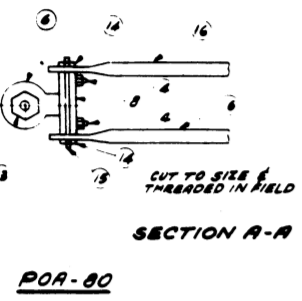
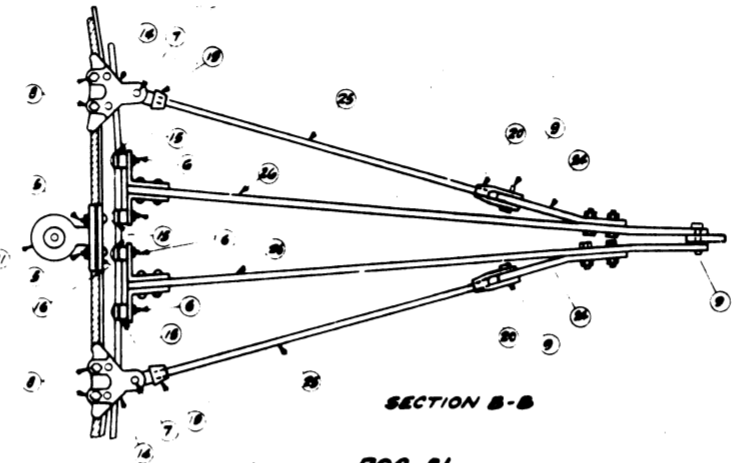
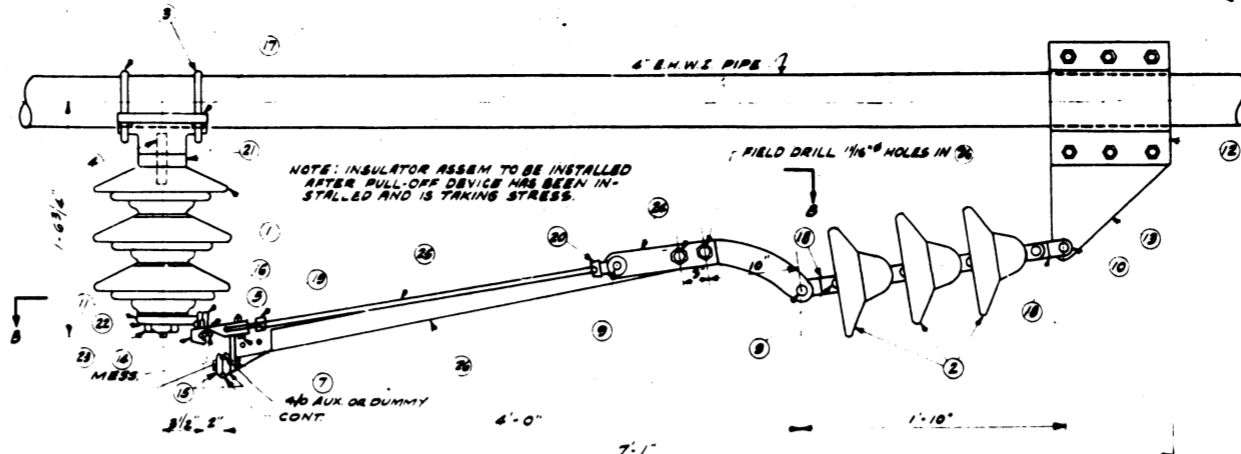


BILL OF MATERIAL		POA-80	
ITEM	PIECE	DWG. NO.	MARK. NO.
1	INSULATOR	L	8
2	U-BOLT	ET-145-E	UB-61
3	BOLT (STUD)	ET-145-E	NB-5
4	BOLT	ET-145-E	BB-22
5	BOLT	ET-145-E	BB-24
6	CLAMP	ET-96-E	TS-12
7	CLIP	ET-77-E	TS-17
8	CLIP	ET-102-E	HC-29A
9	PIPE SADDLE	ET-211-E	PS-3
10	SPACING COLLAR	ET-87-E	TS-18
11	WASHER	ET-97-E	W-7
12	NUT	ET-29-E	BN-3
13	NUT 3/4\"/>		

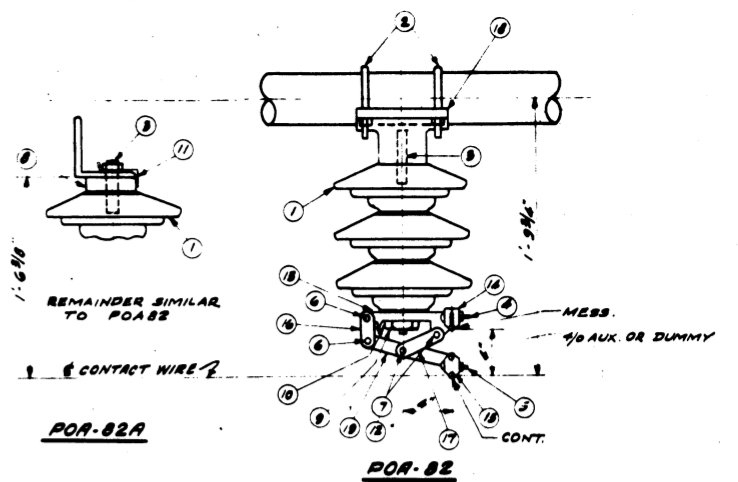


POA-80

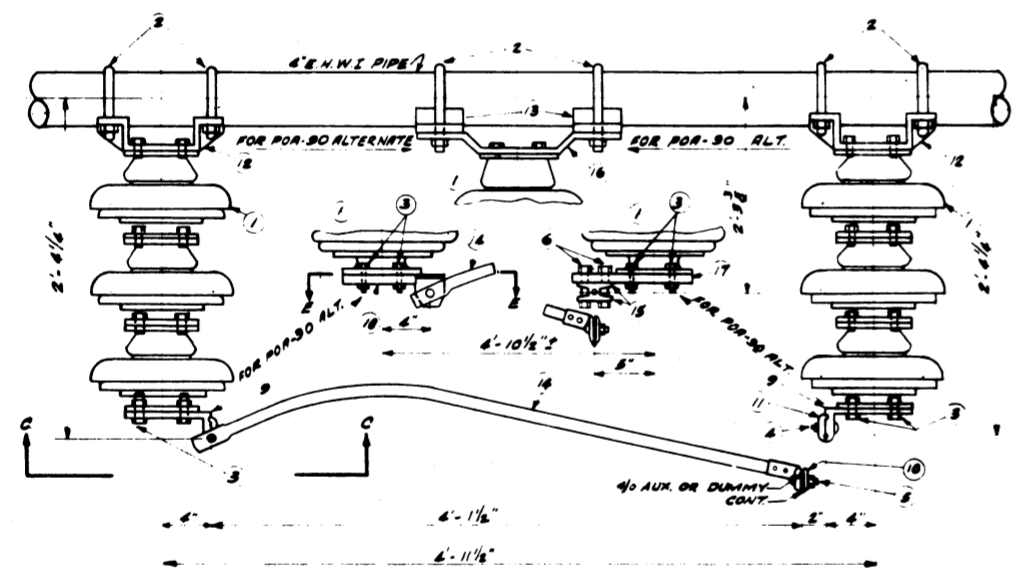


POA-81

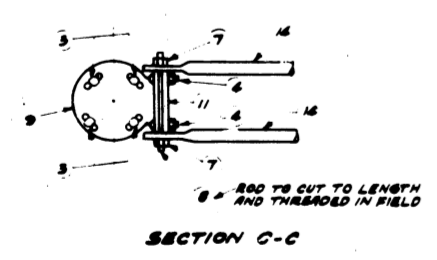
BILL OF MATERIAL		POA-81	
ITEM	PIECE	DWG. NO.	MARK. NO.
1	INSULATOR	L	8
2	U-BOLT	ET-145-E	UB-61
3	BOLT (STUD)	ET-145-E	NB-5
4	BOLT	ET-145-E	BB-22
5	BOLT	ET-145-E	BB-24
6	CLAMP	ET-96-E	TS-12
7	CLIP	ET-77-E	TS-17
8	CLIP	ET-102-E	HC-29A
9	PIPE SADDLE	ET-211-E	PS-3
10	SPACING COLLAR	ET-87-E	TS-18
11	WASHER	ET-97-E	W-7
12	NUT	ET-29-E	BN-3
13	NUT 3/4\"/>		



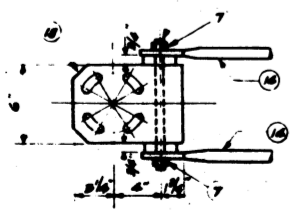
BILL OF MATERIAL		POA-82		POA-82A	
ITEM	PIECE	DWG. NO.	MARK. NO.	MARK. NO.	MARK. NO.
1	INSULATOR	L	8	L	8
2	U-BOLT	ET-145-E	UB-61	ET-145-E	UB-61
3	BOLT (STUD)	ET-145-E	NB-5	ET-145-E	NB-5
4	BOLT	ET-145-E	BB-22	ET-145-E	BB-22
5	BOLT	ET-145-E	BB-24	ET-145-E	BB-24
6	CLAMP	ET-96-E	TS-12	ET-96-E	TS-12
7	CLIP	ET-77-E	TS-17	ET-77-E	TS-17
8	CLIP	ET-102-E	HC-29A	ET-102-E	HC-29A
9	PIPE SADDLE	ET-211-E	PS-3	ET-211-E	PS-3
10	SPACING COLLAR	ET-87-E	TS-18	ET-87-E	TS-18
11	WASHER	ET-97-E	W-7	ET-97-E	W-7
12	NUT	ET-29-E	BN-3	ET-29-E	BN-3
13	NUT 3/4\"/>				



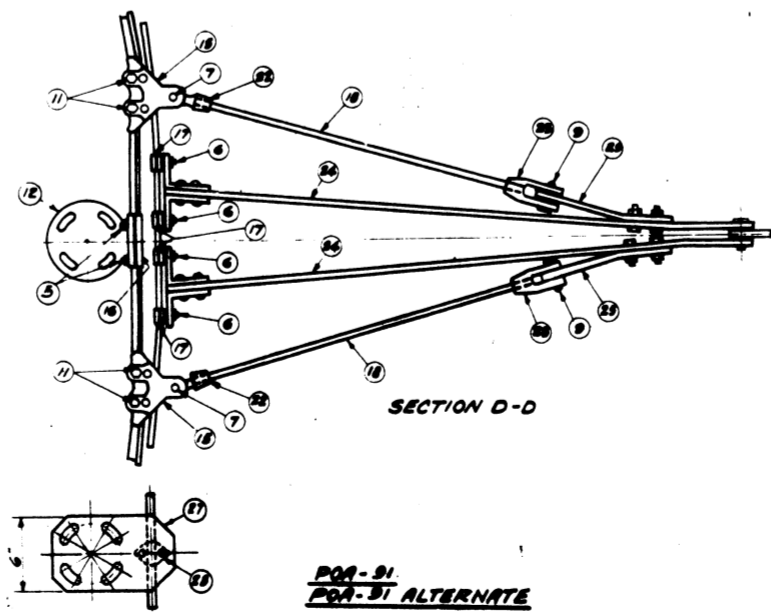
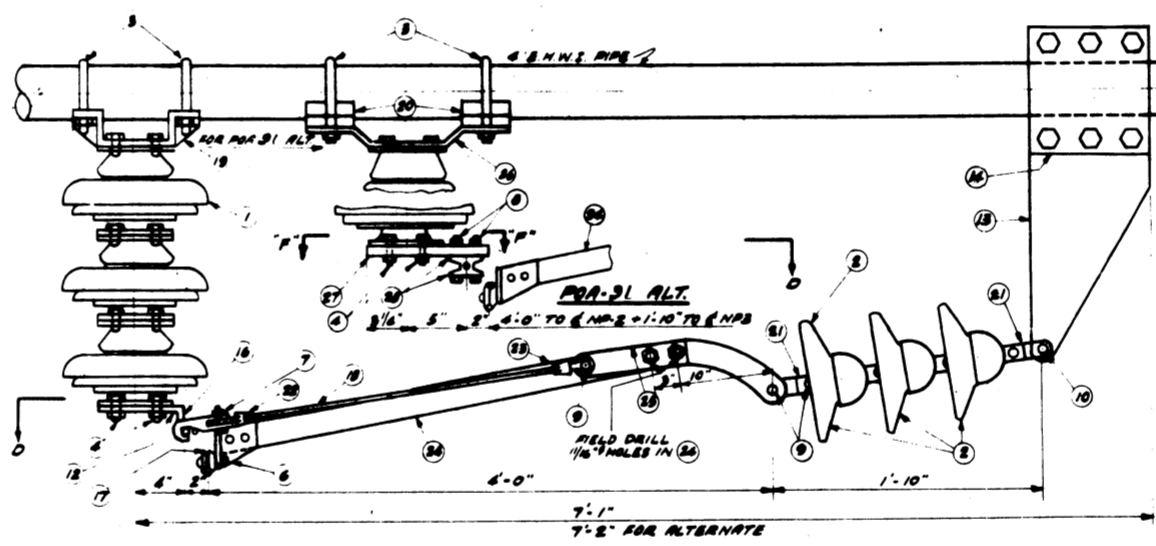
BILL OF MATERIAL		POA-90		POA-90ALT	
ITEM	PIECE	DWG. NO.	MARK. NO.	MARK. NO.	MARK. NO.
1	INSULATOR	T	3	T	3
2	U-BOLT	ET-145-E	UB-61	ET-145-E	UB-61
3	BOLT	ET-145-E	BB-22	ET-145-E	BB-22
4	BOLT	ET-145-E	BB-24	ET-145-E	BB-24
5	BOLT	ET-145-E	BB-27	ET-145-E	BB-27
6	CLAMP	ET-96-E	TS-12	ET-96-E	TS-12
7	CLIP	ET-77-E	TS-17	ET-77-E	TS-17
8	CLIP	ET-102-E	HC-29A	ET-102-E	HC-29A
9	PIPE SADDLE	ET-211-E	PS-3	ET-211-E	PS-3
10	SPACING COLLAR	ET-87-E	TS-18	ET-87-E	TS-18
11	WASHER	ET-97-E	W-7	ET-97-E	W-7
12	NUT	ET-29-E	BN-3	ET-29-E	BN-3
13	NUT 3/4\"/>				



SECTION C-C

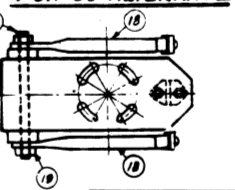
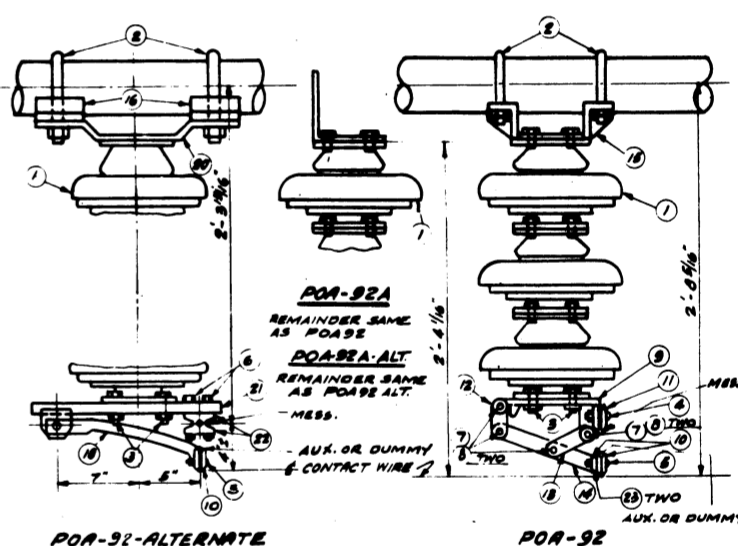


SECTION E-E
POA-90 ALTERNATE



SECTION D-D
POA-91 ALTERNATE

BILL OF MATERIAL		POA-91		POA-91ALT	
ITEM	PIECE	DWG. NO.	MARK. NO.	MARK. NO.	MARK. NO.
1	INSULATOR	T	3	T	3
2	U-BOLT	ET-145-E	UB-61	ET-145-E	UB-61
3	BOLT	ET-145-E	BB-22	ET-145-E	BB-22
4	BOLT	ET-145-E	BB-24	ET-145-E	BB-24
5	BOLT	ET-145-E	BB-27	ET-145-E	BB-27
6	CLAMP	ET-96-E	TS-12	ET-96-E	TS-12
7	CLIP	ET-77-E	TS-17	ET-77-E	TS-17
8	CLIP	ET-102-E	HC-29A	ET-102-E	HC-29A
9	PIPE SADDLE	ET-211-E	PS-3	ET-211-E	PS-3
10	SPACING COLLAR	ET-87-E	TS-18	ET-87-E	TS-18
11	WASHER	ET-97-E	W-7	ET-97-E	W-7
12	NUT	ET-29-E	BN-3	ET-29-E	BN-3
13	NUT 3/4\"/>				



POA-92-ALTERNATE



POA-92

BILL OF MATERIAL		POA-92		POA-92ALT		POA-92A		POA-92AALT	
ITEM	PIECE	DWG. NO.	MARK. NO.	MARK. NO.	MARK. NO.	MARK. NO.	MARK. NO.	MARK. NO.	MARK. NO.
1	INSULATOR	L	8	L	8	L	8	L	8
2	U-BOLT	ET-145-E	UB-61	ET-145-E	UB-61	ET-145-E	UB-61	ET-145-E	UB-61
3	BOLT	ET-145-E	BB-22	ET-145-E	BB-22	ET-145-E	BB-22	ET-145-E	BB-22
4	BOLT	ET-145-E	BB-24	ET-145-E	BB-24	ET-145-E	BB-24	ET-145-E	BB-24
5	BOLT	ET-145-E	BB-27	ET-145-E	BB-27	ET-145-E	BB-27	ET-145-E	BB-27
6	CLAMP	ET-96-E	TS-12	ET-96-E	TS-12	ET-96-E	TS-12	ET-96-E	TS-12
7	CLIP	ET-77-E	TS-17	ET-77-E	TS-17	ET-77-E	TS-17	ET-77-E	TS-17
8	CLIP	ET-102-E	HC-29A	ET-102-E	HC-29A	ET-102-E	HC-29A	ET-102-E	HC-29A
9	PIPE SADDLE	ET-211-E	PS-3	ET-211-E	PS-3	ET-211-E	PS-3	ET-211-E	PS-3
10	SPACING COLLAR	ET-87-E	TS-18	ET-87-E	TS-18	ET-87-E	TS-18	ET-87-E	TS-18
11	WASHER	ET-97-E	W-7	ET-97-E	W-7	ET-97-E	W-7	ET-97-E	W-7
12	NUT	ET-29-E	BN-3	ET-29-E	BN-3	ET-29-E	BN-3	ET-29-E	BN-3
13	NUT 3/4\"/>								

SECTION F-F
POA-91 ALTERNATE

NOTE:
THIS DRAWING IS FOR THE
DRAWING ET-300-E, ET-301-E, 29C-116 (PART)

3	3-57	REVISED BY SLOAN	SBS WAS SHOWN SBS	ORIGINAL
2	5-145	JRS	ROT. 1936	
1				
ISSUE NO.	DATE	DWN/CHKD	CORRECT	REMARKS
GIBBS HILL, INC. CONSULTING ENGINEERS NEW YORK				SCALE: ET-110-C-3

THE PENNSYLVANIA RAILROAD
ELECTRIFIED TERRITORY
OVERHEAD BRIDGE INSULATOR ASSEMBLY
PULL-OFF
USING L&T INSULATORS

PHILADELPHIA
CHIEF OF MOTIVE POWER

J. Stair, Jr.
ELECTRICAL ENGINEER