FONROCHE lighting AMERICA

APPLICATION DESIGN

Robinson Ave Intersections

Cortland - IL

River Landing - West Chapel, FL

Project Number:	G7140
Date:	9/26/2023
Written by:	Cuong VU
Version :	A

The global leader in solar lighting

FONROCHE lighting AMERICA

Fonroche Lighting America is proud to be part of Fonroche Lighting, the global leader in off-grid solar street lighting. The deep resources and broader scope of an established market leader lets us take solar lighting even further, from the State Treasury in Salem, Oregon to the West African Republic of Senegal. Over 150,000 Fonroche SmartLight systems have been deployed worldwide.

With five offices in the USA and installations across the country, Fonroche is never far away. Some solution providers enter the solar lighting market—then move on. We're a reliable partner that sticks around. You get the responsive support and smart answers that you need now—and the confidence that we'll be here for you far in the future. And we can take on projects of any size, from local to national. That's why so many municipalities, military and federal facilities, tribes, commercial properties, and developers trust us to deliver the full promise of solar lighting.

Olton City Park – Olton, TX

The 3 key benefits for your project

- OFF-GRID
100% solar, not connected to the utility grid. No outages.
365 nights of light a year – guaranteed.

- POWERFUL
Powerful illumination, on a par with grid-connected systems.

- COST-EFFICIENT
No maintenance for the first 10 years. Rapid installation. No operating costs.

Feasibility of your solar lighting project

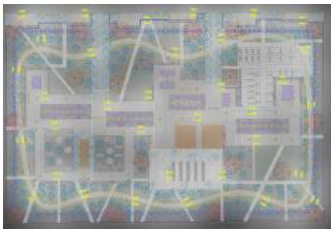
To guarantee powerful, cost-effective off-grid lighting, Fonroche operates its own **design offices**.
We assess the feasibility of each project in four stages:

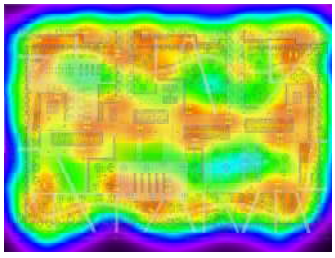
1. First, we define your **lighting requirements**.

2. Next, we analyze the last 10 years of **local weather data** to determine how much energy our PV panels will generate.

3. On this basis, we **calculate** what size and how many products we need to install.

4. Finally, our sales team draws up a **cost estimate**.





Fonroche Lighting America - Design Office

Rightsized to your specific needs

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1 Project = 1 Study

10-Year Analysis of local weather data

We use the **PVsyst** software suite and **Meteonorm** historical time series irradiation data to calculate the real-world operating conditions — orientation and tilt angle of the panel, shadow, etc. — and external parameters, such as direct and diffuse irradiation, temperature and the solar calendar.

Simulation of product(s) over a typical year

Our teams have developed a solar sizing software application, which we use to determine which products will best meet your needs. We then simulate how these products operate over a typical year, based on the average conditions for **the last decade**.

Sizing the project to your needs

We use a set of key criteria to optimally specify your project:

- Average battery charge level over the year
- Minimum charge level
- Comparative analysis of energy generated by the panel vs. energy used by the system
- Worst-case scenario (lowest irradiation, longest night)

Results

Based on our experience, we propose the **optimal solution** in terms of lighting **performance** and **cost effectiveness**.

Autonomy of
365
nights of lighting /year

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Our technical proposal

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SMARTLIGHT SYSTEM CONFIGURATION

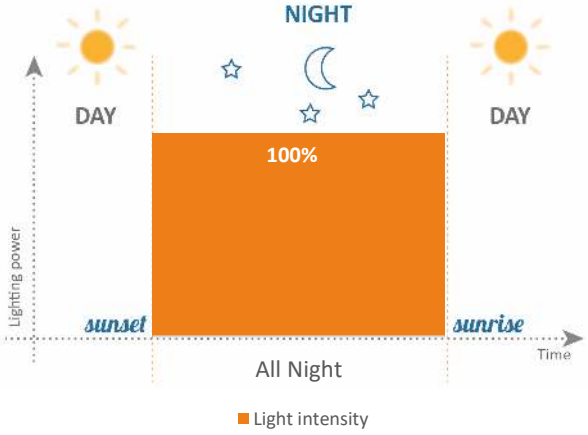
WARRANTY 5 years

Non pro-rated

Project-Specific System Specifications

PHOTOVOLTAIC MODULE (SERVICE LIFE 30 years)	
PV panel power rating	310 Wp
PV panel tilt angle	45°
POWER 365: SMART STORAGE AND MANAGEMENT (SERVICE LIFE 10 years)	
Battery capacity (Must be NiMH)	1248 Wh
LED LIGHT UNIT (SERVICE LIFE 20 years)	
Lighting power	30 W nominal
LED light unit specification	4000K - 180 Lm/w
POLE & CROSSPIECE	
Pole height	20’
Protective treatment	Powder Coated

Chosen lighting profile for your project



PHOTOMETRIC STUDY

**Note: these results are only valid if the Smartlight PV panel is at an azimuth angle of zero degrees and is completely free of shadow.*

***These results are subject to change due to technological or regulatory advances. This technical report is valid for 60 days from the date you receive it.*

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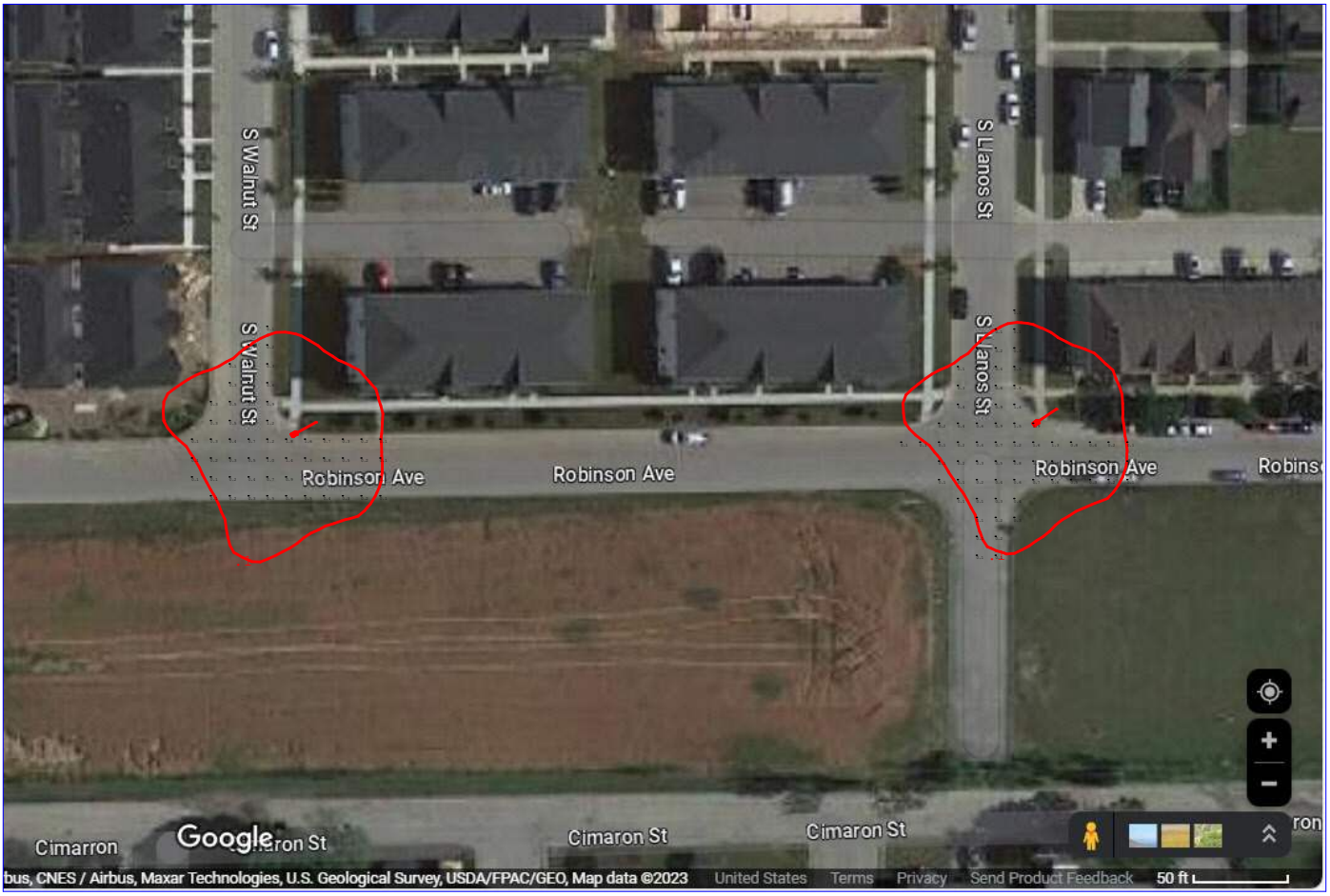
Robinson Ave Intersections

Lighting Plan Rev A
Project Number: G7140

By: Cuong Vu
cuong.vu@fonroche.us
Date:9/26/2023

FONROCHE lighting AMERICA
4900 David Strickland Road
Forest Hill, TX 76119 | USA
Phone Number: (339) 225 4530
www.fonrochesolarlighting.com



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	2	T4-CK16B-4K-30W-20'	Single	5400	0.900	YTR215964

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Intersection - Left	Illuminance	Fc	0.49	1.8	0.1	4.90	18.00
Intersection - Right	Illuminance	Fc	0.45	1.9	0.1	4.50	19.00

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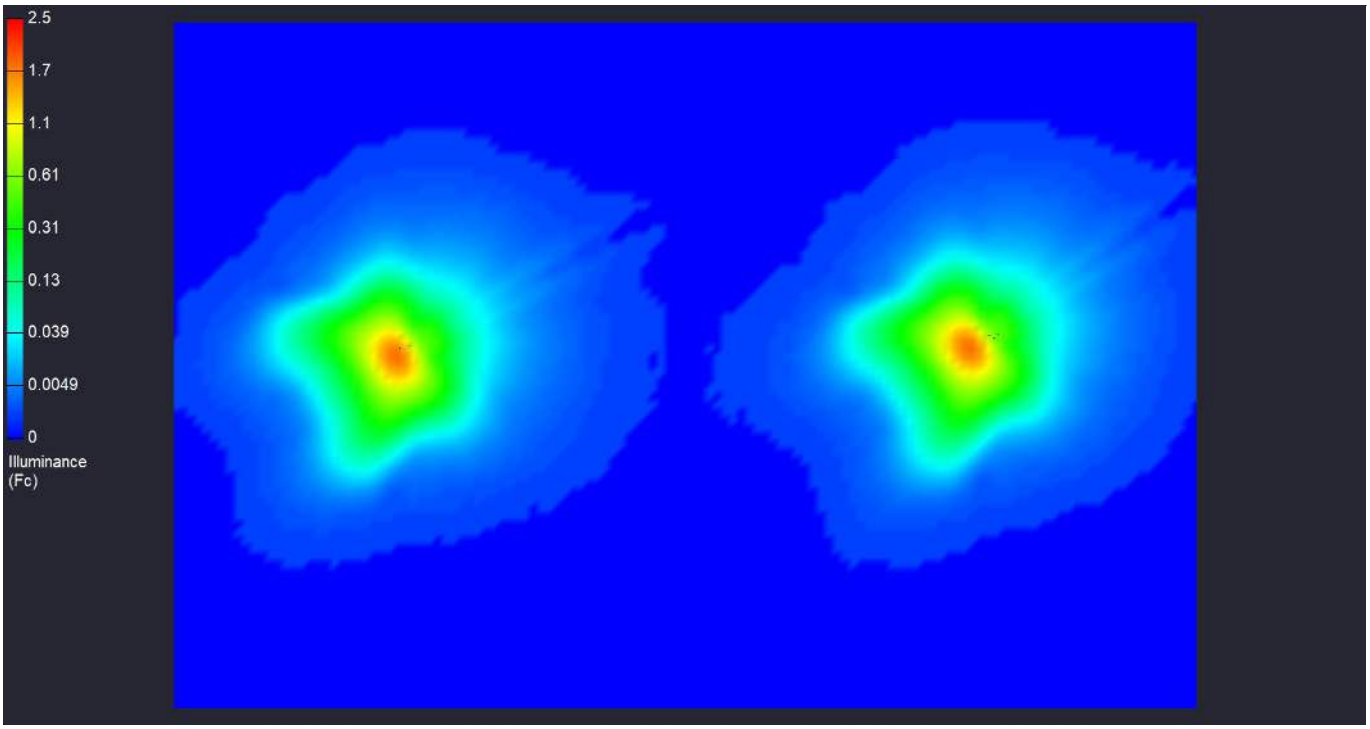

A few examples

Melissa, TX - Country Ridge Park

Fort Worth - TX

Brushy Creek - Cedar Park TX

Marana, AZ

Solar lighting

Your commitment to sustainability

Contact us

Austin Brennan
Inside Sales Representative
P: (339) 225-4530 x207
E: Austin.brennan@fonroche.us

FIND OUT MORE AT

www.FonrocheSolarLighting.com

FONROCHE LIGHTING AMERICA | 4900 David Strickland Road
Forest Hill, TX 76119 | USA
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