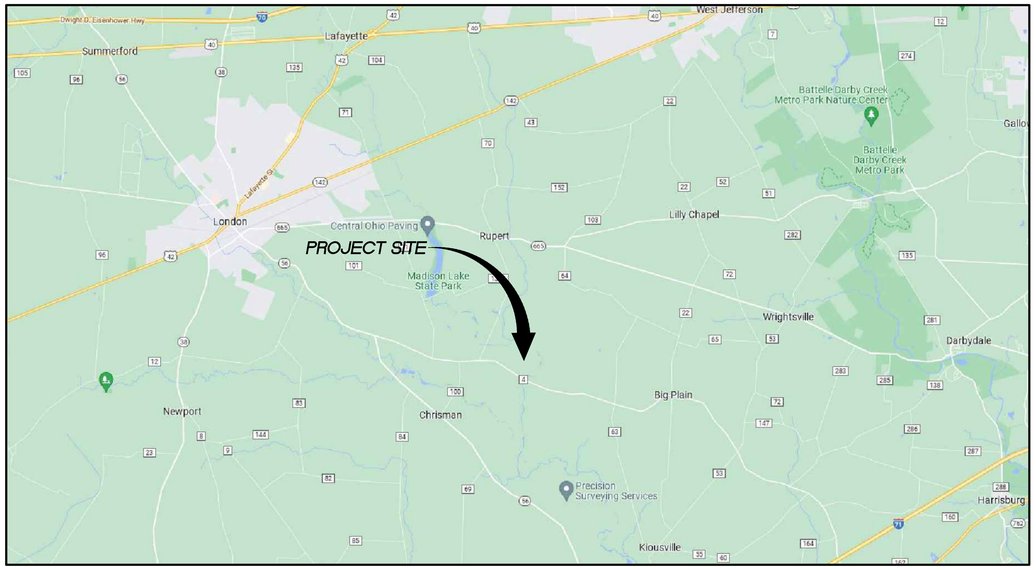
BIG PLAIN

196 MWAC SINGLE-AXIS TRACKER PHOTOVOLTAIC ARRAYS

MADISON COUNTY, OH



VICINITY MAP
SCALE: NTS



SITE PLAN
SCALE: 1" = 1500'-0"

DRAWING LIST

CS-1	COVER SHEET
G-100	PHOTOVOLTAIC ARRAY SITE PLAN
E-1.0	GENERAL ELECTRICAL SYMBOLS, NOTES AND ABBREVIATIONS
E-2.0.1	MV ONE-LINE DIAGRAM, CIRCUITS 1, 2
E-2.0.2	MV ONE-LINE DIAGRAM, CIRCUITS 3, 4, 5
E-2.1	PV BLOCK AC/DC SYSTEM SCHEMATIC
E-2.2	BLOCK ARRAY CONFIGURATION
E-2.3	WIRING DIAGRAM
E-3.0	PHOTOVOLTAIC ARRAY ELECTRICAL SITE PLAN
E-3.0.G	FENCE GROUNDING PLAN
E-3.1A.1	BLOCK 1A.1 ELECTRICAL ARRANGEMENT
E-3.1A.2	BLOCK 1A.2 ELECTRICAL ARRANGEMENT
E-3.1A.3	BLOCK 1A.3 ELECTRICAL ARRANGEMENT
E-3.1A.4	BLOCK 1A.4 ELECTRICAL ARRANGEMENT
E-3.1A.5	BLOCK 1A.5 ELECTRICAL ARRANGEMENT
E-3.1A.6	BLOCK 1A.6 ELECTRICAL ARRANGEMENT
E-3.1B.1	BLOCK 1B.1 ELECTRICAL ARRANGEMENT
E-3.1B.2	BLOCK 1B.2 ELECTRICAL ARRANGEMENT
E-3.1B.3	BLOCK 1B.3 ELECTRICAL ARRANGEMENT
E-3.1B.4	BLOCK 1B.4 ELECTRICAL ARRANGEMENT
E-3.1B.5	BLOCK 1B.5 ELECTRICAL ARRANGEMENT
E-3.1B.6	BLOCK 1B.6 ELECTRICAL ARRANGEMENT
E-3.2A.1	BLOCK 2A.1 ELECTRICAL ARRANGEMENT
E-3.2A.2	BLOCK 2A.2 ELECTRICAL ARRANGEMENT
E-3.2A.3	BLOCK 2A.3 ELECTRICAL ARRANGEMENT
E-3.2A.4	BLOCK 2A.4 ELECTRICAL ARRANGEMENT
E-3.2A.5	BLOCK 2A.5 ELECTRICAL ARRANGEMENT
E-3.2A.6	BLOCK 2A.6 ELECTRICAL ARRANGEMENT
E-3.2B.1	BLOCK 2B.1 ELECTRICAL ARRANGEMENT
E-3.2B.2	BLOCK 2B.2 ELECTRICAL ARRANGEMENT
E-3.2B.3	BLOCK 2B.3 ELECTRICAL ARRANGEMENT
E-3.2B.4	BLOCK 2B.4 ELECTRICAL ARRANGEMENT
E-3.2B.5	BLOCK 2B.5 ELECTRICAL ARRANGEMENT
E-3.2B.6	BLOCK 2B.6 ELECTRICAL ARRANGEMENT
E-3.3A.1	BLOCK 3A.1 ELECTRICAL ARRANGEMENT
E-3.3A.2	BLOCK 3A.2 ELECTRICAL ARRANGEMENT
E-3.3A.3	BLOCK 3A.3 ELECTRICAL ARRANGEMENT
E-3.3A.4	BLOCK 3A.4 ELECTRICAL ARRANGEMENT
E-3.3A.5	BLOCK 3A.5 ELECTRICAL ARRANGEMENT
E-3.3A.6	BLOCK 3A.6 ELECTRICAL ARRANGEMENT
E-3.3B.1	BLOCK 3B.1 ELECTRICAL ARRANGEMENT
E-3.3B.2	BLOCK 3B.2 ELECTRICAL ARRANGEMENT
E-3.3B.3	BLOCK 3B.3 ELECTRICAL ARRANGEMENT
E-3.3B.4	BLOCK 3B.4 ELECTRICAL ARRANGEMENT
E-3.3B.5	BLOCK 3B.5 ELECTRICAL ARRANGEMENT
E-3.3B.6	BLOCK 3B.6 ELECTRICAL ARRANGEMENT
E-3.4A.1	BLOCK 4A.1 ELECTRICAL ARRANGEMENT
E-3.4A.2	BLOCK 4A.2 ELECTRICAL ARRANGEMENT
E-3.4A.3	BLOCK 4A.3 ELECTRICAL ARRANGEMENT
E-3.4A.4	BLOCK 4A.4 ELECTRICAL ARRANGEMENT
E-3.4A.5	BLOCK 4A.5 ELECTRICAL ARRANGEMENT
E-3.4A.6	BLOCK 4A.6 ELECTRICAL ARRANGEMENT
E-3.4B.1	BLOCK 4B.1 ELECTRICAL ARRANGEMENT
E-3.4B.2	BLOCK 4B.2 ELECTRICAL ARRANGEMENT
E-3.4B.3	BLOCK 4B.3 ELECTRICAL ARRANGEMENT
E-3.4B.4	BLOCK 4B.4 ELECTRICAL ARRANGEMENT
E-3.4B.5	BLOCK 4B.5 ELECTRICAL ARRANGEMENT
E-3.4B.6	BLOCK 4B.6 ELECTRICAL ARRANGEMENT
E-3.5A.1	BLOCK 5A.1 ELECTRICAL ARRANGEMENT
E-3.5A.2	BLOCK 5A.2 ELECTRICAL ARRANGEMENT
E-3.5A.3	BLOCK 5A.3 ELECTRICAL ARRANGEMENT
E-3.5A.4	BLOCK 5A.4 ELECTRICAL ARRANGEMENT
E-3.5A.5	BLOCK 5A.5 ELECTRICAL ARRANGEMENT
E-3.5A.6	BLOCK 5A.6 ELECTRICAL ARRANGEMENT
E-3.5B.1	BLOCK 5B.1 ELECTRICAL ARRANGEMENT
E-3.5B.2	BLOCK 5B.2 ELECTRICAL ARRANGEMENT
E-3.5B.3	BLOCK 5B.3 ELECTRICAL ARRANGEMENT
E-3.5B.4	BLOCK 5B.4 ELECTRICAL ARRANGEMENT
E-3.5B.5	BLOCK 5B.5 ELECTRICAL ARRANGEMENT
E-3.5B.6	BLOCK 5B.6 ELECTRICAL ARRANGEMENT
E-4.1A.1	BLOCK 1A.1 INVERTER 1A.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.1A.2	BLOCK 1A.2 INVERTER 1A.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.1A.3	BLOCK 1A.3 INVERTER 1A.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.1A.4	BLOCK 1A.4 INVERTER 1A.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.1A.5	BLOCK 1A.5 INVERTER 1A.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.1A.6	BLOCK 1A.6 INVERTER 1A.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.1B.1	BLOCK 1B.1 INVERTER 1B.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.1B.2	BLOCK 1B.2 INVERTER 1B.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.1B.3	BLOCK 1B.3 INVERTER 1B.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.1B.4	BLOCK 1B.4 INVERTER 1B.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.1B.5	BLOCK 1B.5 INVERTER 1B.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.1B.6	BLOCK 1B.6 INVERTER 1B.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.2A.1	BLOCK 2A.1 INVERTER 2A.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.2A.2	BLOCK 2A.2 INVERTER 2A.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.2A.3	BLOCK 2A.3 INVERTER 2A.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.2A.4	BLOCK 2A.4 INVERTER 2A.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.2A.5	BLOCK 2A.5 INVERTER 2A.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.2A.6	BLOCK 2A.6 INVERTER 2A.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.2B.1	BLOCK 2B.1 INVERTER 2B.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.2B.2	BLOCK 2B.2 INVERTER 2B.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.2B.3	BLOCK 2B.3 INVERTER 2B.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.2B.4	BLOCK 2B.4 INVERTER 2B.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.2B.5	BLOCK 2B.5 INVERTER 2B.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.2B.6	BLOCK 2B.6 INVERTER 2B.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.3A.1	BLOCK 3A.1 INVERTER 3A.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.3A.2	BLOCK 3A.2 INVERTER 3A.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.3A.3	BLOCK 3A.3 INVERTER 3A.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.3A.4	BLOCK 3A.4 INVERTER 3A.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.3A.5	BLOCK 3A.5 INVERTER 3A.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.3A.6	BLOCK 3A.6 INVERTER 3A.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.3B.1	BLOCK 3B.1 INVERTER 3B.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.3B.2	BLOCK 3B.2 INVERTER 3B.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.3B.3	BLOCK 3B.3 INVERTER 3B.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.3B.4	BLOCK 3B.4 INVERTER 3B.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.3B.5	BLOCK 3B.5 INVERTER 3B.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.3B.6	BLOCK 3B.6 INVERTER 3B.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.4A.1	BLOCK 4A.1 INVERTER 4A.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.4A.2	BLOCK 4A.2 INVERTER 4A.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.4A.3	BLOCK 4A.3 INVERTER 4A.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.4A.4	BLOCK 4A.4 INVERTER 4A.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.4A.5	BLOCK 4A.5 INVERTER 4A.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.4A.6	BLOCK 4A.6 INVERTER 4A.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.4B.1	BLOCK 4B.1 INVERTER 4B.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.4B.2	BLOCK 4B.2 INVERTER 4B.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.4B.3	BLOCK 4B.3 INVERTER 4B.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.4B.4	BLOCK 4B.4 INVERTER 4B.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.4B.5	BLOCK 4B.5 INVERTER 4B.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.4B.6	BLOCK 4B.6 INVERTER 4B.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.5A.1	BLOCK 5A.1 INVERTER 5A.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.5A.2	BLOCK 5A.2 INVERTER 5A.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.5A.3	BLOCK 5A.3 INVERTER 5A.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.5A.4	BLOCK 5A.4 INVERTER 5A.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.5A.5	BLOCK 5A.5 INVERTER 5A.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.5A.6	BLOCK 5A.6 INVERTER 5A.6.1 DC WIRE & CONDUIT SCHEDULE
E-4.5B.1	BLOCK 5B.1 INVERTER 5B.1.1 DC WIRE & CONDUIT SCHEDULE
E-4.5B.2	BLOCK 5B.2 INVERTER 5B.2.1 DC WIRE & CONDUIT SCHEDULE
E-4.5B.3	BLOCK 5B.3 INVERTER 5B.3.1 DC WIRE & CONDUIT SCHEDULE
E-4.5B.4	BLOCK 5B.4 INVERTER 5B.4.1 DC WIRE & CONDUIT SCHEDULE
E-4.5B.5	BLOCK 5B.5 INVERTER 5B.5.1 DC WIRE & CONDUIT SCHEDULE
E-4.5B.6	BLOCK 5B.6 INVERTER 5B.6.1 DC WIRE & CONDUIT SCHEDULE
E-5.0	TYPICAL WIRING CONFIGURATIONS
E-5.1	TYPICAL WIRING CONFIGURATIONS
E-6.0	WARNING SIGNS
E-6.1	WARNING SIGNS
E-6.2	INVERTER SPECIFIC WARNING SIGNS
E-7.0	ELECTRICAL DETAILS ABOVE GROUND SYSTEM
E-7.1	ELECTRICAL DETAILS INVERTER CONDUIT & CABLES
E-7.2	CABLE JUNCTION PEDESTAL DETAILS
E-8.0	GROUNDING DETAILS
E-8.1	GROUNDING DETAILS COMPONENTS
E-8.2	GROUNDING EQUIPMENT
E-8.3	GROUNDING DETAILS FENCE
E-9.0	TRENCH SECTIONS
E-9.1	TRENCH SECTIONS
E-9.2	TRENCH SECTIONS
E-9.3	TRENCH SECTIONS
E-9.4	TRENCH SECTIONS
E-11.0	EQUIPMENT SPECIFICATIONS
E-11.1	EQUIPMENT SPECIFICATIONS
S-1.0	STRUCTURAL DETAILS
S-1.1	STRUCTURAL DETAILS FIRST SOLAR SERIES 4
S-2.0	STRUCTURAL DETAILS

SCOPE OF WORK

INSTALLATION OF PHOTOVOLTAIC SOLAR MODULES ON A SINGLE-AXIS TRACKER SYSTEM AND DC/AC SOLAR INVERTERS INTERCONNECTED TO UTILITY GRID.
SEE SEPARATE DESIGN PACKAGE FOR TRANSMISSION VOLTAGE SUBSTATION.

ENGINEERS OF RECORD

GREGORY MAZUR – OH LICENSE #76088
BENJAMIN J. LIU – OH LICENSE #80518

KEY PROJECT CONTACT INFORMATION

BLYMYER ENGINEERS (ELECTRICAL/STRUCTURAL ENGINEERING)
CHRIS GLEASON, PROJECT MANAGER
STAS GORBIS, STRUCTURAL ENGINEER
JOHN A. KUEHN, P.E., ELECTRICAL ENGINEER
1101 MARINA VILLAGE PARKWAY, SUITE 100
ALAMEDA, CA 94501
(510) 521-3773

SOLV ENERGY (E.P.C.)
SUMANA SESHADRI, ENGINEERING MANAGER
16680 W BERNARDO DR.
SAN DIEGO, CA 92127
(858) 251-4888

CODES AND STANDARDS

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS, OR THEIR CURRENT EDITIONS, ALONG WITH ALL LOCAL AND STATE CODES:

2017 NATIONAL ELECTRIC CODE
2018 INTERNATIONAL BUILDING CODE

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
GREGORY MAZUR
PE 76088
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

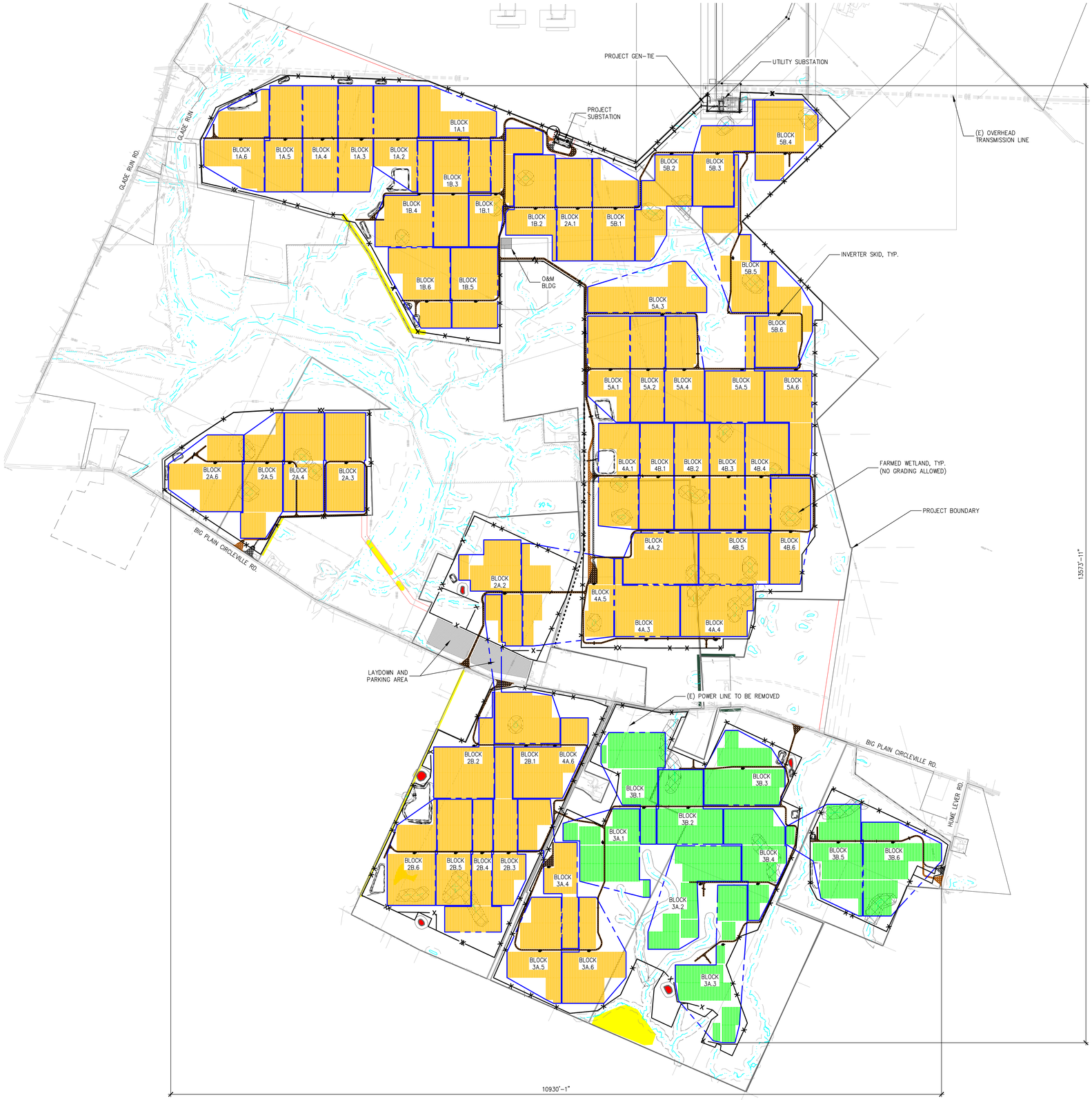
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
COVER SHEET

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: SSS	SCALE: AS SHOWN

SHEET NUMBER
CS-1

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PHOTOVOLTAIC ARRAY SITE PLAN

N

0 600' 1200'

1" = 600'-0"

SYSTEM SUMMARY	
PROJECT LOCATION	MADISON COUNTY, OH
DESIGN TEMPERATURE (MIN.)	-19°C (ASHRAE EXTREME MIN)
DESIGN TEMPERATURE (MAX)	33°C (ASHRAE 2% AVG HIGH) 36°C (ASHRAE 0.4% HIGH)
MAX SITE ELEVATION	1000'
STRING SIZE	120W: 15 460W: 6
MODULE TYPE	FIRST SOLAR FS-4120-3 FIRST SOLAR FS-6460-P
MODULE WATTAGE	SERIES 4: 120W SERIES 6: 460W
MODULE QTY.	120W: 320,880 460W: 495,000
INVERTER	SUNGROW SG3600UD-MV
INVERTER QTY.	60
SYSTEM SIZE (AC)	216,000 kVA (AT 45°C) 196,000 kW (AT POI)
SYSTEM SIZE (DC)	266,206 kW
ARRAY TYPE	NEXTRACKER HORIZON (1,337) x 240 MODULE ROW (5,568) x 84 MODULE ROW (379) x 72 MODULE ROW
GROUND COVER RATIO	120W: 37.5% (21'-6") 460W: 38.3% (17'-4")
RANGE OF MOTION	±60°
ARRAY AZIMUTH	180°
STRING WIRE COMBINING MEANS	COMBINER HARNESS
DC COLLECTION	ABOVE GROUND
MAIN DC COLLECTION METHOD	END OF ROW
DESIGN SNOW LOAD	20 PSF
DESIGN WIND SPEED	100 MPH
PROJECT COORDINATES	LATITUDE: 39°51.66' N LONGTUDE: 83°19.85' W
ARRAY AREA	365.3 ACRES

1

GENERAL NOTES

1. THE SITE SHALL MAINTAIN A 20' CLEAR FIRE BREAK AROUND THE PERIMETER OF THE SITE AND COMPLY WITH ALL APPLICABLE CODES AS APPROVED BY THE AHJ. THE SITE SHALL BE MAINTAINED BY A PROFESSIONAL SOLAR OPERATIONS AND MAINTENANCE FIRM.

LEGEND

- 9 BLOCKS 120W
- 51 BLOCKS 470W
- CULTURAL AVOIDANCE AREA
- WETLANDS
- DETENTION BASIN (FINAL SIZE AND LOCATION PENDING HYDROLOGY)
- ACCESS ROADS
- PROJECT FENCE
- BREEDING AREA (SEASONAL RESTRICTIONS APPLY)
- VEGETATIVE SCREENING
- BLOCK OUTLINE
- ACCESS/COLLECTION EASEMENT
- LEASE LINE

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
GREGORY MAZUR
PE 76088
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
PHOTOVOLTAIC ARRAY
SITE PLAN

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: OF	SCALE: 1" = 600'

SHEET NUMBER
G-100

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GENERAL NOTES

1. AT ALL TIMES THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITION OF JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. THE ENGINEERS JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES.

2. THE CONTRACTOR SHALL MAKE AN EXAMINATION OF THE SITE AND COMPARE THE SITE WITH THE DRAWINGS AND SPECIFICATIONS AND SATISFY HIMSELF AS TO CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL ASCERTAIN AND CHECK THE LOCATIONS OF ANY EXISTING STRUCTURES OR EQUIPMENT WHICH MAY AFFECT WORK THAT HAS TO BE PERFORMED, NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE IN CONTRACTOR'S BEHALF FOR ANY EXPENSE TO WHICH THE CONTRACTOR MAY BE PUT DUE TO FAILURE OR NEGLECT BY CONTRACTOR TO MAKE SUCH EXAMINATION.

3. ALL WORK SHALL BE COORDINATED WITH THE OWNER TO MAINTAIN CONTINUITY OF SERVICE AND MAXIMUM UTILIZATION OF THE OWNERS FACILITY.

4. THE CURRENT ISSUE OF ALL NFPA, IBC, IFC, ANSI, OSHA, ASTM, NEMA, AND OTHER NATIONALLY PUBLISHED CODES OR STANDARDS SHALL APPLY TO THIS WORK UNLESS LOCAL JURISDICTION SUPERSEDES. THE MOST STRINGENT CODES SHALL APPLY.

5. NOTHING IN THE DRAWINGS OR SPECIFICATIONS IS INTENDED TO ALLOW A VIOLATION OF ELECTRICAL WORKING SPACE AROUND ELECTRICAL EQUIPMENT REQUIREMENT. ANY DEVIATION FROM THIS REQUIREMENT SHALL BE APPROVED IN WRITING, BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE ANY EQUIPMENT IN VIOLATION OF THE ELECTRICAL CODE AT HIS OWN COST.

6. PROVIDE PHENOLIC NAMEPLATE WITH WHITE LETTERING ON BLACK BACKGROUND FOR EACH ELECTRICAL EQUIPMENT. PROVIDE PERMANENT MEANS OF ATTACHMENT THAT WILL NOT VIOLATE NEMA RATING OR EQUIPMENT WARRANTY.

7. REFER TO THE DRAWINGS FOR LOCATIONS AND SPACE REQUIREMENTS OF ELECTRICAL EQUIPMENT. COORDINATE THE INSTALLATION OF ELECTRICAL EQUIPMENT WITH OTHER TRADES.

8. POWER FEEDERS MAY NOT BE SHOWN ON THE DRAWINGS. REFER TO THE SINGLE LINE DIAGRAM FOR FEEDER INFORMATION.

9. CONTRACTOR SHALL SECURE AND PAY FOR ELECTRICAL TRADE SPECIFIC CONSTRUCTION PERMITS, LICENSES, GOVERNMENTAL AND INSPECTION FEES NECESSARY FOR THE EXECUTION OF THE WORK, UNLESS OTHERWISE DIRECTED.

10. ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ESTABLISHED TECHNIQUES AND ACCEPTED PRACTICES AND ALL LOCAL, STATE, AND NATIONAL CODES HAVING JURISDICTION.

11. ELECTRICAL REQUIREMENTS SUCH AS CONDUIT ROUTING AND LOCATIONS OF ELECTRICAL DEVICES (RECEPTACLES, SWITCHES, FLOOR OUTLETS, CONDUIT STUBS, ETC.) SHOWN ON THESE PLANS ARE DIAGRAMMATIC AND SUBJECT TO VERIFICATION BY ELECTRICAL CONTRACTOR FOR THE INTERFACING OF THE ELECTRICAL WORK WITH THE INSTALLATION. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO CLEAR THE OTHER FACILITIES EXCEPT AS SHOWN DIMENSIONED ON THE ARCHITECTURAL DRAWINGS OR AS APPROVED BY THE ARCHITECT.

12. ELECTRICAL EQUIPMENT SHOWN OR SPECIFIED FOR THIS PROJECT HAS BEEN GENERALLY SELECTED BASED ON DIMENSIONS TO FIT THE SPACE. THE CONTRACTOR SHALL VERIFY EQUIPMENT DIMENSIONS AND/OR ANY INTERFERENCES PRIOR TO ORDERING THE EQUIPMENT.

13. MANUFACTURER'S RECOMMENDATIONS FOR CONDUCTOR SIZING, CIRCUIT BREAKER OR FUSE RATING OF ELECTRICALLY OPERATED EQUIPMENT MAY DIFFER FROM THOSE INDICATED ON DRAWINGS. CONTRACTOR SHALL CONFIRM RATINGS PRIOR TO ORDERING EQUIPMENT.

14. CONTRACTOR SHALL REVIEW THE MECHANICAL AND PLUMBING DRAWINGS IF APPLY, AND CONNECT ELECTRICALLY OPERATED EQUIPMENT UNLESS OTHERWISE NOTED. COORDINATE THE LOCATION AND ELECTRICAL CONNECTION REQUIREMENTS PRIOR TO ORDERING OF ELECTRICAL AND MECHANICAL EQUIPMENT.

15. CONTRACTOR SHALL REVIEW THE SECTIONS OF EACH DIVISION OF THE SPECIFICATION (WHERE APPROPRIATE) AND PROVIDE CONNECTIONS TO ELECTRICALLY OPERATED EQUIPMENT AS MAY BE SPECIFIED THEREIN.

16. ALL CONDUIT ONLY (CO) NOTED SHALL HAVE PULL ROPES OR WIRES INSTALLED, TENSILE STRENGTH MINIMUM OF 200 FT/LBS.

17. COORDINATE ALL UG PULLBOX LOCATIONS WITH THE CIVIL AND LANDSCAPE PLANS. REPORT AND RESOLVE ANY DISCREPANCIES PRIOR TO START OF WORK.

18. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITER'S LABORATORIES OR OTHER APPROVED NRTL, AND SHALL BEAR THEIR LABEL. ALL CONTROL PANELS SHALL BE SO LISTED AS AN ASSEMBLY.

19. ELECTRICAL EQUIPMENT AND FEEDERS SHALL BE SUPPORTED AND/OR ANCHORED IN ACCORDANCE WITH CBC SEISMIC REQUIREMENTS. DO NOT SUPPORT CONDUITS FROM MECHANICAL DUCTS, PLUMBING, PIPING, OR EQUIPMENT OF ANY KIND.

20. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, FEES AND EQUIPMENT SPECIFIED. INDICATED OR IMPLIED IN THESE DOCUMENTS TO ACCOMPLISH THE CONSTRUCTION IN A PROFESSIONAL, WORKMANLIKE MANNER. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION TASKS INDICATED AND LOCAL CODES AND/OR ORDINANCES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR AND/OR OWNER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK AT ISSUE.

21. THE CONTRACTOR SHALL CONSULT THE MECHANICAL, STRUCTURAL, AND OTHER DRAWINGS AND DOCUMENTATION RELATED TO THE PROJECT FOR ADDITIONAL WORK TO BE PROVIDED.

22. THE OWNER RETAINS FIRST SALVAGE RIGHTS TO ALL EXISTING EQUIPMENT REMOVED UNDER THIS CONTRACT. THE ELECTRICAL CONTRACTOR SHALL CONSULT WITH THE OWNER FOR DISPOSITION OF THE EXISTING EQUIPMENT TO BE REMOVED.

23. ANY WORK INSTALLED INCORRECTLY, OR BEFORE APPROVAL HAS BEEN OFFICIALLY GRANTED FOR THOSE ITEMS AT ISSUE, SHALL BE CORRECTED BY THE ELECTRICAL CONTRACTOR AT NO CHARGE TO OWNER/ARCHITECT/CLIENT.

24. ALL MATERIALS AND EQUIPMENT FURNISHED BY THE CONTRACTOR SHALL BE NEW AND COMPLETELY SERVICEABLE UNLESS OTHERWISE SPECIFIED.

25. CONTRACTOR SHALL COORDINATE ROUGH-IN AND FINAL CONNECTION REQUIREMENTS WITH THE OWNER, EQUIPMENT SUPPLIERS, GENERAL CONTRACTOR AND OTHER BUILDING TRADES BEFORE PROCEEDING WITH ANY FURTHER RELATED WORK. INSTALLATIONS SHALL BE IN FULL ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND REQUIRED CODES. CONFLICTS AND INTERFERENCES SHALL BE RESOLVED IMMEDIATELY, BEFORE ANY INSTALLATION BEGINS.

26. FINAL ACCEPTANCE OF WORK IN PLACE SHALL BE SUBJECT TO APPROVAL BY OWNER'S REPRESENTATIVE AND ARCHITECT/ENGINEER. INSTALLATION APPROVAL SHALL BE BASED ON APPROVED SUBMITTALS, SHOP DRAWINGS AND LOCAL INSPECTION.

27. CONTRACTOR SHALL SUBMIT "FOR RECORD" MARKUP DRAWINGS WITHIN TWO (2) WEEKS AFTER DATE OF NOTIFICATION OF FINAL APPROVAL OF WORK-IN-PLACE. CONTRACTOR'S FINAL INVOICE WILL NOT BE PAID WITHOUT COMPLETE DOCUMENTATION.

28. CONTRACTOR SHALL WARRANTY THIS WORK PER THE TERMS IN THE CONTRACT DOCUMENTS. 1

29. THE CONTRACTOR SHALL PROVIDE ALL FUSES AND OVERLOAD HEATER ELEMENTS REQUIRED FOR THIS CONTRACT INSTALLATION INCLUDING ANY FUSES BLOWN DURING INITIAL TESTING.

30. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO ALL WALLS, FLOORS AND PAVING. IF DAMAGE OCCURS DURING CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER TO PATCH, PAINT AND REPAIR TO MATCH EXISTING CONDITIONS.

31. CONDUIT AND WIRE SCHEDULE FOR NEW EQUIPMENT ARE GENERALLY INDICATIVE. CONTRACTOR SHALL REFER TO MANUFACTURER AND SUPPLIER OF EQUIPMENT FOR DETAILED WIRING DIAGRAM AND VERIFY THE EXACT ROUTING AND CONDUCTOR SIZE.

32. THE CONTRACTOR SHALL REFER TO MANUFACTURER AND SUPPLIER OF ELECTRICAL CONTROL EQUIPMENT FOR EXACT WIRING INTERCONNECTION.

33. ALL CONDUCTORS SHALL BE ALUMINUM OR COPPER STRANDED, AND HAVE INSULATION TEMPERATURE RATING NOT LESS THAN 90°C, UNLESS OTHERWISE NOTED.

34. IDENTIFICATION OF GROUNDED CONDUCTORS SHALL BE IN ACCORDANCE WITH NEC 200.6. IDENTIFICATION OF EQUIPMENT GROUNDING CONDUCTORS SHALL BE IN ACCORDANCE WITH NEC 250.119 BARE, GREEN, OR GREEN-YELLOW COLORED ISTULATION. NEUTRAL CONDUCTORS SHALL BE PROVIDED WITH WHITE COLORED INSULATION. IDENTIFICATION OF UNGROUNDED CONDUCTORS SHALL BE IN ACCORDANCE WITH NEC 210.5(C) AND SHALL BE IDENTIFIED BY THE FOLLOWING COLORED INSULATION, MARKING TAPE, OR TAGGING AS FOLLOWS: 1

SYSTEM	34.5kV	480Y/277V	208Y/120V	120/240V 1-PHASE
PHASE A	BLACK	BROWN	BLACK	BLACK (LINE 1)
PHASE B	RED	ORANGE	RED	RED (LINE 2)
PHASE C	BLUE	YELLOW	BLUE	

PV OUTPUT CIRCUIT	FUNCTIONALLY GROUNDED SYSTEM
POSITIVE (+)	RED
NEGATIVE (-)	BLACK

PV SOURCE CIRCUIT	FUNCTIONALLY GROUNDED SYSTEM
POSITIVE (+)	RED
NEGATIVE (-)	BLACK

35. USE WIRE IDENTIFICATION COLOR CODE PER SPECIFICATIONS BELOW.

COLOR	DESCRIPTION
LT. BLUE	INTRINSICALLY SAFE CIRCUITS
GREEN	EQUIPMENT GROUNDING CONDUCTOR
YELLOW	CONTROL CIRCUITS SUPPLIED FROM EXTERNAL POWER SOURCE, INTERLOCKS

36. MEDIUM VOLTAGE CABLE MARKINGS SHALL UTILIZE COLORED CONDUCTOR TAPE FOR ALL PHASES: COLORED, SELF-ADHESIVE VINYL TAPE NOT LESS THAN 3 MILS THICK BY 1 INCH WIDE. BLACK FOR THE A PHASE CONDUCTOR, RED FOR THE B PHASE CONDUCTOR, BLUE FOR THE C PHASE CONDUCTOR. TAPE SHALL BE LOCATED AT ALL TERMINATIONS, SPLICES AND PULL BOXES.

37. THE ELECTRICAL DESIGN AND EQUIPMENT RATINGS ARE BASED ON ELECTRICAL SYSTEM STUDIES INCLUDING:
   - A. LOAD FLOW
   - B. SHORT CIRCUIT
   - C. ARC FLASH
   - D. RELAY COORDINATION
   - E. GROUNDING
   - F. CABLE SIZING
   - G. TRANSFORMER IMPEDANCE

   VERIFY ALL EQUIPMENT RATINGS, SETTINGS, AND LABELING ARE IN ACCORDANCE WITH THE LATEST VERSIONS OF THESE STUDIES.

39. OUTDOOR LIGHTING SITE LIGHTING IS RECOMMENDED TO COMPLY WITH DARK SKY GUIDELINES.

ABBREVIATIONS

A, AMPS	AMPERES
A/C	AIR CONDITIONER
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CURRENT
AL	ALUMINUM
AS	AMPERE SWITCH
AT	AMPERES TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CB	CIRCUIT BREAKER
CC	CENTER TO CENTER
CJP	CABLE JUNCTION PEDESTAL
CKT	CIRCUIT
℄	CENTER LINE
CLG	CEILING
CLR	CLEAR
CO	CONDUIT ONLY WITH PULL ROPE
CONC	CONCRETE
CU	COPPER
DB	DIRECT BURIAL
DC	DIRECT CURRENT
DIA	DIAMETER
DN	DOWN
DP	DISTRIBUTION PANEL
DWG	DRAWING
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQUIP	EQUIPMENT
(E)	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPERES
(F)	FUTURE
GND	GROUND
GALV	GALVANIZED
GRS	GALVANIZED RIGID STEEL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HANDHOLE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HZ	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
ISC	INTERRUPTING SHORT CIRCUIT
IG	ISOLATED GROUND
INST	INSTANTANEOUS
JB	JUNCTION BOX
KAIC	KILO AMPERES INTERRUPTION CAPACITY
KCMIL	KILO CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT-AMPERES KW KILO WATTS
KWH	KILO WATT-HOURS
LCP	LIGHTING CONTROL PANEL
LTG	LIGHTING
MAX	MAXIMUM
MCA	MAXIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MCB	MAIN CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MSB	MAIN SWITCHBOARD
MSG	MAIN SWITCHGEAR
MV	MEDIUM VOLTAGE
MVA	MEGA VOLT AMPERES
(N)	NEW
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OH	OVERHEAD
PH, ø	PHASE
PB	PUSHBUTTON
PDU	POWER DISTRIBUTION UNIT
PNL	PANEL
POCC	POINT OF COMMON CONNECTION
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
(R)	EXISTING TO BE REMOVED
(RE)	NEW LOCATION OF RELOCATED DEVICE
(RL)	EXISTING TO BE RELOCATED
SCA	SHORT CIRCUIT AVAILABLE
SEC	SECONDARY
SPECS	SPECIFICATIONS
STD	STANDARD
STP	SHIELDED TWISTED PAIR
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TBD	TO BE DETERMINED
TD	TIME DELAY
TEL	TELEPHONE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPB	UNDERGROUND PULLBOX
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
VFI	VACUUM FUSED INTERRUPTER
VP	VAPORPROOF
W	WATTS, WIRE
WH	WATER HEATER
WP	WEATHERPROOF
WT	WATERTIGHT
XFMR	TRANSFORMER
XLPE	CROSS-LINKED POLYETHYLENE
XP	EXPLOSION PROOF

QUALITY ASSURANCE NOTES

1. FOLLOW AND ADHERE TO ALL MANUFACTURERS INSTALLATION INSTRUCTIONS.
2. ALL BACKFILL AND COMPACTION SHALL COMPLY WITH GEOTECH REPORT.
3. ALL ELECTRICAL TERMINATIONS SHALL BE TORQUED TO MANUFACTURERS' SPECIFICATIONS. WHERE THEY ARE NOT SPECIFIED, REFER TO UL STANDARDS 486A AND 486B. FINAL TORQUE TEST DOCUMENTATION SHALL BE PROVIDED TO OWNER OR HIS REPRESENTATIVE, WITH ONE OR THE OTHER IN WITNESS AT RANDOM TIMES.
4. LINE AND LOAD CONDUCTORS SHALL BE BRACED AND SUPPORTED (LASHED, HELD FIRMLY IN PLACE) IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS AND NECA/IBEW APPROVED INSTALLATION PRACTICES.

MOUNTING HEIGHTS

MOUNTING HEIGHTS SHALL BE TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED.

RECEPTACLES	18"	VOLUME CONTROLS	48"
RECEPTACLE WIREWAYS	4.3"	THERMOSTATS	48"
SWITCHES	48"	TELE/COMMUNICATION OUTLET	18"
MOTOR STARTERS, TO TOP	72"	PANELBOARDS, TO TOP	72"
DISCONNECTS, TO TOP	72"	CABINETS, TO TOP	72"
JUNCTION BOXES	15" MIN.	FIRE ALARM PULL STATIONS	48"

ACCEPTANCE TESTING

THE FOLLOWING TESTS SHALL BE PERFORMED PRIOR TO ENERGIZATION OF THE SYSTEM WHEN APPLICABLE: TEST RESULTS SHALL BE MADE AVAILABLE TO THE ENGINEER OF RECORD OR BUILDING OFFICIAL UPON REQUEST.

1. GROUND-FAULT PROTECTION EQUIPMENT
   - 1.1. VERIFY PICKUP AND TIME DELAY SETTINGS ARE IN ACCORDANCE WITH SETTINGS PROVIDED BY THE ENGINEER OR EQUIPMENT MANUFACTURER.

2. ELECTRICAL TESTS SWITCHBOARDS, PANELBOARDS, MOTOR CONTROL CENTERS AND OTHER EQUIPMENT RATED 1000 AMPERES OR MORE, OR OVER 1000 VOLTS.
   - 2.1. RELAY PICKUP CURRENT BY CURRENT INJECTION AT THE SENSOR AND OPERATION OF THE CIRCUIT INTERRUPTING DEVICE
   - 2.2. TEST RELAY TIMING.
   - 2.3. TEST PRIMARY CONTROL VOLTAGE AT NOT MORE THAN 57 PERCENT OF ITS RATED VOLTGROUNDED CONDUCTOR INSULATION RESISTANCE
   - 2.4. VERIFICATION OF CONTINUITY OF EQUIPMENT GROUNDING SYSTEM.
   - 2.5. INSULATION RESISTANCE TEST ON EACH BUS AND PROTECTIVE DEVICE, PHASE-TO-PHASE AND PHASE-TO-GROUND.
   - 2.6. DIELECTRIC VOLTAGE-WITHSTAND TEST ON EACH BUS AND PROTECTIVE DEVICE, PHASE-TO-PHASE AND PHASE-TO-GROUND.
   - 2.7. CONTROL POWER TRANSFORMER, CONTROL POWER CIRCUITS AND POTENTIAL CIRCUITS.
   - 2.8. CONTROL AND PROTECTIVE DEVICES FOR PROPER OPERATION.

3. ELECTRICAL TESTS ON TRANSFORMERS RATED 100 KVA OR MORE SINGLE PHASE AND 300 KVA OR MORE THREE PHASE. MANUFACTURER FACTORY TEST REPORTS OR FIELD TEST REPORTS ARE ACCEPTABLE.
   - 3.1. INSULATION RESISTANCE TEST ON EACH WINDING. TEST WINDING-TO-WINDING AND WINDINGS-TO-GROUND.
   - 3.2. TURNS-RATIO TEST FOR EACH WINDING AT ALL TAP SETTINGS.
   - 3.3. CONTROL POWER TRANSFORMER, CONTROL POWER CIRCUITS AND POTENTIAL CIRCUITS.
   - 3.4. CONTROL AND PROTECTIVE DEVICES FOR PROPER OPERATION.

4. CONDUCTORS THAT SUPPLY EQUIPMENT RATED AT 1000 AMPERES OR MORE, OR OVER 1000 VOLTS
   - 4.1. INSULATION RESISTANCE TEST ON EACH CONDUCTOR, PHASE-TO-PHASE AND PHASE-TO-GROUND.
   - 4.2. DC HIGH-POTENTIAL TEST ON EACH CONDUCTOR, PHASE-TO-PHASE AND PHASE-TO-GROUND.

5. ELECTRICAL TESTS ON EMERGENCY AND STANDBY POWER SYSTEMS: SWITCHBOARDS, PANELBOARDS, DISTRIBUTION BOARDS, TRANSFER EQUIPMENT, POWER SOURCE, CONDUCTORS, FIRE PUMPS, EXHAUST AND VENTILATION FANS.
   - 5.1. CONTROL AND PROTECTIVE DEVICES FOR PROPER OPERATION.
   - 5.2. PHASE ROTATION TEST
   - 5.3. INSULATION RESISTANCE TEST ON FEEDER CONDUCTORS AND EQUIPMENT, PHASE-TO-PHASE AND PHASE-TO-GROUND
   - 5.4. AUTOMATIC LOAD TRANSFER TEST. TEST NORMAL AND EMERGENCY POWER, OR NORMAL AND STANDBY POWER, OR BOTH. SIMULATE LOSS OF EMERGENCY AND NORMAL POWER OR STANDBY AND POWER, OR BOTH. SIMULATE ALL FORMS OF SINGLEPHASE CONDITIONS.
   - 5.5. CONDUCT OPERATIONAL TEST ON SYSTEM UNDER LOAD CONDITIONS.

EQUIPMENT SPECIFICATIONS

THE FOLLOWING EQUIPMENT SPECIFICATION AND SUBMITTALS SHALL BE PROVIDED TO AND APPROVED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION:

- ELECTRICAL EQUIPMENT INCLUDING: SWITCHGEAR, PANELBOARDS, MOTOR CONTROL CENTERS, AND SAFETY SWITCHES.
- CONDUCTORS AND CABLES INCLUDING: MEDIUM VOLTAGE CABLES, LOW VOLTAGE CABLES, PV DC WIRING, AND CONTROL CABLES
- PROTECTIVE DEVICES INCLUDING: CIRCUIT BREAKERS, FUSES, RELAYS, AND PROTECTION SETTINGS.
- PV EQUIPMENT INCLUDING: SOLAR MODULE. MOUNTING SYSTEM, TRANSFORMERS, INVERTERS, COMBINER BOXES, AND RECOMBINER BOXES

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

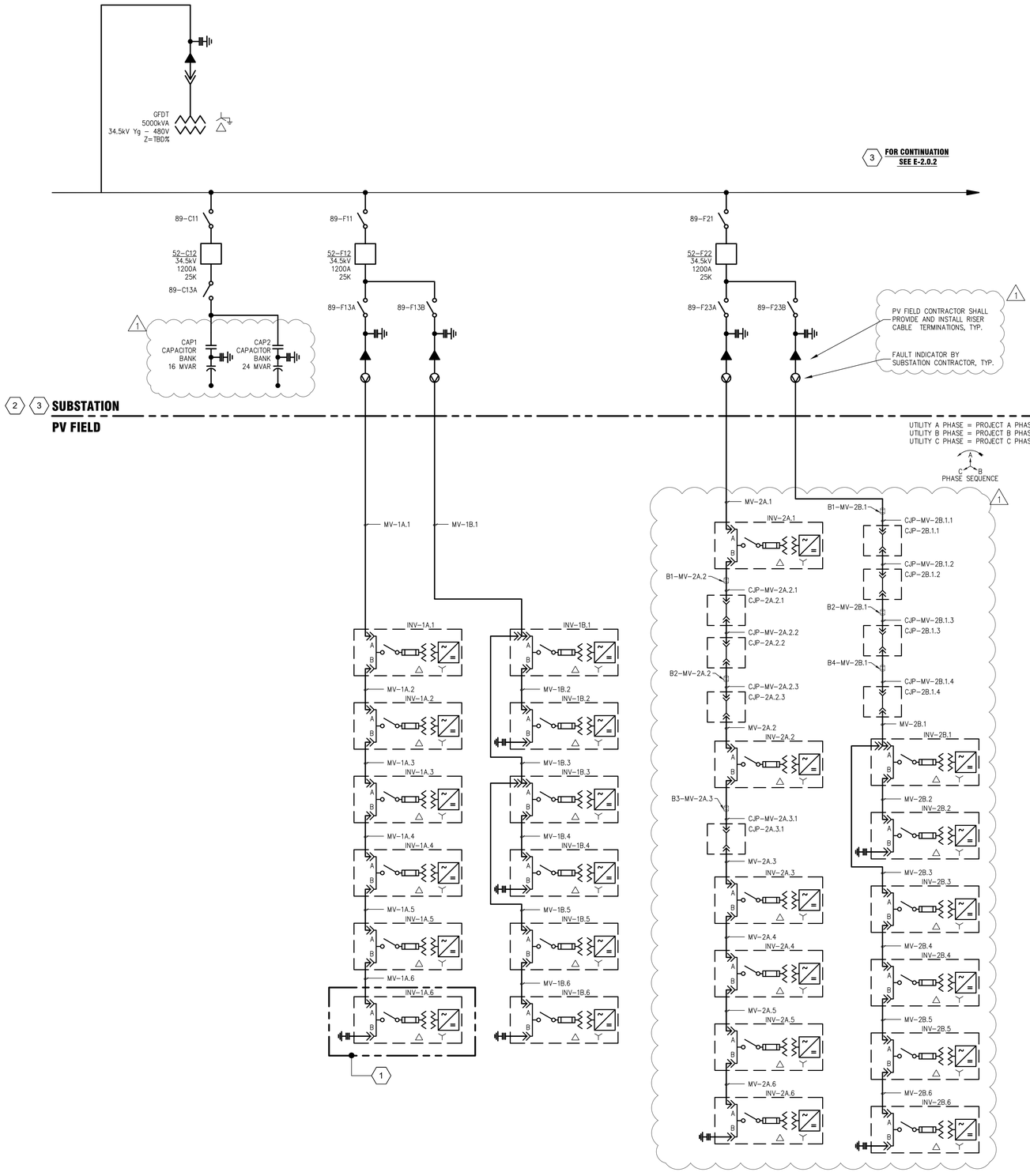
GENERAL ELECTRICAL SYMBOLS, NOTES AND ABBREVIATIONS

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CVV	SCALE: NO SCALE

SHEET NUMBER

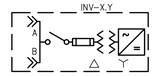
E-1.0

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EQUIPMENT:

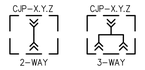
SUNGROW SG3600UD-MV SKID
3,425/3,600KVA @ 50°C/45°C
34.5kV, 3ø, 3W+GND., 60HZ
1,500VDC
RATED FOR 1000m ELEVATION
SEE E-2.1.x SERIES FOR DETAILS
TYP. OF 60



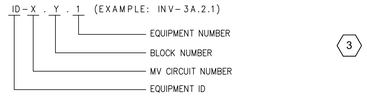
35kV SEPARABLE CONNECTORS.
ANSI/IEEE STD. 386
DEADBREAK, 600A
STACKABLE WHERE REQUIRED

27kV MCOV ELBOW SURGE ARRESTOR.

CABLE JUNCTION PEDESTAL,
600A, 35 KV, 200KV BIL



EQUIPMENT NAMING CONVENTION



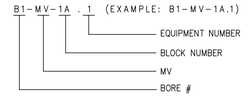
GENERAL NOTES

1. ALL EQUIPMENT SHALL BE UL LISTED OR UTILITY GRADE AND APPROVED BY OWNER. THE AHJ HAS FINAL JURISDICTIONAL AUTHORITY ON CODE APPLICATION AND COMPLIANCE.
2. ALL INVERTER WIRING AND GROUNDING METHODS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES.
3. EXPOSED NON-CURRENT CARRYING METAL PARTS OF EQUIPMENT AND ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250.134 AND 250.136(A).
4. ALL BREAKERS AND DISCONNECT SWITCHES ARE CLOSED UNDER NORMAL OPERATING CONDITIONS UNLESS OTHERWISE NOTED.
5. DISTANCES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DISTANCES IN FIELD.
6. FIBER OPTIC CABLES TYPICALLY INSTALLED IN TRENCH WITH MV FEEDERS. REFER TO SCADA DRAWING PACKAGE FOR FIBER ROUTING DETAILS.

KEYED NOTES

1. POWER BLOCK CONSISTING OF SKID MOUNTED EQUIPMENT INCLUDING: FLUID FILLED TRANSFORMER, SOLAR INVERTER, AUXILIARY POWER SYSTEMS, AND DATA ACQUISITION EQUIPMENT. INVERTERS SHALL BE LISTED TO UL1741 STANDARD AND INCLUDE INTEGRAL ANTI-ISLANDING PROTECTION. REQUIREMENTS FOR LOW-VOLTAGE RIDE-THROUGH (LVRT) SHALL BE COORDINATED WITH THE UTILITY COMPANY. REFER TO E-2.1 FOR POWER BLOCK DETAILS.
2. SUBSTATION CONTRACTOR IS ASSUMED TO PROVIDE THE FOLLOWING:
   1. MULTI-ELEMENT PROTECTION SYSTEM RELAYS FOR EACH CIRCUIT FOR SHORT CIRCUIT PROTECTION OF MEDIUM VOLTAGE CABLES AND EQUIPMENT.
   2. HIGH PRECISION REVENUE METERS, PTs AND CTs IN ACCORDANCE WITH OWNER AND UTILITY REQUIREMENTS. DATA INTERFACE SHALL BE PROVIDED FOR POWER PLANT CONTROL SYSTEM.
   3. EQUIPMENT RACK SPACE FOR NECESSARY PV SYSTEM SCADA AND CONTROLS SYSTEMS FOR ALARMING, LOGGING, DATA ARCHIVING, SEQUENCE OF EVENTS RECORDING, AND INDICATING FUNCTIONS FOR EACH INVERTER BLOCK SHALL BE PROVIDED.
3. SUBSTATION PORTION IS SHOWN TO INDICATE POWER FLOW FROM GENERATION TO POI. NOT ALL EQUIPMENT MAY BE SHOWN FOR CLARITY. EQUIPMENT RATING MAY CHANGE PENDING FINAL DESIGN AND SYSTEM STUDIES. REFER TO SUBSTATION DESIGN PACKAGE FOR DETAILS.

BORE NAMING CONVENTION & SUMMARY



MV BORE 1:
B1-MV-2A.2
B1-MV-2B.1
B1-MV-3A.1
B1-MV-3B.1
B1-MV-4A.1
B1-MV-4B.1
B1-MV-5A.1

MV BORE 2:
B2-MV-2A.2
B2-MV-2B.1
B2-MV-3A.1
B2-MV-3B.1
B2-MV-4A.6

MV BORE 3:
B3-MV-2A.3

MV BORE 4:
B4-MV-2B.1
B4-MV-3A.1
B4-MV-3B.1
B4-MV-4A.6

MV BORE 5:
B5-MV-3B.1
B5-MV-3A.1

MV BORE 6:
B6-MV-3B.5

MV FEEDER SCHEDULE

35kV, AL. MV105, 5 MIL CU. TAPE SHIELD WITH 25% OVERLAP, TRXLPE, 100% INSULATION, PHASE CONDUCTORS PER TABLE WITH BARE #2/0 AWG. CU. GND

FEEDER NO.	(SETS) SIZE AWG / kcmil	LENGTH (FEET)	MVA	REQUIRED AMPACITY	*CABLE AMPACITY
MV-1A.1	1000	1,780	21.6	380	461
MV-1A.2	750	940	18.0	317	393
MV-1A.3	500	560	14.4	254	322
MV-1A.4	4/0	600	10.8	190	201
MV-1A.5	1/0	570	7.2	127	135
MV-1A.6	1/0	680	3.6	63	135
MV-1B.1	1000	1,640	21.6	380	461
MV-1B.2	1/0	820	3.6	63	135
MV-1B.3	500	660	14.4	254	322
MV-1B.4	1/0	530	3.6	63	135
MV-1B.5	1/0	2,030	7.2	127	135
MV-1B.6	1/0	750	3.6	63	135
MV-2A.1	1000	1,290	21.6	380	461
CJP-MV-2A.2.1	750	1,240	18.0	317	393
CJP-MV-2A.2.2	750	2,040	18.0	317	393
CJP-MV-2A.2.3	750	3,010	18.0	317	393
MV-2A.2	750	910	18.0	317	393
CJP-MV-2A.3.1	500	2,890	14.4	254	322
MV-2A.3	500	1,400	14.4	254	322
MV-2A.4	4/0	860	10.8	190	201
MV-2A.5	1/0	360	7.2	127	135
MV-2A.6	1/0	790	3.6	63	135
CJP-MV-2B.1.1	1000	2,470	21.6	380	461
CJP-MV-2B.1.2	1000	2,050	21.6	380	461
CJP-MV-2B.1.3	1000	3,030	21.6	380	461
CJP-MV-2B.1.4	1000	1,670	21.6	380	461
MV-2B.1	1000	1,060	21.6	380	461
MV-2B.2	1/0	790	3.6	63	135
MV-2B.3	500	1,880	14.4	254	322
MV-2B.4	4/0	410	10.8	190	201
MV-2B.5	1/0	410	7.2	127	135
MV-2B.6	1/0	630	3.6	63	135

*DIRECT BURY CABLE PLOW INSTALLATION IN TREFOIL CONFIGURATION WITH NO INTENTIONAL SPACING BETWEEN PHASES, RHO: 329°C-CM/WATT AT 0% MOISTURE, AMBIENT EARTH TEMPERATURE OF 24°C, DEMAND FACTOR 50%, 60" OF COVER.

MV CONDUIT SCHEDULE

MV FEEDER SIZE AWG/kcmil	CONDUIT SIZE (DIA.")
1250	8 OR (3) 5
1000	8 OR (1) 5 & (2) 4
750	6 OR (3) 4
500	6 OR (3) 4
350	5 OR (3) 4
250	5 OR (3) 4
4/0	5 OR (3) 4
3/0	5 OR (3) 4
2/0	5 OR (3) 4
1/0	5 OR (3) 4

40% CONDUIT FILL: (3) 35KV AL. CONDUCTORS WITH 100% RATED INSULATION, TAPE SHIELD, COMPRESSED CONDUCTOR, AND PVC JACKET AND (1) BARE #2/0 AWG. CU. GND

FOR CONSTRACTION

SOLV ENERGY

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STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

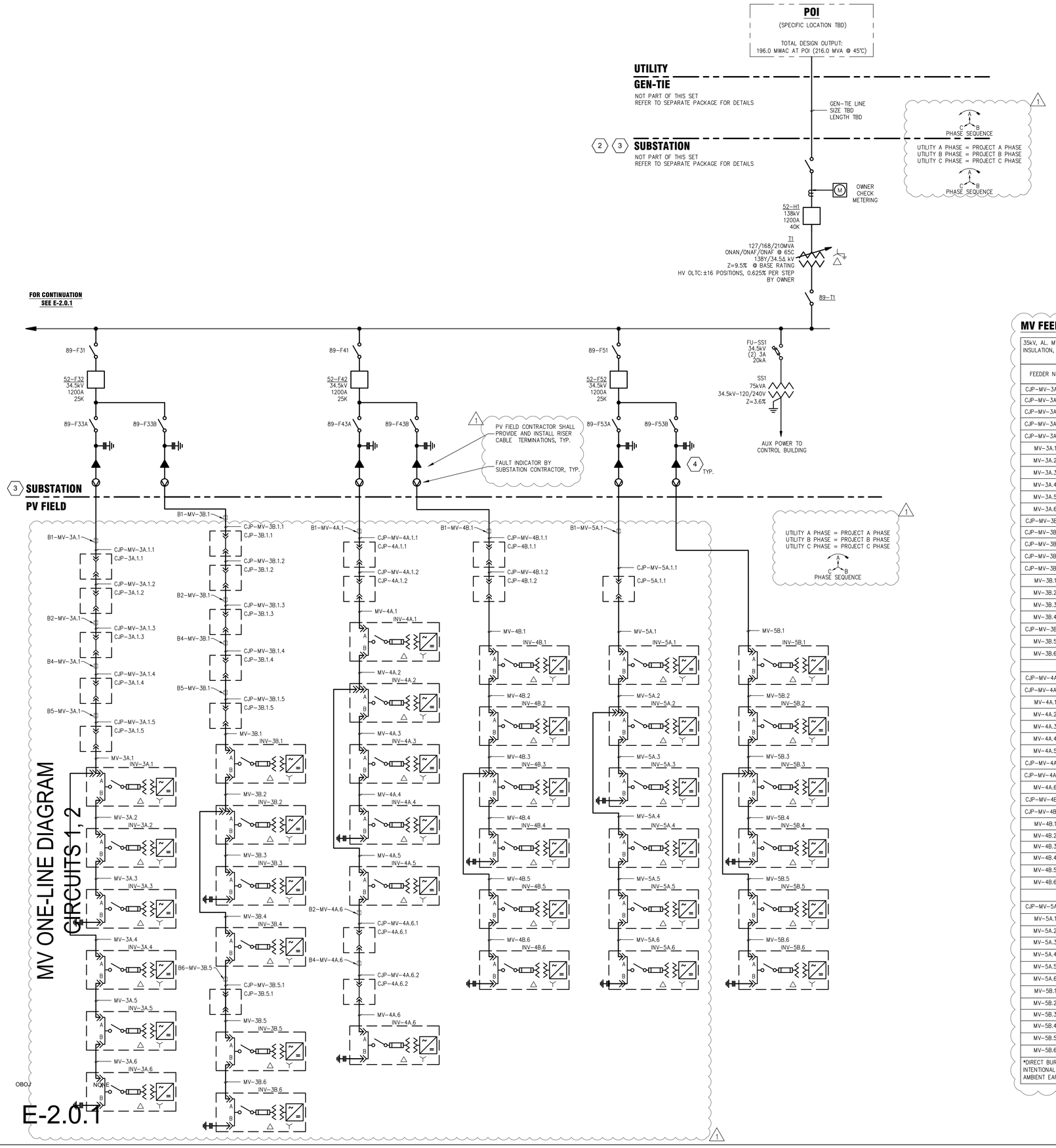
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

JOB NO.: 222018	PROJECT MGR: CG
DRAWN:	SCALE:

SHEET NUMBER

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GENERAL NOTES

1. SEE E-2.0.1 FOR GENERAL AND KEYED NOTES

BORE NAMING CONVENTION & SUMMARY

B1-MV-1A.1 (EXAMPLE: B1-MV-1A.1)

- EQUIPMENT NUMBER
- BLOCK NUMBER
- MV
- BORE #

MV BORE 1:
B1-MV-2A.2
B1-MV-2B.1
B1-MV-3A.1
B1-MV-3B.1
B1-MV-4A.1
B1-MV-4B.1
B1-MV-5A.1

MV BORE 2:
B2-MV-2A.2
B2-MV-2B.1
B2-MV-3A.1
B2-MV-3B.1
B2-MV-4A.6

MV BORE 3:
B3-MV-2A.3

MV BORE 4:
B4-MV-2B.1
B4-MV-3A.1
B4-MV-3B.1
B4-MV-4A.6

MV BORE 5:
B5-MV-3B.1
B5-MV-3A.1

MV BORE 6:
B6-MV-3B.5

MV FEEDER SCHEDULE

35kV, AL. MV105, 5 MIL CU. TAPE SHIELD WITH 25% OVERLAP, TRXLPE, 100% INSULATION, PHASE CONDUCTORS PER TABLE WITH BARE #2/0 AWG. CU. GND

FEEDER NO.	(SETS) SIZE AWG / kcmil	LENGTH (FEET)	MVA	REQUIRED AMPACITY	*CABLE AMPACITY
CJP-MV-3A.1.1	1000	2,460	21.6	380	461
CJP-MV-3A.1.2	1000	2,060	21.6	380	461
CJP-MV-3A.1.3	1000	3,050	21.6	380	461
CJP-MV-3A.1.4	1000	1,680	21.6	380	461
CJP-MV-3A.1.5	1000	2,610	21.6	380	461
MV-3A.1	1000	780	21.6	380	461
MV-3A.2	1/0	2,140	7.2	127	135
MV-3A.3	1/0	1,280	3.6	63	135
MV-3A.4	4/0	1,290	10.8	190	201
MV-3A.5	1/0	1,410	7.2	127	135
MV-3A.6	1/0	750	3.6	63	135
CJP-MV-3B.1.1	1000	2,450	21.6	380	461
CJP-MV-3B.1.2	1000	2,060	21.6	380	461
CJP-MV-3B.1.3	1000	3,070	21.6	380	461
CJP-MV-3B.1.4	1000	1,660	21.6	380	461
CJP-MV-3B.1.5	1000	2,610	21.6	380	461
MV-3B.1	1000	1,350	21.6	380	461
MV-3B.2	750	680	18.0	317	393
MV-3B.3	1/0	1,420	3.6	63	135
MV-3B.4	4/0	2,190	10.8	190	201
CJP-MV-3B.5.1	1/0	1,300	7.2	127	135
MV-3B.5	1/0	400	7.2	127	135
MV-3B.6	1/0	830	3.6	63	135
CJP-MV-4A.1.1	1000	2,440	21.6	380	461
CJP-MV-4A.1.2	1000	2,070	21.6	380	461
MV-4A.1	1000	1,300	21.6	380	461
MV-4A.2	750	1,460	18.0	317	393
MV-4A.3	1/0	2,000	7.2	127	135
MV-4A.4	1/0	1,060	3.6	63	135
MV-4A.5	1/0	1,890	7.2	127	135
CJP-MV-4A.6.1	1/0	570	3.6	63	135
CJP-MV-4A.6.2	1/0	1,660	3.6	63	135
MV-4A.6	1/0	1,400	3.6	63	135
CJP-MV-4B.1.1	1000	2,440	21.6	380	461
CJP-MV-4B.1.2	1000	2,070	21.6	380	461
MV-4B.1	1000	1,760	21.6	380	461
MV-4B.2	750	550	18.0	317	393
MV-4B.3	500	550	14.4	254	322
MV-4B.4	1/0	510	3.6	63	135
MV-4B.5	1/0	1,020	7.2	127	135
MV-4B.6	1/0	780	3.6	63	135
CJP-MV-5A.1.1	1000	2,430	21.6	380	461
MV-5A.1	1000	1,500	21.6	380	461
MV-5A.2	750	580	18.0	317	393
MV-5A.3	1/0	1,080	3.6	63	135
MV-5A.4	4/0	570	10.8	190	201
MV-5A.5	1/0	880	7.2	127	135
MV-5A.6	1/0	820	3.6	63	135
MV-5B.1	1000	1,700	21.6	380	461
MV-5B.2	750	1,520	18.0	317	393
MV-5B.3	500	700	14.4	254	322
MV-5B.4	1/0	1,050	3.6	63	135
MV-5B.5	1/0	1,940	7.2	127	135
MV-5B.6	1/0	1,570	3.6	63	135

*DIRECT BURY CABLE PLOW INSTALLATION IN TREFOIL CONFIGURATION WITH NO INTENTIONAL SPACING BETWEEN PHASES, RHO: 329°C-CM/WATT AT 0% MOISTURE, AMBIENT EARTH TEMPERATURE OF 24°C, DEMAND FACTOR 50%, 60" OF COVER.

MV CONDUIT SCHEDULE

MV FEEDER SIZE AWG/kcmil	CONDUIT SIZE (DIA.")
1250	8 OR (3) 5
1000	8 OR (1) 5 & (2) 4
750	6 OR (3) 4
500	6 OR (3) 4
350	5 OR (3) 4
250	5 OR (3) 4
4/0	5 OR (3) 4
3/0	5 OR (3) 4
2/0	5 OR (3) 4
1/0	5 OR (3) 4

40% CONDUIT FILL: (3) 35KV AL CONDUCTORS WITH 100% RATED INSULATION, TAPE SHIELD, COMPRESSED CONDUCTOR, AND PVC JACKET AND (1) BARE #2/0 AWG. CU. GND

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
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STAMP/SEAL
STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

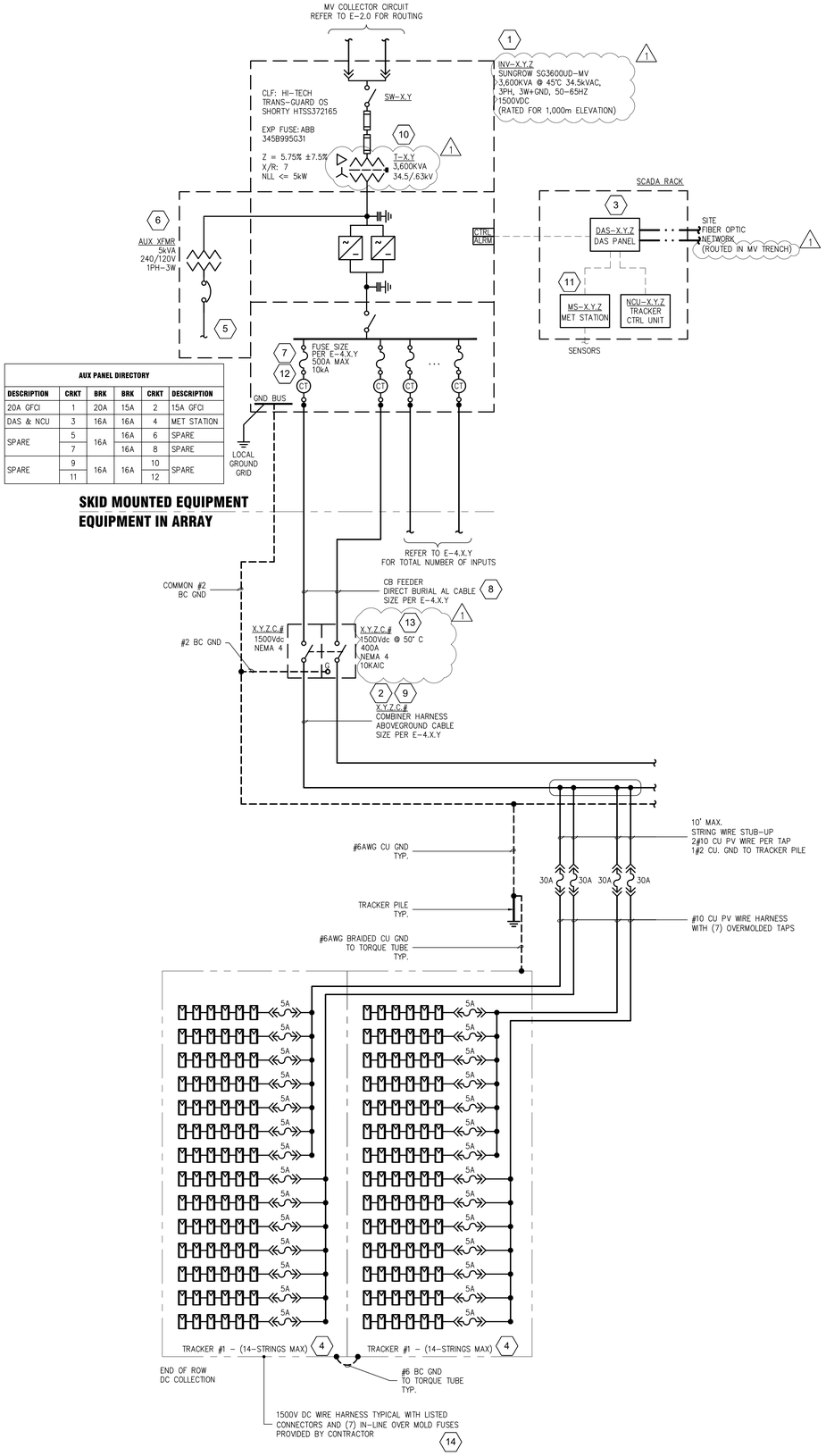
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
MV ONE-LINE DIAGRAM
CIRCUITS 3, 4, 5

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: OBOJ	SCALE: NONE

SHEET NUMBER
E-2.0.2

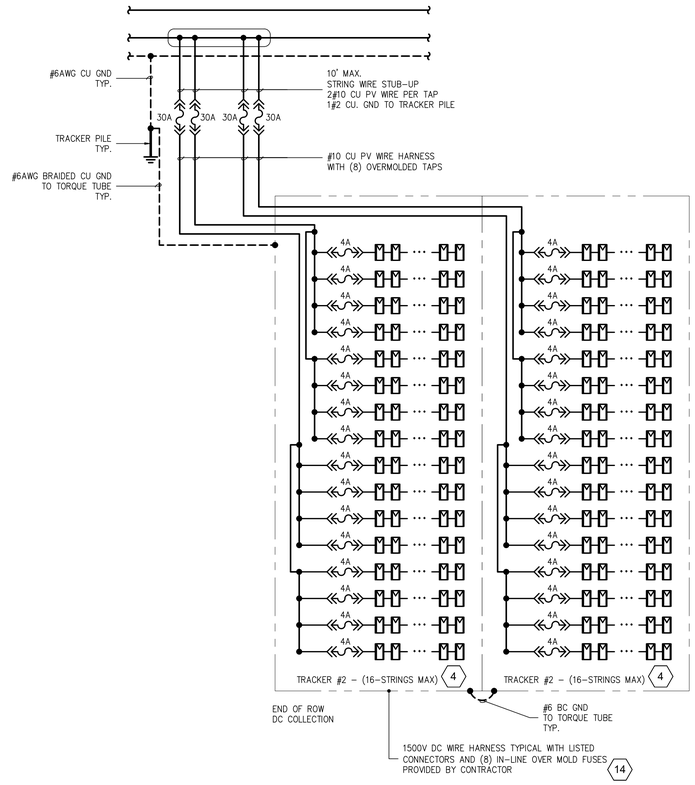
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AUX PANEL DIRECTORY					
DESCRIPTION	CRKT	BRK	BRK	CRKT	DESCRIPTION
20A GFCI	1	20A	15A	2	15A GFCI
DAS & NCU	3	16A	16A	4	MET STATION
SPARE	5	16A	16A	6	SPARE
	7		16A	8	SPARE
SPARE	9	16A	16A	10	SPARE
	11			12	

SKID MOUNTED EQUIPMENT
EQUIPMENT IN ARRAY

WIRING DIAGRAM FOR FS6



WIRING DIAGRAM FOR FS4

PHOTOVOLTAIC MODULES

MODULE MAKE AND MODEL	FS-4120-3	FS-6460-P
Pmax - MAX POWER AT STC	120 W	460 W
Voc - OPEN CIRCUIT VOLTAGE AT STC	88.7 V	222.9 V
Vmp - MAX. POWER VOLTAGE AT STC	70.8 V	188.8 V
Isc - SHORT CIRCUIT CURRENT AT STC	1.84 A	2.59 A
Bi-FACIAL MODULE BACKSIDE GAIN [ESTIMATED]	N/A	N/A
TOTAL Isc - SHORT CIRCUIT CURRENT	1.84 A	2.59 A
Imp - MAX POWER CURRENT AT STC	1.70 A	2.44 A
TEMPERATURE COEFFICIENT OF Voc	-0.280 % / °C	-0.250 % / °C
MAXIMUM SERIES FUSE RATING	4.0 A	5.0 A
STRING RATINGS	FS-4120-3	FS-6460-P
SERIES CONNECTED MODULES IN EACH PV SOURCE CIRCUIT	15	6
STRING MAX POWER AT STC	1,800 W	2,760 W
STRING Voc AT STC	1330.5 V	1337.4 V
MAXIMUM SYSTEM VOLTAGE	1500.0 V	1500.0 V
MAXIMUM EXPECTED VOLTAGE PER NEC 690.7(A)(1)	1,422.1	1,433.1
ASHRAE EXTREME MIN.	-2° C	-3° C
IRRADIANCE	700 W / M²	502 W / M²

NOTE: Voc CORRECTED FOR THE LOWEST EXPECTED AMBIENT TEMPERATURE USING THE MODULES TEMPERATURE COEFFCIENT.

GENERAL NOTES

1. INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED NEC AND NESC CODES AND STANDARDS AND SHALL CONFORM WITH INDUSTRY BEST PRACTICES AND IEEE RECOMMENDATIONS. THE AHJ HAS FINAL JURISDICTIONAL AUTHORITY ON CODE APPLICATION AND COMPLIANCE.
2. ALL EQUIPMENT SHALL BE UTILITY GRADE AND APPROVED BY OWNER.
3. ALL DC ISOLATION SWITCHES AND COMBINER BOXES SHALL BE LABELED "WARNING – ELECTRIC SHOCK HAZARD – DO NOT TOUCH TERMINALS" AND "TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION" PER NEC 690.17.
4. ALL INVERTER WIRING AND GROUNDING METHODS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES.
5. ALL EQUIPMENT SHALL HAVE ARC FLASH WARNING LABELS WITH APPLICABLE INCIDENT ENERGY LEVELS, WORKING DISTANCES, AND REQUIRED PPE IN ACCORDANCE WITH NFPA 70E.

KEYED NOTES

1. INVERTER: SHALL BE PROVIDED WITH THE FOLLOWING OPTIONS: (1)
   - OUTDOOR RATED
   - NEGATIVE POLE SHALL BE FUNCTIONALLY GROUNDED
   - GROUND-FAULT DETECTION AND INTERRUPTION CAPABLE OF DETECTING GROUND FAULTS IN THE DC CURRENT CARRYING CONDUCTORS AND COMPONENTS, INCLUDING INTENTIONALLY GROUNDED CONDUCTORS.
   - INSULATION MONITORING
   - DC AND AC OVERVOLTAGE PROTECTION AND LIGHTNING PROTECTION
   - HUMIDITY CONTROL
   - DATA ACQUISITION AND MONITORING COMMUNICATION INTERFACE
   - LVRT, HVRT, AND FRT CAPABILITY. COORDINATE THESE SETTINGS WITH THE SERVING UTILITY. OPERATIONAL SETTINGS REQUIRED FOR GRID STABILITY MAY CONFLICT WITH UL1741.
   - REFER TO DATASHEET ON 11.0 FOR DETAILS (1)
2. LISTED ABOVE GROUND COMBINER HARNESS. OUTDOOR AND UV RATED WITH ALUMINUM PV WIRE TRUNK AND CU PV WIRE TAPS. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, LISTING, PROCUREMENT, PERFORMANCE, AND RELIABILITY OF COMBINER HARNESS COMPONENTS.
3. PART OF PLANT CONTROL AND MONITORING SYSTEM (PCS/SCADA).
4. SINGLE-AXIS TRACKER SYSTEM STRUCTURE CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
5. PROVIDE A MINIMUM OF (2) 120VAC GFCI RECEPTACLES AT EACH SKID LOCATION FOR MAINTENANCE OF INVERTERS AND CONTROL SYSTEM. COORDINATE POWER REQUIREMENTS WITH DAS PROVIDER.
6. INVERTER MANUFACTURER TO PROVIDE EXTERNAL POWER SUPPLY FOR SKID AUXILIARY LOADS. DISTRIBUTION PANEL SHALL BE INTEGRAL TO INVERTER WITH DISTRIBUTION BREAKERS.
7. INTEGRATED RECOMBINER UNIT WITH TOTAL OF 24 INPUTS. EACH INPUT SHALL HAVE CURRENT ZONE MONITORING. FUSE ISOLATION SHALL BE ACCOMPLISHED BY OPENING ALL COMBINER HARNESS DISCONNECTS.
8. AVERAGE VOLTAGE DROP FOR DC CIRCUITS SHALL NOT EXCEED 1.5%. OTHERWISE SIZE OF CONDUCTORS MAY HAVE TO BE INCREASED. CONTRACTOR SHALL NOTIFY ENGINEER IF ACTUAL ROUTING EXCEEDS THE DESIGNED MAXIMUM ONE-WAY DISTANCE AS SHOWN IN WIRE AND CONDUIT SCHEDULES.
9. NUMBERS OF STRINGS PER SPECIFIC COMBINER HARNESS AND NUMBER OF COMBINER HARNESS PER SPECIFIC INVERTER VARY AT DIFFERENT BLOCKS. SEE CORRESPONDING WIRE AND CONDUIT SCHEDULE ON E-4.X.Y SERIES DRAWINGS FOR EXACT CONFIGURATIONS, AND DC SYSTEM SUMMARY
10. INTEGRATED MEDIUM VOLTAGE STEP UP TRANSFORMER PROVIDED BY INVERTER MANUFACTURER. TRANSFORMER SHALL INCLUDE LOOP FED LOAD BREAK SWITCH WITH DEAD FRONT CONSTRUCTION, PRCLF AND EXPULSION FUSES, TRANSFORMER ALARMS, 600A BUSHING WELLS, AND ELECTROSTATIC SHIELD BETWEEN WINDINGS. (1)
11. MET STATION AT SELECT LOCATION ONLY. REFER TO SITE PLAN FOR NUMBER AND EXACT LOCATION.
12. FUSES SHALL BE RATED FOR SYSTEM VOLTAGE, LISTED TO UL 2579, AND FURNISHED BY INVERTER MANUFACTURER, REFER TO E-4.X.Y SERIES FOR EXACT SIZE. OPEN ALL AC AND DC DISCONNECTS AND WAIT FOR CAPACITORS TO DISCHARGE PRIOR TO OPENING CABINET OR SERVICING FUSES.
13. LOAD BREAK RATED COMBINER HARNESS DISCONNECT USED FOR INVERTER FUSE SERVICING. DISCONNECT MUST OPEN BOTH POSITIVE AND NEGATIVE CONDUCTORS SIMULTANEOUSLY. UL LISTED. ARC FAULT PROTECTION IS NOT AVAILABLE AT THIS VOLTAGE LEVEL AND IS NOT IN CURRENT DESIGN. A FIRE MITIGATION PLAN IN ACCORDANCE WITH NEC 691.10 IS AVAILABLE UPON REQUEST.
14. STRING WIRES WITH LISTED CONNECTORS AND (2) IN-LINE OVER MOLD FUSES. HARNESS SHALL BE USED AS METHOD OF COMBINING SUB ARRAY STRING NEGATIVE CONDUCTORS, SEE E-5.0 FOR FURTHER DETAILS.

COMBINER HARNESS NAMING CONVENTION

1 . 1 . 1 . C . 1 (EXAMPLE: 1.2.1.C.6)

- 1 — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- 1 — INVERTER NUMBER
- 1 — BLOCK NUMBER
- 1 — MV CIRCUIT NUMBER

CABLE SCHEDULE:

ALL LOW-VOLTAGE AC CONDUCTORS SHALL BE:
CU. WITH THWN-2 OR XHHW-2 INSULATION.
UNLESS OTHERWISE NOTED.

ALL PV DC CABLES SHALL BE:
CU. OR AL. AS NOTED WITH 2000V PV WIRE INSULATION.
UNLESS OTHERWISE NOTED.

FOR CONSTRACTION

SOLV ENERGY

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STAMP/SEAL

STATE OF OHIO
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PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

PV BLOCK
AC/DC SYSTEM SCHEMATIC

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: OBOJ	SCALE: NONE

SHEET NUMBER

E-2.1

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BLOCK ARRAY CONFIGURATION

INVERTER BLOCK	MODULE TYPE	STRINGS	TOTAL MODULES	kW DC AT STC	DC:AC RATIO	COMBINER HARNESSES
1A.1.1	FS-6460-P	1636	9,816	4,515.36	1.382	20
1A.2.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
1A.3.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
1A.4.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
1A.5.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
1A.6.1	FS-6460-P	1612	9,672	4,449.12	1.362	21
1B.1.1	FS-6460-P	1610	9,660	4,443.60	1.360	21
1B.2.1	FS-6460-P	1592	9,552	4,393.92	1.345	20
1B.3.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
1B.4.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
1B.5.1	FS-6460-P	1618	9,708	4,465.68	1.367	20
1B.6.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
–	–	–	–	–	–	–
2A.1.1	FS-6460-P	1592	9,552	4,393.92	1.345	20
2A.2.1	FS-6460-P	1604	9,624	4,427.04	1.355	21
2A.3.1	FS-6460-P	1712	10,272	4,725.12	1.446	23
2A.4.1	FS-6460-P	1688	10,128	4,658.88	1.426	23
2A.5.1	FS-6460-P	1698	10,188	4,686.48	1.435	22
2A.6.1	FS-6460-P	1694	10,164	4,675.44	1.431	21
2B.1.1	FS-6460-P	1614	9,684	4,454.64	1.364	20
2B.2.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
2B.3.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
2B.4.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
2B.5.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
2B.6.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
–	–	–	–	–	–	–
3A.1.1	FS-4120-3	2368	35,520	4,262.40	1.305	21
3A.2.1	FS-4120-3	2384	35,760	4,291.20	1.314	20
3A.3.1	FS-4120-3	2368	35,520	4,262.40	1.305	21
3A.4.1	FS-6460-P	1652	9,912	4,559.52	1.396	23
3A.5.1	FS-6460-P	1626	9,756	4,487.76	1.374	20
3A.6.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
3B.1.1	FS-4120-3	2400	36,000	4,320.00	1.322	20
3B.2.1	FS-4120-3	2368	35,520	4,262.40	1.305	19
3B.3.1	FS-4120-3	2384	35,760	4,291.20	1.314	19
3B.4.1	FS-4120-3	2384	35,760	4,291.20	1.314	20
3B.5.1	FS-4120-3	2368	35,520	4,262.40	1.305	20
3B.6.1	FS-4120-3	2368	35,520	4,262.40	1.305	21
–	–	–	–	–	–	–
4A.1.1	FS-6460-P	1612	9,672	4,449.12	1.362	20
4A.2.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
4A.3.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
4A.4.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
4A.5.1	FS-6460-P	1596	9,576	4,404.96	1.348	22
4A.6.1	FS-6460-P	1610	9,660	4,443.60	1.360	20
4B.1.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
4B.2.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
4B.3.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
4B.4.1	FS-6460-P	1596	9,576	4,404.96	1.348	19
4B.5.1	FS-6460-P	1606	9,636	4,432.56	1.357	20
4B.6.1	FS-6460-P	1624	9,744	4,482.24	1.372	20
–	–	–	–	–	–	–
5A.1.1	FS-6460-P	1616	9,696	4,460.16	1.365	20
5A.2.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
5A.3.1	FS-6460-P	1576	9,456	4,349.76	1.332	19
5A.4.1	FS-6460-P	1620	9,720	4,471.20	1.369	20
5A.5.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
5A.6.1	FS-6460-P	1596	9,576	4,404.96	1.348	19
5B.1.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
5B.2.1	FS-6460-P	1604	9,624	4,427.04	1.355	21
5B.3.1	FS-6460-P	1596	9,576	4,404.96	1.348	20
5B.4.1	FS-6460-P	1604	9,624	4,427.04	1.355	20
5B.5.1	FS-6460-P	1610	9,660	4,443.60	1.360	21
5B.6.1	FS-6460-P	1610	9,660	4,443.60	1.360	21
–	–	–	–	–	–	–
SUB-TOTAL	FS-4120-3	21,392	320,880	38,505.60	–	–
SUB-TOTAL	FS-6460-P	82,500	495,000	227,700.00	–	–
TOTALS		103,892	815,880	266,205.60	1.358	1218

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1

FOR CONSTRACTION

SOLV ENERGY

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STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
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BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

BLOCK ARRAY CONFIGURATION

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: TII	SCALE: NONE

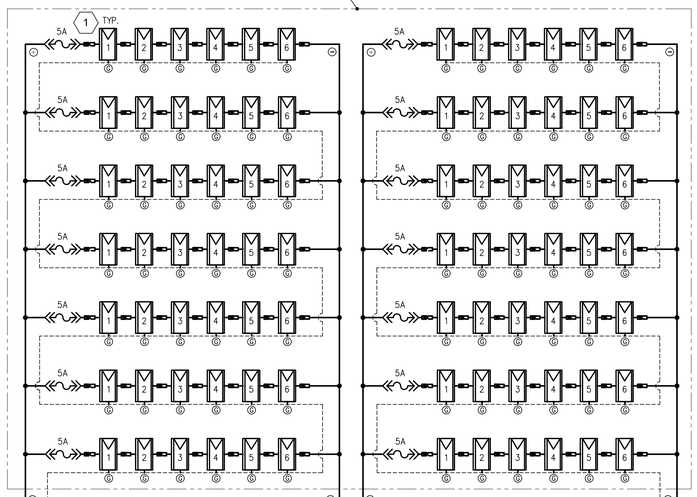
SHEET NUMBER

E-2.2

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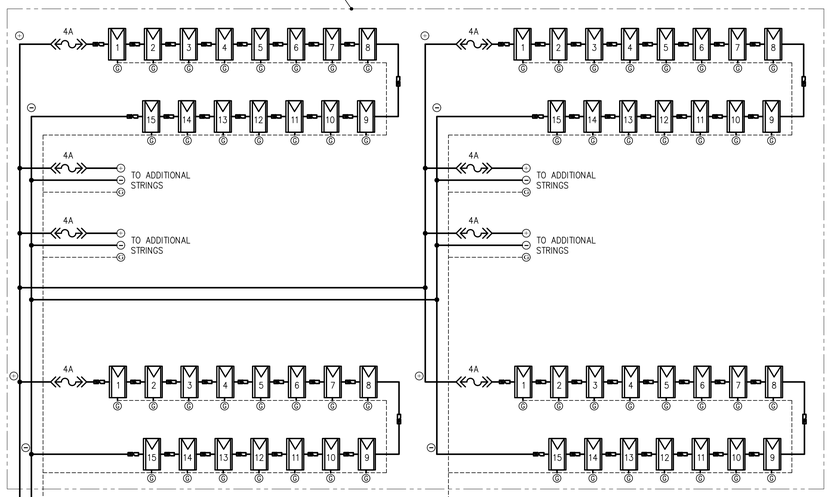
1500V DC SOURCE CIRCUIT COLLECTION SHALL UTILIZE LISTED COMPONENTS SUCH AS: CONNECTORS, SPLITTERS, FUSE HOLDERS, AND OVERMOLDED ASSEMBLIES TO COMBINE SOURCE CIRCUITS AS SHOWN, REFER TO E-5.0 FOR DETAILS, TYP.

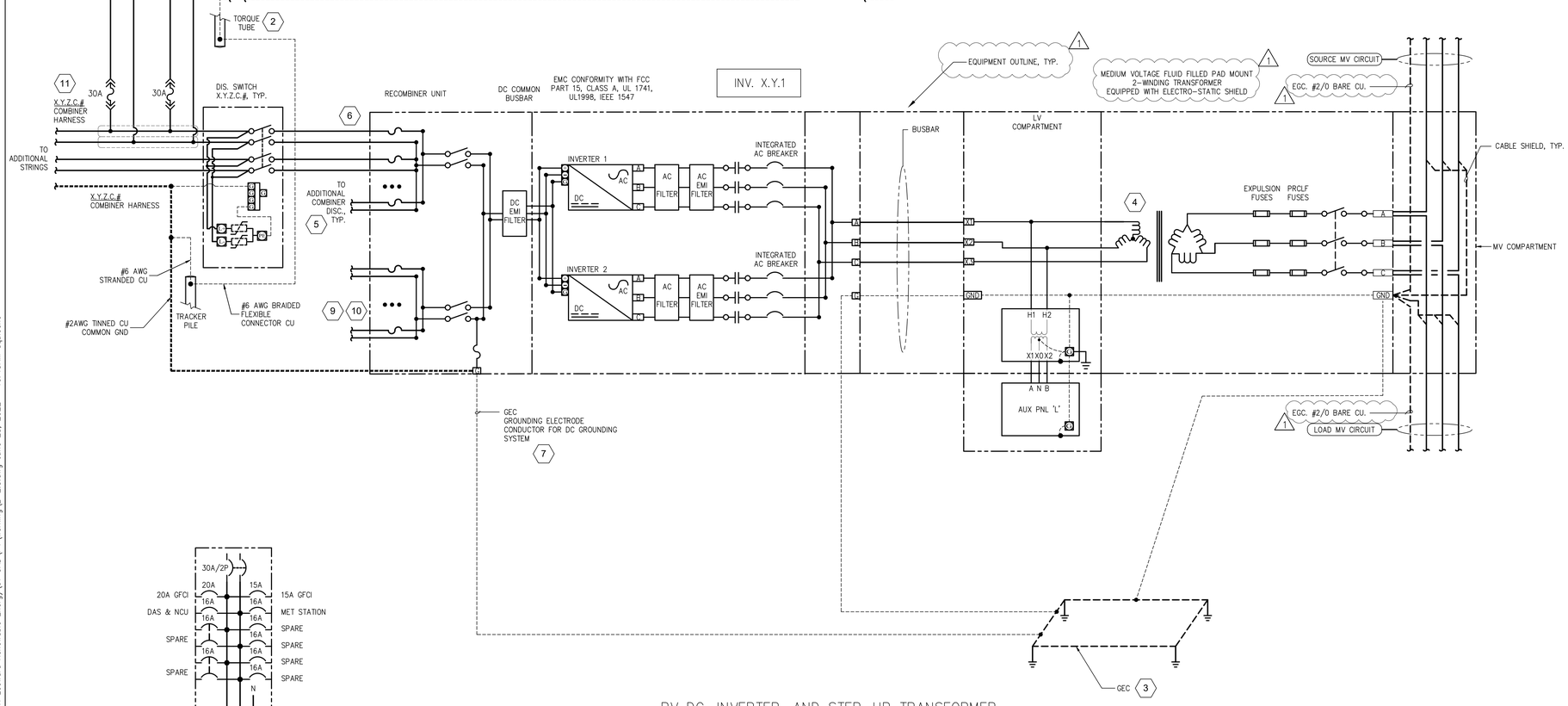
WIRING DIAGRAM FOR FS6 MODULES



1500V DC SOURCE CIRCUIT COLLECTION SHALL UTILIZE LISTED COMPONENTS SUCH AS: CONNECTORS, SPLITTERS, FUSE HOLDERS, AND OVERMOLDED ASSEMBLIES TO COMBINE SOURCE CIRCUITS AS SHOWN, REFER TO E-5.1 FOR DETAILS, TYP.

WIRING DIAGRAM FOR FS4 MODULES





PV DC, INVERTER, AND STEP-UP TRANSFORMER

PNL 'L'

1 E-2.3 WIRING DIAGRAM
SCALE: NTS

GENERAL NOTES

1. REFER TO E-2.X SERIES FOR EQUIPMENT RATINGS AND CABLE TYPES AND AC CONDUCTOR SIZES.
2. REFER TO E-4.X.Y SERIES FOR DC CONDUCTOR AND CONDUIT SIZES.
3. EQUIPMENT SHALL BE UTILITY GRADE AND APPROVED BY OWNER. THE AHJ HAS FINAL JURISDICTIONAL AUTHORITY ON CODE APPLICATION AND COMPLIANCE.
4. ALL INVERTER WIRING AND GROUNDING METHODS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES.
5. ALL DC ISOLATION SWITCHES SHALL BE LABELED "WARNING – ELECTRIC SHOCK HAZARD – DO NOT TOUCH TERMINALS" AND "TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION" PER NEC 690.17.
6. EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENT AND ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250.134 AND 250.136(A). PHOTOVOLTAIC MODULES TO BE GROUNDED USING FACTORY GROUND POINT ONLY.
7. ALL CONDUCTORS ARE COPPER UNLESS OTHERWISE NOTED. 1
8. DEVICES AND WIRING WITHIN EQUIPMENT OUTLINES ARE BY THE EQUIPMENT MANUFACTURER AND ARE SHOWN FOR REFERENCE.

KEYED NOTES

1. EACH MODULE INCLUDES OUTDOOR RATED QUICK CONNECTOR FOR MODULE INTERCONNECTION. FACTORY CONNECTORS SHALL NOT BE REMOVED OTHERWISE THE MODULE WARRANTY AND UL LISTING MAY BE INVALIDATED.
2. STRUCTURE CONFORMS TO THE STANDARD UL2703 AND IS CERTIFIED TO GROUND UL 1703 LISTED PV MODULES THROUGH THE STRUCTURE. EQUIPMENT GROUNDING CONDUCTOR FROM COMBINER HARNESS SHALL BE ATTACHED TO THE TORQUE TUBE, AND SHALL BE MIN #2AWG STRANDED COPPER.
3. GROUNDING ELECTRODE RESISTANCE SHALL BE MEASURED USING FALL OF POTENTIAL 3-POINT TESTING METHOD. RESULTS MUST BE REPORTED TO EOR FOR EVALUATION.
4. TRANSFORMER SECONDARY NEUTRAL SHALL NOT BE GROUNDED. SEE INVERTER MANUFACTURER'S INSTRUCTION FOR FURTHER INFORMATION.
5. FOR QUANTITY OF DC CONNECTIONS SEE INVERTER MANUAL.
6. IDENTIFY EACH CONDUCTOR BY PERMANENT INDELIBLY MARKED IDENTIFIER WITH STRING NUMBER, COMBINER HARNESS NUMBER AND POLARITY. EXAMPLE: 1.1.1.C.1–01(+) OR (–). THE NEGATIVE CONDUCTORS SHALL BE COLORED BLACK OR MARKED WITH BLACK ELECTRICAL TAPE AT BOTH ENDS.
7. FERROUS METAL ENCLOSURES FOR GROUNDING ELECTRODE CONDUCTORS SHALL BE ELECTRICALLY CONTINUOUS FROM THE POINT OF ATTACHMENT TO CABINETS OR EQUIPMENT TO THE GROUNDING ELECTRODE AND SHALL BE SECURELY FASTENED TO THE GROUND CLAMP OR FITTING. FERROUS METAL ENCLOSURES THAT ARE NOT PHYSICALLY CONTINUOUS FROM CABINETS OR EQUIPMENT TO THE GROUNDING ELECTRODE SHALL BE MADE ELECTRICALLY CONTINUOUS BY BONDING EACH END OF THE RACEWAY OR ENCLOSURE TO THE GROUNDING ELECTRODE CONDUCTOR. BONDING SHALL APPLY AT EACH END AND TO ALL INTERVENING FERROUS RACEWAYS, BOXES, AND ENCLOSURES BETWEEN THE CABINETS OR EQUIPMENT AND THE GROUNDING ELECTRODE.
8. BEFORE WORKING ON COMBINER HARNESS, OR DISCONNECTING ANY MODULES, SHUT DOWN INVERTER, OPEN ALL DC DISCONNECTS AT THE INVERTER, AND CONFIRM NO CURRENT IS FLOWING WITH A DC CLAMP-ON AMMETER.
9. DANGER: DO NOT TERMINATE COMBINER HARNESSES IN INVERTER WHEN COMBINER HARNESSES ARE ENERGIZED.
10. DANGER: DO NOT SERVICE DC FUSES IN INVERTER UNLESS ALL DC DISCONNECTS ARE OPEN.
11. A DISCONNECT LABEL FOR EACH DC CIRCUIT SHALL BE PLACED ON THE DISCONNECT ENCLOSURE FOR EACH CIRCUIT IT DISCONNECTS

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER

1

LEGEND

- EQUIPMENT ENCLOSURE
- DC CONDUCTOR
- AC CONDUCTOR
- GEC GROUND
- EGC GROUND
- COMMON GROUND

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO — BENJAMIN J. LIU E-80518 — PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

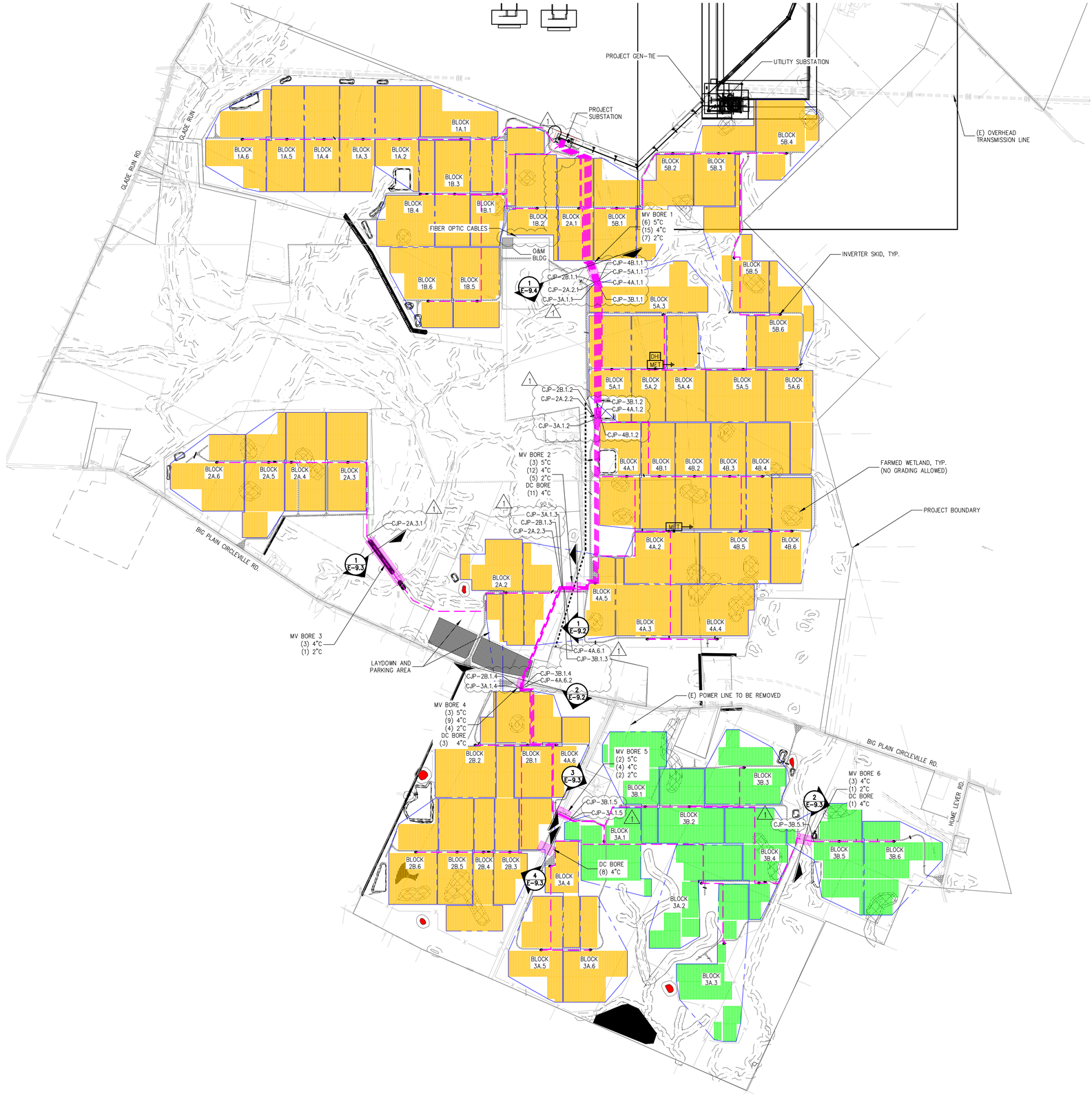
WIRING DIAGRAM

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: SGG	SCALE: NTS

SHEET NUMBER

E-2.3

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PHOTOVOLTAIC ELECTRICAL ARRAY SITE PLAN

0 600' 1200'
1" = 600'-0"

GENERAL NOTES

1. REFER FOR WIRE AND CONDUIT SCHEDULES STARTING ON SHEET E-4.1.1
2. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. REFER TO E-3.X.Y SERIES DRAWINGS FOR DC AND MV TRENCHING LAYOUT. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. NO PART OF THIS DRAWING OR SPECIFICATIONS IS INTENDED TO ALLOW A VIOLATION OF PHYSICAL WORKING SPACE REQUIREMENTS AROUND ELECTRICAL EQUIPMENT.
5. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE. INSTALL "BURIED CABLE" WARNING TAPE 12 INCHES BELOW THE GRADE IN ALL TRENCHES.
6. SEE TRENCH DETAILS STARTING ON SHEET E-9.0 FOR ACTUAL DIMENSIONS.
7. FOR DC TRENCHING AND EQUIPMENT LOCATION DETAILS REFER TO ELECTRICAL PLANS STARTING ON SHEET E-3.1.1
8. REFER TO MET/SOILING STATION DRAWINGS FOR INSTALLATION DETAILS.
9. CONTRACTOR IS RESPONSIBLE TO LOCATE AND MARK ALL ELECTRICAL CIRCUITS, ANY UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION PRIOR TO AN EXCAVATION REQUIRED FOR INSTALLATION OF DIRECT BURIED CONDUITS, DUCTS. CONTRACTOR SHALL PHYSICALLY VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. 1
10. CONDUIT ROUTING IS DIAGRAMMATIC IN NATURE. EXACT ROUTING SHALL BE COORDINATED BY THE CONTRACTOR. WHEN APPLICABLE CONTRACTOR SHALL NOT ROUTE UNDERGROUND CONDUIT UNDERNEATH THE ROADWAYS.

LEGEND

- 9 BLOCKS 120W
- 51 BLOCKS 470W
- BORE LOCATION
- BLOCK OUTLINE
- UNDERGROUND MV COLLECTION AND FIBER COMMUNICATIONS
- DHI — DIFFUSE HORIZONTAL IRRADIANCE SENSOR. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.
- MET — MET SYSTEM. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.

BORE NAMING CONVENTION & SUMMARY

B1-MV-1A.1 (EXAMPLE: B1-MV-1A.1)

- EQUIPMENT NUMBER
- BLOCK NUMBER
- MV
- BORE #

MV BORE 1:
B1-MV-2A.2
B1-MV-2B.1
B1-MV-3A.1
B1-MV-3B.1
B1-MV-4A.1
B1-MV-4B.1
B1-MV-5A.1

MV BORE 2:
B2-MV-2A.2
B2-MV-2B.1
B2-MV-3A.1
B2-MV-3B.1
B2-MV-4A.6

MV BORE 3:
B3-MV-2A.3

MV BORE 4:
B4-MV-2B.1
B4-MV-3A.1
B4-MV-3B.1
B4-MV-4A.6

MV BORE 5:
B5-MV-3B.1
B5-MV-3A.1

MV BORE 6:
B6-MV-3B.5

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
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ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL
STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
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PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
PHOTOVOLTAIC ARRAY
ELECTRICAL SITE PLAN

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: SSS	SCALE: 1" = 600'

SHEET NUMBER
E-3.0

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FENCE GROUNDING SITE PLAN

0 600' 1200'

1" = 600'-0"

N

GENERA NOTES

1. FENCE GROUNDING LOCATION ARE IDENTIFIED AS BEST A PRACTICABLE BASED ON AVAILABLE INFORMATION. FIELD CONDITIONS MAY REQUIRE ADDITIONAL FENCE GROUNDING REQUIREMENTS. CONTRACTOR SHALL FOLLOW FENCE AND GATE GROUNDING NOTES BELOW.

FENCE AND GATE GROUNDING NOTES

1. PERIMETER FENCES SHALL NOT BE DIRECTLY CONNECTED TO SUBSTATION FENCES. THERE MUST BE AN ISOLATION PANEL BETWEEN THEM, OR IF THE SUBSTATION FENCE IS COMPLETELY WITHIN THE PV PERIMETER FENCE, IT MUST BE OFF BY AT LEAST 6' (NESC 110A1). IT IS RECOMMENDED TO USE A 8' MINIMUM, 10' IS PREFERRED.
2. METAL ISOLATION PANELS COULD CAUSE SAFETY ISSUES WHEN LOCATED NEAR HIGH VOLTAGE LINES, SO NON-METALLIC ISOLATION PANELS SHOULD BE USED.
3. IT IS RECOMMENDED TO GROUND FENCES RUNNING BELOW TRANSMISSION LINES AND TO PROVIDE ISOLATION PANELS ON EITHER SIDE OF THE CROSSING.
4. WHEN THE FENCE IS RUNNING PARALLEL TO HIGH VOLTAGE LINES THESE SHOULD BE GROUNDED EVERY 150' WITH A GROUND ROD.
5. WHEN A FENCE RUNS PARALLELS AND WITHIN 10' OF DIRECT BURY MV CABLES IT SHOULD BE GROUNDED EVERY 150' WITH A GROUND ROD.
6. PER BPA RECOMMENDATIONS THE FENCE DOES NOT NEED TO BE GROUNDED WHEN ALL ARE MET:
   - 6.1. THE FENCE IS LOCATED OUTSIDE RIGHT-OF- WAY.
   - 6.2. IT IS LOCATED MINIMUM 50 FEET OR THE HEIGHT OF THE TRANSMISSION TOWER/STRUCTURES (WHICHEVER IS GREATER).
   - 6.3. IT PARALLELS THE LINE WITHIN 125 FEET FROM OUTSIDE WIRE FOR LESS THAN 150 FEET.
   - 6.4. IT PARALLELS THE LINE WITHIN 125 TO 250 FEET FROM OUTSIDE WIRE FOR LESS THAN 6000 FEET.
7. ALL GATES MUST BE GROUNDED.

LEGEND

X	FENCE
XG XG	REPRESENTS AREAS WHERE FENCE GROUNDING IS REQUIRED. PROVIDE GROUND ROD AT ENDS, CORNERS, AND AT 150' INTERVALS
ISO	10' ISOLATION PANEL(WHERE SHOWN), REFER TO 4/E-8.3
	DIRECT BURY MV CABLE
OHE	OVERHEAD ELECTRICAL LINES

1 NEW SHEET

FOR CONSTRACTION

SOLV ENERGY

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STAMP/SEAL

STATE OF OHIO
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E-80518
PROFESSIONAL ENGINEER

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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

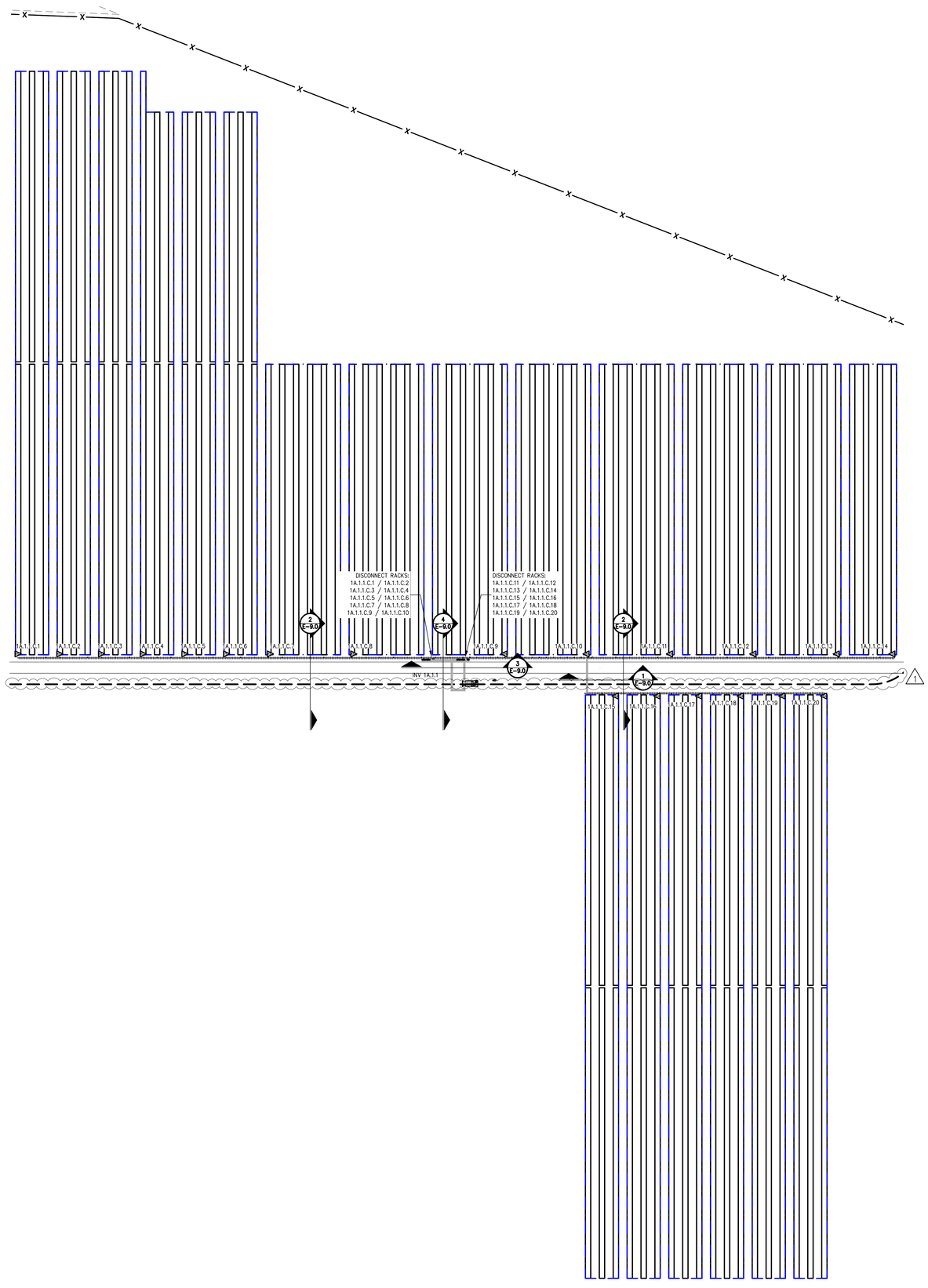
FENCE GROUNDING SITE PLAN

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: SSS	SCALE: 1" = 600'

SHEET NUMBER

E-3.0.G

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1 - BLOCK 1A.1 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

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3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS (1)
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE, REFER TO CIVIL PLANS FOR DETAILS

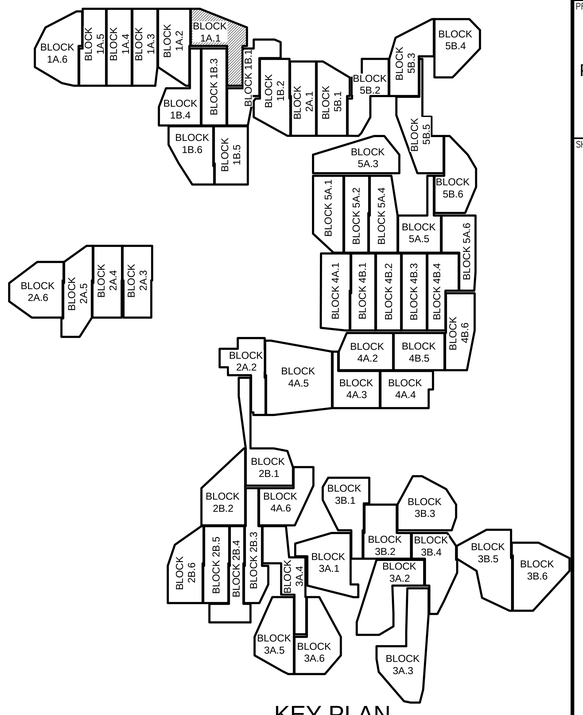
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO — BENJAMIN J. LIU E-80518 — PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

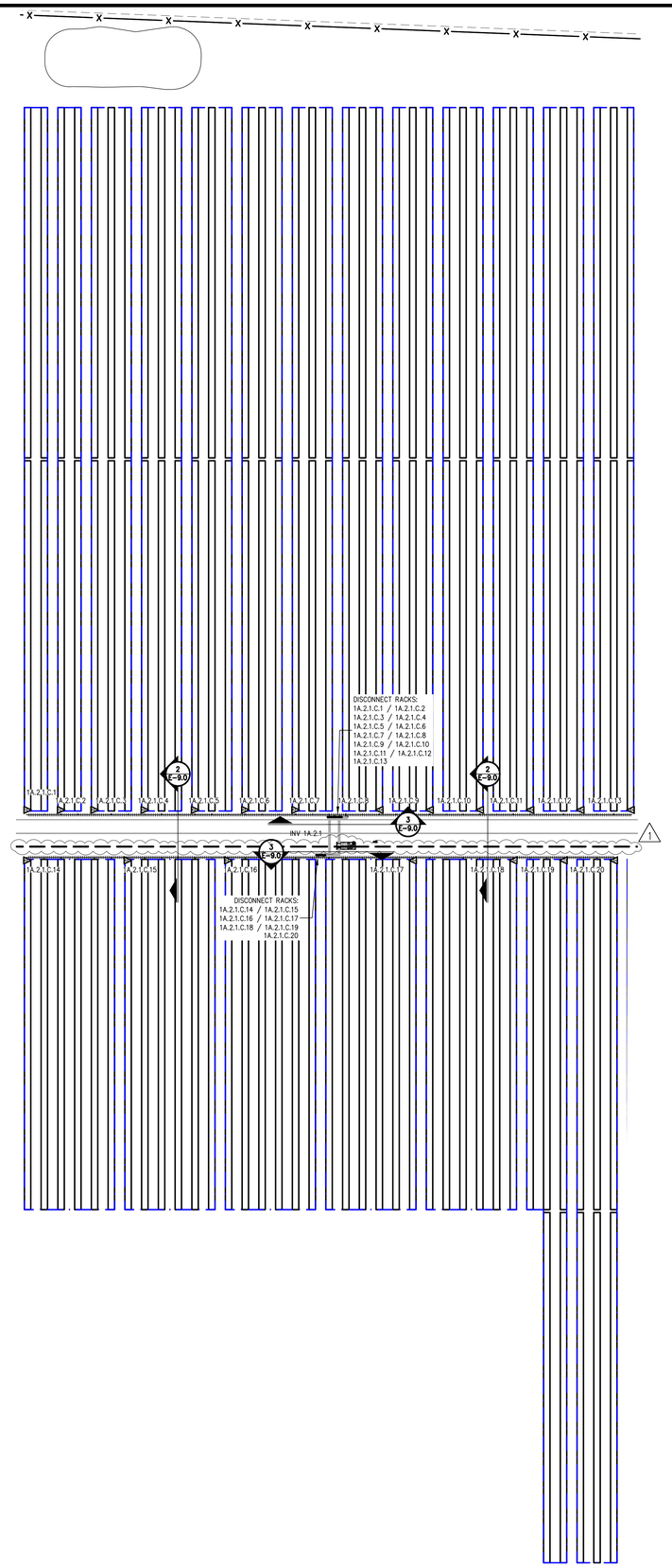
BLOCK 1A.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.1A.1

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1 BLOCK 1A.2 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

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3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0' FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
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7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

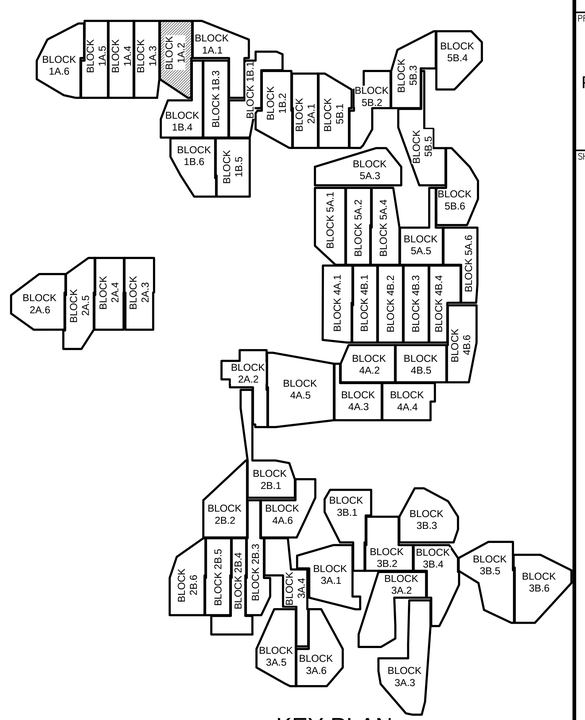
EQUIPMENT LEGEND

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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
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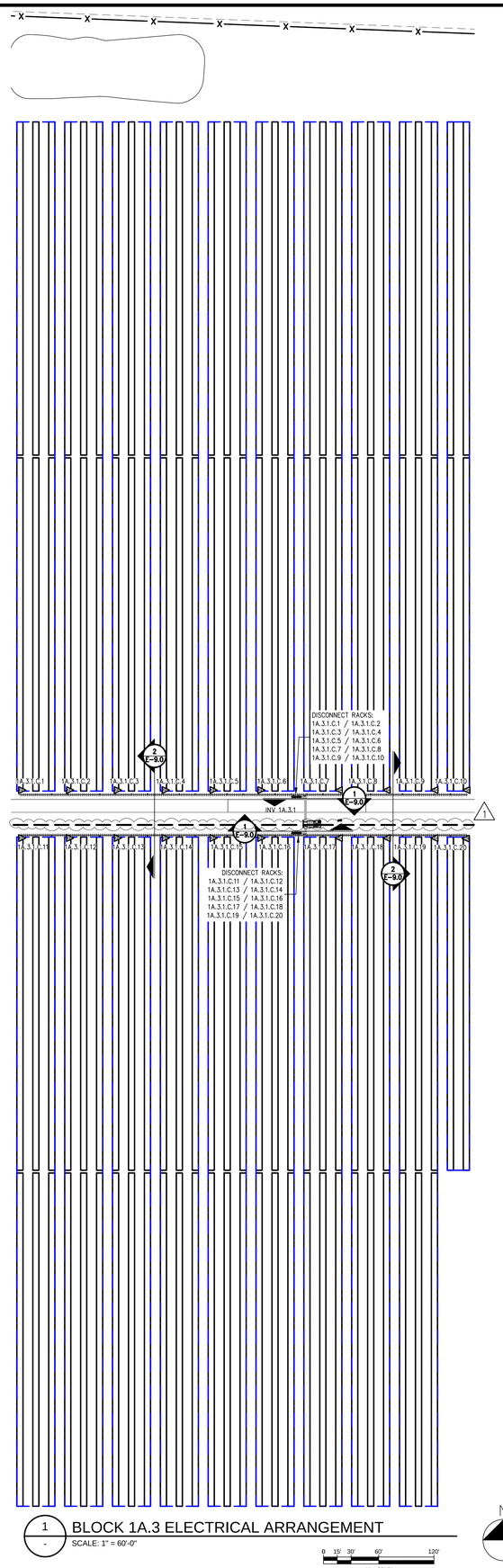
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1A.2 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1A.2

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1 BLOCK 1A.3 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
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10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

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- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
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- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

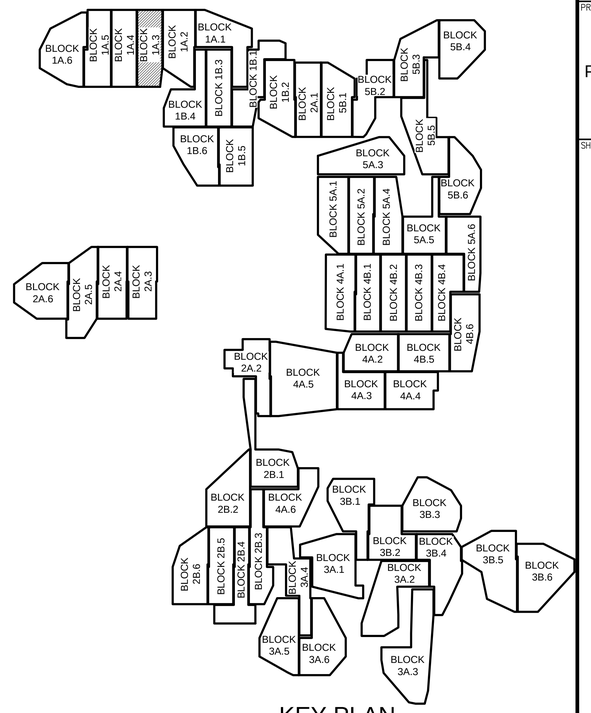
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KEY PLAN
NTS

FOR CONSTRACTION

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BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL
STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

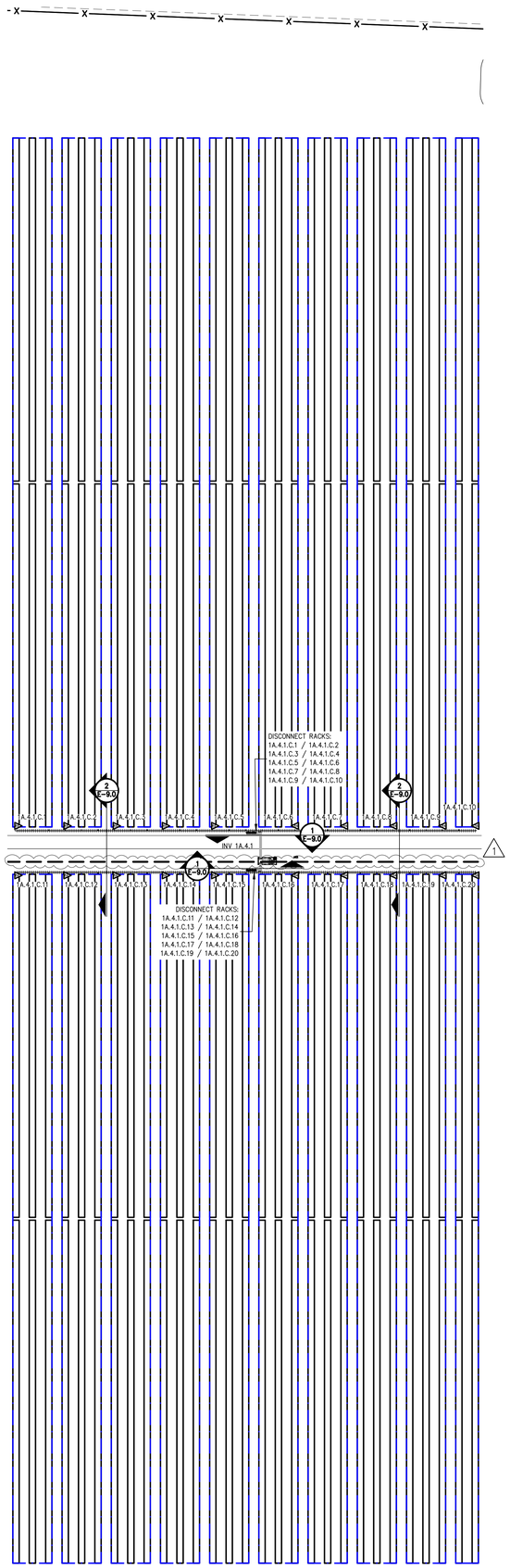
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1A.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1A.3

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GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

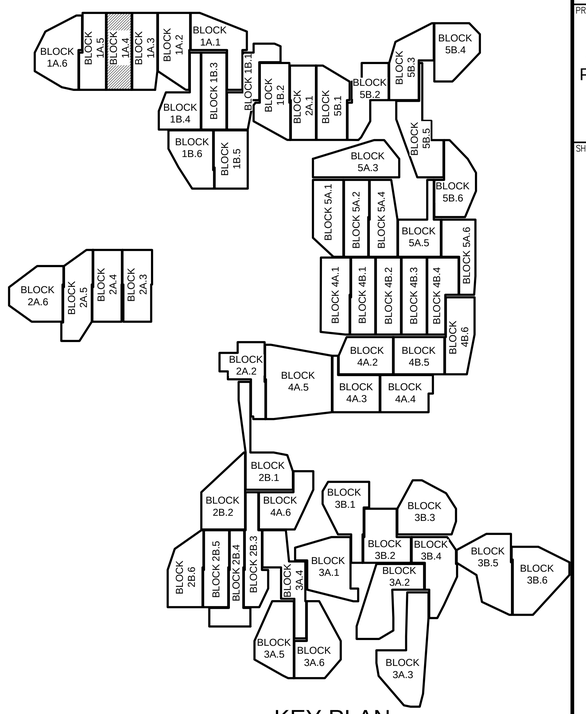
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

1 BLOCK 1A.4 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

FOR CONSTRACTION

SOLV ENERGY

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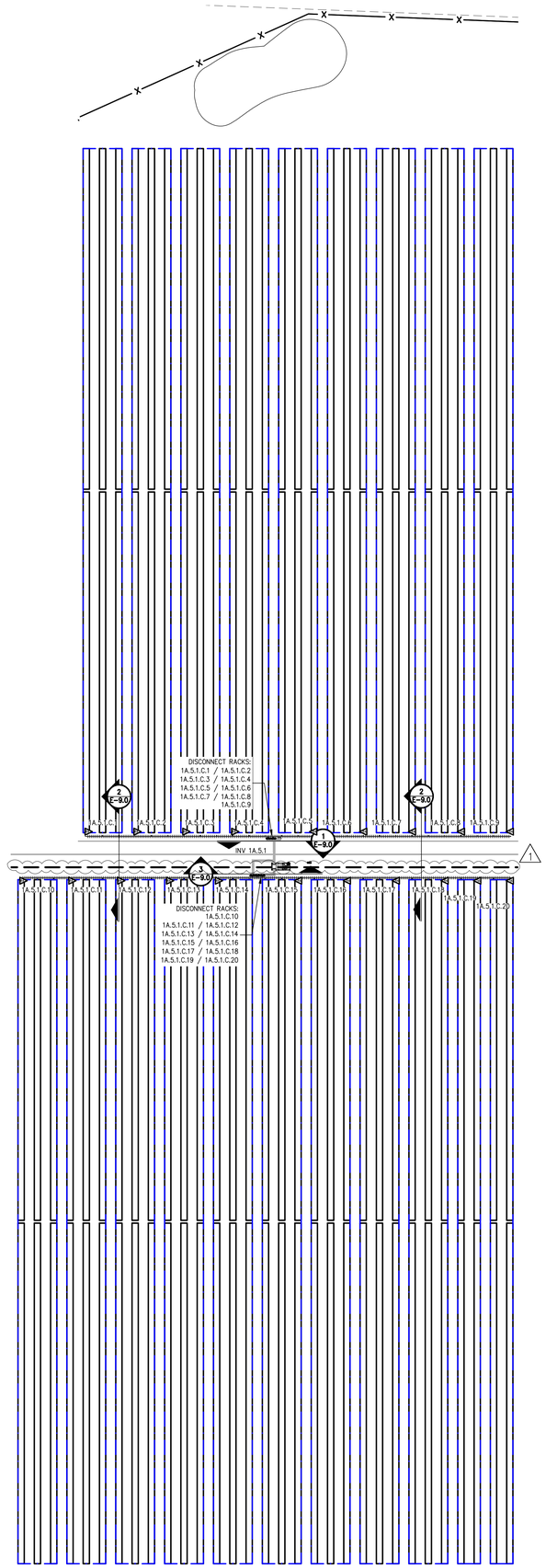
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1A.4 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1A.4

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9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

EQUIPMENT LEGEND

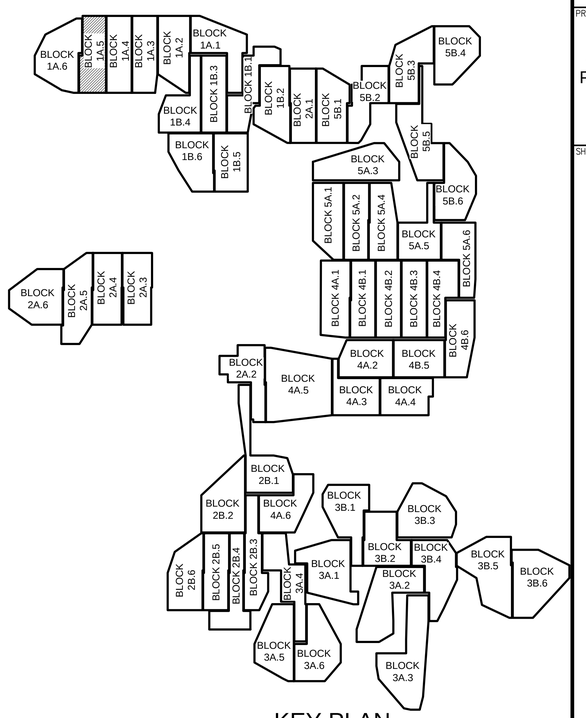
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

1 — BLOCK 1A.5 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

FOR CONSTRACTION

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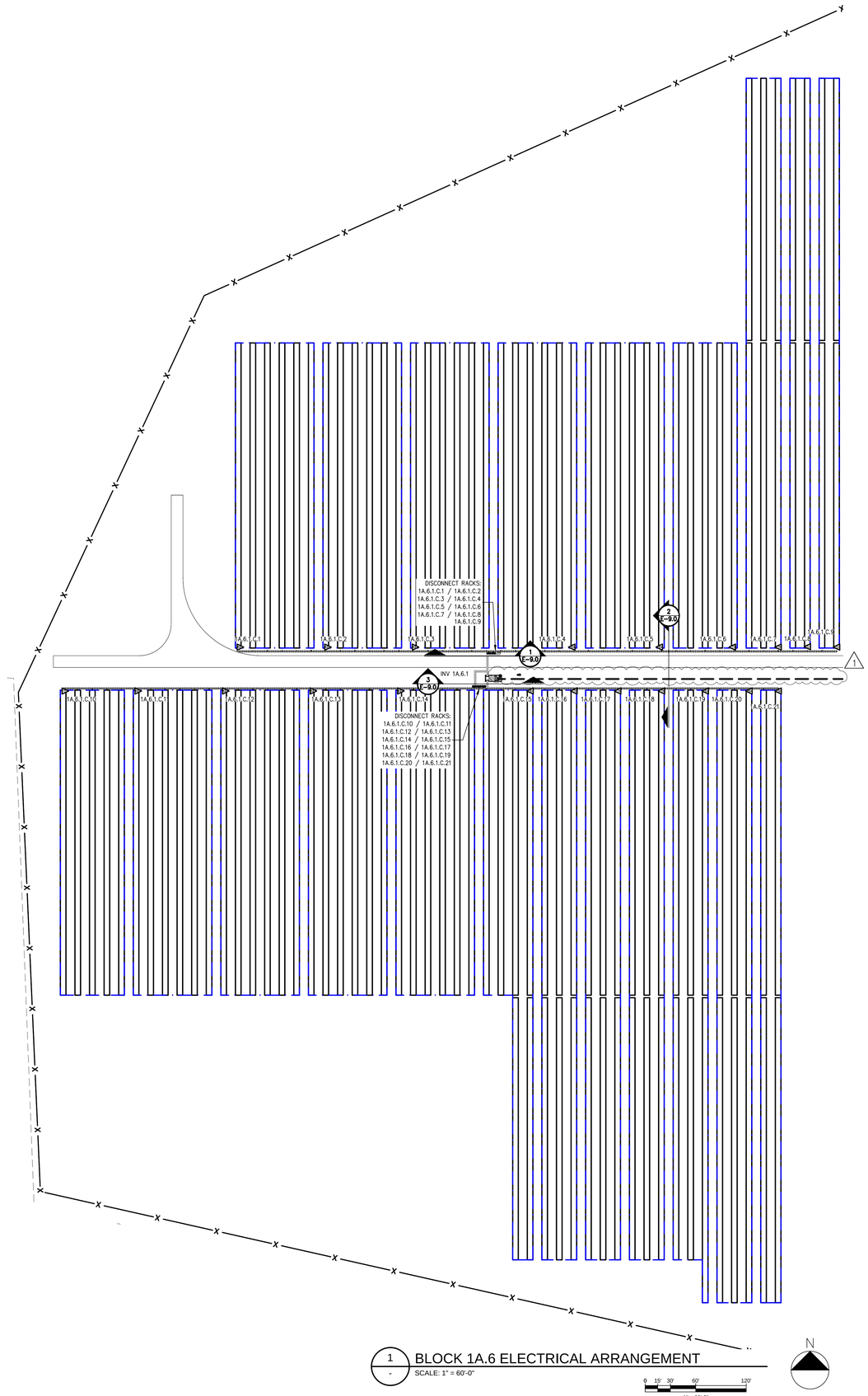
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1A.5 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1A.5

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1 BLOCK 1A.6 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

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8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
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11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

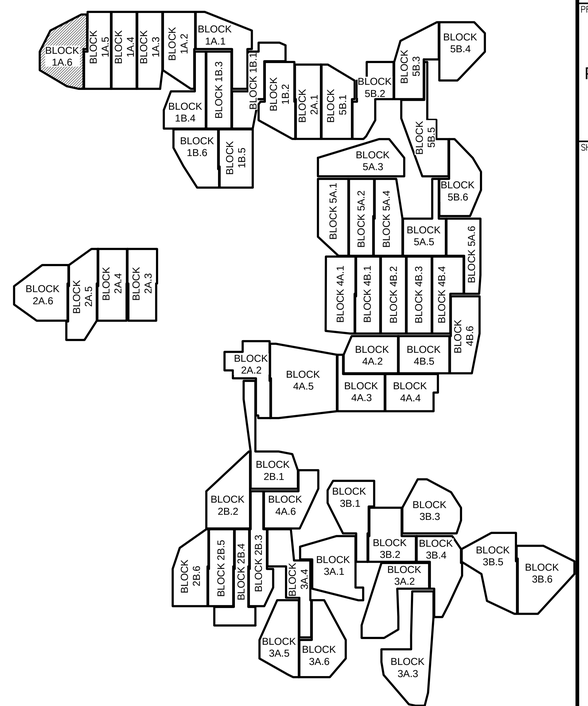
EQUIPMENT LEGEND

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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

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ALAMEDA, CA 94501 510.521.3773

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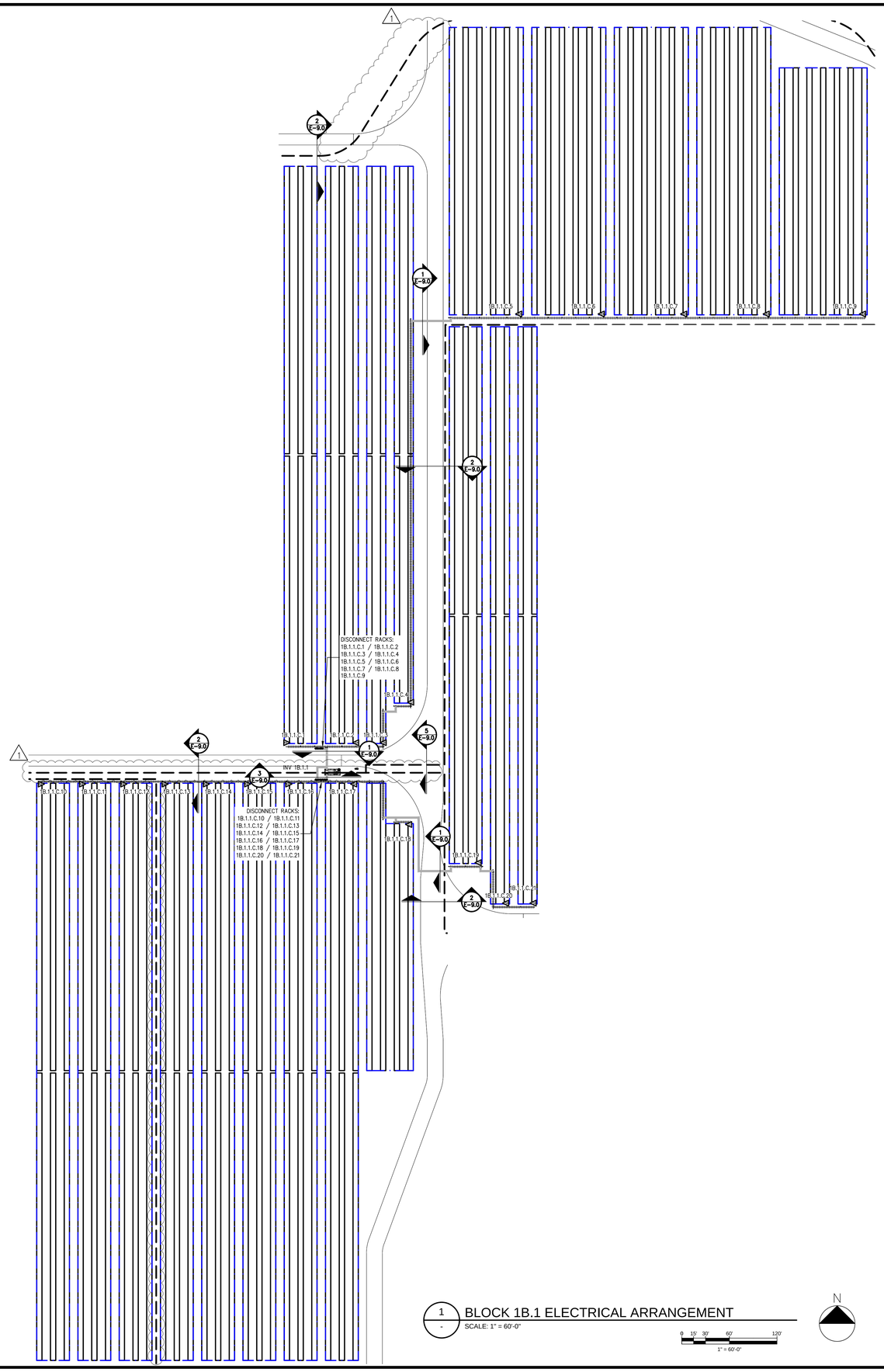
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1A.6 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1A.6

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1 - BLOCK 1B.1 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

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LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

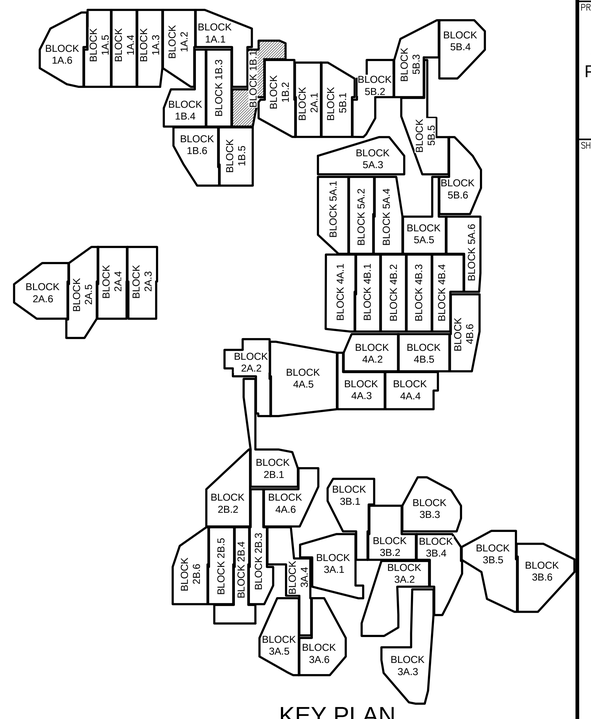
EQUIPMENT LEGEND

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COMBINER HARNESS NAMING CONVENTION

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- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

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PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

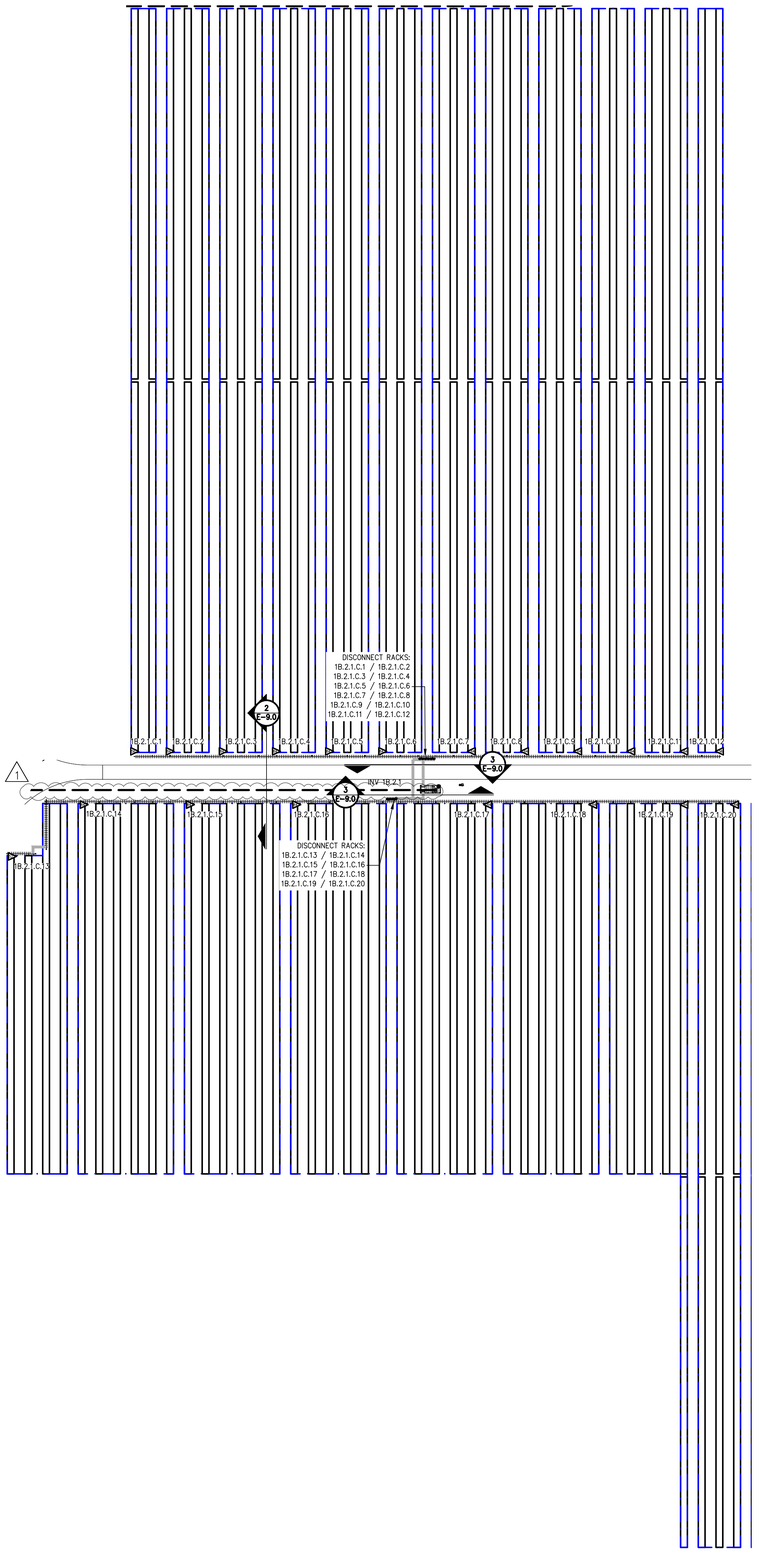
BLOCK 1B.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.1B.1

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1 BLOCK 1B.2 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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LINETYPE LEGEND

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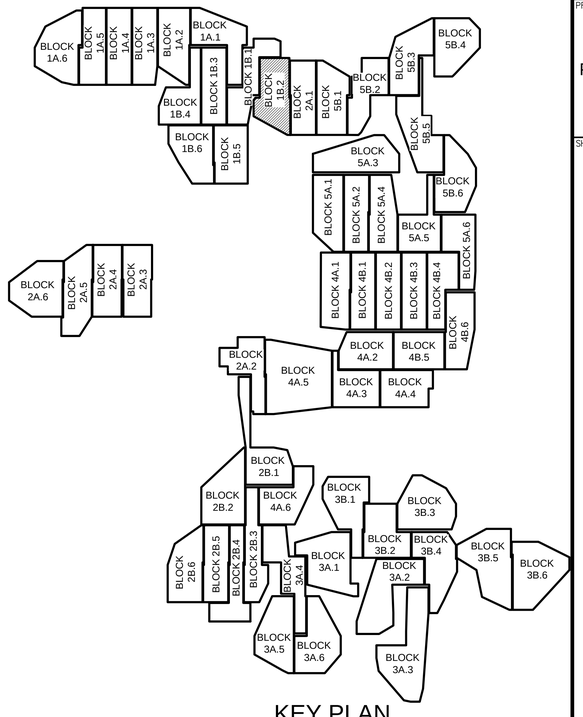
EQUIPMENT LEGEND

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KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

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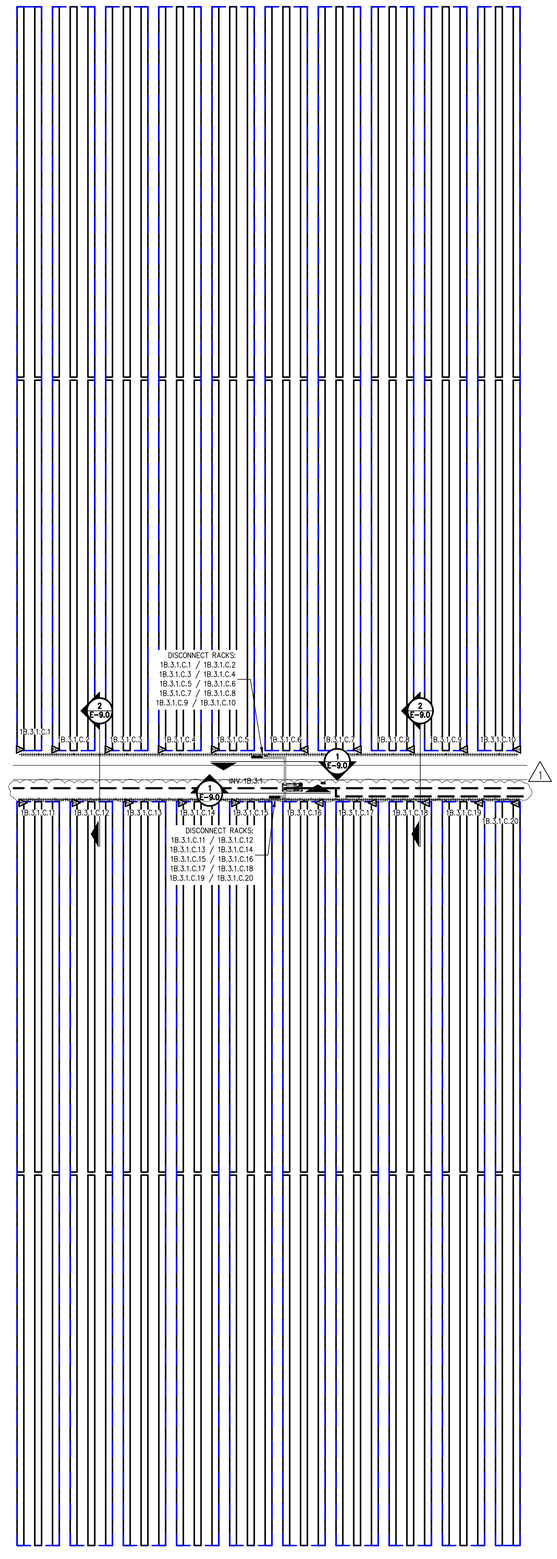
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1B.2 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1B.2

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1 BLOCK 1B.3 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

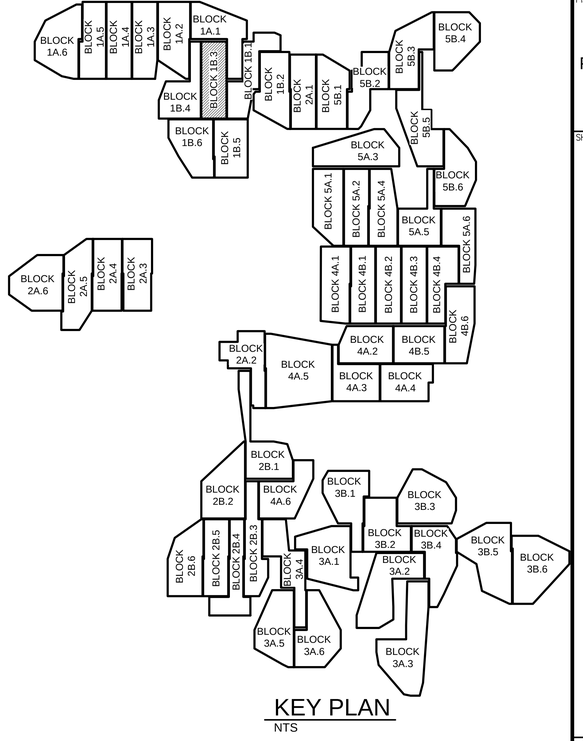
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
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1	ISSUE FOR CONSTRUCTION	06/23/2022

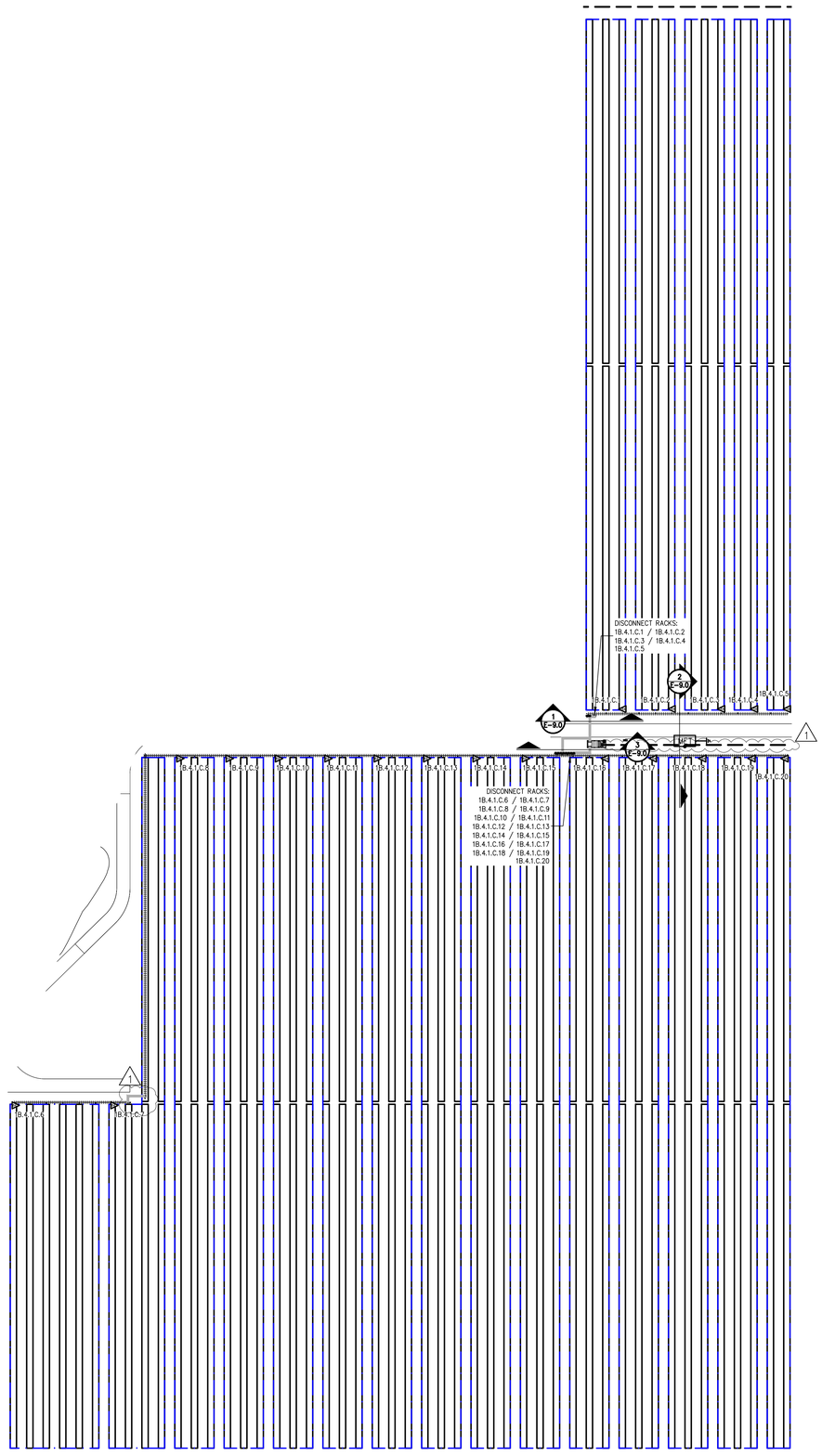
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 1B.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.1B.3

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1 BLOCK 1B.4 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0' FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
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10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING. REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

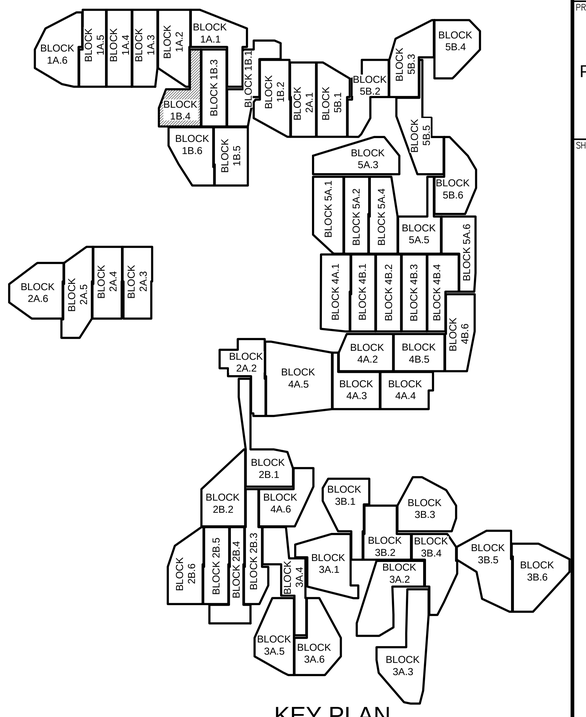
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING. MODULES NOT SHOWN FOR CLARITY.
- DHI — DIFFUSE HORIZONTAL IRRADIANCE SENSOR. REFER TO DRAWING M-1.0 FOR ADDITIONAL COMPONENTS
- MET — MET SYSTEM. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
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ALAMEDA, CA 94501 510.521.3773

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STATE OF OHIO
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E-80518
PROFESSIONAL ENGINEER

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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

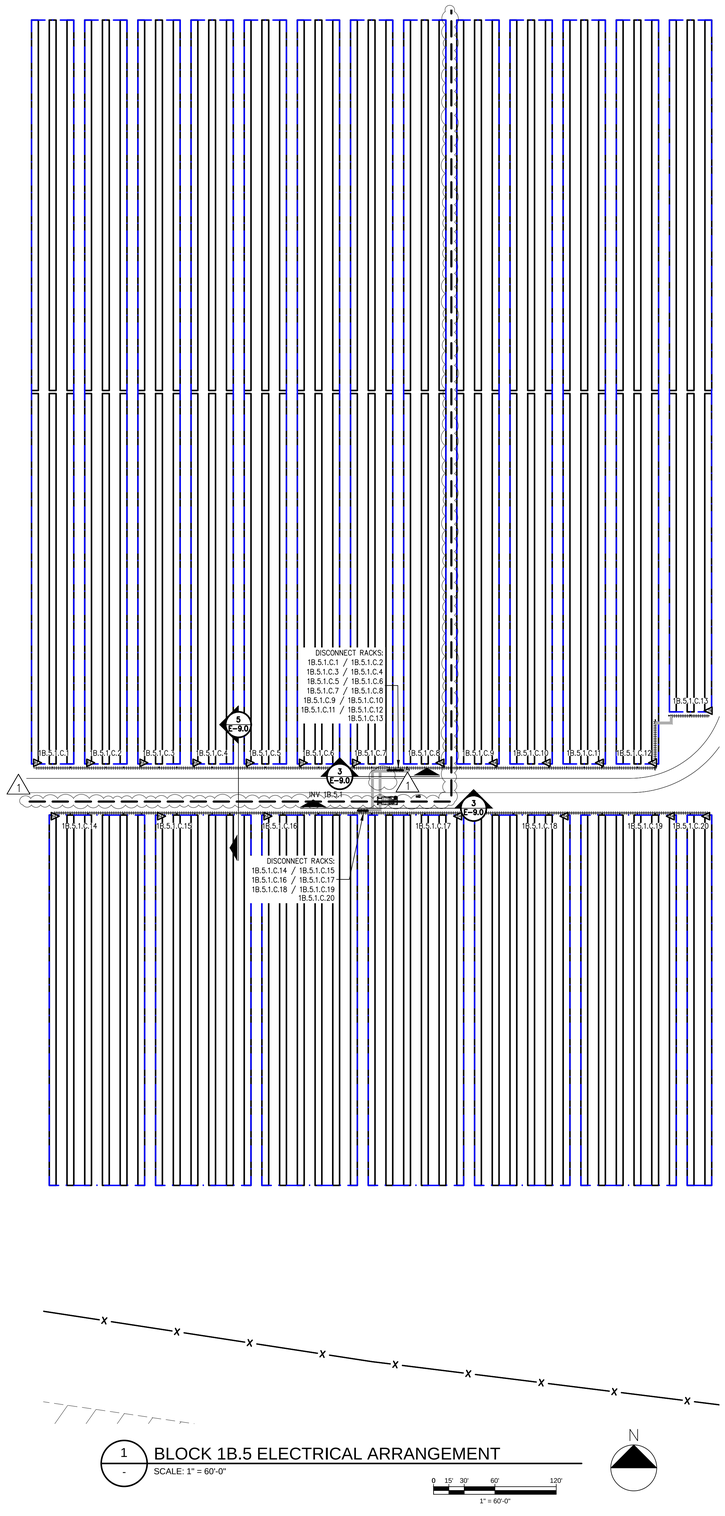
BLOCK 1B.4 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.1B.4

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1 - BLOCK 1B.5 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

N

GENERAL NOTES

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4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
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10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS (1)
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

EQUIPMENT LEGEND

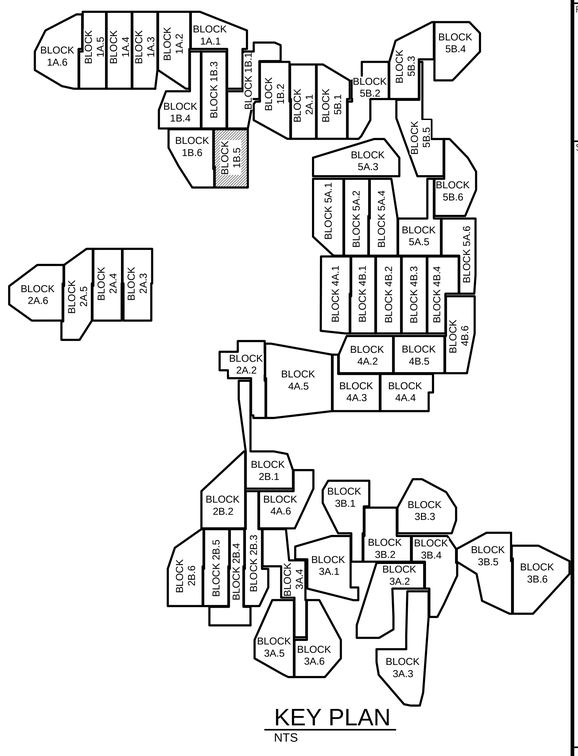
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  MODULES NOT SHOWN FOR CLARITY.
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

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ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

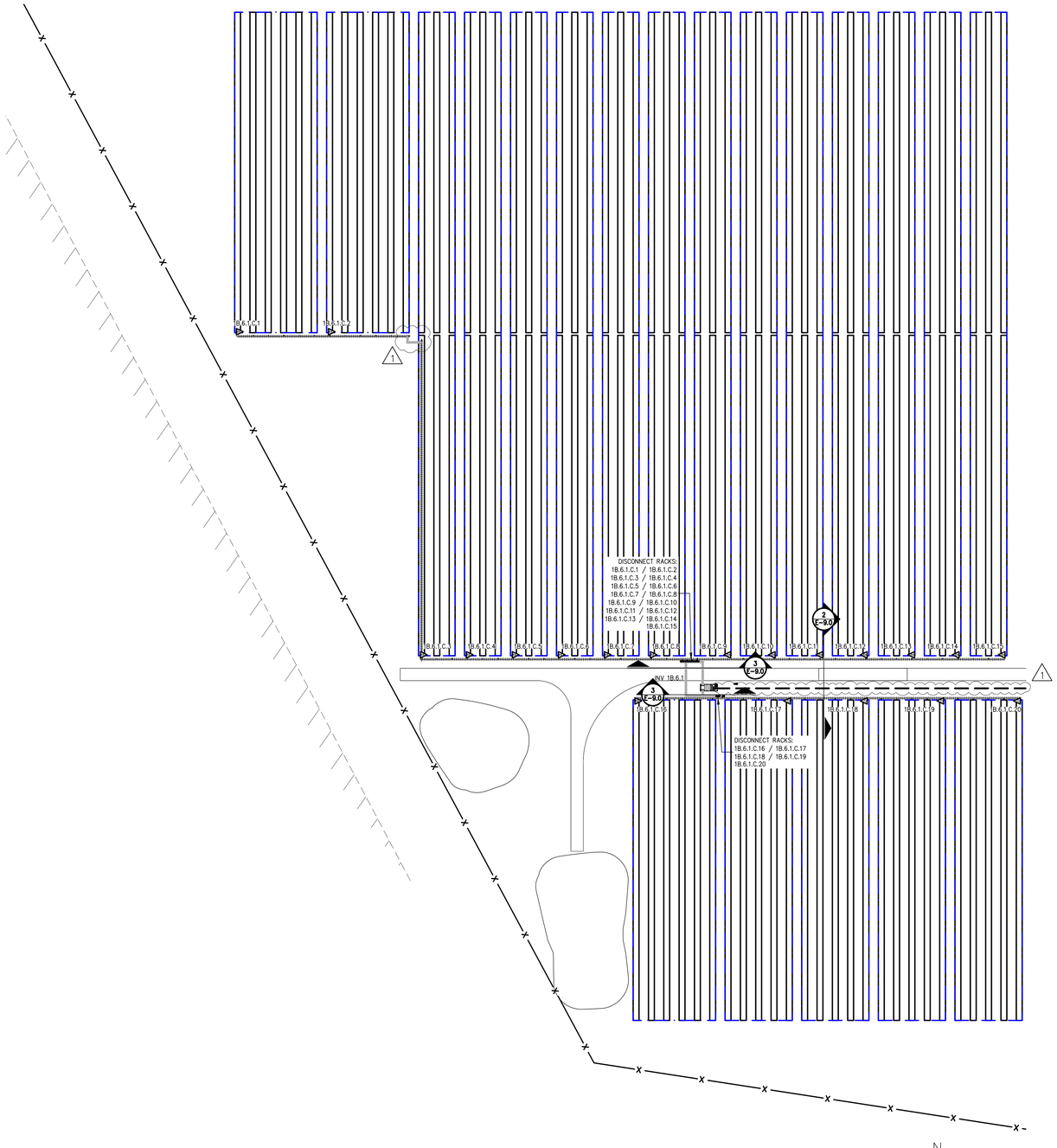
BLOCK 1B.5 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.1B.5

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1 - BLOCK 1B.6 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

GENERAL NOTES

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11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

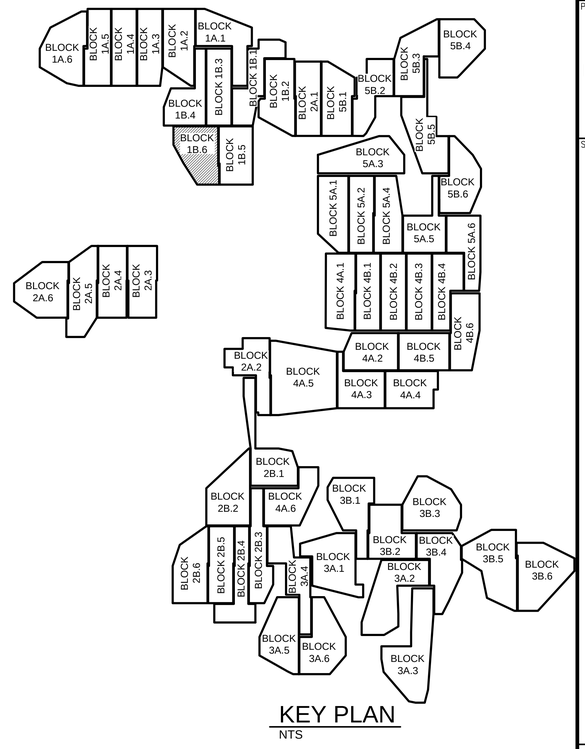
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

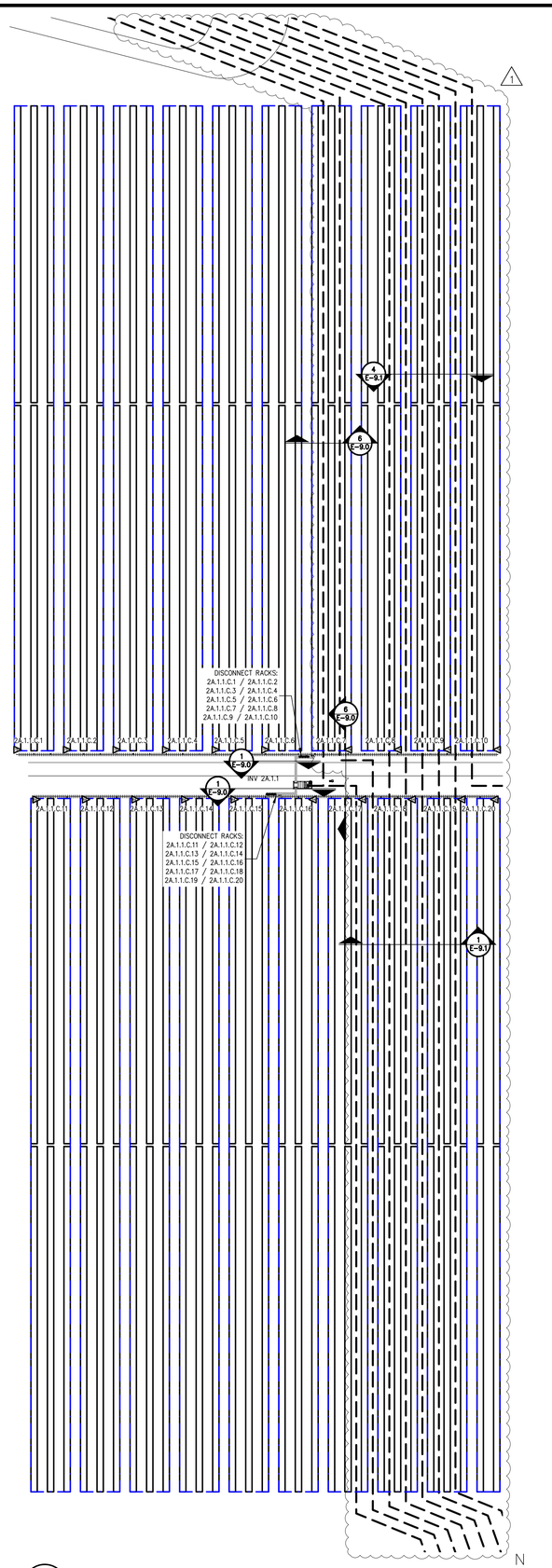
BLOCK 1B.6 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.1B.6

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1 - BLOCK 2A.1 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

GENERAL NOTES

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LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS (1)
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

EQUIPMENT LEGEND

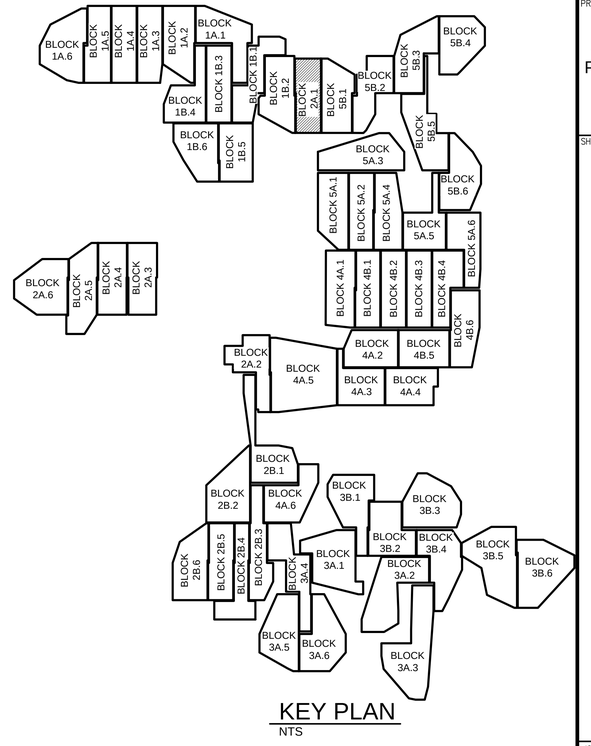
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

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- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

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SINGLE-AXIS TRACKER
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196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

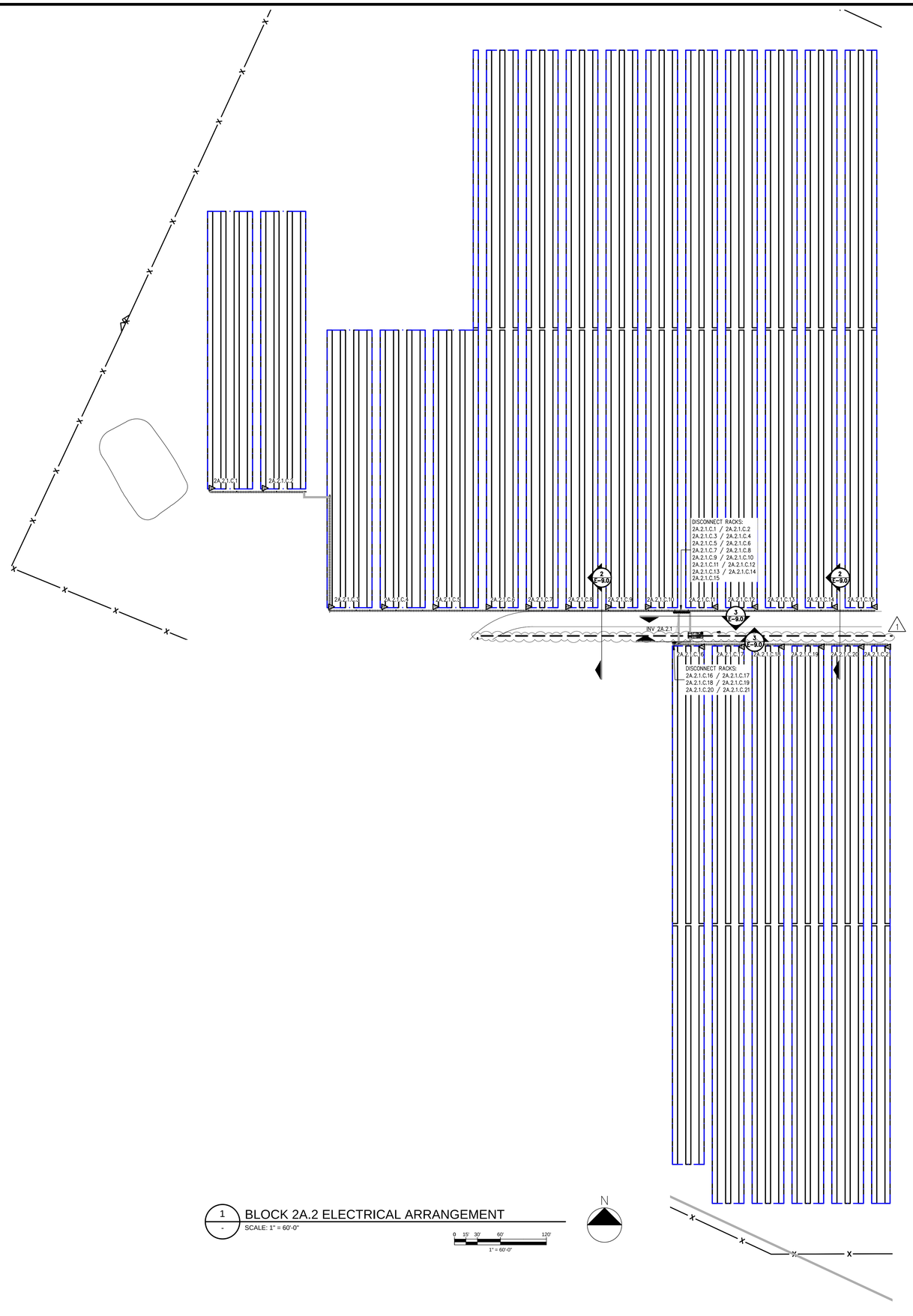
BLOCK 2A.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2A.1

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1 BLOCK 2A.2 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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LINETYPE LEGEND

- DC TRENCH
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- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
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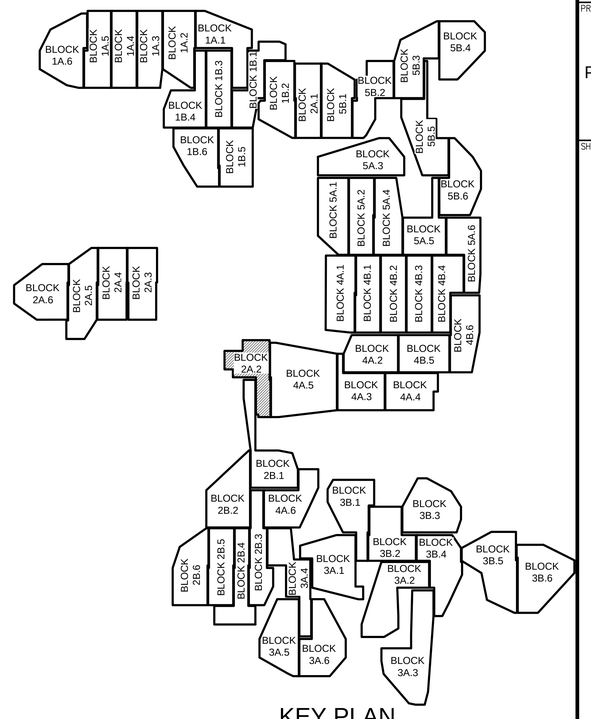
EQUIPMENT LEGEND

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PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

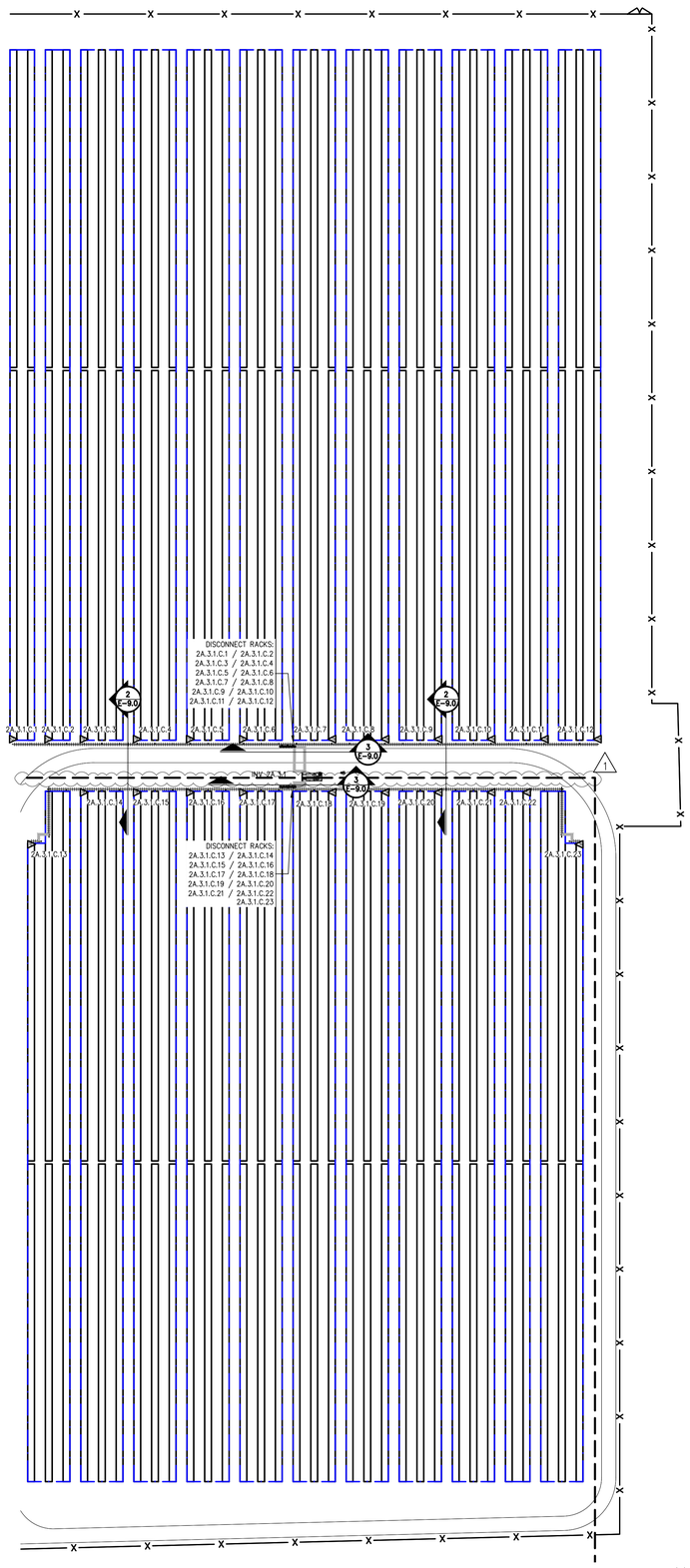
BLOCK 2A.2 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2A.2

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1 - BLOCK 2A.3 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

EQUIPMENT LEGEND

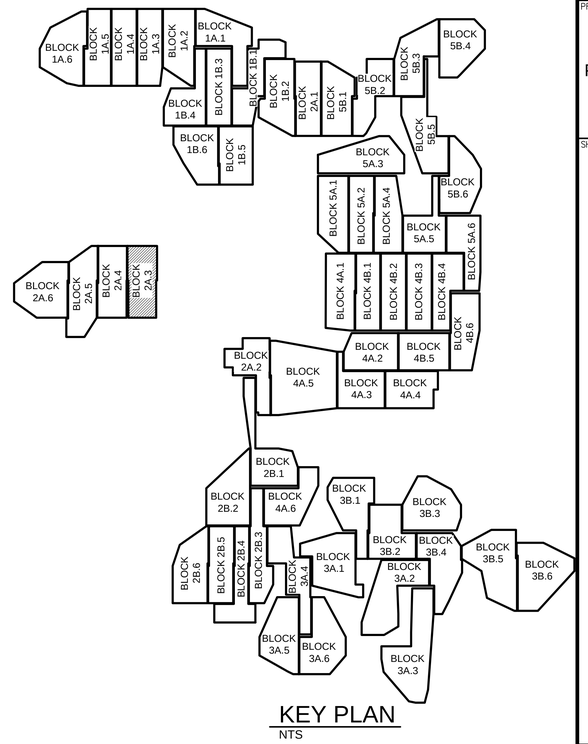
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- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.

  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

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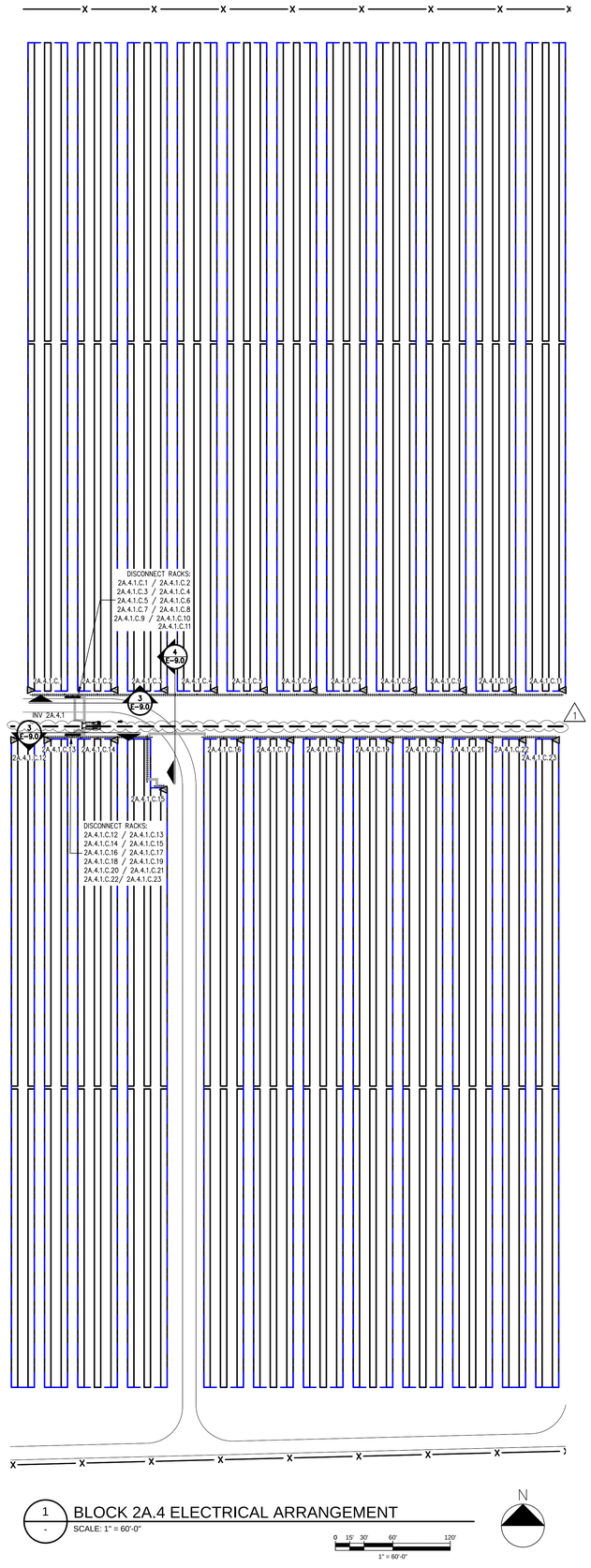
BLOCK 2A.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2A.3

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1 BLOCK 2A.4 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
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8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- 1 — MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE, REFER TO CIVIL PLANS FOR DETAILS

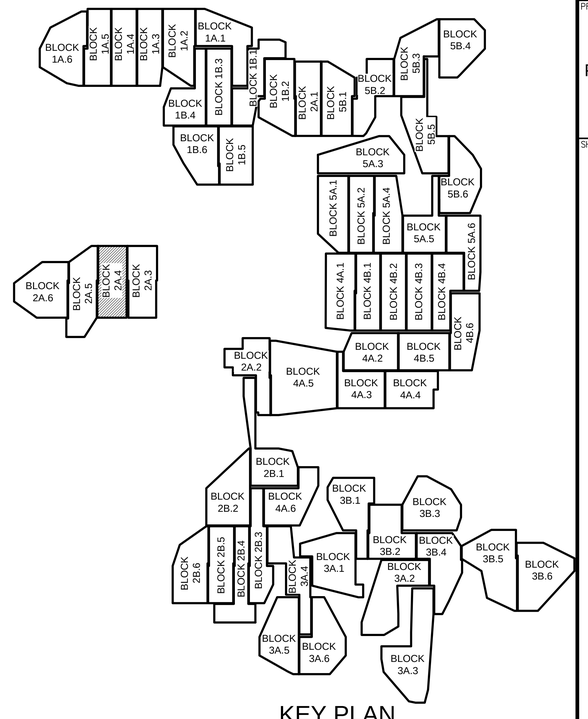
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

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CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

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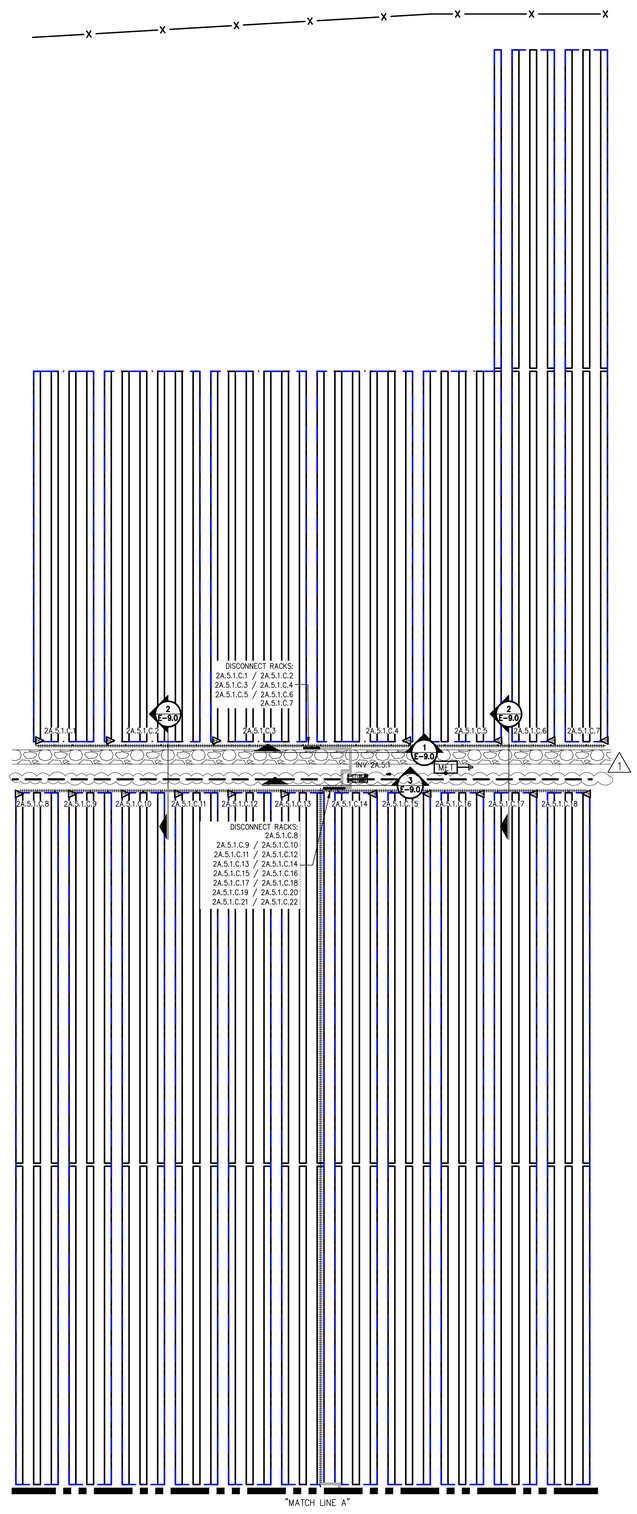
BLOCK 2A.4 ELECTRICAL ARRANGEMENT

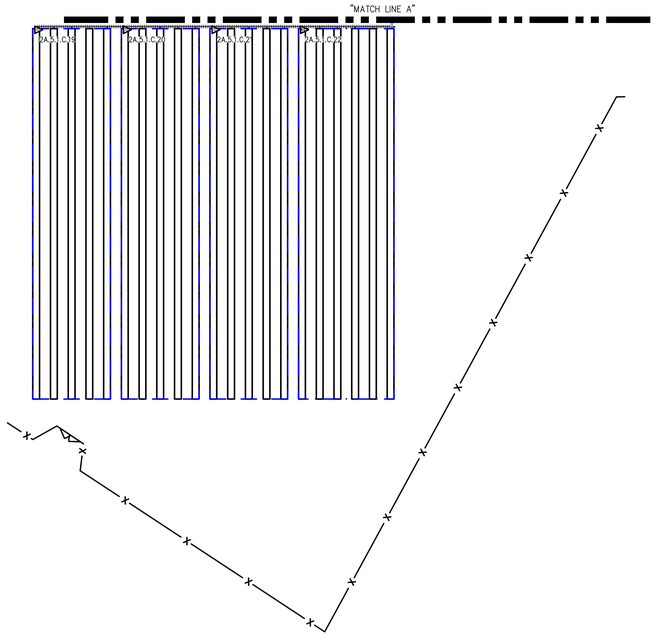
JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2A.4

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1 - BLOCK 2A.5 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

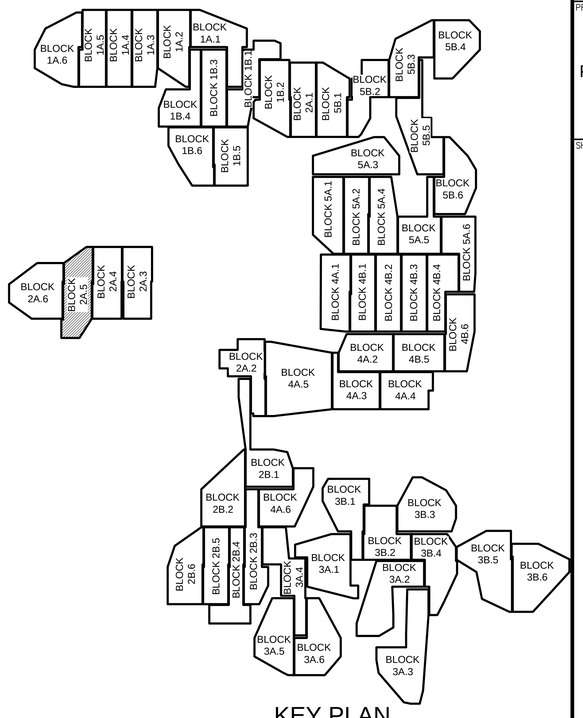
EQUIPMENT LEGEND

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- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING. MODULES NOT SHOWN FOR CLARITY.
- DIH — DIFFUSE HORIZONTAL IRRADIANCE SENSOR. REFER TO DRAWING E-8.0 FOR ADDITIONAL INFORMATION
- MET — MET SYSTEM. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

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SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

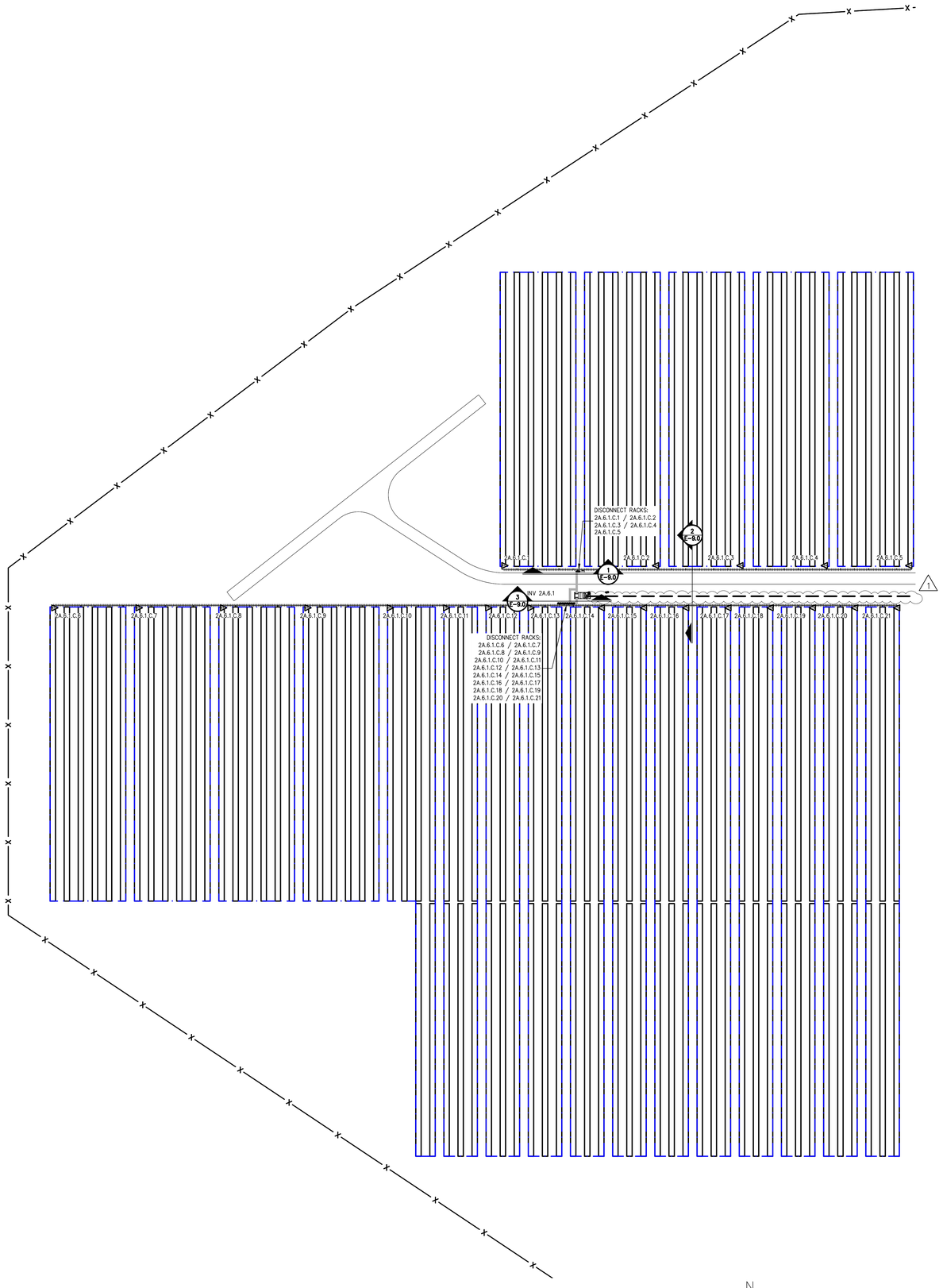
BLOCK 2A.5 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2A.5

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1 / - BLOCK 2A.6 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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LINETYPE LEGEND

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- COMBINER HARNESS AREA BOUNDARY
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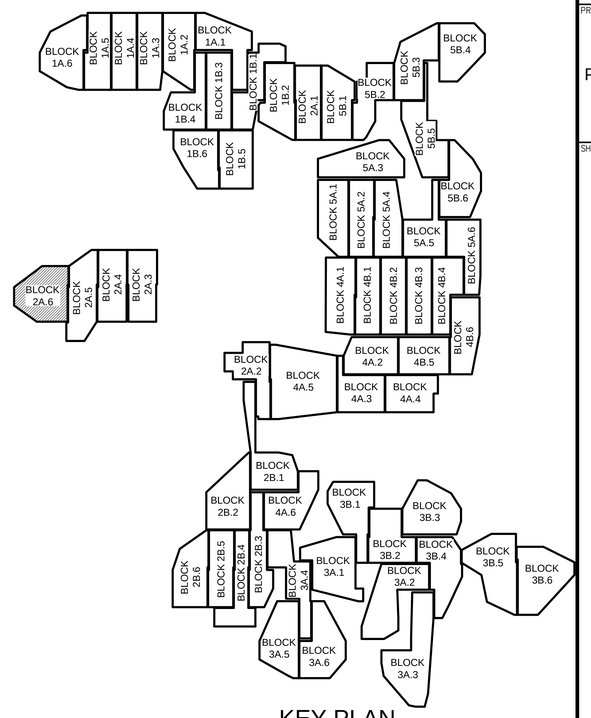
EQUIPMENT LEGEND

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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- COMBINER HARNESS NUMBER
- EQUIPMENT DESIGNATION
- INVERTER NUMBER
- BLOCK NUMBER
- MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

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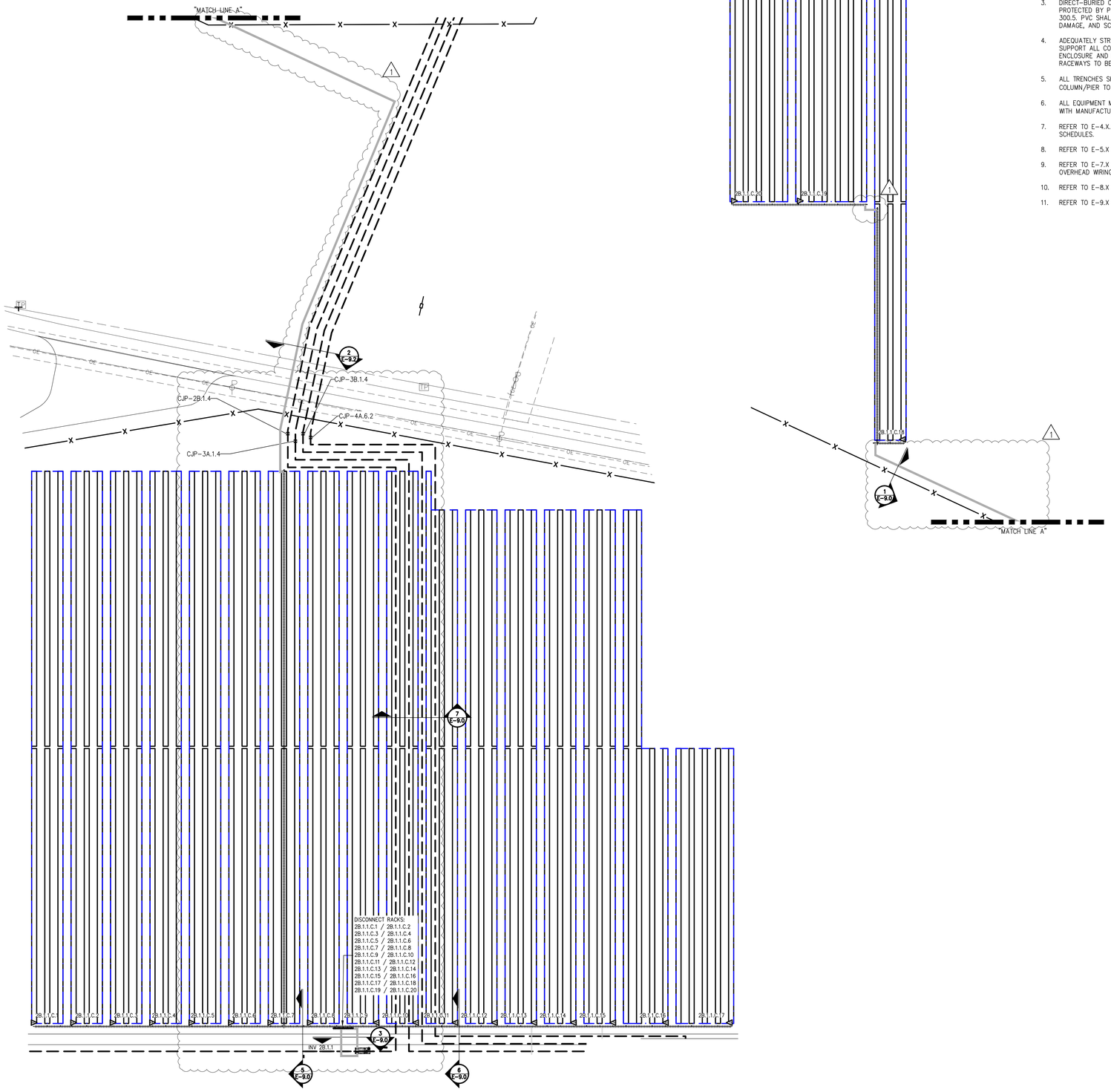
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 2A.6 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.2A.6

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1 BLOCK 2B.1 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

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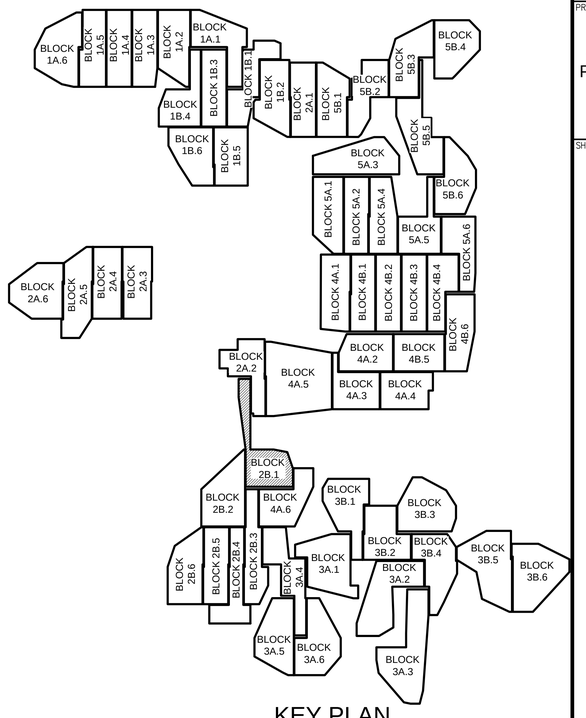
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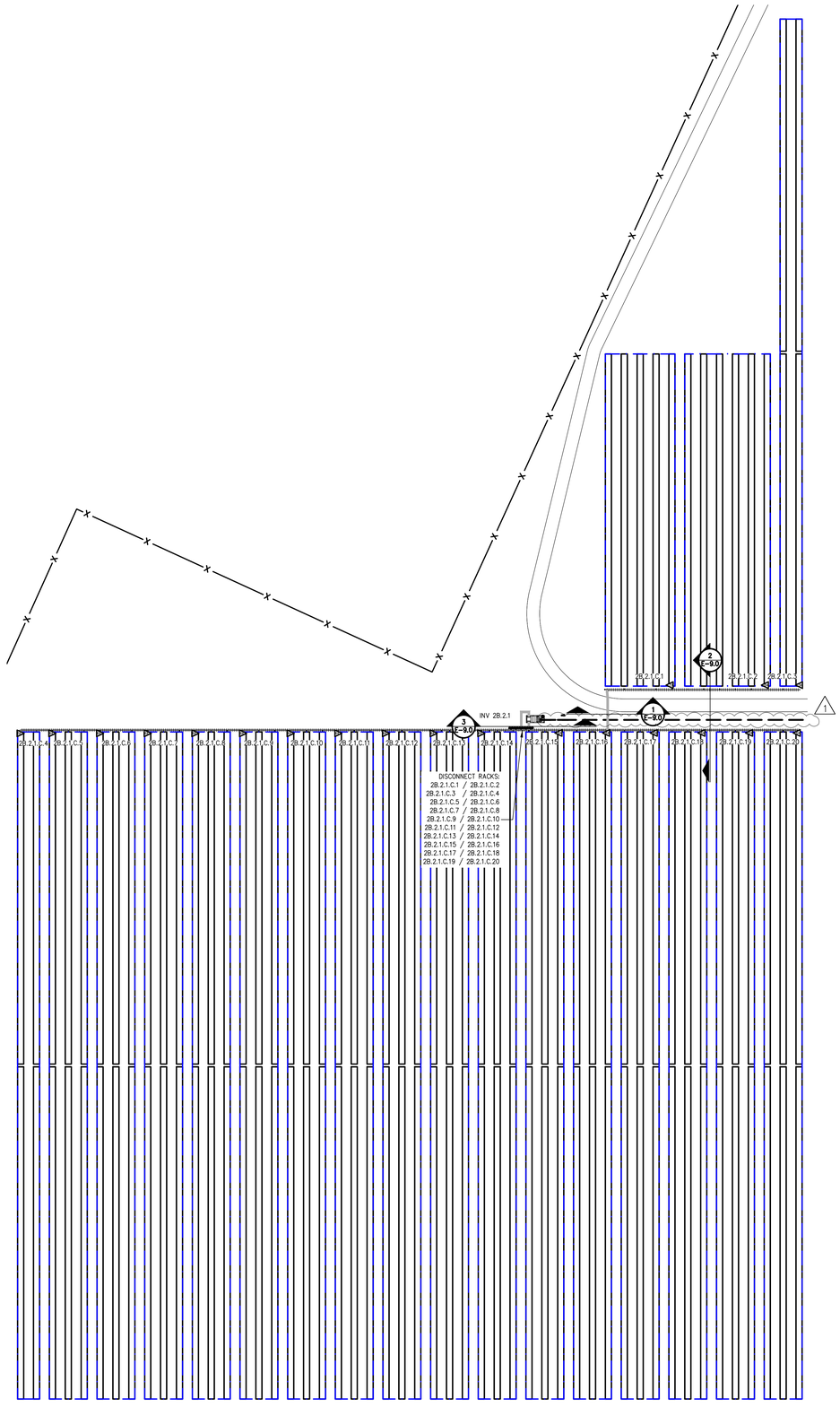
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196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 2B.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.2B.1

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0 15' 30' 60' 120'
1" = 60'-0"

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4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

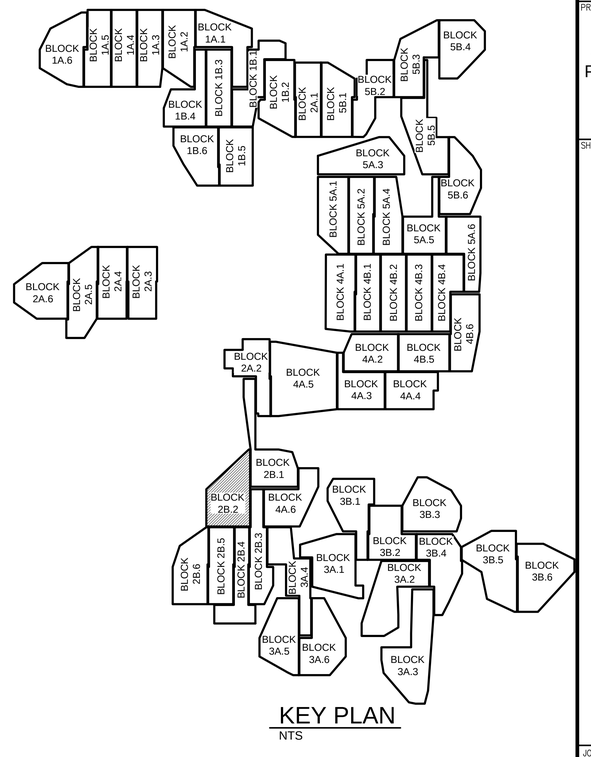
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- X — MV CIRCUIT NUMBER
- Y — BLOCK NUMBER
- Z — INVERTER NUMBER
- C — EQUIPMENT DESIGNATION
- # — COMBINER HARNESS NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

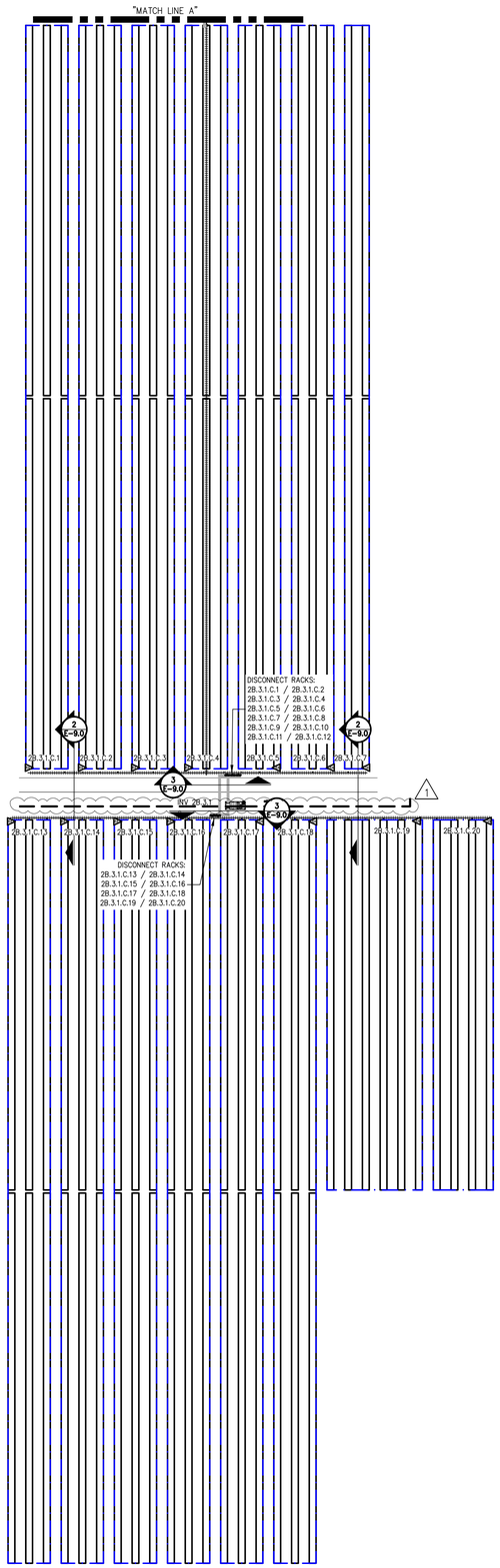
BLOCK 2B.2 ELECTRICAL ARRANGEMENT

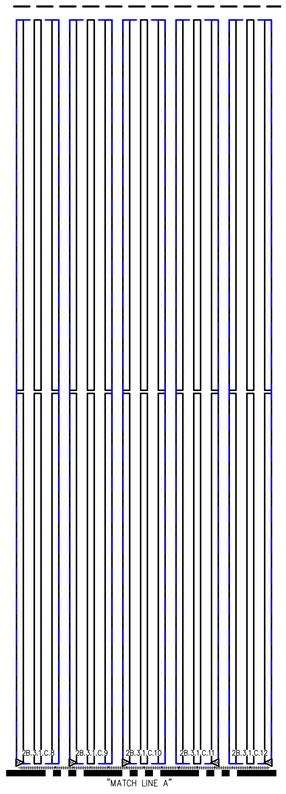
JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2B.2

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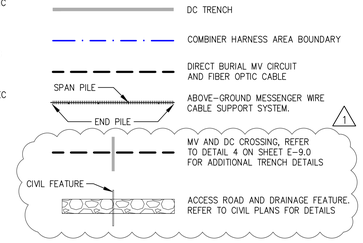




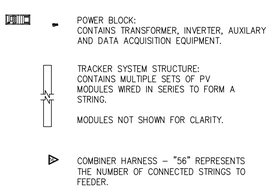
GENERAL NOTES

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8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

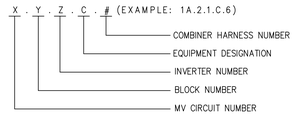
LINETYPE LEGEND

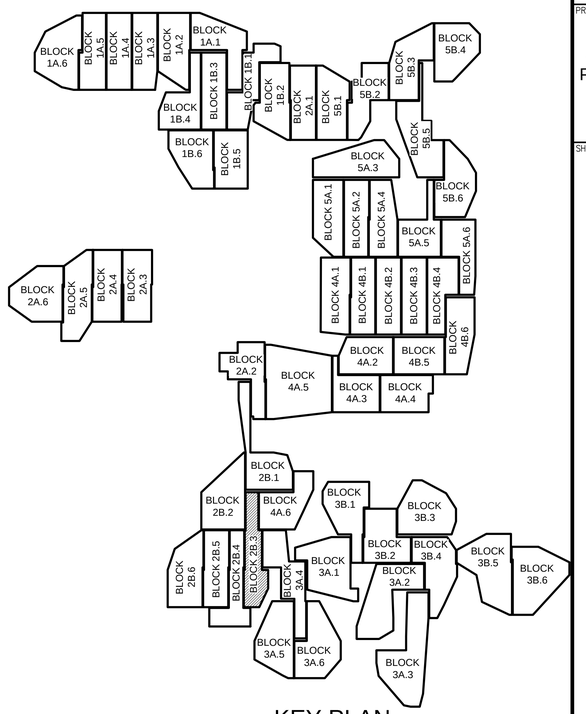


EQUIPMENT LEGEND



COMBINER HARNESS NAMING CONVENTION





KEY PLAN
NTS

1 BLOCK 2B.3 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

N

0 15' 30' 60' 120'
1" = 60'-0"

FOR CONSTRACTION

SOLV ENERGY
CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

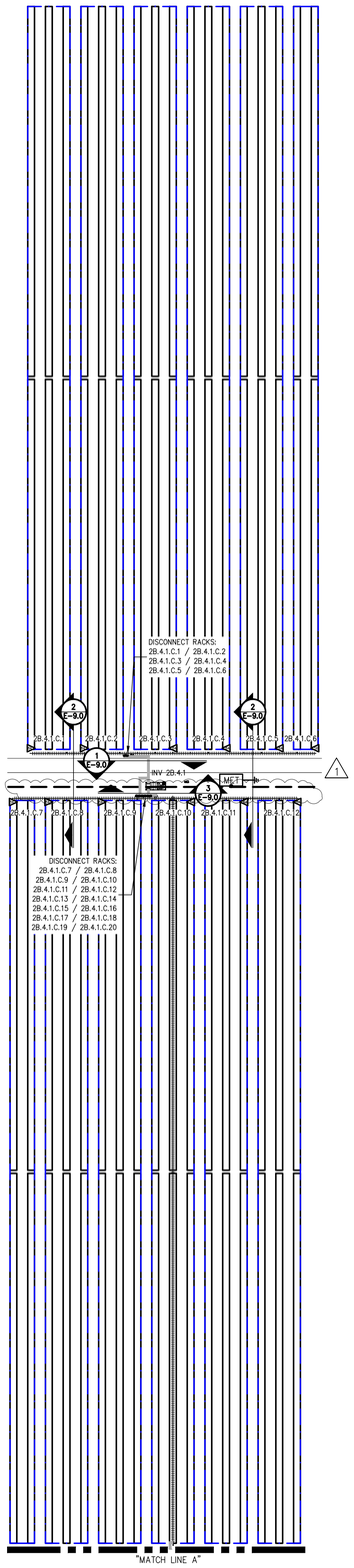
REV #	DESCRIPTION	DATE
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1	ISSUE FOR CONSTRUCTION	06/23/2022

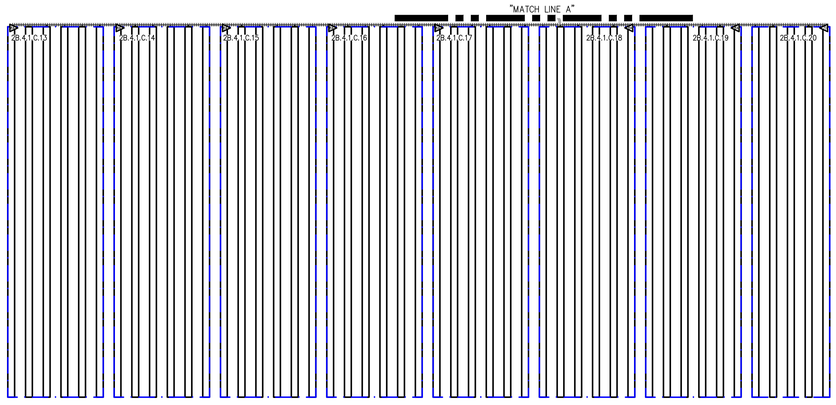
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 2B.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018 | PROJECT MGR: CG
DRAWN: DQ | SCALE: 1" = 60'-0"
SHEET NUMBER
E-3.2B.3

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1 BLOCK 2B.4 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
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6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING. REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS (1)
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

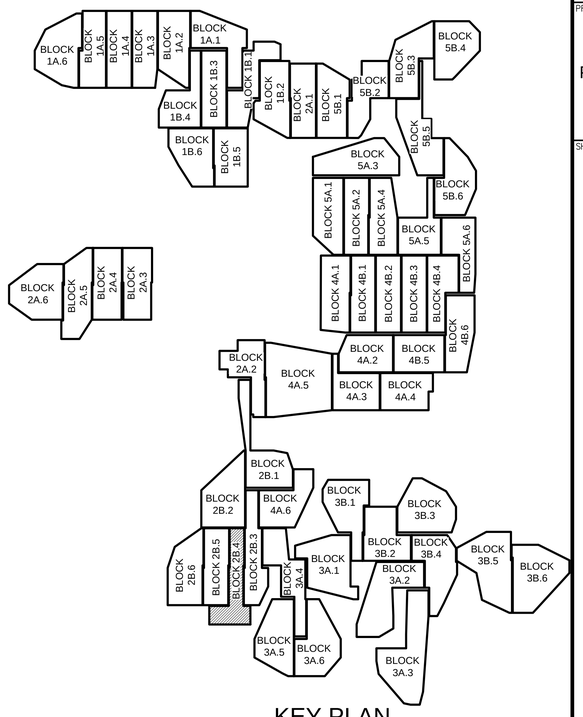
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING. MODULES NOT SHOWN FOR CLARITY. (1)
- DIH — DIFFUSE HORIZONTAL IRRADIANCE SENSOR. REFER TO DRAWING E-8.0 FOR ADDITIONAL INFORMATION.
- MET — MET SYSTEM. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- X — MV CIRCUIT NUMBER
- Y — BLOCK NUMBER
- Z — INVERTER NUMBER
- C — EQUIPMENT DESIGNATION
- # — COMBINER HARNESS NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

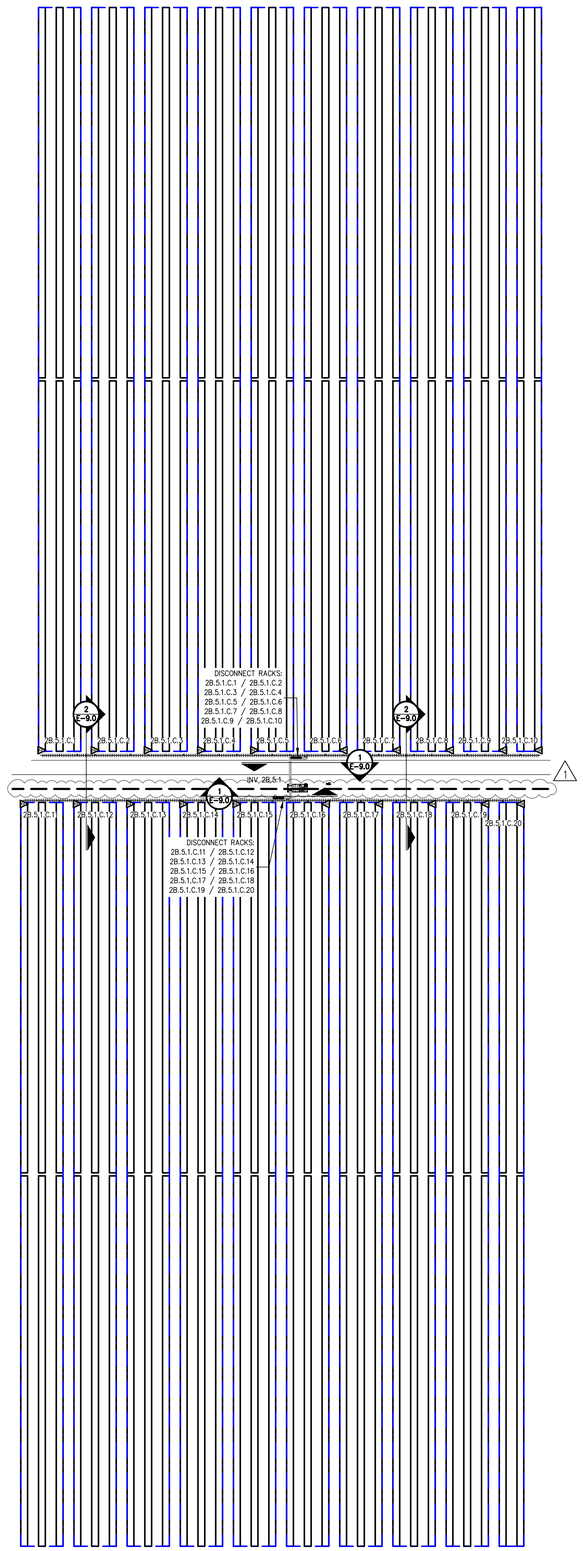
BLOCK 2B.4 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2B.4

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1 - BLOCK 2B.5 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

N

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
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5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

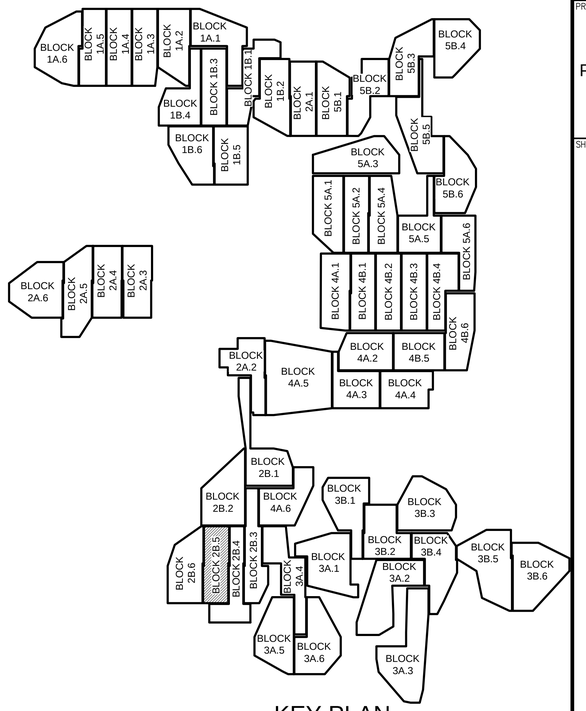
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
- MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

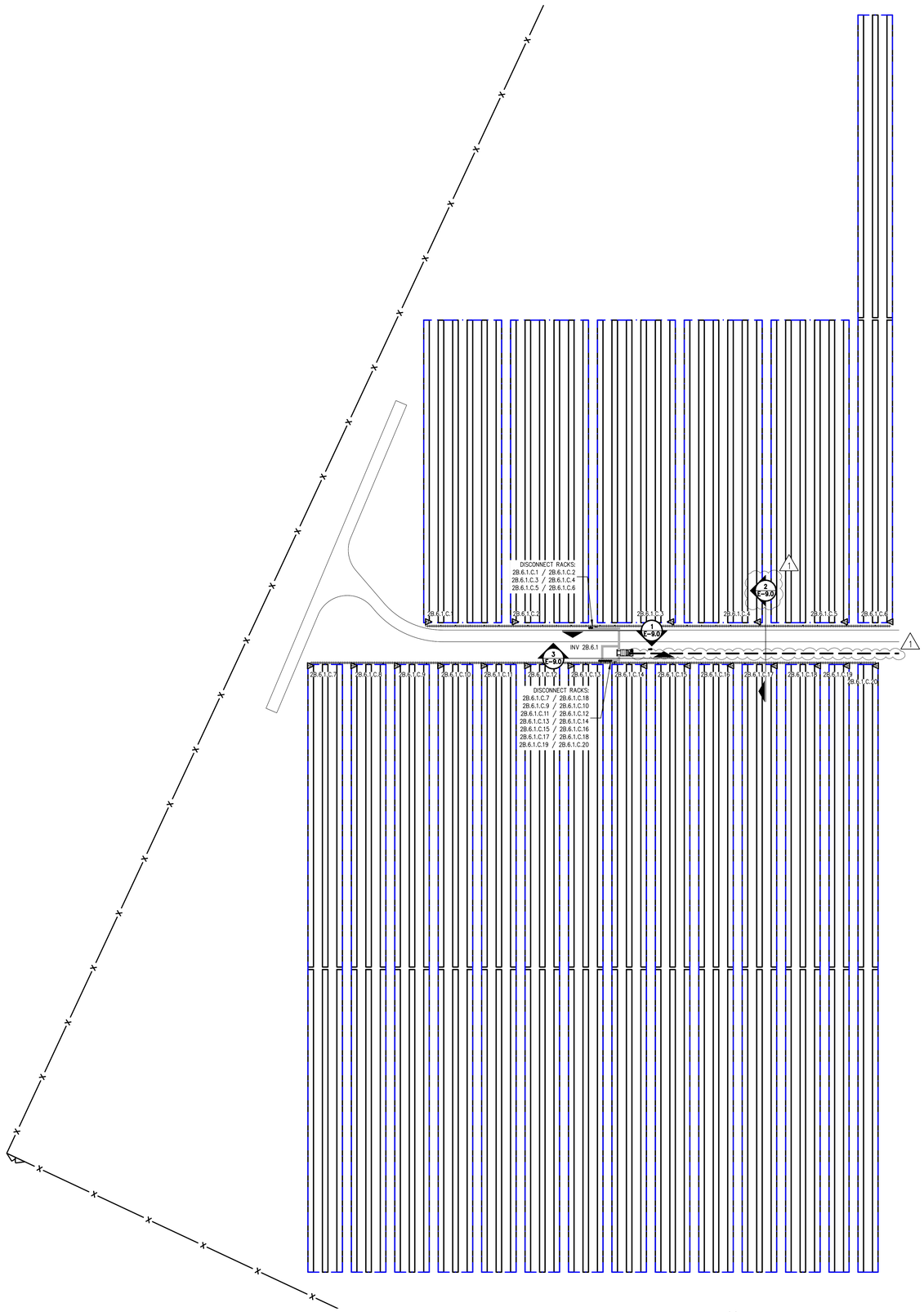
BLOCK 2B.5 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2B.5

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1 - BLOCK 2B.6 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

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LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

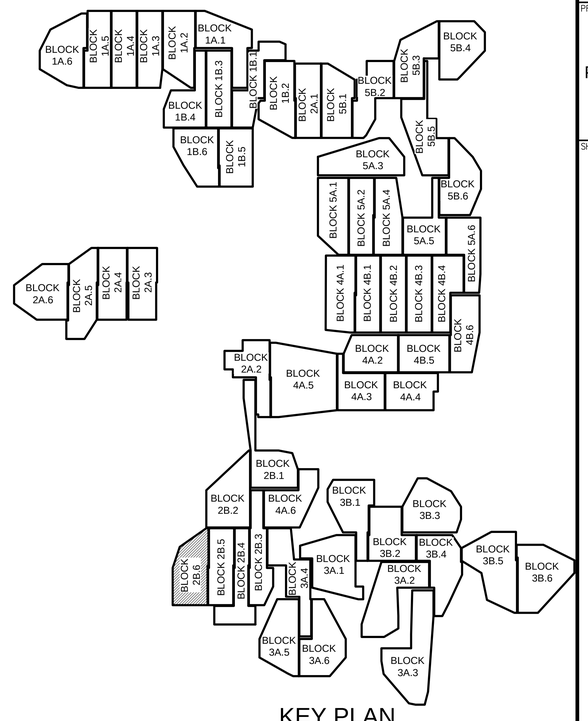
EQUIPMENT LEGEND

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- MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

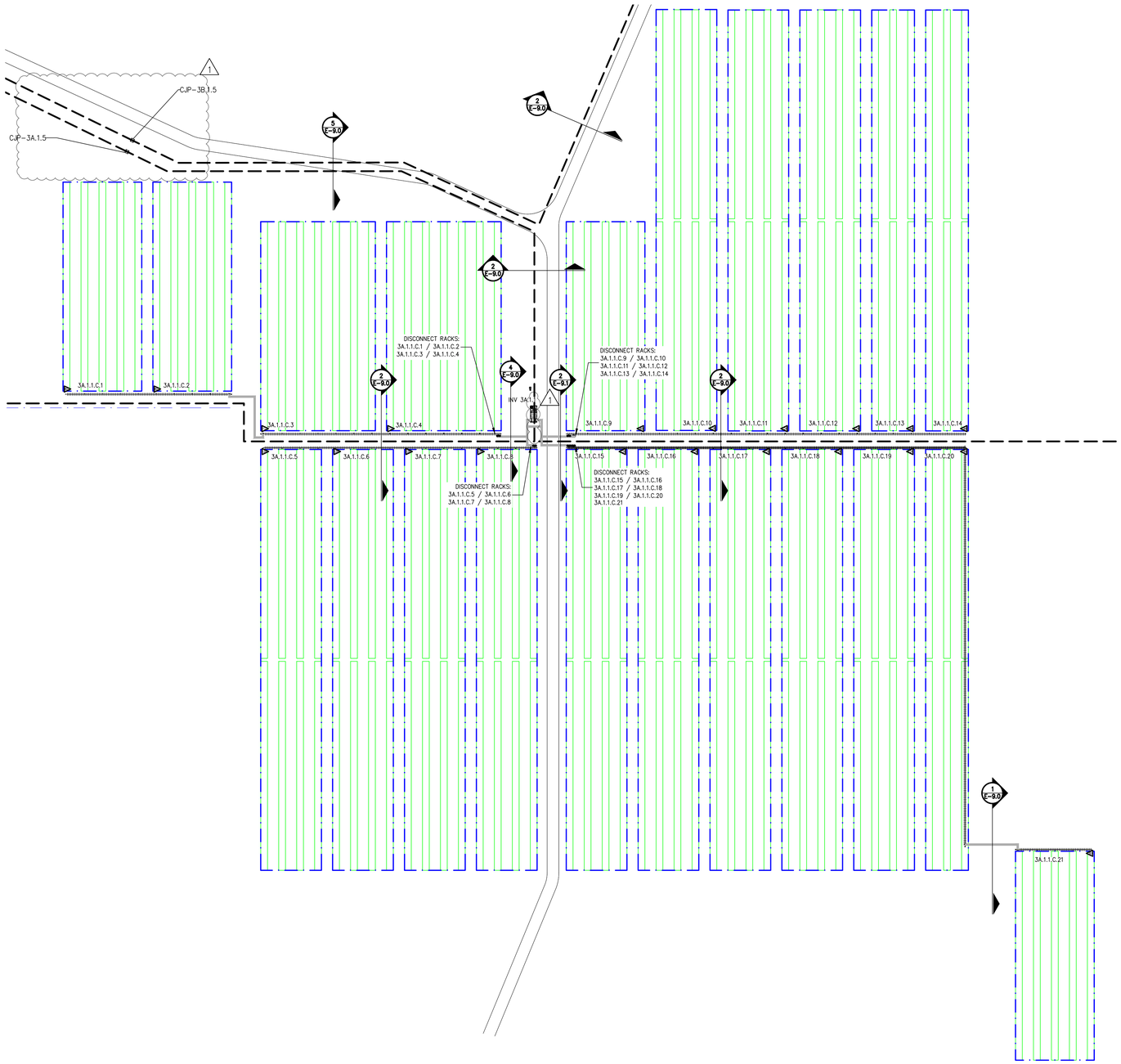
BLOCK 2B.6 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.2B.6

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1 BLOCK 3A.1 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

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LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- 1 — MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

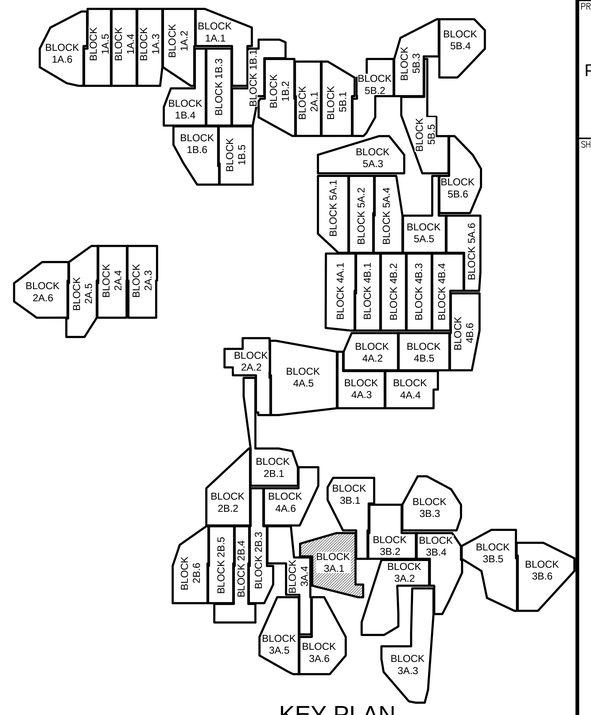
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY
CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

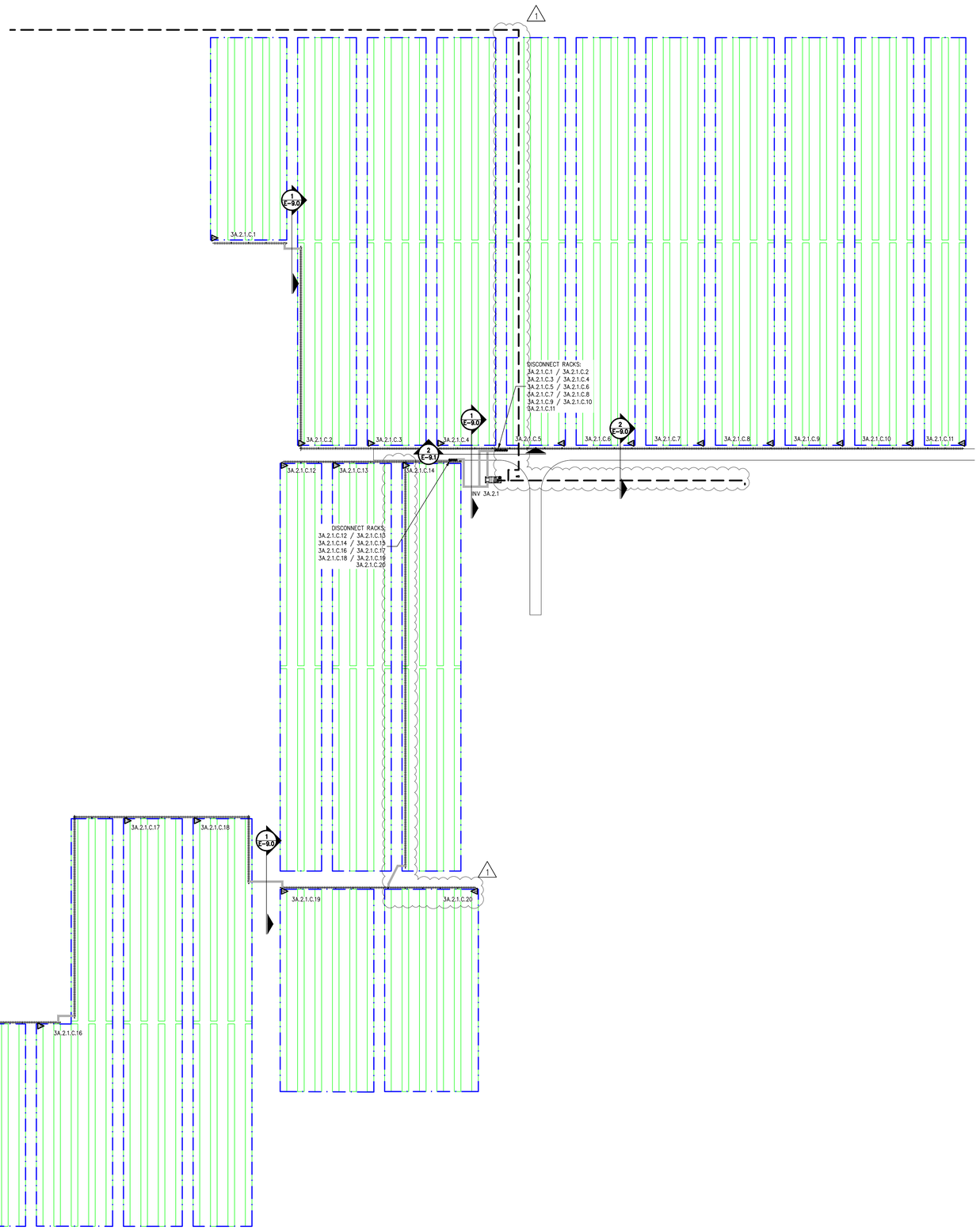
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3A.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3A.1

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1 BLOCK 3A.2 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- 1 — MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

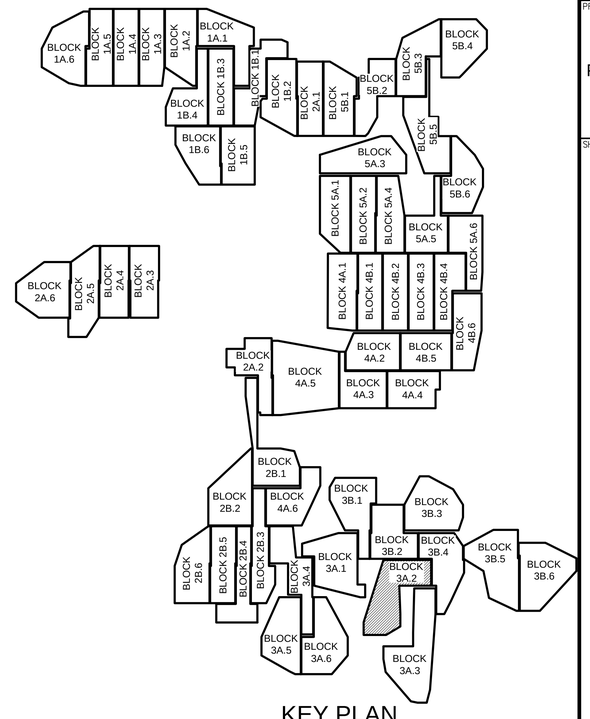
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
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- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL
STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

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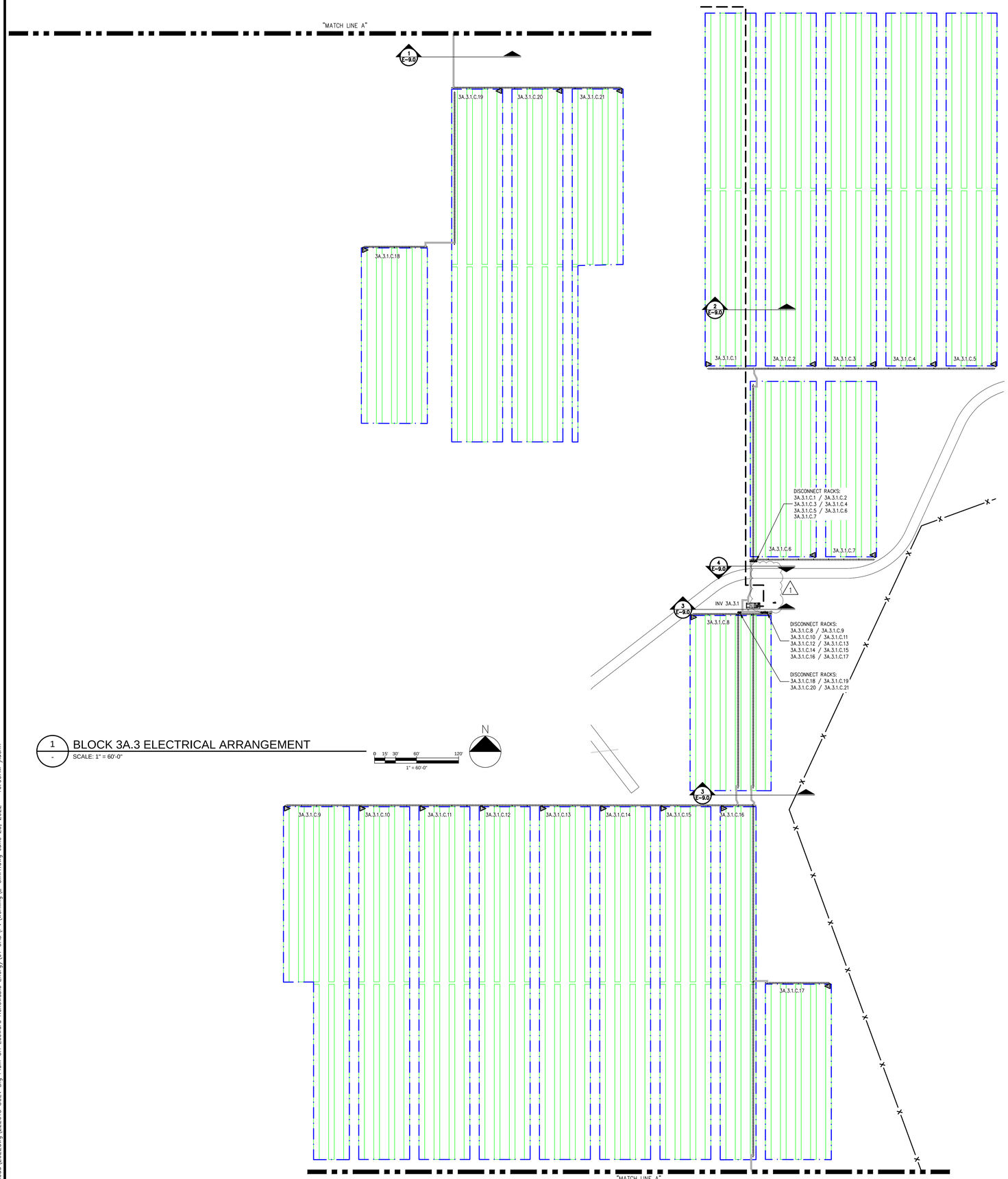
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3A.2 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3A.2

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1 / - BLOCK 3A.3 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
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6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

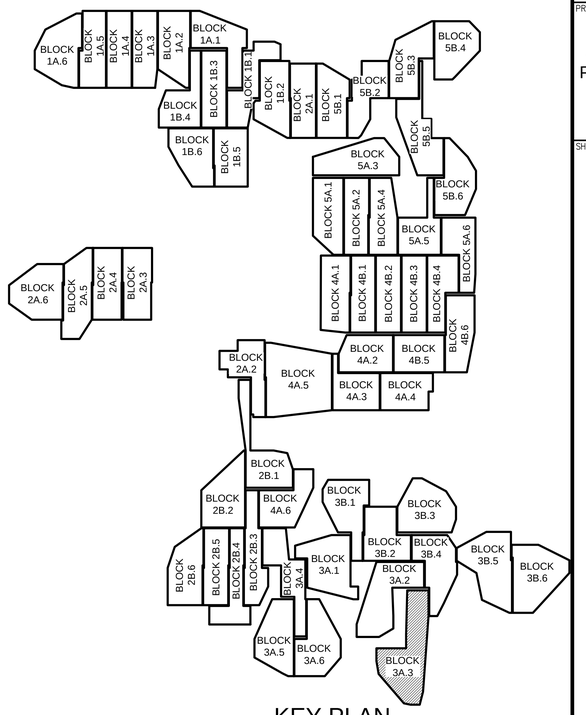
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
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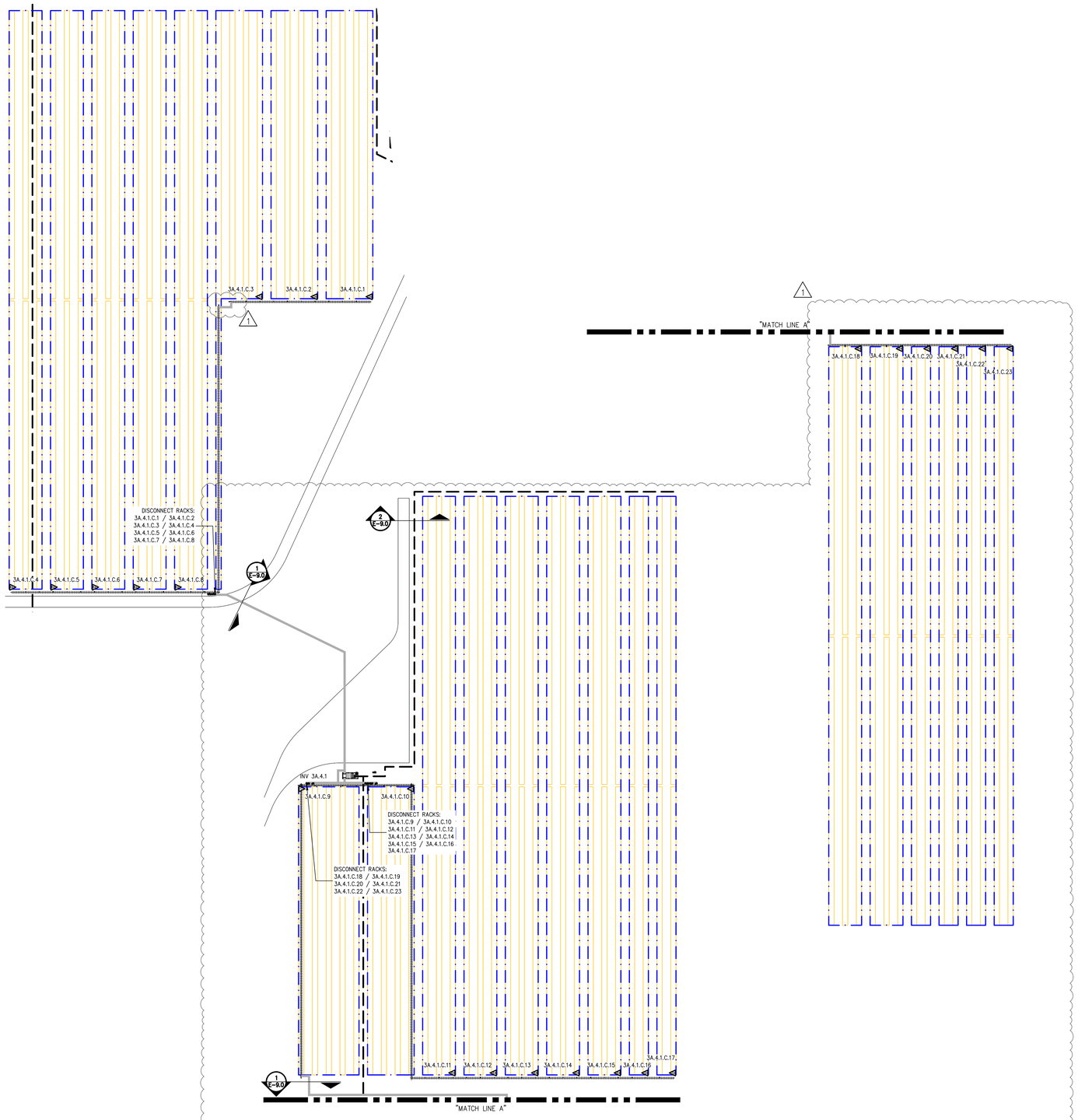
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3A.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3A.3

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GENERAL NOTES

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8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

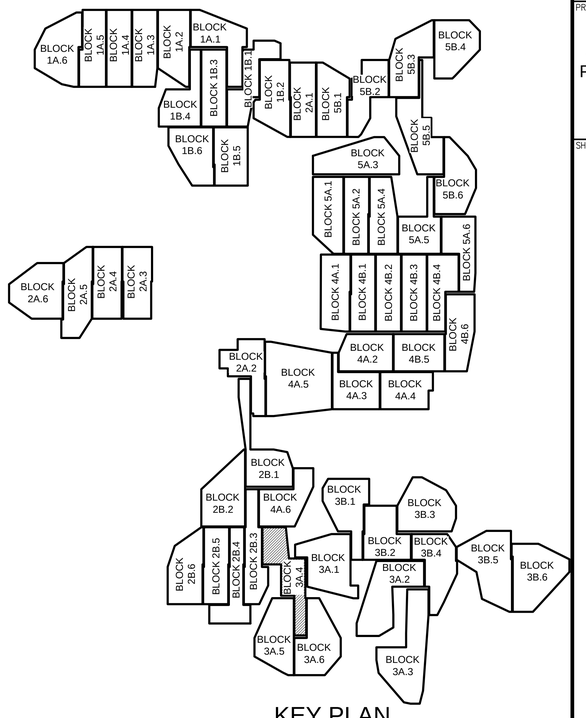
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

1 - BLOCK 3A.4 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
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1	ISSUE FOR CONSTRUCTION	06/23/2022

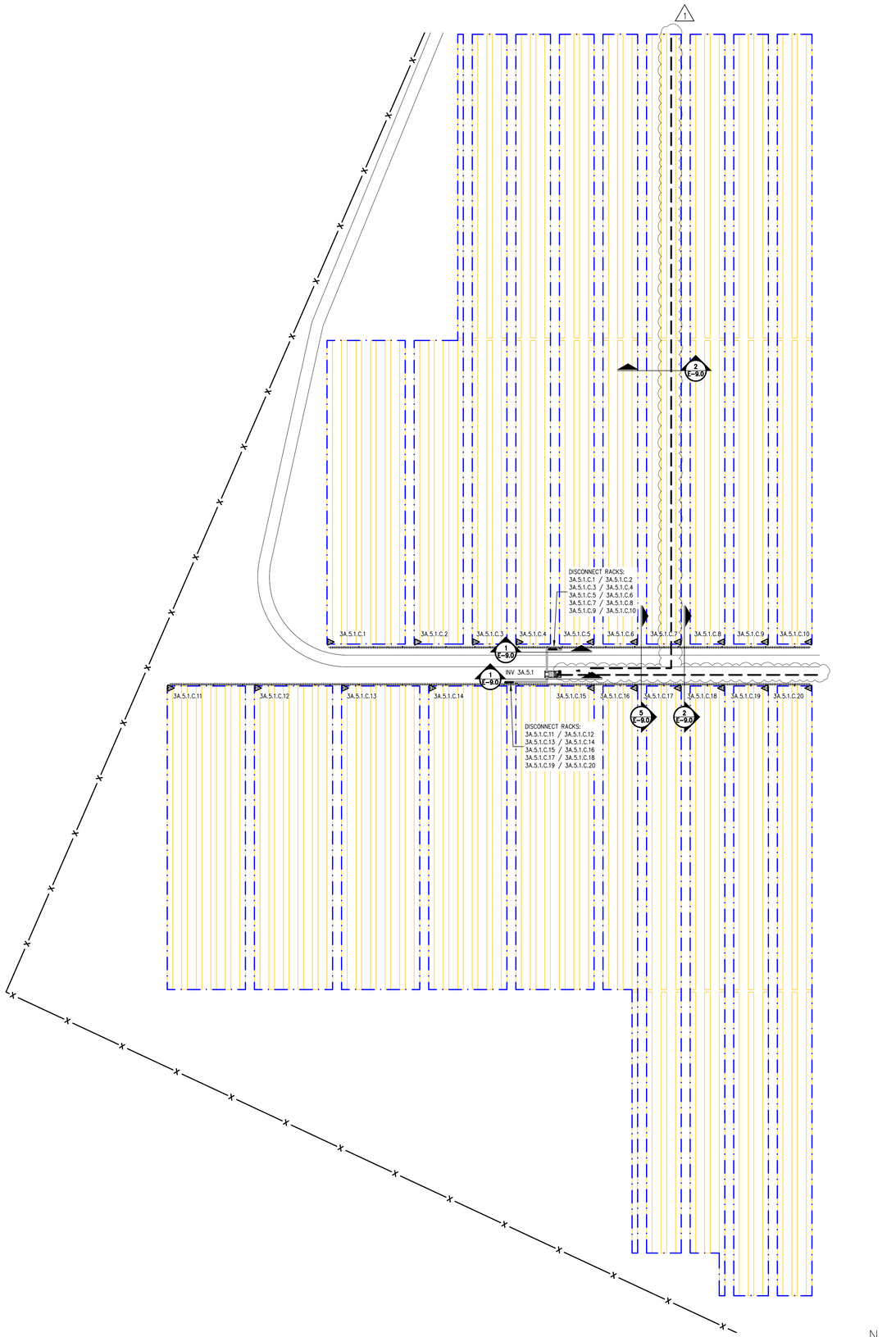
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3A.4 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3A.4

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1 BLOCK 3A.5 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

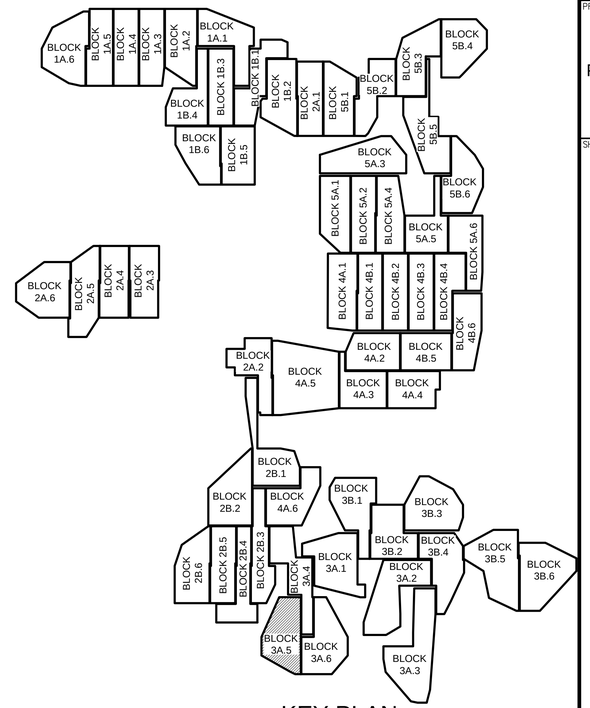
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- X — MV CIRCUIT NUMBER
- Y — BLOCK NUMBER
- Z — INVERTER NUMBER
- C — EQUIPMENT DESIGNATION
- # — COMBINER HARNESS NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

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BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

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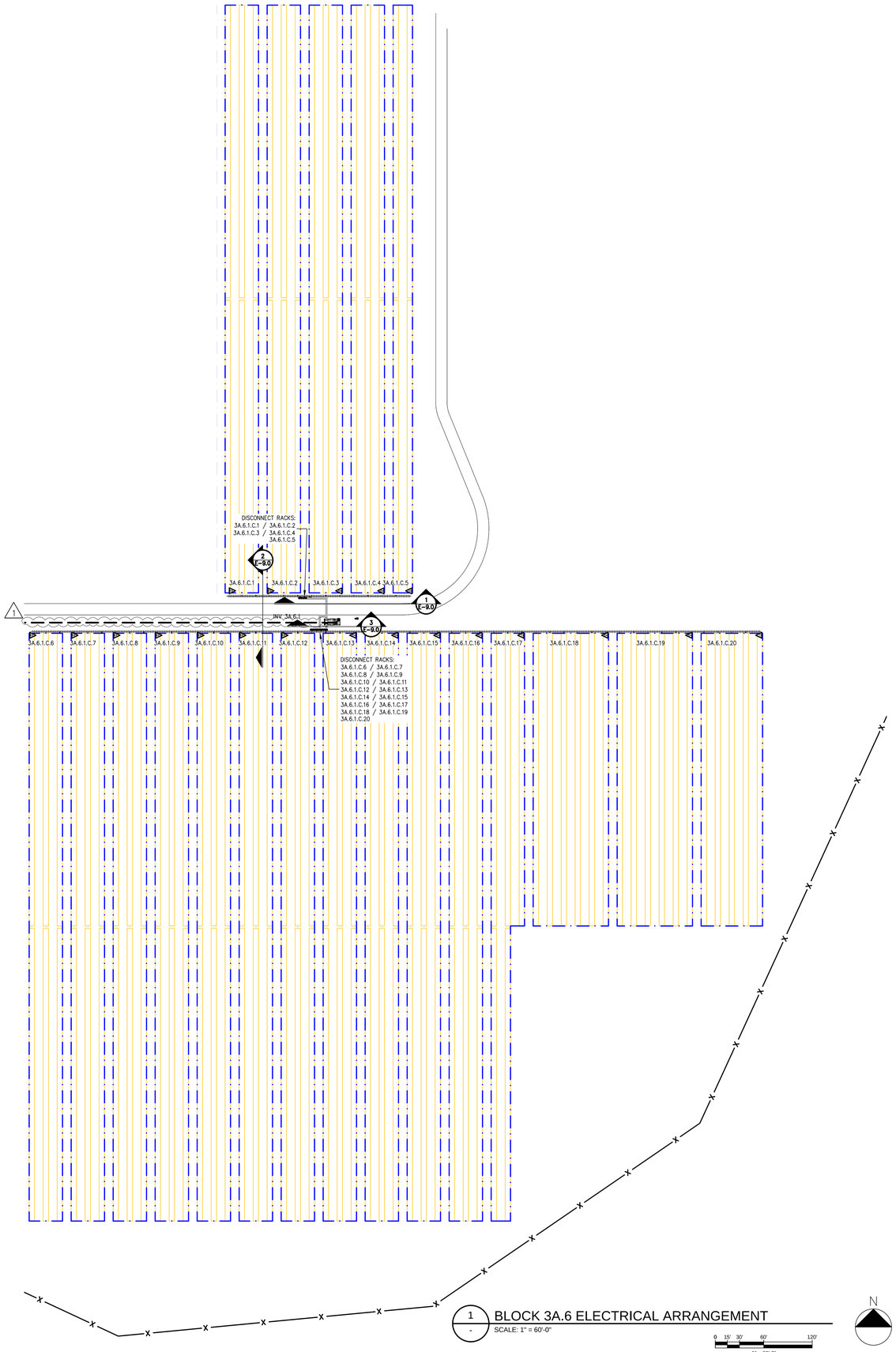
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3A.5 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3A.5

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1 - BLOCK 3A.6 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
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11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- 1 — MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

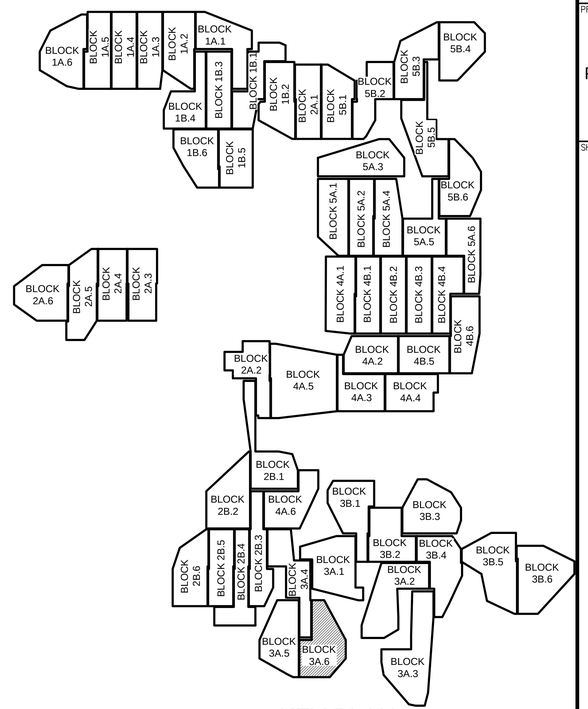
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
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STAMP/SEAL

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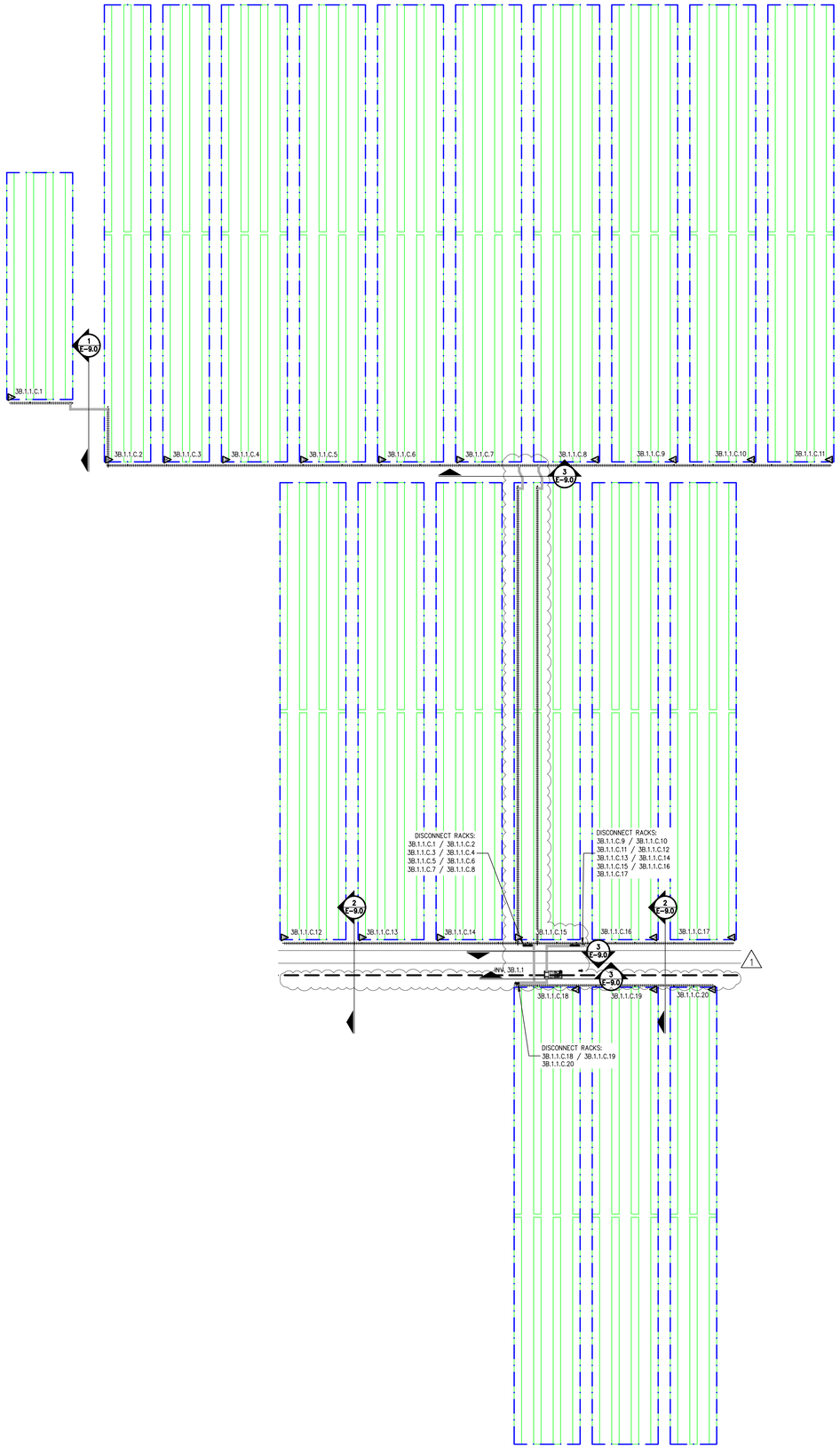
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3A.6 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3A.6

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1 BLOCK 3B.1 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS (1)
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

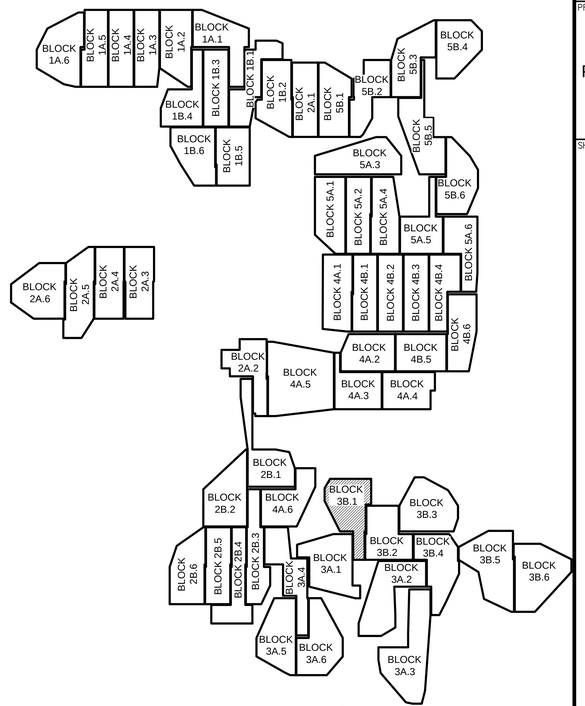
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL
STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

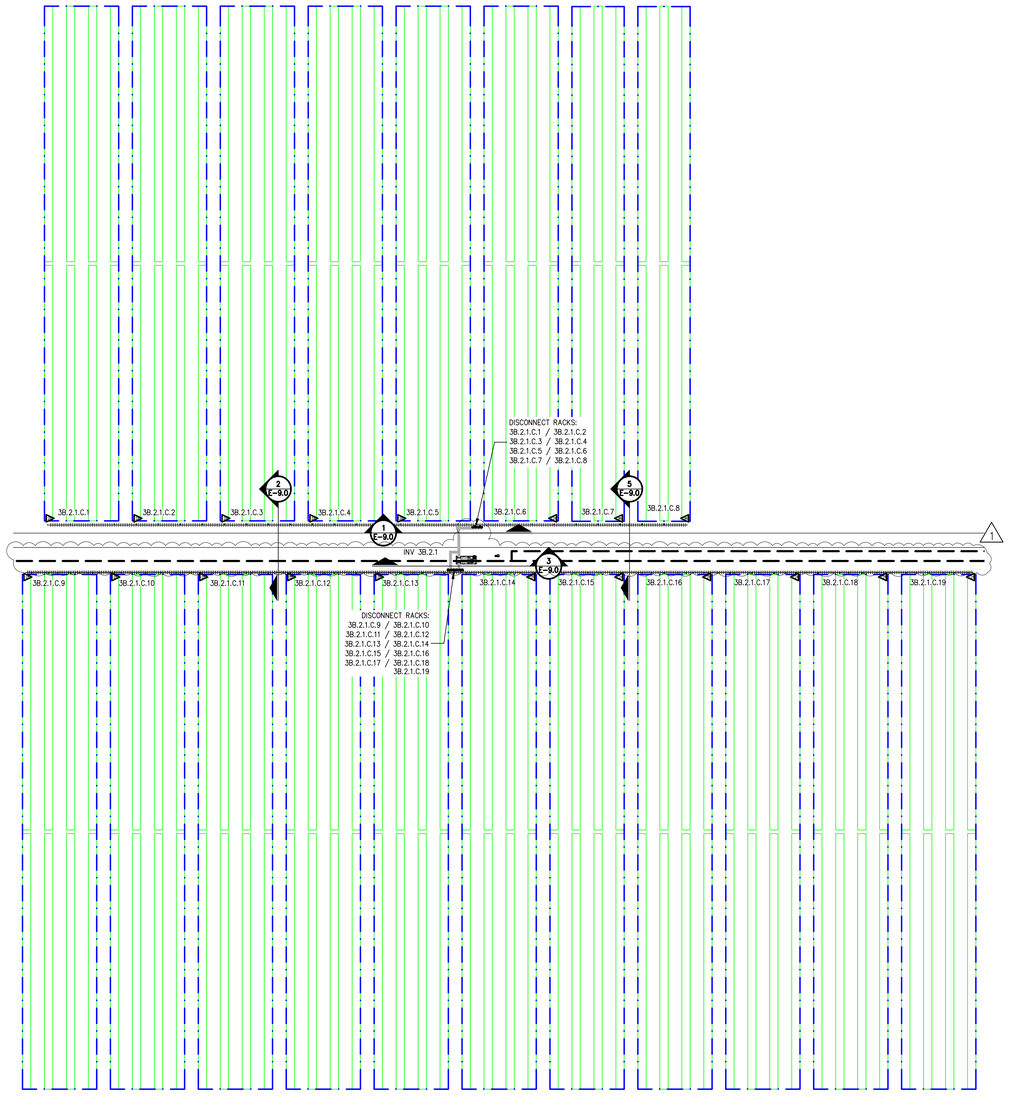
REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3B.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018 | PROJECT MGR: CG
DRAWN: CL | SCALE: 1" = 60'-0"
SHEET NUMBER
E-3.3B.1

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1 - BLOCK 3B.2 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

N

0 15' 30' 60' 120'
1" = 60'-0"

GENERAL NOTES

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2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- 1 — MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE, REFER TO CIVIL PLANS FOR DETAILS

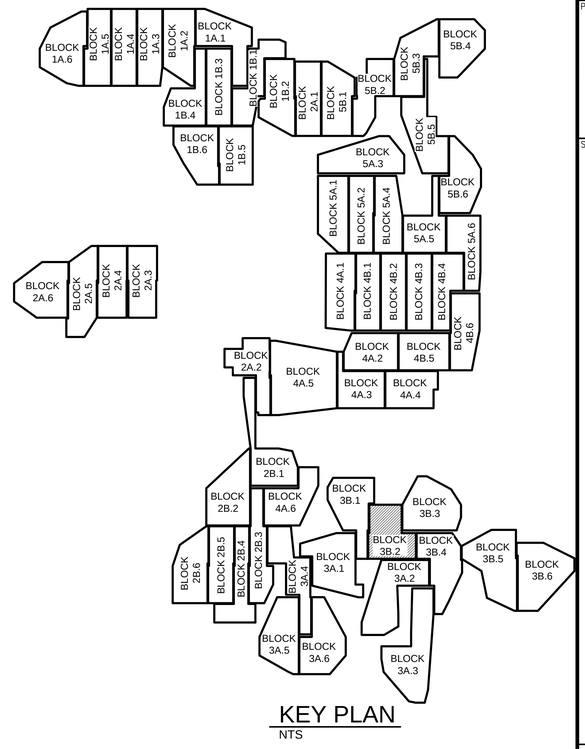
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
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  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

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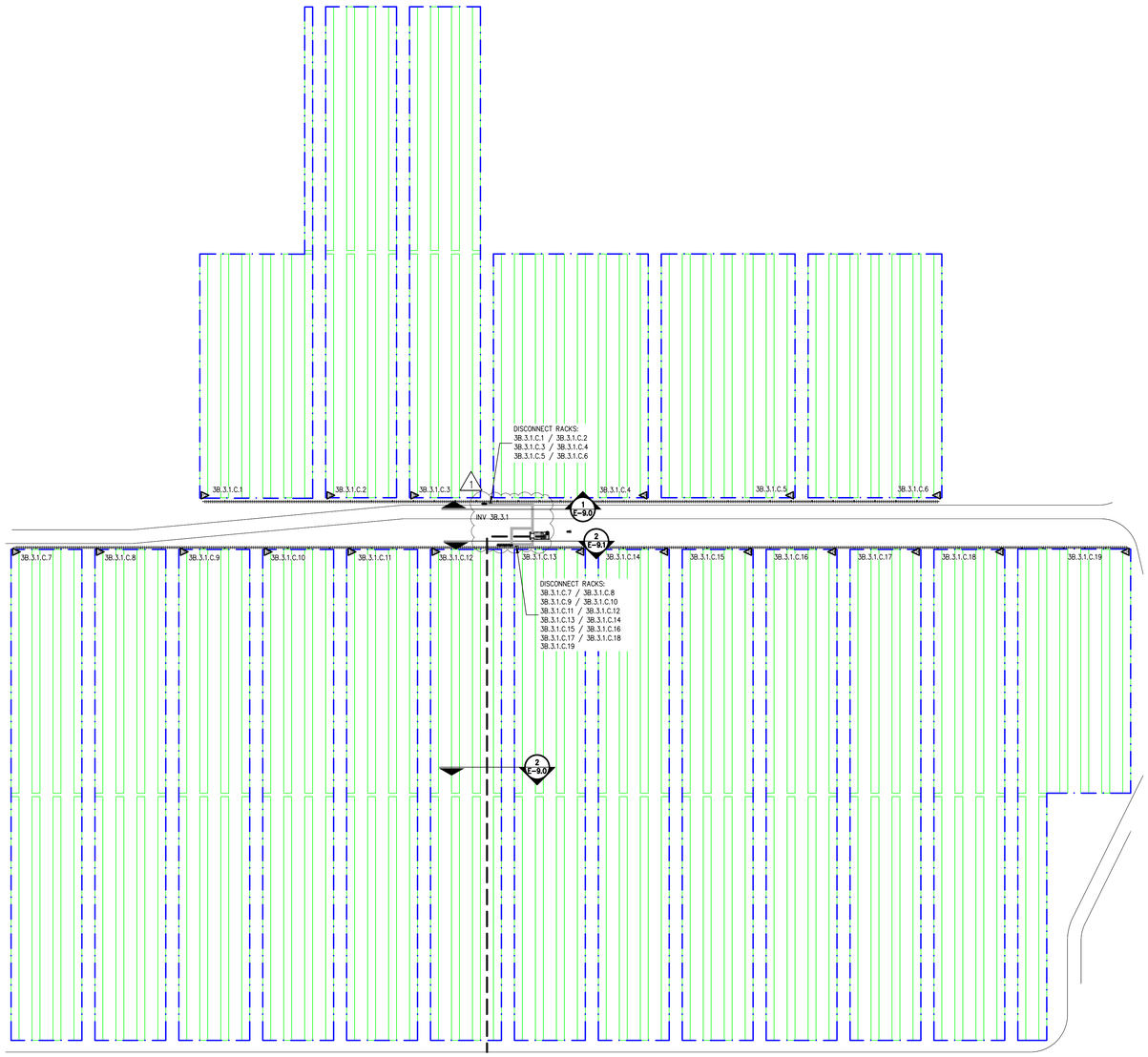
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3B.2 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3B.2

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1 - BLOCK 3B.3 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

N

GENERAL NOTES

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9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

EQUIPMENT LEGEND

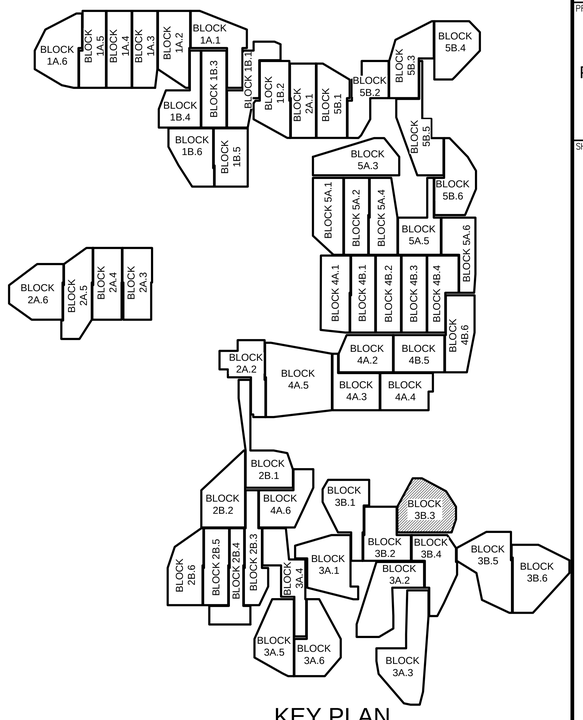
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  MODULES NOT SHOWN FOR CLARITY.
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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO — BENJAMIN J. LIU E-80518 — PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

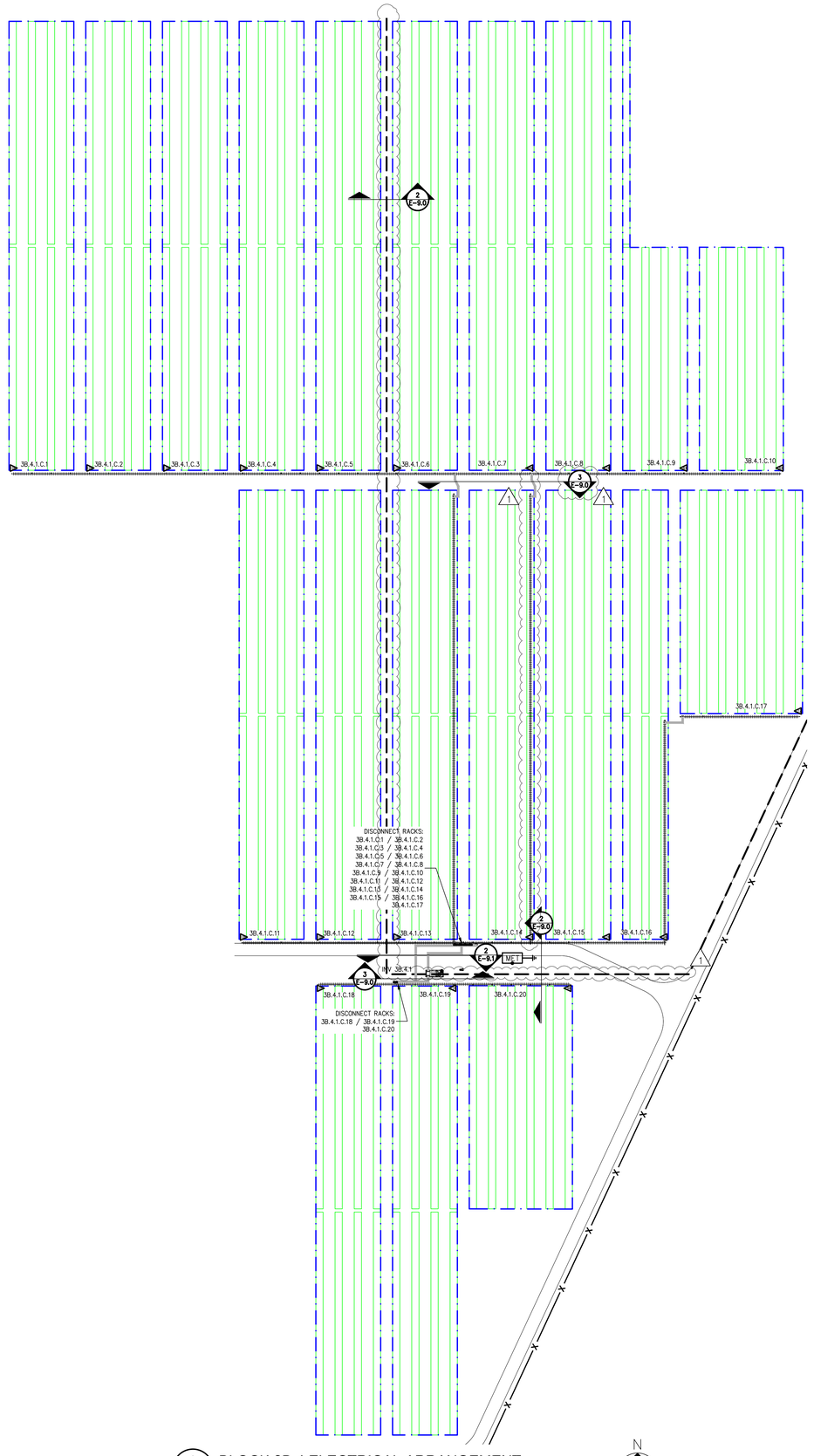
BLOCK 3B.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.3B.3

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1 - BLOCK 3B.4 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

N

GENERAL NOTES

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5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0' FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
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8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING. REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

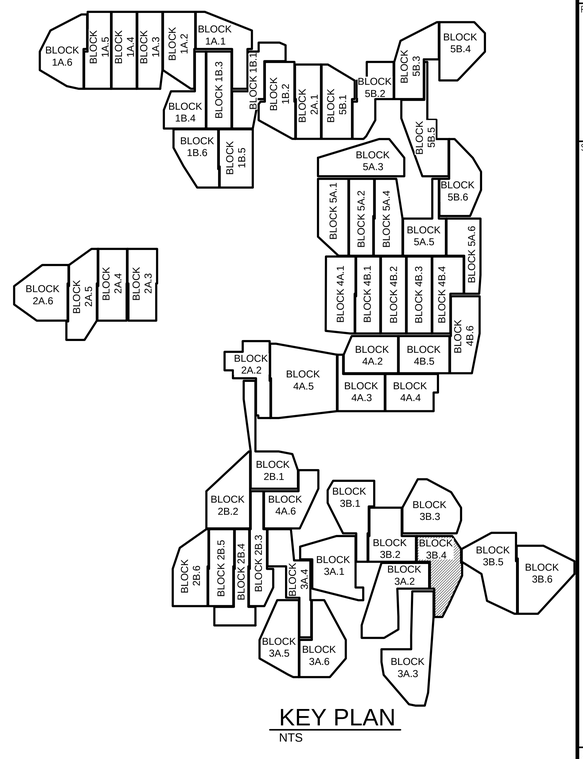
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING. MODULES NOT SHOWN FOR CLARITY.
- DHI — DIFFUSE HORIZONTAL IRRADIANCE SENSOR. REFER TO DETAIL 1A ON SHEET E-9.0 FOR ADDITIONAL INFORMATION.
- MET — MET SYSTEM. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO — BENJAMIN J. LIU E-80518 — PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

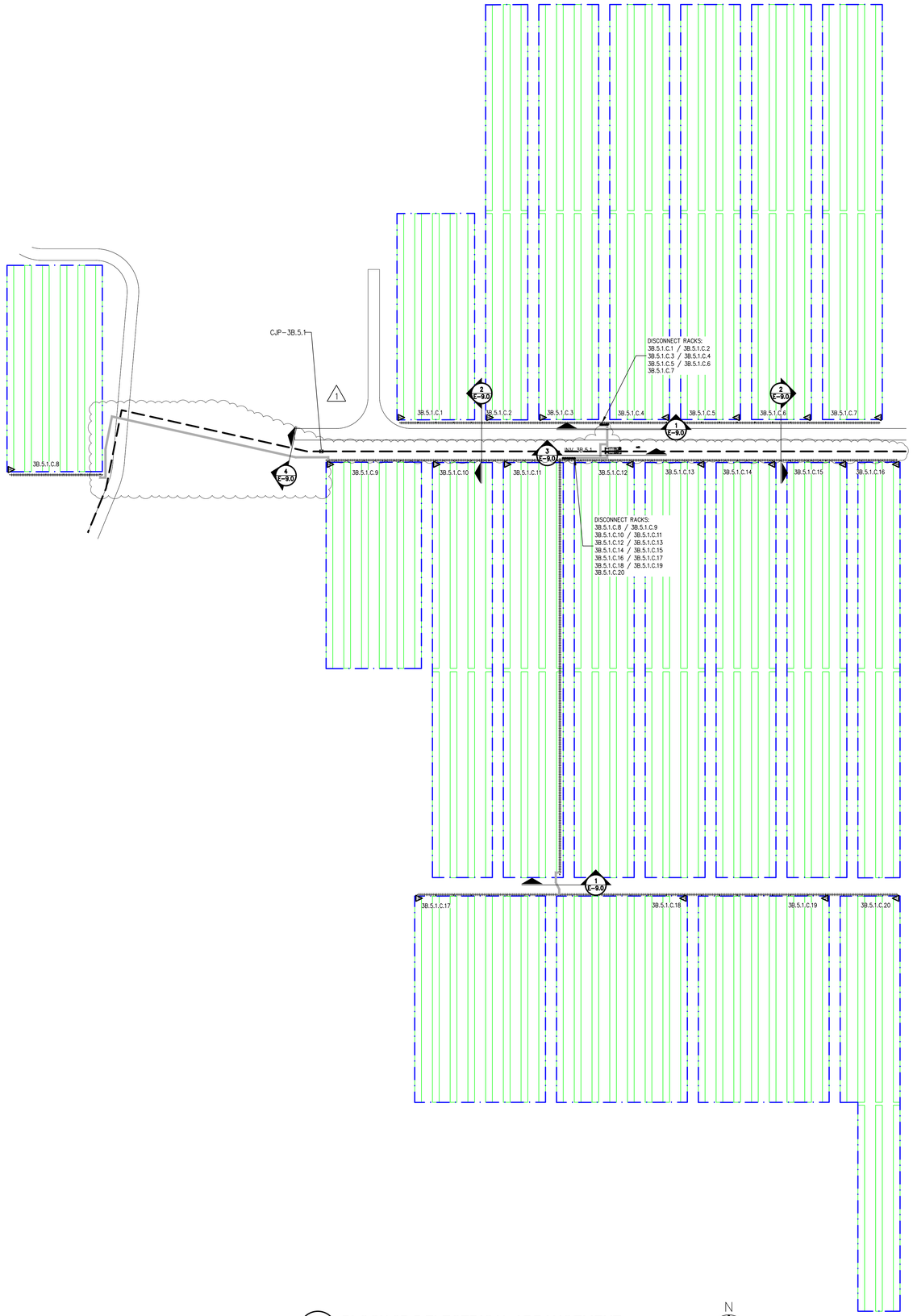
BLOCK 3B.4 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.3B.4

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GENERAL NOTES

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LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

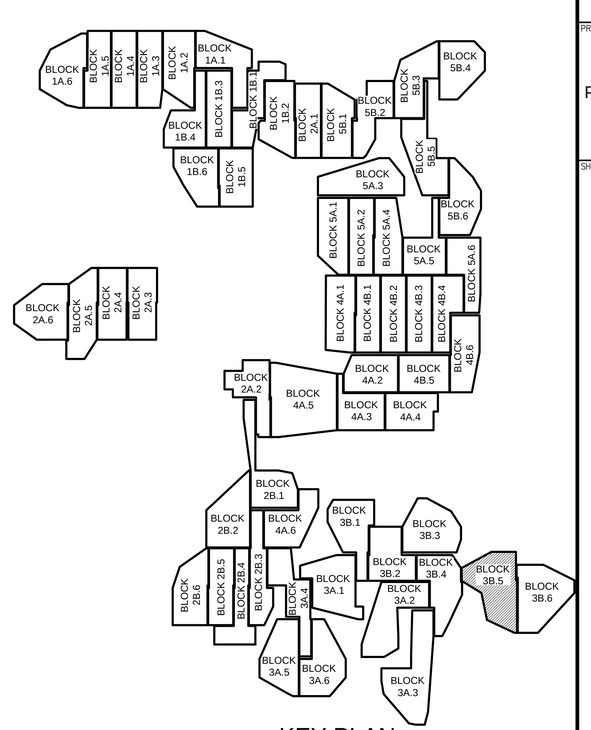
EQUIPMENT LEGEND

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COMBINER HARNESS NAMING CONVENTION

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KEY PLAN
NTS

1 BLOCK 3B.5 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

FOR CONSTRACTION

SOLV ENERGY

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STAMP/SEAL
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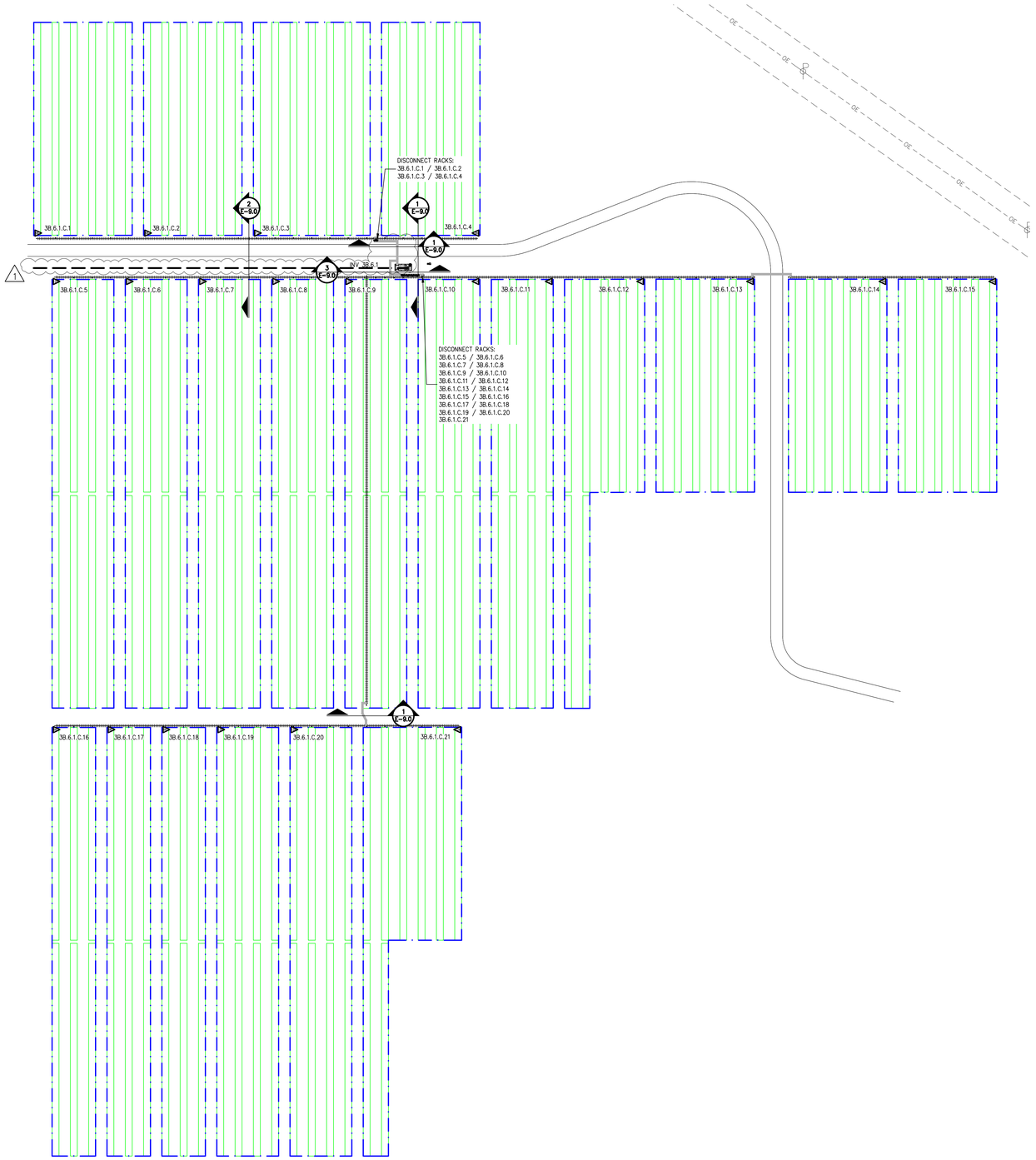
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3B.5 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3B.5

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LINETYPE LEGEND

- DC TRENCH
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- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

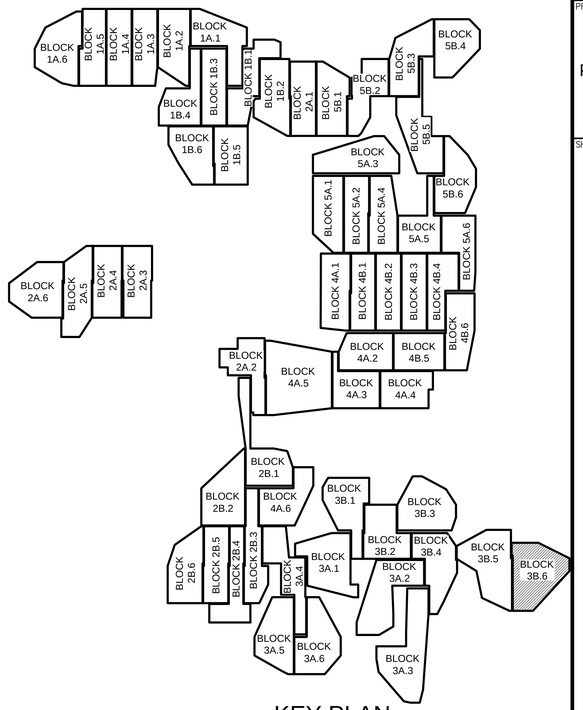
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

1 BLOCK 3B.6 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL
STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
1	ISSUE FOR CONSTRUCTION	06/23/2022

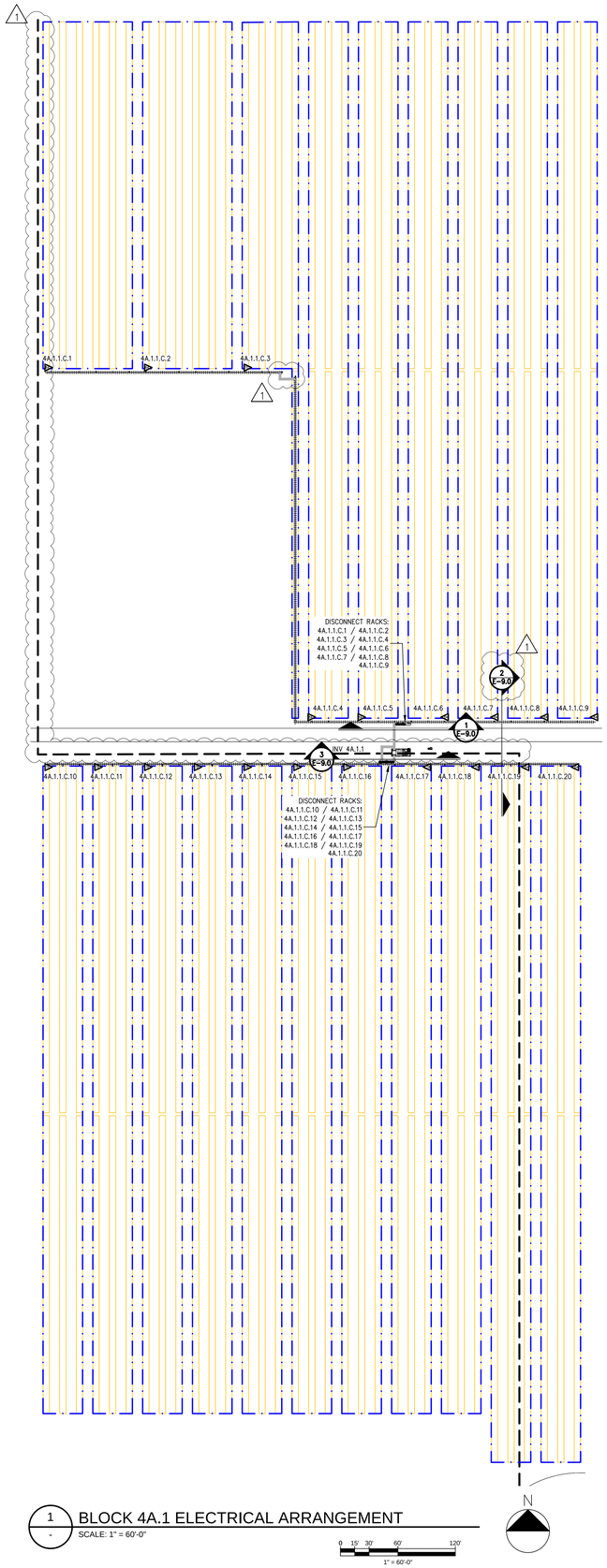
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 3B.6 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: CL	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.3B.6

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1 BLOCK 4A.1 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
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3. DIRECT-BURIED CONDUCTORS EMERGING FROM GRADE SHALL BE PROTECTED BY PVC CONDUIT INSTALLED TO MEET REQUIREMENTS OF NEC 300.5. PVC SHALL BE SCHEDULE 40 WHEN NOT SUBJECT TO PHYSICAL DAMAGE, AND SCHEDULE 80 OTHERWISE.
4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0" FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

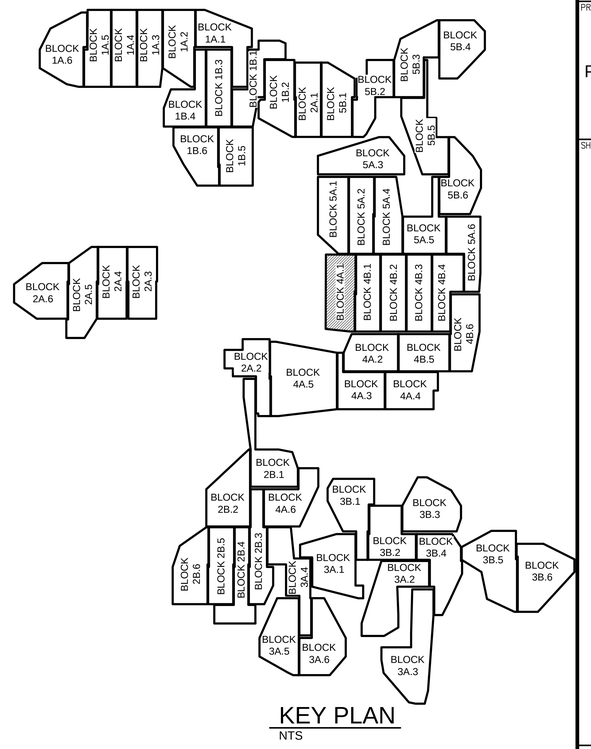
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING.
  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
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STAMP/SEAL

STATE OF OHIO
BENJAMIN J. LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

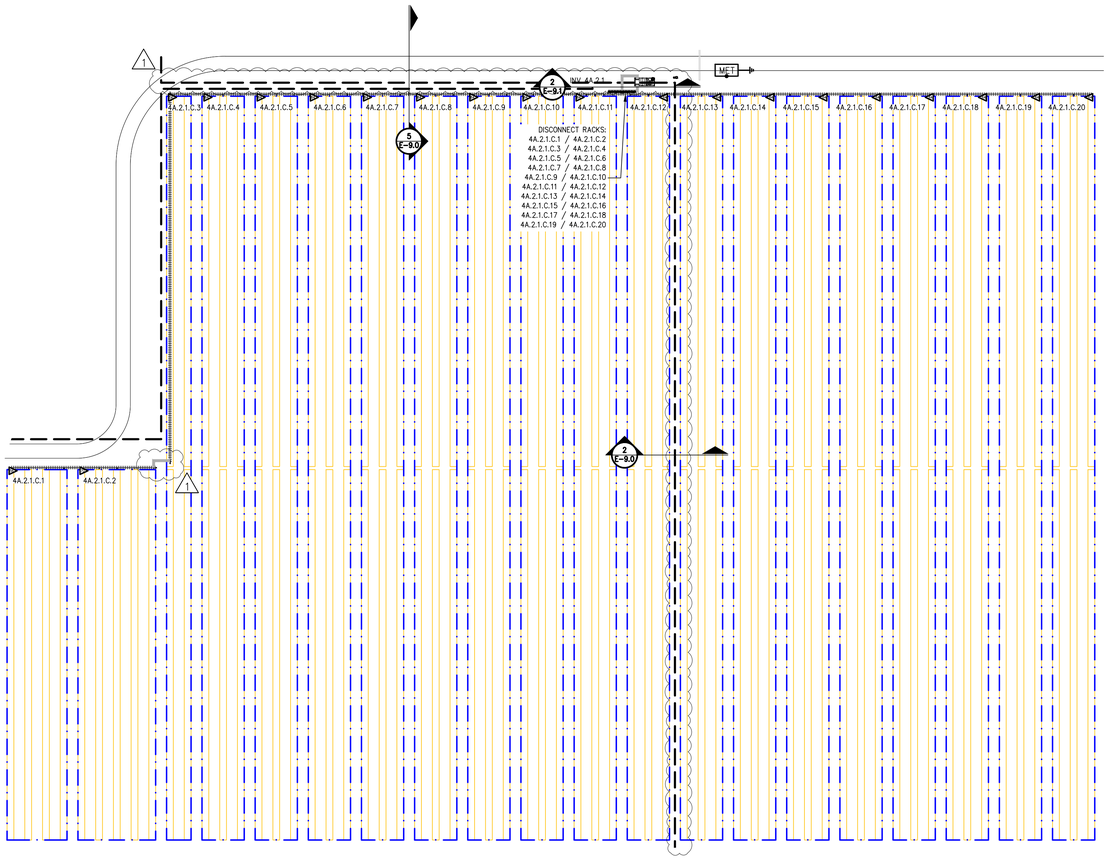
BLOCK 4A.1 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.4A.1

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1 - BLOCK 4A.2 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

GENERAL NOTES

1. CONDUIT AND/OR DIRECT-BURIED CONDUCTOR ROUTING IS DIAGRAMMATIC ONLY. NOT ALL EXISTING STRUCTURES AND UTILITIES ARE SHOWN FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ALL ROUTING TO AVOID EXISTING INTERFERENCES AND IS RESPONSIBLE FOR FIELD CHECKING AND MAKING ALL NECESSARY OFFSETS AS REQUIRED.
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4. ADEQUATELY STRAP AND SUPPORT ALL RACEWAYS. IN GENERAL SUPPORT ALL CONDUIT WITHIN THREE FEET OF OUTLET BOX, PANEL OR ENCLOSURE AND MAXIMUM TEN FEET ON CENTER THEREAFTER. RACEWAYS TO BE LISTED FOR WET LOCATION.
5. ALL TRENCHES SHALL BE NOT LESS THAN 2'-0' FROM EDGE OF COLUMN/PIER TO NEAREST EDGE OF TRENCH.
6. ALL EQUIPMENT MUST BE UL LISTED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. REFER TO E-4.X.Y SERIES DRAWINGS FOR WIRE AND CONDUIT SCHEDULES.
8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING. REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

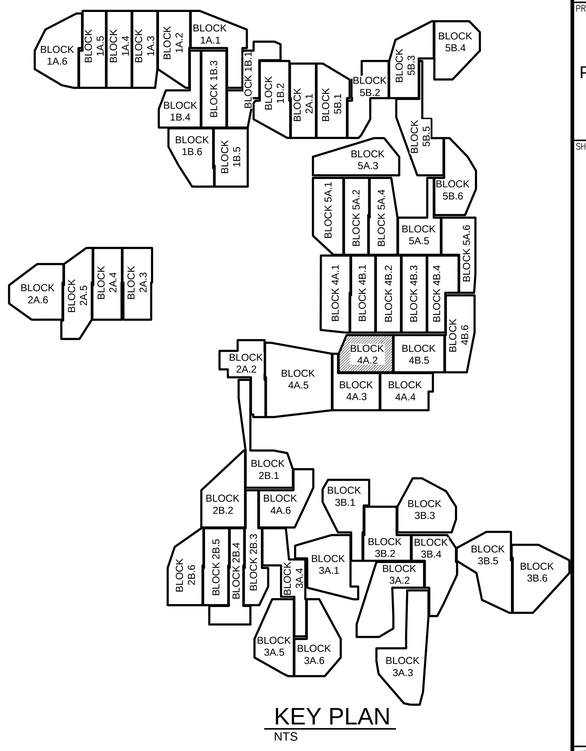
EQUIPMENT LEGEND

- POWER BLOCK: CONTAINS TRANSFORMER, INVERTER, AUXILARY AND DATA ACQUISITION EQUIPMENT.
- TRACKER SYSTEM STRUCTURE: CONTAINS MULTIPLE SETS OF PV MODULES WIRED IN SERIES TO FORM A STRING. MODULES NOT SHOWN FOR CLARITY.
- DIH — DIFFUSE HORIZONTAL IRRADIANCE SENSOR. REFER TO DETAIL 1 ON SHEET E-8.0 FOR ADDITIONAL INFORMATION.
- MET — METEOROLOGICAL STATION. REFER TO MET-1.0 FOR ADDITIONAL INFORMATION.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- X — MV CIRCUIT NUMBER
- Y — BLOCK NUMBER
- Z — INVERTER NUMBER
- C — EQUIPMENT DESIGNATION
- # — COMBINER HARNESS NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO — BENJAMIN J. LIU E-80518 — PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
0	FOR PERMIT	04/22/2022
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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

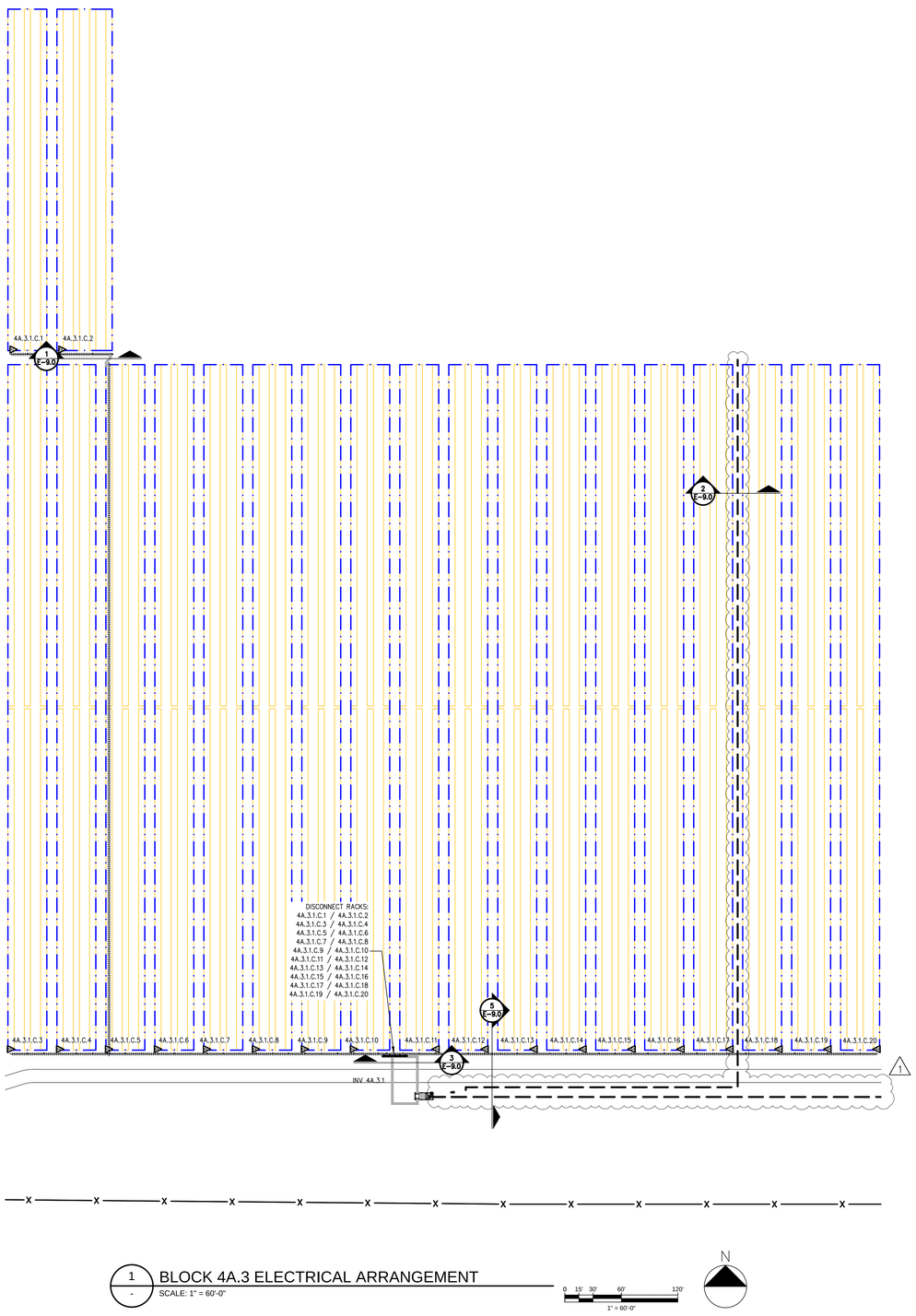
BLOCK 4A.2 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.4A.2

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1 - BLOCK 4A.3 ELECTRICAL ARRANGEMENT
SCALE: 1" = 60'-0"

0 15' 30' 60' 120'
1" = 60'-0"

N

GENERAL NOTES

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9. REFER TO E-7.X SERIES FOR EQUIPMENT INSTALLATION DETAILS AND OVERHEAD WIRING DETAILS.
10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

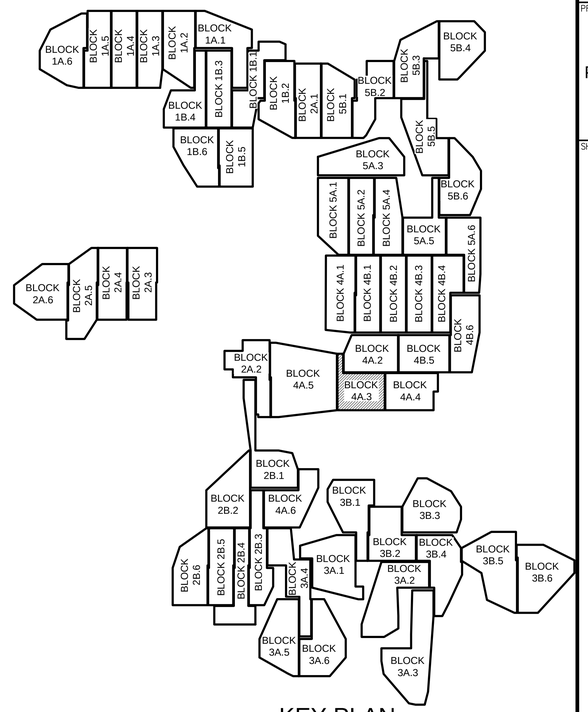
EQUIPMENT LEGEND

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COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN
NTS

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT
BLYMYER ENGINEERS
1101 MARINA VILLAGE PARKWAY # 100
ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

STATE OF OHIO
BENJAMIN J LIU
E-80518
PROFESSIONAL ENGINEER

REV #	DESCRIPTION	DATE
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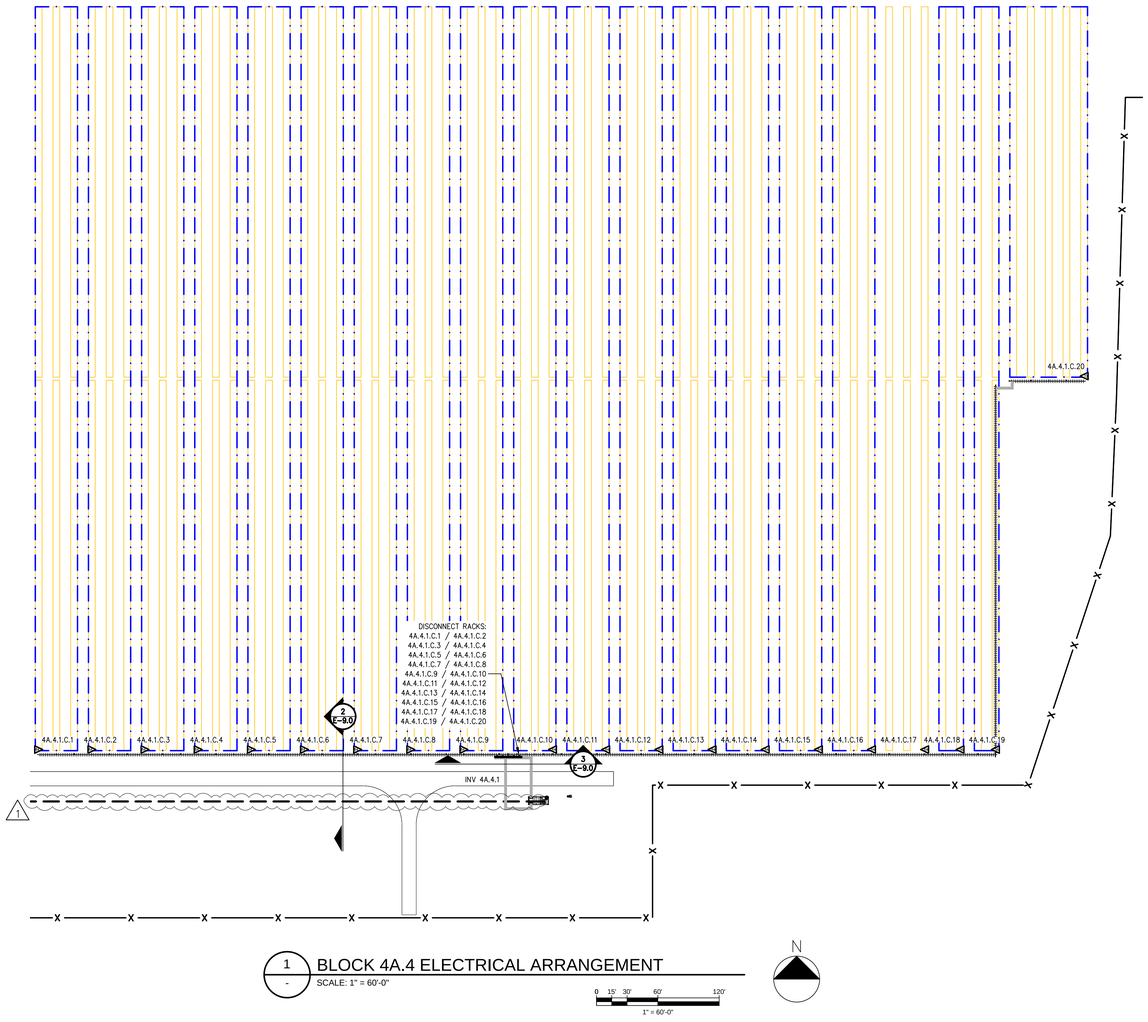
PROJECT TITLE:
BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
BLOCK 4A.3 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER
E-3.4A.3

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1 / - BLOCK 4A.4 ELECTRICAL ARRANGEMENT

SCALE: 1" = 60'-0"

0 15' 30' 60' 120'

1" = 60'-0"

N

GENERAL NOTES

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8. REFER TO E-5.X SERIES FOR TYPICAL STRING WIRING CONFIGURATION.
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10. REFER TO E-8.X SERIES FOR EQUIPMENT GROUNDING DETAILS.
11. REFER TO E-9.X SERIES DRAWINGS FOR TRENCH DETAILS.

LINETYPE LEGEND

- DC TRENCH
- COMBINER HARNESS AREA BOUNDARY
- DIRECT BURIAL MV CIRCUIT AND FIBER OPTIC CABLE
- SPAN PILE / END PILE — ABOVE-GROUND MESSENGER WIRE CABLE SUPPORT SYSTEM.
- 1 — MV AND DC CROSSING, REFER TO DETAIL 4 ON SHEET E-9.0 FOR ADDITIONAL TRENCH DETAILS
- CIVIL FEATURE — ACCESS ROAD AND DRAINAGE FEATURE. REFER TO CIVIL PLANS FOR DETAILS

EQUIPMENT LEGEND

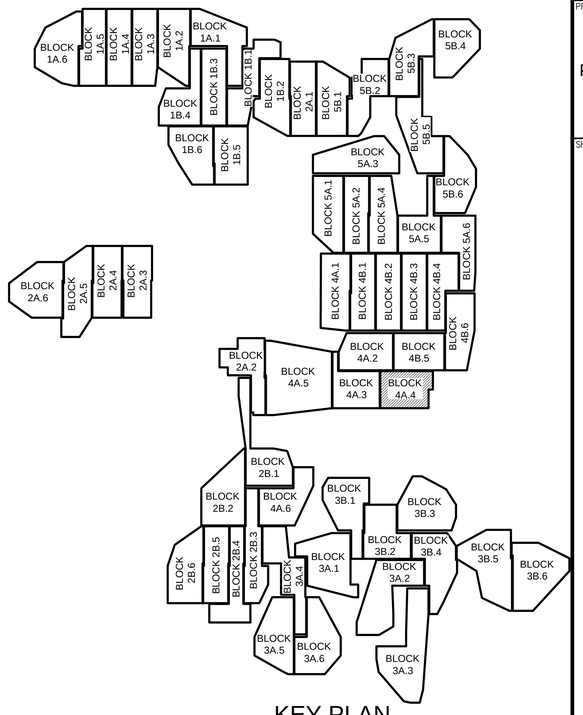
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  MODULES NOT SHOWN FOR CLARITY.
- COMBINER HARNESS - "56" REPRESENTS THE NUMBER OF CONNECTED STRINGS TO FEEDER.

COMBINER HARNESS NAMING CONVENTION

X . Y . Z . C . # (EXAMPLE: 1A.2.1.C.6)

- # — COMBINER HARNESS NUMBER
- C — EQUIPMENT DESIGNATION
- Z — INVERTER NUMBER
- Y — BLOCK NUMBER
- X — MV CIRCUIT NUMBER



KEY PLAN

NTS

FOR CONSTRACTION

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REV #	DESCRIPTION	DATE
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PROJECT TITLE:

BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:

BLOCK 4A.4 ELECTRICAL ARRANGEMENT

JOB NO.: 222018	PROJECT MGR: CG
DRAWN: DQ	SCALE: 1" = 60'-0"

SHEET NUMBER

E-3.4A.4

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Commission of Ohio Docketing Information System on

9/22/2022 3:21:48 PM

in

Case No(s). 21-1196-EL-BGA, 19-1823-EL-BGN

Summary: Notice Compliance with Condition 8 - filing of detailed engineering drawings electronically filed by Mr. Joseph D. Jordan on behalf of Big Plain Solar, LLC