



AGENDA REGULAR MEETING SAN BENITO COUNTY AIRPORT LAND USE COMMISSION

DATE:	Thursday, April 20, 2023 4:00 P.M.
LOCATION:	County Board of Supervisors Chambers 481 Fourth Street Hollister, CA 95023 (<i>The meeting is open to the public</i>)
COMMISSIONERS:	Bea Gonzales, Chair (County of San Benito) Scott Freels, Vice Chair (City of San Juan Bautista) Mia Casey (City of Hollister) Dolores Morales (City of Hollister) Mindy Sotelo (County of San Benito)
ALTERNATES:	San Benito County: Kollin Kosmicki City of San Juan Bautista: Jacki Morris-Lopez

NOTICE OF PROCEDURES FOR AIRPORT LAND USE COMMITTEE MEETINGS

City of Hollister: Rick Perez

The meeting will be available through Zoom, for those who wish to join or require accommodations.

Members of the public may participate remotely via Zoom at the following link: https://zoom.us/join with the following Webinar ID: 815-7855-0230 and Passcode: 749828

Those participating by phone who would like to make a comment can use the "raise hand" feature by dialing "*9" (star-nine). In order to receive full Zoom experience, please make sure your application is up to date.

Remote Zoom participation for members of the public is provided for convenience only. In the event that the Zoom connection malfunctions for any reason, the COG Board of Directors reserves the right to conduct the meeting without remote access.

Persons who wish to address the Board of Directors must complete a Speaker Card and give it to the Clerk prior to addressing the Board. Those who wish to address the Board on an agenda item will be heard when the Chairperson calls for comments from the audience. Following recognition, persons desiring to speak are requested to advance to the podium and state their name and address. After hearing audience comments, the Public Comment portion of the agenda item will be closed. The opportunity to address the Board of Directors on items of interest not appearing on the agenda will be provided during Section 3. <u>Public Comment.</u>

- 1. CALL TO ORDER 4:00 P.M.
- 2. Verification of Certificate of Posting

3. <u>Public Comment:</u> (Opportunity to address the Board on items of interest <u>not</u> appearing on the agenda. No action may be taken unless provided by Govt. Code Sec. 54954.2. <u>Speakers are limited to 3 minutes.</u>)

ACTION ITEMS:

CONSENT AGENDA:

(These matters shall be considered as a whole and without discussion unless a particular item is removed from the Consent Agenda. <u>Members of the public who wish to speak on a Consent Agenda item must submit a Speaker Card to the Clerk and wait for recognition from the Chairperson.</u> Approval of a consent item means approval as recommended on the Staff Report.)

- 4. APPROVE ALUC Draft Action Regular Meeting Minutes Dated January 19, 2023 Gomez
- 5. APPROVE ALUC Draft Action Regular Meeting Minutes Dated February 16, 2023 Gomez
- **6.** FIND Project Associated with Assessor Parcel Numbers 051-110-023-000, located in the City of Hollister, CONSISTENT with the 2012 Hollister Municipal Airport Land Use Compatibility Plan Lezama

Adjourn to ALUC Meeting on May 18, 2023. Agenda deadline is May 2, 2023, at 12:00 p.m.

In compliance with the Americans with Disabilities Act (ADA), if requested, the Agenda can be made available in appropriate alternative formats to persons with a disability. If an individual wishes to request an alternative agenda format, please contact the Clerk of the Council four (4) days prior to the meeting at (831) 637-7665. The Airport Land Use Commission Board of Directors meeting facility is accessible to persons with disabilities. If you need special assistance to participate in this meeting, please contact the Clerk of the Board's office at (831) 637-7665 at least 48 hours before the meeting to enable the Council of Governments to make reasonable arrangements to ensure accessibility.

Written Comments & Email Public Comment

Members of the public may submit comments via email by 5:00 PM. on the Wednesday prior to the Board meeting to the Secretary at monica@sanbenitocog.org, regardless of whether the matter is on the agenda. Every effort will be made to provide Board Members with your comments before the agenda item is heard.

Public Comment Guidelines

- 1. If participating on Zoom: once you are selected, you will hear that you have been unmuted. At this time, state your first name, last name, and county you reside in for the record.
- 2. The Council of Governments Board welcomes your comments.
- 3. Each individual speaker will be limited to a presentation total of <u>three (3) minutes.</u>
- 4. Please keep your comments brief, to the point, and do not repeat prior testimony, so that as many people as possible can be heard. Your cooperation is appreciated.

If you have questions, contact the Council of Governments, and leave a message at (831) 637-7665 x. 201, or email monica@sanbenitocog.org.

CERTIFICATE OF POSTING

Pursuant to Government Code Section #54954.2(a) the Meeting Agenda for the Airport Land Use Commission on **April 20, 2023** at **4:00 P.M.** was posted at the following locations freely accessible to the public:

The front entrance of the Old San Benito County Courthouse, Monterey Street, Hollister, CA 95023, and the Council of Governments Office, 330 Tres Pinos Rd., Ste. C7, Hollister, CA 95023 at the following date and time:

On the 14th day of April 2023, on or before 5:00 P.M.

The meeting agenda was also posted on the Council of San Benito County Governments website, www.sanbenitocog.org, under Meetings, ALUC, Meeting Schedule

I, Monica Gomez, swear under penalty of perjury that the foregoing is true and correct.

BY:

Monica Gomez, Secretary II Council of San Benito County Governments

Agenda Item : 4___

San Benito County AIRPORT LAND USE COMMISSION REGULAR MEETING Board of Supervisors Chambers 481 Fourth Street, Hollister, CA 95023 & Zoom Platform

January 19, 2023 4:00 P.M.

MINUTES

MEMBERS PRESENT:

Chair Pro Tempore Mindy Sotelo, Director Bea Gonzales, and Director Dolores Morales

MEMBERS ABSENT:

Director Mia Casey, Director Scott Freels

STAFF PRESENT:

Executive Director; Binu Abraham, Administrative Services Specialist; Norma Rivera, Transportation Planning Manager; Veronica Lezama, Transportation Planner; Regina Valentine, Office Assistant; Griselda Arevalo, Deputy County Counsel; Shirley Murphy

CALL TO ORDER:

Executive Director Binu Abraham called the meeting to order at 5:20 p.m.

A. CONTINUE ALUC Chair and Vice Chairperson Appointments to the February 16, 2023 Board Meeting and **ELECT** Chair Pro Tempore to Conduct the January 19, 2023 meeting.

Motion made to continue ALUC Chair and Vice Chairperson appointments to the February 16, 2023 meeting and Elect Director Sotelo as Chair Pro Tempore to conduct the January 19, 2023 meeting.

Dolores Morales	Second: Director Bea Gonzales
3/0	
Sotelo, Gonzales, Mora	les
None	
None	
None	
Casey, Freels	
	Dolores Morales 3/0 Sotelo, Gonzales, Mora None None Casey, Freels

B. CERTIFICATE OF POSTING

Motion made to acknowledge Certificate of Posting:Motion: Director Dolores MoralesSecond: Director Bea GonzalesMotion carried:3/0Yes:Sotelo, Gonzales, Morales

No: None Recused: None Abstention: None Absent: Casey, Freels

C. NOTICE OF TEMPORARY PROCEDURES FOR AIRPORT LAND USE COMMISSION MEETINGS

Pursuant to California Governor Gavin Newsom's Executive Order N-29-20 issued on March 17, 2020, relating to the convening of public meetings in response to the COVID-19 pandemic. Additionally, members of the ALUC can attend the meeting via teleconference and to participate in the meeting to the same extent as if they were present.

Chair Pro Tempore Sotelo reminded members of the public that an overview of temporary procedures (Zoom etiquette) for ALUC meetings was attached to the agenda.

D. PUBLIC COMMENT: None

CONSENT AGENDA:

- 1. Adopt Resolution 23-01 Authorizing Teleconferencing Options for the Airport Land Use Commission Meetings for the Period of January 20, 2023, through February 19, 2023 Rivera
- 2. Approve Airport Land Use Commission Draft Meeting Minutes Dated November 17, 2022 Gomez

There was no public comment on the Consent Agenda.

Motion made to approve the Consent Agenda:

Motion: Director Dolores MoralesSecond: Director Bea GonzalesMotion carried:3/0Yes:Sotelo, Gonzales, MoralesNo:NoneRecused:NoneAbstention:NoneAbsent:Casey, Freels

ADJOURNMENT:

There being no further business to discuss, Director Morales motioned to adjourn at 5:23 p.m. Motion seconded by Director Gonzales.

Motion carried:	3/0
Yes:	Sotelo, Gonzales, Morales
No:	None
Recused:	None
Abstention:	None
Absent:	Casey, Freels

ADJOURN TO ALUC MEETING FEBRUARY 16, 2023 AT 4:00 P.M.

Agenda Item :<u>5</u>

San Benito County AIRPORT LAND USE COMMISSION REGULAR MEETING Board of Supervisors Chambers 481 Fourth Street, Hollister, CA 95023 & Zoom Platform February 16, 2023 4:00 P.M.

ACTION MINUTES

MEMBERS PRESENT:

Chair Bea Gonzales, Vice-Chair Scott Freels, Director Mia Casey, Director Mindy Sotelo, Director Dolores Morales (via-Zoom)

STAFF PRESENT:

Executive Director; Binu Abraham, Administrative Services Specialist; Norma Rivera, Transportation Planning Manager; Veronica Lezama, Transportation Planner; Regina Valentine, Office Assistant; Griselda Arevalo, Secretary II; Monica Gomez, Deputy County Counsel; Shirley Murphy

1. CALL TO ORDER:

Chair Gonzales called the meeting to order at 5:56 p.m.

2. CERTIFICATE OF POSTING

Motion made to acknowledge Certificate of Posting:

Motion: Director Scott Freels		Second: Director Mia Casey
Motion carried:	5/0	
Yes:	Gonzales, Casey,	Morales, Freels, Sotelo
No:	None	
Recused:	None	
Abstention:	None	
Absent:	None	

3. NOTICE OF TEMPORARY PROCEDURES FOR AIRPORT LAND USE COMMISSION MEETINGS

Pursuant to California Governor Gavin Newsom's Executive Order N-29-20 issued on March 17, 2020, relating to the convening of public meetings in response to the COVID-19 pandemic. Additionally, members of the ALUC can attend the meeting via teleconference and to participate in the meeting to the same extent as if they were present.

Secretary Gomez reminded members of the public that an overview of temporary procedures (Zoom etiquette) for ALUC meetings was attached to the agenda.

4. PUBLIC COMMENT: None

REGULAR AGENDA:

ACTION ITEMS:

5. HOLD Nomination and Election of ALUC Chair and Vice Chairperson for the 2023 Meeting Calendar.

Motion made to Elect Bea Gonzales as ALUC Chairperson for 2023:

Motion: Director Mindy Sotelo		Second: Director Scott Freels
Motion carried:	5/0	
Yes:	Gonzales, Casey,	Morales, Freels, Sotelo
No:	None	
Recused:	None	
Abstention:	None	
Absent:	None	

Motion made to Elect Scott Freels as ALUC Vice Chairperson for 2023:Motion: Director Mindy SoteloSecond: Director Scott FreelsMotion carried:5/0Yes:Gonzales, Casey, Morales, Freels, SoteloNo:NoneRecused:NoneAbstention:NoneAbsent:None

CONSENT AGENDA:

(These matters shall be considered as a whole and without discussion unless a particular item is removed from the Consent Agenda. <u>Members of the public who wish to speak on a Consent Agenda item must submit a Speaker Card to the Clerk and wait for recognition from the Chairperson.</u> Approval of a consent item means approval as recommended on the Staff Report.)

6. Adopt Resolution 23-02 Authorizing Teleconferencing Options for the Airport Land Use Commission Meetings for the Period of February 16, 2023, through February 28, 2023 – Rivera

There was no public comment on the Consent Agenda.

Motion made to approve the Consent Agenda:

Motion: Director Mindy Sotelo		Second: Director Mia Casey
Motion carried:	5/0	
Yes:	Gonzales, Casey,	Morales, Freels, Sotelo
No:	None	
Recused:	None	
Abstention:	None	
Absent:	None	

ADJOURNMENT:

There being no further business to discuss, Director Sotelo motioned to adjourn at 5:58 p.m. Motion seconded by Director Casey.

Motion carried: 5/0

Yes: Gonzales, Casey, Morales, Freels, Sotelo No: None

Recused: None

Abstention: None

Absent: None

ADJOURN TO ALUC MEETING MARCH 16, 2023 AT 4:00 P.M.



STAFF REPORT

Consent Prepared By: Veronica Lezama, Transportation Planning Manager **Subject:** Consistency Determination Agenda Item No. 6 Approved By: Binu Abraham, Executive Director

Meeting Date: April 20, 2023

Recommendation:

Find Project Associated with Assessor Parcel Numbers 051-110-023-000, located in the City of Hollister, Consistent with the 2012 Hollister Municipal Airport Land Use Compatibility Plan.

Summary:

The ALUC application associated with assessor parcel number 051-110-023-000 (Attachment 1) was reviewed in accordance with the adopted 2012 Hollister Municipal Airport Land Use Compatibility Plan.

Background/ Discussion:

ALUC received a referral development application from the City of Hollister for a Consistency Determination. Land use actions proposed within the Hollister Municipal Airport Influence Area (Attachment 2) are subject to ALUC review to determine consistency with the Hollister Municipal Airport Land Use Compatibility Plan. The purpose of the Compatibility Plan is to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards.

The Compatibility Plan requires that Major Land Use Actions proposed within Review Area 1 (Attachment 2) be submitted to the Airport Land Use Commission for review, including any project having the potential to create:

- Glare in the eyes of pilots of aircraft using the airport;
- Electrical interference with radio communications or navigational signals;
- Lighting which could be mistaken for airport lighting; and
- Impaired visibility near the airport.

The project before the Airport Land Use Commission is classified as a Major Land Use Action due to its potential to create glare in the eyes of pilots of aircraft using the airport.

Project Description:

The applicant is proposing to mount 205 commercial photovoltaic modules, solar system, on an existing building roof located on San Felipe Road, in the City of Hollister (Attachment 3).

In the course of a project review, the Airport Land Use Commission considers a number of Compatibility Plan policies including *Noise, Safety, Airspace Protection,* and *Overflight*. An analysis of each of the compatibility factors is discussed below.

Noise Policy 3.2.

The Noise Policy objective is to avoid the establishment of noise-sensitive land uses in the portions of airport environs that are exposed to significant levels of aircraft noise.

The solar arrays are proposed outside of the noise contours (Attachment 4) and therefore consistent with the Noise Policy.

Safety Policy 3.3.

The Safety Policy objective is to minimize the risks associated with an off-airport aircraft accident or emergency landing. The policy focuses on reducing the potential consequences of such events by limiting sensitive land uses (i.e. residential) and intensities of nonresidential uses (i.e. commercial, industrial, etc.). This policy is defined in terms of the geographic distribution of where accidents are most likely to occur based on the six safety zones.

The solar modules are proposed within Safety Zone 6 (Attachment 5). The solar project does not propose a new building nor an increase in occupants and therefore is consistent with the Safety Policy.

Airspace Protection Policy 3.4.

The Airspace Protection Policy seeks to prevent creation of land use features that can be hazards to the airspace required by aircraft in flight and have the potential for causing an aircraft accident to occur. In evaluating the airspace protection compatibility of proposed development near Hollister Municipal Airport, the following three categories of hazards to airspace shall be considered:

- (a) The height of structures and other objects situated near the airport are a primary determinant of physical hazards to the airport airspace. The applicant is proposing to mount solar panels on an existing building, therefore there are no height concerns or hazards to navigable airspace.
- (b) Land use features that have the potential to attract birds and certain other wildlife to the airport area are also to be evaluated as a form of physical hazards (FAA Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports*). The applicant is not proposing wildlife attractants, therefore there are no concerns or hazards to navigable airspace.

(c) Visual hazards of concern include certain types of lights, sources of glare, and sources of dust,

steam, or smoke. This category of hazard is further analyzed below as the project has the potential to cause glare to the eyes of pilots in flight.

The applicant is proposing to mount 205 commercial photovoltaic modules, Figure 1, measuring 4,018.4 array area square feet on an existing building roof located on San Felipe Road.



Figure 1

Solar panels are a source of glare, which occurs when an observer sees a direct reflection of the sun caused by a specular (mirror-like) reflection from the surface, which may cause hazards to aircraft in flight. It is the role of ALUC to determine of the proposed use poses a hazard to navigable airspace.

ALUC requested that the applicant submit a Glare Analysis Report as part of their development application to analyze the impacts of glare from the solar modules (Attachment 6). The report indicates that some glare will occur depending on the time of day, time of year, and angle of the solar modules. Exposure to glare, as defined in the report, is summarized below.



The report concluded that low "green" glare would occur throughout the year. "Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time. Based on FAA Policy for FAA Review of Solar Energy System Projects on Federally Obligated Airports, "low potential for temporary after-image" ("green" level)¹ is an acceptable level

¹ "Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

of glare on final approach (within 2 miles from end of runway) for solar facilities located on airport property.

Furthermore, the Federal Aviation Administration's (FAA) Technical Guidance for Evaluating Selected Solar Technologies on Airports states that "in comparison with Concentrated Solar Power (CSP) systems, Solar Photovoltaic are more compatible with airport land uses because of the low-profile module design...and are designed to absorb sunlight (rather than reflect it), <u>minimizing</u> potential impacts to glare." The applicant is proposing solar photovoltaic modules, which is a low-profile module design.

ALUC concludes that the solar arrays project does not provide a significant source of glare to navigable airspace and therefore is consistent with the Safety Policy.

(d) Electronic hazards are ones that may cause interference with aircraft communications or navigation. The applicant is not proposing causes of interference with aircraft communications, therefore there are no concerns or hazards to navigable airspace.

Overflight Policy 3.5.

The Overflight Compatibility Policy is intended to help notify people (i.e., real estate disclosures) about the presence of aircraft overflight near airports so that they can make informed decisions regarding acquisition or lease of property in the affected areas. Overflight compatibility is particularly important with regard to residential land uses. The Routine Overflight Zone policy establishes the form and requirements for notification about airport proximity and aircraft overflights to be given in conjunction with local agency approval of new development and with certain real estate transactions involving existing development.

The applicant is not proposing any new structures, and therefore Consistent with the Overflight Policy.

In summary, the project was found to be consistent and in compliance with the 2012 Hollister Municipal Airport Land Use Compatibility Plan. As such, ALUC staff recommends that the San Benito Airport Land Use Commission find the project consistent with the Compatibility Plan.

Financial Impact:

There are no financial impact.

Attachments:

- 1. Project Location Map
- 2. Compatibility Policy Map: Airport Influence Area
- 3. Project Site Map
- 4. Noise Contour Map
- 5. Safety Zones Map
- 6. ForgeSolar Glare Analysis Report

Attachment 1



ATTACHMENT 2

POLICIES CHAPTER 2



ATTACHMENT 3



GENERAL NOTES		SYSTEM INFORMATION	
GENERAL NOTES 1. MODULES ARE LISTED UNDER UL 1703 AND CONFORM TO THE STANDARDS. 2. INVERTERS ARE LISTED UNDER UL 1741 AND CONFORM TO THE STANDARDS. 3. DRAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL ARRANGEMENT OF THE PV SYSTEM AND THE ACTUAL STITE CONDITION MIGHT VARY. 4. WORTING CLEARANCES AROUND THE NEW IV ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH CEE 119.26. 5. ALL GROUND WIDING CONNECTED TO THE MAIN SERVICE GROUNDING IN MAIN SERVICE PANEL/ SERVICE EQUIPMENT. 6. ALL CONDUCTORS SHALL BE 600V, 75°C STANDARD COPPER UNLESS OTHERWISE NOTED. 7. WHEN REQUIRED, A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSMA REGULATIONS. 8. THE SYSTEM WILL NOT BE INTERCONNECTED BY THE CONTRACTOR UNTIL APPROVAL FROM THE LOCAL JURISDICTION ARD/OR THE UTILITY. 9. ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVEN OFENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILIDING CONSTRUCTION WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREES (WHES OR SIGNS. 10. PY ARRAY COMBINER/JUNCTION BOX PROVIDES TRANSITION FROM ARRAY WIRING TO CONDUCT WIBLING. 11. THE INSTALLATION WILL PROVIDE VERIFICATION AT TIME OF INSPECTION THAT 2019 CRC SECTIONS 34/315 (SMORE AND CO DEFECTORS) ARE IN COMPLIANCE. 12. WHALLS ROOM ARE FIRE-RESISTING FROM AT TIME OF INSPECTION THAT 2019 CRC SECTIONS 34/4315 (SMORE AND CO DEFECTORS) A	INTERCONNECTION NOTES: 1. POINT OF INTERCONNECTION WILL BE A LINE SIDE TAP ON THE CUSTOMER SIDE AND WILLBE IN ACCORDANCE WITH (CIC 690.13 (A)-(D), [CEC 690.15 (A)-(D)) & [CEC 705.12 (A)-(B)]. 2. THE SUM OF THE UTLITY OCHO AND INVERTER CONTINUOUS INPUT MAY NOT EXCEED 120% OF BUSBAR RATING [CEC705.12(D)(2)(3)]. 3. WHEN SUM OF THE UP SOURCES EQUALS > 100% OF BUSBAR ATTING, PV DEDICATED BACKFED BREAKERS NUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTLITY SOURCE OCPD [CEC 705.12(D)(2)(2)(3)]. 4. PV OUTPUT COMINER MARE, TOTAL RATING OF ALL OVER CURRENT DEVICES SHALL NOT EXCEED AMPACTLY OF BUSBAR, HOWEVER, THE COMBINED OVER CURRENT DEVICE MAY BE EXCLUDED ACCORDING TO CEC 705.12 (D)(2)(3)(C). GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVISES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SHICH USE. 1. GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVISES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SHICH USE. 2. PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO CEC 690.43 AND MINIMUM CEC TABLE 250.122. 3. METAL PARTS OF MODULE FRAMES, MOULLE RACKING, AND ENCLOSURES CONSIDERED FRUIDED IN ACCORD WITH 250.134 AND 250.136(A). 4. EQUIPMENT GROUNDING 250.136(A). 5. EACH MODULE WILL BE ORDUNDES SHALL BE SIZED ACCORDING TO CEC 690.45 AND MICRO INVERTER MANUFACTURES SHALL BE BY THE AND APPROVES BAND MICRO INVERTER MANUFACTURES.	DC SYSTEM SIZE AC SYSTEM SIZE CEC AC SYSTEM SIZE MODULES: (205)Q CELLS Q.PEAK BRANCH DETALLS: IS BRANCH OF 13 MIC I BRANCH OF 13 MIC I BRANCH OF 10 MICR CONTRACTO SOLAR G 405 MAIN ST 319, V 631. PV CONTRACTO	1 74825W 1 59450W 2 68660W DUO BLK-GID+ / AC 365W RO INVERTERS(13 MODULES) R INFORMATION REEN EARTH WATSONVILLE CA 95076 1045901 726.4280 TOR SIGNATURE MARGON
CONDUCTOR TERMINATIONS IN PANELS, IN A DE-ENERGIZED CONDITION.	 URLAMENTATION AND APPLICED BY THE AND, BY WELLSD AND HOLD OND, HOUSE, HOUSE MOST HUST LED AT THE SPECIFIED GROUNDING LUG HOLDS FRE THE WANUFACTURERS' INSTALLATION REQUIREMENTS. THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTORS, IF INSULATED, SHALL BE COLCRED GREEN OR MARKED GREEN IF #4 AWG OR LAGGER (ECC 250.119) THE GROUNDING ELECTRODE SYSTEM COMPLES WITH CEC 690.47 AND NEC 250.50 THROUGH 250.106. GROUND-FAILAT DETECTION SHALL COMPLES WITH CEC 690.51 IN GENERAL AND CEC (60.5(A)) SPECIFICALLY. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE," TYPICALLY THE UMPER TERMINALS. DISCONNECTING SWITCHES SHALL DO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH. ALL OOPD RATINGS AND TYPES SPECIFIED ACCORDING TO CEC 690.8, 640.9, AID 240. MICKOP RATINGS AND TYPES SPECIFIED ACCORDING TO CEC 690.8, 640.9, AID 240. MICKOP RATINGS AND TYPES SPECIFIED ACCORDING TO CEC 690.8, 640.9, AID 240. MICKO DIVERTER BRANCHES CONNECTED TO S SINGLE IRSEARER OR GROUNDED FROMED THE AVOID BL A VISIBLE-BREAK SWITCH. MICKO DIVERTER BRANCHES CONNECTED TO SINGLE INFERMENT ON ELL COCABLE, AND BE A VISIBLE-BREAK SWITCH. MICKO DIVERTER BRANCHES CONNECTED TO SINGLE AND CEC 690.8, 640.9, AID 240. MICKO DIVERTER BRANCHES CONNECTED TO SINGLE AS SINGLE BREAKER OR GROUNDED FORSES IN ACCORDANCE WITH CEC 110.3(B). IF REQUIRED BY AHO, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDANCE WITH CEC 110.3(B). IF REQUIRED BY AHO, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDANCE WITH CEC 110.3(B). IF REQUIRED BY AHO, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDANCE WITH CEC 110.3(B). IF REQUIRED BY AHO, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDANCE WITH CEC 600.11 AND ULL699B. 	RE FEB CITY OF FLANNI	CEIVED 0 7 2023 FHOLLISTER NG DIVISION
 RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLANT INSTALLATION MANUAL TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RALS MUST ALSO EXTEND A MINIPALIM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARAY, ACCORDING TO RAIL MANUFACTURERS INSTRUCTIONS. JUNCTION BOX WILL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. IF ROOF-PENETRATING TYPE, IT SHALL BE FLASHED & SEALED PER LOCAL REQUIREMENTS. ROOFOP PENETRATIONS FOR PV RACEWAY WILL BE COMPLETED AND SEALED WITH APPROVED CHEMICAL SEALANT. ALL PV RELATED ROOF ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER OR AS RECOOMENDED BY STRUCTURAL ENGINEER. WHEN FOSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGEGEED AMONGST THE ROOF FRAMING MEMORIES. 		CUSTOMER 1133 SAN FELIPI 36%87/29.8 APN: APU: COUNTY OF SAU PROJECT NUMBER:	R INFORMATION RD, HOLLISTER, CA 95023 TM 121*40701.2*W 051-110-023-000 N BENITO
 WIRING & CONDUIT NOTES: ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS. CONDUCTORS SIZE MACCORDING TO CEC 690.8, CEC 690.7. CO WIRING LIMITED TO MODULE FOOTPRINT. MICRO INVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY WITH SUITABLE WIRING CLIPS. AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK PHASE B OR L2- RED, OR OTHER CONVENTION IT THREE PHASE PHASE C OR L2- BLUE, YELLOW, ORANGE**, OR OTHER CONVENTION NEUTRAL- WHITE OR GREY IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE (CEC 110.15). 		GENE DESIGNER/OHEORED IF XOSE SOLORID SCALE:AS NOTED	PAPER SIZE: 30%52"



ATTACHMENT 4







FORGESOLAR GLARE ANALYSIS

Project: Community FoodBank of San Benito - Roof Top Photovoltaic Array

Installation of 74.825kWDC roof mounted PV system with no battery bank.

Site configuration: 1133 San Felipe RD

Client: 1133 San Felipe Rd, Hollister CA

Site description: Installation of 74.825kWDC roof mounted PV system with no battery bank.

Created 10 Apr, 2023 Updated 10 Apr, 2023 Time-step 1 minute Timezone offset UTC-8 Site ID 87961.15533 Category 10 to 100 kW (1,000 kW / 8 acre limit) DNI peaks at 1,000.0 W/m^2 Ocular transmission coefficient 0.5 Pupil diameter 0.002 m Eye focal length 0.017 m Sun subtended angle 9.3 mrad PV analysis methodology V2



Summary of Results Glare with low potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Gr	een Glare	Annual Ye	low Glare	Energy
	0	0	min	hr	min	hr	kWh
Roof Mounted Photovoltaic Solar Array	18.0	183.0	4,273	71.2	0	0.0	172,100.0

Total annual glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Gr	Annual Green Glare		llow Glare
	min	hr	min	hr
Route 1	0	0.0	0	0.0
FP 13	0	0.0	0	0.0
FP24	0	0.0	0	0.0
FP31	4,273	71.2	0	0.0
FP 6	0	0.0	0	0.0
1-ATCT	0	0.0	0	0.0



Component Data

PV Arrays

Name: Roof Mounted Photovoltaic Solar Array Axis tracking: Fixed (no rotation) Tilt: 18.0° Orientation: 183.0° Rated power: 74.825 kW Panel material: Smooth glass without AR coating Reflectivity: Vary with sun Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	36.872894	-121.399801	253.42	16.16	269.58
2	36.872973	-121.399798	253.30	16.16	269.46
3	36.872993	-121.400332	253.56	16.16	269.72
4	36.872912	-121.400334	253.55	16.16	269.71

Route Receptors

Name: Route 1 Path type: Two-way Observer view angle: 50.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	36.869346	-121.401081	262.09	5.00	267.09
2	36.871204	-121.400979	258.45	5.00	263.45
3	36.872986	-121.400855	255.05	5.00	260.05
4	36.874958	-121.400716	251.12	5.00	256.12
5	36.876917	-121.400611	247.26	5.00	252.26
6	36.879307	-121.400445	243.69	5.00	248.69
7	36.881629	-121.400282	240.56	5.00	245.56
8	36.884113	-121.400119	237.37	5.00	242.37
9	36.885566	-121.400069	235.68	5.00	240.68
10	36.886171	-121.400107	234.96	5.00	239.96
11	36.887341	-121.400278	232.68	5.00	237.68



Flight Path Receptors

Threshold heig Direction: 142 Glide slope: 3	ght : 50 ft .0° 0°		ingle		
Pilot view rest	ricted? Yes		a al		
Vertical view: 30.0°					
Azimuthal viev	w : 50.0°		Google	Imagery ©2023 AMBAG, Max	ar Technologies, USDA/FPAC/C
Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	36.901134	-121.417763	203.08	50.00	253.08
Two milo	36 923917	-121 440049	174 91	631 60	806 51

Name: FP24 Description: Threshold heig Direction: 252. Glide slope: 3. Pilot view rest Vertical view: 3 Azimuthal view	ght: 50 ft .0° ricted? Yes 30.0° w: 50.0°		Google	B Integry @2023 AMBAG, Max	Kr Technologies, USDA/FPAC/GEO
Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	36.892471	-121.403016	222.83	50.00	272.83
Two-mile	36.901424	-121.368601	227.02	599.24	826.26



Name: FP31 Description: Threshold height: 50 ft Direction: 321.0° Glide slope: 3.0° Pilot view restricted? Yes Vertical view: 30.0° Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	36.887851	-121.404791	229.62	50.00	279.62
Two-mile	36.865382	-121.382015	272.43	560.62	833.05

Name: FP 6
Description:
Threshold height: 50 ft
Direction: 72.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	36.889719	-121.413455	223.99	50.00	273.99
Two-mile	36.880789	-121.447878	265.69	561.72	827.41



Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
1-ATCT	1	36.887078	-121.401204	231.34	105.00

Map image of 1-ATCT





PV Array	Tilt	Orient	Annual Gr	een Glare	Annual Ye	low Glare	Energy
	٥	0	min	hr	min	hr	kWh
Roof Mounted Photovoltaic Solar Array	18.0	183.0	4,273	71.2	0	0.0	172,100.0

Summary of Results Glare with low potential for temporary after-image predicted

Total annual glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare		
	min	hr	min	hr	
Route 1	0	0.0	0	0.0	
FP 13	0	0.0	0	0.0	
FP24	0	0.0	0	0.0	
FP31	4,273	71.2	0	0.0	
FP 6	0	0.0	0	0.0	
1-ATCT	0	0.0	0	0.0	

PV: Roof Mounted Photovoltaic Solar Array low potential for temporary after-image

Receptor results ordered by category of glare

Receptor	Annual Gr	een Glare	Annual Yellow Glare		
	min	hr	min	hr	
Route 1	0	0.0	0	0.0	
FP31	4,273	71.2	0	0.0	
FP 13	0	0.0	0	0.0	
FP24	0	0.0	0	0.0	
FP 6	0	0.0	0	0.0	
1-ATCT	0	0.0	0	0.0	

Roof Mounted Photovoltaic

Solar Array and Route 1

Receptor type: Route No glare found



Roof Mounted Photovoltaic Solar Array and FP31

Receptor type: 2-mile Flight Path 0 minutes of yellow glare 4,273 minutes of green glare







Roof Mounted Photovoltaic

Solar Array and FP 13

Receptor type: 2-mile Flight Path **No glare found**

Roof Mounted Photovoltaic

Solar Array and FP24

Receptor type: 2-mile Flight Path **No glare found**

Roof Mounted Photovoltaic

Solar Array and FP 6

Receptor type: 2-mile Flight Path **No glare found**

Roof Mounted Photovoltaic

Solar Array and 1-ATCT

Receptor type: Observation Point **No glare found**



Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time. "Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time. Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.

The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year. Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily

affects V1 analyses of path receptors.

Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.

The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.

The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)

The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.

The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.

The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.

Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.

Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.

Refer to the Help page at www.forgesolar.com/help/ for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- · Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- · Eye focal length: 0.017 meters
- · Sun subtended angle: 9.3 milliradians

2016 © Sims Industries d/b/a ForgeSolar, All Rights Reserved.

