Meeting Date: Thursday, February, 26, 2026
Meeting Time: 5:00 P.M.
Meeting Location: Council Chambers
118 Hillsboro Avenue

ADMINISTRATIVE AND COMMUNITY SERVICES COMMITTEE AGENDA

Committee Members

Elizabeth Grant, Chair	Will Krause	Andrea Miracle

1. Roll Call

2. Approval of Minutes from the February 12, 2026 ACS meeting Pg. 3

3. Public Comment

4. New Business

   A. A Resolution Approving a Special Use Permit for A Rooftop Solar Energy System at 5710 Inner Park Drive Pg. 5
   B. Approval of an Ordinance Amending Chapter 1250.13 – Off-street parking and loading; tables of the Codified Ordinances of the City of Edwardsville – Second Reading Pg. 110
   C. Approval of an Ordinance Amending Chapter 1228 – Landscaping and screening of the Codified Ordinances of the City of Edwardsville – Second Reading Pg. 125
   D. Approval of an Ordinance Certifying the Official Zoning Map of the City of Edwardsville, Madison County, Illinois – Second Reading Pg. 140
   E. Approval of a Sole Source Resolution to Slayden Glass, Inc. for the Purchase and Installation of a Storefront at 246 North Main Street Pg. 144
   F. Approval of Inducement Resolution to University Park Plaza, LLC Pg. 146

5. Old Business

6. Correspondence & Announcements:
   A. Letter from the Zoning Board of Appeals regarding a Special Use Permit for 5710 Inner Park Drive Pg. 148

If prospective attendees require an interpreter or other access accommodation, please contact the Edwardsville City Clerk's office at 618-692-7500 no later than 48 hours prior to the commencement of the meeting to arrange the accommodations.

7. Boards & Commissions:
   A. Plan Commission
   B. Zoning Board of Appeals – September 22, 2025 Pg. 150
   C. Human Relations Committee
   D. Historic Preservation Commission – January 14, 2026 Pg. 153
   E. Edwardsville Environmental Commission
   F. Bicycle and Pedestrian Advisory Committee
   G. Recreation, Arts and Special Events Board
   H. Library Board
   I. Band Board

8. Next ACS Meeting: **Thursday, March 12, 2026 at 5:00 p.m.** in City Hall Council Chambers, 118 Hillsboro Ave

9. Adjournment

CITY COUNCIL MEETING: Tuesday, March 3, 2026 at 7:00 p.m. in City Hall Council Chambers, 118 Hillsboro Ave

Administrative and Community Services Committee
Minutes
February 12, 2026 5:00 P.M. at City Hall

Approved Date: _____

Signature:_____

PRESENT:		EXCUSED
Elizabeth Grant	Cathy Hensley	
Will Krause	John Falcone	
Andrea Miracle	Don Munsch	
Ryan Zwijack	Jim Acra	
James Arnold	Leigh Ann Acra	
Breana Buncher		

1. Roll Call

2. Approval of Minutes from the January 29, 2026 ACS meeting – Motion to approve (Krause), seconded (Miracle) and voted all ayes to forward to Council

3. Public Comment

4. New Business
   - A. Resolution Approving a Sign Variance for 7371 Marine Road (Edwardsville Moose Lodge) – Motion to approve (Krause), seconded (Miracle) – Motion to amend staff recommendation to approve all requested sign variances (Krause), seconded (Miracle) and voted one aye (Grant) and two nays (Krause, Miracle) to forward to Council
   - B. Approval of an Ordinance Amending Chapter 1250.13 – Off-street parking and loading; tables of the Codified Ordinances of the City of Edwardsville – First Reading – Motion to approve (Krause), seconded (Miracle) and votes all ayes to forward to Council
   - C. Approval of an Ordinance Amending Chapter 1228 – Landscaping and screening of the Codified Ordinances of the City of Edwardsville – First Reading – Motion to approve (Krause), seconded (Miracle) and votes all ayes to forward to Council
   - D. Approval of an Ordinance Certifying the Official Zoning Map of the City of Edwardsville, Madison County, Illinois – First Reading – Motion to approve (Krause), seconded (Miracle) and votes all ayes to forward to Council
   - E. Approval of RASE Board Items from the February 3, 2026 meeting:
     - i. Earth Day – Nature Preserve Foundation (Saturday, April 18)
     - ii. Celebrating the Spirit of 1776 – Madison County Historical Society (Sunday, June 28)
     - iii. Edwardsville Rotary Criterium – Edwardsville Rotary (Friday, August 14 and Saturday, August 15)
     - iv. Unity Fest – Edwardsville Unity (Saturday, September 26)
     - v. Edwardsville Book Fair – Edwardsville Library (Saturday, October 3)
     - vi. Living History Day – Madison County Historical Society (Sunday, October 4)
     - vii. Wags at the Watershed – Partners for Pets (Saturday, November 7)

     – Motion to approve (Krause), seconded (Miracle) and votes all ayes to forward to Council
   - F. A Parade Resolution Approving IDOT Temporary Closure of Highways for the Edwardsville Rotary Criterium – Motion to approve (Krause), seconded (Miracle) and voted all ayes to

forward to Council

G. A Resolution Authorizing the Director of Parks and Recreation to Apply for Park Commission Funds from Madison County in an amount not to exceed $300,732.00 – Motion to approve (Krause), seconded (Miracle) and voted all ayes to forward to Council

5. Old Business

6. Correspondence & Announcements:
   A. January Building Permit Report

7. Boards & Commissions:
   A. Plan Commission – January 7, 2026
   B. Zoning Board of Appeals
   C. Human Relations Committee
   D. Historic Preservation Commission
   E. Edwardsville Environmental Commission
   F. Bicycle and Pedestrian Advisory Committee – January 7, 2026
   G. Recreation, Arts and Special Events Board
   H. Library Board
   I. Band Board

9. Next ACS Meeting: Thursday, February 26, 2026 at 5:00 p.m. in City Hall Council Chambers, 118 Hillsboro Ave.

10. Adjournment – Motion to adjourn (Krause), seconded (Miracle)

CITY COUNCIL MEETING: Tuesday, February 17, 2026 at 7:00 p.m. at City Hall Council Chambers, 118 Hillsboro Ave.

DATE: February 26, 2026

ACTION ITEM TITLE: Resolution Approving a Special Use Permit for a Rooftop Solar Energy System for Community Solar at 5710 Inner Park Drive

ORIGIN: Public Works

SUMMARY:

The applicant is requesting a Special Use Permit to construct a community rooftop solar energy system for community solar in the "M-1" Light Manufacturing District at 5710 Inner Park Dr.

RATIONALE:

The proposed solar energy system would have a rated capacity of 4,950 kW AC and would generate power for public utility usage. However, this project would not meet the Zoning Ordinance's definition of a "solar energy system," as its rated capacity would exceed the defined rated capacity limit of 100 kW and would not generate power to reduce on-site consumption. The applicant cannot seek administrative approval as a "solar energy system," and must instead request a Special Use Permit for "any other use not specifically permitted" in the "M-1" Light Manufacturing District.

COMPLIANCE WITH COMPREHENSIVE PLAN:

The Comprehensive Plan identifies the future land use for this property as "Employment." The existing zoning is in agreement with the Comprehensive Plan. The proposed solar energy system would not alter the property's industrial usage.

SUGGESTED COUNCIL ACTION:

Approval

RESOLUTION NO._____

RESOLUTION APROVING A SPECIAL USE PERMIT FOR A ROOFTOP SOLAR ENERGY SYSTEM FOR COMMUNITY SOLAR AT 5710 INNER PARK DRIVE

WHEREAS, a petition has been filed with the City of Edwardsville and referred to the Zoning Board of Appeals to request a Special Use Permit to allow a rooftop solar energy system for community solar in the "M-1" Light Manufacturing District at 5710 Inner Park Drive;

WHEREAS, public notice in the form required by law, was given of said February 23, 2026, public hearing by publication not more than 30 days nor less than 15 days prior to said hearing in The Intelligencer, a newspaper of general circulation in this City; and

WHEREAS, the request for a Special Use Permit is consistent with the City of Edwardsville Comprehensive Plan and Zoning Ordinance and substantially meets the criteria for Standards for Special Use Permit, found in the ordinance; and

WHEREAS, the Zoning Board of Appeals did at its February 23, 2026 meeting recommend approval of this Special Use Permit request (Case 2026-03) with a vote of 4 ayes, 0 nays, and 1 abstain; and

WHEREAS, the Administrative & Community Services Committee did on February 26, 2026, recommend _____ of the Special Use Permit with a vote of ___ ayes and ___ nays; and

NOW THEREFORE, Be It Resolved by the City Council, City of Edwardsville, Illinois, that after appropriate review and discussion, the Special Use Permit for a rooftop solar energy system for community solar in the "M-1" Light Manufacturing District at 5710 Inner Park Drive is hereby approved.

This Resolution passed by the City Council, City of Edwardsville, Madison County, Illinois, and approved by the Mayor this ___ day of March, 2026 pursuant to a roll call vote as follows:

AYES:
NAYS:
ABSENT:
ABSTENTION:

APPROVED by me this ___ day of March, 2026

By: _____
Art Risavy, Mayor of the
City of Edwardsville, Madison County, Illinois

ATTESTED, Filed in my office,
this ___ day of March, 2026

By: _____
Michelle Boyer, Clerk of the City of
Edwardsville, Madison County, Illinois.

CASE No. 2026-03

REQUEST FOR SPECIAL USE PERMIT
ZONING BOARD OF APPEALS
EDWARDSVILLE, IL

(Do not write in this space - for office use only)

Date set for hearing: 2/23/26
Notice published on: 1/31/26
Newspaper "E"
Action by Zoning Board of Appeals:
( ) Denied
( ) Approved
( ) Approved with modification
Date:

SPECIAL USE PERMIT REQUEST NO. 2026-03
DATE 1/16/26
Zone District Classification
Fee Amount $700.00 Date Pd 1/29/26
Parcel ID No. 18-1-14-25-00-000-002.006
FEMA/FIRM Zone:
Soil Survey Sheet No.
Undermined

Instructions to applicants: To request a Special Use Permit:

1) This application for a Special Use Permit **must** be complete.
2) All requests for Special Use Permits **must** include a site plan with the application showing the information listed in item 10 paragraphs a), b), c), d) (an "Air Photo Overlay" from Madison County Maps and Plats for the subject property), & e).
3) Development schedule providing reasonable guarantees for the completion of construction **must** be provided.
4) Names and Addresses of all property owners within 300 feet of subject property boundaries.

All information requested on this application must be provided **before** a hearing will be scheduled for the next regularly scheduled Zoning Board of Appeals meeting.

A notice of the hearing will be published in a newspaper of general circulation in the local area at least 15 days before the hearing and the applicant/owner will be notified by mail of the time and place of the hearing at least 15 days prior to the hearing date. The applicant or his attorney or duly-authorized agent must appear at the hearing and present this case to the Zoning Board of Appeals or the case will not be heard and fees forfeited. A special use permit allows development listed in the zoning ordinance which have been designated "special uses". These may be public service uses which, although generally considered desirable or compatible with other uses in the zoning district in which they may be permitted, require special review. This review is performed by the Zoning Board of Appeals at a public hearing.

The applicant should be able to show, by the attached site plan and documentary evidence, that the proposed "special use" will be in harmony with the general purpose and intent of the zoning ordinance and will not be injurious to the neighborhood or otherwise detrimental to the public welfare. The burden of providing substantiating evidence rests with the applicant. Applicants are encouraged to contact the Office of the Zoning Administrator should they have any questions concerning the application.

1. Name of Applicant(s) 5710 Inner Park Dr, LLC
Email Address [redacted]
Address: 1000 Wilson Blvd #2400 Phone [redacted]
City: Arlington State: VA Zip 22209

2. Property interest of applicant:
( ) Owner ( ) Contract Purchaser (X) Lessee ( ) Other

3. Name of Property Owner(s) Dev Property IL, LLC
Email Address [redacted]
Address: EQT Exeter 100 Matsonford Road, Suite 250 Phone n/a
City Radnor State PA Zip 19087

CASE No. _____

Request for Special Use Permit
Zoning Board of Appeals
City of Edwardsville
Page Two of Three

4. Location of Property:
A ddress of property as assigned by the 911 coordinator is 5710 Inner Park Dr, Edwardsville, IL 62025 . Parcel ID # 18-1-14-25-00-000-002.006,of the property described below and shown on the attached site plan. Legal description of property (lot, block and subdivision - A dditional sheets may be attached if necessary: See Attachment A: Site Legal Description

5. Present zoning classification of the property M-1 (Light Manufacturing)

6. Present use of property (If any uses or buildings on the property are non-conforming, so state): The current use of the property is as a warehouse, in compliance with existing M-1 (Light Manufacturing) zoning.

7. Present deed and/or tract restrictions (if any) which apply to the property. (Note date of expiration of same): See Attachment D: Title Report

8. Special Use Request:
State exactly what is intended to be done with the property which does not conform with existing zoning regulations. Please cite relevant paragraphs of the Ordinance by section number (if known).
The city ordinances of the City of Edwardsville define a "solar energy system" as *"A solar energy conversion system consisting of solar panels, support structure, and associated controller or conversion electronics, which has a rated capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power."*
The applicant is proposing a rooftop solar energy system on top of the existing warehouse that is larger than the current definition of "solar energy system" allows. The proposed size of the rooftop solar system is 6,218.6 kWdc, 4,950kWac.

9. Names of adjacent property owners:
Following are the names of owners of all property immediately adjacent* to the subject property, including those directly across the street, and present use of their property:

(Northerly) (present use)
WESTWAY INDUSTRIAL LLC (current use warehouse)
(Southerly) (present use)
ESSKAY ENTERPRISES LLC (current use vacant land)
(Easterly) (present use)
POOL 5 INDUSTRIAL IL LLC (current use warehouse)
(Westerly) (present use)
WPT INNER PARK DRIVE LP (current use warehouse)

*A comprehensive list of property owners surrounding the subject site is requested in item #11.

CASE No. _____

Request for Special Use Permit
Zoning Board of Appeals
City of Edwardsville
Page Three of Three

10. Site plan attached shall be drawn in a scale large enough for clarity to reflect all of the following (Drawing sizes that exceed 11" X 17" require applicant to furnish 20 copies folded to fit a 9" x 15" mailing envelope.):

a) Location and dimensions of:
   1) Lot (Corner Lot shall be identified)
   2) Buildings
   3) Driveways
   4) All off-street parking spaces

b) Distance between: See Attachment B: Site Plan
   1) Buildings and front, side and rear property lines
   2) Principal building and accessory buildings

c) Location of:
   1) Signs
   2) Easements
   3) Underground utilities
   4) Septic tanks/tile fields
   5) Water wells
   6) Etc.

d) An "Air Photo Overlay" available at Madison County Maps and Plats for the subject property shall be furnished by the petitioner. See Attachment C: Overlay Map

e) Any additional information as may reasonably be required by the Zoning Administrator and applicable sections of the Zoning ordinance.

11. Based on the most recent tax records available from Madison County Maps and Plats office, **attached** are the computer listing of:
[X] Name and Address of the property owner for the subject property
[X] Names and Addresses of all property owners within 300 feet of subject property boundaries. (Please note this list will be a more comprehensive listing than property owners listed in item #9.)

See Attachment E: Tax Roll Information

12. I certify that all of the above statements and the statements contained in any papers or plans submitted herewith are true and accurate. I consent to the entry in or upon the premises described in this application by any authorized official of the City of Edwardsville, Illinois for the purpose of inspecting or of posting, maintaining and removing such notices as may be required by law.

[redacted] Authorized Representative
Applicant(s)

12/31/2025
Date

[redacted] Authorized Signature
Property Owner(s)

12-22-25
Date

ATTACHMENT A – SITE LEGAL DESCRIPTION

A TRACT OF LAND BEING PART OF LARGER TRACTS OF LAND AS CONVEYED TO EXETER INNER PARK LAND, LLC BY INSTRUMENTS RECORDED AS DOCUMENT NUMBER 2018R18990 AND 2018R26451 OF THE MADISON COUNTY RECORDS, LOCATED IN SECTION 25, TOWNSHIP 4 NORTH, RANGE 9 WEST OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, ILLINOIS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF ABOVE SAID SECTION 25; THENCE NORTH 00 DEGREES 02 MINUTES 11 SECONDS EAST ALONG THE WESTERLY LINE OF ABOVE SAID SECTION 25 A DISTANCE OF 66.57 FEET TO A POINT ON THE NORTHERN RIGHT-OF-WAY LINE OF CHAIN OF ROCKS ROAD (ROUTE 66 BY-PASS), 80 FEET WIDE; THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING; SOUTH 87 DEGREES 45 MINUTES 42 SECONDS EAST 1332.14 FEET; THENCE SOUTH 87 DEGREES 14 MINUTES 07 SECONDS EAST 38.31 FEET TO A POINT ON A CURVE TO THE RIGHT FOR WHICH THE RADIUS POINT BEARS NORTH 02 DEGREES 45 MINUTES 53 SECONDS EAST 40.00 FEET, SAID POINT ALSO BEING LOCATED ON THE EASTERLY OF A PROPOSED ROAD, 80 FEET WIDE, SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT; THENCE ALONG LAST SAID EASTERLY LINE THE FOLLOWING; ALONG LAST SAID CURVE, WITH A CHORD WHICH BEARS NORTH 43 DEGREES 28 MINUTES 11 SECONDS WEST 55.34 FEET AN ARC LENGTH OF 61.11 FEET TO A POINT OF TANGENCY; NORTH 00 DEGREES 17 MINUTES 44 SECONDS EAST, 2,498.24 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF INNER PARK DRIVE, 80 FEET WIDE, SAID POINT ALSO BEING THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 40.00 FEET; THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING COURSES AND DISTANCES; ALONG SAID CURVE WITH AN ARC LENGTH OF 62.83 FEET AND A CHORD WHICH BEARS NORTH 45 DEGREES 17 MINUTES 44 SECONDS EAST, 56.57 FEET; SOUTH 89 DEGREES 42 MINUTES 16 SECONDS EAST, 120.00 FEET TO A POINT OF CURVATURE TO THE LEFT HAVING A RADIUS OF 1,780.00 FEET; ALONG SAID CURVE WITH AN ARC LENGTH OF 70.44 FEET AND A CHORD WHICH BEARS NORTH 89 DEGREES 09 MINUTES 43 SECONDS EAST, 70.44 FEET; NORTH 88 DEGREES 01 MINUTE 42 SECONDS EAST, 212.52 FEET TO A POINT OF CURVATURE TO THE RIGHT HAVING A RADIUS OF 1,720.00 FEET; ALONG SAID CURVE WITH AN ARC LENGTH OF 68.07 FEET AND A CHORD WHICH BEARS NORTH 89 DEGREES 09 MINUTES 43 SECONDS EAST, 68.06 FEET; SOUTH 89 DEGREES 42 MINUTES 16 SECONDS EAST, 557.18 FEET TO A POINT OF CURVATURE TO THE RIGHT HAVING A RADIUS OF 145.00 FEET; THENCE ALONG SAID CURVE WITH AN ARC LENGTH OF 227.77 FEET AND A CHORD

REQUEST FOR SPECIAL USE PERMIT FOR A ROOFTOP COMMUNITY SOLAR ENERGY PROJECT IN M-1 DISTRICT

5710 Inner Park Dr, LLC
5710 Inner Park Drive; Edwardsville, IL 62025

Submitted to City of Edwardsville
January 2026

SUMMIT RIDGE ENERGY

January 19, 2026

Breana Buncher, AICP
City Planner
City of Edwardsville
200 E. Park Street
Edwardsville, IL 62025
BBuncher@cityofedwardsville.com

Re: Cover Letter for Special Use Permit Application

Dear Breana Buncher:

Please find the supporting materials for the submission of a Special Use Permit for a rooftop community solar project on behalf of 5710 Inner Park Dr, LLC. We have carefully reviewed the ordinance and materials available and believe that our application complies. We welcome the opportunity to provide any additional materials or information as the City deems appropriate. Enclosed are copies of:

- **City of Edwardsville Request for Special Use Permit (Signed)**
- **Applicant's Project Narrative to Include**
  - 1.0 – Applicant Overview
  - 2.0 – Site Description
  - 3.0 – Project Description
  - 4.0 - Background on Permit Application
  - 5.0 – Considerations for Special Use
- **Accompanying Attachments**

Please note that the $700 permitting fee was delivered to the City on Wednesday, January 7th, 2026. We respectfully request that our project be reviewed and considered on the following timelines, if the application is found to be in compliance.

- Zoning Board of Appeals – February 23, 2026
- Administrative and Community Services Committee – February 26, 2026
- City Council – March 3, 2026

We look forward to addressing any questions on this application, further presenting our project at a Zoning Board of Appeals Meeting, and discussing the project with the City.

Best,

Bridget Callahan
VP of Development, Summit Ridge Energy
bcallahan@srenergy.com
(317) 443-2905

1.0 APPLICANT OVERVIEW

The Applicant, 5710 Inner Park Dr, LLC is seeking a Special Use Permit for the development, construction, and operation of a 6,218.6 kW DC / 4,950 kW AC Rooftop Community Solar Energy Project to be located at 5710 Inner Park Drive; Edwardsville, IL 62025. The solar project would be located on the rooftop of the existing building with necessary ground equipment located on the west side of the building to support the interconnection of the project to the Ameren grid.

The Applicant, 5710 Inner Park Dr, LLC, is a Delaware limited liability company indirectly owned and managed by Summit Ridge Energy, LLC. Summit Ridge Energy, LLC is the nation's leading commercial solar company, and the largest commercial solar developer and owner-operator in the State of Illinois. Currently, Summit Ridge Energy's Illinois portfolio includes more than 278 MW across the state. Summit Ridge has invested over $900 million in Illinois through the development and acquisition of 134 individual solar farms located in 39 counties. These projects have employed more than 5,000 construction workers and provide solar power saving to more than 20,000 Illinois ratepayers.

The Applicant has entered into a Memorandum of Lease with the building property owner, Dev Property IL LLC (c/o EQT Exeter) for the purposes of constructing, installing, operating, repairing, replacing, removing, and maintaining Solar Facilities on the rooftop. This document was recorded with the Madison County Clerk and Recorder on February 7, 2025 as Record #2025R03508 which is included as ***ATTACHMENT F.***

2.0 SITE DESCRIPTION

This project would be located at the furthest southwest municipal boundary of the City of Edwardsville and within the Gateway Commerce Center business park for warehousing and distribution. The project is bound by Chain of Rocks Road to the south, Westway Drive to the west, and Inner Park Drive to the north. The rooftop community solar project would be located on a singular parcel of property, PIN #18-1-14-25-00-000-002.006 on which there is an existing building which hosts tenants for industrial and manufacturing purposes.

The legal description of the site is provided as ***ATTACHMENT A.*** An air photo overlap map provided by the Madison County Maps and Plats is included as ***ATTACHMENT C***. A title report is provided as ***ATTACHMENT D.***

This parcel was confirmed zoned as M-1 Light Manufacturing in a Zoning Verification Letter, which is presented as ***ATTACHMENT G.*** This zoning is consistent with other parcels in the vicinity.

The parcel is not located within one of City of Edwardsville's Historic Districts.

The building's rooftop has sufficient structural capacity to host a rooftop solar facility, which has been independently verified by third party engineers.

Further, the grid infrastructure in the area is sufficient to connect a solar facility at this location. This project will connect to the existing Ameren 12.47 kV overhead facilities directly to the west of the

building. The project has a fully executed interconnection agreement with Ameren Illinois. The project has received all necessary easements to support this connection to the grid.

Names and addresses of all property owners within 300 feet of the subject property boundaries, provided by the Madison County Chief County Assessment Office, are presented as ***ATTACHMENT E.***

3.0 PROJECT DESCRIPTION

The rooftop community solar energy project will be hosted nearly entirely on the rooftop of the preexisting building. All solar panels will be located on the rooftop. There is minimal ground equipment that supports the project's connection to the Ameren grid, such as utility poles and overhead lines.

The site plan overview is presented as ***ATTACHMENT B***, which should include all required items in Item 10 paragraphs a, b, and c. In the event any further detail is requested, more detailed engineering drawings are included as ***ATTACHMENT H.*** These drawings were submitted to the City of Edwardsville in August 2025 in support of a Building Permit and some initial comments have been shared and addressed.

Please note that while the Applicant does not anticipate changes to the information provided in these drawings, specific material manufacturers and models may change from time to time subject to material procurement availability.

4.0 BACKGROUND ON PERMIT APPLICATION

The Applicant is seeking a Special Use Permit because this size of rooftop solar is not a defined use in the City of Edwardsville Codified Ordinances as written. However, it is similar to "public utility" and is of similar character with other uses allowed in the M-1 District. It can serve as a dual-use on properties that already support an existing permitted use in the M-1 District, as is the case here. For those reasons, the Applicant is seeking a Special Use Permit, in accordance with Chapter 1242.04(e), under the provision, *"(9) Any other use not specifically permitted"* for properties in the M-1 District. The Project is a suitable candidate for this "catch-all" provision given the strong relationship that larger rooftop solar installations have with industrial and commercial buildings and because it will preserve the character of the district and the neighboring properties.

Notably, the City of Edwardsville amended the solar ordinance referenced as Ordinance No. 6800-07-2024 on July 2, 2024 which defines requirements for roof mounted solar energy systems. However, this project would not fall under the definition of a solar energy system, which is defined in Section 1252.02 as,

> *"Solar energy system: A solar energy conversion system consisting of solar panels, support structure, and associated controller or conversion electronics, which has a rated capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power."*

However, this project does not fit into the definition of a solar energy system for two primary reasons:

1. **The rated capacity exceeds 100 kW** – This project's rated capacity exceeds this threshold. The rated capacity of this project is 4,950 kW AC.

2. **The project is not intended to primarily reduce on-site consumption –** This project is a community solar project (also known as "front-of-the-meter"), which means that consumption is not used on-site (also known as "behind-the-meter"). Instead, the generation from this project is delivered to the utility or the Ameren grid where benefits are shared with a number of different offtakers, as opposed to behind-the-meter where all cost savings benefits are kept by the owner of the solar project.

Accordingly, the Project cannot seek approval as a "solar energy system" and must instead seek approval under the "catch-all" provision in the M-1 District.

5.0 CONSIDERATIONS FOR SPECIAL USE

Based on Section 1244.02.02 – Special use permits in the City of Edwardsville Code of Ordinances, there are five certain factors that should be considered by the board in the granting of a special use permit. The Applicant has presented below responses to each of those factors.

(1) Existing uses and zoning of nearby property and relationship to Edwardsville's adopted Comprehensive Plan.

This parcel is located in the far southwest municipal boundary of the City of Edwardsville and within the Gateway Commerce Center.

This parcel's zoning is M-1 Light Manufacturing District. All adjacent parcels to the north and east maintain the same M-1 zoning designation. The parcels to the south and west are located outside of the municipal boundaries of City of Edwardsville and within the Village of Pontoon Beach. These properties are also considered part of the Gateway Commerce Center South and slated for continued commercial business development

Based on the City of Edwardsville Comprehensive Plan (dated February 5, 2010), the Gateway Commerce Center (GCC) was envisioned to be used and expanded for further industrial use. Properties in the Gateway Commerce Center are used primarily for warehouses and distribution centers for a wide variety of tenants, as well as for similar industrial or commercial uses.

The Applicant believes that rooftop solar is a use that is consistent with the zoning and use of the adjacent properties, as rooftop solar allows the parcels and buildings to continue to be used for warehouses, distribution centers, or industrial uses, while allowing for the integration and development of energy resources to further support the facilities and offtakers in the vicinity. In other words, rooftop solar does not take up vacant properties, it simply uses the underutilized area on existing rooftops.

(2) Extent to which property value diminishes adjacent to the zoned parcels. Value decrease to be supplied by the petitioner and made by professional appraiser.

Rooftop solar panels is unlikely to have any negative impact on adjacent property values, especially in an industrial or commercial district such as the Gateway Commerce Center. In many jurisdictions, rooftop solar is considered an accessory use.

There is extensive research and discussion on impact of surrounding property values as it relates to ground-mounted solar projects. However, there is much less research as it relates to impact of solar on commercial real estate and adjacent properties.

It is a widely held belief that the installation of solar energy on a commercial building increases the appraised value of that commercial property due to increased net operating income, reduced energy costs, and marketing advantages to prospective tenants. Additionally, neighboring commercial and industrial properties that could host rooftop solar installations may increase in value as a result of the potential dual use.

(3) Extent to which the proposed change alters or promotes the public health, safety, morals or general welfare.

Rooftop solar is unlikely to have any negative impact on public health, safety, morals, or general welfare.

There will be minor disruptions during the construction phase, which would be consistent with the traffic and noise expected on any construction project. Gateway Commerce Center is an area where there is frequently extensive truck traffic and construction and development of new construction projects, so this project is not expected to be out of the ordinary for this area.

Once installed, rooftop solar will be out of view of the public, nearly silent, and will require only periodic maintenance. It does not create glare for road traffic or neighbors. It does not produce any odors or vibrations. Access to the public will restricted. The panels do not pose any health or safety risk to the building tenants or neighbors.

(4) The relative gain to the public as compared to the hardship imposed upon the property owners, and there is a need for the proposed special use.

This project will deliver 4,950 kW of electricity to the local distribution grid, which is enough renewable energy to power about 1,000 average households. This project will provide relative gain to the public as it relates to grid stability and cost savings. Further, because this project is located in an industrial area, and will be located on a rooftop, there will be negligible negative impact to the public.

- ***Cost Savings*** - In terms of cost savings, this is a community solar energy project, so there are associated cost savings affiliated with this project. These cost savings, which typically are 10% or more on monthly Ameren energy bills are offered to subscribers or "offtakers" of the project, offering gain to the public. Two examples of how these type of projects have benefited the public would be:
    - ***The City of Edwardsville,*** or the municipality, is a community solar offtaker. The City Council approved the City's agreement with Ampion in November 2024. The Council meeting agenda where this agreement was approved is presented as

ATTACHMENT I.

- ***Madison County residents*** have benefited in terms of cost savings from other community solar projects. Summit Ridge Energy and the Edwardsville Community Foundation have partnered on previous enrollment events to subscribe local residents for costs savings.

- ***Grid Stability –*** Solar projects increase grid stability. For this project in particular and all similar solar projects, the Applicant was responsible for all grid upgrade and payments which will support Ameren's infrastructure in this area.

The neighboring property owners will not endure any hardship as a consequence of this installation. There is also a need for additional power generation in the Ameren network. Recent studies indicate that the area may experience electricity shortfalls, which will increase prices, and additional power generation is needed. This project will produce additional electricity to the Ameren grid without taking additional land out of service.

These benefits and the need for the Project far outweigh any potential hardships caused by the Project.

(5) The suitability of the subject property for the zoned purposes indicated by ordinance.

The subject property is currently zoned as M-1 and is currently being used as an industrial warehouse. The subject property will continue to be used for the intended use as indicated by the ordinance.

As described above, a rooftop solar installation such as this one (of this size) is not specifically defined by the zoning ordinance. However, it is similar to other types of uses allowed as special uses in the M-1 district, including "public utility," and is consistent with the overall character of the district. Rooftop solar exists in harmony with large-scale industrial uses in the district and is less impactful on the surrounding area than may of the uses authorized as "permitted" in the M-1 district. For these reasons, this rooftop solar project is an extremely suitable candidate for the "catch-all" special use category of "(9) any other use not specifically permitted."

Additionally, due to the dual-use nature of rooftop solar, the requested special use will not affect the subject property's ability to be used for its currently zoned purposes.

LIST OF ATTACHMENTS

ATTACHMENT 0	SIGNED APPLICATION FORM
ATTACHMENT A	SITE LEGAL DESCRIPTION OF PROPERTY
ATTACHMENT B	PROJECT SITE PLAN
ATTACHMENT C	AIR PHOTO OVERLAY MAP
ATTACHMENT D	TITLE REPORT
ATTACHMENT E	TAX ROLL/PARCEL LISTING FROM MADISON CO.
ATTACHMENT F	MEMORANDUM OF LEASE
ATTACHMENT G	ZONING VERIFICATION FROM EDWARDSVILLE
ATTACHMENT H	DETAILED ENGINEERING DRAWINGS
ATTACHMENT I	CITY COUNCIL AGENDA – 11/19/2024

ATTACHMENT B

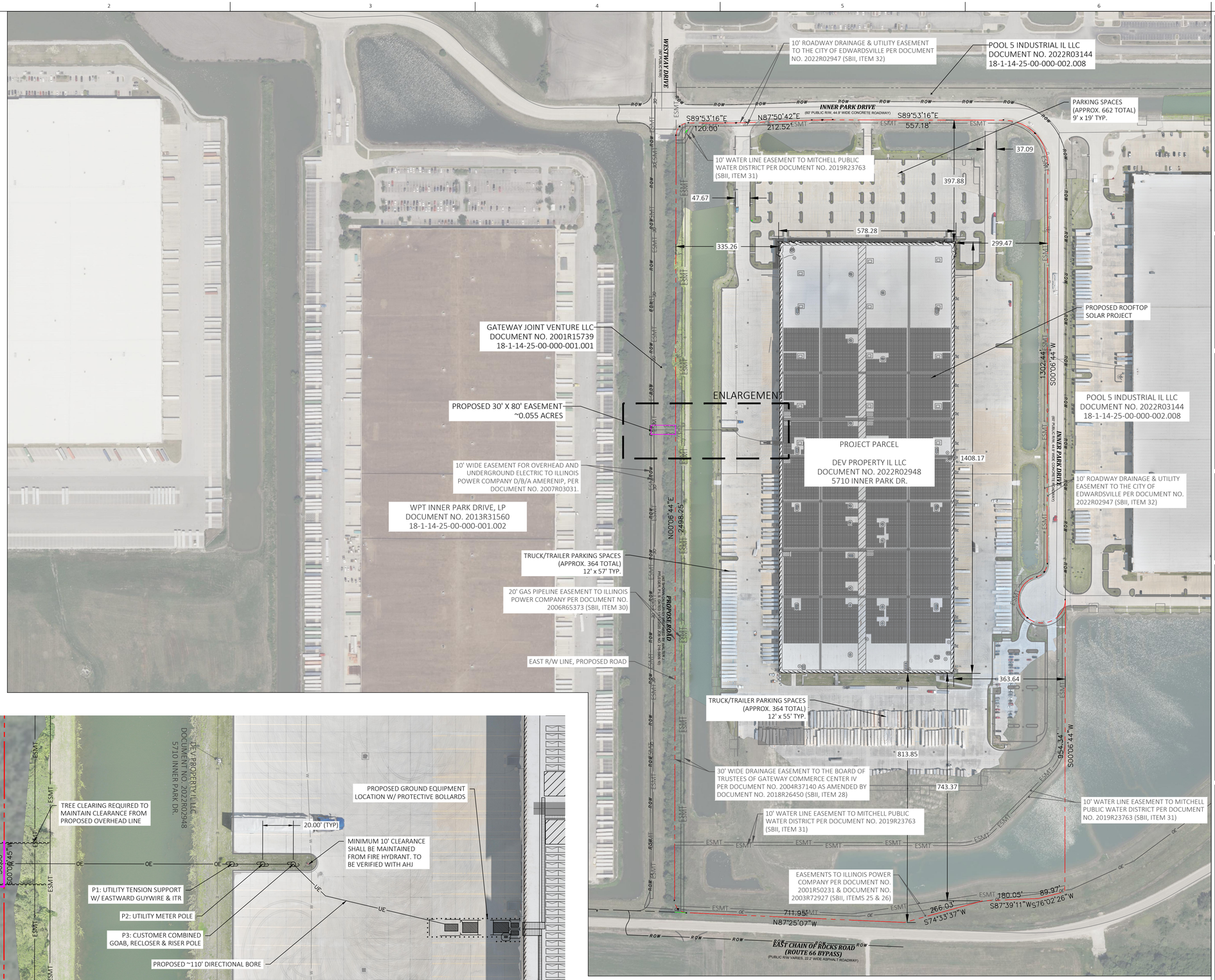
NOTES:

1. THE MEASUREMENTS AND AERIAL IMAGES HAVE BEEN TAKEN FROM DRONE SURVEY AND UTILITY LOCATE CONDUCTED BY WIGHTMAN ON 7/22/24. NO DRAIN TILES, WATER WELLS, OR SEPTIC TANKS WERE OBSERVED WITHIN THE SURVEY PARCEL WHILE CONDUCTING THE FIELD WORK.
2. PARCEL BOUNDARY LINES, EASEMENTS, AND RIGHT OF WAY LINES ARE REFERENCED FROM ALTA SURVEY PREPARED BY WIGHTMAN DATED 5/15/2025.

ARRAY SPECIFICATIONS	
DC SYSTEM SIZE (kW)	6218.6 kW
AC SYSTEM SIZE (kW)	4950 kW
DC/AC RATIO	1.26
MODULE MODEL	Q.PEAK DUO XL-G11S.3/BFG
MODULE POWER	590 W
MODULE COUNT	10,540
RACKING MANUFACTURER	PANELCLAW CLAWFR 10
STRING LENGTH	38-39
STRING QUANTITY	276
INVERTER TYPE	SOLAREDGE SE-110KUS
INVERTER QUANTITY	(46) 107.61 kW
AZIMUTH	180°
TILT ANGLE / PHI LIMITS	10°
INTER-ROW SPACING (IN)	17"

LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT OF WAY LINE — ROW
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE — ESMT
- PROPOSED OVERHEAD ELECTRIC LINE — OE
- PROPOSED UNDERGROUND ELECTRIC LINE — UE
- UTILITY POLE
- EXISTING WATER LINE — W
- EXISTING GAS LINE — G
- EXISTING TELEPHONE LINE — T
- EXISTING OVERHEAD ELECTRIC LINE — OE
- EXISTING UNDERGROUND ELECTRIC LINE — E



ENLARGEMENT

30 FEET 0 30 60 90
Scale: 1"=30'

VICINITY MAP

150 FEET 0 150 300 450
Scale: 1" = 150'

REV	BY	DESCRIPTION	DATE
0	CHH	SUP SITE PLAN	12/11/2025

DRAWING ISSUE: ☑ PRELIMINARY ☐ PERMITTING ☐ BID ☐ CONSTRUCTION ☐ AS-BUILT ☐ OTHER

SUMMIT RIDGE ENERGY
1000 WILSON BLVD, SUITE 2400
ARLINGTON, VA 22209
WWW.SRENERGY.COM

PE SEAL/CONSULTANT: NOT FOR CONSTRUCTION

PROJECT: SOLAR PROJECT
5710 INNER PARK DR
EDWARDSVILLE, IL 62025
LAT/LONG: 38.765271, -90.050606
UTILITY: AMEREN
LOCAL AHJ: EDWARDSVILLE CITY
STATE: ILLINOIS

DRAWING TITLE: CONCEPTUAL SITE PLAN

DWG NO. FIG 1

C:\USERS\CELIAHKSHAW\SUMMIT RIDGE ENERGY, LLC\SRE - PROJECTS WORKING FOLDERS\IL-22-0123 ---- IL - EDT - 5710 INNER PARK DRIVE\4 - ENGINEERING\CAD\SHEET FILES_FIGURES\PV SITE PLAN - SUP.DWG

ATTACHMENT F - MEMO OF LEASE

2025R10811
STATE OF ILLINOIS
MADISON COUNTY
04/23/2025 01:48 PM
LINDA A. ANDREAS
CLERK & RECORDER
REC FEE: 52.00
CO STAMP FEE:
ST STAMP FEE:
RHSPS FEE: 18.00
OF PAGES: 7

COVER SHEET TO RE-RECORD
A
MEMORANDUM OF LEASE

2025R03508
STATE OF ILLINOIS
MADISON COUNTY
02/07/2025 06:01 AM
LINDA A. ANDREAS
CLERK & RECORDER
REC FEE: 52.00
CO STAMP FEE:
ST STAMP FEE:
RHSPS FEE: 18.00
OF PAGES: 6

THIS DOCUMENT IS BEING RE-RECORDED TO CORRECT A SCRIEVENOR'S ERROR WITH THE TENANT'S NAME. THE ORIGINAL DOCUMENT REFLECTED THE TENANT AS 5710 INNER PARK DR SOLAR, LLC; HOWEVER, IT SHOULD HAVE REFLECTED 5710 INNER PARK DR, LLC AS THE TENANT

Prepared by and return to:

Amy Fox
Summit Ridge Energy
1000 Wilson Blvd., Suite 2400
Arlington, VA 22209

Property Tax Identification #: 18-1-14-25-00-000-002.006

MEMORANDUM OF LEASE
(5710 Inner Park Drive, Edwardsville, IL 62025)

THIS MEMORANDUM OF LEASE ("**Memorandum**") is made and entered into as of this January 30, 2025, by and between DEV PROPERTY IL LLC, a Delaware limited liability company, whose address is c/o EQT Exeter, 100 Matsonford Road, Suite 250, Radnor, PA 19087 ("**Landlord**"), and 5710 INNER PARK DR ~~SOLAR~~, LLC, a Delaware limited liability company, as successor-in-interest to SRE Solar Origination 2, LLC, a Delaware limited liability company, whose address is 1000 Wilson Boulevard, Suite 2400, Arlington, VA 22209 ("**Tenant**"); Landlord and Tenant, collectively, are hereinafter referred to as the "**Parties**".

1. **LEASE**. Landlord and SRE Solar Origination 2, LLC, a Delaware limited liability company ("**Original Tenant**") entered into that certain Solar Rooftop Lease dated as of October 30, 2022 ("**Original Lease**"), as amended by that certain First Amendment to the Solar Rooftop Lease dated June 29, 2023 and that certain Letter Agreement dated January 29, 2024 (collectively, the "**Lease**") to construct, install, operate, repair, replace, remove and maintain certain Solar Facilities as more particularly described in the Lease.

DOC 2025R03508 Pg 1 of 6
DOC 2025R10811 Pg 2 of 7

2. **ASSIGNMENT**. Tenant and Original Tenant entered into that certain Assignment and Assumption Agreement, dated January 7, 2025, whereby the Lease was assigned to Tenant by Original Tenant and Tenant assumed all rights and obligations of Original Tenant under the Lease.

3. **LEASED PREMISES.** The Solar Facilities are primarily located on the rooftop of that certain Building located in Edwardsville, Madison County, State of Illinois and more particularly described on Exhibit A attached hereto (the "**Leased Premises**").

4. **TERM**. The Lease includes (i) a "**Development Term**" effective from the date of the Lease and terminating on the earlier of (a) the Delivery Notice Deadline Date or (b) such date Tenant delivers the Delivery Notice to Landlord, and (ii) an **"Operating Term"** commencing on the earlier of (x) the expiration of the Development Term or (y) the Commercial Operation Date and terminating on the twentieth (20th) anniversary thereof subject to a Removal Period of ninety (90) days from the expiration or termination of the Lease.

5. **COUNTERPARTS**. This Memorandum may be executed in multiple counterparts, each of which together shall be deemed an original, but all of which together shall constitute one and the same instrument.

6. **SUCCESSORS AND ASSIGNS**. This Memorandum shall be binding upon, and inure to the benefit of the Parties, and their respective heirs, successors, and assigns.

7. **CAPITALIZED TERMS**. Capitalized terms used in this Memorandum shall have the same meanings assigned to them in the Lease.

8. **RATIFICATION**. This Memorandum is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Lease, all of which are hereby ratified and affirmed. In the event of a conflict between the provisions of this Memorandum and the provisions of the Lease, the provisions of the Lease shall control. The Lease shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, ad assigns, subject to the provisions of the Lease.

[*Signature pages follow*]

IN WITNESS WHEREOF, the undersigned, Landlord and Tenant, have duly executed this Memorandum, effective as of the day and year first above written.

LANDLORD:

DEV PROPERTY IL LLC,
a Delaware limited liability company

By: [redacted]
Name: Thomas J. Meehan
Title: Vice President

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF DELAWARE

This instrument was acknowledged before me this 30th day of January, 2025, by Thomas J. Meehan, the Vice President of Dev Property IL LLC, a Delaware limited liability company, on behalf of said limited liability company.

My commission expires 11/8/2025

[redacted]
Notary Public

[redacted]
Printed Name

[redacted]

[NOTARY SEAL]

[signatures continue on following page]

TENANT:

5710 INNER PARK DR ~~SOLAR~~, LLC,
a Delaware limited liability company

By: _____
Name: Barrett LaChance
Title: Authorized Person

COMMONWEALTH OF VIRGINIA

COUNTY OF ARLINGTON

This instrument was acknowledged before me this 27th day of January, 2025, by Barrett LaChance, Authorized Person of 5710 Inner Park Dr ~~Solar~~, LLC, a Delaware limited liability company, on behalf of said limited liability company.

My commission expires 10/31/2028

[redacted]
Notary Public

[redacted]
Printed Name

[NOTARY SEAL] [redacted]

[End of Signatures]

EXHIBIT A
LEASED PREMISES

All of those lots or parcels of land in Madison County and more particularly described as follows:

A TRACT OF LAND BEING PART OF LARGER TRACTS OF LAND AS CONVEYED TO EXETER INNER PARK LAND, LLC BY INSTRUMENTS RECORDED AS DOCUMENT NUMBER 2018R18990 AND 2018R26451 OF THE MADISON COUNTY RECORDS, LOCATED IN SECTION 25, TOWNSHIP 4 NORTH, RANGE 9 WEST OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, ILLINOIS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF ABOVE SAID SECTION 25; THENCE NORTH 00 DEGREES 02 MINUTES 11 SECONDS EAST ALONG THE WESTERLY LINE OF ABOVE SAID SECTION 25 A DISTANCE OF 66.57 FEET TO A POINT ON THE NORTHERN RIGHT-OF-WAY LINE OF CHAIN OF ROCKS ROAD (ROUTE 66 BY-PASS), 80 FEET WIDE; THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING; SOUTH 87 DEGREES 45 MINUTES 42 SECONDS EAST 1332.14; THENCE SOUTH 87 DEGREES 14 MINUTES 07 SECONDS EAST 38.31 FEET TO A POINT ON A CURVE TO THE RIGHT FOR WHICH THE RADIUS POINT BEARS NORTH 02 DEGREES 45 MINUTES 53 SECONDS EAST 40.00 FEET, SAID POINT ALSO BEING LOCATED ON THE EASTERLY OF A PROPOSED ROAD, 80 FEET WIDE, SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT; THENCE ALONG LAST SAID EASTERLY LINE THE FOLLOWING; ALONG LAST SAID CURVE, WITH A CHORD WHICH BEARS NORTH 43 DEGREES 28 MINUTES 11 SECONDS WEST 55.34 FEET AN ARC LENGTH OF 61.11 FEET TO A POINT OF TANGENCY; NORTH 00 DEGREES 17 MINUTES 44 SECONDS EAST, 2,498.24 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF INNER PARK DRIVE, 80 FEET WIDE, SAID POINT ALSO BEING THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 40.00 FEET; THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING COURSES AND DISTANCES; ALONG SAID CURVE WITH AN ARC LENGTH OF 62.83 FEET AND A CHORD WHICH BEARS NORTH 45 DEGREES 17 MINUTES 44 SECONDS EAST, 56.57 FEET; SOUTH 89 DEGREES 42 MINUTES 16 SECONDS EAST, 120.00 FEET TO A POINT OF CURVATURE TO THE LEFT HAVING A RADIUS OF 1,780.00 FEET; ALONG SAID CURVE WITH AN ARC LENGTH OF 70.44 FEET AND A CHORD WHICH BEARS NORTH 89 DEGREES 09 MINUTES 43 SECONDS EAST, 70.44 FEET; NORTH 88 DEGREES 01 MINUTE 42 SECONDS EAST, 212.52 FEET TO A POINT OF CURVATURE TO THE RIGHT HAVING A RADIUS OF 1,720.00 FEET; ALONG SAID CURVE WITH AN ARC LENGTH OF 68.07 FEET AND A CHORD WHICH BEARS NORTH 89 DEGREES 9 MINUTES 43 SECONDS EAST, 68.06 FEET; SOUTH 89 DEGREES 42 MINUTES 16 SECONDS EAST, 557.18 FEET TO A POINT OF CURVATURE TO THE RIGHT HAVING A RADIUS OF 145.00 FEET; THENCE ALONG SAID CURVE WITH AN ARC LENGTH OF 227.77 FEET AND A CHORD WHICH BEARS SOUTH 44 DEGREES 42 MINUTES 16 SECONDS EAST, 205.06 FEET TO THE WEST RIGHT-OF-WAY LINE OF SAID INNER PARK DRIVE; THENCE ALONG SAID RIGHT-OF-WAY LINE, SOUTH 00 DEGREES 17 MINUTES 44 SECONDS WEST 1,302.44 FEET TO A POINT OF CURVATURE TO THE RIGHT HAVING A RADIUS OF 44.00 FEET; ALONG SAID CURVE WITH AN ARC LENGTH OF 58.98 FEET AND A CHORD WHICH BEARS SOUTH 38 DEGREES 41 MINUTES 58 SECONDS WEST, 54.67 FEET TO A POINT OF REVERSE CURVATURE TO THE LEFT HAVING A RADIUS OF 76.50 FEET AND ALONG SAID CURVE WITH AN ARC LENGTH OF 342.88 FEET AND A CHORD WHICH BEARS SOUTH 51 DEGREES 18 MINUTES 02 SECONDS EAST, 119.90 FEET; THENCE SOUTH 00 DEGREES 17 MINUTES 44 SECONDS WEST, 954.34 FEET TO THE NORTHERN RIGHT-OF-WAY LINE OF ABOVE SAID CHAIN OF ROCKS ROAD (ROUTE 66 BY-PASS); THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING COURSES AND DISTANCES; SOUTH 76 DEGREES 13 MINUTES 26 SECONDS WEST, 89.97 FEET; SOUTH 87 DEGREES 50 MINUTES 11 SECONDS WEST, 180.05 FEET; SOUTH 74 DEGREES 44 MINUTES 37 SECONDS WEST, 266.03 FEET

AND NORTH 87 DEGREES 14 MINUTES 07 SECONDS WEST, 711.94 FEET TO THE POINT OF BEGINNING; CONTAINING 72.877 ACRES, MORE OR LESS; SITUATED IN THE COUNTY OF MADISON, STATE OF ILLINOIS.

EXCEPT THE COAL, OIL, GAS AND OTHER MINERALS UNDERLYING SAID PREMISES AND THE RIGHT TO MINE AND REMOVE SAME.

Property Tax Identification #: 18-1-14-25-00-000-002.006
Address: 5710 Inner Park Drive, Edwardsville, IL 62025

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE EDWARDSVILLE, IL 62025

PHOTOVOLTAIC (PV) SYSTEM

90% DESIGN DRAWINGS

GENERAL NOTES

ANNOTATIVE DEFINITIONS

: EQUIPMENT TAG. REFER TO SINGLE LINE DIAGRAM FOR DETAILS

: FEEDER TAG. REFER TO SINGLE LINE DIAGRAM FOR DETAILS

: ASSEMBLY REFERENCE POINT TAG

: ELEVATION CALLOUT

: SECTION CALLOUT

: SITE DETAIL CALLOUT

: COLUMN LINE

ELECTRICAL DEFINITIONS

S#.##	:	INVERTER# - STRING##
INV#	:	INVERTER #
ACCP#	:	AC INVERTER COMBINER PANEL #
MDS#	:	MAIN DISCONNECT SWITCH #
LC#	:	LOADS CENTER #
MNTR#	:	MONITORING EQUIPMENT #
XFMR #	:	TRANSFORMER #
EGC	:	EQUIPMENT GROUNDING CONDUCTOR
GEC	:	GROUNDING ELECTRODE CONDUCTOR
OCPD	:	OVER CURRENT PROTECTION DEVICE
SPD	:	SURGE PROTECTION DEVICE
TVSS	:	TRANSIENT VOLTAGE SURGE SUPPRESSION DEVICE

GENERAL

1. ALL WIRING METHODS AND INSTALLATION PRACTICES SHALL BE IN COMPLIANCE WITH THE APPROPRIATE ELECTRIC CODE OF THE TERRITORY OF THE INSTALLATION, LOCAL STATE/PROVINCE CODES, AND OTHER APPLICABLE LOCAL CODES.
2. CONTRACTOR SHALL BECOME FAMILIAR WITH ALL INSTALLATION INFORMATION IN THE EQUIPMENT DOCUMENTATION FROM THE MANUFACTURER PRIOR TO BEGINNING THE INSTALLATION, AND SHALL OBSERVE THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
3. CONTRACTOR SHALL CONFIRM THAT CONDUIT LOCATE SERVICES HAVE BEEN COMPLETED BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING IS DEMOLISHED, DRILLED, OR CUT, REGARDLESS OF THE LOCATION ON THE SITE.
4. CONTRACTOR SHALL UPDATE "RED-LINE" CONSTRUCTION DOCUMENTS ON A DAILY BASIS, AND PROVIDE THE COMPLETE RED-LINE DOCUMENT PACKAGE TO THE PROJECT MANAGER UPON SUBSTANTIAL COMPLETION OF THE PROJECT.
5. CONTRACTOR SHALL DAILY CLEAN UP TRASH AND WASTE RESULTING FROM THEIR WORK. CONTRACTOR SHALL DISPOSE OF ALL TRASH IN LOCATIONS AND/OR RECEPTACLES DESIGNATED BY OWNER. PACKING MATERIALS SUCH AS CARDBOARD AND RECYCLABLE PLASTICS SHALL BE RECYCLED ONSITE OR REMOVED OFFSITE BY THE CONTRACTOR FOR OFFSITE RECYCLING.
6. CONTRACTOR SHALL USE APPROVED FALL PROTECTION AT ALL TIMES WHEN WORKING MORE THAN 6 FEET ABOVE THE GROUND OR FLOOR AND WITHIN 15' OF ROOF EDGE OR OTHER FALL HAZARD UNLESS THE ROOF PARAPET IS AT LEAST 39" TALL.
7. EQUIPMENT AND MATERIALS SHALL NOT BE STORED WITHIN 15' OF A FALL HAZARD UNLESS AN APPROVED BARRIER PROTECTS THE FALL HAZARD.
8. WORKERS SHALL USE APPROPRIATE PPE AT ALL TIMES, INCLUDING HARDHAT, STEEL-TOED BOOTS, REFLECTIVE SHIRT OR VEST, EYE PROTECTION, AND WORK GLOVES.

PROJECT CONTACTS

OWNER'S REPRESENTATIVES

SUMMIT RIDGE ENERGY

350 N. ORLEANS STREET, SUITE 9711; CHICAGO, IL 60654

VANESA ROJAS, ASSISTANT PROJECT MANAGER

VROJAS@SRENERGY.COM

224-245-4839

KYLE HAWKINSON, DIRECTOR, PROJECT MANAGEMENT

KHAWKINSON@SRENERGY.COM

773-295-2662

PROJECT TEAM

AZIMUTH ENERGY, LLC.

7800 FORSYTH; CLAYTON, MO 63105

CORY BRENNAN, PE; ENGINEER OF RECORD

CORY@AZIMUTH.ENERGY

636.717.8484 EXT. 186

BLAKE MARCHI, EIT; SENIOR ENGINEER

BLAKE@AZIMUTH.ENERGY

636.717.8484 EXT. 187

LANA FEIX, DIRECTOR OF PROJECT MANAGEMENT

LANA@AZIMUTH.ENERGY

1.314.308.5120

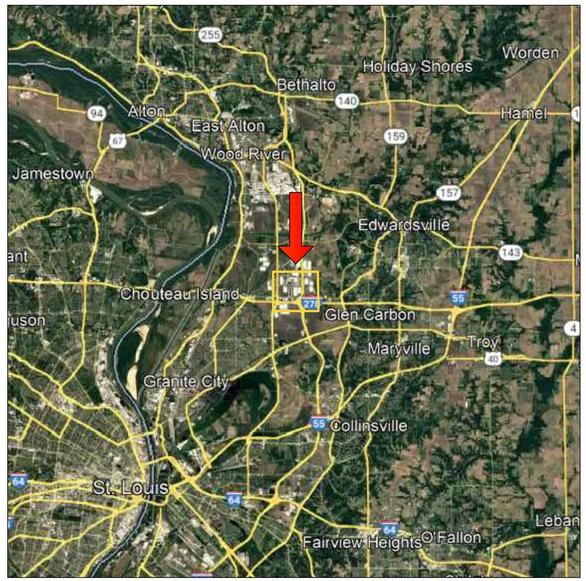
VICINITY MAP

N

SITE SUMMARY

COORDINATES: 38.765 N, -90.051 W

ELEVATION: 423 FT





SYSTEM SUMMARY

DC SYSTEM SIZE:	6218.600 kW-DC STC
AC SYSTEM SIZE:	4950.000 kW-AC
MODULES:	(10540) HANWHA QCELLS Q.PEAK DUO XL-G11S.3/BFG 590W
INVERTERS:	(46) SOLAREDGE SE110K-US (DE-RATED TO 107.61 KW)
OPTIMIZERS:	(10540) SOLAREDGE C651U SINGLE INPUT OPTIMIZERS
RACKING:	PANELCLAW CLAWFR 10
TILT ANGLE:	10°
AZIMUTH:	180° (SOUTH=180°)
DC SYSTEM ARCHITECTURE:	UNGROUNDED, 1000 VDC MAX

DESIGN CRITERIA & CODES

DESIGN CRITERIA

PV SYSTEM COUPLING VOLTAGE:	277Y/480 VAC
PV SYSTEM COUPLING CONFIGURATION:	3φ 4W WYE-G
POCC INTERCONNECTION VOLTAGE:	12.47 kV
POCC INTERCONNECTION CONFIGURATION:	3φ 4W WYE-G
WIND SPEED:	106
SNOW LOAD:	20
EXPOSURE CATEGORY:	C
RISK CATEGORY:	II
AVERAGE HIGH TEMPERATURE:	35° C
EXTREME LOW TEMPERATURE:	-19° C

REFERENCE CODES

ELECTRICAL CODE:	NEC 2023
BUILDING CODE:	IBC 2021
	-

DRAWING REFERENCES

BASIS OF DESIGN	REFERENCE TITLE	SOURCE	REVISION DATE	SEALED	TYPE
PANELCLAW RACKING	RACKING CONSTRUCTION SET	PANELCLAW	2025-05-23	YES	PDF
PALLET LOADING PLAN	5710 INNER PARK DR. PALLET LOADING PLAN	STRUCTURAL ENGINUITY	2025-07-29	YES	PDF
INCORPORATED BY REFERENCE	**REFERENCE TITLE**	**SOURCE**	**REVISION DATE**	**SEALED**	**TYPE**
PANELCLAW RACKING	RACKING CONSTRUCTION SET	PANELCLAW	2025-05-23	YES	PDF
MEDIUM VOLTAGE DRAWINGS	SUMMIT RIDGE - ROOFTOP PV 60% DRAWINGS	CDG	2025-07-30	NO	PDF
ALSO ENERGY DRAWINGS	INNER PARK ROOFTOP	ALSO ENERGY	2025-07-24	NO	PDF

PROJECT INFORMATION

SHEET INDEX

		30% DESIGN DRAWINGS	60% DESIGN DRAWINGS REV B	90% DESIGN DRAWINGS		
PV001	TITLE PAGE	X	X	X		
PV100	SITE PLAN	X	X	X		
PV101	ARRAY LAYOUT		X	X		
PV200	DC SINGLE LINE DIAGRAM	X	X	X		
PV210	AC SINGLE LINE DIAGRAM	X	X	X		
PV220	LOW VOLTAGE SINGLE LINE DIAGRAM			X		
PV230	GROUNDING ELECTRODE DIAGRAM			X		
PV240	ELECTRICAL PLAN		X	X		
PV250	STRINGING PLAN: INVERTERS 1 - 6		X	X		
PV251	STRINGING PLAN: INVERTERS 7 - 12		X	X		
PV252	STRINGING PLAN: INVERTERS 13 - 18		X	X		
PV253	STRINGING PLAN: INVERTERS 19 - 24		X	X		
PV254	STRINGING PLAN: INVERTERS 25 - 30		X	X		
PV255	STRINGING PLAN: INVERTERS 31 - 36		X	X		
PV256	STRINGING PLAN: INVERTERS 37 - 40		X	X		
PV257	STRINGING PLAN: INVERTERS 41 - 46		X	X		
PV300	DETAILS AND DATA SHEETS	X	X	X		
PV301	PLACARD DETAILS					
PV302	DETAILS AND ELEVATIONS		X	X		
S1.0	STRUCTURAL ENGINUITY - PALLET LOADING PLAN			X		
PC-1	PANELCLAW - COVER SHEET		X	X		
PC-2	PANELCLAW - PROJECT SUMMARY		X	X		
PC-3	PANELCLAW - ARRAY SITE MAP		X	X		
PC-4	PANELCLAW - TYPICAL ARRAY DIMENSIONS		X	X		
PC-5	PANELCLAW - ASSEMBLIES		X	X		
PC-6	PANELCLAW - RACKING COMPONENTS		X	X		
PC-7	PANELCLAW - BALLAST LEGEND		X	X		
PC-8	PANELCLAW - BALLAST LAYOUT - 1.1		X	X		
PC-9	PANELCLAW - BALLAST LAYOUT - 1.2		X	X		
PC-10	PANELCLAW - BALLAST LAYOUT - 1.3		X	X		
PC-11	PANELCLAW - BALLAST LAYOUT - 1.4		X	X		
PC-12	PANELCLAW - BALLAST LAYOUT - 1.5		X	X		
PC-13	PANELCLAW - BALLAST LAYOUT - 1.6		X	X		
PC-14	PANELCLAW - BALLAST LAYOUT - 1.7		X	X		
PC-15	PANELCLAW - BALLAST LAYOUT - 1.8		X	X		
PC-16	PANELCLAW - BALLAST LAYOUT - 1.9		X	X		
PC-17	PANELCLAW - BALLAST LAYOUT - 1.10		X	X		
PC-18	PANELCLAW - BALLAST LAYOUT - 1.11		X	X		
PC-19	PANELCLAW - BALLAST LAYOUT - 1.12		X	X		
PC-20	PANELCLAW - BALLAST LAYOUT - 1.13		X	X		
PC-21	PANELCLAW - BALLAST LAYOUT - 1.14		X	X		
PC-22	PANELCLAW - BALLAST LAYOUT - 1.15		X	X		
PC-23	PANELCLAW - BALLAST LAYOUT - 1.16		X	X		
PC-24	PANELCLAW - BALLAST LAYOUT - 1.17		X	X		
PC-25	PANELCLAW - BALLAST LAYOUT - 1.18		X	X		
PC-26	PANELCLAW - BALLAST LAYOUT - 1.19		X	X		
PC-27	PANELCLAW - BALLAST LAYOUT - 1.20		X	X		
PC-28	PANELCLAW - BALLAST LAYOUT - 1.21		X	X		
PC-29	PANELCLAW - BALLAST LAYOUT - 1.22		X	X		
PC-30	PANELCLAW - BALLAST LAYOUT - 1.23		X	X		
PC-31	PANELCLAW - BALLAST LAYOUT - 1.24		X	X		
PC-32	PANELCLAW - BALLAST LAYOUT - 1.25		X	X		
PC-33	PANELCLAW - BALLAST LAYOUT - 1.26		X	X		
PC-34	PANELCLAW - BALLAST LAYOUT - 1.27		X	X		
PC-35	PANELCLAW - BALLAST LAYOUT - 1.28		X	X		
MV-001	CDG - ONE LINE DIAGRAM 12.47KV			X		
MV-100	CDG - MEDIUM VOLTAGE GROUNDING DETAILS			X		
MV-200	CDG - MEDIUM VOLTAGE GROUNDING DETAILS			X		
MV-201	CDG - MEDIUM VOLTAGE POLE DETAILS			X		
MV-202	CDG - MEDIUM VOLTAGE POLE DETAILS			X		
MV-203	CDG - MEDIUM VOLTAGE POLE DETAILS			X		
WT043	ALSO - COVER SHEET			X		
WT050	ALSO - GENERAL NOTES			X		
WT100	ALSO - ENCLOSURE SUMMARY			X		
WT101	ALSO - SINGLE LINE DIAGRAM -DAS 1			X		
WT102	ALSO - SINGLE LINE DIAGRAM - ARRAY 1			X		
WT103	ALSO - SINGLE LINE DIAGRAM - WEATHER STATION 1			X		
WT104	ALSO - SINGLE LINE DIAGRAM - NETWORK ENCLOSURE 1			X		
WT200	ALSO - PANEL LAYOUT - DAS 1			X		
WT201	ALSO - PANEL LAYOUT - WEATHER STATION 1			X		
WT202	ALSO - PANEL LAYOUT - NETWORK ENCLOSURE 1			X		
WT600	ALSO - SCHEMATIC - DAS 1			X		
WT601	ALSO - SCHEMATIC - DAS 1			X		
WT602	ALSO - SCHEMATIC - WEATHER STATION 1			X		
WT603	ALSO - SCHEMATIC - NETWORK ENCLOSURE 1			X		
WT670	ALSO - COMMUNICATIONS 1			X		
WT671	ALSO - COMMUNICATIONS 2			X		
WT680	ALSO - LOCATION BOMS			X		
WT690	ALSO - SERVICES INCLUDED			X		

ENGINEER-OF-RECORD

AZIMUTH ENERGY

PRELIMINARY

NOT FOR CONSTRUCTION

ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

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REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

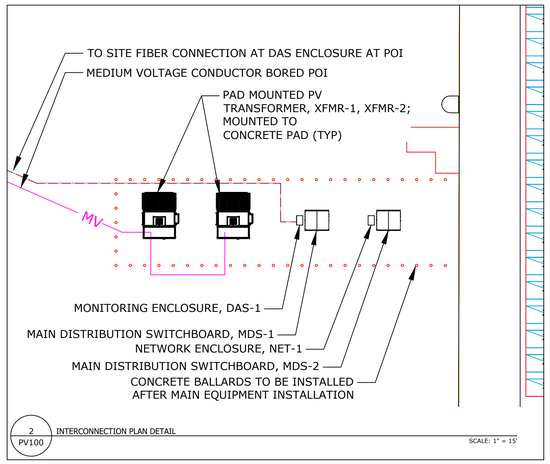
JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE:

NOT TO SCALE

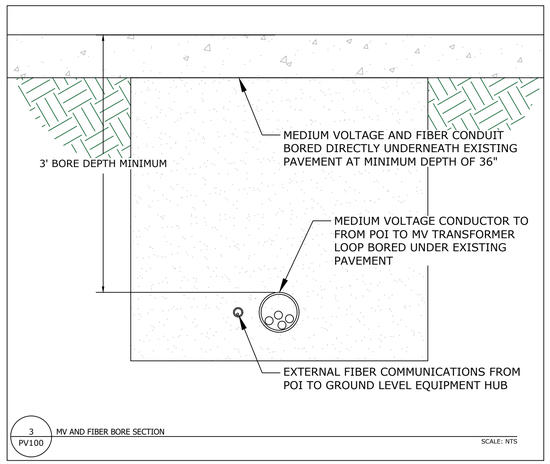
TITLE PAGE

PV001



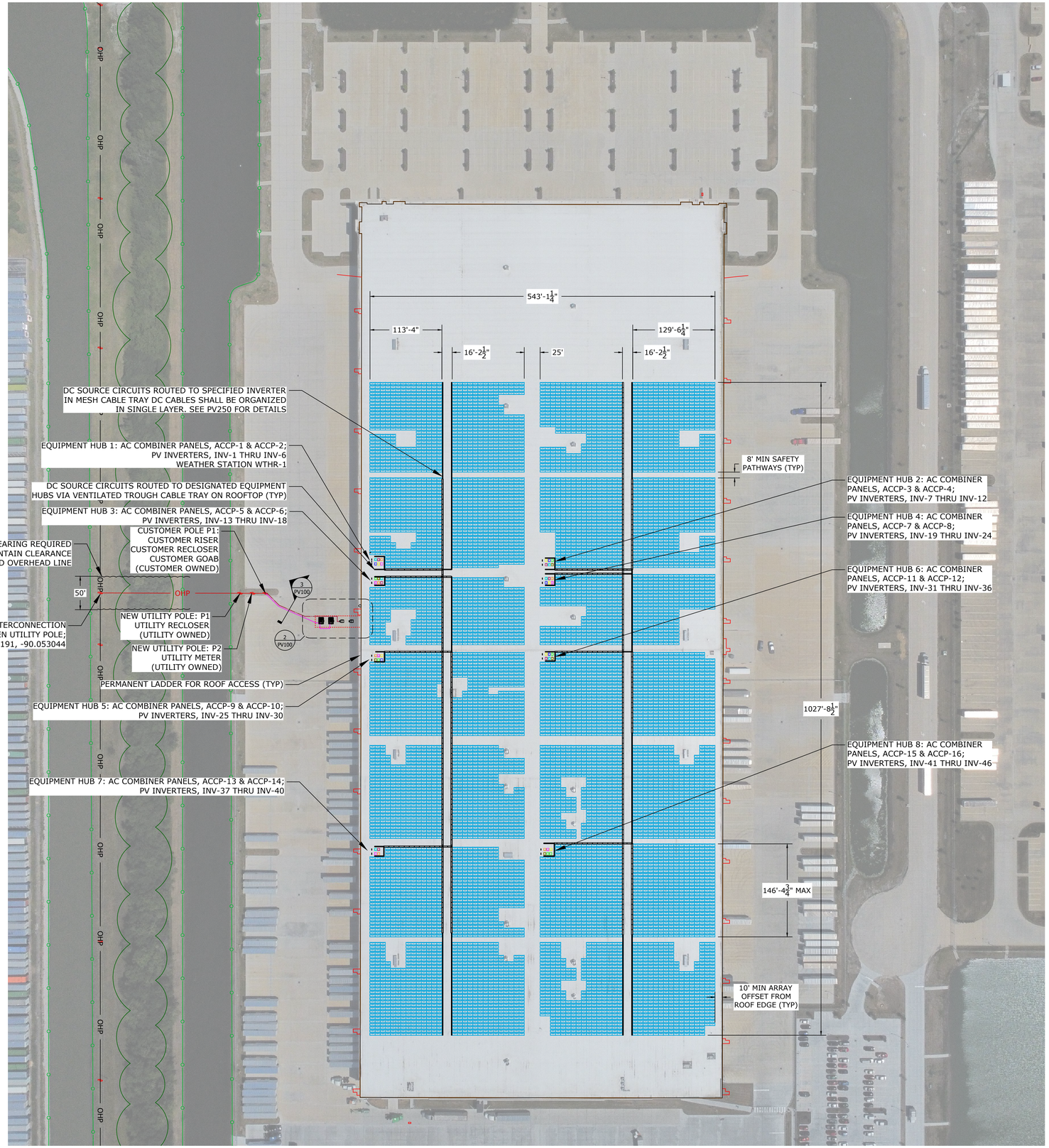
2 / PV100 INTERCONNECTION PLAN DETAIL

SCALE: 1" = 15'



3 / PV100 MV AND FIBER BORE SECTION

SCALE: NTS



PV SYSTEM SUMMARY

DC SYSTEM SIZE:	6218.600 kW-DC (STC)
AC SYSTEM SIZE:	4950.000 kW-AC
MODULES:	(46) SOLAREDGE SE110K-US (DE-RATED TO 107.61 KW)
STRINGS:	(276) 44 MAX MODULE STRINGS
OPTMIZERS:	(10540) SOLAREDGE C651U
INVERTERS:	(46) SOLAREDGE SE110K-US (DE-RATED TO 107.61 KW)
RACKING:	PANELCLAW CLAWFR 10
TILT ANGLE:	10°
AZIMUTH:	180°
GCR:	60.605%
PITCH:	17°

LEGEND

	BUILDING ROOF
MV	UNDER GROUND MV CONDUCTOR
OHP	NEW OVER HEAD MV CONDUCTOR
OHP	EXISTING OVER HEAD MV CONDUCTOR

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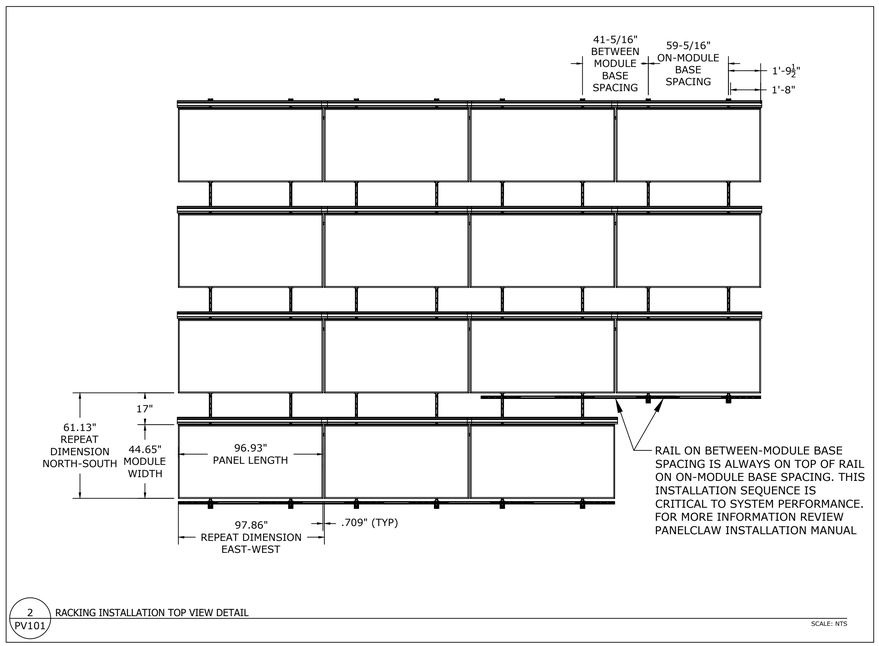
SCALE: 1" = 80' - 0"
0 80' 160'

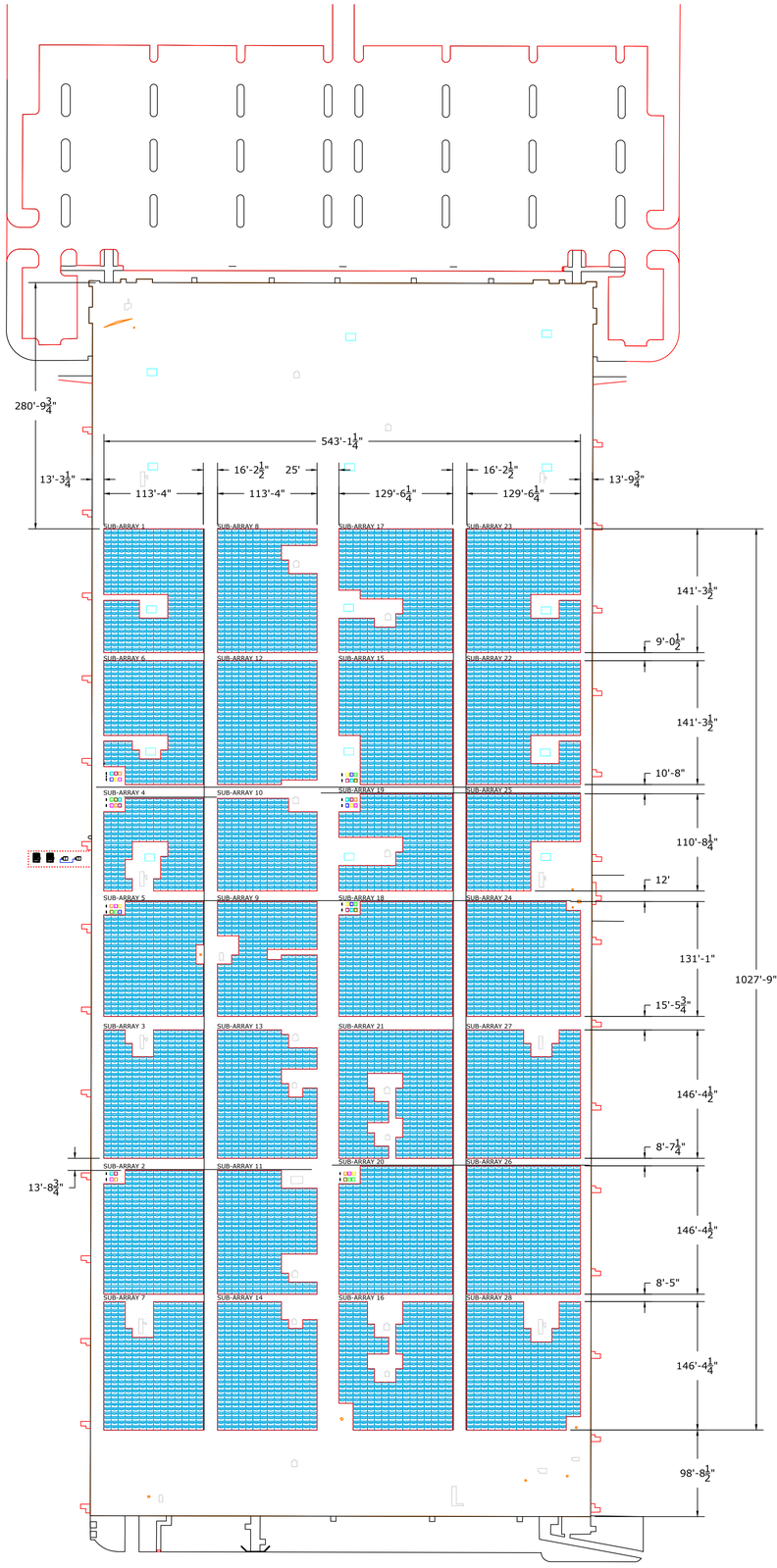
SITE PLAN

PV100



2 PV101 RACKING INSTALLATION TOP VIEW DETAIL

SCALE: NTS



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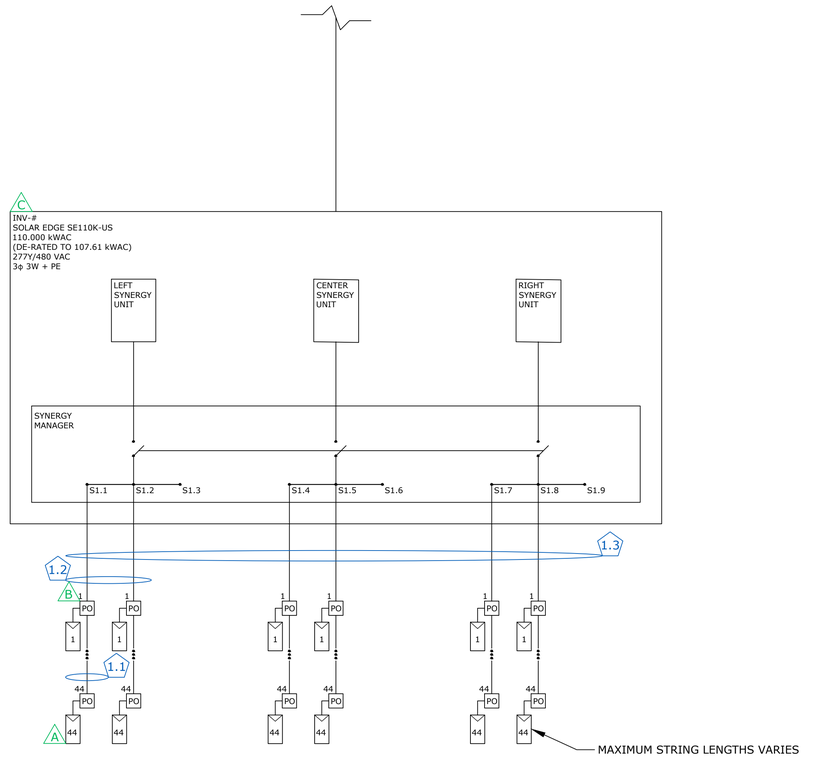
ARRAY PLAN

PV101



GROUNDING & BONDING NOTES

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR BONDING JUMPERS AND CONNECTIONS FROM RACKING TO ELECTRICAL EQUIPMENT AND BALANCE OF SYSTEMS.
3. GROUNDING CONNECTIONS FROM THE MODULE TO THE RACKING SYSTEM IS MADE VIA GROUNDING PINS AS A COMPONENT OF THE RACKING MID-CLAMP. SEE MANUFACTURER'S SPECIFICATIONS FOR ADDITIONAL DETAILS.
4. EGC AND/OR GEC CONTINUITY IN THE ARRAY RACKING IS PROVIDED BY BOLTED MECHANICAL CONNECTIONS WITHIN RACKING FRAMEWORK [NEC 250.64(C)]. THE GEC CONDUCTOR SHALL BE BONDED TO RACKING USING LISTED LUGS AT TWO OR MORE POINTS IN EACH SUB-ARRAY ASSEMBLY.
5. DC EQUIPMENT GROUNDING CONDUCTORS, GROUNDING ELECTRODE CONDUCTORS, AND BONDING JUMPERS SHALL BE CONNECTED BY MACHINE SCREWS THAT ENGAGE NOT LESS THAN TWO THREADS IN THE ENCLOSURE, OR BY BONDING LUGS WITH BOLTED HARDWARE APPROVED FOR THAT PURPOSE. SCREWS SHOULD BE THREAD-FORMING, NOT THREAD CUTTING.
6. ALL METALLIC CONDUITS ENTERING A JUNCTION BOX OR OTHER CONDUIT BODY WHERE OPENING CONSISTS OF CONCENTRIC RINGS SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE GROUNDING CONDUCTOR. EXCEPTIONS AS ALLOWED BY [NEC 250.97].
8. DC-GEC (WHEN REQUIRED) CAN BE COMBINED WITH AC-GEC. THE COMBINED CONDUCTOR SHALL BE SIZED AS THE LARGER OF THE TWO CONDUCTORS, AND BE CONTINUOUS, OR USE EXOTHERMIC WELDING, OR LISTED, IRREVERSIBLE COMPRESSION CONNECTORS (NEC 250.64).
10. GROUNDING CONDUCTORS SHALL USE COPPER CONDUCTOR ONLY.

ELECTRICAL NOTES

1. ELECTRICAL SYSTEM COMPONENTS SHALL BE UL-LISTED FOR THEIR INTENDED PURPOSE, INCLUDING BUT NOT LIMITED TO WIREWAYS, DISCONNECTS, JUNCTION BOXES, MODULES, COMBINERS, INVERTERS, ETC.
2. FINE-STRANDED WIRE SHALL NOT BE USED, UNLESS APPROVED IN ADVANCE. TAPS, TERMINAL BLOCKS, AND OTHER TYPES OF CONNECTORS THAT ARE NOT LISTED SHALL NOT BE USED FOR FINE-STRANDED WIRE.
3. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
4. ALL CONDUCTORS SHALL BE UL CLASS-B STRANDED WIRE UNLESS APPROVED IN WRITING BY THE ENGINEER.
3. COLOR MARKINGS OF CONDUCTORS SHALL BE CONSISTENT THROUGHOUT ELECTRICAL SYSTEM AND WHEN CONDUCTORS PASS THRU A BOX WITHOUT TERMINATING, CONDUCTORS SHALL BE MARKED/PHASED APPROPRIATELY.
6. WIRE TYPES SHALL BE AS FOLLOWS:

PV-WIRE	DC SINGLE CONDUCTOR EXPOSED WITHIN THE ARRAY OR IN CONDUIT

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE.
2. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS.
4. REFER TO DETAILS SHEET, PV300, FOR LABELING INFORMATION & LOCATIONS.
5. REFER TO DETAILS SHEET, PV300, FOR AC COMBINER PANEL AND MAIN DISTRIBUTION SWITCHBOARD EQUIPMENT SCHEDULES.
6. AC VOLTAGE DROP CALCULATIONS ASSUME ABSOLUTE POWER FACTOR VALUE OF 0.97.
7. INVERTERS ARE TRANSFORMERLESS AND DO NOT HAVE AN INTENTIONALLY GROUNDED, CURRENT-CARRYING CONDUCTOR, PER NEC 690.35

EQUIPMENT SCHEDULE

△#	QTY	EQUIPMENT ID	EQUIPMENT TYPE	MODEL NO.	NOTES
A	10540	INV-1.STR1 - INV-46.STR6	PV MODULE	HANWHA QCELLS Q.PEAK DUO XL-G11S.3/BFG 590W	-
B	10540	INV-1.PO1 - INV-46.PO37	PV OPTIMIZER	SOLAREDGE C651U	-
C	46	INV-1 - INV-46	INVERTER	SOLAREDGE SE110K-US (DE-RATED TO 107.61 KW)	110KWAC (DE-RATED TO 107.61 KW), 1000VDC, 480VAC, 3φ 4W
D	14	ACCP-1 - ACCP-12, ACCP-15, ACCP-16	AC COMBINER PANEL	600A BUS, 600AF/600AT MAIN BREAKER	42KAIC, 277Y/480 VAC, 3φ 4W, TVSS, NEMA 3R
E	2	ACCP-13, ACCP-14	AC COMBINER PANEL	400A BUS, 400AF/400AT MAIN BREAKER	30KAIC, 277Y/480 VAC, 3φ 4W, TVSS, NEMA 3R
F	2	MDS-1, MDS-2	MAIN DISTRIBUTION SWITCHBOARD	4000A BUS, 4000AF/4000AT MAIN BREAKER	65KAIC, 600VAC, TVSS, NEMA 3R
G	2	XFMR-1, XFMR-2	TRANSFORMER	-	2500KVA, 12.47 KV WYE-G PRIMARY || 277Y/480 VAC WYE-G SECONDARY
H	1	DAS-1	MONITORING ENCLOSURE	ALSO ENERGY	CELL REF TEMP, BOM SENSOR, AMBIENT TEMP SENSOR, INVERTER MONITORING, CAMERA & FIBER TO RS-485 CONVERTER

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

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PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
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BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
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PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

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CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

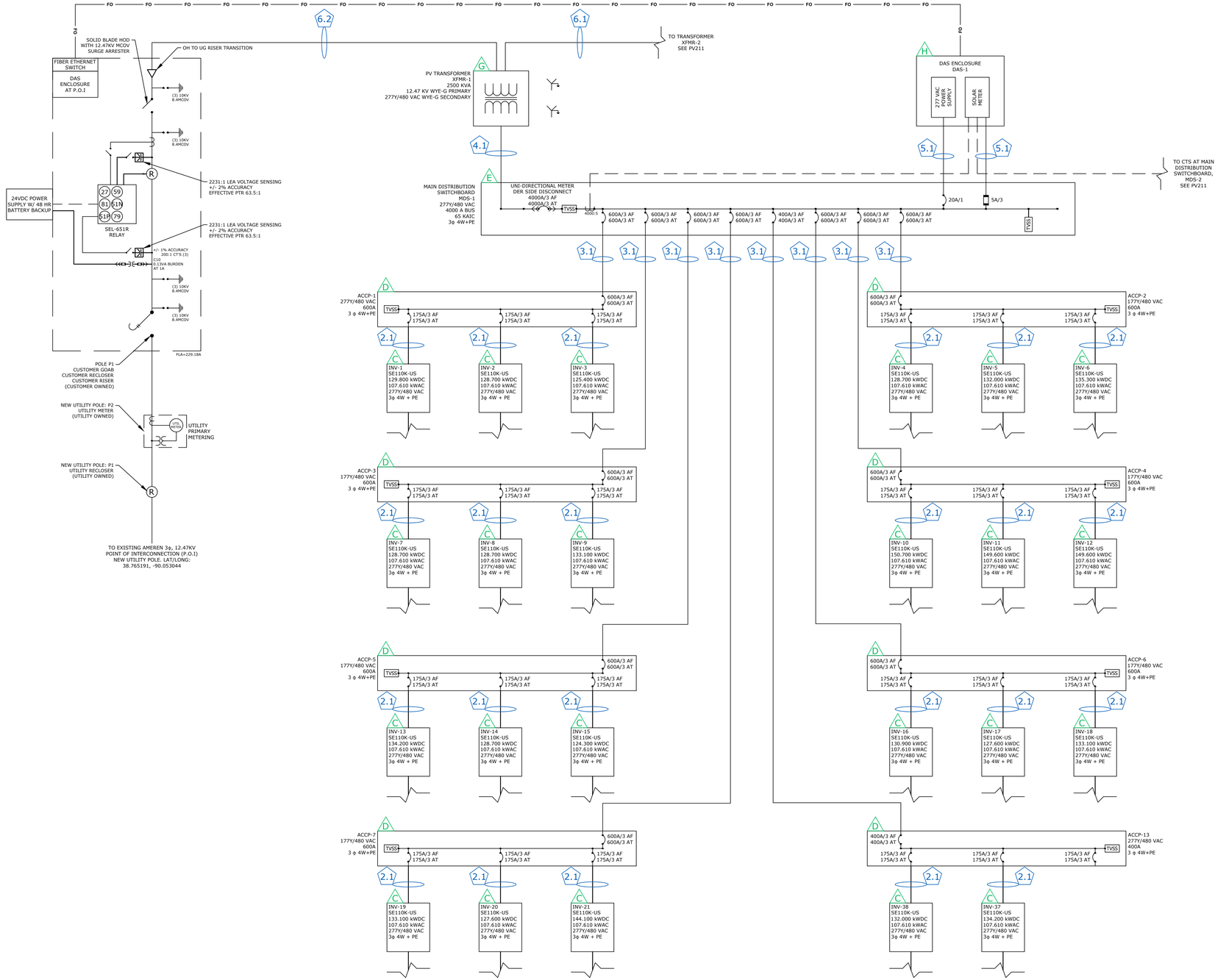
SCALE:

NOT TO SCALE

DC SINGLE LINE DIAGRAM

PV200

AGENDA



GROUNDING & BONDING NOTES

1. SEE SINGLE LINE DIAGRAM & SPECIFICATIONS FOR AC AND DC SPECIFIC GROUNDING DETAILS AND ADDITIONAL NOTES.
2. ALL METALLIC CONDUITS ENTERING A JUNCTION BOX OR OTHER CONDUIT BODY WHERE OPENING CONSISTS OF CONCENTRIC RINGS SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE GROUNDING CONDUCTOR. EXCEPTIONS AS ALLOWED BY [NEC 250.97].
3. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
4. GROUNDING CONDUCTORS SHALL USE COPPER CONDUCTOR ONLY.

ELECTRICAL NOTES

1. ELECTRICAL SYSTEM COMPONENTS SHALL BE UL-LISTED FOR THEIR INTENDED PURPOSE, INCLUDING BUT NOT LIMITED TO WIREWAYS, DISCONNECTS, JUNCTION BOXES, MODULES, COMBINERS, INVERTERS, ETC.
2. FINE-STRANDED WIRE SHALL NOT BE USED, UNLESS APPROVED IN ADVANCE. TAPS, TERMINAL BLOCKS, AND OTHER TYPES OF CONNECTORS THAT ARE NOT LISTED SHALL NOT BE USED FOR FINE-STRANDED WIRE.
3. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
4. ALL CONDUCTORS SHALL BE UL CLASS-B STRANDED WIRE UNLESS APPROVED IN WRITING BY THE ENGINEER.
3. COLOR MARKINGS OF CONDUCTORS SHALL BE CONSISTENT THROUGHOUT ELECTRICAL SYSTEM AND WHEN CONDUCTORS PASS THRU A BOX WITHOUT TERMINATING, CONDUCTORS SHALL BE MARKED/PHASED APPROPRIATELY.
4. COLOR MARKINGS AND IDENTIFICATION ON 240VAC L-L UNGROUNDED CONDUCTORS SHALL BE AS FOLLOWS:
   PHASE-A: BLACK, PHASE-B: RED
5. WIRE TYPES SHALL BE AS FOLLOWS:

   THWN-2/ XHHW-2 — ALL AC CONDUCTORS

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE.
2. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS.
3. BALANCED 3-PHASE, ONE PHASE SHOWN FOR CLARITY.
4. REFER TO DETAILS SHEET, PV300, FOR LABELING INFORMATION & LOCATIONS.
5. REFER TO DETAILS SHEET, PV300, FOR AC COMBINER PANEL AND MAIN DISTRIBUTION SWITCHBOARD EQUIPMENT SCHEDULES.
6. AC VOLTAGE DROP CALCULATIONS ASSUME ABSOLUTE POWER FACTOR VALUE OF 0.97.
7. INVERTERS ARE TRANSFORMERLESS AND DO NOT HAVE AN INTENTIONALLY GROUNDED, CURRENT-CARRYING CONDUCTOR, PER NEC 690.35

EQUIPMENT SCHEDULE

#	QTY	EQUIPMENT ID	EQUIPMENT TYPE	MODEL NO.	NOTES
A	10540	INV-1.STR1 - INV-46.STR6	PV MODULE	HANWHA QCELLS Q.PEAK DUO XL-G11S.3/BFG 590W	-
B	10540	INV-1.PO1 - INV-46.PO37	PV OPTIMIZER	SOLAREDGE C651U	-
C	46	INV-1 - INV-46	INVERTER	SOLAREDGE SE110K-US (DE-RATED TO 107.61 KW)	110KWAC (DE-RATED TO 107.61 KW), 1000VDC, 480VAC, 3ϕ 4W
D	14	ACCP-1 - ACCP-12, ACCP-15, ACCP-16	AC COMBINER PANEL	600A BUS, 600AF/600AT MAIN BREAKER	42KAIC, 277Y/480 VAC, 3ϕ 4W, TVSS, NEMA 3R
E	2	ACCP-13, ACCP-14	AC COMBINER PANEL	400A BUS, 400AF/400AT MAIN BREAKER	30KAIC, 277Y/480 VAC, 3ϕ 4W, TVSS, NEMA 3R
F	2	MDS-1, MDS-2	MAIN DISTRIBUTION SWITCHBOARD	4000A BUS, 4000AF/4000AT MAIN BREAKER	65KAIC, 600VAC, TVSS, NEMA 3R
G	2	XFMR-1, XFMR-2	TRANSFORMER	-	2500KVA, 12.47 KV WYE-G PRIMARY || 277Y/480 VAC WYE-G SECONDARY
H	1	DAS-1	MONITORING ENCLOSURE	ALSO ENERGY	CELL REF TEMP, BOM SENSOR, AMBIENT TEMP SENSOR, INVERTER MONITORING, CAMERA & FIBER TO RS-485 CONVERTER

AC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

FROM EQUIP ID	TO EQUIP ID	#	PARALLEL RUNS	CURRENT CARRYING CONDUCTORS	NEUTRAL CONDUCTOR	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]
INV-#	ACCP-#	2.1	1	(3) 4/0 AWG XHHW-2 AL	-	(1) #6 AWG THWN-2 CU	WIREWAY / 2-1/2" RMC	175
ACCP-#	MDS-#	3.1	2	(3) 500 MCM XHHW-2 AL	-	(1) #1 AWG THWN-2 CU	3" RMC/ PVC SCHD 80	600
MDS-#	XFMR-#	4.1	12	(3) 600 MCM XHHW-2 AL	(1) 600 MCM XHHW-2 AL	(1) 500 MCM THWN-2 CU	4" RMC	4000
MDS-#, ACCP-1	DAS-1, NET-1, WTHR-1	5.1	1	(1) #12 AWG THWN-2 CU	(1) #12 AWG THWN-2 CU	(1) #12 AWG THWN-2 CU	1" RMC	20
XFMR-2	XFMR-1	6.1	1	(3) #3/0 AWG MV-105 15KV	(1) 1/3 CONCENTRIC N	(1) #4 AWG THWN-2 CU	5" PVC SHC40	600
XFMR-1	POI	6.2	1	(3) 500 MCM MV-105 15KV	(1) 1/3 CONCENTRIC N	(1) #2 AWG THWN-2 CU	5" PVC SHC40	600

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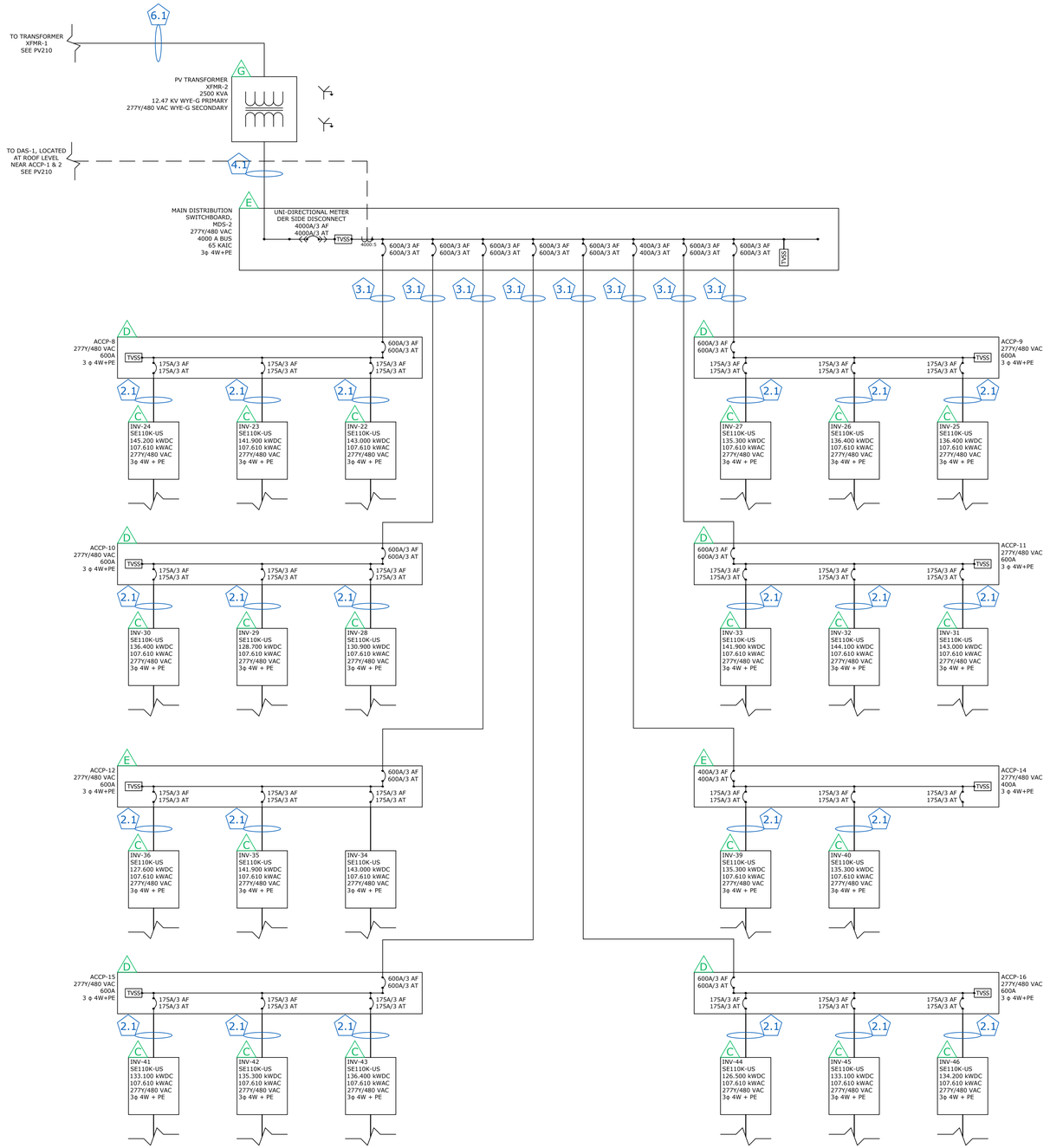
MDS-1 AC SINGLE LINE DIAGRAM

PV210



GROUNDING & BONDING NOTES

1. SEE SINGLE LINE DIAGRAM & SPECIFICATIONS FOR AC AND DC SPECIFIC GROUNDING DETAILS AND ADDITIONAL NOTES.
2. ALL METALLIC CONDUITS ENTERING A JUNCTION BOX OR OTHER CONDUIT BODY WHERE OPENING CONSISTS OF CONCENTRIC RINGS SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE GROUNDING CONDUCTOR. EXCEPTIONS AS ALLOWED BY [NEC 250.97].
3. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
4. GROUNDING CONDUCTORS SHALL USE COPPER CONDUCTOR ONLY.

ELECTRICAL NOTES

1. ELECTRICAL SYSTEM COMPONENTS SHALL BE UL-LISTED FOR THEIR INTENDED PURPOSE, INCLUDING BUT NOT LIMITED TO WIREWAYS, DISCONNECTS, JUNCTION BOXES, MODULES, COMBINERS, INVERTERS, ETC.
2. FINE-STRANDED WIRE SHALL NOT BE USED, UNLESS APPROVED IN ADVANCE. TAPS, TERMINAL BLOCKS, AND OTHER TYPES OF CONNECTORS THAT ARE NOT LISTED SHALL NOT BE USED FOR FINE-STRANDED WIRE.
3. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
4. ALL CONDUCTORS SHALL BE UL CLASS-B STRANDED WIRE UNLESS APPROVED IN WRITING BY THE ENGINEER.
3. COLOR MARKINGS OF CONDUCTORS SHALL BE CONSISTENT THROUGHOUT ELECTRICAL SYSTEM AND WHEN CONDUCTORS PASS THRU A BOX WITHOUT TERMINATING, CONDUCTORS SHALL BE MARKED/PHASED APPROPRIATELY.
4. COLOR MARKINGS AND IDENTIFICATION ON 240VAC L-L UNGROUNDED CONDUCTORS SHALL BE AS FOLLOWS:
   PHASE-A: BLACK, PHASE-B: RED
5. WIRE TYPES SHALL BE AS FOLLOWS:

   THWN-2/ XHHW-2 — ALL AC CONDUCTORS

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE.
2. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS.
3. BALANCED 3-PHASE, ONE PHASE SHOWN FOR CLARITY.
4. REFER TO DETAILS SHEET, PV300, FOR LABELING INFORMATION & LOCATIONS.
5. REFER TO DETAILS SHEET, PV300, FOR AC COMBINER PANEL AND MAIN DISTRIBUTION SWITCHBOARD EQUIPMENT SCHEDULES.
6. AC VOLTAGE DROP CALCULATIONS ASSUME ABSOLUTE POWER FACTOR VALUE OF 0.97.
7. INVERTERS ARE TRANSFORMERLESS AND DO NOT HAVE AN INTENTIONALLY GROUNDED, CURRENT-CARRYING CONDUCTOR, PER NEC 690.35

EQUIPMENT SCHEDULE

#	QTY	EQUIPMENT ID	EQUIPMENT TYPE	MODEL NO.	NOTES
A	10540	INV-1.STR1 - INV-46.STR6	PV MODULE	HANWHA QCELLS Q.PEAK DUO XL-G11S.3/BFG 590W	-
B	10540	INV-1.PO1 - INV-46.PO37	PV OPTIMIZER	SOLAREDGE C651U	-
C	46	INV-1 - INV-46	INVERTER	SOLAREDGE SE110K-US (DE-RATED TO 107.61 KW)	110KWAC (DE-RATED TO 107.61 KW), 1000VDC, 480VAC, 3φ 4W
D	14	ACCP-1 - ACCP-12, ACCP-15, ACCP-16	AC COMBINER PANEL	600A BUS, 600AF/600AT MAIN BREAKER	42KAIC, 277Y/480 VAC, 3φ 4W, TVSS, NEMA 3R
E	2	ACCP-13, ACCP-14	AC COMBINER PANEL	400A BUS, 400AF/400AT MAIN BREAKER	30KAIC, 277Y/480 VAC, 3φ 4W, TVSS, NEMA 3R
F	2	MDS-1, MDS-2	MAIN DISTRIBUTION SWITCHBOARD	4000A BUS, 4000AF/4000AT MAIN BREAKER	65KAIC, 600VAC, TVSS, NEMA 3R
G	2	XFMR-1, XFMR-2	TRANSFORMER	-	2500KVA, 12.47 KV WYE-G PRIMARY || 277Y/480 VAC WYE-G SECONDARY
H	1	DAS-1	MONITORING ENCLOSURE	ALSO ENERGY	CELL REF TEMP, BOM SENSOR, AMBIENT TEMP SENSOR, INVERTER MONITORING, CAMERA & FIBER TO RS-485 CONVERTER

AC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

FROM EQUIP ID	TO EQUIP ID	#.#	PARALLEL RUNS	CURRENT CARRYING CONDUCTORS	NEUTRAL CONDUCTOR	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]
INV-#	ACCP-#	2.1	1	(3) 4/0 AWG XHHW-2 AL	-	(1) #6 AWG THWN-2 CU	WIREWAY / 2-1/2" RMC	175
ACCP-#	MDS-#	3.1	2	(3) 500 MCM XHHW-2 AL	-	(1) #1 AWG THWN-2 CU	3" RMC/ PVC SCHD 80	600
MDS-#	XFMR-#	4.1	12	(3) 600 MCM XHHW-2 AL	(1) 600 MCM XHHW-2 AL	(1) 500 MCM THWN-2 CU	4" RMC	4000
MDS-#, ACCP-1	DAS-1, NET-1, WTHR-1	5.1	1	(1) #12 AWG THWN-2 CU	(1) #12 AWG THWN-2 CU	(1) #12 AWG THWN-2 CU	1" RMC	20
XFMR-2	XFMR-1	6.1	1	(3) #3/0 AWG MV-105 15KV	(1) 1/3 CONCENTRIC N	(1) #4 AWG THWN-2 CU	5" PVC SHC40	600
XFMR-1	POI	6.2	1	(3) 500 MCM MV-105 15KV	(1) 1/3 CONCENTRIC N	(1) #2 AWG THWN-2 CU	5" PVC SHC40	600

ENGINEER-OF-RECORD

AZIMUTH ENERGY
PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
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REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

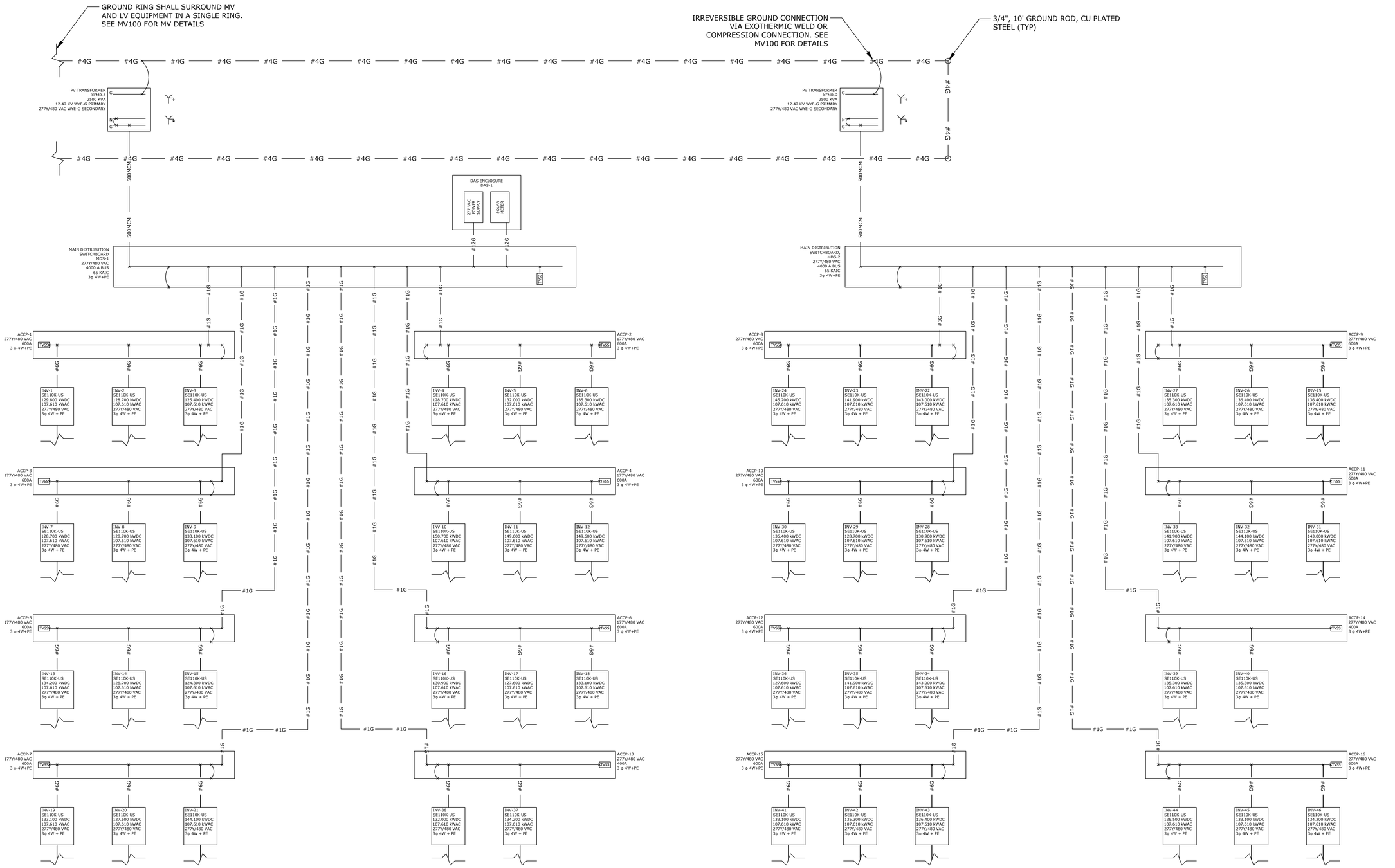
JOB NO.:	125040
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE:

NOT TO SCALE

MDS-2 AC SINGLE LINE DIAGRAM

PV211



LEGEND

500MCM 500MCM	500 MCM EQUIPMENT GROUNDING ELECTRODE
#1G #1G #1G #1G	#1 AWG EQUIPMENT GROUNDING ELECTRODE
#2G #2G #2G	#2 AWG EQUIPMENT GROUNDING ELECTRODE
#4G #4G #4G	#4 AWG EQUIPMENT GROUNDING ELECTRODE
#6G #6G #6G	#6 AWG EQUIPMENT GROUNDING ELECTRODE
#12G #12G #12G	#12 AWG EQUIPMENT GROUNDING ELECTRODE

ENGINEER-OF-RECORD

AZIMUTH ENERGY
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PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

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PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

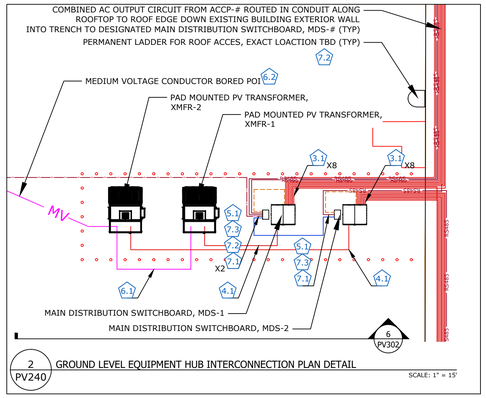
SCALE:

NOT TO SCALE

GROUNDING ELECTRODE DIAGRAM

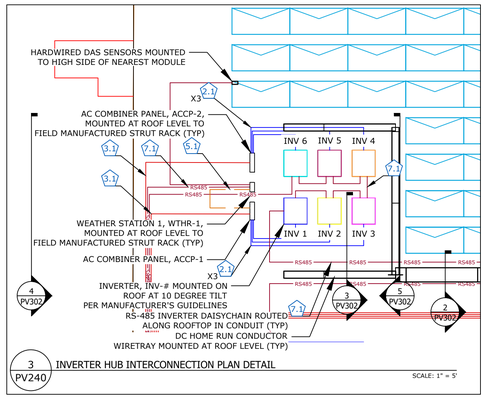
PV230





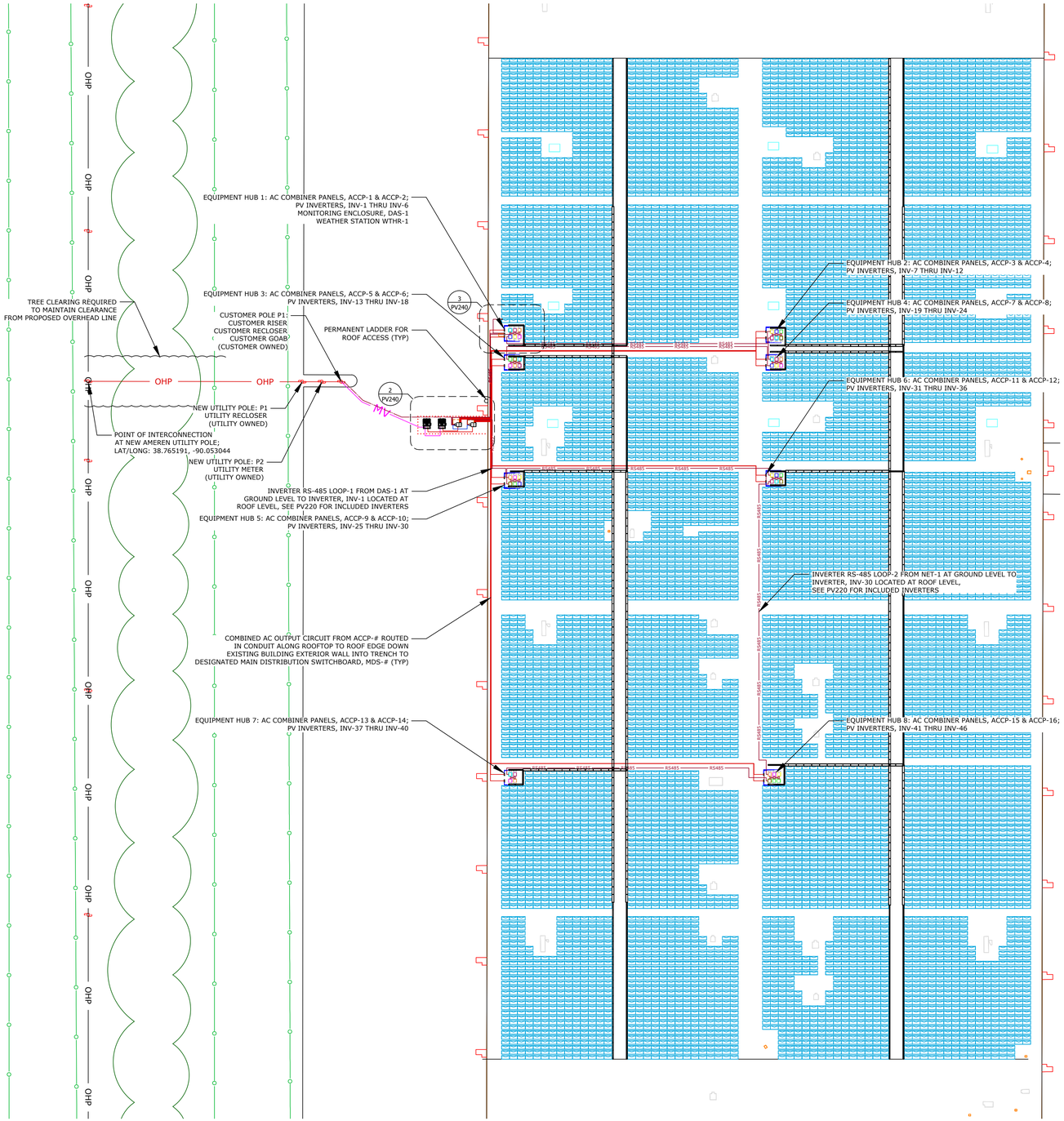
2 PV240 GROUND LEVEL EQUIPMENT HUB INTERCONNECTION PLAN DETAIL

SCALE: 1" = 15'



3 PV240 INVERTER HUB INTERCONNECTION PLAN DETAIL

SCALE: 1" = 5'



ELECTRICAL NOTES

1. SEE SINGLE LINE DIAGRAM & SPECIFICATIONS, AND OTHER ELECTRICAL SHEETS FOR SPECIFIC ELECTRICAL DETAILS AND ADDITIONAL NOTES.
2. ALL JUNCTION BOXES OR COMBINERS SHALL BE INSTALLED IN READILY ACCESSIBLE LOCATIONS.
3. WHERE APPLICABLE, POSITION THE ROOF PENETRATION JUNCTION BOX OVER THE PENETRATION SUCH THAT IT DIVERTS RAINWATER AWAY FROM FALLING ON THE TOP OF THE PENETRATION.
4. ALL CONDUIT RUNS ABOVE GROUND SHALL BE ELECTRICAL METALLIC TUBING (EMT) OR INTERMEDIATE METALLIC CONDUIT (IMC) AND ALL CONDUIT RUNS UNDER GROUND SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE SPECIFIED.
5. HORIZONTAL CONDUIT RUNS ON THE ROOF SHALL USE IMC CONDUIT WITH APPROPRIATELY INSTALLED EXPANSION FITTINGS. EMT IS NOT ALLOWED FOR HORIZONTAL CONDUIT RUNS ON A ROOF. PVC WITH APPROPRIATELY INSTALLED EXPANSION FITTINGS CAN BE SUBSTITUTED FOR HORIZONTAL RUNS ON A ROOF DEPENDING ON LOCAL JURISDICTION AND PROJECT ENGINEER'S APPROVAL. EMT IS ALLOWED FOR ALL OTHER ABOVE GROUND CONDUIT RUNS, UNLESS OTHERWISE NOTED.
6. WHEN ENTERING OR EXITING AN UNDER GROUND RUN, ALL CONDUIT TRANSITIONS SHALL HAVE A GALVANIZED RIGID SWEEP INSTALLED BETWEEN PVC SCHEDULE 40 CONDUIT (BELOW GROUND) AND GALVANIZED RIGID CONDUIT OR PVC SCHEDULE 80 (ABOVE GROUND).
7. CONDUIT PENETRATING ANY FIRE-RATE PARTITION SHALL BE SEALED WITH INTUMESCENT FIRE CAULK INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
8. PENETRATIONS INTO JUNCTION BOXES IN EXPOSED LOCATIONS SHOULD BE ON THE SIDES OR BOTTOM, AND NOT ON THE TOP SURFACE. WHEN THE CONNECTION PENETRATES THE TOP OF AN ENCLOSURE, WEATHER-TIGHT MEYERS HUBS SHALL BE USED. CONNECTIONS TO NEMA-3/3R (OR HIGHER) CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE MADE WITH UL-LISTED WEATHER-TIGHT CONNECTORS TO MAINTAIN THE ENCLOSURE'S NEMA RATING.
9. ALL WIRE TERMINATION HARDWARE SHALL BE TORQUED TO MANUFACTURER'S SPECIFICATIONS, AND MARKED WITH AN INDELIBLE MARKER TO INDICATE FINAL SETTING. INSTALLING CONTRACTOR SHALL REVIEW AND ADHERE TO ALL MANUFACTURER'S INSTRUCTIONS FOR TORQUE SETTINGS OF HARDWARE FOR CONDUCTOR TERMINATIONS. CONTRACTOR SHALL USE A CALIBRATED TORQUE WRENCH TO ENSURE THAT APPROPRIATE TORQUE SETTINGS ARE MET.
11. WHEN USING ALUMINUM WIRE, TERMINALS SHALL BE PADDLE LUGS WITH NOALOX ANTI-OXIDANT COMPOUND OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. ELECTRICIAN SHALL RE-CHECK TERMINAL TORQUE BEFORE COMPLETING THE PROJECT AND AGAIN AFTER ONE YEAR OF OPERATION.
12. WHERE TERMINATIONS ARE LOCATED OUTDOORS, APPROPRIATELY SIZED END FERRULES SHALL BE USED TO TERMINATE DC SOURCE CIRCUIT AND AC INVERTER OUTPUT CURRENT-CARRYING CONDUCTORS SMALLER THAN #2/0 AWG. DC CONDUCTORS SHALL USE UN-INSULATED END FERRULES, WHILE AC CONDUCTORS SHALL USE PRE-INSULATED END FERRULES.
13. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
14. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
15. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
16. WIRE NUTS MAY BE USED WITH AC CONDUCTORS ONLY, AND SHALL BE UL LISTED FOR WET LOCATIONS UNLESS INSIDE A BUILDING OR PROTECTED STRUCTURE.
17. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
18. A BACK-FED AC CIRCUIT BREAKER USED FOR CONNECTING "GRID-INTERACTIVE" SOLAR INVERTERS TO A BUILDING DISTRIBUTION SYSTEM SHALL NOT BE LABELED "LINE" AND "LOAD".
19. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
20. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
21. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
22. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.
23. WORKING CLEARANCE FOR EQUIPMENT INSIDE A BUILDING OR STRUCTURE SHALL COMPLY WITH NEC 110.26(A)(1) AND THESE DRAWINGS, AND BE A MINIMUM OF THE WIDTH OF THE EQUIPMENT OR 30" WHICHEVER IS GREATER.

AC CIRCUITS NOTES

1. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
2. AC CONDUCTORS FOR MULTIPLE INVERTERS IN A COMMON RACEWAY SHALL BE BUNDLED SEPARATELY USING APPROVED ZIP TIES. RUNS LONGER THAN 6 FEET SHALL BE ZIPTIED AT 6-FOOT INTERVALS.
3. INSULATED END FERRULES SHALL BE USED FOR AC PHASE CONDUCTORS FOR INVERTER OUTPUT CIRCUIT CONDUCTORS SMALLER THAN 1/0.
4. INVERTER AC OUTPUT SHALL BE CONNECTED TO THE LOAD SIDE OF METER, AC DISCONNECT, OR OTHER DEVICE.
5. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR INVERTER OUTPUT CIRCUITS OR OTHER AC CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTIOXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.

GENERAL NOTES

1.	CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
2.	CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

SHEET LEGEND

	INVERTER OUTPUT CIRCUIT
	COMBINED AC OUTPUT CIRCUIT
	CONTROL POWER CIRCUIT
OHP	OVERHEAD MEDIUM VOLTAGE CONDUCTOR
OHP	EXISTING OVERHEAD MEDIUM VOLTAGE CONDUCTOR
FO	CAT6 ETHERNET
RS485	RS-485 CONDUCTOR
	BUILDING ROOF
	TREE LINE
	WATERWAY

AC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

FROM EQUIP ID	TO EQUIP ID	(#.#)	PARALLEL RUNS	CURRENT CARRYING CONDUCTORS	NEUTRAL CONDUCTOR	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]
INV-#	ACCP-#	2.1	1	(3) 4/0 AWG XHHW-2 AL	-	(1) #6 AWG THWN-2 CU	WIREWAY / 2-1/2" RMC	175
ACCP-#	MDS-#	3.1	2	(3) 500 MCM XHHW-2 AL	-	(1) #1 AWG THWN-2 CU	3" RMC/ PVC SCHD 80	600
MDS-#	XFMR-#	4.1	12	(3) 600 MCM XHHW-2 AL	(1) 600 MCM XHHW-2 AL	(1) 500 MCM THWN-2 CU	4" RMC	4000
MDS-#, ACCP-1	DAS-1, NET-1, WTHR-1	5.1	1	(1) #12 AWG THWN-2 CU	(1) #12 AWG THWN-2 CU	(1) #12 AWG THWN-2 CU	1" RMC	20
XFMR-2	XFMR-1	6.1	1	(3) #3/0 AWG MV-105 15KV	(1) 1/3 CONCENTRIC N	(1) #4 AWG THWN-2 CU	5" PVC SHC40	600
XFMR-1	POI	6.2	1	(3) 500 MCM MV-105 15KV	(1) 1/3 CONCENTRIC N	(1) #2 AWG THWN-2 CU	5" PVC SHC40	600

COMMUNICATIONS CONDUCTOR AND CONDUIT SCHEDULE

(#.#)	COMMUNICATION CONDUCTORS	CONDUIT SIZE & TYPE [INCHES]
7.1	(1) RS485 TWISTED SHIELDED BELDEN 3106A OR EQUAL	(1) 1" RMC / WIRE TRAY
7.2	(1) 12C MM FIBER OUTDOOR CORNING - 012TU4 -T4790D20	(1) 2" PVC SCHD80 / RMC
7.3	(1) CAT-6 ETHERNET CABLE	(1) 3/4 " PVC 80 / RMC

ENGINEER-OF-RECORD

AZIMUTH ENERGY

PRELIMINARY NOT FOR CONSTRUCTION

ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE #PV-080922-013745
BLAKE MARCHI, EIT #PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

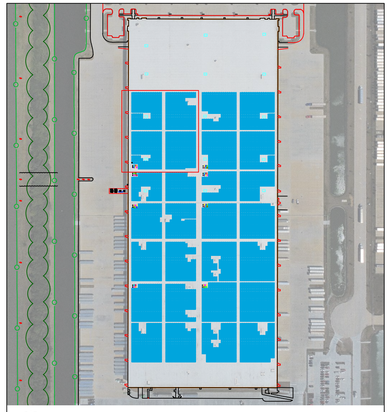
SCALE: 1" = 60' - 0"

0 60' 120'

ELECTRICAL PLAN

PV240





2 PV250 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

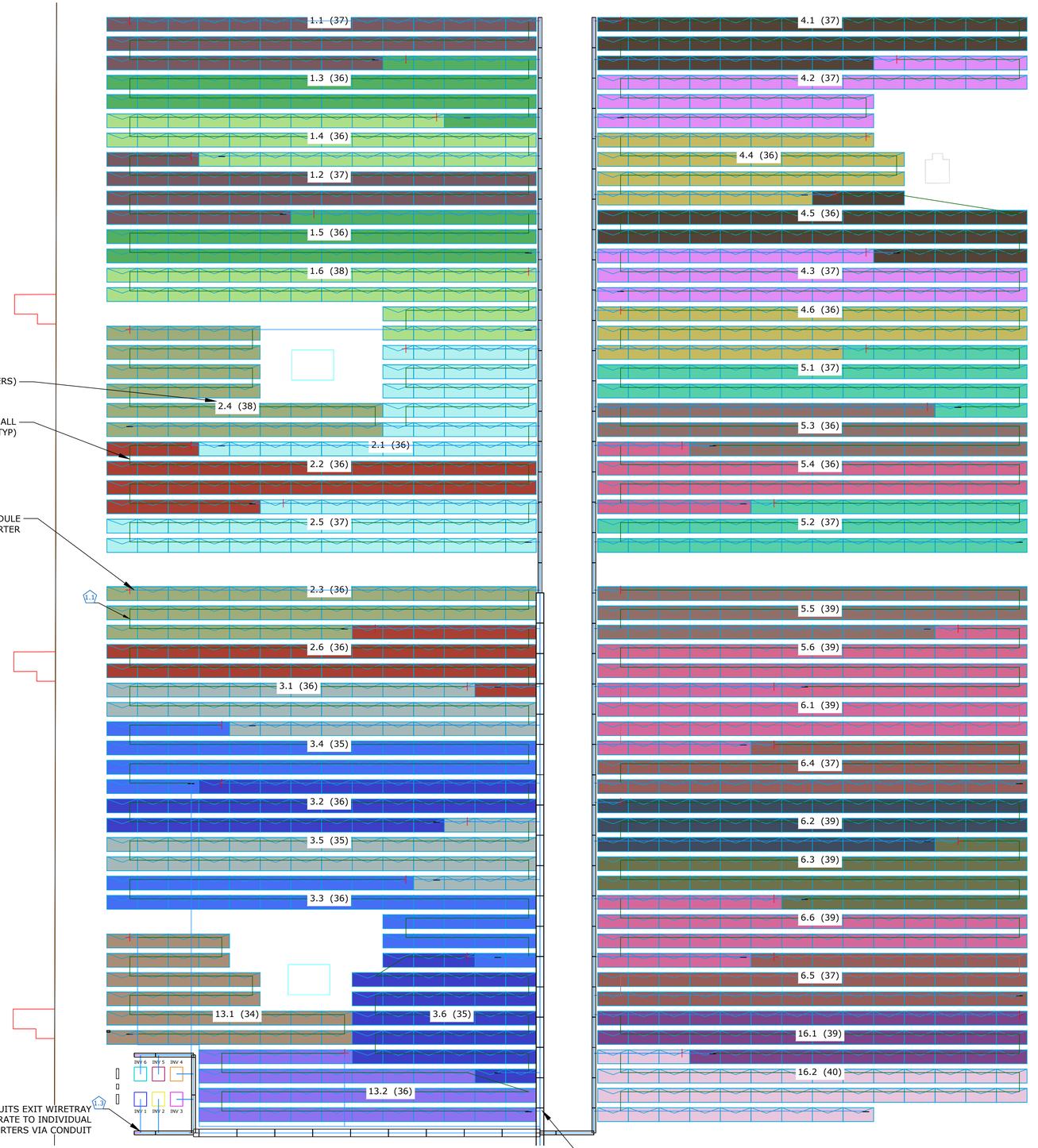
1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCHD40 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
18. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
19. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.

GENERAL NOTES

1. CONTRACTOR SHALL DEMONSTRATE THE PLANNED METHODS AND PATTERN FOR DC WIRE MANAGEMENT IN ADVANCE OF GENERAL EXECUTION. THIS SHALL INCLUDE MODULE-TO-MODULE, ROW-TO-ROW, AND HOMERUNS. EXPOSED WIRING MANAGEMENT THAT IS NOT APPROVED IN ADVANCE BY OWNER MAY REQUIRE REWORK BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND

	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF



STRING INVERTER#.STRING# (QUANTITY OF MODULES AND OPTIMIZERS)

1.2 WHERE DC CONDUCTORS ROUTE BETWEEN RACKING ROWS CONDUCTORS SHALL BE PROTECTED WITH CONDUIT OR ARMORED WIRE LOOM (TYP)

DC SOURCE CIRCUITS ROUTE ALONG HIGH SIDE OF MODULE TO NEAREST WIRETRAY TO SPECIFIED INVERTER

1.1

1.3 DC SOURCE CIRCUITS EXIT WIRETRAY AND SEPARATE TO INDIVIDUAL INVERTERS VIA CONDUIT

DC SOURCE CIRCUITS ROUTED TO INVERTER IN 6X6 WIRETRAY AT ROOF LEVEL TO SPECIFIED INVERTER HUBS

DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY — PRELIMINARY — NOT FOR CONSTRUCTION — ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
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863 HORAN DR.
FENTON, MO 63026
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REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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UNLESS IT IS SIGNED AND SEALED BY A LICENSED ENGINEER.

PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

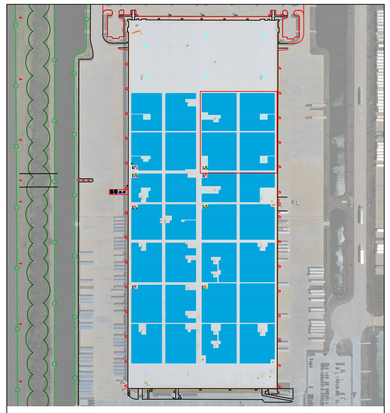
SCALE: 1" = 15' - 0"

0 15' 30'

STRINGING PLAN: INVERTERS 1 - 6

PV250





2 PV251 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCH040 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
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GENERAL NOTES

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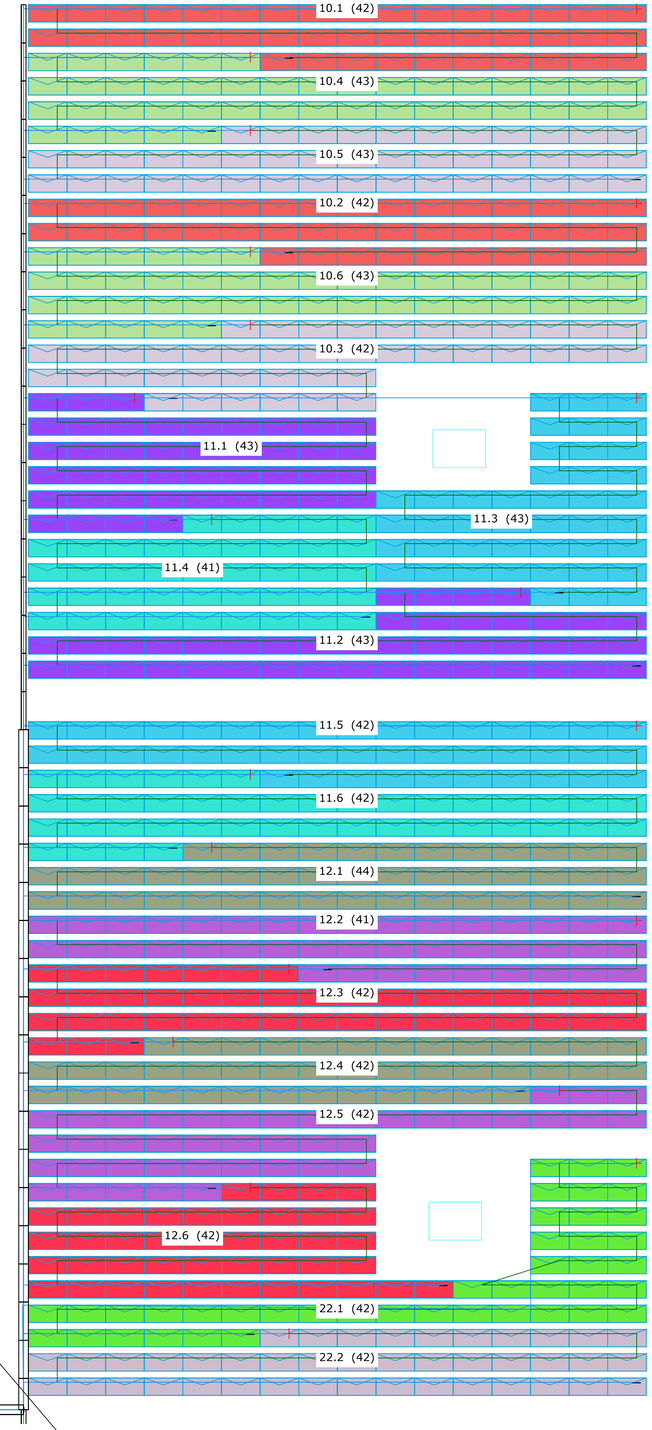
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND	
	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF





DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	(#.#)	PARALLEL RUNS PER CIRCUIT	CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY
PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
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#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

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FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

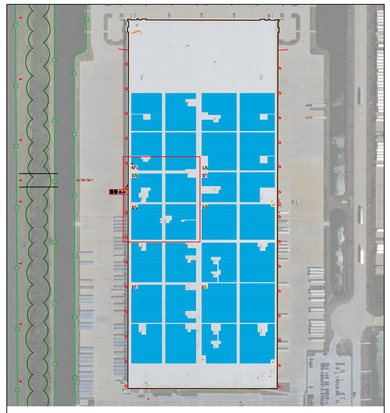
SCALE: 1" = 15' - 0"

0 15' 30'

STRINGING PLAN: INVERTERS 7 - 12

PV251





2 PV252 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCHD40 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
18. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
19. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.

GENERAL NOTES

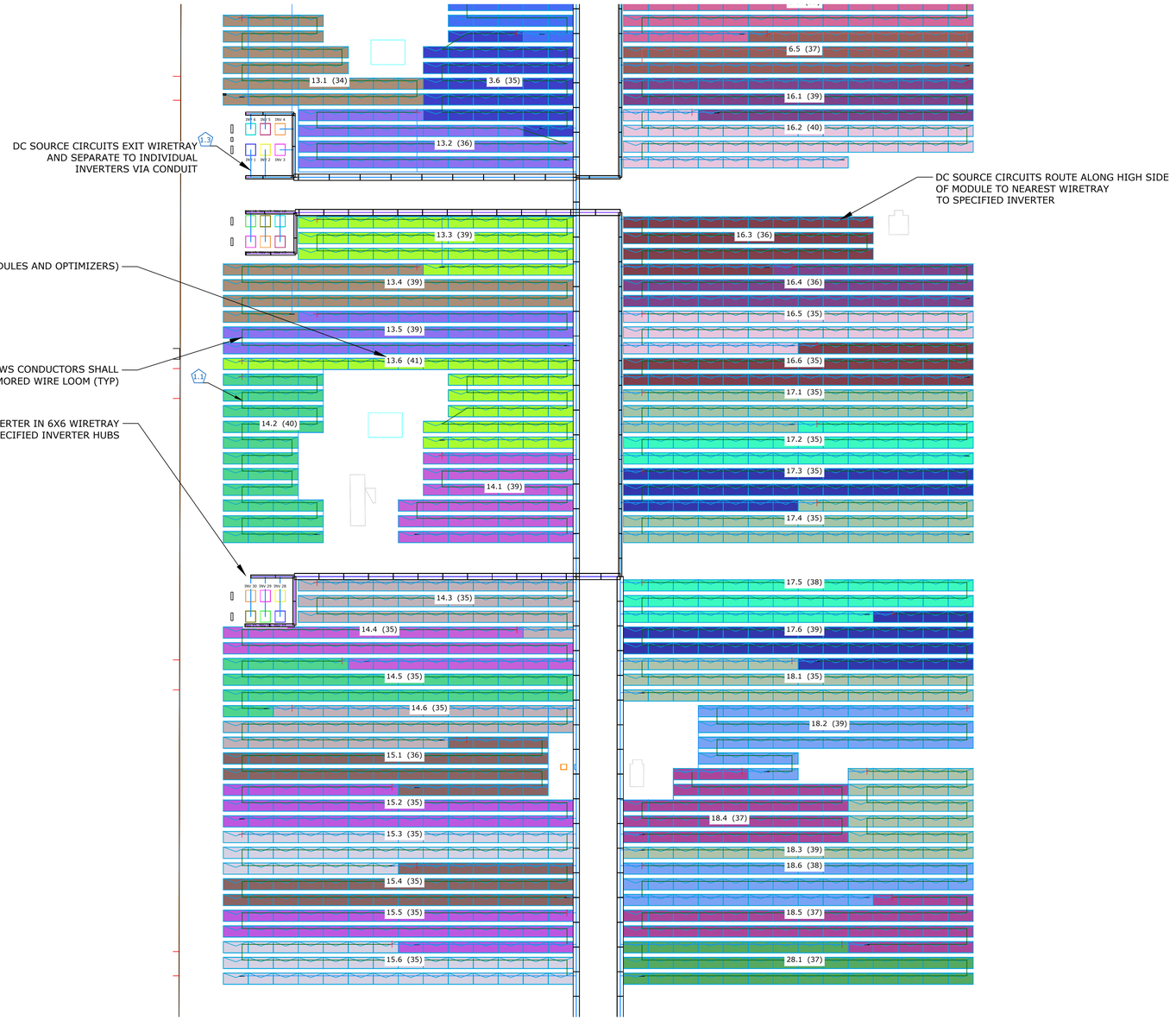
1. CONTRACTOR SHALL DEMONSTRATE THE PLANNED METHODS AND PATTERN FOR DC WIRE MANAGEMENT IN ADVANCE OF GENERAL EXECUTION. THIS SHALL INCLUDE MODULE-TO-MODULE, ROW-TO-ROW, AND HOMERUNS. EXPOSED WIRING MANAGEMENT THAT IS NOT APPROVED IN ADVANCE BY OWNER MAY REQUIRE REWORK BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND

	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF

DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.



DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY

PRELIMINARY NOT FOR CONSTRUCTION ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE: 1" = 20' - 0"

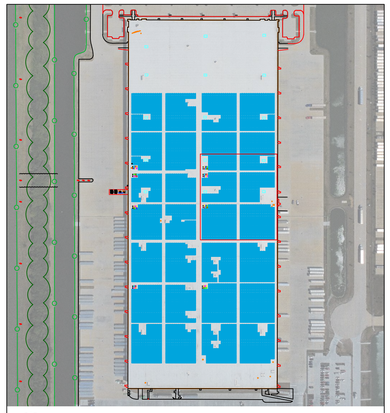
0 20' 40'

STRINGING PLAN: INVERTERS 13 - 18

PV252

AGENDA





2 PV253 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

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7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
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GENERAL NOTES

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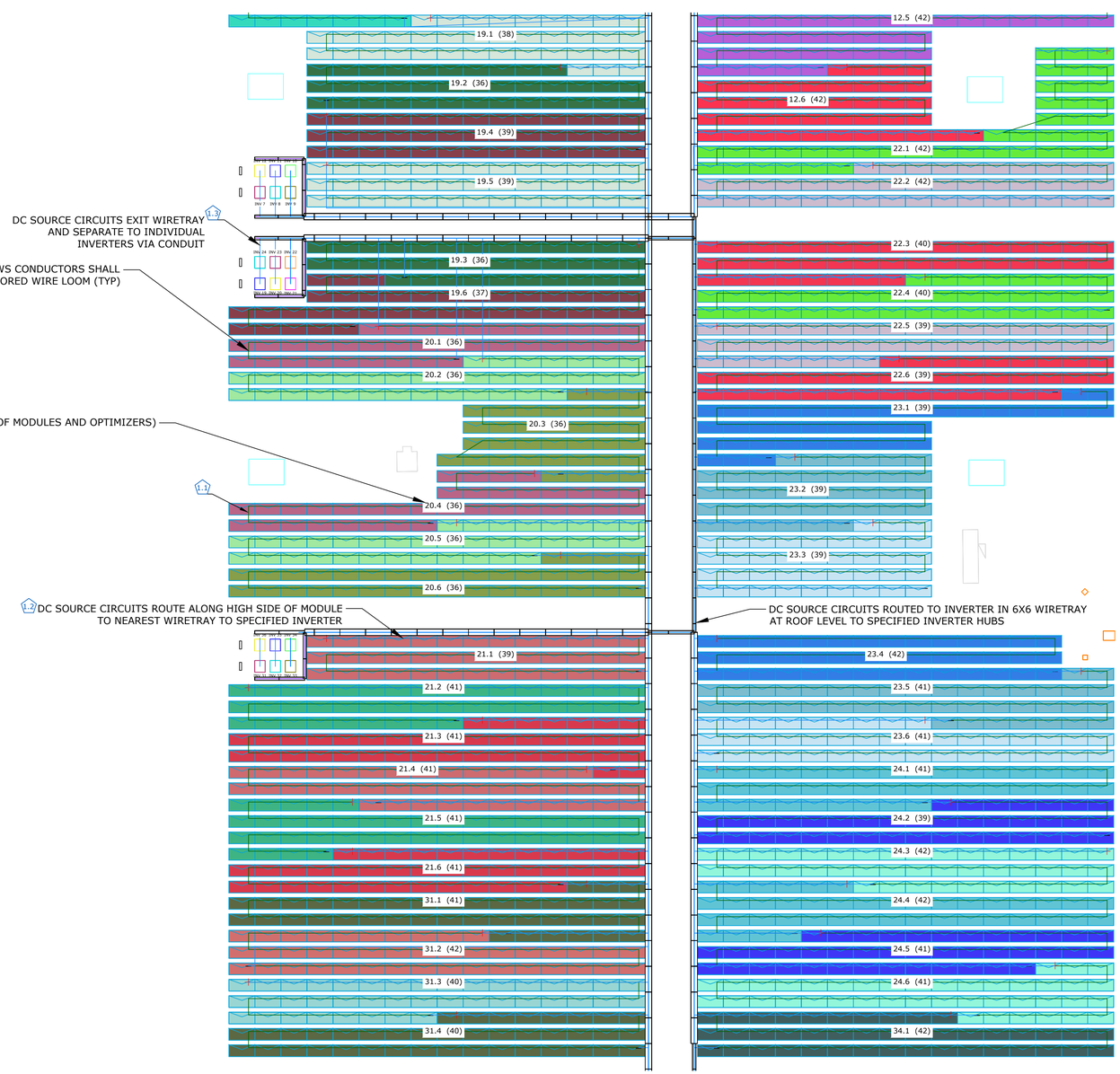
LEGEND

	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF



DC CIRCUITS NOTES

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3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
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11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABNTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
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13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
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16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY
PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
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#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

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REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

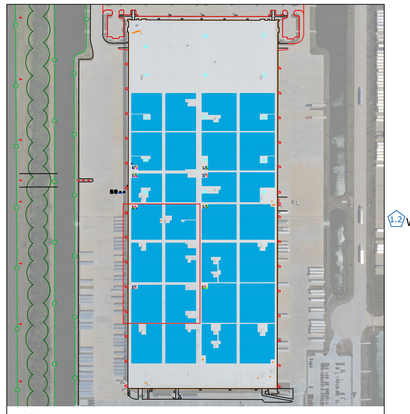
JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")
SCALE:	1" = 20' - 0"

0 20' 40'

STRINGING PLAN: INVERTERS 19 - 24

PV253





2 PV254 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCHD40 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
18. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
19. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.

GENERAL NOTES

1. CONTRACTOR SHALL DEMONSTRATE THE PLANNED METHODS AND PATTERN FOR DC WIRE MANAGEMENT IN ADVANCE OF GENERAL EXECUTION. THIS SHALL INCLUDE MODULE-TO-MODULE, ROW-TO-ROW, AND HOMERUNS. EXPOSED WIRING MANAGEMENT THAT IS NOT APPROVED IN ADVANCE BY OWNER MAY REQUIRE REWORK BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND

	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF

DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.



DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY

PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

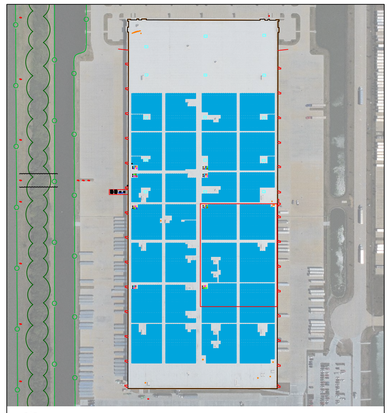
SCALE: 1" = 25' - 0"

0 25' 50'

STRINGING PLAN: INVERTERS 25 - 30

PV254





2 PV255 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCH040 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
18. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
19. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.

GENERAL NOTES

1. CONTRACTOR SHALL DEMONSTRATE THE PLANNED METHODS AND PATTERN FOR DC WIRE MANAGEMENT IN ADVANCE OF GENERAL EXECUTION. THIS SHALL INCLUDE MODULE-TO-MODULE, ROW-TO-ROW, AND HOMERUNS. EXPOSED WIRING MANAGEMENT THAT IS NOT APPROVED IN ADVANCE BY OWNER MAY REQUIRE REWORK BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND	
	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF



DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT	CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY

PRELIMINARY NOT FOR CONSTRUCTION

ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
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#PV-080922-013745
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#PV-120723-013944

ENGINEER
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REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

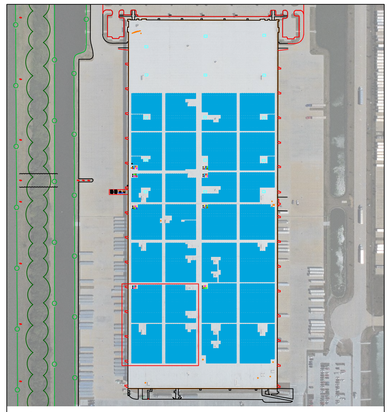
SCALE: 1" = 20' - 0"

0 20' 40'

STRINGING PLAN: INVERTERS 31 - 36

PV255





2 PV256 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

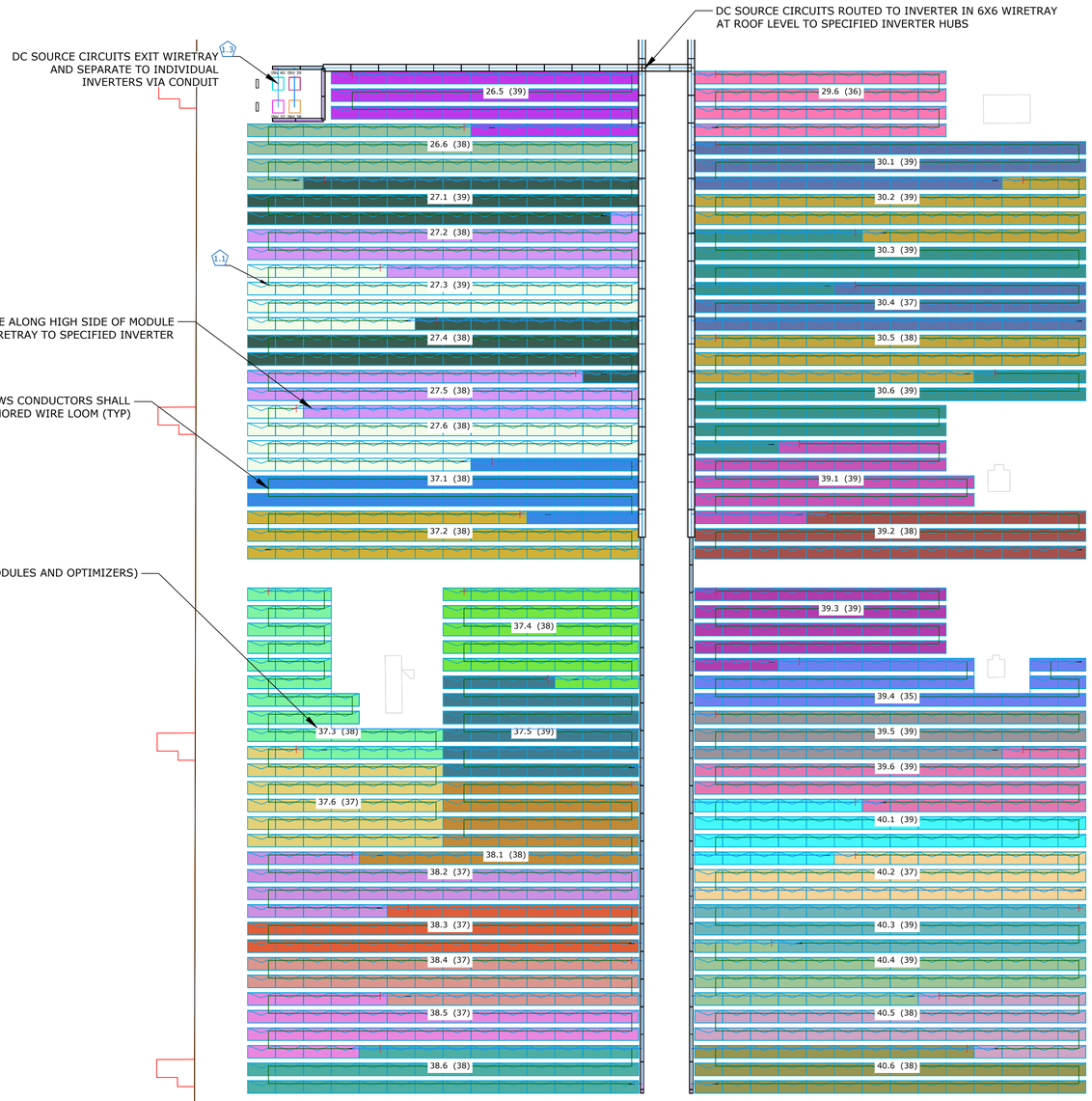
1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCHD40 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
18. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
19. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.

GENERAL NOTES

1. CONTRACTOR SHALL DEMONSTRATE THE PLANNED METHODS AND PATTERN FOR DC WIRE MANAGEMENT IN ADVANCE OF GENERAL EXECUTION. THIS SHALL INCLUDE MODULE-TO-MODULE, ROW-TO-ROW, AND HOMERUNS. EXPOSED WIRING MANAGEMENT THAT IS NOT APPROVED IN ADVANCE BY OWNER MAY REQUIRE REWORK BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND

	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF



DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#.#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY
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NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

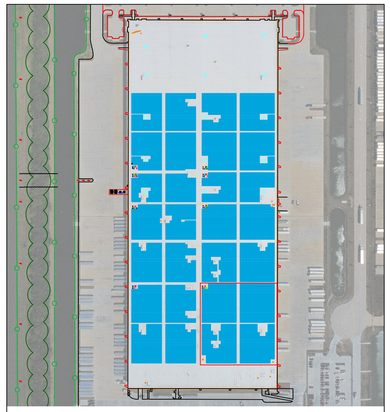
JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE: 1" = 20' - 0"
0 20' 40'

STRINGING PLAN: INVERTERS 37 - 40

PV256





2 PV257 SITE PLAN

SCALE: NTS

DC WIRE MANAGEMENT NOTES

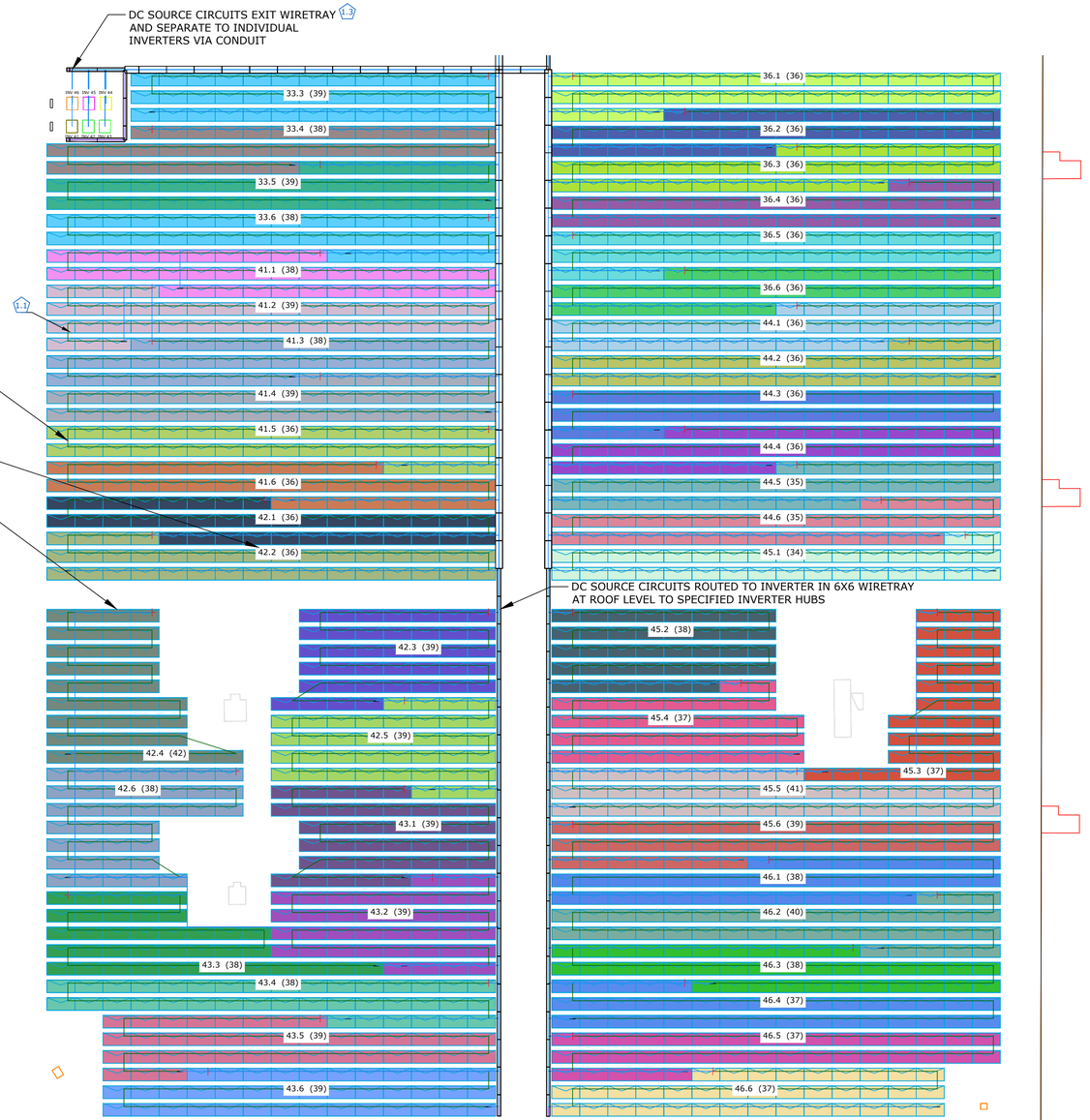
1. EXPOSED DC WIRING IS FULLY RESTRAINED, SYMMETRICAL, RECTILINEAR, AND UNIFORM, AND NOT TOUCHING THE GROUND, ROOF, BALLAST, OR ANY OTHER SURFACE THAT IS NOT INTENDED FOR CONTACT.
2. DC WIRING SHALL BE RESTRAINED SUCH THAT CONDUCTORS CAN EXPAND OR CONTRACT WITH CHANGING TEMPERATURE.
3. CONDUCTORS EXPOSED TO DIRECT SUNLIGHT AT ANY TIME FROM 9 AM TO 5 PM LOCAL TIME SHALL BE SECURED USING ONE OF THESE METHODS: (1) STAINLESS STEEL OR GALVANIZED CLIPS WHEN THE SUPPORT STRUCTURE IS THIN-GAUGE METAL THAT WILL ACCOMMODATE CLIPS; OR (2) STAINLESS STEEL "ZIPTIES" WITH PVC COATING THAT ARE UL-LISTED FOR WIRE BUNDLING.
4. EXPOSED CONDUCTORS ENTERING CONDUIT BODIES, WIREWAYS, AND JUNCTION BOXES SHALL BE PROVIDED WITH DRIP LOOPS THAT DIVERT WATER AWAY FROM THE REQUIRED WIRE-GLAND, CABLE-GRIP, OR WEATHERHEAD. WIRE-GLANDS, CABLE-GRIPS, AND WEATHERHEADS SHALL BE UL-LISTED FOR THE NUMBER AND SIZE OF CONDUCTORS TO PROVIDE STRAIN RELIEF FOR ALL CONDUCTORS ENTERING ENCLOSURES.
5. WIRE MANAGEMENT SHALL USE WIRE CLIPS APPROVED IN ADVANCE BY THE PROJECT MANAGER, SUCH AS CADDY OR EQUAL. ZIP TIES ARE ACCEPTABLE TO SECURE WIRE SIZE AWG#8 OR SMALLER TO A WIRE SUPPORT CHANNEL, PROVIDED ZIP TIES MEET THE FOLLOWING SPECIFICATIONS: STEEL BARB, UV RESISTANT, MINIMUM 40LB TENSILE STRENGTH, UL LISTED, TEMPERATURE RANGE -20°F TO +165°F OR BETTER.
6. PLASTIC ZIPTIES MAY BE USED FOR CONDUCTORS #8 AWG OR SMALLER AND ONLY IN A LOCATION THAT HAS NO EXPOSURE TO DIRECT OR REFLECTED SUNLIGHT FROM 9 AM TO 5 PM LOCAL TIME (DIFFUSE SUNLIGHT IS EXCEPTED AND ALLOWED). FOR EXAMPLE: ZIP TIES MAY BE USED UNDERNEATH THE MODULES TO CONNECT DC CONDUCTORS TO THE MODULE RACKING.
7. PLASTIC ZIPTIES THAT ARE USED IN APPROVED LOCATIONS SHALL BE RATED AS FOLLOWS, WITH THE RATING PRINTED BY MANUFACTURER ON THE PACKAGING: UL LISTED, UV-RESISTANT, STEEL BARB, MINIMUM 40LB TENSILE STRENGTH, TEMPERATURE RANGE -40 DEGREES F TO +165 DEGREES F OR BETTER.
8. CLIPS OR ZIPTIES SHALL BE SPACED EVERY 4 FEET, OR CLOSE ENOUGH TO ENSURE THAT UNSIGHTLY DROOPING IS AVOIDED. ADDITIONAL WIRE RESTRAINT MAY BE DICTATED AT THE DISCRETION OF THE OWNER OR OWNER'S ENGINEER.
9. WHEN USED, ZIPTIES SHALL BE POSITIONED WITHIN 12" OF CONDUIT BODY OR ENCLOSURE.
10 DC WIRE RUNS THAT ARE PERPENDICULAR TO THE MODULE MOUNTING RAILS SHALL BE PASSED OVER TOP OF THE MODULE RAIL, AND NOT UNDERNEATH. THE POINT OF CROSSING ABOVE THE RAIL SHALL BE SECURED WITH AN APPROVED ZIPTIE.
11. SOURCE CIRCUIT CONDUCTORS WHEN RUNNING IN CONDUIT ACCROSS AND BETWEEN RACKING ROWS, SHALL BE REFERRED TO AS AN 'INTER-TABLE NIPPLE' AND CONTAINED IN EMT OR SUNLIGHT RESISTANT PVC SCHD40 CONDUIT. INTER-TABLE NIPPLE CONDUIT SHALL BE LESS THAN OR EQUAL TO 24" IN LENGTH. WHERE SOURCE CIRCUIT CONDUCTORS ARE #10 PV-2000V WIRE, CONDUIT SIZE SHALL BE CHOSEN ACCORDING TO THE TABLE BELOW AND THE NATIONAL ELECTRIC CODE.
12. MODULE WHIP BEND RADIUS SHALL NEVER BE LESS THAN 2.5".
13. WIRE GLANDS FOR JUNCTION BOXES OR COMBINER BOXES SHALL BE LISTED AS "CORD GRIPS" OR "STRAIN RELIEFS" AND RATED FOR THE NUMBER OF WIRES PASSING THROUGH IT.
14. DC COMBINER BOXES SHALL BE FACTORY ASSEMBLED AND UL-LISTED. ALL FUSES SHALL BE "PV CLASS" AND COMPLIANT WITH UL-2579 AND IEC-60269-6. FUSES OR CIRCUIT BREAKERS USED FOR DC CIRCUITS SHALL BE DC RATED AND NOT AC-ONLY-RATED.
15. CONDUITS CONNECTING TO A JUNCTION BOX OR OTHER CONDUIT BODY USING REDUCING WASHERS, CONCENTRIC, OR ECCENTRIC RINGS, SHALL HAVE A BONDING BUSHING AND JUMPER FROM THE CONDUIT TO THE ENCLOSURE AND GROUNDING CONDUCTOR. THIS SHALL APPLY TO ALL CONDUITS WITH THREE EXCEPTIONS. (1) THE CIRCUIT IS DESIGNATED TO ALWAYS REMAIN BELOW 250 V; OR (2) THE KNOCKOUT IS UL-LISTED TO PROVIDE A RELIABLE BONDING CONNECTION, AND EITHER USES TWO LOCKNUTS FOR RMC OR IMC (ONE INSIDE AND ONE OUTSIDE); OR (3) THE FITTINGS ARE UL-LISTED TO PROVIDE THIS BONDING. ELECTRICIAN TO SHOW UL-LISTING DOCUMENTATION FOR THESE PRODUCTS.
16. CONTRACTOR SHALL INSTALL EXPANSION JOINTS IN CONDUIT RUNS UNDER THESE TWO CIRCUMSTANCES. (1) WHEN TRAVERSING AN EXPANSION JOINT IN THE UNDERLYING STRUCTURE; OR (2) IN STRAIGHT RUNS WHERE THE ENDS ARE RIGIDLY FIXED AND THE EXPANSION IS CALCULATED TO EXCEED 0.25".
17. CONNECTIONS OF METALLIC CONDUIT OUTSIDE OF A BUILDING OR STRUCTURE SHALL USE RAIN-TIGHT COMPRESSION FITTINGS, STAMPED OR COLOR TINTED BY MANUFACTURER.
18. CONDUITS ROUTED INSIDE A BUILDING SHALL BE ROUTED ALONG STRUCTURAL MEMBERS TO ALLOW EASIER LOCATION IN CASE OF EMERGENCY.
19. CONDUIT ROUTED INSIDE A BUILDING AND UNDER THE ROOF DECK SHALL BE AT LEAST 10 INCHES BELOW THE DECK UNLESS DIRECTLY UNDER THE SOLAR ARRAY FOOTPRINT.

GENERAL NOTES

1. CONTRACTOR SHALL DEMONSTRATE THE PLANNED METHODS AND PATTERN FOR DC WIRE MANAGEMENT IN ADVANCE OF GENERAL EXECUTION. THIS SHALL INCLUDE MODULE-TO-MODULE, ROW-TO-ROW, AND HOMERUNS. EXPOSED WIRING MANAGEMENT THAT IS NOT APPROVED IN ADVANCE BY OWNER MAY REQUIRE REWORK BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL GENERAL NOTES, DC CIRCUIT NOTES, AND AC CIRCUIT NOTES IN DRAWING PACKAGE. REFER TO GENERAL NOTES FOR ELECTRICAL AND EQUIPMENT DEFINITIONS. REFER TO DETAILS SHEET FOR SPECIFIED CALLOUTS.
3. CONTRACTOR SHALL LABEL SOURCE CIRCUIT WIRES AS SPECIFIED ON SHEET. FOR MORE INFORMATION SEE PLACARD AND WIRE LABEL NOTES ON DETAILS AND DATA SHEETS.

LEGEND

	MODULE INTERCONNECTION STRING
	MODULE INTERCONNECTION STRING
	BUILDING ROOF



DC CIRCUITS NOTES

1. SOURCE CIRCUIT CONDUCTORS IN FREE AIR SHALL BE SECURED WITHIN 1' OF ALL PV CONNECTORS, AND EVERY 4.5' (1.4 M) THEREAFTER. SOURCE CIRCUIT CONDUCTORS SHALL BE ROUTED TO FOLLOW RAILS OR MODULES AS MUCH AS POSSIBLE.
3. PROTECTION OF THE CONDUCTOR INSULATION JACKET IS CRITICAL. INSTALLING ELECTRICIAN SHALL FOLLOW BEST PRACTICE WITH REGARD TO CONDUIT BODY FAIR LEADS, CONDUCTOR EXPOSURE AT TERMINALS, "360 RULE", AND PULL LUBRICANT. ANY DAMAGE TO THE CONDUCTOR INSULATION OTHER THAN SCRATCHING OR SCORING OF THE EXTERNAL NYLON JACKET WILL BE REJECTED.
4. ALL CONDUCTORS SHALL HAVE THE INSULATION TYPE STAMPED CLEARLY ON THE INSULATION JACKET OF EVERY CONDUCTOR SEGMENT, AND THE STAMPED IDENTIFICATION SHALL MATCH THE SPECIFICATION. ANY CONDUCTORS THAT DO NOT COMPLY WILL BE REJECTED TO BE REINSTALLED CORRECTLY AT THE CONTRACTOR'S EXPENSE.
6. DC CONDUCTORS (EXCEPTING MODULE WHIPS) SHALL HAVE WIRE TAGS AT ALL CONNECTION, TERMINATION, AND SPLICES, INDICATING THE STRING ID AND POLARITY.
7. END FERRULES SHALL BE USED FOR DC SOURCE CIRCUITS (UN-INSULATED) DC OUTPUT CIRCUITS SMALLER THAN 1/0 (INSULATED).
8. ALL PV WIRE/USE-2/THWN-2 USED AS A DC CONDUCTOR SHALL COMPLY WITH THESE COLOR STANDARDS. WHEN APPROVED TO MARK WITH TAPE AT THE TERMINATIONS, THE TAPE SHALL SHOW THE SAME COLORS.
   UNGROUNDED ARRAY: RED-POSITIVE, BLACK-NEGATIVE
9. ALL FIELD INSTALLED PV CONNECTORS SHALL MATCH THE EXACT MAKE/MODEL OF THE MANUFACTURER INSTALLED PV CONNECTORS.
10. DC CIRCUITS SHALL BE MEGOHM TESTED PRIOR TO TERMINATION AT EITHER END, AND RESULTS SHALL BE RECORDED. CONFIRM TESTING VOLTAGE WITH THE PROJECT MANAGER PRIOR TO TESTING.
11. ALL CABLES SHALL HAVE BEST PRACTICE MINIMUM BEND RADIUS, OR AT LEAST 8X THE CABLE DIAMETER. SHIELDED CABLE DIAMETER. SHIELDED CABLE BEND RADIUS SHALL BE AT LEAST 12X THE CABLE DIAMETER.
12. NEUTRAL SHALL NOT BE BONDED TO GROUND AT ANY POINT IN THIS PROJECT, UNLESS OTHERWISE INDICATED.
13. SURGE SUPPRESSION DEVICES NOT MOUNTED INTEGRAL TO AN ELECTRICAL PANEL OR DEVICE SHALL BE INSTALLED WITHIN SIX WIRE-FEET OF THE PROTECTED DEVICE.
14. COPPER CONDUCTOR ONLY SHALL BE USED FOR DC SOURCE CIRCUITS OR GROUNDING CONDUCTORS.
15. ALUMINUM MAY BE SPECIFIED OR PROPOSED FOR DC OUTPUT CIRCUITS OR INVERTER OUTPUT CIRCUITS. CONNECTIONS OR TERMINATIONS FOR ALUMINUM CONDUCTOR SHALL BE UL-LISTED FOR ALUMINUM, OR DUAL RATED AND STAMP-LABELLED FOR COPPER OR ALUMINUM. ALUMINUM CONDUCTOR TERMINATION SHALL USE TWO-HOLE BARREL COMPRESSION LUGS WITH NOALOX ANTI-OXIDANT COMPOUND, OR APPROVED EQUAL, APPLIED PRIOR TO TERMINATION. IF TWO-HOLE LUGS ARE TOO LARGE, SINGLE-HOLE BARREL LUGS SHALL BE PROPOSED AND APPROVED IN WRITING PRIOR TO USE.
16. ELECTRICIAN SHALL TORQUE TERMINAL HARDWARE PURSUANT TO MANUFACTURER'S SPECIFICATIONS AND MARK CONNECTING HARDWARE WITH INDELIBLE MARKER BEFORE ENERGIZING OR TESTING THE SYSTEM.
17. CONDUCTOR(S) LANDED ON A TERMINAL THAT IS PART OF MANUFACTURED EQUIPMENT SHALL USE COPPER CONDUCTORS UNLESS THE TERMINAL IS RATED AND STAMPED FOR ALUMINUM WIRE.
18. WIRE NUTS SHALL NOT BE USED WITH DC CONDUCTORS. CONNECTION OF TWO OR MORE DC CONDUCTORS SHALL BE MADE USING AN IDEAL-22 CONNECTOR, OR REVERSIBLE, INSULATED TERMINAL BLOCKS RATED FOR THE CONDUCTORS BEING CONNECTED.
19. DC SOURCE CIRCUIT POLARITY SHALL BE CONFIRMED WITH A VOM PRIOR TO LANDING IN ANY INVERTER, DC COMBINER, OR OTHER DEVICE. CONTRACTOR SHALL DOCUMENT THIS INFORMATION AND PROVIDE A RECORD OF THESE CHECKS TO THE ENGINEER, INDICATING THE DATE, TECHNICIAN'S NAME, AND STRING ID. FAILURE TO PROVIDE RECORD OF CHECKS MAY RESULT IN DISCONNECTION AND RE-TESTING AT CONTRACTOR'S EXPENSE.
20. DC SAFE-ASSEMBLY PROCEDURE:
   A) REMOVE ALL DC FUSES FROM THE DC COMBINER, RECOMBINER AND/OR INVERTER.
   B) OPEN AND TAG OUT ALL DC DISCONNECTS ON THE COMBINER AND/OR INVERTER.
   C) CONNECT THE DC STRINGS TOGETHER AS SPECIFIED, LEAVING THE END-OF-ROW (+) TOUCH-SAFE PLUGS UNCONNECTED. THESE PLUGS WILL BE THE LAST CONNECTIONS TO BE MADE.
   D) IF LANDING ON THE DC COMBINER OR INVERTER WITH HOMERUN CABLES, MAKEUP, LABEL, AND LAND THOSE CABLES ON THE TERMINAL BLOCKS. IF LANDING WITH THE MODULE WHIPS, CUT, DRESS, AND LABEL THOSE END WHIPS AND LAND ON THE TERMINAL BLOCKS. THERE WILL BE NO CURRENT FLOW BECAUSE THE DISCONNECT SWITCHES ARE ALL OPEN AND THE LAST, TOUCH-SAFE INTER-MODULE CONNECTOR IS OPEN.
   E) TORQUE THE (+) CONDUCTORS ON THE TERMINAL BLOCKS. DO NOT TORQUE THE (-) CONDUCTORS, AS THEY WILL HAVE TO BE REMOVED FOR INSULATION RESISTANCE TESTING.

DC DISTRIBUTION CONDUCTOR AND CONDUIT SCHEDULE

STRING IDS	FEEDS INVERTER ID	#:#	PARALLEL RUNS PER CIRCUIT		CURRENT CARRYING CONDUCTORS	GROUNDING CONDUCTOR	CONDUIT SIZE & TYPE [INCHES]	OCPD SIZE [AMP]	NUMBER OF COMBINED STRINGS
INV-#.STR#	INV-#	1.1	1	SET(S) OF	(2) #10 C PV-2000V CU	(1) #6 BARE STR CU	FREE AIR	-	1
INV-#.STR#	INV-#	1.2	1	SET(S) OF	(4) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY/ 2" RMC	-	1
INV-#.STR#	INV-#	1.3	1	SET(S) OF	(12) #10 C PV-2000V CU	(1) #6 BARE STR CU	6" WIRETRAY / 3" LFMC	-	1

ENGINEER-OF-RECORD

AZIMUTH ENERGY
PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV
5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE: 1" = 20' - 0"
0 20' 40'

STRINGING PLAN: INVERTERS 41 - 46

PV257

Q.PEAK DUO RSF XL-G11S SERIES

585-600 Wp | 156 Cells
21.5 % Maximum Module Efficiency

PRELIMINARY

MODEL Q.PEAK DUO RSF XL-G11S.3 / BFG



Fast installation
Innovative S shape frame design including perfectly matched clamps, bringing innovation and convenience together for effortless setup.

Increased design loads for short rails
Unlock unparalleled strength with Qcells steel frames for cost-effective tracker mounting

Bifacial energy yield gain of up to 20%
Bifacial Q.ANTUM solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.

A reliable investment
Double glass module with Anti LID and Anti PID Technology[1] enables long-term yield security for an extended lifetime backed by a 30-year performance warranty[2].

Lowering carbon emission
High tech steel frame module generates significantly less CO2 pollution than standard aluminum frame.

Enhanced bifaciality and self cleaning
Optimized frame shape reducing rear side shading and drainage slot for reducing soiling loss.

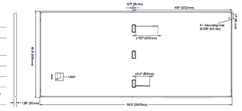
[1] APT test conditions according to IEC/TS 62804-1:2015, method B (-1500 V, 168 h) including pid treatment according to IEC 61215-1-1:ed. 2.0:2021
[2] See data sheet on rear for further information

The ideal solution for:
Solar power plants with tracker

Q.PEAK DUO RSF XL-G11S SERIES

Mechanical Specification

Format	96.9 in × 44.6 in × 1.38 in (including frame) (2462 mm × 1134 mm × 35 mm)
Weight	80.2 lbs (36.4 kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Steel (Zn-Al-Mg coating)
Cell	6 × 26 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), Protection class IP68, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 15.7 in (400 mm), (-) ≥ 5.9 in (150 mm)
Connector	Stäubli MC4; Stäubli MC4-Evo2 , IP68



Electrical Characteristics

POWER CLASS			585		590		595		600	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5 W / -0 W)				BSTC²		BSTC²		BSTC²		BSTC²
Minimum	Power at MPP³	P_{MPP} [W]	585	639.9	590	645.4	595	650.8	600	656.3
	Short Circuit Current⁴	I_{SC} [A]	13.72	15.01	13.74	15.04	13.77	15.07	13.80	15.10
	Open Circuit Voltage⁴	V_{OC} [V]	53.57	53.76	53.60	53.79	53.63	53.82	53.66	53.85
	Current at MPP	I_{MPP} [A]	13.07	14.30	13.12	14.36	13.17	14.41	13.22	14.46
	Voltage at MPP	V_{MPP} [V]	44.75	44.74	44.96	44.95	45.18	45.17	45.39	45.38
	Efficiency⁵	η [%]	≥ 21.0		≥ 21.1		≥ 21.3		≥ 21.5	

Bifaciality of P_{MPP} and I_{SC} 72 % ± 5 % • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

¹Measurement tolerances P_{MPP} ± 3 %; I_{SC}; V_{OC} ± 5 % at STC: 1000 W/m² ²at BSTC: 1000 W/m² + φ × 135 W/m², φ = 70 %, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT²										
Minimum	Power at MPP	P_{MPP}	[W]	440.5		444.2		448.0		451.8
	Short Circuit Current	I_{SC}	[A]	11.05		11.07		11.09		11.11
	Open Circuit Voltage	V_{OC}	[V]	50.67		50.69		50.72		50.75
	Current at MPP	I_{MPP}	[A]	10.30		10.34		10.38		10.42
	Voltage at MPP	V_{MPP}	[V]	42.77		42.96		43.15		43.34

²Measurement tolerances P_{MPP} ± 3 %; I_{SC}; V_{OC} ± 5 % at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • 800 W/m², NMOT, spectrum AM 1.5

Qcells PERFORMANCE WARRANTY

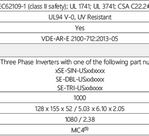


At least 98 % of nominal power during first year. Thereafter max. 0.45 % degradation per year. At least 93.95 % of nominal power up to 10 years. At least 84.95 % of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective country.

⁶Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT	[°F]	108 ± 5.4 (42 ± 3 °C)

Properties for System Design

Maximum System Voltage	V_{SYS}	[V]	1500	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	25	Fire Rating based on ANSI/UL 61730	TYPE 29⁷
Max. Push Load⁸, Test/Design		[lbs/ft²]	54 (2600 Pa)/ 36 (1700 Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Max. Pull Load⁸, Test/Design		[lbs/ft²]	63 (3000 Pa)/ 42 (2000 Pa)		

³ See Installation Manual for instructions

⁷ New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

UL 61730, CE-compliant,
IEC 61215:2016,
IEC 61730:2016,
U.S. Patent No. 9,893,215 (solar cells)

Specifications subject to technical changes © Qcells Q-PEAK DUO RSF XL-G11S BFG_series_585-600_2021-02_Rev04_EN_NEU.MARKY

Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.
*Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.
Hanwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL: +1 949 748 59 96 | EMAIL: hqc-inquiry@qcells.com | WEB: www.qcells.com

qcells

A PV300 MODULE DATA SHEET

Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS / SE120KUS

INVERTER



Powered by unique pre-commissioning process for rapid system installation

- Pre-commissioning feature for automated validation of system components and wiring during the site installation process and prior to grid connection
- Easy 2-person installation with lightweight, modular design (each inverter consists of 2 or 3 Synergy units and 1 Synergy Manager)
- Independent operation of each Synergy unit enables higher uptime and easy serviceability
- Built-in thermal sensors detect faulty wiring, ensuring enhanced protection and safety
- Built-in arc fault protection and rapid shutdown
- Built-in PID mitigation for maximized system performance
- Monitored* and field-replaceable surge protection devices, to better withstand surges caused by lightning or other events
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

*Applicable only for DC and AC SPDs

solaredge.com

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Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America

SE80KUS / SE100KUS / SE110KUS / SE120KUS

MODEL NUMBER	SE80KUS	SE100KUS	SE110KUS	SE120KUS	
APPLICABLE TO INVERTERS WITH PART NUMBER	SExxK-USxxBIxxxx				UNITS
OUTPUT					
Rated AC Active Output Power	80000	100000	110000	120000	W
Maximum AC Apparent Output Power	80000	100000	120000	120000	VA
AC Output Line Connections	3W + PE, 4W + PE				
Supported Grids	WYE: TN-C, TN-S, TN-C-S, TT, IT; Delta: IT				
AC Output Voltage Minimum-Nominal-Maximum[3] (L-N)	244 – 277 – 305				Vac
AC Output Voltage Minimum-Nominal-Maximum[3] (L-L)	422.5 – 480 – 529				Vac
AC Frequency Min-Nom-Max[3]	59.5 – 60 – 60.5				Hz
Maximum Continuous Output Current (per Phase, PF=1)	96.5	120	144.3		Aac
GFDI Threshold	1				A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes				
Total Harmonic Distortion	≤ 3				%
Power Factor Range	±0.85 to 1				
INPUT					
Maximum DC Power (Module STC) Inverter / Synergy Unit	140000 / 70000	175000 / 58300	210000 / 70000		W
Transformer-less, Ungrounded	Yes				
Maximum Input Voltage DC+ to DC-	1000				Vdc
Operating Voltage Range	850 – 1000				Vdc
Maximum Input Current	2 x 48.25	3 x 40	3 x 48.25		Adc
Reverse-Polarity Protection	Yes				
Ground-Fault Isolation Detection	1676kΩ sensitivity per Synergy Unit[4]				
CEC Weighted Efficiency	98.5				%
Nighttime Power Consumption	< 8	< 12			W
ADDITIONAL FEATURES					
Supported Communication Interfaces[5]	2 x RS485, Ethernet, Wi-Fi (optional), Cellular (optional)				
Smart Energy Management	Export Limitation				
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection				
Arc Fault Protection	Built-in, User Configurable (According to UL1699B)				
Photovoltaic Rapid Shutdown System	NEC 2014 – 2023, built-in				
PID Rectifier	Nighttime, built-in				
RS485 Surge Protection (ports 1+2)	Type II, field replaceable, integrated				
AC, DC Surge Protection	Type II, field replaceable, integrated				
DC Fuses (Single Pole)	25A, integrated				
VAR at Night[6]	Yes				
DC SAFETY SWITCH					
DC Disconnect	Built-in				
STANDARD COMPLIANCE					
Safety	UL1699B, UL1741, UL1741 SA, UL1741 SB, UL1998, CSA C22.2#107.1, Canadian AFCI according to T.I.L. M-07				
Grid Connection Standards	IEEE 1547-2018, Rule 21, Rule 14 (HI)				
Emissions	FCC part 15 class A				

(1) For other regional settings please contact SolarEdge support.
(2) Where permitted by local regulations.
(3) For specifications of the optional communication options, visit the Communication product page or the Knowledge Center to download the relevant product datasheet.
(4) For details, see Set Volt Ampere Reactive at Night.

B PV300 INVERTER DATA SHEET

Commercial Power Optimizer

USA Domestic Content Eligible

C651U

POWER OPTIMIZER



Made in the USA from imported parts

SolarEdge's USA-manufactured offering for C&I projects, for power optimization at the module level

- **Eligible for Domestic Content***
  - SolarEdge USA-manufactured power optimizers, when paired with certain SolarEdge USA-manufactured inverters, are intended to be eligible for the enhanced federal income tax credit for domestic content
- **Higher Energy Yields**
  - Generates maximum power from each PV module
  - High efficiency (99.5%)
  - Supports high power and bifacial PV modules, including G12 modules
- **Enhanced Monitoring and Visibility**
  - Maximum system visibility up to the individual module level
  - Pinpointed fault detection and remote troubleshooting
- **Maximum Protection with Built-in Safety**
  - Designed to automatically reduce high DC voltage to touch-safe levels, upon grid/inverter shutdown, with SafeDC™
  - Includes SolarEdge Sense Connect, designed to prevent arcs by monitoring Power Optimizer connectors for overheating
  - Certified to Photovoltaic Rapid Shutdown, according to NEC 2014 – 2023

* For more information, refer to the last page of this document

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Power Optimizer

USA Domestic Content Eligible for North America

C651U

Power Optimizer Model	C651U	
INPUT		
Rated Input DC Power[11]	650	W
Absolute Maximum Input Voltage (Voc)	80	Vdc
MPPT Operating Range	12.5 – 80	Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module[12]	20	Adc
Maximum Adjusted Short Circuit Current (with Safety Factor)[13]	25	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	II	
OUTPUT DURING OPERATION		
Maximum Output Power	650	Wdc
Maximum Output Current	24	Adc
Maximum Output Voltage	60	Vdc
SAFETY FEATURES		
SafeDC™	Yes	
Safety Output Voltage per Power Optimizer	0.5 ± 0.075	Vdc
Sense Connect	Yes	
Photovoltaic Rapid Shutdown System	Yes, NEC 2014 – 2023	
STANDARD COMPLIANCE		
EMC	FCC Part 15; IEC 61000-6-2; IEC 61000-6-3	
Safety	IEC62109-1 (class II safety); UL 1741; UL 3741; CSA C22.2#107.1	
Material	UL94 V-0, UV Resistant	
RoHS	Yes	
Fire Safety	VDE-AR-E 2100-712:2013-05	
INSTALLATION SPECIFICATIONS		
Compatible SolarEdge Inverters[16]	Commercial Three Phase Inverters with one of the following part number structures: xSE-SINI-USxxbxxxx SE-DBL-USxxbxxxx SE-TRI-USxxbxxxx	
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	128 x 155 x 52 / 5.03 x 6.10 x 2.05	mm / in
Weight	1080 / 2.38	gr / lb
Input Connector	MC4[15]	
Input Wire Length	(+) 1.4, (-) 1.4 / (+) 4.59, (-) 4.59[15]	m / ft
Output Connector	MC4	
Output Wire Length	(+) 3.0 (-) 0.10 / (+) 9.84, (-) 0.32	m / ft
Operating Temperature Range[17]	-40 to +85 / -40 to +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 – 100	%

(11) Modules with a front side maximum power of up to 715W at STC are allowed. Up to +5% power tolerance is allowed.
(12) When using bifacial modules, consider only the front side Isc at STC (0% back side gain). For details, see here.
(13) Adjusted for ambient temperature, irradiance, bifacial gain, safety factor, and iso on, in accordance with NEC and CSA.
(14) For detailed inverter compatibility information, see here.
(15) For other connector types please contact SolarEdge.
(16) The Sense Connect feature is only enabled on the output wire connectors. For details, see here.
(17) For ambient temperatures above +63°C / +145°F, power derating is applied. For details, see here.

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RoHS Intertek

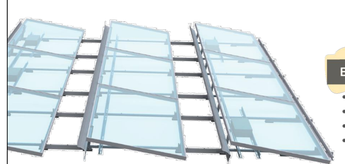
C PV300 RACKING DATA SHEET

clawFR® 10°



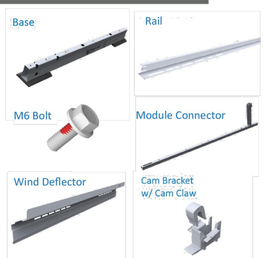
Flat Roof Racking Specialists

PanelClaw® is the only major racking provider in North America focused exclusively on flat roof racking. Our 11+ years of focus on flat roof result in a competitive advantage for our partners. No one knows more about flat roof racking than PanelClaw; no one delivers a more thoroughly tested and reliable platform; and no one matches our level of service. Our mission is to accelerate the deployment of flat roof PV and the best way to do this is to continue to lower its life-cycle cost while maintaining the highest levels of reliability. The clawFR platform is the result of this experience and commitment to flat roof.



PANELCLAW®

SYSTEM COMPONENTS



Applications
< 5° slope flat roofs (up to 7° possible w/engineering review)

Roof Type Compatibility
Membrane, tar and gravel, ballasted, BUR, concrete, asphalt (not compatible with metal roofs)

3 Shade Ratio Options
1.7:1 | 2.0:1 | 2.5:1

Platform Load
~ 2.0 - ~ 12.0 psf

Module Orientation
Landscape

Module Attachment
Airy point flange mounted

Basic Wind Speed
Up to 190 mph (>190 mph by approval)

Wind Exposure Category
B and C (D required engineering review)

USGS Seismic Categories
A, B, C, D (others require engineering review)

Building Height
No building height limitations

Corrosion Resistance
ZAM coating provides 5x better resistance than G90

Warranty and Certifications
25 year warranty

ANSI/UL 2703-2015 Listed

System Fire Rating
Class A with Type 1 and Type 2 modules

Intelligent Componet Design

- A single Ballast Rail part number covers all compatible 60 and 72 cell modules
- The Base does not change with module changes
- The wind deflector has 2 part numbers that cover all 72 cell module lengths
- The Module Connector and Deflector each have 2 part numbers have cover all compatible 72 cell modules

Safety and Reliability

clawFR has been tested well beyond code requirements in the US. In addition to wind tunnel testing and ANSI/UL 2703-2015 listing, we have completed a battery of reliability and performance tests which can all be found at panelclaw.com.

PANELCLAW®
(978) 688.4900 | sales@panelclaw.com
panelclaw.com Made in USA

Engineered for Speed

- Single M6 bold hardware kit
- No tool module attachment method
- 90 degree single-module tilt-up feature
- Flexible order of operations installation process allows for optimized coordination of building trades on the roof
- Integrated roof protection pads
- 10" plus access ways between modules
- Only 1 ground lug required per array

O&M Features

Construction designed specifically for O&M, and to assist providers
- Recessed Deflector allows for easy access to module connections and optimizer equipment
- ZAM coating with 5x better corrosion resistance than G90
- If mechanical roof attachments are needed, they are always placed in the North/South module gaps for easy O&M inspection

clawFR® 10°

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D PV300 RACKING DATA SHEET

ENGINEER-OF-RECORD

AZIMUTH ENERGY
PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE
#PV-080922-013745
BLAKE MARCHI, EIT
#PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
WWW.AZIMUTH.ENERGY

REVISIONS

REV	DESCRIPTION	DATE
A	30% DESIGN DRAWINGS	6/24/25
B	60% DESIGN DRAWINGS	7/15/25
C	60% DESIGN DRAWINGS REV B	7/23/25
D	90% DESIGN DRAWINGS	7/31/25

PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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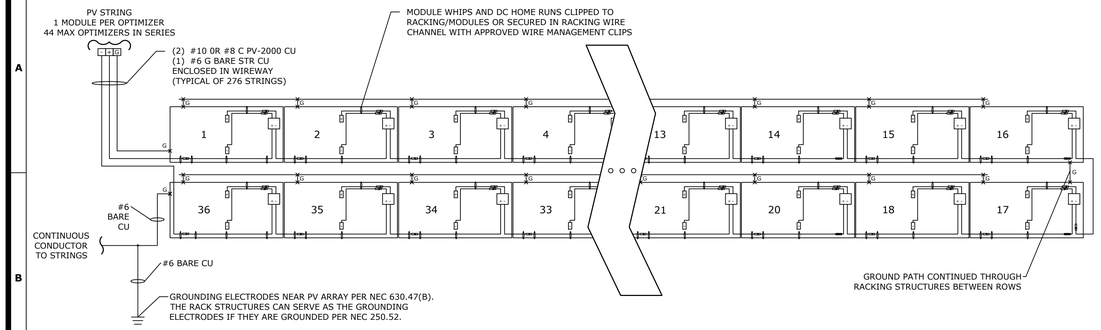
PROJECT DETAILS

JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE:
NOT TO SCALE

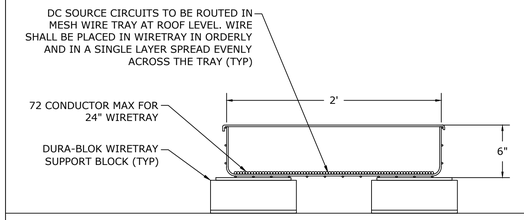
DETAILS AND DATA SHEETS

PV300



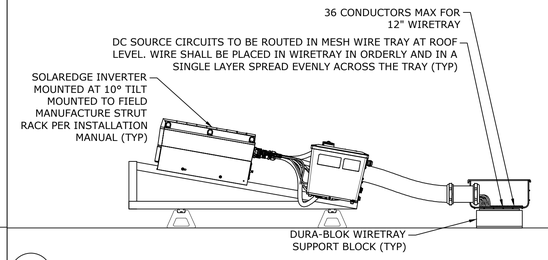
1 PV302 TRACKER TABLE WIRE MANAGEMENT

SCALE: N.T.S



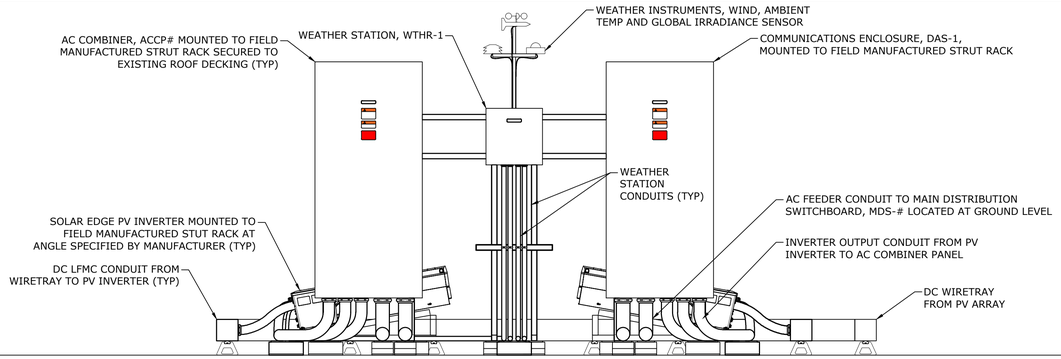
2 PV302 24" MESH WIRE TRAY SECTION

SCALE: NTS



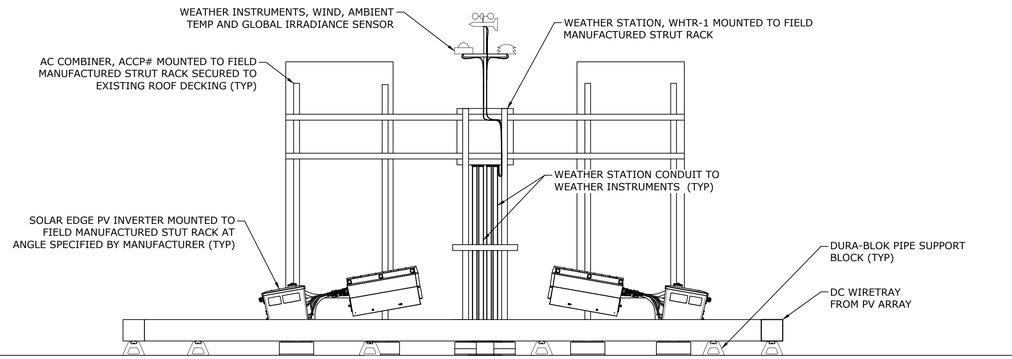
3 PV302 DC SOURCE CIRCUIT AND INVERTER WIRE TRAY INTERCONNECTION DETAIL

SCALE: NTS



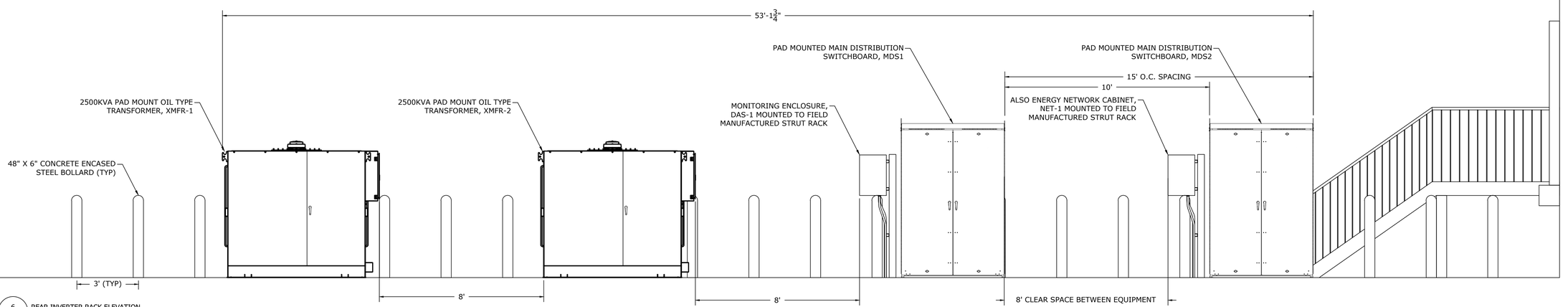
4 PV302 FRONT INVERTER RACK ELEVATION

SCALE: NTS



5 PV302 REAR INVERTER RACK ELEVATION

SCALE: NTS



6 PV302 REAR INVERTER RACK ELEVATION

SCALE: NTS

ENGINEER-OF-RECORD

AZIMUTH ENERGY
PRELIMINARY
NOT FOR CONSTRUCTION
ENGINEERING DEPT

PROJECT TEAM

AZIMUTH ENERGY

NABCEP CERTIFIED PV Installation Professional

CERTIFICANTS:
CORY BRENNAN, PE #PV-080922-013745
BLAKE MARCHI, EIT #PV-120723-013944

ENGINEER
AZIMUTH ENERGY, INC.
863 HORAN DR.
FENTON, MO 63026
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REVISIONS

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PROJECT INFORMATION

INNER PARK DRIVE - SUMMIT RIDGE ROOTOP PV

5710 INNER PARK DRIVE
EDWARDSVILLE, IL 62025

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PROJECT DETAILS

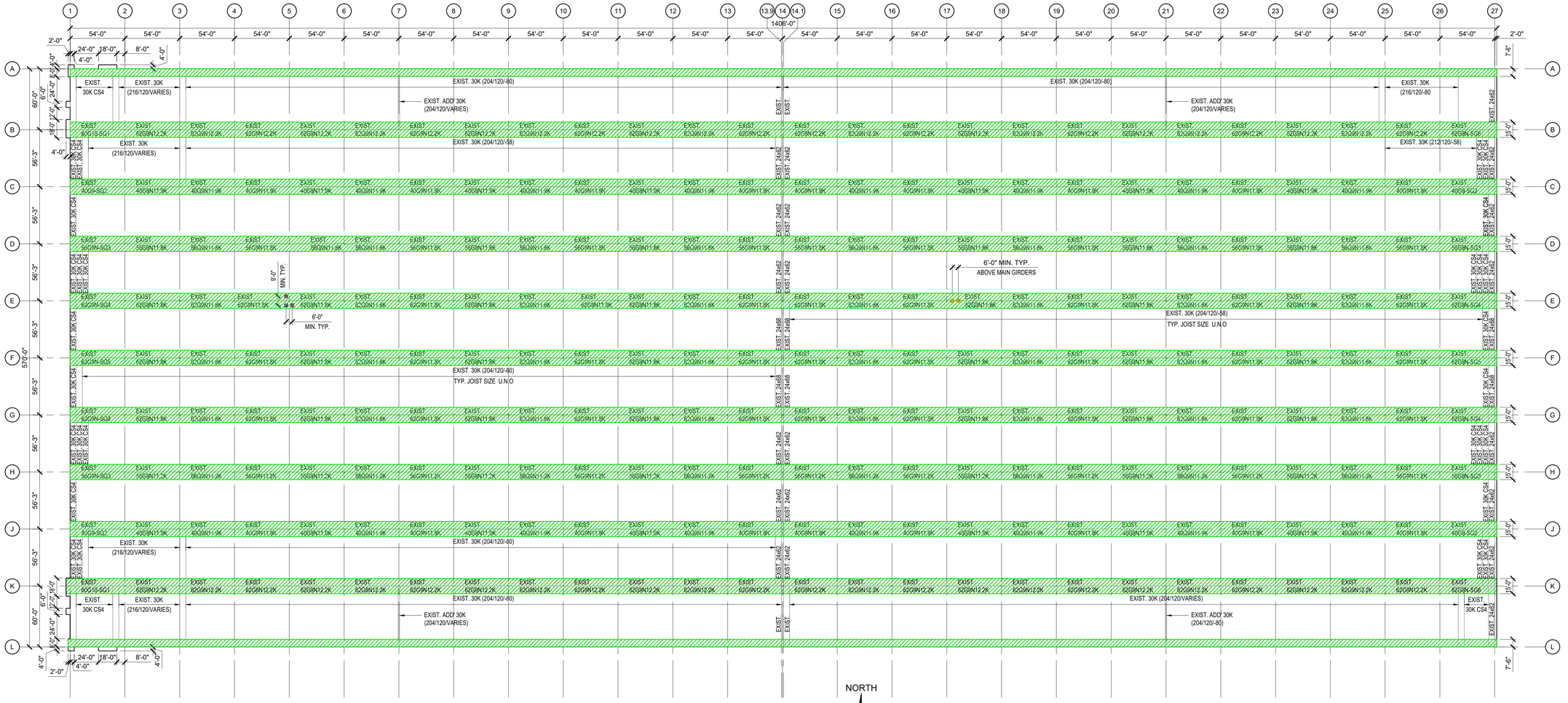
JOB NO.:	1250401
DATE:	7/31/25
DESIGNED BY:	BEM
DRAWN BY:	BEM
CHECKED BY:	CJB
SHEET SIZE:	ARCH D (24"X36")

SCALE:

NOT TO SCALE

DETAILS AND ELEVATIONS

PV302



1 S1.0 PALLET LOADING PLAN
SCALE: 1"=50'-0"

NORTH

LEGEND

- PALLETS CAN ONLY BE PLACED IN THIS AREA
- INDICATES EXAMPLE PALLET LOCATION (MAX. WEIGHT = 3250 LBS.)
- INDICATES EXAMPLE PALLET LOCATION (MAX. WEIGHT = 1000 LBS.)

NOTES:

1. PALLET LOCATIONS SHOWN ON PLAN ARE EXAMPLE LOCATIONS. ACTUAL PALLET LOCATIONS ARE ALLOWED TO VARY AND ARE ACCEPTABLE AS LONG AS THEY FOLLOW PLACEMENT REQUIREMENTS LISTED BELOW.
2. MINIMUM SPACING BETWEEN PALLETS IS SHOWN ON THE PLANS. HEAVY PALLETS UP TO 3250LBS CAN BE PLACED ONLY DIRECTLY ABOVE THE GIRDER LINE AND NEEDS TO BE A MIN OF 6FT AWAY FROM OTHER PALLETS IN THE WEST-EAST DIRECTION. PALLETS WEIGHING UP TO 1000LBS CAN BE A MIN OF 9FT AWAY FROM OTHER PALLETS IN THE NORTH-SOUTH DIRECTION AND A MIN OF 6FT APART FROM OTHER PALLETS ALONG THE GIRDER.
3. PALLET DIMENSIONS WERE NOT PROVIDED. LONG DIMENSIONS OF PALLETS IS ASSUMED TO BE AT LEAST 40". SEI SHALL BE CONTACTED IF A PALLET IS SMALLER THAN THIS OR IS SIGNIFICANTLY HEAVIER THAN THE VALUES SHOWN.
4. PALLETS SHOULD BE ORIENTED EAST - WEST.
5. PALLETS SHALL NOT BE STACKED ON TOP OF EACH OTHER.
6. PALLET PLACEMENT DETERMINATION INCLUDES A REDUCED LIVE LOAD ON THE ROOF FRAMING AS ACCEPTED BY THE INTERNATIONAL BUILDING CODE IN SECTION 1607.14.2. THE JOISTS HAVE A REDUCED LIVE LOAD OF 17.25 PSF AND THE MAIN GIRDERS HAVE A REDUCED LIVE LOAD OF 12 PSF.
7. THIS PALLET LOADING DIAGRAM IS INTENDED TO BE A TEMPORARY LOADING CONDITION. THE ANALYSIS DID NOT INCLUDE ADDITIONAL LOADS DUE TO WEATHER EVENTS SUCH AS SNOW DRIFT ON PALLETS OR PALLET OVERTURNING DUE TO WIND.

CLIENT:

AZIMUTH ENERGY, LLC
ATTN: MR. DEKO DEVINS
863 HORAN DRIVE
FENTON, MO 63026

PROJECT:
5710 INNER PARK DR.
PALLET LOADING PLAN

5710 INNER PARK DR.
EDWARDSVILLE, IL 62025

Structural INNUITY®
1815 W. DIEHL RD., SUITE 100, NAPERVILLE, IL 60563
(630) 219-1997

DESIGN FIRM REG. NO.
184.006994
PROJECT NO.:
250583.00

ALLAN T. MYKAT
081-007428
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

07/29/2025
Exp: 11/30/2026
SEI COA Number:184.006994

REVISIONS/ISSUANCES

No.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

SHEET NAME:
PALLET
LOADING PLAN

DATE: 07/07/25
DRAWN BY: VH
CHECKED BY: DM
SCALE: AS SHOWN

SHEET NO.
S1.0
1 OF 1

FILE: 250583.00_Azimuth Energy_5710 Inner Park Dr Pallet Loading Plan_Edwardsville - IL.dwg
PATH: S:\2025\250583.00_AZIMUTH ENERGY_5710 INNER PARK DR ROOF SOLAR ARRAY_EDWARDSVILLE - IL\DWGS\PALLET LOADING PLAN

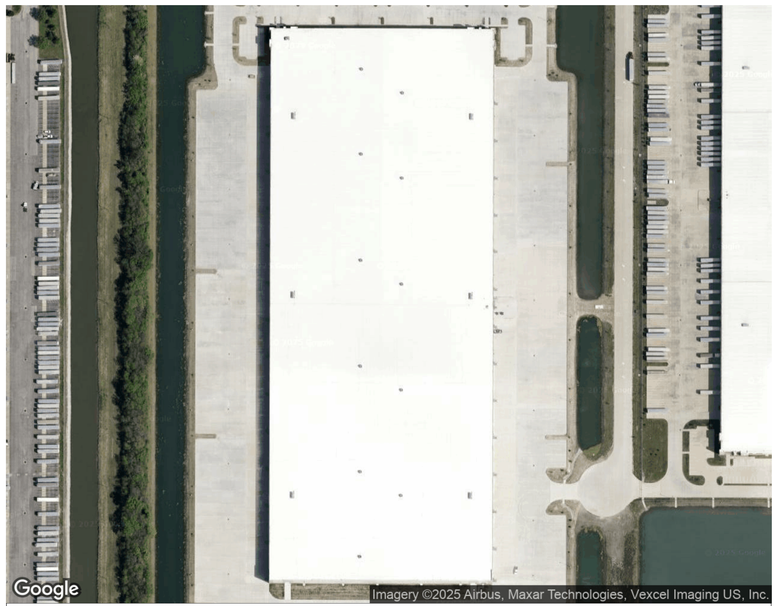
7/29/2025 12:23:52 PM

Site Design Criteria - Flat Roof PV System Basis of Design	
Roof Live Load (psf)	20(see footnote 1)
Ground Snow Pg (psf)	20
Flat Roof Snow (psf)	20
Snow Importance Factor (Is)	1.0
Wind Design Data	
Basic Wind Speed (mph)	108
Risk Category	II
Wind Exposure	C
Earthquake Design Data	
Risk Category	II
Importance Factor (Ie)	1.00
Component Importance Factor (Ip)	1.0
Mapped Acceleration Parameter (Ss)	0.427
Mapped Acceleration Parameter (S1)	0.154
Seismic Site Class	D
Design Spectral Acceleration Parameter (Sds)	0.415
Design Spectral Acceleration Parameter (Sd1)	0.235
Seismic Design Category (SDC)	D
Basic seismic-force-resisting system(s)	ASCE 7-16 section 13.6.12
Base Design Shear = Fp x W	0.20 W
Response Modification Factor (Rp)	2.5
Analysis Procedure	ASCE 7 sec. 13.6.12
Design Code (with local amendments)	IBC 2021
-	ASCE 7 - 16
ALTERNATE DESIGN METHOD	
1. Roof Live Load only applicable to areas not covered by PV modules. Reference SEAOC Design Guidelines	

GENERAL NOTES:

1. ALL SITE, PROJECT, AND BUILDING DETAILS ARE PROVIDED BY CUSTOMER OR GENERATED VIA SATELLITE IMAGERY FROM INFORMATION PROVIDED BY CUSTOMER. PANELCLAW IS NOT RESPONSIBLE FOR SITE INACCURACIES THAT COULD LEAD TO CHANGES TO THESE DRAWING DETAILS AND ARRAY LAYOUT CONFIGURATIONS. ALL INFORMATION CONTAINED WITHIN THESE DOCUMENTS ARE TO BE FIELD VERIFIED BY CUSTOMER AND INSTALLER. ANY CHANGES OR MODIFICATIONS TO THESE DOCUMENTS, CONTAINED INFORMATION, OR FINAL ARRAY AND MOUNTING SYSTEM INSTALLATIONS MUST BE SUBMITTED TO PANELCLAW AND OTHER PROJECT AUTHORITIES FOR APPROVAL.
2. REFER TO AND FOLLOW THE APPROPRIATE PANELCLAW INSTALLATION MANUALS AND PROCEDURES DURING THE INSTALLATION PROCESS. NOT FOLLOWING SUCH PROCEDURES AND METHODS COULD RESULT IN DAMAGE TO THE COMPONENTS OR MAY VOID THE PRODUCT WARRANTY.
3. ARRAY SETBACKS: ALL ARRAYS ARE REQUIRED TO BE SETBACK 4-FEET FROM ALL ROOF EDGES UNLESS OTHERWISE SPECIFIED AND CALLED OUT ON THE ARRAY DIAGRAMS ON THIS PAGE OR ON ADDITIONAL ARRAY BALLAST PAGES.
4. REFER TO THE SPECIFIC ARRAY BALLAST SHEETS FOR BALLASTING REQUIREMENTS BASED ON THE PROVIDED SITE INFORMATION.
5. SYSTEM PSF INCLUDES ALL PANELCLAW RACKING COMPONENTS, MECHANICAL ATTACHMENTS (IF APPLICABLE), PV MODULE AND BALLAST BLOCKS. FOR MAXIMUM SYSTEM POINT LOAD SUMMARY (PLS), REFER TO CALCULATIONS.
6. PANELCLAW AND/OR PANELCLAW CONSULTING ENGINEERS ARE NOT RESPONSIBLE FOR DETERMINING THE ADEQUACY OF THE STRUCTURE TO SUPPORT LOADS IMPOSED BY THE ARRAY AND MOUNTING SYSTEM. SUPPORT STRUCTURE TO BE CHECKED BY OTHERS.
7. ALWAYS ALLOW A MINIMUM OF 6" CLEARANCE BETWEEN NEIGHBORING SUBARRAYS, 6" BETWEEN SUBARRAYS AND ALL FIXED ROOF OBJECTS AND 4' BETWEEN SUBARRAYS AND ROOF EDGES. REFER TO LOCAL FIRE CODES AND ELECTRICAL CODES FOR ADDITIONAL REQUIREMENTS WHICH MAY GOVERN DESIGN. SUBARRAYS THAT USE A SEISMIC ANALYSIS METHOD OF DELTA MPV PREDICTED MOVEMENT HAVE THEIR OWN CLEARANCE REQUIREMENTS. REFER TO THE BALLAST LAYOUT SHEETS WITHIN THIS DOCUMENT FOR DETAILS.
8. BALLAST BLOCK DIMENSIONS MUST CONFORM TO THE FOLLOWING SPECIFICATIONS: 3-3/4" THICK MAX., 7-5/8" ± 1/8" WIDTH, 15-5/8" ± 1/8" LENGTH.
9. IF AN ARRAY CLEARANCES TABLE APPEARS BELOW ON THIS PAGE, THE DESIGN UTILIZES THIRD PARTY SEISMIC NON-LINEAR RESPONSE ANALYSIS TO ESTIMATE MAXIMUM ARRAY SEISMIC DISPLACEMENT. THE PREDICTED MOVEMENT IS ONLY AN ESTIMATE. PANELCLAW IS NOT RESPONSIBLE OR LIABLE FOR ANY DAMAGES OR COSTS ASSOCIATED WITH PV ARRAY MOVEMENT INCLUDING MOVEMENT IN EXCESS OF THE CLEARANCES NOTED IN THIS DOCUMENT OR ANY REQUIREMENT TO REPOSITION THE ARRAYS IF MOVEMENT OCCURS.
10. DEFLECTORS MUST BE INSTALLED WHEN WINDS ARE EXPECTED TO EXCEED APPROX. 25% OF WIND SPEED DOCUMENTED IN SITE DESIGN CRITERIA TABLE. DEFLECTORS ARE REQUIRED ON ALL MODULES UNLESS OTHERWISE NOTED ON BALLAST LAYOUT PAGES.

SHEET INDEX	
NO.	DESCRIPTION
PC-1	COVER SHEET
PC-2	PROJECT SUMMARY
PC-3	ARRAY SITE MAP
PC-4	TYPICAL ARRAY DIMENSIONS
PC-5	ASSEMBLIES
PC-6	RACKING COMPONENTS
PC-7	BALLAST LEGEND
PC-8 TO PC-35	BALLAST LAYOUT - 1 TO 28



AERIAL PHOTO / SITE DIAGRAM

ARRAY CLEARANCES PER ASCE 7		
CONDITION	**MINIMUM SEPARATION**	**DISTANCE (IN.)**
BETWEEN SEPARATE SOLAR ARRAYS OF SIMILAR CONSTRUCTION	(0.5) (Mpv)	3
BETWEEN A SOLAR ARRAY AND A FIXED OBJECT ON THE ROOF OR SOLAR ARRAY OF DIFFERENT CONSTRUCTION	(Mpv)	6
BETWEEN A SOLAR ARRAY AND A ROOF EDGE WITH A QUALIFYING PARAPET	(Mpv)	6
BETWEEN A SOLAR ARRAY AND A ROOF EDGE WITHOUT A QUALIFYING PARAPET	(2.0) (Mpv) >= 4ft	48
NOTE: SUFFICIENT SLACK IN ARRAY ELECTRICAL WIRING MUST BE PROVIDED TO ACCOMMODATE ALL POTENTIAL ARRAY MOVEMENT.		

THIS CONSTRUCTION SET PROVIDES THE RACKING LAYOUT FOR ALL ARRAYS WITH NUMBER OF BALLAST BLOCKS AND/OR MECHANICAL ATTACHMENTS BASED ON THE APPROVED STRUCTURAL CALCULATIONS FOR THE COMPLETED INSTALLED CONDITION OF THE SOLAR ARRAY. THE INSTALLER IS RESPONSIBLE FOR THE SAFETY AND CARE OF THE ARRAY DURING ALL PHASES OF INSTALLATION. THEREFORE, THE INSTALLER MUST MONITOR THE WEATHER FORECAST AND TAKE NECESSARY PRECAUTIONS (SEE GENERAL NOTE #10) TO TEMPORARILY SHORE/BRACE ALL ARRAYS DURING CONSTRUCTION UNTIL INSTALLATION IS COMPLETED IN CONFORMANCE WITH THIS APPROVED CONSTRUCTION SET AND THE PRODUCT INSTALLATION MANUAL (SEE GENERAL NOTE #2). THE INSTALLER HAS SOLE RESPONSIBILITY FOR THE MEANS, METHODS, AND TECHNIQUES OF CONSTRUCTION OF THE SOLAR ARRAY FOR COMPLIANCE WITH LAWS, REGULATIONS, AND CODES, AND FOR THE SAFETY OF CONSTRUCTION APPLICABLE TO THIS WORK.

APPROVED FOR CONSTRUCTION

STAMP:
LIMITED TO STRUCTURAL DESIGN ONLY

STATE OF ILLINOIS
CHRISTINE A. WROBEL
081-006080
CHICAGO
LICENSED STRUCTURAL ENGINEER

Larson Engineering Inc
1488 Bond Street, Suite 100
Naperville, Illinois 60563
(p) 630.357.0540 (f) 630.357.0164
ILLINOIS LICENSE # 184-001442
LEI Comm No. 21210001.129

panelclaw®

RACKING CONSTRUCTION SET

1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
TEL: 978.688.4900
www.panelclaw.com

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REV	DESCRIPTION	DATE	CHECK	PREP
0	Initial Layout	2024-12-11		AW
1	Revised Layout	2025-02-06		MM
2	Revised Layout	2025-02-28		DH
3	Revised Layout	2025-05-23		RH

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

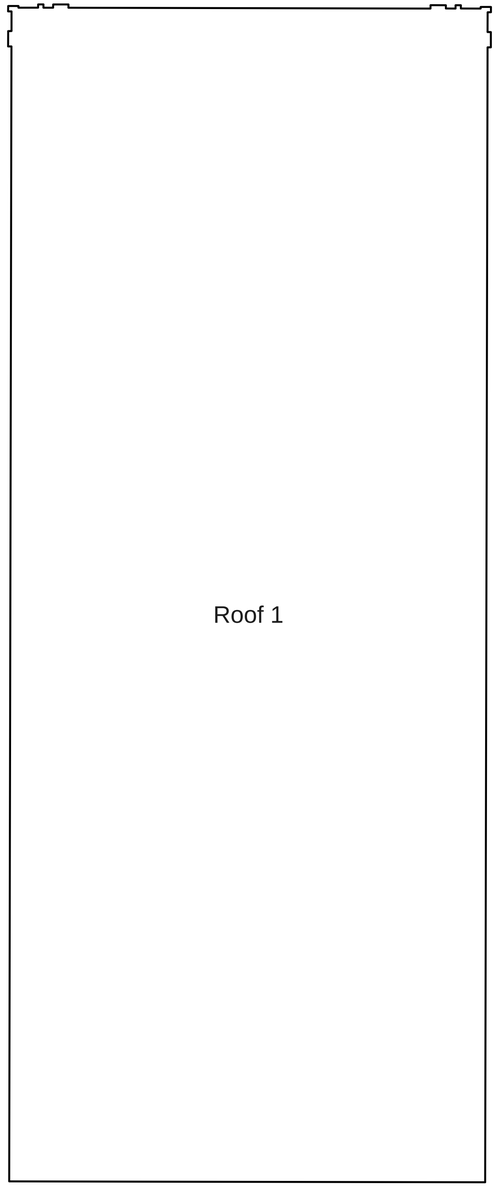
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
COVER SHEET

REVISION: 3
SHEET: PC-1



SITE MAP

SCALE: NTS

A
PC-2

PROJECT SUMMARY	
MODULE TYPE	HANWHA Q CELLS Q.PEAK DUO XL-G11S.3/BFG590
MODULE DIMENSIONS (IN.)	96.93 X 44.65 X 1.38
NUMBER OF MODULES	10540
MODULE WATTAGE (W STC)	590
SYSTEM SIZE (kW STC)	6218.6
SYSTEM WEIGHT (LB)	1457877
SYSTEM AREA (SQ FT.)	434489
AGGREGATE SYSTEM LOAD (PSF)	3.36
NUMBER OF ARRAYS	28
ARRAY TILT (DEG)	8.99

clawFRplus 10 Degree - 44 cm

PROJECT PART QUANTITY

ITEM	PART NUMBER	QTY
Base	500050203	22102
BASE, 03, CFR		
Module Connector	500063304	21080
MODULE CONNECTOR, 1150, 10D, CFRP		
Rail	2000895	27820
RAIL, 2500, CFR		
Cam	5000630	21080
CAM, 10D, CFRP		
Cam Claw	2000854	21080
CAM CLAW, CFRP		
Deflector	200088707	10540
DEFLECTOR, 10D, 2500, CFR		
Bolt	2000697	103484
BLT, HEX FLG, TRI, M6X16, GR8.8, PATCH		
CONCRETE MASONRY UNIT	N/A	14463
BLOCK, CONCRETE, 32.6 LB. - 4in x 8in x 16in NOMINAL, PARTNER SUPPLIED, SEE INSTALLATION MANUAL		

APPROVED FOR CONSTRUCTION

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SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

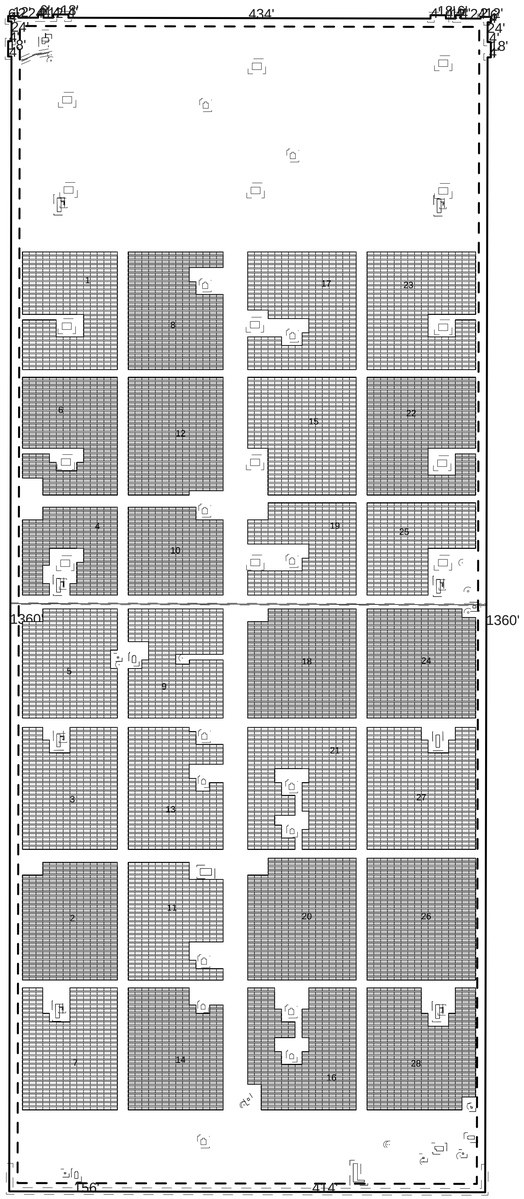
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
PROJECT SUMMARY

REVISION: 3

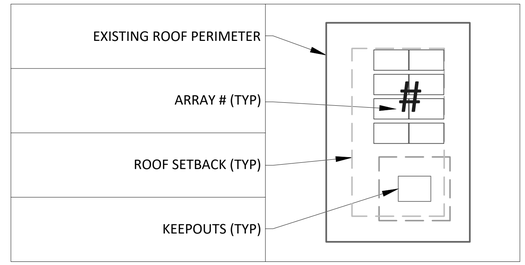
SHEET: PC-2



ARRAY SITE MAP

SCALE: NTS

A
PC- 3

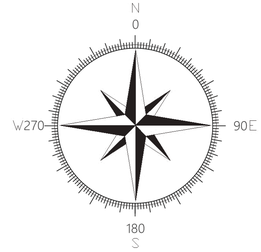


ROOF NAME	ROOF SETBACK (FT.)	ROOF HEIGHT (FT)	PARAPET HEIGHT (FT)	ROOF TILT (DEG)
Roof 1	10.00	47.00	2.0	1

KEEPOUT NAME	KEEPOUT CLEARANCE (FT.)	KEEPOUT HEIGHT (IN.)
Group 1	4	24
Group 2	5	96
Group 3	4	48
Group 4	1	6

NOTES:

1. ALL DIMENSIONS SHOWN ARE BASED UPON INFORMATION PROVIDED TO PANELCLAW. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION OF THE SOLAR ARRAY. NOTIFY PANELCLAW OF ANY DISCREPANCIES.



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REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

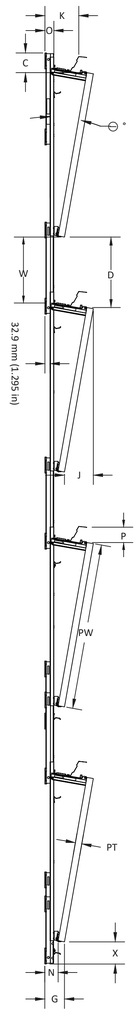
PROJECT:
5710 Inner Park Dr

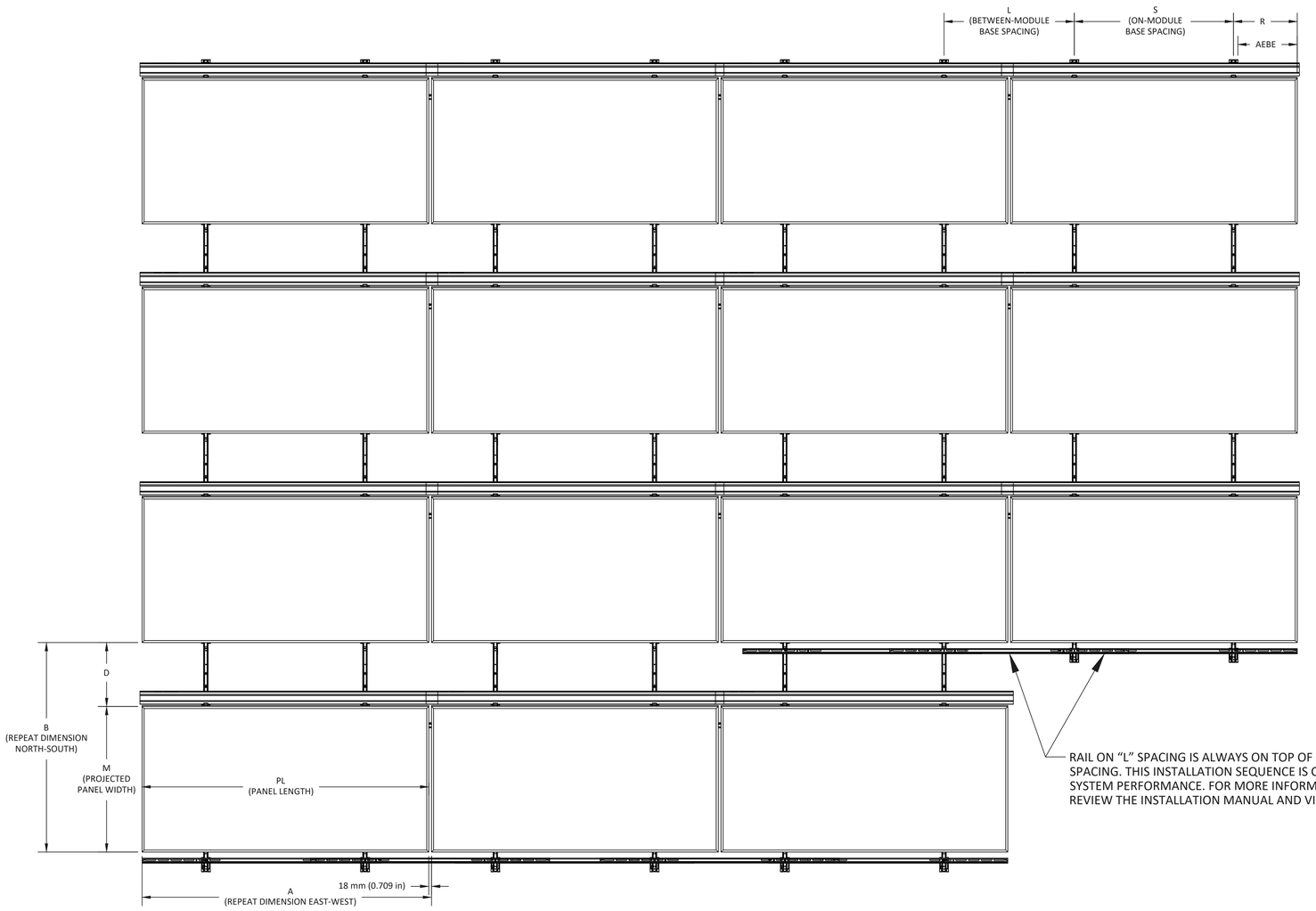
LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
ARRAY SITE MAP

REVISION: 3

SHEET: PC-3





ARRAY CROSS SECTION VIEW

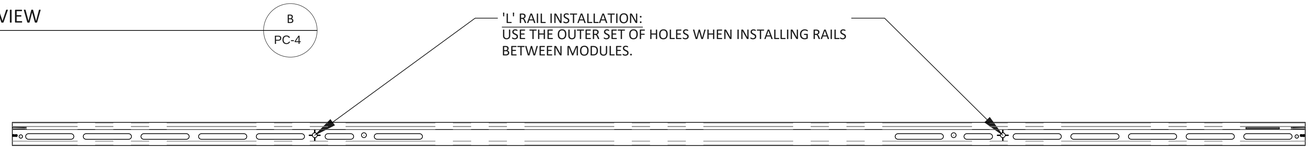
SCALE: NTS

A PC-4

ARRAY TOP VIEW

SCALE: NTS

B PC-4



RAIL DETAIL

SCALE: NTS

C PC-4

INSTALLATION MEASUREMENTS					
		AEBE	S	L	CAM SPACING*
UNITS	mm	486	1430	1050	53
	inches	19 1/8	56 5/16	41 5/16	2 1/8
*CAM SPACING SHOWN ON ASSEMBLIES PAGE.					

MODULE DIMENSIONS				
		PL	PW	PT
UNITS	mm	2462	1134	35
	inches	96.93	44.65	1.38

INSTALLED ARRAY DIMENSIONS																		
		A	B	C	D	G	J	K	M	N	O	P	R	W	X	Theta (DEG)	D/J (#:1)	G.C.R.*
UNITS	mm	2480	1553	121	433	116	177	209	1120	81	59	92	516	407	137	8.99	2.44	0.73
	inches	97.64	61.13	4.75	17.03	4.56	6.97	8.23	44.10	3.20	2.31	3.61	20 5/16	16.03	5.39	8.99	2.44	0.73
* G.C.R = (PW) / B																		

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PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

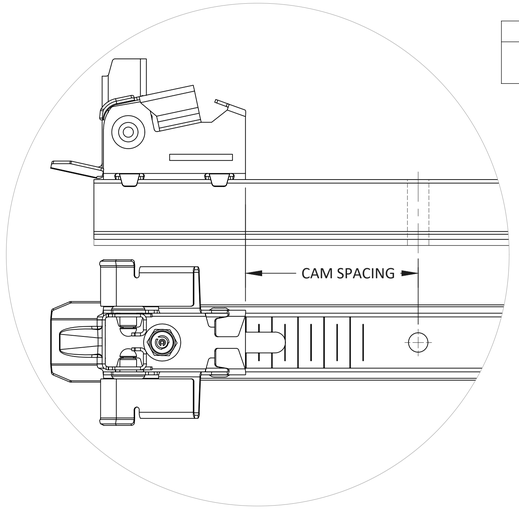
LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
TYPICAL ARRAY DIMENSIONS

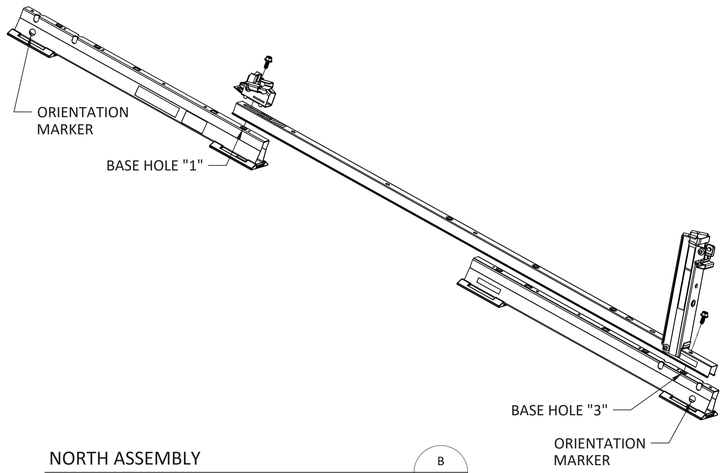
REVISION: 3

SHEET: PC-4

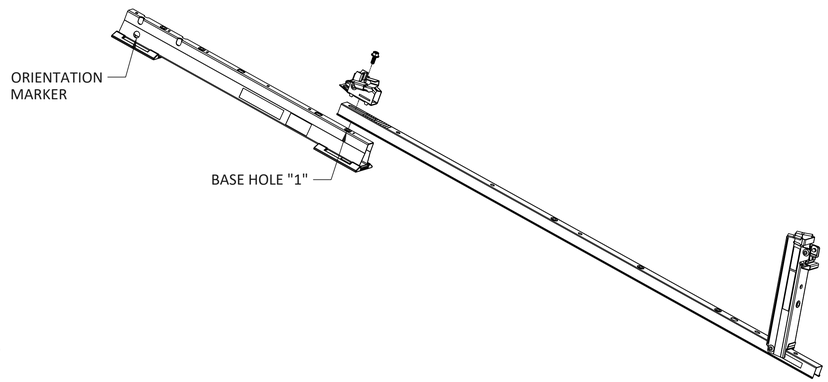
		CAM SPACING
UNITS	mm	53
	inches	2 1/8



CAM SPACING DETAIL — A — PC-5
SCALE: NTS

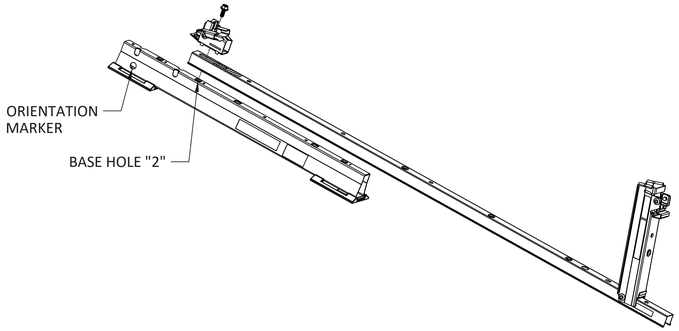


NORTH ASSEMBLY — B — PC-5
SCALE: NTS

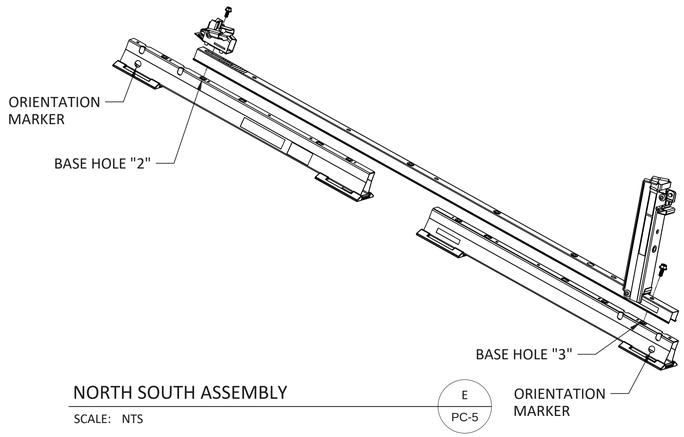


MIDDLE ASSEMBLY — C — PC-5
SCALE: NTS

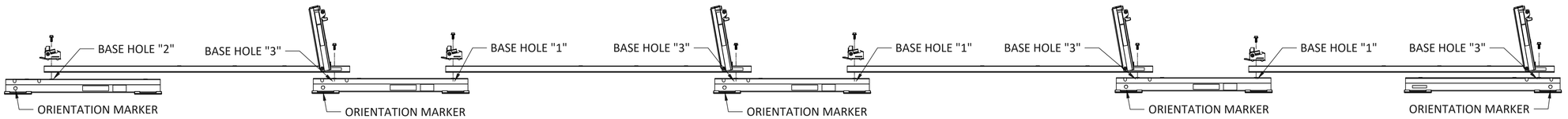
STANDARD ASSEMBLY QUANTITY	
NORTH ASSEMBLY	1022
SOUTH ASSEMBLY	1022
MIDDLE ASSEMBLY	19036
NORTH SOUTH ASSEMBLY	0
NOTE: ASSEMBLIES IN THIS TABLE USE THE STANDARD 2-PAD BASE	



SOUTH ASSEMBLY — D — PC-5
SCALE: NTS



NORTH SOUTH ASSEMBLY — E — PC-5
SCALE: NTS



EXAMPLE ARRAY CONSTRUCTION — F — PC-5
SCALE: NTS

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SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

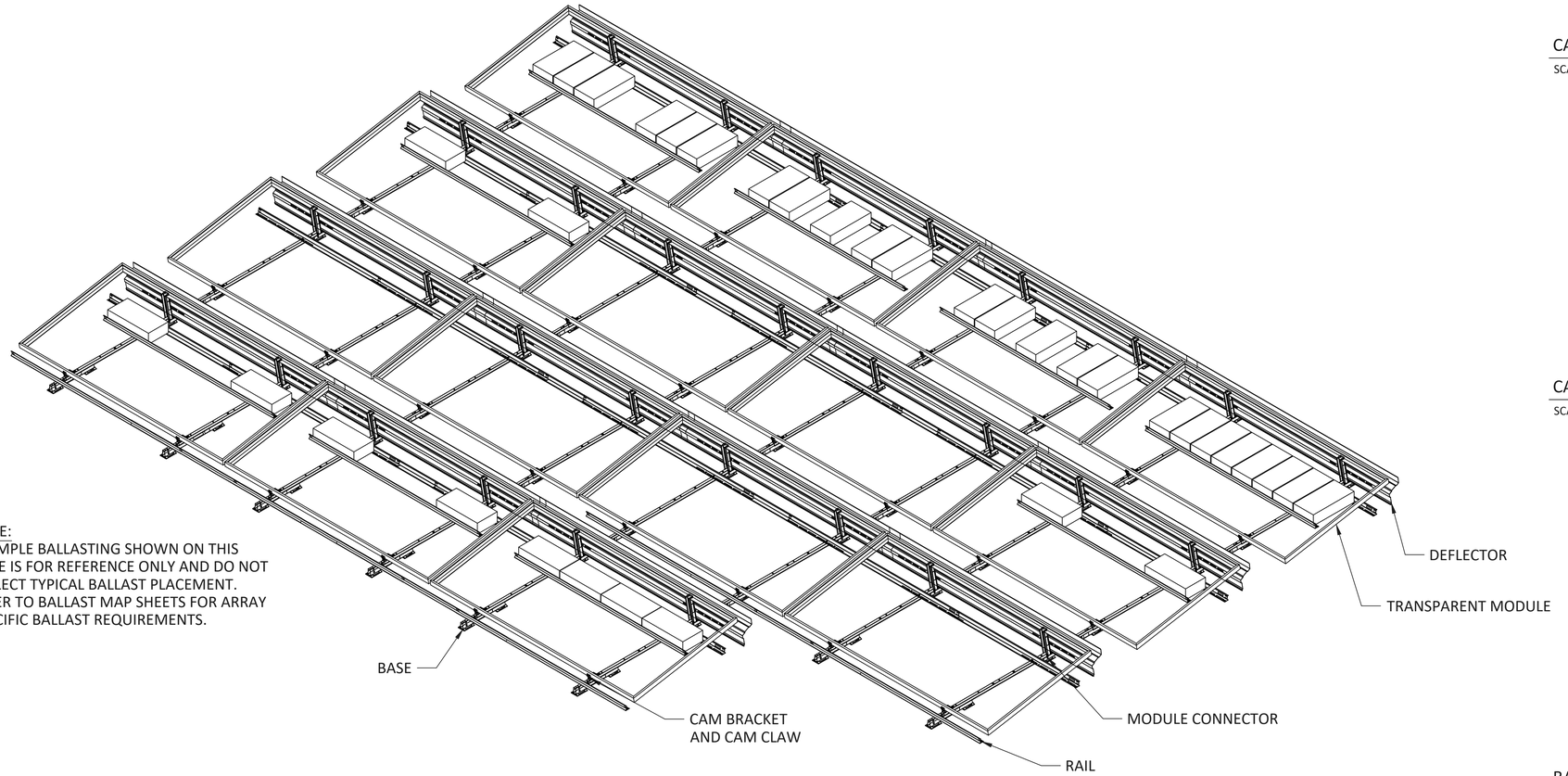
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
ASSEMBLIES

REVISION: 3
SHEET: PC-5

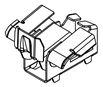
NOTE:
EXAMPLE BALLASTING SHOWN ON THIS PAGE IS FOR REFERENCE ONLY AND DO NOT REFLECT TYPICAL BALLAST PLACEMENT. REFER TO BALLAST MAP SHEETS FOR ARRAY SPECIFIC BALLAST REQUIREMENTS.



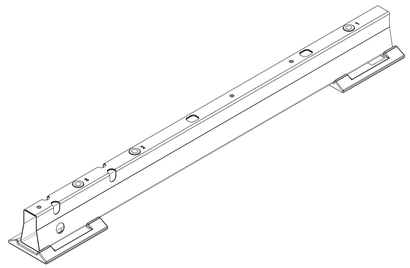
EXAMPLE RAIL AND BLOCK CONFIGURATION — A — PC-6
SCALE: NTS



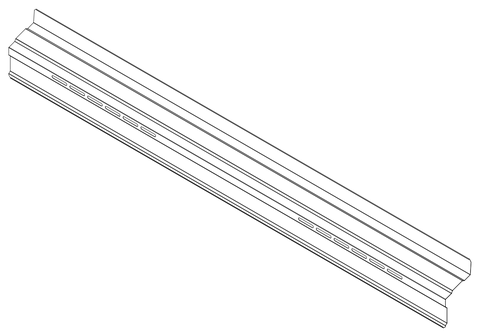
CAM CLAW — B — PC-6
SCALE: NTS



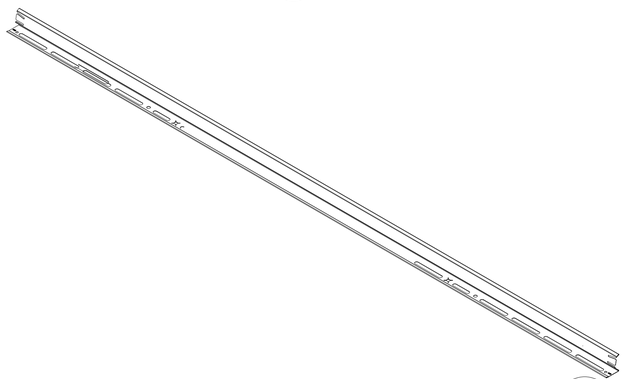
CAM BRACKET — C — PC-6
SCALE: NTS



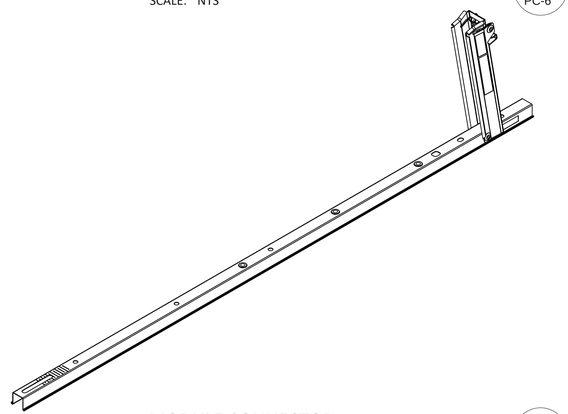
BASE — D — PC-6
SCALE: NTS



DEFLECTOR — G — PC-6
SCALE: NTS



RAIL — F — PC-6
SCALE: NTS



MODULE CONNECTOR — E — PC-6
SCALE: NTS

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SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
RACKING COMPONENTS

REVISION: 3
SHEET: PC-6

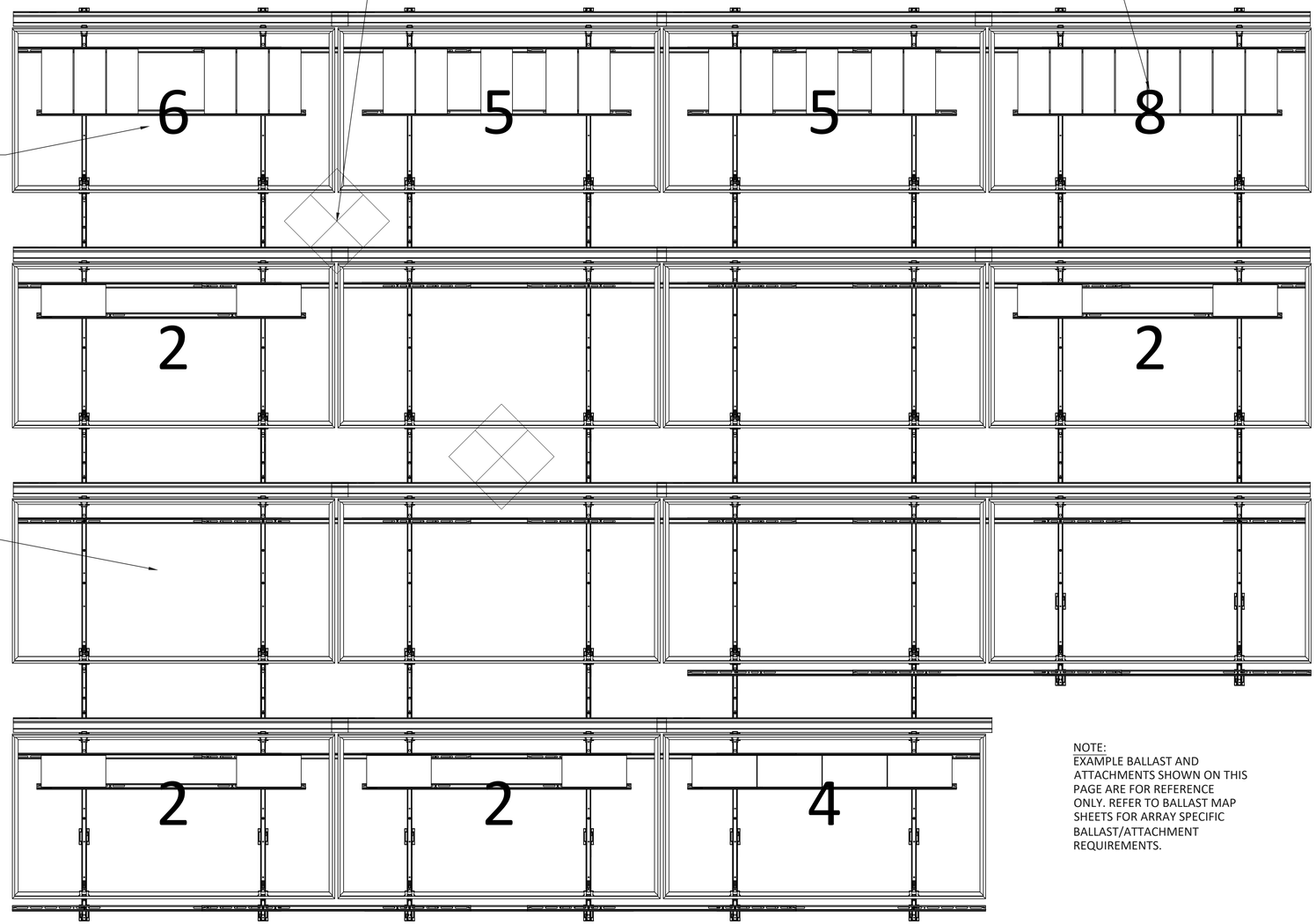


BALLAST QUANTITY:
"#"=QUANTITY OF BALLAST BLOCK INSTALLED CENTERED UNDER MODULE

IF NO BALLAST QUANTITY SHOWN, DO NOT PLACE BALLAST

SEE INSTALLATION MANUAL FOR NOTES ON INSTALLING MORE THAN FOUR BALLAST BLOCKS PER MODULE

DO NOT INSTALL ADDITIONAL RAIL TO HOLD BALLAST ON MODULES WITH NO BALLAST SHOWN.



NOTE:
EXAMPLE BALLAST AND ATTACHMENTS SHOWN ON THIS PAGE ARE FOR REFERENCE ONLY. REFER TO BALLAST MAP SHEETS FOR ARRAY SPECIFIC BALLAST/ATTACHMENT REQUIREMENTS.

ARRAY CROSS SECTION VIEW
SCALE: NTS
A PC-7

ARRAY TOP VIEW
SCALE: NTS
B PC-7

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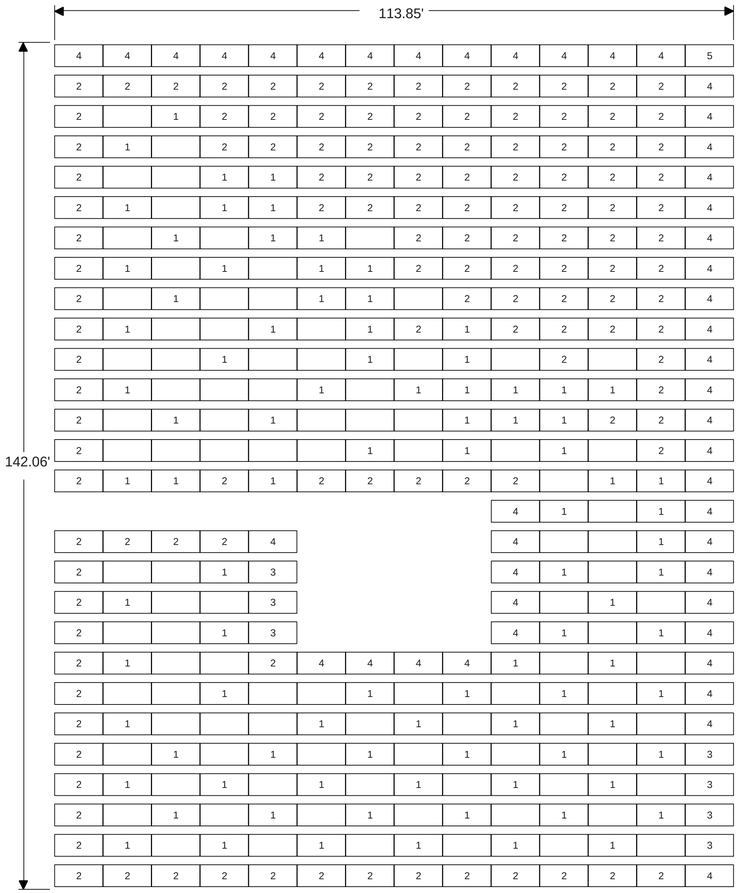
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LEGEND

REVISION: 3
SHEET: PC-7



ARRAY 1.1	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	367
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	216.53
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	780
Module Connector	734
Rail	1018
Cam	734
Cam Claw	734
Deflector	367
Ballast Block	550
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	52391
ARRAY AREA (SQ. FT)	15104
ARRAY LOAD (PSF)	3.47
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	46
SOUTH ASSEMBLY	46
MIDDLE ASSEMBLY	642
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.1

SCALE: 1/12" = 1'-0"

A PC-8

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PREPARED FOR:
Summit Ridge Energy

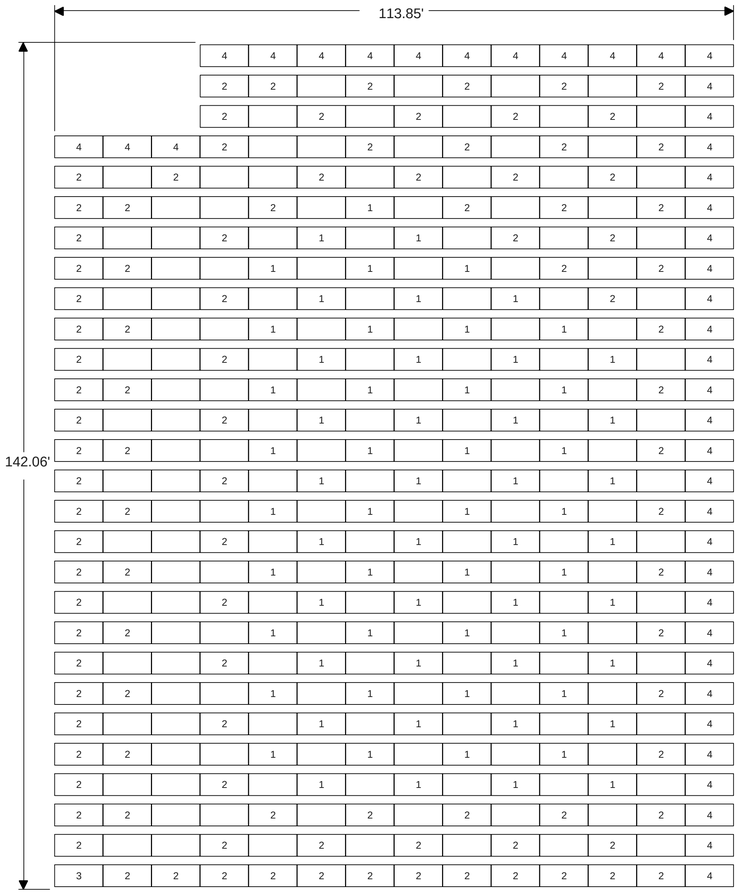
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.1

REVISION: 3

SHEET: PC-8



ARRAY 1.2	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	383
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	225.97
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	794
Module Connector	766
Rail	984
Cam	766
Cam Claw	766
Deflector	383
Ballast Block	448
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	50381
ARRAY AREA (SQ. FT)	15810
ARRAY LOAD (PSF)	3.19
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	28
SOUTH ASSEMBLY	28
MIDDLE ASSEMBLY	710
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.2

SCALE: 1/12" = 1'-0"

A / PC-9

N

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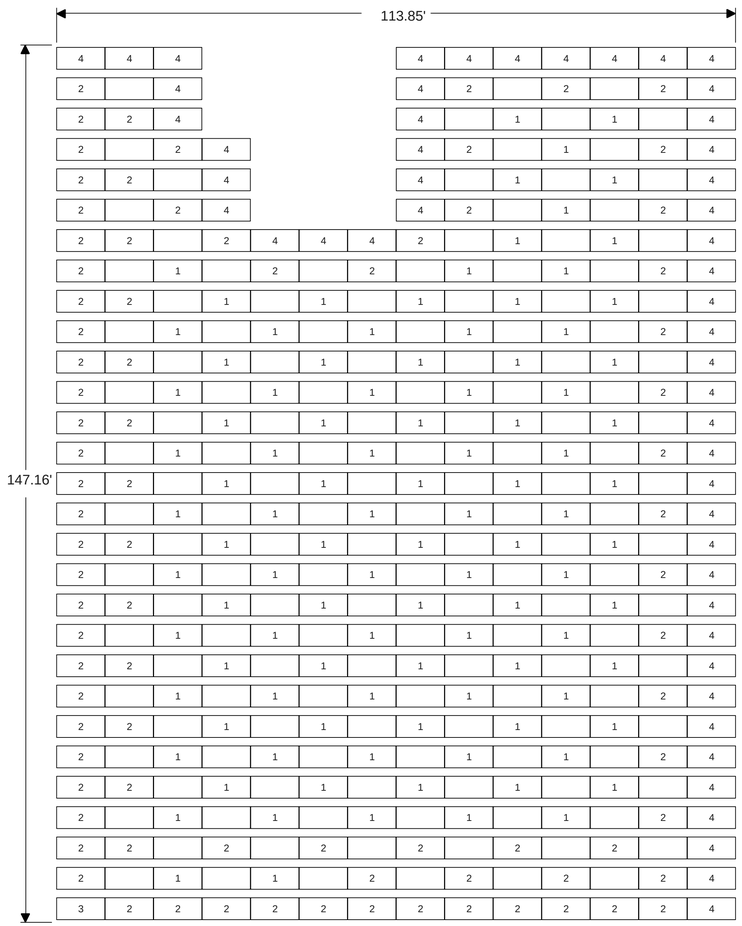
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.2

REVISION: 3
SHEET: PC-9



BALLAST LAYOUT - 1.3

SCALE: 1/12" = 1'-0"

A
PC-10

N

APPROVED FOR CONSTRUCTION

ARRAY 1.3	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	385
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	227.15
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	798
Module Connector	770
Rail	1001
Cam	770
Cam Claw	770
Deflector	385
Ballast Block	478
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	51570
ARRAY AREA (SQ. FT)	15893
ARRAY LOAD (PSF)	3.24
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	28
SOUTH ASSEMBLY	28
MIDDLE ASSEMBLY	714
NORTH SOUTH ASSEMBLY	0

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CHRISTINE A. WROBEL
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REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

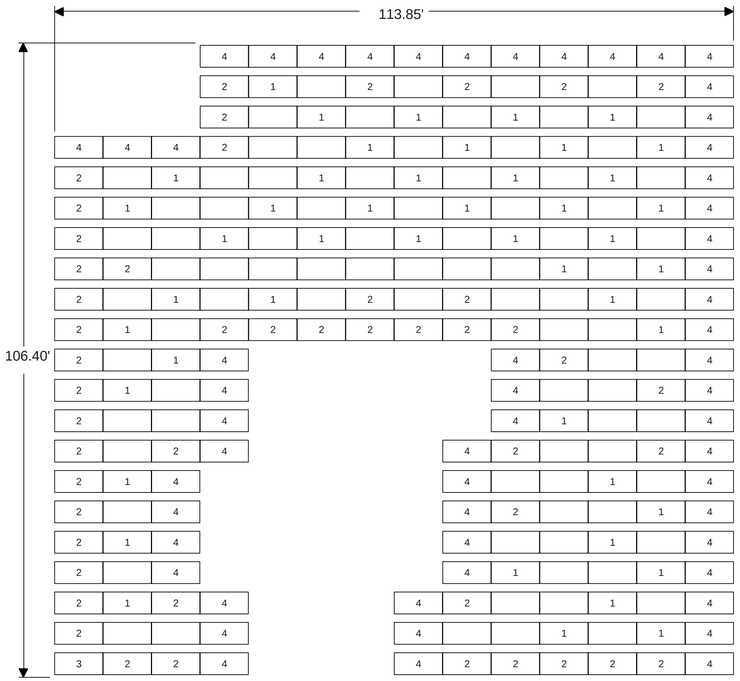
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.3

REVISION: 3

SHEET: PC-10



BALLAST LAYOUT - 1.4

SCALE: 1/12" = 1'-0"

A / PC-11

N

ARRAY 1.4	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	237
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	139.83
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	508
Module Connector	474
Rail	629
Cam	474
Cam Claw	474
Deflector	237
Ballast Block	369
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	34229
ARRAY AREA (SQ. FT)	9744
ARRAY LOAD (PSF)	3.51
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	34
SOUTH ASSEMBLY	34
MIDDLE ASSEMBLY	406
NORTH SOUTH ASSEMBLY	0

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0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

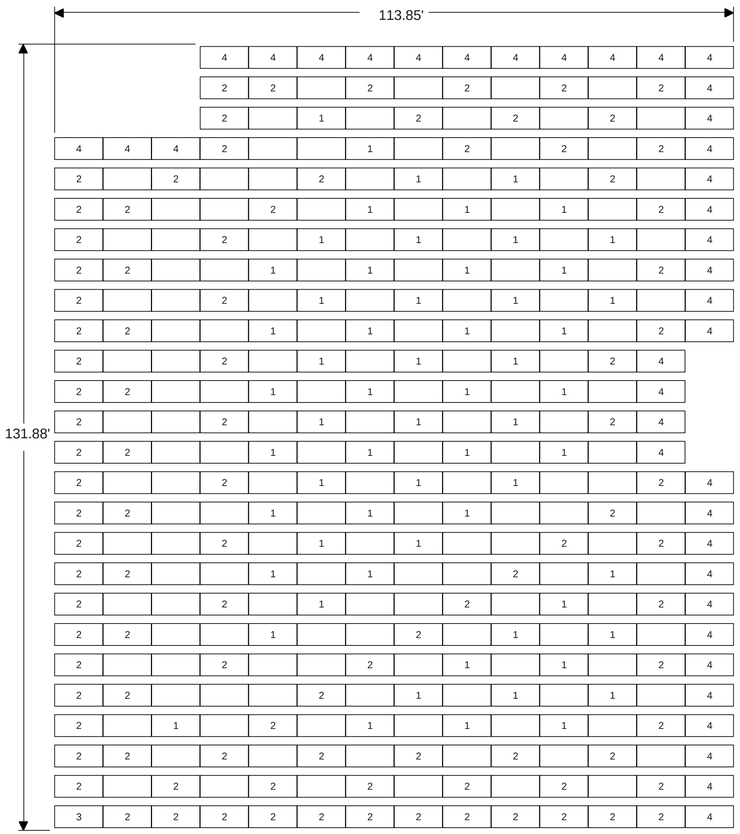
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.4

REVISION: 3

SHEET: PC-11



BALLAST LAYOUT - 1.5

SCALE: 1/12" = 1'-0"

A
PC-12

N

ARRAY 1.5	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	351
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	207.09
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	732
Module Connector	702
Rail	906
Cam	702
Cam Claw	702
Deflector	351
Ballast Block	417
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	46395
ARRAY AREA (SQ. FT)	14479
ARRAY LOAD (PSF)	3.20
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	30
SOUTH ASSEMBLY	30
MIDDLE ASSEMBLY	642
NORTH SOUTH ASSEMBLY	0

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0	Initial Layout	2024-12-11		AW
1	Revised Layout	2025-02-06		MM
2	Revised Layout	2025-02-28		DH
3	Revised Layout	2025-05-23		RH

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

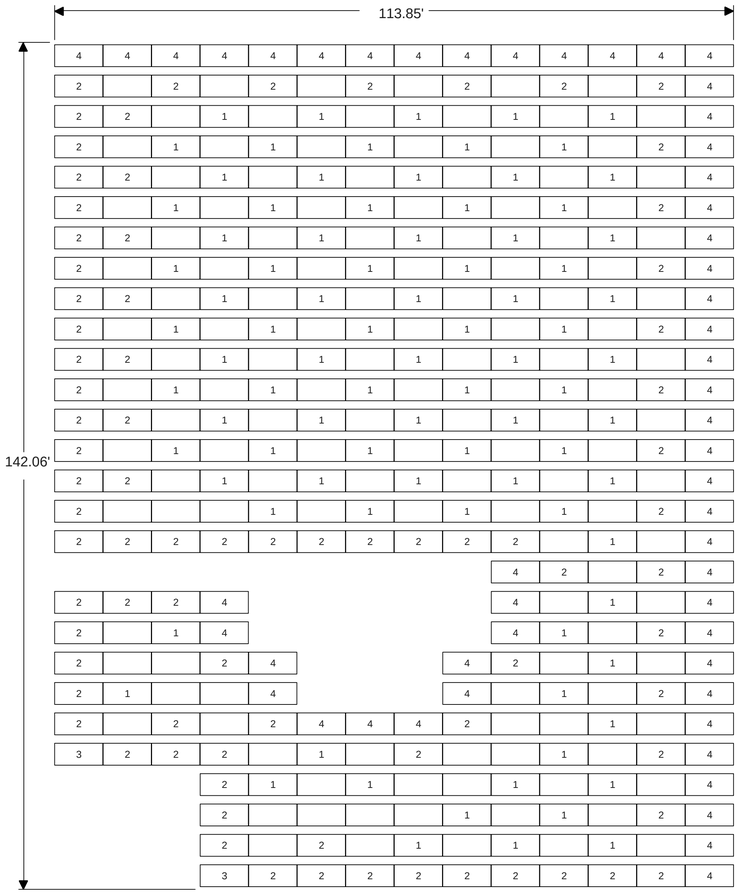
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.5

REVISION: 3

SHEET: PC-12



ARRAY 1.6	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	355
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	209.45
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	756
Module Connector	710
Rail	948
Cam	710
Cam Claw	710
Deflector	355
Ballast Block	466
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	48451
ARRAY AREA (SQ. FT)	14607
ARRAY LOAD (PSF)	3.32
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	46
SOUTH ASSEMBLY	46
MIDDLE ASSEMBLY	618
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.6

SCALE: 1/12" = 1'-0"

A PC-13

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1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE: 0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

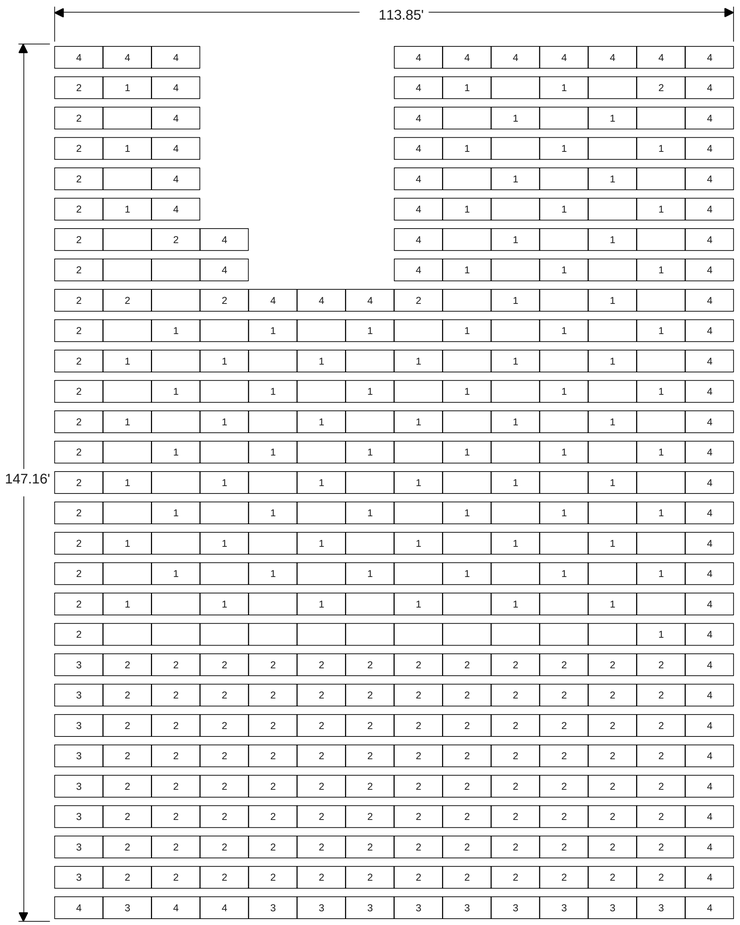
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.6

REVISION: 3
SHEET: PC-13



BALLAST LAYOUT - 1.7

SCALE: 1/12" = 1'-0"

A
PC-14

N

ARRAY 1.7	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	376
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	221.84
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	780
Module Connector	752
Rail	1021
Cam	752
Cam Claw	752
Deflector	376
Ballast Block	609
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	55090
ARRAY AREA (SQ. FT)	15520
ARRAY LOAD (PSF)	3.55
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	28
SOUTH ASSEMBLY	28
MIDDLE ASSEMBLY	696
NORTH SOUTH ASSEMBLY	0

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0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

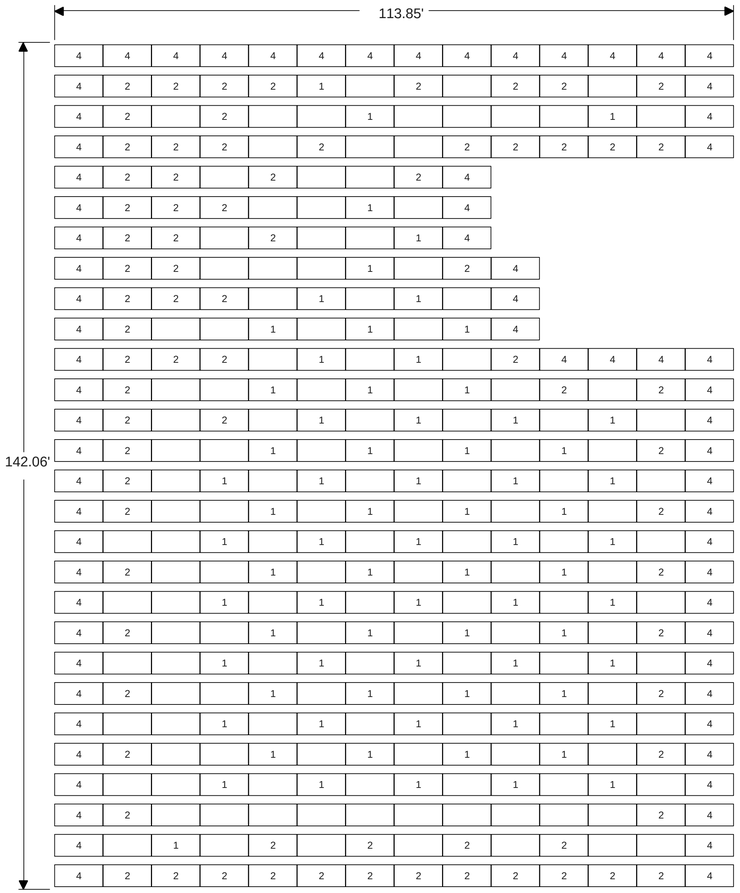
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.7

REVISION: 3

SHEET: PC-14



ARRAY 1.8	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	365
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	215.35
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	768
Module Connector	730
Rail	962
Cam	730
Cam Claw	730
Deflector	365
Ballast Block	511
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	50817
ARRAY AREA (SQ. FT)	15040
ARRAY LOAD (PSF)	3.38
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	38
SOUTH ASSEMBLY	38
MIDDLE ASSEMBLY	654
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.8

SCALE: 1/12" = 1'-0"

A PC-15

N

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1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

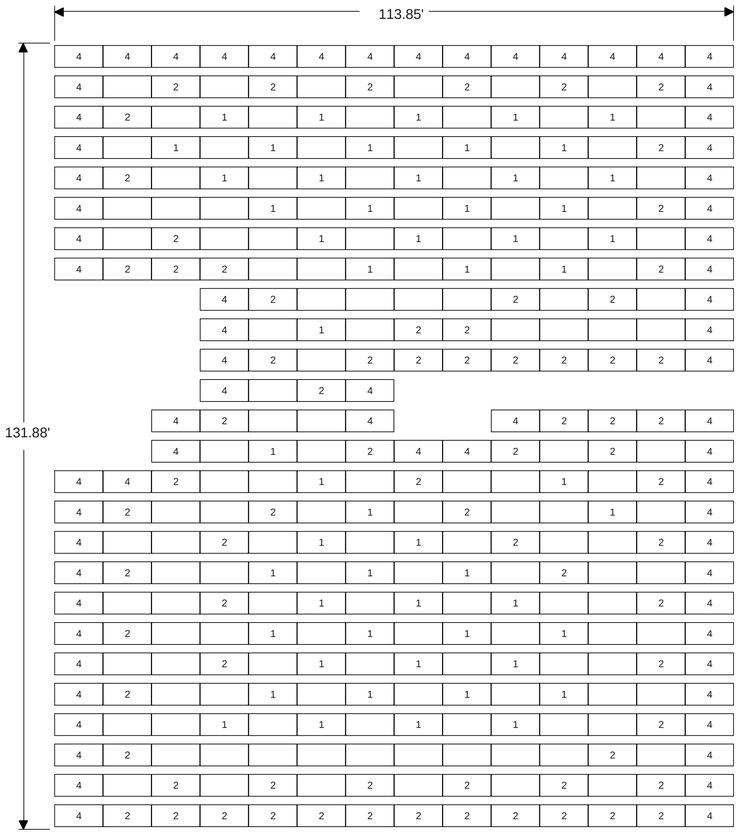
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.8

REVISION: 3

SHEET: PC-15



BALLAST LAYOUT - 1.9

SCALE: 1/12" = 1'-0"

A
PC-16

N

ARRAY 1.9	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	339
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	200.01
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	726
Module Connector	678
Rail	898
Cam	678
Cam Claw	678
Deflector	339
Ballast Block	479
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	47366
ARRAY AREA (SQ. FT)	13939
ARRAY LOAD (PSF)	3.40
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	48
SOUTH ASSEMBLY	48
MIDDLE ASSEMBLY	582
NORTH SOUTH ASSEMBLY	0

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REV	DESCRIPTION	PREP	CHECK	DATE
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1	Revised Layout	MM		2025-02-06
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3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

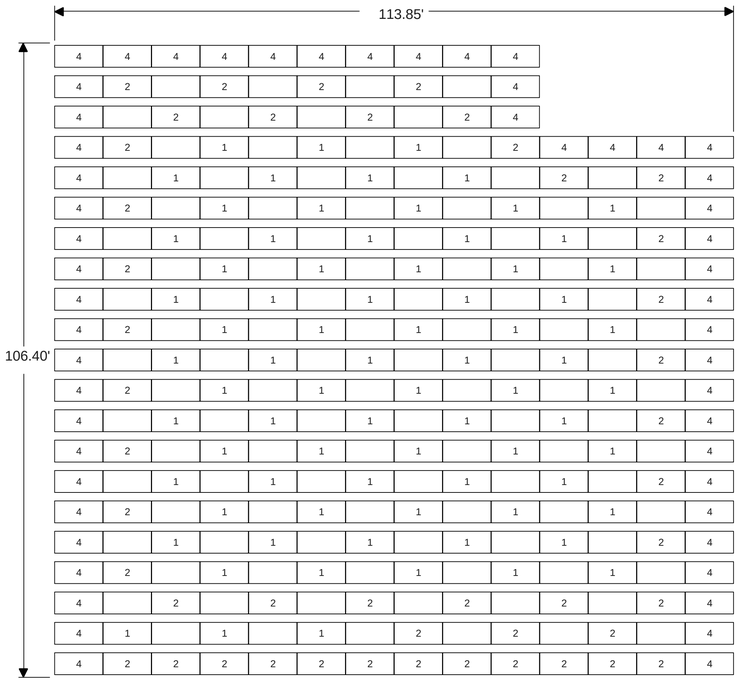
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.9

REVISION: 3

SHEET: PC-16



BALLAST LAYOUT - 1.10

SCALE: 1/12" = 1'-0"

A PC-17

N

ARRAY 1.10	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	282
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	166.38
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	592
Module Connector	564
Rail	744
Cam	564
Cam Claw	564
Deflector	282
Ballast Block	379
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	38746
ARRAY AREA (SQ. FT)	11623
ARRAY LOAD (PSF)	3.33
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	28
SOUTH ASSEMBLY	28
MIDDLE ASSEMBLY	508
NORTH SOUTH ASSEMBLY	0

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SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

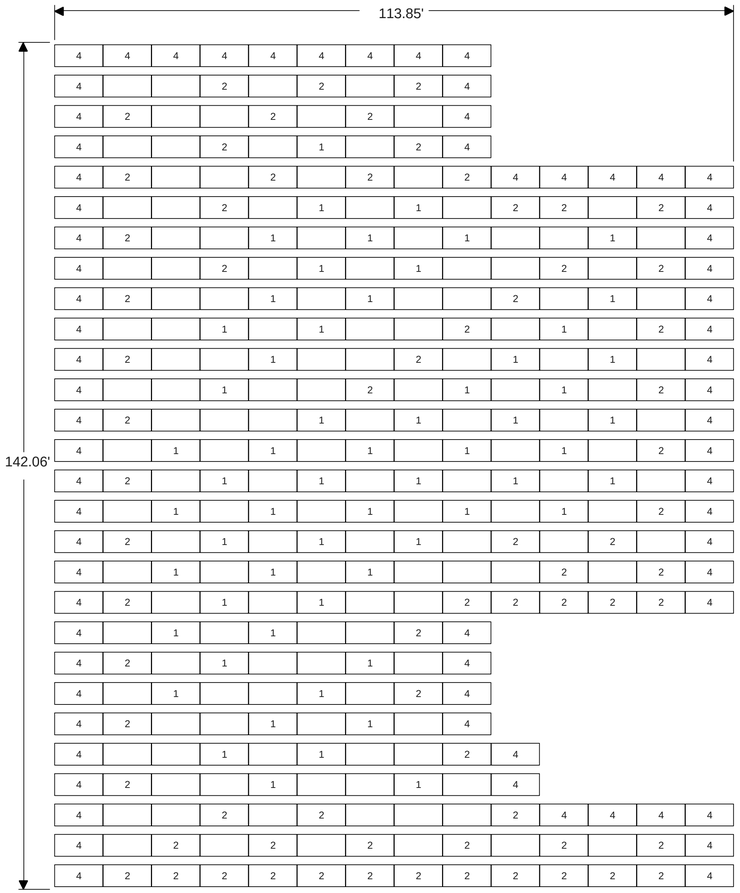
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.10

REVISION: 3

SHEET: PC-17



BALLAST LAYOUT - 1.11

SCALE: 1/12" = 1'-0"

A
PC-18

N

ARRAY 1.11	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	344
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	202.96
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	726
Module Connector	688
Rail	898
Cam	688
Cam Claw	688
Deflector	344
Ballast Block	480
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	47826
ARRAY AREA (SQ. FT)	14170
ARRAY LOAD (PSF)	3.38
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	38
SOUTH ASSEMBLY	38
MIDDLE ASSEMBLY	612
NORTH SOUTH ASSEMBLY	0

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CHRISTINE A. WROBEL
081-006080
CHICAGO
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LEI Comm No. 21210001.129

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REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

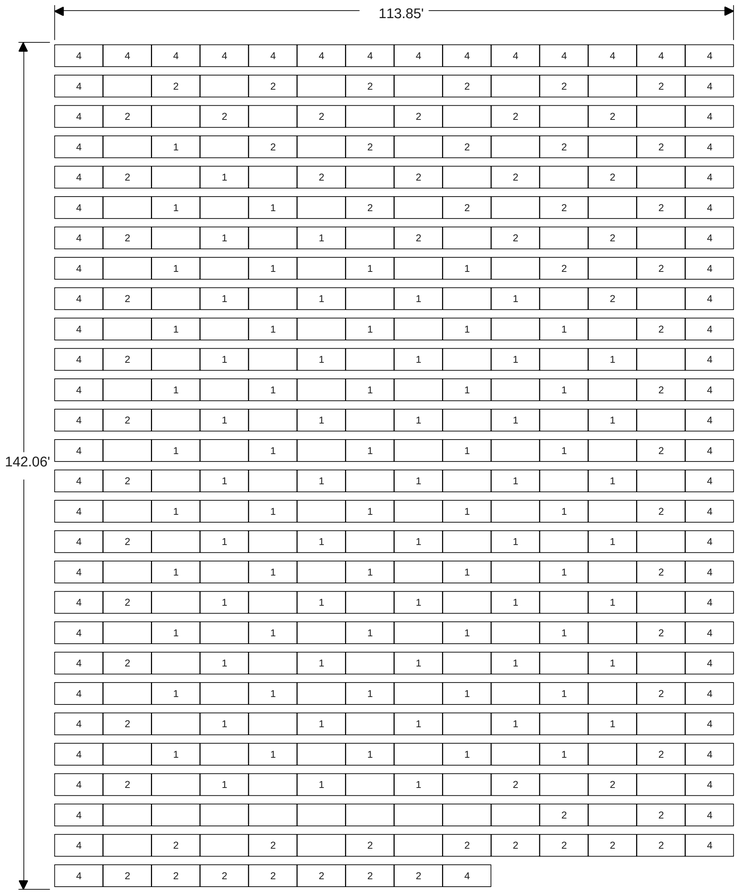
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.11

REVISION: 3

SHEET: PC-18



ARRAY 1.12	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	387
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	228.33
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	802
Module Connector	774
Rail	1003
Cam	774
Cam Claw	774
Deflector	387
Ballast Block	502
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	52533
ARRAY AREA (SQ. FT)	15976
ARRAY LOAD (PSF)	3.29
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	28
SOUTH ASSEMBLY	28
MIDDLE ASSEMBLY	718
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.12

SCALE: 1/12" = 1'-0"

A PC-19

N

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2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

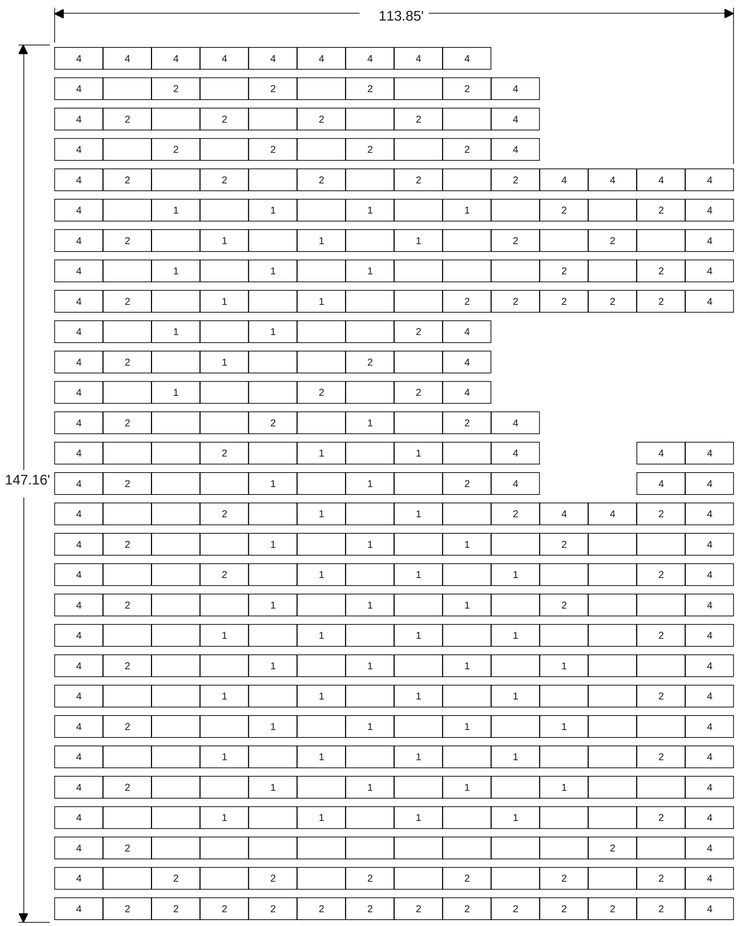
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.12

REVISION: 3
SHEET: PC-19



BALLAST LAYOUT - 1.13

SCALE: 1/12" = 1'-0"

A
PC-20

N

ARRAY 1.13	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	366
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	215.94
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	770
Module Connector	732
Rail	950
Cam	732
Cam Claw	732
Deflector	366
Ballast Block	510
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	50848
ARRAY AREA (SQ. FT)	15082
ARRAY LOAD (PSF)	3.37
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	38
SOUTH ASSEMBLY	38
MIDDLE ASSEMBLY	656
NORTH SOUTH ASSEMBLY	0

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SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

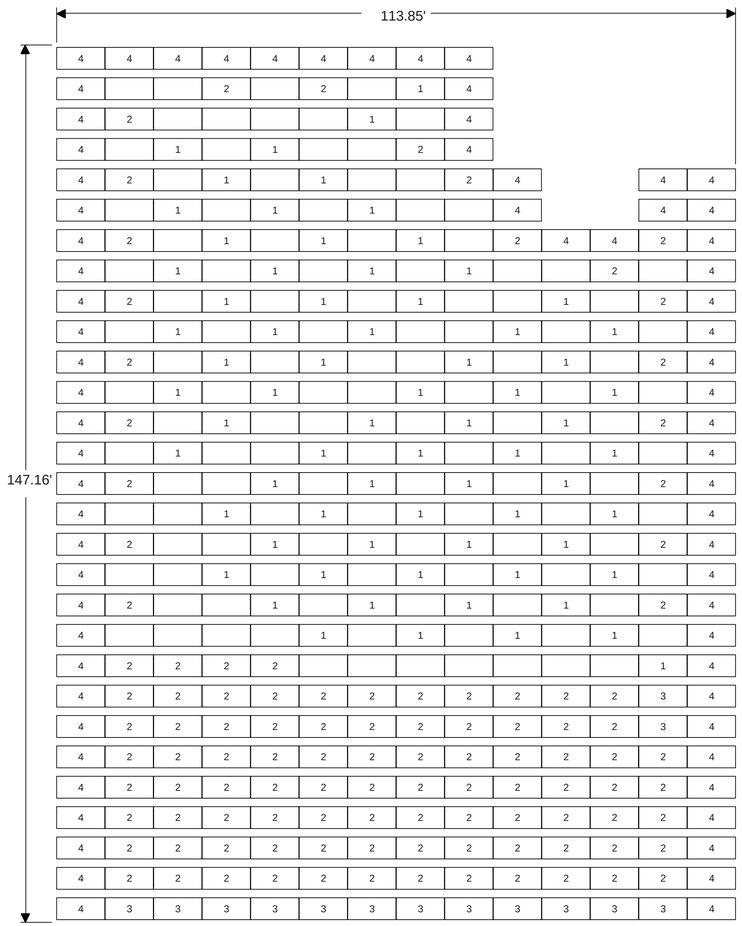
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.13

REVISION: 3

SHEET: PC-20



BALLAST LAYOUT - 1.14

SCALE: 1/12" = 1'-0"

A / PC-21

N

ARRAY 1.14	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	382
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	225.38
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	792
Module Connector	764
Rail	1023
Cam	764
Cam Claw	764
Deflector	382
Ballast Block	612
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	55720
ARRAY AREA (SQ. FT)	15768
ARRAY LOAD (PSF)	3.53
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	28
SOUTH ASSEMBLY	28
MIDDLE ASSEMBLY	708
NORTH SOUTH ASSEMBLY	0

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3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

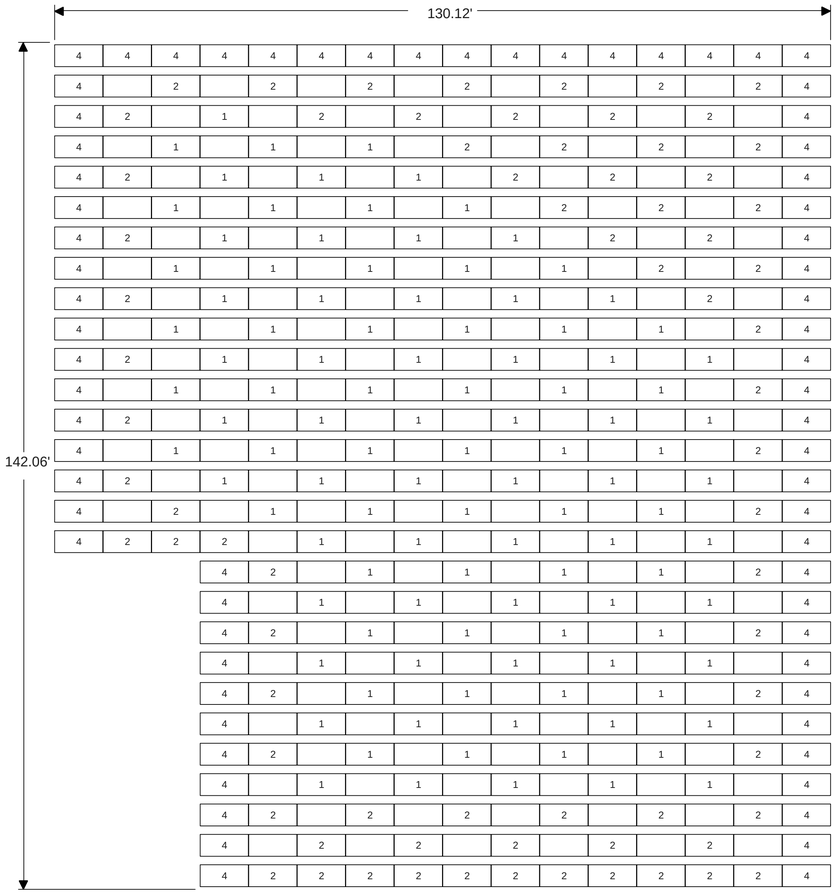
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.14

REVISION: 3

SHEET: PC-21



BALLAST LAYOUT - 1.15

SCALE: 1/12" = 1'-0"

A
PC-22

N

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ARRAY 1.15	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	415
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	244.85
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	862
Module Connector	830
Rail	1083
Cam	830
Cam Claw	830
Deflector	415
Ballast Block	531
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	56113
ARRAY AREA (SQ. FT)	17127
ARRAY LOAD (PSF)	3.28
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	766
NORTH SOUTH ASSEMBLY	0

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1	Revised Layout	MM		2025-02-06
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3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

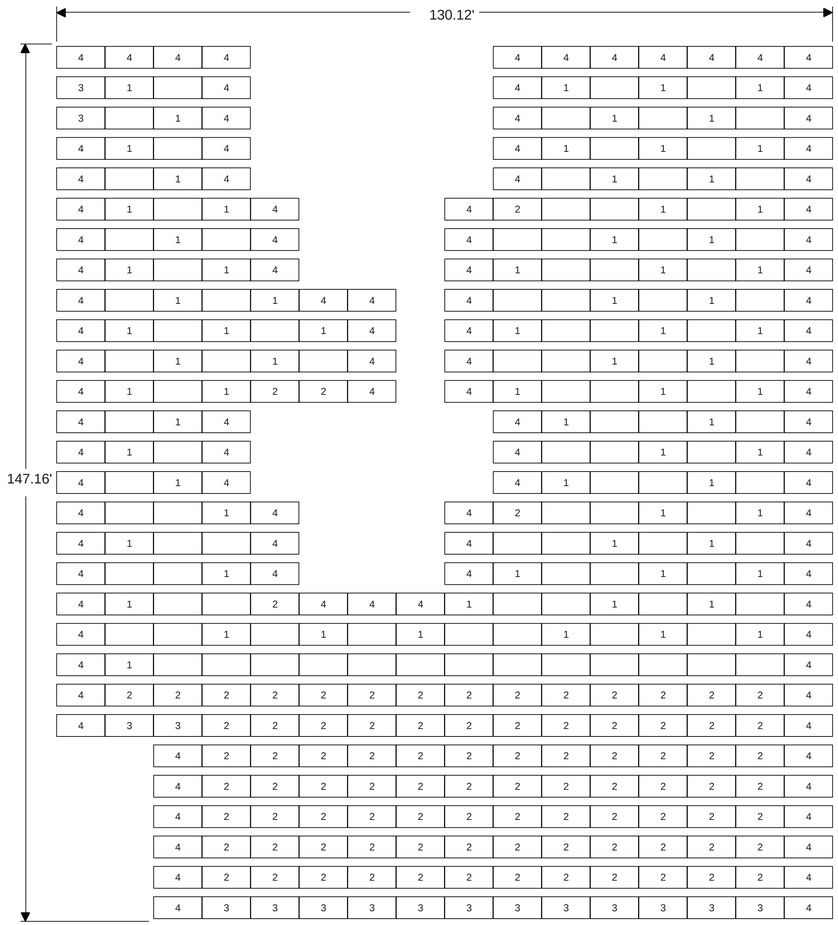
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.15

REVISION: 3
SHEET: PC-22



BALLAST LAYOUT - 1.16

SCALE: 1/12" = 1'-0"

A / PC-23

N

ARRAY 1.16	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	390
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	230.1
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	820
Module Connector	780
Rail	1060
Cam	780
Cam Claw	780
Deflector	390
Ballast Block	717
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	59939
ARRAY AREA (SQ. FT)	16072
ARRAY LOAD (PSF)	3.73
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	40
SOUTH ASSEMBLY	40
MIDDLE ASSEMBLY	700
NORTH SOUTH ASSEMBLY	0

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REV	DESCRIPTION	DATE	CHECK	PREP
0	Initial Layout	2024-12-11		AW
1	Revised Layout	2025-02-06		MM
2	Revised Layout	2025-02-28		DH
3	Revised Layout	2025-05-23		RH

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

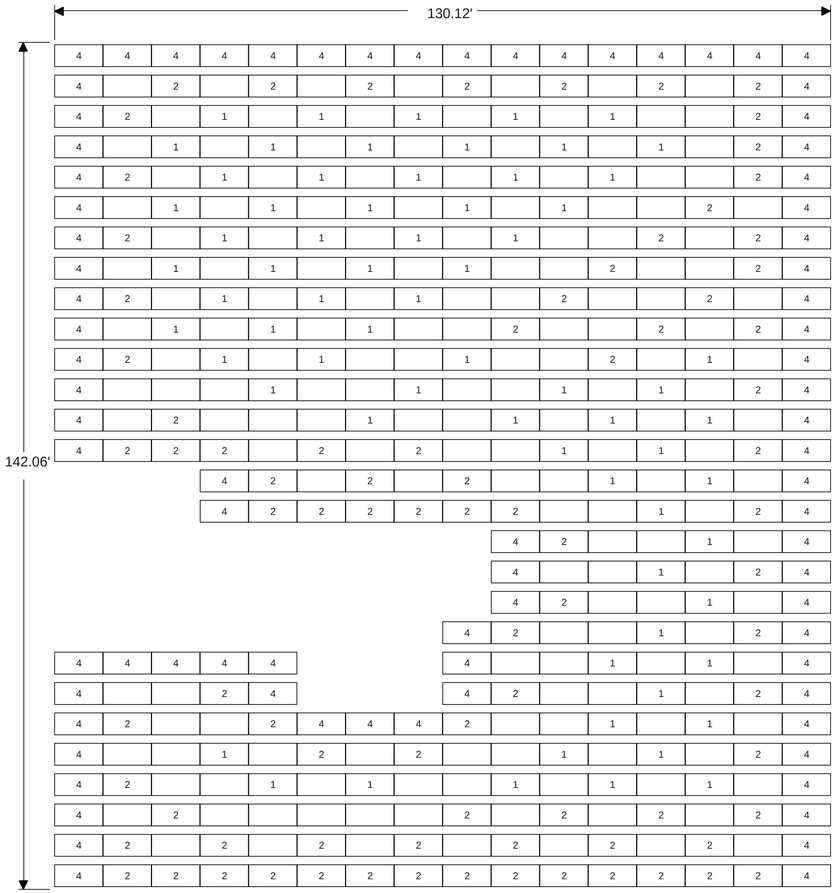
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.16

REVISION: 3

SHEET: PC-23



BALLAST LAYOUT - 1.17

SCALE: 1/12" = 1'-0"

A
PC-24

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ARRAY 1.17	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	401
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	236.59
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	852
Module Connector	802
Rail	1057
Cam	802
Cam Claw	802
Deflector	401
Ballast Block	559
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	55761
ARRAY AREA (SQ. FT)	16504
ARRAY LOAD (PSF)	3.38
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	50
SOUTH ASSEMBLY	50
MIDDLE ASSEMBLY	702
NORTH SOUTH ASSEMBLY	0

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SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

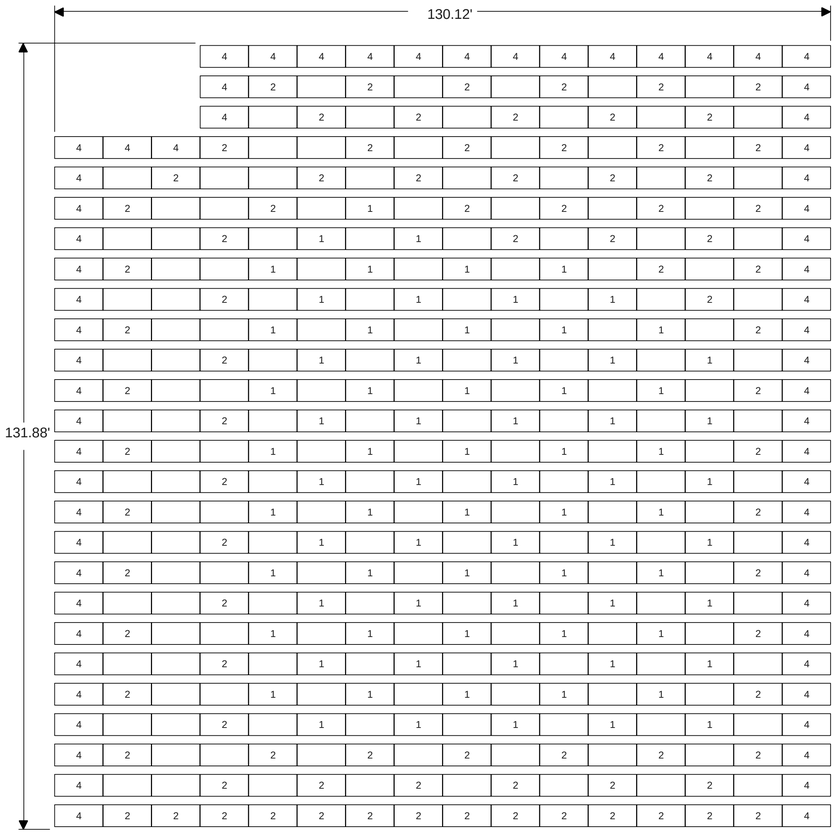
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.17

REVISION: 3
SHEET: PC-24



BALLAST LAYOUT - 1.18

SCALE: 1/12" = 1'-0"

A
PC-25

N

ARRAY 1.18	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	407
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	240.13
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	846
Module Connector	814
Rail	1051
Cam	814
Cam Claw	814
Deflector	407
Ballast Block	513
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	54755
ARRAY AREA (SQ. FT)	16795
ARRAY LOAD (PSF)	3.26
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	750
NORTH SOUTH ASSEMBLY	0

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0" 1/2" 1" 2"
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PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
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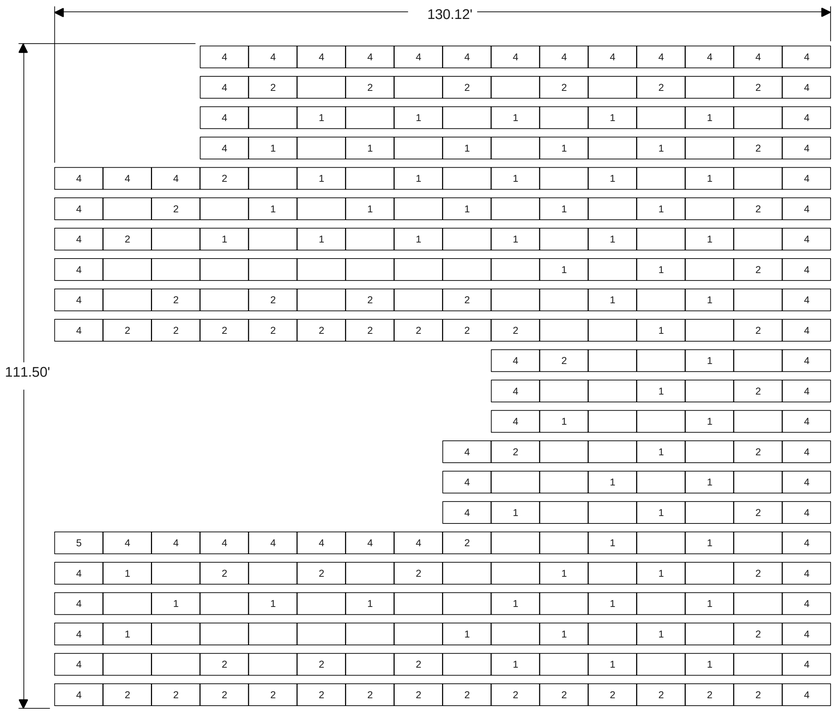
SHEET TITLE:
BALLAST LAYOUT - 1.18

REVISION: 3
SHEET: PC-25



BALLAST LAYOUT - 1.19

SCALE: 1/12" = 1'-0"

A
PC-26

N

ARRAY 1.19	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	289
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	170.51
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	628
Module Connector	578
Rail	782
Cam	578
Cam Claw	578
Deflector	289
Ballast Block	423
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	40902
ARRAY AREA (SQ. FT)	11862
ARRAY LOAD (PSF)	3.45
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	50
SOUTH ASSEMBLY	50
MIDDLE ASSEMBLY	478
NORTH SOUTH ASSEMBLY	0

APPROVED FOR CONSTRUCTION

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STATE OF ILLINOIS
CHRISTINE A. WROBEL
081-006080
CHICAGO
LICENSED STRUCTURAL ENGINEER

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Naperville, Illinois 60563
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ILLINOIS LICENSE # 184-001442
LEI Comm No. 21210001.129

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REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

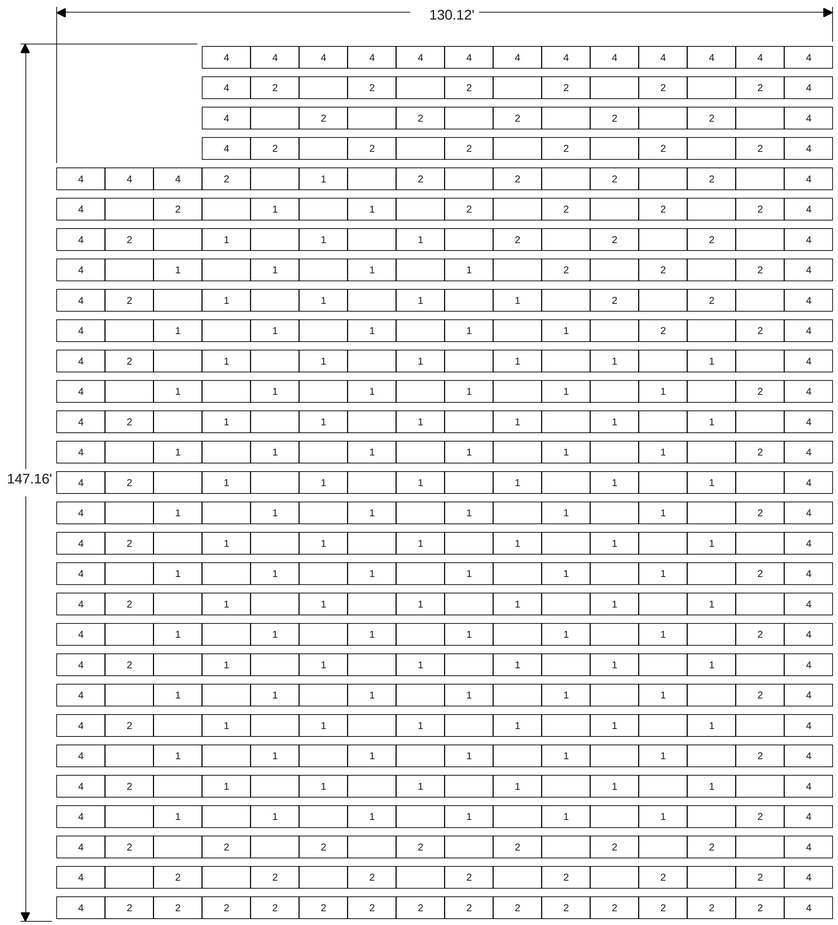
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.19

REVISION: 3

SHEET: PC-26



BALLAST LAYOUT - 1.20

SCALE: 1/12" = 1'-0"

A
PC-27

N

ARRAY 1.20	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	452
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	266.68
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	936
Module Connector	904
Rail	1175
Cam	904
Cam Claw	904
Deflector	452
Ballast Block	565
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	60667
ARRAY AREA (SQ. FT)	18660
ARRAY LOAD (PSF)	3.25
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	840
NORTH SOUTH ASSEMBLY	0

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3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

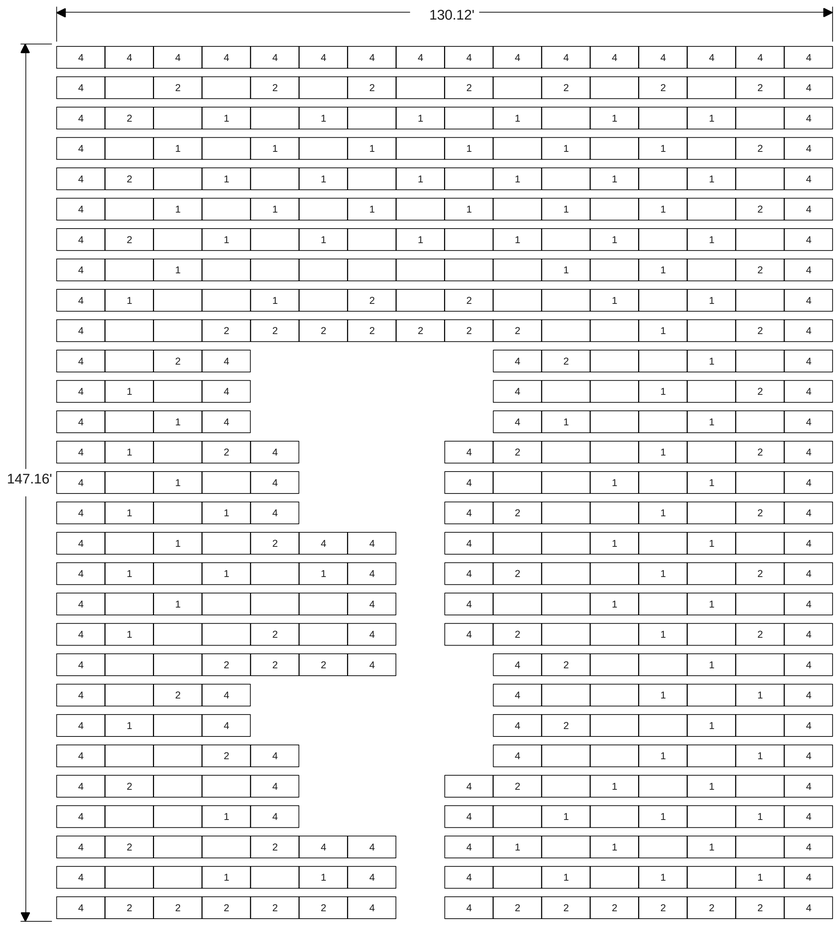
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.20

REVISION: 3

SHEET: PC-27



ARRAY 1.21	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	411
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	242.49
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	870
Module Connector	822
Rail	1081
Cam	822
Cam Claw	822
Deflector	411
Ballast Block	651
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	59688
ARRAY AREA (SQ. FT)	16924
ARRAY LOAD (PSF)	3.53
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	48
SOUTH ASSEMBLY	48
MIDDLE ASSEMBLY	726
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.21

SCALE: 1/12" = 1'-0"

A PC-28

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SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

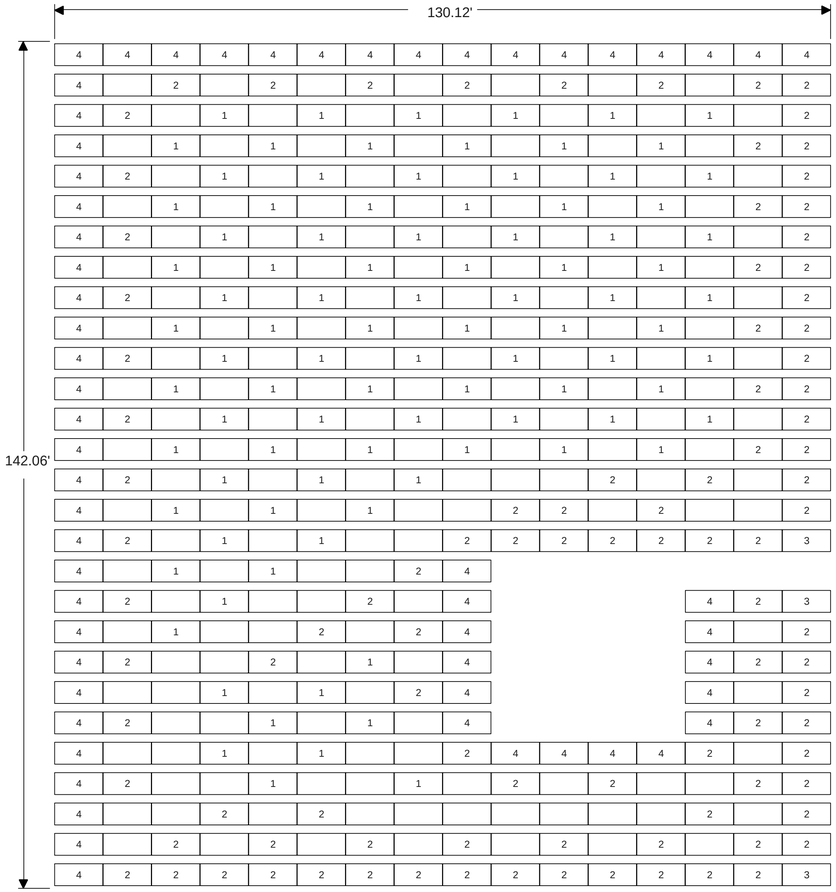
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.21

REVISION: 3

SHEET: PC-28



ARRAY 1.22	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	421
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	248.39
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	888
Module Connector	842
Rail	1107
Cam	842
Cam Claw	842
Deflector	421
Ballast Block	530
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	56675
ARRAY AREA (SQ. FT)	17343
ARRAY LOAD (PSF)	3.27
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	46
SOUTH ASSEMBLY	46
MIDDLE ASSEMBLY	750
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.22

SCALE: 1/12" = 1'-0"

A / PC-29

N

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3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

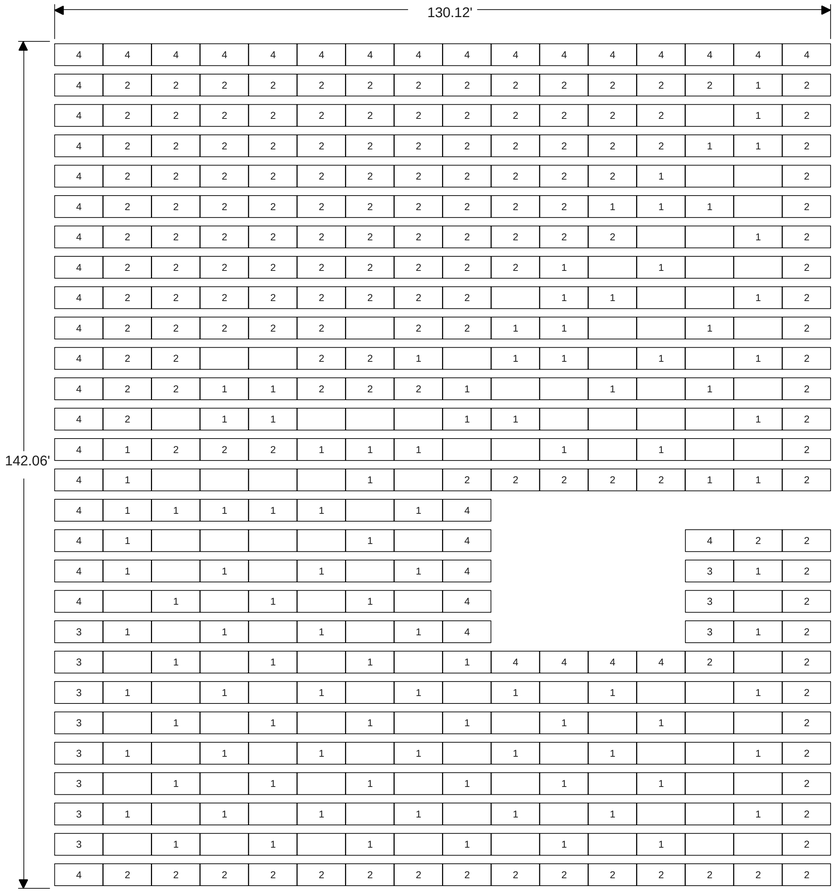
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.22

REVISION: 3
SHEET: PC-29



ARRAY 1.23	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	425
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	250.75
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	896
Module Connector	850
Rail	1179
Cam	850
Cam Claw	850
Deflector	425
Ballast Block	625
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	60273
ARRAY AREA (SQ. FT)	17509
ARRAY LOAD (PSF)	3.44
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	46
SOUTH ASSEMBLY	46
MIDDLE ASSEMBLY	758
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.23

SCALE: 1/12" = 1'-0"

A / PC-30

N

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3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

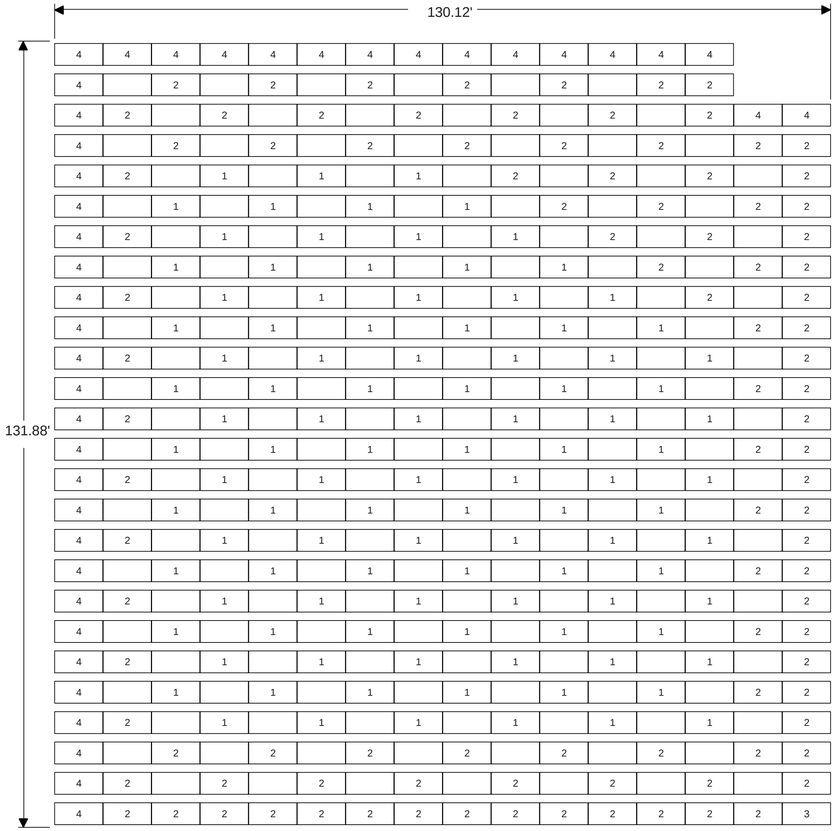
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.23

REVISION: 3
SHEET: PC-30



BALLAST LAYOUT - 1.24

SCALE: 1/12" = 1'-0"

A
PC-31

N

ARRAY 1.24	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	412
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	243.08
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	856
Module Connector	824
Rail	1075
Cam	824
Cam Claw	824
Deflector	412
Ballast Block	470
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	53843
ARRAY AREA (SQ. FT)	17002
ARRAY LOAD (PSF)	3.17
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	760
NORTH SOUTH ASSEMBLY	0

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SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

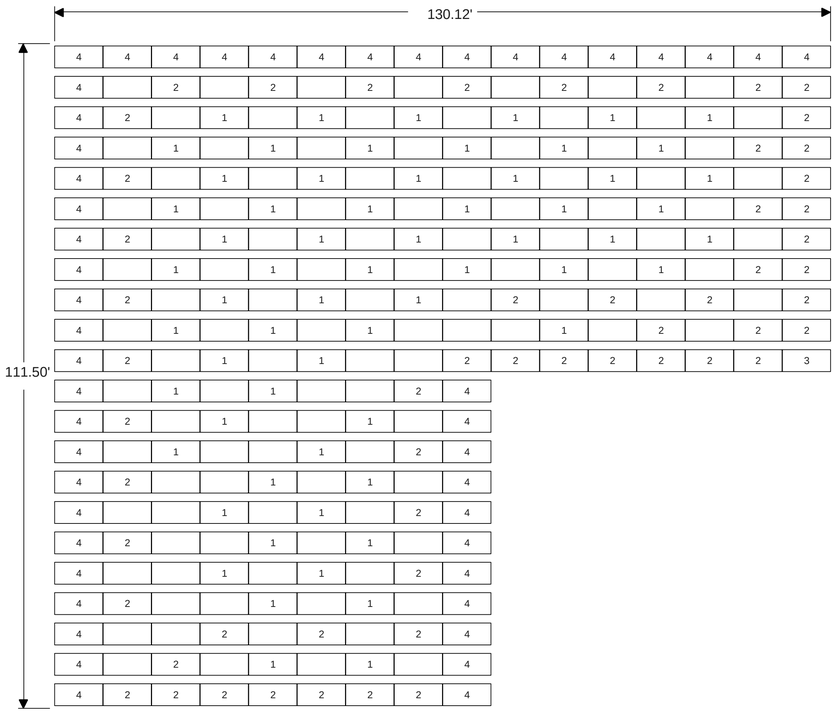
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.24

REVISION: 3

SHEET: PC-31



BALLAST LAYOUT - 1.25

SCALE: 1/12" = 1'-0"

A
PC-32

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ARRAY 1.25	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	275
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	162.25
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	582
Module Connector	550
Rail	727
Cam	550
Cam Claw	550
Deflector	275
Ballast Block	368
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	37741
ARRAY AREA (SQ. FT)	11324
ARRAY LOAD (PSF)	3.33
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	486
NORTH SOUTH ASSEMBLY	0

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SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
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PREPARED FOR:
Summit Ridge Energy

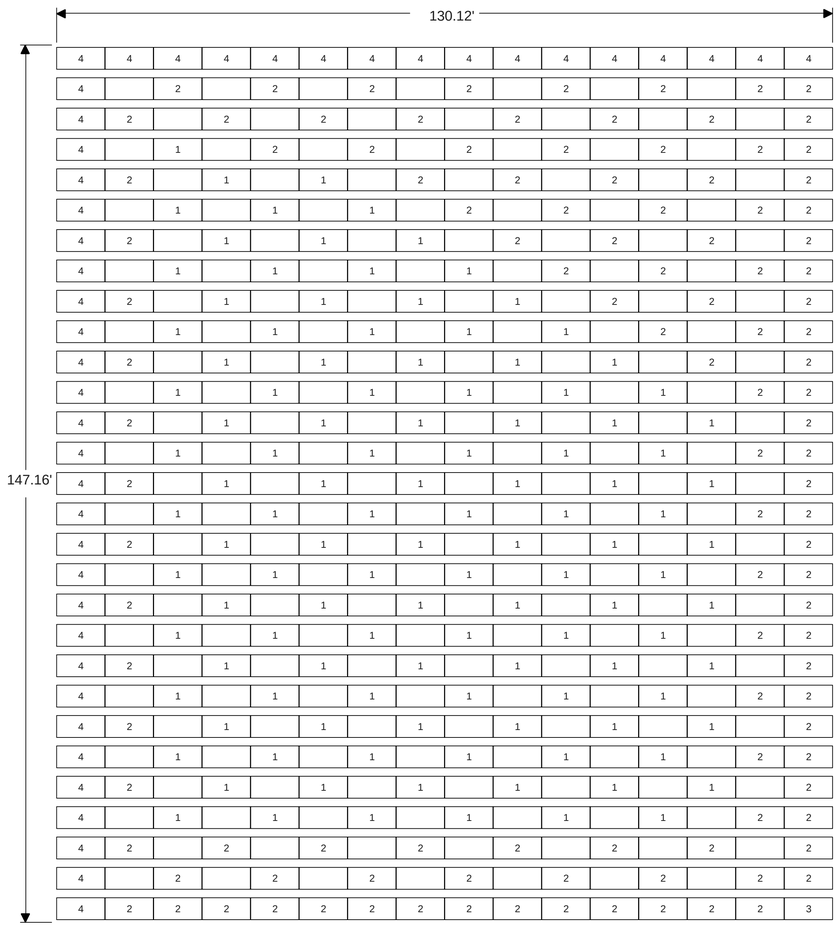
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.25

REVISION: 3

SHEET: PC-32



BALLAST LAYOUT - 1.26

SCALE: 1/12" = 1'-0"

A
PC-33

N

ARRAY 1.26	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	464
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	273.76
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	960
Module Connector	928
Rail	1205
Cam	928
Cam Claw	928
Deflector	464
Ballast Block	522
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	60384
ARRAY AREA (SQ. FT)	19158
ARRAY LOAD (PSF)	3.15
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	864
NORTH SOUTH ASSEMBLY	0

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PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
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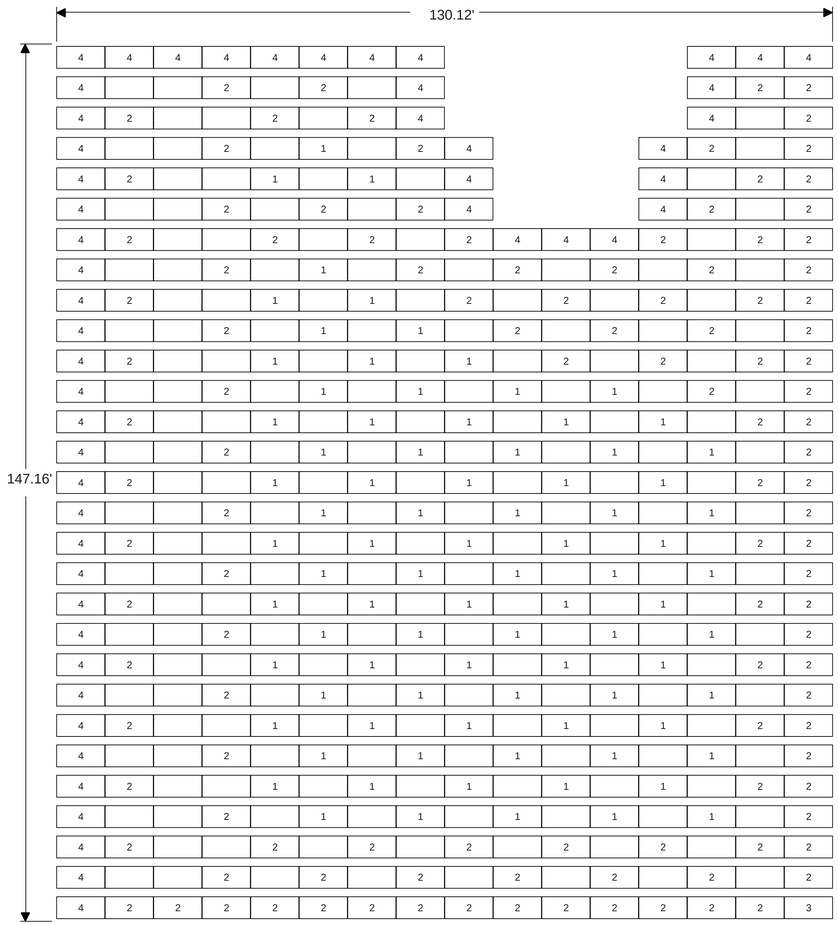
SHEET TITLE:
BALLAST LAYOUT - 1.26

REVISION: 3

SHEET: PC-33



ARRAY 1.27	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	440
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	259.6
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	912
Module Connector	880
Rail	1130
Cam	880
Cam Claw	880
Deflector	440
Ballast Block	528
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	58312
ARRAY AREA (SQ. FT)	18163
ARRAY LOAD (PSF)	3.21
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	816
NORTH SOUTH ASSEMBLY	0

BALLAST LAYOUT - 1.27

SCALE: 1/12" = 1'-0"

A / PC-34

APPROVED FOR CONSTRUCTION

STAMP:
LIMITED TO STRUCTURAL DESIGN ONLY

STATE OF ILLINOIS
CHRISTINE A. WROBEL
081-006080
CHICAGO
LICENSED STRUCTURAL ENGINEER

Larson Engineering Inc
1488 Bond Street, Suite 100
Naperville, Illinois 60563
(p) 630.357.0540 (f) 630.357.0164
ILLINOIS LICENSE # 184-001442
LEI Comm No. 21210001.129

panelclaw®

RACKING CONSTRUCTION SET

1600 OSGOOD ST. SUITE 2023
NORTH ANDOVER, MA 01845
TEL: 978.688.4900
www.panelclaw.com

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REV	DESCRIPTION	PREP	CHECK	DATE
0	Initial Layout	AW		2024-12-11
1	Revised Layout	MM		2025-02-06
2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE: 0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

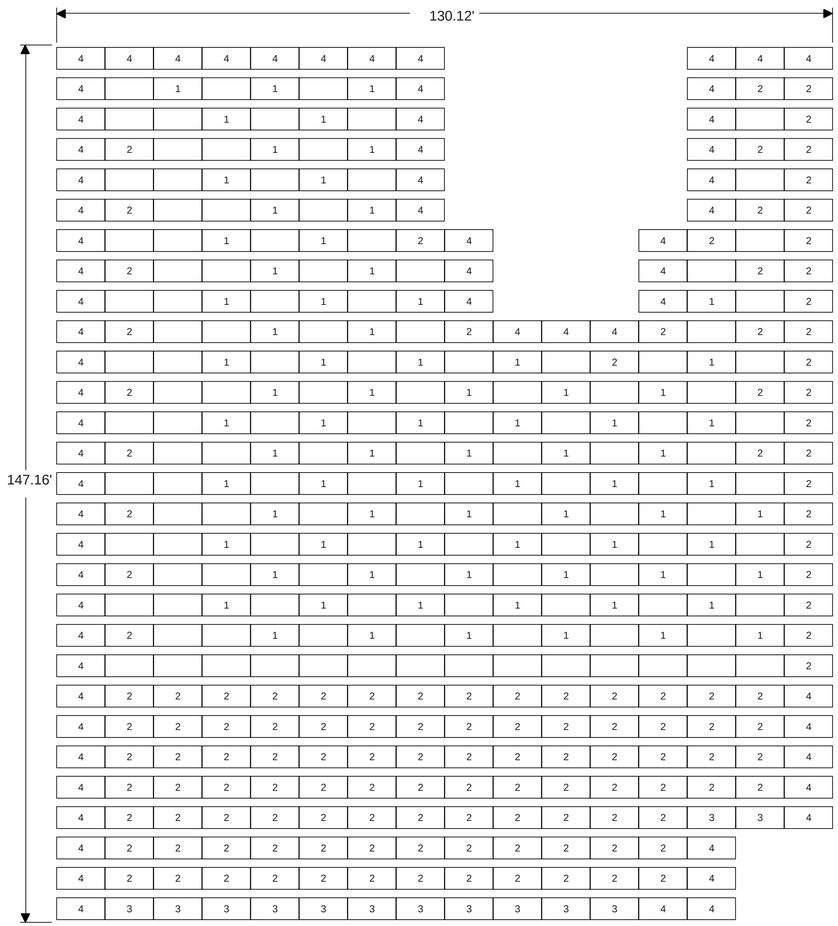
PREPARED FOR:
Summit Ridge Energy

PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.27

REVISION: 3
SHEET: PC-34



BALLAST LAYOUT - 1.28

SCALE: 1/12" = 1'-0"

A
PC-35

N

APPROVED FOR CONSTRUCTION

ARRAY 1.28	ROOF INFORMATION
ROOF HEIGHT (FT)	47.00
PARAPET HEIGHT (FT)	2.0
ROOF TILT (DEG)	1
ROOF TYPE	TPO
SPECIFICATIONS	
NUMBER OF MODULES	419
MODULE POWER (W)	590
ARRAY OUTPUT (Kw)	247.21
ARRAY AZIMUTH	180
PART QUANTITIES	
ITEM	QTY
Base	870
Module Connector	838
Rail	1123
Cam	838
Cam Claw	838
Deflector	419
Ballast Block	651
LOADING DETAILS	
SINGLE MODULE WT (LB)	76.9
SINGLE CMU WT (LB)	32.6
TOTAL ARRAY WT (LB)	60460
ARRAY AREA (SQ. FT)	17293
ARRAY LOAD (PSF)	3.50
ARRAY CLEARANCES PER ASCE 7	
CONDITION 1 (in.)	3
CONDITION 2 (in.)	6
CONDITION 3 (in.)	6
CONDITION 4 (in.)	48

ASSEMBLY QUANTITIES	
ASSEMBLY	QTY
NORTH ASSEMBLY	32
SOUTH ASSEMBLY	32
MIDDLE ASSEMBLY	774
NORTH SOUTH ASSEMBLY	0

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2	Revised Layout	DH		2025-02-28
3	Revised Layout	RH		2025-05-23

SCALE:
0" 1/2" 1" 2"
ORIGINAL SIZE 36"X24"
SHEET SIZE ARCH "D"

PREPARED FOR:
Summit Ridge Energy

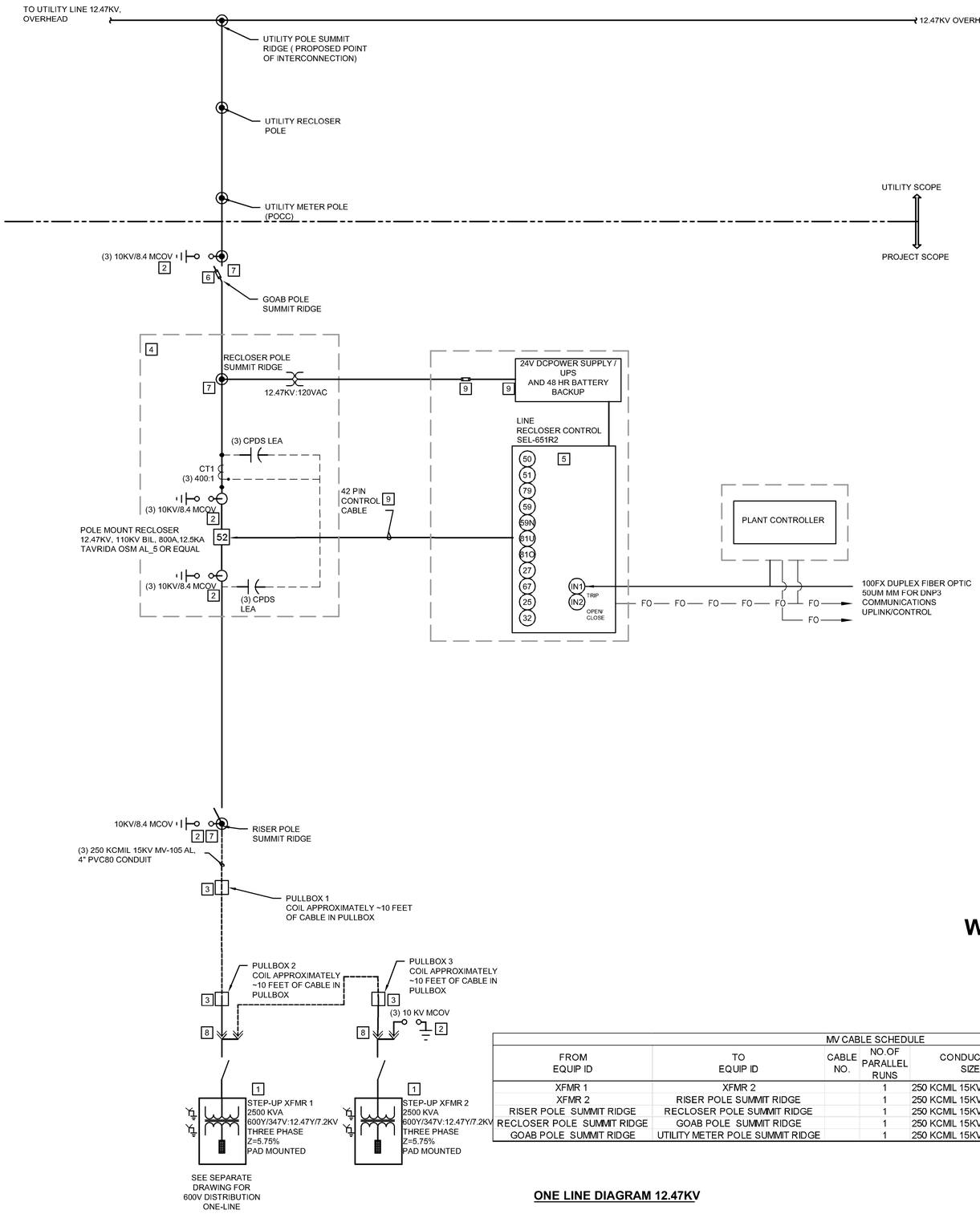
PROJECT:
5710 Inner Park Dr

LOCATION:
5710 Inner Park Dr, Edwardsville, IL 62025, USA

SHEET TITLE:
BALLAST LAYOUT - 1.28

REVISION: 3

SHEET: PC-35



ONE LINE DIAGRAM 12.47KV

****PRELIMINARY****
WORK-IN-PROGRESS
7/30/2025

DESIGN ON HOLD.
WILL UPDATE ON NEXT REVISION

MV CABLE SCHEDULE

FROM EQUIP ID	TO EQUIP ID	CABLE NO.	NO.OF PARALLEL RUNS	CONDUCTOR SIZE	GROUNDING CONDUCTOR	CONDUIT SIZE	APPROXIMATE LENGTH (FT)	VOLTAGE DROP (%)
XFMR 1	XFMR 2		1	250 KCMIL 15KV MV-105 AL	4 AWG CU	4" PVC80	36	0.06
XFMR 2	RISER POLE SUMMIT RIDGE		1	250 KCMIL 15KV MV-105 AL	4 AWG CU	4" PVC80	30	0.07
RISER POLE SUMMIT RIDGE	RECLOSER POLE SUMMIT RIDGE		1	250 KCMIL 15KV MV-105 AL		OH LINES	30	<0.01
RECLOSER POLE SUMMIT RIDGE	GOAB POLE SUMMIT RIDGE		1	250 KCMIL 15KV MV-105 AL		OH LINES	30	<0.01
GOAB POLE SUMMIT RIDGE	UTILITY METER POLE SUMMIT RIDGE		1	250 KCMIL 15KV MV-105 AL		OH LINES		

KEYED NOTES:

1. STEP-UP TRANSFORMER: EPC FURNISHED PAD-MOUNT envirotemp FR3 OIL FILLED KNAN STEP-UP TRANSFORMER. 600Y/347 PRIMARY, 12.47Y/7.2 KV SECONDARY. 2500KVA RATING AS INDICATED @ 55C RISE. 95KV BIL RATING. DEAD FRONT CONSTRUCTION, LOCKABLE HIGH VOLTAGE AND LOW VOLTAGE COMPARTMENTS. NO-LOAD MANUAL TAP-CHANGER +2 @ 2.5%, -2@2.5%. 200A 21/36KV DEADBREAK ONE PIECE BUSHINGS.
2. SURGE ARRESTOR: EPC FURNISHED INTERMEDIATE CLASS LIGHTNING ARRESTOR, 15KV CLASS 12.5KA NOMINAL DISCHARGE CURRENT. MINIMUM 3.9KJ/KV ENERGY RATING:
   . OVERHEAD: EATON UHS15070A1A181A OR EQUAL.
   . TRANSFORMER: HUBBEL 215ELA10 OR EQUAL.
3. UNDERGROUND PULLBOX: FURNISH 48"x48" POLYMER CONCRETE PULLBOX RATED 22,000LB LOAD WITH 4 PIECE LID. LABEL SHALL SAY, " DANGER HIGH VOLTAGE". HUBBEL QUAZITE PG4848BA48 OR EQUAL.
4. RECLOSER: EPC FURNISHED RECLOSER AND RECLOSER CONTROL. 12.47KV CLASS, 110KV BIL, 800A CONTINUOUS, 12500A INTERRUPTING SYMMETRICAL. TAVRIDA OSM_AL 5 WITH INTEGRAL LOW ENERGY ANALOG (LEA) VOLTAGE SENSING AND CURRENT SENSING. THREE 400:5 CURRENT TRANSFORMERS FOR RECLOSER CONTROL. (6) 400A DEADBREAK BUSHINGS. (6) LEA VOLTAGE SENSORS. (6) 8.4KV MCOV LIGHTNING ARRESTORS. (1) OIL POTENTIAL TRANSFORMER FOR CONTROL POWER. WILDLIFE PROTECTORS.
5. RECLOSER CONTROL: EPC FURNISHED RECLOSER CONTROL SCHWEITZER SEL-651R. MOUNT RECLOSER CONTROL AT THE BOTTOM OF RECLOSER POLE. REQUIRES 120VAC CONTROL POWER, RS485 AND 100FX FIBER OPTIC COMMUNICATIONS TO DNP CONTROL NETWORK. 48 AHR DC BATTERY BACKUP.
6. 15KV DISCONNECT SWITCH: 3PH GROUP OPERATED SOLID BLADE HOD 15.5KV 110KV BIL 900A 25 KA 3 SECOND RATED. POLYMER INSULATORS FOR HORIZONTAL MOUNTING ARRANGEMENT. EPC FURNISHED CONTROL ROD OPERATED AIR BREAK SWITCH EATON M FORCE M1HC2FR2HU2 OR EQUAL.
7. OVERHEAD POLE: FURNISH ALL UTILITY POLES, HARDWARE, GUY SUPPORTS, OVERHEAD AND UNDERGROUND CONDUCTOR ON POLE CONSTRUCTION AS PER AMEREN DISTRIBUTION CONSTRUCTION STANDARDS.
8. MV LOADBREAK TERMINATIONS: 600A DEAD BREAK BUSHINGS WITH PROVISIONS FOR 8.4KV MOV ARRESTERS.
9. FURNISHED BY VENDOR. SEE VENDOR DRAWINGS FOR EQUIPMENT BILL OF MATERIALS. CONFIRM THE CONTROL CABLE IS AT LEAST 100M LONG.

GENERAL NOTES:

1. PHASING IDENTIFICATION: CABLE PHASING AND IDENTIFICATION SHALL MATCH ABC PHASE ROTATION, AS SPECIFIED BY UTILITY. ADDITIONALLY, TRANSFORMER TERMINATIONS H1-H2-H3 SHALL MATCH PHASES A-B-C RESPECTIVELY.
2. INSTALLATION DETAILS: 15KV INSULATORS REQUIRED. REFER TO DRAWINGS MV-100 AND MV-200 FOR APPLICABLE GROUNDING, INSTALLATION, AND 15KV UG DETAILS.
3. APPLICABLE STANDARDS: ELECTRICAL CONTRACTOR SHALL REFERENCE NECESSARY INSTALLATION DETAILS AND CONSTRUCTION REQUIREMENTS FROM AMEREN ILLINOIS.

LEGEND:

- OVERHEAD POLE
- LIGHTNING ARRESTOR
- 4.8kV:120 — PT RATIO — POTENTIAL TRANSFORMER
- 600:5 — CURRENT TRANSFORMER — CT RATIO
- UNDERGROUND CABLE
- FO — OPTICAL FIBER CABLE
- DEMARCATION LINE
- 27 — PROTECTIVE DEVICE OR RELAY
  IEEE STD 141-1993 DEVICE NUMBER
  25 SYNCHRONISM CHECK
  27 UNDERVOLTAGE
  32 DIRECTIONAL POWER
  50 OVERCURRENT
  51 TIME OVERCURRENT
  52 AC CIRCUIT BREAKER
  59 OVERVOLTAGE
  67 DIRECTIONAL OVERCURRENT
  79 AUTORECLOSING
  81 OVER/UNDER FREQUENCY
- CT — CURRENT METERING ELEMENT
- M — METER
- PT — VOLTAGE METERING ELEMENT

REV.	DATE	DESCRIPTION	APPROVED
A	07/30/25	ISSUED FOR REVIEW – 60%	DWL

CDG ENGINEERS
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AZIMUTH ENERGY

IHH
07/11/2025

MEDIUM VOLTAGE ONE LINE DIAGRAM
SUMMIT RIDGE - ROOFTOP PV
AZIMUTH ENERGY
5710 INNER PARK DRIVE, EDWARDSVILLE, IL 62025

CDG PROJECT NO.
25211

DRAWING NO.
MV-001

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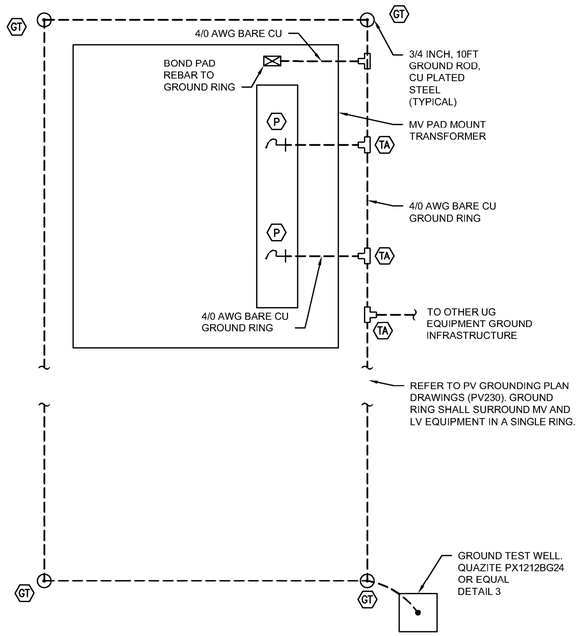
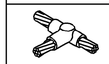
sadhikari 07/30/25–16:41



MV EQUIPMENT GROUNDING PLAN (1 / MV100)
SCALE: 1/2" = 1'-0"

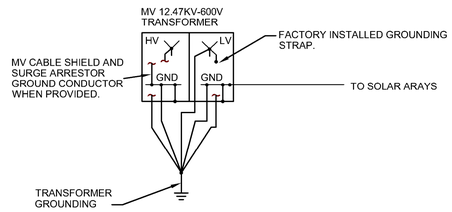
CABLE TO CABLE CONNECTIONS				
	NAME	TYPE		DESCRIPTION
	HORIZONTAL TEE	TA		USED FOR CABLE SIZE RUNS #4 - 1000 KCMIL
	CABLE TO GROUND ROD			
	NAME	TYPE		DESCRIPTION
	CABLE TO GROUND ROD	GR		USED WITH 3/4" GROUND ROD
	CABLE TO GROUND ROD	GT		USED WITH 3/4" GROUND ROD
	CABLE TO REBAR CONNECTIONS			
	NAME	TYPE		DESCRIPTION
	VERTICAL STEEL SURFACE	VSC		USED FOR CABLE SIZE #6 - #250 KCMIL
	PIGTAIL	P		STUBBED OUT THROUGH 1 1/2" PVC SLEEVE AND TAPED, FOR CONNECTION TO APPARATUS GROUND BUS OR GROUND PAD

LEGEND

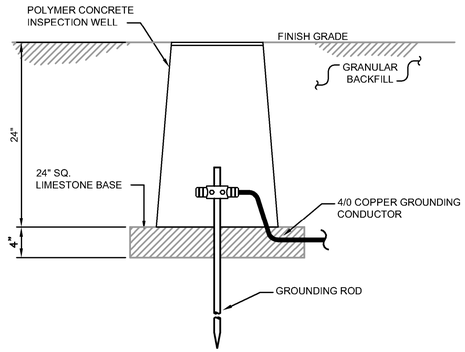
4/0 BARE SOFT DRAWN COPPER GROUND WIRE BURIED AT A DEPTH OF 30" BELOW FINISHED GRADE

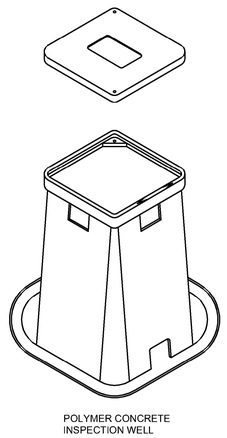
GENERAL NOTES:

1. REFER TO AZIMUTH ENERGY DRAWINGS FOR SITE PLAN AND MV EQUIPMENT LOCATIONS. COORDINATE FINAL MV EQUIPMENT LOCATIONS WITH OWNER PRIOR TO INSTALLATION.



MV EQUIPMENT GROUNDING DIAGRAM (2 / MV100)
SCALE: NONE





GROUND WELL DETAIL (3 / MV100)
SCALE: NONE

****PRELIMINARY****
WORK-IN-PROGRESS
7/30/2025

REV.	DATE	DESCRIPTION	APPROVED
A	07/30/25	ISSUED FOR REVIEW – 60%	DWL

CDG ENGINEERS
One Campbell Plaza
St. Louis, Missouri 63139
T. 314 781 7770
F. 314 781 9075

AZIMUTH ENERGY

IHH
07/11/2025

MEDIUM VOLTAGE GROUNDING DETAILS
SUMMIT RIDGE - ROOFTOP PV
AZIMUTH ENERGY
5710 INNER PARK DRIVE, EDWARDSVILLE, IL 62025

CDG PROJECT NO.
25211

DRAWING NO.
MV-100

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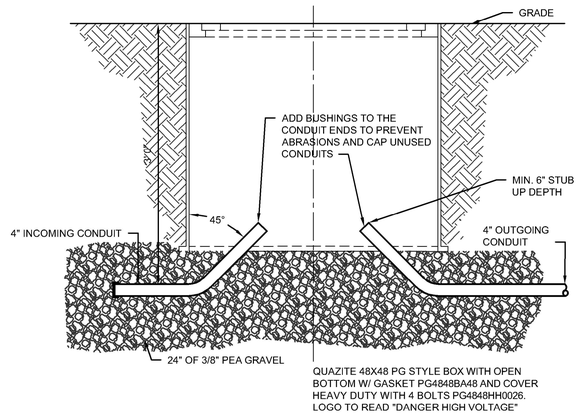
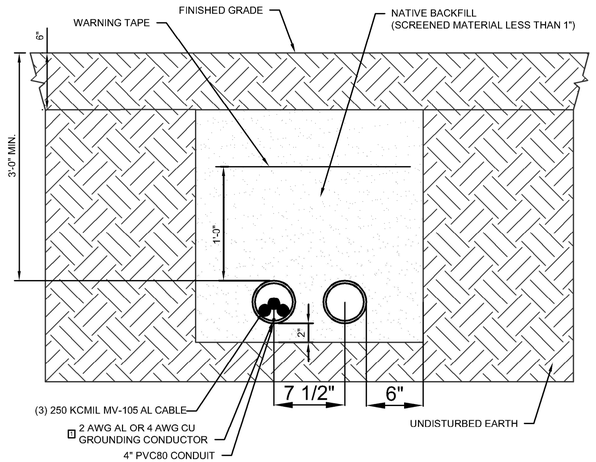
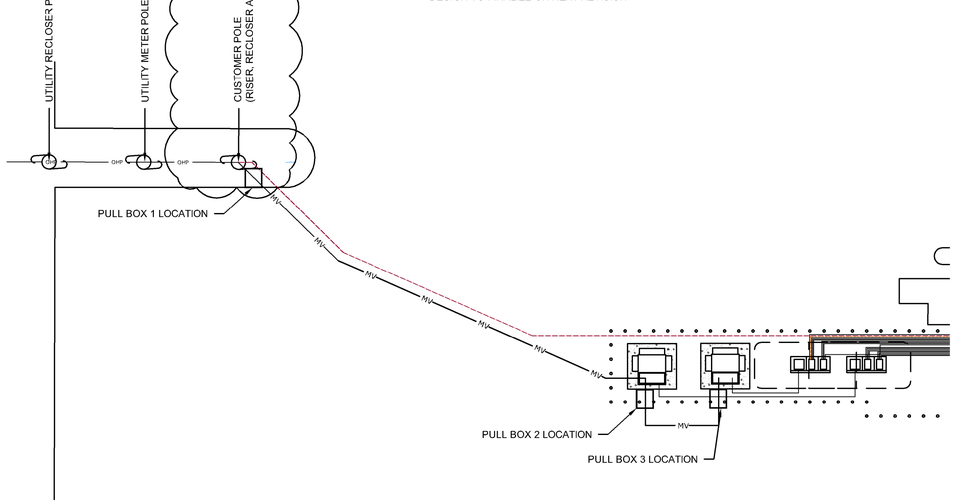


UNDERGROUND JUNCTION BOX DETAIL (1 / MV200)
SCALE: NONE



UNDERGROUND CONDUITS DETAIL FOR SINGLE CIRCUIT (TYP) (2 / MV200)
SCALE: NONE



SUMMIT RIDGE POLE AND EQUIPMENT LINEUP (3 / MV200)
1/16" = 1' - 0"

KEYED NOTES:

1 TIE TO GROUND GRID ON BOTH ENDS.

****PRELIMINARY****
WORK-IN-PROGRESS
7/30/2025

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One Campbell Plaza
St. Louis, Missouri 63139
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F. 314 781 9075

AZIMUTH ENERGY

IHH
07/11/2025

MEDIUM VOLTAGE INSTALLATION DETAILS
SUMMIT RIDGE - ROOFTOP PV
AZIMUTH ENERGY
5710 INNER PARK DRIVE, EDWARDSVILLE, IL 62025

CDG PROJECT NO.
25211

DRAWING NO.
MV-200

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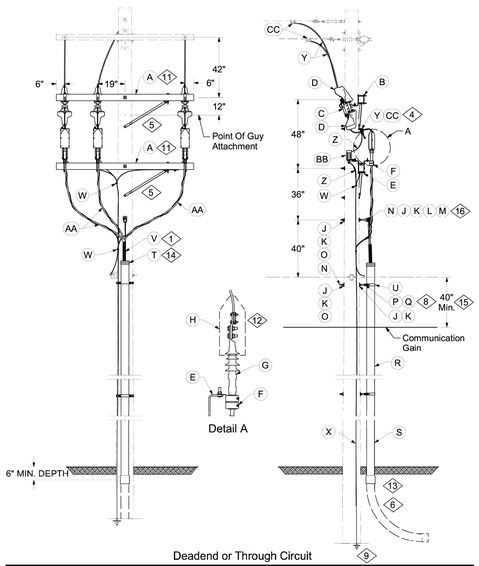
CABLE TERMINALS
Three Phase Riser
350-750 kcmil Cable w/ Vertical Switches

14 12 14 **
15kV
1 of 3



DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
15	01/01/24	JMW	Converted to new format
14	11/03/16	WYW	

RISER POLE DETAIL (1 / MV-201)
SCALE: NONE

CABLE TERMINALS
Three Phase Riser
350-750 kcmil Cable w/ Vertical Switches

14 12 14 **
15kV
2 of 3

DCS #	DECSRIPTION
14 12 14 01	750 AL on 8' Crossarm
14 12 14 02	750 AL on 10' Crossarm
14 12 14 03	500 AL on 8' Crossarm
14 12 14 04	500 AL on 10' Crossarm
14 12 14 05	350 CU on 8' Crossarm
14 12 14 06	350 CU on 10' Crossarm
14 12 14 07	750 CU on 8' Crossarm
14 12 14 08	750 CU on 10' Crossarm

CONSTRUCTION NOTE(s):

1. Wrap cable with friction tape prior to installation of cable grip.
2. When guy is required, use 45° fiberglass strain insulator and select links to obtain maximum clearance.
3. For alternate construction call for split conduit with steel guard.
4. Strip 4" section of wire above terminator cover. This bare section will be used for the arrester connection or the ground set connection when grounding cable. Keep arrester leads as short as possible.
5. Use only one V brace on each crossarm.
6. Bend normally included in conduit instructions.
7. On 13800 Grd/7970 V terminal poles use 10 kV lightning arrester.
8. See DCS **14 00 01 03** for standoff Bracket placement and grounding requirements.
9. Use DCS **12 00 10 04** for ground coil application on new pole installation. Use DCS **12 00 10 03** for ground rod on existing pole.
10. See DCS Section 03 for through pole or deadend configuration.
11. Use 8' arm with DCS **14 12 14 01** where easement or horizontal clearances are concern.
12. Omit grounding stud and use regular hardware, place cover over connectors.
13. The conduit bend should be completely below grade. Field conditions may make this impractical, and in these cases, the top of the bend may be up to 6" above final grade.
14. Install bell end coupling at top of conduit to prevent cable damage.
15. The NESC requires a minimum distance of 40" between the lowest point on the neutral/secondary bracket and the highest point of the communication hardware. The top of the conduit should be above the neutral. If abnormal clearances on pole require the top of the conduit to be below the neutral or secondary, the NESC requires 40" from the top of the conduit to the communication hardware.
16. Items J,K,L,N and M may be omitted if insufficient vertical distance, such as when cable terminal is added to an existing pole.

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
15	01/01/24	JMW	Converted to new format
14	11/03/16	WYW	

RISER POLE DETAIL (2 / MV-201)
SCALE: NONE

CABLE TERMINALS
Three Phase Riser
350-750 kcmil Cable w/ Vertical Switches

14 12 14 **
15kV
3 of 3

	ITEM	STK / DCS #	DESCRIPTION 14 12 14 **	01	02	03	04	05	06	07	08
5,11	A	**04 00 20 02**	Crossarm, 8' w/60° V Brace	2	-	2	-	2	-	2	-
		04 00 20 03	Crossarm, 10' w/60° V Brace	-	2	-	2	-	2	-	2
	B	17 58 054	Bracket, Arrester/Cutout Mounting	3	3	3	3	3	3	3	3
	C	54 07 296	Switch - Disconnect 15kV 600 Amp	3	3	3	3	3	3	3	3
	D	23 17 512	Wildlife Guard - Vertical Switch 600 Amp	6	6	6	6	6	6	6	6
	E	23 56 088	Bracket, Crossarm, Double Sided NEMA	3	3	3	3	3	3	3	3
	F	23 67 197	Bracket - Cable Support	3	3	3	3	3	3	3	3
12	G	**42 34 61 04**	Termination, 15kV, 750 kcmil AL	3	3	-	-	-	-	-	-
		42 34 61 10	Termination, 15kV, 500 kcmil AL	-	-	3	3	-	-	-	-
		42 34 61 06	Termination, 15kV, 350 kcmil Cu	-	-	-	-	3	3	-	-
		42 34 61 02	Termination, 15kV, 750 kcmil Cu	-	-	-	-	-	-	3	3
	H	23 17 257	Wildlife Guard - Extension Arm 35kV Pin Insulator	3	3	3	3	3	3	3	3
	I	23 52 066	Bolt, Mach., 5/8" x 14" w/ square nut	1	1	1	1	1	1	1	1
	J	23 66 207	Washer, Curved, Square, 5/8"	8	8	8	8	8	8	8	8
	K	23 66 134	Lock Washer - 5/8" Double Coil	7	7	7	7	7	7	7	7
	L	23 65 012	Eyenut, 5/8"	1	1	1	1	1	1	1	1
	M	23 68 181	Shackle - Deadend	1	1	1	1	1	1	1	1
	N	23 53 003	Bolt, DA, 5/8" Dia x 18" w/ 4 square nuts	4	4	4	4	4	4	4	4
	O	23 65 043	Lock Nut - 5/8" Square	3	3	3	3	3	3	3	3
	P	23 65 053	Nut - 5/8" Jam	3	3	3	3	3	3	3	3
8	Q	23 06 087	Bracket - Standoff, 12"	3	3	3	3	3	3	3	3
	R	12 01 303	Conduit - 5" Schedule 40 (ft.)	20	20	20	20	20	20	20	20
	S	12 01 272	Conduit - 5" Schedule 80 (ft.)	10	10	10	10	10	10	10	10
14	T	12 51 233	Coupling, Bell End, 5"	1	1	1	1	1	1	1	1
	U	23 67 184	Strap - Conduit 5" w/2" Bolts	3	3	3	3	3	3	3	3
	V	23 17 245	Grip - Cable 2"-2.5" Dia., Split	1	1	1	1	1	1	1	1
	W	17 54 004	Connector - Split Bolt, #4 Sol CU thru #8 Sol CU	3	3	3	3	3	3	3	3
9	X	**12 00 10 04**	Grounding Unit	1	1	1	1	1	1	1	1
	Y	18 51 052	Wire, Cu. 350 S.D., Covered	35	35	35	35	35	35	35	35
	Z	18 51 021	Wire, #6 Cu., S.D., Covered	18	18	18	18	18	18	18	18
	AA	18 07 243	Cable, 750 kcmil AL	35	35	-	-	-	-	-	-
		17 07 410	Cable, 500 kcmil AL	-	-	35	35	-	-	-	-
		18 07 245	Cable, 350 kcmil Cu.	-	-	-	-	35	35	-	-
		18 07 244	Cable, 750 kcmil Cu.	-	-	-	-	-	-	35	35
7,@	BB	10 01 129	Arrester, Lightning, 9kV, 7.65kV MCOV	3	3	3	3	3	3	3	3
		10 01 146	Arrester, Lightning, 10kV, 8.4kV MCOV	3	3	3	3	3	3	3	3
@	CC	**07 00 21 00**	Clamp, Hot Line, HLC*W	5	5	5	5	5	5	5	5
		07 00 25 00	Clamp, Parallel Groove, PG**	5	5	5	5	5	5	5	5
		279	Op Code, Install Cable Up Pole	1	1	1	1	1	1	1	1

DISTRIBUTION CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
15	01/01/24	JMW	Converted to new format
14	11/03/16	WYW	

RISER POLE DETAIL (3 / MV-201)
SCALE: NONE

GENERAL NOTES:

1. STANDARD REFERENCE: THE REFERENCED STANDARDS ARE TAKEN FROM THE AMEREN DISTRIBUITON CONSTRUCTION STANDARDS CABLE TERMINALS DATED 01/01/24.THE DETAIL REFERENCES SHOWN ARE INTENDED AS A GUIDE TO AID THE ELECTRICAL CONTRACTOR (EC). THE DETAILS ARE NOT EXCLUSIVE AS THE ONLY INSTALLATION DETAILS APPLICABLE TO THIS PROJECT SCOPE. EC SHALL FOLLOW STANDARDS AS NECESSARY FOR RUS, AMEREN CORPORATION, AND MANUFACTURER REQUIREMENTS.
2. SITE INSPECTION: FACILITY SHALL BE INSPECTED BY AMEREN CORPORATION OR THE DESIGNATED INSPECTORS. EC IS ENCOURAGED TO REFERENCE THE CONSTRUCTION STANDARDS REFERENCE GUIDES BY AMEREN CORPORATION.
3. UTILITY COORDINATION: COORDINATE LINE CONSTRUCTION AND REQUIREMENTS WITH APPLICABLE UTILITY STANDARDS FROM ILLINOIS POWER AGENCY (IPA) AND AMEREN CORPORATION.
4. POLE HEIGHT, CLASSIFICATION, AND MATERIAL: RECOMMENDED POLES FOR THIS APPLICATION ARE AT LEAST 40FT HIGH, CLASS 3, SOUTHERN YELLOW PINE POLES. CONTRACTOR TO CHECK AND CONFIRM WITH AMEREN PROJECT TEAM BEFORE INSTALLATION TO MAKE SURE THEY ARE ACCEPTABLE AND ARE CONSISTENT WITH THE POLES ON THE UTILITY SIDE.

PRELIMINARY
WORK-IN-PROGRESS
7/30/2025

REV.	DATE	DESCRIPTION	APPROVED
A	07/30/25	ISSUED FOR REVIEW – 60%	

CDG ENGINEERS
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AZIMUTH ENERGY

SA
05/13/2025

MEDIUM VOLTAGE POLE DETAILS
SUMMIT RIDGE - ROOFTOP PV
AZIMUTH ENERGY
5710 INNER PARK DRIVE, EDWARDSVILLE, IL 62025

CDG PROJECT NO.
25211

DRAWING NO.
MV-201

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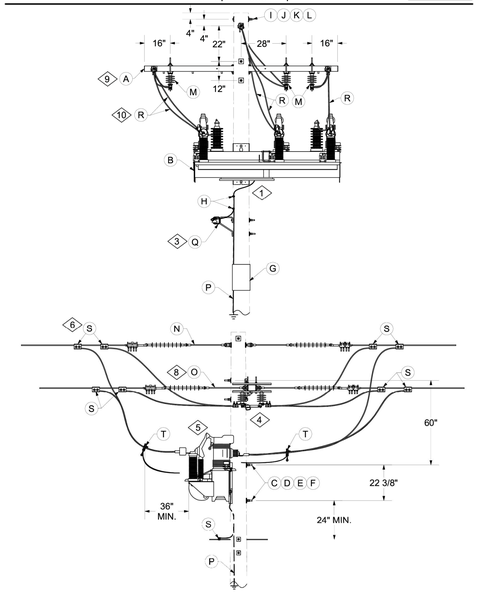
FUSES AND SWITCHES
Three Phase Electronic Recloser
Intellirupter - 600 Amp

10 12 33 01
5, 15kV
1 of 3



DISTRIBUTION
CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
13	01/01/24	DT	Converted to new format
12	10/01/19	DT	

RECLOSER POLE DETAIL (1 / MV-202)
SCALE: NONE

FUSES AND SWITCHES
Three Phase Electronic Recloser
Intellirupter - 600 Amp

10 12 33 01
5, 15kV
2 of 3

CONSTRUCTION NOTE(s):

1. Intellirupter recloser frame must be connected to ground with #2 Cu. Pole ground to neutral connection must be #2 Cu.
2. Tool for removal / install of radio module and control module is Stock #46 01 645.
3. Install neutral/secondary using extension brackets on the side of the pole with only one phase to allow access to the compartments on the bottom of the Intellirupter. The neutral/secondary may be dead-ended to the pole as long as they are mounted 36 inches below the bottom mounting bolt of the Intellirupter.
4. Bypass switch shall be installed to open towards climbing side of pole. Only install the two inside bolts on the switch and slide them as close to the crossarm as possible, when installing switches on single crossarm.
5. Integral disconnect switches on recloser shall be in the open position while connecting primary leads to the recloser.
6. The recloser leads shall be connected to the line connector with a piggy-back clamp (Stock #85 38 392) during the installation. The lightning arresters shall be connected to the recloser leads with hot line clamps and the hot line clamps must be installed 36" away from the aluminum base of the Intellirupter. Then, the recloser leads shall be permanently connected with parallel groove clamps and the piggy-back clamps shall be removed.
7. Intellirupter Recloser weighs 1010 lbs.
8. Install 26" fiberglass extension to provide clearance between insulator and switch.
9. When differential tension is present, fiberglass crossarm shall be installed on the side of the pole with lower tension. Intellirupter shall be installed on opposite side of the pole as fiberglass crossarm.
10. Wire sizes smaller than 1/0 shall not be used.

DISTRIBUTION
CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
13	01/01/24	DT	Converted to new format
12	10/01/19	DT	

RECLOSER POLE DETAIL (2 / MV-202)
SCALE: NONE

GENERAL NOTES:

1. STANDARD REFERENCE: THE REFERENCED STANDARDS ARE TAKEN FROM THE AMEREN DISTRIBUITON CONSTRUCTION STANDARDS FUSE AND SWITCHES DATED 01/01/24.THE DETAIL REFERENCES SHOWN ARE INTENDED AS A GUIDE TO AID THE ELECTRICAL CONTRACTOR (EC). THE DETAILS ARE NOT EXCLUSIVE AS THE ONLY INSTALLATION DETAILS APPLICABLE TO THIS PROJECT SCOPE. EC SHALL FOLLOW STANDARDS AS NECESSARY FOR RUS, AMEREN CORPORATION, AND MANUFACTURER REQUIREMENTS.
2. SITE INSPECTION: FACILITY SHALL BE INSPECTED BY AMEREN CORPORATION OR THE DESIGNATED INSPECTORS. EC IS ENCOURAGED TO REFERENCE THE CONSTRUCTION STANDARDS REFERENCE GUIDES BY AMEREN CORPORATION.
3. UTILITY COORDINATION: COORDINATE LINE CONSTRUCTION AND REQUIREMENTS WITH APPLICABLE UTILITY STANDARDS FROM ILLINOIS POWER AGENCY (IPA) AND AMEREN CORPORATION.
4. POLE HEIGHT, CLASSIFICATION, AND MATERIAL: RECOMMENDED POLES FOR THIS APPLICATION ARE AT LEAST 40FT HIGH, CLASS 3, SOUTHERN YELLOW PINE POLES. CONTRACTOR TO CHECK AND CONFIRM WITH AMEREN PROJECT TEAM BEFORE INSTALLATION TO MAKE SURE THEY ARE ACCEPTABLE AND ARE CONSISTENT WITH THE POLES ON THE UTILITY SIDE.

FUSES AND SWITCHES
Three Phase Electronic Recloser
Intellirupter - 600 Amp

10 12 33 01
5, 15kV
3 of 3

	ITEM	STK / DCS #	DESCRIPTION	10 12 33 **	01
9	A	**04 00 42 03**	Crossarm - Deadend, F/G 10'		1
	B	69 10 250	Recloser, S&C Intellirupter, 15kV, 600A w/Comm Module		1
	C	23 52 219	Bolt, Mach., 3/4" x 14" w/ square nut		4
	D	23 66 031	Washer, Curved, Square, 3/4"		8
	E	23 66 135	Lock Washer - 3/4" Double Coil		6
	F	23 65 042	Lock Nut - 3/4" Square		5
	G	23 17 473	Animal Guard, Pole Wrap		1
	H	17 54 373	Connector - Split Bolt, #14 AWG Str. to #2 AWG Str.		3
	I	23 52 097	Bolt, Mach., 3/4" x 12" w/ square nut		2
	J	23 66 207	Washer, Curved, Square, 5/8"		2
	K	23 66 134	Lock Washer - 5/8" Double Coil		2
	L	23 65 043	Lock Nut - 5/8" Square		2
	M	54 07 204	Switch, Disc. 600A., 15 kV		3
	N	**06 12 30 03 @**	Dbl Deadend on Pole F/G Extension		1
@	O	**06 12 35 04 @**	Dbl Deadend on FG Arm w/ F/G Extension		1
@	P	**12 00 10 03**	Grounding Unit (with #2 S.D. Cu) - Ground Rod		1
		12 00 10 04	Grounding Unit (with #2 S.D. Cu) - Ground Coil		1
3,@	Q	**03 01 ** ** @**	Neutral Configuration		1
10,@	R	**07 00 80 00**	Wire, Poly, S.D., (ft.)		100'
@	S	**07 00 25 00**	Clamp, Parallel Groove		13
@	T	**07 00 21 00**	Clamp, Hot line		6
12,@	U	69 10 252	4 kV Power Supply		1
13,@	V	16 16 060	Speednet Radio		1

DESIGN NOTE(s):

11. 8'-0" crossarms can be used if existing on pole in Missouri.
13. Speednet radio may be required for communications.

DISTRIBUTION
CONSTRUCTION STANDARDS

REV	DATE	ENG	DESCRIPTION
13	01/01/24	DT	Converted to new format
12	10/01/19	DT	

RECLOSER POLE DETAIL (3 / MV-202)
SCALE: NONE

****PRELIMINARY****
WORK-IN-PROGRESS
7/30/2025

REV.	DATE	DESCRIPTION	APPROVED
A	07/30/25	ISSUED FOR REVIEW – 60%	DWL

CDG ENGINEERS
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AZIMUTH ENERGY

SA
05/13/2025

MEDIUM VOLTAGE POLE DETAILS
SUMMIT RIDGE - ROOFTOP PV
AZIMUTH ENERGY
5710 INNER PARK DRIVE, EDWARDSVILLE, IL 62025

CDG PROJECT NO.
25211

DRAWING NO.
MV-202

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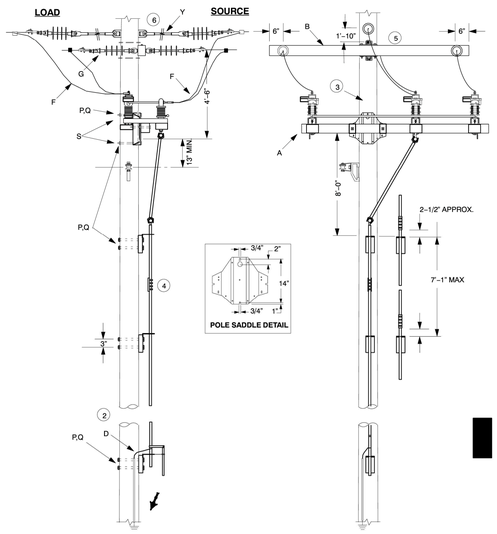
FUSES AND SWITCHES
Three Phase Sectionalizing
15kV – 600Amp. – Group Operated, Air–Break Switch

10 12 35 01
Sheet 1 of 2



DISTRIBUTION CONSTRUCTION STANDARDS

Ameren

ENG: WYW
REV. NO: 4
REV. DATE: 06/30/16

GOAB POLE DETAIL
SCALE: NONE

1
MV-203

FUSES AND SWITCHES
Three Phase Sectionalizing
15kV – 600Amp. – Group Operated, Air–Break Switch

10 12 35 01
Sheet 2 of 2

NOTES:

1. For new installation, both Illinois and Missouri, arresters are not required for normally closed switch installations; where switches are normally open, install both sets of arresters on adjacent poles. Refer to DCS **12 00 01 01** for arresters selection.
2. Grounding unit the switch handle.
3. When required, switch number tag shall be installed here.
4. Insulator must be installed in this section.
5. 8' crossarm available AmerenMO only.
6. Double deadend on pole w/o FG extension available AmerenMO only.

		Stnd. / Stk. No.	Description 10 12 35 01	Qty
5@	A	54 07 273	Switch, Group Operated 15kV	1
	B	**04 00 41 03**	Crossarm, Deadend, F/G, 8'	1
		04 00 41 04	Crossarm, Deadend, F/G, 10'	1
@	D	**12 69 11 05**	Grounding Unit–Ground Rod	1
		12 69 11 06	Grounding Unit–Ground Coil	1
@	E	PG*W	Clamp, PG, DCS **07 00 25 00**	6
	F	18 51 052	Wire, SD Cu, 350 kcmil, Poly covered	30
	G	**06 12 35 02**	Double Deadend on FG Crossarm	2
	P	23 52 066	Bolt, Galv., 5/8" x 14"	8
	Q	23 66 027	Washer, Galv., 11/16" Square	4
	S	23 66 046	Washer, Galv, 11/16" Round	2
@	X	DEC*W	Clamp, Deadend, DCS 07 00 30 00	4
6@	Y	**06 12 30 03**	Double Deadend on Pole w/ FG Extension	1
		06 12 30 13	Double Deadend on Pole w/o FG Extension	1

DISTRIBUTION CONSTRUCTION STANDARDS

Ameren

ENG: WYW
REV. NO: 4
REV. DATE: 06/30/16

GOAB POLE DETAIL
SCALE: NONE

2
MV-203

GENERAL NOTES:

1. STANDARD REFERENCE: THE REFERENCED STANDARDS ARE TAKEN FROM THE AMEREN DISTRIBUITON CONSTRUCTION STANDARDS FUSE AND SWITCHES DATED 01/01/24.THE DETAIL REFERENCES SHOWN ARE INTENDED AS A GUIDE TO AID THE ELECTRICAL CONTRACTOR (EC). THE DETAILS ARE NOT EXCLUSIVE AS THE ONLY INSTALLATION DETAILS APPLICABLE TO THIS PROJECT SCOPE. EC SHALL FOLLOW STANDARDS AS NECESSARY FOR RUS, AMEREN CORPORATION, AND MANUFACTURER REQUIREMENTS.
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CDG ENGINEERS
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AZIMUTH ENERGY

SA
05/13/2025

MEDIUM VOLTAGE POLE DETAILS
SUMMIT RIDGE - ROOFTOP PV
AZIMUTH ENERGY
5710 INNER PARK DRIVE, EDWARDSVILLE, IL 62025

PRELIMINARY
WORK-IN-PROGRESS
7/30/2025

REV.	DATE	DESCRIPTION	APPROVED
A	07/30/25	ISSUED FOR REVIEW – 60%	DWL

CDG PROJECT NO.
25211

DRAWING NO.
MV-203

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SHEET INDEX

SHEET ID	TITLE
WT043	COVER SHEET
WT050	GENERAL NOTES
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WT102	SINGLE LINE DIAGRAM - ARRAY 1
WT103	SINGLE LINE DIAGRAM - WEATHER STATION 1
WT104	SINGLE LINE DIAGRAM - NETWORK ENCLOSURE 1
WT200	PANEL LAYOUT - DAS 1
WT201	PANEL LAYOUT - WEATHER STATION 1
WT202	PANEL LAYOUT - NETWORK ENCLOSURE 1
WT600	SCHEMATIC - DAS 1
WT601	SCHEMATIC - DAS 1
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WT603	SCHEMATIC - NETWORK ENCLOSURE 1
WT670	COMMUNICATIONS 1
WT671	COMMUNICATIONS 2
WT680	LOCATION BOMS
WT690	SERVICES INCLUDED

also energy a stem company

Boulder, CO 80301
866-303-5668
www.AlsoEnergy.com

INNER PARK ROOFTOP

Q207071

2025-07-24

DESIGN REV-1

PROJECT DESCRIPTION

SITE NAME	INNER PARK ROOFTOP
SITE ADDRESS	5710 INNER PARK DRIVE EDWARDSVILLE IL, 62025 UNITED STATES
SYSTEM SIZE	6,218.6 KW DC

TECHNICAL SUPPORT

CALL: 866-303-5668
EMAIL: SUPPORT@ALSOENERGY.COM

WEEKDAYS (M-F): 8AM-9PM US-ET
WEEKENDS: 11AM-7PM US-ET

CONTACT YOUR ACCOUNT REPRESENTATIVE TO PURCHASE ON-SITE COMMISSIONING OR ONSITESERVICE@ALSOENERGY.COM TO SCHEDULE PREVIOUSLY PURCHASED SERVICES.

⚠ WARNINGS / AVERTISSEMENTS ⚠

[EN] LINE VOLTAGES UP TO 600 VRMS ARE PRESENT ON THE INPUT TERMINALS OF THE DEVICE AND THROUGHOUT THE CONNECTED LINE CIRCUITS DURING NORMAL OPERATION. THESE VOLTAGES MAY CAUSE SEVERE INJURY OR DEATH. INSTALLATION AND SERVICING SHOULD BE PERFORMED ONLY BY QUALIFIED, PROPERLY TRAINED PERSONNEL. THIS IS A CLASS III MEASUREMENT DEVICE.

[FR] DES TENSIONS DE LIGNE JUSQU'À 600 VRMS SONT PRÉSENTES SUR LES BORNES D'ENTRÉE DE L'APPAREIL ET DANS TOUS LES CIRCUITS DE LIGNE RACCORDÉS PENDANT LE FONCTIONNEMENT NORMAL. CES TENSIONS PEUVENT CAUSER DES BLESSURES GRAVES OU LA MORT. L'INSTALLATION ET L'ENTRETIEN DOIVENT ÊTRE EFFECTUÉS UNIQUEMENT PAR DU PERSONNEL QUALIFIÉ ET CORRECTEMENT FORMÉ. CECI EST UN APPAREIL DE MESURE DE CLASSE III.

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SIZE: ANSI B
SCALE: NONE

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DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

COVER SHEET

LOCATION: -

WT043

ABBREVIATIONS

A	AMPS
AC	ALTERNATING CURRENT
ACD	AC DISCONNECT
AWG	AMERICAN WIRE GAUGE
BPOA	BACKSIDE PLANE OF ARRAY
C	CELSIUS
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
CU	COPPER
DAS	DATA ACQUISITION SYSTEM
DC	DIRECT CURRENT
DCD	DC DISCONNECT
DISC	DISCONNECT
F	FAHRENHEIT
FO	FIBER OPTIC
GHI	GLOBAL HORIZONTAL IRRADIANCE
GND	GROUND
HV	HIGH VOLTAGE
ID	INSIDE DIAMETER
INV	INVERTER
JB	JUNCTION BOX
KV	KILOVOLT
KW	KILOWATT
KWH	KILOWATT-HOUR
LV	LOW VOLTAGE
MAX	MAXIMUM
MCE	MAIN COMMUNICATION ENCLOSURE
MIN	MINIMUM
MV	MEDIUM VOLTAGE
NEC	NATIONAL ELECTRIC CODE
NEG	NEGATIVE
OCP	OVERCURRENT PROTECTION
OD	OUTSIDE DIAMETER
OVP	OVER-VOLTAGE PROTECTION
PE	PROTECTIVE EARTH
POA	PLANE OF ARRAY
PB	PANELBOARD
PCC/POCC	POINT OF COMMON COUPLING
POS	POSITIVE
PV	PHOTOVOLTAIC
RHI	REFLECTED HORIZONTAL IRRADIANCE
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SCH	SCHEDULE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLTS
VAC	VOLTS AC
VAR	VOLT-AMPERE REACTIVE
VDC	VOLTS DC
W	WATTS
WS	WEATHER STATION
XFMR	TRANSFORMER

SYMBOLS

- METER
- PE
- THERMO-MAGNETIC CIRCUIT BREAKER
- FUSED DISCONNECT
- ANTENNA
- MODULE TEMPERATURE SENSOR (T_{BOM})
- AMBIENT TEMPERATURE SENSOR (T_{AMB})
- WIND SPEED SENSOR
- WIND DIRECTION SENSOR
- PYRANOMETER
- REFERENCE CELL - PLANE OF ARRAY
- RAINFALL SENSOR
- PRECIPITATION TYPE AND QUANTITY SENSOR
- RELATIVE HUMIDITY SENSOR
- BAROMETRIC PRESSURE SENSOR
- BATTERY
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- OVERVOLTAGE PROTECTION
- ◀ XXX Y-ZZ — CONTINUATION AT SHEET XXX, ROW Y, COLUMN ZZ

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH APPLICABLE CODE.
2. ALL CURRENT CARRYING CONDUCTORS SHALL BE SIZED WITH CONSIDERATION FOR MAXIMUM CURRENT, WIRE LENGTH, AND ACCEPTABLE VOLTAGE DROP
3. ALL CABLE SHALL BE RATED APPROPRIATELY FOR THE INSTALLATION ENVIRONMENT. THE MINIMUM SPECIFICATIONS LISTED BY ALSOENERGY PERTAIN ONLY TO THE REQUIREMENTS FOR ALSOENERGY SCOPE. ADDITIONAL CONSIDERATIONS FOR CONDUIT, BURIAL, OVERHEAD, OR OTHER CONSTRAINTS OF THE CABLE SHALL BE CONSIDERED AND ADDRESSED BY THE INSTALLER.
4. THIS SYSTEM HAS BEEN DESIGNED TO ALSOENERGY SPECIFICATIONS. MODIFICATIONS MUST BE APPROVED IN ADVANCE BY ALSOENERGY. CHANGES TO PHYSICAL WIRING MAY VOID ENCLOSURE SAFETY CERTIFICATION AND VOID WARRANTY. MODIFICATIONS TO CONNECTIONS OF COMMUNICATION ENABLED DEVICE SETTINGS OR CONNECTION LOCATION MAY RESULT IN FAILED COMMUNICATIONS AND LOST DATA.
5. INTERNAL DEVICES ARE SUPPLIED PRE-WIRED BY ALSOENERGY WITH IP AND MODBUS ADDRESSING CONFIGURED PER THE COMMUNICATIONS TABLE.
6. ALL RS485 WIRING SHALL BE IN DAISY CHAIN CONFIGURATION. STUBS SHALL BE LESS THAN 15m (49').
7. SHIELDED CABLE DRAIN SHALL BE CONNECTED TO EARTH GROUND. GROUND ON ONE END OF CABLE ONLY. GROUND LOOPS MAY RESULT IN FAILED COMMUNICATION AND LOST DATA.
8. RS485 CABLE SHALL BE INDICATED FOR USE AS RS485 COMMUNICATION CABLE BY THE MANUACTURER WITH A MINIMUM OF 3 CONDUCTORS IN SHIELDED CABLE WITH CHARACTERISTIC IMPEDANCE OF 120Ω. 4000FT (1220M) MAX LENGTH PER BUS.
9. ETHERNET NETWORK CABLE SHALL BE SHIELDED CAT5E, CAT6, OR CAT7. 100m (328') MAX BETWEEN EACH ACTIVE DEVICE.
10. SINGLE MODE FIBER SHALL BE OS2. REFER TO SINGLE LINE DIAGRAM FOR FIBER TERMINATION TYPE.
11. MULTI-MODE FIBER CABLE SHALL BE MATCHED TO THE TYPE AND TERMINATION OF THE FIBER PATCH PANEL, 50/125µm OM3 OR 62.5/125µm OM1 ARE SUPPORTED BY ALSOENERGY. REFERENCE DRAWING PACKAGE FOR FIBER PATCH PANEL DETAIL. TERMINATION SHALL BE SC TYPE UNLESS OTHERWISE SPECIFIED
12. ALL FIBER PATCH PANELS PROVIDED BY ALSOENERGY TO INCLUDE ONE PRETERMINATED FIBER JUMPER CABLE OF COMPATIBLE FIBER AND TERMINATION TYPE. FIBER PATCH CABLE SHALL BE SHIPPED IN ORIGINAL PACKAGING INSIDE PANEL HOUSING TO PREVENT DAMAGE. ALL FIBER PATCH TERMINATIONS SHALL BE MADE BY INSTALLER AT COMMISSIONING.
13. MANY ANALOG SENSOR CABLES ARE CALIBRATED. CABLE LENGTH SHALL NOT BE MODIFIED WITHOUT APPROVAL FROM ALSOENERGY.
14. WIRELESS RADIO CONNECTIONS MUST BE LINE OF SIGHT.
15. ALL ENCLOSURE PENETRATIONS SHALL BE MADE ON THE BOTTOM OF THE ENCLOSURE GREATER THAN 1" (25mm) FROM ANY EDGE. WARRANTY OF ALL INTERNAL COMPONENTS AND WORKMANSHIP IS VOID IF THE ENCLOSURE PENETRATIONS DO NOT FOLLOW ALSOENERGY REQUIREMENTS AND MOISTURE IS PRESENT WITHIN THE ENCLOSURE.

also a stem company energy
Boulder, CO 80301
866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

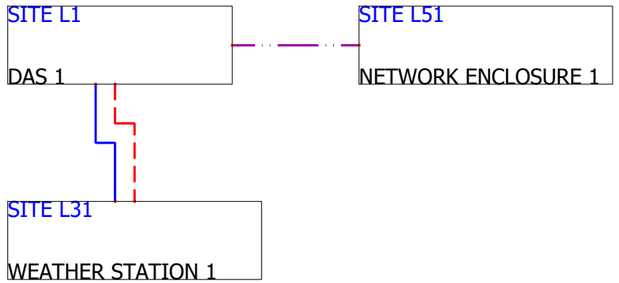
Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

GENERAL NOTES

LOCATION: -

WT050



WIRING LEGEND

- DC POWER 24VDC
- DC POWER 12VDC
- AC POWER
- ETHERNET CAT5E/CAT6
- SERIAL/RS485
- ANALOG/PULSE/DRY CONTACT
- MULTI-MODE FIBER
- SINGLE-MODE FIBER

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Boulder, CO 80301
866-303-5668
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SIZE: ANSI B
SCALE: NONE

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Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

ENCLOSURE SUMMARY

LOCATION:
SITE

WT100

SITE L1 - DAS 1

CM0 CM-ET-PW
CELLULAR MODEM
LAN1
LAN2
ANT 3/WAN

NET0 ET-UW-08
8-RJ45
RJ45 ×8

NET1 ET-UW-24
4-RJ45
2-MM SC FIBER
RJ45 ×4
FIBER ×2

FPP0 ET-FPP-12-M
6-MM SC FIBER
OM1
1 2 3 4 5 6
CABLE OUT

GW0 CH-E0-2200
LAN1 LAN2 LAN3 LAN4
COM1 COM2 COM3 COM4

24VDC OVP0 CH1 CH2

24VDC OVP1 CH1 CH2

M0 MT-RG-05
PRODUCTION
RS485
M0
X40

Φ1
Φ2
Φ3
N
CT - 4000A:5A
CT-M0

IO0 SA-TMK-05
RJ45
DIGITAL I/O
IO0
X80

XFMR
1

UPS0
UPS
RJ45
X9 X103

ALSOENERGY
OWNER/EPC

P0
L
N
PE
100-277VAC L-N

WT104 F-1
WT102 B-2
WT102 E-2
WT103 F-2
WT103 F-2
WT103 G-11
WT103 G-11
WT102 E-2
WT102 B-2

WIRING LEGEND
- DC POWER 24VDC
- DC POWER 12VDC
- AC POWER
- ETHERNET CAT5E/CAT6
- SERIAL/RS485
- ANALOG/PULSE/DRY CONTACT
- MULTI-MODE FIBER
- SINGLE-MODE FIBER

also energy a stem company
Boulder, CO 80301
866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

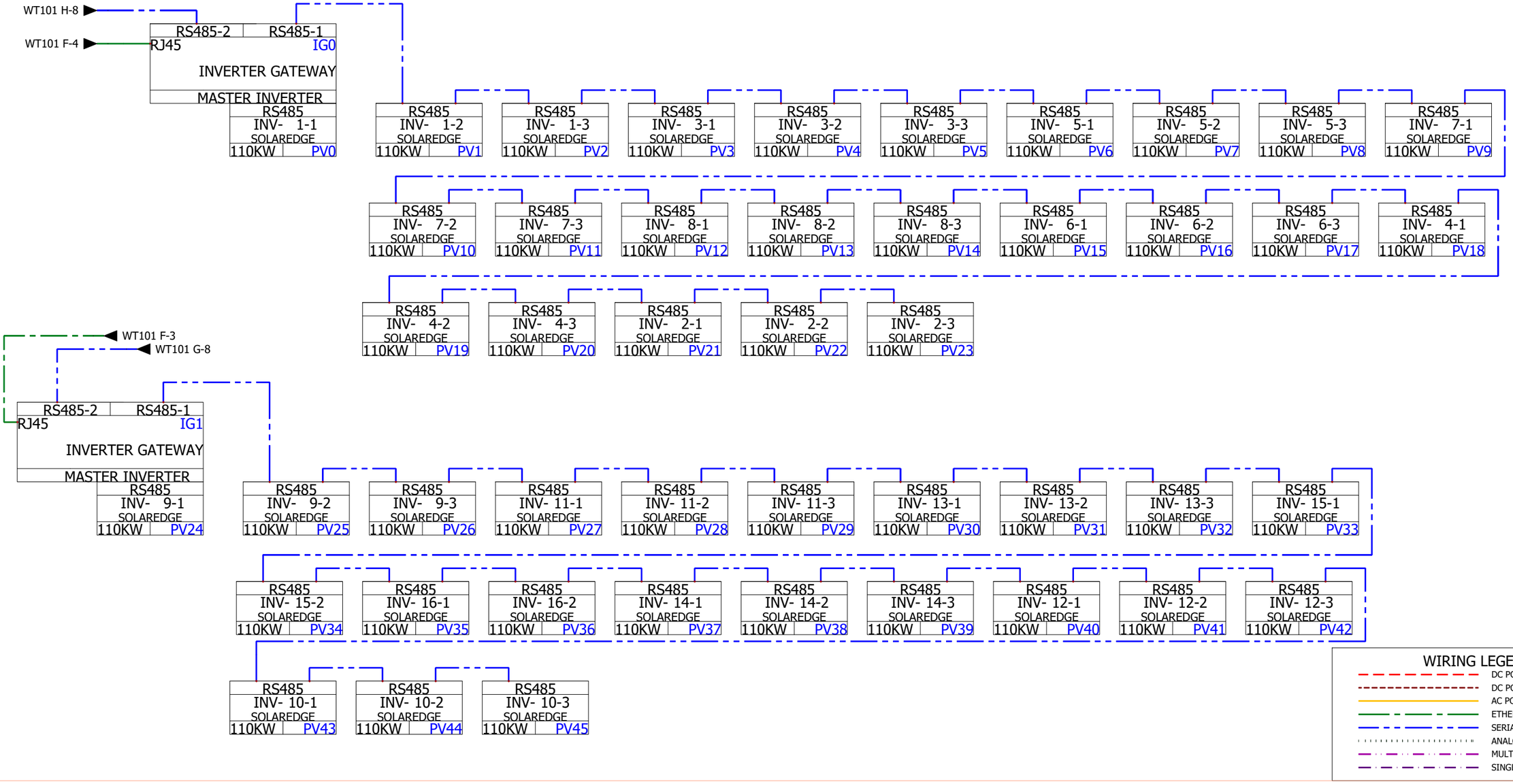
SINGLE LINE DIAGRAM
DAS 1

LOCATION:
SITE L1

WT101

ALSOENERGY
OWNER/EPC

SITE L101 - ARRAY 1



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866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

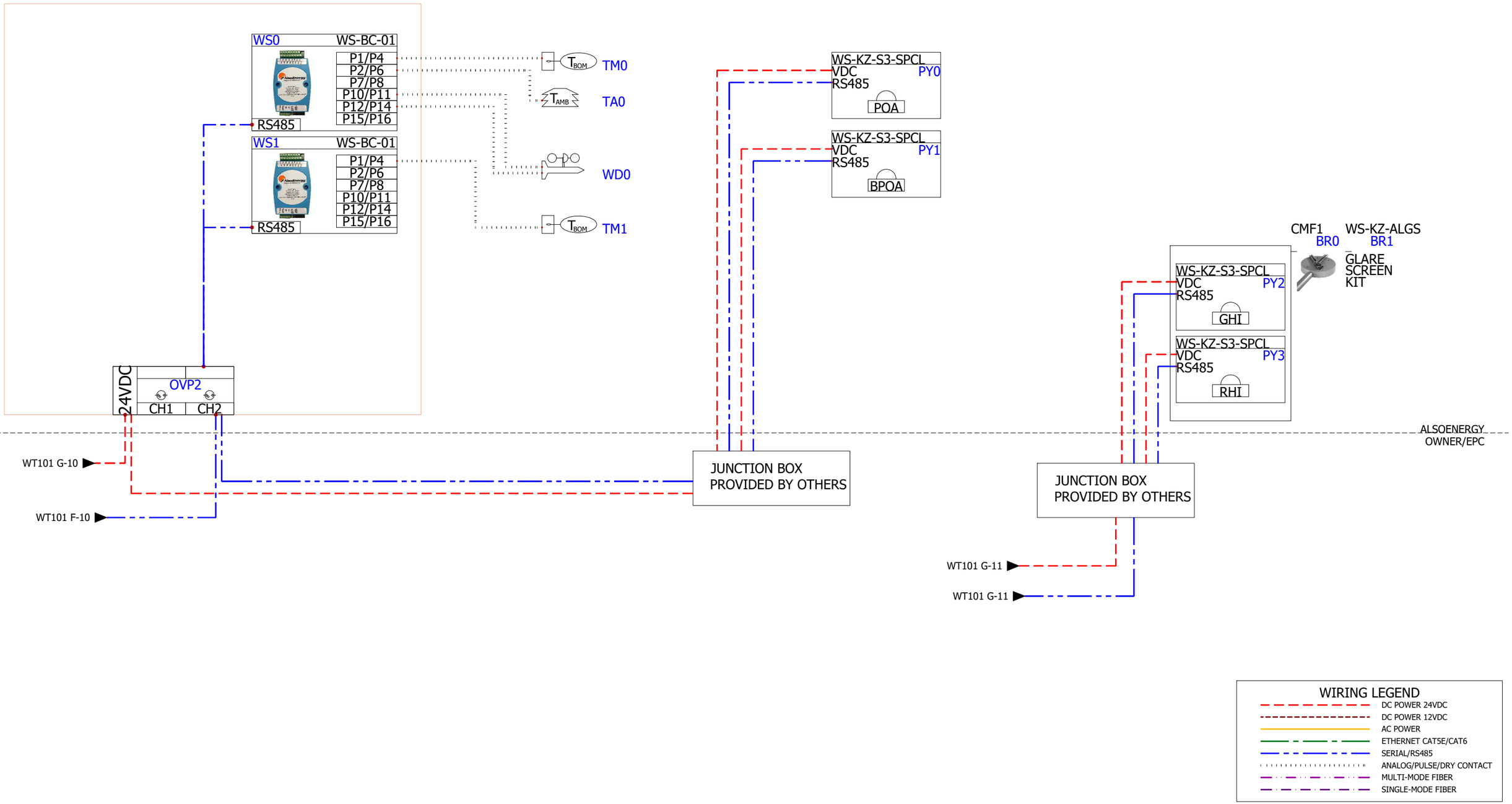
REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

SINGLE LINE DIAGRAM
ARRAY 1

LOCATION:
SITE L101

WT102

SITE L31 - WEATHER STATION 1



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866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

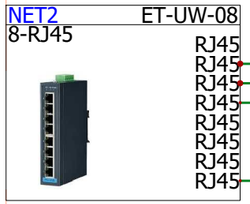
REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

SINGLE LINE DIAGRAM
WEATHER STATION 1

LOCATION: SITE L31

WT103

SITE L51 - NETWORK ENCLOSURE 1



WIRING LEGEND

- DC POWER 24VDC
- DC POWER 12VDC
- AC POWER
- ETHERNET CAT5E/CAT6
- SERIAL/RS485
- ANALOG/PULSE/DRY CONTACT
- MULTI-MODE FIBER
- SINGLE-MODE FIBER

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866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

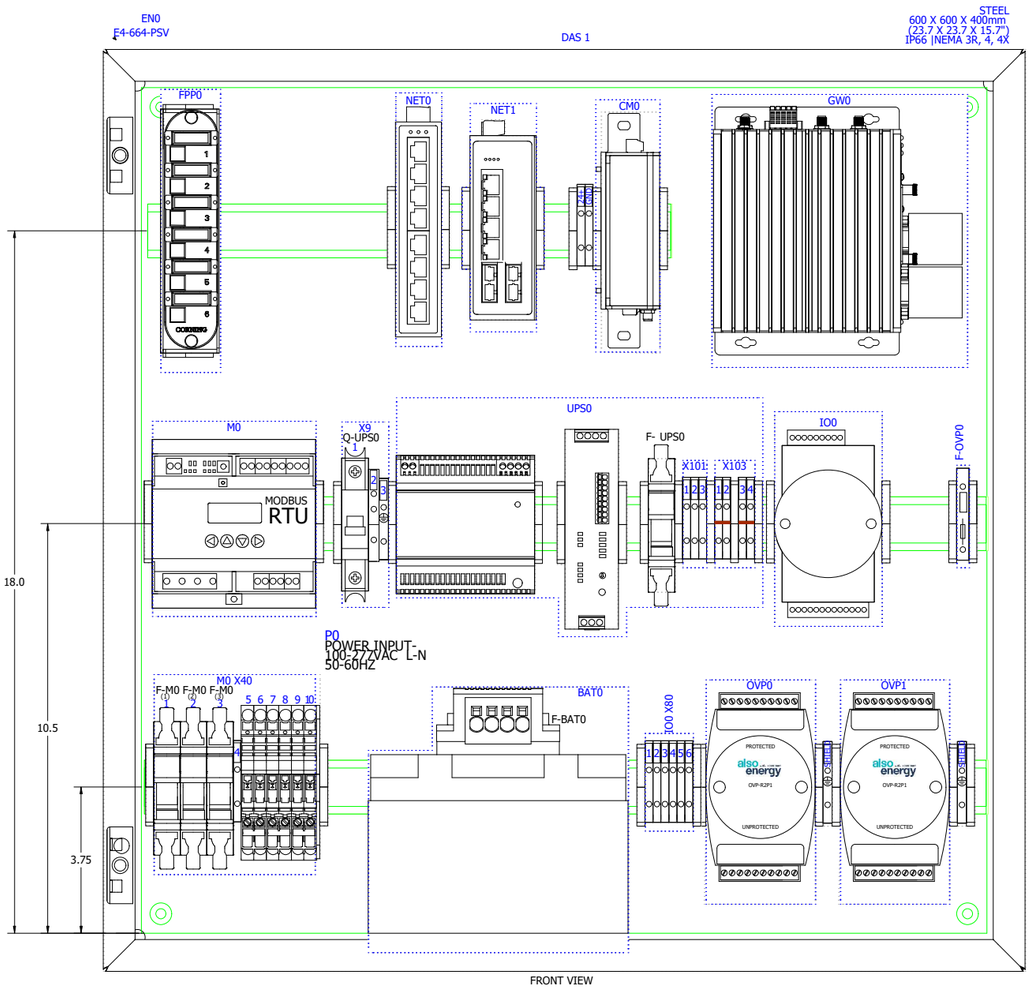
Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

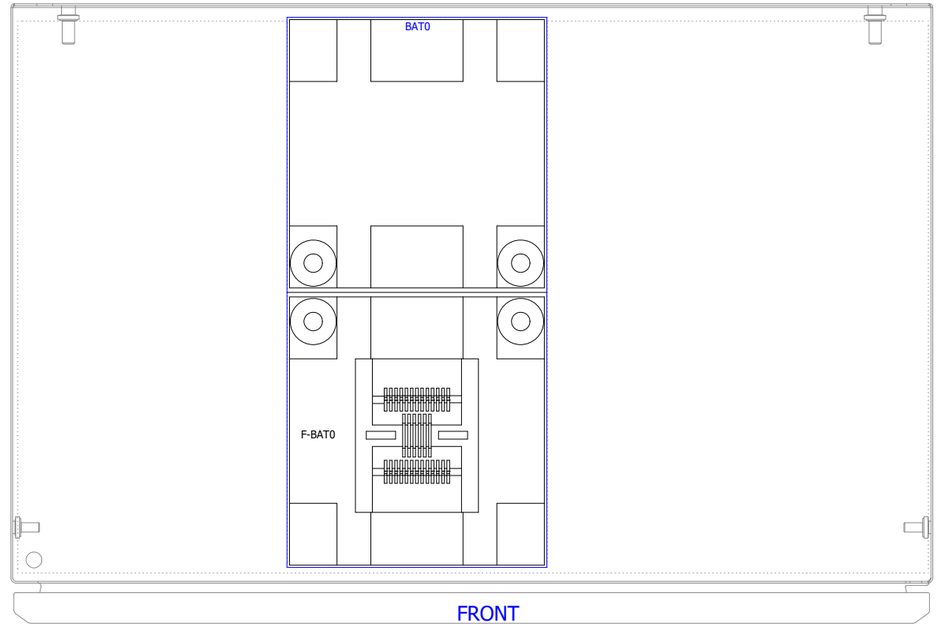
SINGLE LINE DIAGRAM
NETWORK ENCLOSURE 1

LOCATION:
SITE L51

WT104



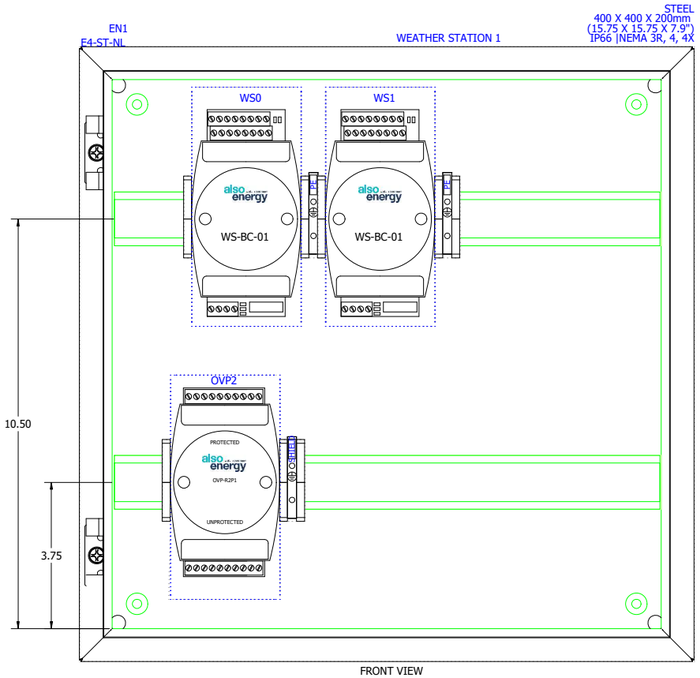
TOP VIEW OF ENCLOSURE BOTTOM SURFACE



also energy a stem company Boulder, CO 80301 866-303-5668 AlsoEnergy.com	INITIAL REV:	PD	INNER PARK ROOFTOP Q207071
SIZE: ANSI B SCALE: NONE	DATE:	2025-07-24	
	DESIGN	REV-1	

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

PANEL LAYOUT
DAS 1
LOCATION:
SITE L1
WT200

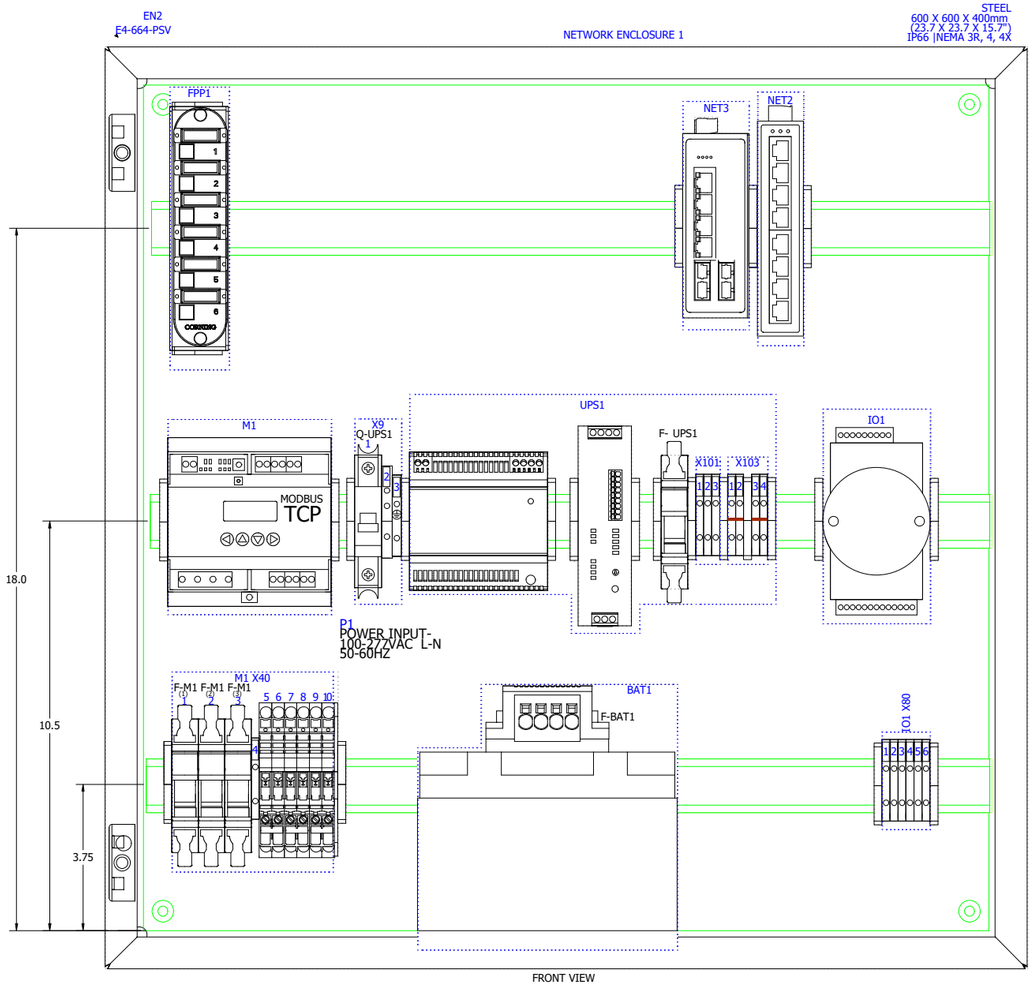


also a stem company energy Boulder, CO 80301 866-303-5668 AlsoEnergy.com	SIZE: ANSI B SCALE: NONE	INITIAL REV: PD DATE: 2025-07-24 DESIGN REV-1	INNER PARK ROOFTOP Q207071	REV: / BY: / DATE: / DESCRIPTION: 1 / PD / 2025-07-24 / DRAFTED	**PANEL LAYOUT** **WEATHER STATION 1**	LOCATION: SITE L31	WT201

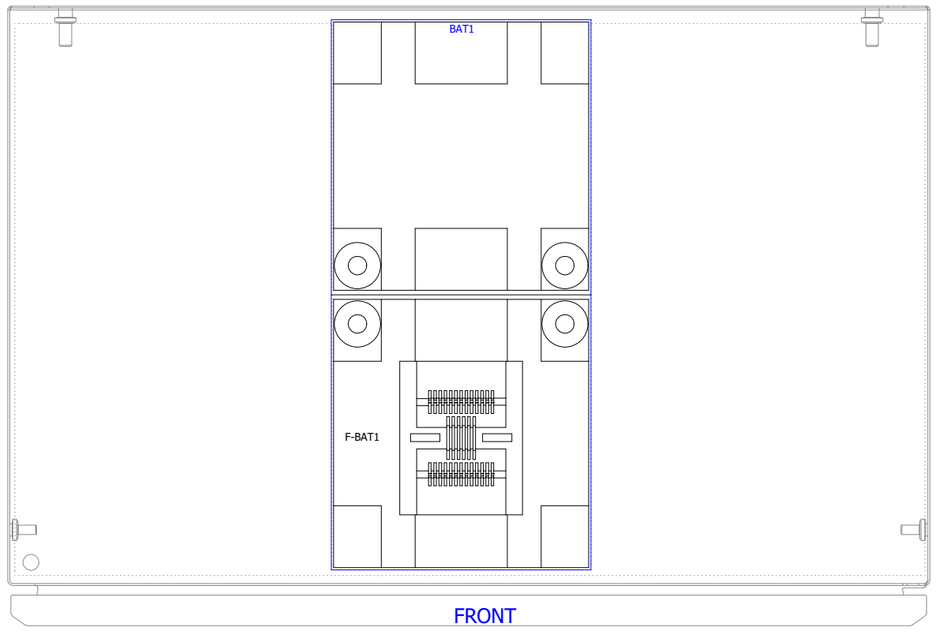
EN2
E4-664-PSV

NETWORK ENCLOSURE 1

STEEL
600 X 600 X 400mm
(23.7 X 23.7 X 15.7")
IP66 |NEMA 3R, 4, 4X



TOP VIEW OF ENCLOSURE BOTTOM SURFACE



also energy a stem company
Boulder, CO 80301
866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

PANEL LAYOUT
NETWORK ENCLOSURE 1

LOCATION:
SITE L51

WT202

POWER INPUT-P0
100-277VAC L-N
50-60HZ
6A MAX
L
N
PE
X9
1
2
3
6A Q- UPS0
BK 14AWG
WH 14AWG
GNYE 14AWG

EN0
E4-664-PSV

UPS0
ALSOENERGY
2904945
2906994

100-277VAC L-N
50-60HZ
1.43A @120VAC
1.1 +
1.2 -
PHOENIX CONTACT
2904945
52W
24VDC
+
-
+
-
RD 14AWG
BK 14AWG
2.1 +
2.2 -
3.1
3.2
3.3
3.4
3.5
3.6
3.7
3.8
3.9

INPUT
PHOENIX CONTACT
2906994
5A DC
INPUT - 24VDC
OUTPUT - 24VDC
OUTPUT
BATTERY

4.1 +
4.2 -
RD 14AWG
BK 14AWG
L
N
WH 22AWG
X101
3
2
1
BK 14AWG
YE 14AWG
WH 22AWG
BK 14AWG
YE 14AWG

BAT0
2320429
12VDC
24VDC
26Ah
12VDC
F-BAT0
25A (2X) ATO

F- UPS0
4A
CLASS CC
FAST ACTING
600V
RD 14AWG
X103
1
2
3
4

BK 20AWG
RD 20AWG

V1+
V1-
V2+
V2-
NET0
ET-UW-08
ADVANTECH
EKI-2528I-BE
UNMANAGED
4.7W
8-RJ45

V1+
V1-
V2+
V2-
NET1
ET-UW-24
ADVANTECH
EKI-5524MMI
UNMANAGED
4W
4-RJ45
2-MM SC FIBER

FPP0
ET-FPP-12-M
CORNING
SPH-01P
SPH-DIN-KIT
CCH-CP12-91
SCCSCCD1
6-MM SC FIBER
OM1

WT601 D-2
WT601 D-2

+24V
GND
RD
BK
OG
BN

CM-ET-PW
PEPLINK
MAX-BR1-MINI-LTE-US-DC-T-M-RPM
18W
CM0

(R) +Vs
(B) GND
ISO GND
DO0
DO1
DO2
DO3
DO4
DO5

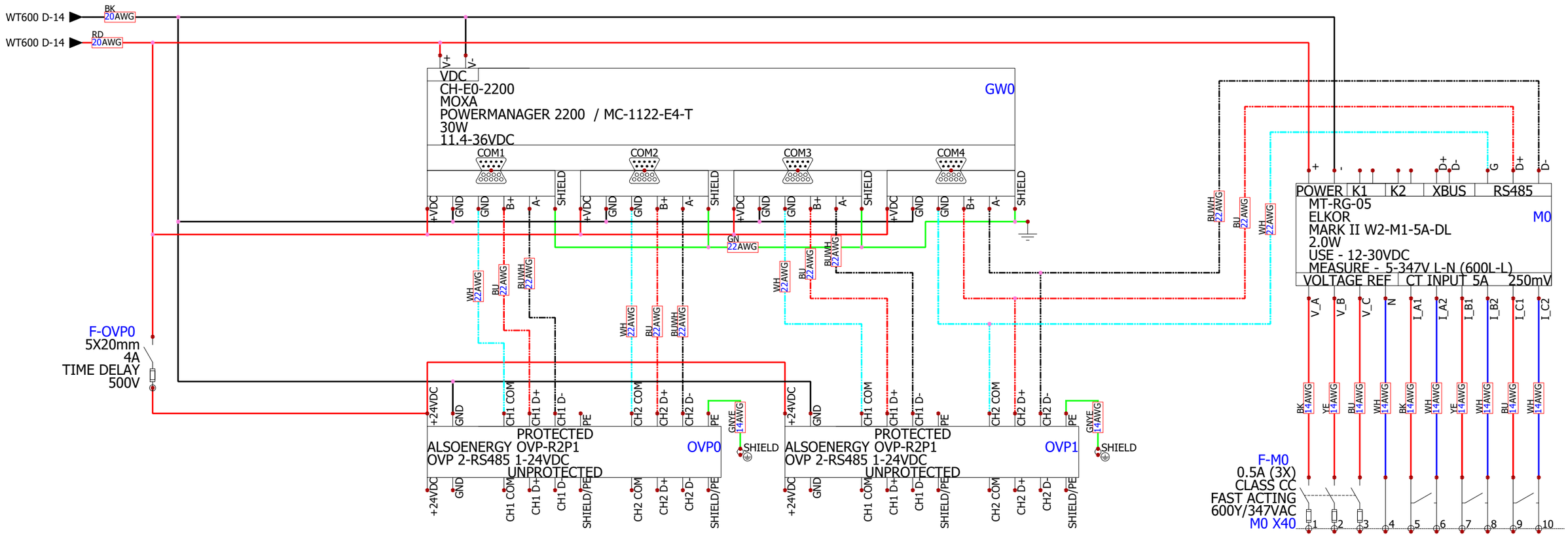
VDC
DIGITAL OUT
SA-TMK-05
ADVANTECH
ADAM 6050
2W
10-30VDC
IO0

DIGITAL IN
DI0
DI1
DI2
DI3
DI4
DI5
DI6
DI7
DI8
DI9
DI10
DI11
ISO GND
WH 22AWG
IO0
X80
1
2
3
4
5
6

also energy a stem company Boulder, CO 80301 866-303-5668 AlsoEnergy.com	INITIAL REV: PD DATE: 2025-07-24 DESIGN REV-1	INNER PARK ROOFTOP Q207071	SCHEMATIC DAS 1 LOCATION: SITE L1 WT600

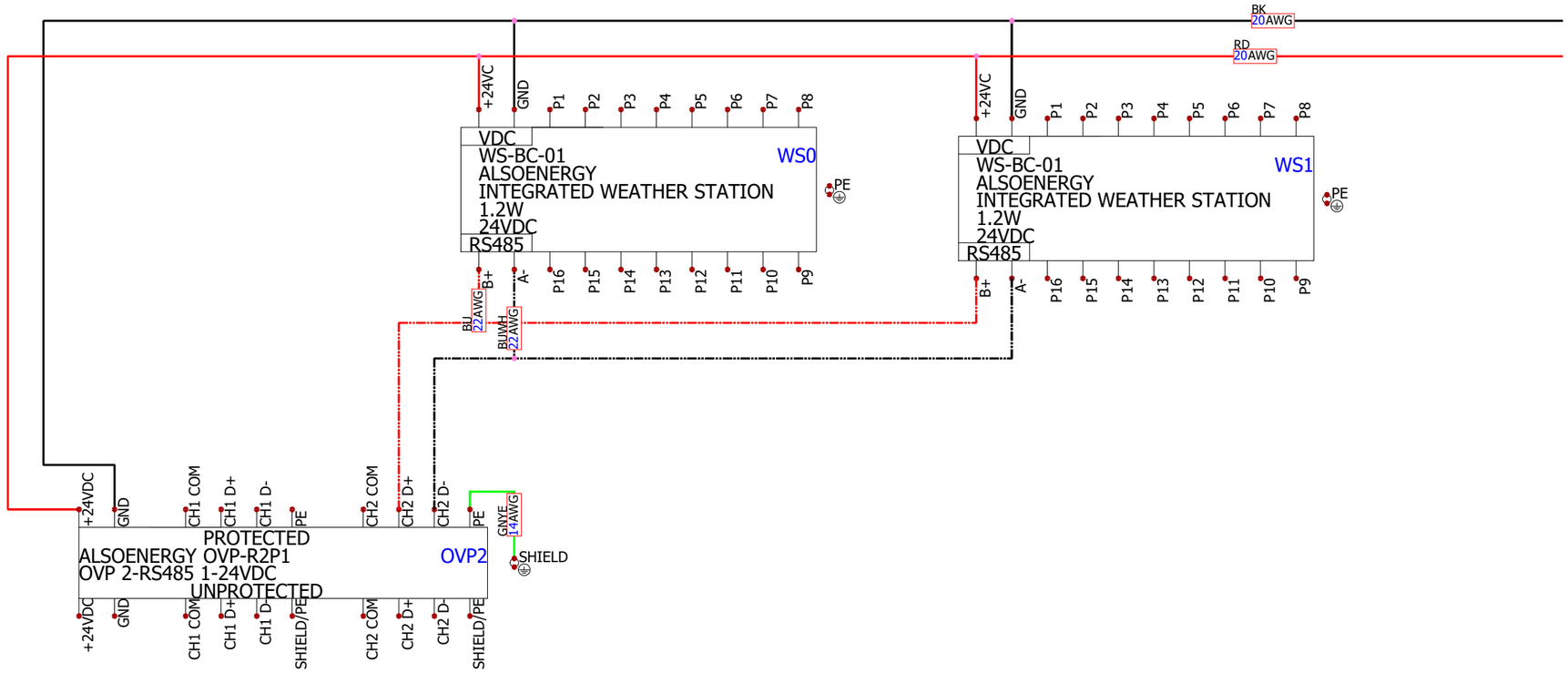
SIZE: ANSI B
SCALE: NONE

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED



also energy a stem company Boulder, CO 80301 866-303-5668 AlsoEnergy.com	SIZE: ANSI B SCALE: NONE	INITIAL REV: PD DATE: 2025-07-24 DESIGN REV-1	INNER PARK ROOFTOP Q207071	REV:	BY:	DATE:	DESCRIPTION:	SCHEMATIC DAS 1
				1	PD	2025-07-24	DRAFTED	LOCATION: SITE L1
								WT601

EN1
F4-ST-NL



also energy a stem company
Boulder, CO 80301
866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

SCHEMATIC

WEATHER STATION 1

LOCATION:
SITE L31

WT602

POWER INPUT-P1
100-277VAC L-N
50-60HZ
6A MAX
L
N
PE
X9
1
2
3
6A Q- UPS1
BK 14AWG
WH 14AWG
GNYE 14AWG

EN2
F4-664-PSV

100-277VAC L-N
50-60HZ
1.43A @120VAC
1.1 +
1.2 -
PHOENIX CONTACT
2904945
UPS1
ALSOENERGY
2904945
2906994
52W
24VDC
+
-
+
-
RD 14AWG
BK 14AWG
2.1 +
2.2 -
3.1
3.2
3.3
3.4
3.5
3.6
3.7
3.8
3.9

INPUT
PHOENIX CONTACT
2906994
5A DC
INPUT - 24VDC
OUTPUT - 24VDC
OUTPUT
BATTERY
4.1 +
4.2 -
L
N
WH 22AWG
BK 14AWG
YE 14AWG
X101
3
2
1
BAT1
2320429
12VDC
24VDC
26Ah
12VDC
F- UPS1
4A
CLASS CC
FAST ACTING
600V
RD 14AWG
X103
1
2
3
4
F-BAT1
25A (2X) ATO

BK 20AWG
RD 20AWG
V1+
V1-
V2+
V2-
NET2
ET-UW-08
ADVANTECH
EKI 2528I-BE
UNMANAGED
4.7W
8-RJ45
NET3
ET-UW-24
ADVANTECH
EKI-5524MMI
UNMANAGED
4W
4-RJ45
2-MM SC FIBER
FPP1
ET-FPP-12-M
CORNING
SPH-01P
SPH-DIN-KIT
CCH-CP12-91
SCCSCCD1
6-MM SC FIBER
OM1

+
-
RELAY
K1
POWER
K1
K2
XBUS
MT-RG-06
ELKOR
MARK II W2-E4-5A-DL
2.0W
USE - 12-30VDC
MEASURE - 5-347V L-N (600L-L)
M1
VOLTAGE REF
CT INPUT 5A|250mV
V_A
V_B
V_C
N
I_A1
I_A2
I_B1
I_B2
I_C1
I_C2
BK 14AWG
YE 14AWG
BU 14AWG
WH 14AWG
F-M1
0.5A (3X)
CLASS CC
FAST ACTING
600Y/347VAC
M1 X40
1
2
3
4
5
6
7
8
9
10

(R) +Vs
(B) GND
ISO GND
DO0
DO1
DO2
DO3
DO4
DO5
VDC
DIGITAL OUT
SA-TMK-05
ADVANTECH
ADAM 6050
2W
10-30VDC
IO1
DIGITAL IN
DI0
DI1
DI2
DI3
DI4
DI5
DI6
DI7
DI8
DI9
DI10
DI11
ISO GND
WH 22AWG
IO1
X80
1
2
3
4
5
6

also energy a stem company Boulder, CO 80301 866-303-5668 AlsoEnergy.com	INITIAL REV: PD DATE: 2025-07-24 DESIGN REV-1	INNER PARK ROOFTOP Q207071	SCHEMATIC NETWORK ENCLOSURE 1 LOCATION: SITE L51 WT603

SIZE: ANSI B
SCALE: NONE

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

COMMUNICATIONS

DEVICE ID	DESCRIPTION	MODEL	COMMUNICATIONS PROTOCOL	COMMUNICATIONS PORT/CHANNEL	BUS CONFIGURATION	CLIENT DEVICE	UNIT ID	IP ADDRESS	PROVIDER
L1 + CM0	CELLULAR MODEM	PEPLINK MAX-BR1-MINI-LTE-US-DC-T-M-RPM	TCP/IP	LAN1	10/100Mbps	INTERNET	-	192.168.13.1	ALSOENERGY
L1 + GW0	INDUSTRIAL COMPUTER - DATALOGGER	MOXA POWERMANAGER 2200 / MC-1122-E4-T	TCP/IP	LAN1	10/100Mbps	ALSOENERGY MONITORING	-	192.168.13.151	ALSOENERGY
L1 + M0	METER - PRODUCTION	ELKOR MARK II W2-M1-5A-DL	MODBUS RTU	GW0-4	9600 8N1	GW0	41	--	ALSOENERGY
L51 + M1	METER - PRODUCTION	ELKOR MARK II W2-E4-5A-DL	MODBUS TCP	LAN1	10/100Mbps	GW0	1	192.168.13.42:502	ALSOENERGY
L101 + IG0	INVERTER GATEWAY - MASTER INVERTER	SOLAREDGE CCG	TCP/IP	GW0-1 / LAN1	10/100Mbps	NOT MONITORED	-	DHCP	BY OTHERS
L101 + IG1	INVERTER GATEWAY - MASTER INVERTER	SOLAREDGE CCG	TCP/IP	GW0-2 / LAN1	10/100Mbps	NOT MONITORED	-	DHCP	BY OTHERS
L101 + PV0	INVERTER 1-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	1	--	BY OTHERS
L101 + PV1	INVERTER 1-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	2	--	BY OTHERS
L101 + PV2	INVERTER 1-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	3	--	BY OTHERS
L101 + PV21	INVERTER 2-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	22	--	BY OTHERS
L101 + PV22	INVERTER 2-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	23	--	BY OTHERS
L101 + PV23	INVERTER 2-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	24	--	BY OTHERS
L101 + PV3	INVERTER 3-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	4	--	BY OTHERS
L101 + PV4	INVERTER 3-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	5	--	BY OTHERS
L101 + PV5	INVERTER 3-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	6	--	BY OTHERS
L101 + PV18	INVERTER 4-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	19	--	BY OTHERS
L101 + PV19	INVERTER 4-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	20	--	BY OTHERS
L101 + PV20	INVERTER 4-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	21	--	BY OTHERS
L101 + PV6	INVERTER 5-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	7	--	BY OTHERS
L101 + PV7	INVERTER 5-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	8	--	BY OTHERS
L101 + PV8	INVERTER 5-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	9	--	BY OTHERS
L101 + PV15	INVERTER 6-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	16	--	BY OTHERS
L101 + PV16	INVERTER 6-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	17	--	BY OTHERS
L101 + PV17	INVERTER 6-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	18	--	BY OTHERS
L101 + PV9	INVERTER 7-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	10	--	BY OTHERS
L101 + PV10	INVERTER 7-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	11	--	BY OTHERS
L101 + PV11	INVERTER 7-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	12	--	BY OTHERS
L101 + PV12	INVERTER 8-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	13	--	BY OTHERS
L101 + PV13	INVERTER 8-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	14	--	BY OTHERS
L101 + PV14	INVERTER 8-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-1	9600 8N1	GW0	15	--	BY OTHERS
L101 + PV24	INVERTER 9-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	25	--	BY OTHERS
L101 + PV25	INVERTER 9-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	26	--	BY OTHERS
L101 + PV26	INVERTER 9-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	27	--	BY OTHERS
L101 + PV43	INVERTER 10-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	44	--	BY OTHERS
L101 + PV44	INVERTER 10-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	45	--	BY OTHERS
L101 + PV45	INVERTER 10-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	46	--	BY OTHERS
L101 + PV27	INVERTER 11-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	28	--	BY OTHERS
L101 + PV28	INVERTER 11-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	29	--	BY OTHERS
L101 + PV29	INVERTER 11-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	30	--	BY OTHERS
L101 + PV40	INVERTER 12-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	41	--	BY OTHERS

LAN1

GATEWAY: 192.168.13.1
SUBNET MASK: 255.255.255.0
DHCP START: 192.168.13.240
DHCP END: 192.168.13.254

also energy a stem company
Boulder, CO 80301
866-303-5668
AlsoEnergy.com

SIZE: ANSI B
SCALE: NONE

INITIAL REV: PD
DATE: 2025-07-24
DESIGN REV-1

INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

COMMUNICATIONS 1

LOCATION: SITE

WT670

-> COMMUNICATIONS

DEVICE ID	DESCRIPTION	MODEL	COMMUNICATIONS PROTOCOL	COMMUNICATIONS PORT/CHANNEL	BUS CONFIGURATION	CLIENT DEVICE	UNIT ID	IP ADDRESS	PROVIDER
L101 + PV41	INVERTER 12-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	42	--	BY OTHERS
L101 + PV42	INVERTER 12-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	43	--	BY OTHERS
L101 + PV30	INVERTER 13-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	31	--	BY OTHERS
L101 + PV31	INVERTER 13-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	32	--	BY OTHERS
L101 + PV32	INVERTER 13-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	33	--	BY OTHERS
L101 + PV37	INVERTER 14-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	38	--	BY OTHERS
L101 + PV38	INVERTER 14-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	39	--	BY OTHERS
L101 + PV39	INVERTER 14-3	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	40	--	BY OTHERS
L101 + PV33	INVERTER 15-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	34	--	BY OTHERS
L101 + PV34	INVERTER 15-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	35	--	BY OTHERS
L101 + PV35	INVERTER 16-1	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	36	--	BY OTHERS
L101 + PV36	INVERTER 16-2	SOLAREDGE SE110K-US	MODBUS RTU	GW0-2	9600 8N1	GW0	37	--	BY OTHERS
L31 + PY0	PYRANOMETER - POA	KIPP & ZONEN SMP-3	MODBUS RTU	GW0-4	9600 8N1	GW0	21	--	ALSOENERGY
L31 + PY1	PYRANOMETER - BPOA	KIPP & ZONEN SMP-3	MODBUS RTU	GW0-4	9600 8N1	GW0	22	--	ALSOENERGY
L31 + PY2	PYRANOMETER - GHI	KIPP & ZONEN SMP-3	MODBUS RTU	GW0-3	9600 8N1	GW0	23	--	ALSOENERGY
L31 + PY3	PYRANOMETER - RHI	KIPP & ZONEN SMP-3	MODBUS RTU	GW0-3	9600 8N1	GW0	24	--	ALSOENERGY
L31 + WS0	WEATHER STATION	ALSOENERGY INTEGRATED WEATHER STATION	MODBUS RTU	GW0-4	9600 8N1	GW0	16	--	ALSOENERGY
L31 + WS1	WEATHER STATION	ALSOENERGY INTEGRATED WEATHER STATION	MODBUS RTU	GW0-4	9600 8N1	GW0	17	--	ALSOENERGY
L31 + TA0	AMBIENT TEMPERATURE	BAPI AE/T1K[-29 to 49C]-O-BB2-CERT	ANALOG mA	P2/P6	--		-	--	ALSOENERGY
L31 + TM0	MODULE TEMPERATURE	BAPI AE/T1K[-40 TO 85C]-SMFEP-10'-BB2-CERT	ANALOG mA	P1/P4	--		-	--	ALSOENERGY
L31 + TM1	MODULE TEMPERATURE	BAPI AE/T1K[-40 TO 85C]-SMFEP-10'-BB2-CERT	ANALOG mA	P1/P4	--		-	--	ALSOENERGY
L31 + WD0	WIND SPEED AND DIRECTION	DAVIS 7911	ANALOG mV PULSE/CONTACT	P10/P11/P12/P14	--		-	--	ALSOENERGY
L1 + IO0	DIGITAL I/O - XFMR ALARMS	ADVANTECH ADAM 6050	MODBUS TCP	LAN1	10/100Mbps	GW0	-	192.168.13.191:502	ALSOENERGY
L51 + IO1	DIGITAL I/O - XFMR ALARMS	ADVANTECH ADAM 6050	MODBUS TCP	LAN1	10/100Mbps	GW0	-	192.168.13.192:502	ALSOENERGY
L1 + UPS0	ALSOENERGY SMART UPS	ALSOENERGY 2904945 - 2906994	MODBUS TCP	LAN1	10/100Mbps	GW0	192	192.168.13.221:502	ALSOENERGY
L51 + UPS1	ALSOENERGY SMART UPS	ALSOENERGY 2904945 - 2906994	MODBUS TCP	LAN1	10/100Mbps	GW0	192	192.168.13.222:502	ALSOENERGY

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SIZE: ANSI B
SCALE: NONE

INITIAL REV:	PD
DATE:	2025-07-24
DESIGN	REV-1

INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

COMMUNICATIONS 2

LOCATION:
SITE

WT671

SITE L1 - DAS 1 - ENCLOSURE ASSEMBLY

ID	PART NUMBER	DESCRIPTION	PROVIDER
CM0	CM-ET-PW	MAX-BR1-MINI-LTE-US-DC-T-M-RPM - 4G LTE CELLULAR MODEM	ALSOENERGY
EN0	E4-664-PSV	NSYS3D6640 - 23.6"X23.6"X15.7" VENTED IP66-NEMA 4/4X ENCLOSURE	ALSOENERGY
GW0	CH-E0-2200	POWERMANAGER 2200 / MC-1122-E4-T - INDUSTRIAL COMPUTER	ALSOENERGY
M0	MT-RG-05	MARK II W2-M1-5A-DL - MODBUS RTU REVENUE GRADE METER	ALSOENERGY
IO0	SA-TMK-05	ADAM 6050 - DIGITAL I/O FOR DRY CONTACT INPUT AND 24VDC DIGITAL OUT	ALSOENERGY
UPS0	UP-277-52W	2904945 - 2906994 - 24VDC UPS - INPUT: 100-277VAC - OUTPUT 24VDC 52W MAX	ALSOENERGY
NET0	ET-UW-08	EKI-2528I-BE - UNMANAGED ETHERNET SWITCH - 8 COPPER RJ45	ALSOENERGY
NET1	ET-UW-24	EKI-5524MMI - UNMANAGED ETHERNET SWITCH - 4 COPPER RJ45 - 2 MM SC FIBER	ALSOENERGY
FPP0	ET-FPP-12-M	SPH-01P - SPH-DIN-KIT - CCH-CP12-91 - SCCSCCD1 - FIBER PATCH PANEL - 12 STRAND OM1 SC UPC	ALSOENERGY
OVP0	OVP-R2P1	OVP 2-RS485 1-24VDC - 24VDC AND RS485 SURGE SUPPRESSOR	ALSOENERGY
OVP1	OVP-R2P1	OVP 2-RS485 1-24VDC - 24VDC AND RS485 SURGE SUPPRESSOR	ALSOENERGY
BAT0	UP-BAT-26WT	2320429 - 26Ah WIDE TEMPERATURE BATTERY	ALSOENERGY

SITE L31 - WEATHER STATION 1 - ENCLOSURE ASSEMBLY

ID	PART NUMBER	DESCRIPTION	PROVIDER
EN1	E4-ST-NL	NSYS3DC4420 - 16"X16"X8" IP66-NEMA 4/4X ENCLOSURE	ALSOENERGY
WS0	WS-BC-01	INTEGRATED WEATHER STATION - ANALOG SENSOR DIGITIZER - INPUTS: (2) mA, (2) mV, (2) PULSE/CONTACT	ALSOENERGY
WS1	WS-BC-01	INTEGRATED WEATHER STATION - ANALOG SENSOR DIGITIZER - INPUTS: (2) mA, (2) mV, (2) PULSE/CONTACT	ALSOENERGY
OVP2	OVP-R2P1	OVP 2-RS485 1-24VDC - 24VDC AND RS485 SURGE SUPPRESSOR	ALSOENERGY

SITE L31 - WEATHER STATION 1 - FIELD INSTALLED COMPONENTS

ID	PART NUMBER	DESCRIPTION	PROVIDER
PY0	WS-KZ-S3-SPCL	SMP-3 - ISO 9060 SPECTRALLY FLAT CLASS C PYRANOMETER	ALSOENERGY
PY1	WS-KZ-S3-SPCL	SMP-3 - ISO 9060 SPECTRALLY FLAT CLASS C PYRANOMETER	ALSOENERGY
PY2	WS-KZ-S3-SPCL	SMP-3 - ISO 9060 SPECTRALLY FLAT CLASS C PYRANOMETER	ALSOENERGY
PY3	WS-KZ-S3-SPCL	SMP-3 - ISO 9060 SPECTRALLY FLAT CLASS C PYRANOMETER	ALSOENERGY
TA0	WS-AMB-01	AE/T1K[-29 to 49C]-O-BB2-CERT - AMBIENT TEMPERATURE SENSOR	ALSOENERGY
TM0	WS-MOD-TT	AE/T1K[-40 TO 85C]-SMFEP-10'-BB2-CERT - BACK OF MODULE TEMPERATURE SENSOR	ALSOENERGY
TM1	WS-MOD-TT	AE/T1K[-40 TO 85C]-SMFEP-10'-BB2-CERT - BACK OF MODULE TEMPERATURE SENSOR	ALSOENERGY

-> SITE L31 - WEATHER STATION 1 - FIELD INSTALLED COMPONENTS

ID	PART NUMBER	DESCRIPTION	PROVIDER
WD0	WS-WD-01	7911 - WIND SPEED AND DIRECTION	ALSOENERGY
BR0	CMF1	CMF1 - ALBEDOMETER MOUNTING BRACKET FOR CMP PYRANOMETERS	ALSOENERGY
BR1	WS-KZ-ALGS	WS-KZ-ALGS - GLARE - SCREEN - KIT	ALSOENERGY

SITE L51 - NETWORK ENCLOSURE 1 - ENCLOSURE ASSEMBLY

ID	PART NUMBER	DESCRIPTION	PROVIDER
EN2	E4-664-PSV	NSYS3D6640 - 23.6"X23.6"X15.7" VENTED IP66-NEMA 4/4X ENCLOSURE	ALSOENERGY
M1	MT-RG-06	MARK II W2-E4-5A-DL - MODBUS TCP REVENUE GRADE METER	ALSOENERGY
IO1	SA-TMK-05	ADAM 6050 - DIGITAL I/O FOR DRY CONTACT INPUT AND 24VDC DIGITAL OUT	ALSOENERGY
UPS1	UP-277-52W	2904945 - 2906994 - 24VDC UPS - INPUT: 100-277VAC - OUTPUT 24VDC 52W MAX	ALSOENERGY
NET2	ET-UW-08	EKI 2528I-BE - UNMANAGED ETHERNET SWITCH - 8 COPPER RJ45	ALSOENERGY
NET3	ET-UW-24	EKI-5524MMI - UNMANAGED ETHERNET SWITCH - 4 COPPER RJ45 - 2 MM SC FIBER	ALSOENERGY
FPP1	ET-FPP-12-M	SPH-01P - SPH-DIN-KIT - CCH-CP12-91 - SCCSCCD1 - FIBER PATCH PANEL - 12 STRAND OM1 SC UPC	ALSOENERGY
BAT1	UP-BAT-26WT	2320429 - 26Ah WIDE TEMPERATURE BATTERY	ALSOENERGY

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SIZE: ANSI B
SCALE: NONE

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INNER PARK ROOFTOP

Q207071

REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

LOCATION BOMS

LOCATION: SITE

WT680

DEVICE MONITORING

SERVICE CATEGORY	PART ID	DESCRIPTION	QTY	UNITS
METERS	M0, M1	MONITORING OF REVENUE GRADE METER. TYPICALLY INCLUDES PER-PHASE DATA FOR ACTIVE POWER, REACTIVE POWER, VOLTAGE, CURRENT AND POWER FACTOR. 3 PHASE WYE OR DELTA, SINGLE PHASE, HIGH LEG DELTA, AND MORE ARE SUPPORTED.	2	PER DEVICE
INVERTERS (>49KW & <130KW)	PV0, PV1, PV2, PV3, PV4, PV5, PV6, PV7, PV8, PV9, PV10, PV11, PV12, PV13, PV14, PV15, PV16, PV17, PV18, PV19, PV20, PV21, PV22, PV24, PV25, PV26, PV27, PV28, PV29, PV30, PV31, PV32, PV33, PV34, PV35, PV36, PV37, PV38, PV39, PV40, PV41, PV42, PV23, PV43, PV44, PV45	STRING INVERTER MONITORING, DATA STORAGE AND MAINTENANCE. PER INVERTER >49KW AND <130KW	46	PER DEVICE
WEATHER STATIONS	WS0, WS1, PY0, PY1, PY2, PY3	MONITORING OF WEATHER SENSORS. WEATHER DATA DEPENDENT ON TYPE OF SENSORS SOLD OR INTEGRATED. WEATHER SENSOR MONITORING CHARGED PER WEATHER STATION, WHICH CAN INCLUDE MULTIPLE SENSORS BUT IS UNIQUE PER LOCATION/CLUSTER OF WEATHER SENSORS.	1	PER WEATHER STATION
TRANSFORMERS	IO0, IO1	MONITORING OF 5 TRANSFORMER ALARM DRY CONTACTS. TERMINALS 1 THROUGH 5 OF SA-TMK-05 CORRESPOND TO LIQUID TEMPERATURE 1, LIQUID TEMPERATURE 2, LIQUID LEVEL, VACUUM, AND PRESSURE RESPECTIVELY. CONSULT ALSOENERGY SALES OR SUPPORT REPRESENTATIVE FOR CUSTOM CONFIGURATIONS THAT VARY FROM THIS STANDARD.	2	PER DEVICE
UPS	UPS0, UPS1	MONITORING OF UNINTERRUPTABLE POWER SUPPLY. DATA TYPICALLY INCLUDES BUT NOT LIMITED TO OUTPUT VOLTAGE, STATE OF CHARGE, RESIDUAL BACKUP TIME, DISCHARGING CURRENT AND OVER TEMPERATURE ALERT.	2	PER DEVICE

DEVICE MONITORING AND PROFESSIONAL SERVICES

DEVICE MONITORING MAY INCLUDE DATA STORAGE AND MAINTENANCE FOR THE FOLLOWING TYPES OF DEVICES:
-INVERTERS
-METERS
-WEATHER STATIONS
-SOILING STATIONS
-CAMERA
-TRANSFORMER
-UPS
-RECLOSERS/RELAYS
-PPC

OTHER DEVICES MAY BE MONITORED IF MODBUS TCP OR MODBUS RTU IS SUPPORTED. OTHER PROTOCOLS MAY BE SUPPORTED IN SOME CASES. ADDITIONAL INTEGRATION FEES MAY BE REQUIRED FOR NON-STANDARD DEVICES.

PROFESSIONAL SERVICES MAY INCLUDE:
-POWER PLANT CONTROL
-IMPLEMENTATION OF CONTROLS THROUGH HMI
-HISTORIAN
-TELEMETRY CONFIGURATION AND CONNECTION
-POWERTRACK DASHBOARD FOR INVERTER CONTROL
-POWERTRACK DASHBOARD FOR PPC CONTROL
-POWERTRACK DASHBOARD FOR RECLOSER CONTROL
-POWERTRACK DASHBOARD FOR TRACKER CONTROL

NOTE THAT DEVICE MONITORING DOES NOT INCLUDE ANY CONTROL SCOPE. CONTROLS PROVIDED SEPERATELY IN PROFESSIONAL SERVICES.

DESCRIPTIONS OF DEVICE MONITORING AND PROFESSIONAL SERVICES MAY NOT REFLECT EXACT CONFIGURATION OF HARDWARE. SEE QUOTE OR PROPOSAL FOR MORE SPECIFIC DETAILS REGARDING MONITORING AND PROFESSIONAL SERVICES.

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SIZE: ANSI B
SCALE: NONE

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INNER PARK ROOFTOP

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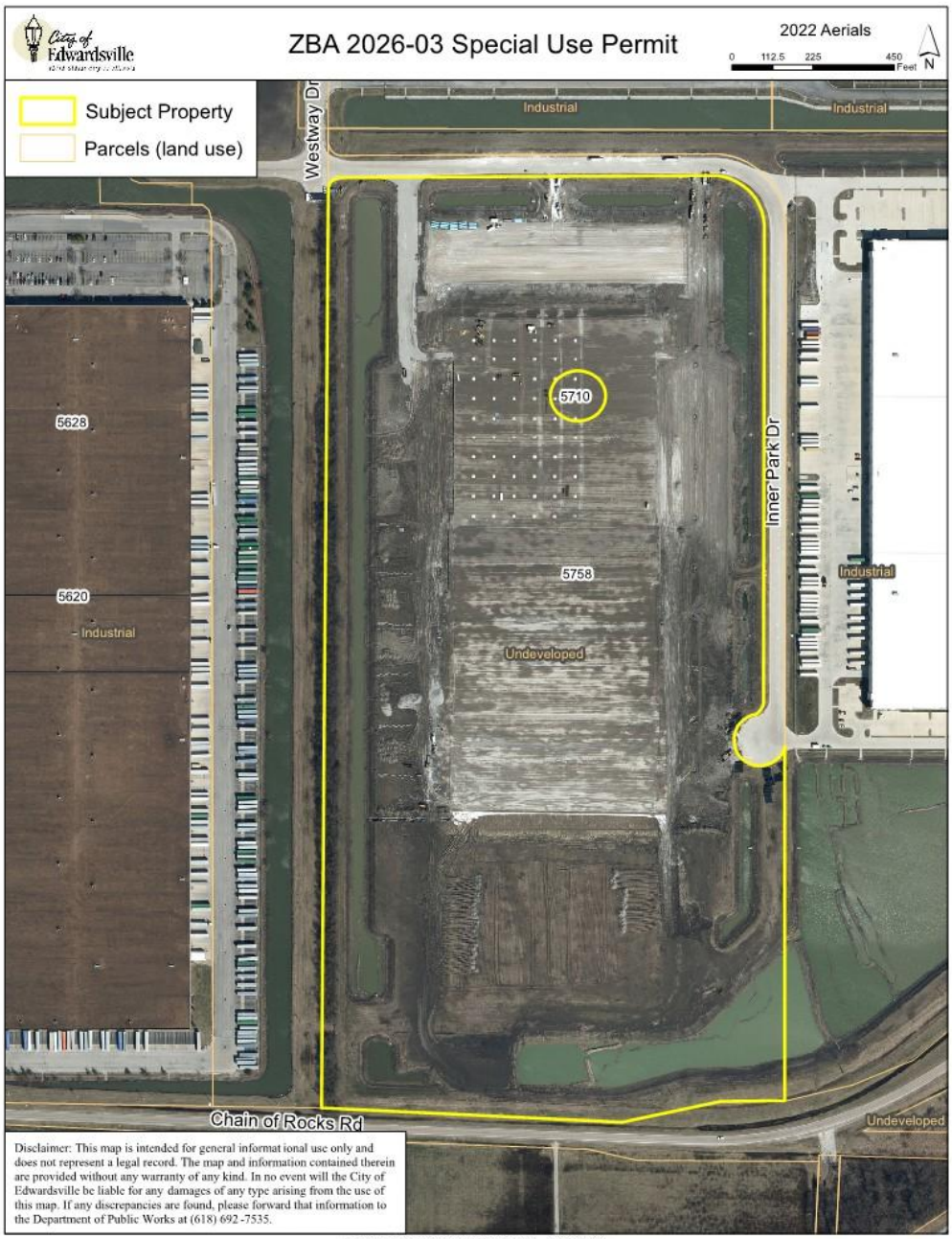
REV:	BY:	DATE:	DESCRIPTION:
1	PD	2025-07-24	DRAFTED

SERVICES INCLUDED

LOCATION:
SITE

WT690

ZONING ADMINISTRATOR'S REPORT
Case 2026-03 - Special Use Permit
5710 Inner Park Drive – PID 18-1-14-25-00-000-002.006
February 23, 2026



APPLICANT:
5710 Inner Park Dr, LLC

LOCATION:
The subject property is located at 5710 Inner Park Drive.

SPECIAL USE PERMIT REQUEST & OVERVIEW:

The applicant is requesting a Special Use Permit for a rooftop solar energy system in the "M-1" Light Manufacturing District. The proposed solar energy system would have a rated capacity of 4,950 kW AC and would generate power for public utility usage. However, this project would not meet the Zoning Ordinance's definition of a "solar energy system," as its rated capacity would exceed the defined rated capacity limit of 100 kW and would not generate power to reduce on-site consumption. The applicant cannot seek administrative approval as a "solar energy system," and must instead request a Special Use Permit for "any other use not specifically permitted" in the "M-1" Light Manufacturing District.

AREA LAND USE AND ZONING:

The subject property is zoned "M-1" Light Manufacturing District and is used as an industrial site. The adjoining properties are zoned and used as follows:

Direction	Zoning Designation	Use
North	*"M-1" Light Manufacturing District*	*Industrial*
South	*Village of Pontoon Beach*	*Industrial*
East	*"M-1" Light Manufacturing District*	*Industrial*
West	*Village of Pontoon Beach*	*Industrial*

PLANNING CONSIDERATIONS:

The Comprehensive Plan identifies the future land use for this property as "Employment." The existing zoning is in agreement with the Comprehensive Plan. The proposed solar energy system would not alter the property's industrial usage

APPLICABLE SECTION OF ORDINANCE

1242.04 – Light Manufacturing District (M-1)

(e) Special uses: Provided all the use restrictions of this district are observed the following uses are permitted:

(1) Assembly, production, processing, wholesaling or warehousing, or manufacturing of any commodity involving raw materials.

(2) Research and development facilities or parks involving explosives, flammable materials, nuclear or hazardous materials, or livestock.

(3) Fuel sales and storage.

(4) Junkyards.

(5) Wastewater/sewer treatment facilities.

(6) Adult businesses.

(7) Public utility.

(8) Wind energy systems

(9) Any other use not specifically permitted.

ZONING BOARD OF APPEALS STANDARDS FOR SPECIAL USE PERMIT:

(d) Requirements for Authorization:

(1) Existing uses and zoning of nearby property and relationship to Edwardsville's adopted comprehensive plan.

See AREA LAND USE AND ZONING and PLANNING CONSIDERATIONS above.

(2) Extent to which property value diminishes adjacent to the zoned parcels. Value decrease to be supplied by the petitioner and made by professional appraiser.

Property values were not provided by the petitioner. However, the petitioner did state in their application that solar energy systems on commercial buildings increases their appraised values due to increased net operating income, reduced energy costs, and marketing advantages.

(3) Extent to which the proposed change alters or promotes the public health, safety morals or general welfare.

The proposed rooftop solar energy system would neither alter nor promote the public health, safety, morals, or general welfare of the community. The construction phase of the project may create minor disruptions, but nothing that is unexpected with construction. Once finished, the rooftop solar would be out of view of the public, create little to no noise, and require only periodic maintenance and would provide solar energy to the electrical grid.

(4) The relative gain to the public as compared to the hardship imposed upon the property owners, and there is a need for the proposed special use.

The proposed rooftop solar energy system will provide relative gain to the public through cost savings and grid stability. As a community solar energy system, the power generated would create cost savings for off-takers of the project in the City of Edwardsville and Madison County. Additionally, the project would create grid stability as the applicant would be responsible for all grid upgrades and payments toward Ameren Illinois' infrastructure.

(5) The suitability of the subject property for the zoned purposes indicated by ordinance.

The property is suitable for the Permitted Uses listed in the "M-1" Light Manufacturing District. The proposed solar energy system would not affect the subject property's current zoning designation. Currently, roof-top solar is permitted by right if it is used to reduce the property's on-site consumption. The difference between roof-top solar for on-site consumption and solar for community solar is more or less indistinguishable and makes sense to place the solar energy system on an existing structure as opposed to a vacant piece of property.

(e) Conditions: The Board may provide such conditions or restrictions upon the construction, location and operations for a special use, including, but not limited to: provisions for the protection of adjacent property, the expiration of such special use after a specified period of time, off-street parking and loading, as may be deemed necessary to secure the general objectives of this Zoning Code, and to reduce injury to the value of the property in the neighborhood.

Please see the "Staff Recommendation" section.

(f) Expiration: In the event the Board establishes no time limitation within which the proposed use is to be exercised, then the permit shall expire in one year. Nothing shall preclude an applicant from reapplying for the same special use permit upon expiration.

(i) Transfer of Special Use Permit*:* A special use permit is issued for a specified zoning lot or lots and shall only be allowed to transfer from that location, or to another occupant or owner, as follows:

(1) All requests for transfers must be filed on an application form available through the public works department.

(2) Substantial transfers—All substantial transfers shall be subject to review and approval by the zoning board of appeals under the terms of section 1244.02. Substantial transfers include, but are not limited to:

a. A transfer involving a more intensive use on the subject property;

b. Other changes deemed to represent a substantial change by the zoning administrator and public works director.

c. The trend of development in the area surrounding the subject property necessitates further review of the proposed special use.

(3) Unsubstantial transfers—Unsubstantial transfers will be subject to review and approval by the city planner and public works director. Unsubstantial transfers represent minor changes from the provisions of the originally approved special use permit and may include:

a. Transfer of ownership not effecting the intensity of the use:

b. Other changes deemed to represent an unsubstantial change by the zoning administrator and public works director.

STAFF RECOMMENDATION

Staff recommends approval of the Special Use Permit subject to any reasonable conditions of approval put forth by the Zoning Board of Appeals and City Council.

DATE: February 12, 2026

ACTION ITEM TITLE: Approval of an Ordinance Amending Chapter 1250.13 – Off-Street Parking and Loading; Tables of the Codified Ordinances of City of Edwardsville

ORIGIN: Public Works

SUMMARY:

The attached ordinance amendment will modify Section 1250.13 – Off-Street Parking and Loading; Tables in its entirety with the most significant changes being the following:

1. Changing parking minimum requirements to parking maximum requirements
2. Allowing no more than a double row of parking between the principal structure and the highest classified right-of-way
3. Revising the off-street parking waiver process for developers wanting more parking than what is permitted
4. Removing landscaping requirements
5. Restructuring the ordinance's layout with minor clarifications and revisions

RATIONALE:

The proposed text amendment would simplify and streamline the off-street parking and loading review processes and would simply the enforcement of this ordinance.

COMPLIANCE WITH COMPREHENSIVE PLAN:

N/A

SUGGESTED COUNCIL ACTION:

Approval

ORDINANCE NO. _____

AN ORDINANCE AMENDING CHAPTER 1250.13 OF APPENDIX B (ZONING) OF THE CODIFIED ORDINANCES OF THE CITY OF EDWARDSVILLE REGARDING Off-Street Parking and Loading

WHEREAS, the Corporate Authorities of the City of Edwardsville may establish regulations pertaining to zoning within the City of Edwardsville; and,

WHEREAS, Chapter 1250.13 of Appendix B, Zoning, provides regulation in regard to Off-Street Parking and Loading; and,

WHEREAS, the proposed text amendments to Chapter 1250.13 will allow for simplified and streamlined processes for all aspects of the Off-Street Parking and Loading ordinance by revising the off-street parking and loading code in it's entirety; and,

WHEREAS, the Plan Commission did hold a properly noticed public hearing on February 4, 2026 and recommended approval of the proposed amendments to Chapter 1250.13 of Appendix B (Zoning) by a vote of 6 ayes and 0 nays.

WHEREAS, the Administrative and Community Services Committee of the City of Edwardsville did on February 26, 2026, after review and discussion, by a vote of ____ ayes and ___ nays, recommend approval of the proposed text amendment; and,

NOW, THEREFORE IT BE ORDAINED BY THE CITY EDWARDSVILLE CITY COUNCIL, MADISON COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. RECITALS. The facts and statements contained in the preamble of this Ordinance are found to be reasonable and correct and are hereby adopted as part of this Ordinance.

SECTION 2: OFF-STREET PARKING AND LOADING; TABLES. Section Chapter 1250.13 hereby modified as shown in Exhibit A, adding and striking language as described.

SECTION 3. SEVERABILITY. Each section and each part of each section of this Codified Ordinance is hereby declared to be an independent section or part of a section, and if any such section or part of a section, or any provision thereof is held to be invalid, the remaining sections or parts of sections shall not be affected thereby.

SECTION 4. EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage, approval and publication as provided by law.

PASSED by the City of Edwardsville City Council, Madison County, Illinois this _____ day of _____, 2026, pursuant to a roll call as follows:

AYES:
NAYS:
ABSENT:
ABSTENTION:

APPROVED by me this _____day of _____, 2026

By: _____
Art Risavy, Mayor of the
City of Edwardsville,
Madison County, Illinois

ATTESTED, Filed in my office,
this _____ day of _____, 2026

By: _____
Michelle Boyer, Clerk of the City of Edwardsville
Madison County, Illinois.

1250.13 Off-Street Parking and Loading; Tables.

a) ***Purpose****:* The purpose of this section is to provide suitable accommodations for vehicle and bicycle parking without permitting undesirably large parking fields, alleviate or prevent congestion of the public streets, and to promote the safety and welfare of the public by establishing minimum and maximum requirements of the off-street parking and loading and unloading of merchandise and products in accordance with the use to which property is put.

b) ***Applicability of section:***

1) Off-street parking and loading shall be provided in accordance with this section and for all structures and uses erected or established after the effective date hereof.

2) Off-street vehicle parking spaces shall not be provided in an amount that is more than the amount specified in this section unless the maximum parking requirement is waived or mitigated as provided in this section.

c) Prohibited Uses of Off-Street Parking

1) Off-street parking facilities accessory to residential uses developed in any residential district in accordance with the requirements of these subsections shall be used solely for the parking of passenger vehicles owned by occupants of the dwelling structures to which such facilities are accessory, or by guests of such occupants.

2) Off-street parking facilities accessory to residential structures, except for single-family and two-family dwellings, shall not be used for storage of commercial vehicles, motor homes, boats and other such accessory transportation vehicles, or for the parking of vehicles belonging to the employees, owners, tenants, visitors or customers of business or manufacturing establishments.

3) No commercial vehicle exceeding one ton cargo capacity shall be parked anywhere or in any residential district except for normal loading, unloading, and service calls, nor shall any vehicle repair work be conducted on any residential parking lot located in said districts.

4) Properties in business, manufacturing, institutional, and MU-1 Districts that are used for commercial or mixed-use purposes are not permitted to construct or use residentially zoned lots for off-street parking.

d) ***Existing parking and loading facilities:***

1) Off-street parking areas that exist in the front yard may remain, provided no additional parking is added in the front yard. Any additional parking shall be in the rear yard or side yard, as required in under this section.

2) If a residential building or structure is damaged or destroyed and then repaired or rebuilt, the same amount of parking and loading spaces that existed before the damage must be restored. However, no extra parking or loading spaces are required beyond what was originally there.

3) Whenever the use of any residential structure or premises is intensified through addition of dwelling units then such changes shall meet the off-street parking space requirements of this code. Based on the application of this code, additional parking and loading facilities commensurate with such increases in use-intensity may be required.

4) Any nonconforming off-street parking area or facility which existed lawfully at the time of the adoption of this title and which remains nonconforming, and any such parking area or facility which shall become nonconforming, upon adoption of this title or any subsequent amendments thereto, may continue subject to the regulations under this section.

5) Repairs and routine maintenance of a nonconforming parking area or structure will be permitted as long as the configuration is not substantially altered as a result of the work. For the purpose of this section, repairs and routine maintenance shall be defined as resealing, concrete patching, and restriping without changing the configuration of the parking lot. Lighting requirements for nonconforming parking area or structures in parking lots are separate and are defined in Section 1250.10. All repairs and routine maintenance must adhere to State and Federal regulations.

e) General Off-Street Parking design standards:

1) Off-street parking with no principal structure shall be 30 feet from the front and side property lines.

2) Off-street parking spaces shall be at least nine feet wide and 19 feet in length and shall have at least eight feet of vertical clearance.

3) The length of parallel parking spaces shall be a minimum of 22 feet.

4) Every space shall be situated so that no part of any parked vehicle overhangs or infringes on the public right-of-way.

5) Parking space markings shall be made and restored as often as necessary to clearly delineate each parking space as determined by the administrator.

6) Off-street parking located on the same lot as occupied by the use served may be open to the sky or enclosed in a building or covered with a solar energy system that does not affect the function of the off-street parking and loading areas and adheres to solar energy systems requirements as per Section 1248.02.21.

7) Aisles within parking lots shall be sufficiently wide to permit safe and sufficient vehicular movements in the aisles, and into and out of parking spaces as depicted in the table below:

Angle of Parking	Minimum Aisle Width in Feet	
	One-Way	Two-Way
90°	22	22
60°	18	22
45°	14	22
Parallel	14	22

8) Off-street parking and loading areas shall be designed so that ingress to or egress from a parking space is from an aisle or driveway, not directly from the public right-of-way. Such areas shall be so arranged that vehicles at no time shall be required to back into any street or roadway to gain access thereto. (See Diagram 1 of this subsection.)

9) No accessway to any off-street parking shall be located within 50 feet of any corner formed by the intersection of the rights-of-way of two or more streets. At intersections where traffic-control devices are installed, the administrator may increase this requirement as necessary to prevent traffic hazards.

10) Off-street parking area accessways (including residential driveways) and public streets shall be aligned to form - as closely as feasible, right angles to the street.

11) The bi-directional accessway to every off-street parking area shall be at least 24 feet wide unless two adjoining one-way drives, each 12 feet wide at a minimum, are provided.

12) The location and maximum width of the curb cut(s) providing ingress and egress to any public right-of-way or adjoining properties from the parking lot shall be as approved by the director of public works.

13) A cross-access easement or other appropriate legal instrument or agreement guaranteeing permanent access between the property and the proposed development is located and its adjacent properties shall be provided.

14) All ADA parking requirements shall be met.

15) Exterior lighting shall be provided as required in Chapter 1250.10 - Exterior Lighting Controls.

16) Landscaping shall be provided as required in Chapter 1228- Landscaping and Screening

f) ***Loading Design Standards***. All off-street loading facilities shall conform to the minimum standards indicated below:

1) Every required off-street loading space shall be at least 12 feet wide and 45 feet long exclusive of aisle and maneuver space, and shall have vertical clearance of at least 14 feet. In no case shall a vehicle being loaded or unloaded overhang into the public right-of-way.

2) Every off-street loading space shall have vehicular access to a street or alley. Such accessway shall be at least 12 feet wide.

3) Every off-street loading spaces that is required or provided shall be located on the same parcel of land as the use served, and not closer than 50 feet of the intersection of the rights-of-way of two or more streets, and not on required front yards

g) ***Off-street parking and loading areas material requirements:*** Parking areas shall be graded and improved with:

1) A minimum of six inches of Portland cement concrete on a four inch thick aggregate base or lime/Portland cement stabilized base; or

2) A minimum of 1.5 inches of surface course and 1.5 inch binder course with a total thickness minimum of 4" of hot mix asphalt paved on six inches of compacted aggregate base binder;

3) Oil and chip or an aggregate surface is not permitted.

4) A minimum of six inches of continuous vertical barrier curbing, exclusive of ingress/egress points, around the perimeter of all parking lots. Said curbing shall be of Portland cement concrete. The same curbing shall be used for interior islands. Reference IDOT Standards Specifications for Road and Bridge Construction Type B-6.XX Barrier Curb. Off-street parking lots within the “M-1” Light Manufacturing District with structures over 100,000 square feet do not have to provide a 6” curb but shall still adhere to 1250.13 (i)(8).

5) New residential construction is required to provide concrete or hot mix asphalt concrete for their driveway and off-street parking.

h) Residential districts and properties zoned MU-1 which are used for strictly residential uses:

1) Off-street parking spaces for any residential zoning district or residential use shall be located on the same lot as the use.

2) Off-street parking spaces shall not be located in any front yard. They shall be located in the side and rear yards. All driveways/pavement must lead to an off-street parking space.

3) Off-street parking shall be at least 5 feet from the side and rear property lines.

4) Each parking space accessory to a multi-family dwelling shall be unobstructed so that no vehicle need be moved in order to allow another vehicle to enter/exit the parking area.

5) All off-street parking spaces for non-dwelling uses located in any residential district shall be located on the same lot as the use serviced. However, the administrator may allow such parking facilities to be located on another parcel within 200 feet of the use served if the "same lot" requirement is not feasible.

6) Residential parking minimums are subject to the exceptions outlined in the small lot overlay in Section 1250.06.02.

i) ***Business, manufacturing, and institutional districts, as well as MU-1 properties used for commercial or mixed-uses:***

1) No more than a double row (single access) of off-street parking shall be permitted between the principal structure and the highest classified right-of-way. All remaining parking shall be in the side or rear yards.

2) Off-street parking for dwellings located in any commercial district shall either be located on the same lot as the dwelling or another parcel within 200 feet of the residential premises.

3) Off-street parking for any commercial or industrial use located in any commercial or manufacturing district shall be located within 500 feet of the use serviced; provided, that no portion of any such parking lot shall extend into any residential district except by written permission of the zoning administrator.

4) Off-street parking areas, or internal drives, except for ingress/egress drives, shall not be closer to any street right-of-way than three feet and to the side and rear lot lines than five feet. (See Diagram 2 of this subsection)

5) No off-street parking or loading areas, or internal drives shall be permitted within the street right(s)-of-way.

6) No off-street parking areas, ingress/egress drives, or internal drives shall be located within three feet of a building.

7) Sidewalks shall be provided along the perimeter of the building adjacent to the drive aisle and/or off-street parking area. The sidewalk shall be a raised concrete having a minimum width of three feet when adjacent to a drive aisle or five feet when abutting patron parking spaces that are not parallel to the sidewalk in design and may be placed in the three feet buffer area between the parking surface and the building.

8) For “B-1” and “MU-1” Zoning Districts, access to parking shall be provided via a drive aisle that is a minimum of 20-feet wide and a maximum of 24-feet wide for bi-directional traffic. For one-way traffic, a drive aisle that is a minimum of 12 feet wide shall be required.

j) ***Computation of required parking/loading spaces:***

1) In computing the number of spaces required by this title, the zoning administrator shall apply the following rules:

A) In computing parking space requirements based on the number of employees, the maximum number of employees on the premises at any period of the day shall be used. "Employee parking" means one parking space shall be required per one and one-half employees, unless otherwise stated.

B) In computing parking or loading space requirements on the basis of building floor area, the gross floor area shall be used.

C) Whenever it is necessary to translate gross parking lot area into number of parking spaces, 350 square feet of gross area shall be deemed one parking space.

D) If computation of the number of parking or loading spaces required by this title results in a fractional space, any fraction of one-half or more shall be counted as one space.

k) ***Parking exceptions.***

1) For the purpose of calculating parking requirements, the following types of parking spaces shall not count against the maximum parking requirement:

   A) Accessible parking;

   B) Spaces with electrical vehicle charging stations

   C) On-street parking; and

   D) Structured parking, underground parking, and parking within, above or beneath the building(s) it serves.

2) If application of the maximum parking standard would result in fewer than six parking spaces, the development shall be allowed six parking spaces.

3) Maximum parking waiver.

   A) *Parking demand study.* Requests to exceed the maximum parking requirement shall be accompanied by a parking demand study demonstrating how the maximum number of parking spaces specified in this section is insufficient for the proposed development. Such a study shall include estimates of parking demand based on recommendations of the Institute of Transportation Engineers (ITE), or other acceptable estimates as approved by the zoning administrator, and should include other reliable data collected from uses or combinations of uses that are the same as, or comparable with, the proposed use. Comparability will be determined by density, scale, bulk, area, type of activity and location. The study shall document the source of data used to develop the recommendations.

   B) *Review criteria.* A request to waive the maximum parking requirement must demonstrate how it is meeting the following criteria:

      (1) The proposed development has unique or unusual characteristics such as high sales volume per floor area or low turnover, that create a parking demand that exceeds the maximum ratio and that typically does not apply to comparable uses;

      (2) The parking demand cannot be accommodated by on-street parking, shared parking with nearby uses, or by increasing the supply of spaces that are exempt from the maximum ratio;

      (3) The request is the minimum necessary variation from the standards; or

      (4) *Design requirements for excess parking.* Parking that is provided in excess of the maximum parking requirement shall be subject to the review process as outlined in this section. As part of that review, it is the discretion of the Zoning Board of Appeals to impose additional requirements on the excess parking spaces subject to the review for compliance by the Public Works Director. Such additional requirements may include, but are not limited to increased internal landscaping, additional screening, or brick pavers.

   C) *Review process.* An application for a maximum parking waiver shall be forwarded to the Zoning Board of Appeals and shall follow the requirements listed in Section 1244.02.3, Variance.

4) Minimum parking exception

   A) Requests to reduce the number of required parking spaces when a minimum number is required by this section shall follow the requirements listed in Section 1244.02.3, Variances.

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MAXIMUM PARKING AND LOADING SPACES		
USE	**NUMBER OF ALLOWED PARKING SPACES**	**NUMBER OF ALLOWED LOADING SPACES**
Educational, Institutional or Recreational		
Churches, auditoriums	1 space per 3 seats in the largest seating area	N/A
Hospitals	1 space per 2 beds plus employee parking	To 50,000 square feet of floor area - 1 space 50,001 to 100,000 - 2 spaces; 100,001 to 200,000 - 3 spaces
Libraries, museums	1 space per 500 square feet of floor area	On review by Administrator
Municipal or privately-owned recreation center or community building	1 space for each 2 employees plus spaces adequate in number as determined by Administrator to serve visitors	N/A
Nursing homes	1 space per 4 beds plus employee parking	To 50,000 square feet of floor area - 1 space; 50,001 to 100,000 - 2 spaces; 100,001 to 200,000 - 3 spaces
Elementary and junior high schools	1 space for every 20 students that the building is designed to accommodate, plus employee parking	On review by Administrator
Child day care centers	1 space per employee plus either of the following: a) 2 parking spaces for the first 10 children plus 1 parking space for every 10 additional children, or fraction thereof; or b) A drive through facility with adequate "pullover" space out of the flow of driveway traffic for 2 additional vehicles	
Senior high schools	1 space for every 4 students over age 16 that the building is designed to accommodate plus employee parking	
Colleges, business professional and trade schools	1 space for every 3 students that the building is designed to accommodate plus employee parking	
Commercial, Office Services Use		
All retail and commercial service uses not denoted below	1 space per 300 square feet of gross floor area	To 10,000 square feet of floor area—1 space; more than 10,000 square feet—1 space plus 1 additional space per 50,000 square feet of floor area in excess of 10,000 square feet

Banks, savings and loans—walk-in	1 space per 300 square feet of floor area, plus employee parking	To 30,000 square feet of floor area—none; 30,001 to 100,000—1 space; more than 100,000 square feet—1 space plus 1 additional space per 100,000 square feet of floor area in excess of 100,000 square feet
Banks, savings and loans—drive-thru lanes	3 stacking spaces per drive-thru lane	To 30,000 square feet of floor area—none; 30,001 to 100,000—1 space; more than 100,000 square feet—1 space plus 1 additional space per 100,000 square feet of floor area in excess of 100,000 square feet
Bowling alleys	4 spaces per bowling lane plus additional spaces for affiliated uses such as restaurants and saloons	Not applicable except as required for affiliated uses
Car washes	5 spaces per wash lane	N/A
Furniture and appliance stores	1 space per 600 square feet of floor area	To 25,000 square feet of floor area—2 spaces; more than 25,000 square feet of floor area—2 spaces plus 1 additional space per 25,000 square feet of floor area in excess of 25,000 square feet
Laundromats	1 space per 3 washers plus 1 space per employee	
Office generally, except medical and dental	1 space per 200 square feet of floor area	To 30,000 square feet of floor area—none required; 30,001 to 100,000—1 space; more than 100,000—1 space plus 1 additional space per 100,000 square feet of floor area in excess of 100,000 square feet
Medical and dental offices	1 space per 200 square feet of gross floor area or 3 spaces per unit (exam room/table/chair), whichever is greater	N/A
Mortuaries	1 space per 4 seats or 1 space per funeral vehicle, but not less than 20 spaces per chapel or view room	1 space per 10,000 feet or more of floor area
Personal Services	1 space per 100 square feet of gross floor area	
Planned Unit Developments	As stated on the Planned Unit Development	As stated on the Planned Unit Development
Restaurants—indoor seating	1 space per 2 seats	1 space per unit having 10,000 square feet of gross floor area
Restaurants—Drive In	1 space per 30 square feet	1 space per unit having 10,000 square feet of gross floor area

Restaurants—Drive Thru Lane	See Section 1248.02.30	
Service stations	2 spaces per service stall plus employee parking	N/A
Shopping Center—individual tenant uses shall not be reviewed or calculated other than if there are multiple buildings which are being reviewed separately	6 spaces per 1,000 square feet of gross floor area (multiple buildings may be reviewed separately regarding parking regulations)	To 10,000 square feet of floor area—1 space; more than 10,000 square feet—1 space plus 1 additional space per 50,000 square feet of floor area in excess of 10,000 square feet
Taverns/saloons	1 space per 2 seats	1 space per structure having 10,000 square feet or more of gross floor area
Theaters, indoors	1 space per 4 seats	N/A
Vehicle sales	1 space per 300 square feet of enclosed floor area and up to 10,000 square feet of open area	As determined by the Zoning Administrator

MINIMUM PARKING AND LOADING SPACES		
USE	**NUMBER OF REQUIRED PARKING SPACES**	**NUMBER OF REQUIRED LOADING SPACES**
Dwelling or Lodgings		
Hotels/motels	1 parking space per lodging unit plus employee parking and additional spaces must be considered for affiliated uses such as restaurants and taverns, conference rooms	1 space if the use has 20,000 square feet or more of area.
Boarding house or lodge	1 space per lodging unit plus employee parking and additional spaces for affiliated uses such as restaurants and taverns	1 space if the use has 20,000 square feet or more of area.
Bed & Breakfast	1 space per rental unit	
Short-Term Rentals	1 space per rental unit	
Mobile homes	2 spaces per dwelling unit	N/A
Multiple-family dwelling	2 spaces per dwelling unit OR 1 per bedroom	N/A
Single-family dwelling	2 spaces per dwelling unit OR 1 per bedroom	N/A
Multi-family dwellings in a B-1 or MU-1 zoning district	1 space per dwelling unit	N/A
Single-family dwelling in a B-1 or MU-1 zoning district	1 space per dwelling unit	N/A

MAXIMUM PARKING AND LOADING SPACES		
USE	**NUMBER OF REQUIRED PARKING SPACES**	**NUMBER OF REQUIRED LOADING SPACES**
Manufacturing		
Any manufacturing, warehousing or other industrial use	1 space per company vehicle, 1 visitor space per 25 employees on major shift plus employee parking	To 20,000 square feet of floor area—1 space; 20,001 to 50,000—2 spaces; 50,001 to 90,000—3 spaces; above 90,000 square feet—3 spaces plus 1 additional space per 50,000 square feet of floor area in excess of 90,000 square feet

l) ***Vehicle stacking standards.***

1) All land uses with a drive through component shall be required to maintain minimum vehicle stacking as outlined in this section.

2) Each vehicle stacking spaces shall be a minimum of 10 feet in width and 20 feet in length with the exception of spaces along a curve, which shall be a minimum of 12 feet in width.

3) The vehicle stacking lane for a drive through shall not be within the required drive aisle.

4) The number of stacking spaces shall be provided as follows:

LAND USE	MINIMUM NUMBER OF STACKING SPACES
Restaurant	4 in accordance with Section 1248.02.30
Bank	3
Car wash	5 spaces per wash lane
All other uses	3

m) ***Bicycle parking****.*

1) Design

A) Each bicycle parking facility shall include a metal anchor sufficient to secure the bicycle frame and accept a U-shaped lock. Acceptable examples include: inverted U, wave, post and ring, campus style, lightning bolt, and swerve. Similar styles may be accepted if they allow easy securing of the bicycle frame and wheel as determined by the zoning administrator.

B) Each bike rack element shall adhere to the following: One (1) space shall be considered the space required to allow for an adult bicycle to be mounted securely to the bicycle rack element.

C) Each bicycle parking space shall maintain the following minimum clearances:

(1) Two (2) feet from any obstruction,

(2) Four (4) feet from the center of parallel or angled bicycle racks,

(3) Eight (8) feet end to end.

2) Location

A) Bicycle parking facilities for nonresidential developments shall be located within of 50 feet from the building entrance, or shall be located at least as close as the closest parking space. Said bicycle parking shall not impede pedestrian traffic (5 foot minimum width access)

B) Bicycle parking shall be placed on a site with direct access to internal walkways, public sidewalks, or similar pedestrian accommodations to avoid direct conflict with vehicles.

C) Bicycle parking is permitted within the front yard.

3) Spaces required

A) All nonresidential developments which provide off-street parking facilities shall provide bicycle parking facilities (bike racks) at a ratio of at least one bicycle parking space for every ten parking spaces. No more than 10 spaces shall be required.

B) Multi-family developments shall provide bicycle parking facilities for building residents at a ratio of at least one bicycle parking space for every three dwelling units. This requirement can be met by indoor bicycle parking. Such bicycle parking facilities must be provided near the building entrance accessible to the street.

Definitions -

Bicycle Parking Space- a bicycle parking space shall be defined as an area where one (1) bicycle may be securely stored with both wheels resting on a stable surface and facilitate locking without interference to adjacent bicycles.

Bicycle Rack Element – A fixed structure design to securely support and lock one or more bicycles and designed to not cause damage to bicycles.

Bicycle Parking Facility – A designated area or structure intended for securing bicycles on a bicycle rack element. The bicycle parking facility is an accessible platform connected to an accessible route.

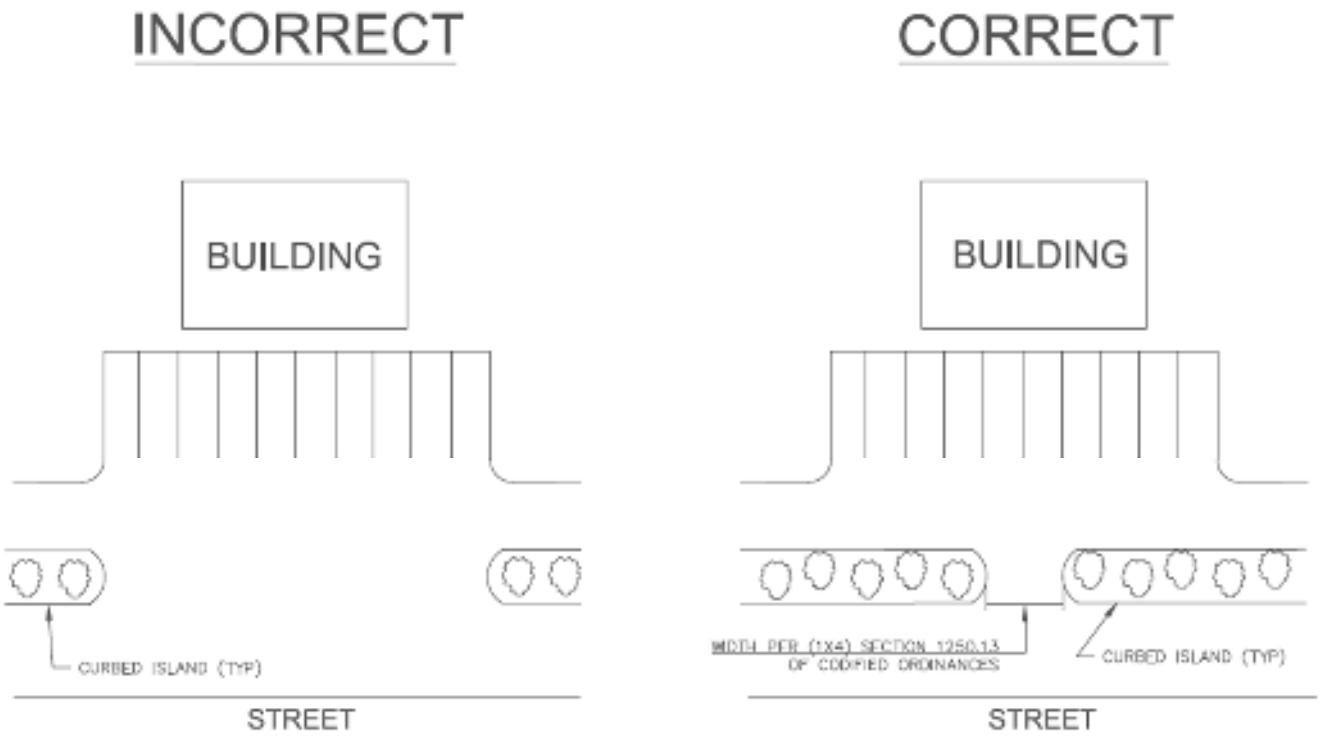


DIAGRAM 1

FOR ILLUSTRATIVE PURPOSES ONLY
NOT TO SCALE

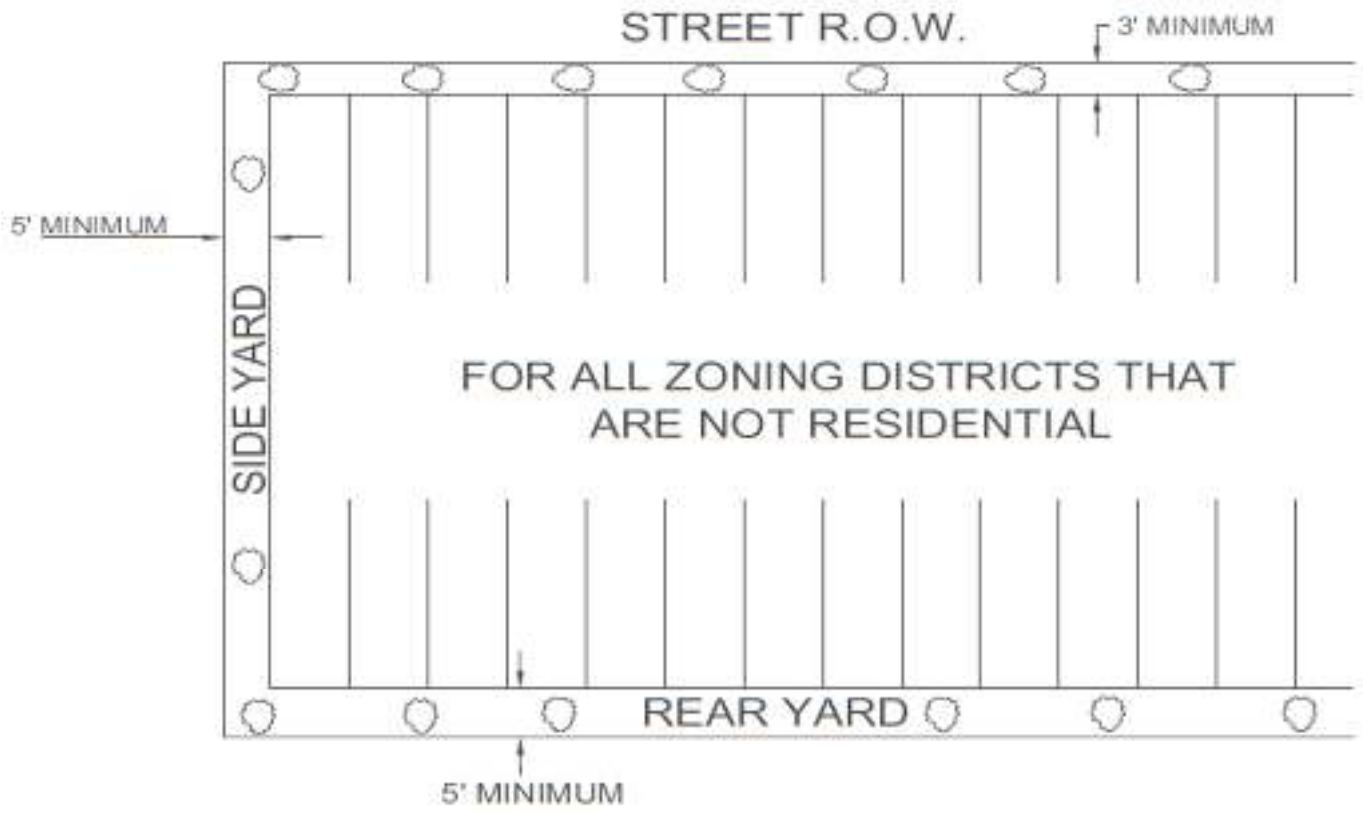


DIAGRAM 2

FOR ILLUSTRATIVE PURPOSES ONLY
NOT TO SCALE

DATE: February 12, 2026

ACTION ITEM TITLE: Approval of an Ordinance Amending Chapter 1228 – Landscaping and Screening of the Codified Ordinances of City of Edwardsville

ORIGIN: Public Works

SUMMARY:

The attached ordinance amendment will modify Section 1228 – Landscaping and Screening in its entirety with the most significant changes being the following:

1. Revising landscape minimums from point requirements based on roadway frontage to landscape coverage requirements for lot yard and parking lot areas
2. Requiring native vegetation
3. Changing the Transitional Buffer Yard plant-only screening to require more shade trees and shrubs and less evergreen trees
4. Restructuring the ordinance's layout with minor clarifications and revisions

RATIONALE:

The proposed text amendment would simplify and streamline the landscaping and screening review processes and would simply the enforcement of this ordinance.

COMPLIANCE WITH COMPREHENSIVE PLAN:

N/A

SUGGESTED COUNCIL ACTION:

Approval

ORDINANCE NO. _____

AN ORDINANCE AMENDING CHAPTER 1228 OF APPENDIX B (ZONING) OF THE CODIFIED ORDINANCES OF THE CITY OF EDWARDSVILLE REGARDING LANDSCAPING AND SCREENING

WHEREAS, the Corporate Authorities of the City of Edwardsville may establish regulations pertaining to zoning within the City of Edwardsville; and,

WHEREAS, Chapter 1228 of Appendix B, Zoning, provides regulation in regard to Landscaping and Screening; and,

WHEREAS, the proposed text amendments to Chapter 1228 will allow for simplified and streamlined processes for all aspects of the Landscaping and Screening ordinance by revising the landscaping and screening code in it's entirety; and,

WHEREAS, the Plan Commission did hold a properly noticed public hearing on February 4, 2026 and recommended approval of the proposed amendments to Chapter 1228 of Appendix B (Zoning) by a vote of 6 ayes and 0 nays.

WHEREAS, the Administrative and Community Services Committee of the City of Edwardsville did on February 12, 2026, after review and discussion, by a vote of ____ ayes and ___ nays, recommend approval of the proposed text amendment; and,

NOW, THEREFORE IT BE ORDAINED BY THE CITY EDWARDSVILLE CITY COUNCIL, MADISON COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. RECITALS. The facts and statements contained in the preamble of this Ordinance are found to be reasonable and correct and are hereby adopted as part of this Ordinance.

SECTION 2: LANDSCAPING AND SCREENING. Section Chapter 1228 hereby modified as shown in Exhibit A, adding and striking language as described.

SECTION 3. SEVERABILITY. Each section and each part of each section of this Codified Ordinance is hereby declared to be an independent section or part of a section, and if any such section or part of a section, or any provision thereof is held to be invalid, the remaining sections or parts of sections shall not be affected thereby.

SECTION 4. EFFECTIVE DATE. This Ordinance shall be in full force and effect upon its passage, approval and publication as provided by law.

PASSED by the City of Edwardsville City Council, Madison County, Illinois this _____ day of _____, 2026, pursuant to a roll call as follows:

AYES:
NAYS:
ABSENT:
ABSTENTION:

APPROVED by me this _____day of _____, 2026

By: _____
Art Risavy, Mayor of the
City of Edwardsville,
Madison County, Illinois

ATTESTED, Filed in my office,
this _____ day of _____, 2026

By: _____
Michelle Boyer, Clerk of the City of Edwardsville
Madison County, Illinois.

CHAPTER 1228 LANDSCAPING AND SCREENING

1228.01 Purpose.

The purposes of this chapter are as follows:

(a) To achieve the communitywide goal of developing the visual appeal of public/private open space as stated in the city's comprehensive plan.

(b) To recognize trees and landscape vegetation as critical infrastructure that stabilize the city's ecological balance by contributing to air purification, oxygen regeneration, carbon storage, groundwater recharge, and stormwater management, while also mitigating the negative impacts of adjacent land development, noise, glare, wind, heat, and climate change

(c) To provide buffering between single-family land uses and multiple-family, office, commercial, and industrial land uses.

(d) To ensure that the local stock of trees and other vegetation is replenished.

(e) To safeguard and enhance property values and to protect public and private investment.

(f) To preserve and protect the unique identity and environment of the city and preserve the economic base available to the city by such factors.

(g) To encourage the preservation of existing trees that provide valuable benefits to the urban environment, which can only be fully replaced after decades if removed.

(h) To protect the public health, safety and general welfare.

(i) To provide a minimum amount of landscape material to achieve the above objectives. However, flexibility in landscape design and landscaping efforts that reasonably exceed the minimum requirements of this chapter are encouraged.

(k) To ensure the proper provision, installation, maintenance, and appearance of landscape infrastructure installed in compliance with the city's adopted codes for land development.

1228.02 Applicability.

(a) It is the intent of this chapter that the terms and conditions set forth herein shall be equally applied throughout the community based on the common factors of zoning district, land use, site conditions and development impacts.

(b) The landscaping requirements set forth in this chapter shall apply to all zoning districts as specified herein.

(c) No application for any action requiring compliance with this chapter shall be considered for approval without the required landscape plans or other equivalent drawings/documents specified in this chapter. All landscaping plans are subject to review and comment by the Public Works Director or official staff designee(s), who shall be the only individual(s) authorized to accept, reject or modify plans that are submitted for review and approval.

(d) All applications for new planned unit developments (PUDs) and building permit applications for new construction shall include a landscape plan that complies with the requirements of this chapter, regardless of the occupancy type, structure type, proposed land use or zoning district. Exemptions include:

(1) Interior tenant finishes, façade remodels, and similar work that does not expand structure footprints or alter the site as long as the development remains in compliance with previously approved landscape plans.

(2) Common improvements on existing residential lots, such as but not limited to new or replacement of uncovered and covered decks, sheds or detached garages, building additions, or patios.

(e) All zoning lots or parcels shall be subject to these applicability requirements, except those properties that meet one of the following conditions at the time of application:

(1) Any property specifically exempted from landscape requirements by the municipal code;

(2) Any property subject to a waiver or modification of certain applicable landscape requirements, which has been approved by variance, special use or other ordinance adopted by the City Council.

(f) All required plans, plats, drawings and documents showing the location of street trees shall demonstrate compliance with the applicable performance standards of this chapter and the City's Arboricultural Specifications Manual as may be modified by the approval of the Edwardsville Environmental Commission.

1228.03 Landscape plan.

(a) No application requiring a landscape plan per Section 1228.02 shall be considered for approval without containing all of the following required information and elements. As necessary to depict and present all required content, landscape plans may consist of multiple sheets.

(1) North arrow (approximate), scale (approximate), date of preparation and revisions, name of designer/drafter;

(2) Approximate location of all buildings, structures, and pavement that are proposed or will remain on-site;

(3) Approximate location of all existing or proposed watercourses, ponds, lakes;

(4) Approximate location, size, and common name of any existing trees or shrubs/grasses that are to remain;

(5) Approximate location of all landscaping that is proposed for the site including any trees, shrubs, ground cover, ornamental grasses, and flower beds (plants should be represented on the drawing at approximately one-half of their mature size);

(6) Approximate location of any existing or proposed signs, walls, fences, berms (approximately one foot contour intervals), site furniture, lights, fountains, and sculptures on the site;

(7) Approximate location of all property lines;

(8) Approximate location of all curb lines of existing or proposed streets, alleys, and parking lots;

(9) Approximate location of all sidewalks that are proposed for the site or currently adjoin the site;

(10) Approximate location of all existing and proposed easements;

(11) Square footage of all landscape islands, yard areas, and parking lot areas;

(12) Elevation drawings (side views) of proposed structures showing the proposed landscaping for front and corner side lots (where applicable);

(13) Any additional information that the building official determines is necessary to adequately review the proposal.

(b) Sketches and drawings required and as set forth in this section are not required to be professionally produced or created by licensed professionals.

(c) Sketches and drawings shall include or be accompanied by a plant list that describes the common name, quantity and size at installation (planting) of each proposed plant.

1228.04 General minimum landscaping requirements.

(a) All developed zoning lots, except those that are specifically exempted from landscape requirements or subject to a waiver by way of approved ordinance shall provide landscaping as provided in this section. The minimum required landscape area and plantings for a zoning lot and required off-street parking areas shall be determined by zoning district and/or land use as provided in this section.

(b) When required, the Supplemental Landscaping and Transitional Buffer Yard (TBY) shall be required in addition to the minimum requirements for zoning lots and off-street parking lots.

(c) ***Single-family use requirements***. Zoning lots developed for single-family use in any zoning district shall require the planting of trees according to lot size as provided below.

(1)

Lot Area	Tree Requirement
First 7,500 square feet	1 Small Shade Tree
7,501 square feet – 21,780 square feet	1 Small Shade Tree and 1 Medium or Large Shade Tree
Every additional 21,780 square feet	1 Medium or Large Shade Tree per 21,780 square foot increment

(2) At least one tree shall be provided in the front yard as zoning setbacks allow related to utility placement. It is recommended that a ten (10) foot setback be maintained from any overhead utilities.

(3) Required trees for single-family dwellings shall be used to meet the minimum requirement of street trees for the subdivision.

(4) The schedule above represents the minimum tree sizes required. Larger classes of trees may be substituted where sufficient yard area exists.

(5) Duplexes, townhouses, and condominiums shall not be considered single-family uses and shall be subject to the requirements for two-family or multiple-family dwellings.

(d) ***Requirements for all uses other than single-family dwellings***.

(1) Lotsthat are developed for any use other than single-family dwellings shall be subject to the minimum landscaping requirements schedule below.

(2) Tables 1 & 2 shall be used in determining minimum landscaping coverage requirements and classifying required plants. Additional requirements for tree preservation can be found in Section 1228.10.

Table 1 Minimum Landscaping Requirements Schedule

Zoning District	Land Use Description	Applicable Landscape	Minimum Required Landscape Coverage	Basis of Calculation

		Area	Lg. or Med. Shade Trees	Small Shade Trees	Shrubs/ Grasses	
R-1	If applicable, minimum requirements for land uses other than single-family shall be determined by the land use description in this table that best fits the use, as determined by the Public Works Director or official staff designee(s).					
R-2	(A) Two-family	Yards	700 sq. ft.		-	Per front yard of each dwelling unit
	(B) Multiple-family	Yards	30%	15%	5%	Total Yard Area
		Parking lots	20%	10%	5%	Parking Lot Area*
MU-1	Mixed Uses	Yards	20%	10%	3%	Total Yard Area
		Parking lots	20%	10%	5%	Parking Lot Area*
B-1	Central Business District	Yards	15%	10%	3%	Total Yard Area
		Parking lots	20%	10%	5%	Parking Lot Area*
B-2	Commercial	Yards	30%	15%	5%	Total Yard Area
		Parking lots	20%	10%	5%	Parking Lot Area*
M-1	Light Industrial	Yards	25%	10%	5%	Total Yard Area
		Parking lots	20%	10%	5%	Parking Lot Area*

*Calculations and distribution of plantings shall include loading areas.

Table 2 Classification of Required Plantings

Plant Classification	Canopy Coverage Credit Per Tree		Minimum Size (at planting)
	New Tree/Shrub/Grasses	Existing Tree	
Large Shade Tree	1,000 sq. ft.	1,500 sq. ft.	2½-inch caliper
Medium Shade Tree	700 sq. ft.	1,050 sq. ft.	2½-inch caliper
Small Shade Tree	350 sq. ft.	525 sq. ft.	1½-inch caliper
Large Evergreen Tree	100 sq. ft.	150 sq. ft.	8 feet in height AND 2-inch caliper
Small Evergreen Tree	50 sq. ft.	75 sq. ft.	4 feet in height AND 1-inch caliper
Shrub/Grasses	30 sq. ft.	-	3-gallon container
Evergreen trees are not required, but may be used to satisfy up to 20% required tree coverage area for yard areas only. This substitution shall not be allowed for trees required in parking areas. In doing so, large evergreens may be substituted for required large or medium shade trees and small evergreens may be substituted for small shade trees with canopy coverage credited at the above rates.			

(e) ***Additional landscaping requirements***. All open yard areas and landscape beds that are not occupied by required trees and shrubs/grasses shall be planted and maintained in accordance with applicable provisions of the municipal code.

(1) Open yard areas: Yard areas containing no improvements or utilities shall be planted and maintained with vegetative ground cover. Any mix of the following types of ground cover shall be allowed:

a. Turf grass. May be installed as seed or sod. Shall be maintained at a height of 8 inches or shorter.

b. Low growing broadleaf evergreen plants. Shall include only non-invasive species recognized and commonly used as ground cover, such as Pachysandra. Must be planted together in continuous beds, mulched with hardwood or cypress mulch, that provide full coverage within two years of planting. Shall be maintained at a height of 12 inches or shorter.

(2) Managed natural landscapes: Managed natural landscapes shall be allowed when provided and maintained in compliance with Section 122.56 of the municipal code.

(3) Street yard planting strip: No landscaping shall be planted that would impede the function of the sidewalk or roadways.

(4) Landscape beds: All required trees and shrubs/grasses shall be installed in mulched (hardwood or cypress) or rocked landscape beds, except those beds adjacent to parking lots where rocked beds are not allowed. Any areas within landscape beds that are not occupied with required trees or shrubs/grasses may be planted with non-invasive vegetation exceeding the minimum requirements. This may include any species of ornamental grass, plant, flower, bush, vegetable, fruit, shrub or tree allowed under the municipal code

(f) ***Distribution of required landscaping:*** After calculating the required number of trees and shrubs/grasses based on the minimum landscape coverage percentages, required amounts shall be distributed across the yard as indicated below.

(1) Parking lots and loading areas. Calculations shall include loading areas. The number of required parking lot trees and shrubs/grasses shall be distributed through parking and loading areas as required in Sections 1228.05 and 1228.06.

(2) In meeting the requirements of the Minimum Required Landscaping Coverage, the trees and shrubs/grasses should be generally evenly distributed throughout the site. Excessive grouping of plants and/or large areas without landscaping shall be avoided.

(3) In addition, plant selections shall adhere to the following:

A. At least seventy-five (75%) of the minimum quantities required for each plant class shall be native as defined herein.

B. No individual plant or tree species shall account for more than one-fifth (20%) of the minimum requirements for a plant class.

(g) ***Rounding of Calculations***: Calculations that result in a fraction when determining minimum landscape requirements shall be rounded according to the provisions below.

(1) In calculating required landscape area for a zoning lot, parking lot, or specific yard area, fractions less than one-half (1/2; 50%; .50) shall be rounded down to the next whole number. Fractions equal to or greater than one-half (1/2; 50%; .50) shall be rounded up to the next whole number.

(2) All calculations to determine the minimum required quantities of trees or shrubs/grasses for a zoning lot, parking lot, or specific yard area shall be rounded up to the next whole number.

1228.05 Parking lot minimum landscaping requirements.

(a) A landscaped island shall be located at the end of any double row of parking spaces. Landscape islands should be a minimum of two parking spaces.

(b) Where any row of parking exceeds 15 spaces, a landscaped island shall be installed

(c) The minimum required parking lot landscaping area, trees, and shrubs/grasses shall be distributed in a reasonably balanced manner throughout off-street parking lots, subject to the provisions below. Evergreen trees shall not be substituted in lieu of required shade trees within interior curbed islands.

(1) In distributing trees, the required medium or large shade trees shall first be allocated to interior curbed islands and medians. Upon satisfying this condition:

A. Any remaining medium or large shade trees may be applied to other landscaped areas of the parking lot.

B. Within any remaining interior islands or medians remain, small shade trees may be substituted in lieu of required medium or large shade trees

(2) When a parking lot has less than 50 vehicle spaces or parking only along a single aisle, landscaping may be placed within interior curbed parking islands and/or within ten feet of the perimeter of the parking lot.

(3) When a parking lot has 50 or more parking spaces, required shade trees shall be planted in curbed islands within the interior of the parking lot so as to interrupt large expanses of pavement and to provide shading within the interior of parking lots.

(d) The minimum size for all parking lot landscape planting areas, including each curbed island and median, shall not be less than 150 square feet per tree plus 30 square feet per shrub planted in each area.

(e) Trees shall not be planted in any area with a width of less than five feet.

(f) Shrubs/grasses shall not be planted in areas having a width of less than four feet.

(g) Loading areas shall be included in the parking lot area used to calculate minimum parking lot landscaping. Loading areas that are subject to Section 1228.07 transitional buffer yard (TBY) requirements shall provide the TBY in addition to the minimum landscape requirements.

(h) Each curbed landscape island and median shall include sufficient plant materials (trees, shrubs, and ground cover, as indicated) to cover a minimum of 75 percent (75%) of the curbed island area. Any areas in a landscape island that are not covered by plant materials shall be fully mulched to achieve 100 percent coverage. Turf grass (sod or seed) shall not be considered ground cover for the purpose of satisfying the minimum coverage requirement for parking lot landscape islands.

1228.06 Supplemental parking lot landscaping standards by zoning district.

Zoning lots located in the districts listed below shall be subject to supplemental standards as indicated.

(a) ***B-1 Central business district and MU-1 Downtown mixed use district.***

(1) In no instance shall any landscaping or screening: block views of parking area access or drive aisles; creating unsafe driving or walking conditions.

(2) The Public Works Director or official staff designee(s) shall be authorized to approve the following administrative adjustments for zoning lots with insufficient area or constrained parking lot area are limited in size, which makes landscaping impractical or creates adverse impacts on the site or adjacent right-of-way.

A. Allow for the substitution of small shade trees in lieu of medium or large shade trees, without reducing the number of required trees.

(b) ***B-2 Commercial / business district.***

(1) Any parking spaces abutting a right-of-way shall be screened and located behind a row or hedge of shrubs or tall grasses maintained at a mature height of at least three feet and creating a solid landscaped screen, designed and installed to minimize views of vehicles from the public way.

(2) Along the side and rear lot lines of any lot abutting any residential district, screening (a wall, solid fence, or closely planted shrubbery) at least six feet high and of sufficient density to completely block the view of the off-street parking area from the adjacent residential property shall be installed.

1228.07 Transitional buffer yard requirement and landscaping.

(a) Any land use or development which abuts or is within 50 feet of any residential zoning district or use shall be required to provide a transitional buffer yard (TBY) unless otherwise relieved of this requirement by ordinance. A TBY shall be provided on every side that is adjacent to any residential zoning district or use.

(b) Any lot developed for multi-family or use that abuts or is within 50 feet of any single-family residential district or use shall also be required to provide a TBY.

(c) TBY shall be provided along the property line (s) which would be the most effective at screening for the residential district or use as determined by Public Works Director or official staff designee(s).

(d) Public local access and secondary roads (per Table SA "Street Design Specifications" in the Land Development Code) private roadways, and/or easements of access which may be situated on the boundary line between zoning districts shall not be construed as relief from the requirement for a non-residential or multi-family property from adhering to the TBY requirements of this section. In instances where zoning district boundaries are situated on streets classified as collector or arterial roadways (as defined in Table SA) all landscaping provisions of this chapter shall apply.

(e) *Depth or width of yard:* The developed lot, as described above, is required to have a TBY that is ten percent of the lot width or depth, whichever is more applicable due to the impact on adjacent property: However, no TBY shall be less than ten feet and not required to be more than 25 feet of the required yard dimension for the applicable zoning district, whichever is more stringent.

(f) *Reduction of TBY requirements:* In cases where a transitional buffer yard is required, the Public Works Director or official staff designee(s) shall have authority to reduce the TBY requirements by no more than 20 percent.

(g) *Prohibited material in TBY:* Any TBY required pursuant to this chapter shall be maintained as a planted or landscaped area only. No driveways, refuse containers, storage areas, aisleways, vehicular maneuvering areas, sidewalks, or structures of any form shall be located within the TBY. However, if an emergency exit into the TBY is required by code, a concrete pad of no more than 25 square feet or as required by said building codes may be placed at grade level immediately outside the required exit.

(h) *Berms, landscaping, fences and walls in the TBY:* Transitional buffer yards shall be comprised of one or more of the following: A landscape berm tree and shrub plantings, a wall, or solid fence. Whichever single type or combination of these alternatives are used, this screen shall be at least six feet high and of sufficient density to completely block the view from the adjacent residential property. If a wall or fence is selected, a row of trees containing a mix of medium/large shade trees, and small shade trees, shall be placed on the exterior portion (the side of the fence facing adjacent property owners) of the fence or wall on eight-foot centers at a height of six feet in order to break up the profile of the fence or wall.

(1) Minimum required TBY landscaping for each plant class shall include at least one-half (50%) native species.

(2) No single species of tree or shrub shall account for more than one-fifth (20%) of minimum required TBY landscaping for a given plant class.

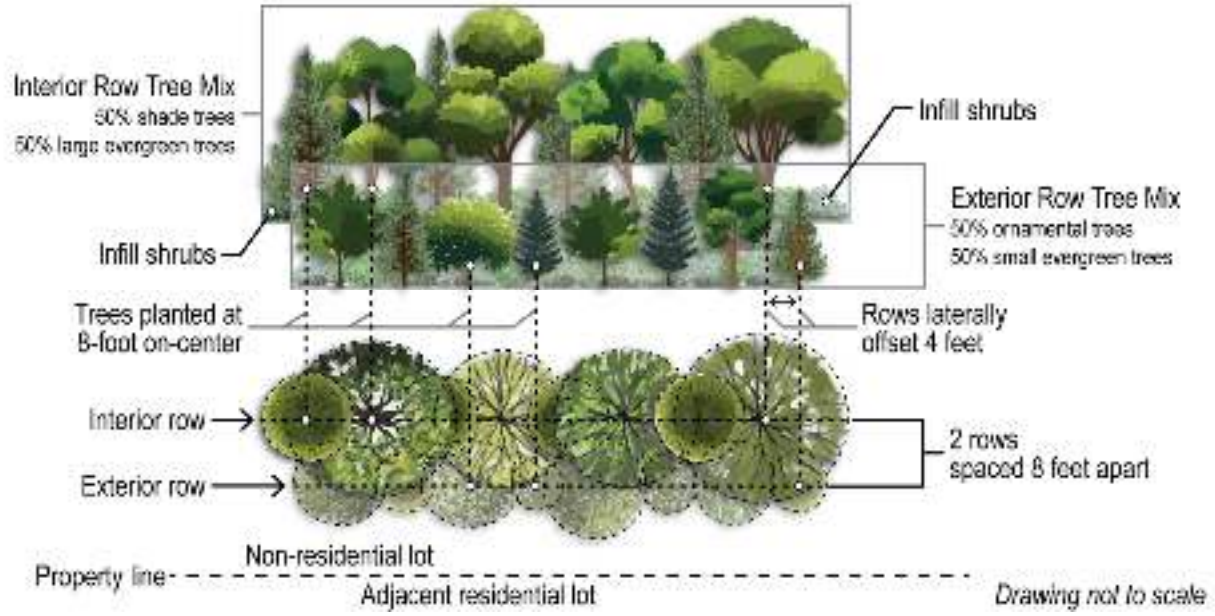
(i) ***Plant-only screening.*** If only plants are used as screening, the TBY must be designed and include a mix of trees and shrubs/grasses that will achieve a 100 percent (100%) screen to a height of six feet at installation.

(1) *Plant materials and layout*. Landscaping shall contain a mix of trees and shrubs/grasses, installed in two rows spaced eight feet apart, as illustrated in Figure 2 and provided below.

A. The interior row (facing the subject zoning lot) shall contain 50% medium or large shade trees and 50% large evergreen trees spaced at eight feet on-center. No specific pattern is required.

B. The exterior row (facing the adjacent zoning lot) shall contain a mix of 50% small shade trees and 50% small evergreen trees spaced at eight feet on-center. No specific pattern is required, but the row should be offset laterally from the interior row by eight feet.

Figure 2: Illustration of Plant-only Screening Layout



C. Shrubs/grasses with a mature height of at least three feet shall be provided in an amount at least equal to the total number of trees in both rows. No specific pattern or mix of evergreen and deciduous shrubs/grasses is required. However, species selection and plant placement shall be designed to achieve the required screening. The Public Works Director or official staff designee(s) shall be authorized to require infill plantings where required 100% screening to a height of six feet has not been achieved within five years.

(2) Stands of existing vegetation containing no invasive plants, which provide the required 100% screening may be preserved and counted toward the TBY screening requirement, upon approval of the Public Works Director or official staff designee(s).

(j) *Maintenance and replacement:*

(1) All plantings in association with TBY requirements shall be properly maintained and/or replaced if determined necessary by the public works director or his/her designee. All landscaping installed to replace dead or dying evergreens shall be replaced with planting of equal height and width to what remains or ten feet in height, whichever is less. For example, if an evergreen tree is removed and the other evergreens in the TBY are 11 feet tall, the replacement evergreen must be at least ten feet tall.

(2) The property owner is solely responsible for the maintenance and replacement of the fence, wall, berm and/or landscaping, In instances where the Public Works Director or official staff designee(s) has determined that the TBY is not being properly maintained, steps may be taken by the city to compel compliance with this section, including, but not limited to 1) a lien placed on the property; 2) water

service to the property shut off; and/or 3) liquor licenses being suspended or not renewed. Such action will be determined through the city's municipal court process.

(3) *Appeals concerning transitional buffer yards (TBY):* Appeals regarding the enforcement of the transitional buffer yard (TBY) requirements may be submitted in accordance with Section 1228.12 of this Chapter.

1228.08 Incentive for preserving existing trees.

(a) Preservation of non-invasive trees in good condition is encouraged. Each tree preserved on-site shall receive a 50% bonus credit applied toward minimum landscape requirements, which is equal to 1.5-times the coverage assigned to new trees, as provided in Table 2. Existing vegetation may be preserved in meeting TBY requirements as provided in Section 1228.08(b). Parking lots shall not be subject to this incentive.

(b) In exercising this incentive, only trees 6 inches or greater measured at 4.5 height from ground shall be counted toward minimum requirements.

(c) The intent to take advantage of this tree preservation incentive shall be clearly indicated at the time of application.

(d) The standards and provisions of Section 1228.04 shall apply to any existing tree or shrub depicted on a tree preservation and protection plan that is used to satisfy the requirements of this chapter.

(g) All trees retained under this section shall be protected against damage from construction activities within at least 10 feet of the trunk's base. Within this tree protection zone (TPZ), there shall be no disturbance to soil or any part of the tree, above or below ground during construction.

(1) The minimum standards for tree protection shall be those outlined in the city's Arboricultural Specifications Manual (Tree Preservation section) or other applicable standards adopted by the city for the protection of trees against construction activities.

(2) At the discretion of the Public Works Director or official staff designee(s), the required TPZ may be expanded in area as deemed necessary to protect the root system and canopy.

1228.09 Performance standards.

(a) In meeting the minimum requirements of this chapter, all landscape plans shall comply with the performance standards of this section, including any standards referenced therein. Furthermore, all street trees required under the city's Land Subdivision Code shall be subject to the same standards, unless specifically exempted or otherwise indicated herein.

(b) Landscaping shall not hinder the vision of motorists and pedestrians where unobstructed visibility is reasonably necessary for safe movement while entering, leaving or moving within the developed site or adjacent property.

(c) Landscaping materials shall be selected and placed in such a manner that they do not interfere, obstruct or damage existing utilities.

(d) Landscaping materials shall be selected and placed so that the safe use of surrounding properties is not inhibited.

(e) Landscaping shall be selected and placed with consideration for the ultimate growth that will be achieved over time.

(f) Landscaping with thorns, berries, and other potentially harmful plant characteristics shall be carefully placed to avoid possible harm to persons and property on and off the developed site.

(g) Trees shall be maintained so as to prevent limb breakage that has significant and apparent potential for causing harm to property or life.

(h) No tree larger than a small shade tree shall be planted in locations where overhead utilities or other overhead conflicts exist. This shall be an allowable substitution in cases where a larger tree class would otherwise be required, which shall not be construed as non-compliance.

(i) Invasive species shall not be used to satisfy the requirements of this chapter. This shall apply to any species considered invasive by the Public Works Director or official staff designee(s); or listed as invasive in any document or policy adopted by Ordinance of the City of Edwardsville.

(j) All zoning lots developed for a use other than single-family residential shall be provided a mechanical in-ground irrigation system within yard areas planted with turf grass.

1228.10 Plant selection and landscaping materials.

(a) *Plant selection:* All plant materials shall be capable of withstanding the extremes of individual site microclimates. Selected plants and trees shall be suitable for planting in Edwardsville per the current US Department of Agriculture Hardiness Zone Map. At the time of this writing, Edwardsville is in Hardiness Zone 7a, per the 2023 USDA map.

(b) *Prohibited trees and shrubs:* The trees and shrubs listed below shall be prohibited for use in meeting any of the requirements of this chapter, and subject to any noted provisions.

	SCIENTIFIC NAME	COMMON NAME
(1)	Ailanthus altissima	Tree-of-heaven
(2)	Elaeagnus angustifolia	Russian olive
(3)	Elaeagnus umbellate	Autumn olive
(4)	Euonymus spp.	Only invasive species are prohibited.
(5)	Fraxinus spp.*	Ash trees that are not pest/disease resistant are prohibited.
(6)	Lonicera spp.	Honeysuckle (all species)
(7)	Morus spp.	Mulberry trees (all species)
(8)	Paulownia tomentosa	Empress (Princess) tree
(9)	Prunus cerasifera	Purpleleaf plum
(10)	Pyrus calleryana	Callery (Bradford) pear
(11)	Ulmus spp.	Elm trees that are not pest/disease resistant are prohibited.

(12) Any unlisted plant species identified as invasive by the Public Works Director or official staff designee(s); or listed as invasive or prohibited in any document or policy adopted by Ordinance of the City of Edwardsville.

1228.11 Landscape maintenance.

(a) *Responsibility:* The owner of the premises shall be responsible for the watering, maintenance, repair, and replacement of all landscaping, fences and other visual barriers including refuse disposal area screens which have died (in the case of plant material) or fallen into disrepair (in the case of fences and screens).

(b) *Plant materials:* All required plant materials shall be installed in compliance with the approved landscape plan and maintained in a healthy, vigorous growing condition. They shall be replaced as necessary, and shall be kept free of refuse and debris.

(c) *Fences and walls:* All fences, walls and other barriers shall be maintained in good repair, meaning structurally sound and attractive in appearance. All fences, required or otherwise, shall be subject to the requirements of Section 1248.02.2 –Fences, walls, hedges.

1228.12 Landscape Plan Compliance Review.

(a) Any person aggrieved by any decision or order of the Public Works Director or official staff designee(s) in any matter related to the interpretation or enforcement of any provision of this chapter may submit such an

appeal in writing to the zoning board as provided in Chapter 1244.02.1. Said board may uphold, reverse or amend the denial and the board's decision shall be final within the purview of this chapter.

1228.13 Zoning variances, special use permits and planned unit developments.

(a) Persons having petitioned the appropriate body of the city for a variance from building or zoning codes, a special use permit or planned unit development authorization shall include with such petition a written explanation thoroughly summarizing the net difference the petition, if approved, will have on landscaping obligations described herein.

(b) Nothing herein is intended to negate, reduce or replace additional requirements set forth in the land development chapter or the codified ordinances of the city.

1228.14 Minor adjustments to previously approved landscape plan.

(a) If a petitioner desires to adjust a plan after it has been approved, proposed changes must be submitted in writing to the Public Works Director or official staff designee(s).

(b) The Public Works Director or official staff designee(s) shall have the authority to approve the proposed amendment and determine whether a suitable substitution to the originally approved plant materials has been provided.

1228.15 Compliance Review of Landscaping Improvements.

(a) Compliance with the terms and conditions of this chapter is required prior to the issuance of an occupancy permit. However, temporary or conditional occupancy permits may be issued to developers, upon written request, at the discretion of the Public Works Director or official staff designee(s) for the following reasons:

(1) When developments or projects subject to city building permit requirements are otherwise completed outside of the recommended planting season for the trees or shrubs/grasses included in the approved landscape plan, and/or

(2) When developments or projects subject to building permit requirements have been or will likely be adversely affected by unreasonable weather conditions, or

(3) When other conditions beyond the control of the developer have been substantiated as adversely affecting completion of landscaping requirements; however,

(4) Temporary or conditional occupancy permits may be provided for a period not longer than ninety (90) days from the date of eligibilityand may be renewed or extended at 90-day intervals but shall not exceed a combined total of one year.

(b) Any person in violation of this provision shall be considered in violation of the city’s adopted building and zoning codes.

1228.16 Penalty.

Noncompliance with maintenance standards: A property owner or developer, notified by the Public Works Director or official staff designee(s), and determined as in violation of the provisions of this chapter shall be granted a reasonable time period, subject to the course of action established by the Public Works Director or official staff designee(s), within which to establish or reestablish compliance. If said violation is not corrected within the given period of time, the property owner shall be subject to a fine as set forth in section 1-10 of the municipal code.

1228.17 Definitions.

(a) The meaning of words, terms and phrases that are defined in Section 1228.19(d) below shall be used in interpreting, administering and enforcing this chapter.

(b) Any undefined words, terms, and phrases used in this chapter shall have the same meaning commonly used in the other relevant official documents of the City of Edwardsville.

(c) In the event conflicting definitions are found, the Edwardsville Arboricultural Specifications Manual shall supersede when defining words, terms, or phrases used in the context of tree/shrub biology, taxonomy, planting practices, and technical specifications. Otherwise, the Public Works Director or official staff designee(s) shall determine the definition to be used, based on the context surrounding the specific use of the word, term, or phrase in question and the specific circumstances of the case under review.

(d) Definitions.

Caliper measurement: The measure of a tree's diameter made at 6 inches above the ground line if less than or equal to 4 inches; or at 12 inches above the ground line if greater than 4 inches.

Canopy: The branches and foliage that make up a tree or shrub's crown.

Coverage: The area of land surface covered by a tree or shrub's canopy as seen from above (plan view).

Evergreen tree (large): A non-invasive evergreen tree species with a mature height of 30 feet or taller.

Evergreen tree (small): A non-invasive evergreen tree species with a mature height of less than 30 feet.

Installation: The act of planting a tree or shrub.

Invasive: A species that is out of its original biological community. Its introduction into an area causes or is likely to cause economic or environmental harm, or harm to human health. An invasive species has the ability to thrive and spread aggressively outside its natural range. An invasive species that colonizes a new area may gain an ecological edge since the insects, diseases, and foraging animals that naturally keep its growth in check in its native range are not present in its new habitat.

Monoculture: A population dominated by one single species or very few species.

Native: A plant species, including varieties/cultivars, which grows native in the State of Illinois or the Midwest.

Shade tree (large): Any species of deciduous tree, including varieties/cultivars, with a mature height of 50 feet or more.

Shade tree (medium): Any species of deciduous tree, including varieties/cultivars, with a mature height between 30 and 50 feet.

Shade tree (small): Any species of deciduous tree, including varieties/cultivars, with a mature height of 30 feet or less.

Shrubs/Grasses: Non-invasive woody deciduous or evergreen perennial plants with multiple stems branching from near the base. An grass species with deep fibrous roots with fine, medium or coarse blades. Shrubs and grasses are low-growing and frequently maintained at a height between 2 and 8 feet.

Street tree: A tree found in the right-of-way of a street or road.

Yard: The open spaces between a building or structure and the lot line. For the purposes of calculation landscaping area, the yard area shall be considered as starting ten (10) feet from the perimeter of the parking lot. The area within the ten (10) feet shall count towards the parking lot landscaping requirements.

DATE: February 12, 2026

ACTION ITEM TITLE: Ordinance Certifying the Official Zoning Map of the City of Edwardsville, Madison County, Illinois

ORIGIN: Public Works

SUMMARY:
The City is required by State Statute for the Official Zoning Map to be adopted and published annually. Section 1246.02(b) of the Codified Ordinances indicates that the Official Zoning Map shall be identified by the signature of the Mayor and attested by the City Clerk and bear the seal of the City and the date of adoption of the map.

RATIONALE:
The map is updated annually to reflect amendments and actions approved by Council throughout the preceding year.

COMPLIANCE WITH COMPREHENSIVE PLAN OR OTHER PLAN:
Complies with Codified Ordinances and State Statute

SUGGESTED COUNCIL ACTION:
Approval

ORDINANCE NO. _____

ORDINANCE CERTIFYING THE OFFICAL ZONING MAP OF THE CITY OF EDWARDSVILLE, MADISON COUNTY, ILLINOIS

WHEREAS, the zoning map is updated to incorporate and reflect the changes made to the map through amendments and actions approved by council during the preceding year; and

WHEREAS, the city is required by state statute to cause the official zoning map to be adopted and published; and

WHEREAS, Section 1246.02(b) of the codified ordinance of the City of Edwardsville stipulates the official zoning map shall be identified by the signature of the mayor and attested by the city clerk, and bearing the seal of the city along with the date of adoption;

WHEREAS, the Administrative and Community Services Committee of the City of Edwardsville did on February 26, 2026, after review and discussion, by a vote of ___ ayes and ____ nays, recommend approval of the proposed text amendment; and,

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EDWARDSVILLE, Madison County, Illinois as follows:

SECTION 1. RECITALS. The facts and statements contained in the preamble to this Ordinance are found to be true and correct and are hereby adopted as part of this Ordinance.

SECTION 2. APPROVAL AND ADOPTION. The 2026 Zoning Map as shown in Exhibit A is hereby approved and adopted by the Corporate Authorities as the Official Zoning Map of the City of Edwardsville.

SECTION 3. CONFLICT. Any ordinance in conflict with this amendment is hereby repealed.

SECTION 4. SEVERABILITY. Each section and each part of each section of this Codified Ordinance is hereby declared to be an independent section or part of a section, and if any such section or part of a section, or any provision thereof is held to be invalid, the remaining sections or parts of sections shall not be affected thereby.

SECTION 5. EFFECTIVE DATE. This Ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

ADOPTED THIS ____ DAY OF _____, 2026, pursuant to a roll call vote as follows:

Ayes:
Nays:
Absent:
Abstentions:

APPROVED by me this ____ day of _____, 2026

_____
Art Risavy, Mayor
City of Edwardsville

Attest:

_____
Michelle Boyer, City Clerk
City of Edwardsville

City of Edwardsville
Third Oldest City in Illinois

Official Zoning Map

2026

Zoning Districts

- B-1A Central Main Street
- B-1B Mid-Downtown
- B-1C Downtown Transition
- MU-1 Downtown Mixed Use
- B-2 Commercial / Business
- R-1 Single Family Residential
- R-2 Multiple Family Residential
- M-1 Light Manufacturing
- C Conservation
- Pin Oak Commercial
- Goshen Commercial
- Goshen Center
- Goshen Mixed Use
- Residential (I-55)
- IP Institutional & Public Service
- Planned Unit Development
- Parks / Recreation
- MCT Trails
- Parcels
- Lakes
- Interstate
- Arterial Street
- Collector Street
- Local Street

N

This is to certify that this is the Official Zoning Map referred to in Section 1246.02 in the codified ordinances of the City of Edwardsville, Illinois.

Adopted this 3rd day of March, 2026

Art Risavy, Mayor

Michelle Boyer, City Clerk

0 0.5 1 Miles

Department of Public Works GIS - 3/3/2026

DATE: February 23, 2026

ACTION ITEM TITLE: Approval of a Sole Source Resolution for the Purchase and Installation of a Storefront at 246 North Main Street

ORIGIN: Public Works Department

SUMMARY:

This item is to approve a Sole source resolution for the purchase and installation of a new storefront for 246 North Main Street.

RATIONALE:

This work will include the purchase and installation of a new aluminum and glass storefront to replace the existing brick-filled storefront at 246 North Main Street. The new storefront will also include an accessible entry door for the space.

This work is proposed to be funded through the 2026-2027 budget line 2801990-6550.

COMPLIANCE WITH COMPREHENSIVE PLAN OR OTHER PLAN:
Not Applicable

SUGGESTED COUNCIL ACTION:
Approval

SOLE SOURCE RESOLUTION
TO SLAYDEN GLASS, INC. FOR THE PURCHASE AND INSTALLATION OF A STOREFRONT AT 246 NORTH MAIN STREET

WHEREAS, the City of Edwardsville recently acquired the property at 246 North Main Street and has started the process of repairs and rehabilitation; and

WHEREAS, the City desires to restore the glass storefront of the building to provide a functional, attractive, and compatible storefront for the Downtown area; and

WHEREAS, Slayden Glass, Inc. has provided a proposal to furnish and install the storefront at the cost of $52,793.00 which the Department of Public Works has evaluated and determined is a fair and reasonable cost, and

WHEREAS, the City Code, Section 2-591, Bid Purchasing Regulation, (d) Exemption from the Bidding Process; provides for the award of single source contracts for services without competitive bidding if such exemption is authorized by two-thirds of all the Aldermen then holding office.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF EDWARDSVILLE that:

The City of Edwardsville City Council has reviewed and hereby approves by two-thirds majority vote the purchase and installation of a storefront at 246 North Main Street from Slayden Glass, Inc. in the amount of $52,793.00.

THIS RESOLUTION PASSED BY THE CITY COUNCIL OF THE CITY OF EDWARDSVILLE, MADISON COUNTY, ILLINOIS, AND APPROVED BY THE MAYOR OF SAID CITY THIS _____ DAY OF _____, 2026.

_____
Art Risavy, Mayor

ATTEST:

_____
Michelle Boyer, City Clerk
Ayes:
Nays:
Absent:

RESOLUTION NO. _____

INDUCEMENT RESOLUTION TO UNIVERSITY PARK PLAZA, LLC FOR DEVELOPMENT OF PROPERTY LOCATED IN THE CITY OF EDWARDSVILLE, ILLINOIS

WHEREAS, University Park Plaza, LLC (the "Developer") desires to develop a blighted area for commercial land use specifically for the development of a mixed-use project entailing a hotel and other commercial businesses (the "Project") located at the property described in the attached **Exhibit A**; and,

WHEREAS, University Park Plaza, LLC (the "Developer") can develop the Project and plans to invest a minimum of $5,530,000 in property acquisition, infrastructure, utilities, and roadway improvements at the Property;

WHEREAS, the City and the Developer may consider a redevelopment agreement contemplating the Developer's redevelopment of the Property for the Project and the Developer's ability to receive assistance through the implementation of a Business District and other relief;

WHEREAS, the City hereby finds and determines that the creation of a Business District to assist the Developer with the Project may serve the public purposes of the City and could be in the best interests of the City;

WHEREAS, before the Business District is implemented, the City wishes to encourage the Developer to begin certain infrastructure and land development improvements on the Project and make sure other expenditures as are reasonably necessary in that regard for the Project with confidence that said expenditures will be reimbursed under the Business District if established;

WHEREAS, the City will use its best efforts and act in a timely manner along with the Developer to establish the Business District pursuant to the Business District Development and Redevelopment Law, 65 ILCS 5/11-74.3-1 *et. seq.*;

WHEREAS, the City will reimburse the Developer through cost reimbursements within the Business District as will be further contemplated and provided for in the parties redevelopment agreement that the City will its best efforts and act in a timely manner to enter into with the Developer for this Project;

NOW, THEREFORE, BE IT RESOLVED by the City of Edwardsville, Illinois, that the City Council believes that it is in the best interests of the City for the redevelopment of this Property for the Project and that the City will utilize its best efforts to implement the Business District for further financial assistance in the development of the Project, provided that this resolution is not a guarantee that any expenditures will be reimbursed but rather an expression of the sense of the City at this time.

PASSED BY THE CITY COUNCIL OF THE CITY OF EDWARDSVILLE, ILLINOIS, this

_____ day of _____, 2026, pursuant to a roll call vote as follows:

AYES:

NAYS:

ABSTENTION:

ABSENT:

APPROVED BY THE MAYOR OF THE CITY OF EDWARDSVILLE, ILLINOIS this _____ day of _____, 2026.

BY: _____

Art Risavy, Mayor

ATTESTED:

Filed in my Office the _____ day of _____, 2026.

BY: _____

Michellle A. Boyer, City Clerk

City of Edwardsville
Third Oldest City in Illinois

February 24, 2026

Honorable Mayor Risavy
And City Council
City of Edwardsville
118 Hillsboro Avenue
Edwardsville, IL 62025

Re: Case 2026-03 Resolution for a Special Use Permit for 5710 Inner Park Drive (PID 18-1-14-25-00-000-002.006)

Dear Mayor and Council:

Your Zoning Board of Appeals transmits for your consideration its recommendation on a Special Use Permit to allow for a rooftop solar energy system. The property is currently zoned "M-1" Light Manufacturing District.

After due notice as required by law, the Zoning Board of Appeals held a public hearing on February 23, 2026 at City Hall, 118 Hillsboro Avenue, Edwardsville, Illinois. The Zoning Board of Appeals recommended approval of the Special Use Permit based on the following findings of fact:

1. Existing use(s) and zoning of the property in question.

The subject property is zoned "M-1" Light Manufacturing District. The adjoining properties are zoned and used as follows:

Direction	Zoning Designation	Use
North	"M-1" Light Manufacturing District	Industrial
South	Village of Pontoon Beach	Industrial
East	"M-1" Light Manufacturing District	Industrial
West	Village of Pontoon Beach	Industrial

2. Extent to which property values diminishes adjacent to the zoned parcels. Value decrease to be supplied by the petitioner and made by professional appraiser.

Property values were not provided by the petitioner. However, the petitioner did state in their application that solar energy systems on commercial buildings increases their appraised values due to increased net operating income, reduced energy costs, and marketing advantages.

3. Extent to which the proposed change alters or promotes the public health, safety, morals or general welfare.

   The proposed rooftop solar energy system would neither alter nor promote the public health, safety, morals, or general welfare of the community. The construction phase of the project may create minor disruptions, but nothing that is unexpected with construction. Once finished, the rooftop solar would be out of view of the public, create little to no noise, and require only periodic maintenance and would provide solar energy to the electrical grid.

4. The relative gain to the public as compared to the hardship imposed upon the property owners, and there is a need for the proposed special use.

   The proposed rooftop solar energy system will provide relative gain to the public through cost savings and grid stability. As a community solar energy system, the power generated would create cost savings for off-takers of the project in the City of Edwardsville and Madison County. Additionally, the project would create grid stability as the applicant would be responsible for all grid upgrades and payments toward Ameren Illinois' infrastructure.

5. The suitability of the subject property for the zoned purposes indicated by ordinance.

   The property is suitable for the Permitted Uses listed in the "M-1" Light Manufacturing District. The proposed solar energy system would not affect the subject property's current zoning designation. Currently, the rooftop solar is permitted by right if it is used to reduce the property's on-site consumption. The difference between rooftop solar for on-site consumption and solar for community solar is more or less indistinguishable and makes sense to place the solar energy system on an existing structure as opposed to a vacant piece of property.

After considering the finding of fact, the Zoning Board of Appeals recommended approval subject to any reasonable conditions of approval put forth by the Zoning Board of Appeals and City Council, by a vote of 4 ayes, 0 nays and 1 abstain.

Respectfully submitted,

Bob Hotz

Bob Hotz
Chairman
Zoning Board of Appeals

EDWARDSVILLE ZONING BOARD OF APPEALS
Meeting Minutes
09/22/2025
7:00 PM

Approved: Robert Hotz 2/23/2026

I. ROLL CALL:

Present	Absent
B. Hotz, Chairman	L. McOlgan
A. Robertson, Vice Chair	
D. Gerber	
D. Seay	
T. Dalla Riva	
E. Williams	
R. Zwijack	
B. Buncher, Staff	
E. Sutter, Staff	
K. Prott	
J. Falcone	
S. Morrison	
E. Bratzler	
J. Harper	

II. PUBLIC COMMENT:

None.

III. APPROVAL OF MINUTES

Motion made by David Gerber and seconded by Ann Robertson to approve the minutes of the regular meeting for August 25, 2025.

IV. ZONING CASES

A. Case 2025-30 – Variance

Plaid Coffee Roasters petitioned the City of Edwardsville to request a Variance in order to construct an off-street parking lot 3 feet from the west property line instead of the required 5 feet in am "MU-1" Downtown Mixed Use District located at 461 East Vandalia. The property is more specifically identified as PID 14-2-15-11-12-202-038 and 14-2-15-11-12-202-037

Staff presented their report as outlined in the Zoning Administrator's Report.

ZONING BOARD OF APPEALS STANDARDS FOR VARIANCE:

1. **The particular physical surroundings, shape or topographical condition of the specific property involved would result in a particular hardship upon the owner, as distinguished from a mere inconvenience or loss of revenue, if the strict letter of the regulations were carried out.**

   Off-street parking lots are required to be setback five feet from property lines. There are no particular concerns about the physical surroundings, lot shape, or topographical conditions with this property. City Ordinances and IDOT Regulations require the property owners to have a 24' access ways for bi-directional traffic. The applicant has stated in their application that due to the

existing location of the building and the required 24' access way and the required parking stall dimensions only allows for the parking lot to be 3' from the property line instead of 5' for bi-directional traffic.

2. **The condition upon which the requested variance is based would not be applicable, generally to other property within the same zoning classification.**

   This is not an unusual commercial lot and off-parking lots located in the nearby corridor appear to be built to the property line or close to the property line. Therefore, the proposed off-street parking lot dimension would meet the character of the surrounding commercial properties.

3. **The alleged difficulty or hardship has not been created by any person presently having an interest in the property.**

   No one having an interest in the property has created the specific conditions for which the variance is requested.

4. **The granting of the variance will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located.**

   Approving the variance would not be detrimental to other properties or improvements in the neighborhood.

5. **The proposed variance will not impair an adequate supply of light and air to adjacent property, or substantially increase congestion in the public streets, or increase the danger of fire, or endanger the public safety, or substantially diminish or impair property values within the neighborhood.**

   Approval of the proposed variance would not do any of these things.

6. **The proposed variance complies with the spirit and intent of the restrictions imposed by this code.**

   The variance request does comply with the spirit and intent of the restrictions imposed by this code.

7. **There is no self-imposed hardship.**

   This request could be considered a self-imposed hardship because the applicant was aware of the size and configuration of the structure on the lot at the time the property was acquired.

David Gerber asked if a transitional buffer yard was required. Breana Buncher stated that it was, but they met the requirement to waive it. There will be a fence in between the parking lot and the house next door. The board asked about a few adjoining addresses and their zoning. Breana stated that the north lot is zoned "R-1" and a duplex, the east lot is zoned "M-1". Bob Hotz asked if there was a benefit to changing the line on the parking lot to meet the distance requirement in the back, but not the front. Ryan Zwijack stated that he also had the same idea to skew it away. Bob stated that it would bring it back into compliance. He stated that it appears the building is a significant distance away from the property line. Eric Bratzler was present and stated that screening and the fence will be in compliance. There is also a possibility to skew the line, but they need to meet landscaping requirements.

S.J. Morrison was present and spoke in favor of the proposed variance. He stated that this is the type of request the Variance process is for. There is minor impact, but the opportunity to gain another small business in town. He is excited to see new life brought back to the building, along with honoring its history.

David Gerber asked about phase two and whether or not the parking requirements are met at this time. Eric Bratzler stated that phase two is for potential seating in the future. David stated that a lot of other businesses in the area also have rock parking lots. He believes that houses around this business could potentially transition into something else. The owners of the house next door were not present, and no opposition letters were received. With the screening requirements and the fence, headlights will not be a problem for adjoining neighbors.

STAFF DISCUSSION & RECCOMENDATION:

Approval of the variance would allow for needed off-street parking lot improvements, such as curb and gutter, and repaved parking areas as well as off-street parking screening via sight-proof fence. The off-street parking lot would still have a 2' setback off the property line.

Staff recommends approval of the proposed variance.

MOTION: Miss Robertson made a motion to approve the Variance request and seconded by Mr. Gerber.

VOICE ROLL CALL: 5 Ayes, 0 Nay, 0 Abstain

V. OLD BUSINESS:

VI. NEW BUSINESS:

VII. ADJOURNMENT: Motion to adjourn by Mr. Gerber, seconded by Mr. Seay.

HISTORIC PRESERVATION COMMISSION
January 14, 2026
7:00 PM
MINUTES

Approved: Barbara Stamer

Date: 2/11/2026

The regularly scheduled meeting of the Historic Preservation Commission was held at 7:00 p.m. at City Hall located at 118 Hillsboro Avenue in Edwardsville, Illinois.

1. **Call to Order**
   The meeting was called to order by Chair Barb Stamer at 7:05 PM
2. **Roll Call**
   Members Present: Barb Stamer, Chair, Lisa Schroeder, Vice Chair, Mary Westerhold, Secretary, Joe Hutton, Suzanne Oberholtzer, Kent Weber, Christy Jennings, Kathryn Biarkis, Associate, and Breana Buncher, City Planner
3. **Approval of minutes**
   Kent Weber motioned to approve the minutes of the December 10, 2025 meeting as presented. Joe Hutton seconded. Minutes approved.
4. **Citizens Wishing to Address the Commission**
   Karen Brostron from the firm Lashly and Baer inquired about placing the name of the firm on the awning of the 122 N. Main which the firm will be occupying. The previous business had their name on the awning. However, this is no longer permitted and discussion followed to clarify the options.
   Chad Morris inquired about window replacements on the Nelson Campus. Discussion followed to clarify the options.
5. **Certificates of Appropriateness**
   a. **1239 Lindenwood Avenue - Addition – Richard Fore, owner–** Joe Hutton motioned to open for discussion and Lisa Schroeder seconded. After discussion, Joe Hutton motioned to approve as described with the notation that the roof line extends the current roof plane. Lisa Schroeder seconded. Motion approved.

   b. **331 North Buchanan Street – Chimney removal, fascia, trim, soffit, gutters. and downspouts – Patrick and Suzanne Cavreaux, owners --** Lisa Schroeder motioned to open for discussion and Kent Weber seconded. After discussion, Kent Weber motioned to deny the removal of the chimney and approve the remainder as described. Joe Hutton seconded. Motion approved.

   c. **750 Hale Avenue – Siding – Quinten Thornton, Cardinal Catastrophe Services, Inc. -** Joe Hutton motioned to open for discussion and Lisa Schroeder seconded. This COA was originally presented at the June 11, 2025 meeting. After discussion, Joe Hutton motioned to concur with the previous decision of painting of the original wood siding and repair as needed. Suzanne Oberholtzer seconded. Motion approved.
6. **Old Business**
   a. **Grandview Subdivision**
   b. **Grant/Goshen Commons**