicle Charging Rates** – As a vehicle fuel, electricity offers tremendous price advantages over gasoline. Special lower Time-of-Use (TOU), off-peak electricity rates are available to EV owners to minimize their energy bills. For example, Pacific Gas & Electric offers a special discounted rate, enabling EVs to operate for as little as 4 cents per mile when charged overnight using off-peak power. For additional information, please see http://www.pge.com/about/environment/pge/electricvehicles/fuelrates/index.shtml.

In addition to these existing incentives, other potential opportunities for incentives include:

- Complimentary charging
- Special EV parking spots
- Public transit discounts for EV owners
- Free battery recycling
- Reduced fees for residential charger installation
- Emissions inspection discounts
- Reduced FasTrak charges
- Commercial incentives such as coupons while charging

Infrastructure Funding

For jurisdictions, one of the highest priority recommendations to encourage the move to electrified transportation is to pursue sources of funding from federal, state, and private sources to help cover costs of the installation of EV charging infrastructure. This is particularly critical in the current economic environment in which many local jurisdictions are struggling to cover costs of basic services. If local jurisdictions are going to be able to provide the EV infrastructure that will encourage individuals to overcome "range anxiety" and purchase electric vehicles, they will need financial support.

A number of programs and opportunities exist for jurisdictions that take the lead and are early installers of electric vehicle infrastructure. Following is a brief overview of some grants and incentives available to jurisdictions interested in installing EV charging infrastructure.

- **Marin Community Foundation (MCF)** – MCF is a community foundation that encourages and applies philanthropic contributions to support community issues in Marin County and beyond. One of MCF's key areas of interest is to help Marin residents and businesses reduce the environmental effects of climate change. Currently, MCF has granted $100,000 to support the Marin Electric Vehicle project described in this report and to support EV education and infrastructure deployment in Marin County.

- **California Energy Commission (CEC)** – As the state's primary energy policy and planning agency, the CEC is responsible for managing the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), which was established by California State Assembly Bill 118 in 2007, with an annual budget of approximately $100 million in state funding through 2015 to be invested in projects that develop, demonstrate and deploy low-carbon alternative fuels and vehicle technologies. Currently, the CEC has committed to allocating more than $260,00 to support EV infrastructure deployment in Marin County.

- **Transportation Fund for Clean Air** – The Bay Area Air Quality Management District (BAAQMD) instituted the Transportation Fund for Clean Air (TFCA) which receives approximately $22 million annually for greenhouse gas (GHG) reduction program implementation. The TFCA funds are generated from an annual $4/vehicle fee charged to all vehicles registered in the Bay Area. TFCA has set aside a portion of these funds for Alternative Fuel Vehicles (AFVs) and related infrastructure investments. In Marin County, more that $120,000 are currently allocated to support the installation of up to 27 EV charging points and provide supplemental matching funds for the purchase of three fleet vehicles.

- **Bay Area Metropolitan Transportation Commission (MTC)** – MTC has instituted the Innovative Grants program as part of its Climate Initiatives Grants Initiative, with jurisdictions eligible for a share of funds available for EV purchases from 2009-2012. In Marin County, $132,000 of these funds have been made available to purchase three electric vans for fleet use.

- **Department of Energy EV Project** – On August 5, 2009, the U.S. Department of Energy announced the award of a grant of $99.8 million to implement the largest-ever rollout of electric vehicle infrastructure. These funds have attracted an additional $100 million in private funds. The funds are being allocated, via partner organizations, to "develop, implement and study techniques for optimizing the effectiveness of infrastructure supporting widespread EV deployment." Private partners include organizations such as Coulomb Technologies and 350 Green, which are currently committed to allocating funds to help cover costs of EV charger equipment and installation in jurisdictions throughout Marin County.

- **Bay Area Air Quality Management District (BAAQMD)** – BAAQMD is the regional, government agency that regulates sources of air pollution within the nine San Francisco Bay Area Counties. In addition to managing the TFCA program described above, BAAQMD manages a number of programs including the Alternative Vehicle and Infrastructure Project and the EV Charging Equipment Deployment Program. These efforts are part of BAAQMD's Strategic Incentives Division (SID) which, since 1992, has awarded more than $400 million in grant funding to public agencies, private companies, and Bay Area residents for cost effective emission reduction projects.

  On February 2, 2011, BAAQMD awarded $3.9 million to four vendors to implement the first phase of the BAAQMD's Plug-in Electric Vehicle (PEV) Charging Equipment Deployment Program. This effort will help to fund up to 3,000 home charger installations for qualifying residents that purchase a new PEV and a network of up to 50 Direct Charge (DC) fast chargers.

  BAAQMD is currently developing a program to offer financial incentives to residents who install Level 2 home chargers and will provide driver charging data over a three-year period.

- **Private Enterprise** – In addition to the sources named above, several private sources have been awarded monies and are providing matches in funding and equipment to facilitate the early installation of EV infrastructure that can be used to collect and monitor data regarding the use of EV chargers.

  For example, Coulomb Technologies, Inc. initiated ChargePoint America, a program to provide charging infrastructure to selected regions in the U.S., including the San Francisco Bay Area. This program is made possible by the American Recovery and Reinvestment Act through the Transportation Electrification Initiative administered by the Department of Energy. The objective is to accelerate the development and production of EVs to reduce petroleum consumption, reduce greenhouse gas production, and create jobs. Companies and municipalities may learn more and apply on the ChargePoint America web site.

350Green is an initial private partner in The EV Project, the $230 million private-public partnership for the installation of charging stations in U.S. cities. As part of this partnership, the company is supporting the rapid deployment of fast chargers in select locations.

In January 2011, the Bay Area Air Quality Management District announced awards to four private companies for their EVSE Charging Deployment Incentives Project: ECOtality, Coulomb Technology, AeroVironment, and Clipper Creek.

Private and public entities are working together to provide support and collect information that will accelerate the deployment of EVs and EV infrastructure. In the early stages of deployment, many opportunities may be available to jurisdictions and organizations wishing to install publicly-accessible EV chargers.

Jurisdictions interested in learning more about specific opportunities to fund installation of EV infrastructure may contact TAM for information and assistance.

APPENDIX G
PROPOSED EV CHARGER SITES BY JURISDICTION

The following pages provide specific addresses by jurisdiction, a synopsis of siting principles met, and mapping of potential locations for publicly-accessible EV charger stations in Marin County from 2011 through 2015. A few factors merit highlighting.

(1) This list of EV charger sites represents a working document that is a starting point for discussions and funding allocation on EV charger siting and placement. It is intended that this list will be updated many times as discussions continue during the next few years as Marin County gains experience with EVs on Marin County streets and highways.

(2) Sites listed for placement during Year One (2011) were selected as part of a competitive grant opportunity available through the California Energy Commission in December 2009 to fund installation of EV charging stations in the nine county San Francisco Bay Area region. Local jurisdictions were asked to quickly assess potential locations in their communities. Given the limited response time, some jurisdictions were not prepared to submit proposals that were fully vetted for their communities. To take advantage of the grant, public sites were supplemented by private properties identified through community outreach conducted by EV Communities Alliance. TAM acknowledges the limitations of the grant opportunity provided to jurisdictions and is committed to working with agencies that were not able to participate successfully in the initial round of funding to ensure future success in funding EV chargers.

(3) Sites included for Years Two through Five were identified through educational outreach sessions and surveying conducted by TAM. The locations identified do not represent a formal plan that has Council approvals or underwent a comprehensive vetting process. They represent more of a "wish list" that jurisdiction representatives provided when asked: "If money were no object, where would you suggest placing EV charger stations in your community during the next five years?"

Note: For all jurisdictions, sites included for Years Two through Five are considered tentative and will be dependent on demonstrated use of prior EV chargers and on the availability of future grant funds.

(4) In some cases, when asked the question above, representatives from jurisdictions suggested EV charger sites on private properties as well as public properties. Since this information was provided through the educational outreach sessions and contributes to an overall picture of the siting of EV chargers countywide, these locations are included.

(5) Sites are organized by jurisdiction and listed in the sequence given by jurisdictions, which is not necessarily an indication of priority. Sites in Marin County are listed last and include sites identified in unincorporated towns including those identified as "priority development areas" in the Plan Bay Area (see page 68).

While the focus of TAM is on providing support to public agencies, TAM advocates the continued development of a strong public/private partnership as local jurisdictions, private enterprise, and private vehicle purchasers work together to develop an efficient and effective electric vehicle charging station network throughout Marin County. It is hoped that the sites listed in this document will provide a strong start to that effort.

Note: All population and land area figures are from www.city-data.com and as of July 2009 unless otherwise noted.

Belvedere

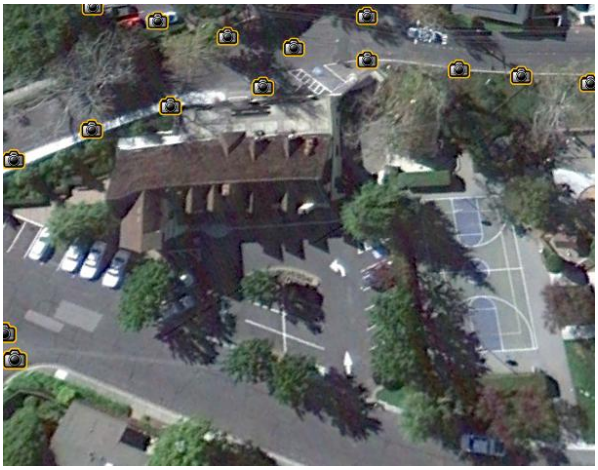
Belvedere is a tiny city, surrounded on three sides by the waters of the San Francisco Bay. Its population is clustered in three neighborhoods: Belvedere Island, Belvedere Lagoon, and Corinthian Island. The city is completely built out with single-family homes and approximately 100 rental units. The number of young families with children is steadily growing. Belvedere has no downtown area; shoppers find products and services immediately outside the city limits. Belvedere's working population commutes to San Francisco by car (30 minutes to downtown) or by ferry or bus.

- **Population:** 2,057
- **Geographic Area:** .54 square miles
- **Population Density:** 3,842 residents per square mile (Average)

EV Position: Wants to position the city as a green community by being one of the first Marin communities to install EV chargers in a highly visible location. Currently owns one Global Electric Motorcar (GEM) and two Ford Escape hybrids. Based on a draft climate action plan, the City of Belvedere estimates an increase in the percentage of EVs in the community fleet of two percent over state projections.

EV CHARGER SITES

1. **Community Road adjacent to City Hall Parking Lot**
   This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



Corte Madera

The town of Corte Madera sits at the foot of Mt. Tamalpais, at the intersection of the Corte Madera Creek and San Francisco Bay. Its main street is Tamalpais Drive, which is lined with parks and charming retail stores. The town includes green countryside and water tidelands and features single-family homes and condominium and townhouse complexes. It is also home to several businesses and two of Marin County's finest shoppibg centers -- The Town Center and The Village at Corte Madera.

- **Population:** 9,290
- **Geographic Area:** 3.17 square miles
- **Population Density:** 2,933 people per square mile (Average)

EV Position: Sees prime opportunity for EV chargers on private shopping center property at the Town Center and the Village. Anticipated future EV use may include an EV as a Town Hall vehicle for site visits and inspections. The town wants to make a statement of sustainability.

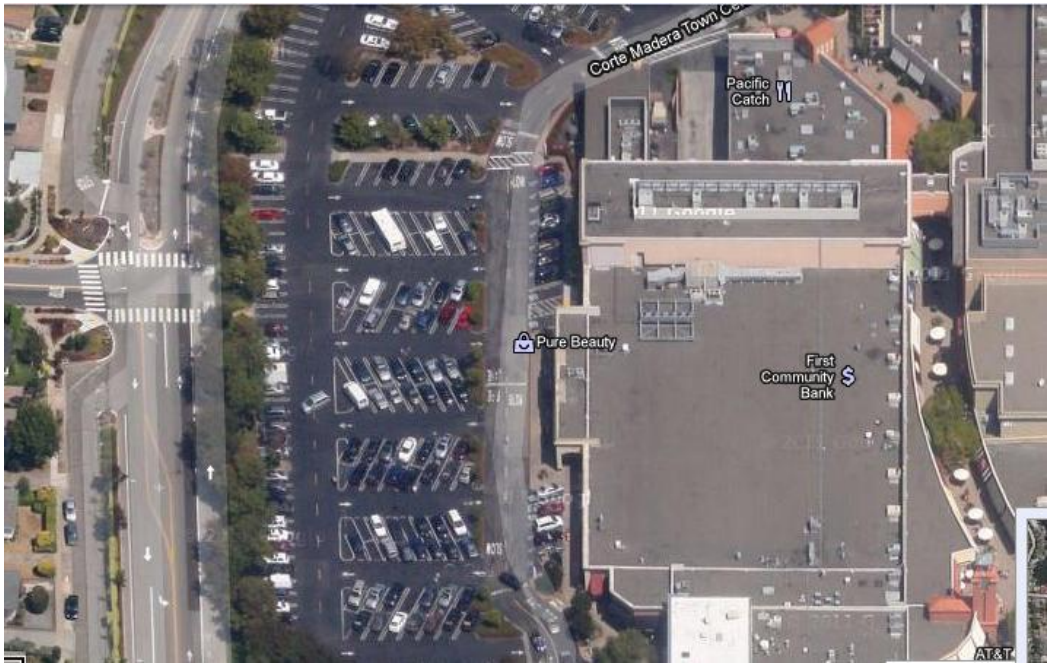
EV CHARGER SITES

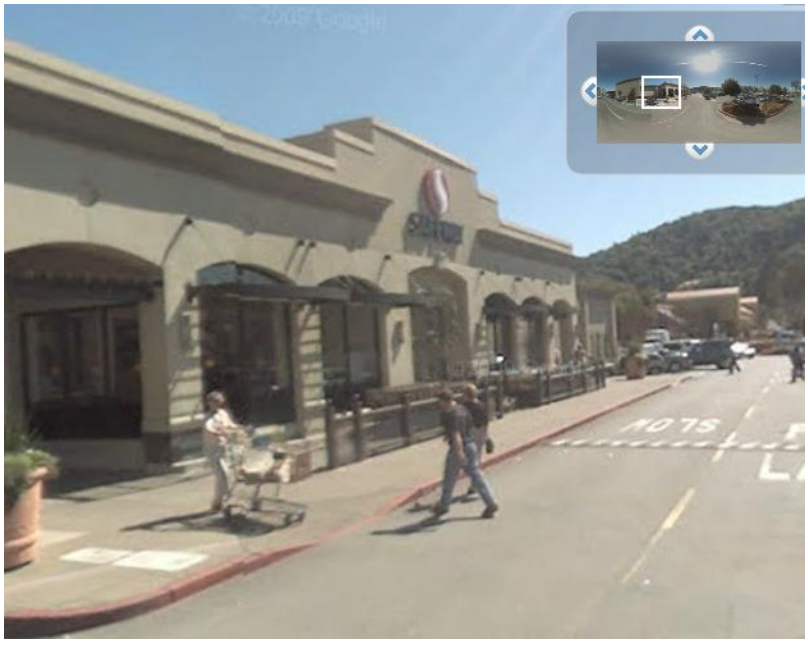
1. **Marin Municipal Water District (MMWD)**
   220 Nellen Avenue
   This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Note: The Administration building for the Marin Municipal Water District islocated at 220 Nellen Ave. The EV chargers will be located at the Corportation Yard on the opposite side of Tamal Vista Blvd.

2. **Safeway**
137 Corte Madera Town Center

This site is an approved location for installation of a Level 3 EV Rapid Charger in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.





3. Town Square – Menke Park
Intersection of Tamalpais Drive & Corte Madera Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

4. Corte Madera Library

707 Meadowsweet Drive

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Fairfax

The town of Fairfax is located in the heart of central Marin County and is considered to be environmentally progressive. The town is home to a diverse population. Its downtown area is surrounded by forested hills, and it is a popular destination for hiking and mountain biking due to the committed open space that surrounds it. Its downtown area includes many boutiques, restaurants, and nightclubs.

- **Population:** 7,434
- **Geographic Area:** 2.13
- **Population Density:** 3,338 people per square mile (Average)

EV Position: Fairfax is a highly environmentally conscious town, with ordinances preventing chain stores, takeout Styrofoam food packaging, and plastic bags. It supports electric vehicles.

EV CHARGER SITES

1. Parkade between Sir Francis Drake Blvd. and Broadway (Bounded by Bank Street and Pacheco Ave.)

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Larkspur

ABOUT LARKSPUR

Larkspur is a city that consists of two distinct areas: (1) downtown Larkspur, which sits west of Highway 101, bordering Madrone Canyon, and includes historic buildings, shops, restaurants, and a movie theater, and (2) Larkspur Landing, which is east of Highway 101 and is the site of the Larkspur Landing Ferry Terminal. The Larkspur Ferry shuttles more than 6,000 people a day to and from San Francisco, and is expected to be the end point of the Sonoma Marin Area Rail Transit (SMART) Train that will connect towns in northern Sonoma County to Larkspur for easy transit to San Francisco.

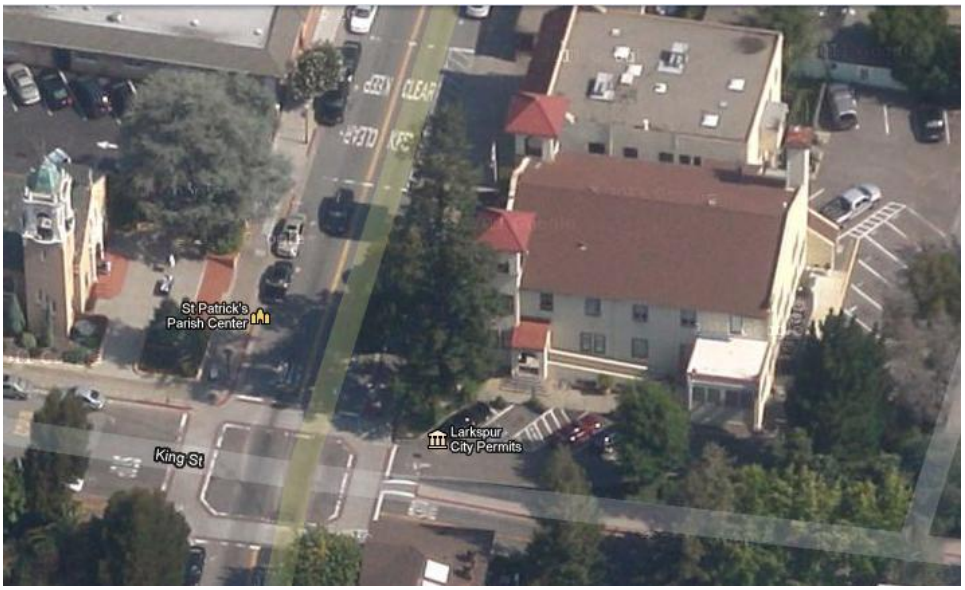
- **Population: 11,800**
- **Geographic Area: 3.13 square miles**
- **Population Density: 3,765 people per square mile (Average)**

EV Position: Wishes to present itself as environmentally conscious and, at the same time, recognizes the need to balance this goal with the constraints of dealing effectively with a limited budget and competing priorities.

EV CHARGER SITES

1. City Hall, 400 Magnolia

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



2. Magnolia & Ward Parking Lot

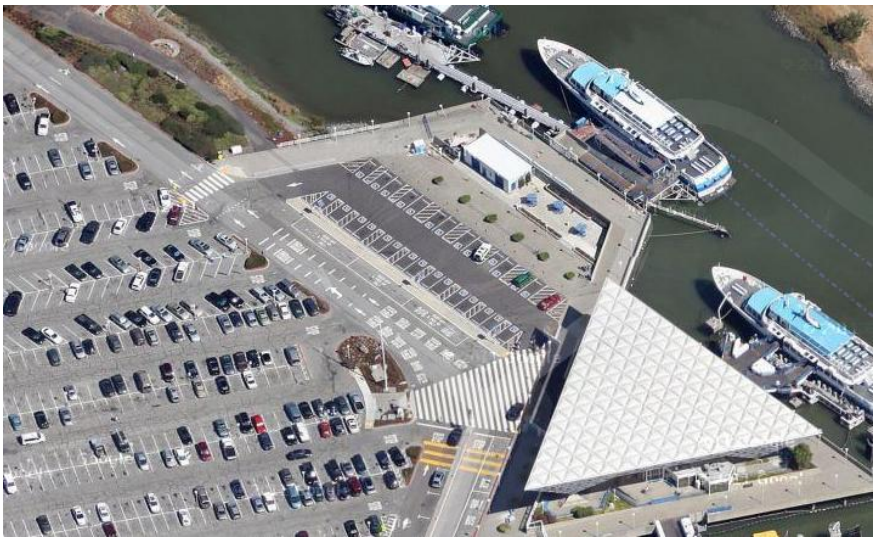
This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

3. Piper Park Parking Lot, 250 Doherty Drive (Adjacent to new Twin Cities Police Station)

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

4. Larkspur Landing Ferry Terminal
101 East Sir Francis Drake Blvd.

This site meets the top Primary Global Principles for the siting of EV charging stations including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



5. Larkspur Landing Shopping Center
Sir Francis Drake Blvd. and Larkspur Landing Circle
(Office: 2257 Larkspur Landing Circle)

This site meets the top Primary Global Principles for the siting of EV charging stations including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Note: Other adjacent private property locations were named as potential target sites for EV chargers, including the Century Larkspur Landing Cinemas, Marriott Courtyard Larkspur, and nearby office complexes.

Mill Valley

ABOUT MILL VALLEY

Mill Valley is located on the western and northern shores of Richardson Bay, and encompasses wooded canyons of second-growth redwoods, on the southern slopes of Mount Tamalpais. Its downtown is a hub of activity and is the town is surrounded by Hundreds of acres of federal, state and county park lands. This close proximity to nature has nurtured a strong sense of conservancy toward the natural environment, which has become one of the cultural cornerstones that defines the community.

- **Population: 13,404**
- **Geographic Area: 4.72 square miles**
- **Population Density: 2,842 people per square mile (Average)**

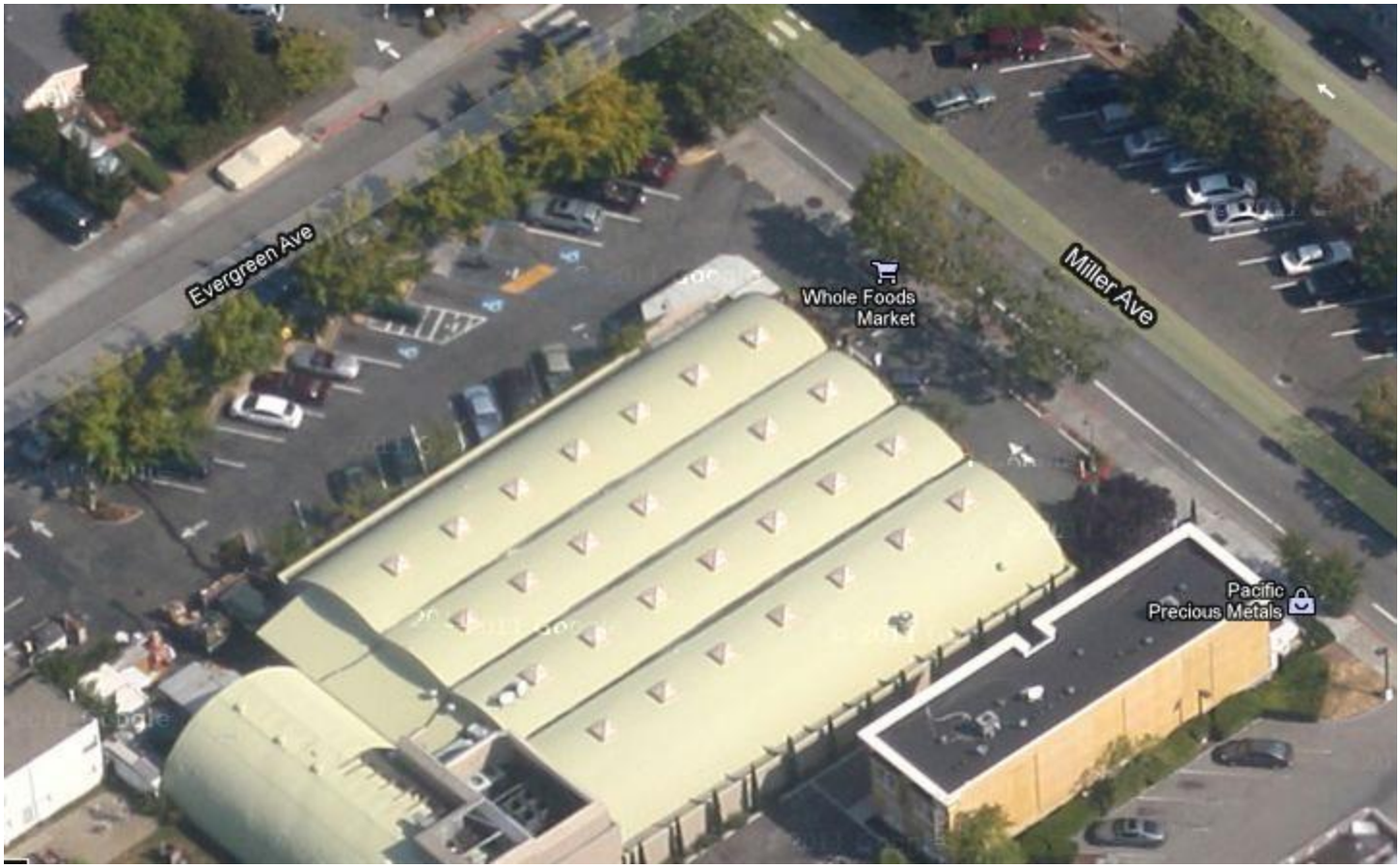
EV Position: Wishes to learn more re: anticipated demand for publicly-accessible EV charging stations, as the town conducts its planning. Mill Valley also encourages EV charger installation by private businesses such as Whole Foods.

EV CHARGER SITES

1. **Miller Avenue Parking Lot at Depot Bookstore and Cafe near 85/87 Throckmorton Avenue**
   This site meets the top Primary Global Principles for the siting of EV charging station, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

2. **Whole Foods**
414 Miller Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



3. Whole Foods Market
731 East Blithedale

This site meets the top Primary Global Principles for the siting of EV charging stations including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Novato

ABOUT NOVATO

Located in Northern Marin County, Novato is one of Marin's largest cities and home to a growing population of residents. It serves as a transportation hub between Sonoma and Marin Counties, attracting large corporations and thriving businesses. It is the site of the decommissioned Hamilton Air Force Base, which now houses diverse businesses, and it is also home to multiple shopping venues ranging from the Vintage Oaks shopping center to the vibrant historic Old Town in the central downtown area.

- **Population: 53,449**
- **Geographic Area: 27.7 square miles**
- **Population Density: 1,929 people per square mile (Low)**

EV Position: Is supportive of a "learn as we go" position regarding EVs. The city currently has 2 hybrid vehicles. When installing EV chargers, city is likely to implement different fee options at different locations, perhaps starting by offering free service and then moving to a fee structure. Desire to provide EV chargers for employees, 80 percent of whom commute from outside the city. Indicated that installation of additional EV chargers would depend on changes in new construction requirements, and possible construction of a new city building. Likely to begin with one charger and add up to three (serving six EVs) at each location. Likely to install near handicapped parking spots – up front and visible.

EV CHARGER SITES

1. **Council Chambers, 901 Sherman**

   This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

2. Margaret Todd Senior Center, 1560 Hill Road

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

3. Gymnastics/Teen Center, 950 Seventh Street

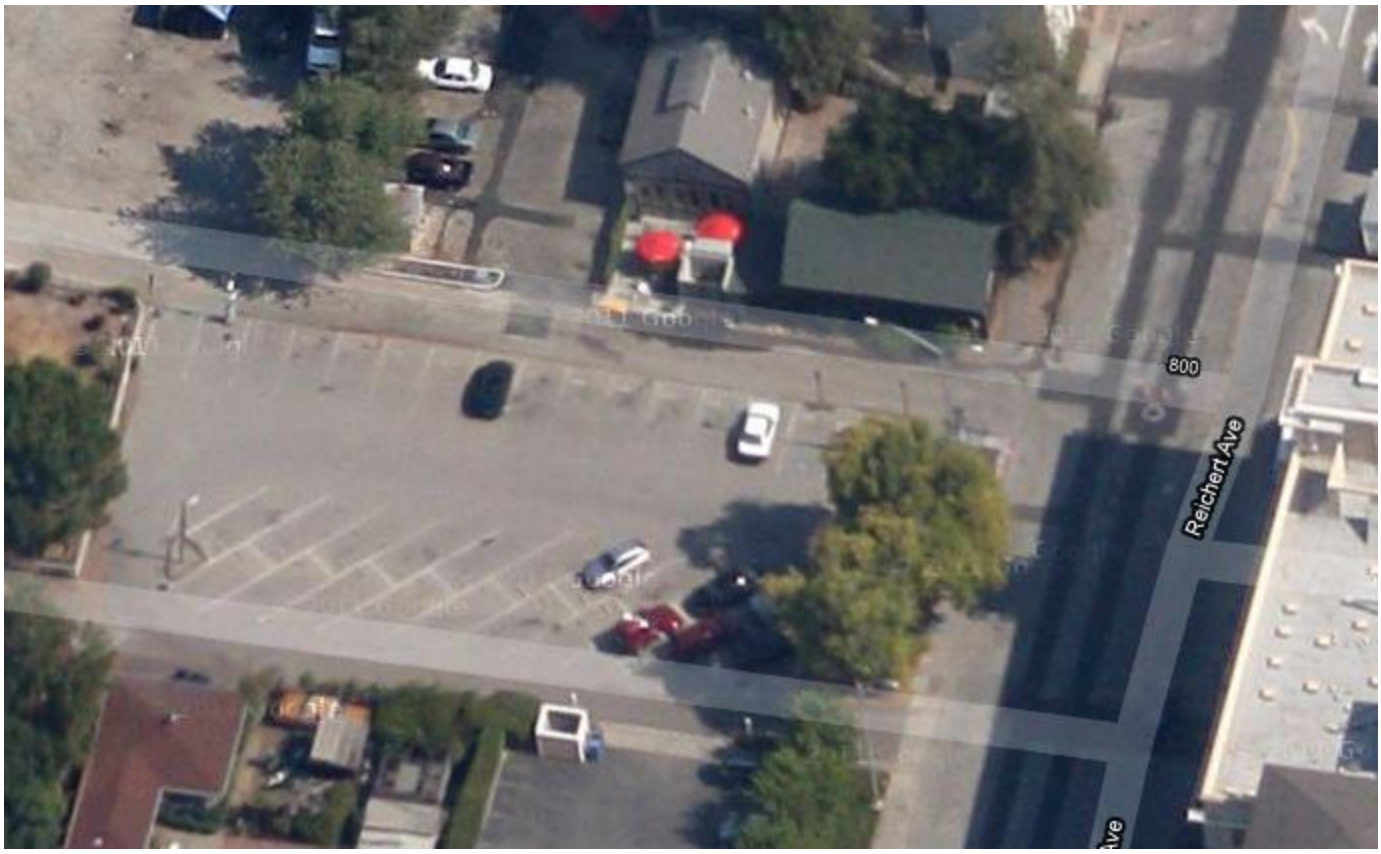
This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

4. Hamilton Community Center, 503 South Palm Drive

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

5. Zenk Parking Lot, 913 Reichart Avenue

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



6. Novato Corporation Yard
550 Davidson Street

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

7. Novato Library
1720 Novato Blvd.

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

8. Marin Community Foundation, 5 Hamilton Landing

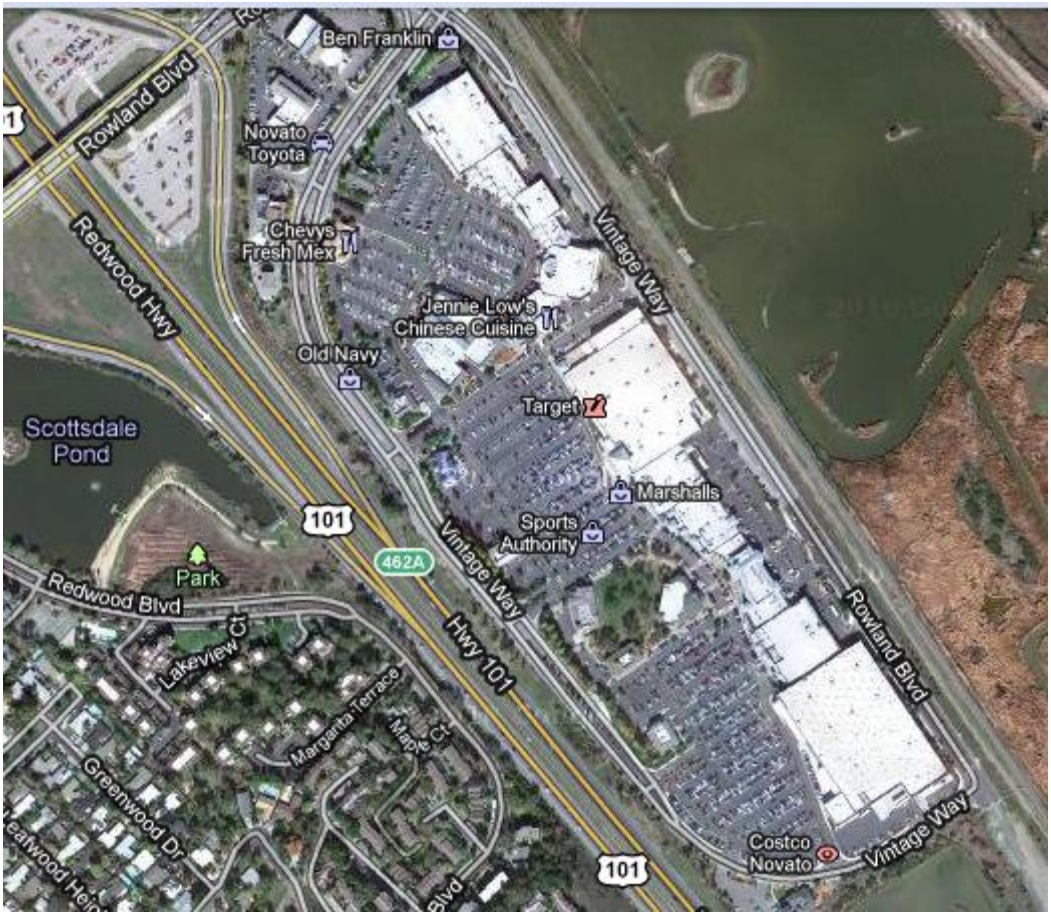
This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

9. College of Marin – Indian Valley Campus
1800 Ignacio Blvd.

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

10. Vintage Oaks Shopping Center
208 Vintage Way (Between Rowland Blvd. & Vintage Way)

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



Other Potential Future Sites for Level 2 Chargers:

- **Grant Avenue Parking Lot**
- **Stafford Lake**
- **Two Park & Ride Locations**
- **Business Complexes such as Fireman's Find, Buck Institute for Aging, BioMarin**

Possible Sites for Level 3 Fast Chargers include:

- **Corporation Yard**
- **New City Building in 4 to 5 years**
- **Teen Center**

Ross

About Ross

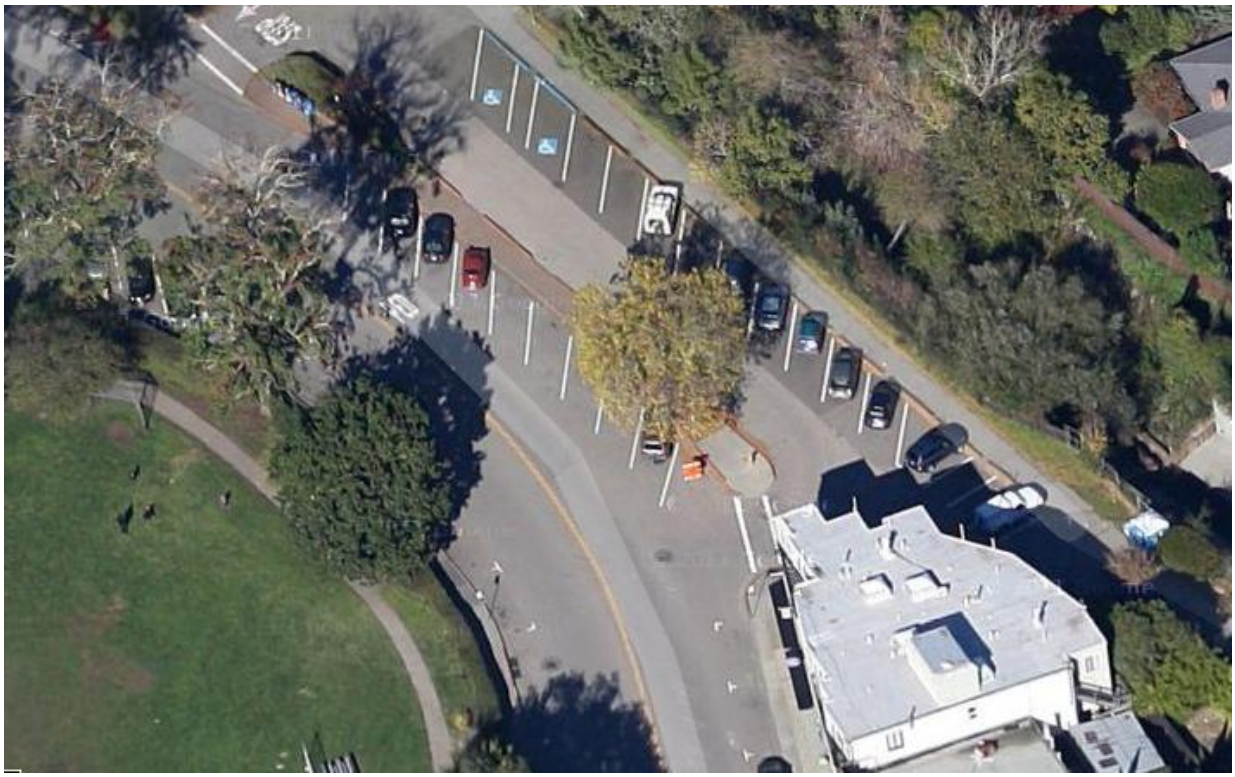
Ross is a small, largely residential community in Marin County.. The town has a small-town feel with an historic center square and downtown, surrounded by open and tree-covered hills, landscaped streets, and low density development that contribute to its charm. The town includes a few apartments downtown and single-family homes occupied by families and older, retired residents.

- **Population: 2,288**
- **Geographic Area: 1.59 square miles**
- **Population Density: 1,436 people per square mile (Low)**

EV Position: The town has an existing EV charger next to the fire station that they would like to retrofit to current standards. The number of chargers installed will be closely tied to demand.

EV Charger Sites

1. Post Office North Parking Lot
1 Ross Common



2. Marin Art & Garden Center
30 Sir Francis Drake Blvd.

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

San Anselmo

ABOUT SAN ANSELMO

San Anselmo is a vibrant community nestled in the center of the Ross Valley. It encompasses an historic downtown area with many restaurants, antique stores, and other small specialty retail shops. Residential areas include apartment complexes and single-family homes, and recreational opportunities are plentiful in the numerous parks and surrounding open space.

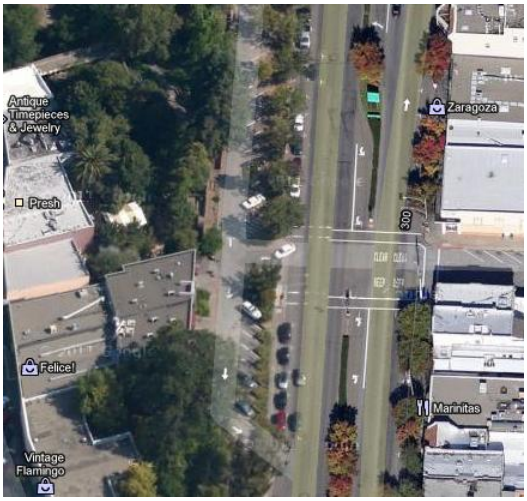
- **Population: 12,058**
- **Geographic Area: 2.75 square miles**
- **Population Density: 4,390 people per square mile (Average)**

EV Position: San Anselmo has a strong commitment to being environmentally conscious. The community of San Anselmo has numerous hybrid-electric vehicles, and approximately six all-electric vehicles in use today. Anticipates that Marin County will see several hundred EVs in the near future, provided the infrastructure is in place. Town anticipates EV charger use by local residents, visitors, employees, and town fleet vehicles. Town projects it could potentially see installation of as many as 16 to 25 EV charging points in the next five years if demand and funding predicate. This would depend on available funding and other related circumstances. As with other jurisdictions, the sites below represent a "wish list" of locations if money or circumstances were not factors.

EV CHARGER SITES

1. Creek Parking Lot, 249 Sir Francis Drake Blvd.

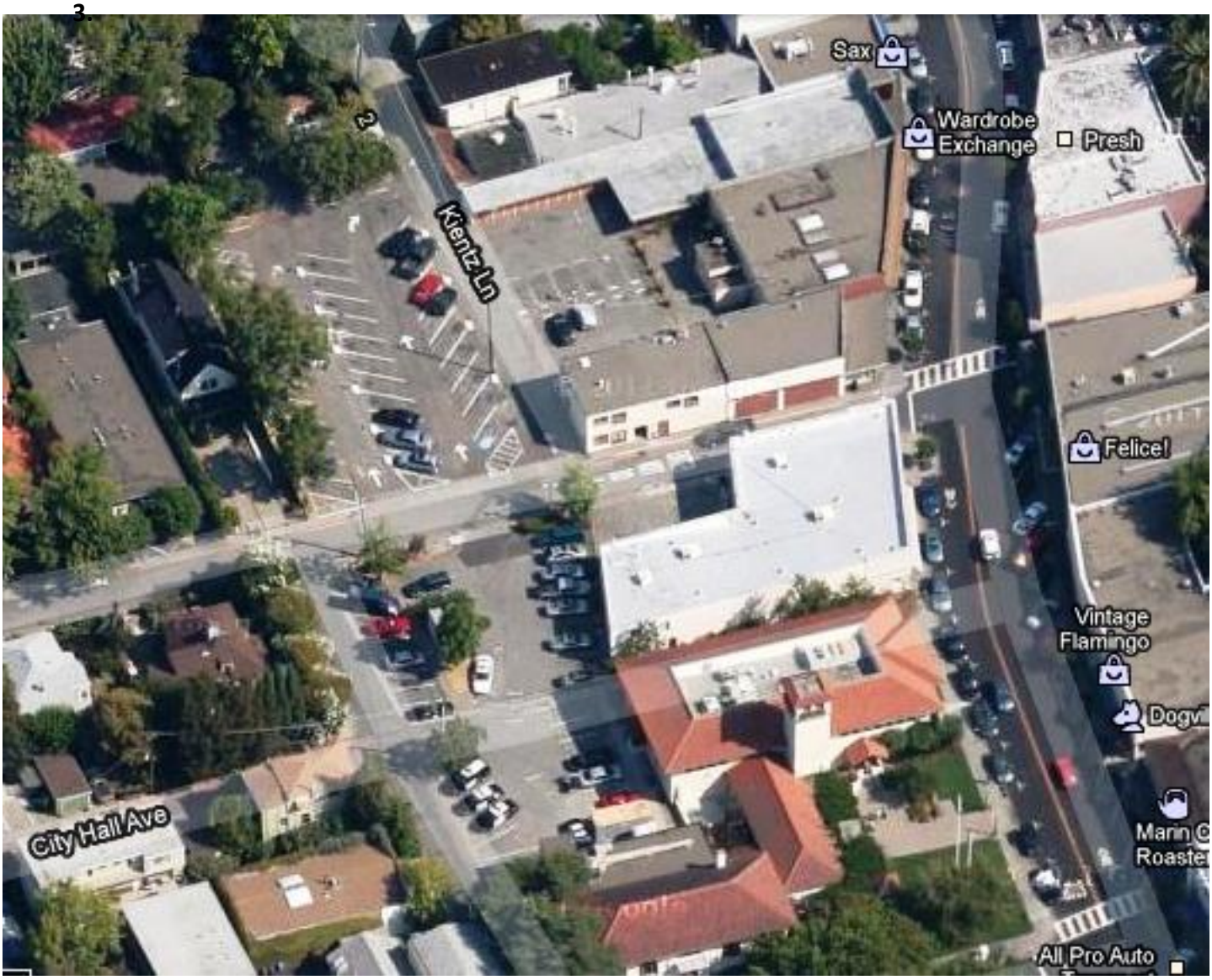
This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



2. Magnolia Avenue Parking Lot, 20 Magnolia Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

3.

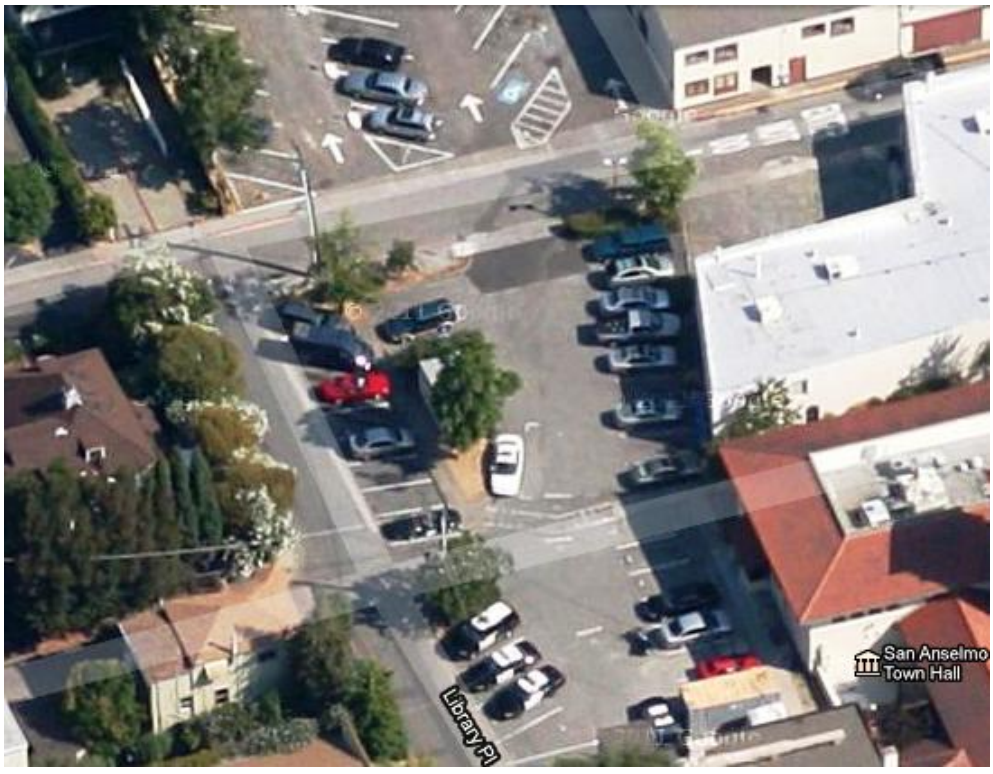


3. Pine Street Parking Lot, 353 San Anselmo Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

4. Town Hall Parking Lot, 525 San Anselmo Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



5. Downtown Fire Station, 777 San Anselmo Avenue

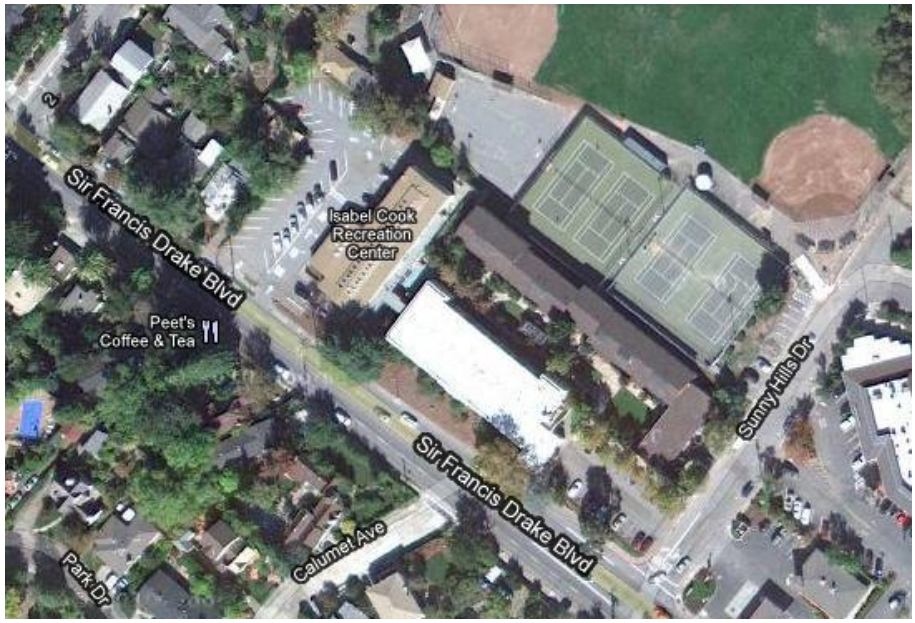
This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

6. Memorial Park Parking Lot, Veteran's Place

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

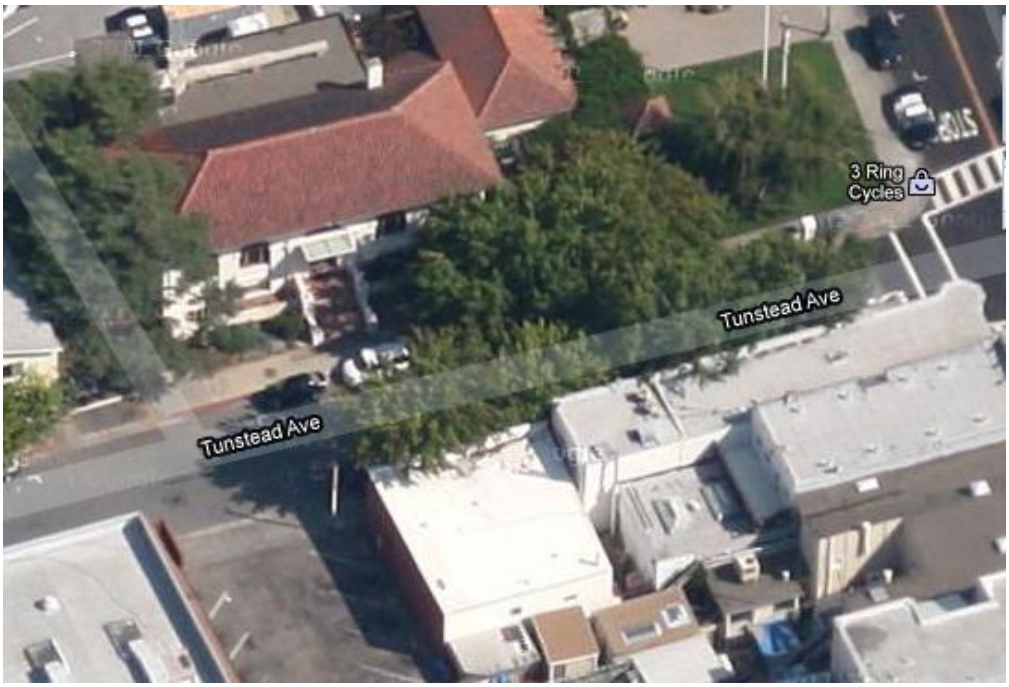
7. San Anselmo Recreation Department, 1000 Sir Francis Drake Blvd.

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



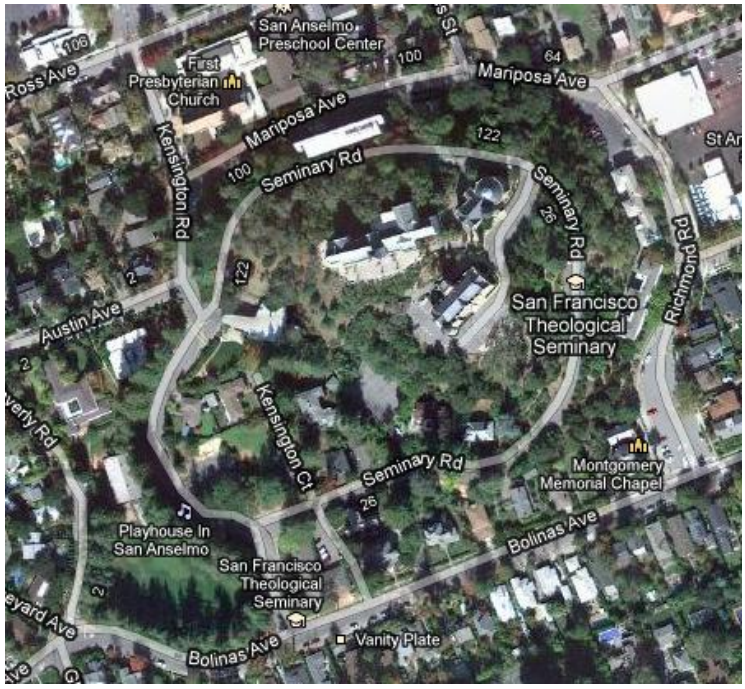
8. San Anselmo Library, 100 Tunstead Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



9. San Francisco Theological Seminary, 105 Seminary Road.

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



San Rafael

ABOUT SAN RAFAEL

San Rafael is the most central city and the county seat. With a central downtown transportation hub, it is a popular stop for commuters and a base for day trips to popular scenic locations such as the Napa/Sonoma wine country, Point Reyes National Seashore, and Muir Woods. Its many attractions include its namesake Mission San Rafael Archangel, the landmark Frank Lloyd Wright Civic Center, Victorian architecture, the popular China Camp, and a lively downtown district. It is also home to several schools including Dominican University, and to business headquarters such as Autodesk and WestAmerica Bank.

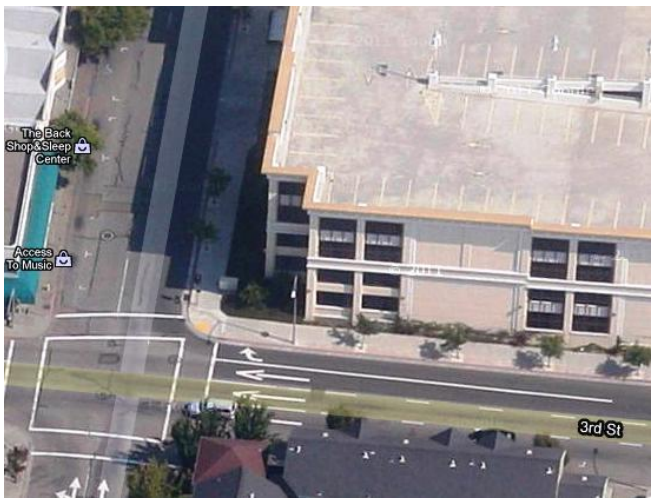
- **Population: 55, 901**
- **Geographic Area: 16.6 square miles**
- **Population Density: 3,369 people per square mile (Average)**

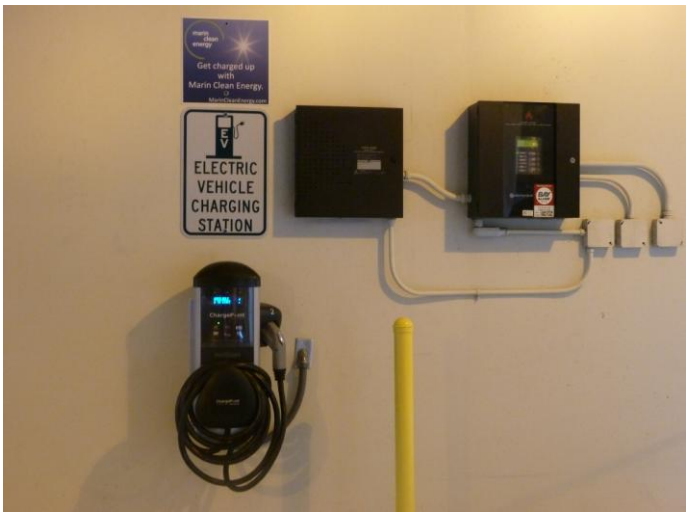
EV Plans: As the most central jurisdiction and county seat of Marin County, San Rafael is committed to being environmentally conscious while balancing that commitment with support for its downtown retail stores and community interests. During the next five years, it anticipates installation of between six to 15 EV charging points, if warranted by demand.

EV CHARGER SITES

1. C Street Parking Garage, 900 C Street

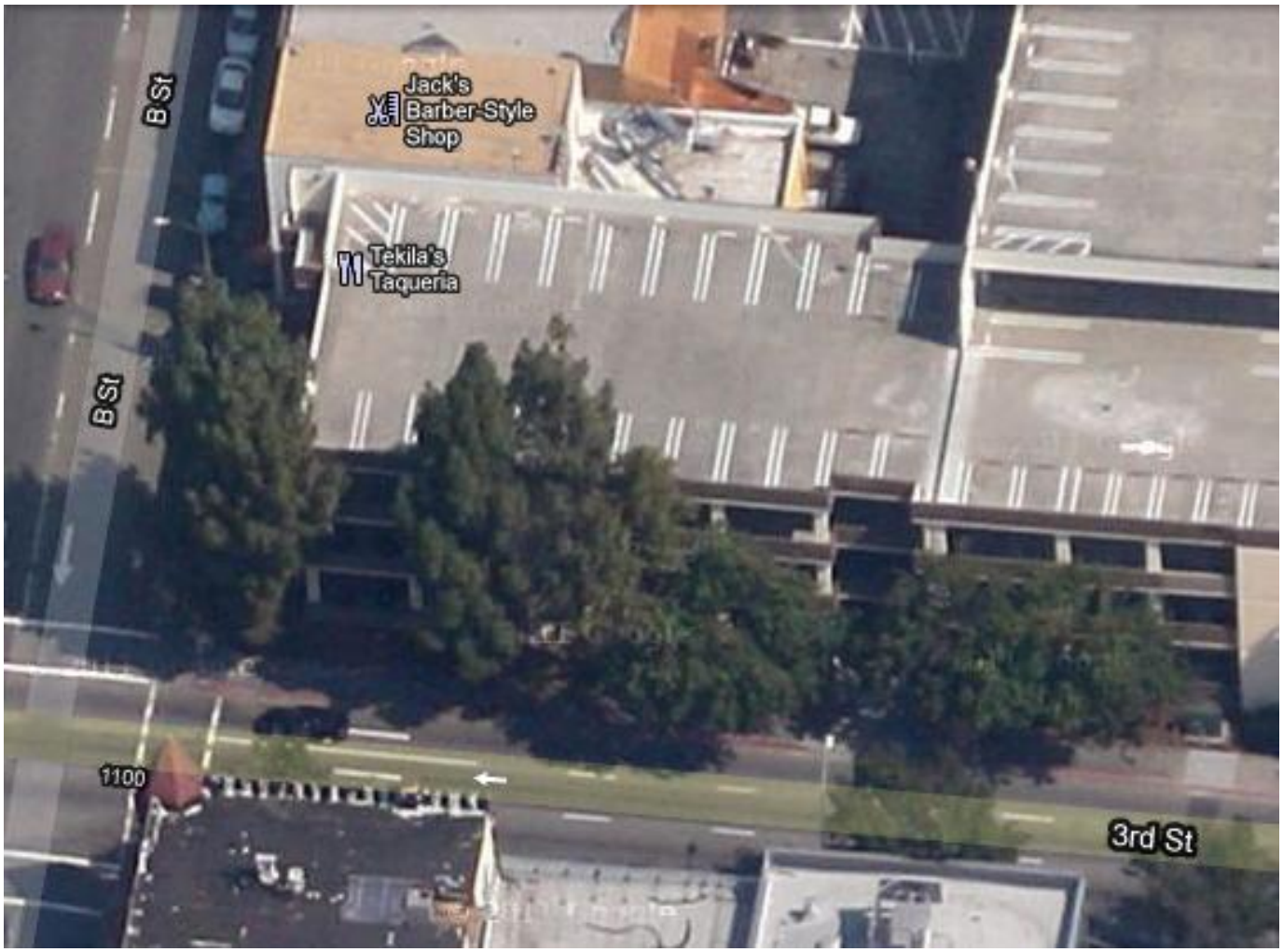
This site meets the majority of top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, security, opportunity for signage, and opportunity for equipment protection. Location of the EV chargers within the garage considered Specific Siting Principles, including electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.





2. Third Street Parking Garage, 1116 Third Street

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

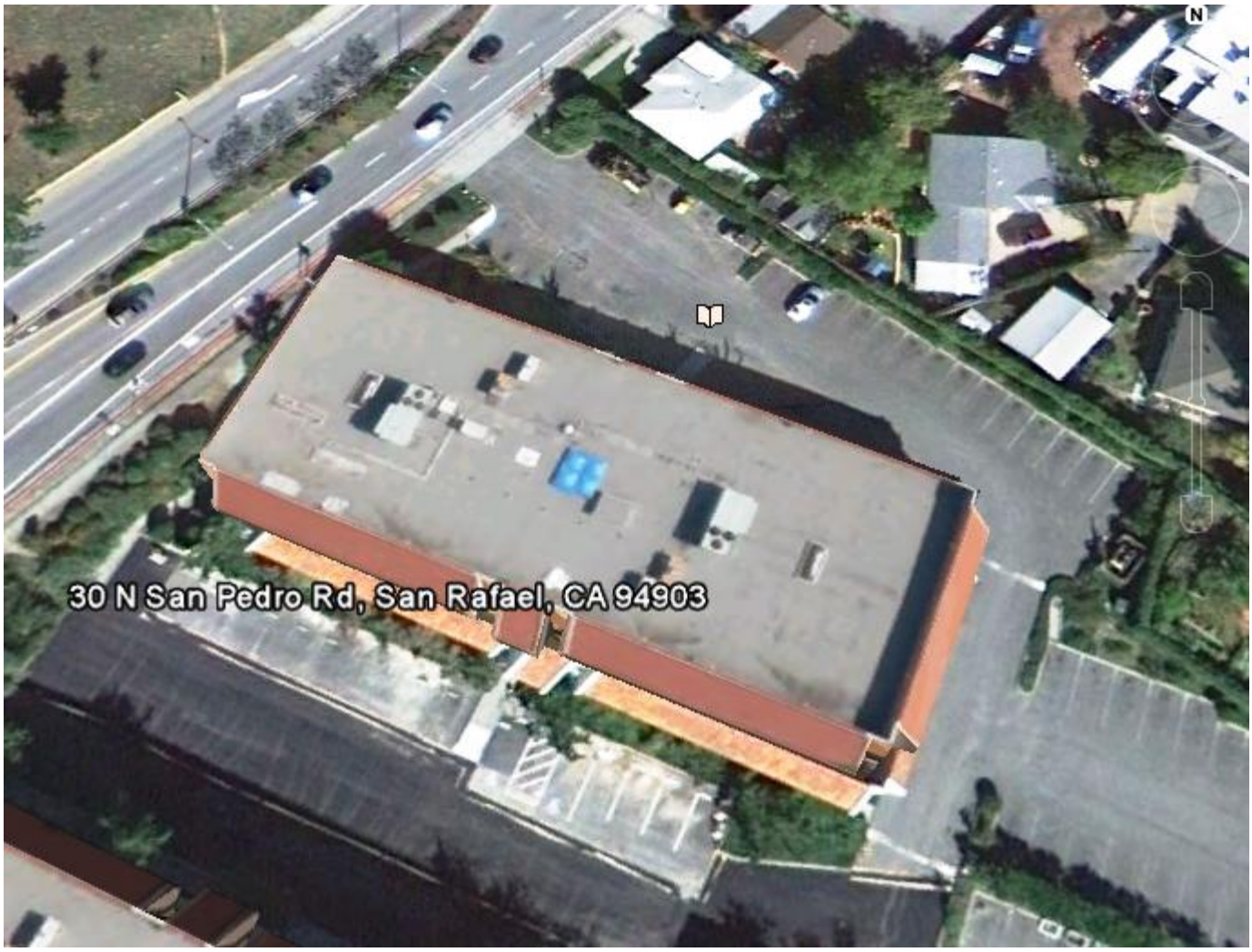


3. Office Building, 555 Northgate

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

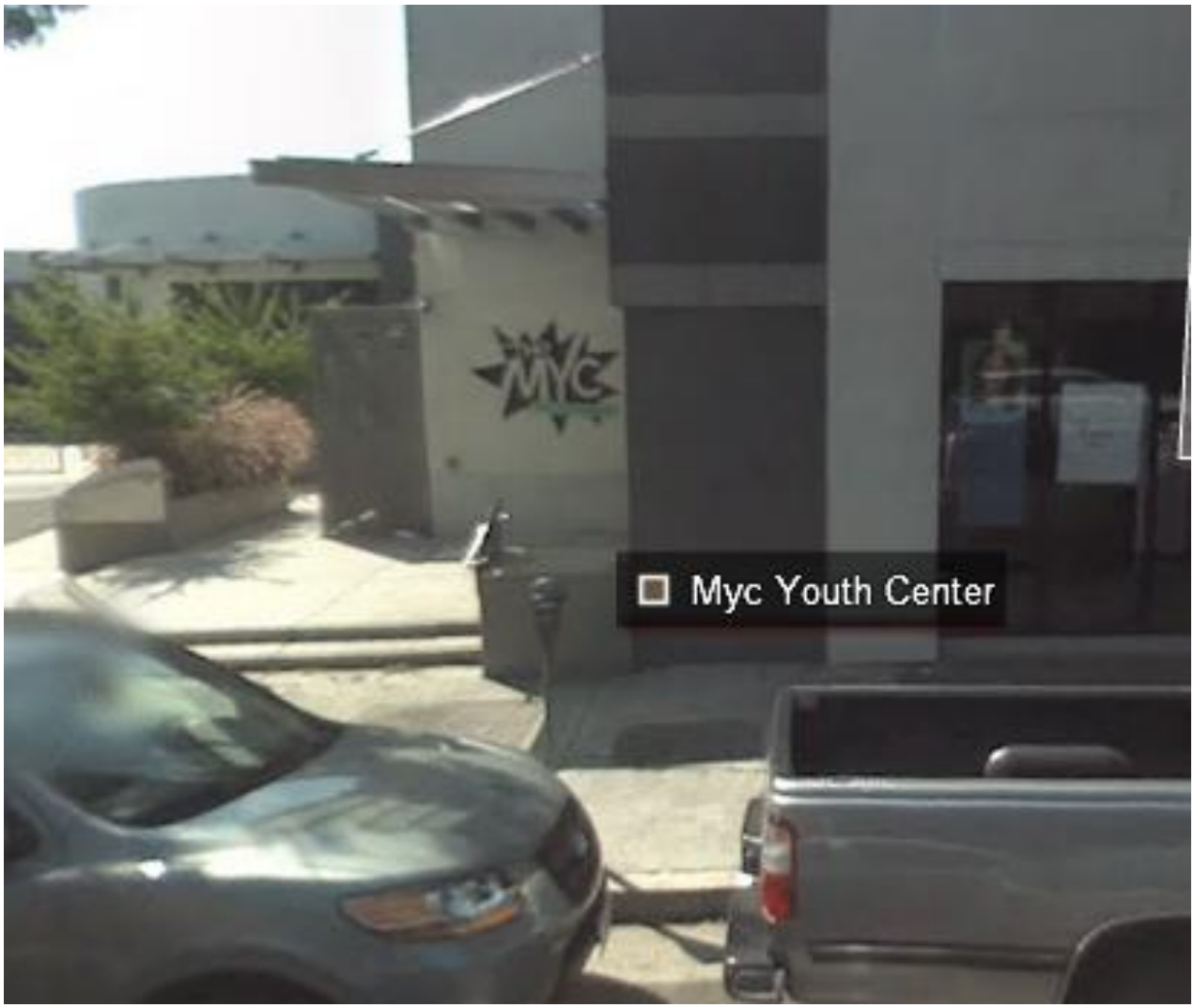
4. Justice Center, 30 North San Pedro

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



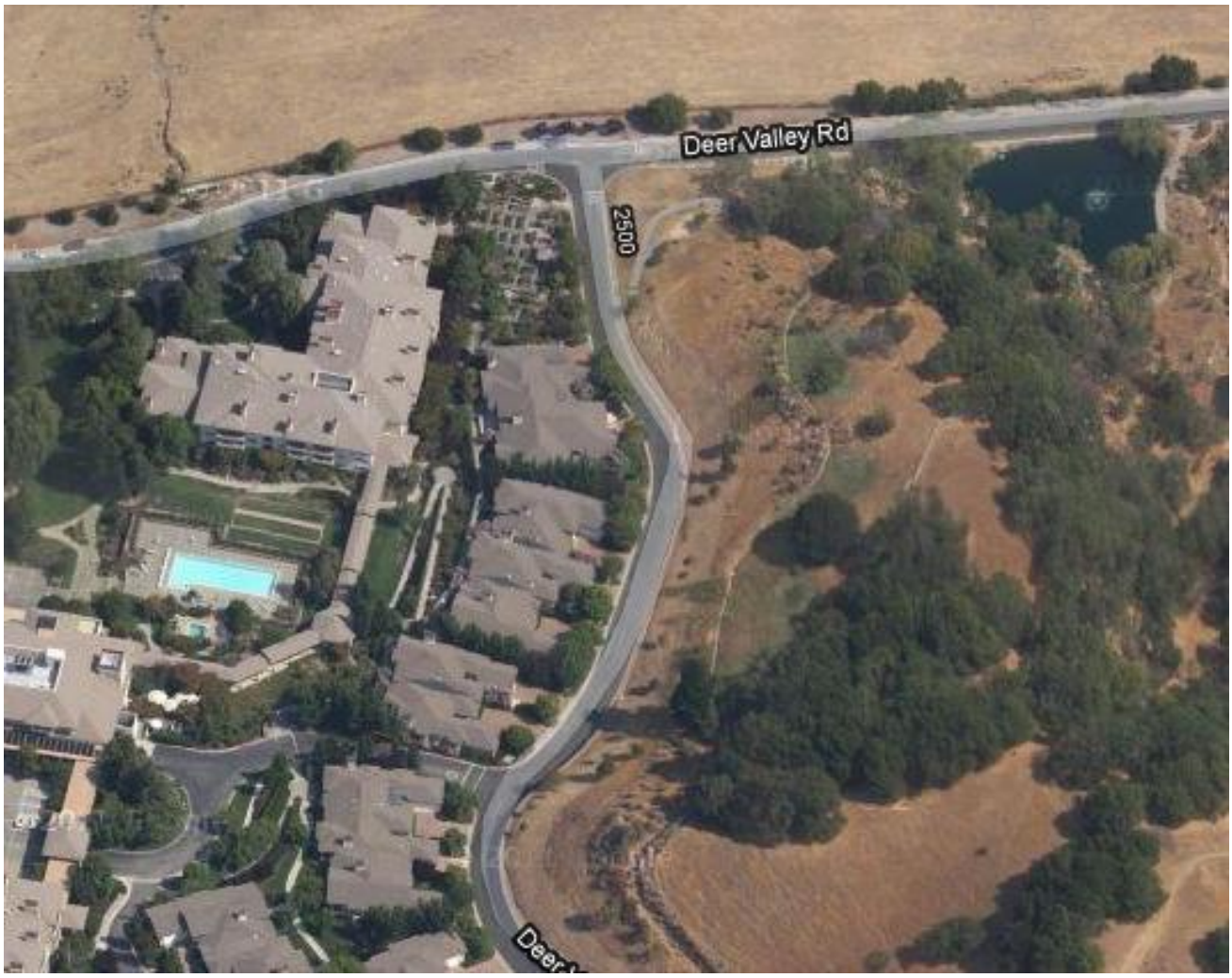
5. Marin Youth Center, 1115 3rd Street

This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



6. Deer Valley, 2500 Deer Valley Road

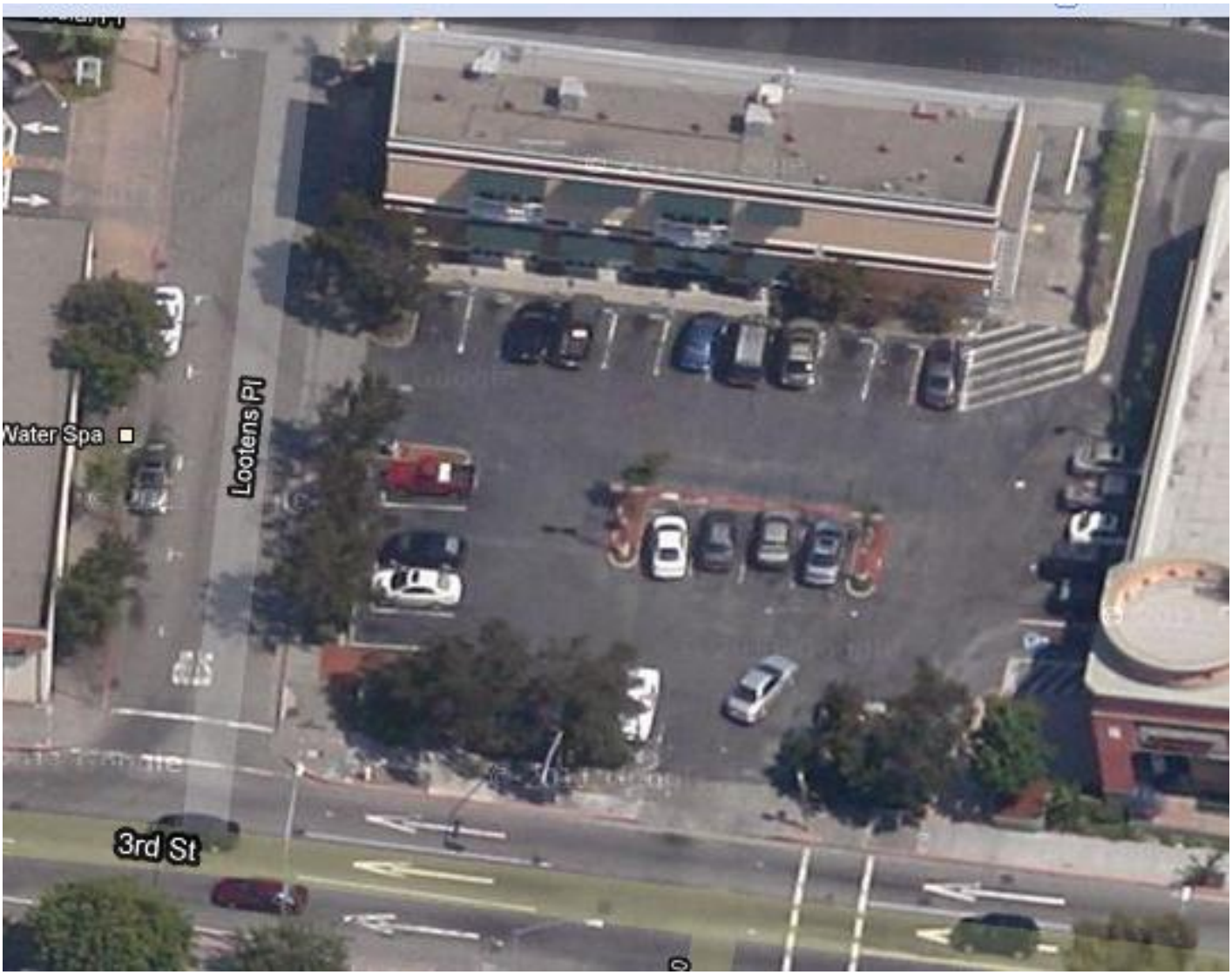
This site is one of the approved locations targeted for EV charger installation in Year One. This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



7. City Hall, 1400 Fifth Avenue

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

8. **Long-Term Parking Lot – Upper Third Street and Lootens Place**
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



9. **Long-Tern Parking Lot – 5th Avenue and C Street**

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

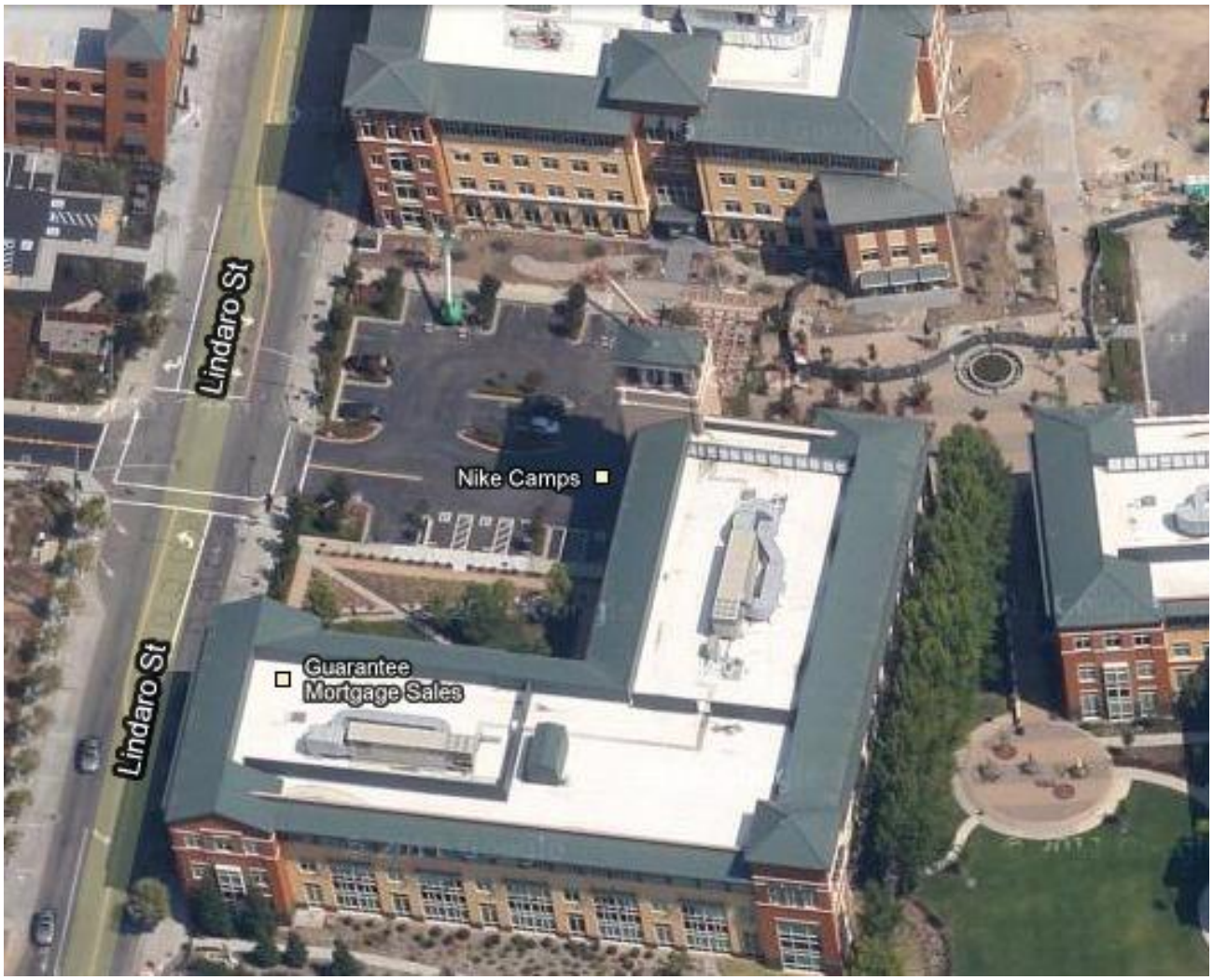
10. Long-Term Parking Lot – 5th Avenue and Lootens Place

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

11. San Rafael Corporate Center

750 Lindaro Street, San Rafael

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



12. Northgate Mall

5800 Northgate Mall, San Rafael

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

13. Montecito Shopping Center

323 Third Street, San Rafael

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Sausalito

ABOUT SAUSALITO

A waterfront community just across the Bay from San Francisco, Sausalito is a picturesque residential community, artistic enclave, houseboat haven, and popular tourist destination. It offers regular ferry service to and from San Francisco via the Golden Gate Ferry, and it is a popular destination for bicyclists. Its thriving downtown area is surrounded by hillside homes with views of the harbor, and the town also encompasses several apartment, condominium, and office complexes.

- **Population:** 7,199
- **Geographic Area:** 1.90 square miles
- **Population Density:** 3,784 people per square mile (Average)

EV Plans: The city has one Global Electric Motorcar (GEM) on order for parking enforcement. In the future, it hopes to have EVs for light trucks for building and parks maintenance (five vehicles) and EVs for parking enforcement (five vehicles). The town also anticipates providing private EVs for local use as well. The city currently anticipates installing six to 15 EV chargers during the next five years, and plans to provide free electricity to encourage residents to use.

EV CHARGER SITES

1. **City Hall, 420 Litho Street**

   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

2. Municipal Lot #1: El Portal/Anchor Way

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

3. Municipal Lot #2: Humboldt Avenue at Bay

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

4. Municipal Lot #3: Humboldt Avenue (between Bay & Johnson)

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

5. Police Station, 29 Caledonia

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

NOTE: Sausalito is also interested in "temporary EV chargers" for use annually at the Sausalito Art & Wine Festival.

Tiburon

About Tiburon

Tiburon is situated on a peninsula surrounded on three sides by water, giving many of its apartment and condominium complexes and hillside homes views of San Francisco, the East Bay, Sausalito, and the Golden Gate Bridge. It is the nearest mainland point to Angel Island and offers regular ferry service to Angel Island and San Francisco. Downtown Tiburon features a classic movie theater, small boutiques, and restaurants, catering both to local residents and tourists. Most of the restaurants are located on the town's Main Street, and provide views across the Bay to the Golden Gate Bridge and San Francisco.

- **Population:** 8,730
- **Geographic Area:** 4.53 square miles
- **Population Density:** 1,929 people per square mile

EV Position: Owns two hybrid vehicles, one in the Building Department and one in the Police Department. The sites listed below are likely sites for the installation of publicly-accessible EV chargers, although the town does not yet have intentions of installing the units within the foreseeable future. The town wants to learn from other communities that are currently installing publicly-accessible EV chargers, as it develops its own plan for EV charger installation.

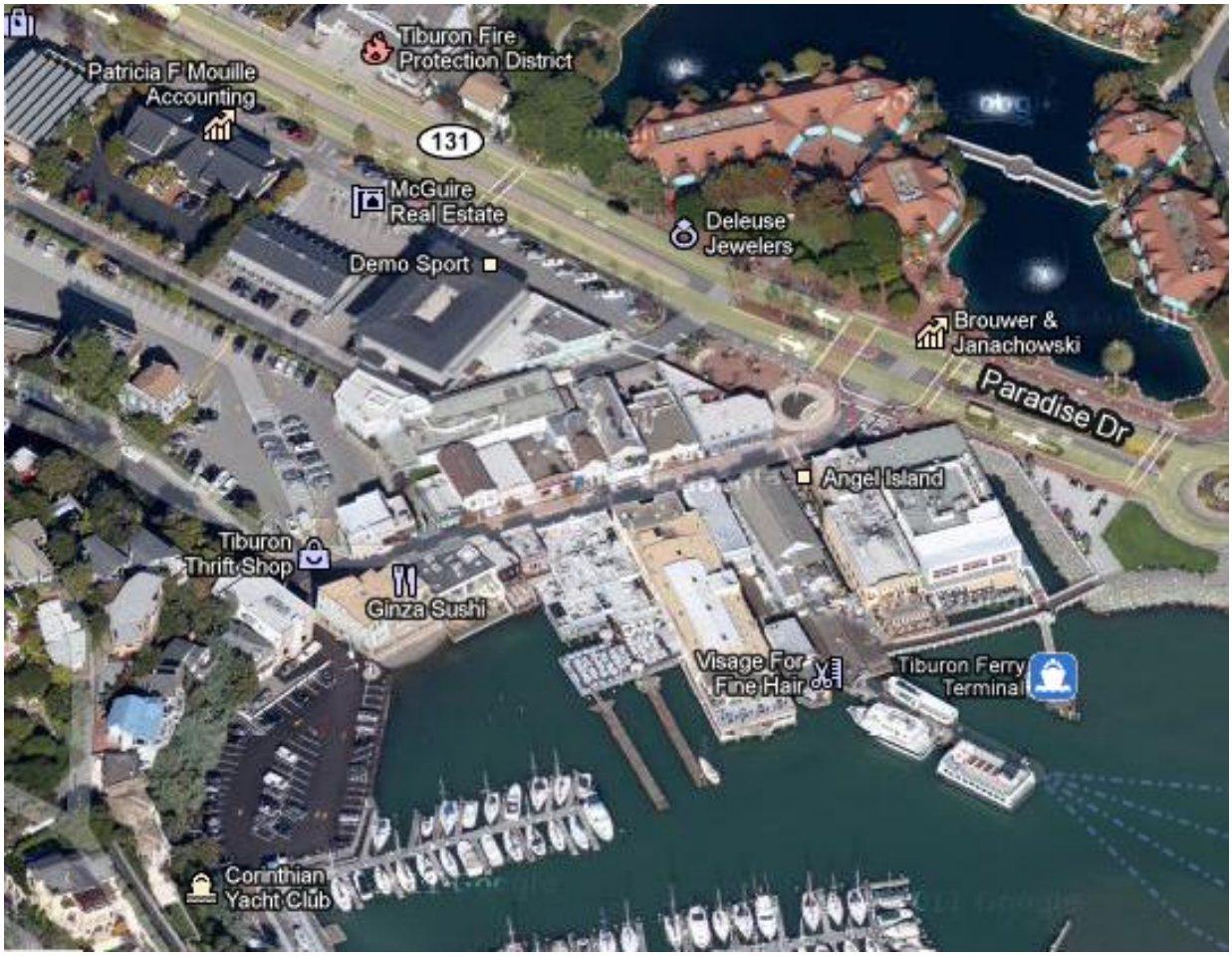
EV Charger Sites

1. **Blackie's Pasture**
   Tiburon Blvd. and Trestle Glen Road
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

2. **Town Hall**
   1505 Tiburon Blvd.
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. In addition, it is anticipated that the EV charger(s) located here may be available for combined use by fleet vehicles and the public. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

3. Downtown Main Street

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



4. Multi-Modal Parking Lot, Tiburon Blvd. & Lyford Drive

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Note: This location will be a multi-modal parking lot that is not yet constructed, but still in the design phase. It will be located on the southeast portion of the Lyford Drive and Tiburon Blvd. intersection, which is shown above.

County of Marin

ABOUT MARIN COUNTY

One of the 27 original counties of California, the County of Marin is located in the north San Francisco Bay Area, across the Golden Gate Bridge from San Francisco. It is well known for its natural beauty, liberal politics, and affluence. The county's natural sites include Muir Woods redwood forest, the Marin Headlands, Stinson Beach, Point Reyes National Seashore, and Mount Tamalpais.

Geographically, the county forms a large southward-facing peninsula, with the Pacific Ocean to the west, San Pablo Bay and San Francisco Bay to the East, and – across the Golden Gate Bridge – the city of San Francisco to the south. Marin County's northern border is Sonoma County.

Most of the county's population resides on the eastern side, straddling the Highway 101 corridor. The interior contains large areas of agricultural and open space, and West Marin includes small unincorporated communities along State Route 1 which runs adjacent to the California coast. San Quentin Prison is located in the county, as well as several high-tech companies, including corporate headquarters for Autodesk. The Marin County Civic Center was designed by Frank Lloyd Wright and draws thousands of visitors a year to tours of its arch and atrium design.

In addition to being a popular destination in its own right, Marin County is the gateway to the Napa/Sonoma wine country and all points north. Public transportation includes bus and ferry service provided by multiple transit agencies, and the county will be the terminus for the greatly anticipated Sonoma Marin Area Rail Transport (SMART) Train. Marin County residents are strong proponents of environmental awareness and action, as well as established leaders in the design, development, and implementation of green technologies.

- **County Population:** 250,750 (94% urban; 6% rural)
- **Geographic Area:** 520 square miles
- **Population Density:** 482 people per square mile (High)

EV Position: In the past, tested a couple of Ford Ranger EVs about 15 years ago but, due to infrastructure complications and limited charging facilities, decided not to purchase. Currently have several hybrid vehicles in County fleet, but no plug-in EVs. Currently planning to install three charging stations at the Marin Health & Wellness Campus, Civic Center, and Marin Center. Planning to purchase EVs for the County fleet. In the future, definitely would like to install charging infrastructure on County facilities.

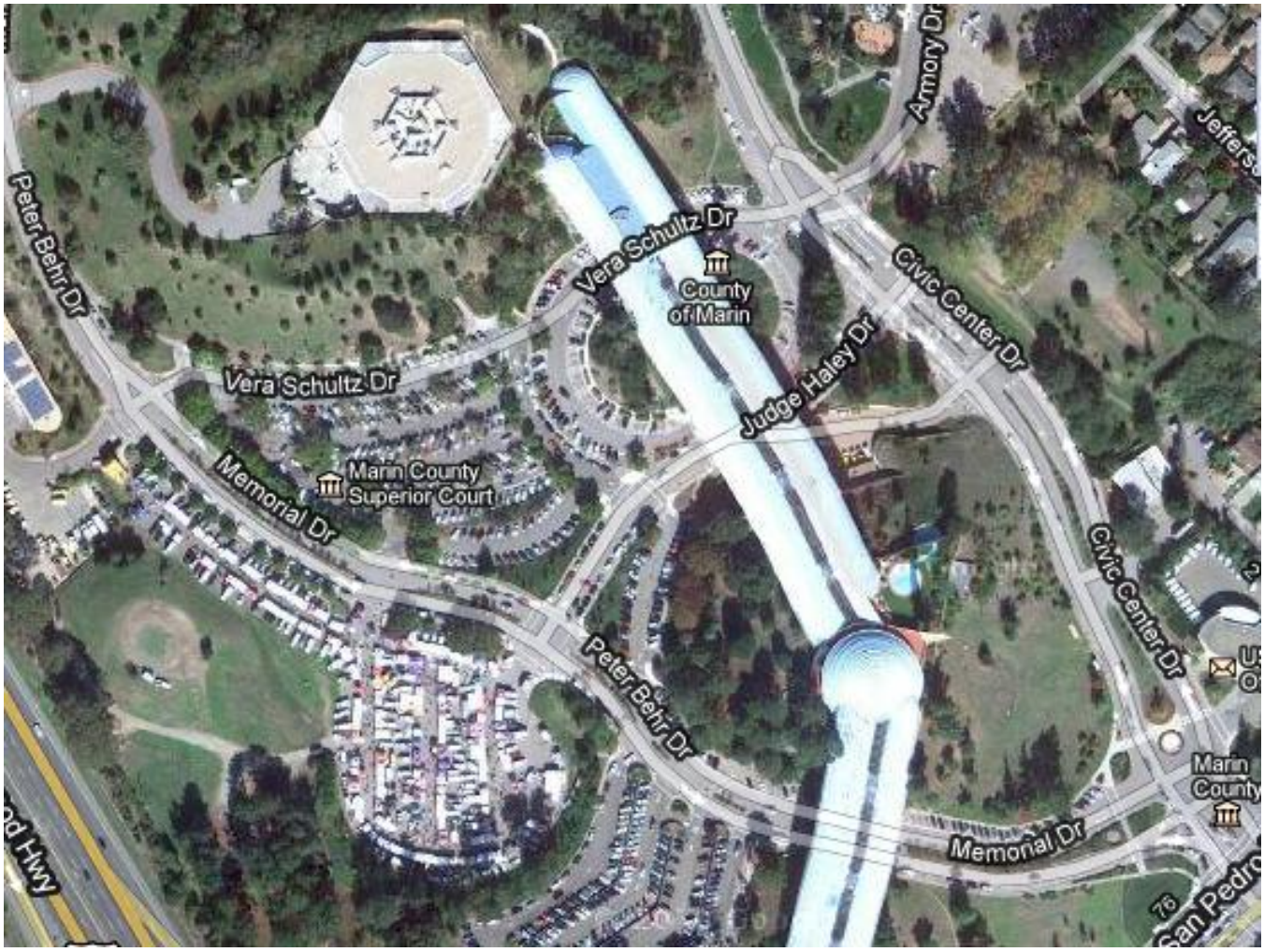
EV CHARGER SITES

1. **Marin Health & Wellness Campus**
   3240 Kerner Blvd., San Rafael
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

2. Civic Center

3501 Civic Center Drive

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



3. Marin Center

10 Avenue of the Flags, San Rafael

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

4. Marin County Health & Human Services
120 N. Redwood, San Rafael

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

5. Marin County Health & Human Services
10 North San Pedro Road

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

6. Marin County Health & Human Services
20 North San Pedro Road

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Other additional future sites would include County library branch offices and other County facilities to be determined based on demand.

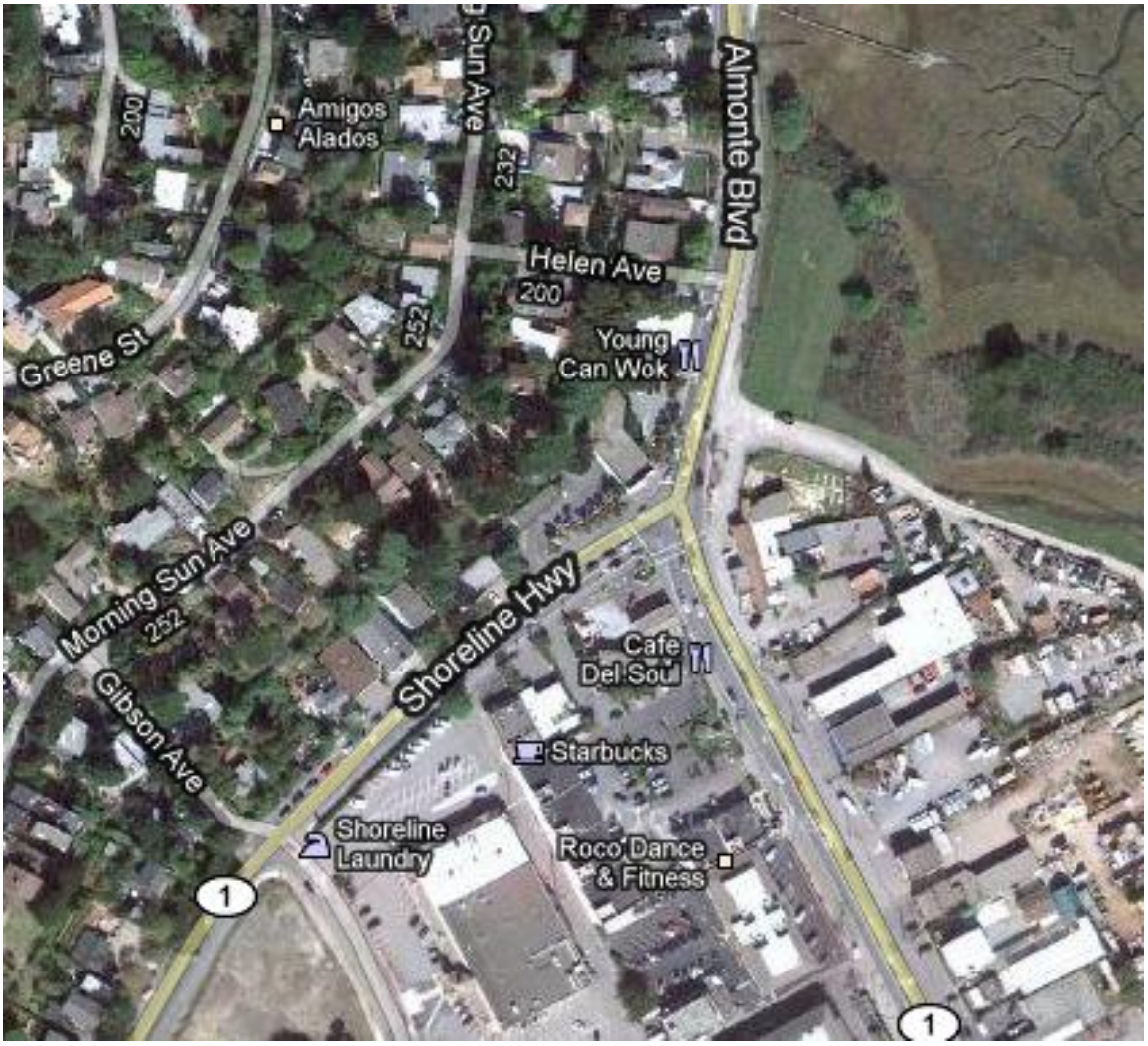
7. Fairfax Library

2097 Sir Francis Drake Blvd., Fairfax

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

8. TAM Junction

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.



Unincorporated Communities in Marin County

According to Plan Bay Area, one of the San Francisco Bay Area's most comprehensive planning efforts, unincorporated areas represent some of the highest priority "Transit Neighborhoods" in Marin County. **Plan Bay Area** is a joint effort led by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in partnership with the Bay Area's other two regional government agencies, the Bay Area Air Quality Management District (BAAQMD), and the Bay Conservation and Development Commission (BCDC). All four agencies are collaborating at an unprecedented level to produce a more integrated land-use/transportation plan. Equal partners are the nine counties and 101 cities and towns that have land-use authority in their respective jurisdictions, and transportation partners that help plan and manage the regional transportation network.

Maps included in Plan Bay Area show unincorporated areas to be Priority Development Areas and, thus, they are included here as part of Marin County, but identified separately to highlight their inclusion in the Plan Bay Area.

EV Position: The actual sites listed below were suggested in educational outreach sessions with TAM by representatives from Marin County and other neighboring jurisdictions as high priority private properties that could be prime locations for EV chargers. No contact has yet been made with private property owners to confirm interest in installing EV chargers.

PLAN Bay Area: Map of Marin County Priority Development Areas

Greenbrae

ABOUT GREENBRAE

Greenbrae is made up of mostly unincorporated neighborhoods that are under the jurisdiction of the county. Greenbrae includes several condominium and townhouse properties, as well as homes built on hillsides that offer lovely views. Greenbrae is home to Marin General Community Hospital and offers an excellent commute as it has easy access to Highway 101.

- **Population:** 12,088
- **Geographic Area:** 4.46 square miles
- **Population Density:** 2,708 residents per square mile (Average)

EV CHARGER SITES

1. Bon Air Shopping Center
(Sir Francis Drake Blvd. and Elisio Drive)

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Kentfield

ABOUT KENTFIELD

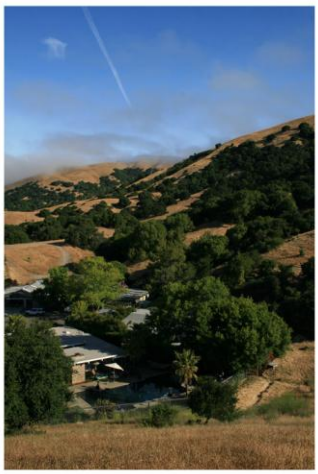
Kentfield is an unincorporated part of Marin County between Larkspur and Ross. Kentfield is home to the main campus of the College of Marin, which attracts students and adult learners from throughout the county.

- **Population:** 6,312 in July 2007
- **Geographic Area:** 3.0 square miles
- **Population Density:** 2,106 people per square mile (Low)

EV CHARGER SITES

1. **College of Marin – Kentfield Campus**
   835 College Avenue
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

Lucas Valley/Marinwood



About Marin County

Lucas Valley and Marinwood are unincorporated areas of Marin County that offer an ideal location for families. They offer low density population and include significant areas of open space, with opportunities for hiking, biking, and mountain biking. They are high-priority Transit Neighborhoods that are easily accessible from the Highway 101Corridor and are designated as a Priority Development Area in Plan Bay Area.

- **Population:** 7,177 in July 2007
- **Geographic Area:** 5.60 square miles
- **Population Density:** 1,281 people per square mile (Low)

EV Charger Sites

1. **McGinnis Park Golf Center**
   350 Smith Ranch Road
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

2. Regency Cinemas

280 Smith Ranch Road, San Rafael

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

MARIN CITY

ABOUT MARIN CITY

Marin City is an unincorporated city located on the west side of Highway 101 adjacent to Sausalito. It is a high-priority Transit Neighborhood that is easily accessible from the Highway 101Corridor and is designated as a Priority Development Area in Plan Bay Area. Initially developed in the 1940s to provide housing for wartime shipyard workers and other immigrants, it is now one of Marin County's growing and less expensive communities.

- **Population:** 2,697
- **Geographic Area:** 1.066 square miles
- **Population Density:** 2,530 people per square mile

EV CHARGER SITES

1. **Gateway Shopping Center**
   100 Donahue Street
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

SAN QUENTIN

ABOUT SAN QUENTIN

San Quentin is a small unincorporated community adjacent to San Quentin State Prison in Marin County. Located just east of the prison, it is also known as Point San Quentin or San Quentin Village. The town was originally housing for the prison's employees and their families. It is a high-priority Transit Neighborhood that is easily accessible from the Highway 101Corridor and is designated as a Priority Development Area in Plan Bay Area.

- Village Population: 100 residents
- Point San Quentin Geographic Area: 432 acres
- Prison Complex Geographic Area: 275 acres
- Prison Staff: 1,718

EV CHARGER SITES

1. San Quentin State Prison

1 Main Street, San Quentin

This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

STRAWBERRY

ABOUT STRAWBERRY

Strawberry is an unincorporated district of Mill Valley that is separated from Mill Valley by U.S. Route 101. Ring Mountain dominates the high ground east of Strawberry on the Tiburon Peninsula. Strawberry is the home of the Golden Gate Baptist Theological Seminary and the site of a major transfer bus stop for the Golden Gate Transit. It is a high-priority Transit Neighborhood that is easily accessible from the Highway 101Corridor and is designated as a Priority Development Area in Plan Bay Area.

- **Population:** 5,269 in July 2007
- **Geographic Area:** 1.36 square miles
- **Population Density:** 3,877 residents per square mile (Average)

EV CHARGER SITES

1. **Strawberry Village**
   Redwood Highway Frontage Road (Between Reed Blvd. & Belvedere Drive)
   This site meets the top Primary Global Principles for the siting of EV charging stations, including high-impact and visible location, electrical supply availability, opportunity for disabled access, security, opportunity for signage, and opportunity for equipment protection. When selecting specific parking spaces at this location, the jurisdiction will consider Specific Siting Principles, including disabled access, electrical supply access and costs, balance of benefits of offering EV charging station versus potentially negative aspects of taking up an available parking space, cord management, and security.

END OF REPORT