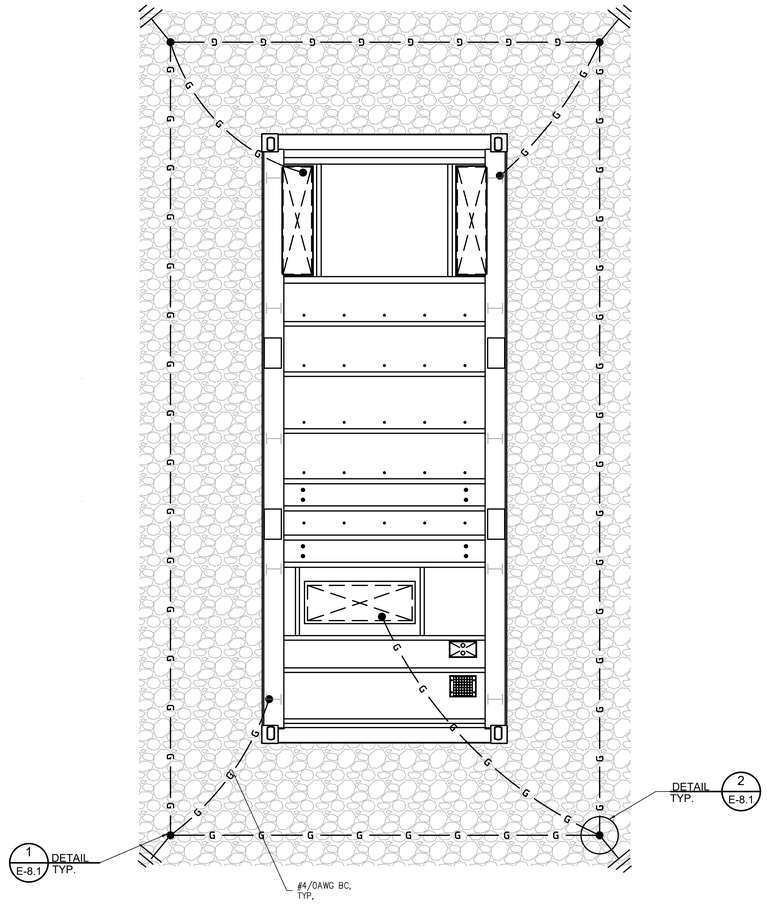
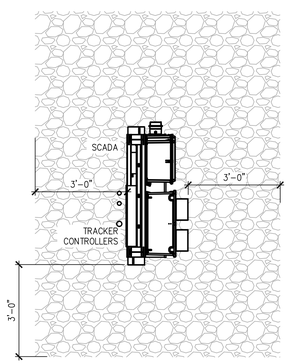




1 E-8.2 TYPICAL PV BLOCK GROUNDING

SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO GROUND GRID REPORT FOR FINAL DETAILS.
2. REFER TO STRUCTURAL DRAWINGS FOR EXACT SKID MEASUREMENTS, EQUIPMENT LOCATIONS, AND SKID COLUMN SIZES AND QUANTITIES.

1

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

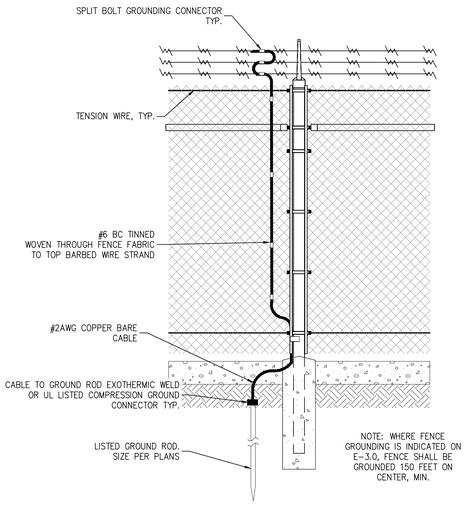
SHEET TITLE:

GROUNDING EQUIPMENT

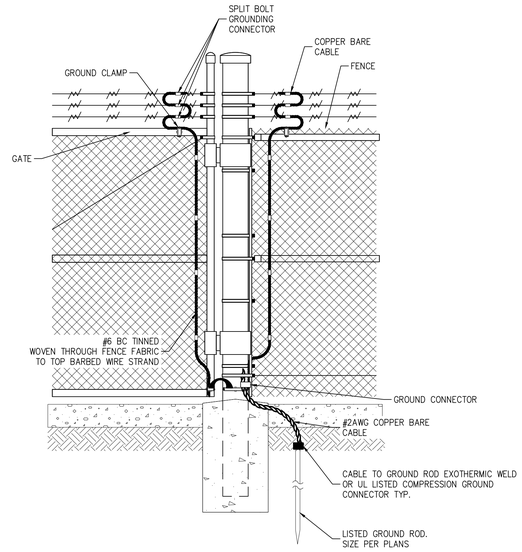
JOB NO.: 222018	PROJECT MGR: CG
DRAWN: Bll	SCALE: NONE

SHEET NUMBER

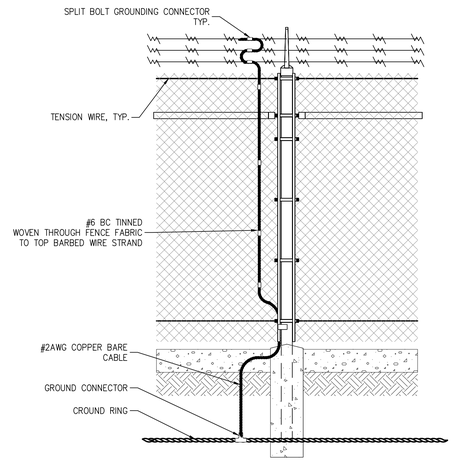
E-8.2



1 / E-8.3 FENCE POST GROUNDING
SCALE: NTS



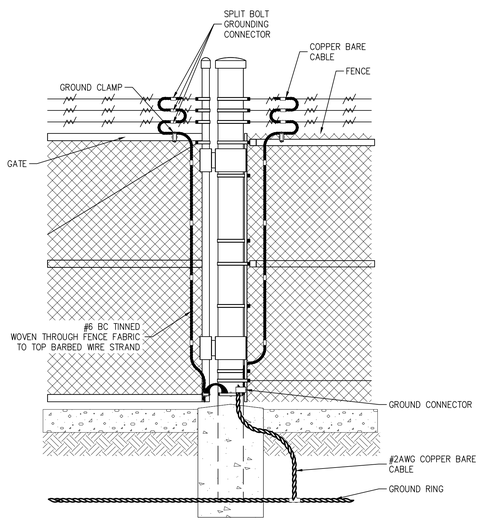
2 / E-8.3 GATE GROUNDING
SCALE: NTS



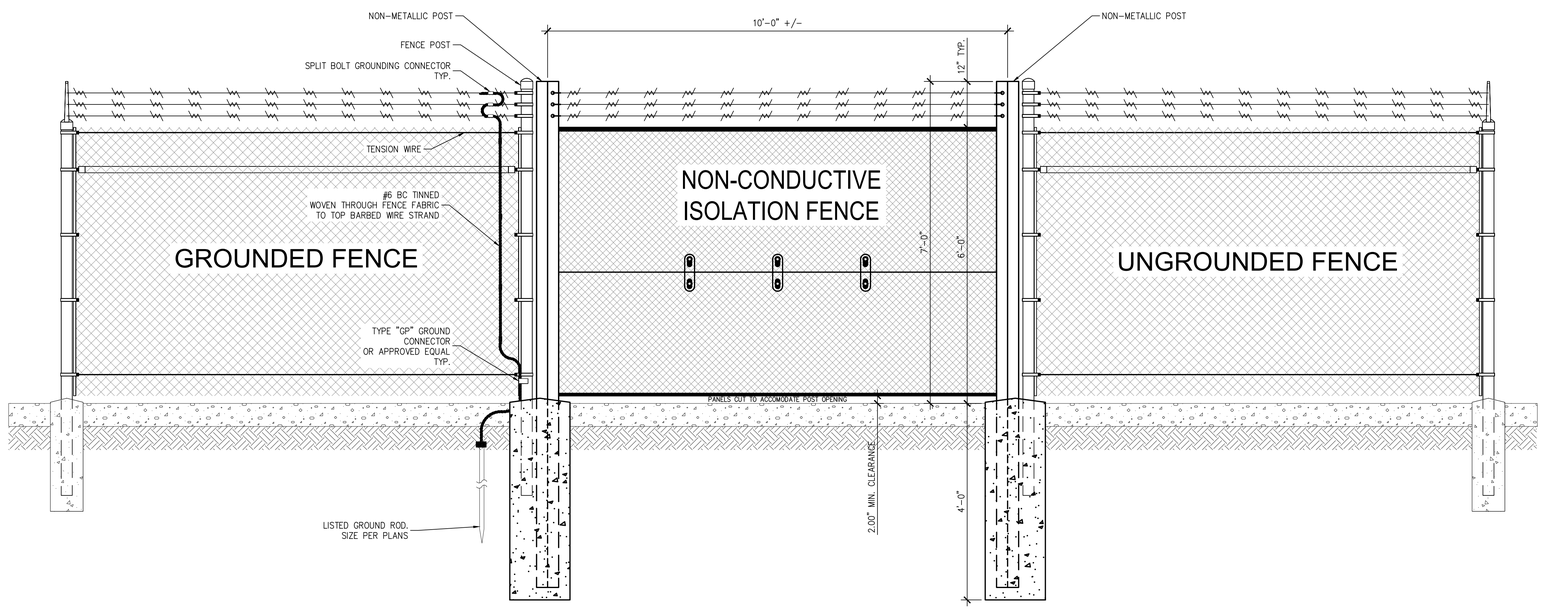
3 / E-8.3 ALTERNATE FENCE POST GROUNDING
SCALE: NTS

GENERAL NOTES

1. ALL FENCING TO BE INSTALLED PER MANUFACTURER'S DESIGN, RECOMMENDATION AND SPECIFICATION.
2. STATE AND LOCAL STANDARDS AND SPECIFICATIONS PERTAINING TO A SPECIFIC SITE TAKE PRECEDENCE OVER THIS DRAWING.
3. ALL FENCE TIES, TURNBUCKLES, AND OTHER MISCELLANEOUS ITEMS REQUIRED FOR PROPER FENCE INSTALLATION NOT SHOWN AND TO BE SUPPLIED BY CONTRACTOR. REFER TO CIVIL PLANS FOR FINAL DETAILS.
4. ALL POSTS AND HARDWARE SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.
5. LINE POST SPACING SHALL BE EQUIDISTANT WITH MAX. SPACING OF 10 FEET, UNLESS OTHERWISE NOTED.
6. ALL EXTERNALLY ACCESSIBLE HARDWARE SHALL BE INSTALLED IN SUCH A MANNER TO DETER UNWARRANTED REMOVAL.
7. DOMED CAPS TO BE USED AT ALL GATE POSTS, CORNER POSTS & TERMINAL POSTS. THESE POSTS SHALL BE DEAD-END POINTS (BRACE BAND) FOR BARBED WIRE.
8. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC. USE GALVANIZED HOG-RINGS WIRE TO MOUNT ALL SIGNS.
9. PROVIDE LOCKS ON ALL GATE(S) TO PREVENT UNAUTHORIZED PUBLIC ACCESS.



4 / E-8.3 ALTERNATE GATE GROUNDING
SCALE: NTS



5 / E-8.3 ISOLATION PANEL
SCALE: NTS

FOR CONSTRACTION

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ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

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

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

SHEET TITLE:
GROUNDING DETAILS
FENCE

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

SHEET NUMBER
E-8.3

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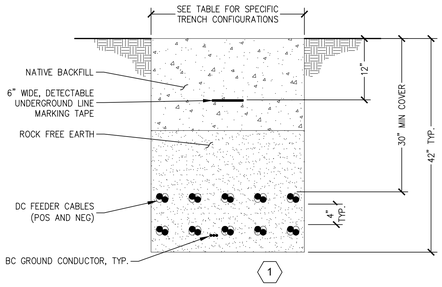
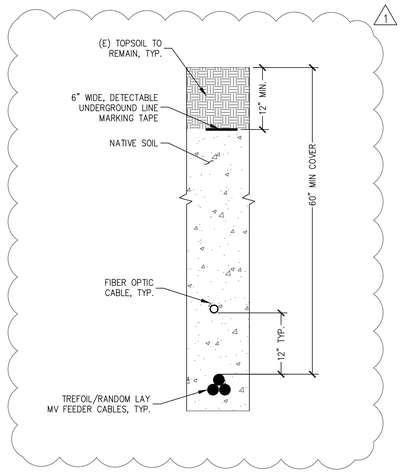
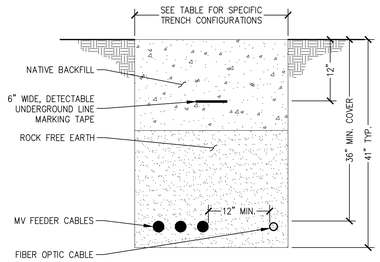


TRENCH REQUIREMENTS	
TRENCH WIDTH	30"
MAX NUMBER OF DC FEEDERS	10
MAX NUMBER OF DC FEEDERS PER LIFT	5
LIFTS DC FEEDERS CAN BE INSTALLED ON	1–2

1 E-9.0 DC FEEDER TRENCH
SCALE: 1" = 1'-0"



2 E-9.0 MEDIUM VOLTAGE FEEDER PLOW
SCALE: 1" = 1'-0"



NOTE

FIBER MAY BE INSTALLED ON THE SAME LIFT AS THE MV CONDUCTORS AS LONG AS A MINIMUM 12" HORIZONTAL SEPARATION IS MAINTAINED.

MAX. PARALLEL MV FEEDERS PER LIFT	
TRENCH WIDTH	30"
LIFT 1	1

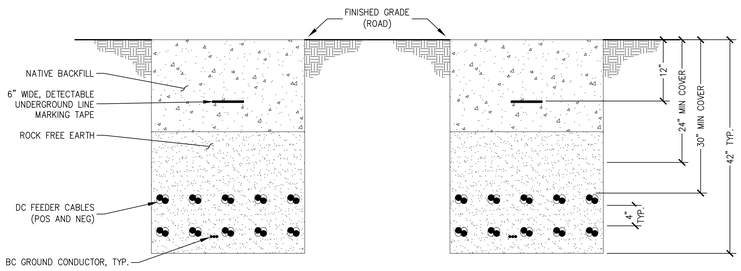
2A E-9.0 MEDIUM VOLTAGE FEEDER TRENCH 2
SCALE: 1" = 1'-0"

GENERAL NOTES

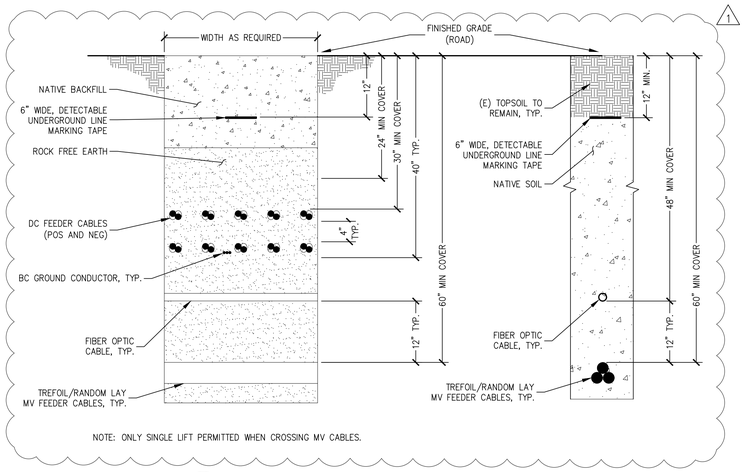
1. TRENCHES AND CABLE PLOW CROSS SECTIONS ARE LOCATION SPECIFIC REFER TO E-3 SERIES FOR DETAIL CALLOUTS.
2. THE CONFIGURATIONS SHOWN REPRESENT THE REQUIREMENTS FOR EACH OF THE TRENCH OR PLOW CONDITIONS ON SITE. MINIMUM CLEARANCES, MINIMUM COVER REQUIREMENTS, AND TYPICAL DEPTHS. SEE DETAIL TABLES FOR SPECIFIC TRENCH WIDTHS AND FILL REQUIREMENTS.
3. ALL TRENCHES SHALL HAVE:
   4" HORIZONTAL SEPARATION BETWEEN CABLES OR CONDUITS.
   4" VERTICAL SEPARATION BETWEEN CABLE CROSSINGS.
   4" VERTICAL SPACE BETWEEN LIFTS.
   UNLESS OTHERWISE NOTED.
4. CABLE AMPACITY HAS BEEN DETERMINED USING THE NEHER–MCGRATH METHOD AND EXCEEDS MINIMUM AMPACITY REQUIREMENTS OF THE STATE'S ELECTRICAL CODE. CONTRACTOR SHALL NOTIFY EOR IF INSTALLATION REQUIREMENTS CANNOT BE MET SO FURTHER ANALYSIS MAY BE PERFORMED.
5. TRENCH BACKFILL COMPACTION SHALL BE:
   85% AT NON–ROADWAY AREAS.
   PER GEOTECHNICAL REPORT REQUIREMENTS AT ROADWAY AREAS.
   PER GEOTECHNICAL REPORT REQUIREMENTS WHEN WITHIN 24" OF STRUCTURAL COLUMN OR PIER.
   SOIL DENSITY AND COMPACTION SHALL BE IN ACCORDANCE WITH STANDARD PROCTOR TEST.
   COMPACTION MEANS AND METHODS SHALL BE DETERMINED BY TRENCHING CONTRACTOR.
6. TRENCH CONSTRUCTION SHALL COMPLY WITH OSHA REQUIREMENTS.
7. SAND OR ROCK–FREE NATIVE SOIL SHALL BE USED FOR BEDDING MATERIAL 3" IN DEPTH AND FOR BACKFILL WHEN WITHIN 6" OF CABLES OR CONDUITS, UON. SOIL WITH ROCKS LESS THAN 1/2" IN SIZE AND WITHOUT SHARP EDGES SHALL BE CONSIDERED ROCK–FREE. 1
8. PROVIDE 6" WIDE DETECTABLE WARNING RIBBON CENTERED IN TRENCH 12" BELOW GRADE AND AT LEAST 12" ABOVE ANY CONDUIT OR DIRECT BURIED CABLE OPERATING AT OVER 600V.

KEYED NOTES

1. CABLE/CONDUIT LIFTS ARE SPECIFIED NUMERICALLY IN DESCENDING ORDER FROM SHALLOWEST TO DEEPEST FROM GRADE, 0,1,2,3,...N.
2. MEDIUM VOLTAGE FEEDER TRENCH SHALL BE USED WHERE TURNING RADIUS, PROXIMITY TO EQUIPMENT, OR PROXIMITY TO TRENCHES DOES NOT ALLOW FEEDER PLOWING. CONTRACTOR TO COORDINATE TRANSITION BETWEEN FEEDER PLOW AND FEEDER TRENCH. DETAIL MAY BE SUBSTITUTED AS NEEDED FOR FEEDER PLOW IN ALL TRENCH DETAILS WHERE FEEDER PLOW IS SHOWN.

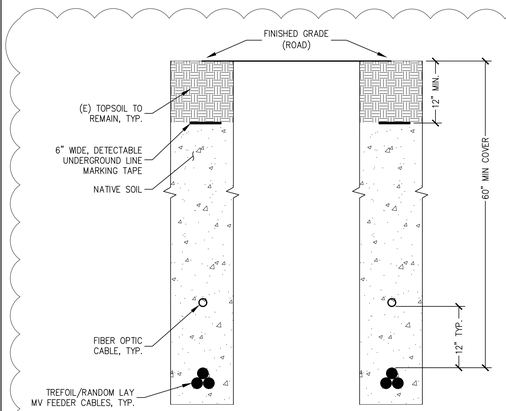


3 E-9.0 DC FEEDER TRENCH
SCALE: 1" = 1'-0"

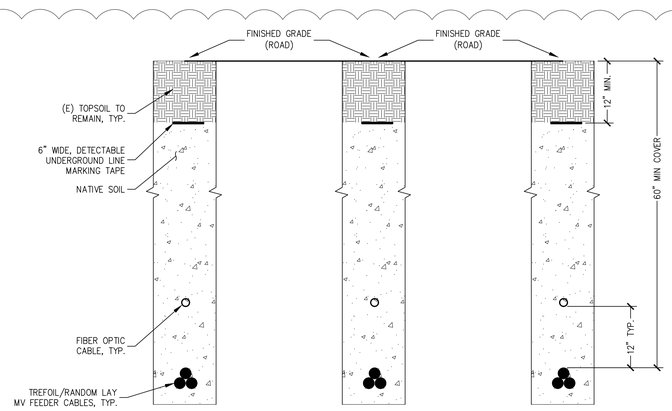


NOTE: ONLY SINGLE LIFT PERMITTED WHEN CROSSING MV CABLES.

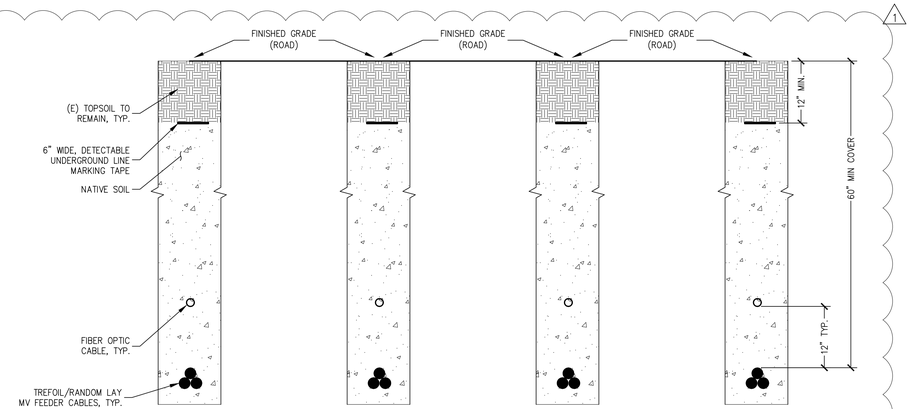
4 E-9.0 MV FEEDER PLOW & DC FEEDER TRENCH
SCALE: 1" = 1'-0"



5 E-9.0 MV FEEDER PLOW
SCALE: 1" = 1'-0"



6 E-9.0 MV FEEDER PLOW
SCALE: 1" = 1'-0"



7 E-9.0 MV FEEDER PLOW
SCALE: 1" = 1'-0"

FOR CONSTRACTION

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ALAMEDA, CA 94501 510.521.3773

STAMP/SEAL

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BENJAMIN J. LIU
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BIG PLAIN
SINGLE-AXIS TRACKER
PHOTOVOLTAIC ARRAYS
196 MWAC
MADISON COUNTY, OH

SHEET TITLE:
TRENCH SECTIONS

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

SHEET NUMBER
E-9.0

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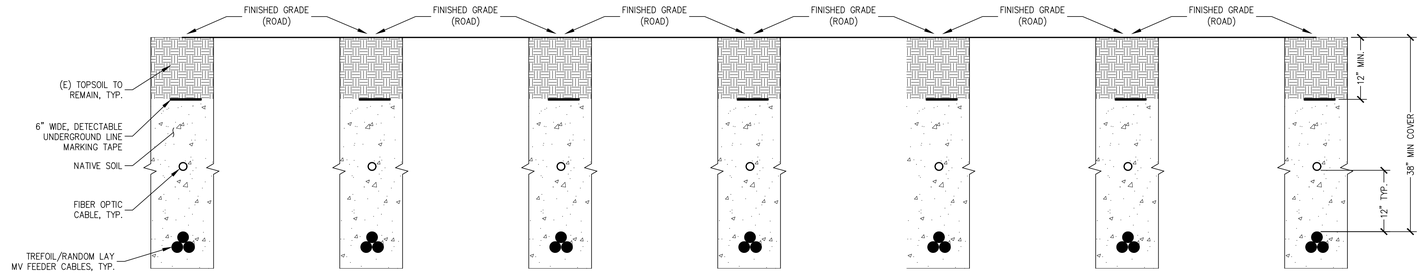
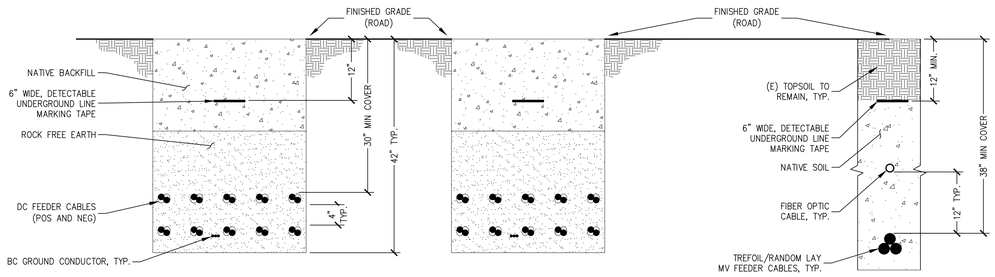


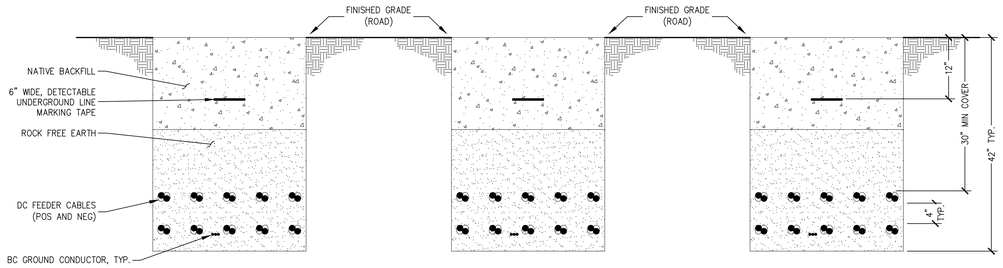
1 E-9.1 MV FEEDER PLOW

SCALE: 1" = 1'-0"



2 E-9.1 MV FEEDER PLOW & DC FEEDER TRENCH

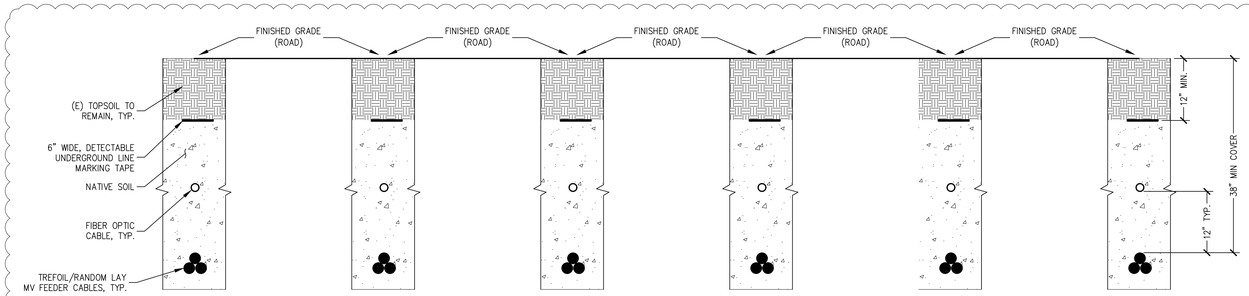
SCALE: 1" = 1'-0"



3 E-9.1 MV FEEDER PLOW & DC FEEDER TRENCH

SCALE: 1" = 1'-0"

1



4 E-9.1 MV FEEDER PLOW

SCALE: 1" = 1'-0"

GENERAL NOTES

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   UNLESS OTHERWISE NOTED.
4. CABLE AMPACITY HAS BEEN DETERMINED USING THE NEHER-MCGRATH METHOD AND EXCEEDS MINIMUM AMPACITY REQUIREMENTS OF THE STATE'S ELECTRICAL CODE. CONTRACTOR SHALL NOTIFY EOR IF INSTALLATION REQUIREMENTS CANNOT BE MET SO FURTHER ANALYSIS MAY BE PERFORMED.
5. TRENCH BACKFILL COMPACTION SHALL BE:
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   PER GEOTECHNICAL REPORT REQUIREMENTS WHEN WITHIN 24" OF STRUCTURAL COLUMN OR PIER.
   SOIL DENSITY AND COMPACTION SHALL BE IN ACCORDANCE WITH STANDARD PROCTOR TEST.
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7. SAND OR ROCK-FREE NATIVE SOIL SHALL BE USED FOR BEDDING MATERIAL 3" IN DEPTH AND FOR BACKFILL WHEN WITHIN 6" OF CABLES OR CONDUITS, UON. SOIL WITH ROCKS LESS THAN 1/2" IN SIZE AND WITHOUT SHARP EDGES SHALL BE CONSIDERED ROCK-FREE.

1

8. PROVIDE 6" WIDE DETECTABLE WARNING RIBBON CENTERED IN TRENCH 12" BELOW GRADE AND AT LEAST 12" ABOVE ANY CONDUIT OR DIRECT BURIED CABLE OPERATING AT OVER 600V.

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
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PROFESSIONAL ENGINEER

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

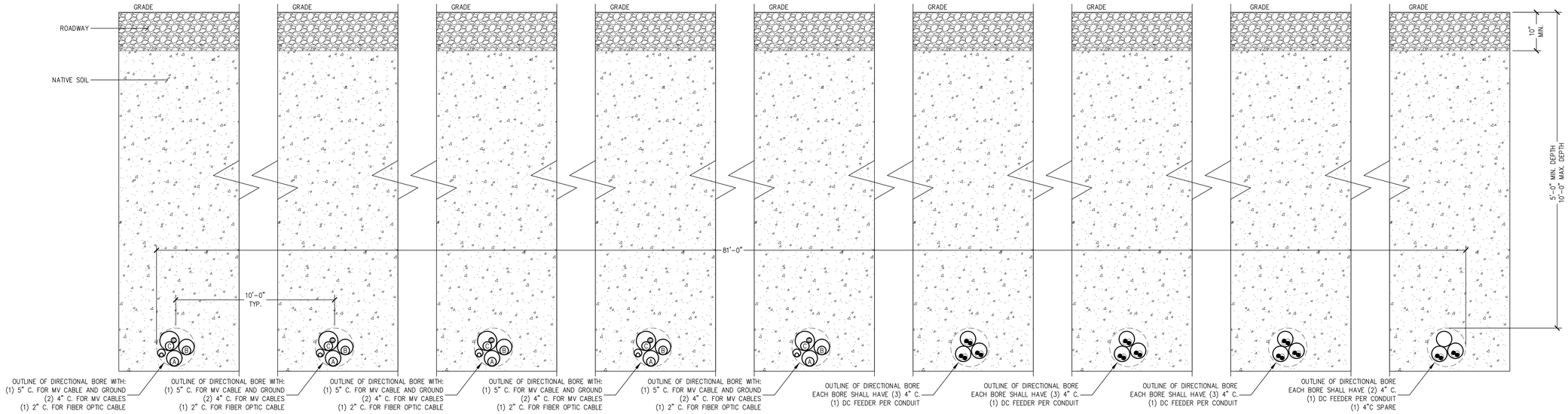
SHEET TITLE:

TRENCH SECTIONS

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

SHEET NUMBER

E-9.1



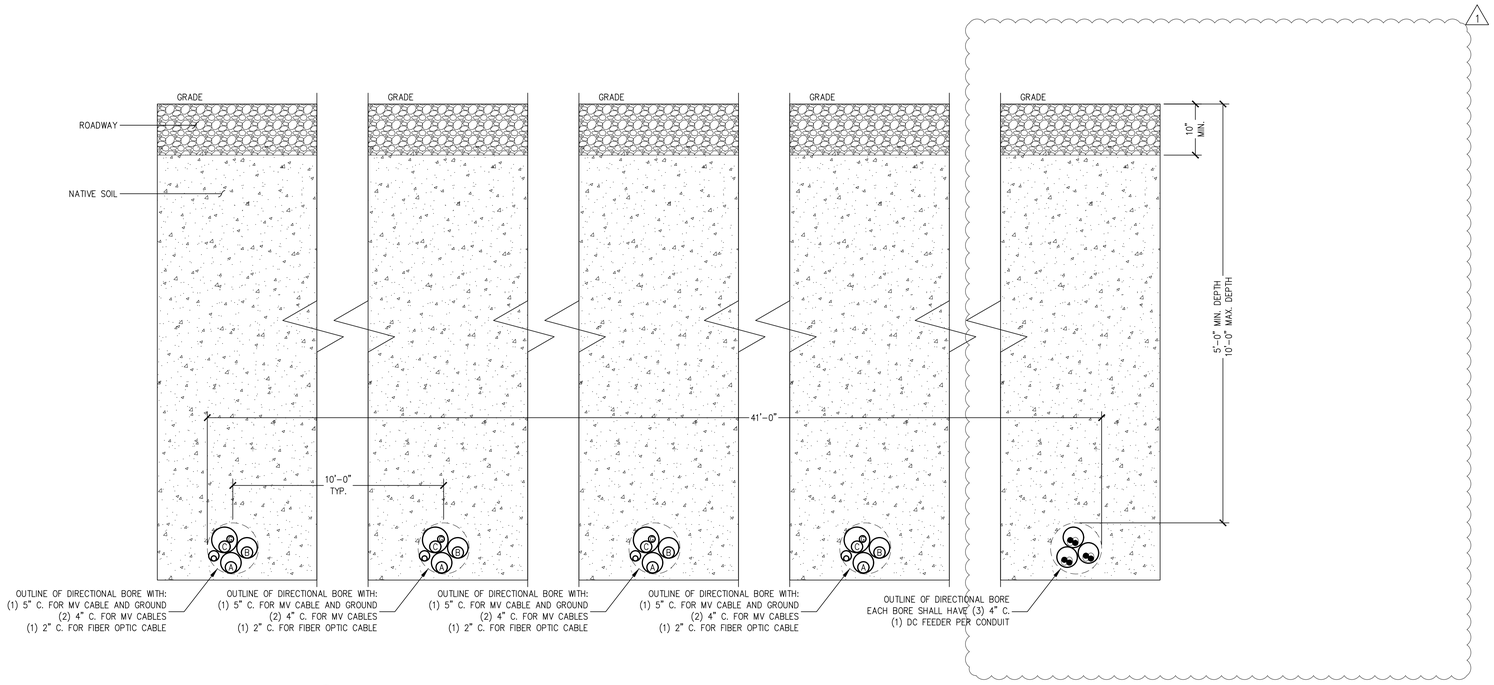
1 E-9.2 ROAD CROSSINGS
SCALE: NTS

DIRECTIONAL BORE NOTES:

1. CONTRACTOR SHALL NOTIFY EOR IF BORING WILL EXCEED MAX. DEPTH. CONDUCTORS MAY NEED TO BE UPSIZED.
2. ALL CONDUIT SHALL BE MIN. SCHEDULE 80 PVC UON.
3. CONDUIT SHALL NOT HAVE ANY BENDS HORIZONTALLY OR VERTICALLY WHILE CROSSING ROAD.
4. CONDUIT SHALL CROSS THE EASEMENT PERPENDICULAR TO ROAD.
5. BORE PIT BACKFILL COMPACTION SHALL BE 85% AT NON-ROADWAYS AND 95% AT ROADWAY AREAS.
6. BORE PIT TO BE LOCATED OUT OF ALL EASEMENTS.
7. PLACE UNDERGROUND CABLE MARKER SIGN AT EACH CORNER OF THE RIGHT OF WAY CROSSING. SIGNS SHALL EXPLAIN THAT MULTIPLE MEDIUM VOLTAGE CABLES ARE BURIED BETWEEN THE SIGNS.
8. PROVIDE PULL BOXES OR VAULTS ON EACH END WHERE REQUIRED FOR SPLICING CABLES.
9. CONFIRM CROSSING REQUIREMENTS WITH AHJ.
10. UTILITY SHALL BE WRAPPED WITH TRACER WIRE WITHIN THE WIDTH OF THE RIGHT-OF-WAY.

GENERAL NOTES

1. DETAILS SHOWS 5" CONDUIT FOR 1000 KCMIL FEEDER AND GND WIRE. 750 KCMIL AND LOWER MAY USE 4" CONDUIT.



2 E-9.2 ROAD CROSSINGS
SCALE: NTS

DIRECTIONAL BORE NOTES:

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10. UTILITY SHALL BE WRAPPED WITH TRACER WIRE WITHIN THE WIDTH OF THE RIGHT-OF-WAY.

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TRENCH SECTIONS

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DRAWN: SSS	SCALE: AS SHOWN

SHEET NUMBER

E-9.2

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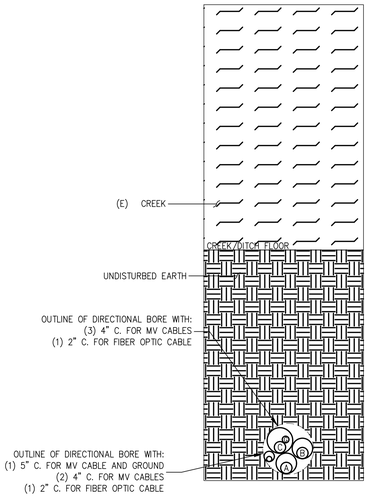

DIRECTIONAL BORE NOTES:

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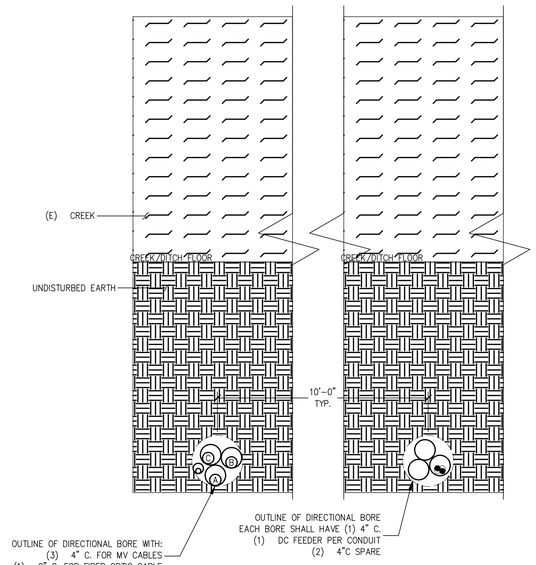
2. ALL CONDUIT SHALL BE MIN. SCHEDULE 80 PVC UON.
3. CONDUIT SHALL NOT HAVE ANY BENDS HORIZONTALLY OR VERTICALLY WHILE CROSSING STREAM.
4. CONDUIT SHALL CROSS THE EASEMENT PERPENDICULAR TO STREAM.
5. BORE PIT BACKFILL COMPACTION SHALL BE 85% AT NON-ROADWAYS AND 95% AT ROADWAY AREAS.
6. BORE PIT TO BE LOCATED OUT OF ALL EASEMENTS.
7. PROVIDE PULL BOXES OR VAULTS ON EACH END WHERE REQUIRED FOR SPLICING CABLES.
8. CONFIRM CROSSING REQUIREMENTS WITH PIPELINE OWNER.
9. PLACE UNDERGROUND CABLE MARKER SIGN AT EACH CORNER OF THE RIGHT OF WAY CROSSING. SIGNS SHALL EXPLAIN THAT MULTIPLE MEDIUM VOLTAGE CABLES ARE BURIED BETWEEN THE SIGNS.

1 / E-9.3 UG STREAM/DITCH CROSSINGS
SCALE: NTS



DIRECTIONAL BORE NOTES:

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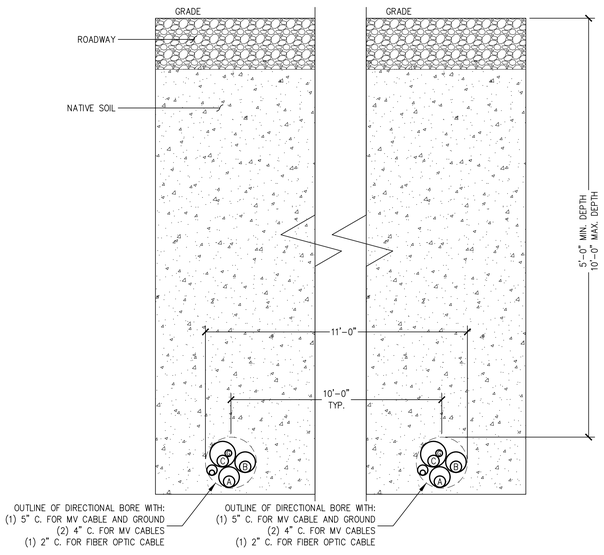
7. PROVIDE PULL BOXES OR VAULTS ON EACH END WHERE REQUIRED FOR SPLICING CABLES.
8. CONFIRM CROSSING REQUIREMENTS WITH PIPELINE OWNER.
9. PLACE UNDERGROUND CABLE MARKER SIGN AT EACH CORNER OF THE RIGHT OF WAY CROSSING. SIGNS SHALL EXPLAIN THAT MULTIPLE MEDIUM VOLTAGE CABLES ARE BURIED BETWEEN THE SIGNS.

2 / E-9.3 UG STREAM/DITCH CROSSINGS
SCALE: NTS

GENERAL NOTES

1. DETAILS SHOWS 5" CONDUIT FOR 1000 KCMIL FEEDER AND GND WIRE. 750 KCMIL AND LOWER MAY USE 4" CONDUIT.

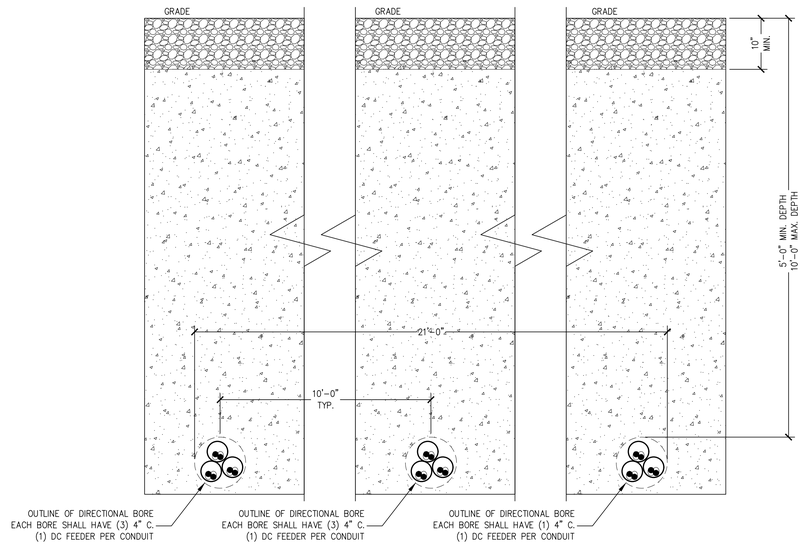
1



DIRECTIONAL BORE NOTES:

1. CONTRACTOR SHALL NOTIFY EOR IF BORING WILL EXCEED MAX. DEPTH. CONDUCTORS MAY NEED TO BE UPSIZED.
2. ALL CONDUIT SHALL BE MIN. SCHEDULE 80 PVC UON.
3. CONDUIT SHALL NOT HAVE ANY BENDS HORIZONTALLY OR VERTICALLY WHILE CROSSING ROAD.
4. CONDUIT SHALL CROSS THE EASEMENT PERPENDICULAR TO ROAD.
5. BORE PIT BACKFILL COMPACTION SHALL BE 85% AT NON-ROADWAYS AND 95% AT ROADWAY AREAS.
6. BORE PIT TO BE LOCATED OUT OF ALL EASEMENTS.
7. PLACE UNDERGROUND CABLE MARKER SIGN AT EACH CORNER OF THE RIGHT OF WAY CROSSING. SIGNS SHALL EXPLAIN THAT MULTIPLE MEDIUM VOLTAGE CABLES ARE BURIED BETWEEN THE SIGNS.
8. PROVIDE PULL BOXES OR VAULTS ON EACH END WHERE REQUIRED FOR SPLICING CABLES.
9. CONFIRM CROSSING REQUIREMENTS WITH AHJ.
10. UTILITY SHALL BE WRAPPED WITH TRACER WIRE WITHIN THE WIDTH OF THE RIGHT-OF-WAY.

3 / E-9.3 ROAD CROSSINGS
SCALE: NTS



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4 / E-9.3 ROAD CROSSINGS
SCALE: 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

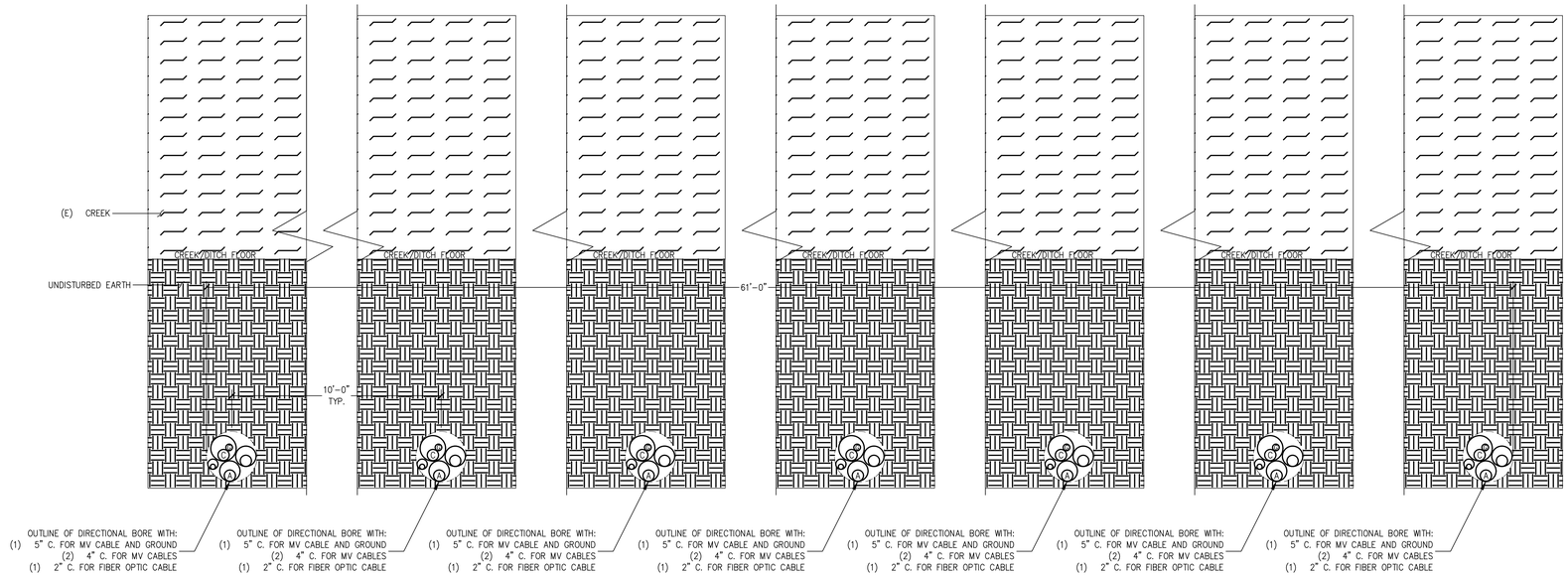
SHEET TITLE:

TRENCH SECTIONS

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

SHEET NUMBER

E-9.3



DIRECTIONAL BORE NOTES:

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2. ALL CONDUIT SHALL BE MIN. SCHEDULE 80 PVC UON.
3. CONDUIT SHALL NOT HAVE ANY BENDS HORIZONTALLY OR VERTICALLY WHILE CROSSING STREAM.
4. CONDUIT SHALL CROSS THE EASEMENT PERPENDICULAR TO STREAM.
5. BORE PIT BACKFILL COMPACTION SHALL BE 85% AT NON-ROADWAYS AND 95% AT ROADWAY AREAS.
6. BORE PIT TO BE LOCATED OUT OF ALL EASEMENTS.
7. PROVIDE PULL BOXES OR VAULTS ON EACH END WHERE REQUIRED FOR SPLICING CABLES.
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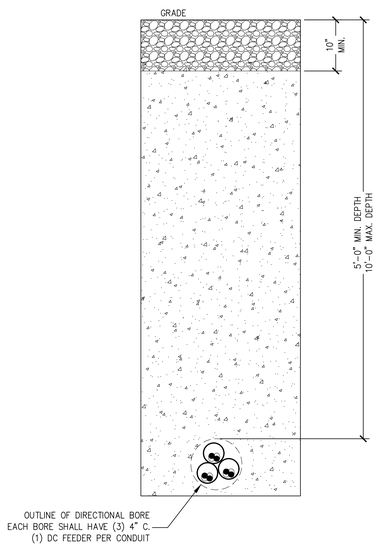
1 / E-9.4 UG STREAM/DITCH CROSSINGS
SCALE: NTS



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10. UTILITY SHALL BE WRAPPED WITH TRACER WIRE WITHIN THE WIDTH OF THE RIGHT-OF-WAY.

2 / E-9.4 ROAD CROSSINGS
SCALE: NTS

GENERAL NOTES

1. DETAILS SHOWS 5" CONDUIT FOR 1000 KCMIL FEEDER AND GND WIRE. 750 KCMIL AND LOWER MAY USE 4" CONDUIT.

1

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

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

STAMP/SEAL

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DRAWN: SSS | SCALE: AS SHOWN
SHEET NUMBER
E-9.4

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NEXTracker
A Flex Company

THE MOST ADVANCED AND RELIABLE TRACKER ON THE MARKET

In our mission to make solar a mainstream energy source, NEXTracker has engineered the most intelligent and flexible tracking technology available today: the NX Horizon™ self-powered tracker.

NX Horizon brings self-contained motor power and control to each row, eliminating power wiring and trenching and enabling advanced energy yield optimization. With a balanced mechanical design and highly configurable, independent rows, NX Horizon improves reliability and design flexibility while lowering O&M costs. By offering more powerful systems at a greater value, NEXTracker is accelerating deployment of renewable energy worldwide.

NX HORIZON KEY FEATURES AND BENEFITS INCLUDE:

SELF-POWERED SYSTEM WITH SMART PERFORMANCE COMMUNICATION ARCHITECTURE:
Self-contained units on each row include a dedicated PV panel to provide power to the controller which drives the motor and hosts intelligent control electronics to position each tracker row for maximum yield.

INDEPENDENT BALANCED ROWS WITH 120 DEGREE ROTATIONAL RANGE:
Each NX Horizon row has its own controlled motor and a wide rotational range that delivers up to 2% more energy than typical linked row trackers.

FAST AND SIMPLE INSTALLATION:
With less steel, no drive shafts, extra cabling, or welding required, NX Horizon allows for quick and easy installation. We also offer our PowerworX™ Academy to share hands-on best practices to ensure the highest quality installation and reliability for the life of the plant.

LOWEST LONG-TERM O+M COSTS:
NX Horizon's elegant design, independent rows, and smart, data-driven Digital O&M™ capability contribute to the lowest long-term ownership costs for our customers.

FIRST SOLAR SERIES 6 CuRe

MODEL TYPES: FS-6XXX-C / FS-6XXXA-C / FS-6XXX-C-I / FS-6XXXA-C-I
(XXX = NOMINAL POWER)

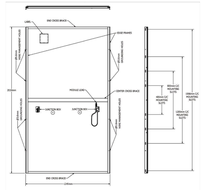
RATINGS AT STANDARD TEST CONDITIONS (1000W/m², AM 1.5, 25°C)[2]									
Nominal Power[6] (-0/+5%)	P_{MAX} (W)	450	455	460	465	470	475	480
Efficiency (%)	%	17.9	18.1	18.3	18.5	18.7	18.9	19.0
Voltage at P_{MAX}	V_{MAX} (V)	186.8	187.8	188.8	189.8	191.1	191.5	192.8
Current at P_{MAX}	I_{MAX} (A)	2.41	2.42	2.44	2.45	2.46	2.48	2.49
Open Circuit Voltage	V_{OC} (V)	221.1	222.0	222.9	223.8	224.3	224.8	225.4
Short Circuit Current	I_{SC} (A)	2.57	2.58	2.59	2.60	2.61	2.61	2.62
Maximum System Voltage	V_{SYS} (V)	1500[8]						
Limiting Reverse Current	I_R (A)	5.0						
Maximum Series Fuse	I_{CF} (A)	5.0						
RATINGS AT NOMINAL OPERATING CELL TEMPERATURE OF 45°C (800W/m², 20°C air temperature, AM 1.5, 1m/s wind speed)[2]								
Nominal Power	P_{MAX} (W)	339.9	343.6	347.3	351.3	355.0	358.8	362.4
Voltage at P_{MAX}	V_{MAX} (V)	175.2	176.2	176.3	177.4	179.3	179.4	180.3
Current at P_{MAX}	I_{MAX} (A)	1.94	1.95	1.97	1.98	1.98	2.00	2.01
Open Circuit Voltage	V_{OC} (V)	210.0	210.9	211.8	212.6	213.1	213.6	214.1
Short Circuit Current	I_{SC} (A)	2.07	2.08	2.09	2.10	2.10	2.11	2.11

TEMPERATURE CHARACTERISTICS		
Module Operating Temperature Range	(°C)	-40 to +85
Temperature Coefficient of P_{MAX}	$T_K(P_{MAX})$	-0.28%/°C (Temperature Range: 25°C to 75°C)
Temperature Coefficient of V_{OC}	$T_K(V_{OC})$	-0.25%/°C
Temperature Coefficient of I_{SC}	$T_K(I_{SC})$	+0.04%/°C

CERTIFICATIONS AND TESTS[1]
IEC
61215:2016 & 61730-1:2016[9], CE
61701: Salt Mist Corrosion
60068-2-68 Dust and Sand Resistance
UL
UL 61730 1500V Listed
REGIONAL CERTIFICATIONS
InMetro, SII, BIS, FSEC, MyHijau
Buy American Act (BAA) Compliant
EXTENDED DURABILITY TESTS
ANSI/CAN/CSA-C450-18
Long-Term Sequential
Thresher Test
PID Resistant
QUALITY & EHS
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018
ISO 14064-3:2006
EPEAT Silver Registered

MECHANICAL DESCRIPTION	
Length	2024mm
Width	1245mm
Area	2.52m²
Module Weight	34.9kg (FS-6XXX-C / FS-6XXXA-C) 34.2kg (FS-6XXX-C-I / FS-6XXXA-C-I)
Leadwire[8]	2.5mm², 733mm (+) & Bulkhead (-)
Connectors	TE Connectivity PV4-S, MC4-EVO 2, or alternate
Junction Box	IP68 Rated
Bypass Diode	N/A
Cell Type	Thin film CdTe semiconductor, up to 271 cells
Frame Material	Anodized Aluminum
Front Glass	Heat strengthened
Back Glass	Heat strengthened
Encapsulation	Laminate material with edge seal
Frame to Glass Adhesive	Silicone
Load Rating[7,8]	2400Pa

MECHANICAL DRAWING



PACKAGING INFORMATION		
Model Type	Modules Per Pack	Packs per 40' Container
FS-6XXX-C / FS-6XXXA-C	27	18
FS-6XXX-C-I / FS-6XXXA-C-I	30	18

Install in portrait only
1 Limited power output and product warranties subject to warranty terms and conditions
2 All ratings ±10%, unless specified otherwise. Specifications are subject to change
3 Measurement uncertainty applies
4 Testing Certifications/Listings pending
5 IEC 61730-1: 2016 Class II
6 Leadwire length from junction box exit to connector mating surface
7 1500Pa temporal load rating for 1956mm mounting slots. Higher loads may be acceptable, subject to testing
8 Model Types FS-6XXX-C-I and FS-6XXXA-C-I meet UL 61730 with a reduced mechanical design load. Contact Module User Guide for additional details

firstsolar.com | info@firstsolar.com

SG3425UD-MV/ SG3600UD-MV

New

SUNGROW
Clean power for all

Turnkey Station for North America 1500 Vdc System - MV Transformer Integrated

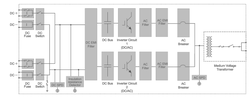
HIGH YIELD
- Advanced three-level technology, max. efficiency 98.9%
- Full power operation at 45 ℃ (113 ℉)
- Effective cooling, wide operation temperature
- Max. DC/AC ratio up to 2.0

SMART O&M
- Integrated current, voltage and MV parameters monitoring function for online analysis and trouble shooting
- Modular design, easy for maintenance

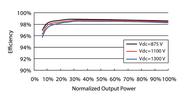
SAVED INVESTMENT
- Low transportation and installation cost due to 20-foot container size design
- DC-coupled storage interface and charging power from the grid, low system cost
- Integrated MV transformer and LV auxiliary power supply
- Q at night optional

GRID SUPPORT
- Compliance with standards:UL 1741,UL 1741 SA, IEEE 1547, Rule 21 and NEC code
- Low / High voltage ride through (L/HVRT), L/HFRT, soft start/stop
- Active & reactive power control and power ramp rate control

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SG3425UD)



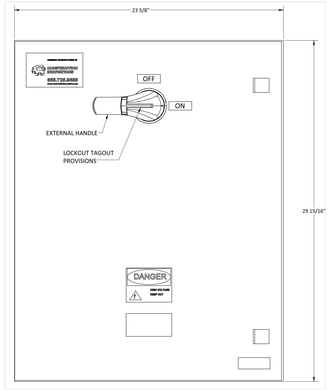
CONSTRUCTION INNOVATIONS

PV DISCONNECT SWITCH INSTALLATION & OPERATION MANUAL - V51

PRODUCT OVERVIEW

The PV Disconnect Switch is a commercial disconnect switch suitable for use as a photovoltaic disconnect in accordance with NEC NFPA70 Article 690. The output is passed through an externally operable load-break switch that can disconnect the positive and negative source conductors of a PV array. The door is mechanically interlocked and cannot be opened while the switch is in the "ON" position during normal operation.

Figure 1: PV Disconnect Switch Overview



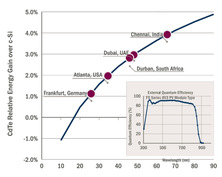
FIRST SOLAR SERIES 4™ PV MODULE

MECHANICAL DESCRIPTION	
Length	1200mm
Width	600mm
Weight	12kg
Thickness	6.8mm
Area	0.72m²
Individual Leadwire	2.5mm², 657mm (minimum from strain relief to connector mating surface)
Connectors	MC4 or MC4-EVO 2[9]
Bypass Diode	None
Cell Type	Thin-film CdTe semiconductor, up to 216 cells
Frame Material	None
Front Glass	3.2mm heat strengthened Series 4A™ includes anti-reflective coating
Back Glass	3.2mm tempered
Encapsulation	Laminate material with edge seal
Load Rating	2400Pa[10]

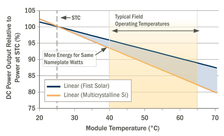
MODULE NUMBERS AND RATINGS AT STANDARD TEST CONDITIONS (1000W/m², AM 1.5, 25°C)[3]							
NOMINAL VALUES		FS-4130-3 FS-4110A-3	FS-4122-3 FS-4112A-3	FS-4135-3 FS-4115A-3	FS-4117-3 FS-4117A-3	FS-4120-3 FS-4120A-3	FS-4122-3 FS-4122A-3
Nominal Power* (-0/+5W)	P_{MAX} (W)	110.0	112.5	115.0	117.5	120.0	122.5
Voltage at P_{MAX}	V_{MAX} (V)	67.8	68.5	69.3	70.1	70.8	71.5
Current at P_{MAX}	I_{MAX} (A)	1.62	1.64	1.66	1.68	1.70	1.71
Open Circuit Voltage	V_{OC} (V)	86.4	87.0	87.6	88.1	88.7	88.7
Short Circuit Current	I_{SC} (A)	1.82	1.83	1.83	1.83	1.84	1.85
Module Efficiency	%	15.3	15.6	16.0	16.3	16.7	17.0
Maximum System Voltage	V_{SYS} (V)	1500[7,8]					
Limiting Reverse Current	I_R (A)	4.0					
Maximum Series Fuse	I_{CF} (A)	4.0					
RATINGS AT NOMINAL OPERATING CELL TEMPERATURE OF 45°C (800W/m², 20°C air temperature, AM 1.5, 1m/s wind speed)[3]							
Nominal Power	P_{MAX} (W)	83.2	85.1	87.0	89.0	90.8	92.7
Voltage at P_{MAX}	V_{MAX} (V)	63.5	64.5	64.9	65.9	66.3	67.2
Current at P_{MAX}	I_{MAX} (A)	1.31	1.32	1.34	1.35	1.37	1.38
Open Circuit Voltage	V_{OC} (V)	81.6	82.1	82.7	83.2	83.7	83.7
Short Circuit Current	I_{SC} (A)	1.47	1.47	1.48	1.48	1.48	1.49

TEMPERATURE CHARACTERISTICS		
Module Operating Temperature Range	(°C)	-40 to +85
Temperature Coefficient of P_{MAX}	$T_K(P_{MAX})$	-0.28%/°C (Temperature Range: 25°C to 75°C)
Temperature Coefficient of V_{OC}	$T_K(V_{OC})$	-0.28%/°C
Temperature Coefficient of I_{SC}	$T_K(I_{SC})$	+0.04%/°C

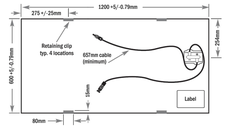
SUPERIOR SPECTRAL RESPONSE



SUPERIOR TEMPERATURE COEFFICIENT



MECHANICAL DRAWING



1 Device package meets Atlas 25+
2 Class A Spread of Flame / Class B Burning Brand. Roof mounted fire rating is established by assessing rack and solar module as a unit
3 Limited power output and product warranties subject to warranty terms and conditions
4 Ensures 98% rated power in first year, -0.5%/year through year 25
5 All ratings ± 10%, unless specified otherwise. Specifications are subject to change
6 Measurement uncertainty applies
7 UL 1703 1500V Listed / ULC 1703 1000V Listed
8 Application Class A for 1000V (class II), Application Class B for 1500V (class I) with MC4; Application Class A for 1000V and 1500V (class II) with MC4-EVO 2
9 Multi-Contact: MC4 (PV-KST4/PV-KBT4) or MC4-EVO 2 (PV-KST-EVO 2 / PV-KBT-EVO 2).
10 Higher load ratings can be met with additional clips or wider clips, subject to testing

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GENERAL	
Tracking Technology	Horizontal single-axis balanced-mass tracker
Tracking Range	120° (± 60°)
Drive System	One slew gear, 24 VDC motor and self-powered controller w/ dedicated solar panel per row
DC Capacity	23-35kWp per tracker row, depending on panel type. Row length up to 90 panels.
System Voltage	1,000 volt or 1,500 volt
Safety Stowing	Automated wind and snow stowing with self-contained backup power
Torsional Limiter	Included at each foundation/bearing for additional wind and snow load protection
Principal Materials	Galvanized and stainless steel
Compliance	Grounding/bonding: UL2703; structural design: ASCE7-10, T racker: UL 3703
Typical Dimensions	Height 1.4 m/4.5 ft, Width 2.0 m/6.4 ft, Length 85 m/283 ft
Module Frame Bonding	Integrated bonding to foundation pier. No additional copper wiring required

SG3425UD-MV/SG3600UD-MV

Type designation	SG3425UD-MV	SG3600UD-MV
Input (DC)		
Max. PV input voltage	1500 V	
Min. PV input voltage / Startup input voltage	875 V / 915 V	915 V / 955 V
Available DC fuse sizes	250A, 315A, 400A, 450A, 500A	
MPP voltage range	875 – 1300 V	915 – 1300 V
No. of independent MPP inputs	1	
No. of DC inputs	20 (optional: 22 / 24 / 26 / 28)	
Max. DC short-circuit current	10000 A	
PV array configuration	Negative grounding or floating	
Output (AC)		
AC output power	3425 kVA @ 45 ℃ (113 ℉); 3083 kVA @ 50 ℃ (122 ℉)	3600 kVA @ 45 ℃ (113 ℉); 3240 kVA @ 50 ℃ (122 ℉)
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 50 – 65 Hz	
Harmonic (THD)	< 3 % (at nominal power)	
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading - 0.8 lagging	
Efficiency		
Inverter Max. efficiency	98.9 %	
Inverter CEC efficiency	98.5 %	
Transformer		
Transformer rated power	3425 kVA	3600 kVA
Transformer max. power	3425 kVA	3600 kVA
LV / MV voltage	0.6 kV / (12 – 35) kV	0.63 kV / (12 – 35) kV
Transformer vector	Dy1 or Dy11	
Transformer cooling type	ONAN (Optional: KNAN)	
Protection		
DC input protection	Load break switch + fuse	
Inverter output protection	Circuit breaker	
AC MV output protection	Load break switch + fuse	
Overvoltage protection	DC Type II / AC Type II	
Grid monitoring / Ground fault monitoring	Yes / Yes	
Insulation monitoring	Yes	
Overheat protection	Yes	
General Data		
Dimensions (W*H*D)	6058 * 2896 * 2438 mm 238.5" * 114.0" * 96.0"	
Weight	18000 kg 39683.2 lbs	
Degree of protection	NEMA 4X(Electronic for Inverter) / NEMA 3R(Others)	
Auxiliary power supply	5KVA, 120Vac/240Vac; Optional: 30kVA, 480Vac/277Vac	
Operating ambient temperature range	-35 to 60 ℃ (> 45 ℃ derating) / optional: -40 to 60 ℃ (> 45 ℃ derating) -22 to 140 ℉ (> 113 ℉ derating) / optional: -40 to 140 ℉ (> 113 ℉ derating)	
Allowable relative humidity range	0 - 100 %	
Cooling method	Temperature controlled forced air cooling	
Max. operating altitude	1000 m (Standard) / > 1000 m (Customized) (3280.8 ft (standard) / > 3280.8 ft (Customized))	
DC-coupled storage interface	Optional	
Charging power from the grid	Optional	
Communication	Standard: RS485, Ethernet; Optional: optical fiber	
Compliance	UL 1741, IEEE 1547, UL1741 SA, NEC 2017, CSA C22.2 No.107.1-01	
Grid support	Q at night function (optional), L/HVRT, L/HFRT, Active & reactive power control and power ramp rate control, Volt-var, Frequency-watt	

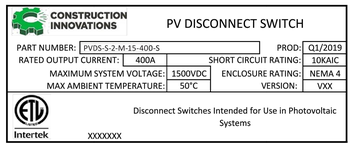
CONSTRUCTION INNOVATIONS

PV DISCONNECT SWITCH INSTALLATION & OPERATION MANUAL - V51

RATINGS

Refer to *Figure 2* for important environmental and electrical ratings.

Figure 2: PV Disconnect Switch Label Example



The PV Disconnect Switch part number is as follows: PVDS-M-C-L-VV-AAA-S, where:

Part Type (PVDS):	PV Disconnect Switch
Switch MFG (M):	S; Socomec, A; ABB
Number of Circuits (C):	1, 2
Lug Type (L):	C; Compression, M; Mechanical
Voltage (VV):	15; 1500V
Current (AAA):	250, 320, 400
Surge Arrester (S):	Optional surge arrester included

1 E-11.0 RACKING
SCALE: NTS

2 E-11.0 SOLAR MODULE
SCALE: NTS

3 E-11.0 SOLAR INVERTER
SCALE: NTS

4 E-11.0 PV DISCONNECT SWITCH
SCALE: NTS

FOR CONSTRACTION

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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:

EQUIPMENT SPECIFICATIONS

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

SHEET NUMBER

E-11.0

PRODUCT INFORMATION SHEET

CONSTRUCTION INNOVATIONS

PATENT PENDING

Combiner Harness Commercial Wiring System

Construction Innovations' Combiner Harness is a highly configurable commercial wiring system designed to safely combine up to 6 conductors per node into a single output.

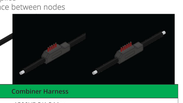
The Combiner Harness is custom-configured to your application. Variables include: feeder and tap conductor sizes and colors, quantity of nodes, and quantity of tap conductors. Plus, the harness can be extended or combined into infinite array possibilities, when the optional UL-listed butt-splice has been included.

FEATURES

- Rated for direct burial, above ground/suspended, or cable tray support installation
- Up to 6 taps/mode
- Plug 'n' Play system allows for tool-free installation
- Listed to UL 9703 for 1500V systems

OPTIONS

- Feeder and tap conductor sizes & colors
- Quantity of nodes/harness
- Butt-splice
- Distance between nodes



Technical Information	Combiner Harness
Voltage Rating	1500VDC/AC Max
Max. Overcurrent Protection (Feeder Conductor)	600A
Max. Overcurrent Protection (Tap)	45A
Max Feeder Conductor Size	750 kcmil
Number of Input Circuits	Customer Specific

Node material is suitable for outdoor use rated for exposure to UV light, water, and immersion in accordance with UL

MADE IN THE USA

UL LISTED

constructioninnovations.com 10630 Mather Blvd., #200, Mather, CA 95655 // 855.725.9555

Innovate to Simplify®

CI-Slim-006.001

1 / E-11.1 DC COMBINER HARNESS

SCALE: NTS

FOR CONSTRACTION

SOLV ENERGY

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JOB NO.: 222018 | PROJECT MGR: CG
DRAWN: SSS | SCALE: NTS

SHEET NUMBER

E-11.0

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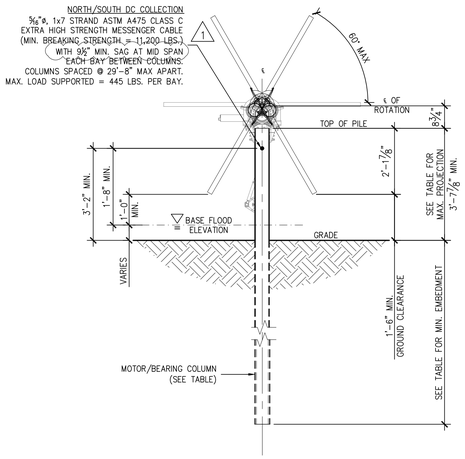
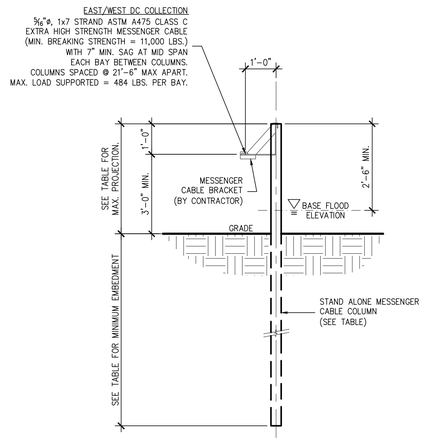
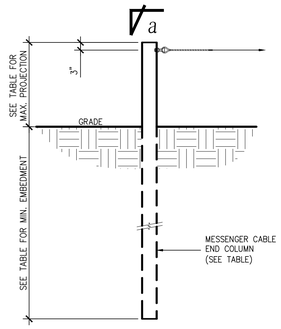


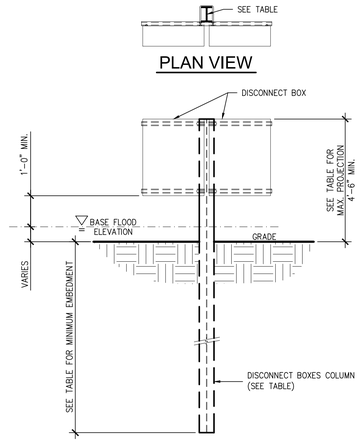
1 S-1.0 FS SERIES 6 TRACKER COLUMN FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



2 S-1.0 STAND ALONE MESSENGER COLUMN FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



3 S-1.0 MESSENGER CABLE END COLUMN FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



4 S-1.0 DISCONNECT BOXES COLUMN FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"

GENERAL NOTES

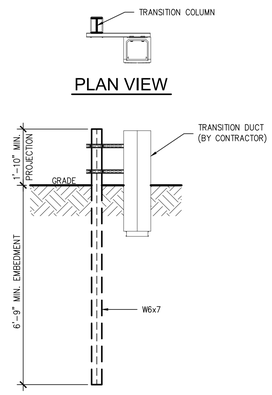
1. REFER TO NEXTRACKER CONSTRUCTION DRAWINGS FOR TRACKER DETAILS, EXTERIOR AND INTERIOR PILE LOCATIONS, AND INSTALLATION REQUIREMENTS.
2. MAXIMUM EXPECTED FLOOD DEPTH IS X'-X". MAX EXPECTED SCOUR IS Y'-Y". REFER TO FINAL GRADING AND HYDROLOGY REPORT BY KIMLEY HORN.
3. MESSENGER CABLE SUPPORT BRACKET DESIGNED BY CI. SEE APPROVED SUBMITTAL FOR DETAILS.
4. SEISMIC BUSHING REQUIREMENTS FOR EDGE ROWS ARE SAME AS INTERIOR ROWS.

STEEL NOTES

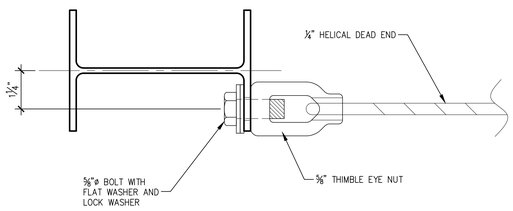
1. ALL STEEL FABRICATION SHALL COMPLY WITH LATEST AISC SPECIFICATIONS.
2. ALL WELDING SHALL COMPLY WITH LATEST AWS D1.1. USE E70XX ELECTRODES.
3. PLATES AND ANGLES: ASTM A36.
4. WIDE FLANGE BEAMS (W): ASTM A992, GRADE 50. NON-GALVANIZED.
5. STEEL DESIGN LIFE: 25 YEARS.
6. AT A MINIMUM, ALL HARDWARE SHALL BE HOT DIP GALVANIZED PER ASTM A153, A153M OR STAINLESS STEEL PER ASTM F593B. FOR ADDITIONAL REQUIREMENTS, REFER TO GEOTECHNICAL ENGINEER'S AND STEEL GALVANIZER'S RECOMMENDATIONS.
7. FOR SIZE AND EMBEDMENT OF BEARING AND MOTOR COLUMNS, WHEN COLUMN HEIGHT EXCEEDS LIMITS SHOWN, CONTACT STRUCTURAL ENGINEER.

SPECIAL INSPECTIONS

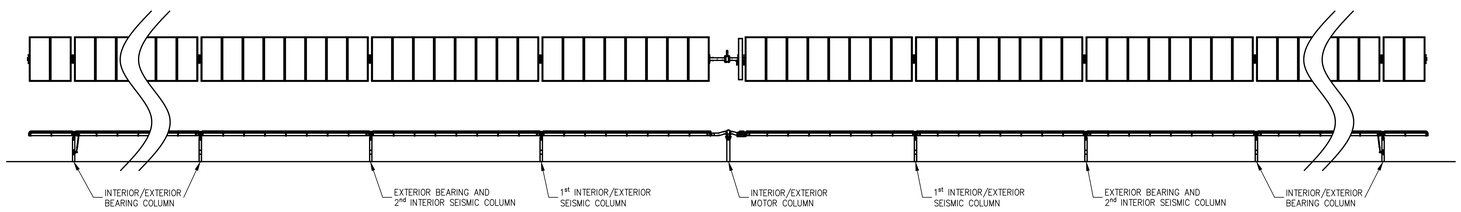
1. STEEL VERIFICATION AND INSPECTION: REFER TO 2018 IBC SECTION 1705.2
2. PROJECT APPLICANT TO COORDINATE ANY APPLICABLE FORMS AND PROCEDURES WITH THE BUILDING DEPARTMENT.



5 S-1.0 TRANSITION COLUMN FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



SECTION a
SCALE: 6" = 1'-0"



6 S-1.0 COLUMN DESIGNATION
SCALE: 1" = 10'-0"
NOTE: REFER TO TABLE ABOVE FOR PILE SIZE AND EMBEDMENT

	INTERIOR BEARING COLUMN AND 1st & 2nd SEISMIC COLUMN			INTERIOR MOTOR COLUMN			EXTERIOR BEARING COLUMN AND 1st SEISMIC COLUMN			EXTERIOR MOTOR COLUMN			(N/S) TRACKER MESSENGER CABLE END COLUMN			STAND ALONE MESSENGER CABLE COLUMN			(E/W) STAND ALONE MESSENGER CABLE END COLUMN			DISCONNECT BOXES COLUMN		
SCOUR	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT
0'	W6x7	6'-10"	9'-0"	W6x7	6'-0"	9'-0"	W6x9	4'-6"	9'-0"	W6x8.5	4'-3"	9'-0"	W6x15	4'-6"	9'-6"	W6x7	7'-6"	9'-0"	W6x15	4'-8"	9'-0"	W6x7	5'-6"	9'-0"
0'	W6x8.5	8'-6"	9'-0"	W6x8.5	8'-6"	9'-0"	W6x12	6'-3"	9'-0"	W6x9	5'-0"	9'-0"	W6x20	8'-0"	9'-9"				W6x20	6'-6"	9'-3"			
0'							W6x15	7'-6"	9'-0"	W6x12	6'-10"	9'-0"	W6x25	8'-3"	10'-0"									
0'							W6x16	8'-3"	9'-6"	W6x15	8'-3"	9'-0"												
0'							W6x20	8'-6"	9'-6"	W6x16	8'-6"	9'-6"												
1'-6"	W6x7	5'-4"	10'-6"	W6x7	4'-6"	10'-6"	W6x12	4'-9"	10'-6"	W6x12	5'-4"	10'-6"	W6x20	6'-6"	11'-3"	W6x7	7'-6"	10'-6"	W6x20	6'-6"	10'-9"	W6x7	5'-6"	10'-6"
1'-6"	W6x8.5	7'-6"	10'-6"	W6x8.5	7'-1"	10'-6"	W6x15	6'-0"	10'-6"	W6x15	6'-9"	10'-6"	W6x25	8'-3"	11'-6"									
1'-6"	W6x9	8'-6"	10'-6"	W6x9	8'-3"	10'-6"	W6x16	6'-9"	11'-0"	W6x16	7'-3"	11'-0"												
1'-6"				W6x12	8'-6"	10'-6"	W6x20	8'-0"	11'-0"	W6x20	8'-6"	11'-0"												
1'-6"							W6x25	8'-6"	11'-6"															
2'-0"	W6x7	4'-10"	11'-0"	W6x7	4'-0"	11'-0"	W6x12	4'-3"	11'-0"	W6x12	4'-10"	11'-0"	W6x20	6'-0"	11'-6"	W6x7	7'-6"	11'-0"	W6x20	6'-6"	11'-3"	W6x7	5'-6"	11'-0"
2'-0"	W6x8.5	7'-0"	11'-0"	W6x8.5	6'-7"	11'-0"	W6x15	5'-6"	11'-0"	W6x15	6'-3"	11'-0"	W6x25	8'-0"	12'-0"									
2'-0"	W6x9	8'-0"	11'-0"	W6x9	7'-9"	11'-0"	W6x16	6'-3"	11'-6"	W6x16	6'-9"	11'-6"												
2'-0"	W6x12	8'-6"	11'-0"	W6x12	8'-6"	11'-0"	W6x20	7'-6"	11'-6"	W6x20	8'-1"	11'-6"												
2'-0"							W6x25	8'-6"	12'-0"	W6x25	8'-6"	12'-0"												

1

FOR CONSTRACTION

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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:
STRUCTURAL DETAILS
FIRST SOLAR SERIES 6

JOB NO.: 222018 | PROJECT MGR: CG
DRAWN: LW | SCALE: AS NOTED
SHEET NUMBER
S-1.0

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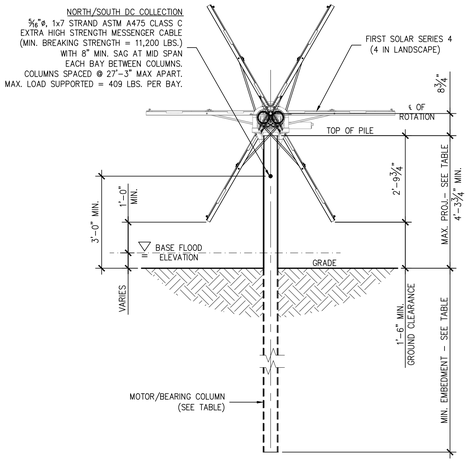
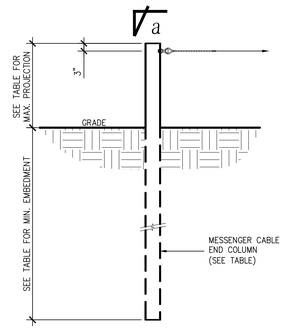


1 S-1.1 FS SERIES 4 TRACKER COLUMN FOUNDATION DETAIL

SCALE: 1/2" = 1'-0"

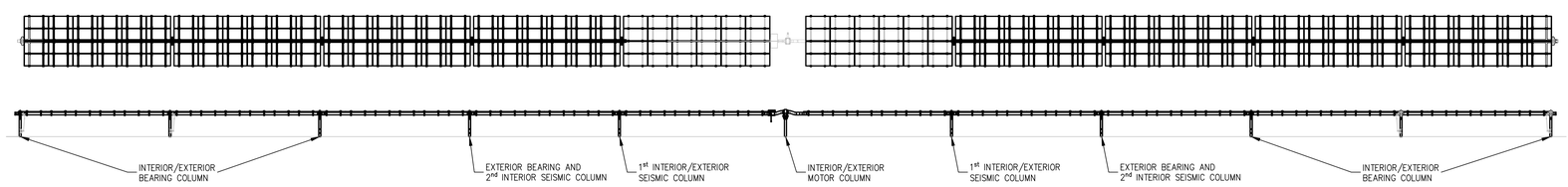


2 S-1.1 MESSENGER CABLE END COLUMN FOUNDATION DETAIL

SCALE: 1/2" = 1'-0"

	INTERIOR BEARING COLUMN AND 1st & 2nd SEISMIC COLUMN			INTERIOR MOTOR COLUMN			EXTERIOR BEARING COLUMN AND 1st SEISMIC COLUMN			EXTERIOR MOTOR COLUMN			(N/S) TRACKER MESSENGER CABLE END COLUMN		
SCOUR	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT
0'	W6x7	6'-3"	9'-0"	W6x7	6'-3"	9'-0"	W6x12	5'-7"	9'-0"	W6x12	5'-9"	9'-0"	W6x15	4'-6"	9'-6"
0'	W6x8.5	8'-1"	9'-0"	W6x8.5	8'-3"	9'-0"	W6x15	7'-0"	9'-0"	W6x15	7'-0"	9'-0"	W6x20	8'-0"	9'-9"
0'	W6x9	8'-6"	9'-0"	W6x9	8'-6"	9'-0"	W6x16	7'-10"	9'-6"	W6x16	7'-11"	9'-6"	W6x25	8'-3"	10'-0"
0'							W6x20	8'-6"	9'-6"	W6x20	8'-6"	9'-6"			
1'-6"	W6x8.5	6'-7"	10'-6"	W6x8.5	6'-9"	10'-6"	W6x15	5'-6"	10'-6"	W6x15	5'-6"	10'-6"	W6x20	6'-6"	11'-3"
1'-6"	W6x9	7'-7"	10'-6"	W6x9	7'-9"	10'-6"	W6x16	6'-4"	11'-0"	W6x16	6'-5"	11'-0"	W6x25	8'-3"	11'-6"
1'-6"	W6x12	8'-6"	10'-6"	W6x12	8'-6"	10'-6"	W6x20	7'-7"	11'-0"	W6x20	7'-7"	11'-0"			
1'-6"							W6x25	8'-6"	11'-6"	W6x25	8'-6"	11'-6"			
2'-0"	W6x8.5	6'-1"	11'-0"	W6x8.5	6'-3"	11'-0"	W6x15	5'-0"	11'-0"	W6x15	5'-0"	11'-0"	W6x20	6'-0"	11'-6"
2'-0"	W6x9	7'-1"	11'-0"	W6x9	7'-3"	11'-0"	W6x16	5'-10"	11'-6"	W6x16	5'-11"	11'-6"	W6x25	8'-3"	12'-0"
2'-0"	W6x12	8'-6"	11'-0"	W6x12	8'-6"	11'-0"	W6x20	7'-1"	11'-6"	W6x20	7'-1"	11'-6"			
2'-0"							W6x25	8'-3"	12'-0"	W6x25	8'-4"	12'-0"			

1



3 S-1.1 COLUMN DESIGNATION

SCALE: 1" = 10'-0"

NOTE: REFER TO TABLE ABOVE FOR PILE SIZE AND EMBEDMENT

GENERAL NOTES

1. SEE SHEET S-1.0 FOR GENERAL NOTES.

STEEL NOTES

1. SEE SHEET S-1.0 FOR STEEL NOTES.

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

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ALAMEDA, CA 94501 510.521.3773

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

SHEET TITLE:

STRUCTURAL DETAILS
FIRST SOLAR SERIES 4

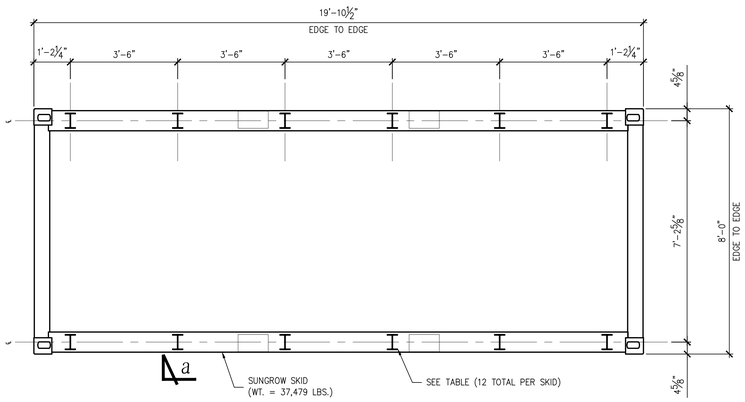
JOB NO.: 222018 | PROJECT MGR: CG
DRAWN: LW | SCALE: AS NOTED

SHEET NUMBER

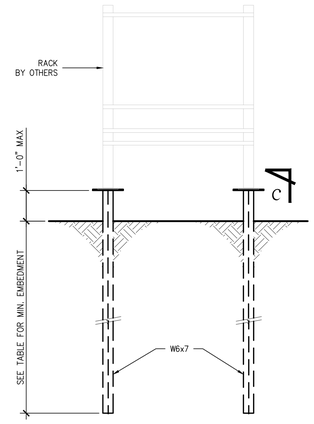
S-1.1

STEEL NOTES

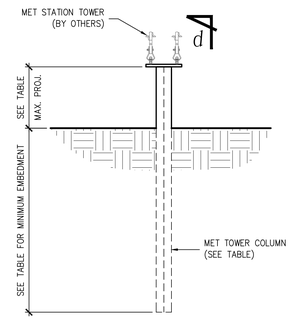
1. REFER TO S-1 FOR STEEL NOTES.



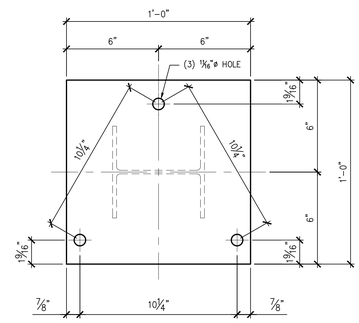
1 S-2.0 INVERTER SKID PLAN
SCALE: 1/2" = 1'-0"



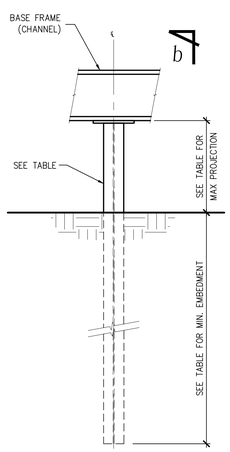
2 S-2.0 POWER/SCADA RACK PILES
SCALE: 1/2" = 1'-0"



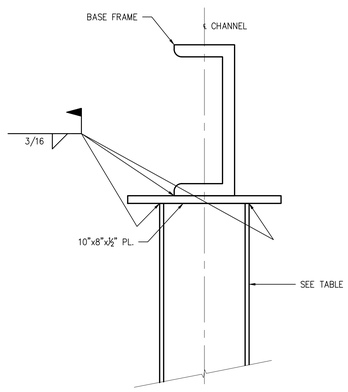
3 S-2.0 MET TOWER COLUMN
SCALE: 1/2" = 1'-0"



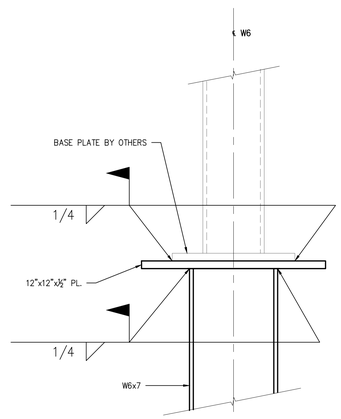
PLAN VIEW



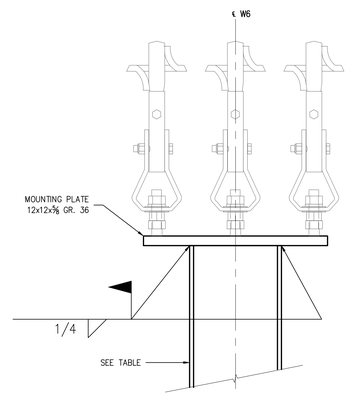
SECTION a
SCALE: 1" = 1'-0"



SECTION b
SCALE: 3" = 1'-0"



SECTION c
SCALE: 3" = 1'-0"



SECTION d
SCALE: 3" = 1'-0"

	SKID COLUMN			POWER/SCADA RACK COLUMN			MET TOWER COLUMN		
SCOUR	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT	COLUMN SIZE	MAX. PROJECTION	MIN. EMBEDMENT
0'	W6x7	2'-0"	12'-0"	W6x7	1'-0"	9'-0"	W6x15	2'-0"	9'-0"
1'-6"				W6x7	1'-0"	10'-6"	W6x15	2'-0"	10'-6"
2'-0"				W6x7	1'-0"	11'-0"	W6x15	2'-0"	11'-0"

1

FOR CONSTRACTION

SOLV ENERGY

CONSULTANT

BLYMYER ENGINEERS
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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:

STRUCTURAL DETAILS

JOB NO.: 222018 | PROJECT MGR: CG
DRAWN: KS | SCALE: AS NOTED

SHEET NUMBER

S-2.0

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