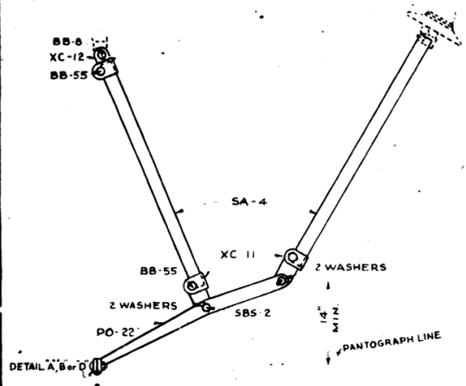
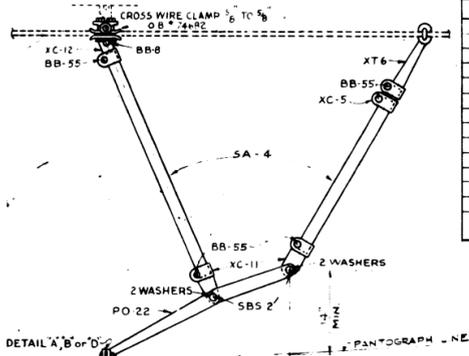


BILL OF MATERIAL			
PIECE	DWG. No.	MARK	NO. REQ.
FULCRUM CASTING	ET-912E	XC-12	1
FULCRUM CASTING	ET-905E	XC-11	2
STEEL SHOULDER BOLT	ET-1090E	SBS-2	2
BRONZE BOLT	ET-145E	BB-55	3
BRONZE BOLT	ET-146E	BB-8	1
PULL-OFF BAR	ET-945D	PO-22	1
STEADY TUBE	ET-915E	SA-4	2
WASHERS, 2" O.D. 1/2" I.D. X 1/4" GAL. STL.			4
CONTACT WIRE ASSEMBLIES			
3 WIRE TANGENT	THIS DWG.		DET. A
3 WIRE CURVE	"		DET. B
2 WIRE TANG & CUR.	"		DET. D



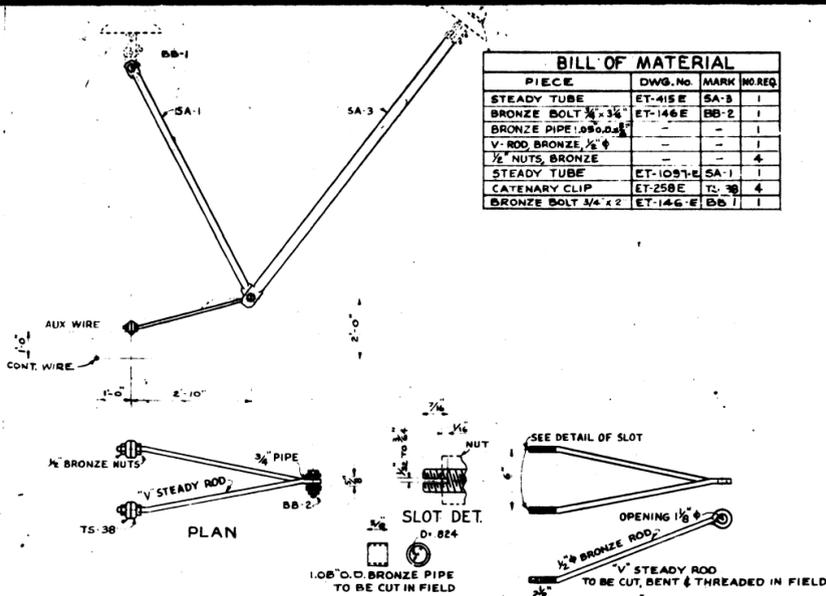
SAP 5

BILL OF MATERIAL			
PIECE	DWG. No.	MARK	NO. REQ.
FULCRUM CASTING	ET-912E	XC-12	1
FULCRUM CASTING	ET-905E	XC-11	2
STEEL SHOULDER BOLT	ET-1090E	SBS-2	2
BRONZE BOLT	ET-146E	BB-8	1
BRONZE BOLT	ET-145E	BB-55	5
PULL-OFF BAR	ET-945D	PO-22	1
STEADY TUBE	ET-915E	SA-4	2
STRAP	11B-1240	XC-5	1
PIPE CLAMP	11B-1231	XC-5	1
CROSS WIRE CLAMP			1
WASHERS, 2" O.D. 1/2" I.D. X 1/4" GAL. STL.			4
CONTACT WIRE ASSEMBLIES			
3 WIRE TANGENT	THIS DWG.		DET. A
3 WIRE CURVE	"		DET. B
2 WIRE TANG & CUR.	"		DET. D



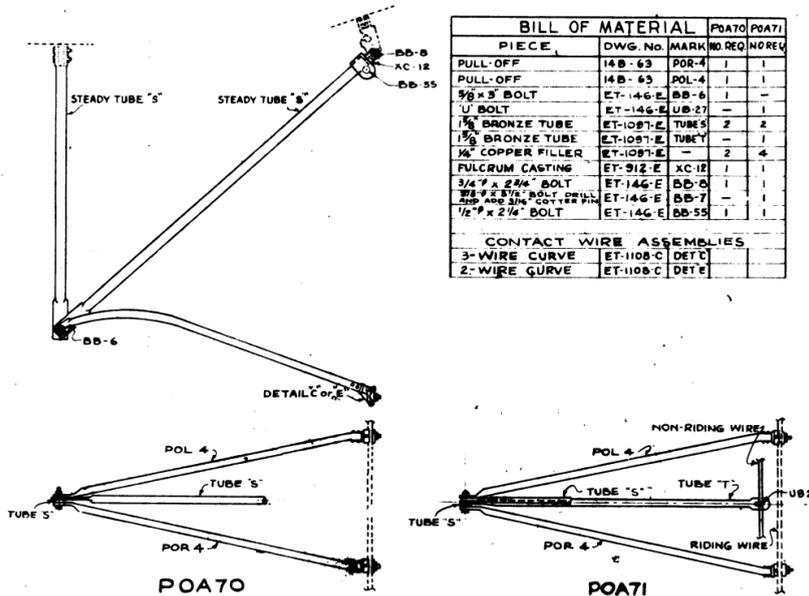
SAP 10

BILL OF MATERIAL			
PIECE	DWG. No.	MARK	NO. REQ.
STEADY TUBE	ET-915E	SA-3	1
BRONZE BOLT	ET-146E	BB-2	1
BRONZE PIPE, 1/2" O.D. X 1/4" I.D.			1
V-ROD, BRONZE, 1/2" DIA.			1
1/2" NUTS, BRONZE			4
STEADY TUBE	ET-1097E	SA-1	1
CATENARY CLIP	ET-258E	TL-38	4
BRONZE BOLT 1/4" X 2"	ET-146E	BB-1	1



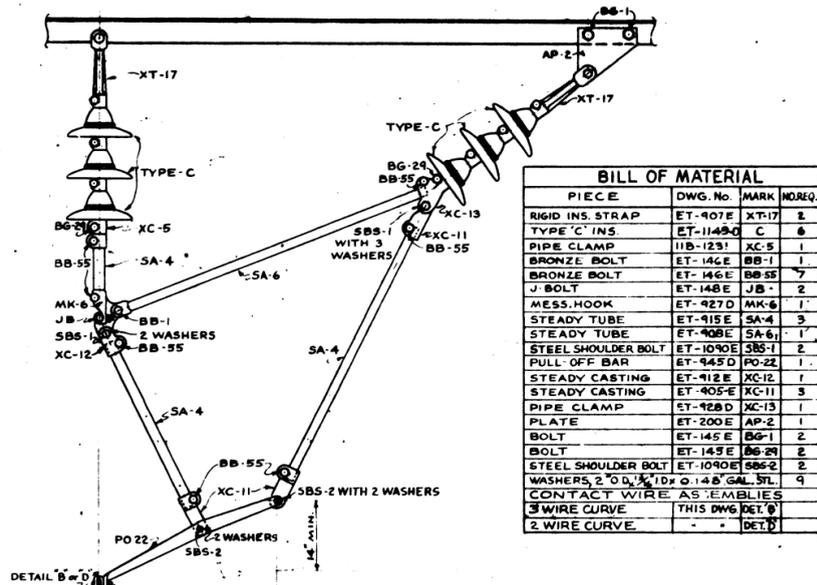
SAP 6

BILL OF MATERIAL				POA70	POA71
PIECE	DWG. No.	MARK	NO. REQ.		
PULL-OFF	14B-63	POR-4	1	1	1
PULL-OFF	14B-63	POL-4	1	1	1
3/8" X 3" BOLT	ET-146E	BB-6	1	1	1
U BOLT	ET-146E	UB-27	1	1	1
1/2" BRONZE TUBE	ET-1097E	TUBE5	2	2	2
1/2" BRONZE TUBE	ET-1097E	TUBEY	2	2	2
1/2" COPPER FILLER	ET-1097E		2	4	4
FULCRUM CASTING	ET-912E	XC-12	1	1	1
3/4" X 2 3/4" BOLT	ET-146E	BB-9	1	1	1
3/8" X 3/4" BOLT	ET-146E	BB-7	1	1	1
1/2" X 2 1/4" BOLT	ET-146E	BB-55	1	1	1
CONTACT WIRE ASSEMBLIES					
3-WIRE CURVE	ET-1108-C		DET. C		
2-WIRE CURVE	ET-1108-C		DET. E		



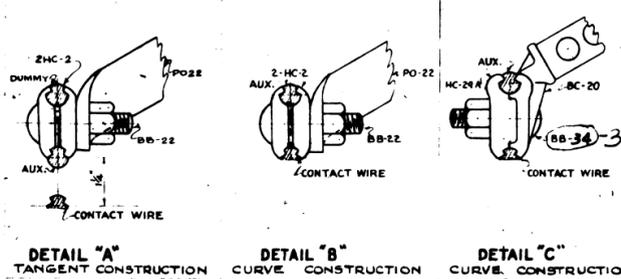
POA70

POA71



SAP 7

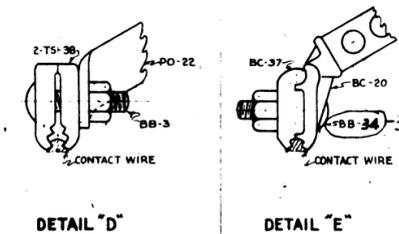
BILL OF MATERIAL			
PIECE	DWG. No.	MARK	NO. REQ.
RIGID INS. STRAP	ET-907E	XT-17	2
TYPE 'C' INS.	ET-1149C	C	8
PIPE CLAMP	11B-1231	XC-5	1
BRONZE BOLT	ET-146E	BB-1	1
WASHERS	ET-146E	BB-55	7
J BOLT	ET-148E	JB-2	2
MESS. HOOK	ET-927D	MK-6	1
STEADY TUBE	ET-915E	SA-4	3
STEADY TUBE	ET-905E	SA-6	1
STEEL SHOULDER BOLT	ET-1090E	SBS-1	2
PULL-OFF BAR	ET-945D	PO-22	1
STEADY CASTING	ET-912E	XC-12	1
STEADY CASTING	ET-905E	XC-11	3
PIPE CLAMP	ET-928D	XC-13	1
PLATE	ET-200E	AP-2	1
BOLT	ET-145E	BB-1	2
BOLT	ET-145E	BB-29	2
STEEL SHOULDER BOLT	ET-1090E	SBS-2	2
WASHERS, 2" O.D. 1/2" I.D. X 1/4" GAL. STL.			9
CONTACT WIRE ASSEMBLIES			
3 WIRE CURVE	THIS DWG.		DET. B
2 WIRE CURVE	"		DET. D



DETAIL "A" TANGENT CONSTRUCTION

DETAIL "B" CURVE CONSTRUCTION

DETAIL "C" CURVE CONSTRUCTION



DETAIL "D"

DETAIL "E"

S ET-916-E, ET-928-E  
298-196  
PART OF DWGS ET-414-E, 14C-130

THE PENNSYLVANIA RAILROAD ELECTRIFIED TERRITORY INDIVIDUAL TRACK STEADY & PULL OFF			
PHILADELPHIA			
GIBBS HILL, INC. CONSULTING ENGINEERS NEW YORK		ET-1108-C-3	
ISSUE No.	DATE	BY	REMARKS
3	5-5-1936	J. H. RAL	CHANGED BB-4 TO BB-34
4	4-15-1936	J. H. RAL	VIEW of wire section revised
1	8-18-35	J. H. RAL	ORIGINAL
DATE	DRAWN BY	CORRECT	SCALE
APPR.		REMARKS	
J. H. Ral		C	
CHIEF OF MOTIVE POWER		ELECTRICAL ENGINEER	