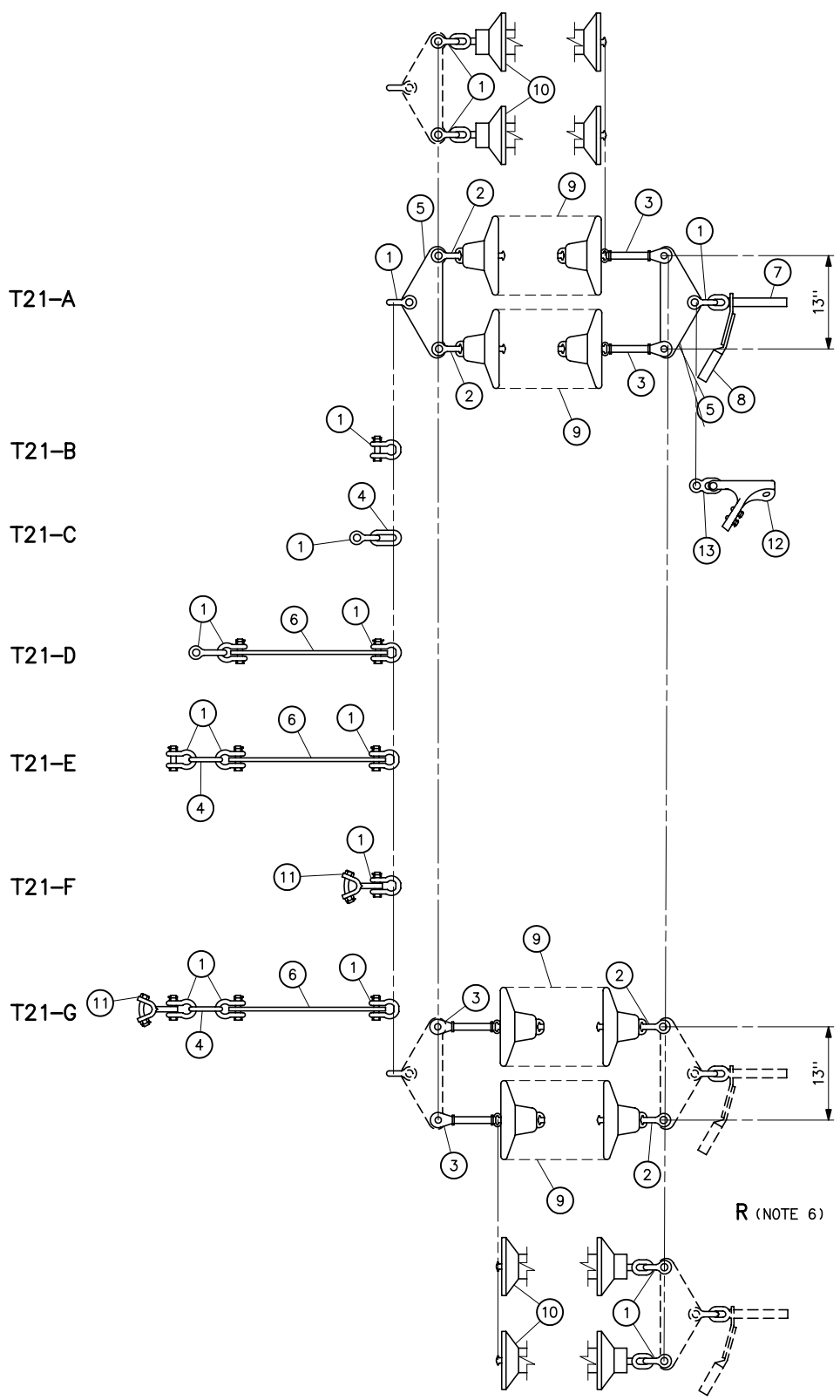
DOUBLE STRING
TENSION INSULATOR ASSEMBLIES

ULTIMATE INSULATOR ASSEMBLY STRENGTH AS SPECIFIED

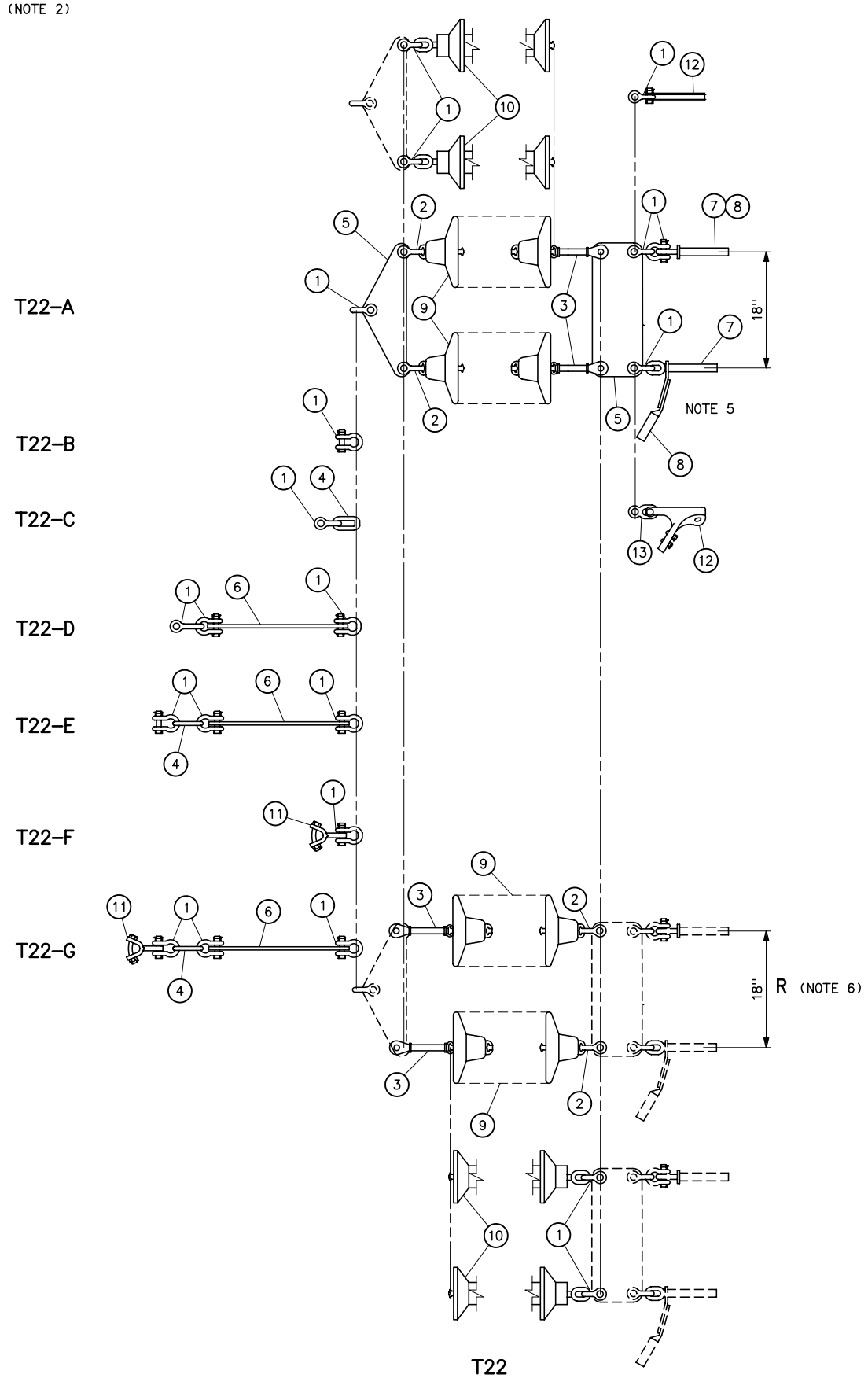
(NOTE 2)



T21

DOUBLE INSULATOR STRING, SINGLE CONDUCTOR

(NOTE 3)



T22

DOUBLE INSULATOR STRING, DOUBLE CONDUCTOR

(NOTE 4)

MATERIALS LIST

ITEM NO.	DESCRIPTION
1	ANCHOR SHACKLE, BNK
2	CLEVIS BALL, BNK
3	SOCKET CLEVIS, HOT LINE, BNK
4	CHAIN LINK
5	YOKE PLATE
6	EXTENSION STRAP (LENGTH AS SPECIFIED)
7	COMPRESSION DEAD END FITTING, EYE, SINGLE TONGUE
8	COMPRESSION JUMPER TERMINAL
9	INSULATOR STRING, PORCELAIN UNITS
10	INSULATOR STRING, POLYMER FIBERGLASS, OVAL EYE-BALL (LENGTH AS SPECIFIED)
11	Y-CLEVIS EYE, BNK
12	STRAIN CLAMP, BNK
13	CLEVIS EYE, BNK

NOTES

1. BNK INDICATES BOLT, NUT AND STAINLESS STEEL COTTER KEY REQUIRED.
2. STRENGTH OF HARDWARE COMPONENTS SHALL BE EQUAL TO OR GREATER THAN THE INSULATOR ASSEMBLY ULTIMATE STRENGTH, EXCEPT THAT PARALLEL COMPONENTS IN DOUBLE INSULATOR ASSEMBLIES T21, AND T22 MAY HAVE 50% OF ULTIMATE ASSEMBLY STRENGTH.
3. DOUBLE STRING, SINGLE CONDUCTOR ASSEMBLIES SHALL HAVE THE INSULATOR STRING PARALLEL IN A HORIZONTAL PLANE.
4. DOUBLE STRING, DOUBLE CONDUCTOR ASSEMBLIES SHALL HAVE THE INSULATOR STRINGS PARALLEL IN THE SAME PLANE AS THE CONDUCTORS (USUALLY VERTICAL).
5. FOR DOUBLE CONDUCTOR ASSEMBLIES, THE PADS ON THE CONDUCTOR DEADENDS SHALL BE TURNED OUT TO EACH SIDE IN ORDER TO CLEAR HARDWARE AND PROVIDE A SMOOTH TRANSITION INTO A BUNDLE AT THE JUMPER INSULATOR ASSEMBLY.
6. ASSEMBLIES DESIGNATED WITH AN R SHALL HAVE THE INSULATOR CAPS AT THE CONDUCTOR END OF THE ASSEMBLY AS SHOWN, AND ARE FOR USE WHEN THE CONDUCTOR ATTACHMENT POINT IS AT A HIGHER ELEVATION THAN THE STRUCTURE ATTACHMENT POINT.

TABLE A – PORCELAIN UNITS

VOLTAGE (KV)	UNIT QUANTITY PER ASSEMBLY T21 AND T22	
	WOOD STRUCTURES	STEEL STRUCTURES
69	10	14
115	16	20
138	20	22
161	22	24
230	26	30

INSULATOR ASSEMBLY TYPE NO.

TYPE OF STRUCTURE ATTACHMENT HARDWARE

EXAMPLE: T22 – B

- ONE (1) OR TWO (2) SUBCONDUCTORS
- SINGLE (1) OR DOUBLE (2) INSULATOR STRING
- TENSION ASSEMBLY

C	7-15-03 A7-RC	REVISED TITLE BLOCK ONLY.
B	6/13/00 A3-RMC	ADDED STRAIN CLAMPS.
A	5-5-99 A3910-RMC	ADDED ASSEMBLY TYPE F AND ASSEMBLY TYPE G.

UNITED STATES DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
CORPORATE SERVICES OFFICE – LAKEWOOD, COLORADO

TRANSMISSION LINE STANDARDS
TENSION INSULATOR ASSEMBLIES
DOUBLE STRING

DESIGNED F.S. COOK APPROVED ROSS CLARK ELECTRICAL ENGINEERING MANAGER

CAE	OCTOBER 10, 1997	41	1023

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