

PLANNING & ZONING STAFF SUMMARY REPORT

MEETING DATE: JANUARY 17, 2023

CASE # ETZ 2022-27

ROSWELL-CHAVES COUNTY EXTRATERRITORIAL PLANNING AND ZONING COMMISSION

ACTION
REQUESTED:

Special Use Permit for a Community Solar Facility in the Rural Suburban District

LAND	OWNER
& AGE	NT:

Joshua and Alison Capps Chaberton Solar Capitan LLC

LOCATION	&
LEGAL:	

445 North Red Bridge Road Tract 2 of the McPherson Living Trust Plat

ITEM SUMMARY

The Capps family and Chaberton Solar Capitan LLC are proposing a 3.75 MW community solar facility on 18.2 acres of the 25.3-acre parcel of land located at 445 N. Red Bridge Rd. There is a double wide manufactured home on the lot. The surrounding area is zoned R-S Rural Suburban with numerous 5-acre residential lots to the west, south and southwest. Chaberton Energy has stated they have reached out to the surrounding residential neighbors with letters and flyers. Article 25 states reasons for granting a SUP; 1. shall not be a danger to public health and safety; 2. shall not be detrimental to the economic welfare of the county; 3. shall Not be a nuiance; 4. shall meet the use standard for R-S district; 5. shall be compatible with the surrounding area; 6. shall conform with the 2016 Comp. Master Plan. The 2016 Comprehensive Master Plan recommends that renewable energy facilities be located and designed to mitigate negative impact on adjacent residential neighborhoods.

SUPPORTING DOCUMENTS

Staff Report, Application, Warranty Deed, Development Plan & Chaberton Solar Capitan LLC information, Vicinity Map.

SUMMARY BY: Louis Jaramillo -Planning & Zoning Director

STAFF'S REPORT CASE # ETZ 2022-27

Chaberton Solar Capitan LLC and Mr. and Mrs. Capps are requesting a Special Use Permit for a community solar facility located at 445 N Red Bridge Rd. The proposed solar facility would be located on the northern portion (18.2 acres) of the 25.3-acre lot. The Capps family acquired the property in March of 2020. There is a double wide manufactured home along with corrals and a rodeo ring on the property.

The proposed site and surrounding properties are zoned R-S Rural-Suburban District. The residential properties to the west are 5-acre tracts that are a part of the MrPherson North Subdivision Unit 1. The property to the north is a vacant 25-acre parcel of land. The property to the south and east is a large vacant 42-acre parcel of land. Further to the east and north is the NextEra Energy/ City of Roswell/ Commercial Solar Facility (SUP-ETZ 2015-12).

Access to the property is from North Red Bridge Road only. Red Bridge Road is a twenty-five-foot-wide, chip sealed, County maintained road that runs from the Pine Lodge Rd., south, to 2nd St. Red Bridge Rd., along with Pine Lodge Rd., is currently being used as a truck route by truck drivers wishing to access east US380 (E. 2nd St.) from north US285 (N. Main St.) Clearview Rd., a County maintained road, is located across from the proposed site and provides access to 18 lots in the McPherson Subdivision. There are numerous other 5-acre residential lots to the south and southwest. Chaberton Energy has stated they have reached out to the surrounding residential neighbors with letters and flyers.

Staff has reviewed Mitchell A. Pavao-Zuckerman's (2016 assistant professor University of Maryland) report which states that the measured ambient air temperature over a solar facility was warmer than the surrounding area by 5-7-degrees F (3-4 C), at night and that the added heat was unmeasurable and dissipated within 100 feet of the facility. The report also states the heat effect may be caused by the natural ground's, underneath the solar panels, inability to cool off as quickly as the surrounding area. (See attachment).

The 2016 Comprehensive Master Plan encourages new commercial or industrial uses be located in areas that are not injurious to residential neighborhoods and, when possible, along major highways and arterial roads. (Land Use 4.3) It also notes that new solar energy facilities should be located and designed to mitigate negative impacts on surrounding residential neighborhoods (Physical Appearance 4.4). The Future Land Use Scenario map recommends this area as Mid-Density Residential (5-10 residential homes per acre) use which is really not possible in the ETZ area due to the 5-acre minimum lot size in the ETZ area.

If approved, Chaberton Solar Capitan LLC proposes to construct a twenty-four (24') foot service road along the perimeter of the facility for fire prevention and emergency service access. Chaberton Solar Capitan LLC has provided a development plan showing the solar panels will be ground based. The facility would be fenced in for security reasons. (See Project Description for details.) The facility will tie into the nearby overhead electric line on Red Bridge Road. Xcel Energy is unable to determine

if they will be able to accept the 3.75-megawatt community solar facility on their distribution line, at this time.

Article 25 of the Roswell-Chaves County Extraterritorial Zoning Ordinance No. 80-1 states that a Special Use Permit shall not be transferable from one property owner or location to another. It lists four considerations the Commission must take into account when acting on a SUP. It also states six reasons for granting a Special Use Permit-1. Shall not be a danger to public health and safety; 2. Shall not be detrimental to the economic welfare of the county; 3. Shall not be a nuiance;4. Shall meet the use standard for R-S district; 5. Shall be compatible with the surrounding area; 6. Shall conform with the 2016 Comp. Master Plan. The Article notes thirteen development restrictions or conditions the Commission may require as part of the approval such as screen fencing, additional setback requirements and size of the array farm, just to name a few. Finally, Article 25 gives reasons for revoking or terminating the Special Use Permit, such as but not limited to, failure to begin construction, the restrictions and conditions have not been met, or the use becomes detrimental to the public's health and safety. (See attachment)

Should the Special Use Permit receive favorable consideration, Staff recommends the following Conditions of Approval:

- 1. A twenty-four (24) foot wide hard pack, weather proof, service road shall be required along the perimeter the facility and within the fenced in area for fire and other emergency vehicles.
- 2. The location and development of the community solar facility shall conform to the presented and approved site plan, included in this report. Changes or modification by the Commission may be necessary for public health, safety and welfare or to compliance with other Conditions of Approval listed. Any modification to the location or an increase in size of the facility <u>made after</u> this public hearing shall require ETZ Commission's approval at a second public hearing.
- 3. Failure to complete the construction of the community solar facility within ten (10) years shall result in the Special Use Permit being terminated.
- 4. Chaberton Solar Capitan LLC shall apply for any necessary building and electrical permits for construction of the community solar facility within one year of being award the solar project.
- 5. Chaberton Solar Capitan LLC shall utilize the existing electric transmission lines in the area.
- 6. Chaberton Solar Capitan LLC shall provide a de-commissioning and restoration plan for this property.
- 7. All lighting used on-site shall be shielded from traffic, surrounding properties and shall comply with the NM Night Sky Act.

- 8. All solar panels and their foundations shall be setback from all property lines a minimum of one hundred (100) feet to reduce the effects on the surrounding residential lots and public school.
- 9. A minimum (6) six-foot security fence around the perimeter of the facility.
- 10. A partial vegetative screening along N. Red Bridge Road directly across from 446 N. Red Bridge Road.

Findings of Fact:

- 1. The proposed solar facility (does or does not) conform with the requirements for approving a Special Use Permit as stated in Article 25 of the Roswell-Chaves County ETZ Ordinance 80-1.
- 2. The proposed Special Use Permit (does or does not) correspond with the recommendations of the Chaves County 2016 Comprehensive Master Plan.
- 3. Owner's within 100 feet of the proposed Special Use Permit have been notified of this public hearing by certified and standard mail, per Section 2.5 of the Roswell-Chaves County Extraterritorial Zoning Ordinance No. 80-1.
- 4. Planning and Zoning Staff have advertised this meeting in the local Roswell Daily Record and on the Chaves County website 15 days prior to today's public hearing per the Roswell-Chaves County Extraterritorial Zoning Ordinance No. 80-1.



CHAVES COUNTY/ETZ ZONING ORDINANCE APPLICATION FOR A SPECIAL USE PERMIT

Case Number:		Date Received:		Fee:		
	-	Capps and Alison Cap		7 <u>5-914-5145</u>		
Name of Applicant:	_	ge Rd, Roswell, NM, 88	1201			
Mailing Address: 11			Home Phone Num	ber: 202-792-4364		
City, State, Zip: No				umber: 814-999-1833		
	□ Owner [☑ Other Solar Dev			
Site Address: 33°26		8'05.0"W arcel ID for the project		ETZ Chaves County		
Property Legal Descr	iption: The pa	rect 15 for the project	UPN: R012540			
Present Land Use: V	'acant		OTN. 2022			
Intended Land Use:	Solar Photovo	ltaic Generation				
Present Zoning: R-	-S	Size o	f Development in Acres:	18.2 Acres		
Reason for Request (Attach sheets if more space is needed): To allow a portion of the parcel to be used for						
solar electri	city developm	ent as described in the	supporting docume	nts and design, that are		
attached to this ap	plication. Att	achment 1- Project De	scription, Attachmer	nt 2- Site Plan,		
Attachment 6 Co	ommunity En	gagement Attachmen	t 7- Landowners list.	- Decommissioning Plan Attachment 8- Accessors Copy of Deed Attached: 🛛		
I ACKNOWLEDG	SE THAT I HA' MEETINGS W	VE BEEN INFORMED HICH I OR MY AGEN	OF THE DATES, TIM	MES, AND LOCATIONS ORDER TO FULFILL		
Alison Capps (Nov 9, 2022 13:40 MST)		Josh Capps (Nov 9, 2022 14:34 MST)	11/9/2	22 11/9/22		
Owner's Signature			Date			

WARRANTY DEED - JOINT TENANTS

GF#2000046

Caleb Widener and Braden Widener, husband and wife, for consideration paid,

grants to: Joshua A Capps and Alison G Capps, husband and wife, as Joint Tenants

Whose address is: 445 N. Red Bedge Rd
Roswell NM 88201

the following described property situated in Chaves County, New Mexico.

SS.

TRACT 2 of MCPHERSON LIVING TRUST - PLAT OF SURVEY of a portion of the SW1/4 of Section 13, Township 10 South, Range 24 East, N.M.P.M., in the County of Chaves and State of New Mexico, as shown on the Survey filed in the Chaves County Cierk's Office on October 17, 2001 and recorded in Book S-9 of Survey Records, Chaves County, New Mexico, at Page 33.

SUBJECT to all reservations contained in the Patent and all covenants, easements and restrictions of record and taxes of current year and there after.

With Warranty Covenants

WITNESS our hands and seals this _304 day of March, 2020.

Caleb Widener Braden Widener

ACKNOWLEDGEMENT FOR NATURAL PERSONS

STATE OF NEW MEXICO

COUNTY OF 4 CHAVES_

This instalment was acknowledged before me this 20 day of March, 2020 by Caleb Widener and

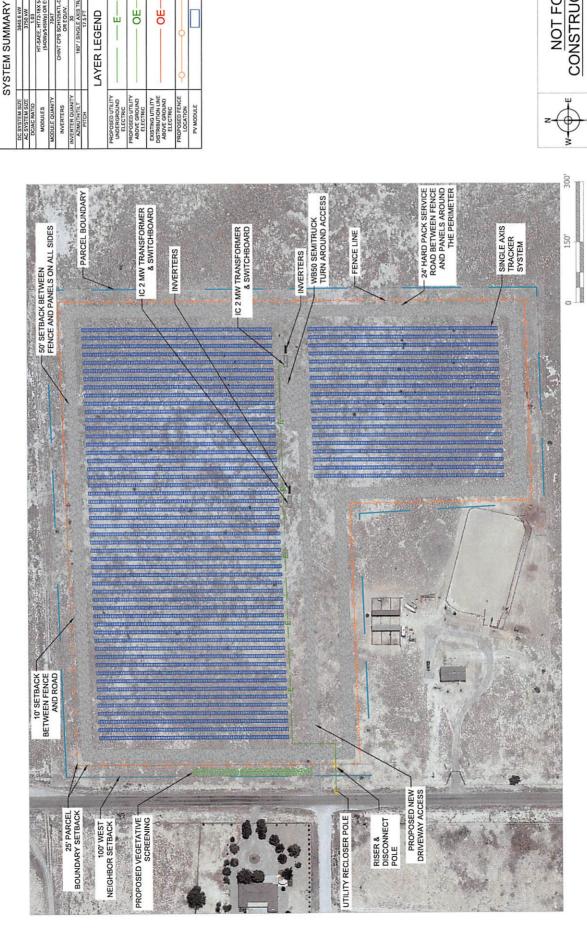
Braden Widener.

My Commission Expires

Notary Public

202002360 03/31/2020 04:32:54 PM Pages: 1 Fees: 25.00 Dave Kunko, County Clerk, Chaves County NM LANDMARK TITLE COMPANY





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CONSTRUCTION NOT FOR

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11/10/2022

HARD PACK SERVICE ROAD UPDATE

O

FENCE BUFFER UPDATE

INITIAL DRAFT DESCRIPTION

B A REV.

CHABERTON

CHABERTON ENERGY 11900 Parklawn Drive, Suite 406 North Bethesda, MD 20852

DEVELOPER

ELECTRICAL SITE PLAN

REVISION

DRAWING NO. E-001

CKD

ВУ

DATE

VD

10/20/2022

11/02/2022 VD

PROJECT

CHABERTON SOLAR CAPITAN
3.84 MWdc 13.75 Mwds GROUDD MOUNT AT
COSWELL, NM, USA
33.44379 N, -104.46805"W



Project Description:

Chaberton Solar Capitan LLC ("Chaberton" or the "Applicant") proposes to install a solar photovoltaic power generation ("PV") project (the "Project") on vacant land owned by Joshua Capps and Alison Capps in Roswell, New Mexico. This project is designed as a Community Solar facility to comply with The Community Solar Act passed in year 2021. Community Solar is an extremely exciting development in New Mexico to ensure access to solar for everyone, specifically low to middle income consumers who have in large part been unable to access the benefits of solar power to date. If approved, this project will allow consumers to subscribe to a guaranteed reduced rate (as compared to the normal residential tariff rate) with no need for any upfront capital or "buy in". We can achieve this via the lower cost of building solar on the ground vs on residential rooftops, achieving some scale (vs residential rooftops), along with enabling legislation and incentives from both the state and federal governments.

Chaberton is a developer of solar generation projects with a portfolio of more than 30 projects under development. They are composed of community solar projects, aggregate net meter projects for institutional clients, and other solar power purchasing arrangements with commercial and industrial customers.

Chaberton Energy has performed significant local engagement with the neighbors and greater community in Roswell, New Mexico in order to demonstrate our commitment to being a good neighbor and design a project which will have minimal negative impact to the community while providing significant positive impact. Some of our engagement activities have included:

- Sent letters to all adjacent property owners within 300 feet of the property, notifying them of our proposed development and providing contact details.
- Visited with our neighbors and knocked on their door, speaking with many, and leaving a
 follow up letter and flier for all neighbors. We were equipped with a fluent Spanish
 speaker to be able to successfully converse with all local stakeholders.
- Communicated multiple times with the Roswell Independent School District, notifying them of the project and offering to partner to provide direct benefits to the school district.
- Met with an official at Eastern New Mexico University to introduce the project to them
 and discuss potential partnership opportunities. We are planning to attend their next job
 fair in early 2023 to introduce the concept of solar energy as a career to their students.
- Sent a second batch of letters to all adjacent neighbors inviting them to a Community Meeting.
- We placed an advertisement both online and via the print version of the Roswell Daily Record inviting all community members to a Community Meeting.



- Spoke with a local reporter at the Roswell Daily Record and invited them to the Community Meeting.
- Called and left multiple messages with our nearest neighbor advising them of the project and inviting them to our Community Meeting.
- Held a Community Meeting at Eastern New Mexico University and provided an overview of the Chaberton, Community Solar, and the project.

We have focused on delivering benefits to our neighbors and local community. As a Community Solar project, we will first offer subscriptions to participate in the Community Solar program to our neighbors and other members of the community. We estimate that this project will deliver over \$2.8M in utility savings to our subscribers over the life of the project, many of whom will be Low to Moderate Income residents.

We remain committed to communicating with our neighbors and the people of Roswell in order to develop and deliver a project of the highest quality that provides tangible benefits to our community. We have included a more detailed breakdown of our outreach efforts as well as copies of the various letters and outreach materials we have utilized in Attachment 6.

We maintained a minimum of 100' setback from the only neighbor around the parcel to the west side of the property and a 25' setback between the parcel boundary and the fence, a 50' setback between the fence and the panels. A 24' hard pack service road is provided around the perimeter of the site for emergency and fire trucks. An additional 10' setback between the fence and the hard pack service road is ensured. These setbacks are called out for in the Site Plan (Attachment 2).

The landowner's address is 445 N Red Bridge Rd, Roswell, NM, 88201. The project is located at the following parcel coordinates: 33.44379, -104.46805. The project site is in Zone "R-S" and located in the Roswell-Chaves County Extraterritorial Zone. The parcel number is 4-139-058-058-335-000000.

The Applicant has executed a lease agreement whereby Chaberton has the exclusive right to develop a solar photovoltaic project on the subject property land for a 12–18-month period beginning Q3 of 2023. A copy of the lease option is attached as Attachment in this submission. Upon approval, the Applicant will construct the Project, and own and operate the facility during a 25-year lease period, which may be extended for up to an additional 15-year period, to a total of up to 40 years.

The proposed project is 3.75 Megawatts ("MW") alternating current ("AC") and covers approximately 18.2 acres. The solar modules will be installed on steel racking structures. The posts for the racking structures will be driven approximately 5-6 feet into the ground using a post-driving machine. The medium voltage step-up transformers will be set on concrete pads which are typically 12-18 inches deep. The project will be surrounded by a 7ft chain link fence for safety and security. A driveway access with gravel road will be constructed for construction, maintenance and other municipal requirements.

The project has completed a pre-application for utility interconnection with Xcel Energy Inc



("Xcel"). The Pre-application report can be submitted to the County if requested.

There will be light traffic generated during the construction of the project which will last for 4 to 6 months, with "peak" activity being approximately 2 months. Deliveries of solar equipment will be scheduled and adjusted as feasible to minimize the effect on local traffic and the adjacent school. Post construction, the traffic to the solar facility will be almost negligible, with only periodic inspections and response to maintenance, as necessary, averaging 1 to 2 visits per month.

Once the field is constructed, it generates virtually no noise. The only components that generate any detectable sound are the transformers and the inverters. The inverters are the noisiest component, but these are relatively quiet with a similar sound as a refrigerator. The proposed project will use string inverters, which are small units, about the size of a desktop computer, distributed across the system. At 50 feet from the equipment, any noise will fade into typical rural ambient noise.

The following attachments are provided in addition to the permit application:

- Project Description
- 2. Site Plan
- 3. Official Copy of Deed
- 4. Lease Agreement
- 5. Decommissioning Plan
- 6. Community Engagement
- 7. List of Landowners within 100ft
- 8. Accessor's Map
- 9. Preliminary Civil Engineering Site Assessment
- 10. Permitting Plan

Comprehensive Community Engagement Activities

- ✓ Mailed letters on 08/10/2022 to all neighbors adjacent to the parcel; 15 in total for Project El Capitan, providing information on the project and our contact information. (Included a copy of this letter)
- ✓ Sent emails to Sunset Elementary School and Roswell Independent School District first on 07/25/22, again on 08/16/22, and 08/30/22 to notify them of our neighbor engagement, and on 10/19/22 to notify them of the community meeting and propose an in-person meeting. The contacts and dates we reached out to them are below:
 - ✓ Sunset Elementary Principal: Principal Russ; 07/25/22, 08/16/22, 08/30/22, 10/19/22, 10/31/22
 - ✓ Sunset Elementary Secretary: B Lozano; 07/25/22, 10/25/22
 - ✓ Assistant Superintendent for Finance and Operations: Chad Cole; 08/16/22
 - ✓ Director of Business Services: Linda Purcella; 07/25/22
 - ✓ Support Services and Transportation: Chris Thweatt; 10/19/22, 11/03/22
 - ✓ District 3 Rep: Jack Cheney; 07/25/22, 08/16/22, 10/25/22
 - ✓ Human Resources: Ralph Matta; 10/28/22, 10/31/22
 - ✓ Business Services: Vickie Dunn; 10/28/22
 - ✓ Maintenance Services: Rayanne Duran; 10/31/22
 - ✓ Superintendent's Office: Julie Whitcamp; 10/25/22
- ✓ Expanded outreach network to RISD staff via email on 08/16/22 and again 10/19/22 to invite them to our community meeting
- ✓ Visited neighborhood to knock on doors, speak with neighbors, and leave letters when neighbors were not home on 08/30/22 thru 09/02/2022. We were able to speak with a few neighbors. (Included a copy of the fliers we left)
- ✓ Sent initial partnership/engagement email to Eastern New Mexico University Roswell (ENMUR) to expand support for community-based organizations on 09/19/22
- ✓ Posted notice of our Community Meeting in The Daily Roswell News online and in print on 10/21/22 dates, which ran from 10/26/22 through 11/03/22
- ✓ Mailed follow up letter on 10/19/22 to all neighbors adjacent to the parcel to inform neighbors of our Community Meeting (included copy of this letter)
 - ✓ Also sent notifications to RISD, Sunset Elementary, and ENMUR to remind them of the presentation, extend invitation once more, and offer to meet in-person for any remaining questions/concerns.

- ✓ Called our neighbors across the street (Chaidez) multiple times starting on 10/31 to speak and remind them of the Community meeting, left multiple voicemails with no response
- ✓ Visited neighborhood 11/03/22 in anticipation of the Community Meeting to knock on doors and invite neighbors
- ✓ Held Community Meeting on 11/03/22



August 10, 2022

Chaberton Energy 11900 Parklawn Drive, Ste 406 North Bethesda, MD 20852

Hello,

Nice to meet you! My name is Inaya Molina and I am the Associate Manager of Community Engagement at Chaberton Energy. We are a Maryland-based renewable energy company that specializes in leasing and/or purchasing property for development of ground mounted solar arrays, as well as developing community solar systems, which offer savings off customers' utility bills. We are reaching out regarding Project Clark, a prospective solar project near your property located at North Red Bridge Rd. in Chaves County.

We strive to design a project that blends into the neighborhood and that promotes the highest environmental stewardship for our local community; therefore, we will follow stormwater management and screening best practices. Unlike utility-scale solar that spans large swaths of land, community solar has a maximum capacity of 5MW on average, occupies approx. 20-30acres, and serves local constituents/subscribers at a discounted price. Solar is a great neighbor; it is quiet by nature (no noise will be heard outside the property boundary) and generates no long-term traffic. Solar requires no county or city services while providing significant tax revenue. Most importantly, renewable electricity improves air quality and lowers the cost of power.

This will be a community solar project, which means that you will be eligible to and obtain the solar benefits without the need or expense of physically installing panels on your property. We will provide you with priority access to the output of the facility (there is normally a waitlist for these projects), and a premium discount offering for you and our other adjacent neighbors. We can follow up with you regarding this offer as the project proceeds through permitting and receives all necessary approvals.

We are preparing to host a Community Meeting to be held mid-September in Roswell. Please look forward to another letter from us detailing the date, time, and location closer to time.

My colleague and I plan on being in the neighborhood on September 1st and 2nd so we can meet you in person and provide more information on Chaberton and the project. I hope to be able to connect with you then. I am also happy to address any questions via phone or email if we cannot connect in person. You can contact me at 334-235-2404 or at inaya.molina@chaberton.com.

I look forward to hearing from you.

Best Regards,

Inaya Molina, Associate Manager of Community Relations

Inaya.Molina@chaberton.com

334-235-2404



Chaberton Energy 11900 Parklawn Drive, Suite 406 North Bethesda, MD 20852 October 19, 2022

Hello,

My name is Inaya Molina, and I am the Community Engagement Associate Manager at Chaberton Energy. We are a renewable energy company that specializes in leasing and/or purchasing property for development of ground mounted solar arrays, as well as developing community solar projects, which offer electricity savings to Southwestern Public Service (SPS) customers. We are reaching out regarding Project Capitan (formerly Project Clark), a prospective solar project located in Chaves County.

I was out in the neighborhood in early September and had a chance to meet many of our neighbors. We have scheduled a Community Meeting to be held on Wednesday, November 3rd at 8:00pm, to be located at the Eastern New Mexico University: Campus Union Building at 48 University Blvd. Roswell, NM (on the corner of University Blvd. and W. Martin St.). We hope you can attend and look forward to providing more detail to our neighbors!

We strive to design a project that promotes the highest environmental stewardship of the local community. Solar is a great neighbor; it is quiet by nature (no noise will be heard outside the property boundary) and generates no long-term traffic. Solar requires no county or city services while providing significant tax revenue. Importantly, renewable electricity improves air quality and lowers the cost of power.

I plan on being in the neighborhood early on Wednesday, November 3rd before the Community Meeting, so if you are unable to attend the Community Meeting but will be available earlier in the day, please give me a call so we can schedule a time to meet. I hope to be able to connect with you then. I am also happy to address any questions via phone or email, in person, or during the community meeting. You can contact me at 334-235-2404 or at inaya.molina@chaberton.com.

I look forward to hearing from you.

Best Regards,
Inaya Molina, Community Engagement Associate Manager
Inaya.Molina@chaberton.com
334-235-2404



for CHAVES neighbors COUNTY

GUADALUPE PROJECT



The solar site is located on O'Connor Drive and is approximately 20 acres.



A **Single Axis Tracker** system will allow panels to track the movement of the sun.



We are early in the **application process**. A formal application is yet to be submitted to the County. We want our neighbors to help us make this project a **success!**



We will unveil the project concept plan in a **Community Meeting** open to the public planned for **September**. More details will be provided to you soon!



The only **noise** making equipment will be located sufficiently far from our neighbors to ensure no noise will escape the property boundary.



Construction is expected to take 4-6 months, with 2 months of peak activity.



An unloading area on site will prevent construction traffic from blocking roads.



Post-construction, there will **no impacts to long term traffic.**A pick up style truck will visit the site for maintence once a month at the most.



You can subscribe to receive a portion of the energy produced by this array. Our neighbors receive an additional discount!







Electricity is ready to be distributed to subscribers through the local power grid



Credits are issued to subscribers in their utility bill based on the power generation of the solar farm

Subscribers pay less for energy credits

II.



Community solar farm generates solar power

BENEFITS

- Community solar is great for:
 - Homes that cannot accommodate solar
 - Renters or those who may have restrictions on their homes
 - Homeowners that are hesitant to enter long term financing contracts for rooftop solar
- ${\swarrow}$ Savings are guaranteed
- By adding its power to the grid, community solar increases the grid's reliability.
- With Community Solar you are supporting the decarbonization of our electricity and aiding in the transition away from fossil fuels.

More information, as well as details on how to subscribe, will be provided as the project gets closer to the start of construction.



November 10, 2022 #9330713

Vasavi Devineni Development Engineer Chaberton Energy 11900 Parklawn Dr, Suite 406 North Bethesda, MD 20852 (573) 529-8003 vasavi.devineni@chaberton.com

RE: Preliminary Civil Engineering Site Assessment - Capitan Community Solar Project

Dear Ms. Devineni:

A preliminary civil engineering site assessment has been conducted for the proposed Chaberton Energy Capitan Community Solar Site (site), near Roswell, New Mexico. The components of the site assessment include review of the existing topography, an initial drainage investigation methodology and results, and site access requirements. The drainage investigation portion of this letter includes results for the approximate peak flows and volumes draining to and on the site during a 10-year, and 100-year, 24-hour frequency storm event.

Existing Topography

SMA used existing topographic data, publicly available from the Unites States Geological Survey (USGS) National Map, to determine the on-site and off-site drainage basins. The Capitan Site has flat terrain with average slopes of 0.5%. The flat terrain of the site should not inhibit placement of PV arrays. The site generally drains from the northwest to a local low point in the site area where runoff concentrates and then flows to the east. The site is bounded to the west by North Red Bridge Road. North Red Bridge Road has a drainage swale running parallel to it; however, this swale tapers off along the northwest corner of the proposed site area. It is expected that this swale will divert runoff from the west but runoff will still enter along the northwest corner and the northern edge of the site where the swale is undefined and runoff overtops the road.

According to the Federal Emergency Management Agency (FEMA), the project site is located within Flood Zone X. Zone X designation indicates an area of minimal flood risk outside the 1% and 2% annual chance floodplains. The corresponding FIS map number for the project area is Map #35005C1400D effective 9/25/2009.

Drainage Investigation

The total area contributing runoff to the site's hydrologic design point has been divided into three offsite basins and one onsite basin. Offsite basin B1 is approximately 12.16 acres, B2 is approximately 50.31 acres, and B3 is approximately 28.58 acres. The onsite basin, B4, is approximately 26.98 acres. The basin map enclosed illustrates the basin delineations.

To calculate the storm water discharge rates and volumes for the 10-year and 100-year, 24-hour storm frequency events, the SCS Unit Hydrograph method was used. This method uses hydrologic data such as the Curve Number (CN) and the Lag Time (T_{Lag}) to determine the peak runoff and volume for the site. The Type II-75 storm distribution method developed by NRCS is used in accordance with the NMDOT Drainage Design Manual. The calculations for this analysis were computed using The United States Army Corp of Engineers' HEC-HMS hydrologic modeling software version 4.10.

Drainage patterns for each basin were estimated from the topographic maps identified in the Existing Topography section. The terrain is gentle with average slopes of 0.5%. The mild slopes indicate that the flow regime thought each basin is sheet flow. The Kerby Equation was used for time of concentration calculations. The SCS Unit Hydrograph method uses T_{Lag} in its hydrologic calculations. The lag Time is defined as 0.6 * Tc and has been calculated for each basin.

The soils within the contributing drainage area along with their Hydrologic Soil Group (HSG) classification varies within each basin. The following table summarizes the HSG classifications within each basin.

Hydrologic Soil Group Classification						
Basin ID	HSG A (%)	HSG B (%)	HSG C (%)	HSG D (%)		
B1	0.0	100.0	0.0	0.0		
B2	0.0	48.1	0.0	51.9		
В3	0.0	56.0	0.0	44.0		
B4	0.0	48.3	0.0	51.7		

The vegetative cover within this area is primarily herbaceous with minor elements of gravel roads and impervious roofs and paved roads. Herbaceous classification indicates areas with grass, weeds, and minor elements of low-growing brush. Generally, the canopy coverage of the site appears to be greater than 70% indicating a good hydrologic condition; however, some sections of land have much less cover. These sections have been modeled as poor hydrologic condition. The condition of the site vegetation was estimated based on aerial imagery from Google Earth Pro® and imagery from Google Steet View.

In accordance with Technical Release 55, a runoff curve number (CN) has been selected for each type of vegetative cover and HSG found within the study area. Due to the varying vegetation and HSG classifications within each basin, a composite CN was calculated for each basin. The following table summarizes the composite CN calculations.

Composite CN Calculations						
Basin ID	Impervious	Gravel	Herbaceous	Herbaceous	Composite	
Dasin ID	Surfaces	Roads	(Poor)	(Good)	CN	
B1	2.8%	1.6%	7.6%	88.0%	65	
B2	1.6%	1.8%	5.8%	90.8%	75	
В3	1.4%	0.3%	0.0%	98.3%	73	
B4	0.7%	0.0%	0.0%	99.3%	74	

NOAA Atlas 14, Volume 1, Version 5 precipitation data was used for the analysis. The 10-year and 100-year, 24-hour point precipitation data for the site is 3.34 inches and 5.43 inches, respectively.

The aforementioned basin characteristics were used to model the hydrologic response for the site. The following table summarizes the results of the hydrologic analysis with the 100-Year values listed in parentheses.

	Hydrologic Calculations, 24-hour Storm 10-Yr (100-Yr)						
Basin ID	Area (acres)	T _{lag} (min)	I UN I Discharge		Volume (ft³)		
В1	12.16	22.60	65	4.3 (15.5)	29,571 (86,066)		
B2	50.31	23.97	75	39.7 (100.6)	217,342 (511,394)		
В3	28.58	29.45	73	17.2 (46.1)	110,998 (271.789)		
B4	26.98	27.09	74	18.4 (47.7)	110,674 (212,534)		

All contributing basins consolidate flow at the design point along the eastern edge of the site. The following table summarizes the calculated peak discharge and volume at the design point.

Design Point Hydrologic Calculations, 24- hour Storm				
Frequency Storm Event	Peak Discharge (cfs)	Volume (ft³)		
10-Year	57.4	467,016		
100-Year	147.8	1,135,406		

For the 100-year storm, the maximum flow depth within the site is estimated to be 8.28 inches with a maximum velocity of 0.47 ft/sec determined by GeoHECRAS. Due to the low velocity, the potential for scour is low.

The next steps for the drainage analysis include estimating the increase in peak flow due to project-related changes to land cover and use within the site (e.g., concrete pads, roadways, vegetation). Common stormwater mitigation methods, including detention facilities, if required, could mitigate increased drainage impacts due to post-development conditions. These stormwater mitigation measures will be explored during final design to optimize the projects goals. Mitigation measures could include revegetation, post brush clearing operations, and/or the use of small detention swales.

Chaberton Energy November 10, 2022 Page 4

Site Access Requirements

A 24-foot-wide gravel road around the perimeter of the site will allow access to the panels. A 16-foot-wide internal gravel road will allow access to the transformers, inverters, and switchboard. The client proposed access point connects to North Red Bridge Road along the west edge of the site. No vertical or horizontal curves were identified restricting site distance at the entrance. Based on the flat topography of the site, soils, and existing drainage patterns, access to and within the site is expected to be unobstructed.

Conclusion

Based on the topographic data and the hydrologic analysis of the site, the site appears to be suitable for the proposed development. Due to the larger estimated flow rates impacting the site, it is recommended that electrical components such as the IC Transformer and components be raised at least one foot above the expected flow depth.

Please do not hesitate to contact me if you have questions or comments regarding this preliminary civil engineering site assessment.

Sincerely,

MILLER ENGINEERS, INC. D/B/A SOUDER, MILLER & ASSOCIATES

Douglas W. Mize Jr., PE, CFM

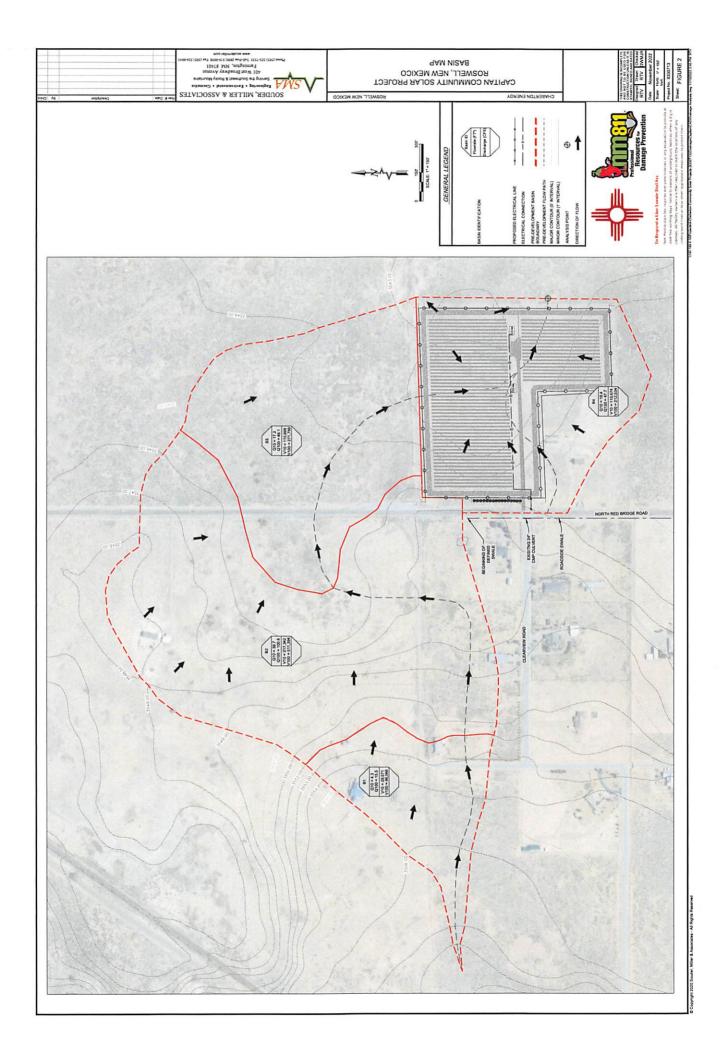
Project Engineer II

douglas.mizejr@soudermiller.com

Attachments: Figure 1: Site Plan

Figure 2: Basin Map

Figure 3: Slope Analysis Map





Capitan Solar Project Decommissioning Plan

Prepared By: Chaberton Solar Capitan LLC

Prepared for: Roswell-Chaves County Extraterritorial Authority, New Mexico

> Date: October 30th, 2022

Property: Parcel Number: 4-139-058-058-335-000000



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Section 1: Introduction

Chaberton Solar Capitan LLC ("Chaberton") will construct, own, and operate a project, approximately 4 megawatts (MW) of total photovoltaic ("PV") capacity in the Roswell-Chaves County, New Mexico. The Project is located on Parcel number 4-139-058-058-335-000000 and consists of approximately 18.2 acres. The project will lease the property from the current owner for 25 years with an option to extend the lease for three (3) additional five (5) year periods, for a maximum operation term of forty (40) years.

Chaberton provides this Decommissioning Plan as part of our Application for Administrative Approval.

Section 2: Project Background

The project is located to the south of Sunset Elementary, part of the Roswell Independent Schools, with project coordinates 33.328692, -104.527795. The project will consist of approximately 7,614 solar modules, associated solar module racking system and foundations, 30 DC (DIRECT CURRENT) to AC (ALTERNATING CURRENT) electrical inverters, 2 medium voltage step-up transformers and associated electrical equipment and materials necessary to connect to the local power distribution system.

Section 3: Existing Site Conditions

The project is zoned "R-S". The topography of the site is very flat. Adjacent land use includes residential home.

Section 4: Description of Work to Construct Utility Scale Solar Facility

Major Activities

Cable Trenching: Trenching requirements for the electrical cables and telecommunication lines would consist of a trench up to approximately three feet deep and one to four feet wide. The trenches would be filled with base material above and below the conductors and communications lines to ensure adequate thermal conductivity and electrical insulating characteristics. The topsoil from trench excavation would be set aside before the trench is backfilled and would comprise the uppermost layer of the trench. Any excess material from the foundation and trench excavations is incorporated onsite and will not be exported.

Foundations: The solar modules will be installed on steel racking structures. The posts for the racking structures and DC to AC inverters will be driven 5-6 feet into the ground using a post-driving machine. The medium voltage step-up transformers will be set on concrete pads which are typically 12-18 inches deep.



Modules Racking System: Galvanized beams and other structural members will be bolted to the foundation posts of the racking system. The solar modules are then mounted on these structural members.

Medium Voltage Step-Up Transformers: The medium voltage step-up transformers will be offloaded from delivery trucks and placed on concrete foundations. This equipment will be bolted to the concrete foundations. The underground electrical and communication cables will be routed and connected to this equipment.

4.1 System Overview and Components

PV solar modules absorb sunlight and use silicone cells to generate electrical current. The PV Modules are mounted on a single axis tracker racking system which allows the modules to track the sun throughout the day. Components of the system include the following:

- 4.1.1. **Combiner Boxes**: Combiner boxes allow for the paralleling of multiple conductors/feeder inputs and allow for fewer outputs.
- 4.1.2. **Inverters**: Inverters are power conversion devices which transform direct current (DC) to alternating current (AC). There are 40 inverters planned. These are mounted on the same racking that supports the solar modules.
- 4.1.3. **Transformers, Recloser, Disconnect Switch**: Transformers are an apparatus for reducing or increasing the voltage of an alternating current. There are 2 medium voltage step-up transformers. The Recloser and Disconnect Switch are protection devices that allow the Project or SPS to isolate the projects from the wider distribution system.
- 4.1.4. **Underground Cables and Conduits**: Underground power (AC and DC) cables, communication and grounding cables will be either direct buried or placed in conduit. The cables will be rated in accordance with their application. The cables will be in a conduit as per code when transitioning from below grade to above grade.
- 4.1.5. Access and Internal Roads: Due to the small size of the projects, the only access will be a short driveway leading to the transformer equipment pads. Internal to the fence, a grass open area will be maintained for infrequent maintenance access to the modules and inverters.
- 4.1.6. **Buildings and Enclosures**: The Project will not contain any permanent occupied building structures once construction is complete and the plant is operating. The site may have storage containers used for storing spare parts and materials, but these will not be affixed to a foundation. Except for periodic maintenance, the site is unstaffed.
- 4.1.7. **Security Fencing**: To ensure security of the facility, the property will be fenced with seven-foot-high ag fencing. Access to the site will be controlled via locked access gates.
- 4.1.8. **Project Life**: The facility has an estimated useful life of at least 30 years with an opportunity for extension depending on equipment replacements or refurbishments.



4.1.9. SCADA and Communications Equipment Enclosure: Supervisory Control and Data Acquisition (SCADA) refers to the entire communication and control components. The SCADA equipment for the projects will be mounted inside of an enclosure in the vicinity of the transformers. The enclosure is affixed to a foundation or mounted on piles, depending on soil conditions. The SCADA system includes an internet router, server(s), a firewall, battery backup, and other hardware to monitor the solar farm.

Section 5: Decommissioning Process

Decommissioning consists of the removal of above- and below-ground facility components, management of excess wastes and materials, and the restoration of ground surface irregularities and herbaceous vegetation. If commercial operations cease for over twelve months, the project area is to be restored in a manner consistent with its condition prior to facility construction. Decommissioning activities are expected to take between 6 to 8 months. Removal of all equipment will be done in accordance with applicable regulations of the time.

5.1 Equipment Removal

After the facility has been disconnected and isolated from the utility power grid and all electrical components have been disconnected within the facility, equipment will be dismantled and removed. Decommissioning will be undertaken by licensed subcontractors using similar techniques and equipment to those used in the construction of the Project.

The following describes the methods for dismantling and removal of various Project Components:

PV arrays and associated equipment

- Disconnect all wiring, cables, and electrical interconnections.
- Remove PV arrays from racks.
- Dismantle and remove all racks and extract all pile-drive support structures (see Equipment foundations).

Generation Tie-Line cables

 All aboveground and underground cables will be removed and transported off-site to an approved recycling facility or landfill.

Equipment foundations

The pile-drive support structures for the solar arrays will have foundations that require removal.
 Other underground infrastructure that requires removal may include concrete protective electrical
 structures. Any foundation structures and below ground concrete will be fully removed from the
 ground and the affected area will be backfilled as necessary with native soil.

Access roads

- All aggregate and other underlying materials from the access driveway / road will be excavated.
- As necessary, all compacted areas will be disc-ed or tilled to restore soil densities consistent with the surrounding area.



 The access road area will be restored in a manner consistent with its condition prior to facility construction.

Other components

Fences, gates, and guards will be removed.

5.2 Site Restoration

The portion of the site currently in use as agriculture will be returned to that use or stabilized with grasses common to the area if the future owner does not plan to return the site to agricultural crops.

5.3 Managing Excess Materials and Waste

A variety of excess materials and wastes will be generated during decommissioning. To the extent practical, Chaberton will coordinate with manufacturers, contractors, waste firms, and other entities to maximize the reuse and/or recycling of materials. Those materials deemed reusable/recyclable will be transported offsite and managed at approved receiving facilities following all applicable federal, state, and county waste management regulations of the time.

All residual waste will be removed by a licensed contractor and transported to an approved landfill. No waste materials will remain on the site.

Decommissioned materials will include:

5.3.1 PV Panels

The Project will coordinate the collection and dispensation of the PV modules to minimize the potential for modules to be discarded prematurely. If there is no possibility for reuse, PV panels will either be returned to the manufacturer for appropriate recycling/disposal or will be transported to a recycling facility where the glass, metal and semiconductor will be recycled. Best management practices at the time of decommissioning shall be utilized.

5.3.2 Racking and Supports

All steel racks and pile-driven supports will be transported offsite and recycled at an approved recycling facility.

5.3.3 Inverters and Transformers

All metal components of the DC to AC inverters will be recycled at an approved recycling facility to the extent practical. Transformers will be transported off-site for reuse. If no reuse option is available, transformers will be recycled or disposed at an approved facility.

5.3.4 Gravel and Aggregates

Any used gravel or aggregates will be tested for contamination prior to removal. All uncontaminated materials will be transported offsite for salvage processing and then reused for



construction fill. In the unlikely event that the used gravel or aggregates are found to be contaminated, these will be disposed at an approved facility.

5.3.5 Concrete

All concrete, including all foundations, will be broken down and transported to an approved landfill or recycling facility.

5.3.6 Cables and Wiring

All copper and/or aluminum wiring and associated electronic equipment (e.g., isolation switches, fuses, metering) will be recycled to the extent practical. Any materials not deemed recyclable will be disposed of at an approved landfill.

5.3.7 Fencing

All fencing materials will be recycled at a metal recycling facility to the extent practical.

5.3.8 Debris and Residual Waste

Any remaining debris or residual waste will be collected, and all recyclable materials will be sorted. All sorted materials will be removed and sent to either an approved recycling or disposal facility.

5.4 Security for Removal of Solar Energy System

Prior to issuance of a building permit, the project will provide a decommissioning letter of credit, bond, or such other security as approved by the Roswell-Chaves County Extraterritorial Authority based on the requirements of the Administrative Approval. The security will be in an amount equal to the cost of performing the decommissioning obligations as determined by an independent engineer. The security provided will be enough to perform the necessary decommissioning obligations for the entire project site. The financial assurance shall be reviewed and renewed every five (5) years to ensure that the amount reflects the current market.

5.5 Abandonment

If the Community Energy Generating Facility does not produce energy for a continuous period of one year or more, it will be presumed to have been abandoned. A Good Cause Exemption from Roswell-Chaves County Extraterritorial Authority may be requested and may not be unreasonably withheld so long as all Real Estate and Personal Property Taxes are in good standing. If the facility is abandoned without obtaining a Good Cause Exemption in writing, it must be decommissioned and removed within 180 days.

5.6 Responsibility for Decommissioning

Chaberton Solar Capitan is responsible for decommissioning of the Community Energy Generating Facility at the end of its useful life under normal business operations. If the facility is deemed to be abandoned by Roswell-Chaves County Extraterritorial Authority and such



designation is not disputed by Chaberton Solar Capitan or its affiliates within 60 days of official notification in writing, the security shall be in place to defray the cost of decommissioning by Roswell-Chaves County Extraterritorial Authority.

5.7 Summary Decommissioning Cost Analysis

DECOMMISSIONING COST ANALYSIS

PROJECT CAPITAN ROSWELL- CHAVES COUNTY, NM

Description of Item	Quantity	Unit	Un	it Cost	Total	Cost (2022)
Disassembly and Disposal						
PV Modules	7,614	EA	\$	6.25	\$	47,588
Inverters (string)	30	EA	\$	25.00	\$	750
Transformers	2	EA	\$	625.00	\$	1,250
Racking Frame (Tracker)	175	EA	\$	125.00	\$	21,875
Racking Posts	1,800	EA	\$	20.00	\$	36,000
LV Wiring	96,000	LF	\$	0.80	\$	76,800
MV Wiring	1,600	LF	\$	0.80	\$	1,280
Ag Fence	4,000	LF	\$	4.70	\$	18,800
Concrete	30	CY	\$	73.00	\$	2,190
Gravel (Access Road)	0	CY	\$	73.00	\$	•
Removal of utility poles	8	EA	\$	2,000.00	\$	16,000
			Subtotal		\$	222,533
Site Restoration						
Re-seeding (includes seed)	2	AC	\$	2,500.00	\$	5,000
Re-grading	100	CY	\$	12.00	\$	1,200
			Sub	ototal	\$	6,200
	1	Demolition Cost			\$	228,733

^{*} Racking Frames were calculated with the assumption that poles are installed at 18 ft distance.

