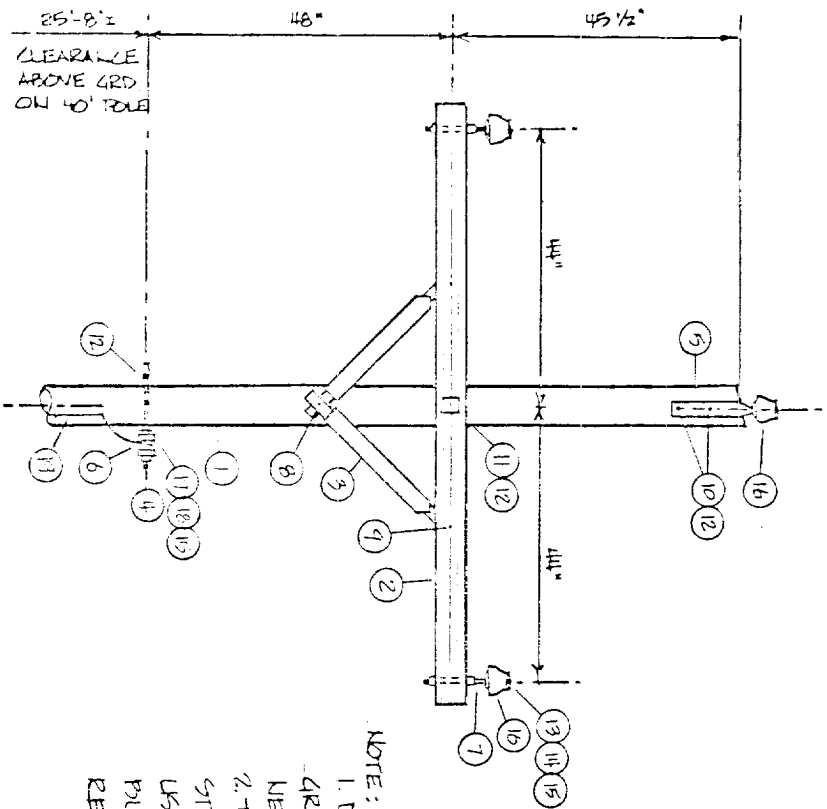
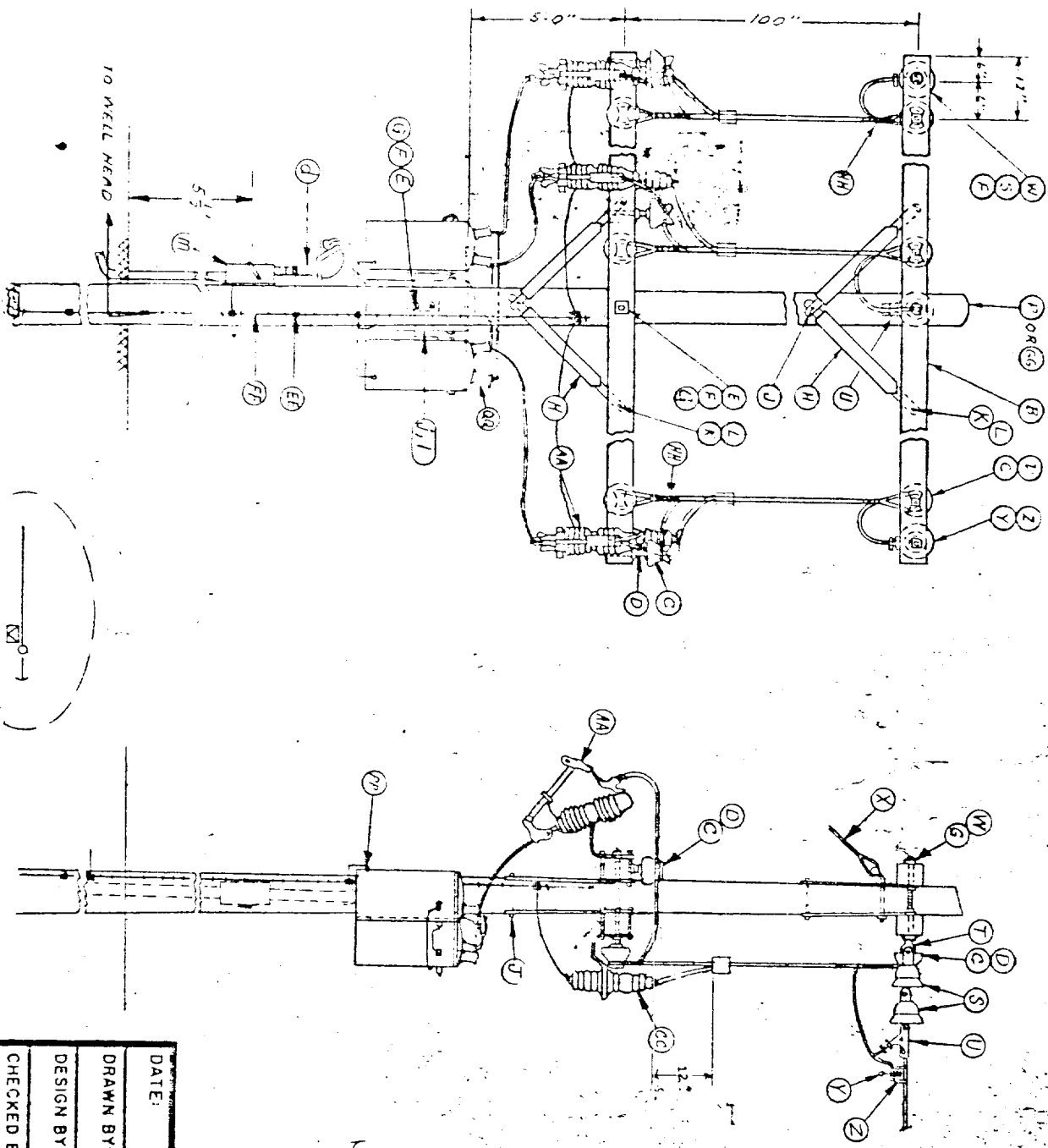




NOTE:
1. DO NOT INSTALL
GROUND WIRE FAST
NEUTRAL CONDUCTOR.
2. THIS CONSTRUCTION
STANDARD TO P&E
USED ON ALL LINES
BUILT ON NATIONAL
RESOURCE LANDS

MATERIALS				
ITEM	DESCRIPTION	REQ'D.	ITEM	DESCRIPTION
1	POLE, 40'	1	17	NEUTRAL CONDUCTOR
2	CROSSARM, 3/4" x 4 1/2" x 8'	1	18	ARMOR ROD
3	BRACE, WOOD	2	19	POLE GROUND WIRE, #6 AL.
4	STUD RAIL	1		
5	BRIDGE PIN, 1/2"	1		
6	SPOOL INSULATOR	1		
7	STEEL PIN, 3/8" x 5"	2		
8	LV, SCREW, 1/2" x 4"	1		
9	CARABE POLT, 3/8" x 4 1/2"	2		
10	MACHINE POLT, 3/8" x 10"	2		
11	MACHINE POLT, 5/8" x 14"	1		
12	WASHER, 2 1/2" SQ.	5		
13	PHASE CONDUCTOR	-		
14	ARMOR ROD	3		
15	TEE WIRE, #6 AL.	1#		
16	PIN INSULATOR, 9 KV	3		

DATE: 7-15-77	TITLE: PRIMARY 111 LINE POLE
DRAWN BY: J. TROTTILL	12,500 VOLT ACR.
DESIGN BY:	
CHECKED BY: SK	CONOCO
APPROVED BY: SK	PRODUCTION DEPT. HOBBS DIVISION
SCALE: 1/2"=1'	JOB: 12,500 VOLT ACR.
	DRAWING NO. ES-26



ITEM	QTY	REF
B	4	
C	9	
D	9	
E	3	
F	24	
G	12	
H	8	
J	4	
K	8	
L	8	
Porog	1	ES-1A, NOTE 5
S	6	
T	3	
U	3	
W	5	
X	1	
Y	3	
Z	3	
AA	3	
CC	3	
EE	3	
FF	1	
HH	6	
D	1	
V1	1	ES-1A, NOTE 2
M	1	
FP	3	
QA	6	

NOTE:
 1. CENTER PHASE ON PAULK WILL HAVE EPOXY INSULATOR, KEARNEY # 923015-24 INS. (REF. REFER TO DRUG, ES-25)
 2. ALL WIRE FROM POINT "U" WILL BE INSULATED TYPE WIRE ON TRANSFORMER PAULK.

DATE:	12-13-71	TITLE:	SINGLE POLE SUBSTA.
DRAWN BY:	AKD	1PH. TRANS. CLUSTER MOUNT	
DESIGN BY:	AKD	PRIM. DEAD-END. 14500/480V ACGR	
CHECKED BY:		PRODUCTION DEPT.	CONOCO
APPROVED BY:		JOB:	HOBBS DIVISION
SCALE:	NONE	ELEC SPECS	ES-9

ITEM	DESCRIPTION	A. B. CHANGE NO.	JOSLYN NO.	OTHER MFRS. NO.	NO. SUB.
A	35' class 6 creosoted pine pole				
B	3 1/2" x 4 1/2" x 8' treated crossarm				
C	High density wet process porcelain pin insulator		463		
D	5/8" x 5" Forged steel pin w/sq. washer, nut, & locknut	881			
E	5/8" x 12" machine bolt w/ nut (or length req'd)	881/2			
F	2 1/4" x 2 1/4" x 3/16" x 11/16" hole sq. washer	681/3			
G	5/8" NF locknut	351/2			
H	1/4" x 1 1/4" x 28" flat crossarm brace	7128			
J	1/2" x 4" EZ Fetter Drive Log Screw	508754			
K	3/8" x 4 1/2" Carriage Bolt w/ Nut	8634 1/2			
L	3/8" NF locknut	3510			
M	Preformed Aluminum Alloy Armor Rods, size req'd				
N	tie wire #6 strong alum. alloy				
O	Epoxy Insulator (Extension Link)			KEARNEY #321025660	X
P	35' class 5 creosoted pine pole				
R	Aluminum double tab Squeeze on Connector for ACSR, Aluminum, or Copper-size req'd			KEARNEY SERIES "81"	X
S	6" Suspension Insulator	66100			
T	5/8" Standard Oval Eye Nut	6502			
U	Primary Dead End Clamp		44050		
W	5/8" x 18" (or length req'd) Double Arming Bolt w/4 sq. nuts	8868			
X	Guying detail - see dwg No. ES-10 for specs.				
Y	Hot Line Clamp				
Z	Squeeze on basket, size required	5152046P		KEARNEY	X

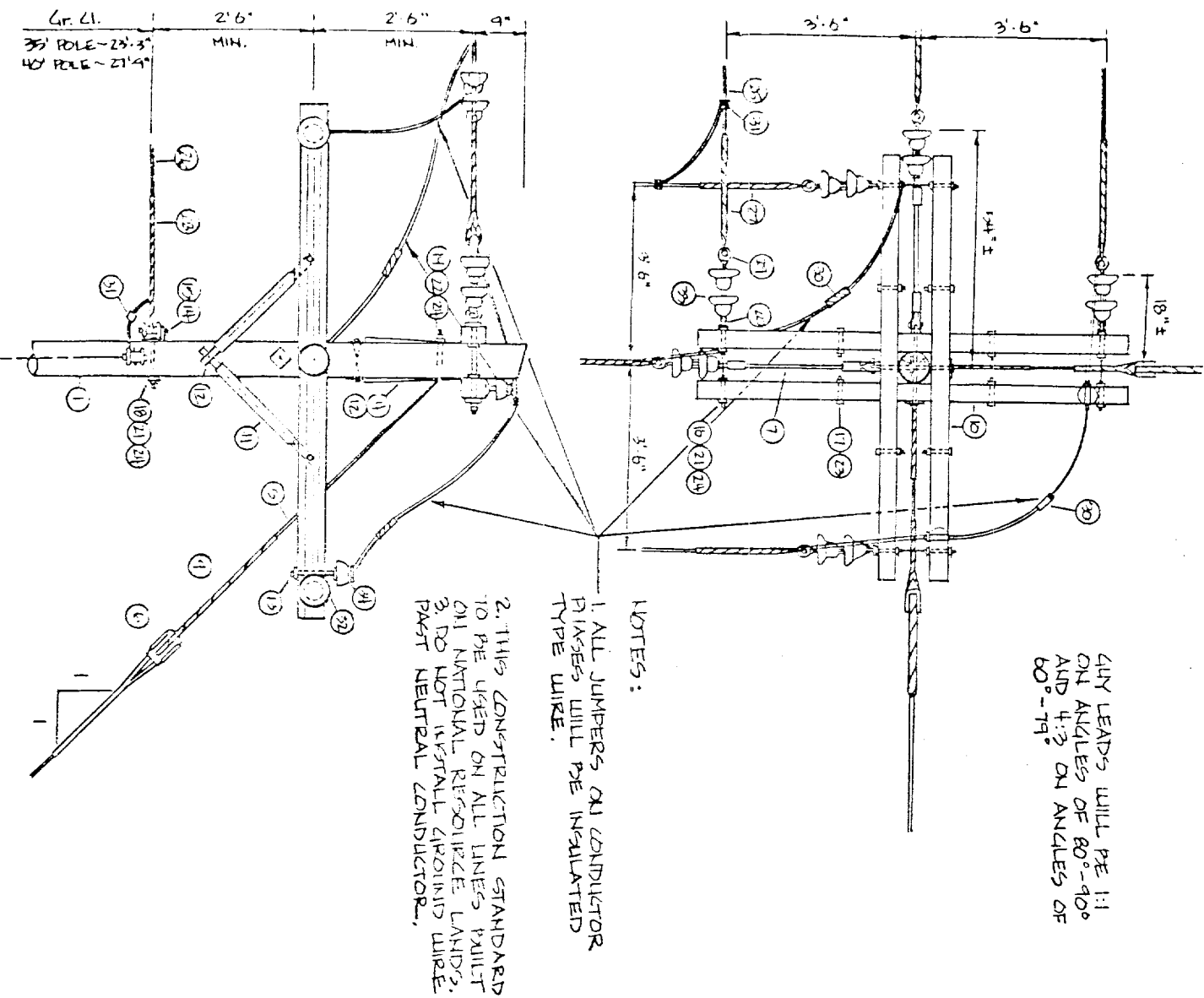
DATE: 12-27-71		TITLE: DESCRIPTION MATERIALS	
DRAWN BY: E. WINTER		CONOCO PRODUCTION DEPT. HOBBS DIVISION JOB: ELEC SPECS DRAWING NO: ES-1 SHEET 1 OF 3	
DESIGN BY:			
CHECKED BY:			
APPROVED BY:			
SCALE: NONE			

ITEM	DESCRIPTION	A. B. CHANCE NO.	JOSLYN NO.	OTHER MFRS. NO.	NO SUB.
AA	Primary Cutout - 100 amp, 15 KV, 16000 amp int. cap.				X
BB	General Purpose "U" bolt clamp	FZHX1015G			
CC	Lightening arrestor, 10 KV	UC510AGP			
DD	Single phase oil switch, 14.4 KV			HUGH-EDSON KMG2	
EE	Split bolt connector, size req'd			BLACKBURN "S" SERIES	
FF	Grounding specs. see dwg. No. ES-11 & ES-1A, Note 3				
GG	35' class 4 creosoted pine pole				
HH	Aluminum deadend Preforms for ACSR, size req'd				
JJ	30' class 6 creosoted pine pole				
KK	OVERHEAD GRND, #4 ACSR - If Req'd - Ref. DWG ES-11, PS-1A - Note 3				
LL	Ground connector, motor			BURNBY KC-22	X
MM	600 V. secondary lightening arrestor single phase				
NN	Greenfield Type EF liquid-tight flexible steel conduit, size req'd, w/ necessary liquid-tight connectors.				
OO	req'd size LB fitting & cover & basket				
PP	transformer tank grounding terminal	GW5-15			
QQ	Bird Guards (insulating boots on transformer bushings)			ONESTAKA HURTS	

DATE: 12-27-71	TITLE: DESCRIPTION MATERIAL
DRAWN BY: E. WINTER	CONOCO HOBBS DIVISION DRAWING NO. ES-1 SHEET 2 OF 3
DESIGN BY:	
CHECKED BY:	
APPROVED BY:	
SCALE: NONE	REC. SPECS JOB:

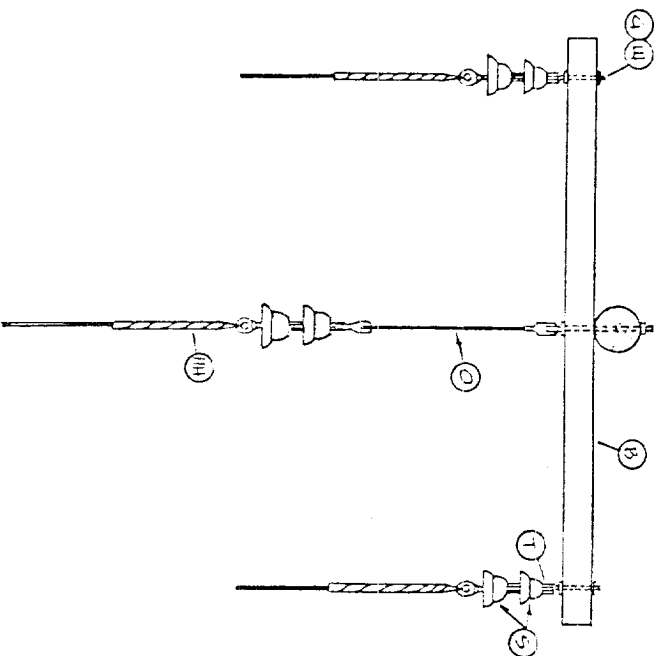
ITEM	DESCRIPTION	A. B. CHANCE NO.	JOSLYN NO.	OTHER MFRS. NO.	NO. SUB.
a	double upset bolt s/sq. nut, round washer, and cotter key on short end, sq. nut and MF locknut on long end, 15 1/8" long (or length required.) wet process porcelain secondary spool insulator, 3" brown glaze	7828	2101		
b	required size conduit w/ servicehead(s) & req'd size & rated insulated conductors, Ref. Dwg ES-1B Note: provide clamp and ground conduit parallel groove clamp, size req'd			BURNDY SERIES "UC"	
d	secondary insulator clevis for 4" insulator				
f	3/8" thimble nut	6510			
h	5/8" x 12" (or length req'd) straight thimbleye bolt w/sq. nut	5512			
j	transformer cluster mount bracket (small)			ALUMAFORM 6M3-6	X
l	transformer cluster mount bracket (large)			ALUMAFORM 15M3-6	X
m	req'd size rain/light disconnect & fuses, 3-phase, 600 V, Ref. Dwg No. ES-1B				
n	16" cross plate anchor (or size req'd)	X-16			
q	8-way expanding anchor (size req'd)	88135			
t	4" brown glaze wet process porcelain secondary spool insulator		10101		
u	5/8" x 7' thimbleye anchor rod w/nut (use twineye 1f req'd - Chance No. 5347)	5317 (NUT 55006P)			
aa	3/8" high strength guy strand (10,800 lb.)				
bb	preformed guy grip for 3/8" guy strand				
dd	5/8" x 10" angle thimbleye bolt w/nut	5010			
ee	3" x 3 1/4" x 11/16" hole curved washer	6823 1/2			X
ff	6" - guy clamp w/3-1/2" bolts				
px	medium size strain insulator				
hh	serving sleeve for 3/8" guy strand	6454			
jj	3/16" x 2-1/2" x 7" lift plate	7887			X
nn	pole bottom ground plate (may use butt-wrap if desired)				
qq	Ground Connection (See Dwg. ES-12)				
rr	wet process porcelain secondary spool insulator, 3" - white glaze				
tt	wet process porcelain secondary spool insulator, 4" - white glaze				

DATE:	12-27-71	TITLE:	
DRAWN BY:	E. WINTER	DESCRIPTION MATERIALS	
DESIGN BY:		CONOCO	
CHECKED BY:		PRODUCTION DEPT.	
APPROVED BY:		HOBBS DIVISION	
SCALE:	NONE	JOB:	
		ELEC SPECS	
		DRAWING NO. ES-1	
		SHEET 5 OF 5	



MATERIALS		
ITEM	DESCRIPTION	QTY
1	POLE	1
2	ANCHOR, 8"	2
3	ANCHOR ROD, 5/8" x 7'	2
4	GUY ATTACHMENT, 1/2" DIA.	2
5	GUY CABLE, 3/4" 11/4"	24*
6	GUY INSULATOR, 500	2
7	EPOXY INSULATOR, KEARNEY # 323015-24	2
8	CLAMP, 3-POLY	2
9	GUY GRIP, 3/8"	6
10	CROSS ARM, 6"	4
11	BRACE, 3/8" SPA.	8
12	LAY SCREW, 1/2"	8
13	STEEL PIN, 3/8" x 5"	2
14	BACK, 1-POINT	2
15	SPRIG INSULATOR, 13"	2
16	POLY, D.A.L. 5/8" x 10"	6
17	POLY, MACH. 3/8" x 11 1/2"	8
18	POLY, MACH. 3/8" x 10"	2
19	POLY, MACH. 3/8" x 12"	2
20	EYE NUT, 5/8"	6
21	WASHER, 2 1/4" FLAT	22
22	WASHER, 3" CURVED	2
23	LOCK NUT, 3/8"	8
24	LOCK NUT, 3/8"	6
25	PHASE CONDUCTOR, NO.	1
26	NEUTRAL CONDUCTOR, NO.	1
27	REF. DE. NO.	1
28	REF. DE. NO.	2
29	CLAMP, THIMBLE	6
30	JUMPER, SLEEVE, NO.	2
31	CONDUCTOR, 50' S.W.L. AL.	2
32	INSULATOR, 6KV PIN	2
33	INSULATOR, 6" DIA.	12
34	TIE WIRE, NO. 6 AL.	1/2"

DATE: 7-15-77		TITLE: PRIMARY ANGLE STRUCTURE 60°-90° 12,500 VOLT ASR	
DRAWN BY: J. TYPFILL		CONOCO PRODUCTION DEPT. HOBBS DIVISION DRAWING NO.:	
DESIGN BY:			
CHECKED BY: GP			
APPROVED BY: SK		JOB: EL-EC. SPELS.	
SCALE: 1/4" = 1'		ES-27	



ITEM	QTY. REQ'D
B	1
4	3
HH	3
O	1
S	6
T	2
W	3

NOTE:
FOR MATERIALS, SEE
DRUGS, ES-1

DATE: 7-15-77		TITLE:	
DRAWN BY: L. MORTILL		EPOXY INSULATOR (EXTENSION LINK)	
DESIGN BY:		CONOCO	
CHECKED BY: SP			
APPROVED BY: SP			
SCALE: 1/2" = 1"		JOB:	DRAWING NO.:
		ELEC. SPECS.	ES-28