



SUPERIOR

W I S C O N S I N

Living up to our name.

CONTRACT VOLUME &
BIDDING DOCUMENT- 2023

Fire Station 1 Solar System
Design Build

CITY OF SUPERIOR, WISCONSIN
Fire Chief

Bid #23-02-FD

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1. ADVERTISEMENT TO BID

Fire Station 1 Solar System Design Build

Sealed bids will be received by the City of Superior, Department at 1316 North 14th Street - 2nd Floor, Suite 200, ATTN: Superior, WI 54880. Bids will be publicly opened and read aloud in the City offices as follows:

Bid Opening: Tuesday, January 17, 2023, at 2:00 PM

Bid Project: The City of Superior is seeking qualified contractors to install a roof mounted solar system on Fire Station 1 located at 3326 Tower Avenue, Superior, Wisconsin, to reduce reliance on utility provided energy, participate in the renewable energy transition, and to ensure adequate supply of energy for future needs. The design, installation, and commissioning are to be completed by the selected contractor. A pre-bid meeting will be held January 5, 2023.

All bids must be prepared on the form provided and submitted in accordance with the Instructions to Bidder.

Specifications may be obtained through the internet at www.DemandStar.com. Bidding documents may be viewed at the City of Superior, Government Center, 1316 North 14th Street - 2nd Floor, Superior, Wisconsin (darwinj@ci.superior.wi.us), the Minnesota Builders Exchange (mbex.com) and the Builders Exchange of Wisconsin (bxwi.com).

The contractor shall submit a list of its subcontractors as a part of its proposal, which list shall not be added to or altered without the written consent of the City of Superior, and as specified in 66.0901 Wisconsin Statutes.

The City of Superior encourages the participation of women and minority owned businesses.

The City of Superior reserves the right to reject any or all bids, to waive irregularities, or to accept such bids, as in the opinion of the City, will be in its best interests.

Fire Chief

Daily Telegram: **Friday, December 16, 2022, and Friday, December 23, 2022**

2. INSTRUCTIONS TO BIDDERS

- 2.1 Questions regarding this bid may be directed to the City of Superior as follows:
Bidding documents: Jane Darwin, Contract Analyst, darwinj@ci.superior.wi.us.
- 2.2 Method of Bidding: The only acceptable method of bidding on a contract with the City of Superior, Wisconsin, is described as follows and must be strictly complied with. The City of Superior reserves the right to determine the low Bidder based on Qualifications, Solar System proposed, the Base Bid alone or the Base Bid plus any alternates or combinations of alternates, at the City's discretion.
- 2.3 Bid Packet Components: Each item listed must be included with the bid submission:
- a) Bidders must file a **PROPOSAL OR BID** on the form the City has prepared. (See BID PROPOSAL Section 3.)
 - b) Bidders shall be required to submit a list of **SUBCONTRACTORS AND SUPPLIERS** with their proposal in accordance with Section 66.0901(7), Wisconsin Statutes, and subsequent amendments. Such list shall not be added to nor altered without the written consent of the City of Superior. (See SUBCONTRACTORS AND SUPPLIERS LISTING Section 4.)
 - c) Bidders shall be required to submit an **ADDENDA ACKNOWLEDGMENT** with their proposal. Such acknowledgment shall note acknowledgment of receipt of all addenda. If no addenda were issued, the bidder shall indicate and sign document. (See ADDENDA ACKNOWLEDGMENT Section 5.)
 - d) The bidder must file, at the time of the opening of the bids, either a **BID BOND or a certified check in the amount of at least five percent (5%)** of the total bid, conditioned that if the bidder is successful bidder will, within the time allotted by the City, file a properly executed contract and performance bond as per Wisconsin Statutes 62.15(3). (See BID BOND Section 6.)
 - e) The bid proposal must have attached to it the **BIDDER'S PROOF OF RESPONSIBILITY** identifying the bidder's qualifications. (See BIDDER'S PROOF OF RESPONSIBILITY Section 7.). Prospective bidders are required to furnish a statement of financial ability, equipment and experience in the work prescribed in said public contract in accordance with the provisions of Section 66.0901(2) of the Wisconsin Statutes at the time of the opening of the bids. The object of the questionnaire and the pre-qualification of bidders are to enable the City to have sufficient information regarding financial ability, equipment, and experience to reduce the hazards involved in awarding contracts to parties not qualified to perform them and to select those contractors qualified to properly complete the work proposed.
 - f) The bid proposal must have attached to it the **AFFIDAVIT OF ORGANIZATION AND AUTHORITY** identifying a corporation, partnership, or sole trader. The affidavit must contain a sworn statement that the bidder has examined and carefully prepared the

proposal from the plans and specifications and has checked the same in detail per Section 66.0901 (7), Wisconsin Statutes. (See AFFIDAVIT OF ORGANIZATION & AUTHORITY Section 8.)

- g) The bid proposal must have attached to it the **AFFIDAVIT OF COMPLIANCE** swearing the compliance with the criteria set forth in the Responsible Contractor Criteria in the City Code of Ordinances, Chapter 2, Article XII from the Contractor, and all sub-contractors. (See AFFIDAVIT OF COMPLIANCE Section 8).
- h) The Bidder must include **Technical Capabilities: Firm Profile, Project Team, & Business Practices**. Bidder's submittal must convey the technical capabilities of the firm, its staff, and partners (if any). The submission should demonstrate the Bidder's ability to manage Projects with concurrent construction timelines. The submittal must also convey the Bidder's knowledge of and familiarity with permitting, utility and interconnection requirements and limitations and demonstrate proof of ideal business practices, including change orders, and firm health and safety practices.
- i) The Bidder must include **Project Approach, Financial Value & Options Provided**. Describe the proposed approach to each Project, the design advantages of their System and describe all cost components related to any System. Proposals are sought that include, but are not limited to, technical specifications and cost details concerning the following: proposed solar equipment, mounting systems, electrical system, interconnection equipment, monitoring and metering equipment. Additionally, proposals should provide detailed information on any necessary network upgrades, environmental costs, fees or similar items up to and including the utility meter that might not yet be identified or may arise after agreement execution or commercial operation of the System.

Project approach must also include a description of the approach the Bidder will use to design, procure equipment and components, construct, and commission the proposed Project(s). Describe how the Bidder will comply with the requirements of the RFP, obtain timely permits and approvals, and accommodate ongoing operations during construction, including how the Bidder intends to meet the project schedule. Include the approach to the Project and construction management, document control, and Project administration including risk mitigation and escalation processes. Include a narrative addressing how the Bidder recommends phasing the work to efficiently execute the design, design review, installation, and commission of the system in a timely manner. Describe quality assurance procedures and safety plans.

- j) The bid proposal packet shall be placed in an envelope and shall be sealed. **ON THE ENVELOPE SHALL BE**, plainly written: the **date of the bid opening**, the **title of the project** and the **name of the bidder**. Such an envelope shall be addressed and delivered to: The City of Superior, **ATTN: CONTRACT ANALYST**, 1316 North 14th Street - 2nd Floor, Suite 200, Superior, Wisconsin, before the time and date specified for opening bids as listed on the Advertisement to Bid.

- k) Wisconsin's Public Records Law creates a statutory presumption in favor of complete access to public records and the City of Superior endeavors always to conduct its municipal affairs in strict compliance with Wisconsin Statutes §§ 19.31-19.39. Any entities or individuals who submit materials to the City of Superior in response to this request should avoid submittal of any proprietary information.

- 2.4 Work Site and Contract Document Examination: Bidders must satisfy themselves, by examination of the contract documents, the work site and the conditions and obstacles to be encountered in the field, and by such other means as may be necessary, as to the accuracy of the schedule of quantities of the work to be done and the intent of said contract documents. After the submission of the proposal, no complaint or claim that there was any misunderstanding as to the quantities, conditions or nature of the work will be entertained and no extra compensation shall be allowed by reason of any matter or thing concerning which such bidder might have informed himself prior to the bidding.

Upon award of bid, the Contractor must execute the required Performance and Payment Bond in the total amount of the bid. (see PERFORMANCE AND PAYMENT BOND Section 11.)

- 2.5 Time of Performance: When not otherwise specified, the bidder must state in the proposal, the least number of calendar days (counting weekends and holidays), after date to commence work given in the Notice to Proceed, in which bidder will start construction and the number of calendar days (counting weekends and holidays), after date to commence work given in the Notice to Proceed, in which bidder will fully complete the work as specified. The bidder should make allowance for all probable difficulties which may be encountered. In the event of failure to complete the work within the time stated or otherwise specified, liquidated damages will be assessed as provided in the specifications.
- 2.6 Quantities: The estimated quantities of the work are the result of careful calculations but are not to be considered as final. Such estimates will be used as a basis for determining the lowest bidder. After the contract is awarded, the quantity of work listed under any item, or all items, may be increased or decreased according to the specifications at the discretion of the City of Superior without in any way invalidating the bid price (see CONTRACT CHANGE ORDER Section 13).
- 2.7 Bid Prices: Bidders must submit a bid price, in accordance with the specifications, for each item of the job or branch, in compliance with the bidding units specified for the quantities listed in the proposal. Bid prices must be written out in words and entered in figures. In case of conflict, the written word prices will prevail. Totals must be shown based on unit cost and quantity. In case the figures do not match, the figure resulting in the lower price shall be deemed the price intended and applicable.

- 2.8 Inadequacies and Omissions: The City of Superior will not be responsible for verbal information or statements made by representatives of the Engineering Department, or any other department for which work will be performed. Bidders shall bring any inadequacies, omissions, or conflicts to the attention of the City of Superior before the due date for bids. Prompt written clarification will be immediately supplied to all bidders by Addenda before the due date for bids and each Addendum shall be acknowledged on the Addenda Acknowledgment form. Failure to request clarification of any inadequacy, omission or conflict will not relieve the Contractor of responsibility.
- 2.9 No Double Bidding: Two (2) or more proposals under different names will not be accepted from one firm or association.
- 2.10 Partial Bidding: Bidders must quote on all items appearing on the bid forms unless specific directions in the advertisement, on the bid form, or in the special specifications allow for partial bids. Failure to quote on all items, unless specifically exempted as set forth above, shall disqualify the bid. When quotations on all items are not required, bidders shall insert the words "no bid" where appropriate.
- 2.11 Right of Waiver or Rejection: The City reserves the right to reject any or all bids or waive any defects found in bids or proposals submitted.
- 2.12 Wage Rates: This Project is not subject to Prevailing Wage Rates.
- 2.13 Pre-Bid Conference: A non-mandatory pre-bid meeting will be held Thursday, January 5, 2023, at 2:00 PM at the Fire Station 1, 3326 Tower Avenue, Superior, WI. Deadline for questions is Tuesday, January 10, 2023, at 12:00 PM. All questions should be emailed to the City of Superior Contract Analyst at: darwinj@ci.superior.wi.us. The final addendum(s) will be issued by Thursday, January 12, 2023.
- 2.14 Contract Documents: Upon award of the bid the contract documents will consist of the Advertisement to Bid, Instructions to Bidders, Bid Proposal, Subcontractors & Suppliers Listing, Addenda Acknowledgment, Bid Bond, Bidder's Proof of Responsibility, Affidavit of Organization & Authority, Contract, Affidavit of Compliance(s), Performance and Payment Bond, Certificate of Insurance as required, General Specifications, Special Provisions, and include all other herein bound attachments and modifications thereof incorporated in the documents as prepared by the City of Superior.

3. BID PROPOSAL

Station 1 Solar System Design Build

Date 1/30/23
City of Superior, Wisconsin

Scope of Work:

The City of Superior is seeking qualified contractors to install a roof mounted solar system on Fire Station 1 located at 3326 Tower Avenue, Superior, Wisconsin, to reduce reliance on utility provided energy, participate in the renewable energy transition, and to ensure adequate supply of energy for future needs including the addition of electric fire trucks. The design, installation, and commissioning are to be completed by the selected contractor.

- Design and engineering to be completed by the Contractor and included in the cost proposed
- System will be roof-top, ballasted/flush mount, corrosion-resistant equipment
- The mounting system shall minimize roof penetrations and project must meet all applicable code requirements with respect to snow, wind, and other factors
- Modules tilted at 10 degrees for ballasted sections, with direct attachment flush mount for others
- Contractor will provide a weight loading plan to be approved by the City.
- Develop build and permit ready plans and specifications
- Provide Helioscope production estimates for construction plan sets and as-builts
- All systems should have qualified monitoring systems included and the software utilized should be noted in the proposal. Onsite review and training of monitoring system is included in the cost by the Contractor
- Provide as-built record drawings upon completion of project
- Contractor to apply for, and pay, the interconnection application fee to Superior Water and Light Power. Contractor will manage the process and will secure permission to interconnect the array prior to commencing construction and procurement
- Any upstream distribution costs or infrastructure upgrades are to be excluded from contractor's proposal
- "Witness Test" testing must be included in the cost by the Contractor
- A roof warranty letter must be included in the cost by the Contractor
- Pre and Post roof inspections and slip sheets for warranty retention must be included in the cost by the Contractor
- System details preferred or equivalent to:
 - 153.1 KW DC
 - 116.6 KW AC
 - Estimated Y1 power production: 171,500 kWh
 - 480-watt solar panels

- Proposal by Contractor will not include any distribution grid upgrades if required
- Required installation by Contractor of a 220-volt, 30-amp outlet estimated at 60' from panel to desired location. Vehicle chargers are not included in this request.
- Commissioning will be coordinated and completed by the Contractor between the Contractor, Utility, and the City
- Include product warranty and linear power performance warranty information on all products
- The Contractor shall supply the City and assist with all necessary documentation and paperwork to qualify for all applicable rebates and tax or other credits. Proposal shall state total cost of system and then separately any rebates, tax, or other credits that are available
- Mentoring and training of building operating staff for operation and maintenance shall be included in the cost by the Contractor
- Provide information for any optional service plans, extended warranties or other
- Provide information on the life expectancy of modules and inverters
- Provide a schedule and timeline based on a completion date of September 30, 2023
- Include operation and maintenance plan for proposed plan
- Utility infrastructure, including conductors and transformer, may need to be upgraded. The awarded Contractor will work with the utility company to determine any additional costs associated with this upgrade.

I/we, the undersigned, being familiar with your local conditions, having made a field inspection and investigation that I/we deemed necessary, having studied the plans and specifications for the work and being familiar with all the factors and other conditions affecting the work, are hereto attaching the following documents:

1. Bid Form
2. Subcontractors & Suppliers List (see Section 4.)
3. Addenda Acknowledgment (see Section 5.)
4. Certified check or bid bond equal to five percent (5%) of the total amount bid. (Make check payable to: City of Superior, Wisconsin- see Section 6.)
5. Bidder's Proof of Responsibility (see Section 7.)
6. Affidavit of Organization & Authority (see Section 8.)
7. Affidavit of Compliance (see Section 9.)

I/we, the undersigned, hereby propose to furnish all applicable labor, tools, materials, skills, equipment and all else necessary to execute the work, in accordance with the specifications and are hereby submitting the following bid:

**** SEE NEXT PAGE****

Total of Proposed Plan: \$ 364,750

Total in written words:

THREE HUNDRED - SIXTY - FOUR THOUSAND - SEVEN HUNDRED FIFTY

Estimate amount of time to complete project upon Contractor's receipt of Notice to Proceed
(time to include all weekends and holidays) 129

Date able to begin the project MARCH 1, 2023

SIGNATURE 

TITLE COO

COMPANY CEDAR CREEK ENERGY

ADDRESS 10361 James Street NW

PHONE 451-202-6225

FAX

E-MAIL ADDRESS matt@cedarcreekenergy.com

4. SUBCONTRACTORS AND SUPPLIERS LISTING -

Must be submitted with Bid.

Station 1 Solar System

- 4.1 The undersigned agrees to employ the following listed **subcontractors** for the following enumerated classes of work and not to alter or add to such list without the written consent of the City of Superior, WI as per Wisconsin Statutes 66.0901 (7). (Use separate sheets as necessary.)

	<u>SUBCONTRACTOR</u>	<u>CLASS OF WORK</u>
1)	<u>STROH</u>	
2)	<u>STROH ENGINEERING</u>	<u>STRUCTURAL ENGINEER</u>
3)	<u>RVR Engineering</u>	<u>DESIGN</u>
4)	<u></u>	<u></u>
5)	<u></u>	<u></u>

- 4.2 Following is a list of **suppliers** to be used on the above listed project. (Use separate sheets as necessary.)

	<u>SUPPLIER</u>	<u>TYPE OF SUPPLY</u>
1)	<u>CEC</u>	<u>MODULES, INVERTERS & RACKING</u>
2)	<u>DAKOTA SUPPLY GROUP</u>	<u>AC/DC WIRE & BALANCE</u>
3)	<u></u>	<u>SYSTEM COMPONENTS</u>
4)	<u></u>	<u></u>
5)	<u></u>	<u></u>

Number of years of experience or additional details of subcontractors, supplier or product may be requested for projects as deemed necessary by the City.

Submitted by:

COMPANY CEDEAR CREEK ENERGY
 ADDRESS 10301 JAMESTOWN ST NE, BLAINE MN 55749
 COMPANY REPRESENTATIVE MATT STUBNIK

5. ADDENDA ACKNOWLEDGMENT (Must be submitted with Bid)**Station 1 Solar System Design Build**

I/we hereby acknowledge receipt of the following addenda(s):

Addendum No. <u>1</u>	Dated <u>1/12/20</u>
Addendum No. <u>2</u>	Dated <u>1/17/23</u>
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

I/we further certify that no agreement has been entered into to prevent competition for said work and that I/we carefully examined the site where the work is to take place, and the plans, specifications, form of contract, bond and all other contract documents.

I/we further agree to enter into the contract, as provided in the contract documents, under all the terms, conditions and requirements of those documents.

* If no addenda were issued, the bidder shall so indicate and sign this document.

Cedar Creek Energy
Company
[Signature]
Representative Signature
1/30/23
Date

7. BIDDER'S PROOF OF RESPONSIBILITY (Must be submitted with Bid)

Wisconsin Statutes Section 66.0901 (2) requires anyone submitting a bid to complete a sworn statement consisting of information relating to the financial ability, equipment, experience in the work prescribed in the public contract, and other matters that the municipality requires. The City of Superior shall properly evaluate the statement and shall find the maker of the statement either qualified or unqualified. If the City is not satisfied with the sufficiency of the answers to the questionnaire and financial statement, it may reject the bid or disregard the same or require additional information.

The contents shall be confidential and may not be disclosed except upon the written order of the person furnishing the statement, for necessary use by the public body in qualifying the person, or in cases of actions against, or by, the person or municipality.

1. Name of bidder: CEDEAR CREEK ENERGY
2. Bidder's address: 10341 JAMESTOWN ST NE BLOOMING MN 55449
3. When organized: 2007
4. Where incorporated: MINNESOTA
5. How many years have you been engaged in the contracting business under the present firm name: 15 YEARS
6. Have you ever failed to complete any work awarded to you? No ☒ Yes ☐
(If yes, please explain)
7. Have you ever defaulted on a contract? No ☒ Yes ☐
(If yes, please explain.)
8. Have you ever been sued for services you provided? No ☒ Yes ☐
(If yes, please explain.)
9. In the past three years, has your organization had at least a 25% interest, or has another corporation, partnership or other business entity operating in the construction industry controlled it? No ☒ Yes ☐
(If yes, please attach a statement explaining the nature of the relationship.)
10. Has your or the controlling company ever been charged with or convicted of a violation of any wage schedule? (Section 66.0903 (12) d Wis Stats) No ☒ Yes ☐
(If yes, please provide details, date, claimant, particulars of each instance.)
11. Has the applicant, any of its owners, a subsidiary or corporate parent, or any officer or director thereof; been convicted in the last three years of violating Section 133.01, Wisconsin Statutes (Unlawful Contracts; Conspiracies)? No ☒ Yes ☐
(If yes, please provide details, date claimant, particulars of each incident, etc.)
12. Does your firm have a substance abuse policy that complies with Section 103.503 Wisconsin Statutes? No ☐ Yes ☒
13. Does your firm possess all valid licenses, registrations and certifications required by federal, state, county or city law necessary for the work it seeks to perform?
No ☐ Yes ☒
14. Has your organization had any type of business, contracting or trade license, certification or registration revoked or suspended in the last three years?
No ☒ Yes ☐ (If yes, please explain.)

15. Does your organization meet all bonding requirements as required by applicable law?
No _____ Yes X
16. Attach a list of the largest contracts completed by your firm, including kind of work and approximate cost. SEE Pgs.
17. Attach a statement of background and experience of the principal members of your personnel, including your officers.
18. Name, address and telephone numbers of a minimum of three (3) relevant references of others whom you have performed similar work/services to in the past five (5) years.
19. Credit references - attach as applicable
20. Financial statement (net worth in excess of): \$ See Attachment
21. Additional information may be submitted if desired. Attach separate sheets as necessary.

Company Name CEDEAR CREEK ENERGY

I, the below signed, attest all answers to the foregoing questions and all statements contained are true and correct.

Authorized Signature [Signature]

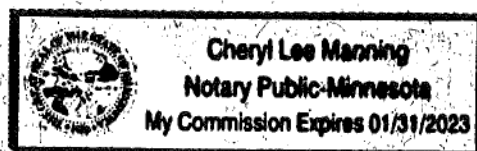
PRINT signature name and title Mark S. Smith COO

Subscribed and sworn to before me,
this 31 day of January, 2023

[Signature]
Notary Public

County of Wright
My Commission Expires

01/31/2023



8. AFFIDAVIT OF ORGANIZATION AND AUTHORITY

(Must be submitted with Bid)

STATE OF MN

) SS

COUNTY OF Anoka

Matt Soubise being duly sworn on oath deposes and states that the bidder on the attached bid proposal is organized as indicated below and that all statements herein made are made on behalf of such bidder and that this deponent is authorized to make them.

Complete Applicable Paragraphs:**1. CORPORATION**

The bidder is a corporation organized and existing under the laws of the State of MN, its president is Rob Appelhof, its secretary is Matt Soubise, and it does (does not) have a Corporate Seal. The president is authorized to sign construction contracts and bids for the company by action of its board of directors taken _____ a certified copy of which is hereto attached. (Strike out last sentence if not applicable.)

2. PARTNERSHIP

The bidder is a partnership consisting of _____ and _____ partners doing business under the name of: _____

3. SOLE TRADER

The bidder is an individual and if operating under a trade name, such trade name is: _____

4. ADDRESS

The business address and phone number of bidder is:

10361 Jamestown St NE Blaine MN 55449

5. STATUTORY SWORN STATEMENT

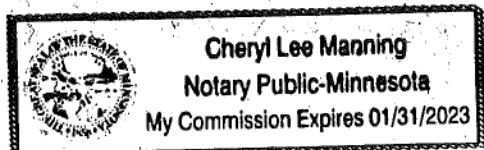
Matt Soubise also deposes and states that he has examined and carefully prepared this bid proposal from the plans and specifications and has checked the same in detail before submitting this proposal or bid, and that the statements contained herein are true and correct.

[Signature]
(Authorized Signature)

Subscribed and sworn to before me,
this 31 day of January, 2023

[Signature]
Notary Public
County of Wright

My Commission Expires 01/31/2023



9. AFFIDAVIT OF COMPLIANCE

(Must be submitted with bid from Contractor and all sub-contractors)

State of MD)
) SS
 County of Anne Arundel)

I, Matt Stupnik, being duly sworn on oath, states as follows:
NAME OF CONTRACTOR/AGENT

1. That I am the contractor or agent of the contractor submitting a bid for

FIRE STATION #1 SOLAR SYSTEM DESIGN BUILD; and
NAME OF PROJECT

2. That CEDAR CREEK ENERGY is a responsible bidder and
NAME OF CONTRACTOR/COMPANY

meets the criteria set forth in Chapter 2, Article XII, Responsible Contractor Criteria,

City of Superior Ordinance #O20-4178 (attached hereto).

[Signature]
SIGNATURE OF CONTRACTOR/AGENT

MATT STUPNIK
PRINT NAME

COO
TITLE

10301 JAMESTOWN AVE NE BURLINGAME 98149
ADDRESS

651-708-6225
PHONE

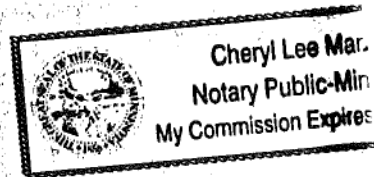
matt@cedarcreekenergy.com
E-MAIL

Subscribed and sworn to before me this 31 day of January, 2023.

[Signature]
SIGNATURE

Cheryl Manning
PRINT NAME

My commission expires: 01/31/2023



BID BOND
(Percentage)BOND No. 611029KNOW ALL PERSONS BY THESE PRESENTS, That we Cedar Creek Energy
of 10361 Jamestown St. NE Blaine, MN 55449Old Republic Surety Company, hereinafter referred to as the Principal, andas Surety, are held and firmly bound unto City of Superior Wisconsinof City of Superior of 1316 North 14th Street 2nd Floor, Superior WI 54880

, hereinafter referred to as the Obligee, in the amount of

5% of \$364,750.00(5%), for the payment of which we bind ourselves, our legal representatives, successors and assigns, jointly and severally, firmly by these presents.WHEREAS, Principal has submitted or is about to submit a proposal to Obligee on a contract for Fire Station 1
Solar System Design Build

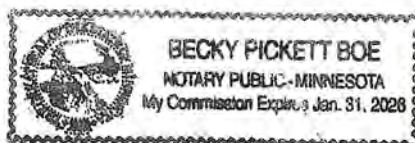
NOW, THEREFORE, if the said contract be awarded to Principal and Principal shall, within such time as may be specified, enter into the contract in writing and give such bond or bonds as may be specified in the bidding or contract documents with surety acceptable to Obligee; or if Principal shall fail to do so, pay to Obligee the damages which Obligee may suffer by reason of such failure not exceeding the penalty of this bond, then this obligation shall be void; otherwise to remain in full force and effect.

SIGNED, SEALED AND DATED this 30th day of January, 2023

Principal

Cedar Creek EnergyBY: [Signature]
_principal_signator

Surety

Old Republic SuretyBY: [Signature]
Jeffrey R. Maas, Attorney-in-Fact

Becky Pickett Boe
Commission expires January 31, 2028



POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint

JEFFREY R. MAAS, BECKY BOE, OF MINNEAPOLIS, MN

its true and lawful Attorney(s)-in-Fact, with full power and authority, not exceeding \$50,000,000, for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, *rather than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance working compensation bonds guaranteeing payment of benefits, asbestos abatement contract bonds, waste management bonds, hazardous waste remediation bonds or black lung bonds*, as follows:

ALL WRITTEN INSTRUMENTS

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. *(This document is not valid unless printed on colored background and is multi-colored. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982. This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.)*

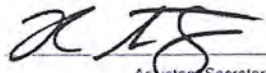
RESOLVED that, the president, any vice-president, or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds, and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

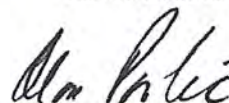
RESOLVED FURTHER, that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 17TH day of JUNE, 2019.


Assistant Secretary



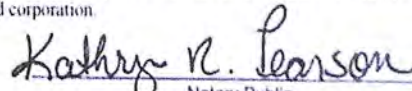
OLD REPUBLIC SURETY COMPANY


President

STATE OF WISCONSIN, COUNTY OF WAUKESHA-SS

On this 17TH day of JUNE, 2019, personally came before me, Alan Pavlic and Kevin Abitz, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say; that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.




Notary Public
My commission expires 9/28/2022

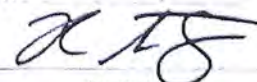
CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

40-5144

Signed and sealed at the City of Brookfield, WI this _____ day of _____




Assistant Secretary

CBIZ INS SERVICES INC

THIS DOCUMENT HAS A COLORED BACKGROUND AND IS MULTI-COLORED ON THE FACE. THE COMPANY LOGO APPEARS ON THE BACK OF THIS DOCUMENT AS A WATERMARK. IF THESE FEATURES ARE ABSENT, THIS DOCUMENT IS VOID.



City of Superior Fire Station 1 Solar Bid

January 30, 2023



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Addenda Acknowledgement

Bid Bond Docs

See attached Proof of Insurance

Bidders Proof of Responsibility

Affidavit of Organization and Authority

Affidavit of Compliance

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See attached Helioscope

Procurement

See attached Product Detail

Construction and Project Management

See attached Sample Site Safety Plan

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See attached QA Checklist

See attached Sample Site Safety Plan

Post Construction Support and Maintenance

Previous Jobs

References



Executive Summary

Below please find Cedar Creek Energy's design, production model and estimated cash flow for a 153.1 KW DC / 1165.6 kW AC roof mounted solar array. Our pricing and design will provide a complete turn-key solution including but not limited to engineering, procurement, and construction services to complete the installation of this project.

Background

Cedar Creek Energy is a Minnesota-based, developer, general, and electrical contractor that specializes in development, engineering, and construction as it pertains to solar PV. Founded in 2007, the company has over 60 full time employees and provides a wide range of services. Our clientele includes but is not limited to: commercial, residential, utility, & municipal projects. We are licensed in MN, WI, ND & SD.

Our mission is to help organizations and individuals save money on electricity through renewable energy and energy efficiency upgrades. We strive to meet our clients' needs with a thorough and consultative approach; and partner with them to determine an energy solution that best fits their financial and environmental goals.

Our office, located in Blaine, Minnesota, provides us with the ability to quickly address customers' needs and provide a premium level of service to clients throughout Minnesota. Cedar Creek Energy's in-house, licensed electricians and support team members have years of experience working in the solar industry and are ready to bring your project to fruition.

See attached licenses



Our Team



ROB
APPELHOF
President, CEO



MATT
STUPNIK
Chief Operating Officer



ALEX
GAST
Director Of Operations



PATRICK
FARNHAM
Senior Project Manager



CHARLIE
STENSTROM
Project Manager



JOHN
NYHLEN
Service and O&M
Manager



ANNIE
HENDRICK
Assistant Project
Manager



CHERIE
MANNING
Office Manager

Rob Appelhof
rob@cedarcreekenergy.com
(763) 432 5261
Owner, President

Matt Stupnik
Owner, VP
matt@cedarcreekenergy.com
(651) 208 6225

Rob and Matt have been with the company since the beginning and work across all disciplines to ensure a high-quality product for the clients and to ensure the business operates smoothly.

Alex Gast
VP & Director of Operations
Cell: 605-520-4903
Email: Alex.Gast@cedarcreekenergy.com



- Alex has over 10 years of experience in solar development, project management and system design. A member of our company's leadership and strategic development team, Alex makes sure that everything goes according to plan, while simultaneously visioning the long-term sustainable growth of our organization

Charlie Stenstrom
Project Manager
Cell: 763-772-5758
Email: charlie@cedarcreekenergy.com

- Charlie does not shy away from a challenge. As a Project Manager at Cedar Creek Energy, he pours his enthusiasm and attention to detail into every solar project that crosses his desk. Charlie started as a Solar Installer, to learn every piece of the solar process, before moving quickly from the field to the office. Now Charlie enjoys designing the PV systems, working with different utilities on interconnections, and helping developers to get the right PV system their clients are looking for.

John Nyhlen
Service Manager
Office: 763.450.9767

Johnny has 8 years of experience with the company, and he will be handing all of your service and monitoring of the system.



Our Services

DEVELOPMENT

- Land Acquisition
- Utility Interconnection Approval
- ALTA Survey
- Geotechnical Investigation
- Wetland, Cultural, and Environmental Site Assessments
- Glare Studies and FAA Hazard Determinations
- Conditional Use Permitting



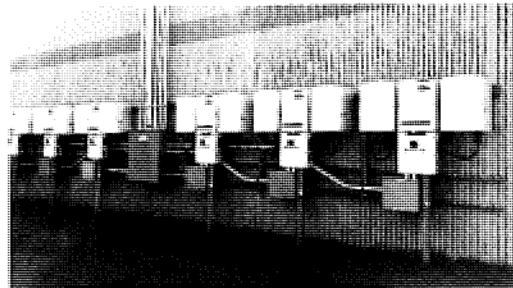
ENGINEERING, PROCUREMENT, & CONSTRUCTION

- Electrical and Civil Engineering (50% design, 90% Design, IFC Design, and As-Built's)
- SWPPP and Watershed Permitting
- Building and Electrical Permits
- Equipment Submittals for Investor/Owner Review
- Material Procurement and Staging
- Civil and Electrical Construction Services to Complete Installation
- QA/QC Controls and Reporting During Construction
- System Commissioning, Testing, and System Capacity Testing



OPERATIONS & MAINTENANCE

- System Monitoring
- Ongoing Seeding and Vegetation Management
- Onsite Testing as Required by Investor/Owner
- On-call Electricians for Service Work as Needed





Our Financials

Please see attached amended corporate asset valuation completed in December 2022.

Rob Appelhof and Matt Stupnik's personal credit is excellent and can provide a reference for CCE banker Greg Hohlen at Minnwest Bank. He can be reached at

greggh@minnwestbankgroup.com

(320) 253 6300

See attached Contractors Score Card

1/30/2023



Scope of Work

System Details:

- 153.1 kW AC
- 116.6 kW DC
- Estimated Y1 Power Production:
 - o 171,500 kWh per year

System Cost/Financials:

- Build Cost: \$364,750

See attached helioscope

Below please find the scope of work as it pertains to each major category involved with the construction of the proposed solar array.

Engineering:

Cedar Creek Energy (CCE) intends complete initial design and engineering of these projects internally and utilize the following, trusted, and qualified, 3rd party vendors to verify design and draft plan sets. We have done this on previous projects with great success.

Electrical Engineering:

- Cedar Creek Energy Design, to be reviewed and certification RVR Engineering

Civil & Structural Engineering:

- Stroh Engineering will review and provide a structural letter for the flat roof portion. And the builder of the secondary building onsite will review structural loading and provide structural letter.

See attached loading details

Geotech Testing:

- Our bid assumes no geotechnical analysis

Design Sets Included in our bid for both Electrical & Civil Scope:

- Issue for Permit Plans (IFP)
- Issue for Construction Plan Sets (IFC)
- As-Built Record Drawings
- PVsyst production estimates for IFC and As-Built Sets
-

Utility Interconnection:

- Cedar Creek Energy to apply for and pay interconnection application fee to secure interconnection. We will manage the process on behalf of Superior Fire Department and will secure permission to interconnect the array prior to commencing construction and procurement.
- Currently there is a 75 kVa pad mounted transformer onsite. As the array is going to provide 150 kVa of electrical generation, CCE anticipates the existing transformer will need to be upgraded. The cost for the utility to perform this upgrade is unknown as of 1/30/2023. The Superior Fire



Department would be responsible for covering the cost differential between the plus labor associated with changeout.

- Any additional upstream distribution costs have been excluded from our proposal
- CCE will work with the utility to coordinate an EV Charge Rate for the current Ford Lighting

Roof Warranty

CCE has included in this bid a price for a pre and post inspection of both roofs.

The company will work with the respective roofers, and in turn their manufactures to ensure seamless transition to solar. When the project is completed the city will be provided an overburden protection warranty.

In addition, slip sheets have been included in the price for the flat roof. The EPDM slip sheets will be of the same type and MIL rating.



Procurement:

CCE is proposing the following products as part of our response:

Module:

- Manufacture: Hanwha Solar
- Product: Q. Peak Duo XL-G10.3/ BFG Bifacial Double Glass Module
- Quantity: 319
- 12-Year Material & Workmanship Warranty
- 30-Year Linear Power Performance Warranty
 - o 1st Year degradation no more than 2%
 - o Subsequent annual power degradation no more than 0.45%

Rapid Shutdown Compliance:

- AP Smart Switch RSD-S-PLC
- Qty: 319

Inverter:

- Manufacture: SMA
- Product: Sunny Tripower Core 1 33-US-41
- Quantity: 2
- Product: Sunny Tripower Core 1 50-US-41
- Quantity: 1
- 208V AC
- 5-year warranty
- Extended Warranty Price: See attached docs for options.
- Sunny Portal online monitoring is included in the price

Racking:

- Unirac EVO RM10
- Snap N Rack Ultra Rail
- 25-year limited product warranty

Transformers:

- o 50 kVa 277/480V Wye to 208V Delta Dry Type Transformers



Construction & Project Management

Safety & Reporting:

The cost and commitment to generate site-specific safety plan has been included in our proposal. An example of a previous site can be found included in our submittals. Additionally, CCE is committed to providing a weekly progress reporting. CCE currently utilizes a shared Dropbox data room to share data with clients and MS Project for our scheduling and planning software.

See attached

Quality Control & Quality Assurance:

As part of our scope of work, a "Plan of the week" reports along with QA/QC logs are kept. Onsite records of work progress are kept in job box and daily progress photos are uploaded to Dropbox. An example of a QA Checklist can be found included in our submittals. Plan of week report detail out construction status, receiving checklist, and scope of work to be completed the following week.

See attached

Scope of Work & Installation:

The cost to provide a turn-key system has been accounted for as part of our proposal. This includes system design and engineering, PVsyst production modeling, and QA/QC reporting for project. Installation of racking, modules, inverters, transformers, equipment pads, monitoring system, AC/DC Balance of system, trenching, patching and has been included in our proposal.



Inspections & Commissioning:

The following permits and fees have been included in our proposal for each site:

- Building Permit
- Electrical Permit

CCE has included the cost to coordinate with City of Superior to complete utility work as it pertains to the site. The cost to perform single phase "Witness Test" testing has been included in our proposal.

CCE has also included the cost to commission the array and as specified in section Commissioning CCE owns a variety of testing and commissioning equipment, including a Solmetric PVA-1500V3 IV Curve Tracer, and has multiple electricians on staff who are trained and certified to use the device. A formal commissioning report from a previous site can be provided upon request.

Post Construction Support & Operation & Maintenance:

CCE has in house staff who can provide ongoing post construction support. We will be monitoring the array on the client's behalf. If an alert is triggered, our service department will contact you.

- ▶ On-going support
 - ▶ Daily system checks to verify system operation
 - ▶ Monthly production reporting vs baseline estimates
 - ▶ Quarterly site visit to perform visual inspection and clean inverter filters
 - ▶ Semi-annual site visit to check system voltages and perform detailed system inspection
 - ▶ Annual Performance ratio testing



Timeline:

See attached

1/30/2023



Assumptions, Clarifications, & Exemptions:

Assumptions/Exemptions:

- Our bid excludes any fees for decommissioning bonds
- Our bid excludes any Union Labor requirements
- We have not included cost for frost, winter conditions or frozen ground conditions
- No screening or tree planting has been included in our bid
- Our bid excludes Utility transformer upgrades along with increased conduit size if applicable



References

Government

City of Brooklyn Park 1MW+
City of Eden Prairie 700 kW DC
City of Little Canada
City of Maple Grove 500 kW DC
City of Morris
City of St Cloud 1MW+
Belle Plaine School District
University of MN
University of St Thomas

Commercial

Aveda/Estee Lauder
HB Fuller
Brin Glass, Heartland Glass
K&K Metal Recycling
Creative Laminating
Toppan Merrill
Eich Mazda & VW

Community Solar Gardens

Waseca CSG
Haven CSG
Bauer CSG
Luhman CSG

Housing

Dominium, Inc.
MBG Properties/Metis
Hornig Properties
Metro Plains
Inventure Properties
Halverson & Blaiser
Lupe Development
Real Estate Equities

Craig Stenson
MetroPlains
314-307-1035

Matt Teasdale
Metis
612 590-0886

Jake Dasheill
New Energy Equity
410-353-3463



1/30/2023

Client#: 134606

CEDACRE6

ACORDTM**CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)

12/29/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

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PRODUCER CBIZ Insurance Services, Inc. 222 S 9th St. STE 1000 Minneapolis, MN 55402 763 549-2200	CONTACT NAME: Stephanie Schmitz	
	PHONE (A/C, No, Ext): 763 549-2204	FAX (A/C, No): 763 549-2299
	E-MAIL ADDRESS: sschmitz@cbiz.com	
INSURED Cedar Creek Energy Corporation 10361 Jamestown St NE Blaine, MN 55449-4524	INSURER(S) AFFORDING COVERAGE	
	INSURER A : Employers Mutual Casualty Co.	NAIC # 21415
	INSURER B : Evanston Insurance Co.	35378
	INSURER C : Admiral Insurance Co.	24856
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☐ LOC OTHER:			5D4171923	01/14/2022	01/14/2023	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$500,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY ☒ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS NON-OWNED AUTOS ONLY			5E4171923	01/14/2022	01/14/2023	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$10,000			5J4171923	01/14/2022	01/14/2023	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N ☒ N	N/A	070001926	01/01/2022	01/01/2023	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
A	Installation/BR			5C4171923	01/14/2022	01/14/2023	\$2,200,000/\$500 Ded
C	Pollution			FEIECC2671102	09/30/2021	09/30/2022	\$5,000,000 Agg
C	Professional			FEIECC2671102	09/30/2021	09/30/2022	\$5,000,000 Agg

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

City of Superior Wisconsin building Inspection Division 1316 N 14th St. Ste 230 Superior, WI 54880	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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Client#: 134606

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	PHONE (A/C, No, Ext): 763 549-2204	FAX (A/C, No):
	E-MAIL ADDRESS: sschmitz@cbiz.com	
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	INSURER B : The Builders Group of MN	
	INSURER C : Admiral Insurance Co.	24856
	INSURER D :	
	INSURER E :	
INSURER F :		

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	AUTHORIZED REPRESENTATIVE <i>Mark G. Stutz</i>

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INSURED Cedar Creek Energy Corporation 10361 Jamestown St NE Blaine, MN 55449	<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Old Republic Surety Company</td> <td>40444</td> </tr> <tr> <td>INSURER B :</td> <td></td> </tr> <tr> <td>INSURER C :</td> <td></td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Old Republic Surety Company	40444	INSURER B :		INSURER C :		INSURER D :		INSURER E :		INSURER F :	
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COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

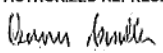
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☐ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB ☐ OCCUR EXCESS LIAB ☐ CLAIMS-MADE DED ☐ RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ Y ☒ N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE ☐ OTH-ER ☐ E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Perf Bond			RCN0640561	03/30/2022	03/30/2023	\$3M aggregate limit

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

City of Superior WI as obligee with respect to contract or agreement or bid.

CERTIFICATE HOLDER**CANCELLATION**

City of Superior Wisconsin building Inspection Division 1316 N 14th St. Ste 230 Superior, WI 54880	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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Q480BFG RM10EVO SMA R1 Superior Fire Dept - Tower Ave, 3326 Tower Ave, Superior, WI 54880

Report

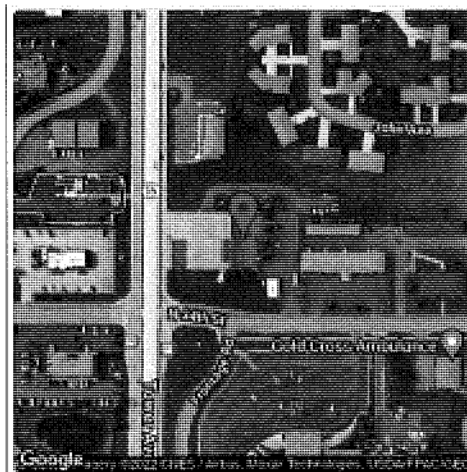
Project Name Superior Fire Dept - Tower Ave
Project Address 3326 Tower Ave, Superior, WI 54880
Prepared By Shawn Doolittle
shawn@cedarcreekenergy.com



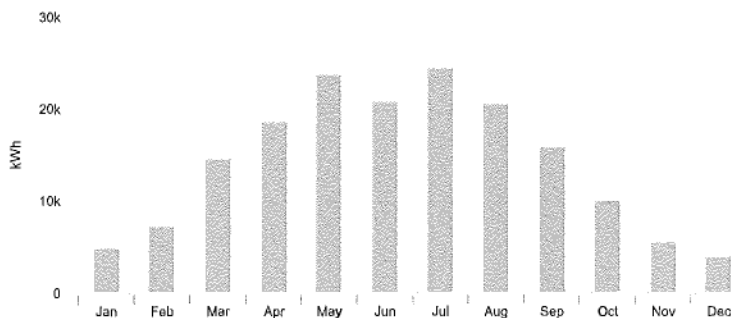
System Metrics

Design Q480BFG RM10EVO SMA R1
Module DC Nameplate 153.1 kW
Inverter AC Nameplate 116.6 kW
Load Ratio: 1.31
Annual Production 171.5 MWh
Performance Ratio 79.6%
kWh/kWp 1,120.1
Weather Dataset TMY, 10km Grid (46.65,-92.15), NREL (prospector)
Simulator Version e8d6985dd0-7ddaace10b-b113002164-54e0273524

Project Location

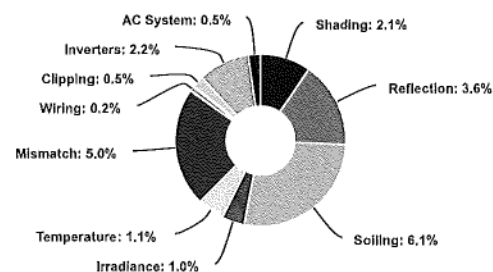


Monthly Production



Month	GHI (kWh/m ²)	POA (kWh/m ²)	Shaded (kWh/m ²)	Nameplate (kWh)	Grid (kWh)
January	44.7	55.2	49.1	5,212.8	4,939.9
February	63.9	72.9	70.5	7,564.8	7,378.4
March	109.2	119.1	117.8	15,207.7	14,633.2
April	142.8	146.4	145.2	20,274.7	18,697.7
May	188.7	188.8	187.4	27,199.3	23,888.0
June	168.1	166.3	165.0	23,996.5	20,923.3
July	194.2	195.5	194.0	28,239.4	24,556.5
August	157.7	163.0	161.7	23,520.2	20,640.3
September	117.2	125.8	124.8	18,052.9	16,045.5
October	72.1	79.2	77.9	11,084.2	10,190.9
November	41.6	48.4	44.7	5,975.2	5,546.9
December	35.6	45.7	38.4	4,426.3	4,062.2

Sources of System Loss



⚡ Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,335.8	
	POA Irradiance	1,406.3	5.3%
	Shaded Irradiance	1,376.5	-2.1%
	Irradiance after Reflection	1,326.5	-3.6%
	Irradiance after Soiling	1,245.7	-6.1%
	Total Collector Irradiance	1,245.5	0.0%
Energy (kWh)	Nameplate	190,754.0	
	Output at Irradiance Levels	188,941.2	-1.0%
	Output at Cell Temperature Derate	186,781.2	-1.1%
	Output After Mismatch	177,473.4	-5.0%
	Optimal DC Output	177,106.0	-0.2%
	Constrained DC Output	176,177.1	-0.5%
Temperature Metrics	Inverter Output	172,364.6	-2.2%
	Energy to Grid	171,502.8	-0.5%
Simulation Metrics	Avg. Operating Ambient Temp		7.6 °C
	Avg. Operating Cell Temp		15.7 °C
	Operating Hours	4672	
	Solved Hours	4672	

☁ Condition Set

Description	snow loss roof pitch												
Weather Dataset	TMY, 10km Grid (46.65,-92.15), NREL (prospector)												
Solar Angle Location	Meteo 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	
	26.5	26.5	12.25	5.5	2.25	2	2	2	2	2.9	8	19.5	
Irradiation Variance	5%												
Cell Temperature Spread	4° C												
Module Binning Range	-2.5% to 2.5%												
AC System Derate	0.50%												
Module Characterizations	Module						Uploaded By		Characterization				
	Q,PEAK DUO XL-G10.3/BFG 480 (2021) (Hanwha)						HelloScope		Spec Sheet Characterization, PAN				
Component Characterizations	Device		Uploaded By					Characterization					

📦 Components

Component	Name	Count
Inverters	Sunny Tripower_Core1 33-US-41 (SMA)	2 (66.6 kW)
Inverters	Sunny Tripower_Core1 50-US-41 (SMA)	1 (50.0 kW)
Strings	10 AWG (Copper)	22 (1,774.8 ft)
Module	Hanwha, Q,PEAK DUO XL-G10.3/BFG 480 (2021) (480W)	319 (153.1 kW)

🔌 Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	4-16	Along Racking
Wiring Zone 2	-	4-16	Along Racking
Wiring Zone 3	-	4-16	Along Racking

🏠 Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	180°	1.1 ft	1x1	131	131	62.9 kW
Field Segment 2	Fixed Tilt	Landscape (Horizontal)	10°	180°	1.1 ft	1x1	0	0	0
Field Segment 3	Fixed Tilt	Landscape (Horizontal)	10°	180°	1.1 ft	1x1	79	76	36.5 kW
Field Segment 4	Fixed Tilt	Landscape (Horizontal)	10°	180°	1.1 ft	1x1	0	0	0
Field Segment 5	Flush Mount	Landscape (Horizontal)	26.57°	0°	1.1 ft	1x1	0	0	0
Field Segment 5 (copy)	Flush Mount	Portrait (Vertical)	26.57°	180°	0.1 ft	1x1	8	8	3.84 kW
Field Segment 7	Flush Mount	Portrait (Vertical)	26.57°	270°	0.1 ft	1x1	104	104	49.9 kW

Detailed Layout



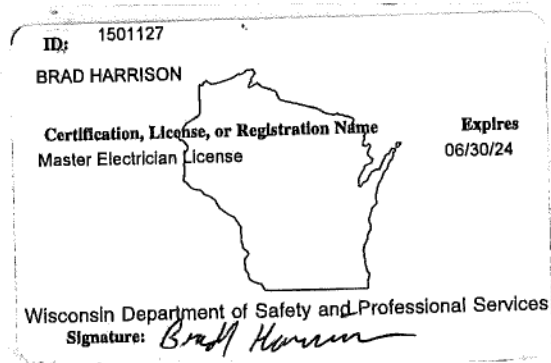
Division of Professional Credential
Processing
4822 Madison Yards Way
Madison, WI 53705
Phone: (608) 266-2112
Fax: (608) 267-0592
Email: dspscredtrades@wi.gov
Website: www.dsps.wi.gov

Certification, License, or Registration Card

Below you will find your certification, license or registration card. This card serves as an additional piece of documentation of licensure that may be carried on person. To view details about your credential or continuing education log into the eSLA portal where you can view your credential status or use the public lookup to verify the status of your CE. To access the eSLA portal, navigate to www.eSLA.wi.gov.

Wisconsin Department of Safety and Professional Services	
Cedar creek energy	
Credential ID: DC-032200339	
Customer ID:	
Certification, License, or Registration Name	Expires:
Dwelling Contractor	2023-03-24
Signature:	

Please review the information on the card. If errors or discrepancies are found, you may contact the Department at 608-266-2112 or email DSPS CredTrades@wi.gov, and provide your ID number printed on the card. The Department should be notified of changes in addresses as they occur. Notification of address changes is the responsibility of the credential holder. A renewal notice will be emailed to the email address on file 30 and 60 days before expiration. Before the expiration date of each credential indicated on the card. Renewals are contingent upon compliance with the requirements specified in Wisconsin Administrative Code SPS 305.





Certification

The Contractor Score is an empirical tool derived from the contractor's documented and verified information. It is based on objective calculations without subjectivity or bias. The main goal of Contractor Score is to provide a concise gauge whereby customers may evaluate the short-term liquidity and management capacity of the contractor relative to its own needs. It is not a bond nor guarantee of performance. The emphasis is on liquidity, working capital, leverage and profitability of the most recent fiscal year and fiscal quarter as it relates to the existing backlog. Available funds contributing to the liquidity may be internal or external.

Cedar Creek Energy

10361 JAMESTOWN ST NE
BLAINE, USA-Minnesota 55449-452

Has a Contractor Score of

1208

Effective Date as of Latest Financial Statements Submitted

August 11, 2021

0 – 350 Weak

350 – 650 Fair

650 – 1000 Good

Over 1000 Excellent

Contractor Score GENERAL DISCLAIMER

This financial information has been prepared by CONTRACTOR SCORE for the purpose of providing interested parties with general information about the Company. The data included was derived from the books and records of the Company. Although such information is believed to present fairly the history and business of the Company, CONTRACTOR SCORE does not make any representation as to the completeness or accuracy of the contents of these financial metrics. CONTRACTOR SCORE, specifically, is only calculating data provided to CONTRACTOR SCORE by the Company. CONTRACTOR SCORE has, in no manner, attempted to verify the information provided to them.

Parties wishing to pursue business with the Company shall be responsible for the verification of any information upon which they may make any decisions.

The underlying financial information to Contractor Score is treated as confidential. The recipient shall use such information only for the purpose of evaluating conduction of business with the Company and not in any manner or for any purpose adverse to the interests of the Company. Contractor Score is in no way a guarantee of the company's future performance.

ORDINANCE #O20-4178

ORDINANCE INTRODUCED BY MAYOR JIM PAINE REPEALING SECTION 2, ARTICLE XII PUBLIC WORKS PROJECTS AND RECREATING SECTION 2, ARTICLE XII RESPONSIBLE CONTRACTOR CRITERIA

The Common Council of the City of Superior, Wisconsin, does ordain as follows:

SECTION 1. Chapter 2, Article XII, Public Works Projects of the City Code of Ordinances is hereby repealed and recreated as follows:

ARTICLE XII. RESPONSIBLE CONTRACTOR CRITERIA

Section 2-468. Purpose. Pursuant to Wis. Stats. § 66.0901, whenever the city lets public work by contract, the contract must be awarded to the lowest qualified responsible contractor. What constitutes a qualified responsible contractor is a determination that requires the exercise of discretion by the city and its departments, officials or employees under reasonably consistent responsible contractor criteria when exercising its discretion.

Section 2 -469. Definitions. In this section, the following definitions shall apply.

“Contractor” means a person, corporation, partnership or any other business entity that performs work on a public works contract as a general contractor, prime contractor or subcontractor at any tier.

“Apprenticeship program” means an apprenticeship program that is currently approved by the U.S. Department of Labor or a state apprenticeship agency and has graduated apprentices to journeyman status for three years.

“Public works contract” means a contract for the construction, alteration, execution, repair, remodeling or improvement of a public work or building, where the contract is in excess of \$25,000 and is required to be bid pursuant to Wis. Stats. § 59.52(29).

“Qualified contractor (Bidder)” means a person, corporation, partnership or any other business entity that meets the requirements specified in this ordinance as well as the criteria specified in Wis. Stats. 16.855 (9m) (b) (1) (a & b)

Section 2-470 Responsible Contractor Criteria. In order to be a qualified responsible contractor for purposes of being awarded a public works contract, the contractor must meet the following criteria.

- a) The contractor maintains a permanent place of business.
- b) The contractor is authorized to do business in the State of Wisconsin.

- c) The contractor, or agent, partner, employee or officer of the contractor, is not debarred, suspended, proposed for debarment or declared ineligible from contracting with any unit of federal, state or local government.
- d) The contractor is in compliance with provisions of Section 2000e of Chapter 21, Title 42 of the United States Code and Federal Executive Order No. 11246 as amended by Executive Order No. 11375 (known as the Equal Opportunity Employer provisions).
- e) The contractor has general liability, workers' compensation, automobile insurance and unemployment insurance.
- f) The contractor has complied with all provisions of any prevailing wage laws and federal Davis-Bacon related Acts, and the rules and regulations therein, for projects undertaken by the contractor that are covered by these laws, for the past five (5) years.
- g) The contractor participates in an apprenticeship program as referred in section 2-46 9, if the contractor employs more than two (2) employees.
- h) The contractor has a written substance abuse prevention program meeting the requirements of Wis. Stat. §103.503.
- i) The employees who will perform work on the project are properly classified as employees or independent contractors under all applicable state and federal laws.
- j) The contractor has not been the subject to any investigation, order or judgement regarding the construction industry from a state or federal agency or court concerning an employment practice, including but not limited to, classification of employees, unemployment insurance, discrimination or payroll fraud. If the contractor has been the subject of any of the aforementioned, the contractor must provide copies of the investigation, order or judgement and may be disqualified.
- k) The contractor's employees who will perform work on the project are:
 - 1) Covered under a current workers' compensation policy; and properly classified under such policy.
 - 2) Covered under a current health insurance policy as required by federal or state law.
- l) The contractor possesses all applicable professional and trade licenses required for performing the public works.
- m) The contractor has adequate financial resources to complete the public works contract, as well as all other work the bidder is presently under contract to complete.
- n) The contractor is bondable for the terms of the proposed public works contract.

- o) The contractor has a record of meeting the criteria which will be considered in determining satisfactory completion of projects and may include, but are not limited to:
 - 1) Completion of contracts in accordance with drawings and specifications;
 - 2) Diligent execution of the work and completed contracts according to the established time schedules unless extensions are granted by the owner; and
 - 3) Fulfilled guarantee requirements of the contract documents.
- p) The contractor has, and diligently maintains, a written safety program.

Section 2-471.No Restriction on Discretion. If information other than what was disclosed by the contractor in section 2-470 is discovered by the city or the department, official or employee responsible for awarding the public works contract, and such information calls into question the contractor's abilities or competence to faithfully and responsibly comply with the terms of a public works contract, that information shall be considered in determining whether the contractor is a qualified responsible contractor.

Section 2-472. Affidavit of Compliance.

In the event a construction management company is to administer the said contract with general contractors, prime contractors or subcontractors of any tier, the construction management firm shall ensure all the rules and regulations contained in this Responsible Contractors Ordinance are followed by all contractors of any tier.

The general, prime contractor, or sub-contractor of any tier bidding on a public works project must include in its sealed bid:

- a) **Its own affidavit swearing compliance with the criteria set forth in section 2-470 on the form required by city; and**
- b) An affidavit swearing compliance with the criteria set forth in [section 2-470](#) on the form required by the city from every subcontractor at any tier who will perform work on the project.

[Failure to submit the required affidavit, or providing incorrect, false, or misleading information may disqualify the contractor's bid.](#)

SECTION 2. All ordinances and parts of ordinances conflicting with this ordinance are hereby repealed.

SECTION 3. This ordinance shall be in full force and effect from and after its passage and publication.

10. CONTRACT

Fire Station 1 Solar System Design Build

10.1 Preamble

This contract made this 8th day of March 2023, by and between Cedar Creek Energy Corporation, a Minnesota corporation, herein called "Contractor", and the City of Superior, a municipal Corporation, located in Douglas County, Wisconsin, herein called "Owner".

WITNESSETH, that the Contractor and Owner for the consideration stated herein, agree as follows:

10.2 Article I - Scope of Work

The Contractor shall perform everything required to be performed and shall provide and furnish all the applicable labor, materials, equipment, necessary tools, expendable equipment, insurance provided by the specifications, contributions to social security and all utility and transportation services required to perform and complete in a workmanlike manner the following work:

Bid Project: Contractor to install a roof mounted solar system on Fire Station 1 located at 3326 Tower Avenue, Superior, Wisconsin, to reduce reliance on utility provided energy, participate in the renewable energy transition, and to ensure adequate supply of energy for future needs. The design, installation, and commissioning are to be completed by the contractor.

All work shall be in strict compliance with the Contractor's proposal and other contract documents, herein mentioned as component parts of this contract.

10.3 Article II - Contract Price

The Owner shall pay the Contractor for the performance of this contract for the not to exceed amount of three hundred sixty-four thousand, seven hundred fifty dollars (\$364,750.00) lump sum as proposed.

Contractor shall not be entitled to payment for work found deficient or failing to conform to the requirements set forth in this agreement and is not entitled to further payments until corrected to the satisfaction of the City of Superior at the cost of the Contractor. The City will inform the Contractor of any deficiencies and/or items that do not conform to this contract within

thirty (30) days of receipt.

Unless otherwise provided in the special provisions, payments are to be made to the Contractor within 30 days of receipt of an approved payment application/invoice on the basis of written approval of estimates by the Owner of the value of the work performed during the preceding billing period. However, in accordance with 66.0901(9) Wisconsin Statutes, owner will retain five percent (5%) of the amount of each such estimate, until the work has been completed. This retainage will be held until completion and acceptance of all work included in this contract.

Submission of a final payment application/invoice shall be accompanied by final unconditional lien waivers (from all sub-contractors and suppliers) to the Owner. Prior to release of final payment, the Fire Department shall review project documents submitted by Contractor to determine the satisfaction thereof; it will be at the Fire Department's sole discretion when the final payment is made. Final payment will be made to Contractor within thirty (30) days of the City's acceptance of services as complete.

The Owner in case the work under this contract is not completed within the time required or within an extended time approved in writing by the Owner, is authorized to take charge of the work and finish it at the expense of the Contractor and his sureties, and to apply the amount retained from estimates to the completion of the work.

10.4 Article III - Component Parts of this Contract

This contract consists of the following component parts, all of which are as fully a part of it as if set out verbatim herein, or if not attached, as if the same were hereto attached:

1. Advertisement to Bid
2. Instructions to Bidders
3. Bid Proposal
4. Subcontractors & Suppliers Listing
- 5 Addenda Acknowledgment
6. Bid Bond
7. Bidder's Proof of Responsibility
8. Affidavit of Organization and Authority
9. Affidavit of Compliance from Contractor and all Sub-Contractors
- 10 Contract
- 10.0 Certificate of Insurance
11. Performance and Payment Bond
12. General Specifications
13. Engineer's Certificate (as applicable)
14. Special Provisions (as applicable)
15. Contract Change Order
16. Additional Attachments per Index (as applicable)

The contract documents form a complete unit and requirements called for by one are as binding as if called for by all. In cases of conflict between plans and specifications, the specifications shall govern. Special Provisions shall control over General Specifications.

10.5 Article IV - Payment for Labor & Materials

The Contractor specifically agrees to pay for all claims for labor performed for this project and materials furnished, used, and consumed in completing the foregoing contract, together with all items enumerated in Section 779.035, of the Wisconsin Statutes, as the obligation of the Contractor. No assignment, modification or change in the contract, or change in the work covered thereby, or any extension of time for completion of the contract shall release the sureties on the bond.

10.6 Article V – Insurance

Within ten (10) days after the execution of the contract, and prior to commencement of any work, the Contractor shall file with the Owner, satisfactory evidence of having adequate worker's compensation insurance and public liability insurance, both personal and property, as outlined in the General Specifications, section 12.3.

10.7 Non-Discrimination

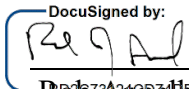
Upon execution of this Agreement, Contractor/Consultant agrees as follows: Contractor/Consultant and all Subcontractors do not discriminate against any employee, applicant for employment, independent contractor, or any other persons because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

10.8 Signatures

In Witness Whereof, the parties intending to be legally bound have executed this agreement the day and year set forth above.

SIGNED AND SEALED: COMPANY: Cedar Creek Energy Corporation
ADDRESS: 10361 Jamestown St NE, Blaine, MN 55449-4524
PHONE: 763-450-9762

DocuSigned by:



3/13/2023 | 8:37:31 AM CDT

Rob Appellhof, CEO

ATTEST: CITY OF SUPERIOR, WISCONSIN

DocuSigned by:

Jim Paine

Jim Paine, Mayor

DocuSigned by:

Nicholas Rhinehart

Nicholas Rhinehart, Finance Director

Provision has been made to
pay the liability that will
accrue under this contract.

DocuSigned by:

Camila Ramos

Camila Ramos, Clerk

DocuSigned by:

Frog Prell

Frog Prell, City Attorney

Approved by the Superior Common Council on: March 7, 2023

11. PERFORMANCE AND PAYMENT BOND (Sample)

AIA Document A312™ - 2010 Performance and Payment Bond is the preferred document.

All other bonds must be approved by the City.

KNOW ALL MEN BY THESE PRESENTS THAT _____
of _____, and _____ as
principal, and _____ of _____, a corporation
and existing under the laws of the State of Wisconsin (hereinafter called Asurety®), as surety are held and
firmly bound unto the City of Superior, a municipal corporation, of the State of Wisconsin, in the penal sum
of \$_____ Dollars, good and lawful money of the United States of America, to be paid to the City
of Superior, Wisconsin, its duly authorized attorneys, agents, officers, successors and assigns for which
payment, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and
assigns, jointly and severally firmly by these presents.

WHEREAS, the above bound principal has entered into a certain written contract with the City of
Superior, Wisconsin, dated this ____ day of _____, 20____, which contract is hereby
referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of the above obligation is such that if the above bound principal
shall well and truly keep, do and perform each and every matter and thing in said contract set forth and
specified to be by the said principal kept, done and performed at the time and in the manner in said contract
specified, and shall pay over, make good and reimburse to the aforementioned City, all loss and damage which
said City may sustain by reason of failure or default on the part of said principal and shall pay to every person
entitled thereto all claims for labor performed and materials furnished, used or consumed in performing the
work provided in said contract including, without limitation because of enumeration, fuel, lumber, building
materials, machinery, vehicles, tractors, equipment, fixtures, apparatus, tools, appliances, supplies, electric
energy, gasoline, motor oil, lubricating oil, greases, state imposed taxes, premiums for worker's compensation
insurance and contributions for unemployment compensation, then this obligation shall be void; otherwise, it
shall be and remain in full force and effect.

Contractor	_____
Representative	_____
Title	_____
Insurance Company	_____
Representative	_____
Attest:	_____

12. GENERAL SPECIFICATIONS

12.1 GENERAL

State, Federal and/or grant funds may be used to fund all or part of this contract. The City will not be held liable for any damages incurred due to changes in State, Federal or grant funding, including (but not limited to) a reduction or cancellation of the project.

12.2 SUBSTITUTIONS

The following terms shall be substituted in the specifications:

- a. "Owner" or "City" is the City of Superior.
- b. "Engineer" is the Contracted Engineer/Architect for the City of Superior or the City Engineer assigned to the project.

12.3 INSURANCE REQUIREMENTS

The Contractor shall not commence work on contract until proof of insurance required has been provided to the applicable department before the contract or purchase order is considered for approval by the City.

It is hereby agreed and understood that the insurance required by the City is primary coverage and that any insurance or self-insurance maintained by the City, its officers, council members, agents, employees, or authorized volunteers will not contribute to a loss. All insurance shall be in full force prior to commencing work and remain in force until the entire job is completed and the length of time that is specified, if any, in the contract or listed below whichever is longer.

CONTRACTOR—LIABILITY

A. Commercial General Liability coverage at least as broad as Insurance Services Office Commercial General Liability Form, including coverage for Products Liability, Completed Operations, Contractual Liability, and Explosion, Collapse, Underground coverage with the following minimum limits and coverage:

- | | |
|--|-------------|
| 1. Each Occurrence limit | \$1,000,000 |
| 2. Personal and Advertising Injury limit | \$1,000,000 |
| 3. General aggregate limit (other than Products-Completed Operations) per project | \$2,000,000 |
| 4. Products-Completed Operations aggregate | \$2,000,000 |
| 5. Fire Damage limit — any one fire | \$50,000 |
| 6. Medical Expense limit — any one person | \$5,000 |
| 7. Products - Completed Operations coverage must be carried for two years after | |

acceptance of completed work.

B. Automobile Liability coverage at least as broad as Insurance Services Office Business Automobile Form, with minimum limits of \$1,000,000 combined single limit per accident for Bodily Injury and Property Damage, provided on a Symbol #1- "Any Auto" basis.

C. Workers' Compensation as required by the State of Wisconsin, and Employers Liability insurance with sufficient limits to meet underlying Umbrella Liability insurance requirements. If applicable for the work coverage must include Maritime (Jones Act) or Longshoremen's and Harbor Workers Act coverage.

D. Umbrella Liability providing coverage at least as broad as the underlying Commercial General Liability, Automobile Liability and Employers Liability, with a minimum limit of \$2,000,000 each occurrence and \$2,000,000 aggregate, and a maximum self-insured retention of \$10,000. The umbrella must be primary and non-contributory to any insurance or self-insurance carried by the City.

F. Builder's Risk / Contractor's Equipment or Property - The contractor is responsible for loss and coverage for these exposures. City will not assume responsibility for loss, including loss of use, for damage to property, materials, tools, equipment, and items of a similar nature which are being either used in the work being performed by the contractor or its subcontractors or are to be built, installed, or erected by the contractor or its subcontractors.

INSURANCE REQUIREMENTS FOR SUBCONTRACTOR

All subcontractors shall be required to obtain Commercial General Liability (if applicable Watercraft liability), Automobile Liability, Workers' Compensation and Employers Liability, (if applicable Aircraft liability) insurance. This insurance shall be as broad and with the same limits as those required per Contractor requirements, excluding Umbrella Liability, contained in Section 1 above.

APPLICABLE TO CONTRACTORS / SUBCONTRACTORS / SUB-SUB CONTRACTORS

- A. Primary and Non-contributory requirement - all insurance must be primary and non-contributory to any insurance or self-insurance carried by City.
- B. Acceptability of Insurers - Insurance is to be placed with insurers who have an **A.M. Best** rating of no less than A- and a Financial Size Category of no less than Class VII, and who are authorized as an admitted insurance company in the state of Wisconsin.
- C. **Additional Insured Requirements - The following must be named as additional insureds on all Liability Policies for liability arising out of project work – City of**

Superior, and its officers, council members, agents, employees and authorized volunteers. On the Commercial General Liability Policy, the additional insured coverage must be ISO form CG 20 10 07 04 and also include Products - Completed Operations additional insured coverage per ISO form CG 20 37 07 04 or their equivalents for a minimum of 2 years after acceptance of work. This does not apply to Workers Compensation Policies.

- D. Deductibles and Self-Insured Retentions - Any deductible or self-insured retention must be declared to and approved by the City.
- E. Evidences of Insurance - Prior to execution of the agreement, the Contractor shall file with the City a certificate of insurance (Accord Form 25-S or equivalent) signed by the insurer's representative evidencing the coverage required by this agreement. In addition form CG 20 10 07 04 for ongoing work exposure and form CG 20 37 07 04 for products-completed operations exposure must also be provided or its equivalent.

Such liability policies shall contain a provision or endorsement covering any contingent liability of the City of Superior. **The City is to be shown as “additionally insured” and the project is to be listed on the certificate.** The naming of said entities as Certificate Holders will not be acceptable. Certificates of worker's compensation and personal and public liabilities, along with the provision indemnifying the City of Superior must be submitted by the successful bidder.

12.3.5 IDEMNIFICATION

Contractor hereby agrees to indemnify, defend and hold harmless the City its elected and appointed officials, officers, employees, agents, representatives and volunteers, and each of them, from and against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, interest, attorneys' fees, costs, and expenses of whatsoever kind or nature in any manner directly or indirectly caused, occasioned, or contributed to in whole or in part or claimed to be caused, occasioned, or contributed to in whole or in part, by reason of any act, omission, fault, or negligence, whether active or passive, of Contractor or of anyone acting under its direction or control or on its behalf, even if liability is also sought to be imposed on the City, its elected and appointed officials, officers, employees, agents, representatives and volunteers.

The obligation to indemnify, defend and hold harmless the City, its elected and appointed officials, officers, employees, agents, representatives, and volunteers, and each of them, shall be applicable unless liability results from the sole negligence of the City, its elected and appointed officials, officers, employees, agents, representatives, and volunteers.

Contractor shall reimburse the City, its elected and appointed officials, officers, employees, agent or authorized representatives or volunteers for all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. If Contractor employs other persons, firms, corporations, or entities (subcontractor) or volunteers

as part of the work covered by this Agreement, it shall be responsibility of the contractor to require and confirm that each sub-contractor enters into an Indemnity Agreement in favor of the City, its elected and appointed officials, officers, employees, agents, representatives and volunteers, which is identical to this Indemnity Agreement.

This indemnity provision shall survive the termination or expiration of this Agreement.

12.4 PERFORMANCE AND PAYMENT BOND

Contractor shall execute and furnish a completed PERFORMANCE AND PAYMENT BOND in the total amount of the approved bid, to be supplied to the Owner along with the required signed contract documents. AIA Document A312™ - 2010 is the preferred Performance and Payment Bond document.

12.5 LICENSES, PERMITS AND APPROVALS

The Contractor warrants that he is properly licensed and possesses all the necessary qualifications as required by the federal, state, and local laws, ordinances, regulations, etc. prior to commencing work, and shall remain in good standing for the duration of the project.

The Contractor is responsible for all local, state, and federal permits and approvals which may apply to this project. The fees for local permits will be waived upon receipt of application of such permits and it is noted that the permit late fee of \$750.00 per permit will be the financial responsibility of contractor. Normal local inspections will be required, including final inspection of the project by the applicable local departments. The Contractor shall give all notices required by law and comply with all laws, statutes, ordinances, rules, and regulations that affect the conduct and prosecution of the project. The Contractor shall be liable for all violation of the law in connection with work furnished by the Contractor. If Contractor performs any work that it knew or should have known to be contrary to such laws, statutes, ordinances, rules, and regulations and without giving notice to the City, the Contractor shall be responsible for all costs arising therefrom.

The City will consider no plea of misunderstanding or ignorance of these requirements.

12.6 OBSTRUCTION OF STREETS AND SIDEWALKS

The Contractor shall promptly remove any dirt or debris which is caused by its performance of this contract and clean all streets, sidewalks, alleys, and public property which are soiled by Contractor's actions or omissions. If the Contractor shall, in any manner, obstruct a street or sidewalk or other public grounds, they shall erect, install, maintain and pay for barriers and lights to prevent accidents and shall be liable for damages caused by the obstruction and

for any damage or disruption to streets, alleys or public grounds which may result from the Contractor's carelessness in the prosecution of such work in accordance with Section 62.15 (11) of the Wisconsin Statutes. The Contractor shall also be bound by any further requirements of the specifications on this point.

12.7 PROSECUTION AND PROGRESS

Upon receipt of "Notice to Proceed" from the Owner, work under this contract shall commence immediately and be completed by September 30, 2023.

12.8 COORDINATION OF CONTRACTORS

The City may award or may contract for additional work outside the scope of this contract. The Contractor shall fully cooperate with any other Contractor, City employee, Engineer, or designated representative of the City, by scheduling its own work with that to be performed under other Contracts as may be directed by the City. The Contractor shall not commit or permit any act which will interfere with the performance of any other Contractor, agent, City employee, engineer or designated representative as scheduled.

Employees of the Contractor must be able to work within a public setting without creating a disruption and conform to all policies, rules, and regulations. Contractor shall require that their employees be courteous at all times, not to use loud or profane language, and to work as quietly as possible. Contractor shall require that its employees shall not trespass, loiter, cross property to adjoining premises, or tamper with property not covered by the contract.

Contractor agrees to observe and obey all applicable laws, ordinances, rules, and regulations promulgated and enforced by the City and by any other proper authority having jurisdiction over the work performed herein.

Special Conditions Where special conditions or special purposes require the consideration of deviations from these specifications, any such deviations must be authorized by the Owner.

12.9 CHANGE ORDERS

Any change to the signed contract must be approved by the Owner, in writing, prior to the commencement of the change (see CONTRACT CHANGE ORDER, Section 13). All changes/amendments/addition/ deletions to the original contract must be described on the Contract Change Order form with necessary increase/decrease in contract price indicated.

Change orders will need to include any invoices and supporting documents. These changes will include applicable project extension time requests. The form is to be numbered sequentially and is to be signed by the Contractor and approved by the Owner before proceeding to execute the work. Verbal directions, approvals, conversations, or agreements are not permitted in lieu of a written Change Order.

Any work conducted outside of the scope of the contract, or in addition to the contract and not authorized through a written Change Order is at the Contractor's sole cost and expense.

12.10 TIME PENALTIES

Should the Contractor fail to complete the work within the time agreed upon under section 12.7 above, or within such extra time as may be allowed by extensions at the discretion of the Owner, the Owner shall be entitled to compensation for damages resulting from the failure of the Contractor(s) to complete the work within the contract period. Such damages shall include, but not be limited to the following: impacts on Owner operations, inconvenience to the public, added cost of engineering and supervision, maintenance of detours and other items resulting from the Contractor's failure to complete the work within the time specified in the contract. If the damages exceed the balance of monies that would otherwise have been due the Contractor, the Contractor or the Contractor's Surety shall be responsible for payment of all such damages to the Owner as liquidated damages.

All actual damages accruing to the Owner because of any delay shall be borne by the Contractor.

12.11 GUARANTEE

The Contractor shall assume responsibility for all defects which may develop in any part of the bid project caused by faulty workmanship, material or equipment and agrees to replace any such faulty workmanship, material, and equipment, during the period of two (2) years from date of final acceptance of the work without cost to the Owner. Contractor shall coordinate any manufacture's warranties for the Owner during the two-year period, without any cost to the Owner.

Acceptance of the plan shall not waive this guarantee. Final acceptance shall be determined as date of letter from Owner or Engineer approving final payment. Contractor is responsible for coordinating manufacturer warranty replacements should problems arise in the guarantee period. The warranty period shall begin upon contractor receipt of final payment, unless otherwise agreed upon in writing by the Owner.

12.12 AS-BUILTS and WARRANTY DOCUMENTS

Within ten (10) days of substantial completion and prior to final payment by the Owner, the Contractor is to supply the Owner with project “as-builts” and all product warranty information. As-builts must be submitted in CAD, GIS or adobe file format or another format agreed upon by Owner.

12.13 CONTROL OF THE WORK – as applicable

MANY UTILITY OWNERS HAVE EXISTING FACILITIES NEAR OR AT THE LOCATION OF THE WORK REQUIRED UNDER THIS CONTRACT. The Contractor shall contact **Diggers Hotline at 1-800-242-8511** to determine locations are safe and will make any adjustments recommended by the locator prior to performing any excavation operations under this contract.

12.14 SCOPE OF WORK

The scope of work for this project shall be in accordance set forth in this document.

The Contractor shall be responsible for the maintenance of traffic. The Contractor shall provide, erect, and maintain all barricades.

12.15 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

The Contractor shall work in cooperation with utility companies in the protection of water and gas mains and other utilities that may be within the limits of construction. It shall be the duty of the Contractor to notify the utility company or companies involved before starting work on this project.

All necessary work of adjusting any underground relocation will be performed by their owners, unless otherwise shown on the plans. The work to maintain and/or adjust these utilities shall be considered incidental to the project.

The Superior Water, Light and Power Company will relocate any power poles or fire hydrants during construction operations, unless otherwise noted in the special provisions or if a cooperative agreement is established with Superior Water, Light and Power Company. The City of Superior has authority over all sanitary and storm sewers. The Superior Water, Light and Power Company will adjust all water shutoffs and gas shutoffs during

construction.

12.16 SAFETY AND SECURITY

The Contractor shall at all times perform in a safe and workmanlike manner to avoid injury or damage to any person or property. The Contractor shall comply with all requirements and specifications relating to the safety, health, and sanitation measures applicable to the project.

The Contractor shall exercise all necessary precautions for the safety of its employees, and be in compliance with all applicable federal, state and local laws, statutes, ordinances, rules and regulations, including, but not limited to, the Wisconsin Labor Code, The U.S. Department of Transportation Omnibus Transportation Employee Testing Act, and OSHA standards.

The contractor shall provide all necessary safeguards, devices, and protective equipment, including but not limited to adequate life protection and lifesaving equipment, and shall ensure the proper inspection and maintenance of safety measures are current and in compliance.

The City may halt construction on any project where appropriate safety measures and equipment are not being used or any safety regulations are not being followed. Work will not be permitted to resume until required safety provisions have been made and delays as a result of this provision will not be considered a basis for an increase in the contract price or an extension of the completion deadline.

12.17 PRE-CONSTRUCTION CONFERENCE

A preconstruction conference will be scheduled by the Owner or the Engineer prior to work commencing.

12.18 PROJECT DOCUMENT SUBMISSIONS

As a condition of final payment, the following documents must be submitted and accepted by the City:

- a. Lien waivers – final unconditional lien waivers from each sub-contractor and/or supplier must be submitted to the City.
- b. As-builts & product warranties – as noted in Section 12.12, these documents must be submitted to City.
- a. Retainage – Contractor's final invoice is to indicate the balance of work completed with the total amount of retainage due the Contractor.
- c. Local inspections – final inspection reports must be submitted to the City.
- d. Project completion documentation – written documentation from the City Supervisor

confirming the completion of the project.

13. CONTRACT CHANGE ORDER

Station 1 Solar System RFP

Change Order No. _____

Contractor: Name _____
Address _____

Item No.	Description of Change	DECREASE in contract price	INCREASE in contract price
----	Total DECREASE in contract price		XXXXXXXXXX
----	Total INCREASE in contract price	XXXXXXXXXX	
----	NET decrease/increase in contract price	-	+

The current contract total is \$ _____. The sum of \$ _____ is hereby added to/deducted from the total contract price and the total adjusted contract price is thereby \$ _____.

Change orders over \$5,000.00: City Finance Department Initial: _____

The time provided for completion of the contract is (check one):

- ☐ unchanged
☐ increased by _____ calendar/working days
☐ decreased by _____ calendar/working days

Necessity for change:

This document shall become an amendment to the contract and all provisions of the contract will apply hereto.

Change order recommended by: _____ Date: _____
(City, Company, engineer, contractor - circle one)

Change order accepted by: _____ Date: _____
(contractor)

Change order approved by City of Superior: _____ Date: _____





Letter of Warranty

CONTRACTOR: CEDAR CREEK ENERGY

PHONE: 763-432-5261

10361 Jamestown St NE

FAX: 763-432-5283

Blaine, MN 55449

OWNER: The City of Superior
Fire Station 1
3326 Tower Ave
Superior, WI

PROJECT: 153.1kW DC Solar Array
The City of Superior
Fire Station 1
3326 Tower Ave
Superior, WI

THE ABOVE NAMED CONTRACTOR CEDAR CREEK ENERGY, AS CONTRACTOR FOR THE WORK ON THE ABOVE PROJECT, DOES HEREBY WARRANT THAT FOR A PERIOD OF FIVE YEARS FROM THE DATE OF THE CERTIFICATE OF OCCUPANCY, THE ABOVE WORK, THAT IT WILL REMAIN FREE FROM ALL DEFECTS IN WORKMANSHIP AND THAT IT WILL COMPLY WITH ALL THE SPECIFIC REQUIREMENTS OF THE SPECIFICATIONS AND OTHER CONTACT DOCUMENTS GOVERNING THE WORK.

IT IS UNDERSTOOD AND AGREED THAT IN THE EVENT OF DEFECTS AND THE NECESSITY OF MAKING REPAIRS, THE OWNER WILL IMMEDIATELY NOTIFY THE ABOVE CONTACTOR IN WRITING OF ITS CONDITIONS AND SHALL GIVE THE CONTRACTOR REASONABLE TIME IN WHICH TO MAKE SAID REPAIRS. IF ANY PERSON, FIRM, OR CORPORATION OTHER THAN THE ABOVE LISTED CONTRACTOR HAS, SINCE THE COMPLETION OF THE ABOVE WORK, PERFORMED OR ATTEMPTED TO PERFORM ANY REPAIRS TO THE PROPERTY, THEN THIS WARRANTY COULD BECOME NULL AND VOID. THIS WARRANTY DOES NOT COVER ANY REPAIRS MADE BY ANYONE OTHER THAN THE ABOVE CONTRACTOR OR ONE OF ITS AUTHORIZED REPRESENTATIVES.

PROJECT COMPLETION DATE: 11/17/2023

SIGNATURE: Jessica Krawczyk

DATE: 11/17/2023

PRINTED NAME: Jessica Krawczyk

COMPANY: Cedar Creek Energy



Subdivision 1. Warranties by vendors.

In every sale of a completed dwelling, and in every contract for the sale of a dwelling to be completed, the vendor shall warrant to the vendee that:

(a) during the one-year period from and after the warranty date the dwelling shall be free from defects caused by faulty workmanship and defective materials due to noncompliance with building standards;

(b) during the two-year period from and after the warranty date, the dwelling shall be free from defects caused by faulty installation of plumbing, electrical, heating, and cooling systems due to noncompliance with building standards; and

(c) during the ten-year period from and after the warranty date, the dwelling shall be free from major construction defects due to noncompliance with building standards.

Subd. 2. Warranties to survive passage of title.

The statutory warranties provided in this section shall survive the passing of legal or equitable title in the dwelling to the vendee.

Subd. 2a. Remedies unaffected by corporate dissolution.

The statutory warranties provided in this section are not affected by the dissolution of a vendor or home improvement contractor that is a corporation or limited liability company.

Subd. 3. Home improvement warranties.

(a) In a sale or in a contract for the sale of home improvement work involving major structural changes or additions to a residential building, the home improvement contractor shall warrant to the owner that:

(1) during the one-year period from and after the warranty date the home improvement shall be free from defects caused by faulty workmanship and defective materials due to noncompliance with building standards; and

(2) during the ten-year period from and after the warranty date the home improvement shall be free from major construction defects due to noncompliance with building standards.

(b) In a sale or in a contract for the sale of home improvement work involving the installation of plumbing, electrical, heating or cooling systems, the home improvement contractor shall warrant to the owner that, during the two-year period from and after the warranty date, the home improvement shall be free from defects caused by the faulty installation of the system or systems due to noncompliance with building standards.

(c) In a sale or in a contract for the sale of any home improvement work not covered by paragraph (a) or (b), the home improvement contractor shall warrant to the owner that, during the one-year period from and after the warranty date, the home improvement shall be free from defects caused by faulty workmanship or defective materials due to noncompliance with building standards.

Subd. 4. Response from vendor or home improvement contractor to notice of claim; right to inspect.



(a) The vendee or owner must allow an inspection for purposes of the preparation of an offer to repair the alleged loss or damage under subdivision 5. The inspection must be performed by the vendor or home improvement contractor within 30 days of the notification under section [327A.03](#), clause (a). Any damage to property caused as a result of an inspection must be promptly repaired by the inspecting party to restore the property to its preinspected condition.

(b) The applicable statute of limitations and statute of repose for an action based on breach of a warranty imposed by this section, or any other action in contract, tort, or other law for any injury to real or personal property or bodily injury or wrongful death arising out of the alleged loss or damage, is tolled from the date the written notice provided by the vendee or owner is postmarked, or if not sent through the mail, received by the vendor or home improvement contractor until the latest of the following:

- (1) the date of completion of the home warranty dispute resolution process under section [327A.051](#); or
- (2) 180 days.

(c) Upon completion of repairs as described in an offer to repair, the vendor must provide the vendee with a list of the repairs made and a notice that the vendee may have a right to pursue a warranty claim under this chapter. Provision of this statement is not an admission of liability. Compliance with this subdivision does not affect any rights of the vendee under this chapter.

Subd. 5. Right to repair; agreement.

(a) Within 15 days of completion of the inspection required by subdivision 4, the vendor or home improvement contractor must provide to the vendee or owner a written offer to repair. The offer to repair must include, at a minimum:

- (1) the scope of the proposed repair work; and
- (2) the proposed date on which the repair work would begin and the estimated date of completion.

(b) This subdivision does not prevent the vendee or owner from obtaining the information in paragraph (a) from another contractor or from negotiating with the vendor or home improvement contractor for a different scope of work.

(c) If the parties agree to a scope of work, the vendor or home improvement contractor must perform the repair work in accordance with the offer to repair. If the parties do not agree to a scope of work, the vendee or owner must submit the matter to the homeowner warranty dispute resolution process under section [327A.051](#).

(d) Upon completion of repairs described in an offer to repair, the vendor or home improvement contractor must provide the vendee or owner with a written notice that the scope of the work agreed upon has been completed.

Subd. 6. Failure to perform inspection or repair.

If the vendor or home improvement contractor fails to perform an inspection under subdivision 4 or fails to make an offer to repair or perform agreed upon repairs under subdivision 5, the vendee or owner may commence an action.



Subd. 7. Processes required before commencement of action.

Except as provided in subdivision 6, a cause of action for which the statute of limitations or statute of repose is tolled under subdivision 4, paragraph (b), must not be commenced in district court until the earlier of:

- (1) the completion of the home warranty dispute resolution process under section 327A.051; or
- (2) 60 days after the written offer of repair is provided to the vendee or owner.



6030 (9/19/11)

Distributed Generation Interconnection Agreement (20 kW to 15 MW)

Public Service Commission of Wisconsin
P.O. Box 7854
Madison, WI 53707-7854

*****SUBMIT COMPLETED AGREEMENT DIRECTLY TO YOUR ELECTRIC PROVIDER*****

(This completed agreement should **NOT** be sent to the Public Service Commission)

Electric Service Distributed By

Name and Address

SUPERIOR WATER, LIGHT AND POWER
2915 HILL AVE
SUPERIOR, WI 54880

Form Supplied By

Name and Address

Public Service Commission of Wisconsin
P. O. Box 7854
Madison, WI 53707-7854

This Distributed Generation Interconnection Agreement (the "Agreement"), is made and entered into this 23rd (day) of 10 (month), 2023 (year) by and between
Superior Water, Light and Power hereinafter called "Public Utility"
and Superior Fire Dept hereinafter called "Applicant".
Public Utility and the Applicant are hereinafter collectively referred to as the "Parties" and individually as a "Party"

Recitals

- A. Public Utility is the owner of the electric distribution system serving 3326 Tower Ave, Superior, WI 54880
[Insert legal description of property or address]
("Public Utility's Distribution System").
- B. Applicant desires to install a Distributed Generation (DG) facility or energy storage device with a capacity greater than 20 kW but no more than 15 MW, including related interconnection equipment (the "DG Facility") and to interconnect the DG Facility to the Public Utility's distribution system.
- C. Public Utility has previously reviewed and approved Applicant's DG Interconnection Application Form (PSC 6028), dated 06/19/2023, and supporting materials (the "Application"). The completed Application is attached as Exhibit 1 and incorporated into this Agreement.
- D. Applicant wishes to interconnect the DG Facility to Public Utility's distribution system and Public Utility is willing to permit such interconnection subject to the terms and conditions set forth in: (1) Wisconsin Administrative Code Chapter PSC 119; (2) the completed Application approved by Public Utility; and (3) this Agreement.
- E. No agency or partnership is created with the interconnection of the applicants DG Facility.

Agreement

NOW THEREFORE, in consideration of the foregoing Recitals and for good and valuable consideration, the Public Utility and Applicant agree as follows:

1. Design Requirements.

The DG Facility shall be installed in compliance with Wisconsin Administrative Code Chapter PSC 119.

2. Applicant's Representations and Warranties.

Applicant represents and warrants that:

- The DG Facility is fully and accurately described in the Application;
- All information in the Application is true and correct;
- The DG Facility has been installed to Applicant's satisfaction;
- Applicant has been given warranty information and an operation manual for the DG Facility; and
- Applicant has been adequately instructed in the operation and maintenance of the DG Facility.

3. Interconnection Disconnect Switch.

The Public Utility may require that the Applicant furnish and install an interconnection disconnect switch that opens, with a visual break, all ungrounded poles of the interconnection circuit. The interconnection disconnect switch shall be rated for the voltage and fault current requirements of the DG Facility, and shall meet all applicable UL, ANSI, and IEEE standards, as well as applicable requirements of the Wisconsin Electrical Safety Code, Volume 2, Chapter Comm 16. The switch enclosure shall be properly grounded. The interconnection disconnect switch shall be accessible at all times, located for ease of access to Public Utility personnel, and shall be capable of being locked in the open position. The Applicant shall follow the Public Utility's recommended switching, clearance, tagging, and locking procedures.

4. Modifications to the DG Facility.

Applicant shall notify Public Utility of plans for any material modification to the DG Facility by providing at least forty (40) working days of advance notice for Category 2 or sixty (60) working days of advance notice for Categories 3 and 4. A "material modification" is defined as any modification that changes the maximum electrical output of the DG Facility or changes the interconnection equipment (e.g., changing from certified to non-certified devices or replacement of components with components of different functionality or UL listings). The notification shall consist of a completed, revised Application and such supporting materials as may be reasonably requested by Public Utility. Applicant agrees not to commence installation of any material modification to the DG Facility until Public Utility has approved the revised Application. The timetable for Public Utility's response to proposed material modification, after receiving proper notification, is described in Wisconsin Administrative Code § PSC 119.06 and shown below.

Category	Generation Capacity after Modification	Working Days for Public Utility's Response to Proposed Modifications
2	Greater than 20 kW to 200 kW	40
3	Greater than 200 kW to 1 MW	60
4	Greater than 1 MW to 15 MW	60

5. Insurance.

Throughout the term of this Agreement, Applicant shall carry a liability insurance policy that provides protection against claims for damages resulting from (i) bodily injury, including wrongful death; and (ii) property damage arising out of Applicant's ownership and/or operation of the DG Facility under this Agreement. The limits of such policy shall be at least one million dollars (or the level shown in Wisconsin Administration Code § PSC119.05) per occurrence or prove financial responsibility by another method acceptable to and approved in writing by the Public Utility.

The failure of the Applicant or Public Utility to enforce the minimum levels of insurance does not relieve the Applicant from maintaining such levels of insurance or relieve Applicant of any liability. Prior to execution of this Agreement applicant shall provide Public Utility with a certificate of insurance containing a minimum 30-day notice of cancellation. Applicant shall name the Public Utility as an additional insured in the liability insurance policy.

6. Indemnification.

Subject to the limitations set forth in this Section, and to the extent allowable by law, each Party to this Agreement shall indemnify, hold harmless and defend the other Party, its officers, directors, employees and agents from and against any and all claims, suits, liabilities, damages, costs and expenses (including without limitation, reasonable attorneys and expert witness fees) for damage to property, or injury to, or death of, any individual, including the employees, officers, directors and agents of the indemnified Party or any other third parties, to the extent caused wholly or in part by the negligence or the intentional wrongdoing of the indemnifying Party. Notwithstanding anything in this Section or in any other provision of this Agreement to the contrary, the liability of each Party to this Agreement shall be limited to direct actual damages, and all other damages at law or in equity are hereby waived. Under no circumstances shall a Party be liable to the other Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary, or consequential damages, including lost profits. Applicant's and Public Utility's indemnification obligations under this Section and the limits upon their respective liability shall continue in full force and effect notwithstanding the expiration or termination of this Agreement with respect to any event or condition giving rise to an indemnification obligation that occurred prior to such expiration or termination.

7. DG Facility Commissioning Testing.

Applicant shall notify Public Utility in writing that installation of the DG Facility is complete and that the interconnection equipment is available for testing by Public Utility at least fifteen (15) working days before Applicant interconnects the DG Facility with Public Utility's Distribution System. Public Utility shall thereupon have the right to test the DG Facility. Public Utility shall also have the right to witness any testing by Applicant of the DG Facility. Any Public Utility testing of the DG Facility shall be completed within ten (10) working days. If Public Utility waives its right to test the installed DG Facility by notifying Applicant in accordance with this Section, Applicant may interconnect the DG Facility to Public Utility's Distribution System upon the earlier to occur of the following: (a) notification by Public Utility; or (b) fifteen (15) working days after Applicant has notified Public Utility that installation of the DG Facility is complete.

8. Access to DG Facility.

Applicant shall permit (and, if the land on which the DG Facility is located is not owned by Applicant, cause such land owner to permit) Public Utility's employees and agents to enter the property on which the DG Facility is located at any reasonable time for the purposes of inspecting and/or testing Applicant's DG Facility to insure its continued safe and satisfactory operation and the accuracy of Public Utility's meters. Such inspections shall not relieve Applicant from its obligation to maintain the DG Facility and any related equipment owned by Applicant in safe and satisfactory operating condition.

Public Utility shall have the right to witness any testing by Applicant of the DG Facility.

9. Disconnection of a DG Facility to Permit Maintenance and Repairs.

Upon reasonable notice by Public Utility, Applicant shall disconnect the DG Facility to permit Public Utility to perform routine repairs and maintenance to Public Utility's Distribution System, or to install modifications thereto.

10. Disconnection of a DG Facility without Notice.

When Public Utility so requests, Applicant shall discontinue operation of the DG Facility and Public Utility may isolate the DG Facility from Public Utility's Distribution System, upon any of the following

- a. Termination of this Agreement;
- b. If, in Public Utility's reasonable judgment, the DG Facility fails to comply with the Design Requirements specified in Wisconsin Administration Code §§ PSC 119.20 and PSC 119.25.
- c. In the event of an emergency on Public Utility's Distribution System; or
- d. Upon any other breach of this Agreement by Applicant (a "Default"), that Applicant fails to remedy within ten (10) working days after receipt of written notice from Public Utility.

In the event of such disconnection, pursuant to b, c, or d above, the DG Facility shall remain isolated from Public Utility's Distribution System until, in the reasonable judgment of Public Utility, the DG Facility meets the Design Requirements, Applicant has cured any Default, and Public Utility's Distribution System is functioning in a safe manner. If Applicant fails to cure a Default within sixty (60) working days, Public Utility shall further have the right to terminate this Agreement without liability to Applicant for such termination.

11. Disputes; Right to Appeal to PSCW.

Nothing in this agreement prevents Applicant from filing a petition with the Public Service Commission to appeal any requirement imposed by Public Utility as a condition to interconnection of DG Facility, that Applicant alleges is unreasonable.

12. Amendments; Non-Waiver.

Any amendment or modification to this Agreement must be in writing and executed by Applicant and Public Utility. The failure of Applicant or Public Utility to insist on performance by the other Party of any provision of this Agreement shall not waive the right of the Party who failed to insist on performance to enforce the same provision at a later time.

13. Term of Agreement.

This Agreement shall become effective immediately upon the execution, by the Parties, and shall continue in effect until terminated by any of the following:

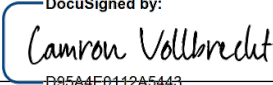
- a. Mutual written agreement of the Parties;
- b. Abandonment or removal of the DG Facility by Applicant;
- c. By Public Utility pursuant to Section 10 of this Agreement;
- d. By Applicant upon thirty (30) working days prior written notice given to the Public Utility.

14. Successors and Assigns.

- a. Assignment by Applicant. Applicant shall not assign its rights and obligations under this Agreement in whole or in part without the prior written consent of Public Utility, which consent shall not be unreasonably withheld or unduly delayed. Public Utility may withhold its consent to any proposed assignment if the proposed assignee fails to assume the obligations of Applicant under this Agreement in writing.
- b. Assignment by Public Utility. The Public Utility shall have the right to assign this Agreement in whole upon written notification to the Applicant.
- c. Successors. This Agreement shall be binding upon the personal representatives, heirs, successors, and permitted assigns of the respective Parties.

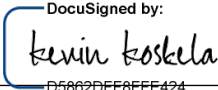
15. Applicant and Public Utility Signature.

**IN WITNESS WHEREOF, Applicant and Company have executed this Agreement
as of the year and date first set forth above.**

Applicant Signature  DocuSigned by:
D95A4E0112A5443...

Title Superior Fire Department - Fire Chief

Date 10/24/2023

Public Utility  DocuSigned by:
D5802DFF8FFE424...

Title Electrical Engineer III

Date 10/24/2023

***** Please Note: This completed form is to be sent to the electric utility. *****

SUPERIOR FIRE DEPARTMENT | 153.12kW DC / 116.6kW AC



CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
3326 TOWER AVE
SUPERIOR, WI 54880

UTILITY CUSTOMER OF RECORD
SUPERIOR FIRE DEPT



SHEET INDEX			
SHEET #	DESCRIPTION	REV. NO.	REV. DATE
PV-1.0	TITLE SHEET	2	09/28/2023
PV-2.0	ROOF SITE PLAN	2	09/28/2023
PV-2.1	ELECTRICAL SITE PLAN	2	09/28/2023
PV-2.2	ELECTRICAL ELEVATION	2	09/28/2023
PV-2.3	MASTER DC STRING PLAN	2	09/28/2023
PV-2.4	DC STRING PLAN (SOUTH)	2	09/28/2023
PV-2.5	DC STRING PLAN (NORTH)	2	09/28/2023
PV-2.6	DC STRING PLAN (EAST)	2	09/28/2023
PV-3.0	ONE LINE DIAGRAM	2	09/28/2023
PV-3.1	SOLAR LABELS	2	09/28/2023
PV-5.0	MODULE SPECIFICATIONS	2	09/28/2023
PV-5.1	RAPID SHUTDOWN DEVICE SPECIFICATIONS	2	09/28/2023
PV-5.2	INVERTER SPECIFICATIONS	2	09/28/2023
PV-5.3	RACKING SPECIFICATIONS	2	09/28/2023
PV-5.4	RACKING SPECIFICATIONS	2	09/28/2023

- NOTES:
1. INVERTERS ARE UL1741 CERTIFIED
 2. PV MODULES ARE UL1703 CERTIFIED
 3. DESIGN SHALL MEET NEC 2020
 4. SECONDARY INTERCONNECTION
 5. THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF EACH OTHER
 6. PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
 7. PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT

PROJECT OWNER: SUPERIOR FIRE DEPARTMENT 3324 TOWER AVE SUPERIOR, WI 54880	PV CONTRACTOR: CEDAR CREEK ENERGY 3155 104TH LN NE BLAINE, MN 55449 WI ELECTRICAL LICENSE #1500705	ELECTRIC UTILITY: SUPERIOR WATER LIGHT & POWER 2915 HILL AVE SUPERIOR, WI 54880 CONTACT: SWA.QUESTIONS@SWLP.COM
CODES & STANDARDS: • IBC 2018 • MN BUILDING CODE 2020 • MNFC 2020 • NEC 2020	UTILITY ACCOUNT INFO: • ACCOUNT #: 2330511512 • PREMISE ID#: 2330148602 • UTILITY METER #: 52181	SCOPE OF WORK: INSTALL NEW 116.6kW AC ROOF MOUNT PHOTOVOLTAIC ARRAY AND OTHER PV EQUIPMENT. POINT OF INTERCONNECTION TO BE A SUPPLY SIDE TAP.

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	153.1201 KW
SYSTEM SIZE (AC)	116.60 KW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	6 CELLS QJPEAK DUO XL G10.3/8FG 480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMA STRONGTIE 33-4L
INVERTER POWER (KW)	50.0KW, 33.3KW
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~6,000FT²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE ISSUES WITH OVERHEAD ELECTRIC SERVICE LINES OR OTHER UTILITIES IN RELATION TO THE PV PANELS
24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

REVISIONS			
#	DESCRIPTION	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY:
JORDIA LATIFI

PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

SHEET DESCRIPTION:
TITLE SHEET

SPACE FOR PE STAMP:

SHEET:
PV-1.0

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	151.1201 kW
SYSTEM SIZE (AC)	116.60 kW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	Q CELLS Q.PEAK DUO XL G10.3/8FG-480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMA STP 50US-4L, STP-33-4L
INVERTER POWER (kW)	50.0kW, 33.3kW
RACKING	ROOF MOUNT (BALLASTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~8,000FT ²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE
ISSUES WITH OVERHEAD ELECTRIC SERVICE
LINES OR OTHER UTILITIES IN RELATION TO
THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

REVISIONS		
#	DESCRIPTION	BY DATE
0	INTERCONNECTION SET	JL 06/13/2023
1	IFC SET	LS 08/30/2023
2	AS BUILT SET	LS 09/28/2023

DRAWN BY :
JORDA LATIFI

PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

SHEET DESCRIPTION :
SITE PLAN

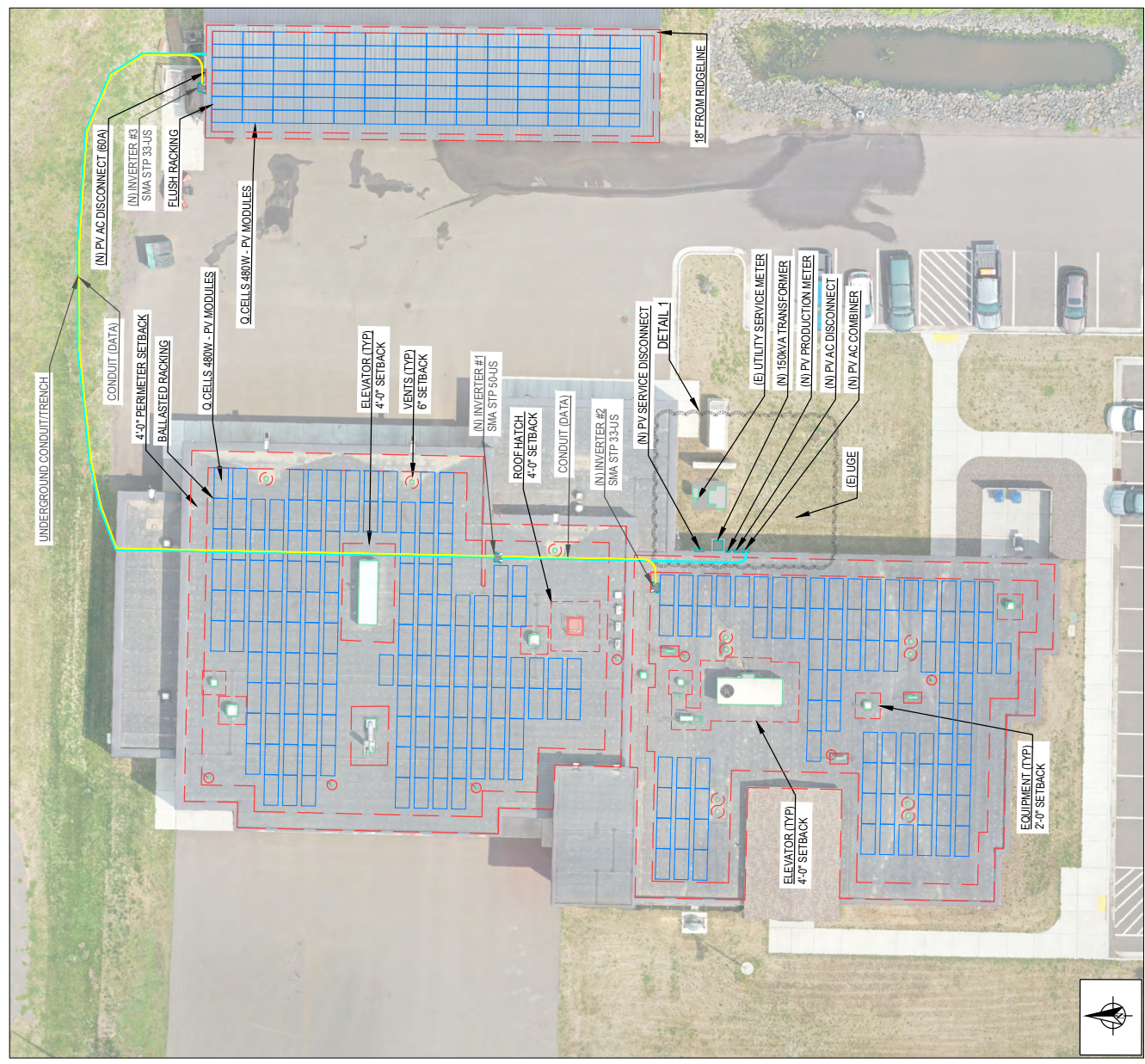
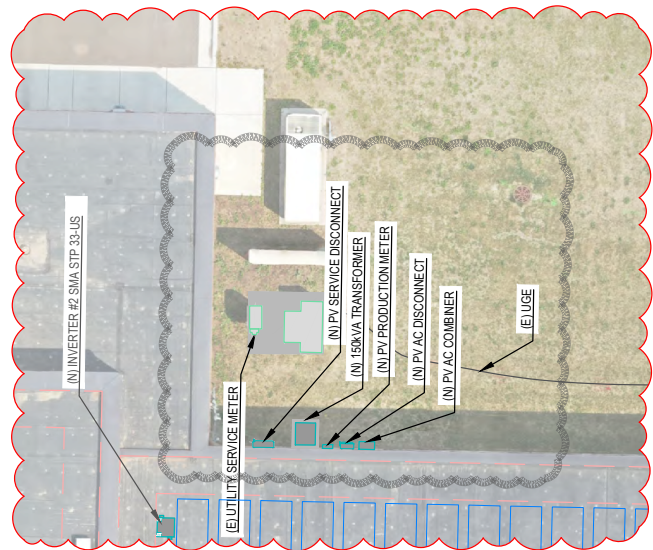
SPACE FOR PE STAMP :

DISTANCES BETWEEN EQUIPMENT

FROM	TO	DISTANCE
MODULES	INVERTER 1	80"
MODULES	INVERTER 2	100"
MODULES	INVERTER 3	140"
INVERTER 1	PV AC COMBINER	160'-0"
INVERTER 2	PV AC COMBINER	45'-0"
INVERTER 3	PV AC COMBINER	350'-0"
PV AC COMBINER	PV AC DISCONNECT	1'-0"
PV AC DISCONNECT	PRODUCTION METER	1'-0"
PRODUCTION METER	CUST. OWNED XFMR	1'-0"
CUST. OWNED XFMR	UTILITY PV AC DISCONNECT	33'-0"
UTILITY PV AC DISCONNECT	UTILITY SERVICE METER	20'-0"
PRODUCTION METER	UTILITY SERVICE METER	23'-0"

- NOTES:
- INVERTERS ARE UL1741 CERTIFIED
 - PV MODULES ARE UL1703 CERTIFIED
 - DESIGN SHALL MEET NEC 2020
 - SECONDARY INTERCONNECTION
 - THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF EACH OTHER
 - PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
 - UTILITY AC DISCONNECT SHALL BE AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT

DETAIL 1



PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	151.1201 KW
SYSTEM SIZE (AC)	116.60 KW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	Q CELLS QJPEAK DUO XL G10.3/8FG-480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMA STP 33-US, 33-US STP-33-43
INVERTER POWER (KW)	50.0KW, 33.3KW
RACKING	ROOF MOUNT (BALLASTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~8,000FT ²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE
ISSUES WITH OVERHEAD ELECTRIC SERVICE
LINES OR OTHER UTILITIES IN RELATION TO
THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

REVISIONS			
#	DESCRIPTION	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY :
JORDIA LATIFI

PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

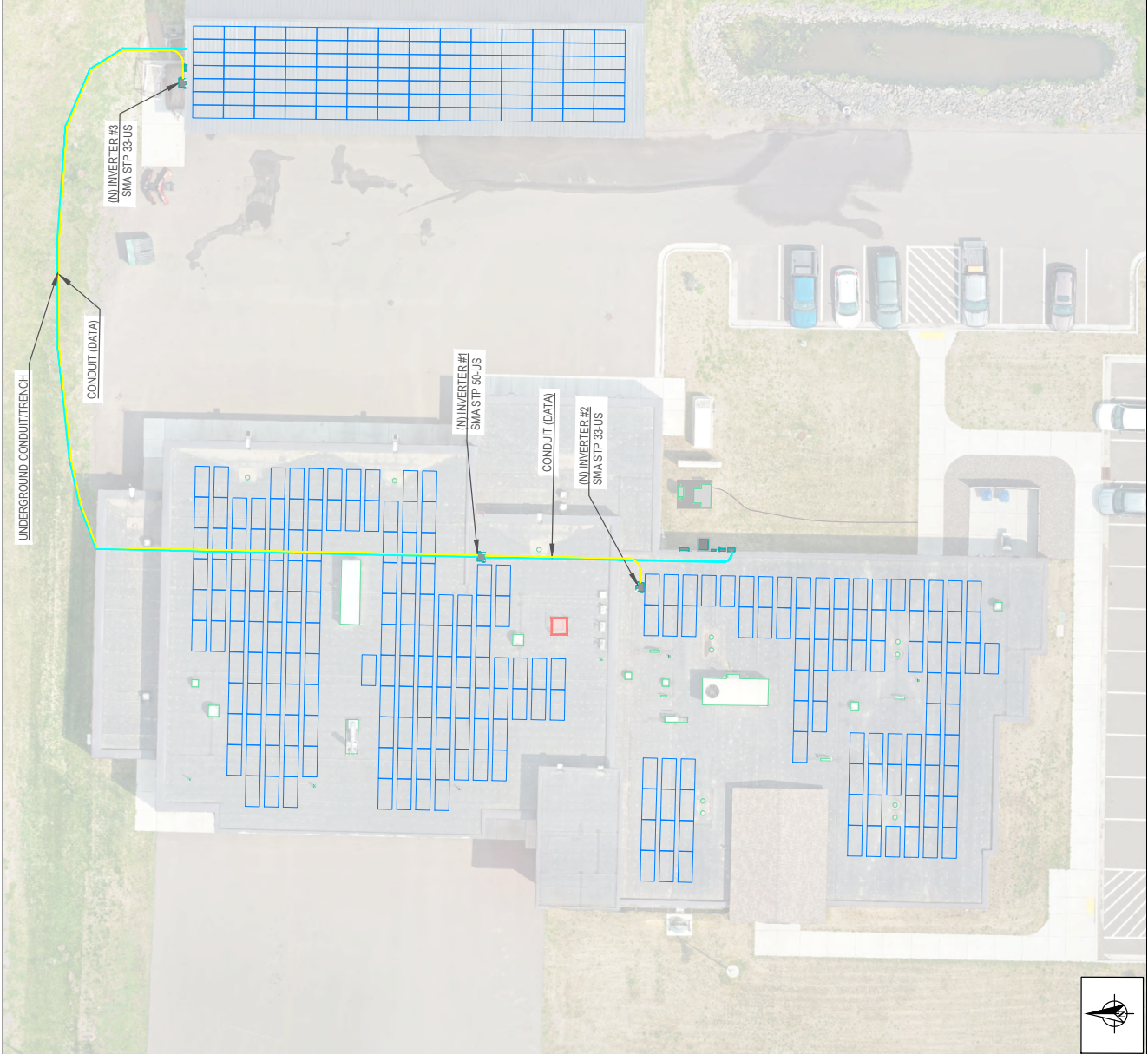
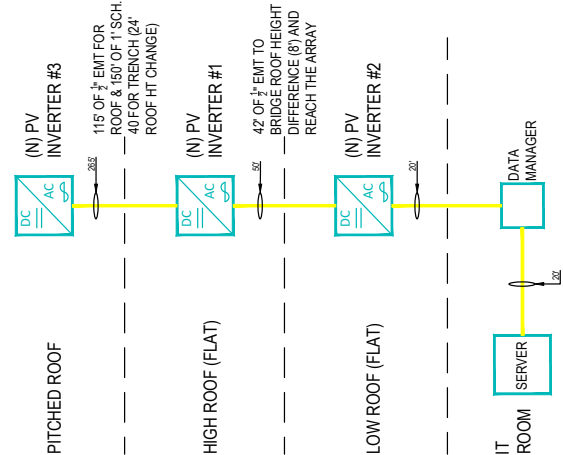
SHEET DESCRIPTION :
ELECTRICAL SITE PLAN

SPACE FOR PE STAMP :

DISTANCES BETWEEN EQUIPMENT		
FROM	TO	DISTANCE
MODULES	INVERTER 1	80'
MODULES	INVERTER 2	100'
MODULES	INVERTER 3	140'
INVERTER 1	PV AC COMBINER	160'-0"
INVERTER 2	PV AC COMBINER	45'-0"
INVERTER 3	PV AC COMBINER	350'-0"
PV AC COMBINER	PV AC DISCONNECT	1'-0"
PV AC DISCONNECT	PRODUCTION METER	1'-0"
PRODUCTION METER	CUST. OWNED XFMR	1'-0"
CUST. OWNED XFMR	UTILITY PV AC DISCONNECT	33'-0"
UTILITY PV AC DISCONNECT	UTILITY SERVICE METER	20'-0"
PRODUCTION METER	UTILITY SERVICE METER	23'-0"

- NOTES :
- INVERTERS ARE UL1741 CERTIFIED
 - PV MODULES ARE UL703 CERTIFIED
 - DESIGN SHALL MEET NEC 2020
 - SECONDARY INTERCONNECTION
 - THE UTILITY SERVICE METER AND UTILITY AC DISCONNECT
WILL BE TOGETHER IN A READY ACCESSIBLE LOCATION WITHIN
10' OF EACH OTHER
 - PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE
WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND
UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS
OF ELECTRICAL EQUIPMENT
 -

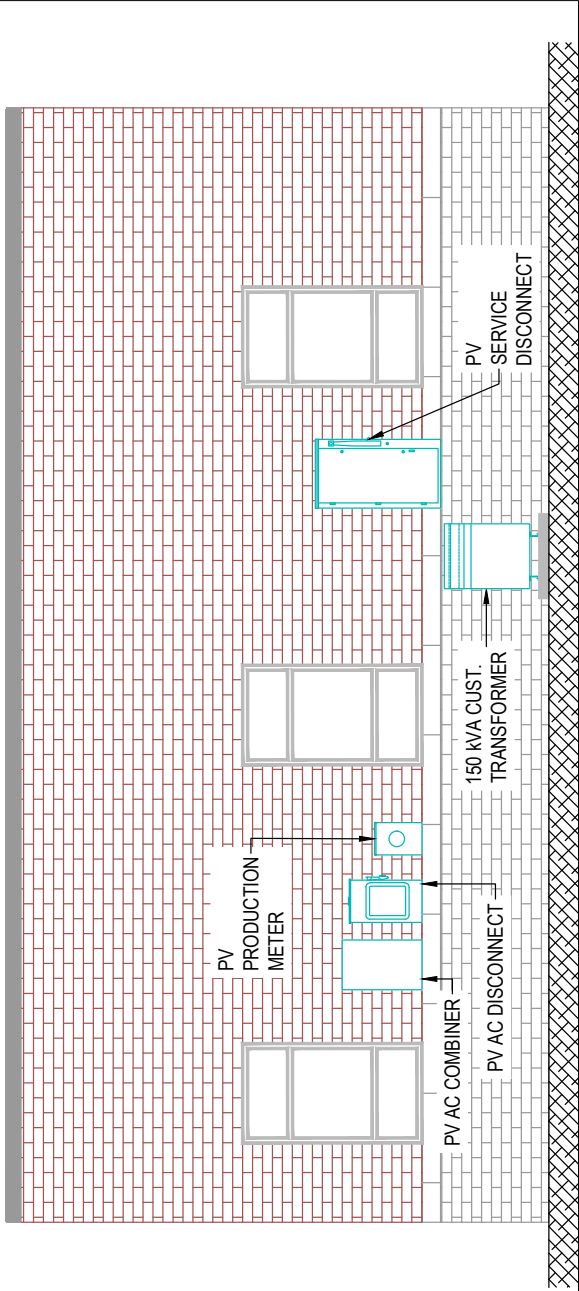
DATA CABLE RUN
TOTAL LF=448





A¹

A²



PP	
SYSTEM SIZE (DC)	2
SYSTEM SIZE (AC)	
DC/AC RATIO	2
AZIMUTH	2
TILT	2
P	P
MODULE COUNT	319
VP	P-- P--
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SMA
P	P
..P	~8,000FT ²
..P	22

OTHER NOTES
VV
P
LINES OR OTHER UTILITIES IN RELATION TO
PVP
2
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	22
1	IFC SET	LS	22
2	AS BUILT SET	LS	222

DRAWN BY :
JORDA LATIFI
P
PP
SHEET DESCRIPTION :
ELECTRICAL ELEVATION
PPP

CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
3326 TOWER AVE
SUPERIOR, WI 54880

UTILITY CUSTOMER OF RECORD
SUPERIOR FIRE DEPT

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	151.1201KW
SYSTEM SIZE (AC)	116.60 KW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	XL G10.3/BEF-480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMA STP 33-US, 33.3kW
INVERTER POWER (KW)	50.0kW, 33.3kW
RACKING	ROOF MOUNT (BALUSTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~6,000FT²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE
ISSUES WITH OVERHEAD ELECTRIC SERVICE
LINES OR OTHER UTILITIES IN RELATION TO
THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

REVISIONS			
#	DESCRIPTION	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY :
JORDIA LATIFI

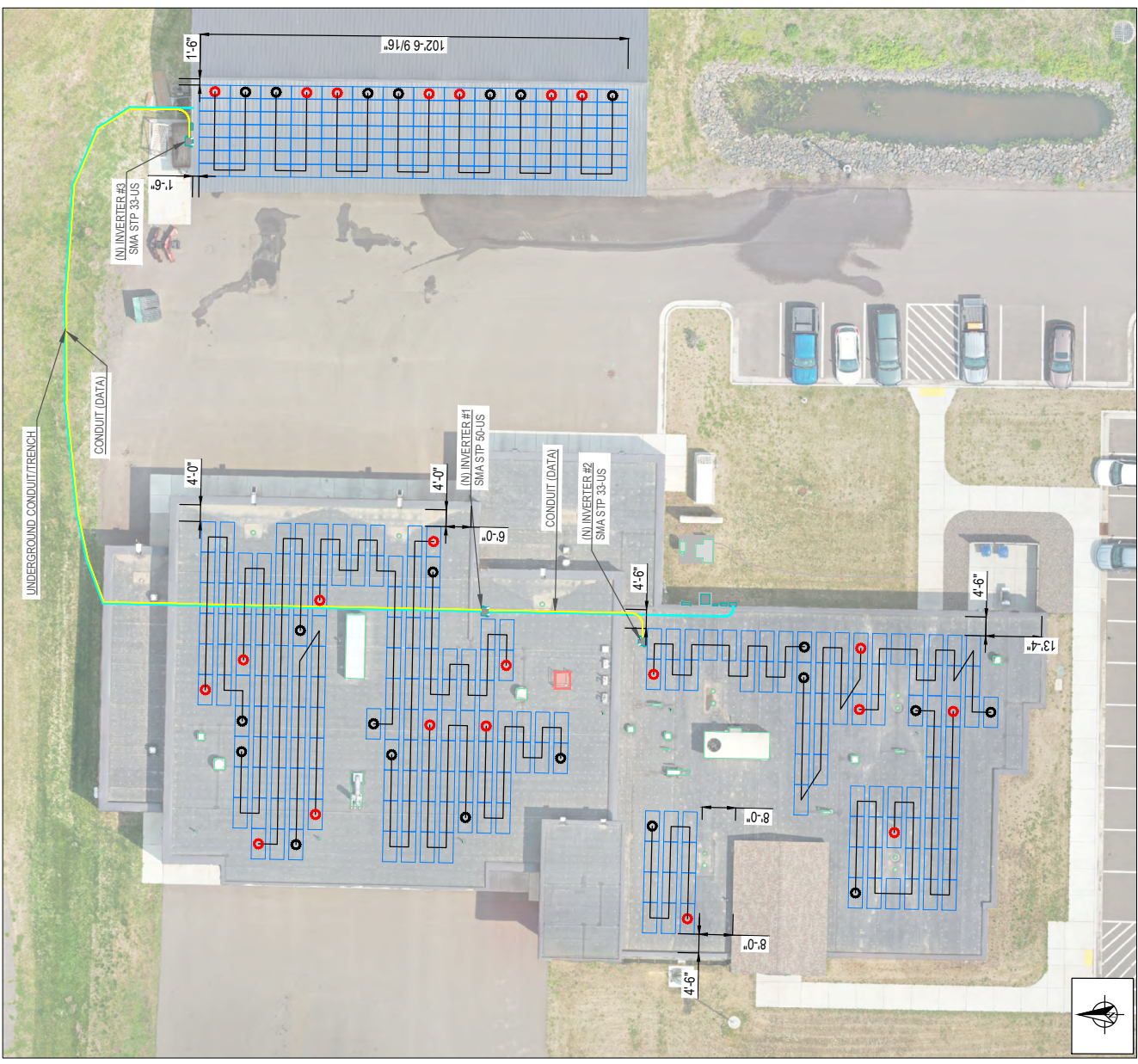
PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

SHEET DESCRIPTION :
MASTER DC STRING PLAN

SPACE FOR PE STAMP :

DISTANCES BETWEEN EQUIPMENT		
FROM	TO	DISTANCE
MODULES	INVERTER 1	80"
MODULES	INVERTER 2	100"
MODULES	INVERTER 3	140"
INVERTER 1	PV AC COMBINER	160'-0"
INVERTER 2	PV AC COMBINER	45'-0"
INVERTER 3	PV AC COMBINER	350'-0"
PV AC COMBINER	PV AC DISCONNECT	1'-0"
PV AC DISCONNECT	PRODUCTION METER	1'-0"
CUST. OWNED XFMR	UTILITY PV AC DISCONNECT	1'-0"
UTILITY PV AC DISCONNECT	UTILITY SERVICE METER	33'-0"
PRODUCTION METER	UTILITY SERVICE METER	23'-0"

- NOTES:
- INVERTERS ARE UL1741 CERTIFIED
 - PV MODULES ARE UL1703 CERTIFIED
 - DESIGN SHALL MEET NEC 2020
 - SECONDARY INTERCONNECTION
 - THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF THE UTILITY SERVICE METER
 - PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
 - PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT



CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
3326 TOWER AVE
SUPERIOR, WI 54880

UTILITY CUSTOMER OF RECORD
SUPERIOR FIRE DEPT

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	151.1201 KW
SYSTEM SIZE (AC)	116.60 KW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	XL CELLS QJPEAK DUO XL G10.3/8FG-480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMA SP7001-DE-4L STEP-33-43
INVERTER POWER (KW)	50.0KW, 33.3KW
RACKING	ROOF MOUNT (BALUSTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~8,000FT ²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE
ISSUES WITH OVERHEAD ELECTRIC SERVICE
LINES OR OTHER UTILITIES IN RELATION TO
THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

REVISIONS			
#	DESCRIPTION	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY :
JORIDA LATIFI

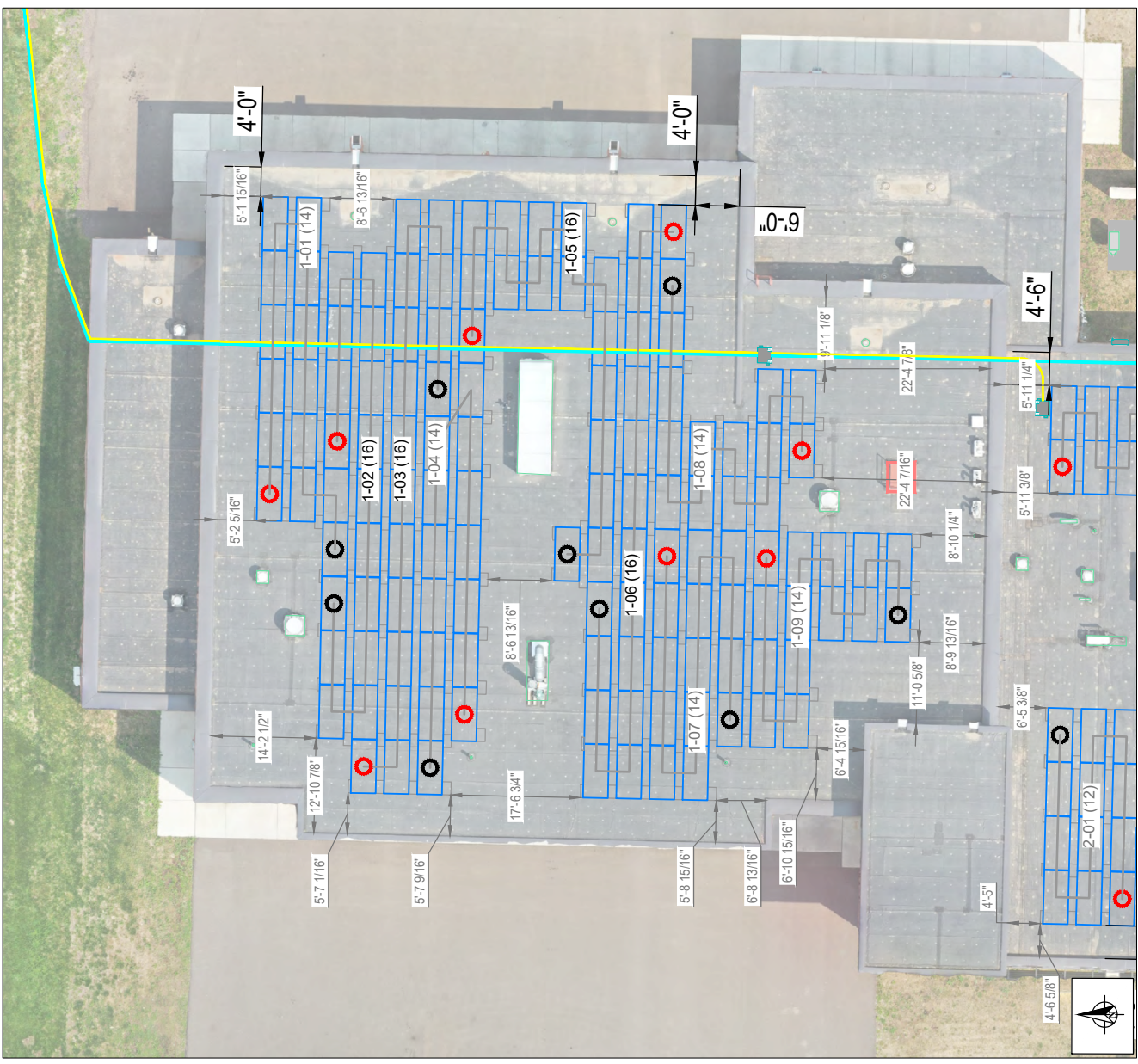
PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

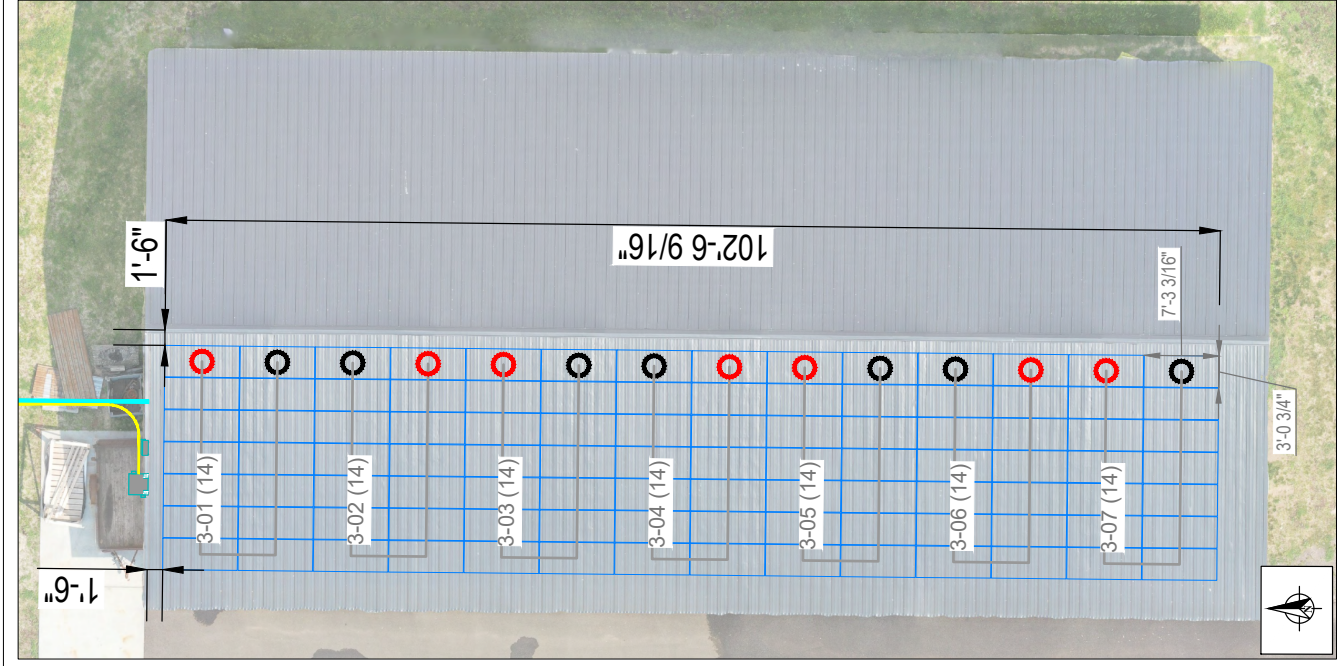
SHEET DESCRIPTION :
DC STRING PLAN (NORTH)

SPACE FOR PE STAMP :

DISTANCES BETWEEN EQUIPMENT		
FROM	TO	DISTANCE
MODULES	INVERTER 1	80'
MODULES	INVERTER 2	100'
MODULES	INVERTER 3	140'
INVERTER 1	PV AC COMBINER	160'-0"
INVERTER 2	PV AC COMBINER	45'-0"
INVERTER 3	PV AC COMBINER	350'-0"
PV AC COMBINER	PV AC DISCONNECT	1'-0"
PV AC DISCONNECT	PRODUCTION METER	1'-0"
PRODUCTION METER	CUST. OWNED XFMR	33'-0"
CUST. OWNED XFMR	UTILITY PV AC DISCONNECT	33'-0"
UTILITY PV AC DISCONNECT	UTILITY SERVICE METER	20'-0"
PRODUCTION METER	UTILITY SERVICE METER	23'-0"

- NOTES:
- INVERTERS ARE UL1741 CERTIFIED
 - ALL PV AC DISCONNECTS ARE UL1741 CERTIFIED
 - DESIGN SHALL MEET NEC 2020
 - SECONDARY INTERCONNECTION
 - THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF EACH OTHER
 - THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
 - PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT





DISTANCES BETWEEN EQUIPMENT		
FROM	TO	DISTANCE
MODULES	INVERTER 1	80'
MODULES	INVERTER 2	100'
MODULES	INVERTER 3	140'
INVERTER 1	PV AC COMBINER	140'-0"
INVERTER 2	PV AC COMBINER	45'-0"
INVERTER 3	PV AC COMBINER	350'-0"
PV AC COMBINER	PV AC DISCONNECT	1'-0"
PV AC DISCONNECT	PRODUCTION METER	1'-0"
PRODUCTION METER	CLUST. OWNED XFMR	1'-0"
CLUST. OWNED XFMR	UTILITY PV AC DISCONNECT	33'-0"
UTILITY PV AC DISCONNECT	UTILITY SERVICE METER	20'-0"
PRODUCTION METER	UTILITY SERVICE METER	23'-0"

- NOTES:
- INVERTERS ARE UL1741 CERTIFIED
 - PV MODULES ARE UL1703 CERTIFIED
 - DESIGN AND INSTALLATION PER NYS DEC 6250
 - SECONDARY INTERCONNECTION
 - THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF EACH OTHER
 - PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 5' OF EACH OTHER
 - PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT



CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
3326 TOWER AVE
SUPERIOR, WI 54880
UTILITY CUSTOMER OF RECORD
SUPERIOR FIRE DEPT

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	151.1201 KW
SYSTEM SIZE (AC)	116.60 KW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	Q CELLS Q.PEAK DUO XL G10.3/HFG-480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMA STP 5001-65-4L, STP-33-4-L
INVERTER POWER (KW)	50.0KW, 33.3KW
RACKING	ROOF MOUNT (BALUSTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~8,000FT²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE ISSUES WITH OVERHEAD ELECTRIC SERVICE LINES OR OTHER UTILITIES IN RELATION TO THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

REVISIONS			
#	DESCRIPTION	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY :
JORIDA LATIFI

PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

SHEET DESCRIPTION :
DC STRING PLAN (EAST)

SPACE FOR PE STAMP :



3155 104TH LN NE
BLAINE, MN, 55449
P7--7

P
2V
P
UTILITY CUSTOMER OF RECORD
PP

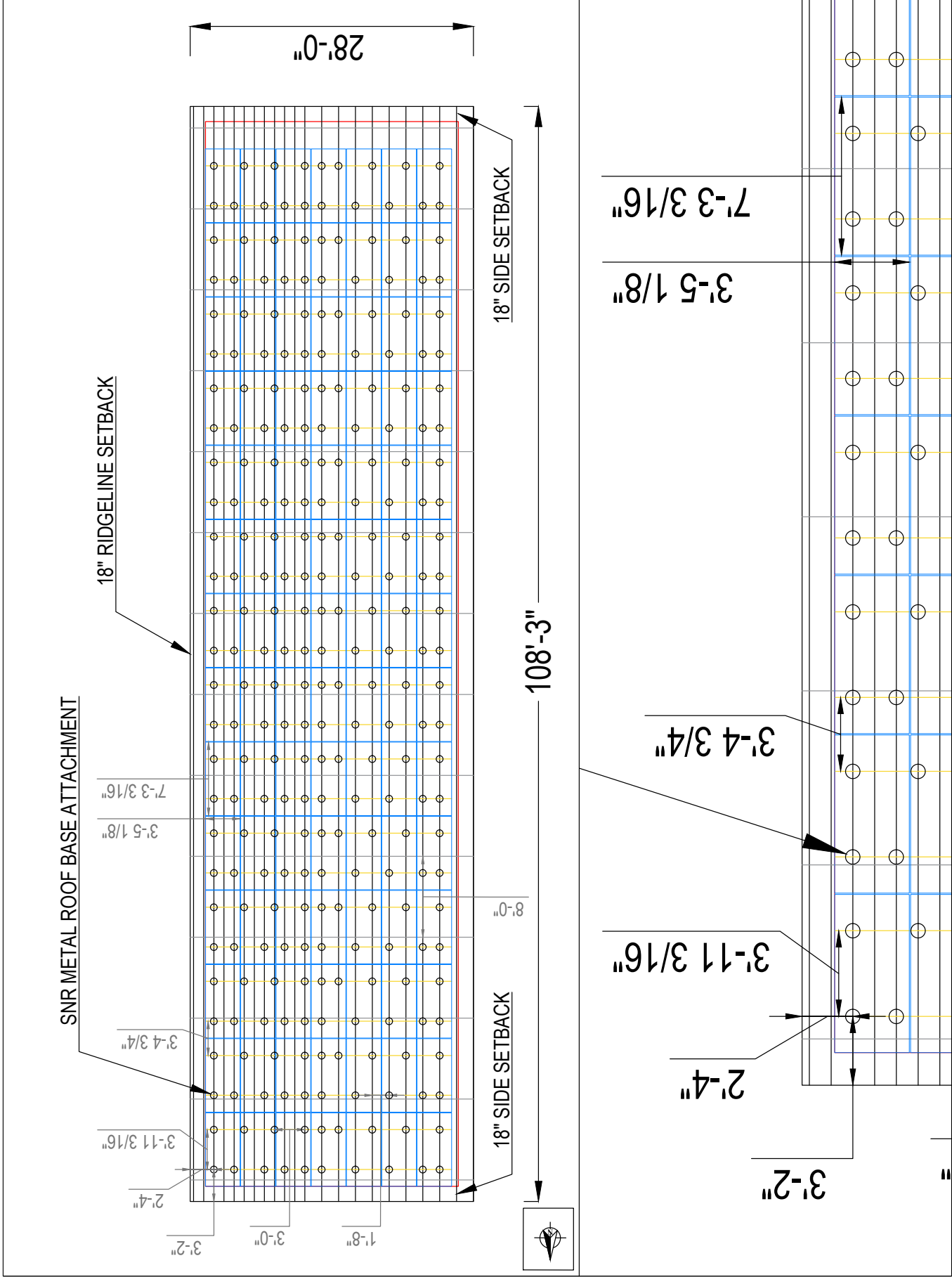
PP	
SYSTEM SIZE (DC)	2
SYSTEM SIZE (AC)	
DC/AC RATIO	.2
AZIMUTH	27
TILT	2.7
P	.P
MODULE COUNT	319
VP	P-- P--
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SMA
P	~8,000FT ²
.P	-272

OTHER NOTES
VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP
27
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
01	INTERCONNECTION SET	JL	22
1	IFC SET	LS	22
2	AS BUILT SET	LS	222

DRAWN BY :
JORDA LATIFI
P
PP-7
SHEET DESCRIPTION :
ATTACHMENT PLAN (EAST)

PP
SHEET :
PV-2.7





CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
P--

P _____
2V
P88
UTILITY CUSTOMER OF RECORD
PP

pp	_____
SYSTEM SIZE (DC)	2
SYSTEM SIZE (AC)	.
DC/AC RATIO	.2
AZIMUTH	82
TILT	2.
P	.P -88
MODULE COUNT	319
VP	P-- P--
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SMA
P	8
.P	-22

OTHER NOTES
P
VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP
2
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	22
1	IFC SET	LS	822
2	AS BUILT SET	LS	2822

DRAWN BY :
JORDA LATIFI

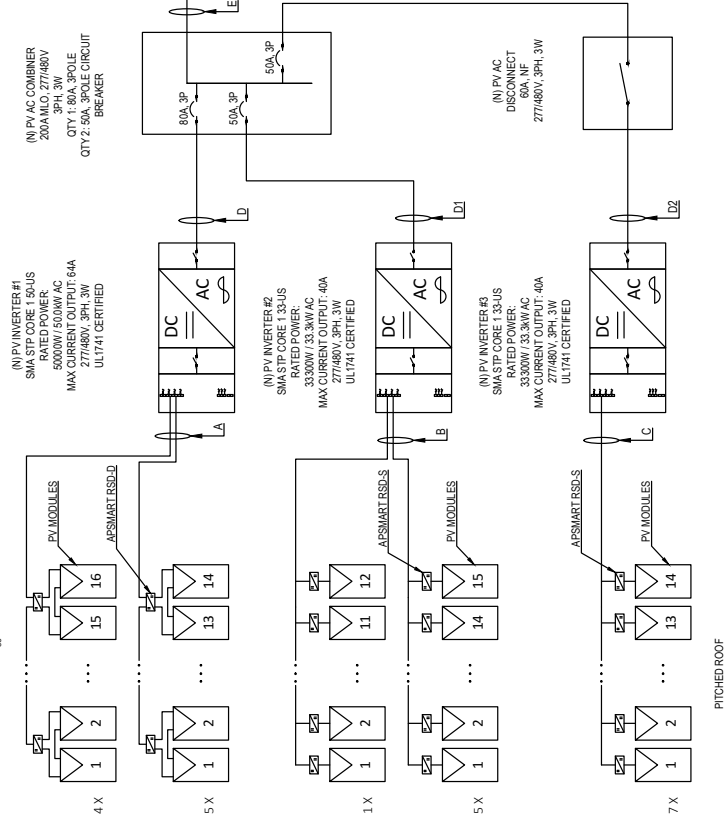
P
PP- _____

SHEET DESCRIPTION :
.....

PPP _____

SUPERIOR FIRE DEPARTMENT - 3326 TOWER AVE						
(1) SMA STP CORE1 50-US-41 & (2) SMA STP CORE1 33-US-41 INVERTERS	STRING #	Q.CELL MODULES Q.PEAK DUO XL-G10.3 / BFG (480W) MODS PER STRING	RSD'S (1 TO 1)	MPPT #	MODULES PER MPPT	MODS PER INVERTER
TOTAL	96	319	319			
INVERTER #1	1-1	14	14	1/A	30	134
	1-2	16	16			
	1-3	16	16	2/B	30	
	1-4	14	14			
	1-5	16	16	3/C	32	
	1-6	16	16			
	1-7	14	14	4/D	14	
DC/AC RATIO 1.2864	1-8	14	14	5/E	14	87
	1-9	14	14	6/F	14	
INVERTER #2	2-1	12	12	1/A	12	
	2-2	15	15	2/B	15	
	2-3	15	15	3/C	15	
	2-4	15	15	4/D	15	
	2-5	15	15	5/E	15	
	2-6	15	15	6/F	15	
DC/AC RATIO 1.254054054	3-1	14	14	1/A	28	98
	3-2	14	14			
	3-3	14	14	2/B	14	
	3-4	14	14	3/C	14	
INVERTER #3	3-5	14	14	4/D	14	
	3-6	14	14	5/E	14	
	3-7	14	14	6/F	14	
DC/AC RATIO 1.412612613						

Q CELLS 480
Q CELLS Q CELLS (480W)
TOTAL QUANTITY: 319 MODULES
15320W DC / 153.12kW DC
22 STRINGS, MODULE QTY VARIES
2 MODULES TO 1 RSD FOR 5kW INVERTER
1 MODULE TO 1 RSD FOR 3.3kW INVERTERS
AT STC: $P_{max} = 480W$, $V_{oc} = 53.38V$
 $I_{sc} = 11.12A$



PITCHED ROOF

DISTANCES BETWEEN EQUIPMENT		
FROM	TO	DISTANCE
MODULES	INVERTER	MAX 140'
INVERTER	PV AC COMBINER	270'-0"
PV AC COMBINER	PV AC DISCONNECT	1'-0"
PV AC DISCONNECT	PRODUCTION METER	15'-0"
PRODUCTION METER	CUST. OWNED XFMR	1'-0"
CUST. OWNED XFMR	UTILITY PV AC DISCONNECT	1'-0"
UTILITY PV AC DISCONNECT	UTILITY SERVICE METER	20'-0"
PRODUCTION METER	UTILITY SERVICE METER	23'-0"

- NOTES:
- INVERTERS ARE UL1741 CERTIFIED
 - PV MODULES ARE UL1703 CERTIFIED
 - DESIGN SHALL MEET NEC 2020
 - SECONDARY INTERCONNECTION THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF EACH OTHER
 - PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
 - PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT



CEDAR CREEK ENERGY
3155 104TH LN NE
BLAINE, MN, 55449
PHONE # 763-450-9763

PROJECT ADDRESS
3326 TOWER AVE
SUPERIOR, WI 54880
UTILITY CUSTOMER OF RECORD
SUPERIOR FIRE DEPT

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	153.1201 kW
SYSTEM SIZE (AC)	116.60 kW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	Q CELLS Q CELLS (480W)
MODULE COUNT	319
INVERTER TYPE	SMA STP CORE 133US
INVERTER POWER (kW)	50.0kW, 33.3kW
RACKING	ROOF MOUNT (BALUSTED, FLUSH)
MONITORING	SMA
PROJECT AREA	~8,000FT²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES
NO POSITION, DISTANCE, OR CLEARANCE ISSUES WITH OVERHEAD ELECTRIC SERVICE LINES OR OTHER UTILITIES IN RELATION TO THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

REVISIONS			
#	DESCRIPTION	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY:
JORDA LATIFI

PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

SHEET DESCRIPTION:
ONE LINE DIAGRAM

SPACE FOR PE STAMP:

SHEET:

PV-3.0

WARNING

ELECTRIC SHOCK HAZARD

TERMINALS ON PHOTOVOLTAIC SIDES MAY BE ENERGIZED IN THE OPEN POSITION

DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT

LABEL LOCATION

AC DISCONNECT, POINT OF INTERCONNECTION

WARNING

ELECTRIC SHOCK HAZARD

TERMINALS ON PHOTOVOLTAIC SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL LOCATION

AC DISCONNECT, POINT OF INTERCONNECTION

WARNING

ELECTRIC SHOCK HAZARD

NO CONTACT AUTHORIZED PERSONNEL FOR SERVICE

INVERTER, JUNCTION BOXES, AC DISCONNECT

LABEL LOCATION

INVERTER

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION

CONDUIT, COMBINER BOX

GENERATION SYSTEM CONNECTED

LABEL LOCATION

POINT OF INTERCONNECTION, MAIN SERVICE METER

PHOTOVOLTAIC SYSTEM DC DISCONNECT

OPERATING VOLTAGE

800

V_{OC}

OPERATING CURRENT

40

A

MAX SYSTEM VOLTAGE

1000

V_{DC}

SHORT CIRCUIT CURRENT

I_{SC}

A

CHARGE CONTROL MAX

A

LABEL LOCATION

DC DISCONNECT, INVERTER

PHOTOVOLTAIC SYSTEM DC DISCONNECT

OPERATING VOLTAGE

800

V_{OC}

OPERATING CURRENT

64

A

MAX SYSTEM VOLTAGE

1000

V_{DC}

SHORT CIRCUIT CURRENT

I_{SC}

A

CHARGE CONTROL MAX

A

LABEL LOCATION

DC DISCONNECT, INVERTER

UTILITY AC DISCONNECT

LABEL LOCATION

UTILITY AC DISCONNECT

UTILITY PRODUCTION METER

LABEL LOCATION

UTILITY PRODUCTION METER

PHOTOVOLTAIC DC DISCONNECT

LABEL LOCATION

DC DISCONNECT, INVERTER

PV AC DISCONNECT

RATED AC OUTPUT CURRENT

40

A

NOMINAL OPERATING AC VOLTAGE

480

V

LABEL LOCATION

AC DISCONNECTS

PV AC DISCONNECT

RATED AC OUTPUT CURRENT

64

A

NOMINAL OPERATING AC VOLTAGE

480

V

LABEL LOCATION

AC DISCONNECTS

PV AC DISCONNECT

RATED AC OUTPUT CURRENT

144

A

NOMINAL OPERATING AC VOLTAGE

480

V

LABEL LOCATION

AC DISCONNECTS

PV AC DISCONNECT

RATED AC OUTPUT CURRENT

332

A

NOMINAL OPERATING AC VOLTAGE

208

V

LABEL LOCATION

AC DISCONNECTS

WARNING

INVERTER OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION

UTILITY AC DISCONNECT

CAUTION: SOLAR CIRCUIT

LABEL LOCATION

DC CONDUIT RACEWAYS, ENCLOSURES AT LEAST EVERY 10 FT

MAIN PV SYSTEM DISCONNECT

LABEL LOCATION

AC DISCONNECT, POINT OF INTERCONNECTION

CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

LABEL LOCATION

PLACED ON OUTSIDE COVERS OF COMBINER PANELS

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

LABEL LOCATION

DC DISCONNECT, POINT OF INTERCONNECTION

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM

HAZARD IN THE ARRAY

LABEL LOCATION

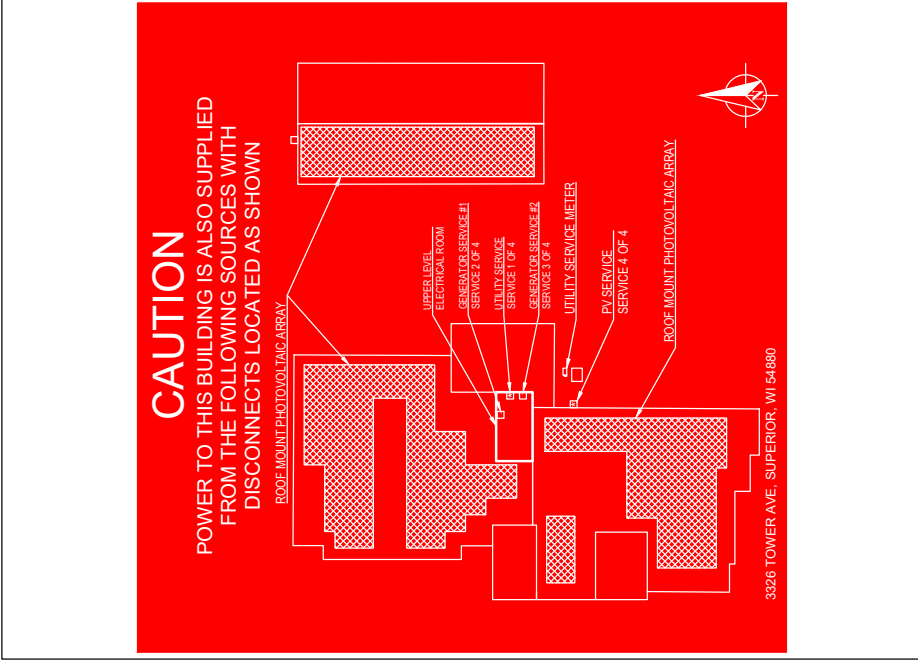
POINT OF INTERCONNECTION

RAPID SHUTDOWN SWITCH FOR PV SYSTEM

LABEL LOCATION

INVERTER, POINT OF INTERCONNECTION

- LABEL NOTES:
- LABELS ARE WEATHERPROOF, DURABLE, AND PERMANENTLY MOUNTED
 - LABELS IN COMPLIANCE WITH NEC 690.0
 - WARNING PV POWER SOURCE LABEL: MARKINGS PLACED ON AC CONDUIT, AC RACEWAYS, AC ENCLOSURES AND ALL AC COMBINER/AC JUNCTION BOXES
 - CAUTION: SOLAR CIRCUIT LABEL: MARKINGS PLACED ON DC CONDUIT AND DC JUNCTION BOXES SPACED AT 10 FT OR LESS
- PLACARD NOTES:
- BACKGROUND ON ALL PLACARDS SHALL BE RED WITH WHITE LETTERING/LINES
 - PLACARD SHALL BE PLACED AT MINIMUM AT PRODUCTION METER AND SERVICE METER



CEDAR CREEK energy

CEDAR CREEK ENERGY

3155 104TH LN NE

BLAINE, MN, 55449

PHONE # 763-450-9763

PROJECT ADDRESS

3326 TOWER AVE

SUPERIOR, WI 54880

UTILITY CUSTOMER OF RECORD

SUPERIOR FIRE DEPT

PROJECT DESCRIPTION	
SYSTEM SIZE (DC)	151.1201 KW
SYSTEM SIZE (AC)	116.60 KW
DC/AC RATIO	1.3132
AZIMUTH	180°, 270°
TILT	10°, 26.57°
MODULE TYPE	Q CELLS Q.PEAK DUO XL G10.3/REG 480 (480W)
MODULE COUNT	319
INVERTER TYPE	SMARTEP3000-4L, 3000W, 480VAC, STEP-33-4L
INVERTER POWER (KW)	50.0KW, 33.3KW
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SAE
PROJECT AREA	~6,000FT²
MIN/MAX TEMP	-27°C / 29°C

OTHER NOTES

NO POSITION, DISTANCE, OR CLEARANCE ISSUES WITH OVERHEAD ELECTRIC SERVICE LINES OR OTHER UTILITIES IN RELATION TO THE PV PANELS

24/7 UNESCORTED KEYLESS ACCESS FOR THE UTILITY METERS AND UTILITY AC DISCONNECT

REVISIONS			
	DESCRIPTION	B	DATE
0	INTERCONNECT SET	L	1/3/3
1	C SET	LS	3/3
2	AS BUILT SET	LS	3

DRAWN BY :
JORIDA LATIFI

PROJECT NAME & JOB #:
SUPERIOR FIRE DEPARTMENT - #1731

SHEET DESCRIPTION :
SOLAR LABELS

SPACE FOR PE STAMP :



04
44
P-40-

P
V
P40

UTILITY CUSTOMER OF RECORD
PP

PP	
SYSTEM SIZE (DC)	.0
SYSTEM SIZE (AC)	.0
DC/AC RATIO	.
AZIMUTH	00
TILT	0.
P	.P -0.000
MODULE COUNT	319
VP	P0-4 P-4
VP	0.0
RACKING	ROOF MOUNT (BALUSTED, FLUSH)
MONITORING	SKVA
P	000
.P	.

OTHER NOTES

P
VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP

4
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	00
1	IFC SET	LS	000
2	AS BUILT SET	LS	00

DRAWN BY :
JORIDA LATIFI

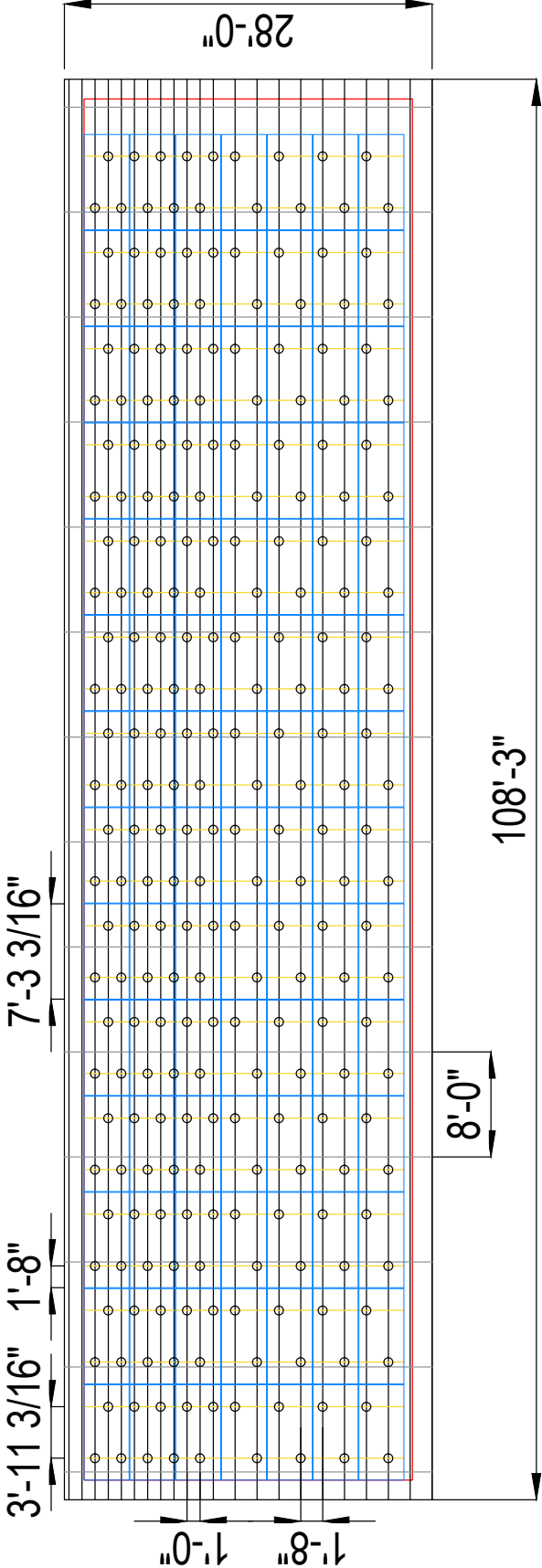
P
PP

SHEET DESCRIPTION :
ATTACHMENT PLAN

PPP

SHEET :

PV-4.0



- NOTES:
1. INVERTERS ARE UL1741 CERTIFIED
 2. PV MODULES ARE UL1703 CERTIFIED
 3. DESIGN SHALL MEET NEC 2020
 4. SECONDARY INTERCONNECTION
 5. THE UTILITY PRODUCTION METER AND UTILITY AC DISCONNECT WILL BE TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF EACH OTHER
 6. PRODUCTION METER AND UTILITY AC DISCONNECT WILL NOT BE WITHIN 10' OF UTILITY SERVICE METER BUT WITHIN LINE OF SIGHT
 7. PLACARDS WILL BE PLACED AT UTILITY SERVICE METER AND UTILITY PRODUCTION METER AT MINIMUM, SHOWING LOCATIONS OF ELECTRICAL EQUIPMENT

FROM	TO	DISTANCE
PV	V	40
PV	PV	0-0
PV	PV	-0
PV	P	-0
P	.	-0
PV	PV	-0
PV	V	0-0
P	V	-0

.....550
55
P-50-
P
V
P50
PP
UTILITY CUSTOMER OF RECORD

PP	
SYSTEM SIZE (DC)	5.0
SYSTEM SIZE (AC)	.0
DC/AC RATIO	
AZIMUTH	00
TILT	0.5
P	-P -0.00
MODULE COUNT	319
VP	P50- P..
VP	50.0
RACKING	ROOF MOUNT (BALAUSTED, FLUSH)
MONITORING	SMA
P	000
.P	

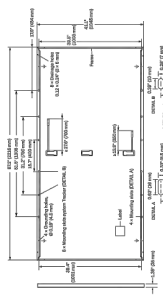
OTHER NOTES
VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP
24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	00
1	IFC SET	LS	000
2	AS BUILT SET	LS	00

DRAWN BY :
JORDIA LATIFI
P
PP-
SHEET DESCRIPTION :
MODULE SPECIFICATIONS
PPP

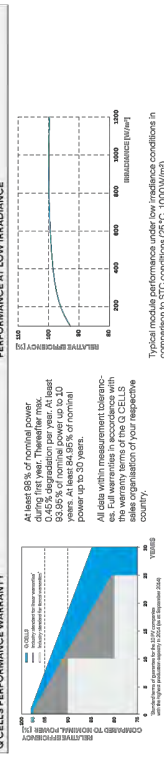
MECHANICAL SPECIFICATION

Format	87.9in x 41.1in x 1.58in (including frame) (2216mm x 1045mm x 39mm)
Weight	64.2lbs (29.1kg)
Front Cover	0.08in (2.0mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08in (2.0mm) semi-tempered glass
Frame	Anodized aluminum
Cell	6 x 26 monocrystalline Q-ANTUM solar half cells
Junction Box	2.09-3.08in x 1.26-2.36in x 0.19-0.71in (53-101mm x 32-60mm x 15-18mm), IP67, with bypass diodes
Cable	4mm ² Solar cable (1) 227.0in (700mm), (2) 13.3in (330mm)
Connector	SMAI MCA, SMAI MCF-Evo2, Hanwha Q CELLS MC4, IP68



ELECTRICAL CHARACTERISTICS

POWER CLASS	475	480	485	490					
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC* (POWER TOLERANCE ±4W/-0W)									
Power at MPPs	P_{MPP}	475	516.6	480	520.5	485	530.5	490	536.0
Short Circuit Current ¹	I_{sc}	11.08	12.12	11.12	12.17	11.16	12.21	11.20	12.26
Open Circuit Voltage ¹	V_{oc}	53.15	53.34	53.39	53.58	53.63	53.92	53.86	54.06
Current at MPPs	I_{mp}	10.55	11.54	10.59	11.58	10.63	11.63	10.67	11.67
Voltage at MPP	V_{mp}	45.93	45.92	45.93	45.92	45.93	45.92	45.93	45.92
Efficiency ¹	η	20.5	22.4	22.0	22.7	22.0	22.9	22.2	23.1
Stability of P_{max} and I_{sc} 70% ±5%. Stability given for new side irradiation on top of STC (front side). According to IEC 60904-2-2									
*Measurement conditions: P_{in} = 1000 W/m ² , T_{cell} = 25°C, V_{oc} ±5% at STC, 1000 W/m ² , η STC: 1000 W/m ² ± 0.15 W/m ² , P_{in} = 70% ±5%, 25 ±2°C, AM 1.5 according to IEC 60904-3									
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²									
Power at MPP	P_{MPP}	357.6	361.4	365.1	368.9				
Short Circuit Current	I_{sc}	8.92	8.96	8.99	9.02				
Open Circuit Voltage	V_{oc}	50.27	50.49	50.72	50.95				
Current at MPP	I_{mp}	8.30	8.34	8.37	8.40				
Voltage at MPP	V_{mp}	43.35	43.63	43.63	43.92				
*900 W/m ² , NMOT, spectrum AM 1.5									
PERFORMANCE AT LOW IRRADIANCE									



TEMPERATURE COEFFICIENTS	
Temperature Coefficient of I _{sc}	α [%/°C]
Temperature Coefficient of P _{mp}	β [%/°C]
Temperature Coefficient of V _{oc}	
Nominal Module Operating Temperature	
N _{MOT} [°C]	
β [%/K]	
-0.27	
-0.04	
-0.34	
108 ± 5.4 (424 ± 3°C)	

PROPERTIES FOR SYSTEM DESIGN	
Maximum System Voltage V _{max}	1500
Maximum Series Fuse Rating	20
Max. Design Load, Pure/Full	75 (800Pa) / 53 (500Pa)
Max. Test Load, Pure/Full	113 (940Pa) / 50 (240Pa)
*New Type is similar to Type 3 but with metallic frame	

Qualifications and Certificates
Quality Controlled PV -
UL 6173, CE compliant,
IEC 61215, CE compliant,
UL 6173, CE compliant,
IEC 61215, CE compliant,
U.S. Patent No. 9,883,215
(solar cell)

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.
400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL: +1 949 748 99 66 | EMAIL: inquiry@ua-q-cells.com | WEB: www.q-cells.us

Q-PEAK DUO XL-G10.3 / BFG
475-490

BIFACIAL DOUBLE GLASS MODULE
WITH EXCELLENT RELIABILITY
AND ADDITIONAL YIELD

BIFACIAL ENERGY YIELD GAIN OF UP TO 20 %
Bifacial Q-ANTUM solar cells with zero gap cell layout make efficient use of light shining on the module rear-side for radically improved LCOE.

LOW ELECTRICITY GENERATION COSTS
Q-ANTUM DUO Z combines cutting edge cell separation and innovative wiring with Q-ANTUM technology for higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.4 %.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behavior.

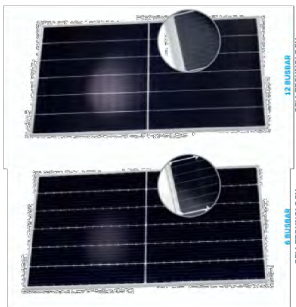
ENDURING HIGH PERFORMANCE
Long-term yield security with Anti-LID and Anti-PID Technology¹, Hot-Spot Protect and Traceable Quality Tru.Q™.

FRAME FOR VERSATILE MOUNTING OPTIONS
High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400Pa) and wind loads (2400Pa).

A RELIABLE INVESTMENT
Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty².

¹ LPT test conditions according to IEC 61215-2:2016 method B (-150V, 168h) including post-treatment according to IEC 61215-2:2016, 2.0 (C20)

² See data sheet on rear for further information.



THE IDEAL SOLUTION FOR:
Ground-mounted
solar power plants



Engineered in Germany



Raising the bar in innovative
DC MLPE solar power systems



RSD-S-PLC

- Meets NEC 2017 & 2020 (690.12) requirements
- Executes rapid shutdown of system when Transmitter-PLC signal is absent
- Meets SunSpec requirements

The RSD-S-PLC meets SunSpec requirements maintaining normal function by continually receiving a heartbeat signal from the APsmart Transmitter. The RSD executes rapid system shutdown when the Transmitter signal is absent. Users can manually execute rapid shutdown using Transmitter breaker switch.

RSD-S-PLC TECHNICAL DATA

MODEL RSD-S-PLC

INPUT DATA (DC)

Input Operating Voltage Range	8-80V
Maximum Cont. Input Current (I _{max})	15A
Maximum Short-Circuit Current (I _{sc})	25A

OUTPUT DATA (DC)

Output Operating Voltage Range	8-80V
Maximum System Voltage	1000V/1500V
Maximum Series Fuse Rating	30A

MECHANICAL DATA

Operating Ambient Temperature Range	-40°F to +185°F (-40 °C to +85 °C)
Dimensions (without cable & connectors)	5" x 1.2" x 0.6" (129 mm x 30 mm x 16 mm)
Cable Length	Input 250mm/Output 1200mm
Cable Cross Section Size	UL12AWG
Connector	Stäubli MC4 PV-KBT4&KST4 or Customize
Enclosure Rating	NEMA Type 6P/IP68
Over Temperature Protection	Yes

FEATURES & COMPLIANCE

Communication	PLC
Safety Compliance	NEC 2017 & 2020 (690.12); UL1741; CSA C22.2 No. 330-17; IEC/EN62109-1; 2PFC2305
EMC Compliance	FCC Part15; ICES-003; IEC/EN61000-6-1/-2/-3/-4

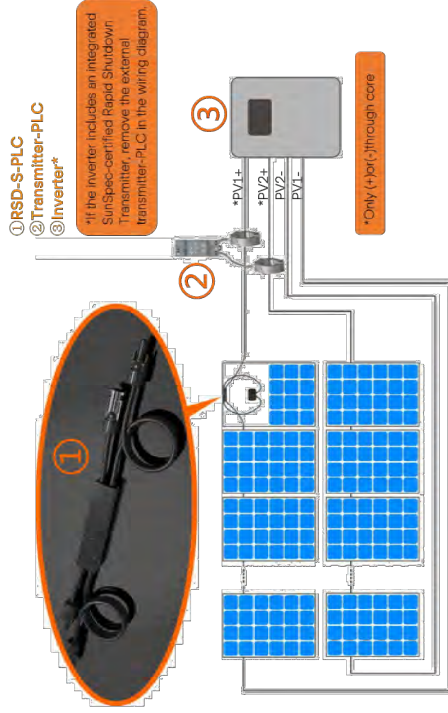


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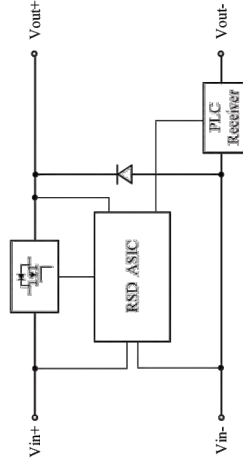
REV 2.3 2021-11-11



RSD-S-PLC WIRING DIAGRAM



WORKING SCHEMATIC DIAGRAM



ORDERING INFORMATION

415002	1500V UL, 1.2m cable, Stäubli MC4 PV-KBT4&KST4
415001	1000V UL, 1.2m cable, Customised connector



600 Erickson Ave NE, Suite 200 Seattle, WA 98110 | +1-737-218-8486 |
+1-866-374-8538 | support@APsmartGlobal.com | APsmartGlobal.com

REV 2.3 2021-11-11



.....
1551
SS
P-S-

P
V
P5

UTILITY CUSTOMER OF RECORD
PP

PP	
SYSTEM SIZE (DC)	15.1
SYSTEM SIZE (AC)	11
DC/AC RATIO	1.1
AZIMUTH	1
TILT	1.5
P	.P
MODULE COUNT	1
VP	P5-1 P-1
VP	5
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SMA
P	"8,000FT²
.P	.

OTHER NOTES

P
VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP

24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JS	08/30/2023
1	IFC SET	LS	09/28/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY :

JORIDA LATIFI

PP

PP-11

SHEET DESCRIPTION :
RSD SPECIFICATIONS

PPP

SHEET :

PV-5.1

.....
55
55
P-5-

P
2V
P5
UTILITY CUSTOMER OF RECORD
PP

PP	
SYSTEM SIZE (DC)	5.2
SYSTEM SIZE (AC)	.
DC/AC RATIO	.2
AZIMUTH	2
TILT	2.5
P	.P
MODULE COUNT	319
VP	P5- P-
VP	S.
RACKING	ROOF MOUNT (BALASTED, FLUSH)
MONITORING	SMA
P	"8,000FT ²
.P	-22

OTHER NOTES

P
VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP
2
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	22
1	IFC SET	LS	22
2	AS BUILT SET	LS	22

DRAWN BY :

JORDIA LATIFI

P

PP-

SHEET DESCRIPTION :
INVERTER SPECIFICATIONS

PPP

SHEET :

PV-5.2

Sunny Tripower CORE1 33-US		Sunny Tripower CORE1 50-US		Sunny Tripower CORE1 62-US	
Technical data					
Input (DC)					
Maximum array power		50000 Wp STC		93750 Wp STC	
Maximum system voltage		1000 V		1000 V	
Rated MPPT voltage range		330 V... 800 V		500 V... 800 V	
MPPT operating voltage range		150 V... 1000 V		150 V... 800 V	
Minimum DC voltage / start voltage		60 V		150 V / 188 V	
MPPT trackers / strings per MPPT input		6 / 2		6 / 2	
Maximum usable operating input current / per MPPT tracker		120 A / 20 A		120 A / 20 A	
Maximum input current per MPPT / per string input		32 A / 30 A		32 A / 30 A	
Output (AC)					
AC nominal power		33000 W		50000 W	
Maximum apparent power		33000 VA		50000 VA	
Output phases / line connections		3 / 3 (N) PE		3 / 3 (N) PE	
Nominal AC voltage		480 V / 277 V WYE		480 V / 277 V WYE	
AC voltage range		40 A		64 A	
Maximum output current		60 Hz		60 Hz	
Rated grid frequency		50 Hz, 60 Hz, 6 Hz... 46 Hz		50 Hz, 60 Hz, 6 Hz... 46 Hz	
Grid frequency range		1 / 0.0 leading... 0.0 lagging		1 / 0.0 leading... 0.0 lagging	
Power factor at rated power / adjustable displacement		-0.9		-0.9	
Efficiency					
CEC efficiency		97.5%		97.5%	
Protection and safety features					
Load rated DC disconnect		●		●	
Ground fault monitoring / Res / Differential current		●		●	
DC AFCI arc-fault protection		●		●	
SunSpec P1C signal for rapid shutdown		●		●	
AC reverse polarity protection		●		●	
AC overcurrent protection		●		●	
DC arc fault protection, Type 2 / Type 1+2		O / O		O / O	
AC arc fault protection, Type 2 / Type 1+2		I / I		I / I	
Protection class / overvoltage category (as per UL 840)		62 mm / 233 mm / 569 mm [24.4 in x 28.8 in x 22.4 in]		84 kg [185 lb]	
General data					
Device dimensions (W/H/D)		25 °C... 40 °C [13 °F... 104 °F]		25 °C... 40 °C [13 °F... 104 °F]	
Operating temperature range		40 °C... 70 °C [104 °F... 158 °F]		40 °C... 70 °C [104 °F... 158 °F]	
Storage temperature range		65 dBA		65 dBA	
Audible noise emissions (full power @ 1m and 25 °C)		Transformerless		Transformerless	
Topology		OptiCool (forced convection, variable speed (rpm))		OptiCool (forced convection, variable speed (rpm))	
Cooling concept		Type 4K, 35kVA, 1000 V (50)		Type 4K, 35kVA, 1000 V (50)	
Enclosure protection rating		C3*		C3*	
Conformity classification according to IEC 61701		100%		100%	
Maximum permissible relative humidity (non-condensing)		Free-standing with included mounting feet		Free-standing with included mounting feet	
Additional information					
Mounting		Anchored UTX PV or H4Plus connectors		Anchored UTX PV or H4Plus connectors	
DC connection		Score terminals: 4 AWG to 4/0 AWG CU/AL		Score terminals: 4 AWG to 4/0 AWG CU/AL	
LED indicators (Status / Fault / Communication)		● [2 point] / ● / ●		● [2 point] / ● / ●	
Network interfaces: Ethernet / WLAN / RS485		●		●	
Data protocols: SMA Modbus / SunSpec / IEEE 1547 Modbus / Webconnect		●		●	
ShadeFix technology for string level optimization		●		●	
Intelligent string performance monitoring		●		●	
IV curve diagnostic function		●		●	
Integrated Plant Control / Q on Demand 24/7		●		●	
SMA Smart Connected (proactive monitoring and service support)		●		●	
Certification					
Certifications and approvals		UL 1741, UL 16998 Ed. 1, UL 1998, CSA 22.2 1071, PV Rapid Shutdown System Equipment, UL 3741		UL 1741, UL 16998 Ed. 1, UL 1998, CSA 22.2 1071, PV Rapid Shutdown System Equipment, UL 3741	
FCC compliance		FCC Part 15 Class A		FCC Part 15 Class A	
Grid interconnection standards		IEEE 1547-2018, UL 1741 SA/38, CA rule 21, IEC62109-2 V2.0		IEEE 1547-2018, UL 1741 SA/38, CA rule 21, IEC62109-2 V2.0	
Advanced grid support capabilities		UL/NET, VDE-AR,			

Ultra Rail



The Ultimate Value in Rooftop Solar

 Industry leading Wire Management Solutions



Mounts available for all roof types

 Single Tool Installation

All SnapNrack Module Clamps & Accessories are compatible with both rail profiles

Start Installing Ultra Rail Today

RESOURCES snaprack.com/resources
DESIGN snaprack.com/configurator
WHERE TO BUY snaprack.com/where-to-buy

SnapNrack Ultra Rail System

A sleek, straightforward rail solution for mounting solar modules on all roof types. Ultra Rail features two rail profiles; UR-40 is a lightweight rail profile that is suitable for most geographic regions and maintains all the great features of SnapNrack rail, while UR-60 is a heavier duty rail profile that provides a larger rail channel and increased span capabilities. Both are compatible with all existing mounts, module clamps, and accessories for ease of install.

The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge



Unparalleled Wire Management

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Industry best wire management offering includes Junction Boxes, Universal Wire Clamps, MLPE Attachment Kits, and Conduit
- System is fully bonded and listed to UL 2703 Standard



Heavy Duty UR-60 Rail

- UR-60 rail profile provides increased span capabilities for high wind speeds and snow loads
- Taller, stronger rail profile includes profile-specific rail splice and end cap
- All existing mounts, module clamps, and accessories are retained for the same great install experience



Quality. Innovative. Superior.

SnapNrack Solar Mounting Solutions are engineered to optimize material use and labor resources and improve overall installation quality and safety.

877-732-2860 www.snaprack.com contact@snaprack.com

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PP	
SYSTEM SIZE (DC)	53
SYSTEM SIZE (AC)	
DC/AC RATIO	.33
AZIMUTH	180°, 270°
TILT	.5
P	.P -.3
MODULE COUNT	3
VP	P5— P.33.
RACKING	ROCK MOUNT (BALANCED, FLUSH)
MONITORING	SMA
P	*8,000FT ²
.P	

OTHER NOTES

VV
LINES OR OTHER UTILITIES IN RELATION TO
PVP
24/7 UNESCORTED KEYLESS ACCESS FOR
THE UTILITY METERS AND UTILITY AC
DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	33
1	IFC SET	LS	33
2	AS BUILT SET	LS	3

DRAWN BY :
JORDIA LATIFI

P
PP-3
SHEET DESCRIPTION :
PITCHED ROOF RACKING
SPECIFICATIONS
PPP

SHEET :

PV-5.3

ROOFMOUNT | RM10 EVO



LAY IT DOWN AND POWER UP! Unirac has taken the tried-and-true form and functionality of RM10 and evolved it to maximize the potential of flat roof solar projects. We have paired simplicity with power by improving the function, strength and reliability of the module clamps and modified the shape of the north row bay to optimize space and increase module density by up to 20%. The system continues to consist of only three major components, minimizing installation time and reducing soft costs. Quickly design around roof obstacles and bond the system with just the turn of a wrench. As with our legacy systems, optional roof attachments, roof pads, and MLPE mounts provide a complete solution. Unirac's unmatched commercial project support makes construction easy, from permitting through installation, and as always, Unirac is supported by North America's largest distribution network and industry leading 25-year warranty. AERODYNAMIC DESIGN. SIMPLICITY OF FORM.



LAY IT DOWN AND POWER UP!

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

ROOFMOUNT | RM10 EVO



STREAMLINED DESIGN. EVOLVED SIMPLICITY. OPTIMIZED FOR POWER DENSITY.

THREE MAJOR COMPONENTS. ONE TOOL.

RM10 EVO supports most framed PV modules (conventional, hi-feed, and large format) at a 10-degree tilt. The component list consists of three SKUs - a fully assembled ballast bay, a nested north row bay and a redesigned universal module clamp. Together, this system enables improved 13" row spacing and up to a 20% increase in the number of modules installed on the roof. Our legacy RM10 system has over a decade long proven track record, and we have retained all the features that will make RM10 EVO as reliable, simple to install, and robust. UL2703 certified grounding path from module to ballast bay, with just the turn of a wrench. RM10 EVO is designed to conveniently work with off the shelf wire management products.

AVAILABILITY

NATIONWIDE NETWORK

Unirac maintains the largest network of stocking distributors for our racking solutions. Our partners have distinguished their level of customer support, availability, and overall value, thereby providing the highest level of service to users of Unirac products. Count on our partners for fast and accurate delivery to meet your project needs. Visit unirac.com for a list of distributors.

AUTOMATED DESIGN TOOL

DESIGN PLATFORM AT YOUR SERVICE

Creating a bill of materials is just a few clicks away with U-Builder, a powerful online tool that streamlines the process of designing a code compliant solar mounting system. Save time by creating a user profile, and recall preferences and projects automatically when you log in. You will enjoy the ability to share projects with customers, there's no need to print results and send to a distributor, just click, and share.

UL2703

BONDING & GROUNDING
MECHANICAL LOADING
SYSTEM FIRE CLASSIFICATION

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT



TECHNICAL SUPPORT

Unirac's technical support team is dedicated to answering questions & addressing issues in real time. An online library of documents including engineering reports, stamped letters and technical data sheets, greatly simplifies your permitting and project planning process.

CERTIFIED QUALITY PROVIDER

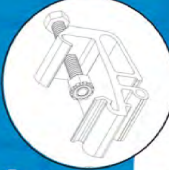
Unirac is the only PV mounting vendor with ISO certifications for 9001:2015, 14001:2015 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and commitment to best class business practices.

BANKABLE WARRANTY

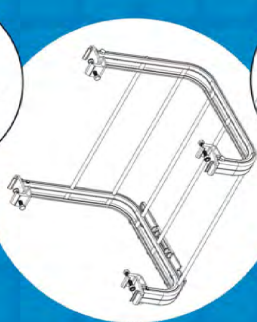
Don't leave your project to chance. Unirac has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are receiving products of exceptional quality. **ROOFMOUNT** is covered by a twenty five (25) year limited product warranty.

PROTECT YOUR REPUTATION WITH QUALITY RACKING SOLUTIONS BACKED BY ENGINEERING EXCELLENCE AND A SUPERIOR SUPPLY CHAIN

RM10EVO-01000001



IMPROVED CLAMP FEATURES



OPTIONAL UNIVERSAL ROOF PAD

OTHER NOTES

VV LINES OR OTHER UTILITIES IN RELATION TO PVP
4 THE UTILITY METERS AND UTILITY AC DISCONNECT

#	P	BY	DATE
0	INTERCONNECTION SET	JL	06/13/2023
1	IFC SET	LS	08/30/2023
2	AS BUILT SET	LS	09/28/2023

DRAWN BY :
JORIDA LATIFI

PP-
PP-

SHEET DESCRIPTION :
FLAT ROOF RACKING SPECIFICATIONS

PPP

SHEET :

PV-5.4



554
5544
P-45-

P
V
P54

UTILITY CUSTOMER OF RECORD
PP

PP	PP
SYSTEM SIZE (DC)	5.
SYSTEM SIZE (AC)	.
DC/AC RATIO	.
AZIMUTH	180°, 270°
TILT	.P -44
MODULE COUNT	319
VP	P5-4 P-4
VP	5.
RACKING	ROOF MOUNT (BALLASTED, FLUSH)
MONITORING	SMA
P	*6,000FT²
.P	.

APsystems Limited Warranty for Rapid Shutdown Devices & Transmitter

Altenergy Power Systems USA Inc. ("APsystems") supplies Rapid Shutdown Devices, including RSD-S-PLC and RSD-D, Transmitter-PLC, Transmitter-PLC Outdoor Kit, and RSD-EYE+ (the "Products")

The Products are designed to withstand normal operating conditions when used for their original intended purpose in compliance with the APsystems User Manual supplied with the system.

This APsystems Limited warranty ("Limited Warranty") covers defective products for the specified duration ("Warranty Period") described below:

- RSD-S-PLC and RSD-D: twenty-five (25) years beginning on the earlier of: (i) 4 months from the date the Product is shipped from APsystems; and (ii) the installation date of the Product (the "Warranty Start Date"). For PV module-embedded Product, the Warranty Period shall not exceed the maximum of (1) the PV module product warranty period and (2) the PV module power warranty period provided by the PV module manufacturer.

- Transmitter-PLC: ten (10) years beginning from the Warranty Start Date. For inverter-embedded Product, the Warranty Period shall not exceed the inverter warranty period provided by the inverter manufacturer.

- Transmitter-PLC Outdoor Kit: three (3) years beginning from the Warranty Start Date, when used with the APsystems Rapid Shutdown Devices.

- RSD-EYE+: one (1) year beginning from the Warranty Start Date, when used with the APsystems Rapid Shutdown Devices.

The Limited Warranty does not apply to ancillary components (i.e. cables, breakers, fuses, wires and connectors) whether supplied by APsystems or others.

A product is defective if it is inoperable because of defects in material and workmanship, provided that APsystems, through inspection, establishes the existence of that defect ("Defective Product")

To obtain service under this Limited Warranty, the holder of the Warranty must comply with the Return Merchandize Authorization ("RMA") procedures which can be found at www.apsmartglobal.com

During the Warranty Period, APsystems will, at its option, either (1) repair or replace the Defective Product free of charge, or (2) provide a refund to the holder of the Warranty of an amount equal to the actual value of the Defective Product at the time of the discovery of the defect. APsystems may, at its option, use new and/or reconditioned parts, and/or parts of the original or a subsequent design, in repairing or replacing the Defective Product. APsystems will also cover the cost of shipping the replacement Product from APsystems to the customer, but not the cost of any import duties or taxes (Other exclusions may apply).

This Limited Warranty does not cover shipping cost of the Product to APsystems, or labor costs related to



APsystems Limited Warranty for Rapid Shutdown Devices & Transmitter

removing the Defective Product or reinstalling the repaired or replacement Product, or any shipping damage. If APsystems repairs or replaces a Defective Product, the Limited Warranty continues on the repaired or replacement Product for the remainder of the original Warranty Period.

The Limited Warranty does not apply to, and APsystems will not be responsible for, any defect in, or damage to, any Product that (1) has not been purchased from APsystems or an entity expressly authorized by APsystems to resell the Product, or (2) has been moved from its original installation location, or (3) has been disassembled, tampered with, or modified in any way, or (4) has been misused, neglected, improperly installed, or used under conditions for which the product was not designed to be used or used differently than outlined in the APsystems User Manual, or (5) has been subjected, directly or indirectly, to circumstances beyond reasonable control, including, without limitation, acts of God; earthquakes; fires; floods; typhoons; war; civil or military disturbances; acts of terrorism; sabotage; riots; any such circumstances beyond its reasonable control as may cause interruption, loss of function, communication disruption or performance issues (hardware or software); water intrusion; corrosion; infestations; or input voltage outside the parameters listed in the Product specifications, whether from the grid, generators, or lightning strikes, or (6) has been impacted by incidental or consequential damage caused by other components of the electrical system within which it is installed, or (7) has been subject to any attempt to alter or remove the original identification markings (including trademark, model number, or serial number).

This Limited Warranty does not cover costs related to the removal, installation or troubleshooting of any components of the customer's electrical systems. During the Warranty Period, this Limited Warranty may be transferred to subsequent owners of the Product upon completion of a "Warranty Transfer Form" available from the APsystems website.

THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY APSYSTEMS, AND ITS AFFILIATES, AND, WHERE PERMITTED BY LAW, IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, OR WARRANTIES AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN MANUALS OR OTHER DOCUMENTATION. IN NO EVENT WILL APSYSTEMS BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, COSTS, OR EXPENSES, HOWEVER ARISING, WHETHER IN CONTRACT OR TORT, INCLUDING WITHOUT LIMITATION ANY ECONOMIC LOSSES OF ANY KIND, ANY LOSS OR DAMAGE TO PROPERTY, OR ANY PERSONAL INJURY.

Some jurisdictions do not allow limitations or exclusions on implied warranties or on the duration of an implied warranty or on the limitation or exclusion of certain damages, so the above limitation(s) or exclusion(s) may not apply. This Limited Warranty gives the customer specific legal rights, and the customer may have other rights that may vary from jurisdiction to jurisdiction.

Altenergy Power Systems USA Inc.
8701 N. Mopac Expy, Ste 160,
Austin, TX 78759
737-218-8486
info@apsmartglobal.com
www.apsmartglobal.com

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LIMITED WARRANTY FOR CRYSTALLINE PHOTOVOLTAIC MODULES FROM Qcells



Document issued on July 1st, 2022

This limited warranty ("Limited Warranty") is issued by Hanwha Solutions Corporation, 86 Cheonggyecheon-ro Jung-gu, Seoul, Republic of Korea 04541, or its successors or assigns ("HSC"), and applies exclusively to Qcells Modules (as defined in Section 1.a.).

1. SCOPE

a. Products

Qcells Modules are defined in this Limited Warranty as Qcells branded photovoltaic modules manufactured by HSC or its authorized manufacturers that are sold and installed within the United States, Canada, Mexico, Panama and Costa Rica and are of the following product type:

- Q.PEAK DUO XL-G9.3/BFG
- Q.PEAK DUO XL-G10.3/BFG, Q.PEAK DUO XL-G10.d/BFG
- Q.PEAK DUO XL-G11.3/BFG

b. Beneficiary

The sole and exclusive beneficiary of this Limited Warranty is an end customer who purchases Qcells Modules from HSC or from any one of its authorized distributors ("Distributor") and is the initial installer of such modules into a specific photovoltaic (PV) solar energy project ("Project"), and any of the end customer's permitted successors or assigns ("Customer").

c. Term

The term of this Limited Warranty ("Term") for the Customer begins on the delivery date to the original Customer ("Warranty Start Date") and ends at the end of the warranty periods set forth in Section 2.. If the Customer is unable to provide sufficient and adequate documentation of the delivery date to the original Customer, the „Warranty start Date“ sixty (60) days after the following the Module(s) was manufactured as indicated by the serial number. The performance of warranty services under this Limited Warranty does not extend the Term. HSC's obligations under this Limited Warranty are conditioned upon the Customer's compliance with its payment obligations for purchase of the applicable Qcells Module.

2. WARRANTY

a. Product Warranty

Subject to the terms and conditions in this Limited Warranty, HSC warrants to the Customer for a period of twelve (12) years following the Warranty Start Date that the Qcells Modules, when installed, used, and serviced under normal operating conditions and in accordance with Qcells Module Installation Manual provided by HSC or Distributor will be free from any defects in materials and workmanship that have a significantly negative effect on the power output of the Qcells Modules (collectively, „Product Defect“). The Product Warranty does not warrant a specific power output of the Qcells Modules, which shall be exclusively covered under the Performance Warranty in Section 2.b.. Product Defect does not include any cosmetic changes or other changes in the Qcells Modules' appearance, including but not limited to, any color changes, mold and normal wear and tear.

b. Performance Warranty

Subject to the terms and conditions of this Limited Warranty, HSC warrants to the Customer that the Qcells Modules are manufactured to (i) produce a power output of at least ninety-eight percent (98%) of the minimum power output specified in the applicable module data sheet during the first twelve (12) months following the Warranty Start Date, and (ii) have a yearly maximum decrease (or degradation) of power of not more than forty-five hundredths of one percent (0.45%) from start of the second (2nd) twelve (12)-month period following the Warranty Start Date until the end of such twelve (12)-month period, and repeated for each successive twelve (12)-month period until the thirtieth (30th) anniversary of the Warranty Start Date, (collectively, "Performance Warranty"). As an example, the Qcells Module will be manufactured to have a minimum power output of eighty-four point ninety-five percent (84.95%) of the minimum power output specified in the applicable module data sheet at the end of the term of this Limited Warranty. Failure to meet the Performance Warranty is defined herein as a "Performance Defect." In the event of a Performance Defect claim, the power output of any Qcells Modules described in this Section 2. b. shall be measured by HSC under the Standard Test Conditions ("STCs") defined in the IEC standards EN 61215 and 60904-3 in effect as of the Warranty Start Date.

3. EXCLUSIONS

The Limited Warranty shall not apply to any Qcells Modules affected by the following events or conditions:

1. usage, transport, storage, installation and/or handling in any manner that fails to strictly comply with the Installation Manual and the Packaging and Transportation Information sheet (provide upon request) applicable to the Qcells Modules;
2. system or components of such system that are of a design, configuration or installation that does not meet the standards typically used by experienced professionals in the industry;
3. incorrect, improper or inadequate service, operation or maintenance of the Qcells Modules or of the Project, or any normal wear and tear of the Qcells Modules;
4. damage caused by extreme environmental sources of impact, including, but not limited to (i) acid rain or snow, (ii) blowing sand, (iii) saline air, (iv) pollution of any kind in the air, soil or groundwater, (v) unusual oxidation levels, (vi) mold, or (vii) any nearby fire, explosion, smoke or charring;
5. damage caused by acts of nature or acts of God, including, but not limited to, lightning, hail, frost, snow, storms, tidal waves, floods, extreme temperatures, earthquakes, typhoons, tornadoes, volcanic eruptions, meteorites, ground motions, earth fissures or landslides;
6. damage caused directly or indirectly by acts of violence or intervention by third parties or external forces, including but not limited to, misadventure, riots, war, insurrection, communal violence, unintentional damage by third parties, vandalism, damage caused by animals, and/or acts or omissions by third parties beyond the reasonable control of HSC;
7. damage to the Project in which the Qcells Modules are installed caused by external factors, including, but not limited to, voltage fluctuations, power peaks, excess current, power failure, poor electrical or mechanical engineering work, or other faults occurring in a power supply system with or without mains connection, whether or not such faults in the power supply system was contributed to by any act or omission of the Customer;
8. Qcells Modules are modified or used in processes involving other products, without obtaining the prior written consent of HSC;
9. the serial number or product label has been removed, changed, deleted or made unrecognizable;
10. the Qcells Modules are used on any mobile carriers (such as motor vehicles or ships);
11. the conditions of use at the Project, at any time, exceed the specifications set out in the applicable module data sheet; and/or
12. the Customer fails to notify HSC of a Product Defect or Performance Defect within 30 days of the initial discovery or prior to the end of the applicable warranty period set forth in Section 2..

4. WARRANTY CLAIMS

a. Customer Inspection

The original Customer must inspect the Qcells Modules for visible defects and notify HSC of any defects within 30 days of the delivery of the Qcells Modules ("Inspection Period"). If Customer does not notify HSC of the visible defects within the Inspection Period, such modules shall be deemed as being accepted by the Customer.

b. Warranty Claims

The Customer will be entitled to make claims under this Limited Warranty ("Warranty Claims") only if the Customer has provided documented evidence sufficient to prove that the malfunctioning or non-conformity of the Qcells Modules resulted exclusively from a Product Defect or Performance Defect covered by this Limited Warranty. If the Warranty Claim is based on glass breakage, then the Customer shall conduct a static load calculation on the substructure.

c. Warranty Claim Compliance

The Customer must comply with the HSC's then-current Return Merchandise Authorization ("RMA") process (available upon request) to make any Warranty Claim. HSC will not accept any Warranty Claims not in compliance with the RMA or Warranty Claims that use the delivery of any unauthorized return shipments of Qcells Modules.

d. Warranty Claim Procedure

The Customer is responsible for shipping the Qcells Modules to HSC for evaluation at the Customer's expense. HSC shall pay the costs of a technical inspection and, in the event that the warranty claim is confirmed by such inspection, transportation. Otherwise, the Customer shall be charged with these costs. To make a Warranty Claim, the Customer must submit the original receipt or invoice, which bears the date of the purchase and of the delivery, the serial numbers of the relevant Qcells Modules and the name of the authorized distributor or seller.

e. Ownership Interest

The Qcells Modules sent to HSC in the course of the RMA process shall remain the property of the Customer until any inspection has been completed and HSC provides a replacement or refund. At the time any refund or delivery of a replacement Qcells Module to the Customer takes place under this Limited Warranty, the ownership interest of the defective module passes to HSC. Any repaired, replaced or additionally supplied modules will be warranted only for the remainder of the original warranty period applicable to the original Qcells Modules.

5. REMEDIES

a. Product Defect Remedy

If HSC determines, following a Warranty Claim, that a Qcells Module has a Product Defect, then HSC shall, at its discretion, within a reasonable time: (i) remedy or repair the Product Defect; (ii) provide a replacement module in place of the Qcells Module with the Product Defect; or (iii) provide the Customer monetary compensation equal to the purchase price of the Qcells Module subject to an annual four percent (4%) depreciation rate on the original purchase price as evidenced by the invoice produced by the Customer; provided, however, if the Customer fails to produce an original invoice, then the price shall be based upon the then-current per watt market price of a comparable PV module in a similar market and the date shall be based upon the date of manufacture according to the HSC records.

b. Performance Warranty Remedy

If HSC determines following a Warranty Claim that a Qcells Module has a Performance Defect, then HSC shall, at its discretion, within a reasonable time: (i) remedy or repair the Performance Defect; (ii) provide a replacement module in place of the Qcells Module that has the Performance Defect; (iii) make up the difference to the guaranteed power output by providing additional modules; or (iv) provide to the Customer monetary compensation that shall be calculated at the time of a justified Customer's Warranty Claim subject to Section 4. of this Limited Warranty, and shall be the difference between the applicable guaranteed power output and actual power output (measured by the STCs) multiplied by the price per watt of the Qcells Module (in which such price shall be calculated by applying an annual four percent (4%) depreciation rate to the purchase price as evidenced by the original invoice provided by the Customer; monetary compensation = depreciated purchase price per watt × (guaranteed power output – actual power output); provided, however, if the Customer fails to produce an original invoice, then the price shall be based upon the then current per watt market price of a comparable PV module in a similar market and the date shall be based upon the date of manufacture according to the HSC records.

c. Discontinued products

In the event the Module(s) is no longer available, Qcells reserves the right to deliver replacement Module(s) that may differ in size, color, shape, model number, but with equivalent or higher power level.

d. Sole and Exclusive Remedy and Obligation

THE REMEDIES SET FORTH IN THIS SECTION 5. ARE HSC'S SOLE AND EXCLUSIVE LIABILITY AND OBLIGATION, AND THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES, FOR ANY PRODUCT DEFECT OR PERFORMANCE DEFECT IN ANY Qcells MODULE. THE REMEDY EXTENDED TO THE CUSTOMER SPECIFICALLY EXCLUDES ANY REIMBURSEMENT FOR THE COSTS OR EXPENSES INCURRED IN THE DISMANTLING OR INSTALLATION OF THE Qcells MODULES, REPLACEMENT MODULES OR PARTS, OR LOSS OF POWER.

6. WARRANTY LIMITATIONS

THE WARRANTIES SET FORTH IN THIS LIMITED WARRANTY ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, REGARDING ANY Qcells MODULES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

HOWEVER, IF A Qcells MODULE IS SOLD AS A CONSUMER PRODUCT, TO THE EXTENT REQUIRED BY APPLICABLE LAW, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT ARE LIMITED TO THE PERIODS OF THE LIMITED PRODUCT AND LIMITED PERFORMANCE WARRANTIES SET FORTH ABOVE, OR SUCH SHORTER PERIOD AS REQUIRED BY APPLICABLE LAW. THIS LIMITED WARRANTY GIVES THE CUSTOMER SPECIFIC LEGAL RIGHTS, AND THE CUSTOMER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. HSC IS NOT RESPONSIBLE OR LIABLE IN ANY WAY FOR DAMAGE OR INJURY TO PERSONS OR PROPERTY, OR FOR OTHER LOSS OR INJURY RESULTING FROM ANY CAUSE WHATSOEVER, ARISING OUT OF OR RELATED TO ANY Qcells MODULES UNLESS OTHERWISE STIPULATED BY MANDATORY STATUTORY LAW. IN PARTICULAR, HSC'S LIABILITY FOR FRAUDULENT OR WILLFUL INTENT, GROSS NEGLIGENCE OR PERSONAL INJURY, IN EACH CASE, UNDER APPLICABLE MANDATORY LIABILITY LAW SHALL REMAIN UNAFFECTED.

EXCEPT AS PROVIDED IN THIS SECTION 6., THE Qcells MODULES, THE PRODUCT DOCUMENTATION AND ALL INFORMATION ARE PROVIDED ON AN "AS IS" BASIS.

THE CUSTOMER ACKNOWLEDGES THAT THE FOREGOING LIMITATIONS ON LIABILITY ARE AN ESSENTIAL ELEMENT OF THE RELEVANT SALES AGREEMENT BETWEEN THE PARTIES AND THAT IN THE ABSENCE OF SUCH LIMITATIONS THE PURCHASE PRICE OF THE Qcells MODULES WOULD BE SUBSTANTIALLY HIGHER.

SOME JURISDICTIONS LIMIT OR DO NOT PERMIT DISCLAIMERS OF LIABILITY, SO THIS PROVISION MAY NOT APPLY TO THE CUSTOMER IN SAID JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS OR THE EXCLUSION OF DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO THE CUSTOMER IN SAID JURISDICTION. THE CUSTOMER MAY HAVE SPECIFIC LEGAL RIGHTS OUTSIDE THIS LIMITED WARRANTY FOR Qcells MODULES, AND MAY ALSO HAVE OTHER MANDATORY RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION, WHICH SHALL REMAIN UNAFFECTED.

IN NO EVENT WILL HSC BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, EXEMPLARY, SPECIAL OR INCIDENTAL DAMAGES, INCLUDING LOSS OF USE, LOST REVENUE And/or LOST POWER, ARISING FROM OR RELATING TO THIS WARRANTY OR ANY Qcells MODULE OR ANY REPLACEMENT OR ADDITIONAL MODULE SUPPLIED BY HSC HEREUNDER, EVEN IF HSC IS AWARE OF THE POSSIBILITY OF SUCH DAMAGES.

THE TOTAL LIABILITY OF HSC, ANY DISTRIBUTOR, And/or THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS ARISING FROM OR RELATING TO THIS LIMITED WARRANTY, WHETHER IN CONTRACT, TORT OR OTHERWISE, WILL NOT EXCEED THE AMOUNT RECEIVED BY HSC FOR THE Qcells MODULE THAT IS THE SUBJECT OF THE CLAIM OR DISPUTE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE CUSTOMER IN SAID JURISDICTION.

7. ASSIGNMENT

Customer Assignment

Customer Assignment. Customer may assign this Limited Warranty for any Qcells Module to a new owner of the entire photovoltaic system in which such module is originally installed, provided that such system remains intact in its original place of installation. This Limited Warranty may not otherwise be assigned or transferred, and any attempt to assign or transfer in violation of this Section 7. shall be null and void.

8. MISCELLANEOUS

a. Survival

If any provision of this Limited Warranty terms and conditions is held to be invalid, illegal or unenforceable in any respect, such provision will be changed and interpreted to accomplish the objectives of such provision to the greatest extent possible under applicable law and the remaining provisions will continue in full force and effect.

b. Governing Law

All matters arising from or relating to this Limited Warranty shall be governed by the laws of the State of California, without regard to its choice of law rules. The UN Convention on the International Sale of Goods shall not apply.

c. Waiver of Jury Trial; Jurisdiction

Any dispute, controversy or claim arising out of or relating to this Limited Warranty or any of its provisions, or the breach, termination, interpretation, enforcement or validity thereof, including any dispute hereby is waived to the fullest extent permitted by applicable Law any right it may have to a trial by jury with respect to any litigation directly or indirectly arising out of, under or in connection with this Limited Warranty. Any dispute, controversy or claim arising out of or relating to this Limited Warranty or any of its provisions, or the breach, termination, interpretation, enforcement or validity thereof, including any dispute irrevocably is submitted to the jurisdiction of the courts of the State of California and the federal courts of the United States of America located in the State of California solely in respect of the interpretation and enforcement of the provisions of this Limited Warranty.



SMA Limited Factory Warranty

Note: this description of SMA Solar Technology AG's (hereinafter "SMA") Limited Factory Warranty is effective and applies to all purchases of the Product Types stated below conducted after July 20, 2020 and to that extent supersedes all prior SMA Limited Factory Warranty rights.

The SMA Limited Factory Warranty is not a guarantee of durability and does not include device availability. It applies exclusively to new devices of the following Product Types:

SUNNY HIGHPOWER, SUNNY TRIPOWER, SUNNY TRIPOWER STORAGE, SUNNY BOY, SUNNY BOY STORAGE, SUNNY ISLAND, SUNNY HOME MANAGER, SUNNY REMOTE CONTROL, SUNNY VIEW, SMA HYBRID CONTROLLER, SMA CLUSTER CONTROLLER, SMA COM GATEWAY, SMA INVERTER MANAGER, SMA BLUETOOTH REPEATER, SMA CONNECTION UNIT, SMA CT METER, SMA DC-COMBINER, SMA ENERGY METER, SMA RAPID SHUTDOWN SYSTEM, SMA READY RACK, SMA WEBCONNECT, CLOUD CONNECT ADVANCED, TS4-R, JMS-F RAPID SHUTDOWN BOX 1500V, GATEWAY, GRID-CONNECT-BOX, MC-BOX, NA-BOX, SMARTFORMER, SMA ENERGY SYSTEM - BUSINESS S, SMA ENERGY SYSTEM - BUSINESS XL, SMA ENERGY SYSTEM - HOME M, SMA STORAGE PACKAGE - BUSINESS, AUTOMATIC BACKUP UNIT, SMA EV CHARGER, SMA DATA MANAGER

No Restriction on Statutory Warranty Rights or other National Statutory Rights

The statutory warranty obligation of the device seller and the corresponding statutory warranty rights of the buyer which may not lawfully be excluded or limited are not affected by this SMA Limited Factory Warranty. Furthermore, should this SMA Limited Factory Warranty violate any national statutory rights which may not lawfully be excluded or limited and which grant the warranty claimant any rights in addition to the SMA Limited Factory Warranty, then such national statutory rights shall not be affected by the provisions of this SMA Limited Factory Warranty.

Warrantor

The warrantor is SMA. SMA reserves the right to have the services specified in this SMA Limited Factory Warranty conducted by SMA authorized partners.

Warranty Eligibility

The persons who are eligible to raise claims under this SMA Limited Factory Warranty are only (i) buyers that have purchased the devices themselves and have put them into operation for the first time (herein "Initial Operator") and (ii) buyers that have acquired the devices legitimately and with no modifications from the Initial Operator or the Initial Operator's legal successor(s). The persons eligible under this SMA Limited Factory Warranty are herein referred to as "warranty claimant". Other persons are not authorized to assert claims against SMA under this SMA Limited Factory Warranty. However the warranty claimant may appoint a third party to raise its claims under this SMA Limited Factory Warranty. Assigning and/or transferring these rights to persons other than a warranty claimant is not permitted.

Warranty Period

For the **SUNNY VIEW** (except for the Sunny View models listed below), **SMA COM GATEWAY, SUNNY HOME MANAGER, SMA DC COMBINER, SMA ENERGY METER, SMA WEBCONNECT, SMA DATA MANAGER M, SMA DATA MANAGER M Lite, SMA Weather station: COM-WS-XXX-10**, the warranty claimant will receive a **2-YEAR** SMA Limited Factory Warranty.

For the **SUNNY HIGHPOWER, SUNNY TRIPOWER** (except for the Sunny Tripower models listed below), **SUNNY TRIPOWER STORAGE, SUNNY BOY** (except for the Sunny Boy models listed below), **SUNNY BOY STORAGE** (except for the Sunny Boy Storage models listed below), **SUNNY ISLAND** (except for the Sunny Island models listed below), **SUNNY REMOTE CONTROL, SUNNY VIEW: SUNNY VIEW-10-JP, SMA INVERTER MANAGER, SMA CT METER, SMA READY RACK, SMA CLUSTER CONTROLLER, CLOUD CONNECT ADVANCED, GRID-CONNECT-BOX, MC-BOX, NA-BOX, SMARTFORMER, SMA HYBRID CONTROLLER, SMA EV CHARGER**, including their standard accessories, interfaces, and disconnect options, the warranty claimant will receive a **5-YEAR** SMA Limited Factory Warranty. For the SMA Hybrid Controller the commissioning documents must be signed and returned to SMA before commissioning or the SMA Factory Warranty will be voided.

For the **SUNNY TRIPOWER: STP xx000TL-US-10, STP 50-US-40, STP xx-US-41, SUNNY BOY: SB xx000TL-US-22, SB xx000TL-US-12, SB xx-1SP-US-4x, SB xx-1TP-US-40, SB xx-LV-JP-4x, SB xx000TL-JP-22, SUNNY ISLAND: SI4.4M-12, SI6.0H-12, SI8.0H-12, SI4.4M-13, SI6.0H-13, SI8.0H-13, SMA CONNECTION UNIT: CU1000-US, SUNNY BOY STORAGE: SBS xx-US-10, SBS xx-JP-10, SBS-ABU-200-US-10, SMA RAPID SHUTDOWN SYSTEM, GATEWAY, SMA SPEEDWIRE/WEBCONNECT DATAMODULE: SWDM-JP, SMA ENERGY SYSTEM – BUSINESS S, SMA ENERGY SYSTEM – BUSINESS XL, SMA STORAGE PACKAGE - BUSINESS, SMA ENERGY SYSTEM – HOME M**, including their standard accessories, interface and disconnect options, the warranty claimant will receive a **10-YEAR** SMA Limited Factory Warranty.

- The warranty period for –US Sunny Tripower, and –US Sunny Boy model types as well as the –US SMA Connection Units installed in countries other than Canada, Mexico or the United States of America is 5 years.
- Sunny Island require a device registration within 3 months after commissioning via Sunny Portal or, in the case of off-grid operation, via the enclosed information sheet. Otherwise, the warranty period is 5 years.
- Sunny Boy Storage requires device registration at SMA Sunny Portal (www.sunnyportal.de) within 31 calendar days after first commissioning. Otherwise, the warranty period is 5 years.
- For the SMA System Packages **SMA ENERGY SYSTEM – BUSINESS S, SMA ENERGY SYSTEM – BUSINESS XL, SMA STORAGE PACKAGE - BUSINESS, SMA ENERGY SYSTEM – HOME M** the following terms shall apply*:
 - The 10-YEAR SMA Limited Factory Warranty for System Packages will only be granted if the Commissioning Report for the respective system (www.SMA-Solar.com) is duly completed and transmitted (Service-SG-Commissioning-Reports@sma.de) within 30 days after completed commissioning of the system.
 - If the Commissioning Report is not duly completed or contains any sort of false declaration, SMA will reject the 10-YEAR SMA Limited Factory Warranty for System Packages.
 - The 10-YEAR SMA Limited Factory Warranty for System Packages SMA ENERGY SYSTEM – BUSINESS S, SMA ENERGY SYSTEM – BUSINESS XL, SMA STORAGE PACKAGE - BUSINESS will only be granted if the system is installed in Germany.
 - The 10-YEAR SMA Limited Factory Warranty for System Package SMA ENERGY SYSTEM – HOME M will only be granted if the system is installed in Italy.
 - The 10-YEAR SMA Limited Factory Warranty for System Packages will only be granted for the components, which are listed in the Commissioning Report and defined as System Package by SMA. Additional components are excluded from the 10-YEAR SMA Limited Factory Warranty for System Packages.
 - **For the system component "Battery" separate Warranties apply.** Currently valid warranty conditions are available at www.SMA-Solar.com.

*excluding SMA Energy System packages sold in North America.

For the **TS4-R** and the **JMS-F Rapid Shutdown Box 1500V** the warranty claimant will receive a **25-YEAR** SMA Limited Factory Warranty.

- TS4-R devices require system registration at SMA Sunny Portal (www.sunnyportal.de) or the Tigo Cloud (if there is a non-SMA inverter in the system), within 31 calendar days after first commissioning. If the system is not remotely accessible, SMA's ability to remotely diagnose and remotely resolve problems will be reduced to supporting the warranty claimant using manual on-site methods.*

For all Product Types listed above, the factory warranty period begins when the device is first commissioned (in line with the commissioning report) by or for the first warranty claimant. The validity of this SMA Limited Factory Warranty requires that the device must be installed and commissioned in line with the manufacturer's installation manual that applies to the device in question. If structural or unauthorized changes of the device have been made, and SMA has not requested these changes, the SMA Limited Factory Warranty will be terminated on the date these structural or unauthorized changes were made, regardless of the periods mentioned above. If damage has been sustained to any structurally altered devices that were not altered at SMA's request, the costs incurring in order to repair the damages, regardless of whether these structural changes were cause of these damages, are not covered by this SMA Limited Factory Warranty. SMA will inform warranty claimant in advance about this costs. The repair will be performed depending on the warranty claimant's consent to cover these costs.

*The SMA Limited Factory Warranty of the JMS-F Rapid Shutdown Junction Box 1500V applies exclusively to the USA.

Geographic Scope of Application

This SMA Limited Factory Warranty applies worldwide. Warranty coverage may vary in certain countries within the geographic scope of application (see below).

Warranty Coverage

The SMA Limited Factory Warranty covers the costs incurred for repairs and/or replacement parts during the defined warranty period as part of and in accordance with the conditions stipulated herein from the date the warranty period begins. If a device becomes defective during the defined warranty period, the device will be (at the discretion of SMA)

- replaced with a device of equivalent value with regard to product type and age, or
- repaired on-site by SMA or a service partner appointed by SMA (when SMA reasonably concludes that the geographical area in which the system is operated is deemed too risky to render on-site services, SMA's obligations to render these services for said area are suspended for the period in which such risk is reasonably deemed to exist), or
- repaired at SMA's premises by SMA or a service partner appointed by SMA, or
- for products with SMA Limited Factory Warranties greater than 5 years, the appropriate market value of the defective device (which is determined by SMA based on the market value that the device would have if it were not defective) will be reimbursed

The warranty claimant must accept a replacement device of equivalent value with regard to product type and age even if it has cosmetic defects that do not affect energy production, or safety compliance. SMA will, at its option, use new and/or equal to new condition parts of original or improved design in the repair or replacement of the warranty claimant's device.

Specific Information if SMA chooses to Supply a Replacement Device

If SMA decides to replace the device, SMA will at its discretion either send in advance a replacement device or send a replacement device after prepayment of the value of the replacement device and the costs of delivery, or send a replacement device after receipt of the defective device. As required by SMA, the warranty claimant must return the defective device at its own risk in a packaging that is suitable for its transportation to an address defined by SMA that will be located within the same country that the replacement device is shipped from. The costs for removal and replacement of the device, as well as the transportation costs for sending the replacement device and returning the defective device

(including, but not limited to, export certifications, inspections, and customs duties) are to be borne entirely by the warranty claimant. However, if the device is installed in an **SMA Primary Support Country**, (see table below) the SMA Limited Factory Warranty will also cover transportation costs, export certifications, inspections, and customs duties for replacement and returned devices.

SMA will retain ownership of the replacement device that has been delivered until it receives the defective device.

If SMA has decided to request from the warranty claimant the prepayment of the value of the replacement device before delivery of the replacement device, SMA will refund to the warranty claimant the amount received by the warranty claimant as prepayment of the value of the replacement device once the warranty claimant has returned to SMA the defective device and this defective device does not have any further defects not previously made known to SMA.

Should the warranty claimant return the defective device more than thirty (30) calendar days after receipt of the replacement device, then SMA has the right to charge the warranty claimant for the cost of administering the overdue RMA (Return Material Authorization) account. Return items will not be accepted without a valid RMA number obtained from SMA that is clearly displayed on the returned items packaging.

Specific Information if SMA chooses to Repair a Device On-site

If SMA decides to repair the defective device on site (repair by SMA or a service partner appointed by SMA), the SMA Limited Factory Warranty covers the repair material and repair labor costs for removal and replacement of the part or replacement device provided however that the device is installed at ground level or a safely accessible level roof top. No other costs – including, but not limited to, transportation, export certifications, inspections, customs duties, costs to safely access devices installed on slanted rooftops, or for lift equipment, travel or accommodation costs, the costs of the warranty claimant's own employees, or the costs of third-parties that have not been authorized by SMA – are covered by the SMA Limited Factory Warranty. However, if the device is installed in an **SMA Primary Support Country** (see table below), the SMA Limited Factory Warranty will also cover transportation costs, export certifications, inspections, customs duties, for replacement and returned parts or devices.

Specific Information if SMA chooses to Repair a Device at SMA's Premises

If the device is to be repaired at SMA's premises, the warranty claimant must remove the defective device and send it for repair to SMA in Kassel, Germany at its own risk in a packaging that is suitable for the transportation. Once the device has been repaired at SMA's premises, SMA will return the repaired device to the warranty claimant. The costs for removal and replacement of the device, as well as the costs for sending the device to SMA's facilities in Kassel, Germany and returning it to the warranty claimant including, but not limited to, transportation costs, export certifications, inspections, and customs duties are to be borne entirely by the warranty claimant. However, if the device is installed in an **SMA Primary Support Country**, (see table below), the SMA Limited Factory Warranty will also cover transportation costs, export certifications, inspections, and customs duties for the returned and repaired device.

Specific Information on the Coverage of Other Costs

SMA will inform the warranty claimant of any costs (including, but not limited to transportation, replacement device value, export certifications, inspections, customs duties, travel, or accommodation) that require payment in advance of the repair action. The repair will be performed depending on the warranty claimant's consent to cover these costs.

SMA Primary Support Countries

SMA Primary Support Countries are the following countries, however excluding their associated islands and overseas territories:

Australia	Canada	Chile	China	EU Countries	India	Vatican City
Japan	Jordan	Liechtenstein	Malaysia	Mexico	Monaco	New Zealand

Philippines	San Marino	South Africa	South Korea	Switzerland	Taiwan	Thailand
Turkey	United Arab Emirates	United States of America	Brazil	Israel		

Warranty Exclusions

The SMA Limited Factory Warranty does not cover damages or performance issues that occur due to:

- Failure to observe the technical documents and manuals, and/or the protocols and/or requirements therein
- Damage related to improper handling, transportation, storage, or repackaging not provided by SMA
- Incorrect installation or incorrect commissioning not provided by SMA
- Non-SMA authorized modifications, changes, or attempted repairs
- Insufficient ventilation of the device and any consequential thermal damage
- Corrosion due to exposure to aggressive atmospheres or environmental conditions outside the scope of design
- Failure to observe the applicable safety regulations (UL, CSA, VDE, IEC, etc.)
- Incorrect use or inappropriate operation (including, but not limited to, improper forced shutdown, improper DC ratio)
- Use of battery types not certified for operation with SMA battery inverters
- Sunny Island and Sunny Boy Storage inverters that exceed 20,000 operating hours-at-full-load (hours-at-full-load defined as AC discharge and AC charge energy over the full operation time divided by the devices rated power)
- Accidents and external influences
- Force majeure, examples including, but not limited to: overvoltage, lighting strikes, floods, fires, earthquakes, storm damage, pest damage and rodents damage

The items below are expressly not covered by this SMA Limited Factory Warranty:

- All items not originally sold by SMA including, but not limited to, installed cables, controllers, (rechargeable) batteries, Current Transformers (CT), Voltage Transformers (VT), and communications devices.
- Consumables and parts of the device which are subject to regular wear and tear (including, but not limited to, varistors, fans, surge arresters, string fuses, ESS handles, filters, (rechargeable) batteries, or overvoltage protection devices)
- Cosmetic or finish defects which do not directly influence energy production, or degrade form, fit, function

Impact of Warranty Coverage on the (Remaining) Warranty Period

If the entire device is replaced under this SMA Limited Factory Warranty, the remainder of the warranty period will be transferred to the replacement device. If device components are replaced or repaired under this SMA Limited Factory Warranty, the components used will be covered by the same remainder of the warranty period as the repaired device.

Procedure to Exercise Rights under this SMA Limited Factory Warranty

The warranty claimant must notify SMA of a device fault or defect within the defined warranty period. To determine if the device is covered by the SMA Limited Factory Warranty, the warranty claimant must – in addition to the requirements stated below - submit a copy of the commissioning report which must include the serial number of the defective device. SMA reserves the right to request a copy of other documents including, but not limited to, the purchasing invoice, which must include the serial number of the device. SMA only accepts documents in the following languages: Arabic, Czech,

Dutch, English, French, German, Greek, Hindi, Italian, Japanese, Mandarin, South Korean, Spanish, and Thai. A certified translation in one of the mentioned languages will also be accepted. The type label on the device must be completely legible. If the aforementioned requirements are not fully met, SMA is not obliged to perform any obligations under the SMA Limited Factory Warranty.

Warranty service is available by accessing SMA's Online Support at www.SMA-Solar.com under the heading SERVICE & SUPPORT. The warranty claimant or their electrically qualified representative must report a failure to their local SMA Service Center using the following procedure as described below.

- Proper fault diagnosis may require a qualified service technician to be at the SMA device location and equipped with a quality digital AC/DC voltmeter and required tools as specified in SMA device manual.
- The on-site qualified service technician may be asked to take voltage measurements and provide error codes from the inverter.
- Additional information may be required, including, but not limited to:
 - model type number
 - installation site name
 - original date of commissioning
 - PV array configuration
 - Battery manufacturer and battery type
 - description of any modifications that have been performed on the inverter
- Safely remove any interface option modules from the inverter to be returned, and retain them for reinstallation on the replacement device.
- SMA will provide instructions for proper return or disposal of the defective device.
- If no failure is found when the device is tested by the SMA Service Repair Department, the warranty claimant may be charged an inspection fee and transportation costs.

If and to the extent services are to be rendered by SMA free of charge in accordance with this SMA Limited Factory Warranty, these are only free of charge if and to the extent the course of action is agreed with and confirmed in writing by SMA in advance. Written documents and electronic messages, including, but not limited to, fax or e-mail, satisfy the requirement that confirmation be given in writing. All costs incurred by the warranty claimant to exercise its rights under this SMA Limited Factory Warranty shall be borne by the warranty claimant.

Final Validity

The rights mentioned in this SMA Limited Factory Warranty reflect the exclusive rights of the warranty claimant in accordance with this SMA Limited Factory Warranty. No other claims – including, but not limited to, claims for compensation for direct or indirect damage caused by the defective device, claims for compensation for costs arising from disassembly or installation, and/or loss of power production or profits – are covered by the SMA Limited Factory Warranty. If the warranty claimant requests unnecessary or unjustified service work and/or SMA replacements under this SMA Limited Factory warranty, SMA shall be entitled to invoice the warranty claimant for the costs incurred as a result.

Applicable Law and Place of Jurisdiction

- (1) All claims arising from or in connection with this SMA Limited Factory Warranty are subject to German law with the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG). However, if the warranty claimant is a consumer as defined in Art. 6 of Regulation (EC) No 593/2008 and SMA has (i) either pursued our commercial or professional activities in the country where the consumer has his habitual residence, or (ii) by any means, directed such activities to that country or to several countries including that country, and (iii) this

SMA Limited Factory Warranty falls within the scope of such activities, then the choice of German law as stated in this paragraph does not have the result of depriving the consumer of the protection afforded to him by provisions that cannot be derogated from by agreement by virtue of the law of the country where the consumer has his habitual residence.

- (2) Kassel, Germany, is the exclusive place of jurisdiction for all disputes arising from or in connection with this SMA Limited Factory Warranty provided that the warranty claimant is a Merchant, a legal entity under public law or special assets under public law.
- (3) In the event the claimant is a consumer, whose residence or habitual residence is in the European Union or in Countries which are contracting parties to the Agreement on the European Economic Area, the following shall apply: SMA is principally in favor to attend a dispute settlement procedure at the General Consumer Conciliation Body of the Centre for Conciliation in Germany: Allgemeine Verbraucherschlichtungsstelle des Zentrums für Schlichtung e.V., Straßburger Str. 8, 77694 Kehl.

For more information, please visit the "Service" section of our website at www.SMA-Solar.com



MANUFACTURER'S LIMITED PRODUCT WARRANTY

Unirac, Inc., ("Unirac") warrants to the owner ("Owner") of the original installation site ("Site") and the transferees permitted herein that any of the Products, defined as components designed and manufactured by Unirac (excluding plastic wire management clips) and installed at the Site ("Products") shall be free from defects in material and workmanship which substantially impair their ability to perform their intended function, as referenced in the Unirac Product Information, for a period of twenty five (25) years - except that any factory-applied finish is warranted to be free from substantial manufacturing-related visible peeling or cracking or chalking under normal atmospheric conditions for a period of only five (5) years ("Finish Warranty") - from the earlier of 1) the date the installation of the Product at the Site is substantially complete, or 2) 120 days after the purchase of the Product by the original buyer of the Product ("Warranty Period").

WARRANTY TRANSFERENCE

Owner may not transfer this Warranty except to subsequent owners of the Site. Proof of purchase is required for any warranty claim.

FINISH WARRANTY LIMITATIONS

The Finish Warranty does not apply to any issues caused by foreign residue deposited on the finish, or an installation in atmospheric conditions more corrosive than normal conditions. The Finish Warranty is VOID if the practices specified by AAMA 609 & 610-02 — "Cleaning and Maintenance for Architecturally Finished Aluminum" (www.aamanet.org) are not followed.

WARRANTY LIMITATIONS

This Limited Warranty covers only the Product, and not PV modules, electrical components and or wiring used in conjunction with the Product or any other goods, equipment or materials not designed and manufactured by Unirac. Goods which may be sold by Unirac, but which are not designed or manufactured by Unirac are not warranted by Unirac, are sold only with the warranties, if any, of the original manufacturers thereof. This warranty does not cover damage to the Product that occurs during its shipment, storage, installation or use, or from force majeure acts including fire, flood, earthquake, storm, hurricane or other natural disaster, war, terrorist activities, acts of foreign enemies and criminal acts. This warranty does not cover damages or problems caused by the connection to or use of alternative materials not purchased from Unirac. This Limited Warranty shall be void if A) installation of the Product is not performed in accordance with the Unirac Product Information and all national, state and local laws, codes, ordinances and regulations, B) if the Product has been modified, repaired, or reworked in a manner not previously authorized by Unirac in writing, or C) the Product is installed in an environment for which it was not designed, each as determined by Unirac in its sole discretion.

WARRANTY CLAIMS

If, within the Warranty Period, Unirac is notified in writing of an alleged non-conformity and if the Product shall be proven at Unirac's sole discretion to be nonconforming with this warranty, then Unirac shall repair, provide a refund of the purchase price of, or provide a replacement for the nonconforming Product, or any nonconforming part thereof, at Unirac's option. Any such repair, refund or replacement does not alter or extend the original Warranty Period. Unirac's aggregate liability for all warranty claims shall not exceed the original purchase price of the nonconforming Product. Owner shall bear all costs of shipment or transportation related to the repair or replacement of the nonconforming Product. Such repair, replacement or refund shall be Owner's sole remedy and Unirac's entire liability for any breach of this warranty and shall fulfill all of Unirac's obligations with respect to the Product and all warranty claims.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, UNIRAC MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WHATSOEVER AND HEREBY DISCLAIMS ALL OTHER WARRANTIES, **EXPRESS OR IMPLIED**, INCLUDING THE IMPLIED **WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF DEALING AND USAGE OF TRADE.**

UNIRAC SHALL NOT BE LIABLE FOR LOSS OF USE, REVENUE OR PROFIT, OR FOR DIRECT, INDIRECT, SPECIAL, PUNITIVE, LIQUIDATED, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR ANY OTHER LOSS OR COST OF A SIMILAR TYPE, OR FOR CLAIMS BY OWNER FOR DAMAGES OF OWNER OR OWNER'S CUSTOMERS, CLAIMS OF THIRD PARTIES OR INJURY TO PERSONS OR PROPERTY ARISING OUT OF ANY DEFECT OR NONCONFORMITY IN THE PRODUCT COVERED BY THIS WARRANTY, EVEN IF CAUSED BY THE NEGLIGENCE OF UNIRAC. ALL SUCH DAMAGES AND EXPENSES ARE HEREBY EXCLUDED.

EFFECTIVE DATE: FEBRUARY 14, 2022