COCHISE COUNTY Arizona

Development Services Department

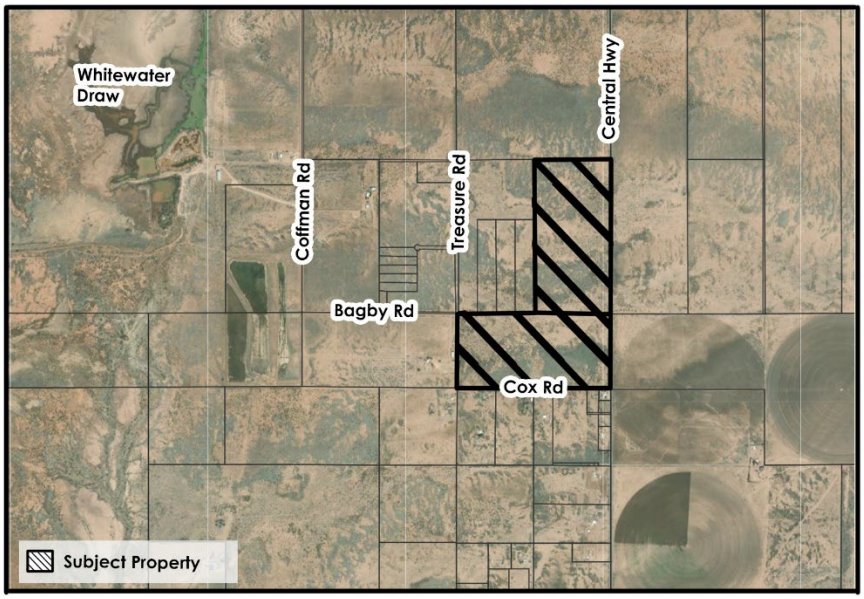
MEMORANDUM

TO: Cochise County Planning and Zoning Commission
FROM: Christine McLachlan, AICP, Planner II
FOR: Daniel Coxworth AICP, Development Services Director
SUBJECT: SU 22-12 (Silicon Ranch Solar), Application for a Special Use Authorization
DATE: May 25, 2022, for the June 8, 2022, Meeting

Docket SU 22-12 (Silicon Ranch Solar)

The applicant, Silicon Ranch Solar, represented by Adrian Markocic, requests a Special Use Authorization to construct, operate, maintain, and decommission a proposed Solar Energy Power Plant and Battery Energy Storage System (BESS) Project on 158.83-acres of land. The property is located in Elfrida, Arizona on APNs 404-11-070 and 405-05-002. The parcels are owned by Sulfur Springs Valley Electric Cooperative and are undeveloped. The installation of a solar energy power plant and BESS is subject to site development standards contained in the Cochise County Zoning Regulations and requires Special Use Authorization from the Planning and Zoning Commission in a rural zoning district.

Figure 1: Request Location



Location
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Planning, Zoning and Building Safety
1415 Melody Lane, Building F
Bisbee, Arizona 85603
520-432-9300
planningandzoning@cochise.az.gov

I. Description of Subject Parcel and Surrounding Uses

Site Size: 158.83 Acres
Zoning: RU-4 (Rural, 4-acres minimum parcel)
Growth Area: Category D
Plan Designation: Rural
Area Plan: None
Existing Uses: Undeveloped/Vacant
Proposed Uses: Same, with attached new addition

Surrounding Zoning and Uses (See Figure X)

Relation to Subject Parcel	Zoning District	Use of Property
North	RU-4	Undeveloped/vacant
South	RU-4	Single Family Residential, low density
East	RU-4	Undeveloped/Vacant
West	RU-4	Single Family Residential, low density

II. Site History

APN 40411070 purchased by SSVEC in 2020
APN 40505002 purchased by SSVEC in 2021
No building permit history

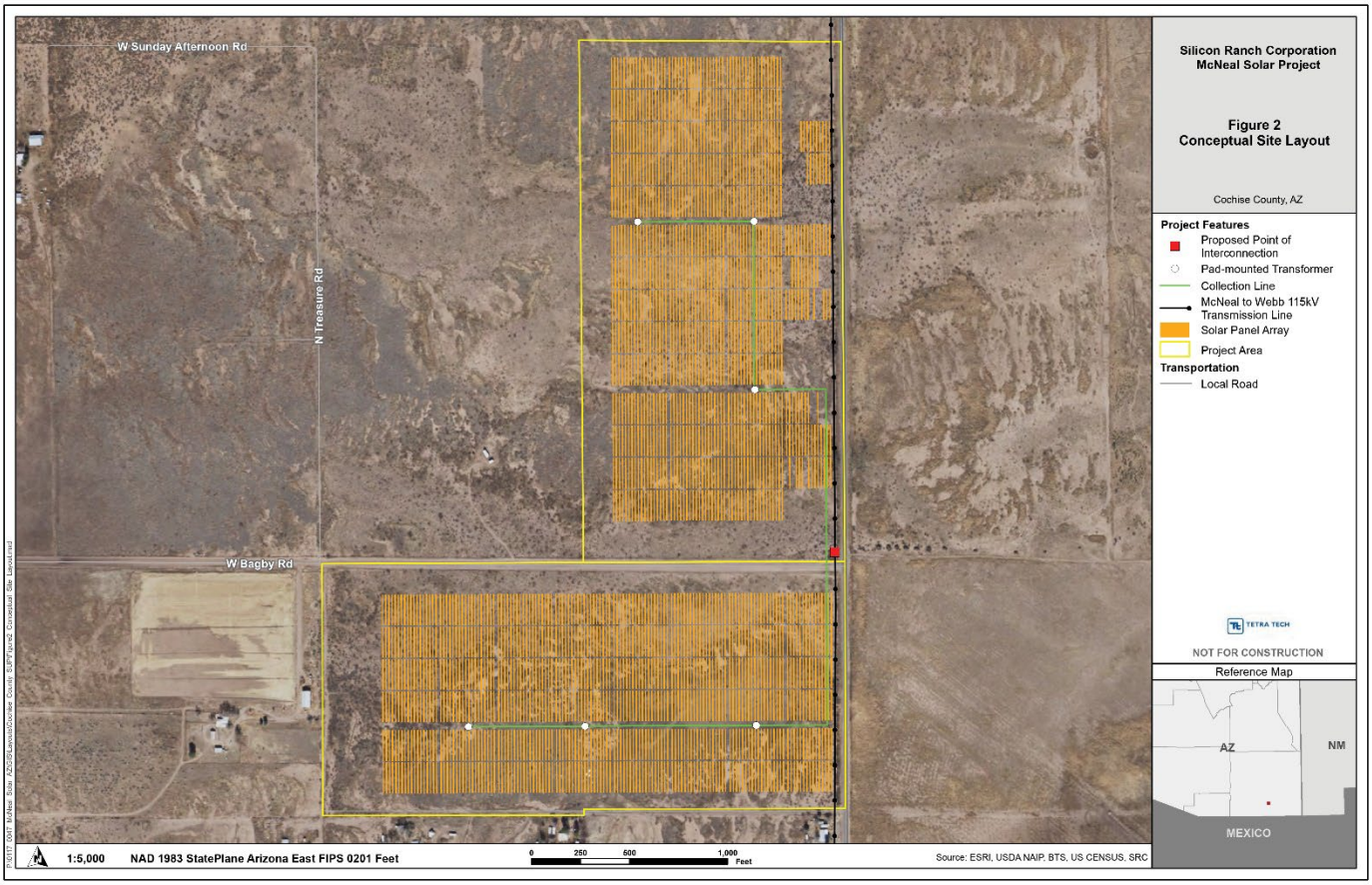
III. Request Description

Silicon Ranch Solar (applicant) is requesting a special use authorization construct, operate, maintain, and decommission a proposed 20 MW Solar Energy Power Plant and Battery Energy Storage System (BESS). As defined by the Zoning Regulations, solar energy plants are a "non-residential, utility-scale system, the purpose of which is to supply solar-generated electricity to off-site consumers." The primary purpose of the power generated is the sale for commercial gain, and it is typically sold to energy companies. Both parcels subject to this request are owned by Sulphur Springs Valley Electric Cooperative (SSVEC). SSVEC is a not for profit, member-owned distribution cooperative providing electricity to more than 51,000 services over some 4,100 miles of energized line. Per the application, the proposed facility will provide enough energy to power nearly 4,000 households served by SSVEC.

Proposed structures will include: solar single-tilt panels, an 80 MW per hour BESS, a project substation, and associated electrical equipment. The facility will be surrounded by a chain-link fence. Paved and unpaved rural roads provide access to the Project site and adjacent properties.

As proposed, the Project would be located on currently vacant, undeveloped land in McNeal, AZ, where indicated on Figure 1: Request Location, on Parcel APNs 404-11-070 and 405-05-002. Both subject parcels are zoned RU-4.

Figure 2: Conceptual Site Layout



IV. ANALYSIS OF IMPACTS – COMPLIANCE WITH SPECIAL USE FACTORS

Section 1716.02 of the Zoning Regulations provides a list of ten factors with which to evaluate Special Use applications. Staff uses these factors to help determine the suitability of a given Special Use request, whether to recommend approval for a Special Use Authorization, as well as to determine what Conditions and/or Modifications may be needed.

With the information provided, ten (10) factors apply to this request. The project, as submitted, fully complies with eight (8) of the factors. The proposal can be brought into compliance with the final factor with recommended conditions.

1. Compliance with Duly Adopted Plans: Complies

The Comprehensive Plan encourages the use of solar energy resources in Element E, Renewable Energy. Goal 1 states: *Support the development of local renewable energy projects and technologies.* This is implemented by several policies including:

a. *Encourage utility-scale renewable energy projects, using the University of Arizona's Renewable Energy Opportunity Analysis and other resources as a guide for determining the suitability of proposals in any one location.*
b. *Encourage renewable energy business development.*

d. Permit flexible site development standards.

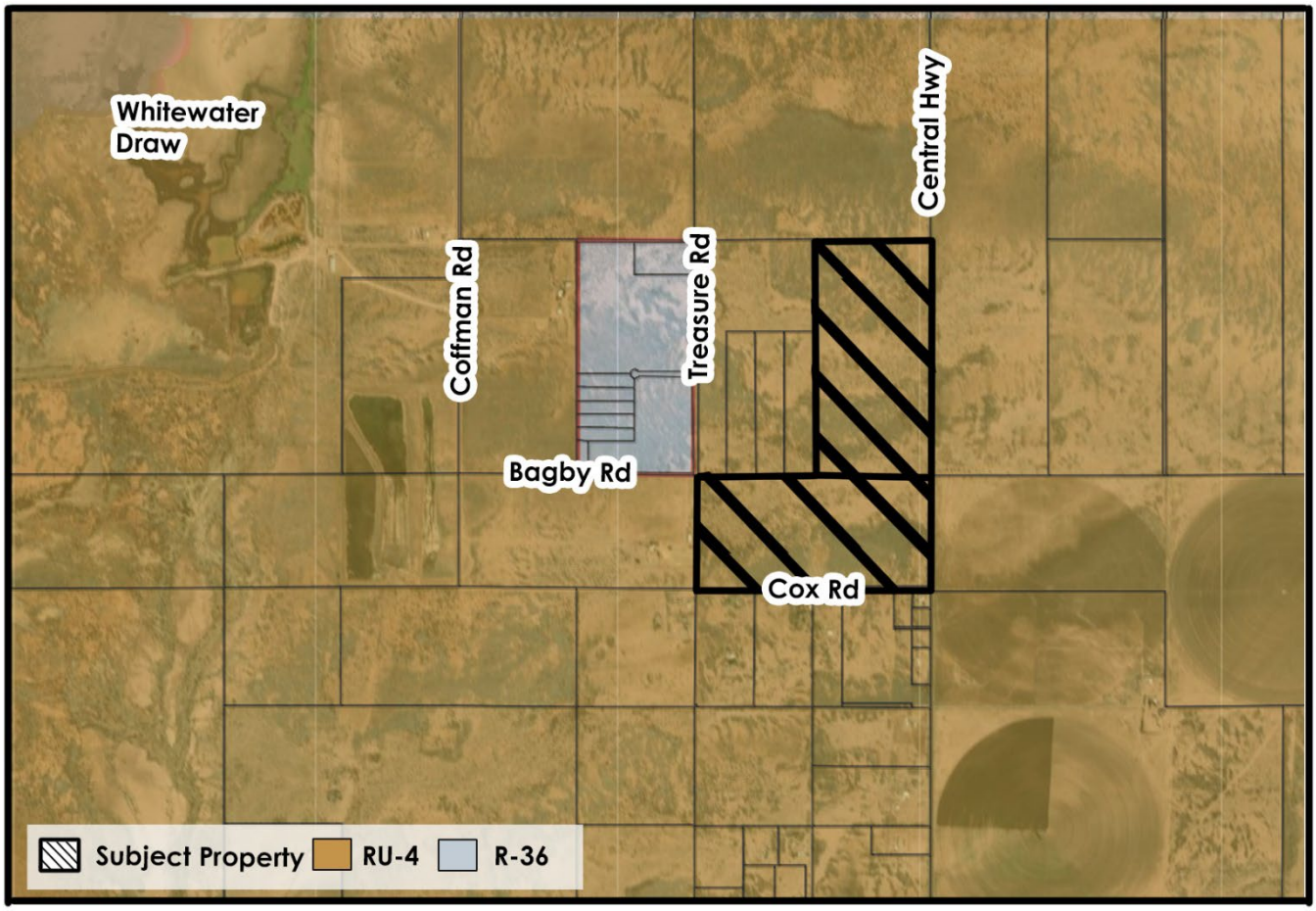
Approval of this project will, in part, implement the County's goals of encouraging renewable energy.

2. Compliance with the Zoning District Purpose Statement: Complies

Section 601.02 of the Zoning Regulations states*: To encourage those types of non-residential and non-agricultural activities which serve local needs or provide a service and are compatible with rural living.*

Electric service to the greater area is provided by SSVEC. The proposed 20MW facility will provide clean energy power to residents, which is a local service need. The surrounding area, which is a mix of low-density residential, public land (Whitewater Draw), and agricultural can continue to exist.

Figure 2: Zoning



Zoning
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3. Development along Major Streets: Complies

This criterion seeks to minimize road cuts that create unsafe traffic conflicts, hazardous traffic congestion and obstruct the functioning of arterials. There are no major throughfares or arterials that serve this area of the County.

Rather, the subject parcels are bounded on the eastern edge by Central Highway, which is a collector road. The Applicant proposes ingress/egress locations along West Bagby Road with potential temporary access from North Central Highway for substation delivery. Both Bagby Road and Central Highway are county-maintained roads. Central Highway is paved while Bagby Road is a dirt road.

The majority of traffic impacts are anticipated to be temporary, during the construction phase of the project. During the estimated 5-6 month construction period, approximately 100 vehicles are anticipated to arrive in the morning and depart in the evening. During operation, which is expected to be 40 years, the Applicant anticipates up to 2 trips per day would occur along primary access roadways for maintenance and repair, as needed.

The Applicant proposes ingress/egress locations along West Bagby Road with potential temporary access from North Central Highway for substation delivery. The limiting of access points and the low traffic demand of the use, once constructed, complies with the requirement to "minimize road cuts that are associated with unsafe traffic conflicts."

4. Traffic Circulation Factors: Complies

The request is consistent with the use and preservation of a collector road as defined within the Comprehensive Plan. Also, because ingress/egress is limited to the non-residential Bagby Road, it will not result in the use of any residential street for non-residential through traffic. An analysis by the County's right-of-way agent indicated that no additional right-of-way dedication was warranted to serve the project site. Consequently, the special use complies with this criterion.

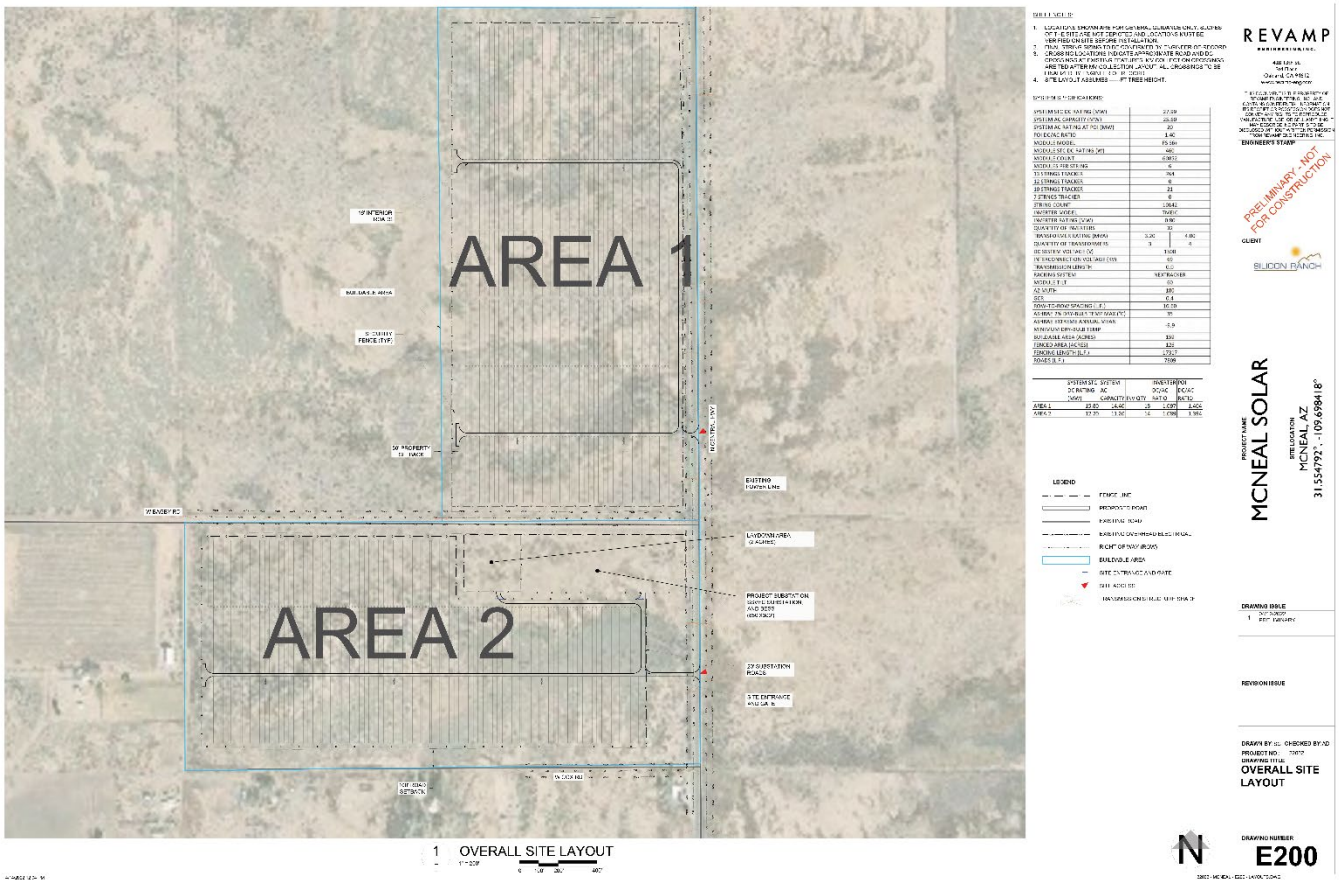
5. Adequate Services and Infrastructure: Complies

As stated in the application, "the primary criteria for determining the location of the power generation facilities include the existence of compatible adjacent and nearby land uses, minimal topographic variability, and the proximity to existing electrical infrastructure, major transportation corridors, utility corridors, and electrical load centers." This site has met the applicant's criteria for determination of an appropriate site. As this is an unmanned site that is intended to collect energy, the requirements for services and infrastructure are minimal.

The proposed use does not require the provision of water or septic as there will be no personnel working on the site. As stated in the application, "Water use during construction would occur over the 10 months needed to construct the Project. Estimated water use during construction would range from 100,000 gallons per month to 200,000 gallons per month (or up to 7.4 acre-feet per year). Much of this water would be used for dust control during construction. The Applicant would obtain water from legally permitted water resources either within the Project or offsite, which would be transported to the site as needed."

The application goes on the state, "During operations, water use would be limited to solar panel washing and operation needs. Although solar panel manufacturers currently do not recommend routine washing of panels, periodic washing could be needed to optimize performance. If needed during operations, the solar modules could be washed several times per year. If panels at the Project are washed, it is anticipated that, on average, 0.5 gallon would be required per module with two washes per module per year assumed. Water would be sourced from legally permitted water resources either within the Project or offsite and would be transported to the site as needed."

Figure 3: Site Layout



6. Significant Site Development Standards: Complies

Site Plan:
In conjunction with the non-residential permit submittal the applicant shall provide a detailed and fully dimensioned site plan. This plan will show all setbacks, panel locations, travel ways, parking location, etc. Unmanned facilities require a minimum of a twelve-foot-wide unimproved driveway and one nine foot by nineteen-foot parking space. In addition, the following may also be required as part of permitting: a floodplain use permit (FEMA zone X), a stormwater pollution prevention plan, clearing permit, a notice to clear native plants. In addition, a drainage analysis will be required.

Setbacks:
Per the section 1824.02 of the zoning regulations, "Setbacks from all property boundaries or edge of road travel ways for Solar Energy Power Plants shall be, at minimum, twice the minimum setback requirement for the respective Zoning District or shall equal the height of the tallest structure, whichever is greater." The proposed solar panels are estimated to be 9-feet in height. The minimum setback within the proposed RU-4 zoning district is 20-feet. This is measured from the closest point on the property line or the edge of road travel way to the structure/use, whichever is closer. Consequently, the minimum required setback from all sides of the bisected subject parcels is 40-feet.

It should be noted that Bagby Road is 60 feet wide and exists as an easement split between the two subject parcels. Consequently, the minimum setback from Bagby Road shall be measured from the edge of the roadway. This area has little to no trees to help screen the facility from the surrounding area. There is some vegetation that currently cover the ground. The case planner recommends a condition that the applicant must establish perennial native vegetation over the entire disturbed soil area at a minimum density of 70 percent of the native vegetative coverage to help mitigate dust.

Lot Coverage:
The Rural Land Use district restricts lot coverage to a maximum of 25%. The applicant calculates that based on the current site plan and a 180 degree tilt of panels over 129 acres of fenced property, lot coverage would be 26.24%. It is commonly thought that solar panels are not an impervious surface since they are elevated, tilted, and allow the stormwater to flow onto the ground. Staff believes that a modification is warranted due to the type of project being proposed and the relatively large percent of the area remaining as pervious surface. Moreover, the case planner recommends conditioning approval on the establish perennial native vegetation over the entire disturbed soil area at a minimum density of 70 percent of the native vegetative coverage to help stabilize the light soil in the area.

Height:
Solar Energy Systems are exempt from height pursuant to Article 20 (Height exemptions), which limits structures to 30 feet in height within rural zoning. At this time is anticipated that the panels should not exceed ten feet in height.

Lighting:
No outdoor lighting is proposed at this time. Any lighting required within future submittals must be shown on the non-residential permit application and will be required to be fully shielded, use (wildlife-friendly) narrow spectrum bulbs, and comply with the Outdoor Lighting Regulations.

7. Public Input: Complies

See Section IV. Public Comment for additional discussion.

8. Hazardous Materials: Not Applicable

There are no proposed hazardous materials. There is a possibility that a battery energy storage system may be incorporated, however the applicant will be required to comply with all standard safety precautions.

9. Off-Site Impacts: Complies with conditions

Major off-site impacts could include temporary construction traffic, dust, noise, and long-term dust, noise and visual impacts/glare. Some impacts are mitigated by the proposed concept plan, while others can be mitigated by conditions.

- Odor – proposed special use will not generate noticeable odors during construction or operation.
- Glare – the axes of the PV panels will be situated in a north-south direction, allowing the panels to rotate 180 degrees, facing east in the morning, and turning west to follow the sun as the day progresses. At the end of each day, the panels re-orient to face east, in preparation for the next morning's sunrise. The Department also understands that the panels will have a non-reflective coating in order to retain maximum solar energy. These design features should minimize glare to a sufficient degree.
- Noise – As stated in the application, "Noise issues associated with renewable energy facilities include construction noise and operations noise. Construction noise is temporary and consists of increased noise levels associated with construction activities and increased traffic on area roadways. Generally, noise generated from construction of renewable energy facilities has maximum noise levels of 80 to 90 A-weighted decibels (dBA) at a distance of 50 feet. Corona (an electrical discharge) from transmission lines can create buzzing, humming, or crackling. Corona effects are expected to be low enough that no objectionable audible noise would result outside the potential right-of-way." In addition, the applicant stated willingness to abide by the following noise limits: "*No noise or vibration (other than normal vehicular traffic) shall be permitted which is discernible on neighboring residential sites, to the unaided human senses for 3-minutes or more duration in any one-hour of the day between the hours of 7:00 a.m. to 7:00 p.m. or of 30-seconds or more duration in any one-hour during the hours of 7:00 p.m. and 7:00 a.m.* (Cochise County 2021).
- Traffic – The project will operate remotely and will not require on-site staff. Two access points, one for each parcel, will be built for access to the site via new gates at each access point shown on the Site Plan. The site access driveways and gates will remain in place for the operational phase of the Project. During operation, the Applicant anticipates that a total of up to 2 trips per day would occur along primary access roadways. The trip generation during operation of the Project would occur for the operational phase of the Project, which is expected to be 40 years.
- Dust - Project construction would likely generate fugitive dust. While the placement of a solar facility will not necessarily increase dust transmission in the long-term, without soils stabilization, dust transmission will also not improve. The applicant shall provide no less than a 40-foot-wide buffer along all perimeters of the site. Native vegetation, where present shall be preserved to the greatest extent possible, rather than grading the entire site. Keeping the existing soil and root structures intact would serve to minimize erosional run-off and maintain biotic diversity within the site. Also, the applicant must establish perennial native

vegetation over the entire disturbed soil area at a minimum density of 70 percent of the native vegetative coverage.

10. Water Conservation: Complies

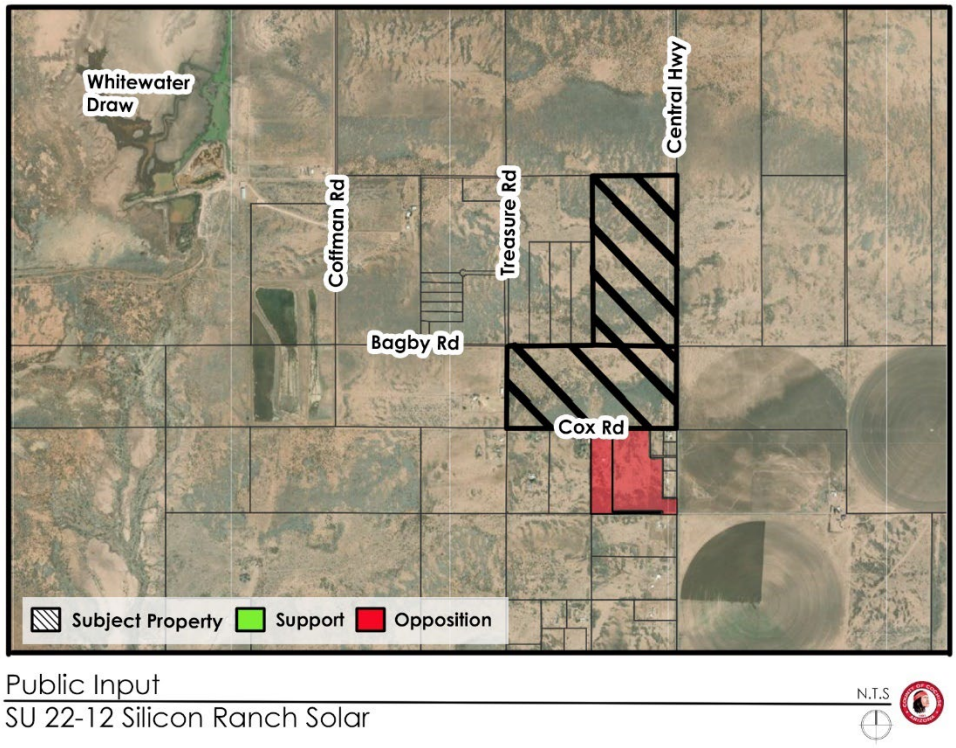
There will be no employees or customers coming to the site. The proposed Solar PV Energy system does not require on-site water. Periodic panel cleaning will be conducted using water trucks delivered to the site and will require a minimal amount of water, particularly when compared to the current allowable use of the property, which is to develop single family houses at a density of one house per 36,000 square feet.

VI. PUBLIC COMMENT

The applicant mailed letters to property owners within 1,000 feet of the property prior to their application submittal.

The case planner mailed letters to the same property owners within 1,000 feet of the subject property, published a legal ad in the *Sierra Vista Herald,* and posted legal notices on the property. To date, staff has received no responses in support and two responses in opposition. Of note, both responses were from the same person, who owned two neighboring properties.

Figure 4: Public input



Public Input
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VII. WAIVERS

Staff recommends waving the lot coverage requirement and approving the plan as presented at approximately 30% lot coverage.

The comprehensive Plan supports the County in being flexible with development standards.

Element E, Renewable Energy. Goal 1 states: *Support the development of local renewable energy projects and technologies.* Policy e. states P*ermit flexible site development standards.*

In addition, while the site will physically be consumed by solar panels these are not permanent improvements and the applicant will be conditioned to remove the project and restore the site to its original condition when the system is decommissioned.

VI. SUMMARY AND CONCLUSION

Authorization to approve the construction of a 20-megawatt photovoltaic (PV) solar power generation facility with associated ancillary facilities on 159 acres of land.

Factors in Favor of Approval

1. The project is consistent with the applicable Policies of the Comprehensive Plan and the Purpose of the Rural Zoning Districts;
2. The project complies with most of the criteria used to evaluate special use requests;
3. The site plan submitted complies with most applicable site development standards and conditions;
4. Once completed the project would generate negligible levels of traffic;
5. At build-out the project would use minimal water; and
6. The project would serve as a source of clean energy, offsetting greenhouse gas emissions and reducing the need to generate electricity from fossil fuels

Factors Against Approval

1. Project construction would likely generate fugitive dust. While the placement of a solar facility will not necessarily increase dust transmission in the long-term, without soils stabilization, dust transmission will also not improve;
2. General compatibility and aesthetics concerns – the surrounding terrain is flat, and the area is undeveloped with the exception of low-density residential and agricultural use. The visibility and massing of the project is of concern;
3. Wildlife and biological concerns – there is potential for bird fatalities or injuries to occur if avian species mistake the solar panels for open water. Water-dependent bird species are theorized to be vulnerable to fatality at some solar facilities due to the potential for them to confuse arrays for bodies of water; and
4. Two Letters of opposition have been received.

VII. RECOMMENDATION

Based on the factors in favor of approval, staff recommends **Approval** of the Special Use request, subject to the following conditions:

1. Within 30-days of approval of the Special Use, the applicant shall provide the County a signed Acceptance of Conditions form and a Waiver of Claims form arising from ARS Section 12-1134. Prior to operation of the Special Use, the applicant shall apply for a building/use permit for the project within 12-months of approval. The building/use permit shall include a site plan in conformance with all applicable site development standards (except as modified) and with Section 1705 of the Zoning Regulations, the completed Special Use permit questionnaire and application, and appropriate fees. A permit must be issued within 18-months of the Special Use approval otherwise, the Special Use may be deemed void upon 30-day notification to the applicant;

2. It is the applicant's responsibility to obtain any additional permits, or meet any additional Conditions, that may apply to the proposed use pursuant to other federal, state, or local laws or regulations;
3. Any changes to the approved Special Use will be considered a Modification to this Special Use and will require review and approval of the Planning and Zoning Commission;
4. Warning signage shall be placed on solar equipment to the extent appropriate. Solar equipment shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar energy project;
5. The applicant shall provide the type of perimeter fencing where indicted on the concept plan. Fencing shall reserve a 6-8-inch gap between the ground surface and bottom of the fence to allow for smaller wildlife species to make use of any habitat within the project boundaries.
6. The applicant shall provide no less than a 40-foot-wide buffer along all property boundaries or from edge of roadways. Native vegetation, where present shall be preserved to the greatest extent possible. Also, the applicant must establish perennial native vegetation over the entire disturbed soil area at a minimum density of seventy (70) percent of the native vegetative coverage;
7. The applicant shall incorporate best management design practices of the AGFD within construction plans, to the greatest extent possible, to minimize potential project impacts to wildlife, this includes leaving the vegetation and soil underneath the panels intact, instead of grading the entire site;
8. Prior to the issuance of a building permit the applicant shall provide a revised decommissioning plan, which shall include the anticipated life of the project, the decommissioning sequence, as well as the projected cost for its removal and site restoration. The owner or operator shall be responsible for the complete physical removal of the project by the date of abandonment included within the decommissioning plan or within 12-months of the project being rendered offline (whichever is sooner). The applicant shall also submit a bond, irrevocable Letter of Credit, or other appropriate surety acceptable to the County to secure the cost of removing the system and restoring the site to its original condition to the extent reasonably possible;

Sample Motion:

Mr. Chairman, I move to approve Docket SU-20-12 (Silicon Ranch Solar), with the Conditions of Approval recommended by staff; the Factors of Approval constituting Findings of Fact.