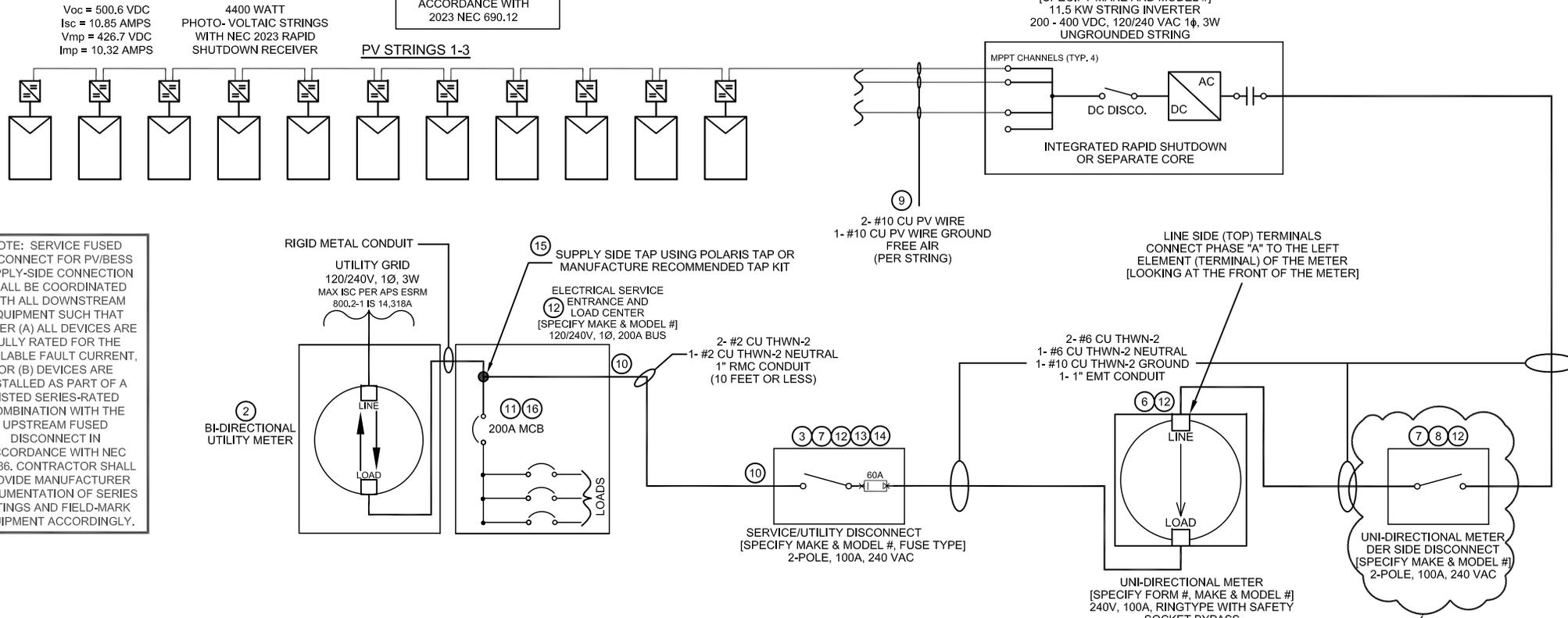


NOTE: All equipment must be utilized in accordance with the manufacturer's intended use and design specifications.

THESE RAPID SHUTDOWN COMPONENTS SHALL BE LISTED OR FIELD LABELED AS AN ASSEMBLY IN ACCORDANCE WITH 2023 NEC 690.12

REV.	DESCRIPTION	DATE
C	FUSED DISCONNECT	1-26-17
D	2023 NEC SET INCORPORATING REVISED APS REQUIREMENTS	02-13-26



NOTE: SERVICE FUSED DISCONNECT FOR PV/BESS SUPPLY-SIDE CONNECTION SHALL BE COORDINATED WITH ALL DOWNSTREAM EQUIPMENT SUCH THAT EITHER (A) ALL DEVICES ARE FULLY RATED FOR THE AVAILABLE FAULT CURRENT, OR (B) DEVICES ARE INSTALLED AS PART OF A LISTED SERIES-RATED COMBINATION WITH THE UPSTREAM FUSED DISCONNECT IN ACCORDANCE WITH NEC 240.86. CONTRACTOR SHALL PROVIDE MANUFACTURER DOCUMENTATION OF SERIES RATINGS AND FIELD-MARK EQUIPMENT ACCORDINGLY.

- NOTES:**
- EQUIPMENT SHALL BE INSTALLED AND LABELED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRIC UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 - BI-DIRECTIONAL UTILITY METER INSTALLED BY UTILITY COMPANY.
 - LABEL "SERVICE/UTILITY DISCONNECT." KEEP COVER LOCKED; SWITCH MUST SHOW VISIBLE OPEN. INSTALL PER UTILITY REQUIREMENTS AND NEC 705.20. ACCEPTABLE OPTIONS: (1) SWITCH WITH VIEWING WINDOW AND CUSTOMER-INSTALLED LOCK, OR (2) A SHARED LOCK PER UTILITY REQUIREMENTS.
 - NOT USED
 - LABEL "PV SYSTEM DISCONNECT" PER NEC 690.13(B). ENCLOSURE DOOR TO BE LOCKED/SECURED PER NEC 690.13(A)(2). [SHOW SWITCH INTERNAL WIRING CONFIGURATION PER MANUFACTURER'S REQUIREMENTS.]. DISCONNECT SHALL BE ACCESSIBLE AND LABELED IN ACCORDANCE WITH NEC 690.12, RAPID SHUTDOWN OF PV SYSTEMS ON BUILDINGS.
 - LABEL "UNI-DIRECTIONAL METER." METER ENCLOSURE AND SOCKET PROVIDED AND INSTALLED BY CUSTOMER PER APS ESRM. METER PROVIDED BY APS. METERING EQUIPMENT SHALL BE INSTALLED PER NEC 110.3(B) AND MANUFACTURERS INSTRUCTIONS. PROVIDE WARNING "LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION."
 - PROVIDE WARNING SIGN PER NEC 690.13(B) READING "WARNING-ELECTRIC SHOCK HAZARD-DO NOT TOUCH TERMINALS-TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION."
 - REQUIRED FOR GRID FORMING SYSTEMS. LABEL "UNI-DIRECTIONAL METER DER SIDE DISCONNECT SWITCH." SWITCH COVER TO BE LOCKED AT ALL TIMES, AND SHALL BE VISUAL OPEN AND ACCESSIBLE PER UTILITY REQUIREMENTS AND CONFORM TO NEC 705.20.
 - METALLIC CONDUIT SHALL BE USED WITHIN BUILDING PER NEC 690.31(D)(1).
 - GROUNDING BUSHINGS INSTALLED AT EVERY ENTRY AND EXIT POINT TO ENCLOSURES WITH RIGID METALLIC CONDUIT (RMC).
 - A PLACARD OR DIRECTORY IS INSTALLED AT THE SERVICE ENTRANCE WITH EXPLICIT DIRECTIONS TO THE LOCATION OF THE UTILITY DISCONNECT SWITCH AS REQUIRED BY APS AND NEC 705.10.
 - EQUIPMENT SHALL BE LISTED, TESTED AND MARKED TO WITHSTAND THE AVAILABLE SHORT CIRCUIT CURRENT.
 - INSTALL AS REQUIRED TO ENSURE UTILITY DISCONNECT SWITCH AND UNI-DIRECTIONAL METER AFC RATINGS ARE NOT EXCEEDED.
 - SUPPLY SIDE CONNECTION IS INSTALLED PER NEC 230, NEC 705, APS ESRM AND APS INTERCONNECTION REQUIREMENTS. LABEL "SERVICE/UTILITY DISCONNECT SWITCH." SWITCH COVER TO BE LOCKED AT ALL TIMES.
 - SUPPLY SIDE CONNECTION IS INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. DOCUMENTATION IS INCLUDED WITH THE APS INTERCONNECTION APPLICATION. UNSURE UL LISTED CONNECTORS.
 - LABEL "WARNING - A GENERATION SOURCE IS CONNECTED TO THE SUPPLY (UTILITY) SIDE OF THE SERVICE DISCONNECTING MEANS. FOLLOW PROPER LOCKOUT/TAGOUT PROCEDURES TO ENSURE THE THE PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH IS OPENED PRIOR TO PERFORMING WORK ON THIS DEVICE.

NOTE: SYSTEM DESIGNED IN ACCORDANCE WITH THE 2023 N.E.C.

NOTE: ONLY NEEDED FOR GRID FORMING SYSTEMS, SEE NOTE #8

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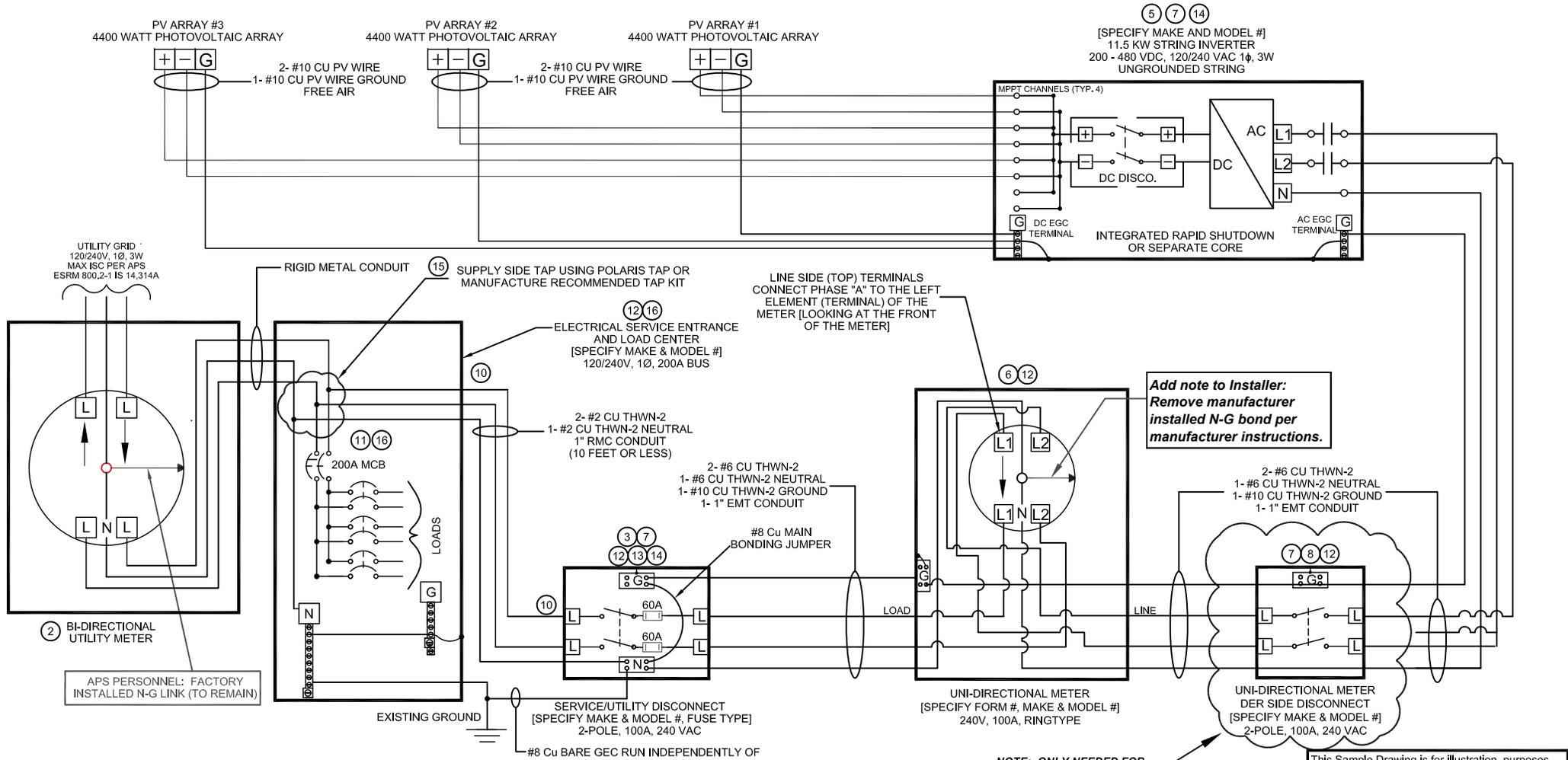
SAMPLE LOAD SIDE CONNECTION ONE - LINE DIAGRAM

1234 South Main Street Any City, Arizona 85123 Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
APPROVALS		DATE	
DRAWN ABC		06-29-05	
CHECKED			
ENGINEER			
REV. D		02-13-26	
ABC PROJECT #1111-9999		SIZE B	DRAWING NO. 0000-0001
SCALE NA		REV. D	
		SHEET 1 OF 3	

ONE-LINE ELECTRICAL DIAGRAM
11.5 KW AC PHOTOVOLTAIC SYSTEM
333 E. CACTUS BIRD RD.
ANY CITY, AZ 85123

NOTE: All equipment must be utilized in accordance with the manufacturer's intended use and design specifications.

REV.	DESCRIPTION:	DATE
C	FUSED DISCONNECT	1-26-17
D	2023 NEC SET INCORPORATING REVISED APS REQUIREMENTS	02-13-26



- NOTES:**
- EQUIPMENT SHALL BE INSTALLED AND LABELED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRIC UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 - BI-DIRECTIONAL UTILITY METER INSTALLED BY UTILITY COMPANY.
 - LABEL "SERVICE/UTILITY DISCONNECT," KEEP COVER LOCKED; SWITCH MUST SHOW VISIBLE OPEN. INSTALL PER UTILITY REQUIREMENTS AND NEC 705.20. ACCEPTABLE OPTIONS: (1) SWITCH WITH VIEWING WINDOW AND CUSTOMER-INSTALLED LOCK, OR (2) A SHARED LOCK PER UTILITY REQUIREMENTS.
 - NOT USED
 - LABEL "PV SYSTEM DISCONNECT" PER NEC 690.13(B). ENCLOSURE DOOR TO BE LOCKED/SECURED PER NEC 690.13(A)(2). [SHOW SWITCH INTERNAL WIRING CONFIGURATION PER MANUFACTURER'S REQUIREMENTS]. DISCONNECT SHALL BE ACCESSIBLE AND LABELED IN ACCORDANCE WITH NEC 690.12, RAPID SHUTDOWN OF PV SYSTEMS ON BUILDINGS.
 - LABEL "UNI-DIRECTIONAL METER," METER ENCLOSURE AND SOCKET PROVIDED AND INSTALLED BY CUSTOMER PER APS ESRM. METER PROVIDED BY CUSTOMER (AS REQUIRED). METERING EQUIPMENT SHALL BE INSTALLED PER NEC 110.3(B) AND MANUFACTURERS INSTRUCTIONS. PROVIDE WARNING "LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION."
 - PROVIDE WARNING SIGN PER NEC 690.13(B) READING "WARNING-ELECTRIC SHOCK HAZARD-DO NOT TOUCH TERMINALS-TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION."
 - REQUIRED FOR GRID FORMING SYSTEMS. LABEL "UNI-DIRECTIONAL METER DER SIDE DISCONNECT SWITCH," SWITCH COVER TO BE LOCKED AT ALL TIMES, AND SHALL BE VISUAL OPEN AND ACCESSIBLE PER UTILITY REQUIREMENTS AND CONFORM TO NEC 705.20.
 - METALLIC CONDUIT SHALL BE USED WITHIN BUILDING PER NEC 690.31(D)(1).
 - GROUNDING BUSHINGS INSTALLED AT EVERY ENTRY AND EXIT POINT TO ENCLOSURES WITH RIGID METALLIC CONDUIT (RMC).
 - A PLACARD OR DIRECTORY IS INSTALLED AT THE SERVICE ENTRANCE WITH EXPLICIT DIRECTIONS TO THE LOCATION OF THE UTILITY DISCONNECT SWITCH AS REQUIRED BY APS AND NEC 705.10.
 - EQUIPMENT SHALL BE LISTED, TESTED AND MARKED TO WITHSTAND THE AVAILABLE SHORT CIRCUIT CURRENT.
 - INSTALL AS REQUIRED TO ENSURE UTILITY DISCONNECT SWITCH AND UNI-DIRECTIONAL METER AFC RATINGS ARE NOT EXCEEDED.
 - SUPPLY SIDE CONNECTION IS INSTALLED PER NEC 230, NEC 705, APS ESRM AND APS INTERCONNECTION REQUIREMENTS. LABEL "SERVICE DISCONNECT SWITCH," SWITCH COVER TO BE LOCKED AT ALL TIMES.
 - SUPPLY SIDE CONNECTION IS INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. DOCUMENTATION IS INCLUDED WITH THE APS INTERCONNECTION APPLICATION. UNSURE UL LISTED CONNECTORS.
 - LABEL "WARNING - A GENERATION SOURCE IS CONNECTED TO THE SUPPLY (UTILITY) SIDE OF THE SERVICE DISCONNECTING MEANS. FOLLOW PROPER LOCKOUT/TAGOUT PROCEDURES TO ENSURE THE THE PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH IS OPENED PRIOR TO PERFORMING WORK ON THIS DEVICE.

**Add note to Installer:
Remove manufacturer
installed N-G bond per
manufacturer instructions.**

**NOTE: ONLY NEEDED FOR
GRID FORMING SYSTEMS,
SEE NOTE #8**

**NOTE: SYSTEM DESIGNED
IN ACCORDANCE WITH THE
2023 N.E.C.**

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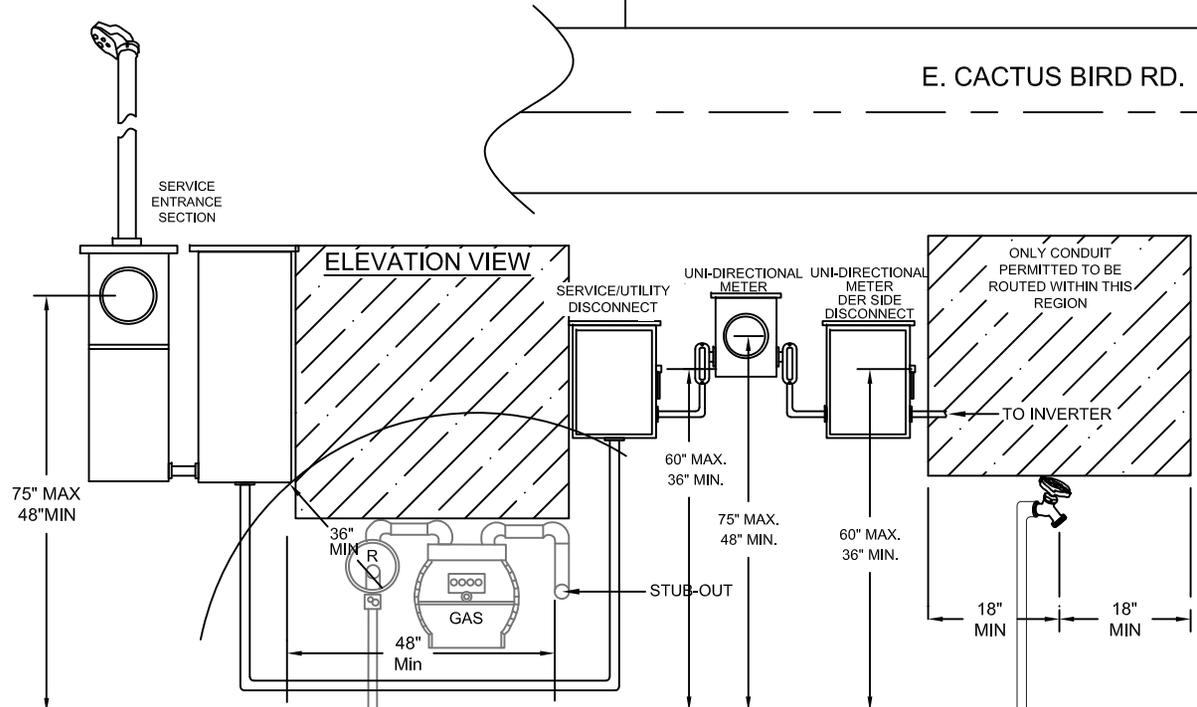
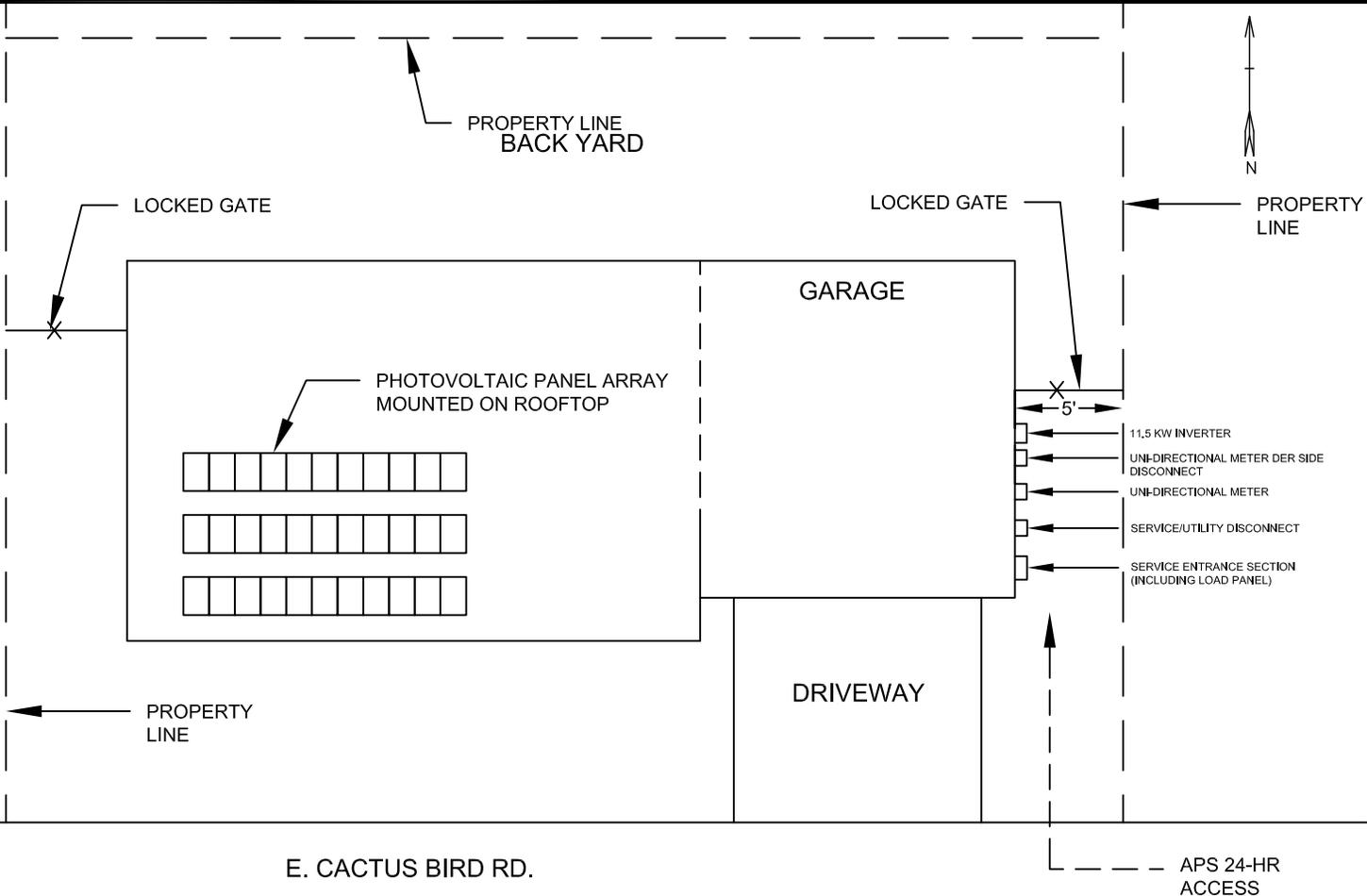
SAMPLE LOAD SIDE CONNECTION THREE-LINE DIAGRAM

1234 South Main Street Any City, Arizona 85123 Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
		THREE-LINE ELECTRICAL DIAGRAM 11.5 KW AC PHOTOVOLTAIC SYSTEM 333 E. CACTUS BIRD RD. ANY CITY, AZ 85123	
APPROVALS	DATE	SIZE	DRAWING NO.
DRAWN ABC	6-29-05	B	0000-0002
CHECKED		SCALE	REV. D
ENGINEER		NA	SHEET 2 OF 3
REV. D	02-13-26		
ABC PROJECT #1111-9999			

NOTE: UTILITY PERSONNEL REQUIRE COORDINATED ACCESS TO ALL DER SYSTEM COMPONENTS, SERVICE DISCONNECTS, METERING, AND SERVICE EQUIPMENT FOR SCHEDULED MAINTENANCE AND SAFETY INSPECTIONS. CUSTOMERS ARE RESPONSIBLE FOR ENSURING THAT ACCESS IS AVAILABLE AND MAY BE CONTACTED BY THE UTILITY TO ARRANGE SITE VISITS WHEN EQUIPMENT IS LOCATED WITHIN FENCED OR SECURED AREAS. EMERGENCY ACCESS TO THIS EQUIPMENT MUST BE AVAILABLE AT ALL TIMES.

NOTE: REFERENCE SECTION 301.15 OF THE APS ESRM FOR ELECTRIC METER SEPARATION BETWEEN WATER AND GAS.

NOTE: WORKSPACE IN FRONT OF AC ELECTRICAL SYSTEM COMPONENTS SHALL BE IN ACCORDANCE WITH APS AND NEC REQUIREMENTS. FOR APS REQUIREMENTS, REFERENCE SECTION 300 OF THE APS ESRM AND SECTION 8.2 OF THE APS INTERCONNECTION REQUIREMENTS.



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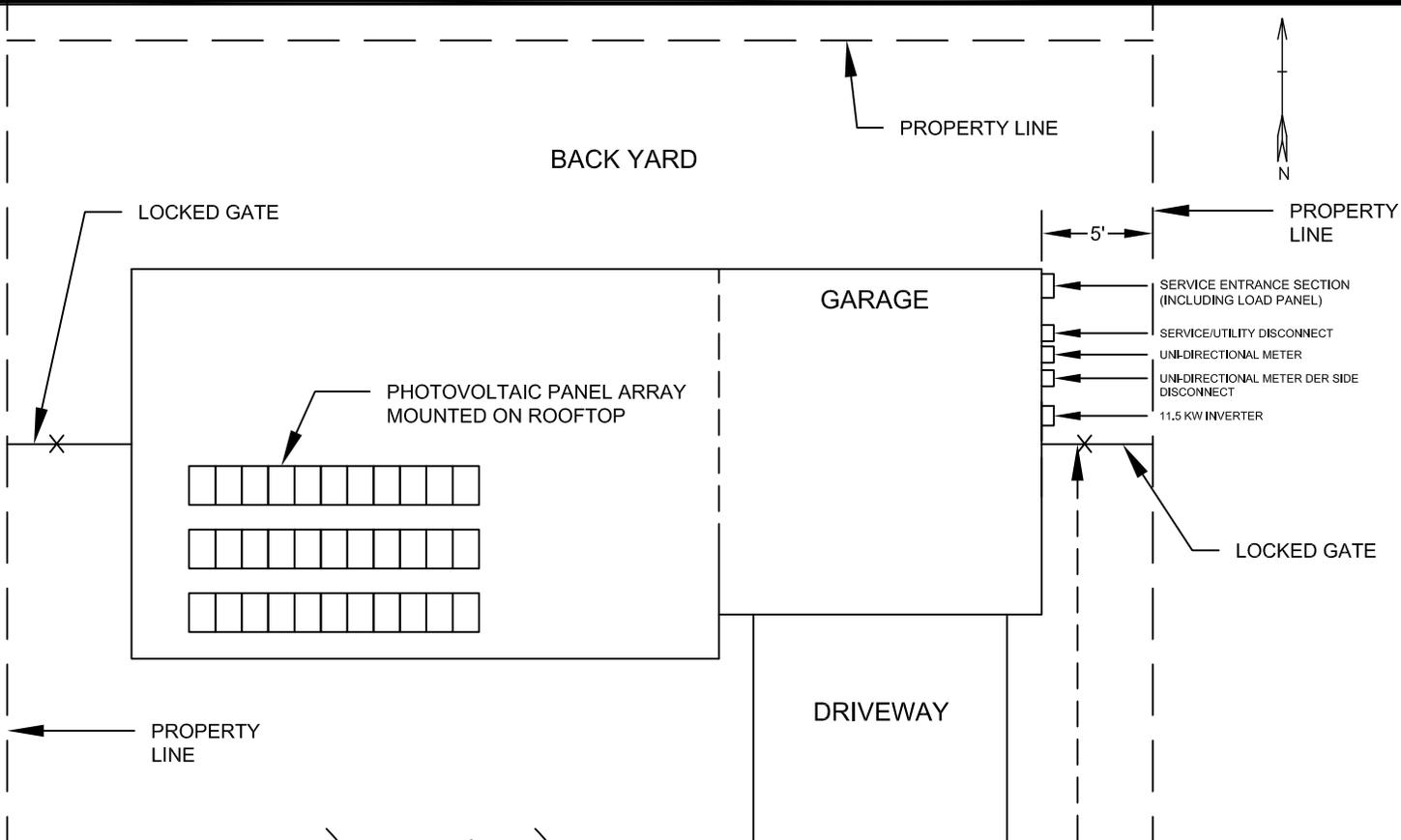
SAMPLE LOAD SIDE CONNECTION SITE PLAN

1234 South Main Street Any City, Arizona 85123 Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
		SITE PLAN	
		11.5 KW AC PHOTOVOLTAIC SYSTEM	
		333 E. CACTUS BIRD RD.	
		ANY CITY, AZ 85123	
APPROVALS	DATE	SIZE	DRAWING NO.
DRAWN FJG	02-13-26	B	0000-0005
CHECKED		SCALE	REV.
ENGINEER		NA	
REV.			
ABC PROJECT #1111-9999		SHEET 3 OF 3	

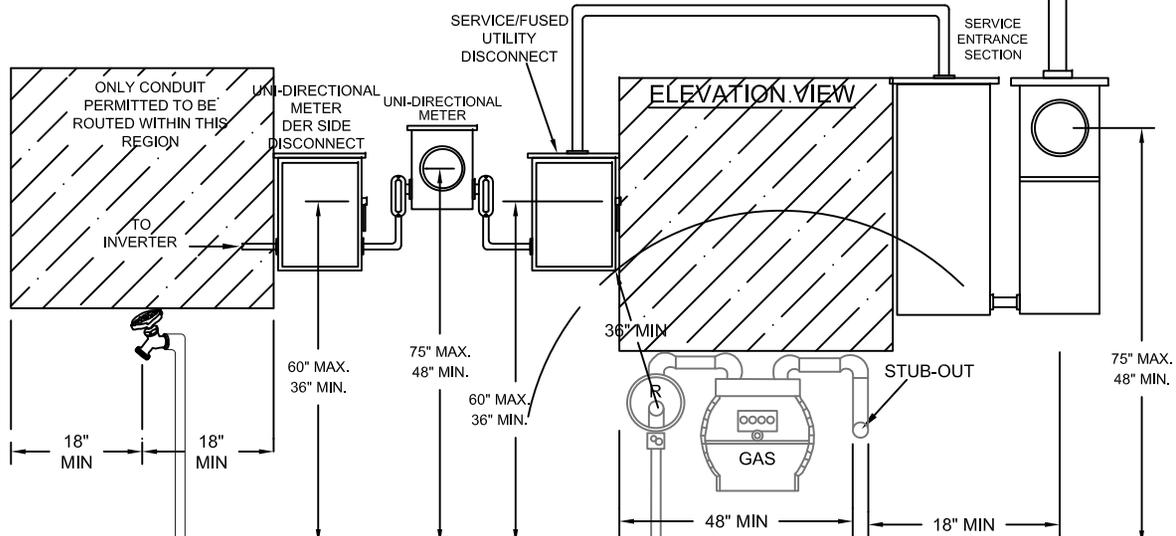
NOTE: UTILITY PERSONNEL REQUIRE COORDINATED ACCESS TO ALL DER SYSTEM COMPONENTS, SERVICE DISCONNECTS, METERING, AND SERVICE EQUIPMENT FOR SCHEDULED MAINTENANCE AND SAFETY INSPECTIONS. CUSTOMERS ARE RESPONSIBLE FOR ENSURING THAT ACCESS IS AVAILABLE AND MAY BE CONTACTED BY THE UTILITY TO ARRANGE SITE VISITS WHEN EQUIPMENT IS LOCATED WITHIN FENCED OR SECURED AREAS. EMERGENCY ACCESS TO THIS EQUIPMENT MUST BE AVAILABLE AT ALL TIMES.

NOTE: REFERENCE SECTION 301.15 OF THE APS ESRM FOR ELECTRIC METER SEPARATION BETWEEN WATER AND GAS.

NOTE: WORKSPACE IN FRONT OF AC ELECTRICAL SYSTEM COMPONENTS SHALL BE IN ACCORDANCE WITH APS AND NEC REQUIREMENTS. FOR APS REQUIREMENTS, REFERENCE SECTION 300 OF THE APS ESRM AND SECTION 8.2 OF THE APS INTERCONNECTION REQUIREMENTS.



E. CACTUS BIRD RD. APS ACCESS



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SAMPLE LOAD SIDE CONNECTION SITE PLAN

1234 South Main Street Any City, Arizona 85123 Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
		SITE PLAN 11.5 KW AC PHOTOVOLTAIC SYSTEM 333 E. CACTUS BIRD RD. ANY CITY, AZ 85123	
APPROVALS	DATE	SIZE	DRAWING NO.
DRAWN FJG	02-13-26	B	0000-0005
CHECKED		SCALE	REV.
ENGINEER		NA	
REV.			
ABC PROJECT #1111-9999			SHEET 3 OF 3