

ENERGY COMMITTEE

TOWN OF SOUTH WINDSOR

Minutes

Page 1

December 4, 2020

Virtual Meeting Special Meeting

1. Call Meeting to Order

The meeting was called to order at 12:03 p.m.

2. Roll Call

Members Present: Larry Brown, Resident
Darrell Crowley, Board of Education
Hank Cullinane, Resident
Jeff Doolittle, Town Engineer
Marek Kozikowski, Board of Education
Councilor Cesar Lopez, Town Council
Athena Loukellis, Resident
James MacPherson, Resident
Andy Paterna, Town Council
Councilor Janice Snyder, Town Council
Sherman Tarr, Resident
Stephen Wagner, Resident

Others Present: Adam Teff, Titan Energy

3. **Next Meeting** – December 11, 2020, at 10:00 a.m.

4. **Business**

- A. Police Station Solar Canopies (Adam Teff, Titan Energy)
 - a. Bid evaluation
 - b. Recommendation to Town council to adopt selected bid

Mr. Adam Teff, Titan Energy, reviewed the Solar Bid Evaluation for the South Windsor Police Department as shown in **Exhibit A**.

Councilor Snyder requested Mr. Teff to assure her that Greenskies was not given a preference because they already have a PPA with the Town. Mr. Teff explained that Greenskies won the bid on price. Already having the PPA with the Town would not have been enough criteria to justify one company over the others. Mr. Teff stated that he views that as a bonus.

(Discussion Continued on Next Page)

MINUTES

Energy Committee Meeting – Special Meeting

Page 2

December 4, 2020

ITEM:

4. A. (Continued)

Mr. Teff then explained to the Committee that the ZREC program is the primary incentive from Eversource, and he explained how the program works.

Answering questions from the Committee members, Mr. Teff explained that a fuel tanker should be under the 14-foot requirement and should have plenty of room to get in and out of the area. Emergency apparatus should also be able to move around this area but would be discussed with the Fire Chief to ensure there are no concerns.

Mr. Jeff Doolittle, Town Engineer stated that the earliest the parking lot could be paved is May or June and wondered how that would work with the installation of the panels.

Mr. Teff explained that the conduits and footings for the canopy beams would most likely be put into place, which should not be a problem as long as the PPA is signed this year. Greenskies could start working with the Town to make sure everything is coordinated.

Answering further questions from the Committee, Mr. Teff explained that an application would be filed for the ZREC program at the end of January or early February. If, for some reason, the Town does not make the first cut, there is a chance that those who were selected decline the funds, and offers would be made to others who were not selected. Mr. Teff informed that Committee that even if the Town were not selected at all, the Town could reapply in a few months, and also there are protections in the agreement which essentially states that if the Town is unable to obtain ZREC, the Town has no further obligation to carry forward with this project.

Councilor Snyder made a motion to recommend the selection of Greenskies with the option of a 20-year flat rate GPA and inclusion of EV ready charging capability. Mr. Brown seconded the motion, and it was approved unanimously.

MINUTES
Energy Committee Meeting – Special Meeting
Page 3
December 4, 2020

ITEM:

4. Business (Continued)

- B. Zoning for Electric Vehicle Charging (Steve Lewis attending)
 - a. Subcommittee Report (Wagner, Cullinane, Lewis)
 - b. Discussion of proposed regulation, letter, and power-point
 - c. Recommendation to PZC

Chairman Wagner reviewed Electric Vehicle Charging and the need to change the zoning regulations to support electric vehicle charging as shown in **Exhibit B**.

Chairman Wagner informed the Committee that a memo had been drafted, which is addressed to the P & Z Commission, as well as copies to other groups in Town government.

5. Approval of Minutes (September 8, 2020)

None

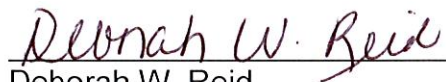
6. Miscellaneous

None

7. Adjournment

At 12:59 p.m., Councilor Snyder made a motion to adjourn the meeting. Mr. Crowley seconded the motion, and it was approved unanimously.

Respectfully submitted,

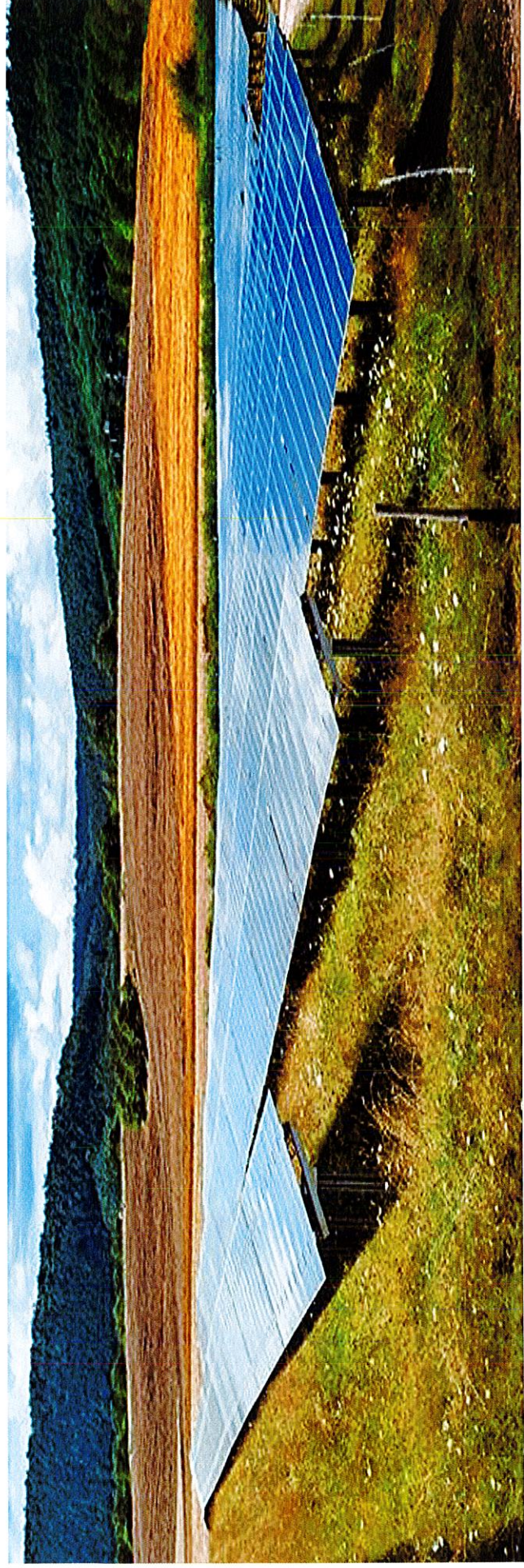


Deborah W. Reid
Clerk of the Council



South Windsor
POLICE
Department

Solar Bid Evaluation, South Windsor Police Department



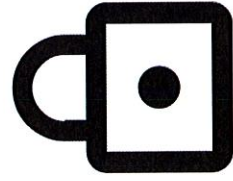
Process Overview

- RFP issued on October 8, 2020 for solar development services at the South Windsor Police Station
- Optional site visit conducted on October 16th, 2020
- Two companies attended the site visit (Verogy & Greenskies)
- Proposals were received On October 30th, 2020 at the town hall
- Greenskies Clean Energy delivered the most advantageous proposal
- Construction can begin at the start of Spring 2021 and be substantially complete by Summer 2021

Bid Response Snapshot

Police Station Canopy Project (\$65 ZREC)				
Bidder	System Size (DC)	Annual kWh Production	PPA Price/kWh	Year-1 Savings PPA Term
Verogy	196	225,992	\$.1230	-\$3,163.89 25-Year
Greenskies	201	242,239	\$.1070	\$484.48 25-Year
Greenskies	201	242,239	\$.1080	\$242.24 20-Year

- It's possible to drive down the PPA rate if we apply for a ZREC with a higher value (>\$65)
- We risk the possibility of not being selected for a ZREC award, but there is likely room to apply at \$75 and still win, which would drive down the PPA rate



25-Year Secure
Power Prices



Predictable
Budgets

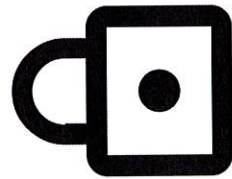


Zero Carbon
Emissions

Bid Response Snapshot

Police Station Canopy Project (\$75 ZREC)					
System Size		Annual kWh		PPA	
Bidder	(DC)	Production	Price/kWh	Year-1 Savings	PPA Term
Greenskies	201	242,239	\$.1010	\$1,937.91	20-Year

- Titan requested updated PPA pricing from Greenskies that accounts for a \$75 ZREC as opposed to \$65. Improved PPA pricing is represented above.
- It is Titan’s recommendation that we request Greenskies apply for a \$75 ZREC.
- It is also Titan’s recommendation that South Windsor consider the 20-year PPA so that future parking lot paving would occur *after* the system is decommissioned, not before.
- The 25-year option is still available, but PPA pricing is effectively the same.



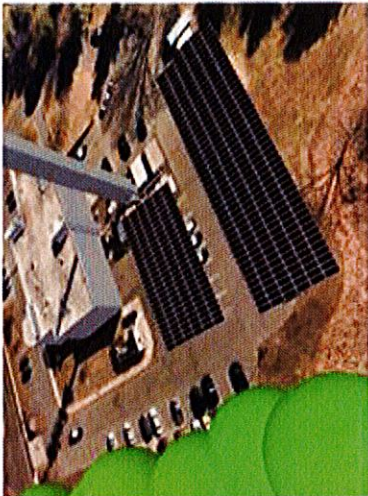
25-Year Secure
Power Prices



Predictable
Budgets



Zero Carbon
Emissions



CARPORT SYSTEM DETAILS

SYSTEM SIZE DC	196.69 kW
SYSTEM SIZE AC	150.00 kW
PRODUCTION - YEAR 1	225,992 kWh
MODULE POWER (W)	445 W
NUMBER OF MODULES	442
ARRAY TILT	7°
ARRAY AZIMUTH	0°



South Windsor Police Department

151 Sand Hill Rd

South Windsor, CT

SHEET NAME: SKETCH

DRAWN BY: SN

DATE: 10/28/2019



	BATCH NO.	PROPOSAL
	DRAWN BY	AF
	SCALE	AS NOTED
	DATE	22 OCT 2020
PROPOSED SITE PLAN SOUTH WINDSOR POLICE DEPARTMENT PV SOLAR ARRAY 151 SAND HILL ROAD SOUTH WINDSOR, CT 06074		
REVISIONS:		
NO.	DATE	DESCRIPTION
 127 Washington Avenue North Haven, CT 06473 PH - 860.398.5408 FAX - 860.398.5423		

Next Steps

- Approve layout with police department staff
- Board to authorize Town to execute PPA contracts with Greenskies Clean Energy, subject to Z-REC awards and price-lock
- Engineering and equipment procurement to take place during Winter 2020/Spring 2021
- Coordinate repaving of parking lot with installation of solar canopies
- Summer 2021 construction/completion
- Project debrief, Fall 2021

About Titan Energy

Founded in 2001, Titan Energy is one of the oldest and largest energy consultants in the U.S.

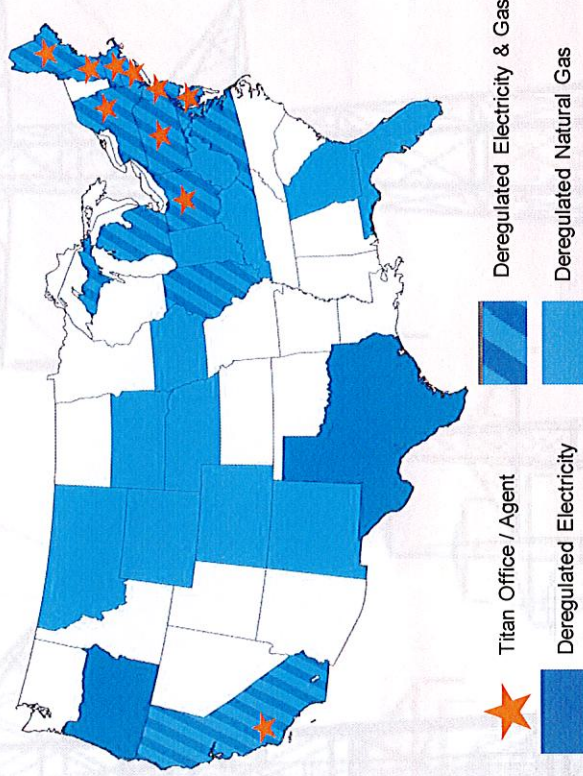
We are a full service energy consulting company focused on delivering value through commodity procurement, utility bill auditing, demand side management and on-site generation

Our commodity coverage extends to every deregulated state in the U.S. while energy consulting services extend to all States

We pride ourselves on a combined 150+ years of senior energy industry and management experience

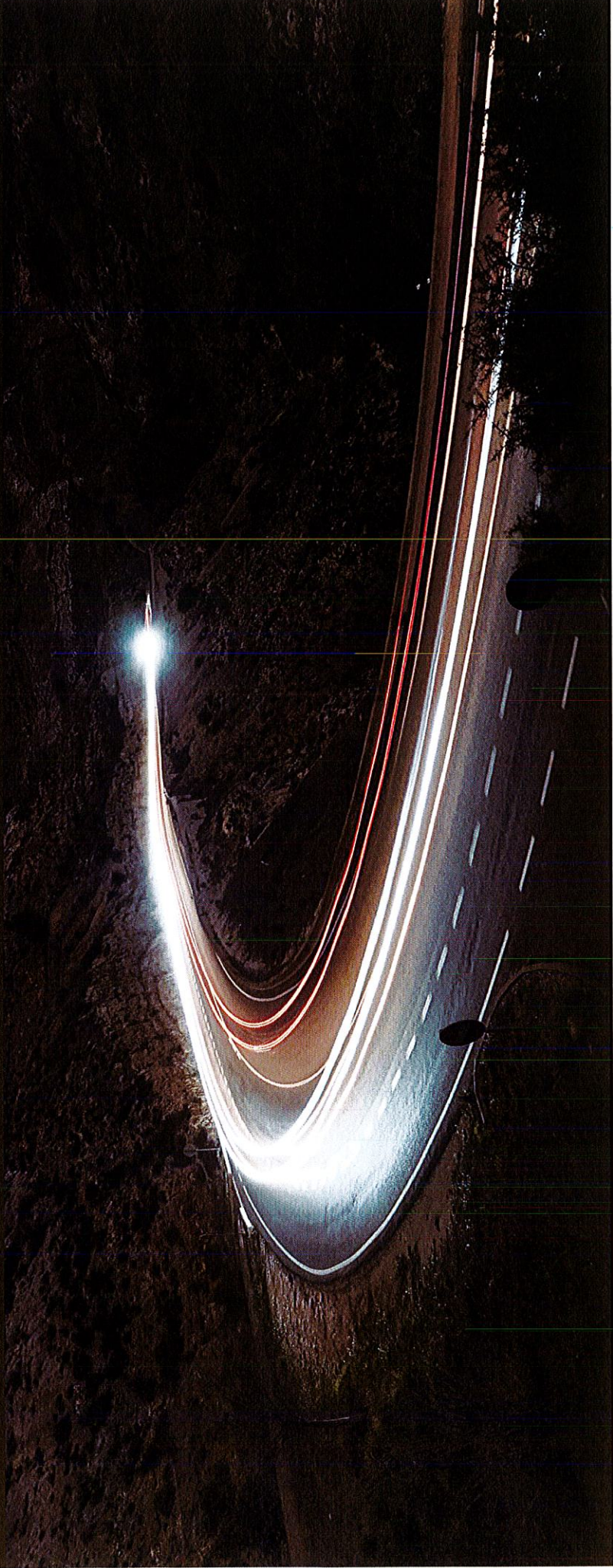
TitanGen is the onsite generation consultancy within Titan Energy. Through our numerous partner relationships, we develop and implement renewable energy solutions for clients throughout North America

TITANGen
Energize!



Electric Vehicle Charging

Proposed zoning regulation changes
South Windsor Energy Committee



State Climate Objectives

- Connecticut statutes:

- Reduce greenhouse gas (GHG) emissions 80 percent below 2001 levels by 2050 (Public Act 08-98),
- Interim target of 45 percent below 2001 levels by 2030 (Public Act 18-82).

- Transportation makes up 38% of GHG emissions, will need to become zero-emission.

- To stay on 2030 target, GC3 recommends reducing transportation emissions 29% from 2014.
- Dec 2015 – CT joined International zero emission vehicle (ZEV) alliance: by 2050 - all new passenger vehicles ZEVs

- July 2020 – CT joined the multi-state Medium and Heavy-duty ZEV MOU:

- By 2050 - 100 percent of all new medium- and heavy-duty vehicle sales be ZEVs
- Interim target for 2030 having 30 percent ZEV sales

Electric Vehicles becoming a major market share

- As of June 30, 2020,
 - 12,624 EVs registered in Connecticut.
 - Early Adopters and True Believers
- DEEP: “Electric Vehicle Roadmap for Connecticut, ...,” 2020.
- 125,000 to 150,000 EVs on the road by 2025
 - Economical choice for many new car buyers
- 500,000 by 2030.
- Connecticut and South Windsor must provide for and encourage this growth

Range Anxiety

If I buy an EV, where will I charge it?

- Most will charge at home
 - Single family home garage
 - Multi-unit housing parking areas
- Or at workplace
 - Especially residents of older housing without charging facilities
- And some commercial establishments
 - E.g. restaurants may find EV chargers attract customers (coffee, eggs and *juice*)
 - Other retail may find visits too short

Role of Zoning

- Zoning regulations
 - Can require a EV Supply Equipment (EVSE) in new construction and major upgrades
 - Ensure EVSE is permitted as an accessory use everywhere
- Phased approach
 - Require wired spaces (EV Ready) for the future (10% in many locations)
 - Require a smaller number of these to have chargers (EV Installed) in the short term (3%)
 - Increase installed fraction later (6% 2024, 10% 2028)
 - Housing: base on required parking. Commercial/Industrial: base on employee parking
 - In some situations, accept conduits under parking lots (EV Capable) as 1st step
- Must include some Handicapped Parking EV Spaces

Requirements

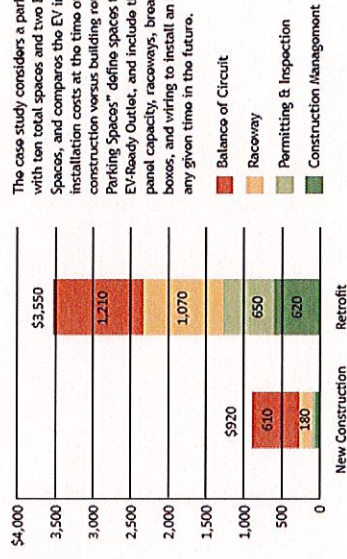
EV Make Ready Policies

- Require certain structures to have conduit and wiring in place to accommodate EVSE
- Cost effective
- Prepared to support electrification of transportation
- Plan to expand



Photo by Kendall Septon / NREL, NREL 45635

Cost per EV Parking Space: New Construction vs Retrofit
Case Study prepared for the City and County of San Francisco (2016)



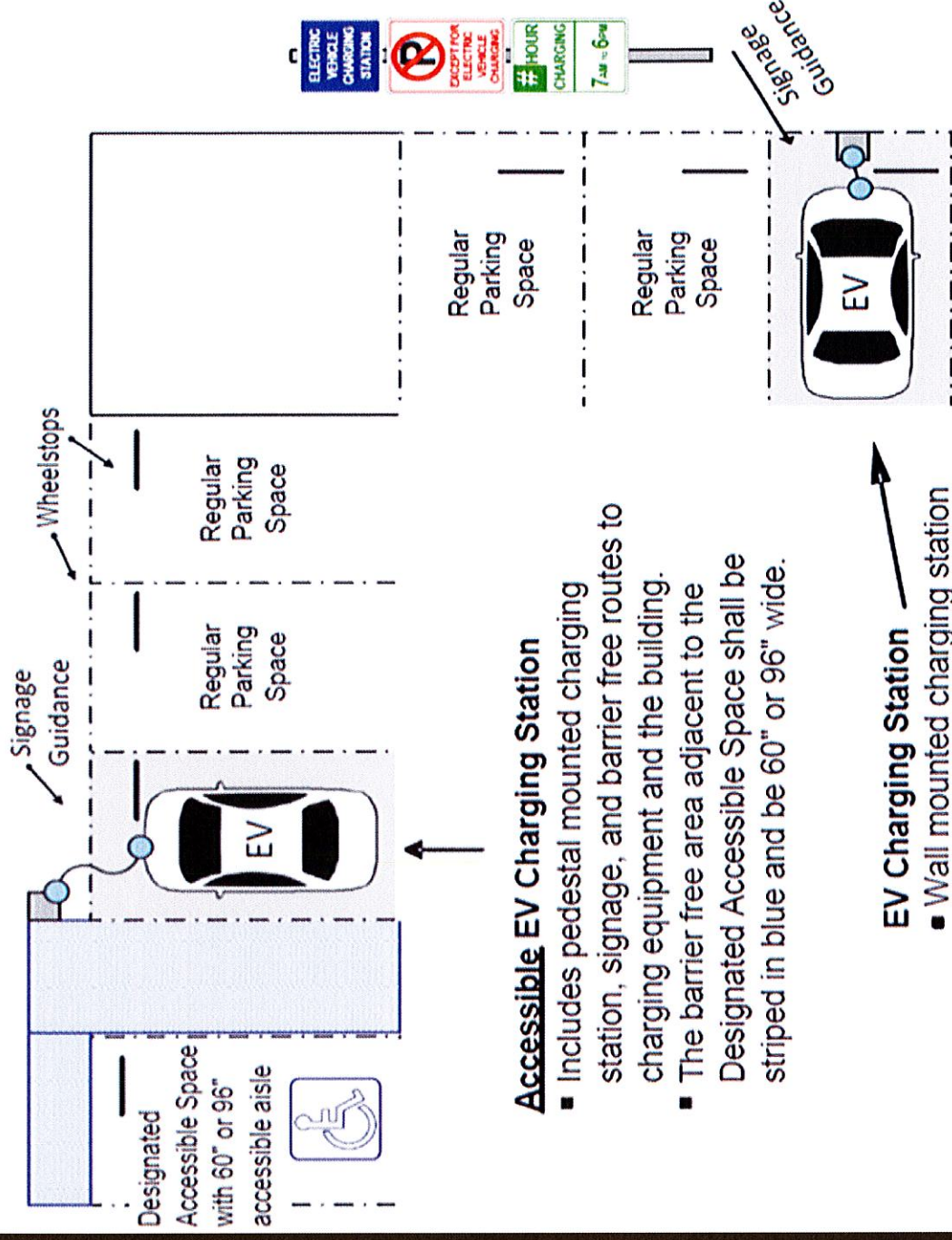
Source: Southwest Energy Efficiency Project

Live Green

Typical Layout

- See regular and accessible spaces
- Note: EVSE requires more space
- Credit 1 less required parking space for every 5 EV Charging Stations

Exhibit B



Paying: Multiple options depending on situation

- Generally owned and managed by equipment supplier
 - Credit card
 - Proprietary fob or card
 - Occupant's electric bill
- Avoid burden on site owner/manager
- Installation costs
 - Note that federal or state incentives costs may be available
 - Build financing into user fees

Other governmental actions

- The state can amend building codes to require EV Supply Equipment

- Town Council could consider

- Requiring charging circuits as well as conduits for rooftop solar in new single and two-family homes' garages (an area outside the scope of PZC's subdivision planning role)
- Preventing residence associations from blocking EV charging equipment
- Requiring the Building Department to use state-wide standard EV charging permit and provide input to a state-wide tracking database.
- Tying a portion of tax abatements to providing EV charging and solar