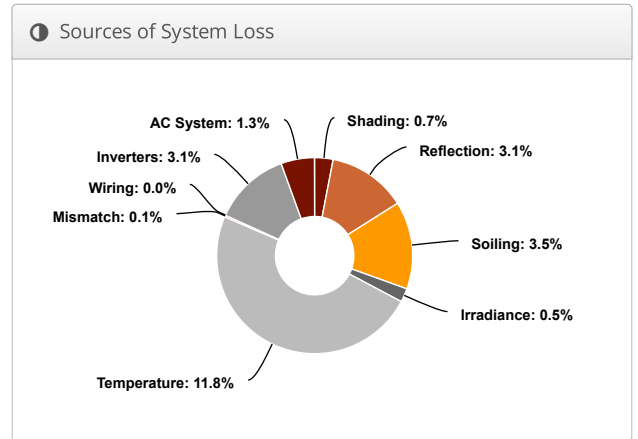
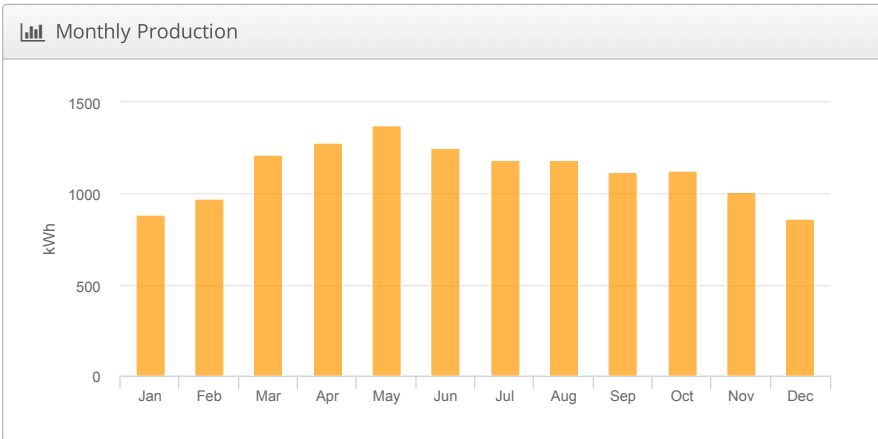
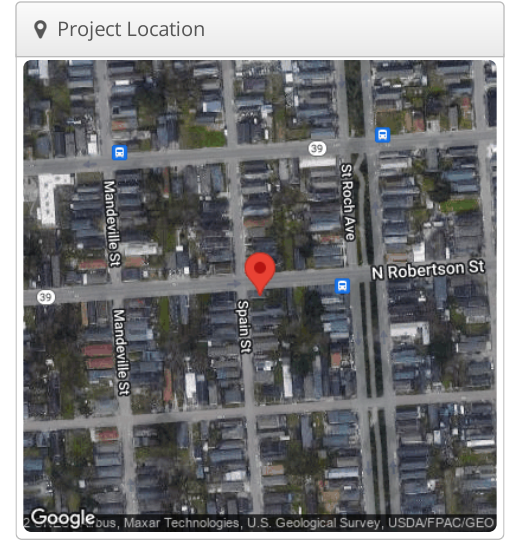


# Design 1 Flanagan.SpainSt, 1441 Spain St.

Report	
Project Name	Flanagan.SpainSt
Project Address	1441 Spain St.
Prepared By	Solar Alternatives admin@solalt.com

System Metrics	
Design	Design 1
Module DC Nameplate	9.99 kW
Inverter AC Nameplate	7.83 kW Load Ratio: 1.28
Annual Production	13.47 MWh
Performance Ratio	78.0%
kWh/kWp	1,347.9
Weather Dataset	TMY, 10km Grid (29.95,-90.05), NREL (prospector)
Simulator Version	ada662d322-df0e856433-c90e500374-981fef9d56



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,710.3	
	POA Irradiance	1,727.2	1.0%
	Shaded Irradiance	1,714.6	-0.7%
	Irradiance after Reflection	1,660.6	-3.1%
	Irradiance after Soiling	1,602.5	-3.5%
	<b>Total Collector Irradiance</b>	<b>1,600.5</b>	<b>-0.1%</b>
Energy (kWh)	Nameplate	16,059.4	
	Output at Irradiance Levels	15,971.5	-0.5%
	Output at Cell Temperature Derate	14,089.3	-11.8%
	Output After Mismatch	14,078.9	-0.1%
	Optimal DC Output	14,078.9	0.0%
	Constrained DC Output	14,079.7	0.0%
	Inverter Output	13,648.0	-3.0%
	<b>Energy to Grid</b>	<b>13,465.7</b>	<b>-1.3%</b>
	Temperature Metrics		
	Avg. Operating Ambient Temp		23.4 °C
	Avg. Operating Cell Temp		41.1 °C
Simulation Metrics			
	Operating Hours	4621	
	Solved Hours	4621	

☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (29.95,-90.05), NREL (prospector)											
Solar Angle Location	Project Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.075	3°C								
	Flush Mount	-2.81	-0.0455	0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	2.00%											
Module Characterizations	Module	Uploaded By					Characterization					
	SIL-370BK (July 2021) (Silfab)	HelioScope					Spec Sheet Characterization, PAN					
Component Characterizations	Device	Uploaded By				Characterization						

📦 Components		
Component	Name	Count
Inverters	IQ8PLUS-72-2-US (240V) (Enphase)	27 (7.83 kW)
AC Branches	10 AWG (Copper)	2 (172.0 ft)
Module	Silfab, SIL-370BK (July 2021) (370W)	27 (9.99 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Landscape (Horizontal)	30°	176.65535°	0.0 ft	1x1	11	11	4.07 kW
Field Segment 2	Flush Mount	Landscape (Horizontal)	30°	265.57654°	0.0 ft	1x1	16	16	5.92 kW

Detailed Layout

