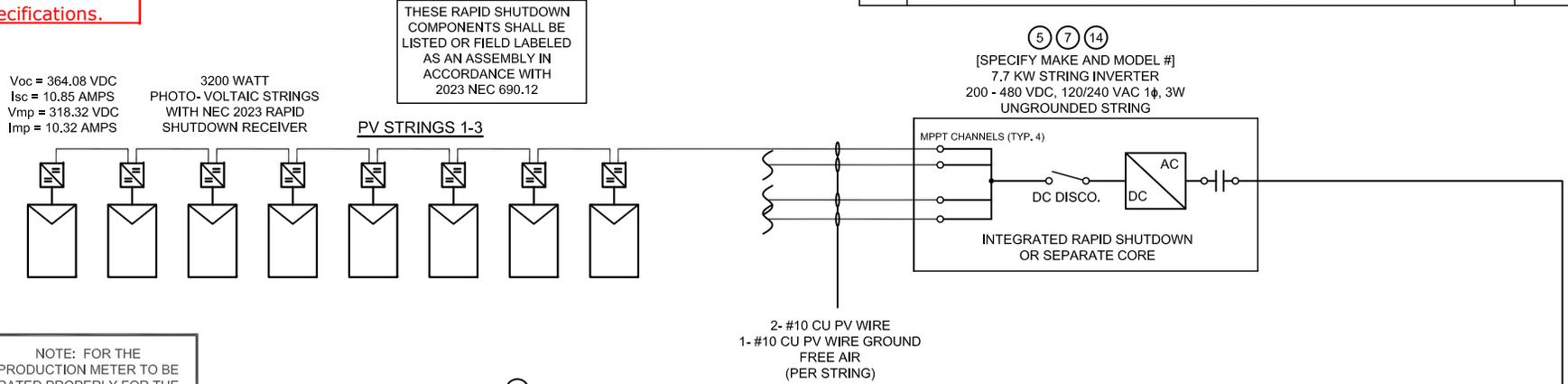


NOTE: All equipment must be utilized in accordance with the manufacturer's intended use and design specifications.

REV.	DESCRIPTION	DATE
C	FUSED DISCONNECT	1-26-17
D	2023 NEC SET INCORPORATING REVISED APS REQUIREMENTS	02-16-26



FAULT CALCS:

F1: AVAIL = 14,318 AIC
d = 6 feet
f = 0.459
m = 0.685
Isc = 9,812 AIC

F2: AVAIL = 9,812 AIC
d = 5 feet
f = 0.262
m = 0.792
Isc = 7773 AIC

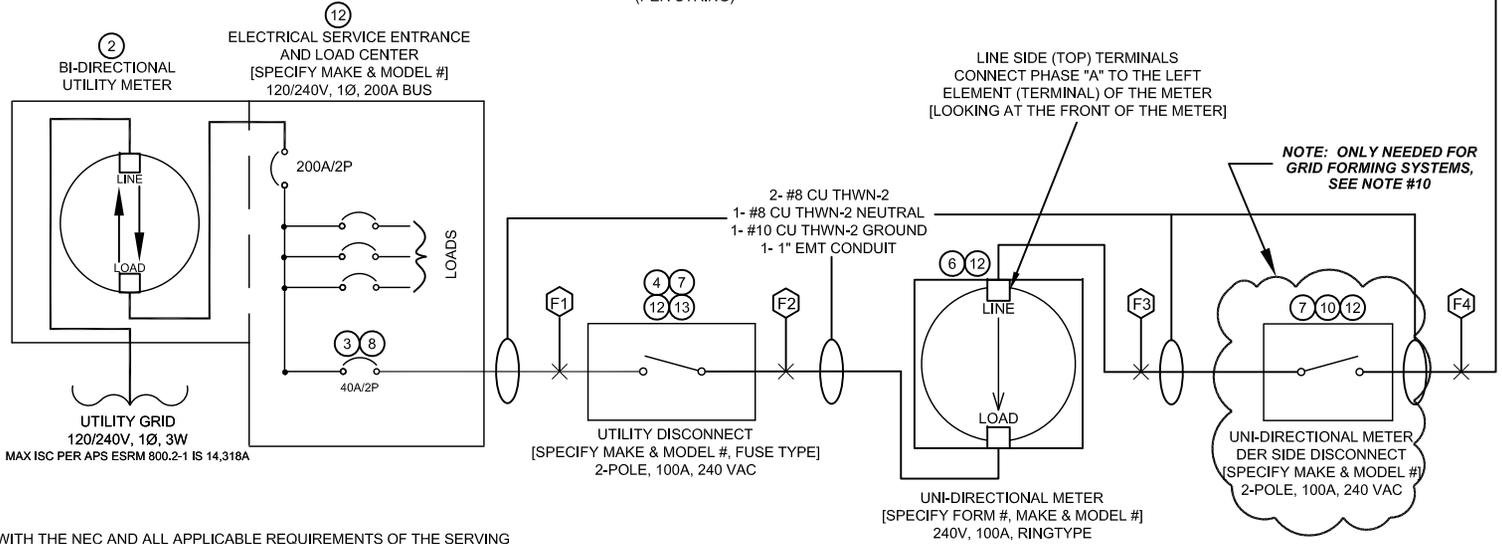
F3: AVAIL = 7773 AIC
d = 5 feet
f = 0.208
m = 0.828
Isc = 6436 AIC

F4: AVAIL = 6436 AIC
d = 5 feet
f = 0.172
m = 0.853
Isc = 5491 AIC

*SOURCE: COOPER BUSSMAN SPD MANUAL, REV 2017. CALCULATIONS IN ACCORDANCE WITH NEC ART 110.9 & 110.10.

NOTE: FOR THE PRODUCTION METER TO BE RATED PROPERLY FOR THE AVAILABLE FAULT CURRENT, TAKE F4 ISC AND ADD TO THE FULL LOAD INVERTER FAULT AT 120%. IN THIS CASE SINCE WE HAVE ONE INVERTER, THE FAULT CONTRIBUTION FROM THE PV SYSTEM WILL BE THE TOTAL FAULT CONTRIBUTION FROM THE SINGLE INVERTER.

I.E. (40 A X 120%) = 48 A + 5,491 A = 5,539 A



- 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 BREAKER "WARNING: EQUIPMENT IS FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN POWER SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR." PER NEC 705.12(B)(4).
 - LABEL "UTILITY DISCONNECT SWITCH." 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, (2) SHARED LOCK PER UTILITY, OR (3) UNFUSED SWITCH LOCATED FAR ENOUGH FROM SERVICE ENTRANCE FOR F1 < 10,000 AIC.
 - 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."
 - LABEL "WARNING: POWER SOURCE OUTPUT. DO NOT RELOCATE THIS OVERCURRENT DEVICE" AND LOCATE BREAKER AT OPPOSITE END OF BUS FROM MAIN BREAKER LOCATION PER NEC 705.12(B)(2).
 - METALLIC CONDUIT SHALL BE USED WITHIN BUILDING PER NEC 690.31(D)(1).
 - 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.
 - NOT USED
 - EQUIPMENT SHALL BE LISTED, TESTED AND MARKED TO WITHSTAND THE AVAILABLE SHORT CIRCUIT CURRENT.
 - INSTALL AS REQUIRED TO ENSURE PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH, PRODUCTION METER AND UNI-DIRECTIONAL METER LINE SIDE DISCONNECT SWITCH AFC RATINGS ARE NOT EXCEEDED.

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

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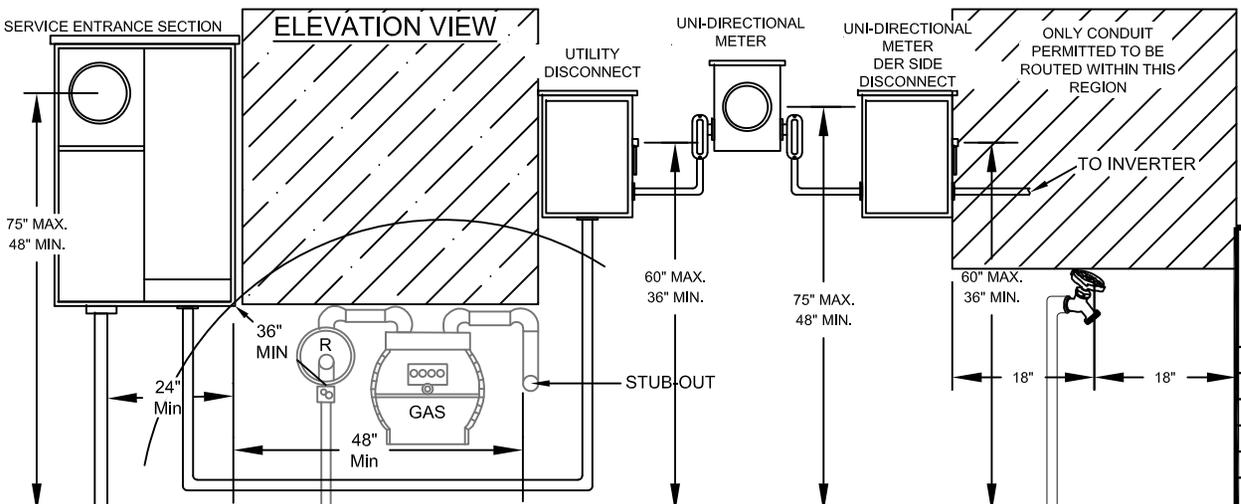
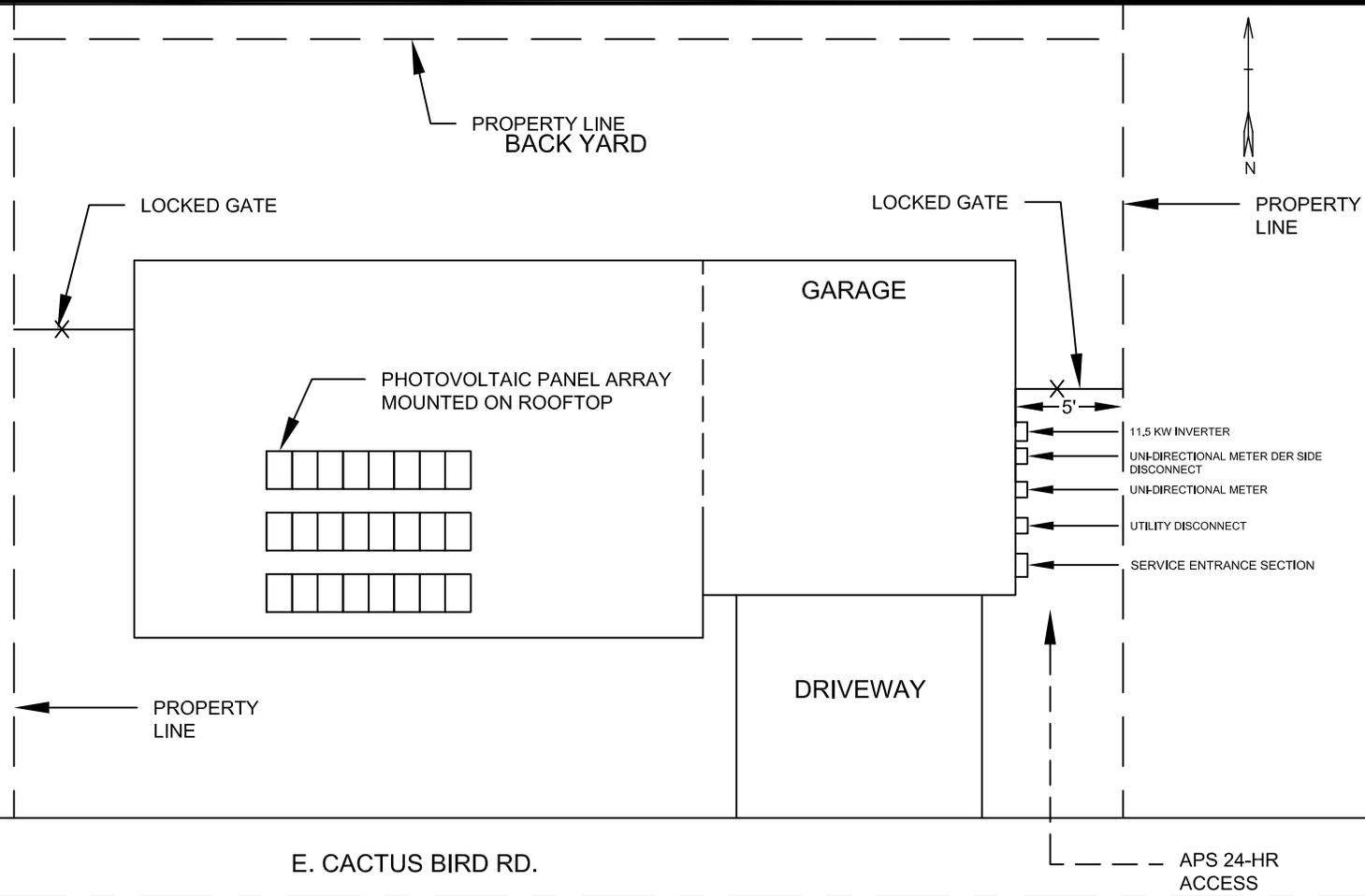
SAMPLE LOAD SIDE CONNECTION ONE - LINE DIAGRAM

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		02-16-26	
ABC PROJECT #1111-9999		SIZE B	DRAWING NO. 0000-0001
SCALE NA		REV. D	SHEET 1 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.



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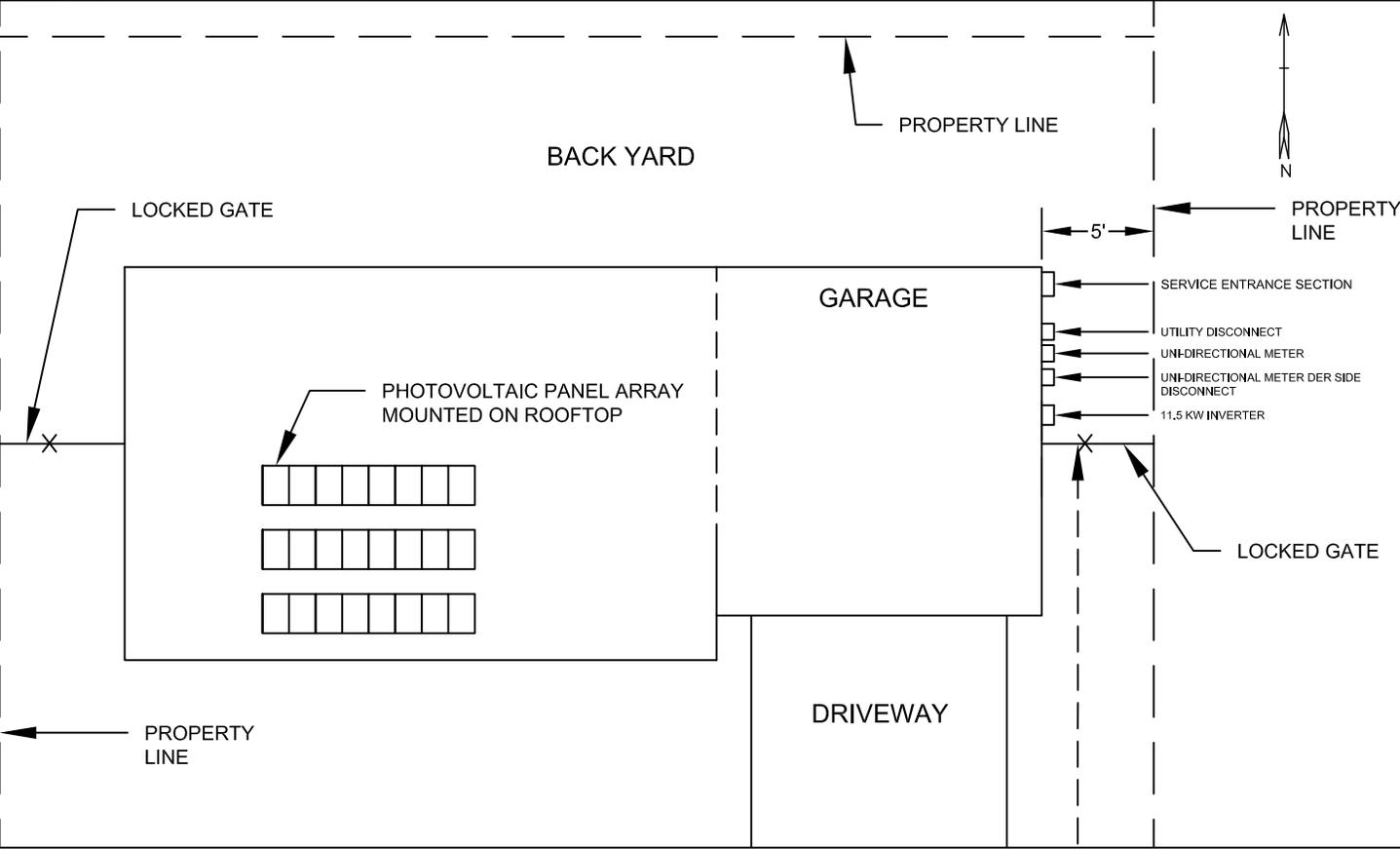
SAMPLE LOAD SIDE CONNECTION SITE PLAN

1234 South Main Street Any City, Arizona 85123 Tel: 602-555-5555		ABC SOLAR COMPANY, INC.	
		SITE PLAN	
		7.7 KW AC PHOTOVOLTAIC SYSTEM	
		333 E. CACTUS BIRD RD. ANY CITY, AZ 85123	
APPROVALS	DATE	SIZE	DRAWING NO.
DRAWN F.JG	01-21-26	B	0000-0005
CHECKED		SCALE	REV.
ENGINEER		NA	
REV. A	02-16-26		
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.

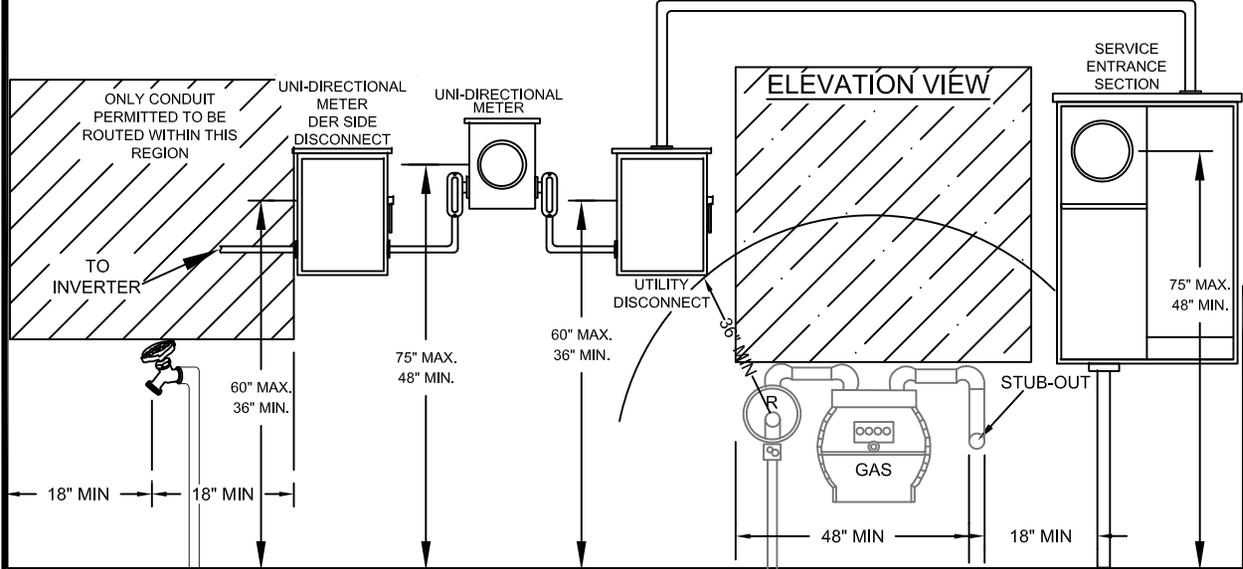
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- E. CACTUS BIRD RD. -

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.	
		7.7 KW AC PHOTOVOLTAIC SYSTEM 333 E. CACTUS BIRD RD. ANY CITY, AZ 85123	
APPROVALS	DATE	SIZE	DRAWING NO.
DRAWN FJG	01-21-26	B	0000-0005
CHECKED		SCALE	REV.
ENGINEER		NA	
REV. A	02-16-26		
ABC PROJECT #1111-9999			SHEET 3 OF 3