

SCOPE: THIS STANDARD DESCRIBES THE PURPOSE AND USE OF SURGE ARRESTERS ON THE DISTRIBUTION SYSTEM.

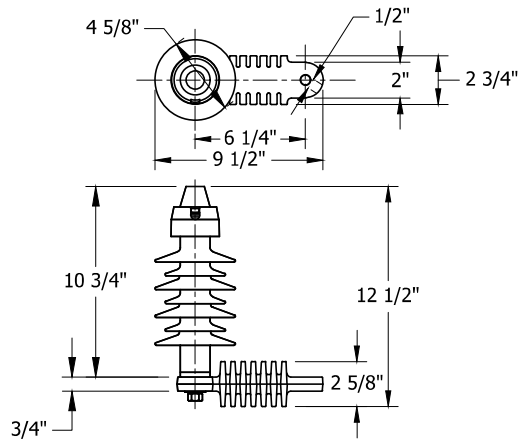


FIGURE 1
LIGHTNING ARRESTER

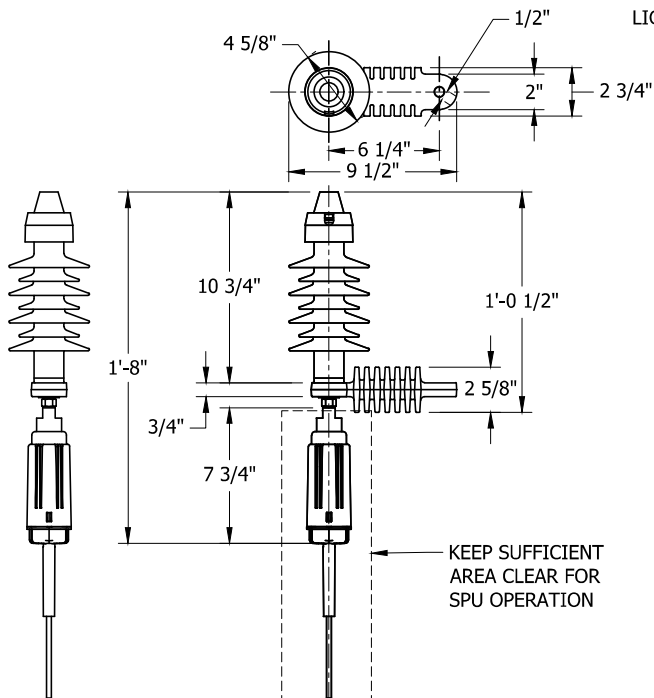


FIGURE 2
PREFERRED METHOD

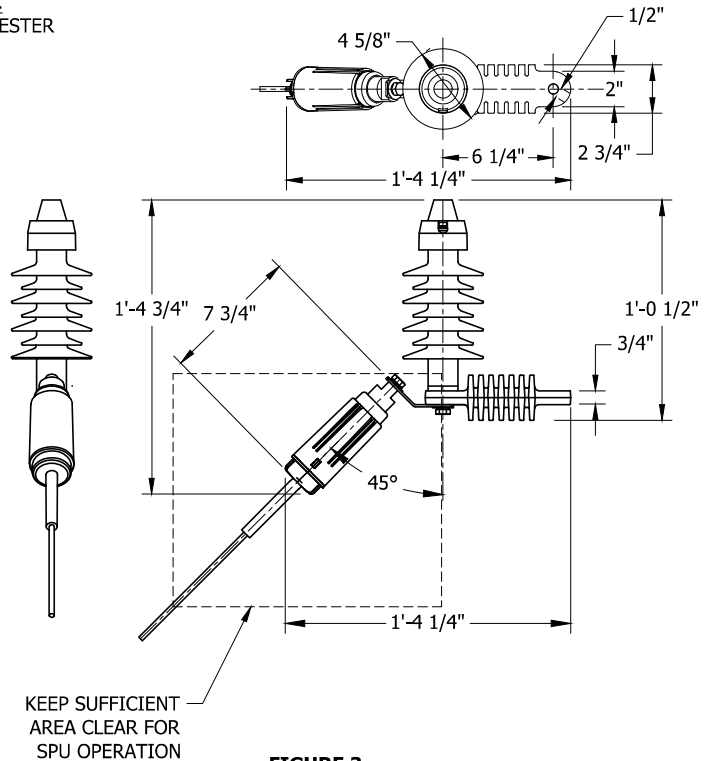


FIGURE 3
45 DEG ANGLE (ALTERNATE METHOD)

TABLE 1

RATINGS: USED FOR SELECTING ARRESTER TO BE USED ON THE DISTRIBUTION SYSTEM					
APPLICATION VOLTAGE-KV	ARRESTER RATING-KV	STOCK NUMBER	DESIGN UNITS	LIGHTNING ARRESTER STOCK NUMBER	LIGHTNING ARRESTER DESIGN UNITS
2.4 DELTA	3	S113210	CFLA3	S113216	LA3
2.4/4.16 WYE					
6.9/12 WYE	12	S113214	CFLA12	S113248	LA12
7.2/12.5 WYE					
12 (3 WIRE)					

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REV	CHANGE	DR	BY	DSN	APV	DATE	REV	CHANGE	DR	BY	DSN	APV	DATE
C	TABLE UPDATE	-	VMV	JES	CZH	12/09/2019	F						
B	DRAWING UPDATE	PEI	-	-	-	02/18/2019	E						
A	UPDATE TABLE	-	JC	KA	DW	09/05/2014	D	TABLE UPDATE	EDM	VMV	JES	CZH	12/06/2021

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SHEET
1 OF 3

SDG&E ELECTRIC OVERHEAD CONSTRUCTION STANDARDS

SURGE (LIGHTNING) ARRESTERS APPLICATION

OH1247.1

INSTALLATION:

GENERAL

- A. SURGE (LIGHTNING) ARRESTERS ARE USED TO KEEP LIGHTNING AND OTHER SURGES WITHIN THE INSULATION LIMITS OF THE DEVICES WHICH THEY'RE INSTALLED TO PROTECT. WHEN THEY ARE REQUIRED, INSTALL THEM AS SHOWN ELSEWHERE IN THIS STANDARDS BOOK, OR WITHIN THE DISTANCES SPECIFIED IN THE "PARTIAL ARRESTER PROTECTION AREA" BELOW, WHEN UPGRADING EXISTING INSTALLATIONS WOULD REQUIRE A POLE CHANGEOUT.
- B. OUR OPERATING TERRITORY HAS BEEN DIVIDED INTO TWO LIGHTNING ARRESTER APPLICATION AREAS. THEY ARE SHOWN ON SHEET 3 "SURGE ARRESTER APPLICATION MAP". SURGE ARRESTERS WILL NORMALLY BE PURCHASED WITHOUT MOUNTING BRACKETS. THE CUTOUT/ARRESTER BRACKETS ARE AN EXEMPT ITEM, M&S S165446 (X). (a)

APPLICATION

- C. PARTIAL ARRESTER PROTECTION AREA - APPLY ARRESTERS ON THE FOLLOWING DISTRIBUTION EQUIPMENT AS DESCRIBED:
1. TRANSFORMERS & BOOSTERS: SINGLE PHASE STATIONS 100KVA AND LARGER, AND THREE PHASE STATIONS HAVING A TOTAL NAMEPLATE RATING LARGER THAN 150KVA. A SEPARATE TWO-ROD GROUND IS REQUIRED FOR THE ARRESTERS, WHICH SHALL NOT BE INTERCONNECTED TO THE STATION GROUND (NOT APPLICABLE TO STEEL POLES).
 2. INSTALL REGULATORS, SERVICE RESTORERS, CAPACITORS, CABLE POLES, PRIMARY METERING, AND SCADA-MATE SWITCHES ON VOLTAGE SENSOR SIDE OF SWITCH, STATIONARY CONTACT SIDE.
 3. ARRESTER WILL BE USED ON EQUIPMENT LOCATED IN A TIER 2 OR TIER 3 HIGH FIRE THREAT DISTRICT (HFTD).
- D. GENERAL ARRESTER APPLICATION AREA - APPLY ARRESTERS TO ALL OF THE FOLLOWING EQUIPMENT IN THE AREA DESIGNATED ON SHEET 3:
1. TRANSFORMERS, REGULATORS, SERVICE RESTORERS, CAPACITORS, CABLE POLES, BOOSTERS, SCADA SWITCHES (ALL TYPES), AND PRIMARY METERING.
 2. NEW CONSTRUCTION INSTALLED IN THE GENERAL APPLICATION AREA WILL USE ARRESTERS.

BILL OF MATERIALS: NONE

NOTES:

- I. ARRESTERS MAY BE APPLIED, WITH THE APPROVAL OF THE DISTRICT ENGINEERING SECTION, TO THOSE CIRCUITS NOT ALREADY DESIGNATED AS GENERAL ARRESTER PROTECTION AREAS BUT WHICH HAVE EXPERIENCED A LIGHTNING CAUSED INTERRUPTION.
- II. ARRESTERS MAY BE APPLIED TO EQUIPMENT AS SPECIFIED IN "GENERAL ARRESTER PROTECTION AREA" ABOVE IN AREAS DESIGNATED AS "PARTIAL ARRESTER PROTECTION AREA" WITH THE APPROVAL OF DISTRICT ENGINEERING SECTION. AFTER SUCH AREAS ARE DESIGNATED, THE "SURGE ARRESTER APPLICATION MAP" SHEET 3 WILL BE REVISED TO INCLUDE THEM.
- III. PORCELAIN ARRESTERS SHALL BE REPLACED WITH THE CURRENTLY EXEMPT POLYMER ARRESTER IN THE COURSE OF DOING OTHER WORK INVOLVING A 3 OR 4 PERSON CREW, SUCH AS CMP OR NEW BUSINESS. THIS WILL IMPROVE RELIABILITY AND AVIAN PROTECTION, AND WILL REDUCE EVENTFUL OPERATIONS. BE SURE TO INSTALL ARRESTERS WITH THE APPROPRIATE AVIAN PROTECTION COVER-UP (S289630) AS THOSE ARE STOCKED SEPARATELY. (b)
- IV. ARRESTER IS AVAILABLE FOR USE IN HIGH FIRE THREAT DISTRICT (HFTD). THE DEVICE IS DESIGNED TO AVOID WILDFIRE HAZARDS CAUSED BY THERMALLY OVERLOADED SURGE ARRESTERS.

(X) THIS ITEM IS EXEMPT.

REFERENCE:

- (a) FOR BRACKET, SEE OH397.
- (b) SEE OH1640: **LIGHTNING ARRESTER AND CUTOUT COVER-UP DEVICES FOR AVIAN PROTECTION.**

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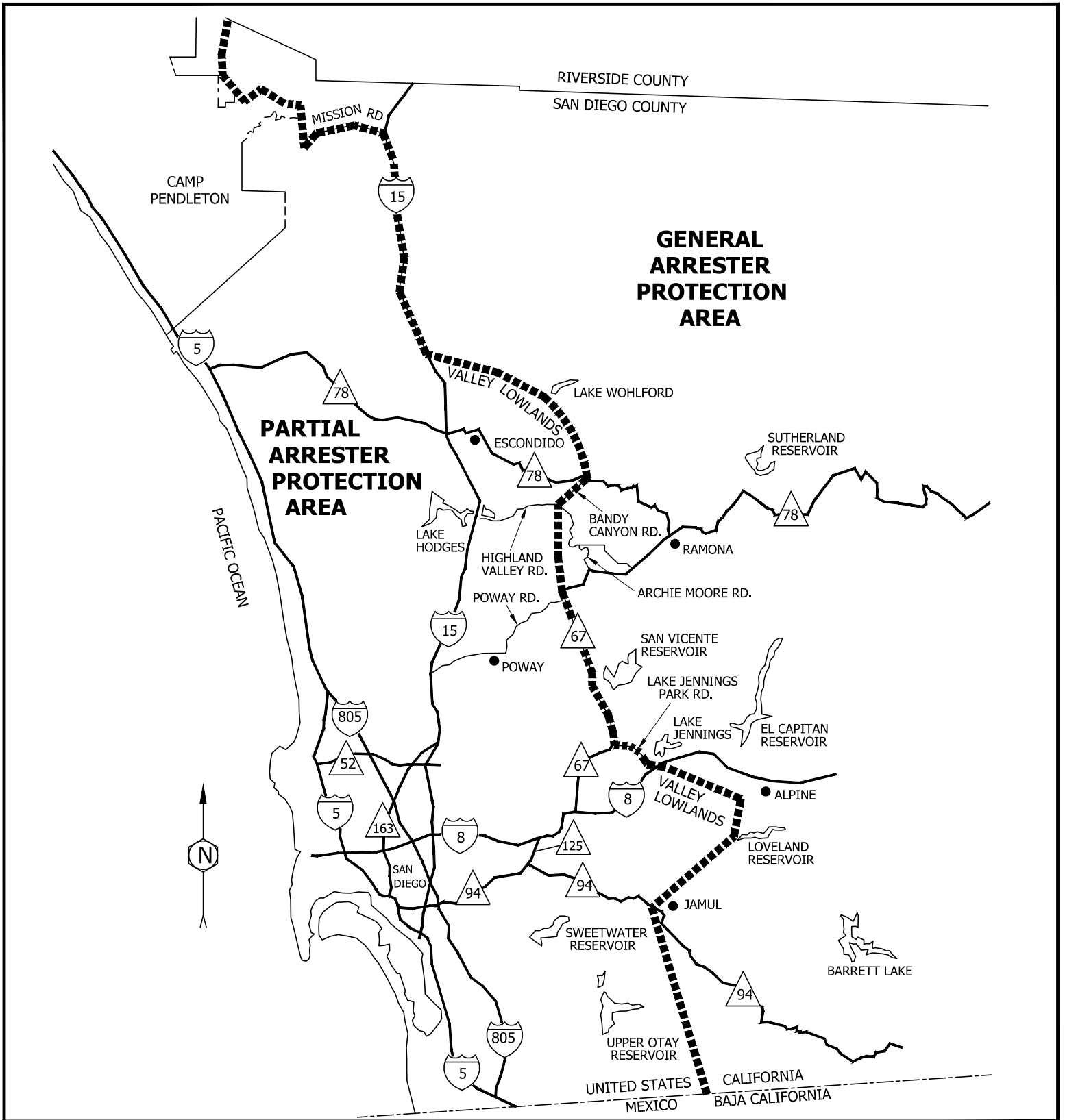
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SHEET
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SDG&E ELECTRIC OVERHEAD CONSTRUCTION STANDARDS

SURGE (LIGHTNING) ARRESTERS APPLICATION

OH1247.2



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SURGE (LIGHTNING) ARRESTERS APPLICATION

OH1247.3