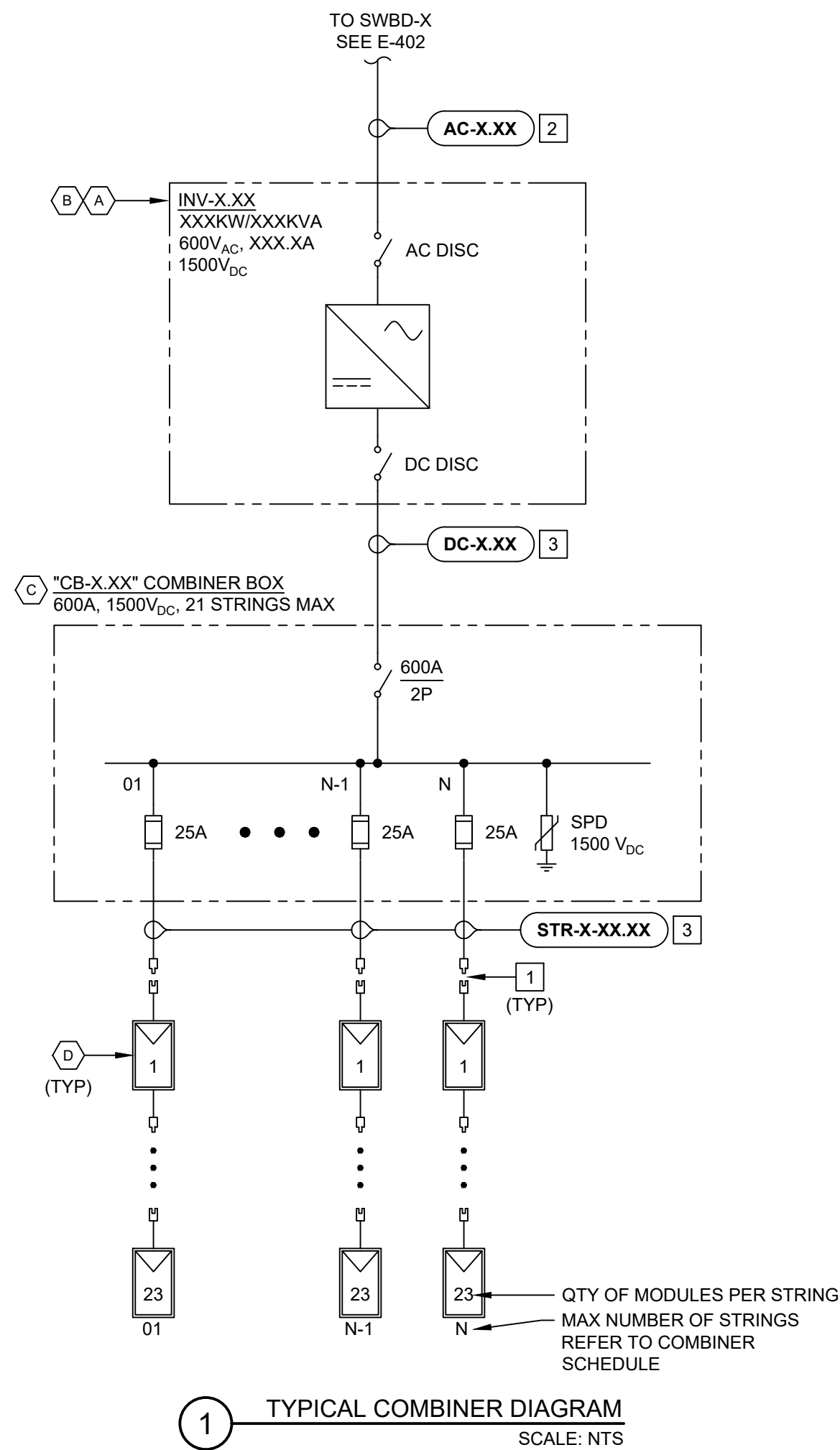


THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22"



COMBINER SCHEDULE																											
COMBINER	MODULES PER STRING																					MODULE QTY	STRING QTY	MODULE RATING (W)	DC SIZE (KW)	INVERTER AC SIZE (KW)	DC/AC RATIO
	INPUT 01	INPUT 02	INPUT 03	INPUT 04	INPUT 05	INPUT 06	INPUT 07	INPUT 08	INPUT 09	INPUT 10	INPUT 11	INPUT 12	INPUT 13	INPUT 14	INPUT 15	INPUT 16	INPUT 17	INPUT 18	INPUT 19	INPUT 20	INPUT 21						
CB-1.01	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	483	21	640	309.1	250	1.24
CB-1.02	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-1.03	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-1.04	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-1.05	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	483	21	640	309.1	250	1.24
CB-1.06	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	483	21	640	309.1	250	1.24
CB-1.07	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-1.08	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-1.09	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-1.10	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.01	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	483	21	640	309.1	250	1.24
CB-2.02	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	483	21	640	309.1	250	1.24
CB-2.03	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.04	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	483	21	640	309.1	250	1.24
CB-2.05	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.06	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.07	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.08	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.09	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	250	1.18
CB-2.10	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	-	460	20	640	294.4	225	1.31
TOTAL																						9,338	406	-	5,976.32	4,975	1.20

LOW/HIGH VOLTAGE RIDE THROUGH SETTINGS				
REGION	VOLTAGE RANGE (% OF NOMINAL VOLTAGE)	OPERATING MODE/RESPONSE	MINIMUM RIDE - THROUGH TIME	MAXIMUM TRIP TIME
HIGH VOLTAGE 2 (HV2)	120	CEASE TO ENERGIZE	N/A	0.16 SECONDS
HIGH VOLTAGE 1 (HV1)	110	MOMENTARY CESSATION	12 SECONDS	13 SECONDS
LOW VOLTAGE 1 (LV1)	88	MANDATORY OPERATION	20 SECONDS	21 SECONDS
LOW VOLTAGE 3 (LV3)	50	MOMENTARY CESSATION	1 SECOND	2 SECONDS

NOTES:

1. SETTINGS ARE PER INVERTER AMEREN WITNESS TESTING & DER INTERCONNECTION REQUIREMENTS.
2. INVERTERS RAMP RATE TO BE CONFIGURED TO NOT EXCEED 2% PER SECOND UPON START-UP.

LOW/HIGH FREQUENCY RIDE THROUGH SETTINGS				
REGION	SYSTEM FREQUENCY DEFAULT SETTINGS	MINIMUM RIDE - THROUGH TIME	MAXIMUM TRIP TIME	MAXIMUM TRIP TIME
HIGH FREQ 2 (HF2)	62	NO RIDE THROUGH	N/A	0.16 SECONDS
HIGH FREQ 1 (HF1)	61.2	299 SECONDS	MANDATORY OPERATION	300 SECONDS
LOW FREQ 1 (LF1)	58.5	299 SECONDS	MANDATORY OPERATION	300 SECONDS
LOW FREQ 2 (LF2)	56.5	NO RIDE THROUGH	N/A	0.16 SECONDS

NOTES:
 1. SETTINGS ARE PER INVERTER AMEREN WITNESS TESTING & DER INTERCONNECTION REQUIREMENTS.
 2. INVERTERS RAMP RATE TO BE CONFIGURED TO NOT EXCEED 2% PER SECOND UPON START-UP.

VOLT-VAR SETTINGS		
VOLT-VAR PARAMETER	DEFINITIONS	DEFAULT VALUES (% OF NOMINAL VOLTAGE)
V1	VOLTAGE AT WHICH DER SHALL INJECT Q1 REACTIVE POWER	92%
Q1	REACTIVE POWER INJECTION AT VOLTAGE V1	44%
V2	DEAD BAND LOWER VOLTAGE LIMIT	98%
Q2	REACTIVE POWER INJECTION OR ABSORPTION AT VOLTAGE V2	0%
V3	DEAD BAND UPPER VOLTAGE LIMIT	102%
Q3	REACTIVE POWER INJECTION OR ABSORPTION AT VOLTAGE V3	0%
V4	VOLTAGE AT WHICH DER SHALL ABSORB Q4 REACTIVE POWER	108%
Q4	REACTIVE POWER ABSORPTION AT VOLTAGE V4	44%
OPEN LOOP RESPONSE TIME	TIME TO 90% OF THE REACTIVE POWER CHANGE IN RESPONSE TO THE CHANGE IN VOLTAGE	5 SECONDS

HOLD
PENDING UTILI
APPROVAL

SHEET NOTES:

1. INVERTER VOLT/VAR OPERATION IS REQUIRED. CONTRACTOR SHALL COORDINATE WITH AMEREN FOR SPECIFICS.

KEYED NOTES:

- 1 MODULE CONNECTORS MATED TOGETHER SHALL BE OF THE SAME TYPE AND FROM THE SAME MANUFACTURER. MC4 EVO-2 CONNECTORS SHALL ONLY BE ALLOWED WITH USE OF DUAL JACKETED PV CABLE.
- 2 SEE LVAC CABLE SCHEDULE ON E-502.
- 3 SEE DC CABLE SCHEDULE ON E-501.

EQUIPMENT SPECS:

- (A) 250KW, 250KVA, 240.6A, 600V, 3ø, 3W STRING INVERTER, SOLLECTRIA XGI 1500-250-250-600
- (B) 225KW, 225KVA, 216.5A, 600V, 3ø, 3W STRING INVERTER, SOLLECTRIA XGI 1500-225-225-600
- (C) 1500VDC, NEMA 4X STANDARD COMBINER BOX WITH 100% RATED INTEGRATED DC DISCONNECT SWITCH. COMBINER BOX SHALL BE SUITABLE FOR UNGROUNDED SYSTEM PER NEC 2020 AND SHALL HAVE FUSED INPUTS FOR POSITIVE CONDUCTORS. COMBINER BOX SHALL BE UL 1741 LISTED AND PADLOCKABLE SHALL BE 2500VDC LISTED. PAD-LOCKABLE ENCLOSURE, FUSES TO BE PROCURED AND INSTALLED BY CONTRACTOR.
- (D) 640W, 1500VDC SOLAR PV MODULE, HELIONE 156HC M10 NTP ST BIFACIAL MODULE

DESIGN COORDINATOR



KNOBELSDORFF

25701 370TH STREET
GOODHUE, MN 55027

PROJECT

138883 CEMETERY

SUN, LLC

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ENGINEER



STELLAVISE
SOLAR ENGINEERING

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IL DESIGN FIRM #184.009162

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REVISIONS

#	DESCRIPTION	DATE
0	IFC	02/06/2026
1	IFC R1	02/27/2026

ISSUED FOR CONSTRUCTION
FEBRUARY 27, 2026

138883 CEMETERY
SUN, LLC
FREDERICK, IL, 62639

SHEET TITLE

SINGLE LINE DIAGRAM - DC

SHEET NO

E-403