

Valley County Planning and Zoning Department
219 North Main
Cascade, ID 83611

06/22/26

Please find the below outline for a proposed solar ground mount project at the Nokes residence at 1270 Elo Road, McCall ID 83638, Assessor's #: RP18N03E234956. This outline is for the purpose of approval for a conditional use permit.

Below is our detailed project description:

Array Details:

- Installation of a ground mount PV array to be 22.080 kW consisting of (48) REC Group REC460AA Pure-RX (460W) modules in 8 strings of 6, arranged across four pole-mounted structures
- Array dimensions: approximately 68' 3" long (E/W) × 11' 0" wide (N/S); winter tilt angle: 46 degrees; azimuth: 180 degrees (south-facing)
- Array's front edge clearance from ground: 8'; total array height at tilt: 19.45' — height of array is intended to sit above snow cover in winter
- Total array area: 1,074.4 sq ft; total module weight: 2,400 lbs
- PV system will operate in conjunction with Idaho Power's electrical grid and follow Idaho Power Customer Generation Guidelines for operation
- Inverters/equipment: (3) Tesla Powerwall 3 (1707000-XX-Y) 11.5 kW inverter/batteries, (1) Tesla Powerwall 3 Expansion Unit, (2) Tesla Backup Gateways 3
- Rapid shutdown: (24) Tesla MCI-2 rapid shutdown devices per array half (12 per junction box), 4 strings of 6 modules per inverter
- All equipment to be installed is UL listed and compliant to NEC 2023 and IFC 2018 regulations
- Array installed on homeowner's private property

Construction/Installation Details:

- Four concrete pad footings, each 40"×48" rectangular, at 5.5' depth below grade; four 8" Pipe Sch 40 steel poles at 13.74' above grade; pole spacing 19.75'; racking: MT Solar TOP-40-TALL-60C with IronRidge XR1000 rail
- One trench from the array to the house approximately 110' long and minimum 18" deep
- Estimated installation time frame is one week
- Installation to be overseen by Idaho licensed Journeyman Electrician under RevoluSun Mountain States, LLC license ELC 039193. Installed per manufacturer guidelines and jurisdictional requirements to meet NEC 2023 and IFC 2018 code requirements
- Authorities having jurisdiction: Building & Zoning — Valley County; Utility — Idaho Power Co
- Dust, noise, and disruption is minimal and will occur during normal working hours

Project Purpose:

- Generate solar power to power homeowner's electrical and storage system
- Solar generation to offset utility use and provide power during any electrical outages via (3) Tesla Powerwall 3 inverter/batteries and (2) Tesla Backup Gateways 3

Please find supporting documentation:

- PV System Plan Set (RevoluSun Mountain States, LLC, 06/22/2026): cover page, general notes, site plan, electrical plan, solar attachment plan, line diagram, design tables, placards, and assembly details
- SkyCiv structural report — MT Solar 4P-19.75-8TOP-HD-12-L-4Hx12W-3KDK, dated 06/17/2026; foundation depth 5.5 ft, 40"x48" rectangular footings, 97 mph wind speed, 120 PSF snow load
- Equipment datasheets: REC Group REC460AA Pure-RX, Tesla Powerwall 3, Tesla Backup Gateway 3, Tesla MCI-2 Rapid Shutdown, MT Solar Pole Mount, IronRidge XR1000 Rail
- Documentation requested but not applicable to our installation
 - Landscaping plan - no landscaping to occur
 - Lighting plan - no lighting to occur
 - Site grading - no grading or excavation to occur
 - No irrigation changes - does not irrigate

Project Purpose from property owner:

Although the existing house has a southerly roof aspect, the homeowner is requesting approval for a ground-mount solar system for the following reasons:

1. The 22.080 kW system (48 modules) is sized to provide meaningful offset of the home's electrical load including whole-home battery backup. A ground-mount configuration allows optimal south-facing orientation at a 46-degree winter tilt, maximizing annual energy production in McCall's high-latitude, high-snow-load environment.
2. McCall, Idaho experiences a roof snow load of 120 PSF and a ground snow load of 120 PSF . The ground mount structure has been specifically engineered with 8" Sch 40 steel pipe poles and 40"x48" concrete footings at 5.5' depth to withstand these extreme loads. The elevated design — 8' front clearance, 19.45' peak height at tilt — ensures the array remains above typical winter snow accumulation for consistent year-round production.
3. Installation of solar panels on the roof would necessitate penetration of the roof envelope, increasing the possibility of ice damming and leaking, and would require removal and reinstallation whenever roofing work is needed. The ground mounted solar system can be maintained independently of the house.
4. The addition of three Tesla Powerwall 3 inverter/batteries, one expansion unit, and two Tesla Backup Gateways 3 will provide whole-home battery backup across two existing electrical panels during utility outages. This level of energy independence is especially important in McCall's remote environment where grid outages during winter weather can be prolonged.

Valley County Planning and Zoning

PO Box 1350 • 700 South Main Street
Cascade, ID 83611-1350



Phone: 208-382-7115
Email: cherrick@valleycountyid.gov

DISCLAIMER

Pre-application meetings with Valley County Staff are required prior to submitting an application.

Please note that information provided in a pre-application meeting or over the phone does not guarantee approval by either the Planning and Zoning Commission nor the Valley County Board of Commissioners. Planning and Zoning staff cannot give you legal advice. You should seek the advice of an attorney if you have specific legal questions regarding the sufficiency of your application.

Sincerely,

A handwritten signature in black ink, appearing to read "Cynda Herrick".

Cynda Herrick, AICP, CFM
Planning and Zoning Director

Valley County Code:

9-5H-1: PREAPPLICATION CONFERENCE:

A. Conference Required: Prior to the formal filing of an application, the applicant shall confer with the administrator or staff to obtain proper forms, information, and guidance.

B. Familiarity With Standards, Goals And Objectives: The applicant shall familiarize himself with the standards of this title, the goals and objectives of the comprehensive plan, and review procedure and submittal requirements, which will affect the proposal.

C. Meeting At Site Or Other Investigations: The preapplication conference may include a meeting at the proposed site and other investigations deemed necessary by the administrator or staff.

Conditional Use Permit Process

- ☐ **Pre-Application Conference with PZ Director Required – 208-382-7115.**
- ☐ **Contact Road & Bridge Director for pre-application appointment – 208-382-7195.**
- ☐ **Submit Application**
 - **Deadline is 45 days prior to a PZ Commission meeting.**
 - **Proposals within an impact area must be submitted 60 days prior to a public hearing date to meet requirements in VCC Title 7**
 - **Public Hearings are typically held on the 2nd Thursday of every month, starting at 6:00 p.m.**
- ☐ **Staff will review, place on agenda, and notice.**
- ☐ **PZ Staff prepares a Staff Report.**
- ☐ **Public Hearing:**
 - Staff Report to Commissioners, Exhibits, and Questions for Staff
 - Presentation by Applicant
 - Testimony of Proponents.
 - Testimony of Undecided
 - Testimony of Opponents
 - Rebuttal by the Applicant
 - If new information is provided, must reopen for other testimony.
 - The public hearing is closed for Commissioner deliberation
 - Commissions approve a motion or table to a future date for more information.
 - There is a 10-day appeal period to the Board of County Commissioners in accordance with Valley County Code 9-5H-12.

Valley County Planning and Zoning Department

700 S. Main ST | PO Box 1350
 Cascade, ID 83611
www.co.valley.id.us
cherrick@valleycountyid.gov
 208-382-7115



Conditional Use Permit Application

TO BE COMPLETED BY THE PLANNING AND ZONING DEPARTMENT

☐ Check # _____ or ☐ Cash or ☐ Card

FILE # 26-018

FEE \$ 250.00

ACCEPTED BY Hannah Smith

DEPOSIT _____

CROSS REFERENCE FILE(S): _____

DATE 06/29/2026

PROPOSED USE: Ground Mounted Solar Panels

When an application has been submitted, it will be reviewed in order to determine compliance with application requirements.
 A hearing date will be scheduled only after an application has been accepted as complete or if applicant requests the hearing in writing.

Applicant's Signature: _____

Signed by:

Barbara Nobles-Kwader

Date: 6/29/2026

By signing, you are agreeing to allow County staff to inspect the property identified in the application.

The following must be completed and submitted with the conditional use permit application:

- ☐ A **detailed project description** disclosing the purpose, strategy, and time frame of construction. Include a phasing plan if appropriate. Address fire mitigation, utilities, fencing, access, emissions, dust, noise, and outside storage.
- ☐ A **plot plan**, drawn to scale, showing the boundaries, dimensions, area of lot, existing and proposed utilities, streets, easements, parking, setbacks, and buildings.
- ☐ A **landscaping plan**, drawn to scale, showing elements such as trees, shrubs, ground covers, and vines. Include a plant list indicating the size, quantity, location and name (both botanical and common) of all plant material to be used.
- ☐ A **site grading plan** clearly showing the existing site topography and detailing the best management practices for surface water management, siltation, sedimentation, and blowing of dirt and debris caused by grading, excavation, open cuts, side slopes, and other site preparation and development.
- ☐ A **lighting plan**.
- ☐ **Names and addresses of property owners within 300 feet of the property lines**. Information can be obtained through the GIS Portal at www.co.valley.id.us. Only one copy of this list is required. Staff may notice more than 300 feet based on adjacent ownership and potential for impacts.
- ☐ **Three (3) copies** of the application, project description, plot plan, landscaping plan, grading plan, and impact report are required.
- ☐ **A Development Agreement may be required**. Possible road mitigation should be discussed with the Valley County Road and Bridge Director, 208-382-7195.

We recommend you review the Valley County Code online at www.co.valley.id.us
 or at the Planning & Zoning Office at 219 North Main Street, Cascade, Idaho

Subject to Idaho Statute Title 55 Chapter 22 Underground Facilities Damage Prevention.

Date of Pre-Application Meeting with Staff: 6/26/26Staff Name(s): Hannah Smith**CONTACT INFORMATION**APPLICANT Donna Nokes PHONE [REDACTED]Owner ☒ Purchaser ☐ Lessee ☐ Renter ☐MAILING ADDRESS 1270 Elo Road, McCall ZIP 83638EMAIL [REDACTED]PROPERTY OWNER NOKES FAMILY LIMITED PARTNERSHIPMAILING ADDRESS 1270 Elo Road, McCall ZIP 83638EMAIL [REDACTED]AGENT / REPRESENTATIVE RevoluSun Mountain States PHONE 208-661-2297MAILING ADDRESS 457 Steelhead Way, Boise ID ZIP 83704EMAIL idahopermits@revolusun.com **Please use this email address**CONTACT PERSON (if different from above) Claire CameronMAILING ADDRESS same as above ZIP EMAIL claire.alivia@revolusun.com PHONE **PROPERTY INFORMATION**ADDRESS OF SUBJECT PROPERTY 1270 Elo Road, McCallPROPERTY DESCRIPTION (either lot, block & subdivision name or attach a recorded deed with a metes and bounds description.)108300 Lakefork Area SubdivisionsTAX PARCEL NUMBER(S) RP 18N03E230004Quarter Section 23 Township 18N Range 3E1. PROPOSED USE: Residential ☒ Civic or Community ☐ Commercial ☐ Industrial ☐2. SIZE OF PROPERTY 311.12 Acres ☐ or Square Feet ☐

3. EXISTING LAND USES AND STRUCTURES ON THE PROPERTY ARE AS FOLLOWS:

Residential Home4. ARE THERE ANY KNOWN HAZARDS ON OR NEAR THE PROPERTY (such as canals, hazardous material spills, and/or soil or water contamination)? If so, describe and give location: None.

5. ADJACENT PROPERTIES HAVE THE FOLLOWING BUILDING TYPES AND/OR USES:

North ResidentialSouth ResidentialEast ResidentialWest Residential

APPLICATION DETAILS

6. MAXIMUM PROPOSED STRUCTURE HEIGHT: 17ft
7. NON-RESIDENTIAL STRUCTURES OR ADDITIONS (If applicable):
- | | |
|--|---|
| Number of <u>Proposed</u> Structures: <u>1</u> | Number of <u>Existing</u> Structures: _____ |
| <u>Proposed Gross Square Feet</u> | <u>Existing Gross Square Feet</u> |
| 1 st Floor _____ | 1 st Floor _____ |
| 2 nd Floor _____ | 2 nd Floor _____ |
| Total <u>1074.4</u> | Total _____ |
- 8a. TYPE OF RESIDENTIAL USE (If applicable): Single family residence ☒ Multiple residences on one parcel ☐
- 8b. TYPE OF STRUCTURE: Stick-built ☐ Manufacture Home ☐ Mobile Home ☐ Tiny Home ☐ Other ☒ Solar Ground Mount
- 8c. SQUARE FOOTAGE OF PROPOSED RESIDENTIAL STRUCTURES (If applicable): N/A
- SQUARE FOOTAGE OF EXISTING RESIDENTIAL STRUCTURES: N/A
- 8d. DENSITY OF DWELLING UNITS PER ACRE: N/A
9. SITE DESIGN:
- Percentage of site devoted to building coverage: N/A
- Percentage of site devoted to landscaping: N/A
- Percentage of site devoted to roads or driveways: N/A
- Percentage of site devoted to other uses: .008%, describe: Solar Ground Mount Installation
- Total: 100%**
10. PARKING (If applicable): N/A
- a. Handicapped spaces proposed: _____

b. Parking spaces proposed: _____

c. Number of compact spaces proposed: _____

d. Restricted parking spaces proposed: _____

e. Are you proposing off-site parking: _____

Office Use Only

Handicapped spaces required: _____

Parking spaces required: _____

Number of compact spaces allowed: _____
11. SETBACKS:
- | | <u>BUILDING</u> | <u>Office Use Only</u> | <u>PARKING</u> | <u>Office Use Only</u> |
|-------------|------------------|------------------------|----------------|------------------------|
| | Proposed | Required | Proposed | Required |
| Front | <u>N 74'-4"</u> | _____ | _____ | _____ |
| Rear | <u>W 226'-7"</u> | _____ | _____ | _____ |
| Side | <u>E 430'-6"</u> | _____ | _____ | _____ |
| Side Street | <u>S 235'</u> | _____ | _____ | _____ |
12. NUMBER OF EXISTING ROADS: N/A Width: _____
- Existing roads will be: Publicly maintained? ☐ Privately Maintained? ☐ or Combination of both? ☐
- Existing road construction: Gravel ☐ Paved ☐ or Combination of both? ☐
13. NUMBER OF PROPOSED ROADS: N/A Proposed width: _____
- Proposed roads: Publicly maintained? ☐ Privately Maintained? ☐ or Combination of both? ☐
- Proposed road construction: Gravel ☐ Paved ☐ or Combination of both? ☐
- Anticipated Trip Generation [Refer to ITE – Trip Generation Manual within Roads Policy Manual] _____
- Primarily heavy truck traffic? Yes ☐ No ☐ Combination ☐

14. ARE SHARED DRIVEWAYS PROPOSED? If so, please explain why. Yes ☐ No ☒

N/A

15. EXISTING UTILITIES ON THE PROPERTY ARE AS FOLLOWS:

Electrical, Propane

16. PROPOSED UTILITIES: None.

Proposed utility easement widths N/A

Locations N/A

17. SEWAGE WASTE DISPOSAL METHOD: Septic ☒ Central Sewage Treatment Facility ☐

Name: _____

18. POTABLE WATER SOURCE: Public ☐ Water Association ☐ Individual Well: ☒

If individual, has a test well been drilled? _____ Depth _____ Flow _____ Purity Verified? _____

Nearest adjacent well _____ Depth _____ Flow _____

19. DRAINAGE (Proposed method of on-site retention): _____

Any special drains? _____ (Please attach map)

Soil type(s): Cabarton silty clay loam

(Information can be obtained from the Natural Resource Conservation Service: websoilsurvey.nrcs.usda.gov)

Stormwater Prevention Management Plan will need approval from Valley County Engineer.

20. IS ANY PORTION OF THE PROPERTY LOCATED IN A FLOODWAY OR 100-YR FLOODPLAIN?

(Information can be obtained from the Planning & Zoning Office) Yes ☐ No ☒

21. DOES ANY PORTION OF THIS PARCEL HAVE SLOPES IN EXCESS OF 15%? Yes ☐ No ☒

22. ARE THERE WETLANDS LOCATED ON ANY PORTION OF THE PROPERTY? Yes ☐ No ☒

23. IS ANY PORTION LOCATED WITHIN 150-FT OF ANY LAKE, POND, RIVER, OR YEAR-ROUND FLOWING CREEK OR STREAM? THIS IS A RIPARIAN AREA AS DEFINED BY VCC 9-6-6.

Yes ☐ No ☒

24. IS THERE ANY SITE GRADING OR PREPARATION PROPOSED? Yes ☐ No ☒

If yes, explain:

25a. ARE THERE ANY EXISTING IRRIGATION SYSTEMS? Yes ☒ No ☐

Are you proposing any alterations, improvements, extensions or new construction? Yes ☐ No ☒

If yes, explain: Lake Irrigation

25b. COMPLETE ATTACHED PLAN FOR IRRIGATION if you have water rights and are in an irrigation district. Submit letter from Irrigation District, if applicable.

26. COMPLETE ATTACHED WEED CONTROL AGREEMENT

Type text here

27. COMPLETE ATTACHED IMPACT REPORT

Irrigation Plan

(Idaho Code 31-3805)

This land: ☒ Has water rights available to it
☐ Is dry and has no water rights available to it.

Idaho Code 31-3805 states that when all or part of a subdivision is “located within the boundaries of an existing irrigation district or canal company, ditch association, or like irrigation water deliver entity ... **no subdivision plat or amendment to a subdivision plat or any other plat or map recognized by the city or county for the division of land will be accepted, approved, and recorded unless:**”

- A. The appropriate water rights and assessment of those water rights have been transferred from said lands or excluded from an irrigation entity by the owner; or
- B. The owner filing the subdivision plat or amendment to a subdivision plat or map has provided for the division of land of underground tile or conduit for lots of one acre or less or a suitable system for lots of more than one acre which will deliver water to those landowners within the subdivision who are also within the irrigation entity with the appropriate approvals:
 1. For proposed subdivisions located within an area of city impact, both city and county zoning authorities must approve such irrigation system.
 2. For proposed subdivisions outside of negotiated areas of city impact, the delivery system must be approved by the Planning and Zoning Commission and the Board of County Commissioners with the advice of the irrigation entity charged with the delivery of water to said lands (e.g., irrigation district).

To better understand your irrigation request, we need to ask you a few questions. Additional pages can be added. A list of the map requirements follows the short questionnaire. **Any missing information may result in the delay of your request before the Planning and Zoning Commission and ultimately the approval of your irrigation plan by the Board of County Commissioners as part of final plat approval.**

1. Are you within an area of negotiated City Impact? _____ Yes _____ N/A No
2. What is the name of the irrigation district/company and drainage entities servicing the property?
 Irrigation: N/A
 Drainage: N/A
3. How many acres is the property being subdivided? N/A
4. What percentage of this property has water? N/A
5. How many inches of water are available to the property? N/A
6. How is the land currently irrigated? ☐ surface ☐ sprinkler ☐ irrigation well
☐ above ground pipe ☐ underground pipe
7. How is the land to be irrigated after it is subdivided? ☐ surface ☐ sprinkler ☐ irrigation well
☐ above ground pipe ☐ underground pipe
8. Describe how the head gate/pump connects to the canal and irrigated land and where ditches &/or pipes go.
N/A
9. Is there an irrigation easement(s) on the property? ☐ Yes ☐ No

10. How do you plan to retain storm and excess water on each lot? N/A

11. How do you plan to process this storm water and/or excess irrigation water prior to it entering the established drainage system? (i.e. oil, grease, contaminated aggregates)

N/A

Irrigation Plan Map Requirements

The irrigation plan **must be on a scalable map** and show all of the irrigation system including all supply and drainage structures and easements. Please include the following information on your map:

- ☐ All canals, ditches, and laterals with their respective names.
- ☐ Head gate location and/or point of delivery of water to the property by the irrigation entity.
- ☐ Pipe location and sizes, if any
- ☐ Rise locations and types, if any.
- ☐ Easements of all private ditches that supply adjacent properties (i.e. supply ditches and drainage ways).
- ☐ Slope of the property in various locations.
- ☐ Direction of water flow (use short arrows on your map to indicate water flow direction →).
- ☐ Direction of wastewater flow (use long arrows on your map to indicate wastewater direction →).
- ☐ Location of drainage ponds or swales, if any where wastewater will be retained on property
- ☒ Other information: N/A

Also, provide the following documentation: N/A

- ☐ Legal description of the property.
- ☐ Proof of ownership.
- ☐ A written response from the irrigation entity and/or proof of agency notification.
- ☐ Copy of any water users' association agreement which shows water schedules and maintenance responsibilities.
- ☐ Copy of all new easements ready for recording (irrigation supply and drainage).
- ☐ If you are in a city area of impact, please include a copy of the approvals by the city planning and zoning commission and city council of your irrigation plan.

=====Applicant Acknowledgement=====

I, the undersigned, agree that prior to the Planning and Zoning Department accepting this application, I am responsible to have all the required information and site plans.

I further acknowledge that the irrigation system, as approved by the Planning and Zoning Commission and ultimately the Board of County Commissioners, must be bonded and/or installed prior to the recording of the plat or building permit.

Signed: Barbara Nokes-Kwader
Applicant

Date: 6/29/2026



VALLEY COUNTY

WEED CONTROL AGREEMENT

It shall be the duty and responsibility of all landowners to control noxious weeds on their land and property, in accordance with Idaho Statute 22-2407.

The purpose of this agreement is to establish a cooperative relationship between Valley County and the undersigned Cooperator to protect the natural and economic values in the Upper Payette River watershed from damages related to the invasion and expansion of infestations of noxious weeds and invasive plants. This is a cooperative effort to prevent, eradicate, contain and control noxious weeds and invasive plants on public and private lands in this area. Factors related to the spread of weeds are not related to ownership nor controllable at agency boundaries. This agreement formalizes the cooperative strategy for management of these weeds addressed in Valley County's Integrated Weed Management Plan.

In this continuing effort to control Noxious Weeds, Valley County Weed Control will consult with the undersigned Cooperator and outline weed identification techniques, present optional control methods and recommend proper land management practices.

The undersigned Cooperator acknowledges that he/she is aware of any potential or real noxious weed problems on his/her private property and agrees to control said weeds in a timely manner using proper land management principles.

Valley County Weed Department can be contacted at 208-382-7199.

Signed by:
By: Barbara Nokes-Kwader
9542926C2C734D5
Applicant

By: Valley County Weed Supervisor

Date: 6/29/2026

IMPACT REPORT (from Valley County Code 9-5-3-D)

You may add information to the blanks below or attach additional sheets.

❖ **An impact report shall be required for all proposed Conditional Uses.**

❖ **Thoroughly answer all questions. Mark N/A if the question is not applicable to your application.**

❖ **The impact report shall address potential environmental, economic, and social impacts and how these impacts are to be minimized as follows:**

1. Traffic volume, character, and patterns including adequacy of existing or proposed street width, surfacing, alignment, gradient, and traffic control features or devices, and maintenance. Contrast existing with the changes the proposal will bring during construction and after completion, build-out, or full occupancy of the proposed development. Include pedestrian, bicycle, auto, and truck traffic.

N/A

2. Provision for the mitigation of impacts on housing affordability.

N/A

3. Noise and vibration levels that exist and compare to those that will be added during construction, normal activities, and special activities. Include indoor and outdoor, day and night variations.

Construction related noise only. Daytime construction for one week. Noise primarily resulting from crews digging trenches and concrete piles for ground mount solar array. No noise or vibration increase after installation.

4. Heat and glare that exist and that might be introduced from all possible sources such as autos in parking areas, outdoor lights, water or glass surfaces, buildings or outdoor activities.

Glare from solar modules. Minimal impact. Glare and visibility of the array will be reduced/screened by surrounding vegetation, and fully blocked from the road by the existing home.

5. Particulate emissions to the air including smoke, dust, chemicals, gasses, or fumes, etc., both existing and what may be added by the proposed uses.

Minimal dust production possible during installation. No increase in any of the above factors after completion of installation.

6. Water demand, discharge, supply source, and disposal method for potable uses, domestic uses, and fire protection. Identify existing surface water drainage, wetlands, flood prone areas and potential changes. Identify existing ground water and surface water quality and potential changes due to this proposal.

N/A

7. Fire, explosion, and other hazards existing and proposed. Identify how activities on neighboring property may affect the proposed use.

Equipment installed to comply with NEC and IFC standards. No affect from or on neighboring properties.

8. Removal of existing vegetation or effects thereon including disturbance of wetlands, general stability of soils, slopes, and embankments and the potential for sedimentation of disturbed soils.

Minimal removal of existing vegetation, no wetland disturbance, no impact on stability of disturbed soils. One 110 ft, 24 in deep trench extending from the ground mount array to the home.

9. Include practices that will be used to stabilize soils and restore or replace vegetation.

N/A

10. Soil characteristics and potential problems in regard to slope stability, embankments, building foundation, utility and road construction. Include suitability for supporting proposed landscaping.

N/A

11. Site grading or improvements including cuts and fills, drainage courses and impoundments, sound and sight buffers, landscaping, fencing, utilities, and open areas.

N/A

12. Visibility from public roads, adjoining property, and buildings. Include what will be done to reduce visibility of all parts of the proposal but especially cuts and fills and buildings. Include the impacts of shadows from new features on neighboring property.

No shading on neighboring property. Cuts and fills not visible. Visibility from the road to be obstructed by surrounding vegetation and the existing home. Visibility to neighboring properties to be obstructed by surrounding vegetation. See planset for site plan, landscaping plan, and full array dimensions.

13. Reasons for selecting the particular location including topographic, geographic and similar features, historic, adjoining land ownership or use, access to public lands, recreation, utilities, streets, etc., in order to illustrate compatibility with and opportunities presented by existing land uses or character.

N/A

14. Approximation of increased revenue from change in property tax assessment, new jobs available to local residents, and increased local expenditures.

N/A

15. Approximation of costs for additional public services, facilities, and other economic impacts.

N/A

16. State how the proposed development will impact existing developments providing the same or similar products or services.

N/A

17. State what natural resources or materials are available at or near the site that will be used in a process to produce a product and the impacts resulting from the depletion of the resource. Describe the process in detail and describe the impacts of each part.

N/A

18. What will be the impacts of a project abandoned at partial completion?

N/A

19. Number of residential dwelling units, other buildings and building sites, and square footage or gross non-residential floor space to be available.

N/A

20. Stages of development in geographic terms and proposed construction time schedule.

Construction time of one week- occurring within the 2026 building season

21. Anticipated range of sale, lease or rental prices for dwelling units, building or other site, or non-residential floor space in order to insure compatibility with adjacent land use and development.

N/A

Property Tax Exemption

New and expanding business **may** qualify for a property tax exemption for up to 5 years by meeting the qualifications in accordance with Idaho Code§ 63-602NN

Application must be filed with the Valley County Assessor's office before construction begins.

Protocols for qualifying property exemption in Valley County, Idaho:

- Application must be received prior to the start of construction (ex. Building Permits, excavation)
- Term of exemption, not to exceed 5 years, will be up to the discretion of the Valley County Board of Commissioners
- Retail sales business do not qualify
- Multi use may qualify excluding retail sale area
- Housing
 - Multi-family housing must have 5 units or more per structure.
 - Multi-Family housing units may qualify if more than one structure is built totaling 5 or more units
 - For local housing only (workforce)
 - Short term rentals not allowed
 - Units cannot be individually sold (e.g., no condominiums)
- Remodel and/or additions to existing businesses
 - Only the area of remodel/addition may qualify for exemption
 - Retail sales additions/remodel will not qualify

For further information regarding the 63-602NN application process and instructions, please contact the Valley County Assessor's office at 208-382-7126.

GENERAL NOTES

- 1.1.1 PROJECT NOTES:
- 1.1.2 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
- 1.1.3 THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
- 1.1.4 ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4: PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(ES): UL 1703 OR UL 1741 ACCESSORY
- 1.1.5 MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
- 1.1.6 ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING [NEC 110.3].
- 1.1.7 ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- 1.2.1 SCOPE OF WORK:
- 1.2.2 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ONSITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE GROUND MOUNT ARRAY PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT.
- 1.3.1 WORK INCLUDES:
- 1.3.2 PV GROUND MOUNT SYSTEM INSTALLATION - MT SOLAR GROUND MOUNT
- 1.3.3 PV MODULE AND INVERTER INSTALLATION - REC GROUP REC460AA PURE-RX / TESLA 1707000-XX-Y 11.5 KW / TESLA BACKUP GATEWAY 2 / TESLA POWERWALL
- 1.3.4 PV EQUIPMENT GROUNDING
- 1.3.5 PV LOAD CENTERS (IF INCLUDED)
- 1.3.6 PV METERING/MONITORING (IF INCLUDED)
- 1.3.7 PV DISCONNECTS
- 1.3.8 PV GROUNDING ELECTRODE & BONDING TO (E) GEC
- 1.3.9 PV FINAL COMMISSIONING
- 1.3.10 (E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
- 1.3.11 SIGNAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE
- 1.3.12 TRENCHING (IF NECESSARY)

SCOPE OF WORK

SYSTEM SIZE: STC: 48 X 460W = 22.080KW
PTC: 48 X 438.8W = 21.062KW
(48) REC GROUP REC460AA PURE-RX
(3) TESLA 1707000-XX-Y 11.5 KW
(1) TESLA POWERWALL 3 EXPANSION UNITS
(2) TESLA BACKUP GATEWAYS 3

ATTACHMENT TYPE: MT SOLAR GROUND MOUNT

MSP UPGRADE: NO

NEW PV SYSTEM: 22.080 kWp
NOKES RESIDENCE

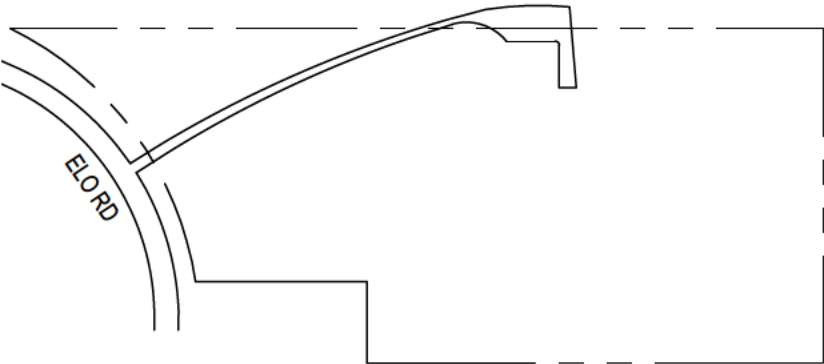
1270 ELO RD,
MCCALL, ID 83638
ASSESSOR'S #: RP18N03E234956



01

AERIAL PHOTO

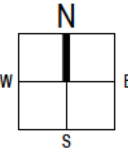
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02

PLAT MAP

NOT TO SCALE



SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
T-001.00	COVER PAGE
G-001.00	NOTES
A-101.00	SITE PLAN
A-102.00	ELECTRICAL PLAN
A-103.00	SOLAR ATTACHMENT PLAN
E-601.00	LINE DIAGRAM
E-602.00	DESIGN TABLES
E-603.00	PLACARDS
S-501.00	ASSEMBLY DETAILS
R-001.00	RESOURCE DOCUMENT
R-002.00	RESOURCE DOCUMENT
R-003.00	RESOURCE DOCUMENT
R-004.00	RESOURCE DOCUMENT
R-005.00	RESOURCE DOCUMENT
R-006.00	RESOURCE DOCUMENT
R-007.00	RESOURCE DOCUMENT
R-008.00	RESOURCE DOCUMENT

PROJECT INFORMATION

OWNER
NAME: DONNA NOKES

PROJECT MANAGER
NAME: DAVID MYERS
PHONE: 208-315-4082

CONTRACTOR
NAME: REVOLUSUN MOUNTAIN STATES, LLC
PHONE: 208-315-4082

AUTHORITIES HAVING JURISDICTION
BUILDING: VALLEY COUNTY
ZONING: VALLEY COUNTY
UTILITY: IDAHO POWER CO

DESIGN SPECIFICATIONS
OCCUPANCY: II
CONSTRUCTION: SINGLE-FAMILY
ZONING: RESIDENTIAL
ROOF SNOW LOAD: 120 PSF
WIND EXPOSURE: B
WIND SPEED: 102 MPH

APPLICABLE CODES & STANDARDS
BUILDING: IBC 2018, IRC 2018
ELECTRICAL: NEC 2023
FIRE: IFC 2018



CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

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BOISE, ID 83704

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HIC. NO.:
ELE. NO.:

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NEW PV SYSTEM: 22.080 KWP

NOKES
RESIDENCE

1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

COVER PAGE

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

T-001.00

	A	B	C	D	E	F	G	H
1	2.1.1	<u>SITE NOTES:</u> THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY INTERACTIVE SYSTEM WITH STORAGE BATTERIES. THE SOLAR PV INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING OR MECHANICAL. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION NEC 110.26.		2.5.5	COMBINED OVERCURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12 (B)(2)(3)(C). FEEDER TAP INTERCONNECTION (LOAD SIDE) ACCORDING TO NEC 705.12 (B)(2)(1) SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC 230.42 BACKFEEDING BREAKER FOR ELECTRIC POWER SOURCES OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [NEC 705.12 (B)(5)].			
	2.1.2			2.5.6				
	2.1.3							
	2.1.4			2.5.7				
2	2.2.1	<u>EQUIPMENT LOCATIONS</u> ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC 110.26. WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC 690.31 (A),(C) AND NEC TABLE 310.15 (B)(2)(A). JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC 690.34. ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT. ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES. ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE. SOLAR ARRAY LOCATION SHALL BE ADJUSTED ACCORDINGLY TO MEET LOCAL SETBACK REQUIREMENTS.		2.6.1	<u>DISCONNECTION AND OVER-CURRENT PROTECTION NOTES:</u> DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS). DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH. BOTH POSITIVE AND NEGATIVE PV CONDUCTORS ARE UNGROUNDED. THEREFORE BOTH MUST OPEN WHERE A DISCONNECT IS REQUIRED, ACCORDING TO NEC 690.13. ISOLATING DEVICES OR EQUIPMENT DISCONNECTING MEANS SHALL BE INSTALLED IN CIRCUITS CONNECTED TO EQUIPMENT AT A LOCATION WITHIN THE EQUIPMENT, OR WITHIN SIGHT AND WITHIN 10 FT. OF THE EQUIPMENT. AN EQUIPMENT DISCONNECTING MEANS SHALL BE PERMITTED TO BE REMOTE FROM THE EQUIPMENT WHERE THE EQUIPMENT DISCONNECTING MEANS CAN BE REMOTELY OPERATED FROM WITHIN 10 FT. OF THE EQUIPMENT, ACCORDING TO NEC 690.15 (A). PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D) ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC 690.8, 690.9, AND 240. BOTH POSITIVE AND NEGATIVE PV CONDUCTORS ARE UNGROUNDED, THEREFORE BOTH REQUIRE OVER-CURRENT PROTECTION, ACCORDING TO NEC 240.21. (SEE EXCEPTION IN NEC 690.9) IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO NEC 690.11 AND UL1699B.			
	2.2.2			2.6.2				
	2.2.3							
	2.2.4			2.6.3				
	2.2.5			2.6.4				
	2.2.6			2.6.5				
	2.2.7							
	2.2.8			2.6.6				
3	2.3.1	<u>STRUCTURAL NOTES:</u> RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL. TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RAILS MUST ALSO EXTEND A MINIMUM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARRAY, ACCORDING TO RAIL MANUFACTURER'S INSTRUCTIONS. JUNCTION BOX WILL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS. IT SHALL BE SEALED PER LOCAL REQUIREMENTS. ALL PV RELATED ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER.		2.6.7				
	2.3.2			2.6.8				
	2.3.3							
	2.3.4			2.6.9				
4	2.4.1	<u>GROUNDING NOTES:</u> GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVICES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE. PV SYSTEMS REQUIRE AN EQUIPMENT GROUNDING CONDUCTOR. ALL METAL ELECTRICAL EQUIPMENT AND STRUCTURAL COMPONENTS BONDED TO GROUND, IN ACCORDANCE WITH 250.134 OR 250.136(A). ONLY THE DC CONDUCTORS ARE UNGROUNDED. PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC 690.43 AND MINIMUM NEC TABLE 250.122. METAL PARTS OF MODULE FRAMES, MODULE RACKING, AND ENCLOSURE CONSIDERED GROUNDED IN ACCORD WITH 250.134 AND 250.136(A). EACH MODULE WILL BE GROUNDED USING WEEB GROUNDING CLIPS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ. IF WEEBS ARE NOT USED, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE SPECIFIED GROUNDING LUG HOLES PER THE MANUFACTURERS' INSTALLATION REQUIREMENTS. THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE. GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [NEC 250.119] THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH NEC 690.47 AND NEC 250.50 THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO NEC 250, NEC 690.47 AND AHJ. DC PV ARRAYS SHALL BE PROVIDED WITH DC GROUND-FAULT PROTECTION MEETING THE REQUIREMENTS OF 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS.		2.7.1	<u>WIRING & CONDUIT NOTES:</u> ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING. ALL CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7. EXPOSED PV SOURCE CIRCUITS AND OUTPUT CIRCUITS SHALL USE WIRE LISTED AND IDENTIFIED AS PHOTOVOLTAIC (PV) WIRE [690.31 (C)]. PV MODULES WIRE LEADS SHALL BE LISTED FOR USE ON PV ARRAYS, ACCORDING TO NEC 690.31 (A). PV WIRE BLACK WIRE MAY BE FIELD-MARKED WHITE [NEC 200.6 (A)(6)]. MODULE WIRING SHALL BE LOCATED AND SECURED UNDER THE ARRAY. ACCORDING TO NEC 200.7, UNGROUNDED SYSTEMS DC CONDUCTORS COLORED OR MARKED AS FOLLOWS: DC POSITIVE- RED, OR OTHER COLOR EXCLUDING WHITE, GRAY AND GREEN DC NEGATIVE- BLACK, OR OTHER COLOR EXCLUDING WHITE, GRAY AND GREEN AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE PHASE C OR L3- BLUE, YELLOW, ORANGE*, OR OTHER CONVENTION NEUTRAL- WHITE OR GRAY			
	2.4.2			2.7.2				
	2.4.3			2.7.3				
	2.4.4			2.7.4				
	2.4.5			2.7.5				
	2.4.6			2.7.6				
	2.4.7			2.7.7				
	2.4.8			2.7.8				
5	2.4.9			*	IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC 110.15]. ELECTRICAL WIRES IN TRENCH SHALL BE AT LEAST 18IN. BELOW GRADE (RESIDENTIAL).			
	2.4.10			2.7.9				
6	2.5.1	<u>INTERCONNECTION NOTES:</u> LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 705.12 (B)] THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR, PV DEDICATED BACKFEED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC 705.12(B)(2)(3)]. AT MULTIPLE ELECTRIC POWER SOURCES OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVERCURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE						
	2.5.2							
	2.5.3							
	2.5.4							



CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

PHONE: 208-315-4082

ADDRESS: 457 STEELHEAD WAY,
BOISE, ID 83704

LIC. NO.: ECL 039193

HIC. NO.:

ELE. NO.:

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NEW PV SYSTEM: 22.080 KWP

NOKES
RESIDENCE
1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

NOTES

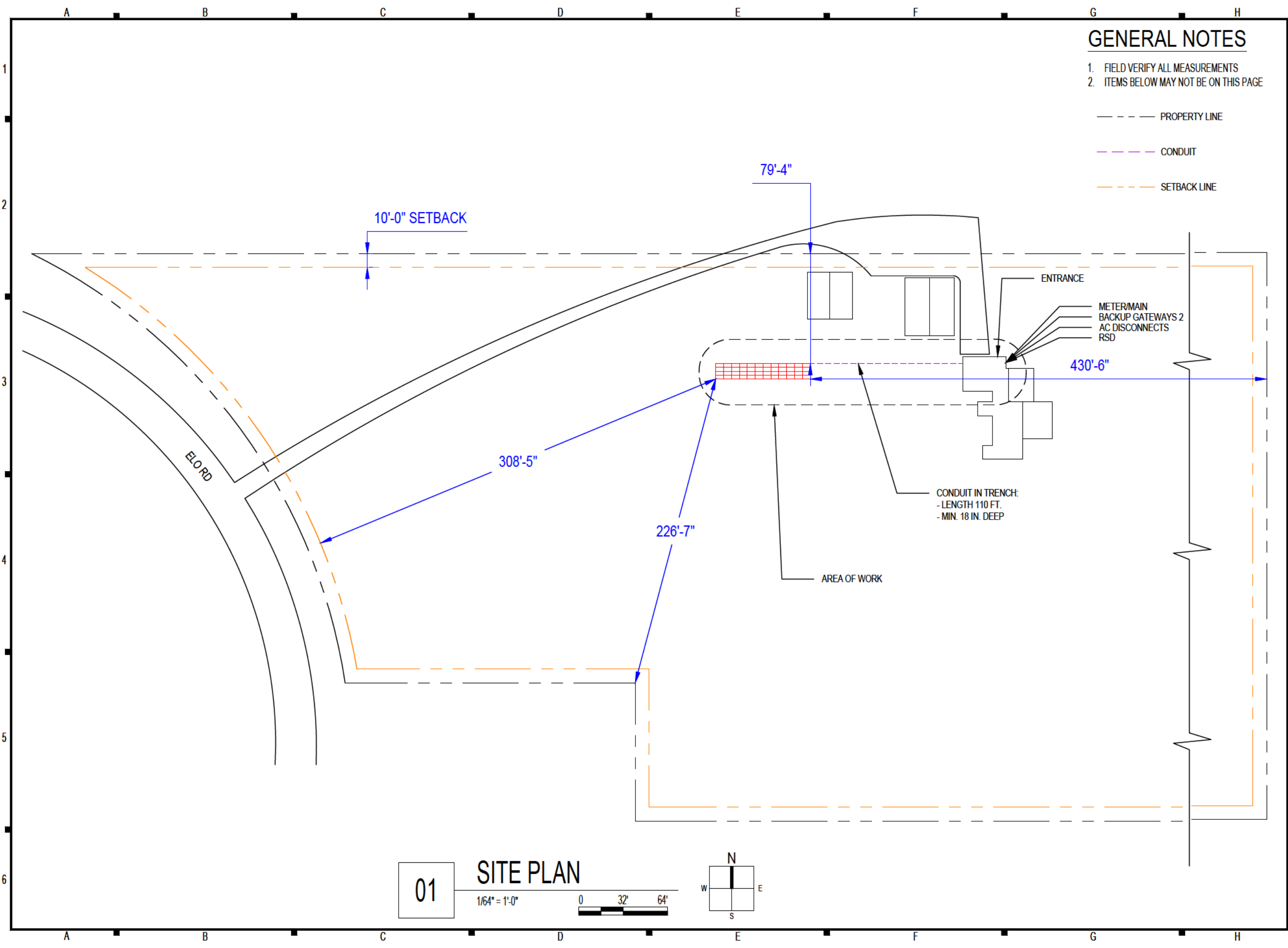
DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

G-001.00



GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

- PROPERTY LINE
- CONDUIT
- SETBACK LINE



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SITE PLAN

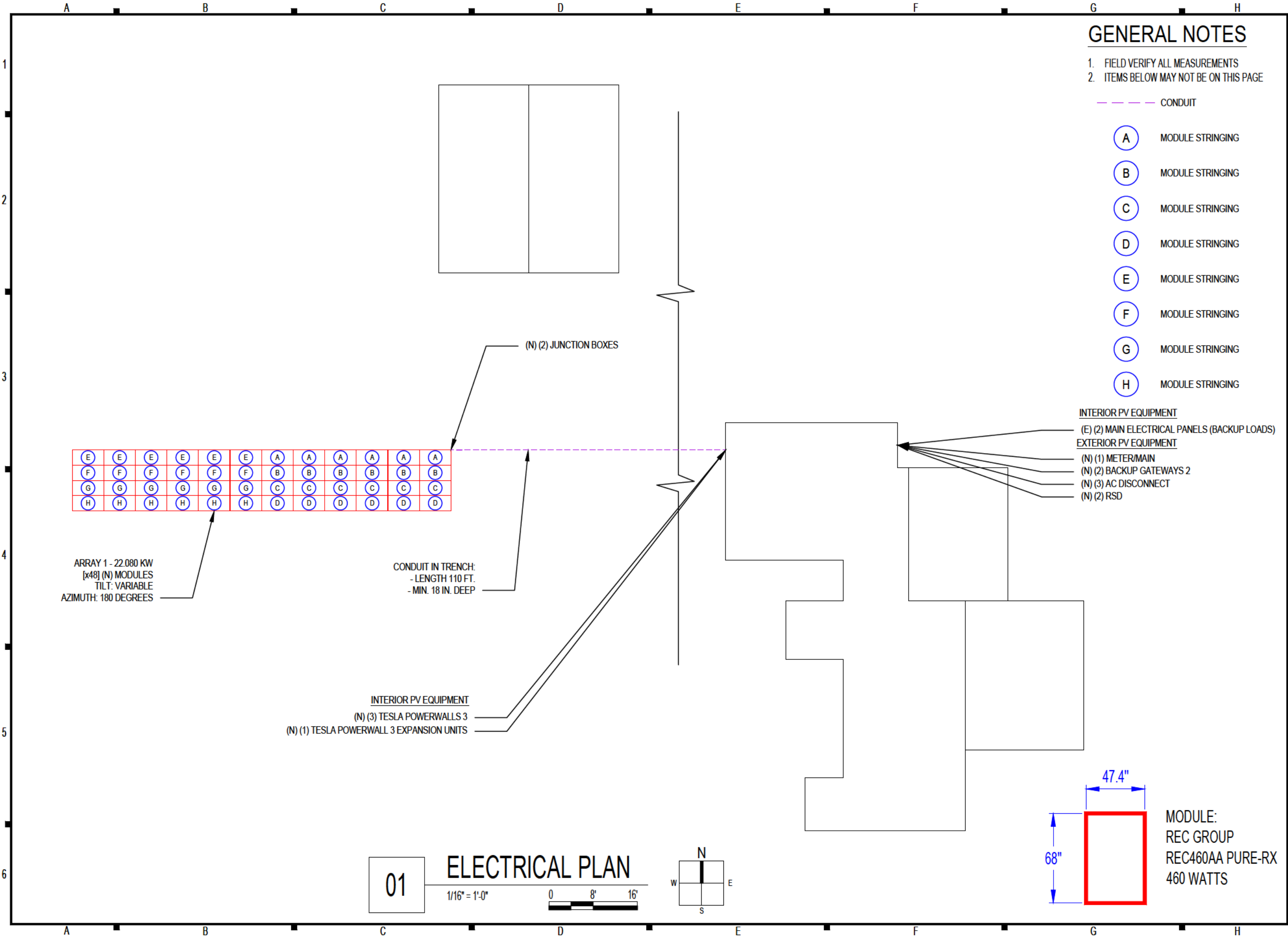
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A-101.00



GENERAL NOTES

- 1. FIELD VERIFY ALL MEASUREMENTS
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- CONDUIT
- (A) MODULE STRINGING
- (B) MODULE STRINGING
- (C) MODULE STRINGING
- (D) MODULE STRINGING
- (E) MODULE STRINGING
- (F) MODULE STRINGING
- (G) MODULE STRINGING
- (H) MODULE STRINGING

- INTERIOR PV EQUIPMENT
- (E) (2) MAIN ELECTRICAL PANELS (BACKUP LOADS)
- EXTERIOR PV EQUIPMENT
- (N) (1) METER/MAIN
- (N) (2) BACKUP GATEWAYS 2
- (N) (3) AC DISCONNECT
- (N) (2) RSD



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PAPER SIZE: 11" x 17" (ANSI B)

ELECTRICAL PLAN

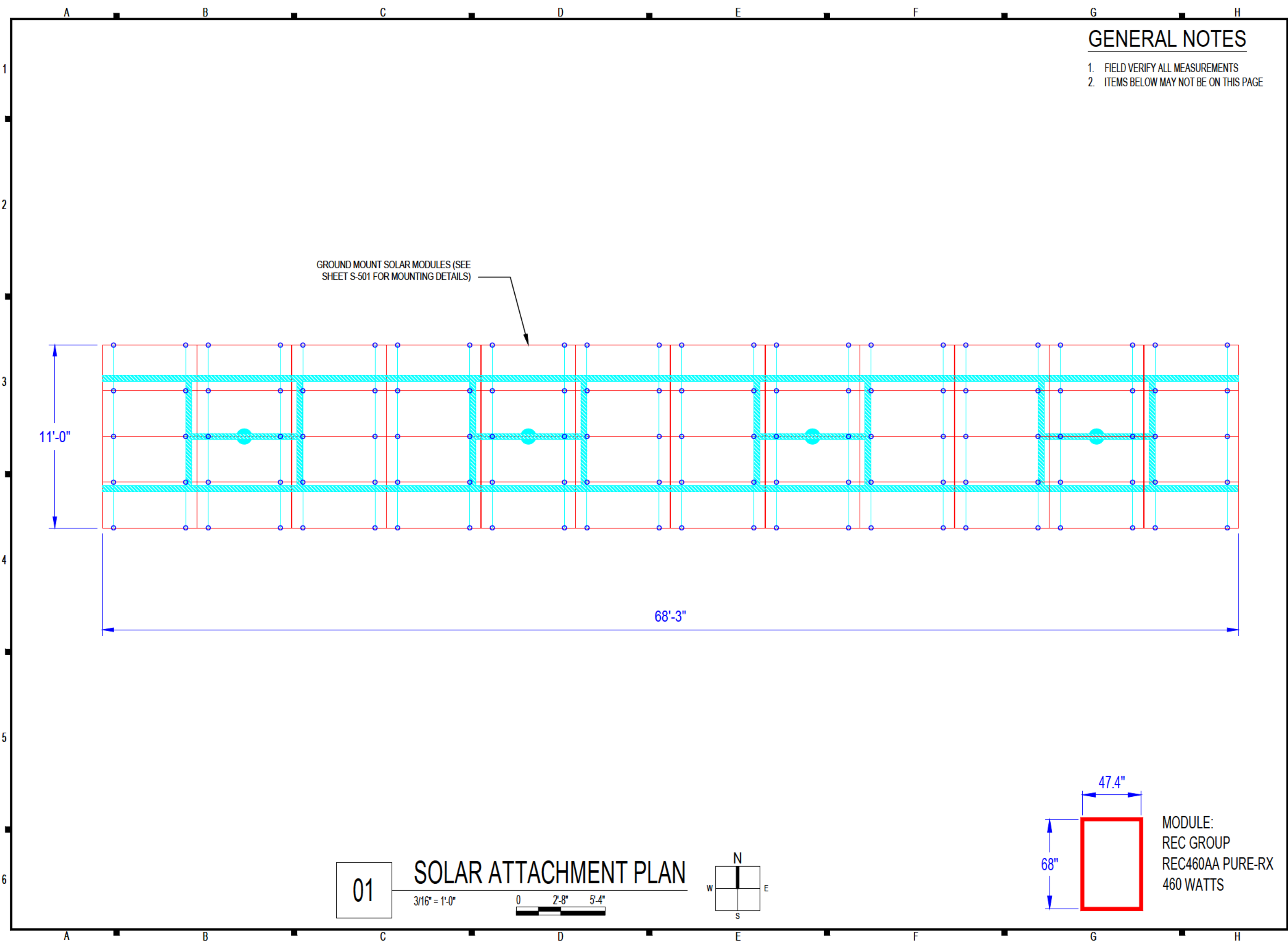
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ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

SOLAR ATTACHMENT PLAN

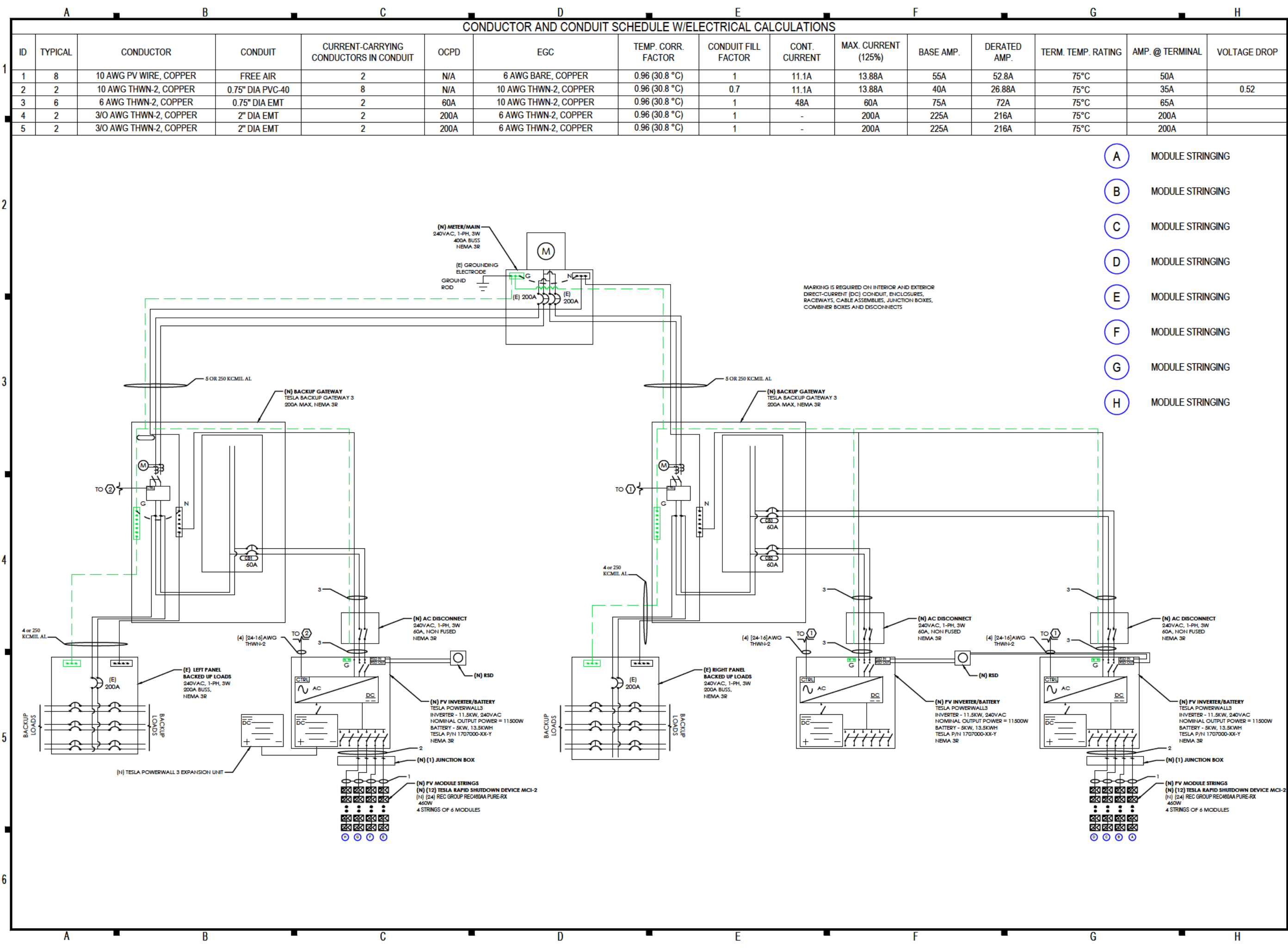
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ENGINEER OF RECORD

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LINE DIAGRAM

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

E-601.00

1	SYSTEM SUMMARY								
	INVERTER #1				INVERTER #2				
	MPPT #1	MPPT #2	MPPT #3	MPPT #4	MPPT #1	MPPT #2	MPPT #3	MPPT #4	
	MODULES IN SERIES	6	6	6	6	6	6	6	
	ARRAY VMP	329.4V	329.4V	329.4V	329.4V	329.4V	329.4V	329.4V	
	ARRAY IMP	8.38A	8.38A	8.38A	8.38A	8.38A	8.38A	8.38A	
	ARRAY VOC	394.8V	394.8V	394.8V	394.8V	394.8V	394.8V	394.8V	
	ARRAY MAX VOC	446.1V	446.1V	446.1V	446.1V	446.1V	446.1V	446.1V	
	ARRAY ISC	8.88A	8.88A	8.88A	8.88A	8.88A	8.88A	8.88A	
	ARRAY STC POWER	11,040W				11,040W			
2	ARRAY PTC POWER	10,531W				10,531W			
	MAX AC CURRENT	48A				48A			
	MAX AC POWER	11,500W				11,500W			
	DERATED (CEC) AC POWER	10,215W				10,215W			
	ARRAY STC POWER	22,080W							
	ARRAY PTC POWER	21,062W							
	MAX AC CURRENT	96A							
	MAX AC POWER	23,000W							
	DERATED (CEC) AC POWER	20,430W							

MODULES												
REF.	QTY.	MAKE AND MODEL			PMAX	PTC	ISC	IMP	VOC	VMP	TEMP. COEFF. OF VOC	FUSE RATING
PM1-48	48	REC GROUP REC460AA PURE-RX			460W	438.8W	8.88A	8.38A	65.8V	54.9V	-0.158V/°C (-0.24%/°C)	25A

INVERTERS												
REF.	QTY.	MAKE AND MODEL			AC VOLTAGE	GROUND	OCPD RATING	RATED POWER	MAX OUTPUT CURRENT	MAX INPUT CURRENT	MAX INPUT VOLTAGE	CEC WEIGHTED EFFICIENCY
I1-3	3	TESLA 1707000-xx-y 11.5 KW			240V	FLOATING	60A	11500W	48A	6X13A	600V	97.0%

DISCONNECTS				
REF.	QTY.	MAKE AND MODEL	RATED CURRENT	MAX RATED VOLTAGE
SW1-3	3	SQUARE D DU222RB OR EQUIV.	60A	240VAC

ASHRAE EXTREME LOW	-29.1°C (-20.4°F), SOURCE: MC CALL MUNI (44.88°; -116.1°)
ASHRAE 2% HIGH	30.8°C (87.4°F), SOURCE: MC CALL MUNI (44.88°; -116.1°)

OCPDS			
REF.	QTY.	RATED CURRENT	MAX VOLTAGE
CB1-3	3	60A	240VAC

MODULES											
REF.	QTY.	MAKE AND MODEL	PMAX	PTC	ISC	IMP	VOC	VMP	TEMP. COEFF. OF VOC	FUSE RATING	
PM1-48	48	REC GROUP REC460AA PURE-RX	460W	438.8W	8.88A	8.38A	65.8V	54.9V	-0.158V/°C (-0.24%/°C)	25A	

INVERTERS										
REF.	QTY.	MAKE AND MODEL	AC VOLTAGE	GROUND	OCPD RATING	RATED POWER	MAX OUTPUT CURRENT	MAX INPUT CURRENT	MAX INPUT VOLTAGE	CEC WEIGHTED EFFICIENCY
I1-3	3	TESLA 1707000-xx-y 11.5 KW	240V	FLOATING	60A	11500W	48A	6X13A	600V	97.0%

DISCONNECTS				
REF.	QTY.	MAKE AND MODEL	RATED CURRENT	MAX RATED VOLTAGE
SW1-3	3	SQUARE D DU222RB OR EQUIV.	60A	240VAC

OCPDS			
REF.	QTY.	RATED CURRENT	MAX VOLTAGE
CB1-3	3	60A	240VAC

ASHRAE EXTREME LOW	-29.1°C (-20.4°F), SOURCE: MC CALL MUNI (44.88°; -116.1°)
ASHRAE 2% HIGH	30.8°C (87.4°F), SOURCE: MC CALL MUNI (44.88°; -116.1°)



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RESIDENCE

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APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

DESIGN TABLES

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

E-602.00

1.1 LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD 1910.145, ANSI Z535

1.2 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

1.3 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.

1.4 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.

1.5 ALERTING WORDS TO BE COLOR CODED. "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND. [ANSI Z535]

1.6 ALL SIGNAGE MUST BE PERMANENTLY ATTACHED AND BE WEATHER RESISTANT/SUNLIGHT RESISTANT AND CANNOT BE HAND-WRITTEN PER NEC 110.21(B)

**WARNING: PHOTOVOLTAIC
POWER SOURCE**

INTERACTIVE PHOTOVOLTAIC SYSTEM CONNECTED
PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED
EAST SIDE OF THE HOUSE

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS IF NOT IN THE SAME LOCATION (5 3/4" X 1 1/8").
[NEC 690.56(B)]

WHERE THE PV SYSTEMS ARE REMOTELY LOCATED FROM EACH OTHER, A DIRECTORY IN ACCORDANCE WITH 705.10 SHALL BE PROVIDED AT EACH PV SYSTEM DISCONNECTING MEANS.

PV SYSTEM EQUIPMENT AND DISCONNECTING MEANS SHALL NOT BE INSTALLED IN BATHROOMS
[NEC 690.4(D),(E)]

PHOTOVOLTAIC SOLAR AC DISCONNECT

LABEL 9
AT EACH AC DISCONNECTING MEANS
(4" X 1").
[NEC 690.13(B)].

PHOTOVOLTAIC SOLAR DC DISCONNECT

LABEL 10
AT EACH DC DISCONNECTING MEANS
(4" X 1").
[NEC 690.13(B)].

LABEL 1
AT EACH DISCONNECTING MEANS FOR
PHOTOVOLTAIC EQUIPMENT (2" X 4").
[NEC 690.13].

LABEL 2
AT POINT OF INTERCONNECTION
OVERCURRENT DEVICE (2" X 4").
[NEC 705.12(B)(2)(3)(B)].

LABEL 4
AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10 FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS (5 3/4" X 1 1/8").
[NEC 690.31(G)]
LETTERS AT LEAST 3/8 INCH; WHITE ON RED BACKGROUND; REFLECTIVE
[IFC 605.11.1.1]

LABEL 5
AT RAPID SHUTDOWN DISCONNECT SWITCH (5 1/4" X 2").
[NEC 690.56(C)(3)].

CAUTION
SOLAR ELECTRIC SYSTEM CONNECTED

LABEL 6
AT UTILITY METER (5 3/4" X 1 1/8")
[NEC 690.56(B)]

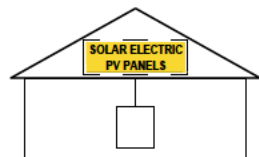
WARNING
DUAL POWER SUPPLY
SOURCES: UTILITY GRID
AND PV SOLAR
ELECTRIC SYSTEM

LABEL 7
AT POINT OF INTERCONNECTION
(2 3/4" X 1 5/8").
[NEC 705.12(B)(3)]

WARNING
SOLAR ELECTRIC
CIRCUIT BREAKER
IS BACKFED

LABEL 8
AT POINT OF INTERCONNECTION
(2" X 1").
[NEC 705.12(B)(3)]

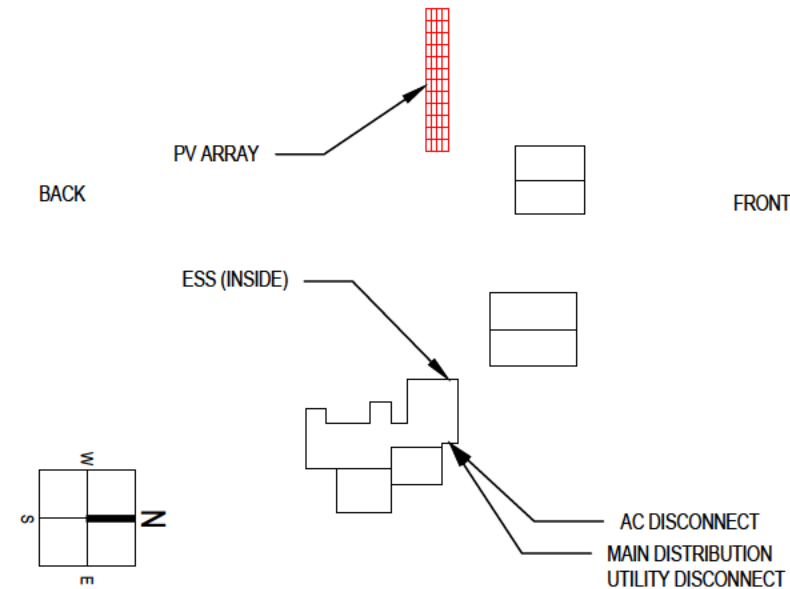
SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN



TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY

LABEL 3
AT RAPID SHUTDOWN SYSTEM
(3 3/4" X 5 1/4"). [NEC 690.56(C)(1)(A)].

!CAUTION!
POWER TO THIS BUILDING IS ALSO SUPPLIED
FROM GROUND MOUNTED SOLAR ARRAYS
WITH SAFETY DISCONNECTS AS SHOWN:



REVOLUSUN MOUNTAIN STATES, LLC

PHONE: 208-315-4082
ADDRESS: 457 STEELHEAD WAY,
BOISE, ID 83704

LIC. NO.: ECL 039193
HIC. NO.:
ELE. NO.:

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AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 22.080 KWP

**NOKES
RESIDENCE**

1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

PLACARDS

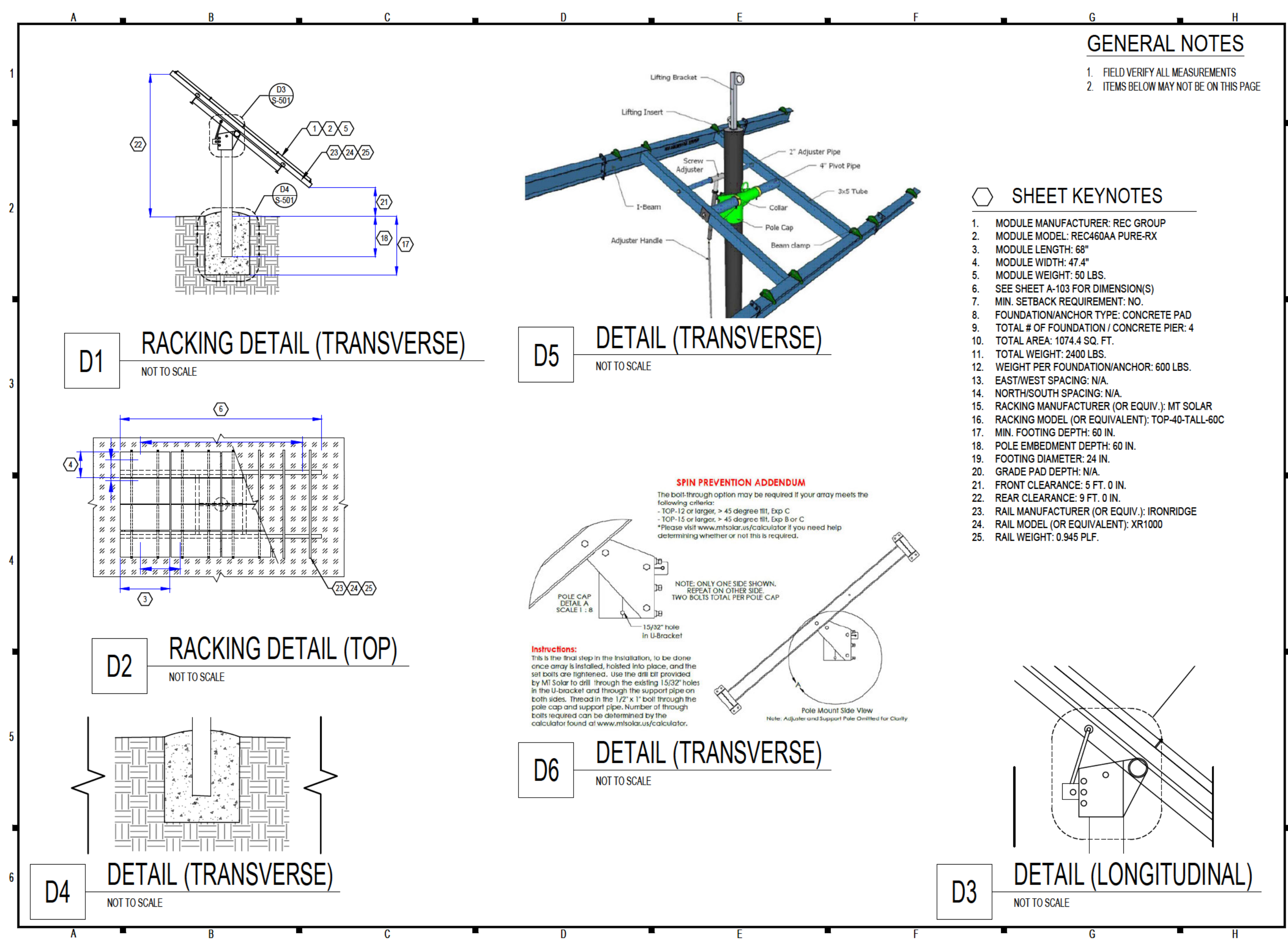
DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

E-603.00



GENERAL NOTES

- 1. FIELD VERIFY ALL MEASUREMENTS
- 2. ITEMS BELOW MAY NOT BE ON THIS PAGE

SHEET KEYNOTES

- 1. MODULE MANUFACTURER: REC GROUP
- 2. MODULE MODEL: REC460AA PURE-RX
- 3. MODULE LENGTH: 68"
- 4. MODULE WIDTH: 47.4"
- 5. MODULE WEIGHT: 50 LBS.
- 6. SEE SHEET A-103 FOR DIMENSION(S)
- 7. MIN. SETBACK REQUIREMENT: NO.
- 8. FOUNDATION/ANCHOR TYPE: CONCRETE PAD
- 9. TOTAL # OF FOUNDATION / CONCRETE PIER: 4
- 10. TOTAL AREA: 1074.4 SQ. FT.
- 11. TOTAL WEIGHT: 2400 LBS.
- 12. WEIGHT PER FOUNDATION/ANCHOR: 600 LBS.
- 13. EAST/WEST SPACING: N/A.
- 14. NORTH/SOUTH SPACING: N/A.
- 15. RACKING MANUFACTURER (OR EQUIV.): MT SOLAR
- 16. RACKING MODEL (OR EQUIVALENT): TOP-40-TALL-60C
- 17. MIN. FOOTING DEPTH: 60 IN.
- 18. POLE EMBEDMENT DEPTH: 60 IN.
- 19. FOOTING DIAMETER: 24 IN.
- 20. GRADE PAD DEPTH: N/A.
- 21. FRONT CLEARANCE: 5 FT. 0 IN.
- 22. REAR CLEARANCE: 9 FT. 0 IN.
- 23. RAIL MANUFACTURER (OR EQUIV.): IRONRIDGE
- 24. RAIL MODEL (OR EQUIVALENT): XR1000
- 25. RAIL WEIGHT: 0.945 PLF.



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ASSEMBLY DETAILS

DATE: 06.22.2026
DESIGN BY: A.O.
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REVISIONS

S-501.00

REC ALPHA® PURE-RX SERIES

DATASHEET

SOLAR'S MOST TRUSTED



9 A MODULE CURRENT
COMPATIBLE WITH MLPE

450 - 470W
HETEROJUNCTION
TECHNOLOGY

226 W/m² POWER DENSITY
>92% POWER IN YEAR 25
-0.24%/°C TEMPERATURE
COEFFICIENT OF P_{MAX}

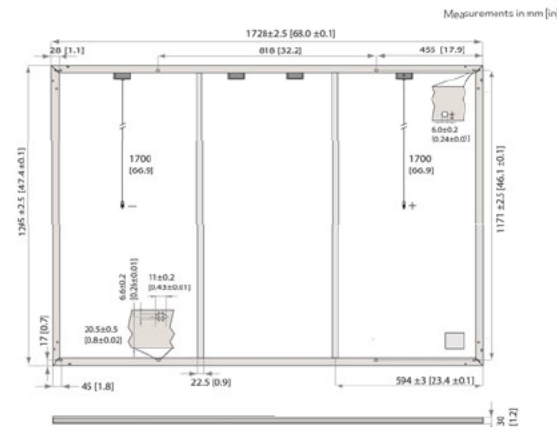


REC ALPHA® PURE-RX SERIES DATASHEET



GENERAL DATA

Cell Type	88 half-cut bifacial REC heterojunction cells, with gapless technology with anti-reflective surface treatment in accordance with EN12150
Glass	3.2 mm solar glass with anti-reflective surface treatment in accordance with EN12150
Backsheet	Highly resistant polymer (Black)
Frame	Anodized aluminum (Black)
Junction Box	4-part, 4 bypass diodes, IP68 rated, in accordance with IEC 62790:2020
Connectors	Stäubli MLC 4 PV-KBI 4/KS 14 (4 mm ²) in accordance with IEC 62852:2014; IP68 only when connected
Cable	4 mm ² solar cable, 1.70 m + 1.70 m in accordance with EN50618:2014
Dimensions	1728 x 1205 x 30 mm (2.08 m ²)
Weight	22.7 kg
Origin	Made in Singapore



Specifications subject to change without notice.

ELECTRICAL DATA

PRODUCT CODE: RECXXXAA PURE-RX

STC

Power Output - P _{MAX} (Wp)	450	460	470
Watt Class Sorting - (W)	0/+10	0/+10	0/+10
Nominal Power Voltage - V _{MPP} (V)	54.3	54.9	55.4
Nominal Power Current - I _{MPP} (A)	8.29	8.38	8.49
Open Circuit Voltage - V _{OC} (V)	65.6	65.8	65.9
Short Circuit Current - I _{SC} (A)	8.81	8.88	8.95
Power Density (W/m ²)	216	221	226
Panel Efficiency (%)	21.6	22.1	22.6

NMOT

Power Output - P _{MAX} (W _p)	343	350	358
Nominal Power Voltage - V _{MPP} (V)	51.2	51.7	52.2
Nominal Power Current - I _{MPP} (A)	6.70	6.77	6.86
Open Circuit Voltage - V _{OC} (V)	61.8	62.0	62.1

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m², temperature 25°C), based on a production spread with a tolerance of P_{MAX}, V_{OC} & I_{SC} ± 3% within one watt class. Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m², temperature 20°C, wind speed 1 m/s). * Where xxx indicates the nominal power class (P_{MAX}) at STC above.

MODULE RATINGS

Module Operating Temperature [T88]§	70°C
Min. Environmental Temperature	-40°C
System Voltage	1000 V
Maximum Test Load (4 Point Mounting, Front)*	+7000 Pa (714 Kg/m ²)
Maximum Test Load (4 Point Mounting, Rear)*	-4000 Pa (408 Kg/m ²)
Maximum Test Load (6 Point Mounting, Front)**	+8000 Pa (816 Kg/m ²)
Maximum Test Load (6 Point Mounting, Rear)**	-6000 Pa (612 Kg/m ²)
Max Series Fuse Rating	25 A
Max Reverse Current	25 A

Design load = Test load / 1.5 (safety factor)

§ IEC 61730/UL 61730 certified. Refer to installation manual.

** Internal testing. Refer to installation manual.

TEMPERATURE RATINGS*

Nominal Module Operating Temperature	44 ± 2°C
Temperature coefficient of P _{MAX}	-0.24%/°C
Temperature coefficient of V _{OC}	-0.24%/°C
Temperature coefficient of I _{SC}	0.04%/°C

* The temperature coefficients stated are linear values.

CERTIFICATIONS

ISO 14001:2015, ISO 9001:2015, IEC 62941
IEC 61215:2021, IEC 61730:2023, UL 61730
ISO 11925-2 Ignitability (EN 13501-1 Class E)
IEC 62716 Ammonia Resistance
IEC 61701 Salt Mist (SM6)
IEC 61215:2016 Hailstone (35 mm)
UL 61730 Fire Type 2



WARRANTY

	Standard	REC ProTrust
Installed by an REC	No	Yes
Certified Professional	No	Yes
System Size	All	<25 kW 25-500 kW
Product Warranty (yrs)	20	25
Power Warranty (yrs)	25	25
Labor Warranty (yrs)	0	10
Power in Year 1	98%	98%
Annual Degradation	0.25%	0.25%
Power in Year 25	92%	92%

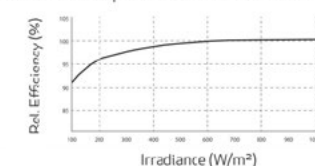
REC ProTrust Warranty applies only for i) REC panels installed by an REC Certified Solar Professional, and ii) panels have been registered by the installer with REC. Subject to System Size and further conditions. See www.recgroup.com for details.

DELIVERY INFORMATION

Panels per Pallet	33
Panels per 40 ft GP/high cube container	594 (18 Pallets)
Panels per 13.6 m truck	660 (20 Pallets)

LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



REF: PM-05-12-06-REV-4.3/IEC EN12 2024

Available from:



Founded in 1996, REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality, innovation, and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia-Pacific.

REC Solar PTE. LTD.
20 Tuas South Ave. 14
Singapore 637312
post@recgroup.com
www.recgroup.com



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NOKES RESIDENCE

1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

R-001.00

Powerwall 3

Power Everything

Powerwall 3 is a fully integrated solar and battery system, designed to accelerate the transition to sustainable energy. Customers can receive whole home backup, cost savings, and energy independence by producing and consuming their own energy while participating in grid services. Once installed, customers can manage their system using the Tesla App to customize system behavior to meet their energy goals.

Powerwall 3 achieves this by supporting up to 20 kW DC of solar and providing up to 11.5 kW AC of continuous power per unit. It has the ability to start heavy loads rated up to 185 LRA, meaning a single unit can support the power needs of most homes. Powerwall 3 Expansions make it easier and more affordable to scale up customers' systems to meet their current or future needs. Powerwall 3 is designed for fast and efficient installations, modular system expansion, and simple connection to any electrical service.



Powerwall 3 Technical Specifications

System Technical Specifications

Model Number	1707000-xx-y			
Nominal Grid Voltage (Input & Output)	120/240 VAC			
Grid Type	Split phase			
Frequency	60 Hz			
Nominal Battery Energy	13.5 kWh AC ¹			
Nominal Output Power (AC)	5.8 kW	7.6 kW	10 kW	11.5 kW
Maximum Apparent Power	5,800 VA	7,600 VA	10,000 VA	11,500 VA
Maximum Continuous Current	24 A	31.7 A	41.7 A	48 A
Overcurrent Protection Device ²	30 A	40 A	60 A	60 A
Configurable Maximum Continuous Discharge Power Off-Grid (PV Only, -20°C to 25°C)	15.4 kW ³			
Maximum Continuous Charge Current / Power (Powerwall 3 only)	20.8 A AC / 5 kW			
Maximum Continuous Charge Current / Power (Powerwall 3 with up to (3) Expansion units)	33.3 A AC / 8 kW			
Output Power Factor Rating	0 - 1 (Grid Code configurable)			
Maximum Output Fault Current (1 s)	160 A			
Maximum Short-Circuit Current Rating	10 kA			
Load Start Capability	185 LRA			
Solar to Battery to Home/Grid Efficiency	89% ¹⁴			
Solar to Home/Grid Efficiency	97.5% ⁵			
Power Scalability	Up to 4 Powerwall 3 units supported			
Energy Scalability	Up to 3 Expansion units (for a maximum total of 7 units)			
Supported Islanding Devices	Gateway 3, Backup Switch, Backup Gateway 2			
Connectivity	Wi-Fi (2.4 and 5 GHz), Ethernet, Cellular (LTE/4G [®])			
Hardware Interface	Dry contact relay, Rapid Shutdown (RSD) certified switch and 2-pin connector, RS-485 for meters			
AC Metering	Revenue Grade (+/- 0.5%, ANSI C12.20)			
Protections	Integrated arc fault circuit interrupter (AFCI), Isolation Monitor Interrupter (IMI), PV Rapid Shutdown (RSD) using Tesla Mid-Circuit Interrupters			
Customer Interface	Tesla Mobile App			
Warranty	10 years			

¹Values provided for 25°C (77°F), at beginning of life. 3.3 kW charge/discharge power.

²See [Powerwall 3 Installation Manual](#) for fuse requirements if using fuse for overcurrent protection.

³15.4kW off-grid maximum continuous discharge power is only available if or-grid rating is 11.5 kW. If enabled, Powerwall 3 must be installed with an 80 A breaker and appropriately sized conductors.

⁴Typical solar shifting use case.

⁵Tested using CEC weighted efficiency methodology.

⁶The customer is expected to provide internet connectivity for Powerwall 3; cellular should not be used as the primary mode of connectivity. Cellular connectivity subject to network operator service coverage and signal strength.



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DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

R-002.00

Powerwall 3 Technical Specifications

Solar Technical Specifications

Maximum Solar STC Input	20 kW
Withstand Voltage	600 V DC
PV DC Input Voltage Range	60 — 550 V DC
PV DC MPPT Voltage Range	60 — 480 V DC
MPPTs	6
Maximum Current per MPPT (I _{mp})	15 A ^{7,8}
Maximum Short Circuit Current per MPPT (I _{sc})	19 A ⁹

⁷ Only applicable to Powerwall 3 units with 15 A I_{MP} on the product label. Otherwise, Powerwall 3 has an I_{MP} of 13 A.
⁸ When PV strings are combined on the roof and the DC input current exceeds the MPPT rating, a jumper can be used to combine two MPPTs into a single input to intake DC current up to 30 A I_{MP} / 38 A I_{SC} (or 26 A I_{MP} / 30 A I_{SC} if Powerwall 3 is labeled with 13 A I_{MP} / 15 A I_{SC}).

Environmental Specifications

Operating Temperature	−20°C to 50°C (−4°F to 122°F) ⁹
Operating Humidity (RH)	Up to 100%, condensing
Storage Temperature	−20°C to 30°C (−4°F to 86°F), up to 95% RH, non-condensing, State of Energy (SOE): 25% initial
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Rating	NEMA 3R
Ingress Rating	IP67 (Battery & Power Electronics) IP55 (Wiring Compartment)
Pollution Rating	PD3
Operating Noise @ 1 m	< 50 db(A) typical < 62 db(A) maximum

⁹ Performance may be de-rated at operating temperatures above 40°C (104°F).

Compliance Information

Certifications	UL 1741, UL 9540, UL 9540A, UL 3741, UL 1741 PCS, UL 1741 SA, UL 1741 SB, UL 1973, UL 1699B, UL 1998, CSA C22.2 No. 0.8, CSA C22.2 No. 107.1, CSA C22.2 No. 330, CSA 22.3 No. 9, IEEE 1547, IEEE 1547A, IEEE 1547.1, CA Rule No.21
Grid Connection	United States and Canada
Emissions	FCC Part 15 Class B, ICES 003
Environmental	RoHS Directive 2011/65/EU
Seismic	AC156, IEEE 693-2005 (high)
Fire Testing	Meets the unit level performance criteria of UL 9540A

Solar Shutdown Device Technical Specifications

The Solar Shutdown Device is a Mid-Circuit Interrupter (MCI) and is integral to the rapid shutdown (RSD) function required for rooftop PV systems in accordance with Article 690 of the NEC. When paired with Powerwall 3, solar array shutdown is initiated by an External System Shutdown Switch or the On/Off Enable switch located on Powerwall 3. Systems not subject to rapid shutdown requirements must still install one or more MCIs for functional purposes; see the Powerwall 3 installation manual for details.

Electrical Specifications

Model	MCI-1	MCI-2	MCI-2 High Current
Nominal Input DC Current Rating (I _{MP})	13 A	13 A	15 A
Maximum Input Short Circuit Current (I _{SC})	19 A	17 A	19 A
Maximum System Voltage	600 V DC	1000 V DC ¹⁵	1000 V DC ¹⁵
Maximum Disconnect Voltage ¹⁶	600 V DC	165 V DC	165 V DC

¹⁵ Maximum System Voltage is limited by Powerwall to 600 V DC.
¹⁶ Maximum Disconnect Voltage is the maximum voltage allowed across each MCI in the open position (Rapid Shutdown Initiated). An individual MCI-2 has a voltage rating of 165V but in combination (connected in the same string) their voltage ratings are additive.

RSD Module Performance

Maximum Number of Devices per String	5
Control	Power Line Excitation
Passive State	Normally Open
Maximum Power Consumption	7 W
Warranty	25 years

Environmental Specifications

Operating Temperature	−40°C to 50°C (−40°F to 122°F)	−45°C to 70°C (−49°F to 158°F)
Storage Temperature	−30°C to 70°C (−22°F to 158°F)	−30°C to 70°C (−22°F to 158°F)
Enclosure Rating	NEMA 4X / IP65	

Mechanical Specifications

Electrical Connections	MC4 Connector	
Housing	Plastic	
Dimensions	125 x 150 x 22 mm (5 x 6 x 1 in)	173 x 45 x 22 mm (6.8 x 1.8 x 1 in)
Weight	350 g (0.77 lb)	120 g (0.26 lb)
Mounting Options	ZEP Home Run Clip M4 Screw (#10) M8 Bolt (5/16") Nail / Wood screw	Wire Clip

Compliance Information

Certifications	UL 1741 PVRSE, UL 3741, PVRSA (Photovoltaic Rapid Shutdown Array)
RSD Initiation Method	External System Shutdown Switch or Powerwall 3 Enable Switch

UL 3741 PV Hazard Control (and PVRSA) Compatibility

See [UL 3741 Application Addendum](#)



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APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

R-003.00

Gateway 3

Tesla Gateway 3 controls connection to the grid in a Powerwall system, automatically detecting outages and providing seamless transition to backup power. It provides energy monitoring that is used by Powerwall for solar self-consumption, time-based control, and backup operation.

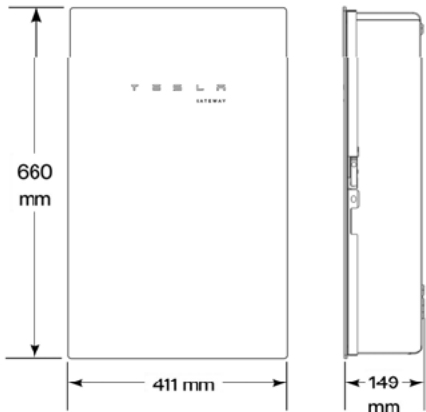
Performance Specifications	Model Number	1841000-x1-y	AC Meter	+/- 0.5%
	Nominal Grid Voltage	120/240 V AC	Communication	CAN
	Grid Configuration	Split phase	User Interface	Tesla App
	Grid Frequency	60 Hz	Backup Transition	Automatic disconnect for seamless backup
	Continuous Current Rating	200 A	Overcurrent Protection Device	100–200 A Service entrance rated Eaton CSR, BWH, or BW, or Square D QOM breakers
	Maximum Supply Short Circuit Current	22 kA with Square D or Eaton main breaker 25 kA with Eaton main breaker ¹⁷	Internal Panelboard	200 A 8-space/16 circuit breakers Eaton BR, Siemens QP, or Square D HOM breakers rated to 10–125A
	IEC Protective Class	Class I	Warranty	10 years
	Overvoltage Category	Category IV		

¹⁷ Only Eaton CSR or BWH main breakers are 25 kA rated.

Environmental Specifications	Operating Temperature	–20°C to 50°C (–4°F to 122°F)
	Operating Humidity (RH)	Up to 100%, condensing
	Maximum Elevation	3000 m (9843 ft)
	Environment	Indoor and outdoor rated
	Enclosure Type	NEMA 3R

Compliance Information	Certifications	UL 67, UL 869A, UL 916, UL 1741 PCS, CSA 22.2 1071, CSA 22.2 29
	Emissions	FCC Part 15, Class B, ICES 003

Mechanical Specifications	Dimensions	660 x 411 x 149 mm (26 x 16 x 6 in)
	Weight	16.3 kg (36 lb)
	Mounting options	Wall mount



Powerwall 3 Expansion Technical Specifications

Battery Technical Specifications	Model Number	1807000-xx-y
	Nominal Battery Energy	13.5 kWh
	Voltage Range	52 – 92 V DC ¹¹

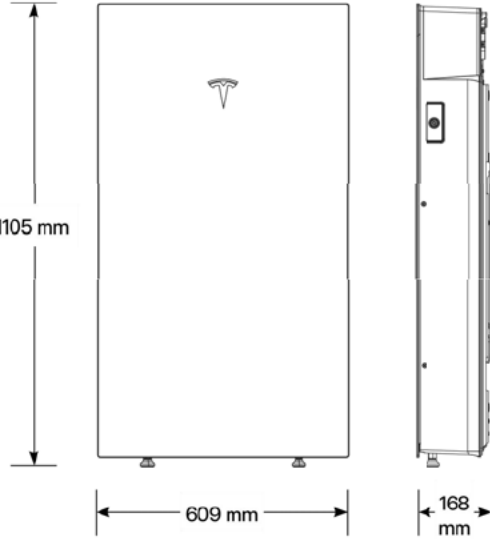
¹¹Powerwall 3 Expansion units are connected in parallel and are not field serviceable.

Environmental Specifications	Operating Temperature	–20°C to 50°C (–4°F to 122°F) ¹²
	Operating Humidity (RH)	Up to 100%, condensing
	Storage Temperature	–20°C to 30°C (–4°F to 86°F), up to 95% RH, non-condensing, State of Energy (SOE): 25% initial
	Maximum Elevation	3000 m (9843 ft)
	Environment	Indoor and outdoor rated
	Enclosure Rating	NEMA 3R
	Ingress Rating	IP67
	Pollution Rating	PD3

¹²Performance may be de-rated at operating temperatures above 40°C (104°F).

Compliance Information	Certifications	UL 1973, UL 9540
------------------------	----------------	------------------

Mechanical Specifications	Dimensions	1105 x 609 x 168 mm (43.5 x 24 x 6.6 in) ¹³
	Total Weight of Wall-Mounted Expansion Unit	118.5 kg (261.2 lb)
	Weight of Expansion Unit	110 kg (242.5 lb)
	Weight of Glass Front Cover	6.5 kg (14.5 lb)
	Weight of Wall Bracket	1.9 kg (4.2 lb)
	Weight of Expansion Accessories	0.7 kg (1.5 lb)
	Mounting Options	Floor or wall mount
	Stacking Capability (Floor Mount Only)	Up to (3) Expansion units behind a Powerwall 3
	Compatibility with Other Systems	Only compatible with Powerwall 3
	Connection to Powerwall 3 or Expansions	Powerwall 3 Expansion harness ¹⁴



¹³These dimensions include the glass front cover being installed on Powerwall 3 Expansion.

¹⁴The Powerwall 3 Expansion harness is a listed component of the UL 9540 certification.



CONTRACTOR
REVOLUSUN MOUNTAIN STATES, LLC

PHONE: 208-315-4082
ADDRESS: 457 STEELHEAD WAY,
BOISE, ID 83704

LIC. NO.: ECL 039193
HIC. NO.:
ELE. NO.:

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AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 22.080 KWP

NOKES
RESIDENCE
1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 06.22.2026

DESIGN BY: A.O.

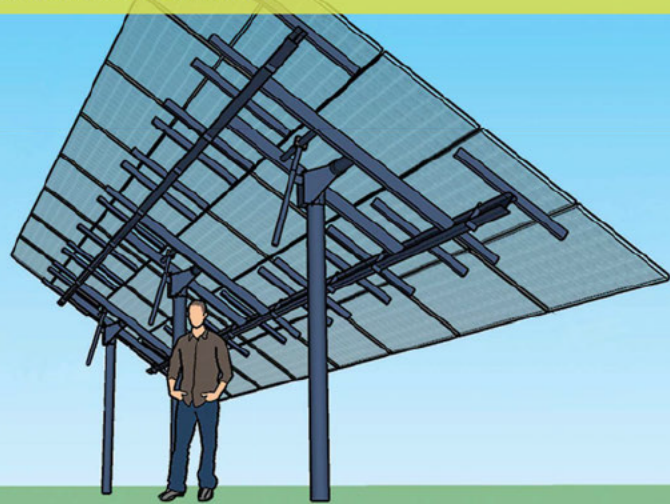
CHECKED BY: M.M.

REVISIONS

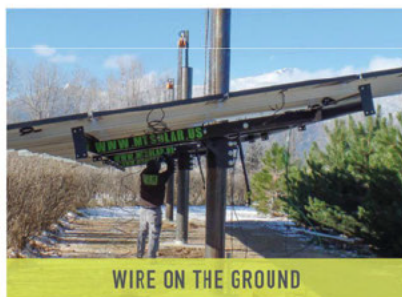
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POLE MOUNTS

EASY INSTALLATION, MAXIMUM VALUE



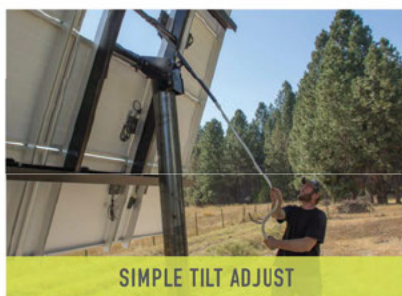
ASSEMBLE AT WAIST LEVEL



WIRE ON THE GROUND



EASY HOISTING - NO HEAVY EQUIPMENT



SIMPLE TILT ADJUST

MT Solar designs and manufactures mounting structures for solar modules and arrays of all sizes. We are dedicated to making the best Pole and Ground Mounts on the market. Our products ultimately promote speed and safety, improving your project's bottom line.

1-844-MT-SOLAR • MTSOLAR.US • P.O. BOX 190, CHARLO, MT 59824



POLE MOUNT FEATURES:

TILT ADJUSTMENT

Pole Mounts offer a patented hand-crank adjustable tilt mechanism, making seasonal tilt changes a snap. Tilts from 5- 90 degrees while standing on the ground.

PATENTED HOISTING SYSTEM

Install racking and modules at ground level, then raise array to eye level for wiring, and finally to the top of the pole for completion. Chain hoist and lifting bracket required.

AVAILABLE SIZES

1-50 panel array configurations with modules 3, 4, or 5 high in landscape. Custom configurations available upon request.

RUGGED DESIGN

Built for high wind and high snow loads when necessary. Use our online calculator to determine pole size and frame duty suitable for your site.

ENGINEERING ASSISTANCE

Complimentary in-house design help and stamped drawings for all 50 states available upon request at additional cost.

DEALER / INSTALLER EDUCATION

Webinars and sales support available on request.

CUSTOMER SUPPORT

From purchase to installation, our products are guaranteed. Our team is standing by, ready to assist with any questions you have.

PRODUCT WARRANTY

10 years

MADE IN USA

Montana is not only the namesake of our company, it's where we build your mounts.

SINGLE POLE & MULTI-POLE ARRAYS



ARRAY CONFIGURATIONS (MODULES IN LANDSCAPE ORIENTATION)

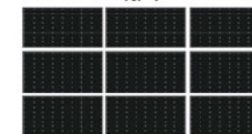
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1	1x1
2	1x2
3	1x3
4	2x2
6	2x3
8	2x4
9	3x3
10-TALL	2x5
12	3x4
15-TALL	3x5
16	4x4
20	5x4

#	WxH
20-TALL	4x5
24	6x4
28	7x4
30-TALL	6x5
32	8x4
35-TALL	7x5
36	9x4
40	10x4
40-TALL	8x5
44	11x4
45-TALL	9x5
48	12x4
50-TALL	10x5

TOP-2



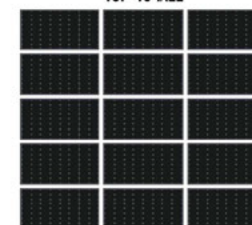
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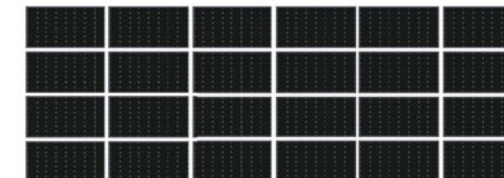
TOP-12



TOP-15 TALL



TOP-24



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NEW PV SYSTEM: 22.080 KWP

NOKES RESIDENCE

1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

R-005.00

Intertek

8431 Murphy Drive
Middleton, WI 53562 USA
Telephone: 608.836.4400
Facsimile: 608.831.9279
www.intertek.com

Test Verification of Conformity

In the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address:	IronRidge, Inc. 28357 Industrial Blvd Hayward, CA 94545 USA
Product Description:	Flush Mount System with XR Rails.
Ratings & Principle Characteristics:	<u>Fire Class Resistance Rating:</u> -Flush Mount (Symmetrical). Class A Fire Rated for Low Slope applications when using Type 1, 2, 3, 13, 19, 25 and 29 listed photovoltaic modules. Class A Fire Rated for Steep Slope applications with Type1, 2 and 3, listed photovoltaic modules. Tested with a 5" gap (distance between the bottom the module frame and the roof covering), per the standard this system can be installed at any gap allowed by the manufacturers installation instructions. No perimeter guarding is required. This rating is applicable with any IronRidge or 3'rd party roof anchor.
Models:	IronRidge Flush Mount with XR Rails
Brand Name:	IronRidge Flush Mount
Relevant Standards:	UL 2703 (Section 15.2 and 15.3) Standard for Safety Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels, First Edition dated Jan. 28, 2015 Referencing UL1703 Third Edition dated Nov. 18, 2014, (Section 31.2) Standard for Safety for Flat-Plate Photovoltaic Modules and Panels.
Verification Issuing Office:	Intertek Testing Services NA, Inc. 8431 Murphy Drive Middleton, WI 53562
Date of Tests:	08/27/2014 to 03/17/2015
Test Report Number(s):	101769343MID-001r1, 101769343MID-001a, 101915978MID-001 & 101999492MID-001ar1-cr1, 104428358MID-001 EEV
Revision Summary	8/27/2020 Added type 13, 19, 25 and 29 to system, update address.

This verification is part of the full test report(s) and should be read in conjunction with them. This report does not automatically imply product certification.

Completed by:	Chris Zimbrich	Reviewed by:	Chad Naggs
Title:	Technician I, Fire Resistance	Title:	Technical Team Lead, Fire Resistance
Signature:		Signature:	
Date:	08/27/2020	Date:	08/27/2020

RATINGS

UL 2703 LISTED



#5003807

Intertek

- Conforms to STD UL 2703 (2015) Standard for Safety First Edition: Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.
- Certified to CSA STD LTR AE-001-2012 Photovoltaic Module Racking Systems.
- Max Overcurrent Protective Device (OCPD) Rating: 25A
- Max Module Size: 24ft²
- Max Frameless Module Size for Canadian LTR-AE: 19.5 ft²
- Module Orientation: Portrait or Landscape
- CAMO Specific Allowable Design Load Rating: 50 PSF downward, 50 PSF upward, 15 PSF lateral
- LTR AE Canadian Load Rating: 2400 PA
- System Level Allowable Design Load Rating: meets minimum requirements of the standard (10 PSF downward, 5 PSF upward, 5 PSF lateral). Actual system structural capacity is defined by PE stamped [certification letters](#).

CLASS A SYSTEM FIRE RATING PER UL 2703

- Any Roof Slope with Module Types 1, 2, 3, 13, 19, 25 & 29.
- Any module-to-roof gap is permitted, with no perimeter guarding required. This rating is applicable with any third-party attachment.
- Class A rated PV systems can be installed on Class A, B, and C roofs without affecting the roof fire rating.

WATER SEAL RATINGS: UL 441 & TAS 100(A)-95 (FLASHFOOT2, ALL TILE HOOK, KNOCKOUT TILE, FLASHVUE)

- Tested and evaluated without sealant.
- Any roofing manufacturer approved sealant is allowed. Ratings applicable for roof slopes between 2:12 and 12:12

STRUCTURAL CERTIFICATION

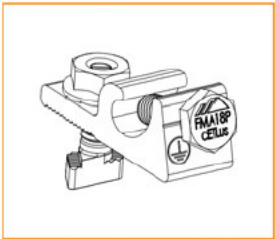
- Designed and Certified for Compliance with the International Building Code & ASCE/SEI-7

FLORIDA PRODUCT APPROVAL #FL29843

- Conforms to TAS202, TAS100(A)
- Approved for installation both inside and outside High Velocity Hurricane Zones (HVHZ)
- Allowable design pressure up to +100/-100 PSF
- Additional details and full list of approved components can be found [Here](#).

MARKINGS

Product markings are located on the Grounding Lug bolt head.



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FLUSH MOUNT INSTALLATION MANUAL - 2

REVOLUSUN
cleaner. smarter. living. LIC# ABC 30244

CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

PHONE: 208-315-4082
ADDRESS: 457 STEELHEAD WAY,
BOISE, ID 83704

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NEW PV SYSTEM: 22.080 KWP

NOKES
RESIDENCE

1270 ELO RD,
MCCALL, ID 83638
APN: RP18N03E234956

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 06.22.2026

DESIGN BY: A.O.

CHECKED BY: M.M.

REVISIONS

R-006.00

GFT-OP-11a (24-MAR-2014)

A B C D E F G H

SPEC 45411

2000 Volt Copper Type PV

Single Conductor Photovoltaic (Type PV) Power Cable 2000 Volt Copper Conductor XLPE Insulation. Sizes 12 AWG through 1000 Kcmil. Heat, Moisture, Sunlight Resistant RoHS. 90°C

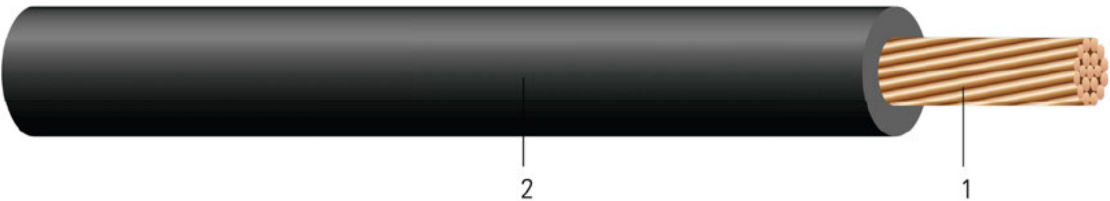


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- 1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- 2. **Insulation:** Cross Linked Polyethylene (XLPE)

APPLICATIONS AND FEATURES:

Southwire's 2000 Volt power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502.

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 4703 Standard for Photovoltaic Wire
- VW-1 Vertical-Wire Flame Test (Optional)

SAMPLE PRINT LEGEND:

SOUTHWIRE E316464 MASTER-DESIGN {UL} PV WIRE XX AWG (XXX.XX{mm2}) CU 2000V 90{D}C WET OR DRY -40{D}C
SUN RES DIRECT BURIAL VW-1 OR RHW-2 2000V --- RoHS {MMM/DD/YYYY}

SPEC 45411

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Insul. Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	inch	mil	inch	lb/1000ft	lb/1000ft
597958	12	0.087	75	0.243	20	40
579962	10	0.113	75	0.263	32	53
569037	8	0.139	85	0.313	51	80
569039	6	0.174	85	0.349	81	113
569040	4	0.221	85	0.395	129	167
569041	2	0.277	85	0.456	205	251
TBA	1	0.321	105	0.531	258	323
569043	1/0	0.360	105	0.57	326	396
569044	2/0	0.404	105	0.614	411	489
TBA	3/0	0.454	105	0.664	518	604
TBA	4/0	0.510	105	0.705	653	749
TBA	250	0.558	120	0.783	772	891
590138	350	0.661	120	0.901	1081	1219
578324	500	0.789	120	1.03	1544	1706
TBA	600	0.866	135	1.12	1853	2051
TBA	750	0.968	135	1.263	2316	2534
TBA	1000	1.117	135	1.402	3088	3336

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F).

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REVISIONS

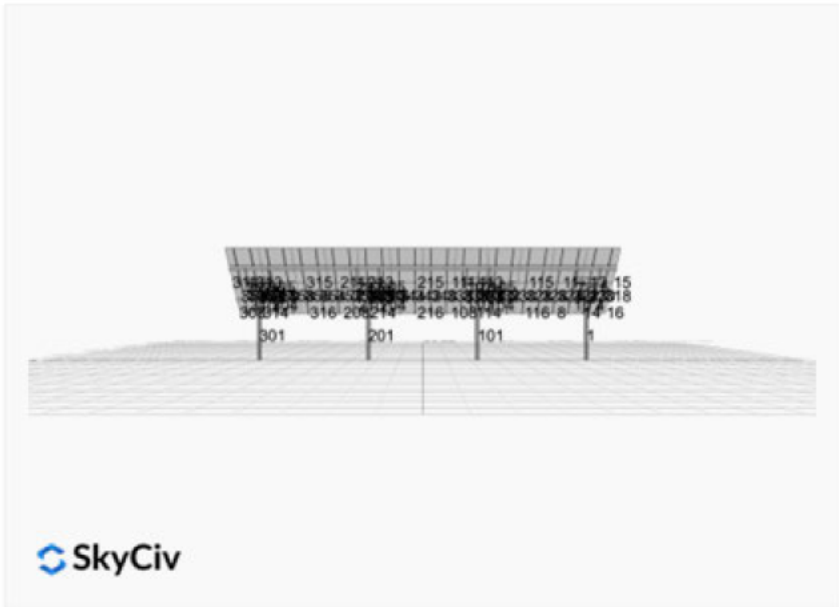
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A B C D E F G H

Project Details



Project Name: Nokes|Donna 4x12 - V1|b
Location: 1270 Elo Rd, McCall, ID 83638, USA
Unique ID: 4P-19.75-8TOP-HD-12-L-4Hx12W-3KDK
Date: Wed Jun 17 2026
Number of Modules: 48
Number of Poles: 4
Dealer: _____
Date Sold: _____



Array Dimensions N/S	15.97 ft
Array Dimensions E/W	69.00 ft
Winter Tilt Angle (Degrees)	46
Front Edge Clearance	8

MT Solar Bill of Materials (4P-19.75-8TOP-HD-12-L-4Hx12W-3KDK)

Part	Short Description	BOM Qty
MTS-PC-8	8IN Pole Cap Assembly	4
MTS-HF-HD	H-Frame Assembly-HD	4
MTS-HD-Wing-12	12IN HD Wing	4
MTS-HD-Splice-90	90IN HD Splice	6
MTS-HD-Splice-57	57IN HD Splice	6
MTS-CLAMP-HOOK-4PK	Hook Clamp	12

Rail Bill of Materials

Part	Qty
Rails (196in Long)	24x
Rail Attachment	48x
Module Mid Clamp	72x
Module End Clamp	48x
Ground Lug	12x



Site Address: 1270 Elo Rd, McCall, ID 83638, USA

Array Specifications

Duty Classification:	HD
Module Width:	47.40 in
Module Length:	68.00 in
Number of Rows:	4
Number of Columns:	12
Total Number of Modules:	48
Winter Tilt Angle:	46
Front Edge Clearance:	8
Total Array Height at Tilt:	19.49 ft
Total Frame Length:	68.75 ft
Module Info/Notes:	REC460AA Pure RX
Array Dimensions N/S:	15.97 ft
Array Dimensions E/W:	69.00 ft
Rail Length:	196.00 in
Rail Spacing:	2.88 ft

Support Specifications

Pole Size:	8in Pipe Sch 40
Pole Length above Grade:	13.74 ft
Number of Poles:	4
Pole Spacing:	19.75 ft

Foundation Specifications

Foundation Type:	rectangular
Foundation Dimensions:	48x48 in
Foundation Depth (below grade):	5.5 ft
Foundation Volume:	88.00 ft ³

Site Info

Risk Category:	I
Exposure:	B
Soil Classification:	sand
Site Location:	1270 Elo Rd, McCall, ID 83638, USA
Wind Speed:	97 mph

Snow Load:	101.78 psf
------------	------------



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R-008.00