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UTLEY,E.E. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Forwards addl info requested by NRC 800321 ltr for bypass & reset of engineered safety features,Fourteen oversize drawings encl,available in Central Files only.

SEE Repts.

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October 7, 1980

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Office of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
United States Nuclear Regulatory Commission
Washington, D. C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
ADDITIONAL INFORMATION FOR BYPASS AND RESET OF ENGINEERED SAFETY FEATURES

Dear Mr. Varga:

In Mr. Schwencer's letter of March 21, 1980, the NRC requested additional information to continue its long-term review of the Bypass and Reset Features of Engineered Safety Features. Item 2 of that letter requested a tabulation of all Engineered Safety Features, their descriptions and drawings. These items are furnished in the attached enclosures. Enclosure 1 contains a tabulation of all Engineered Safety Features in the form as indicated by our original response of April 29, 1980. Each column heading references the specific information requested in Item 2. Enclosure 2 contains the descriptions and drawings of these Engineered Safety Features.

We trust this information satisfies your concerns and is suitable for your use. If you have any questions on this subject, please contact our staff.

Yours very truly,

E. E. Utley
Executive Vice President
Power Supply and
Engineering & Construction

JHE/RSM/dk
Enclosures

cc: Mr. J. D. Neighbors (NRC) w/enclosure 1 only

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ENCLOSURE 1

Tabulation of all Engineered Safety Features

I. CONTAINMENT VENTILATION ISOLATION (CVI)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
CVI	Safe-guards	Protection	SI	No	NA	NA	NA	5379-3235	79-01B
CVI	Safe-guards	Protection	RMS-11/12	No	NA	NA	NA	5379-3235	79-01B
CVI	Safe-guards	Protection	Manual	No	NA	NA	NA	5379-3235	79-01B

I. CONTAINMENT VENTILATION ISOLATION EQUIPMENT (DWG. 5379-3235)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V12-6	CV Purge	CV	CVI	No	NA	NA	NA	CWD-525	79-01B
		Isolation							Purge Valves
V12-7	CV Purge	CV	CVI	No	NA	NA	NA	CWD-525	79-01B
		Isolation							Purge Valves
V12-8	CV Purge	CV	CVI	No	NA	NA	NA	CWD-525	79-01B
		Isolation							Purge Valves
V12-9	CV Purge	CV	CVI	No	NA	NA	NA	CWD-525	79-01B
		Isolation							Purge Valves
V12-10	CV Press	CV	CVI	No	NA	NA	NA	CWD-530	79-01B
	Relief	Isolation							Purge Valves
V12-11	CV Press	CV	CVI	No	NA	NA	NA	CWD-530	79-01B
	Relief	Isolation							Purge Valves
V12-12	CV Vac	CV	CVI	No	NA	NA	NA	CWD-529	79-01B
	Relief	Isolation							Purge Valves
V12-13	CV Vac	CV	CVI	No	NA	NA	NA	CWD-529	79-01B
	Relief	Isolation							Purge Valves

II. STEAM LINE ISOLATION (SLI)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
SLI	Safe- guards	Protection	CV Spray	No	NA	NA	NA	5379-3233	79-01B
SLI	Safe- guards	Protection	Hi Steam Flow W/Low Tave Or Low Steam Press	No	NA	NA	NA	5379-3233	79-01B
SLI	Safe- guards	Protection	Manual	No	NA	NA	NA	5379-3233	79-01B

II. STEAM LINE ISOLATION EQUIPMENT (DWG. 5379-3233)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V1-3A	Main Steam	CV Isolation	SLI	No	NA	NA	NA	CWD-141	79-01B
V1-3B	Main Steam	CV Isolation	SLI	No	NA	NA	NA	CWD-144	79-01B
V1-3C	Main Steam	CV Isolation	SLI	No	NA	NA	NA	CWD-147	79-01B

III. [redacted]DWATER ISOLATION (FWI)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
FWI	Safe-	Protection	SI	No	NA	NA	NA	5379-3234	79-01B
All Loops	guards								
FWI	Safe-	Protection	Hi Level	No	NA	NA	NA	5379-3234	79-01B
Loop 1	guards		SG #1						
FWI	Safe-	Protection	Hi Level	No	NA	NA	NA	5379-3234	79-01B
Loop 2	guards		SG #2						
FWI	Safe-	Protection	Hi Level	No	NA	NA	NA	5379-3234	79-01B
Loop 3	guards		SG #3						

III. EDWATER ISOLATION EQUIPMENT (DWG. 5379-3234)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
FCV-478	Main FW	CV	FWI	No	NA	NA	NA	CWD-642	79-01B
		Isolation							
FCV-488	Main FW	CV	FWI	No	NA	NA	NA	CWD-642	79-01B
		Isolation							
FCV-498	Main FW	CV	FWI	No	NA	NA	NA	CWD-642	79-01B
		Isolation							
FCV-479	FW By-	CV	FWI	No	NA	NA	NA	CWD-642	79-01B
	Pass	Isolation							
FCV-489	FW By-	CV	FWI	No	NA	NA	NA	CWD-642	79-01B
	Pass	Isolation							
FCV-499	FW By-	CV	FWI	No	NA	NA	NA	CWD-642	79-01B
	Pass	Isolation							

IV. CONTAINMENT ISOLATION PHASE "A" (CIA)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
CIA	Safe-guards	Protection	SI	No	NA	NA	NA	5379-3235	79-01B
CIA	Safe-guards	Protection	Manual	No	NA	NA	NA	5379-3235	79-01B

IV. [redacted]TAINMENT ISOLATION PHASE "A" EQUIPMENT (DWG. 53[redacted]235)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
PCV-1716	Inst.	CV	CIA	Yes	Man. SW.	Man. Sw.	NA	CWD-590	79-01B
	Air	Isolation							
EV-1922A	Seal	CV	CIA	No	NA	NA	NA	CWD-594	79-01B
	Water	Isolation							
EV-1922B	Seal	CV	CIA	No	NA	NA	NA	CWD-594	79-01B
	Water	Isolation							
V12-18	H2 Vent.	CV	CIA	No	NA	NA	NA	CWD-598	79-01B
		Isolation							
V12-19	H2 Vent.	CV	CIA	No	NA	NA	NA	CWD-598	79-01B
		Isolation							
RMS-1	CV Air	CV	CIA	No	NA	NA	NA	CWD-599	79-01B
	Samp.	Isolation							
RMS-2	CV Air	CV	CIA	No	NA	NA	NA	CWD-599	79-01B
	Samp.	Isolation							
RMS-3	CV Air	CV	CIA	No	NA	NA	NA	CWD-599	79-01B
	Samp.	Isolation							
RMS-4	CV Air	CV	CIA	No	NA	NA	NA	CWD-599	79-01B
	Samp.	Isolation							
FCV-1930A	SG Blow-	CV	CIA	No	NA	NA	NA	CWD-627/	79-01B
	down	Isolation						630	
FCV-1930B	SG Blow-	CV	CIA	No	NA	NA	NA	CWD-627/	79-01B
	down	Isolation						630	
FCV-1931A	SG Blow-	CV	CIA	No	NA	NA	NA	CWD-627/	79-01B
	down	Isolation						630	

IV. [redacted]AINMENT ISOLATION PHASE "A" EQUIPMENT (DWG. 537[redacted]35)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
FCV-1931B	SG Blow-	CV	CIA	No	NA	NA	NA	CWD-627/	79-01B
	down	Isolation						630	
FCV-1932A	SG Blow-	CV	CIA	No	NA	NA	NA	CWD-627/	79-01B
	down	Isolation						630	
FCV-1932B	SG Blow-	CV	CIA	No	NA	NA	NA	CWD-627/	79-01B
	down	Isolation						630	
FCV-1933A	Blowdown	CV	CIA	No	NA	NA	NA	CWD-628	79-01B
	Samp.	Isolation							
FCV-1933B	Blowdown	CV	CIA	No	NA	NA	NA	CWD-628	79-01B
	Samp.	Isolation							
FCV-1934A	Blowdown	CV	CIA	No	NA	NA	NA	CWD-628	79-01B
	Samp.	Isolation							
FCV-1934B	Blowdown	CV	CIA	No	NA	NA	NA	CWD-628	79-01B
	Samp.	Isolation							
FCV-1935A	Blowdown	CV	CIA	No	NA	NA	NA	CWD-628	79-01B
	Samp.	Isolation							
FCV-1935B	Blowdown	CV	CIA	No	NA	NA	NA	CWD-628	79-01B
	Samp.	Isolation							
V-956A	Sampling	CV	CIA	No	NA	NA	NA	CWD-89	79-01B
		Isolation							
V-956B	Sampling	CV	CIA	No	NA	NA	NA	CWD-89	79-01B
		Isolation							
V-956C	Sampling	CV	CIA	No	NA	NA	NA	CWD-91	79-01B
		Isolation							

IV. [redacted]TAINMENT ISOLATION PHASE "A" EQUIPMENT (DWG. 5[redacted]235)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V-956D	Sampling	CV	CIA	No	NA	NA	NA	CWD-91	79-01B
		Isolation							
V-956E	Sampling	CV	CIA	No	NA	NA	NA	CWD-94	79-01B
		Isolation							
V-956F	Sampling	CV	CIA	No	NA	NA	NA	CWD-94	79-01B
		Isolation							
V-956G	Sampling	CV	CIA	No	NA	NA	NA	CWD-98	79-01B
		Isolation							
V-956H	Sampling	CV	CIA	No	NA	NA	NA	CWD-98	79-01B
		Isolation							
V-516	Gas	CV	CIA	No	NA	NA	NA	CWD-125	79-01B
	Analyzer	Isolation							
V-553	Gas	CV	CIA	No	NA	NA	NA	CWD-126	79-01B
	Analyzer	Isolation							
V-519A	RCS	CV	CIA	No	NA	NA	NA	CWD-127	79-01B
		Isolation							
V-519B	RCS	CV	CIA	No	NA	NA	NA	CWD-127	79-01B
		Isolation							
V-200A	CVCS	CV	CIA	No	NA	NA	NA	CWD-151	79-01B
		Isolation							
V-200B	CVCS	CV	CIA	No	NA	NA	NA	CWD-152	79-01B
		Isolation							
V-200C	CVCS	CV	CIA	No	NA	NA	NA	CWD-153	79-01B
		Isolation							

V. SAFETY INJECTION (SI)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
SI	Safe-	Protection	Steam Line	Yes	Low Tavg	Auto	Norm. Tavg	5379-3232	79-01B
	guards		Isolation		Temperature		Temperature		
					<543°		>543°		
SI	Safe-	Protection	CV Press.	No	NA	NA	NA	5379-3232	79-01B
	guards		4 psi						
SI	Safe-	Protection	High Steam	Yes	Low Prez.	Auto	Norm. Prez.	5379-3232	79-01B
	guards		Line Delta		Pressure		Pressure		
			Press.		<2000 psi		>2000 psi		
			Loop 1						
			100 psi						
SI	Safe-	Protection	High Steam	Yes	Low Prez.	Auto	Norm. Prez.	5379-3232	79-01B
	guards		Line Delta		Pressure		Pressure		
			Press.		<2000 psi		>2000 psi		
			Loop 2						
			100 psi						
SI	Safe-	Protection	High Steam	Yes	Low Prez.	Auto	Norm. Prez.	5379-3232	79-01B
	guards		Line Delta		Pressure		Pressure		
			Press.		<2000 psi		>2000 psi		
			Loop 3						
			100 psi						
SI	Safe-	Protection	Low Prez.	Yes	Low Prez.	Auto	Norm. Prez.	5379-3232	79-01B
	guards		Pressure		Pressure		Pressure		
			1715 psi		<2000 psi		>2000 psi		
SI	Safe-	Protection	Manual	No	NA	NA	NA	5379-3232	79-01B
	guards								

IV. [redacted]TAINMENT ISOLATION PHASE "A" EQUIPMENT (DWG. 53[redacted]235)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V-956D	Sampling	CV	CIA	No	NA	NA	NA	CWD-91	79-01B
		Isolation							
V-956E	Sampling	CV	CIA	No	NA	NA	NA	CWD-94	79-01B
		Isolation							
V-956F	Sampling	CV	CIA	No	NA	NA	NA	CWD-94	79-01B
		Isolation							
V-956G	Sampling	CV	CIA	No	NA	NA	NA	CWD-98	79-01B
		Isolation							
V-956H	Sampling	CV	CIA	No	NA	NA	NA	CWD-98	79-01B
		Isolation							
V-516	Gas	CV	CIA	No	NA	NA	NA	CWD-125	79-01B
	Analyzer	Isolation							
V-553	Gas	CV	CIA	No	NA	NA	NA	CWD-126	79-01B
	Analyzer	Isolation							
V-519A	RCS	CV	CIA	No	NA	NA	NA	CWD-127	79-01B
		Isolation							
V-519B	RCS	CV	CIA	No	NA	NA	NA	CWD-127	79-01B
		Isolation							
V-200A	CVCS	CV	CIA	No	NA	NA	NA	CWD-151	79-01B
		Isolation							
V-200B	CVCS	CV	CIA	No	NA	NA	NA	CWD-152	79-01B
		Isolation							
V-200C	CVCS	CV	CIA	No	NA	NA	NA	CWD-153	79-01B
		Isolation							

IV. [redacted]AINMENT ISOLATION PHASE "A" EQUIPMENT (DWG. 537[redacted]35)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V-204A	CVCS	CV	CIA	No	NA	NA	NA	CWD-154	79-01B
		Isolation							
V-204B	CVCS	CV	CIA	No	NA	NA	NA	CWD-155	79-01B
		Isolation							
V-739	CCS	CV	CIA	No	NA	NA	NA	CWD-229	79-01B
		Isolation							
V-1786	WDS	CV	CIA	No	NA	NA	NA	CWD-340	79-01B
		Isolation							
V-1787	WDS	CV	CIA	No	NA	NA	NA	CWD-341	79-01B
		Isolation							
V-1794	Gas	CV	CIA	No	NA	NA	NA	CWD-342	79-01B
	Analyzer	Isolation							
V-1789	Gas	CV	CIA	No	NA	NA	NA	CWD-343	79-01B
	Analyzer	Isolation							
V-1721	WDS	CV	CIA	No	NA	NA	NA	CWD-346	79-01B
		Isolation							
V-1722	WDS	CV	CIA	No	NA	NA	NA	CWD-347	79-01B
		Isolation							
V-1728	WDS	CV	CIA	No	NA	NA	NA	CWD-348	79-01B
		Isolation							
V-1723	WDS	CV	CIA	No	NA	NA	NA	CWD-349	79-01B
		Isolation							

V. SAFETY INJECTION (INSTANTANEOUS EQUIPMENT) DWG. 5379-1232

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V-744A	RHR	Open Valve	SI	No	NA	NA	NA	CWD-220	79-01B
V-744B	RHR	Open Valve	SI	No	NA	NA	NA	CWD-221	79-01B
V-867A	SI	Open Valve	SI	No	NA	NA	NA	CWD-243	79-01B
V-867B	SI	Open Valve	SI	No	NA	NA	NA	CWD-244	79-01B
V-870B	SI	Open Valve	SI	No	NA	NA	NA	CWD-245	79-01B
V-870A	SI	Open Valve	SI	No	NA	NA	NA	CWD-247	79-01B
V-841A	SI	Close Valve	SI	No	NA	NA	NA	CWD-250	79-01B
V-841B	SI	Close Valve	SI	No	NA	NA	NA	CWD-250	79-01B
V-865A	SI	Open Valve	SI	No	NA	NA	NA	CWD-282	79-01B
V-865B	SI	Open Valve	SI	No	NA	NA	NA	CWD-283	79-01B
V-865C	SI	Open Valve	SI	No	NA	NA	NA	CWD-284	79-01B
V-845A	SI	Open Valve	SI	No	NA	NA	NA	CWD-295	79-01B
V-845B	SI	Open Valve	SI	No	NA	NA	NA	CWD-296	79-01B
HVH-1 Damp.	HVAC	Emerg Flow	SI	No	NA	NA	NA	CWD-511	79-01B
HVH-2 Damp.	HVAC	Emerg Flow	SI	No	NA	NA	NA	CWD-512	79-01B
HVH-3 Damp.	HVAC	Emerg Flow	SI	No	NA	NA	NA	CWD-513	79-01B
HVH-4 Damp.	HVAC	Emerg Flow	SI	No	NA	NA	NA	CWD-514	79-01B
Con Rm Vent	HVAC	Isolate CR	SI	No	NA	NA	NA	CWD-566	79-01B
FW Pump "A"	FW Sys	Stop Pump	SI	No	NA	NA	NA	CWD-615	79-01B
FW Pump "B"	FW Sys	Stop Pump	SI	No	NA	NA	NA	CWD-620	79-01B
V2-6A	FW Sys	Close Valve	SI	No	NA	NA	NA	CWD-638	79-01B
V2-6B	FW Sys	Close Valve	SI	No	NA	NA	NA	CWD-639	79-01B
V2-6C	FW Sys	Close Valve	SI	No	NA	NA	NA	CWD-640	79-01B
52/2B	480V Sy	Open Breaker	SI	No	NA	NA	NA	CWD-893	79-01B

V. [redacted]TY INJECTION (INSTANTANEOUS EQUIPMENT) DWG. 5379[redacted]232

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
52/1B	480V Sys	Open Breaker	SI	No	NA	NA	NA	CWD-894	79-01B
52/15B	480V Sys	Open Breaker	SI	No	NA	NA	NA	CWD-898	79-01B
52/16B	480V Sys	Open Breaker	SI	No	NA	NA	NA	CWD-899	79-01B
Diesel "A"	Emerg.	Start Diesel	SI	No	NA	NA	NA	CWD-945	79-01B
	Power								
Diesel "B"	Emerg.P.	Start Diesel	SI	No	NA	NA	NA	CWD-950	79-01B
Reactor	R. Prot.	Open Breaker	SI	No	NA	NA	NA	5379-3246	79-01B
Breakers	Sys.							5379-3243	
SW Booster	Ser Wtr	Start Pump	SI	No	NA	NA	NA	CWD-845	79-01B
A									
SW Booster	Ser Wtr	Start Pump	SI	No	NA	NA	NA	CWD-846	79-01B
B									

V. SAF[redacted] INJECTION (SEQUENCING EQUIPMENT) DWG. 5379-3227[redacted]

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
52-21B	CVCS	Stop CHPB	SI	No	NA	NA	NA	CWD-162	79-01B
52-23A	CVCS	Stop CHPC	SI	No	NA	NA	NA	CWD-163	79-01B
52-22C	CCS	Start CCPB	SI	No	NA	NA	NA	CWD-205	79-01B
52-26C	CCS	Start CCPC	SI	No	NA	NA	NA	CWD-209	79-01B
52-22A	RHR	Start RHRPA	SI	No	NA	NA	NA	CWD-214	79-01B
52-26B	RHR	Start RHRPB	SI	No	NA	NA	NA	CWD-216	79-01B
52-21C	SIS	Start SIPA	SI	No	NA	NA	NA	CWD-237	79-01B
52-29C	SIS	Start SIPB	SI	No	NA	NA	NA	CWD-238	79-01B
52-23B	SIS	Start SIPC	SI	No	NA	NA	NA	CWD-239	79-01B
52-19B	HVAC	Start HVH-1	SI	No	NA	NA	NA	CWD-511	79-01B
52-20C	HVAC	Start HVH-2	SI	No	NA	NA	NA	CWD-512	79-01B
52-25A	HVAC	Start HVH-3	SI	No	NA	NA	NA	CWD-513	79-01B
52-24B	HVAC	Start HVH-4	SI	No	NA	NA	NA	CWD-514	79-01B
52-20A	Aux FW	Start AFWA	SI	No	NA	NA	NA	CWD-651	79-01B
52-24C	Aux FW	Start AFWB	SI	No	NA	NA	NA	CWD-655	79-01B
52-20B	Ser Wtr	Start SWPA	SI	No	NA	NA	NA	CWD-831	79-01B
52-19C	Ser Wtr	Start SWPB	SI	No	NA	NA	NA	CWD-832	79-01B
52-24A	Ser Wtr	Start SWPC	SI	No	NA	NA	NA	CWD-833	79-01B
52-25B	Ser Wtr	Start SWPD	SI	No	NA	NA	NA	CWD-834	79-01B
52-17B	Emerg.	Close	SI	No	NA	NA	NA	CWD-890	79-01B
	Gen A	Breaker							
52-27B	Emerg.	Close	SI	No	NA	NA	NA	CWD-895	79-01B
	Gen B	Breaker							
52-29B	Emerg.	Bus Tie	SI	No	NA	NA	NA	CWD-896	79-01B
	Power								

V. SAFETY INJECTION (SEQUENCING EQUIPMENT) DWG. 5379-32

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
52-22B	Emerg.	Bus Tie	SI	No	NA	NA	NA	CWD-891	79-01B
	Power								

VI. CONTAINMENT ISOLATION PHASE "B" (CIB)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
CIB	Safe-	Protection	CV Spray	No	NA	NA	NA	5379-3235	79-01B
	guards								
CIB	Safe-	Protection	Manual	No	NA	NA	NA	5379-3235	79-01B
	guards								

VI. C[redacted]INMENT ISOLATION PHASE "B" EQUIPMENT (DWG. 5379[redacted]5)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
V-381	CVCS	CV	CIB	No	NA	NA	NA	CWD-165	79-01B
		Isolation							
V-716A	CCS	CV	CIB	No	NA	NA	NA	CWD-231	79-01B
		Isolation							
V-716B	CCS	CV	CIB	No	NA	NA	NA	CWD-232	79-01B
		Isolation							
V-730	CCS	CV	CIB	No	NA	NA	NA	CWD-233	79-01B
		Isolation							
V-626	CCS	CV	CIB	No	NA	NA	NA	CWD-234	79-01B
		Isolation							
V-735	CCS	CV	CIB	No	NA	NA	NA	CWD-230	79-01B
		Isolation							

VII. CONTAINMENT SPRAY (CS)

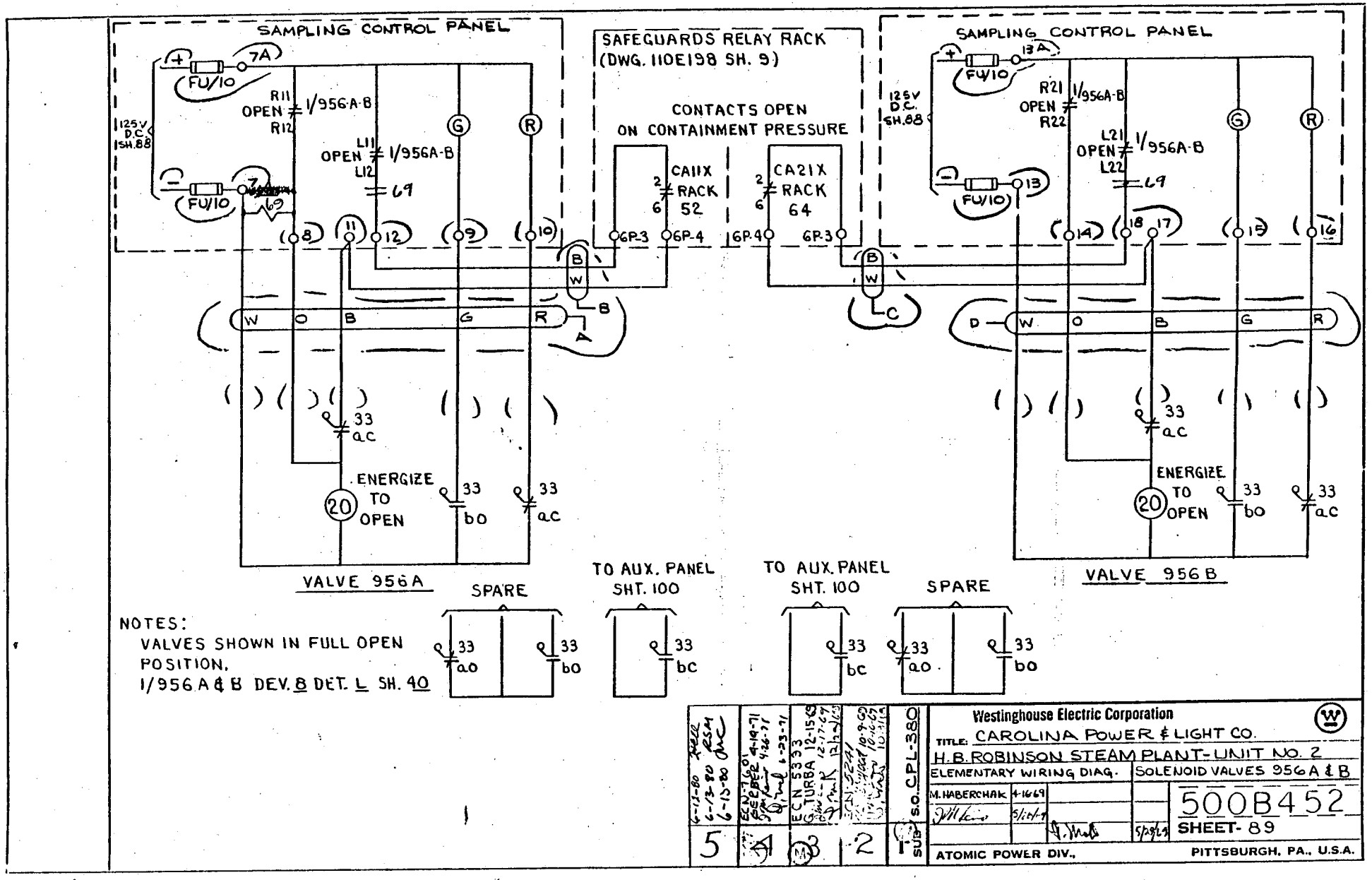
Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
CS	Safe-	Protection	CV Press.	No	NA	NA	NA	5379-3235	79-01B
	guards		20 psi						
CS	Safe-	Protection	Manual	No	NA	NA	NA	5379-3235	79-01B
	guards								

VII. [redacted]INMENT SPRAY EQUIPMENT (DWG. 5379-3235)

Component (1a)	System (1b)	Safety Function (1c)	Actuation Signal (1d)	Blockable (1f-2)	Conditions (2)	How Reset (2)	Reset Signal (3)	Drawing (1e-3)	Qualifying Response (4)
CCPB	CCS	Open Breaker	CS	No	NA	NA	NA	CWD-205	79-01B
CCPC	CCS	Open Breaker	CS	No	NA	NA	NA	CWD-209	79-01B
CSPA	SIS	Close Breaker	CS	No	NA	NA	NA	CWD-287	79-01B
CSPB	SIS	Close Breaker	CS	No	NA	NA	NA	CWD-290	79-01B
V-880A	SIS	Open Valve	CS	No	NA	NA	NA	CWD-288	79-01B
V-880B	SIS	Open Valve	CS	No	NA	NA	NA	CWD-289	79-01B
V-880C	SIS	Open Valve	CS	No	NA	NA	NA	CWD-291	79-01B
V-880D	SIS	Open Vavle	CS	No	NA	NA	NA	CWD-292	79-01B
V-845A	SIS	Open Valve	CS	No	NA	NA	NA	CWD-295	79-01B
V-845B	SIS	Open Valve	CS	No	NA	NA	NA	CWD-296	79-01B

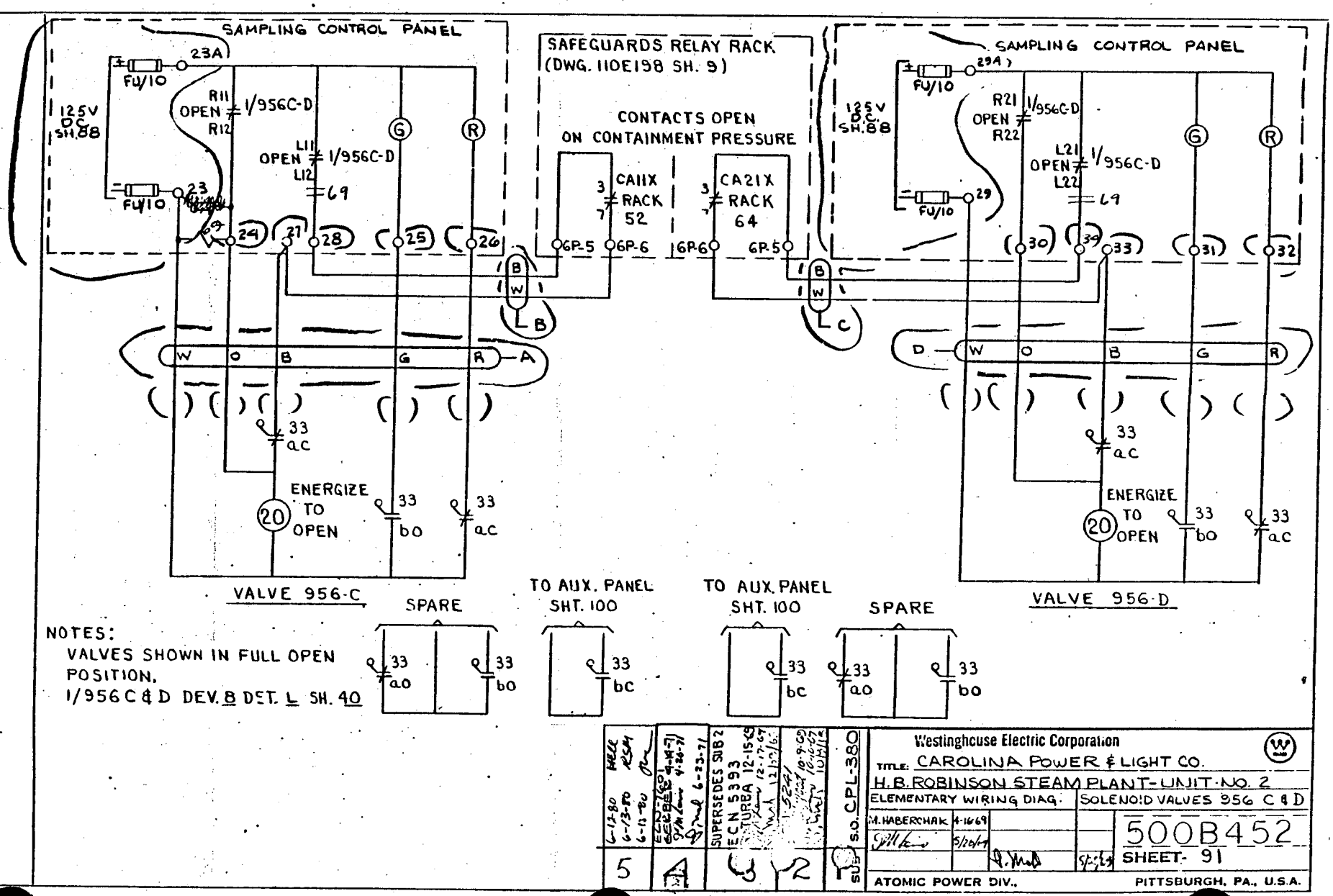
ENCLOSURE 2

Descriptions and Drawings of
All Engineered Safety Features



NOTES:
VALVES SHOWN IN FULL OPEN POSITION.
1/956 A & B DEV. 8 DET. L SH. 40

6-13-80 ASH 6-15-80	ECN-1460 4-19-71 4-26-71 6-23-71	ECN 5333 TURBA 12-15-69 12-17-69 12-23-69	ECN 10-9-69 10-16-69 10-21-69	S.O. CPL-380	Westinghouse Electric Corporation
5	4	3	2	SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT-UNIT NO. 2 ELEMENTARY WIRING DIAG. SOLENOID VALVES 956A & B M. HABERCHAK 1-16-69 500B452 SHEET- 89 ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



NOTES:
VALVES SHOWN IN FULL OPEN POSITION.
1/956 C & D DEV. B DET. L SH. 40

5	A	3	2	SUP	S.O. CPL-380

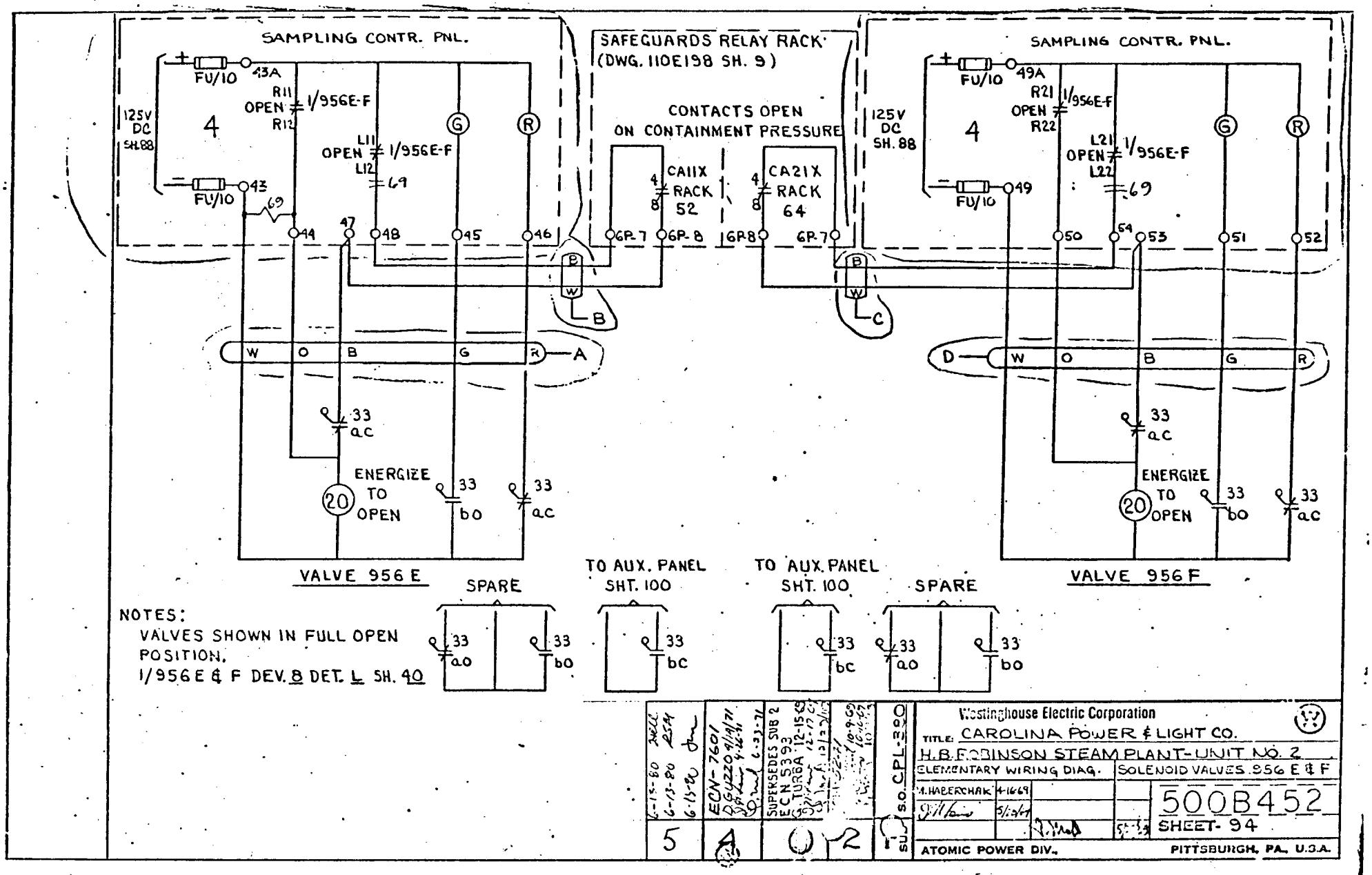
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG. — SOLENOID VALVES 956 C & D

M. HABERCHAK 4-1669 5/20/69

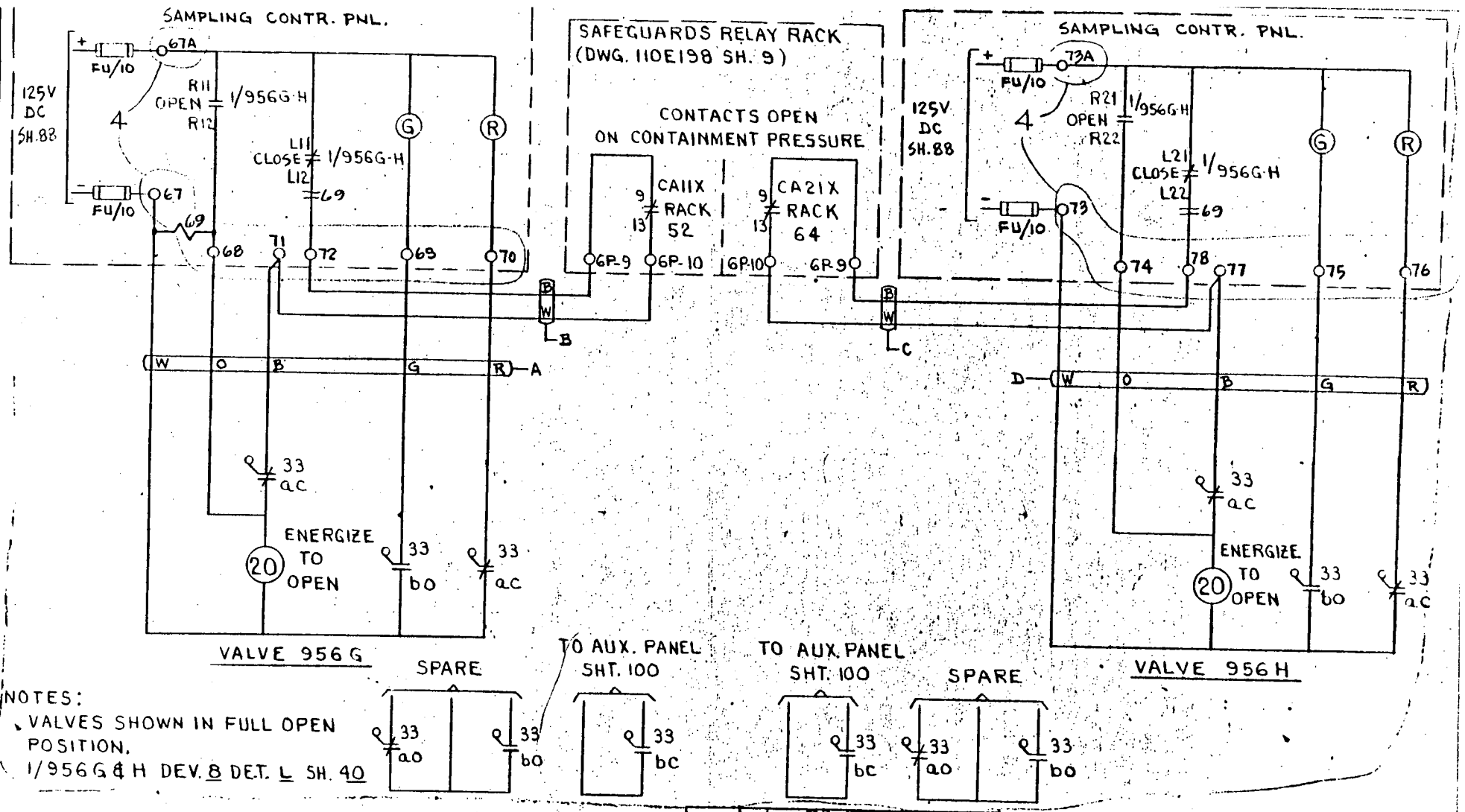
500B452
SHEET- 91

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



NOTES:
VALVES SHOWN IN FULL OPEN POSITION.
1/956 E & F DEV. B DET. L SH. 40

6-15-80 Well 254 6-13-80 6-15-80	ECN-7601 9 6422 4/14/71	SUPERSEDES SUB 2 E.C.N. 5393 TURBA 12-15-69	S.O. CPL-290	Westinghouse Electric Corporation
5	A	0 2		TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT-UNIT NO. 2 ELEMENTARY WIRING DIAG. SOLENOID VALVES 956 E & F
				M. HABERCHAK 4-1669 5/24/71 500B452 SHEET- 94
				ATOMIC POWER DIV. PITTSBURGH, PA. U.S.A.



1/19/70
UB

NOTES:
1. VALVES SHOWN IN FULL OPEN POSITION.
2. 1/956G & H DEV. 8 DET. L SH. 40

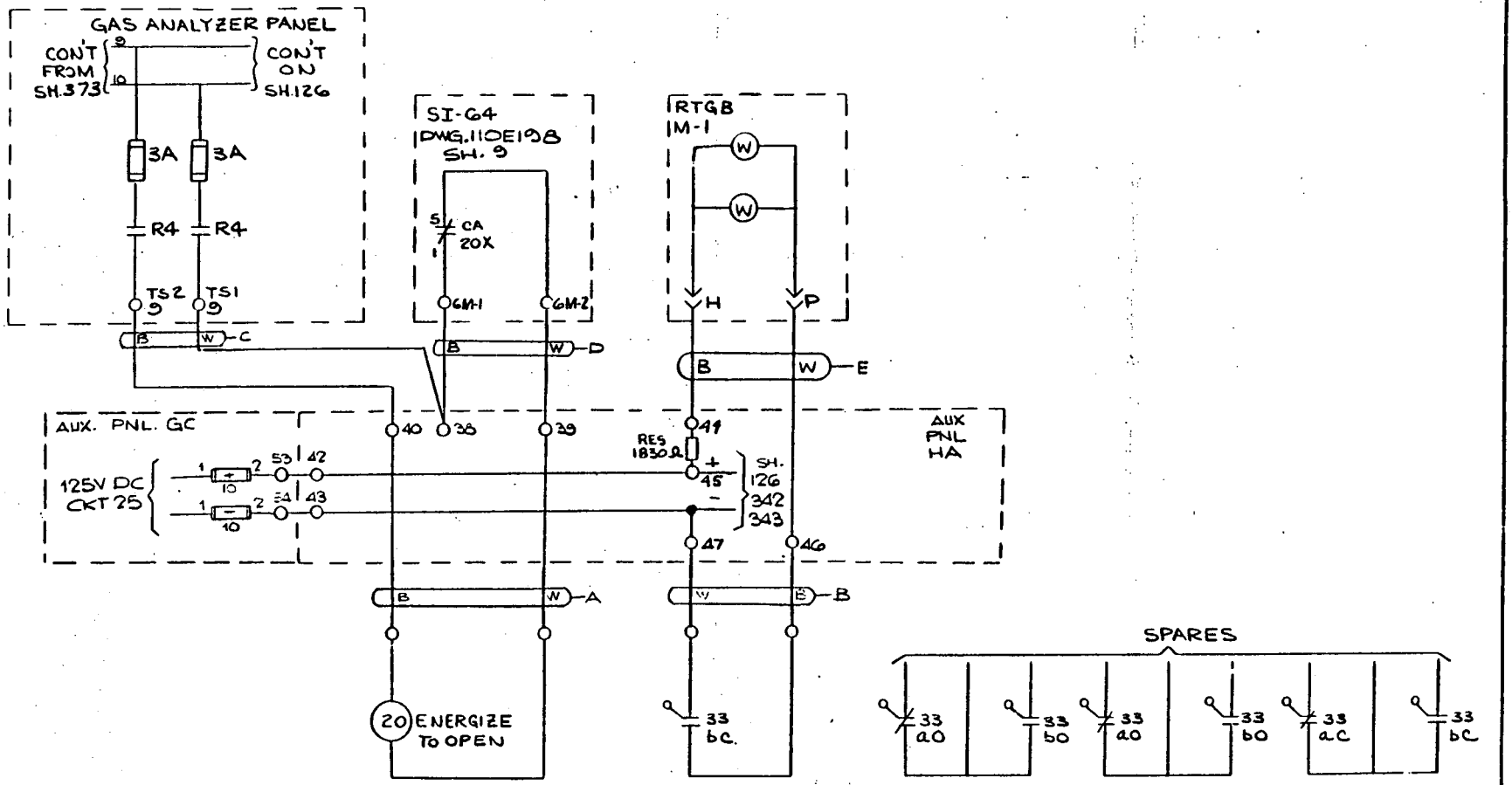
5	4	3	2	1	SUB
6-13-80 Add rem 6-15-80	FLD 4-25-70	SUPERSEDES SUB2 ECN 53393 G. TURBA 12-15-69	ECN 5241 10-9-69		S.O. CPL-380

Westinghouse Electric Corporation

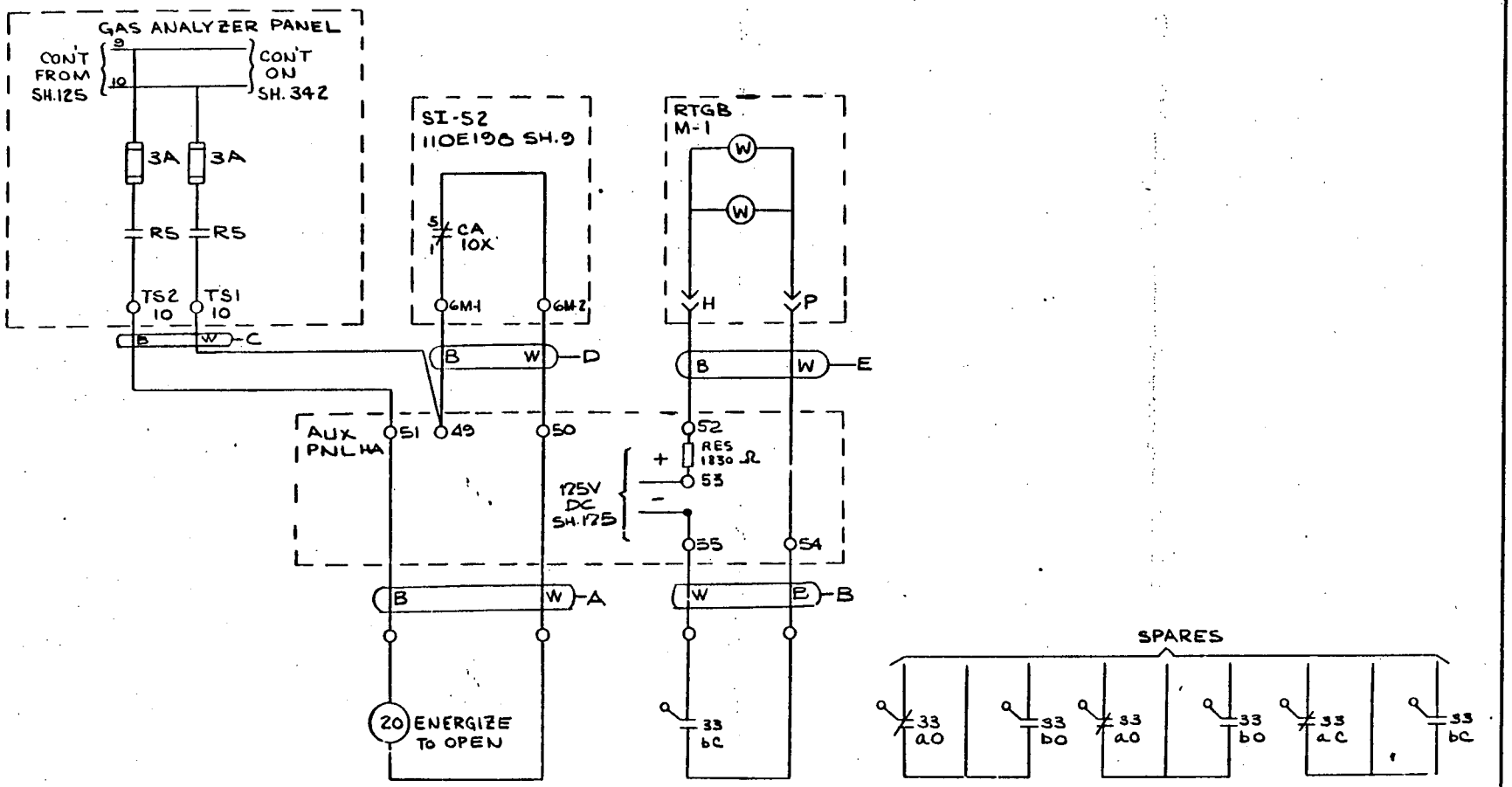
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG. — SOLENOID VALVES 956 G & H

M. HABERCHAK	4-1669		500B452
	5/10/67		SHEET- 98

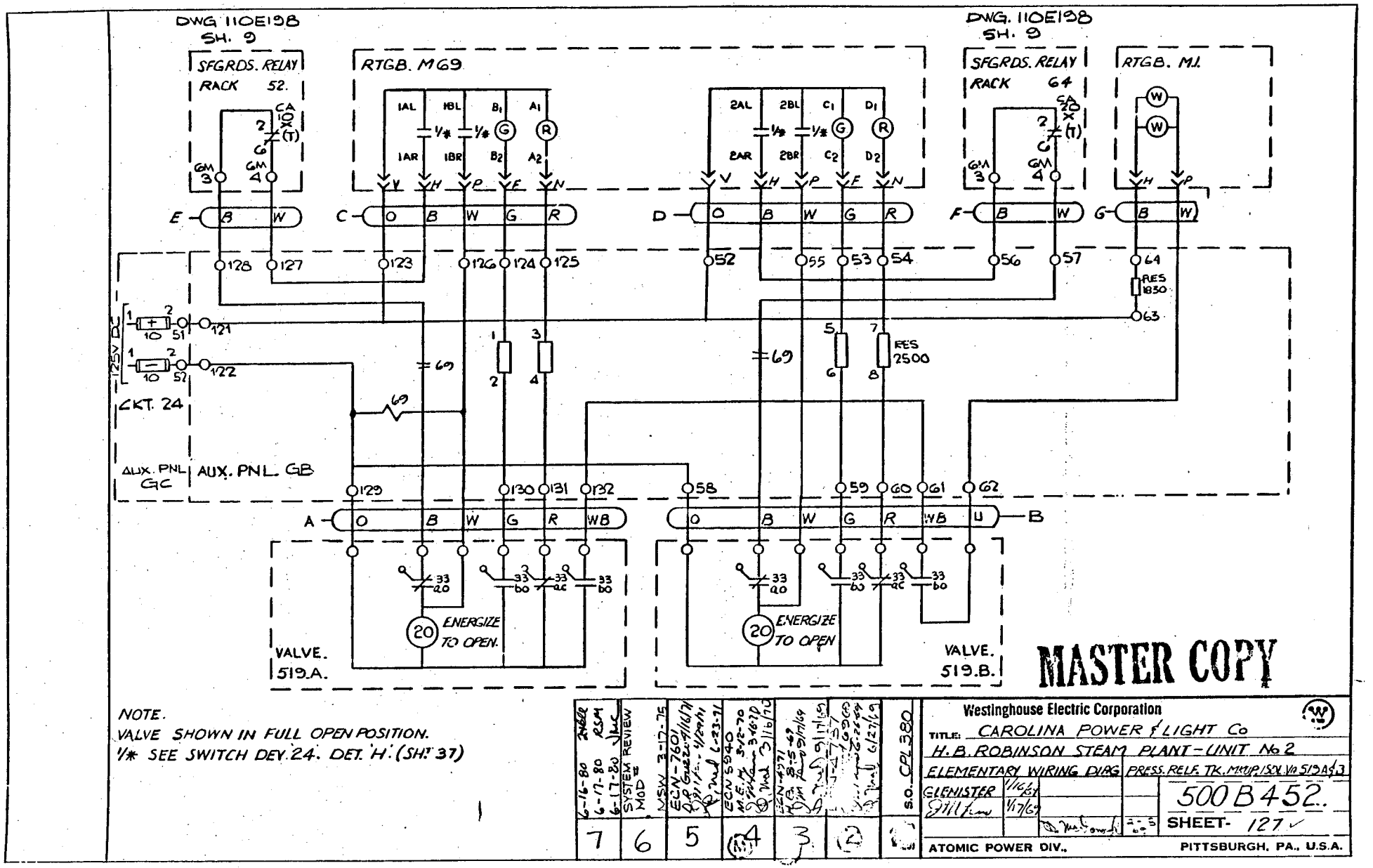
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



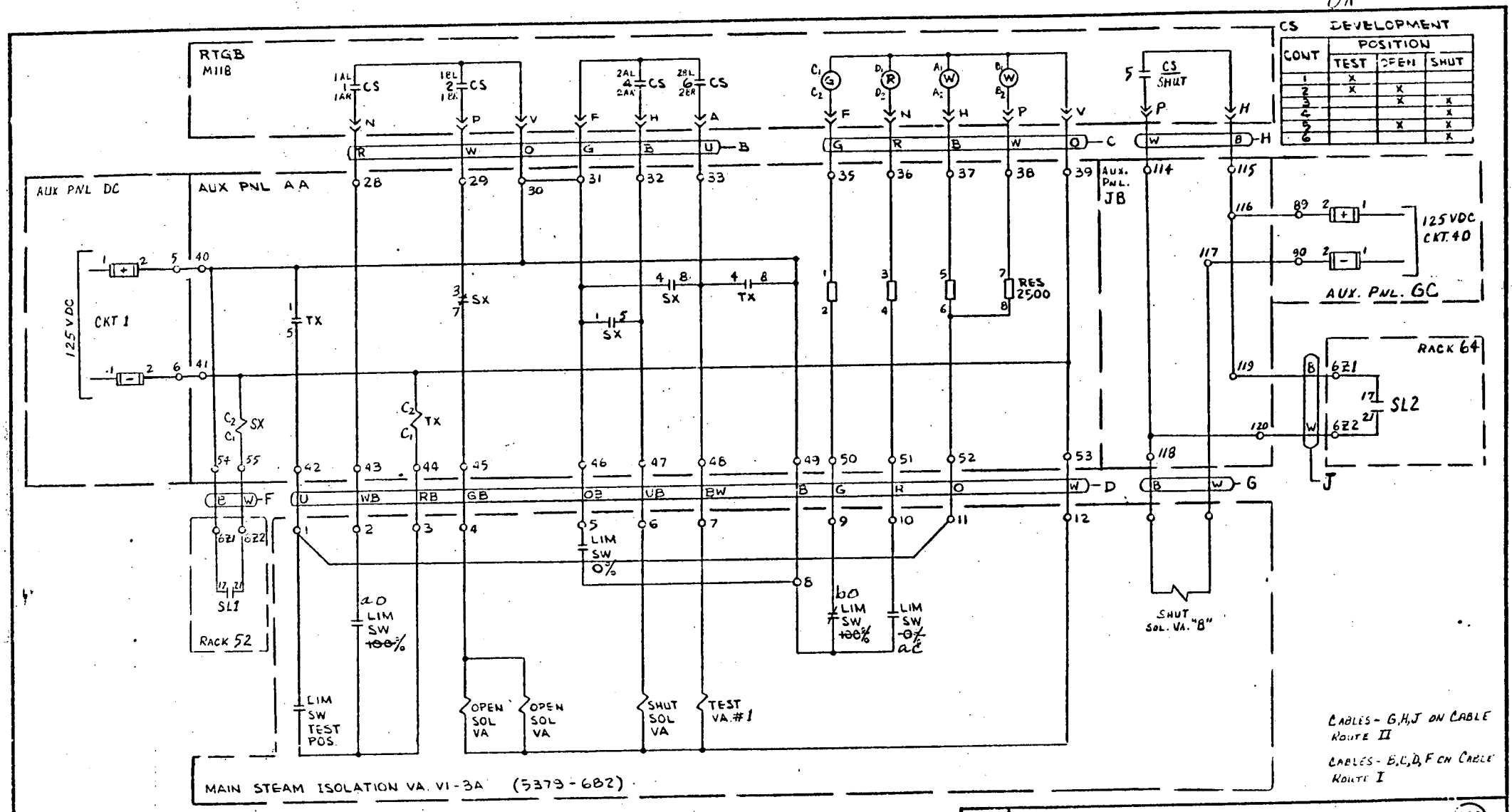
5-16-80 RSM 6-17-80 RSM 6-17-80	ECN-7260 6-26-69 4/24/70 6-23-71	ECN-4737 6-6-69 6-26-69 6/27/69	M.E.H. 5-14-69 5/8-69 5/14/69	S.O.CPL-290	Westinghouse Electric Corporation
5	4	3	2	SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT - UNIT NO. 2 ELEMENTARY WIRING DIAG. SOLENOID VALVE 516
					M. HABERCHAN 3-3-69 4-7-69 9/30/69 500B452 SHEET- 125
					ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



6-16-80 JHC 6-17-80 RSM	ECN-760 D.R.GUZZO 4/14/71	ECN-4737	SO.CPL-380	Westinghouse Electric Corporation
4	3	2	1 SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B.ROBINSON STEAM PLANT-UNIT NO. 2 ELEMENTARY WIRING DIAG. SOLENOID VALVE 553
				M.HABERCHAK +1-67 4-1769 4/30/69
				500B452 SHEET-126
				ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.


DWG. 110E198 SH. 9
SFGRDS. RELAY RACK 52.
RTGB. M69
DWG. 110E198 SH. 9
SFGRDS. RELAY RACK 64
RTGB. M1
AUX. PNL. GC
AUX. PNL. GB
CKT. 24
125V DC
RES 1830
RES 2500
ENERGIZE TO OPEN.
VALVE. 519.A.
VALVE. 519.B.
MASTER COPY
NOTE.
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. 24. DET. 'H'. (SH. 37)
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT Co
H.B. ROBINSON STEAM PLANT - UNIT No 2
ELEMENTARY WIRING DIAG
PRESS. RELF. TK. MKUP/SW Va 519 A&B
500B452.
SHEET- 127
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.

OK



EBASCO DWG B-190628

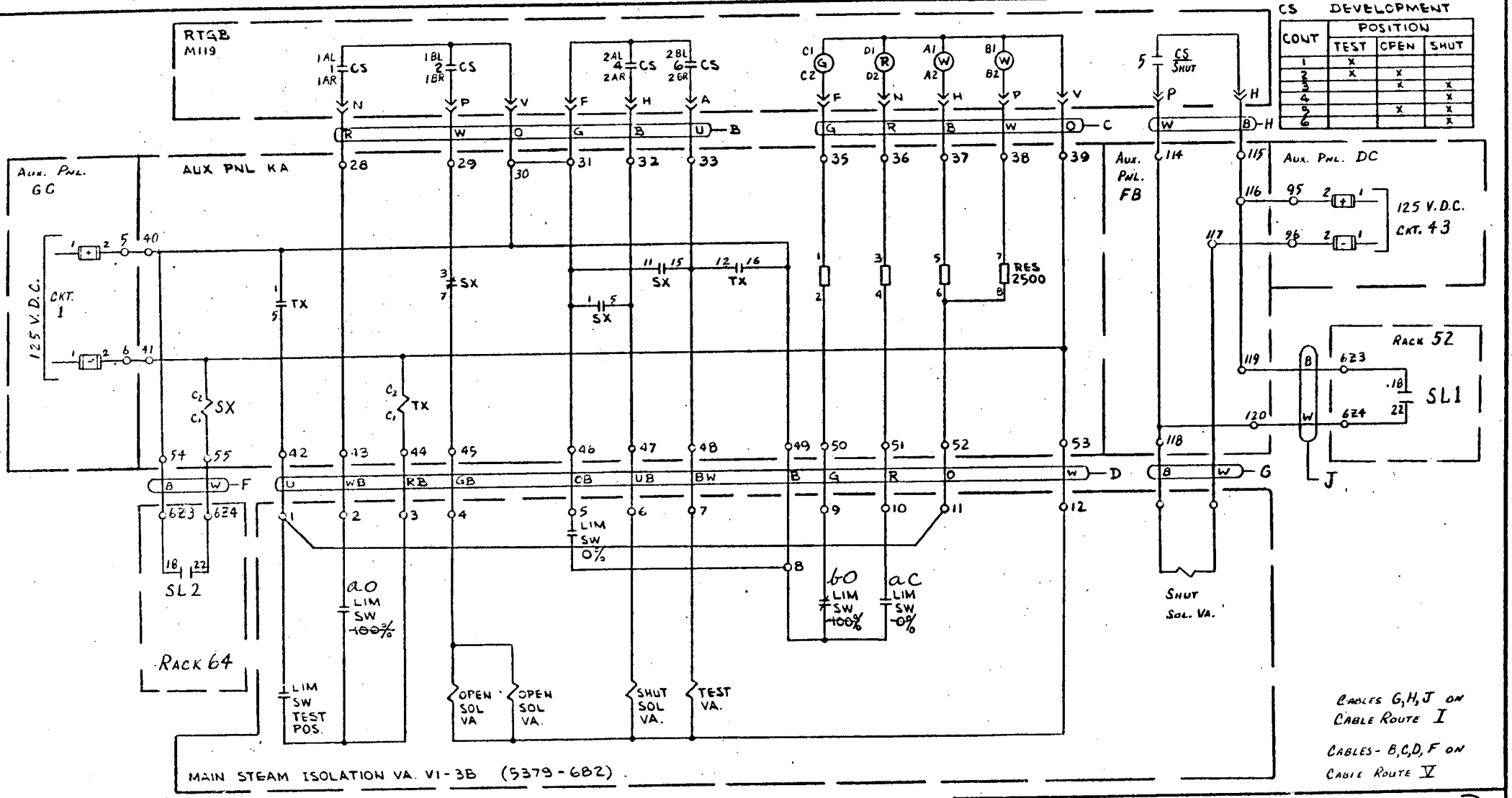
REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	10-27-71	SC	FLD
7				3	8-2-71	SC	FLD
6	4-16-69	[illegible]	RSM	2	2-12-71	SC	FLD
5	[illegible]	[illegible]	[illegible]	1	6-16-69	SC	JB

EBASCO SERVICES INCORPORATED
NEW YORK
DIV ELEC DR CSS
SCALE — CH. VE
DATE MAR 17, 1969
APPROVED K Brutkarelli

MAIN STEAM ISOLATION VA. VI-3A

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. CPL-380
1 SUB
JHS 4/11/69
4/17/69
500B452
SHEET 141
ATOMIC POWER DIV.. PITTSBURGH, PA., U.S.A.

OK



CABLES G, H, J ON CABLE ROUTE I

CABLES - B, C, D, F ON CABLE ROUTE V

EBASCO DWG B-190628

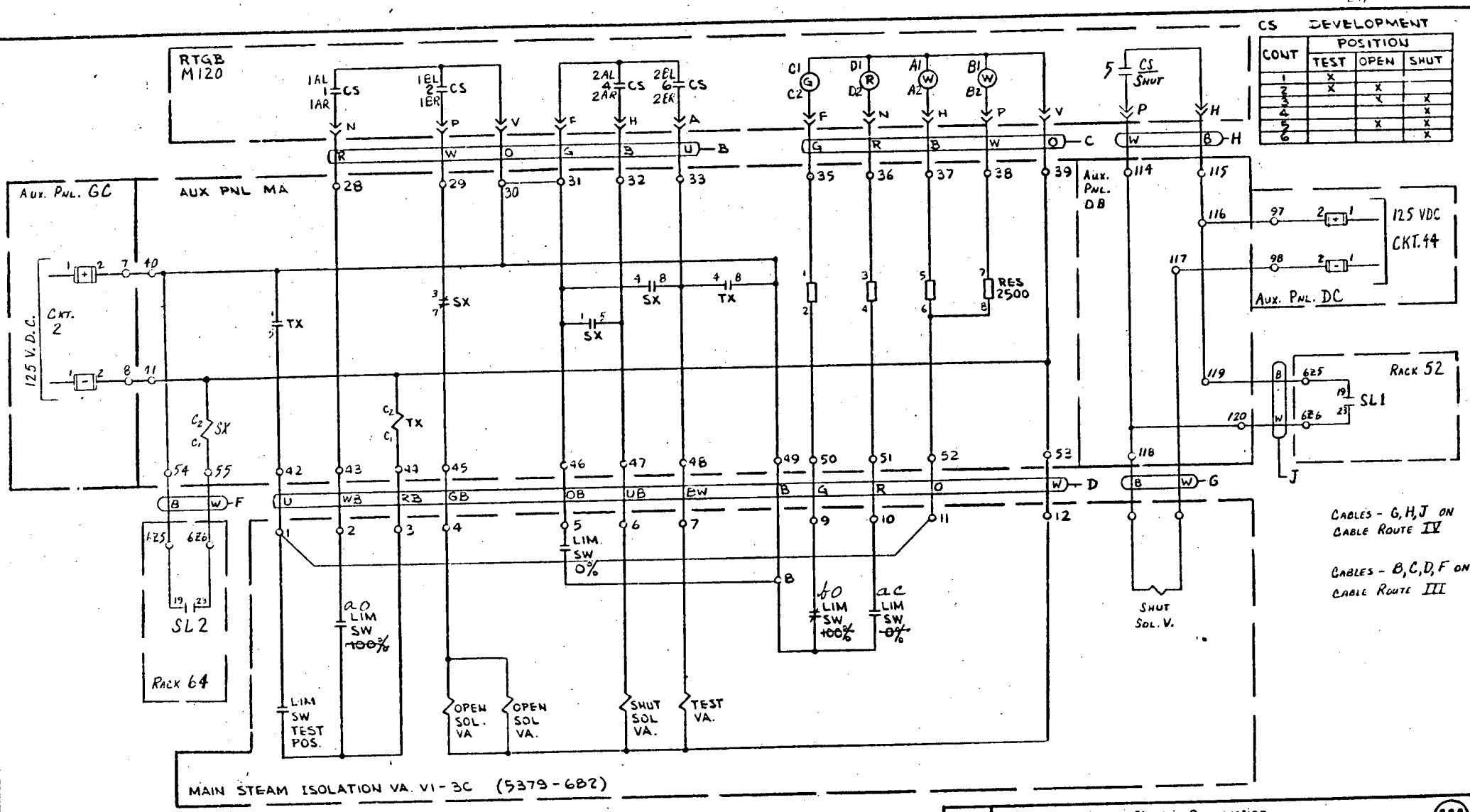
REV	DATE	BY	APPROVED
8			
7			
6	2-11-71	RSM	RSM
5	8-11-70	MCM	
4	10-17-69	GSC	FLD
3	8-22-69	GSC	FLD
2	2-12-69	GSC	FLD
1	6-18-68	GC	VB

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE MAR 17, 1969
APPROVED K Brockwell
VB 55

MAIN STEAM ISOLATION VA VI-3B

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. CPL-380
1 SUB
500B452
SHEET 144
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK



EBASCO DWG B-190628

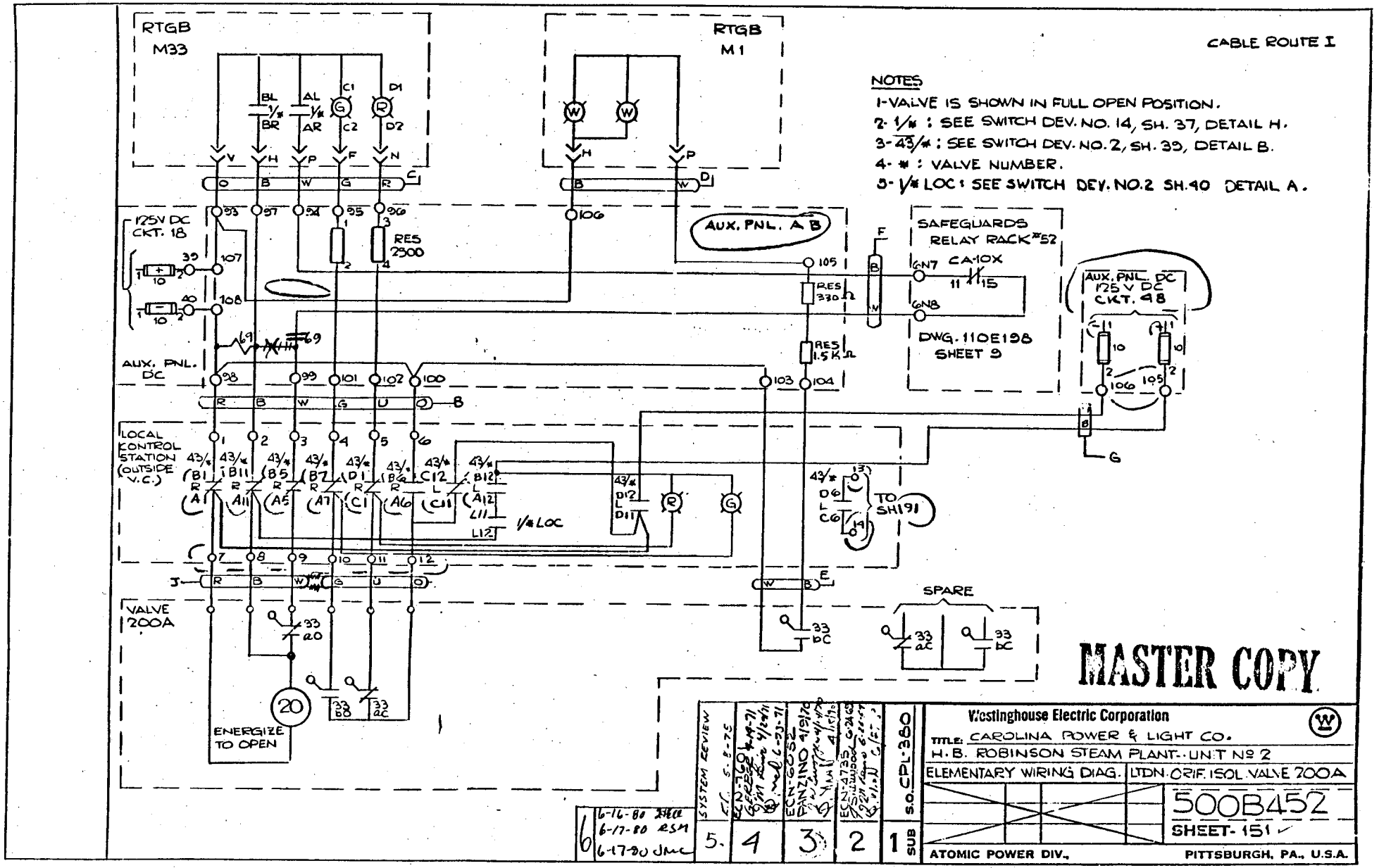
REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3			
6				2			
5				1			

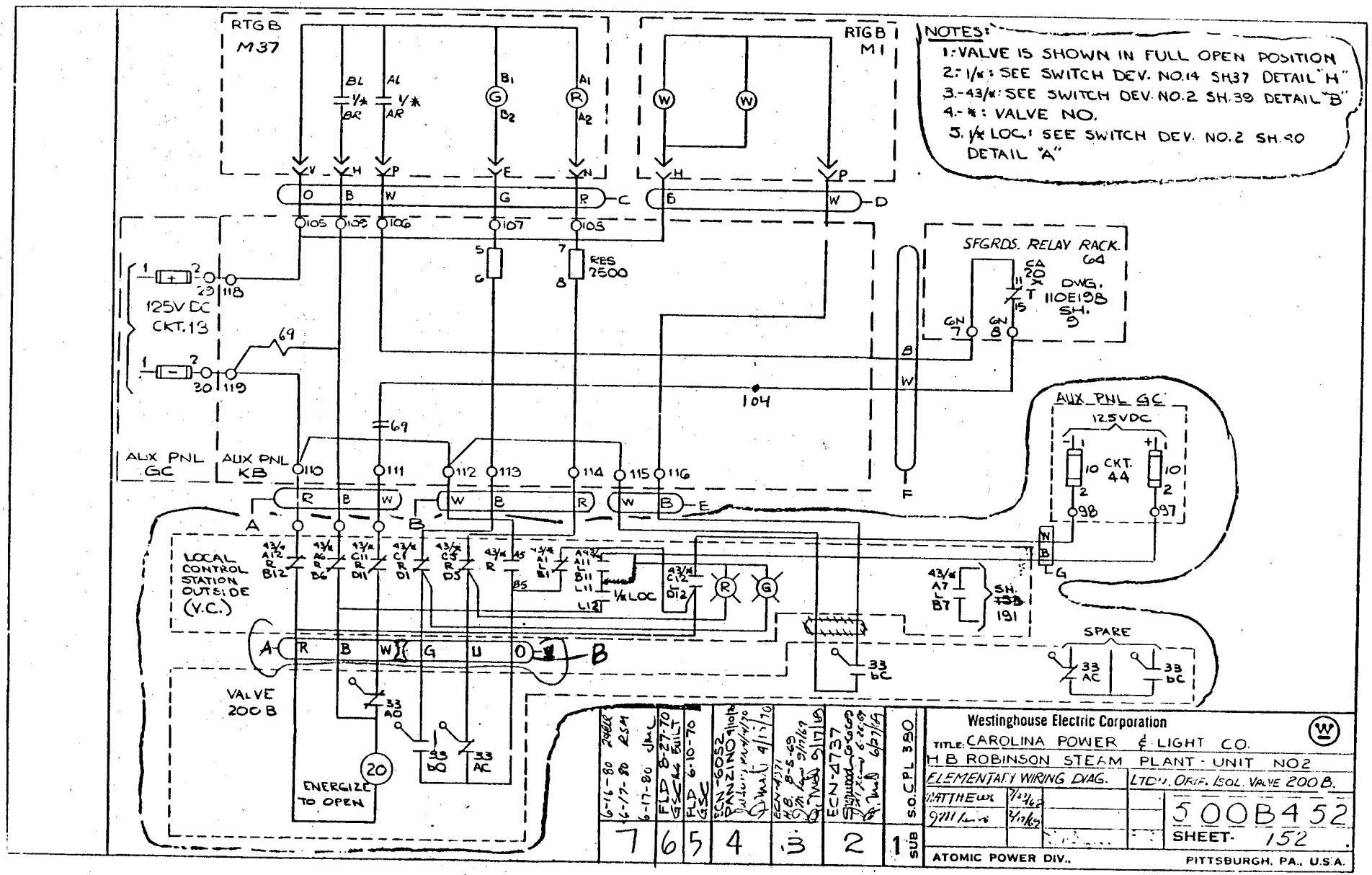
EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC DR. GSC
SCALE — CH. VB
DATE MAR 17, 1969
APPROVED K Brokaw

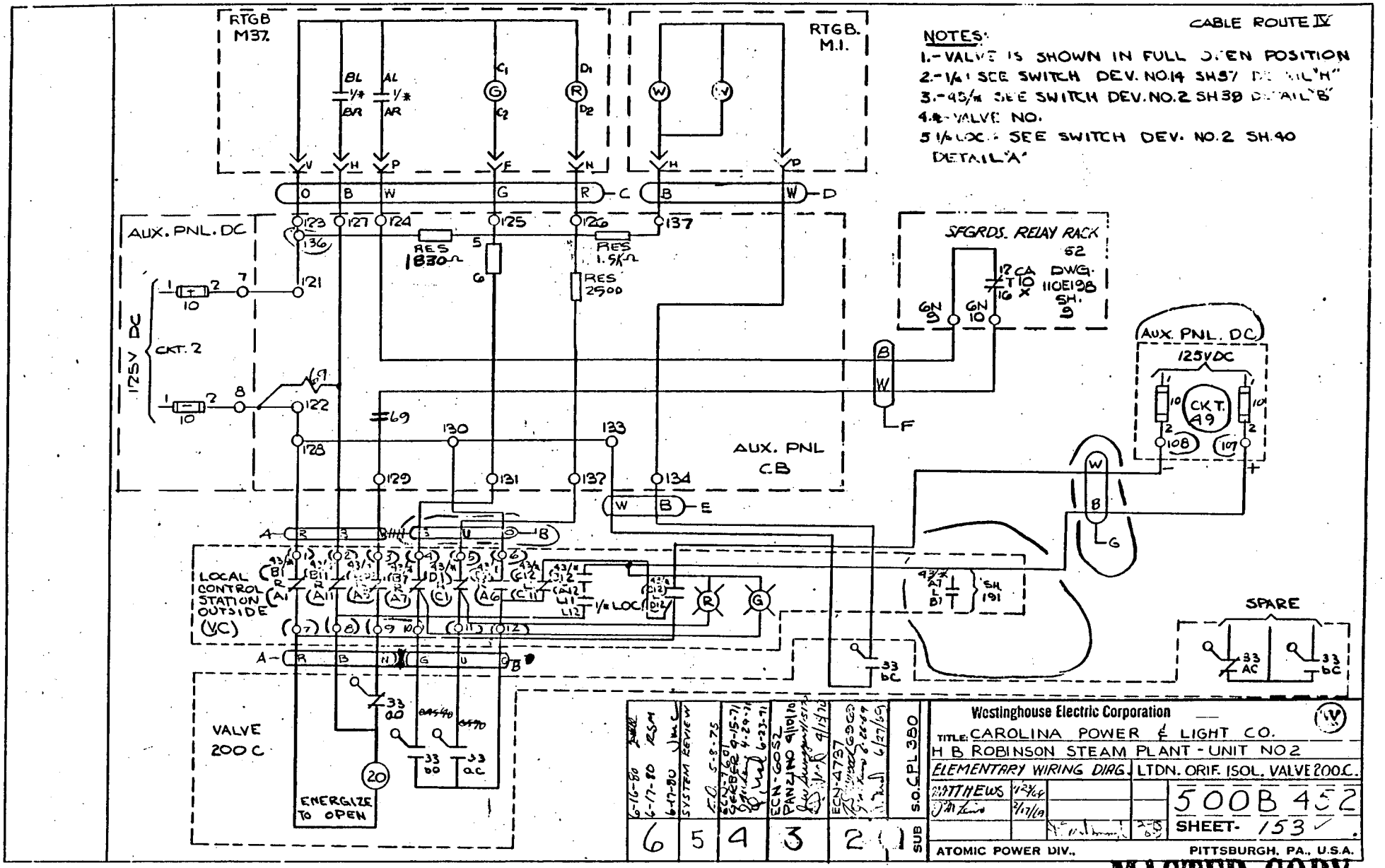
MAIN STEAM ISOLATION VA V1-3C

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. CPL-380
SUB 1
500B452
SHEET 147
ATOMIC POWER DIV.. PITTSBURGH, PA., U.S.A.

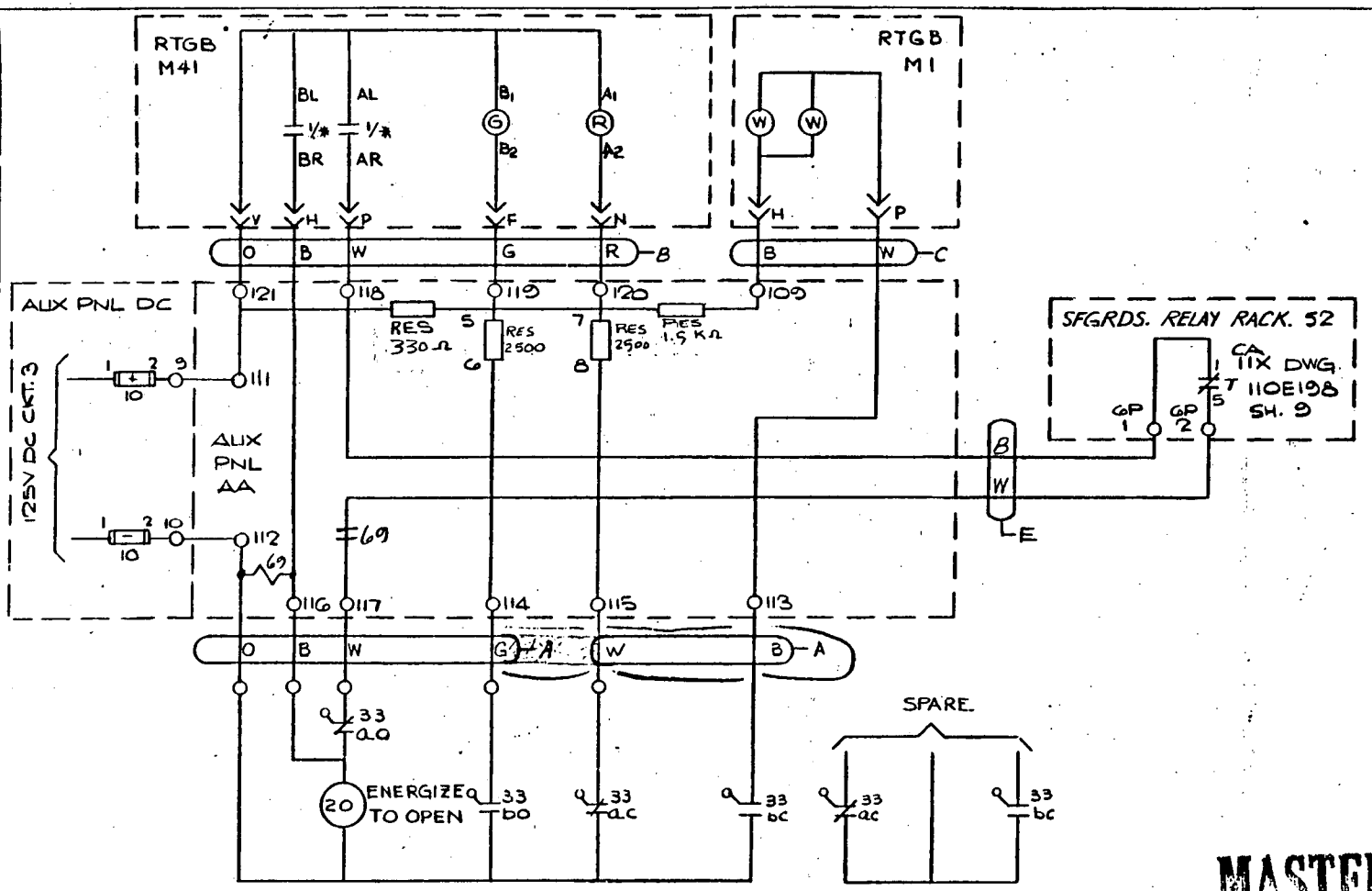
151


RTGB M33
RTGB M1
CABLE ROUTE I
NOTES
1-VALVE IS SHOWN IN FULL OPEN POSITION.
2- 1/* : SEE SWITCH DEV. NO. 14, SH. 37, DETAIL H.
3- 43/* : SEE SWITCH DEV. NO. 2, SH. 39, DETAIL B.
4- * : VALVE NUMBER.
5- 1/* LOC : SEE SWITCH DEV. NO. 2 SH. 40 DETAIL A.
125V DC CKT. 18
RES 2500
AUX. PNL. A B
SAFEGUARDS RELAY RACK #52
CA-10X
RES 330Ω
RES 1.5KΩ
DWG. 110E198 SHEET 9
AUX. PNL. DC 125V DC CKT. 98
AUX. PNL. DC
LOCAL CONTROL STATION (OUTSIDE V.C.)
1/* LOC
TO SH 191
VALVE 200A
ENERGIZE TO OPEN
SPARE
MASTER COPY
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT No 2
ELEMENTARY WIRING DIAG. LTDN. ORIF. ISOL. VALVE 200A
500B452
SHEET- 151
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.
S.O. CPL-3380
SUB 1
ECN-6052
ECN-4735
SYSTEM REVIEW
6 6-16-80 JHeil 6-17-80 RSM 6-17-80 JMC


RTG B M37
RTG B M1
NOTES:
1. VALVE IS SHOWN IN FULL OPEN POSITION
2. 1/*: SEE SWITCH DEV. NO.14 SH.37 DETAIL "H"
3. -43/*: SEE SWITCH DEV. NO.2 SH.39 DETAIL "B"
4. -*: VALVE NO.
5. 1/* LOC.: SEE SWITCH DEV. NO.2 SH.40 DETAIL "A"
125V DC CKT.13
RES 2500
SFGRDS. RELAY RACK. 64
DWG. 110E198 SH. 9
AUX PNL GC
AUX PNL KB
12.5VDC
CKT. 44
LOCAL CONTROL STATION OUTSIDE (V.C.)
1/* LOC
VALVE 200B
ENERGIZE TO OPEN
SPARE
SH. 191
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H B ROBINSON STEAM PLANT - UNIT NO2
ELEMENTARY WIRING DIAG.
LTDN. ORIF. ISOL. VALVE 200B.
500B452
SHEET- 152
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.


CABLE ROUTE IV
NOTES:
1.- VALVE IS SHOWN IN FULL OPEN POSITION
2.- 1/4 SEE SWITCH DEV. NO.14 SH.57 DETAIL "H"
3.- 45/* SEE SWITCH DEV. NO.2 SH.39 DETAIL "B"
4.- VALVE NO.
5 1/4 LOC. - SEE SWITCH DEV. NO.2 SH.40 DETAIL "A"
RTGB M37
RTGB. M.I.
AUX. PNL. DC
125V DC
CKT. 2
AUX. PNL CB
SFGRDS. RELAY RACK 52
DWG. 110E198 SH. 9
AUX. PNL. DC 125V DC
CKT. A9
LOCAL CONTROL STATION OUTSIDE (VC)
SPARE
VALVE 200C
ENERGIZE TO OPEN
RES 1830Ω
RES 1.5KΩ
RES 2500
1/4 LOC
SH 191
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H B ROBINSON STEAM PLANT - UNIT NO 2
ELEMENTARY WIRING DIAG. LTDN. ORIF. ISOL. VALVE 200C.
500B 452
SHEET- 153
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

MASTER COPY



NOTE

VALVE SHOWN IN FULL OPEN POSITION.

V* SEE SWITCH DEV. No. 14. SHT. No. 37 *=VALVE No DET. H

MASTER COPY

5	4	3	2	1
6-17-80 Note 6-17-80 6-18-80	SYSTEM REVIEW MOD #1	MSK 3-17-75 ECN-7601 4-15-77 ECN-7601 4-25-77 ECN-7601 6-23-77	ECN-4737 6-24-88 ECN-4737 6-27-89	S.O. CPL 380

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.

H B ROBINSON STEAM PLANT - UNIT NO 2

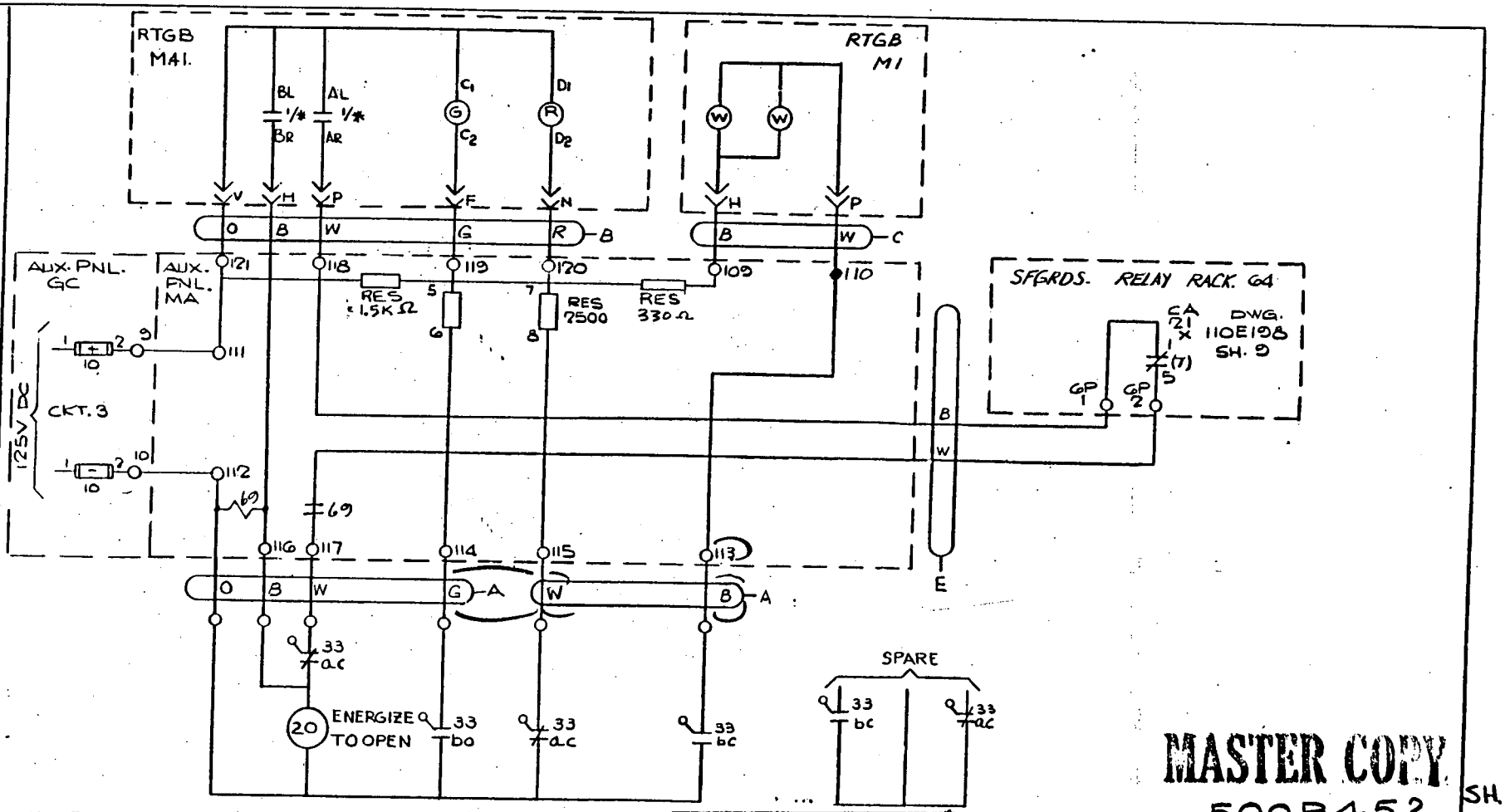
ELEMENTARY WIRING DIAG — LTDN. LINE ISOL. VALVE 204.A.

MATTHEWS 1/27/76

500B 452

SHEET- 154

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



NOTE.

VALVE SHOWN IN FULL OPEN POSITION

1/* SEE SWITCH DEV. No. 14. SHT No. 37 *= VALVE No. DET. H

MASTER COPY

500B452

SH. 155

SHEET #155

5	4	3	2	1
6-17-80 KSH 6-18-80 JWL SYSTEM REVIEW MOD			CN-4737	O.C.P.L 380

Westinghouse Electric Corporation

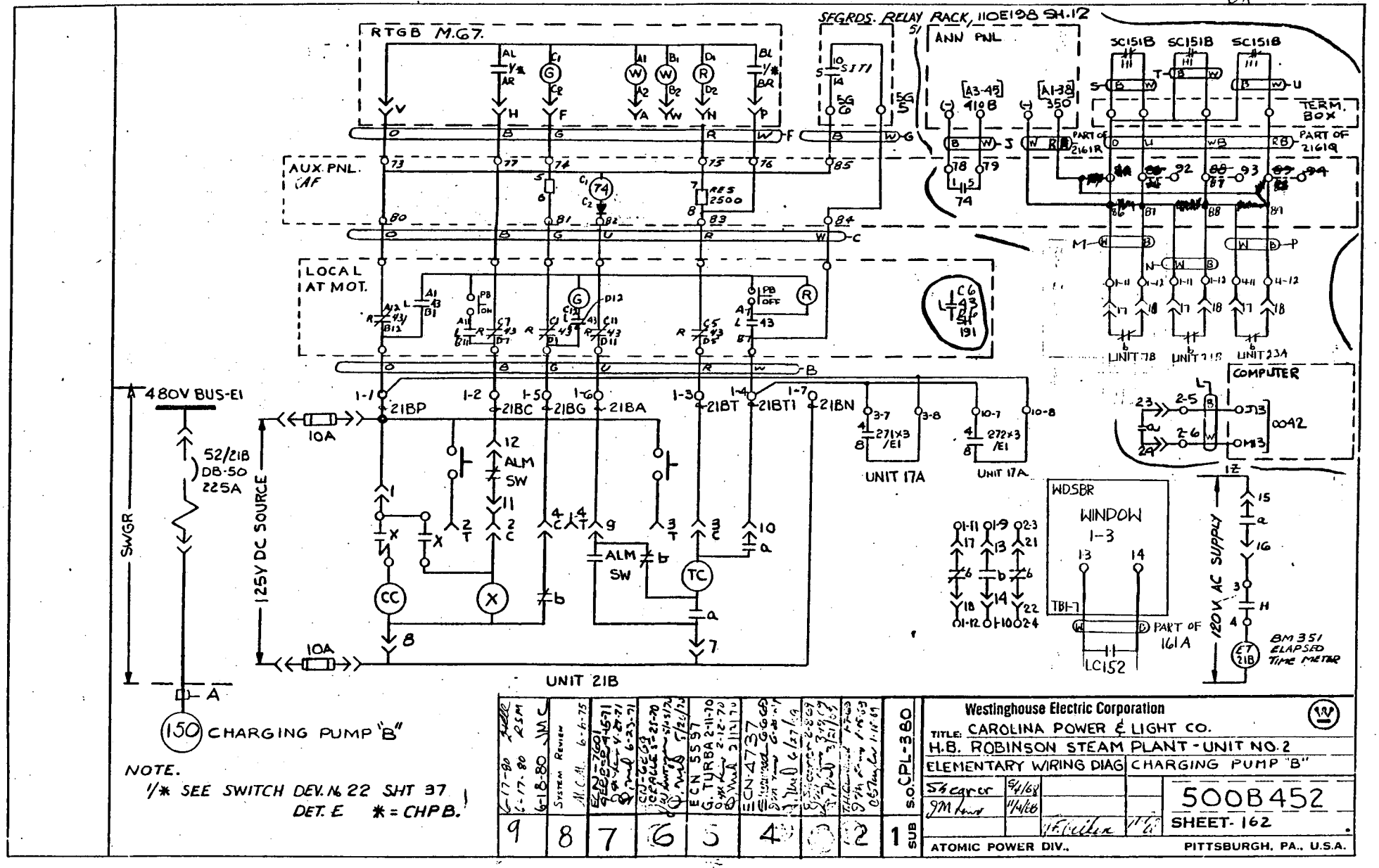
TITLE: CAROLINA POWER & LIGHT CO.

H B ROBINSON STEAM PLANT - UNIT NO 2

ELEMENTARY WIRING DIAG. | LTDN. LINE ISOL. VA. 204. B.

MATTHEWS

OK



NOTE.
1/* SEE SWITCH DEV. No 22 SHT 37
DET. E * = CHP B.

SUB	so.CPL-380
9	6-17-80 Added 2SM; 6-18-80 MC
8	System Review M.C.M. 6-6-75
7	ECN-7601 6-23-71
6	ECN 5597
5	G. TURBA 2-11-70
4	ECN 4737
3	
2	
1	

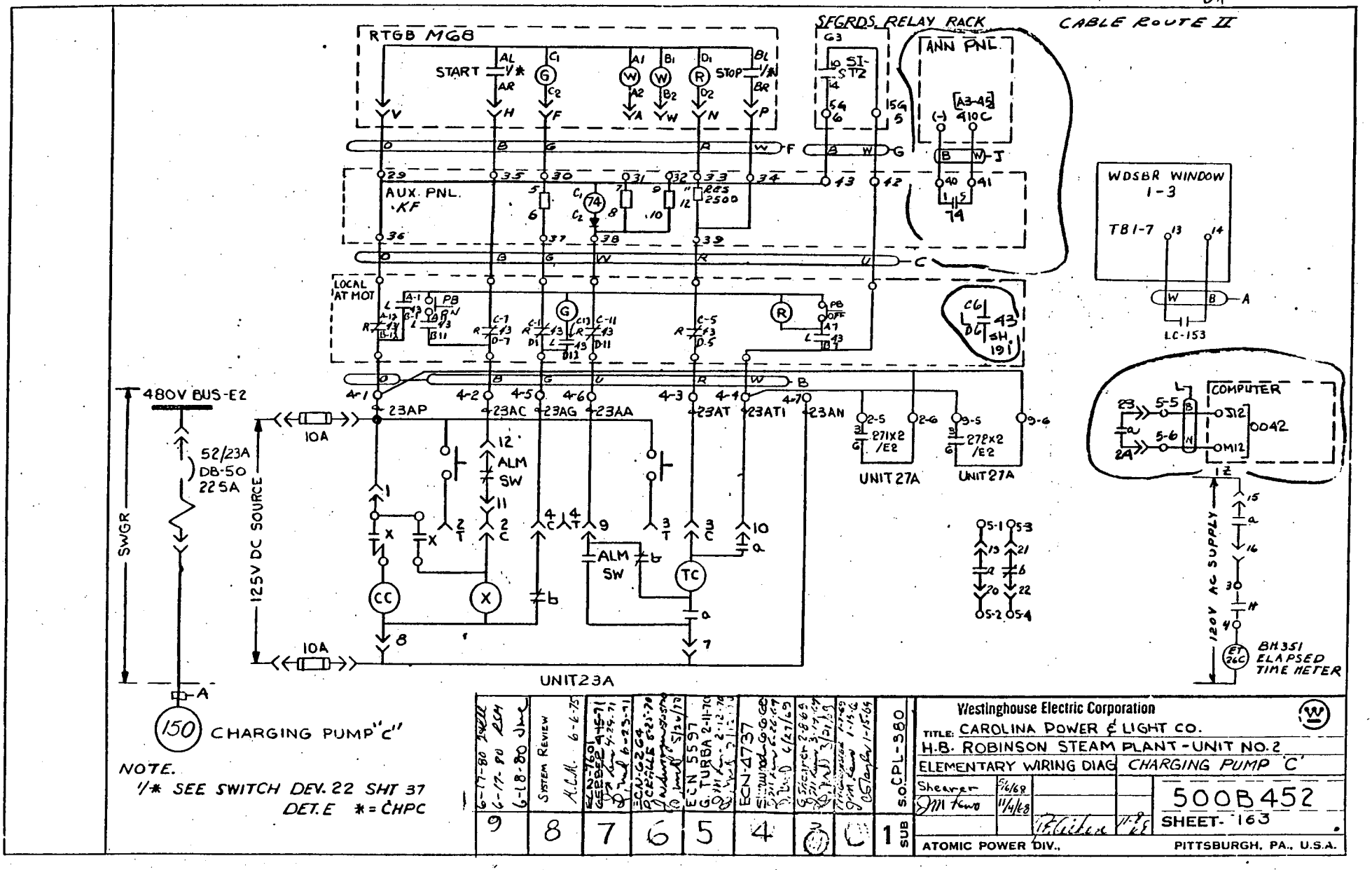
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG | CHARGING PUMP "B"

5008452
SHEET- 162

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK



NOTE.
1/* SEE SWITCH DEV. 22 SHT 37
DET. E * = CHPC

6-17-80 JMZ 6-17-80 PO 254 6-18-80 JMZ	SYSTEM REVIEW K.L.M. 6-6-75	ECN-7601 GERBER 4-15-71 ECN-6264 BECHTEL 6-23-71	ECN-6264 BECHTEL 6-23-71	ECN 5597 G. TURBA 2-11-76	ECN-4737				SO CPL-380
9	8	7	6	5	4	3	2	1	SUB

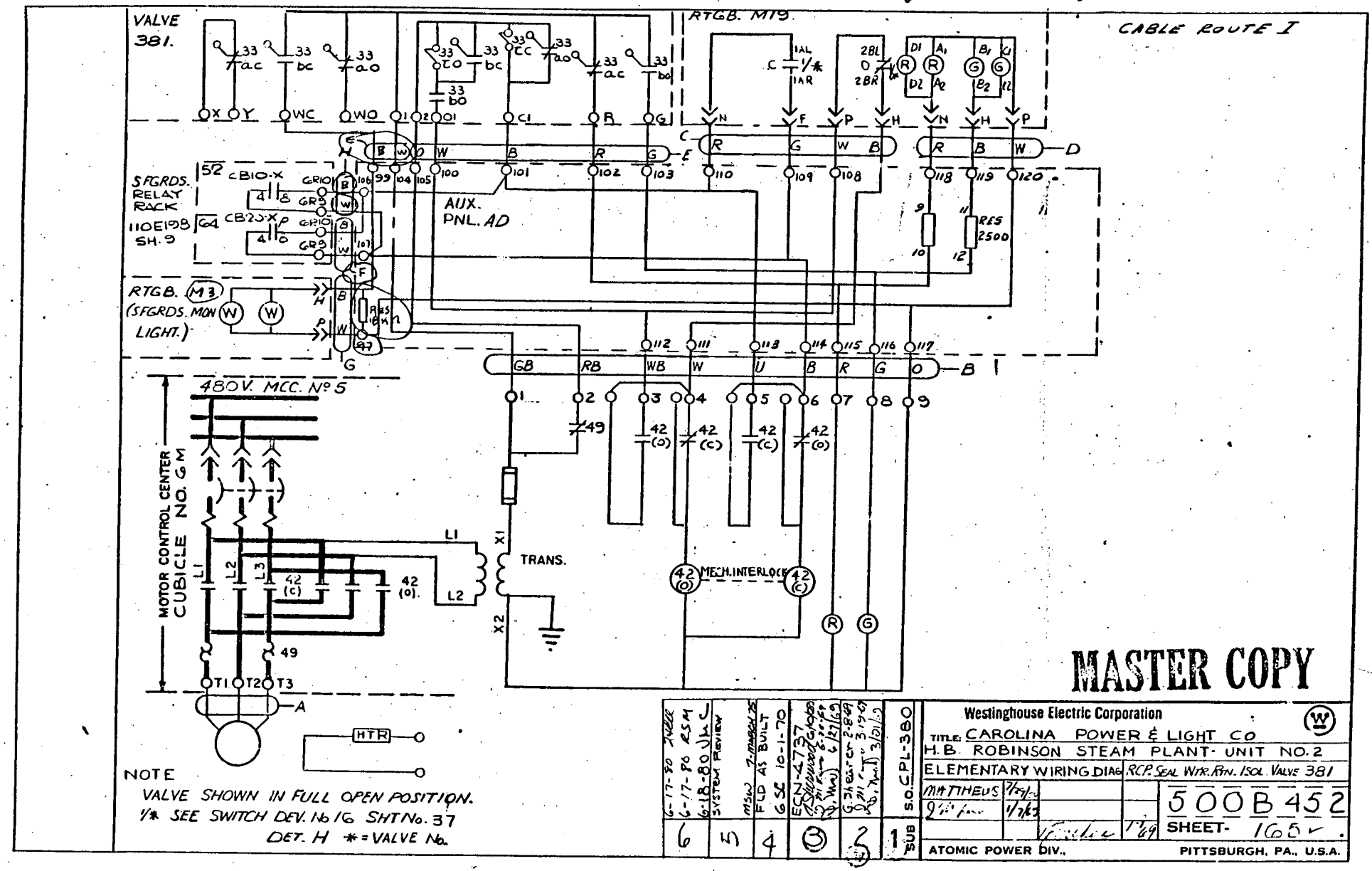
Westinghouse Electric Corporation

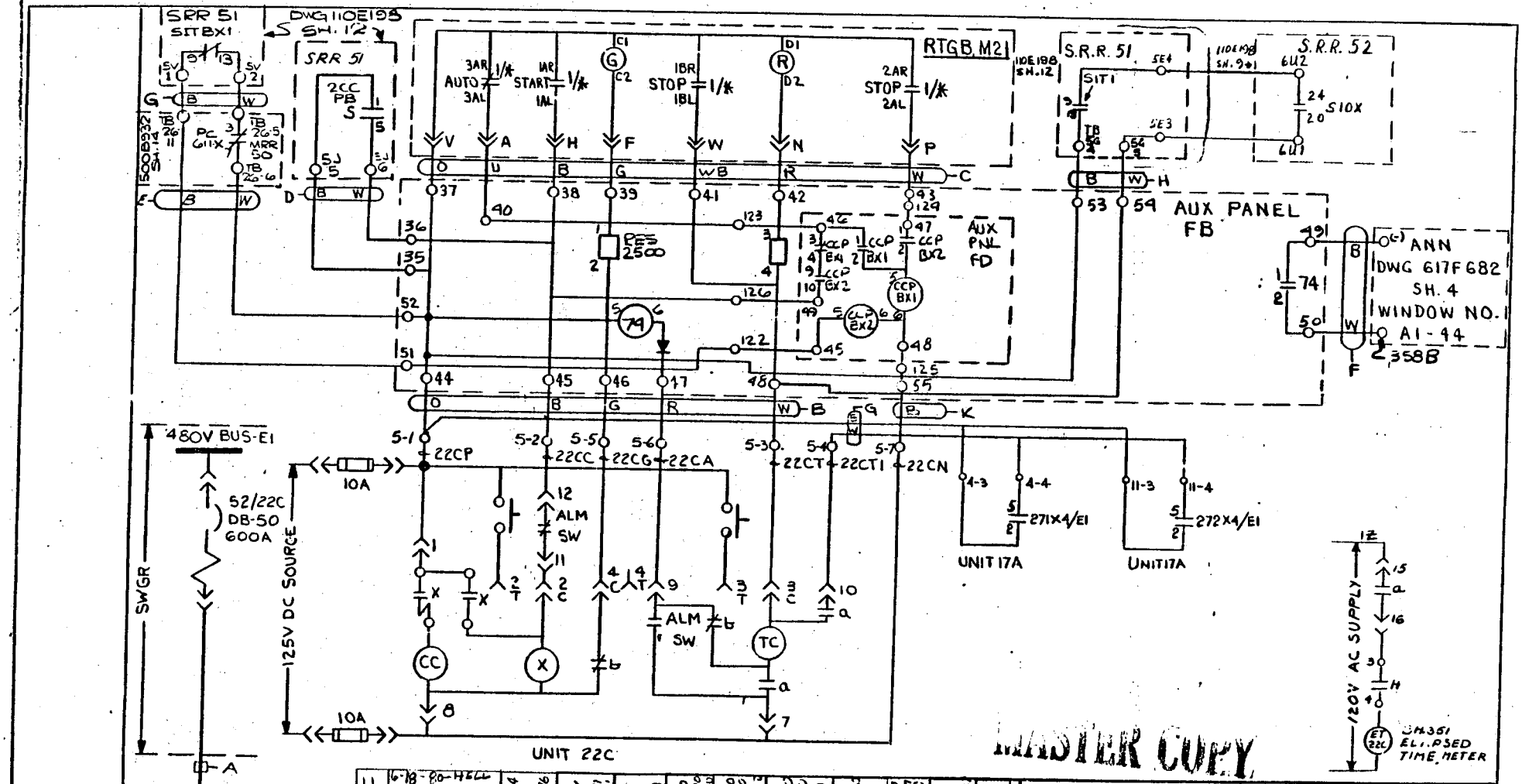
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG CHARGING PUMP 'C'

Sheaner 5/6/68
JM Kwo 11/4/68
P. Crider 11-8-68

500B452
SHEET- 163

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.


VALVE 381.
RTGB. M19.
CABLE ROUTE I
SFGRDS. RELAY RACK 110E198 SH. 9
AUX. PNL. AD
RTGB. M3 (SFGRDS. MON LIGHT.)
480V. MCC. Nº 5
MOTOR CONTROL CENTER CUBICLE NO. GM
TRANS.
MECH. INTERLOCK
RES 2500
HTR
NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. No 16 SHT No. 37
DET. H */= VALVE No.
MASTER COPY
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO
H.B. ROBINSON STEAM PLANT- UNIT NO. 2
ELEMENTARY WIRING DIAG. RCP SEAL WTR. RTN. ISOL. VALVE 381
MATTHEWS
500B452
SHEET- 165
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



NOTE.
1/* SEE SWITCH DEV. 13 SHT 38, DET. H *=CCPB

Per Plant Mod. # 34 M.C.M. 6-22-76	ECN 8063 Gurley 10/18/71	ECN-7601	ECN-5971	ECN 5363	ECN 5906	ECN 5393				S.O. CPL-380
10	9	8	7	6	5	4	3	2	1 SUB	

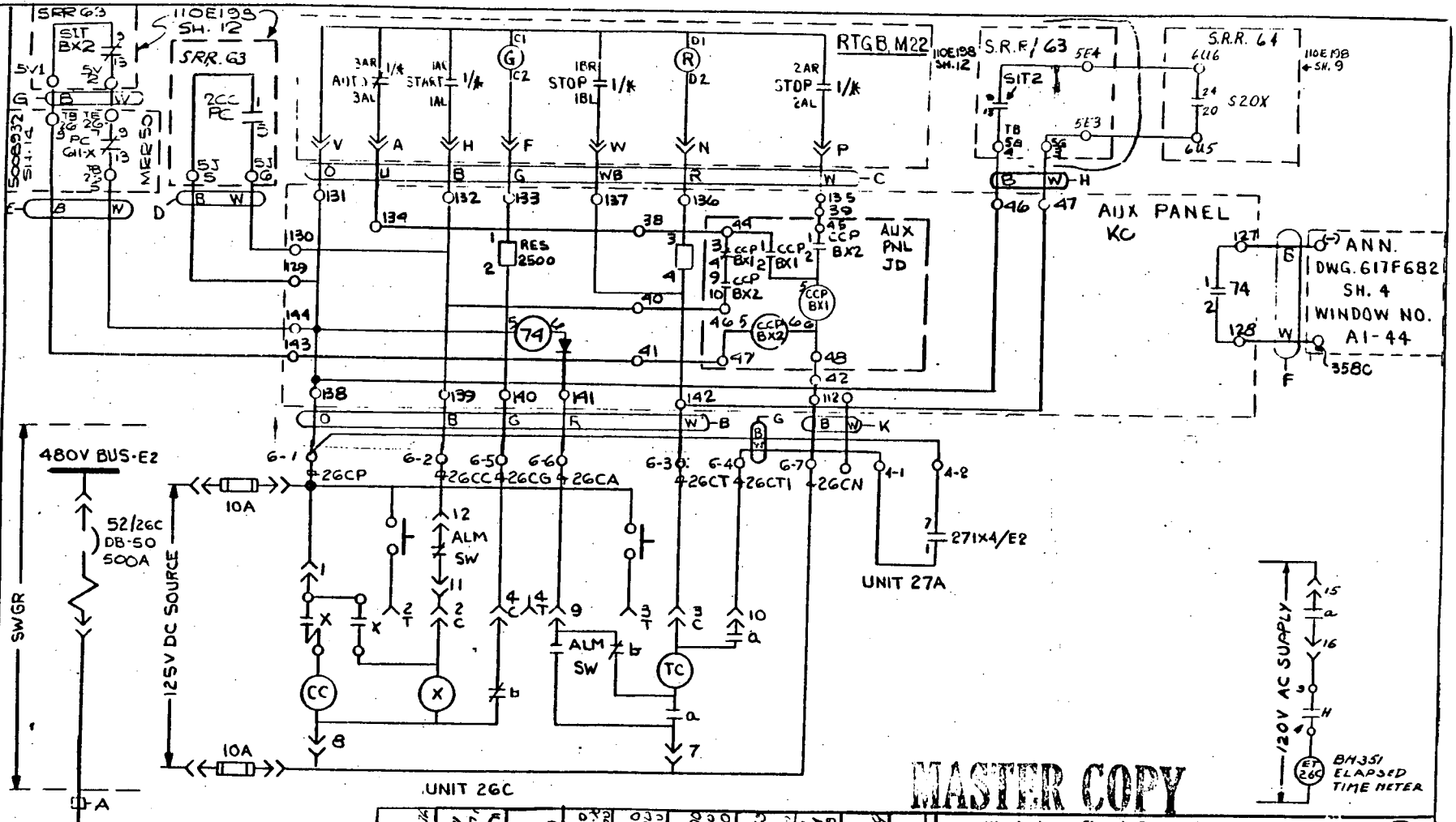
Westinghouse Electric Corporation

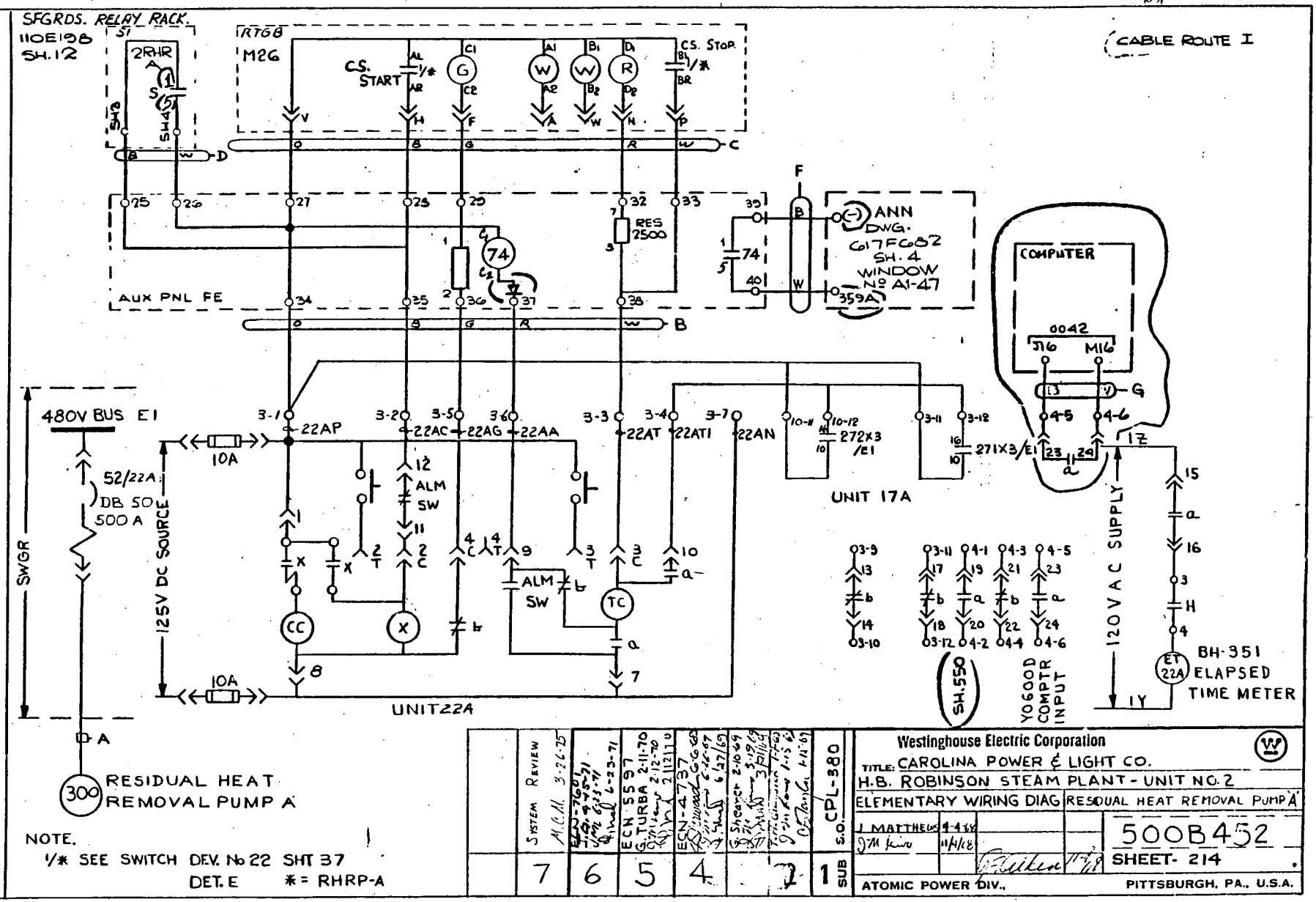
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG | COMPONENT COOLING PUMP 'B'

Shearer 5/6/68
Gill Kane 11/4/68

500B452
SHEET- 205

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.


RTGB M22
110E198 SH. 12
S.R.F/63
S.R.R. 64
110E198 SH. 9
AUX PANEL KC
AUX PNL JD
ANN. DWG. 617F682 SH. 4 WINDOW NO. A1-44
480V BUS-E2
52/26C DB-50 500A
SWGR
125V DC SOURCE
10A
26CP
26CC
26CG
26CA
26CT
26CT1
26CN
271X4/E2
UNIT 27A
ALM SW
UNIT 26C
120V AC SUPPLY
BM351 ELAPSED TIME METER
COMPONENT COOLING PUMP "C"
NOTE
1/* SEE SWITCH DEV. 13 SHT 38
DET. H *=CCPC
MASTER COPY
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG
COMPONENT COOLING PUMP "C"
500B452
SHEET- 209
ATOMIC POWER/DIV.,
PITTSBURGH, PA., U.S.A.



	System Review M.C.M. 3-26-75	ECN-7601 1-9-75-71 ECN 6-23-71	ECN 5597 G.TURBA 2-11-70 2-12-70 2-11211-0	ECN-4737 6-6-68 6-27-69	G.Sheaffer 2-10-69 3-19-69 3-20-69		CPL-380	S.O.
	7	6	5	4		2	1	SUB

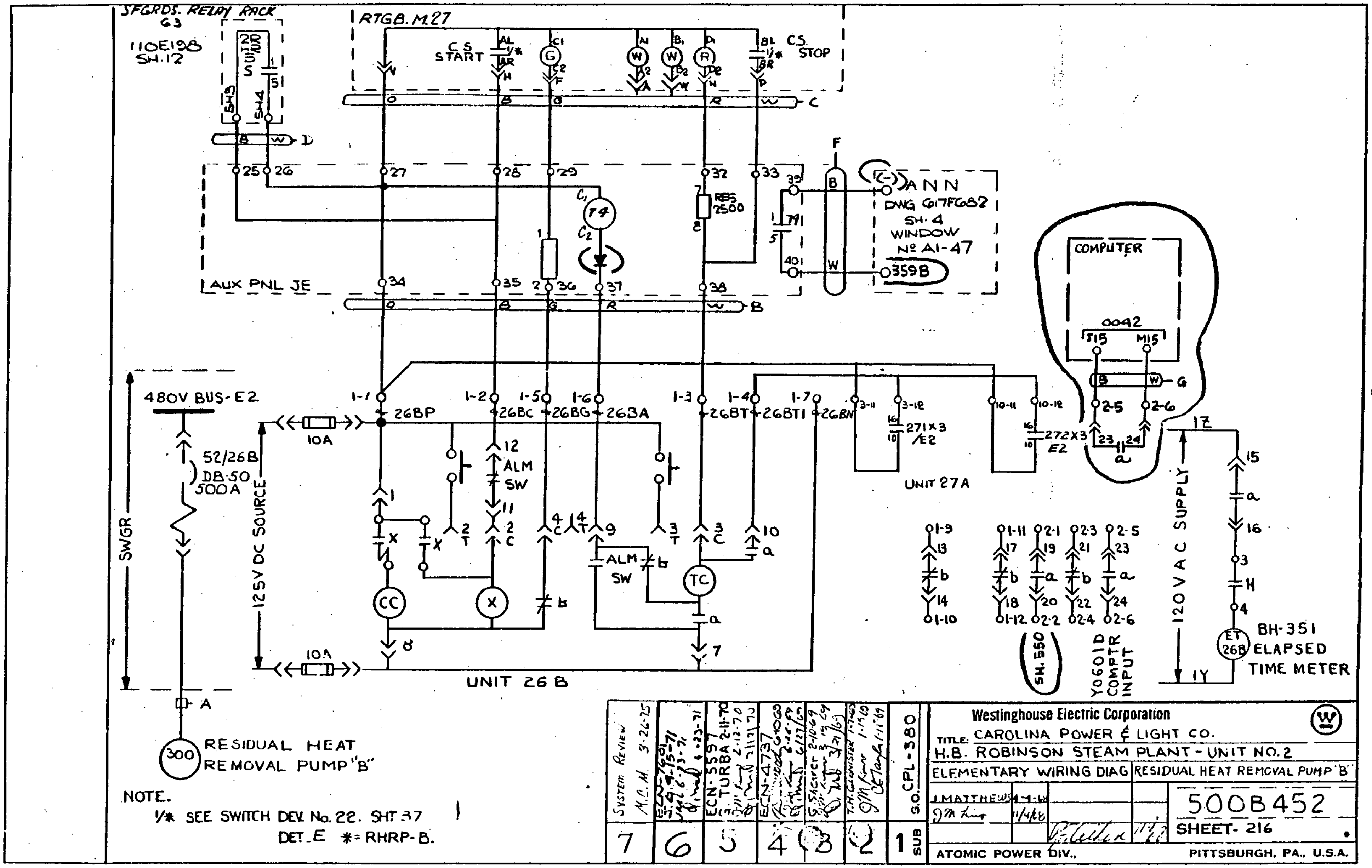
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG | RESIDUAL HEAT REMOVAL PUMP A

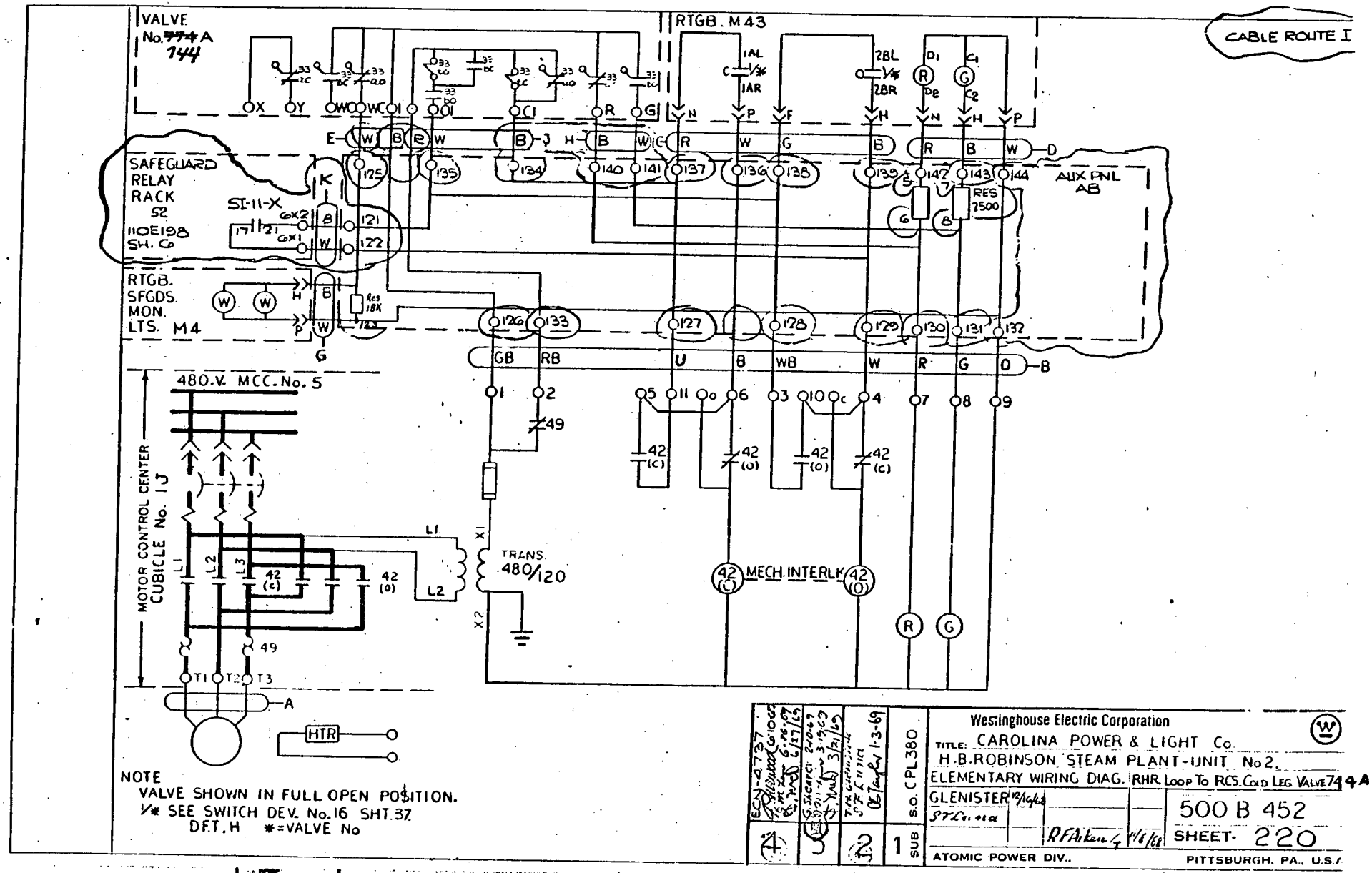
J. MATTHEWS 9-4-68 | 11/4/68

500B452
SHEET- 214

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



SFGRDS. RELAY RACK G3
110E198 SH.12
RTGB. M27
C.S START
C.S. STOP
AUX PNL JE
ANN DWG 617F682 SH. 4 WINDOW № A1-47
359B
RES 2500
COMPUTER
0042
J15
M15
480V BUS-E2
52/26B DB-50 500A
10A
SWGR
125V DC SOURCE
26BP
26BC
26BG
26BA
26BT
26BT1
26BN
ALM SW
271X3 /E2
272X3 E2
UNIT 27A
UNIT 26 B
SH. 550
Y0601D COMPTR INPUT
120 VAC SUPPLY
BH-351 ELAPSED TIME METER
RESIDUAL HEAT REMOVAL PUMP "B"
NOTE.
1/* SEE SWITCH DEV. No. 22. SHT 37 DET. E *= RHRP-B.
System Review M.C.M. 3-26-75
ECN-5597 TURBA 2-11-70
ECN-4737
S.O. CPL-380
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG
RESIDUAL HEAT REMOVAL PUMP 'B'
J. MATTHEWS
500B452
SHEET- 216
7 6 5 4 3 2 1 SUB
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.



Westinghouse Electric Corporation

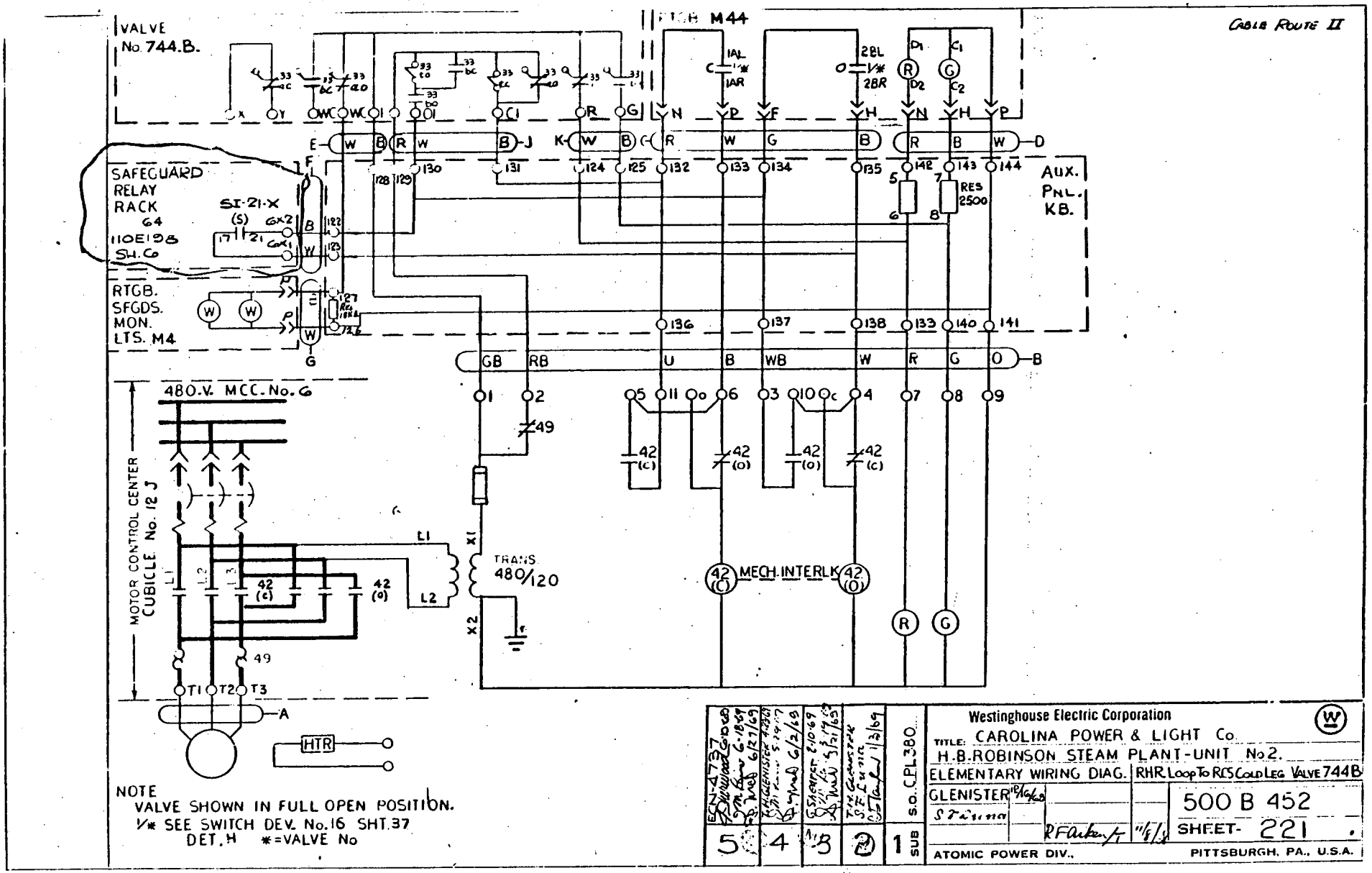
TITLE: CAROLINA POWER & LIGHT Co.
H.B. ROBINSON STEAM PLANT-UNIT No 2.
ELEMENTARY WIRING DIAG. RHR LOOP TO RCS. COLD LEG VALVE 744A

S.O. CPL380

500 B 452

SHEET- 220

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

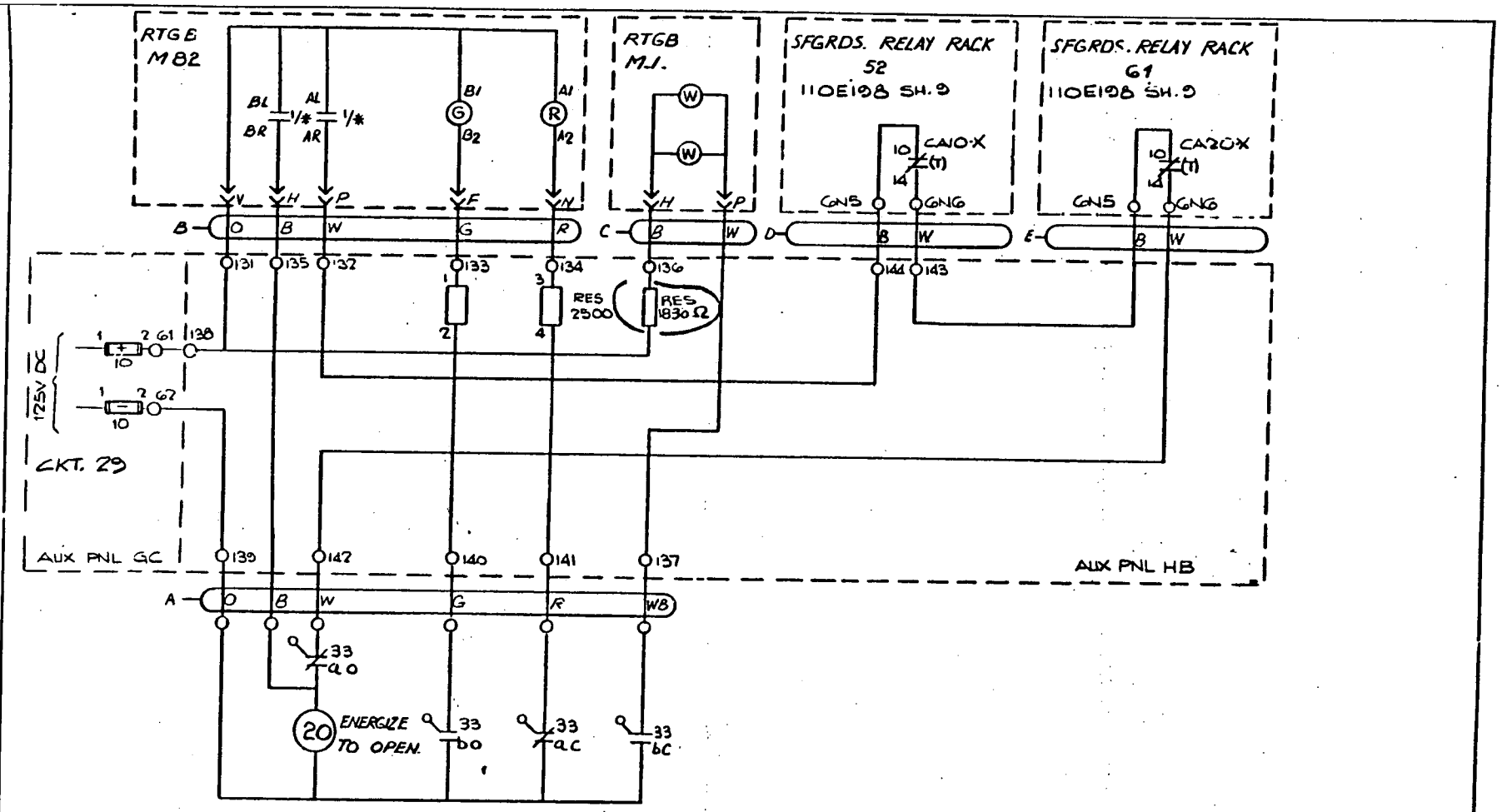


ECN-4737 Issued 6-18-69 Rev 6/27/69	GLENISTER 4/30/69 Issued 6/2/69	G. SKINNER 8/10/69 Issued 5/21/69	T.H. GRAMSTAD S.E. LUNA Issued 11/2/69	SO. C.P.L. 380.	Westinghouse Electric Corporation
5	4	3	2	1 SUB	ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

TITLE: CAROLINA POWER & LIGHT Co.
H.B. ROBINSON STEAM PLANT-UNIT No. 2.
ELEMENTARY WIRING DIAG. | RHR Loop To RCS Cold Leg Valve 744B

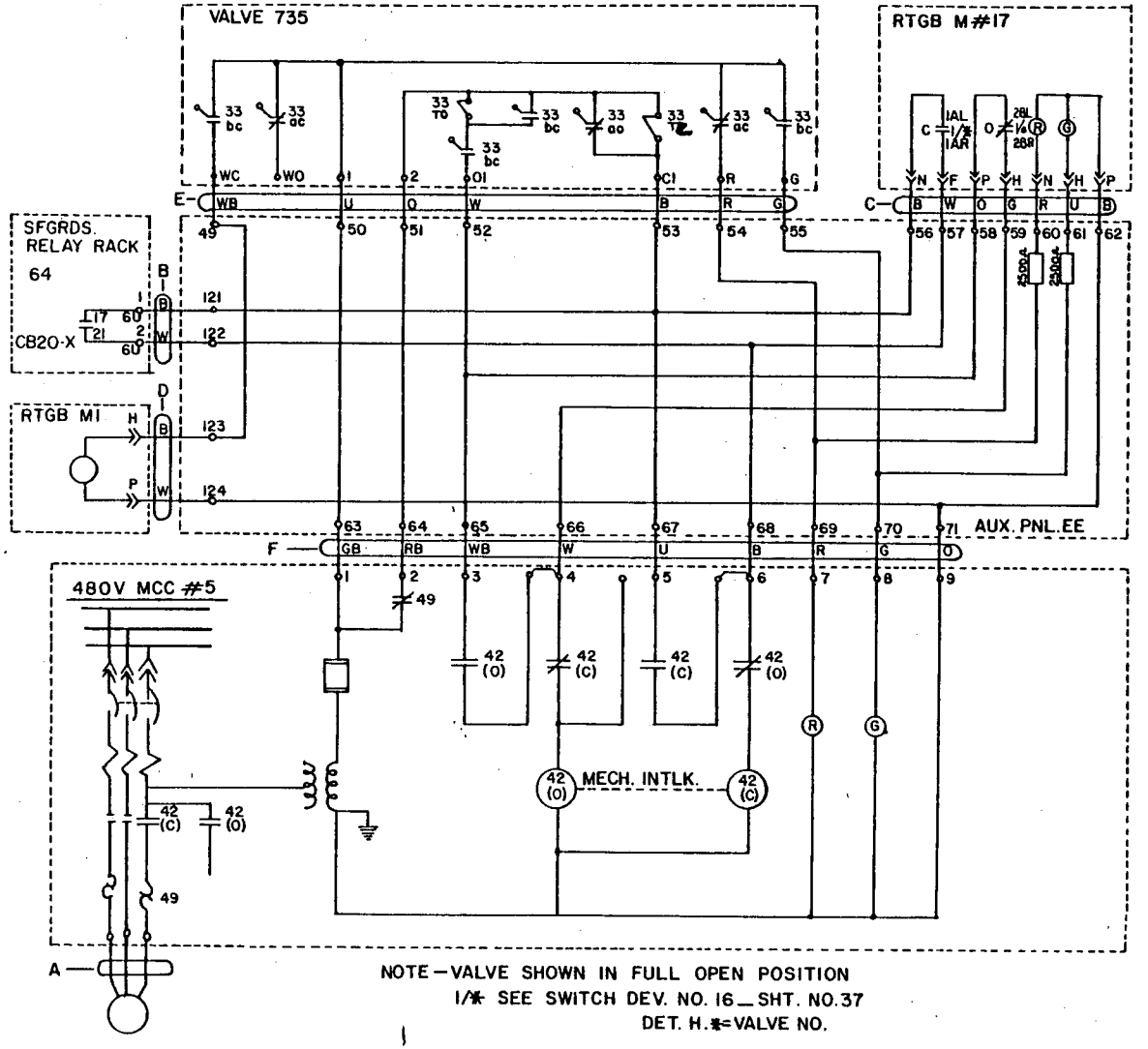
GLENISTER 11/6/69 — Strisna — R F Aukerman 11/6/69

500 B 452
SHEET- 221



NOTE.
VALVE SHOWN IN FULL OPEN POSITION
1/* SEE SWITCH DEV No. 14. SHT 37
DET. H. * = VALVE.

ECN-1601	ECN-4971	ECN-4737	S.O. CPL. 380	Westinghouse Electric Corporation
4	3	2	1	TITLE: CAROLINA POWER & LIGHT Co.
				H.B. ROBINSON STEAM PLANT- UNIT No 2
				ELEMENTARY WIRING DIAG. EXCESS LETDOWN HX. OUTLET ISOL VA 739
				500B452
				SHEET- 229
				ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



DRAWN BY:	WAR	4-2-75			E				
CHECKED BY:					7				
APPROVED BY:		DATE			6	4-2-75	WR	RED AWN MOD. 1F11	
					REV.	DATE	BY	MOD.	

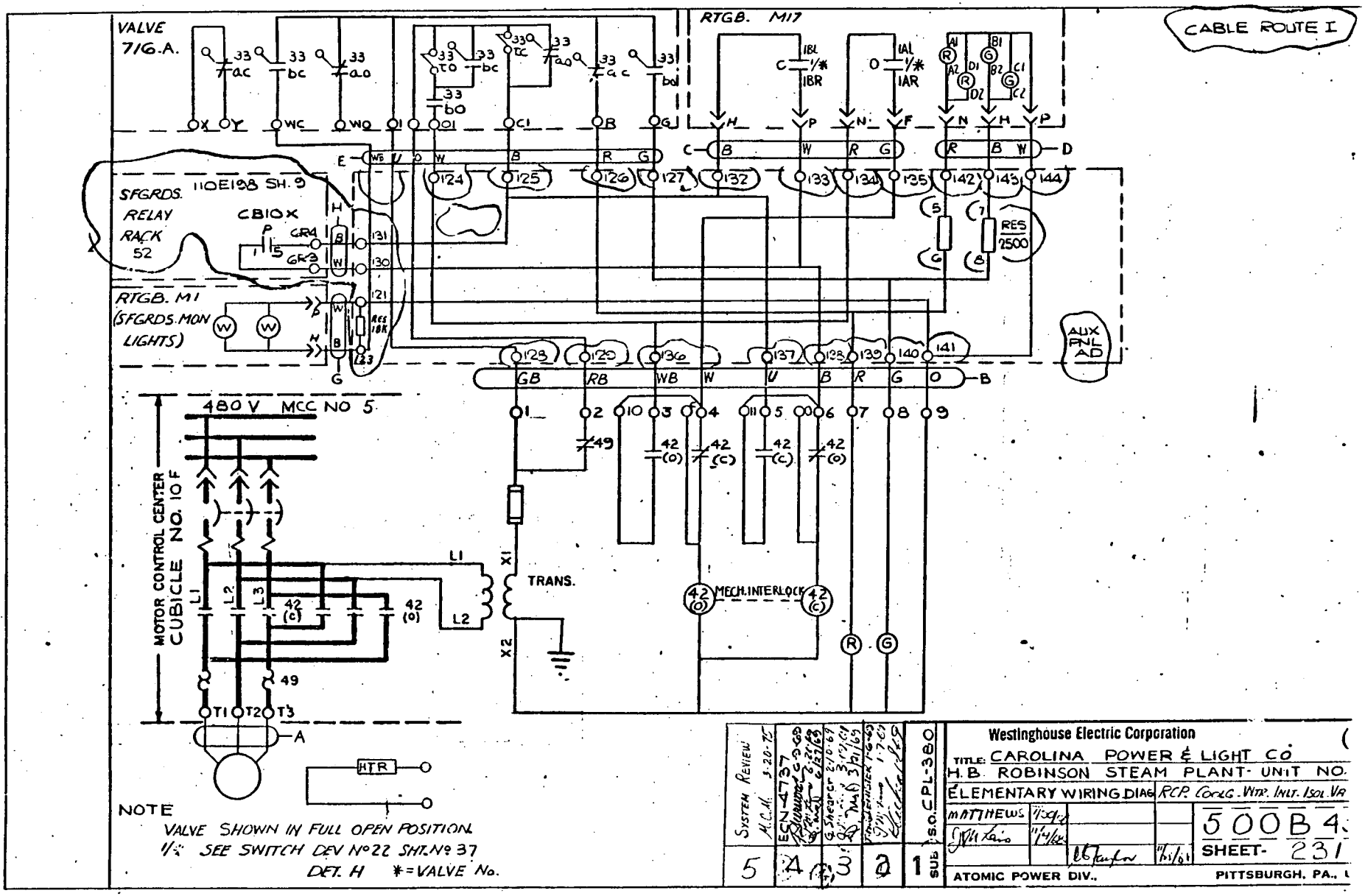
CAROLINA POWER & LIGHT CO.
RALEIGH, N. C.

H.B. ROBINSON — UNIT NO. 2

RCP. THERM. BARR. CLNG. WTR. VA. 735

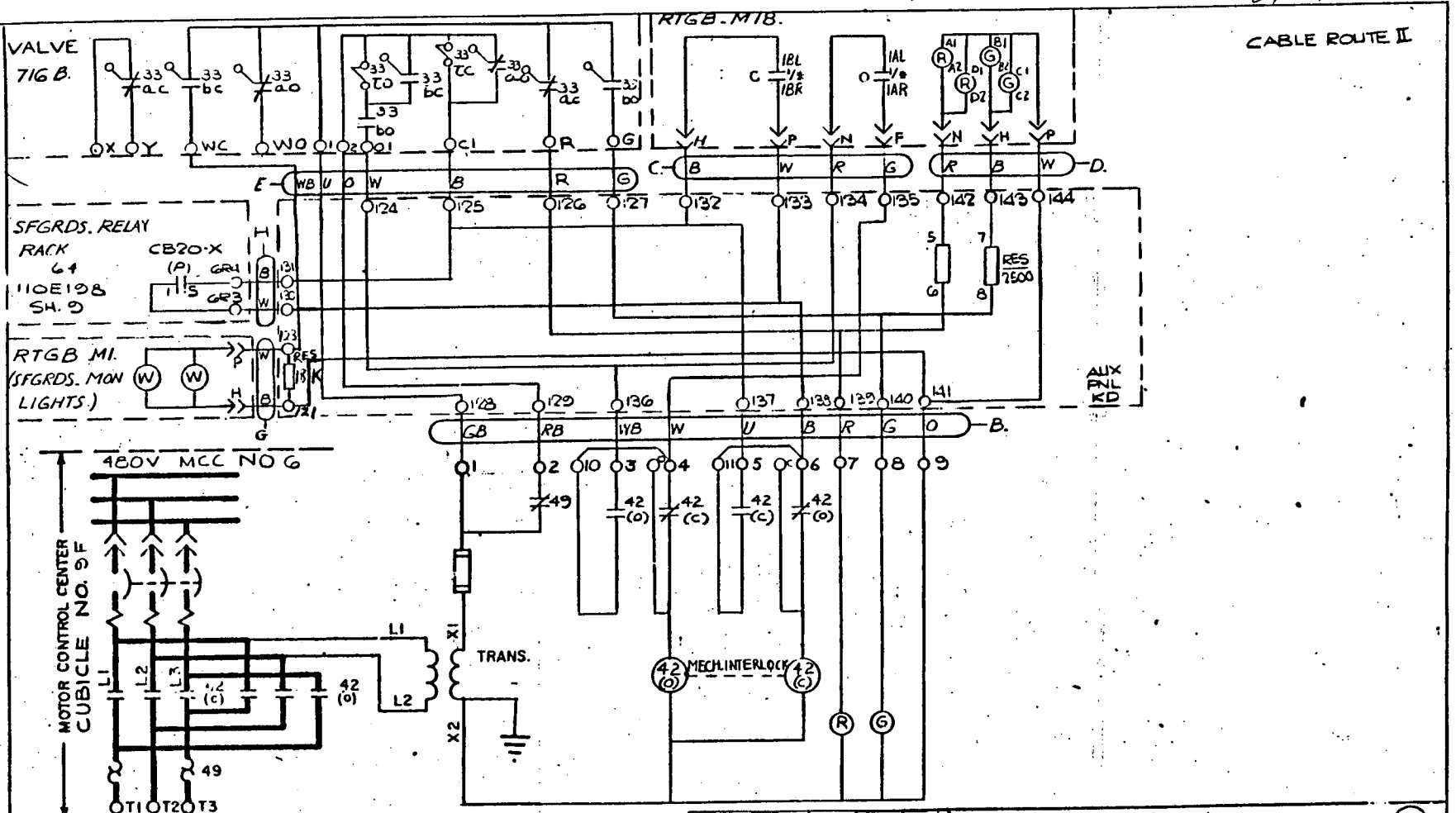
LOCATION

DRAWING NO. 500B452 SHEET NO. 230


CABLE ROUTE I
VALVE 716.A.
RTGB. M17
110E198 SH. 9
SFGRDS. RELAY RACK 52
CB10X
RTGB. M1 (SFGRDS. MON LIGHTS)
AUX PNL AD
480 V MCC NO 5
MOTOR CONTROL CENTER CUBICLE NO. 10 F
TRANS.
MECH. INTERLOCK
HTR
NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV N°22 SHT. N° 37
DET. H */=VALVE No.
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO
H.B. ROBINSON STEAM PLANT- UNIT NO.
ELEMENTARY WIRING DIAG
RCP Contg. Wtr. Inlt. Isol. Va
ATOMIC POWER DIV.
PITTSBURGH, PA.,
SHEET- 231

1.32

OK TWF-14-'78



Westinghouse Electric Corporation

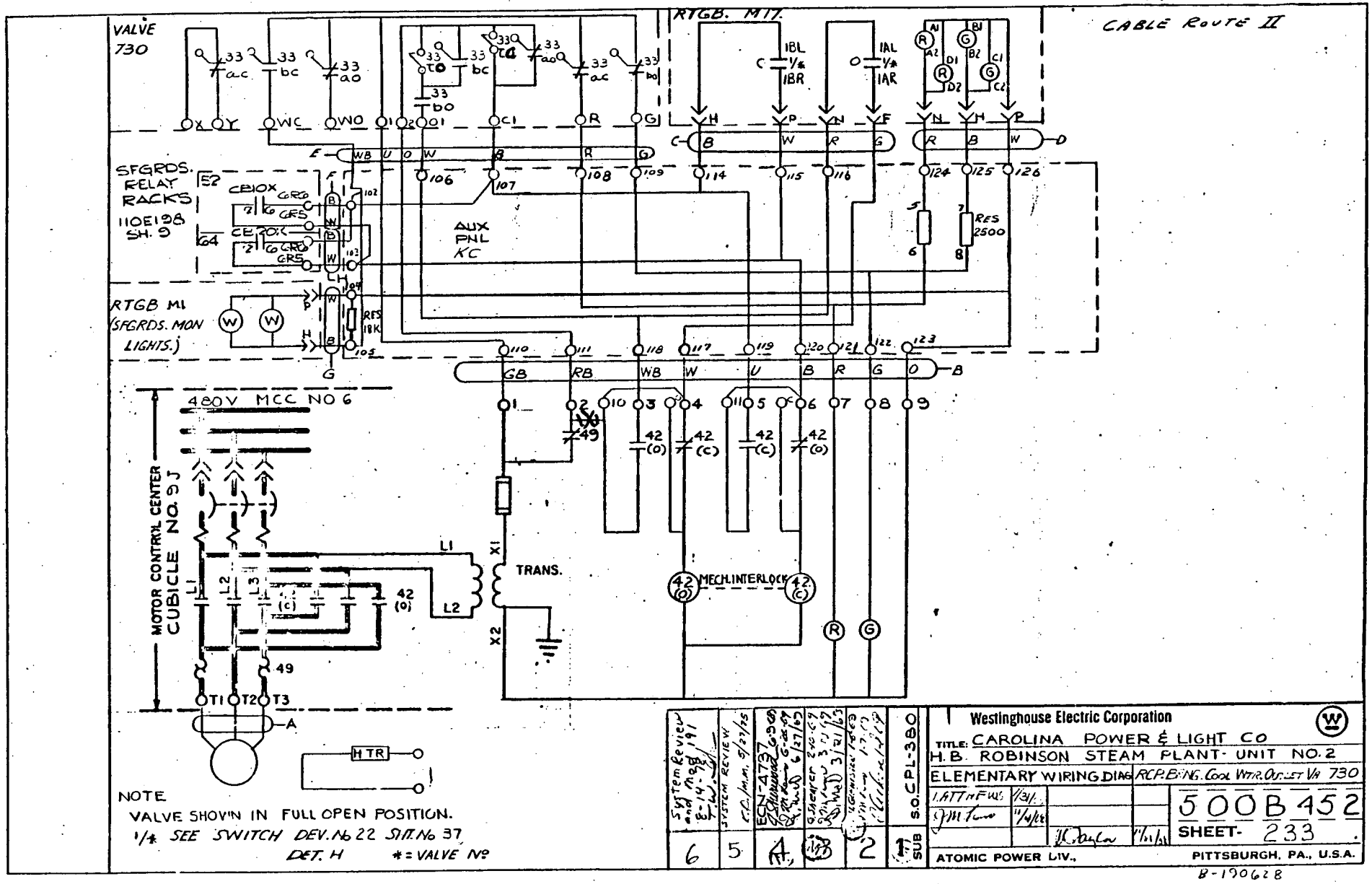
TITLE: CAROLINA POWER & LIGHT CO
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG. RCP COOLG. WTR. INLT. ISOL VA 716B.

5	4	3	2	1 SUB	SO.C.PL-380	500B452

SHEET- 232

ATOMIC POWER DIV. PITTSBURGH, PA., U.S.A.

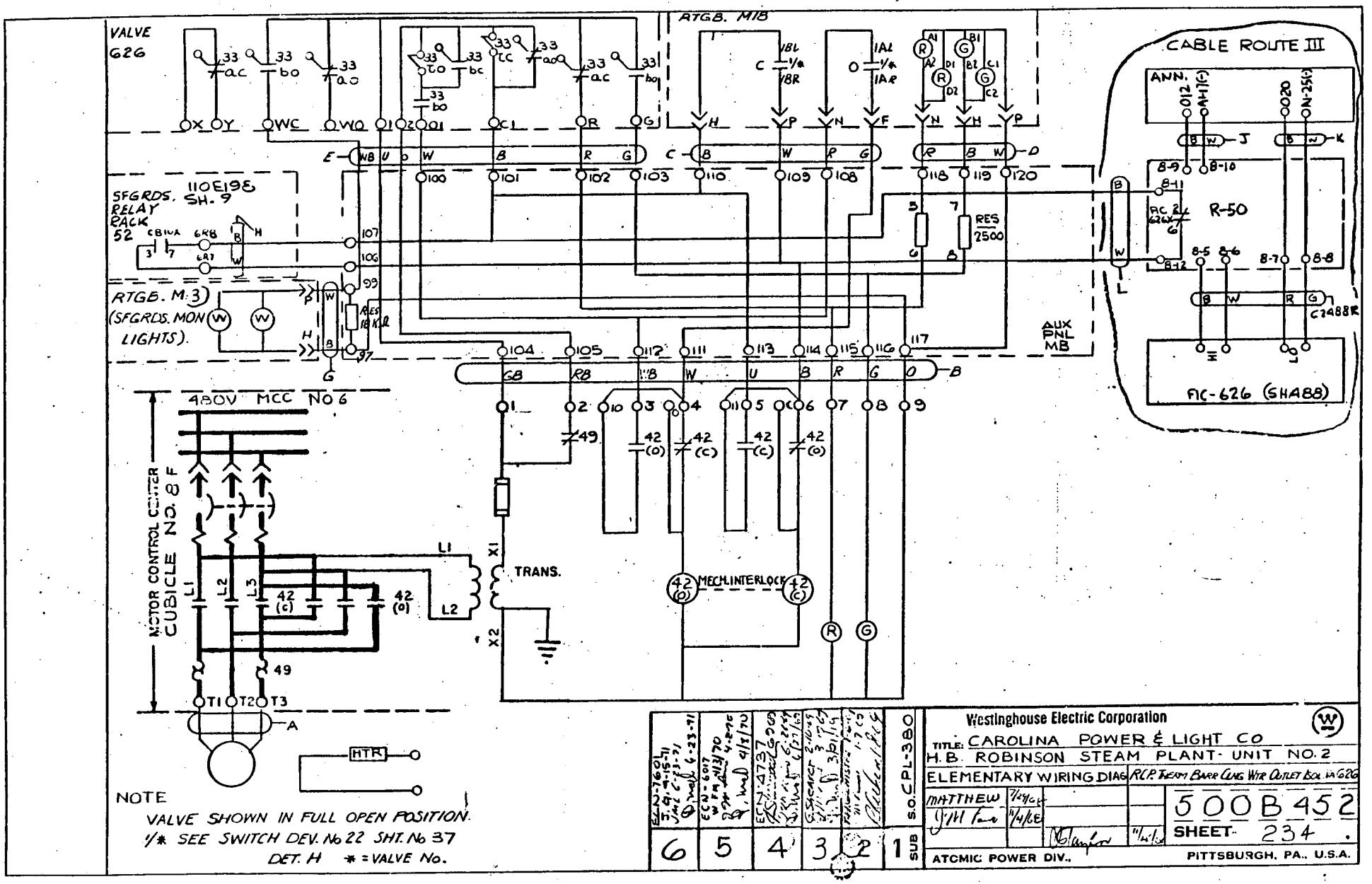
OK TW 8-14-78

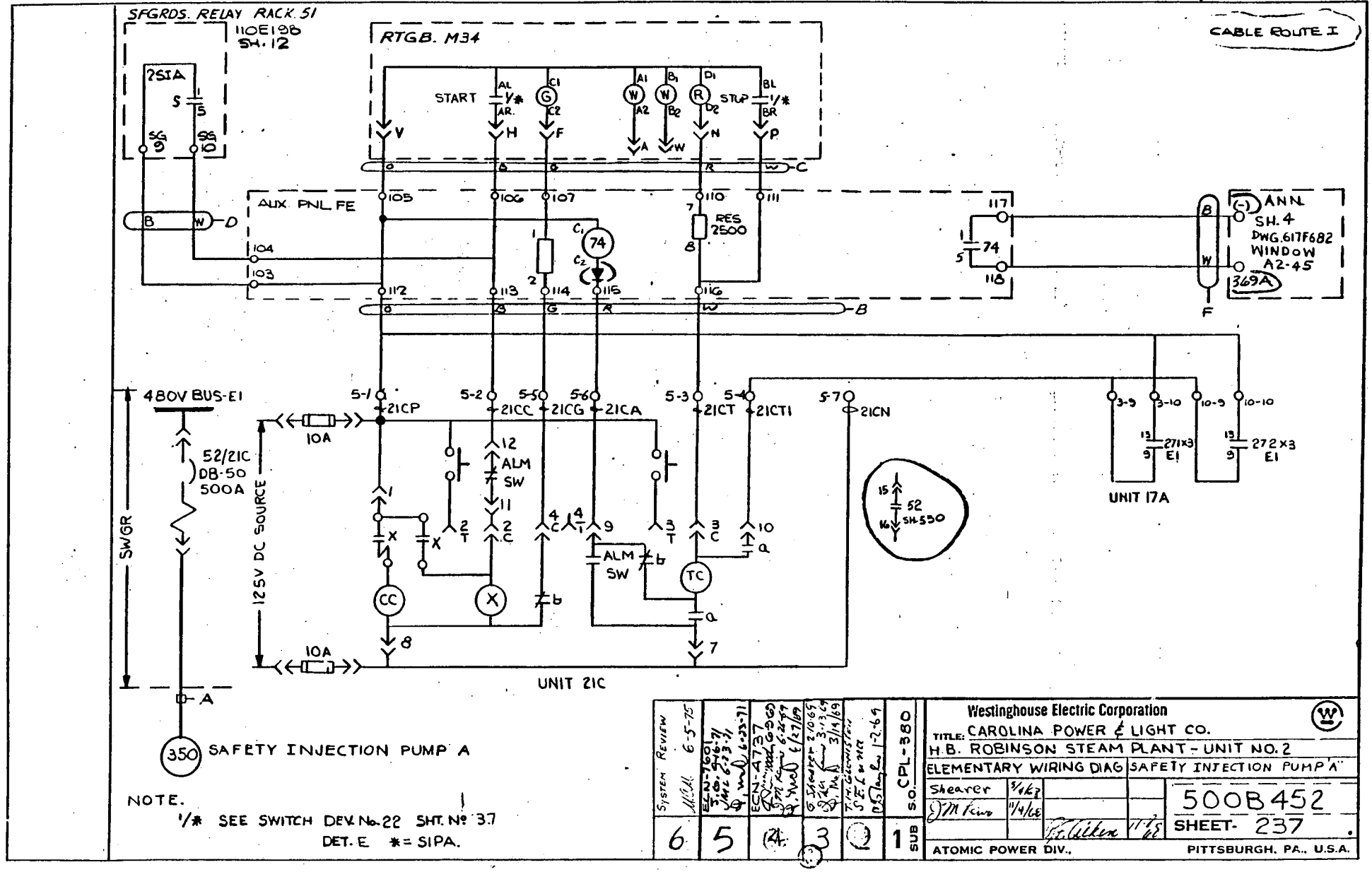


System Review and Mgt 8-14-78	ECN-4737				S.O. CPL-380	Westinghouse Electric Corporation
SYSTEM REVIEW						TITLE: CAROLINA POWER & LIGHT CO
						H. B. ROBINSON STEAM PLANT - UNIT NO. 2
						ELEMENTARY WIRING DIAG. RCP BKG. COOL WTR. OUTLET VA 730
						500B452
6	5	4	3	2	1 SUB	SHEET- 233

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

B-190628


VALVE
626
RTGB. M18
CABLE ROUTE III
ANN.
R-50
FIC-626 (SHA88)
SFGRDS. 110E198 SH. 9
RELAY RACK 52
RTGB. M3
(SFGRDS. MON LIGHTS).
AUX PNL MB
480V MCC NO 6
MOTOR CONTROL CENTER CUBICLE NO. 8 F
TRANS.
MECH. INTERLOCK
HTR
NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. No 22 SHT. No 37
DET. H * = VALVE No.
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO
H.B. ROBINSON STEAM PLANT- UNIT NO. 2
ELEMENTARY WIRING DIAG RCP Therm Barr Cling Wtr Outlet Bol in 626
500B452
SHEET 234
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.



NOTE.
1/* SEE SWITCH DEV. No. 22 SHT. No. 37
DET. E *= SIPA.

System Review 6-5-75	ECN-7601 5.0. 6-23-71	ECN-4737 6-24-69	6 Shearer 3-10-69 3-13-69 3/14/69	T.H. Lemmon 12-2-69	CPL-380	Westinghouse Electric Corporation
6	5	4	3	2	1 SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT - UNIT NO. 2

ELEMENTARY WIRING DIAG | SAFETY INJECTION PUMP A

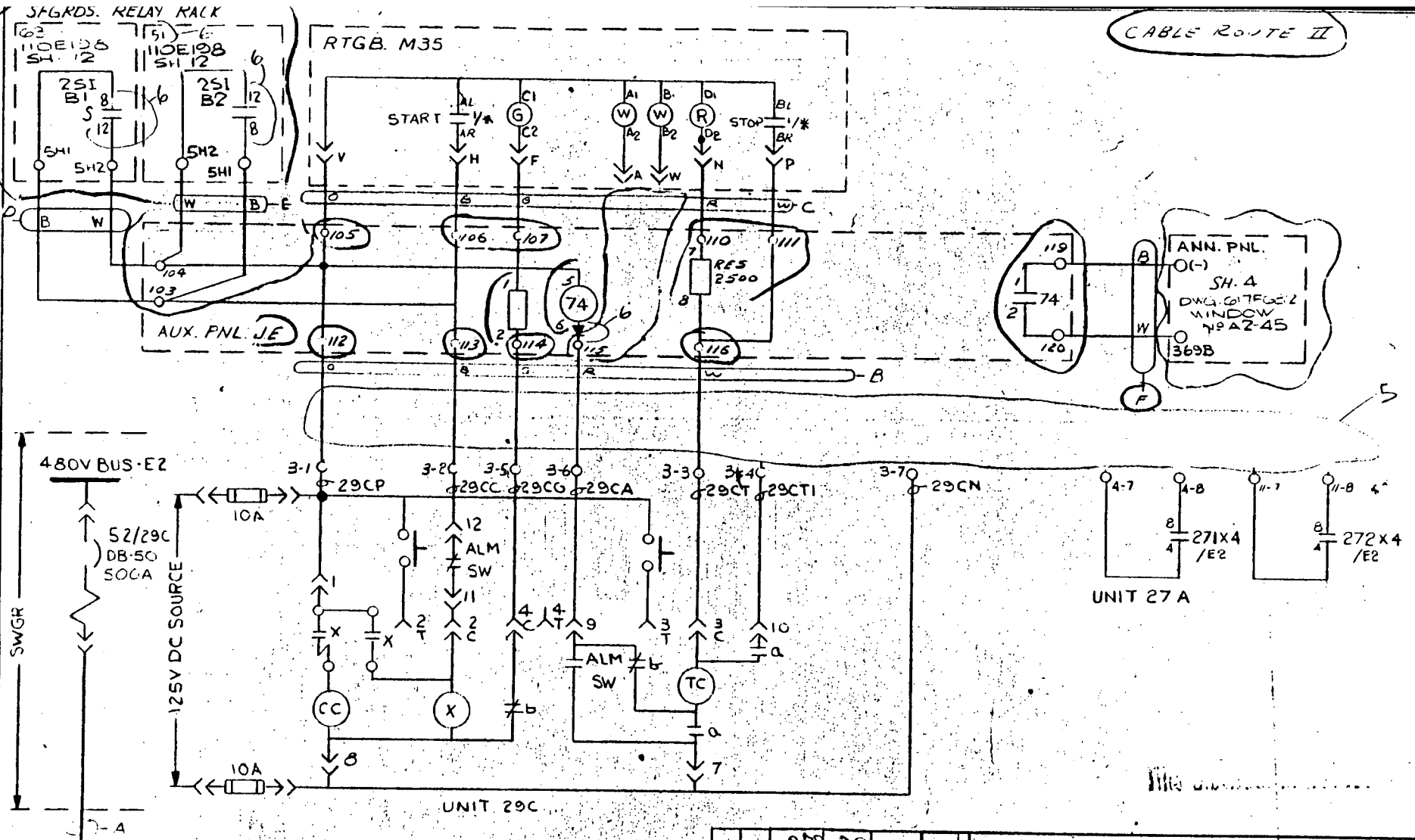
Shearer 5/16/67
J.M. Fiore 11/4/66
F.C. Aitken 11/15/66

500B452
SHEET- 237

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

8/8/69
118

CABLE ROUTE II



NOTE.
1/* SEE SWITCH DEV. No. 22 SHT. No. 37
DET. E1 *= SIPB.

FLD 8-26-70 GSC As Built	FLD 8-8-70 GSC As Built	ECN-4737				S.O. CPL-380	Westinghouse Electric Corporation
6	5	4	3	2	1	SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT - UNIT NO. 2

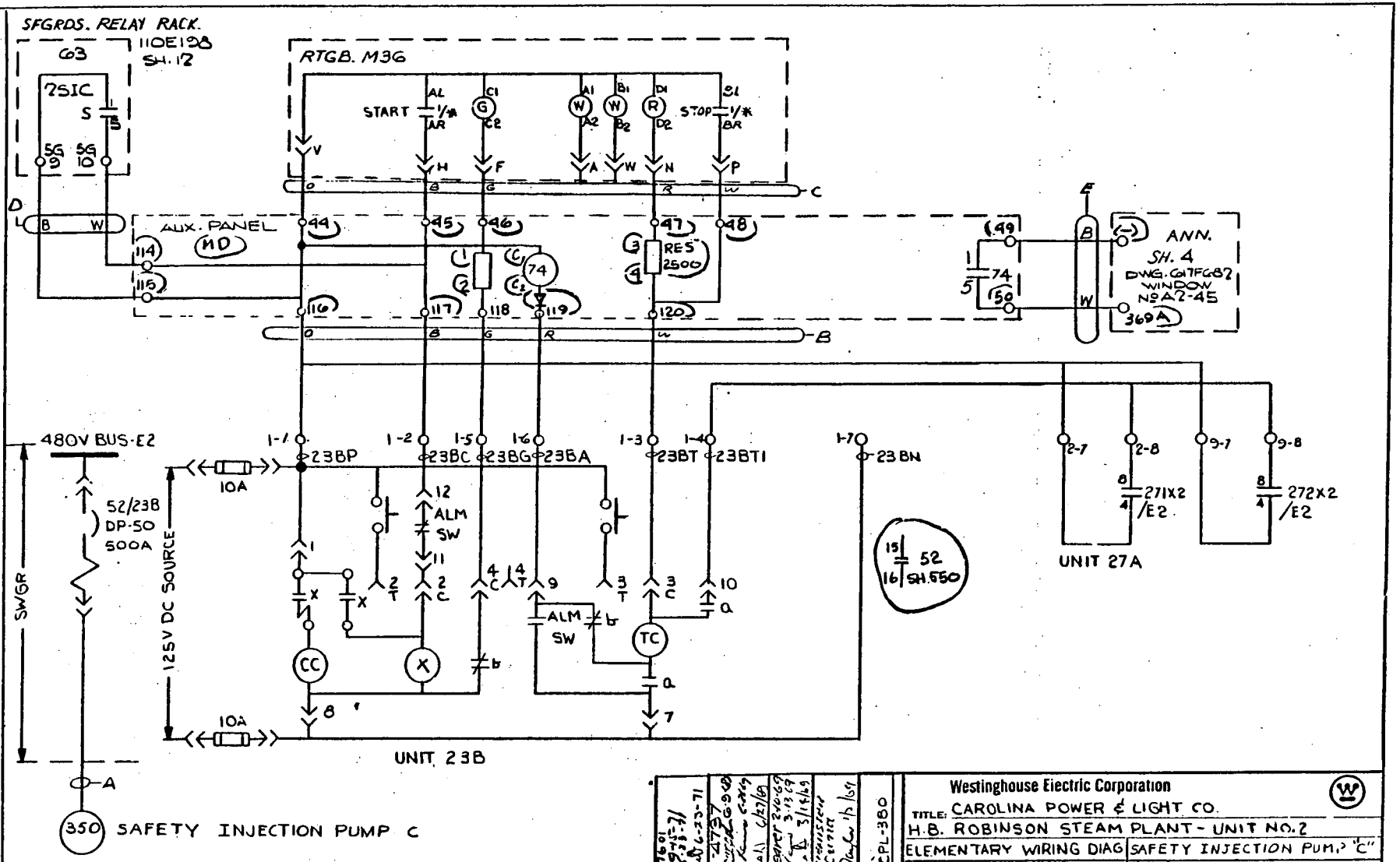
ELEMENTARY WIRING DIAG. — SAFETY INJECTION PUMP B"

Shearer 9/16/68 — J.M. Kuss 11/4/68 — F. Walker 11/67

500B 452

SHEET 238

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



NOTE.
1/* SEE SWITCH DEV. No. 22 SHT. No. 37
DET. E * = SIPC.

ECN-3601	ECN-4737	G. Shearer 2-10-69	T.H. Grimsley 2-11-69	S.O. CPL-380
5	4	3	2	1 SUB

Westinghouse Electric Corporation

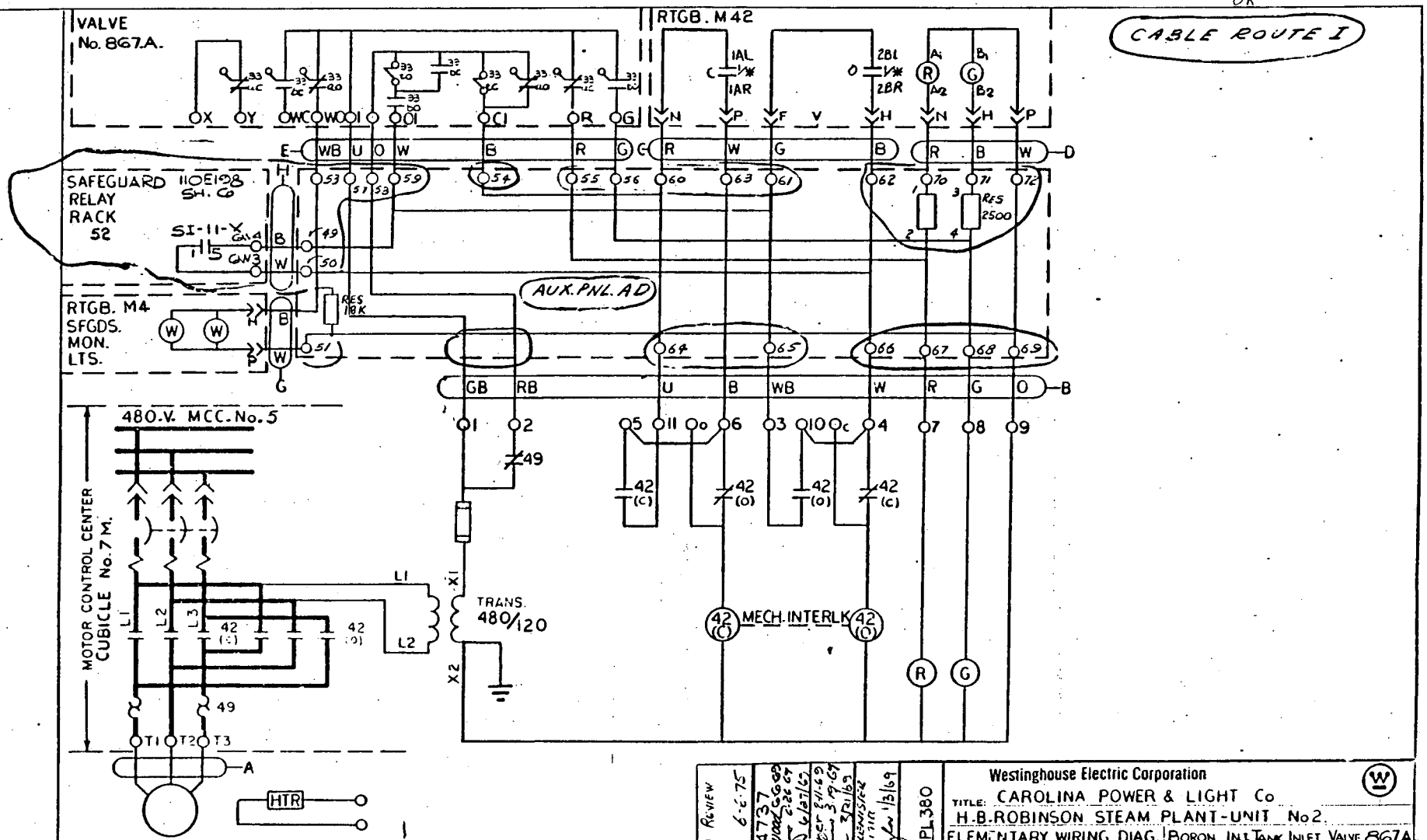
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG | SAFETY INJECTION PUMP "C"

Shearer	9/9/68			500B452
	11/4/68			SHEET- 239
		F. Gilen	11/8	

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK

CABLE ROUTE I



System Review MCH 6-6-75	EGN-4737				S.O. CPL 380
5	4	3	2	1	SUB

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT Co
H.B. ROBINSON STEAM PLANT-UNIT No 2.
ELEMENTARY WIRING DIAG. | BORON INJ. TANK INLET. VALVE 867A

GL ENISTER 12/1/60

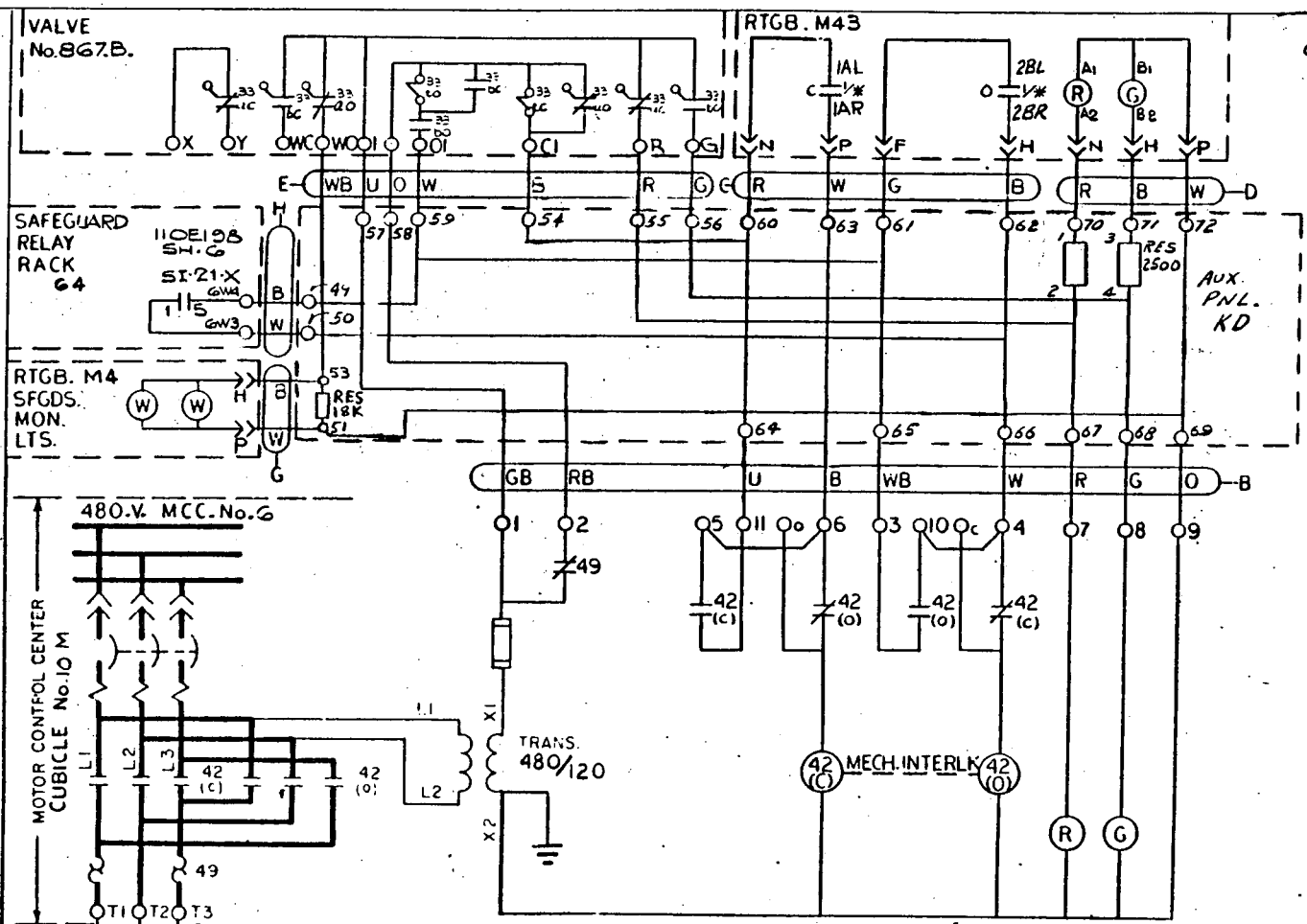
500 B 452

SHEET- 243

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK TW 8-14-78

CABLE ROUTE II



NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. No.16 SHT.37 DET.H *=VALVE No

System Review and Mod 8-14-78 TW	ECN-4737				S.O. CPL380
5	4	3	2	1	SUB

Westinghouse Electric Corporation

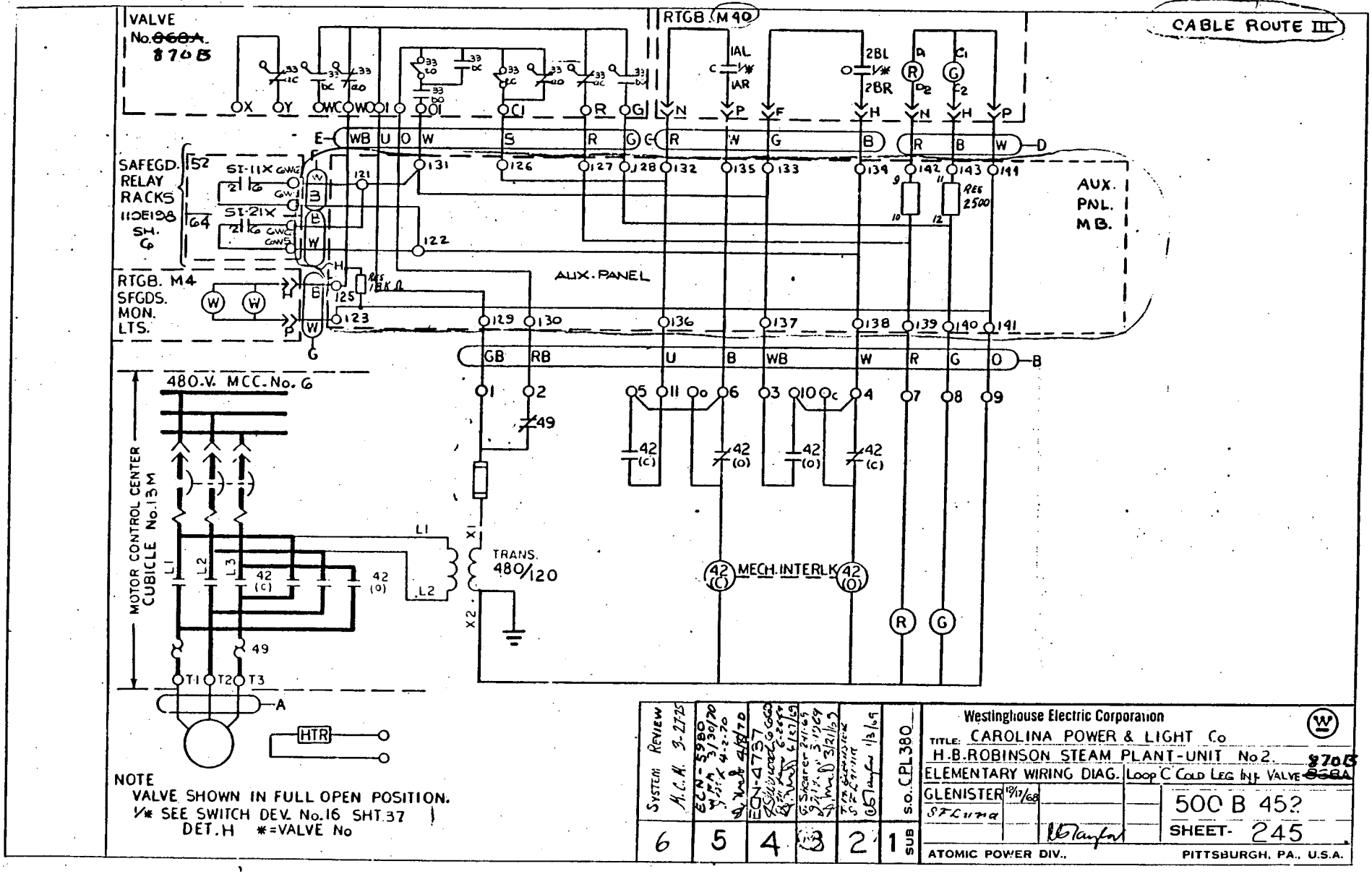
TITLE: CAROLINA POWER & LIGHT Co.
H.B.ROBINSON STEAM PLANT-UNIT No.2,
ELEMENTARY WIRING DIAG. BORON INJ TANK INLET VALVE 867

GLENISTER 10/1/68
STD. DIA

500 B 452
SHEET- 244

ATOMIC POWER DIV. PITTSBURGH, PA., U.S.A.

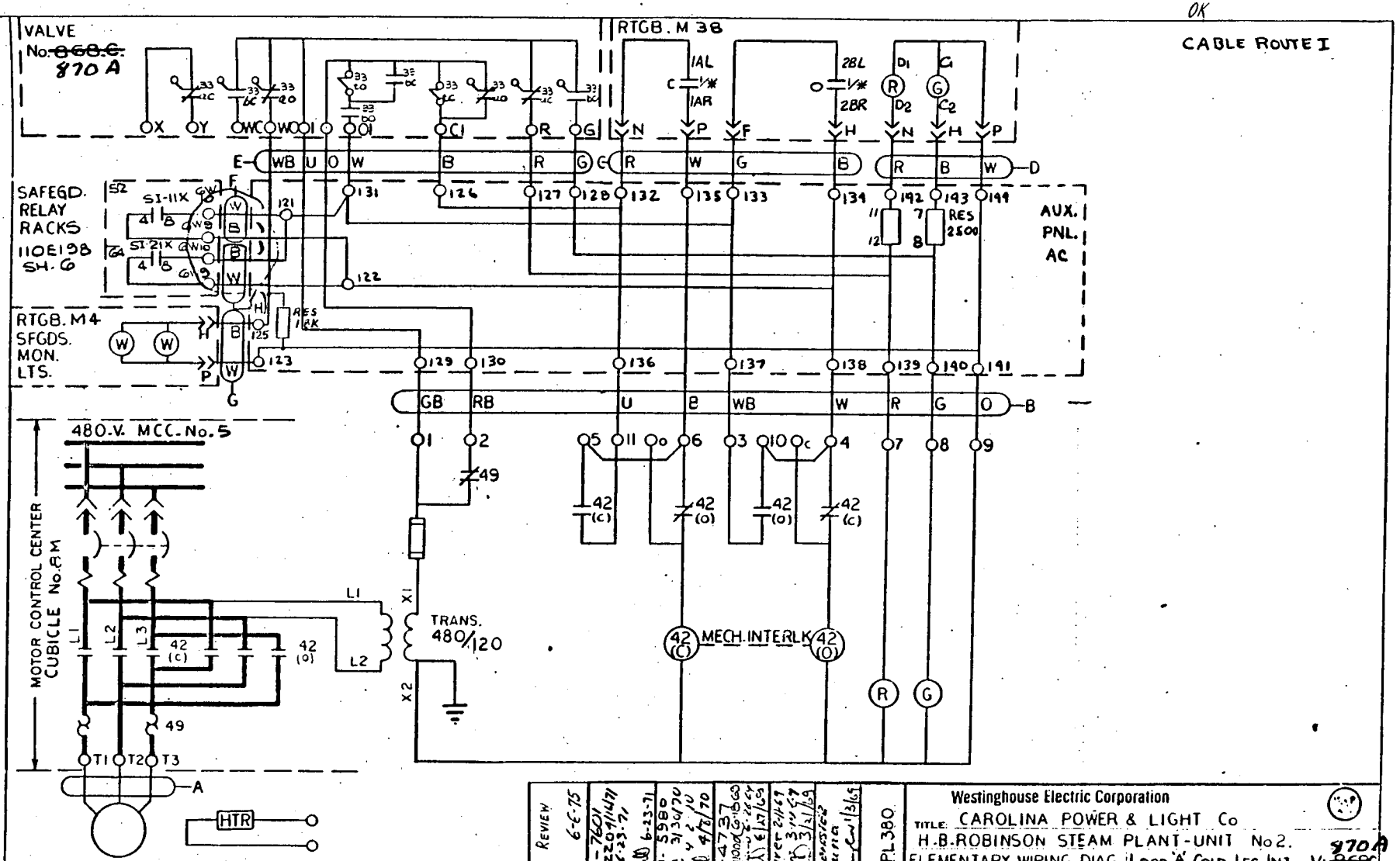
240


VALVE No. 8705
RTGB. M40
CABLE ROUTE III
SAFEGD. RELAY RACKS 11DE198 SH. 6
RTGB. M4 SFGDS. MON. LTS.
AUX. PANEL
AUX. PNL. M.B.
480 V. MCC. No. 6
MOTOR CONTROL CENTER CUBICLE No. 13M
TRANS. 480/120
MECH. INTERLK
HTR
NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. No. 16 SHT. 37 DET. H *=VALVE No
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT Co
H.B. ROBINSON STEAM PLANT-UNIT No 2. 8705
ELEMENTARY WIRING DIAG. Loop C Cold Leg Inj. Valve 8818A
GLENISTER 11/17/68
SFLima
500 B 452
SHEET- 245
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.
S.O. CPL 380

B A A O A A E

OK

CABLE ROUTE I



NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. No. 16 SHT. 37 DET. H *=VALVE No.

SUB	S.O. C.P.L. 380						
1	2	3	4	5	6	7	
	11/3/67	3/1/68	ECN-4737	ECN-5980 3/30/70	ECN-7601 DRG 220911471 Inst. 6-23-71	6-6-75	System Review

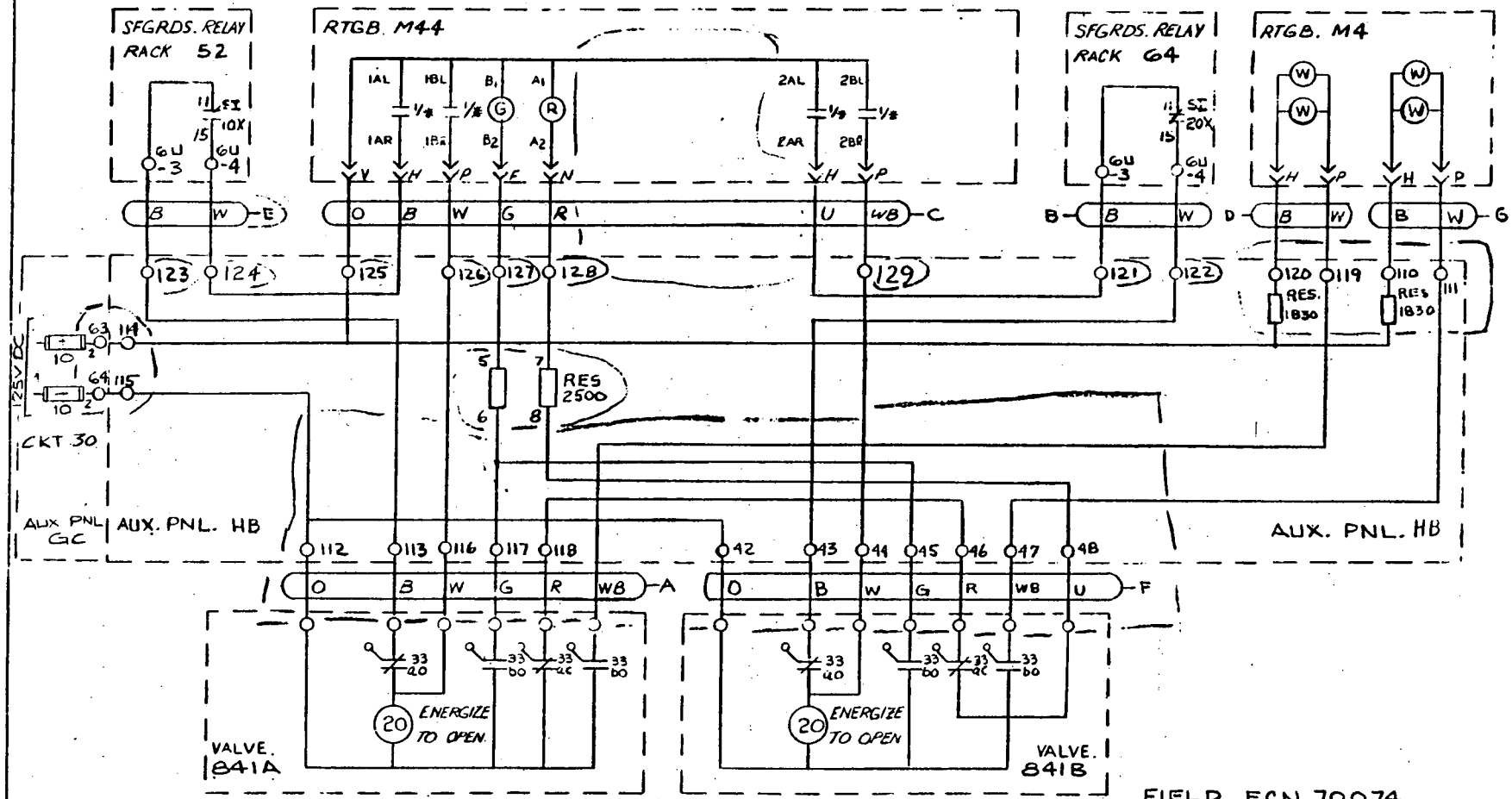
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT Co
H.B. ROBINSON STEAM PLANT - UNIT No 2.
ELEMENTARY WIRING DIAG. Loop 'A' Cold Leg Inj. Valve ~~868C~~ 870A

GLENISTER 11/60
SF Lewis
R B Clayton

500 B 452
SHEET- 247

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



FIELD ECN 70074

NOTE.
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. NO 24, DET. "H", (SHT. 37)
SI10X AND SI20X DWG. 110E198, SHEET 6.
* = VALVE NO.

SUPERCEDES SUB 2
500B452, SH. 250

SYSTEM REVIEW	ECN-760	ECN 5940	ECN 5912	S.O. CEL 3.30
6	5	4	3	1 SUB

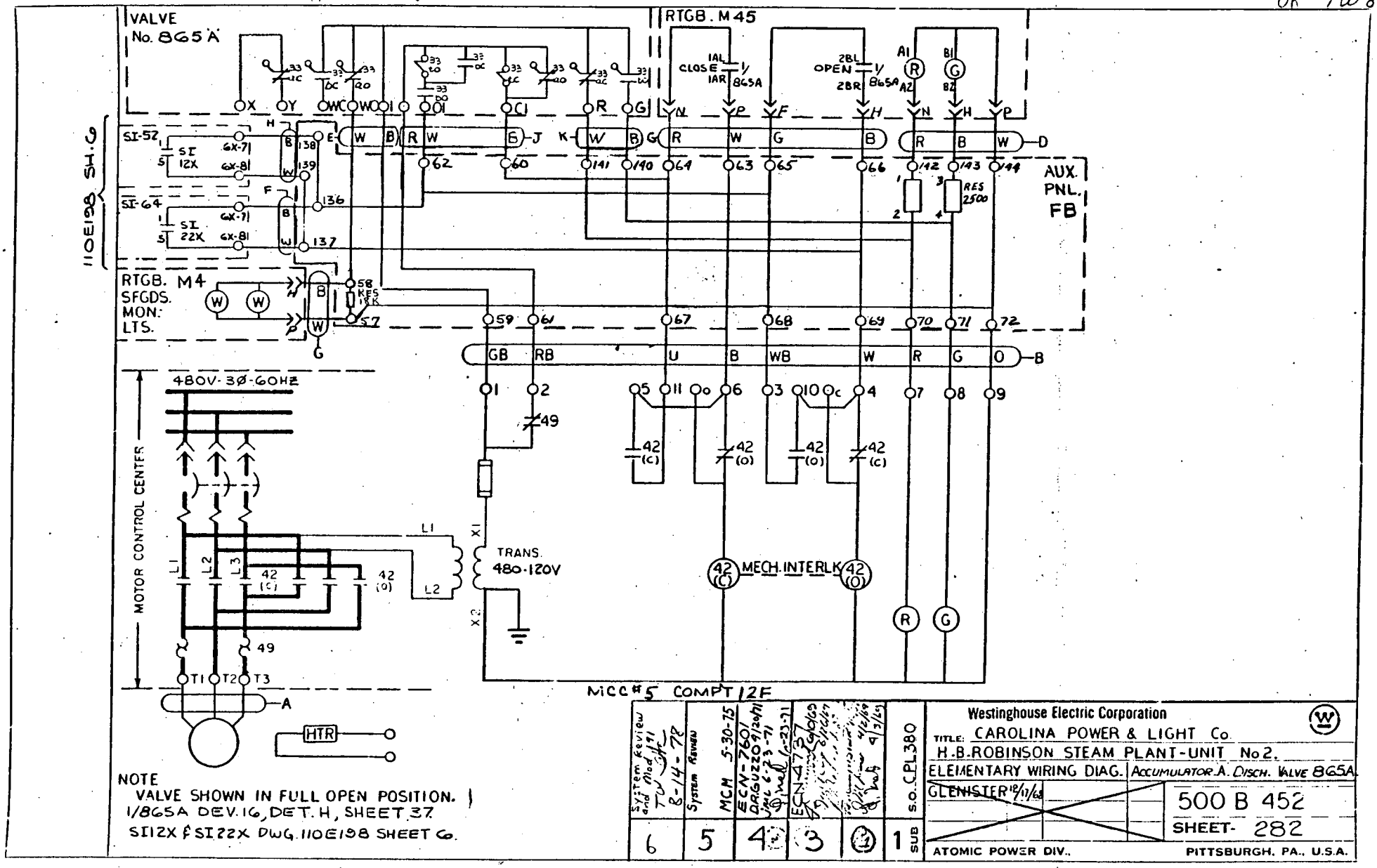
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT Co
H. B ROBINSON STEAM PLANT - UNIT No 2
ELEMENTARY WIRING DIAG. BORON INJ. TK. OUT RECIRC. VA 841A/B

500B452.
SHEET- 250

ATOMIC POWER DIV. PITTSBURGH, PA., U.S.A.

OK TW 8-14-



NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/865A DEV. 16, DET. H, SHEET 37
SI12X & SI22X DWG. 110E198 SHEET 6.

System Review and Mod 1/1 TW 8-14-78	System Review MCM 5-30-75	ECN-7601 DRG 12209 4/20/71 JMC 6-23-71	ECN-4737		S.O. CPL 380	
6	5	4	3	2	1	SUB

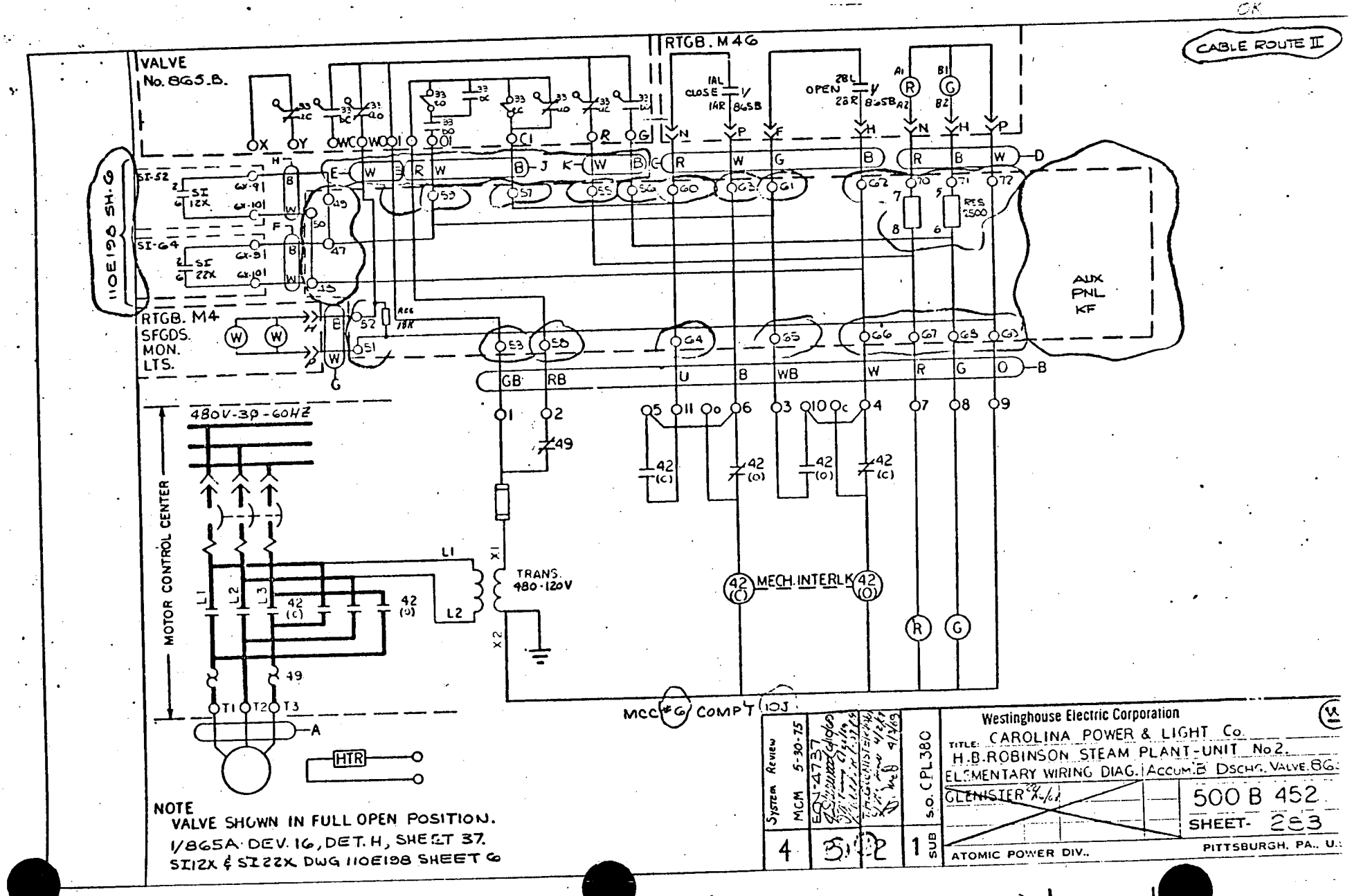
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT Co.
H.B. ROBINSON STEAM PLANT-UNIT No 2.
ELEMENTARY WIRING DIAG. | ACCUMULATOR A. DISCH. VALVE 865A

GLENISTER 12/11/68

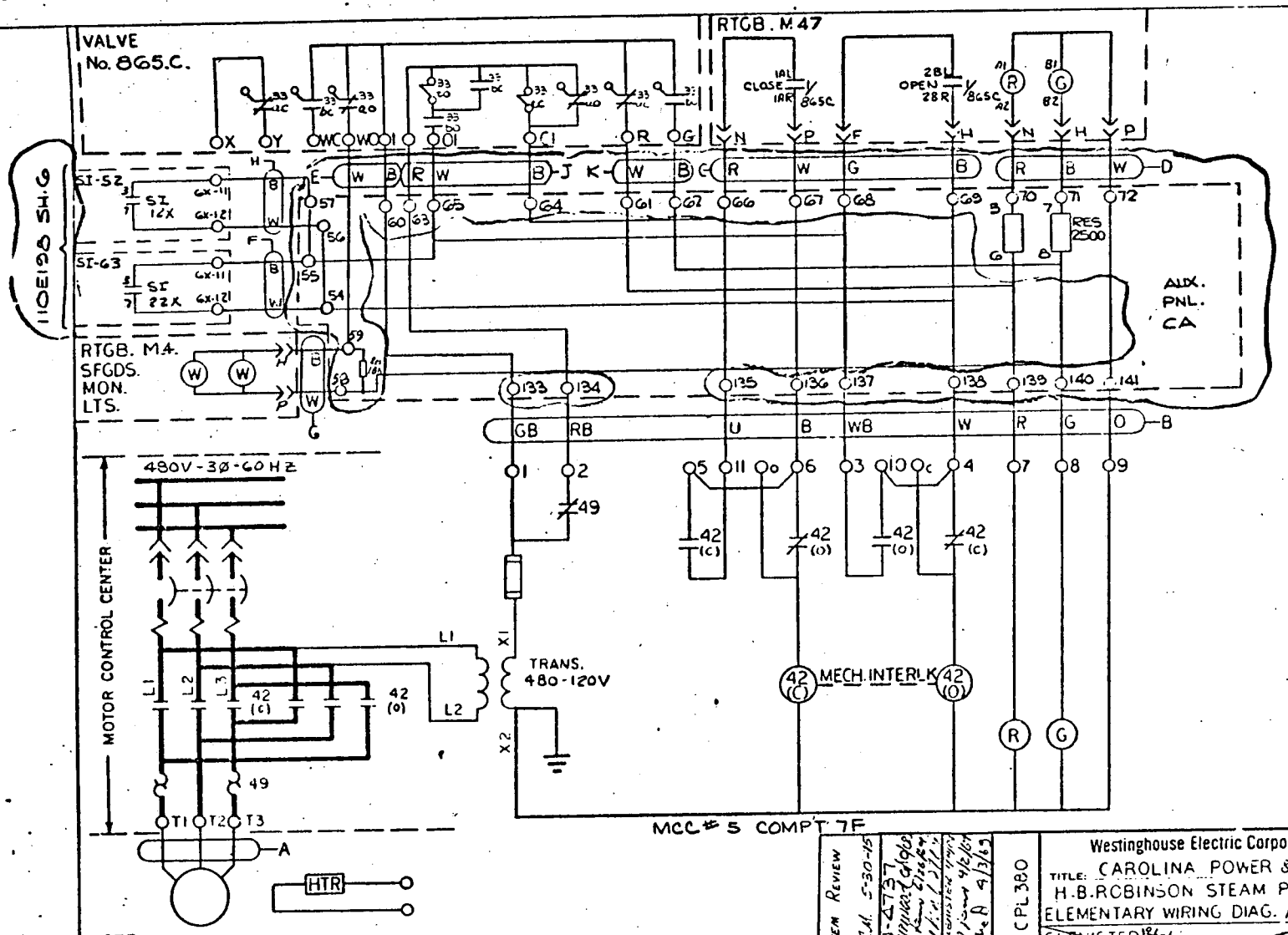
500 B 452
SHEET- 282

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

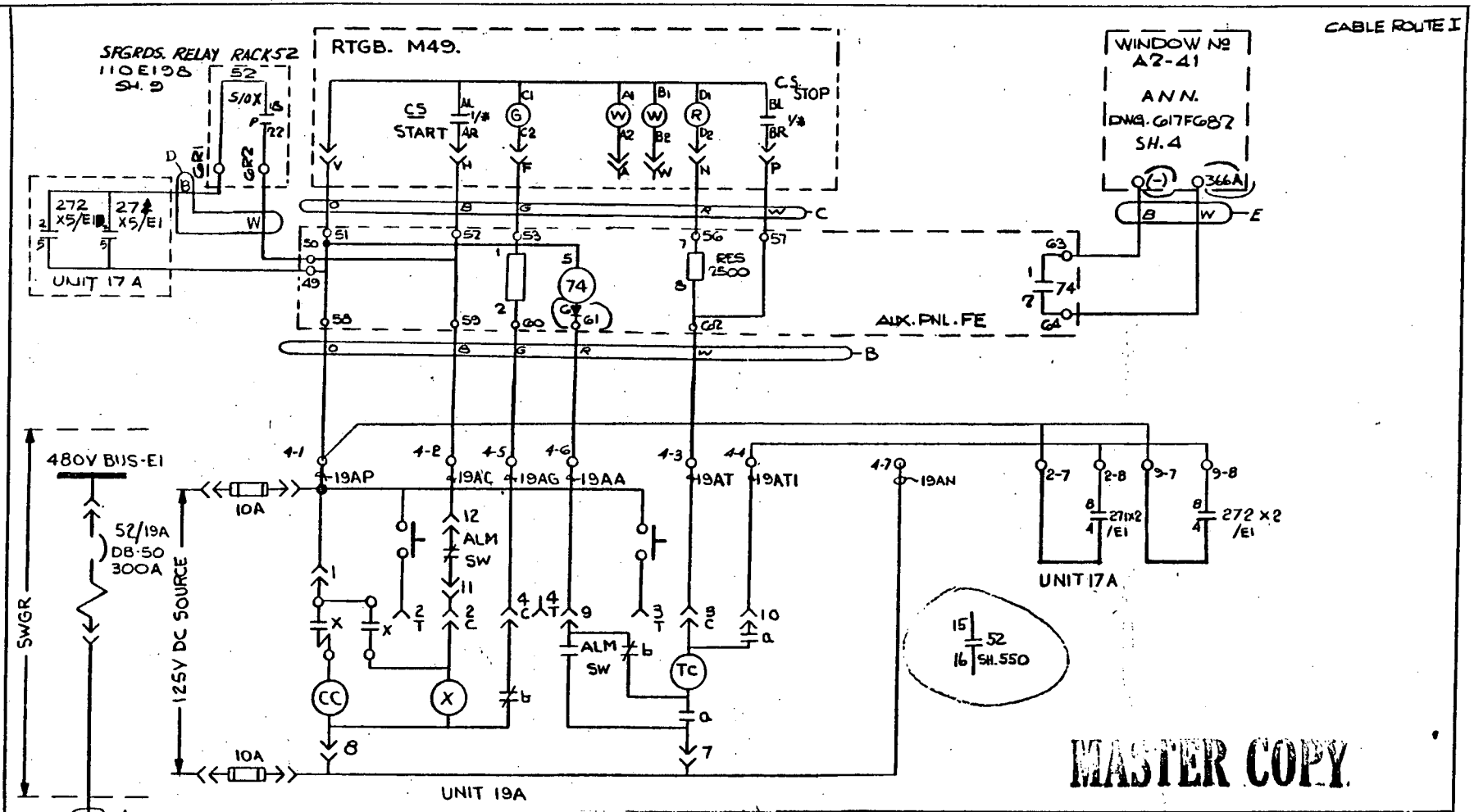

CABLE ROUTE II
VALVE
No. 865.B.
RTGB. M46
1AL CLOSE 1/1AR 865B
2BL OPEN 2/2BR 865B
A1
B1
A2
B2
110E198 SH. 6
SI-52
SI 12X
SI-64
SI 22X
RTGB. M4
SFGDS.
MON.
LTS.
AUX PNL KF
RES. 2500
480V-3P-60HZ
MOTOR CONTROL CENTER
TRANS. 480-120V
MECH. INTERLK
MCC #6 COMPT 10J
HTR
NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/865A DEV. 16, DET. H, SHEET 37.
SI12X & SI22X DWG 110E198 SHEET 6
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT Co.
H.B.ROBINSON STEAM PLANT-UNIT No.2.
ELEMENTARY WIRING DIAG. ACCUM. B DSCHG. VALVE 8G.
GLENISTER
500 B 452
SHEET- 283
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.
System Review
MCM 5-30-75
EQN-4737
S.O. CPL 380
4
SUB 1

OK

CABLE ROUTE IV



SYSTEM REVIEW M.C.H. 5-30-65	ECN-4737 Original 4/9/65 Revised 4/16/65		S.O. CPL 380	Westinghouse Electric Corporation
4	3	M	1 SUB	TITLE: CAROLINA POWER & LIGHT Co. H.B. ROBINSON STEAM PLANT-UNIT No 2. ELEMENTARY WIRING DIAG. ACCUMULATOR C DISCH VALVE. 865
				G1 ENHSIER 4/7/65 — 500 3 452 — SHEET- 294
				ATOMIC POWER DIV. — PITTSBURGH, PA., U.



NOTE.

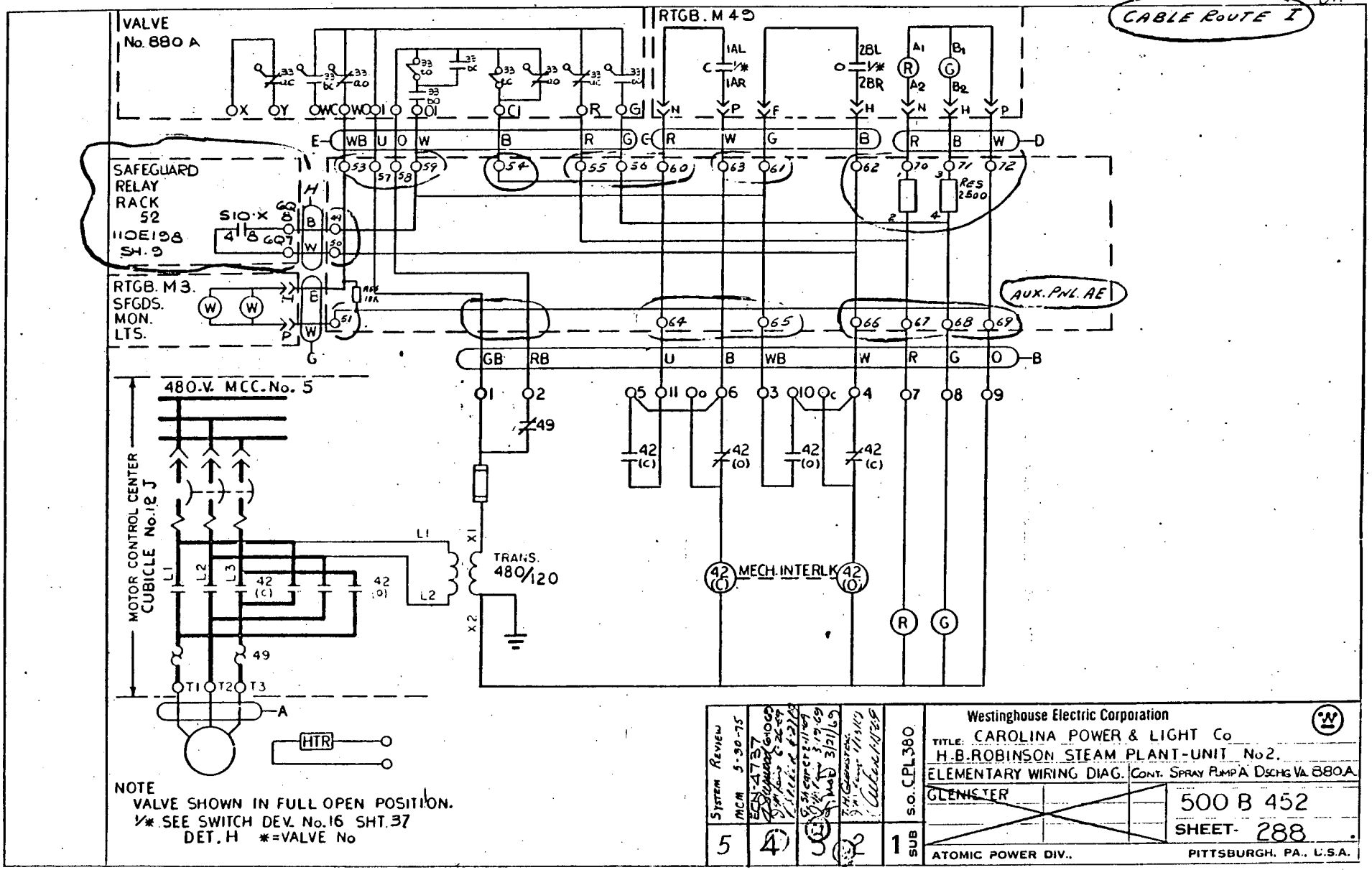
1/* SEE SWITCH DEV. No 22 SHT 37
DET. E */=CSP-A

CPL-DIT. MOD # 84 7 March 74	ECP-013 G.R. STOTT	ECN-7601 Dec 20 1971	ECN-4737	S.O. CPL-380	Westinghouse Electric Corporation
5.	4.	3	2	1 SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT - UNIT NO. 2 ELEMENTARY WIRING DIAG CONTAINMENT SPRAY PUMP A

J.Weaver 5/4/68
3/3/69
3/14/69
500B452
SHEET- 287
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK

CABLE ROUTE I



System Review					
MCM 5-30-75	EN-4737				S.O. CPL 380
5	4	3	2	1 SUB	

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT Co
H.B. ROBINSON STEAM PLANT-UNIT No 2.
ELEMENTARY WIRING DIAG. CONT. SPRAY PUMP A DSCHG VA 880A

GLENSTER

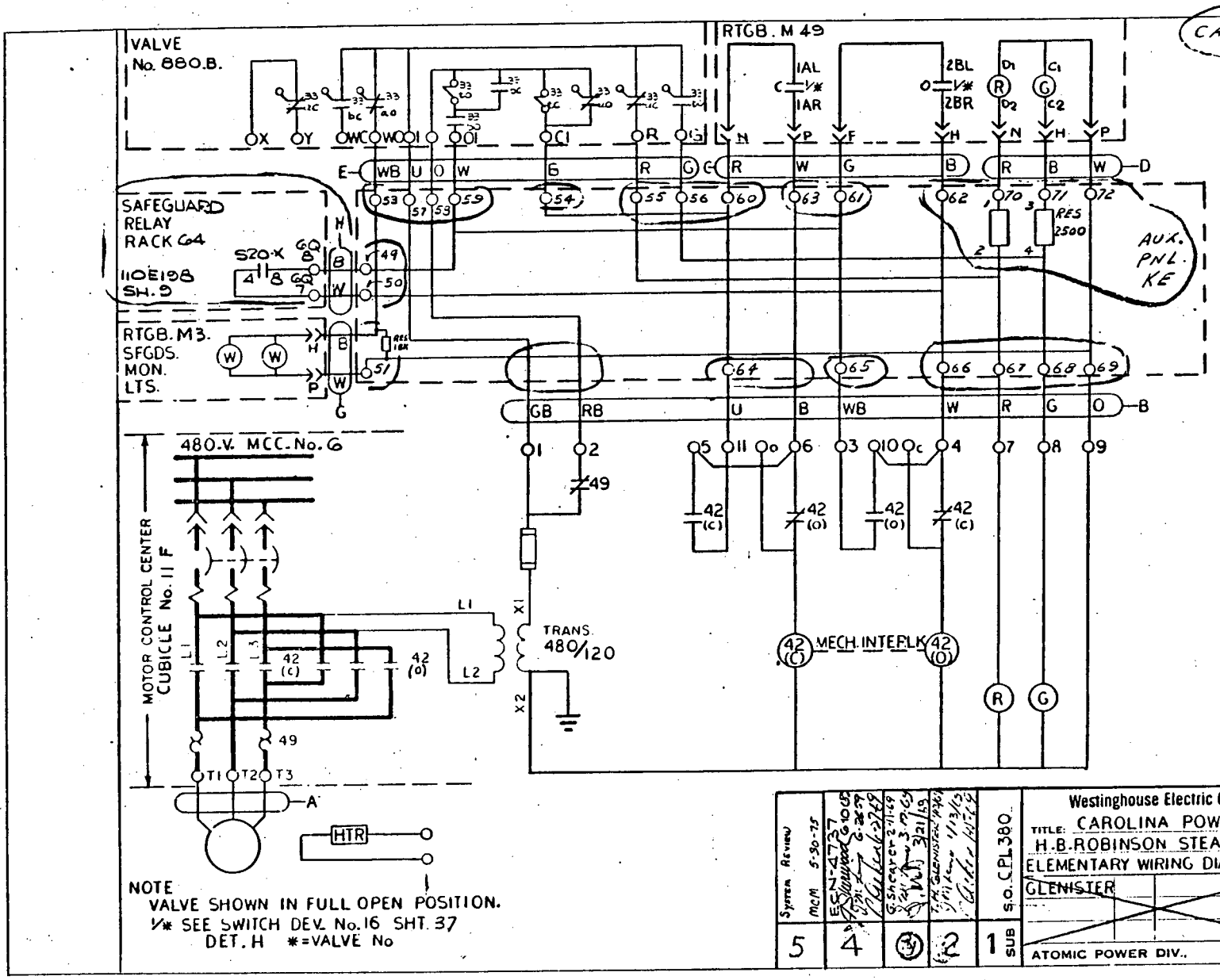
500 B 452

SHEET- 288

ATOMIC POWER DIV. PITTSBURGH, PA., U.S.A.

OK

CABLE ROUTE II



System Review MCM 5-30-75	ESK-4737	G. Shearer 3-11-69	T.H. Glenister 11/3/69	S.O. CPL 380	
5	4	3	2	1 SUB	

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT - Co.

H.B. ROBINSON STEAM PLANT - UNIT No 2.

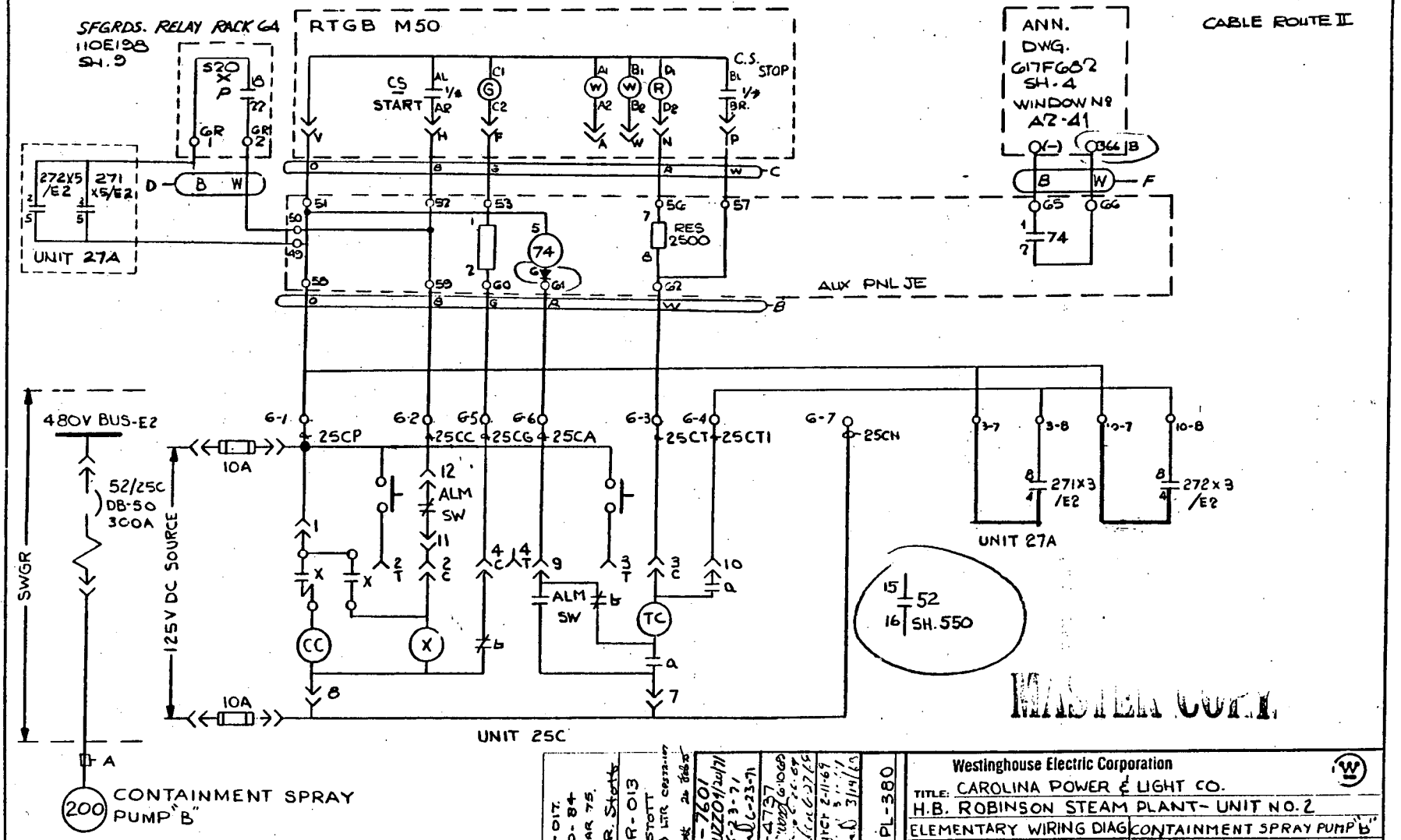
ELEMENTARY WIRING DIAG. | CONT. SPRAY PUMP A DSCHG VALVE

GLENISTER

500 B 452

SHEET- 289

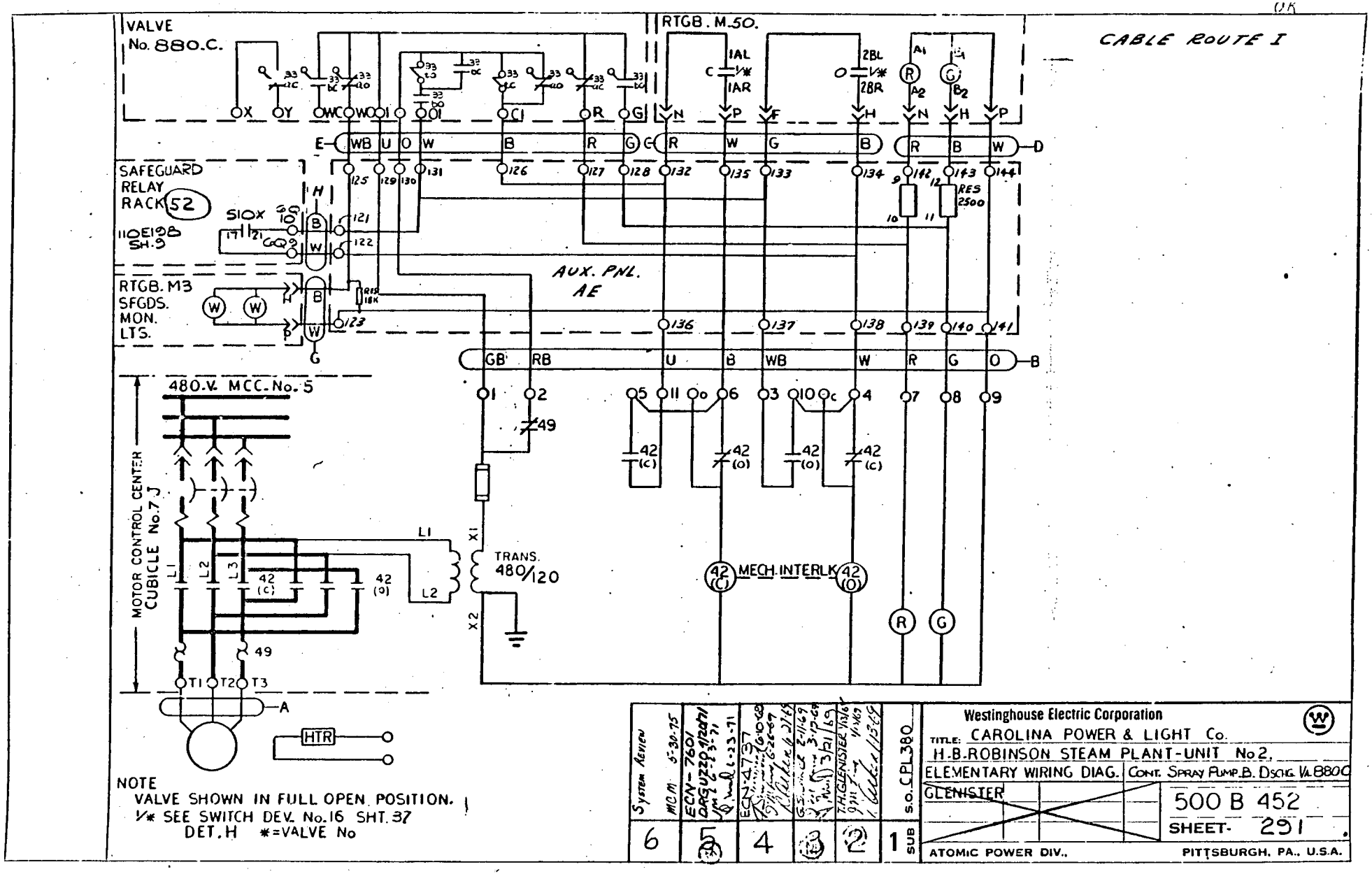
ATOMIC POWER DIV., PITTSBURGH, PA., L

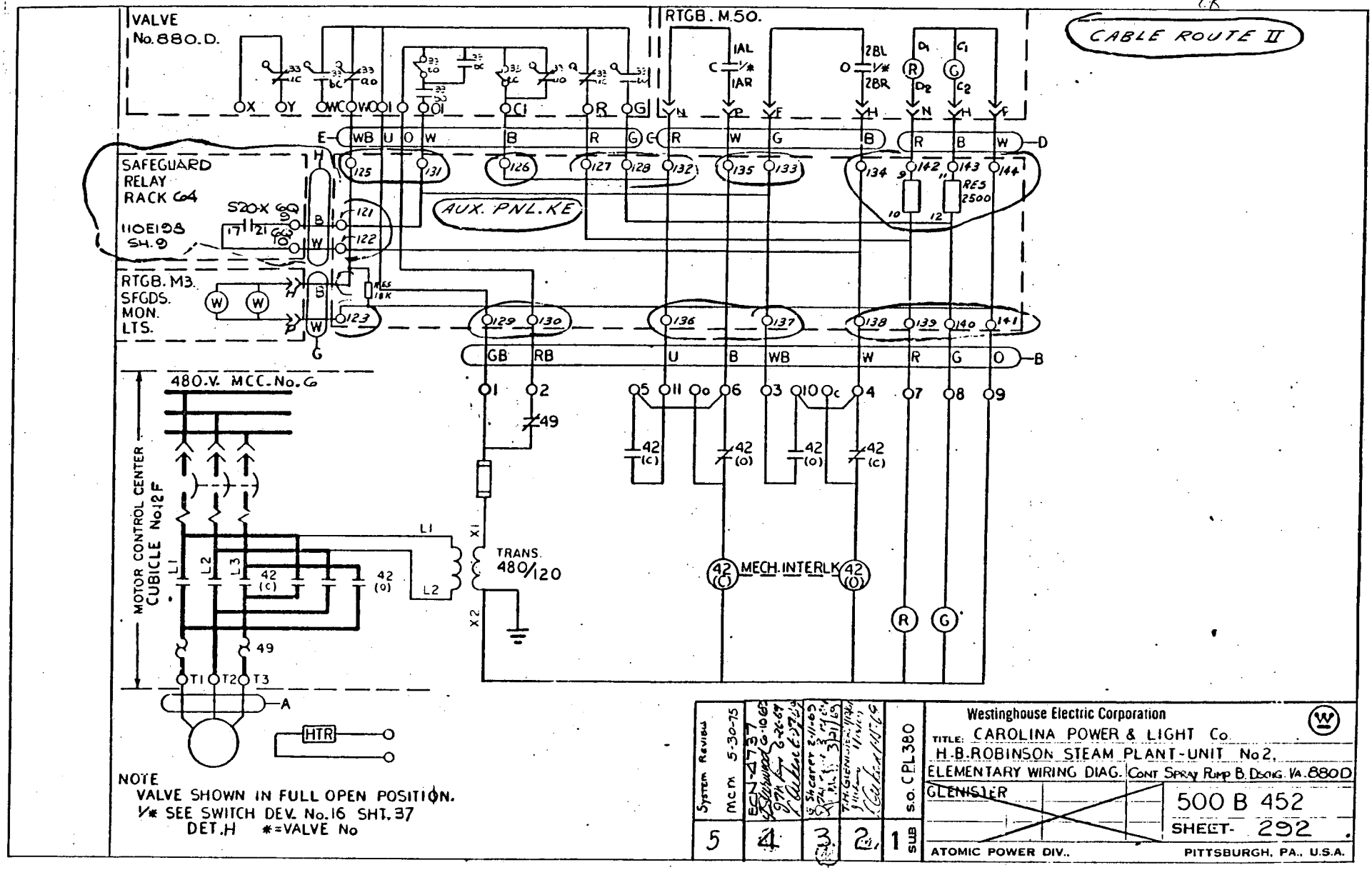


NOTE.
1/* SEE SWITCH DEV. No 22. SHT 27
DET. E *= CSP-B.

CPL-DIT. MOD-84 7 MAR 75. G. R. Stotts	ECR-013 G.R. STOTT Req. @ LTR CORRECT	ECN-7601 DRGW2201/24/71	EC-4737		S.O. CPL-380
6	5	4	3	2	1

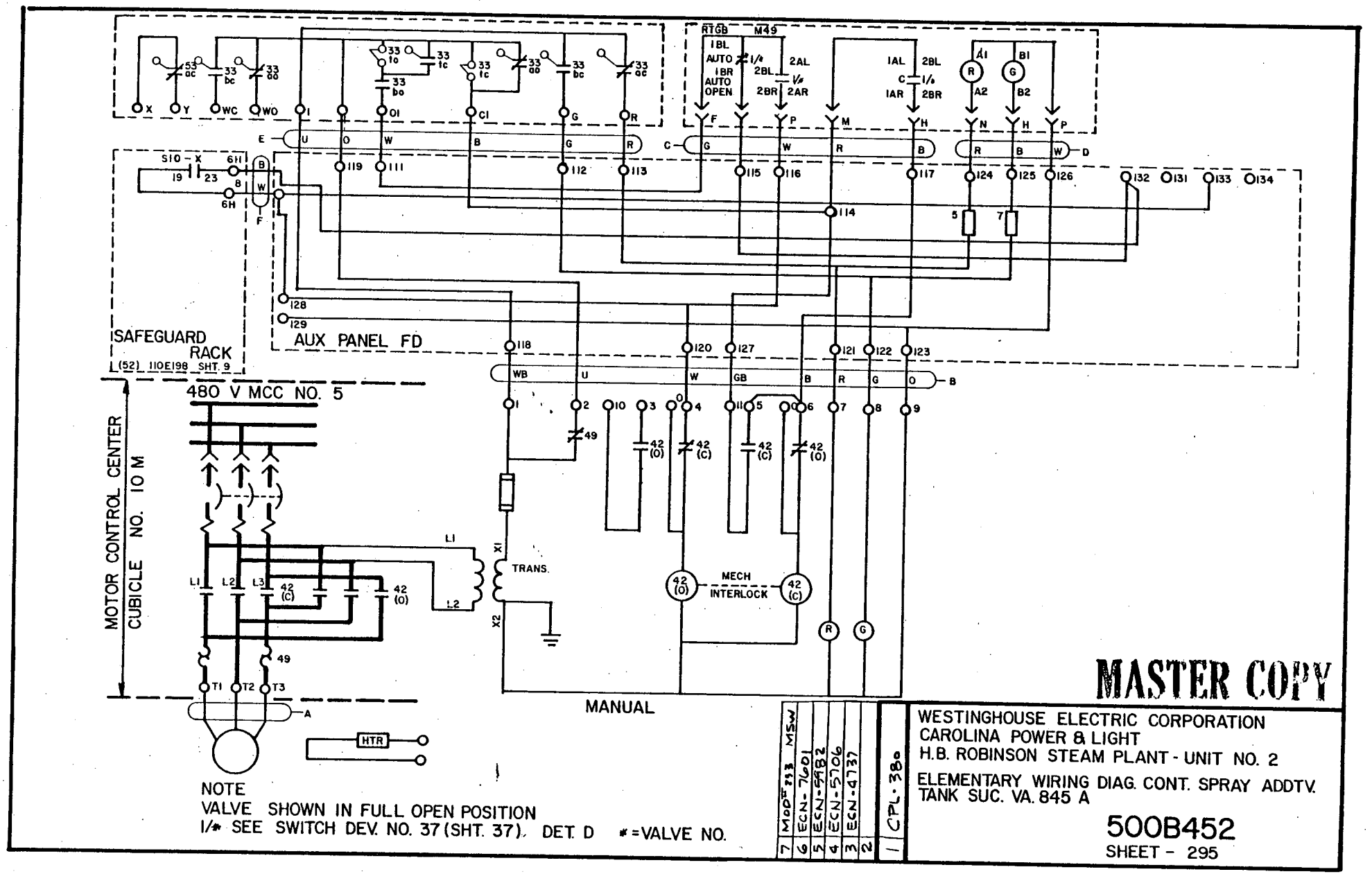
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT- UNIT NO. 2
ELEMENTARY WIRING DIAG CONTAINMENT SPRAY PUMP "B"
Shearer 7/16/68
Dill Lowe 11/4/68
500B452
SHEET- 290
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.


VALVE
No. 880.C.
RTGB. M.50.
CABLE ROUTE I
SAFEGUARD
RELAY
RACK 52
SIOX
110E198
SH. 9
AUX. PNL.
AE
RTGB. M3
SFGDS.
MON.
LTS.
480.V. MCC. No. 5
MOTOR CONTROL CENTER
CUBICLE No. 7 J
TRANS.
480/120
MECH INTERLK
RES
2500
RES
18K
HTR
NOTE
VALVE SHOWN IN FULL OPEN POSITION.
1/* SEE SWITCH DEV. No. 16 SHT. 37
DET. H *=VALVE No
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT Co.
H.B. ROBINSON STEAM PLANT-UNIT No. 2,
ELEMENTARY WIRING DIAG. CONT. SPRAY PUMP B. DSCHG. VA. 880C
GLENISTER
500 B 452
SHEET- 291
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.
S.O. CPL 380
SUB 1
6
5
4
3
2
System Review
M.O.M. 5-30-75
ECN-7601
ECN-4737



System Review MCM 5-30-75	ECN-4737				S.O. CPL380	Westinghouse Electric Corporation
5	4	3	2	1	SUB	TITLE: CAROLINA POWER & LIGHT Co. H.B. ROBINSON STEAM PLANT-UNIT No 2, ELEMENTARY WIRING DIAG. CONT SPRAY PUMP B DSNG. VA. 880D

GLENSIDER 500 B 452
SHEET- 292
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

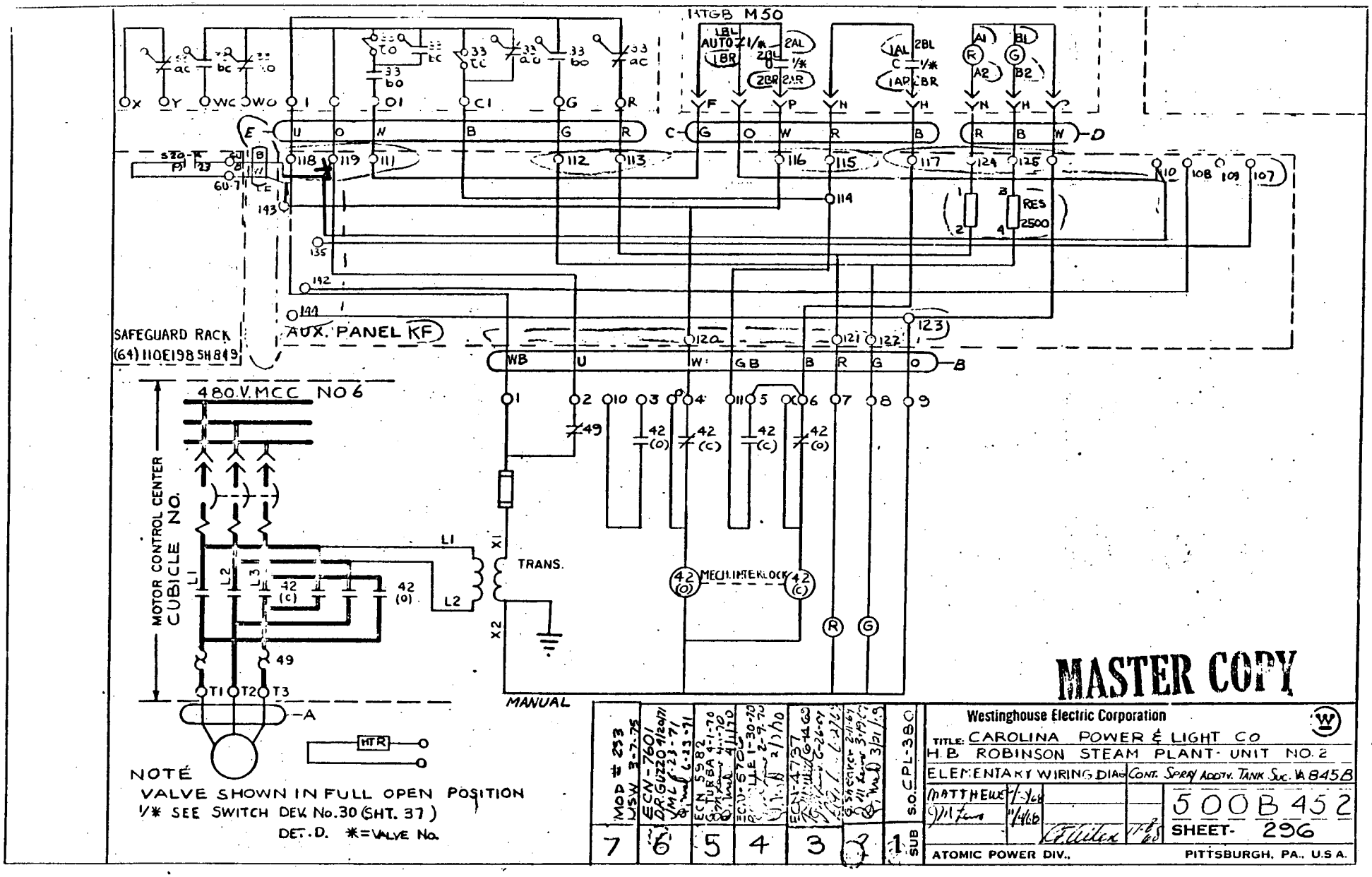


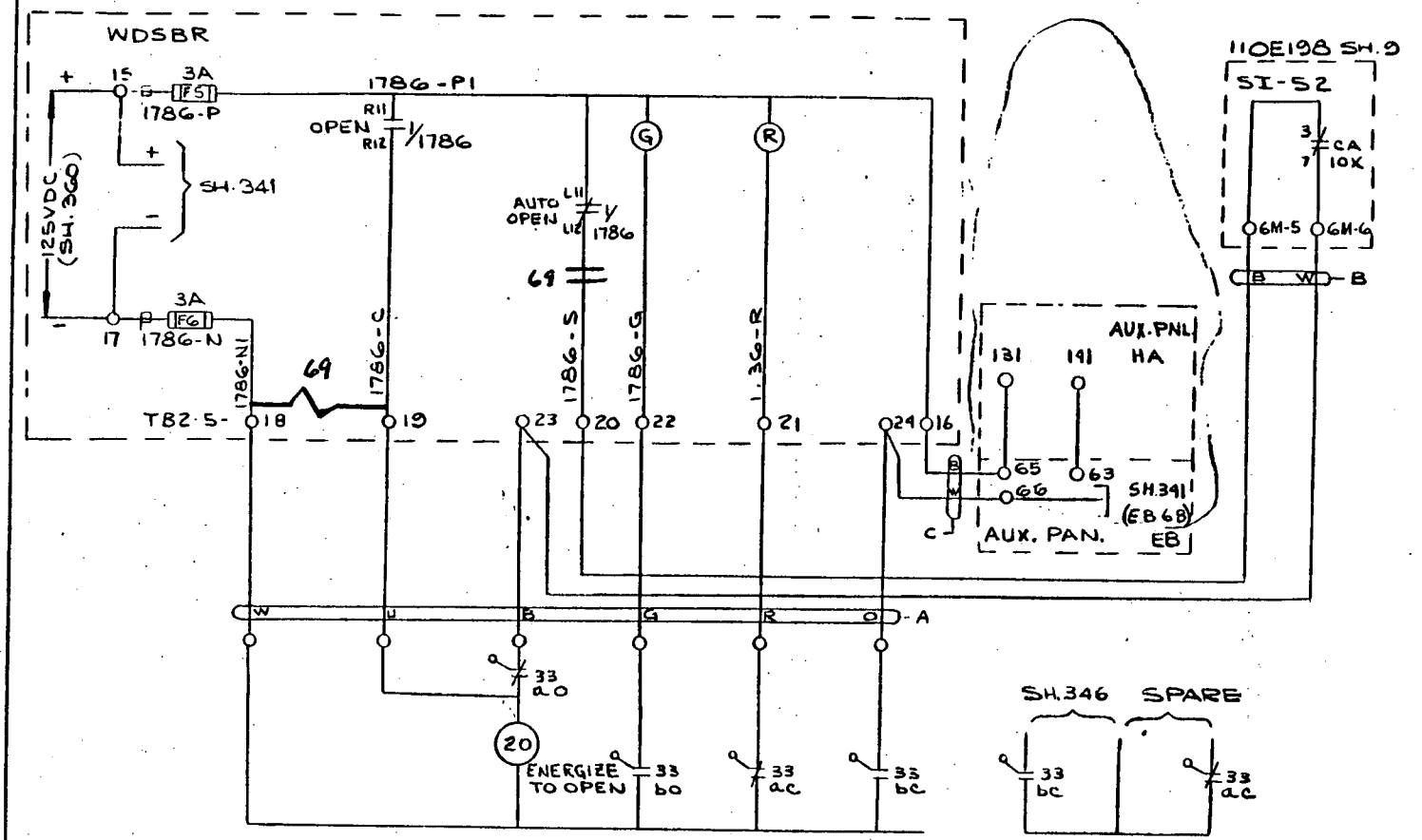
7	MOD. 213 MSW
6	ECN-7601
5	ECN-5482
4	ECN-5706
3	ECN-4737
2	
1	CPL-380

WESTINGHOUSE ELECTRIC CORPORATION
CAROLINA POWER & LIGHT
H.B. ROBINSON STEAM PLANT - UNIT NO. 2

ELEMENTARY WIRING DIAG. CONT. SPRAY ADDTV. TANK SUC. VA. 845 A

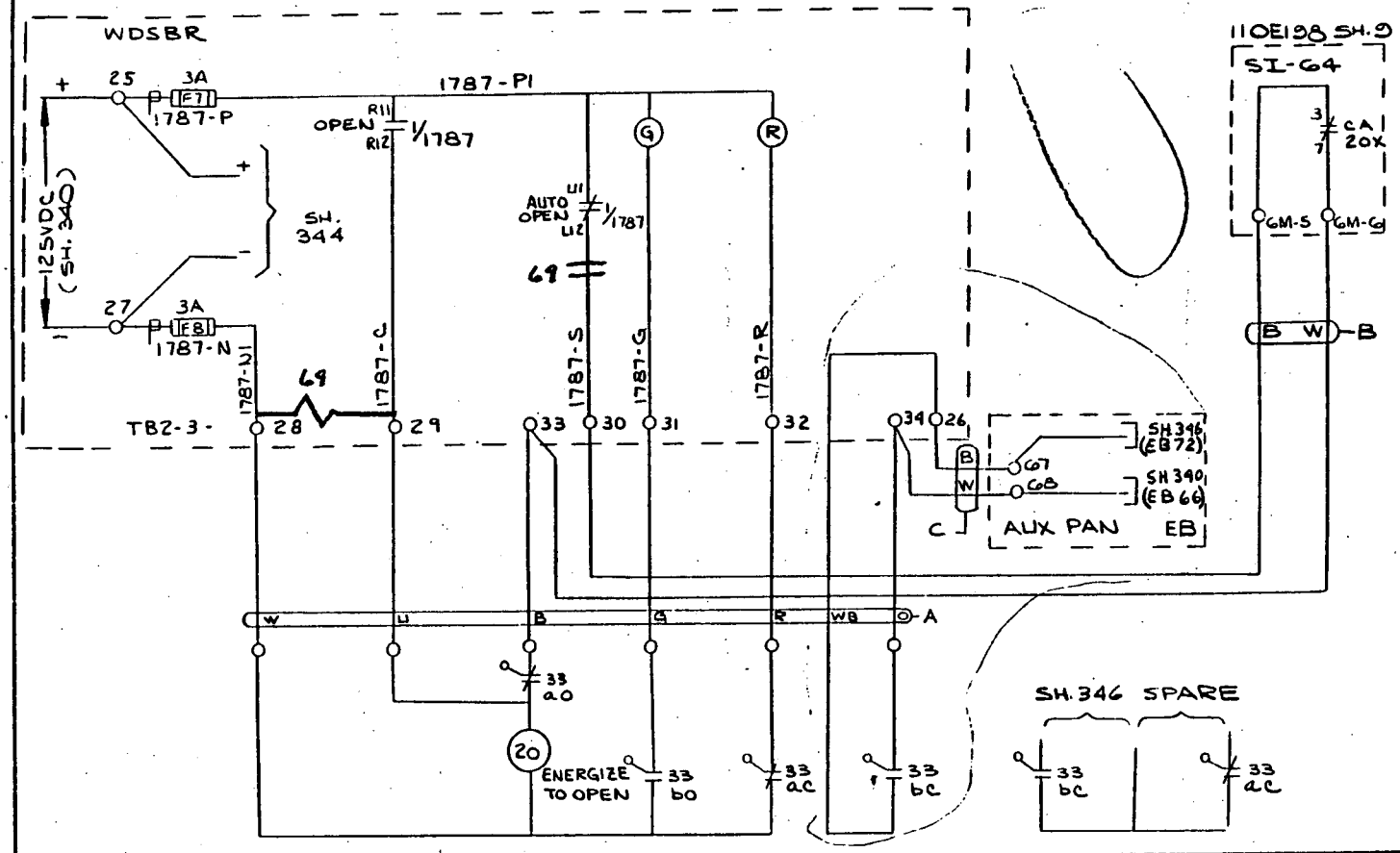
500B452
SHEET - 295


480 V. MCC NO 6
MOTOR CONTROL CENTER CUBICLE NO.
SAFEGUARD RACK (64) 110E198 SH 849
AUX. PANEL KF
TRANS.
MECH. INTERLOCK
MANUAL
HTR
MASTER COPY
NOTE
VALVE SHOWN IN FULL OPEN POSITION
1/* SEE SWITCH DEV. No. 30 (SHT. 37)
DET. D. *=VALVE No.
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO
H.B. ROBINSON STEAM PLANT UNIT NO. 2
ELEMENTARY WIRING DIAG. CONT. SPRAY ADDTN. TANK SUC. VA 845B
500B452
SHEET- 296
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



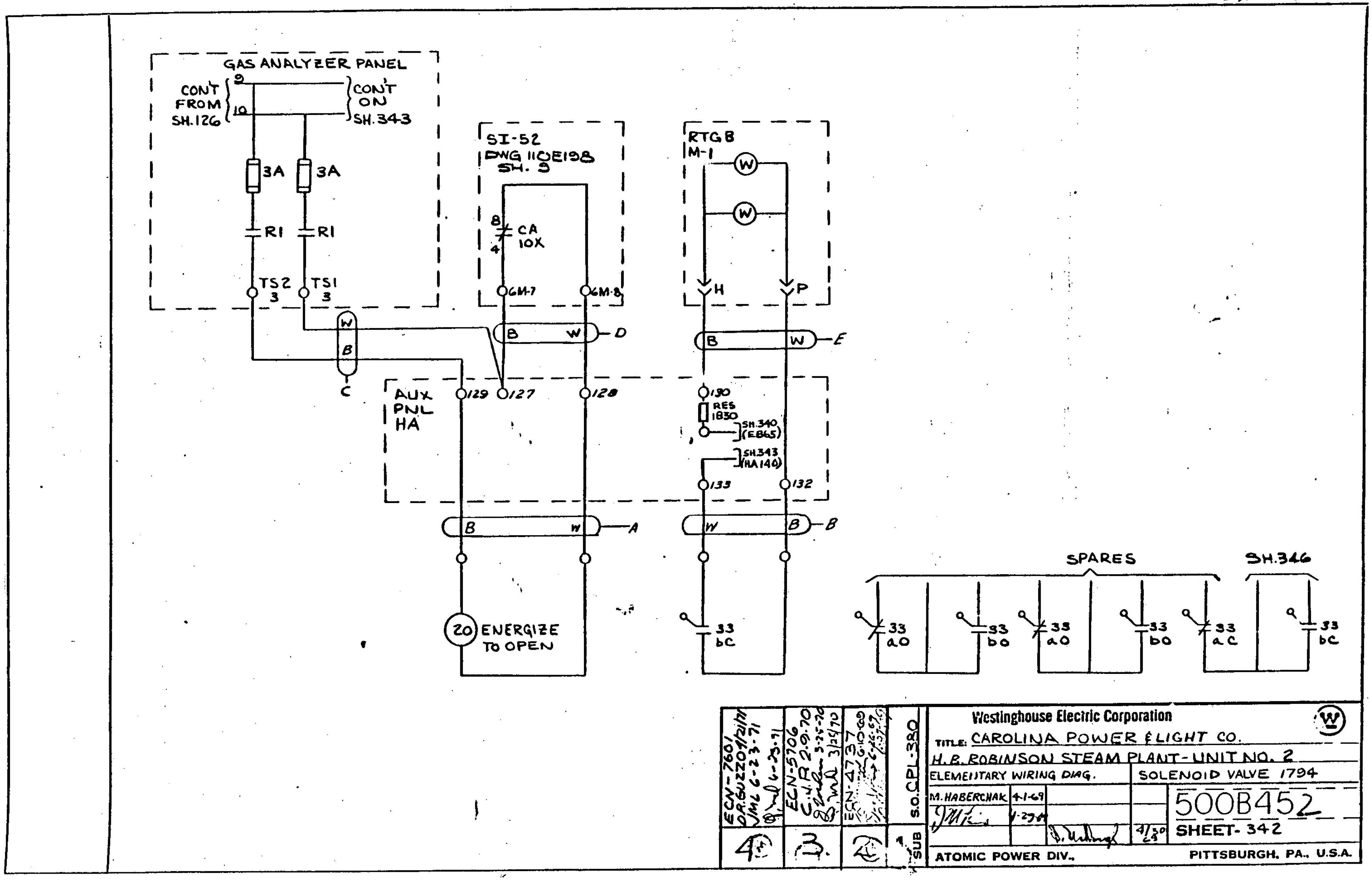
NOTE:
VALVE SHOWN IN FULL OPEN POSITION
1/1786 DEV. 5, DET. D, SHEET 40
CAIOX. DWG. 110E198 SHEET-9

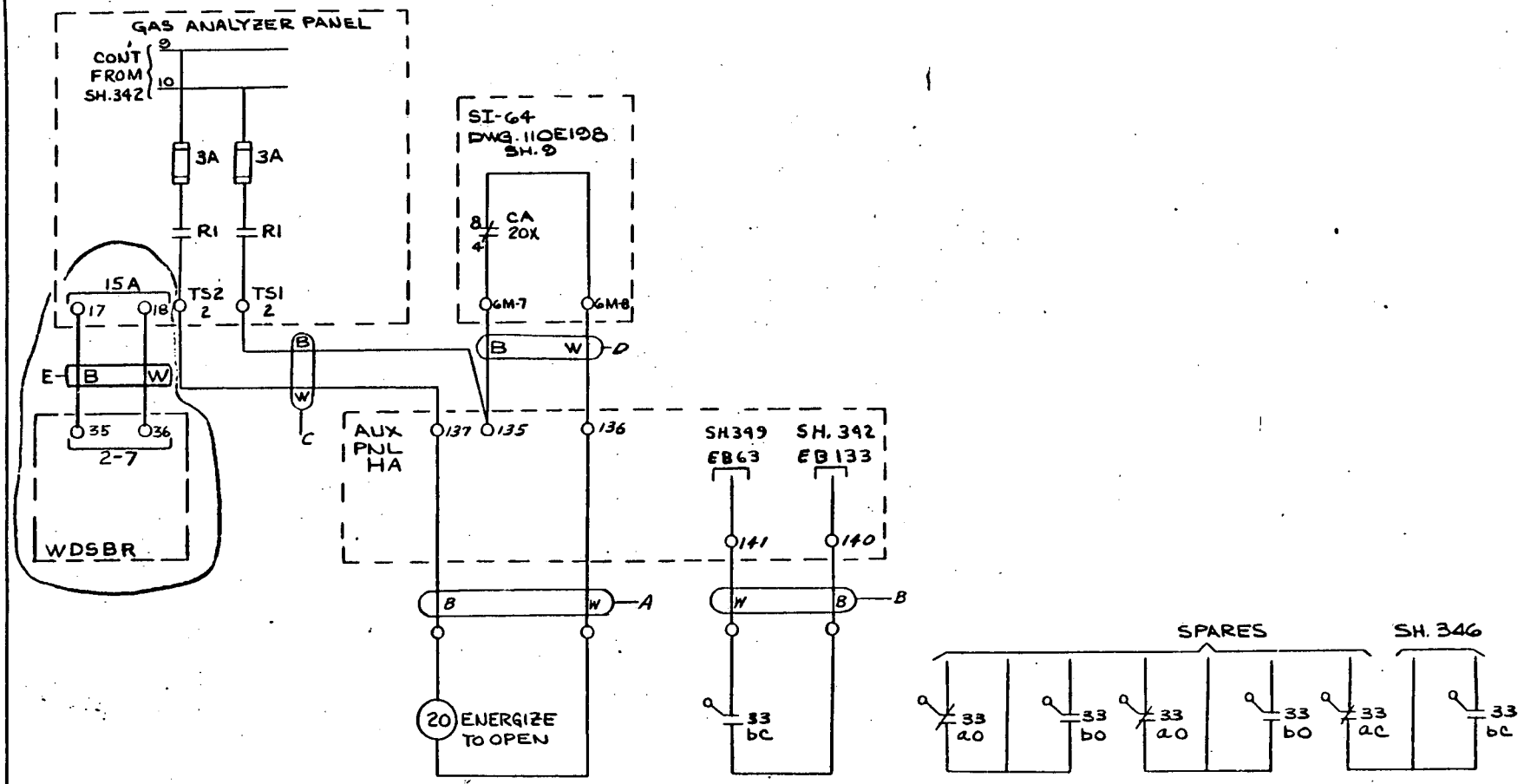
ECN-5980 2nd 9/11/70 3rd 4/15/70 ECN-5766	E.W.P. 29-70 3rd 3/25/70	ECN-4737	W.M. CAMP 4-7-69 2nd 9/10/69	S.O. CPL-38C	Westinghouse Electric Corporation
5	4	3	2	SUB	TITLE: ... INA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT-UNIT NO. 2 ELEMENTARY WIRING DIAG. SOLENOID VALVE 1786
					M. HABERCHAK 2-6-69 R. WILSON 2/24/69
					5003452 SHEET- 340
					ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



NOTE:
VALVE SHOWN IN FULL OPEN POSITION
1/1787 DEV. 5, DET. D, SHEET 40
CAZOX DWG. 1102198 SHEET 9

ECN-5960 4/1/70 Eng 4/7/70 Prod 4/8/70	ECN-5706 C.d.P 2.9.70 Eng 3/25/70 Prod 3/25/70	ECN-4737 Eng 6-2-69 Prod 6-2-69	W.M. CAMP 4-7-69 Eng 4/14/69 Prod 4/14/69	S.O. CPL-380	Westinghouse Electric Corporation	
					TITLE: CAROLINA POWER & LIGHT CO.	
					H.B. ROBINSON STEAM PLANT - UNIT NO.	
					ELEMENTARY WIRING DIAG.	SOLENOID VALVE 1787
					M.H. JERCHAK 2-6-69	500B452
					R. WILSON 2/12/69	
					2/24/69	2/24/69 SHEET- 341
5	4	3	2	1 SUB	ATOMIC POWER DIV.,	PITTSBURGH, PA., U.S.


GAS ANALYZER PANEL
CON'T FROM SH.126
CON'T ON SH.343
9
10
3A
3A
R1
R1
TS2 3
TS1 3
SI-52 DWG 110E198 SH. 9
8 CA 10X 4
6M-7
6M-8
RTG B M-1
W
W
H
P
B W D
B W E
W B C
AUX PNL HA
129
127
128
130
RES 1830
SH.340 (EB65)
SH.343 (HA140)
133
132
B W A
W B B
20 ENERGIZE TO OPEN
33 bC
SPARES
SH.346
33 aO
33 bO
33 aO
33 bO
33 aC
33 bC
ECN-7601 DR.GUZZO 9/21/71 JML 6-23-71
ECN-5706 C.W.R 2-9-70
ECN-4737
S.O. CPL-380
4
3
2
1
SUB
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG.
SOLENOID VALVE 1794
M. HABERCHAK 4-1-69
500B452
SHEET-342
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.



ECN-7601 QA RGUZZO 9/a/m ENL 6-23-71

ECN-5980 ENL 4/12/70 ENL 4/8/70

ECN-5762 C.H.D. 2-9-70 ENL 3/25/70

ECN-4787 ENL 6-10-68

C.O. CPL-380

SUB 1

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.
H. B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG. SOLENOID VALVE 1789

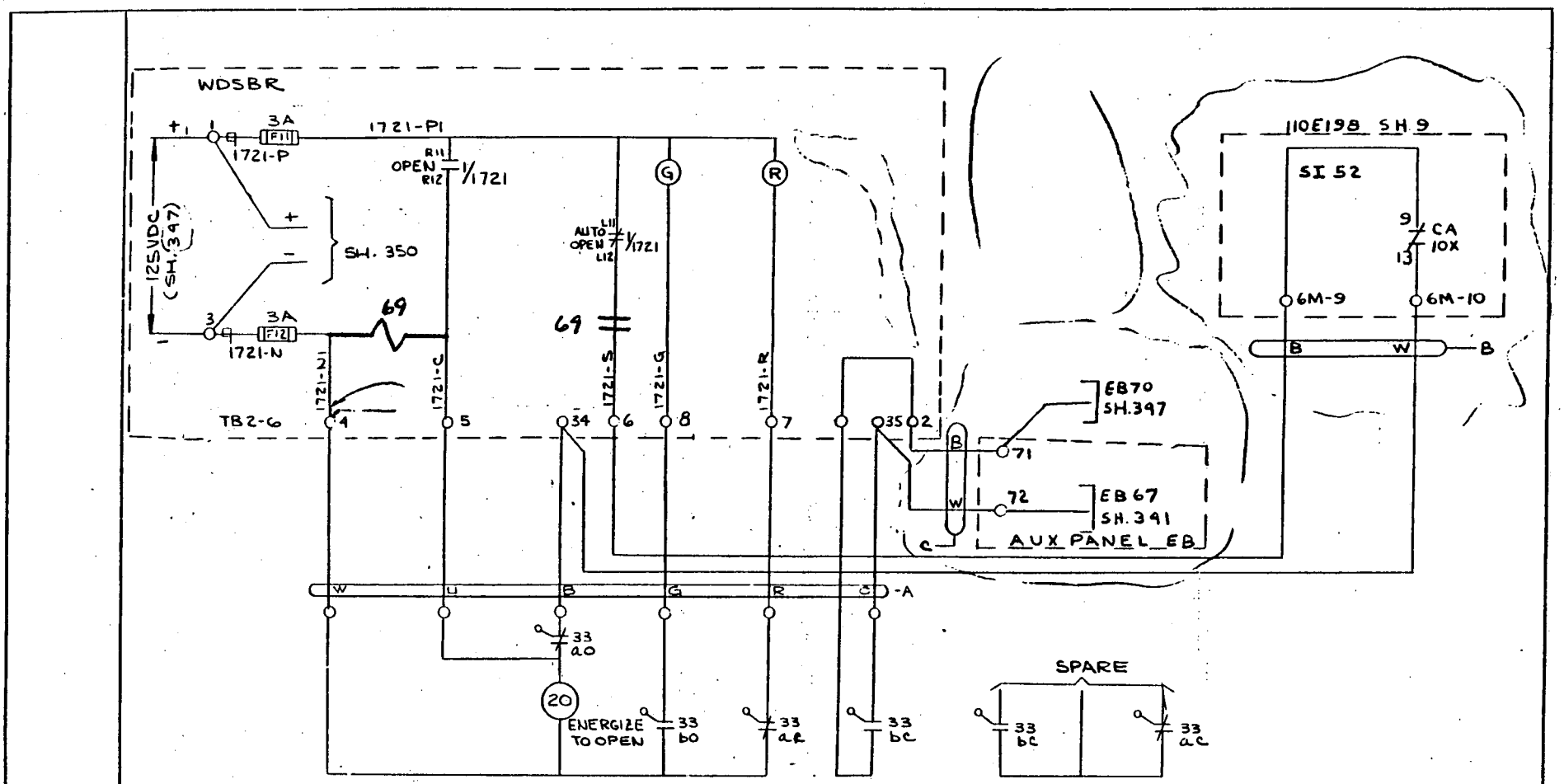
M. HABERCHAK 4-1-69

500B452

SHEET- 343

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

346



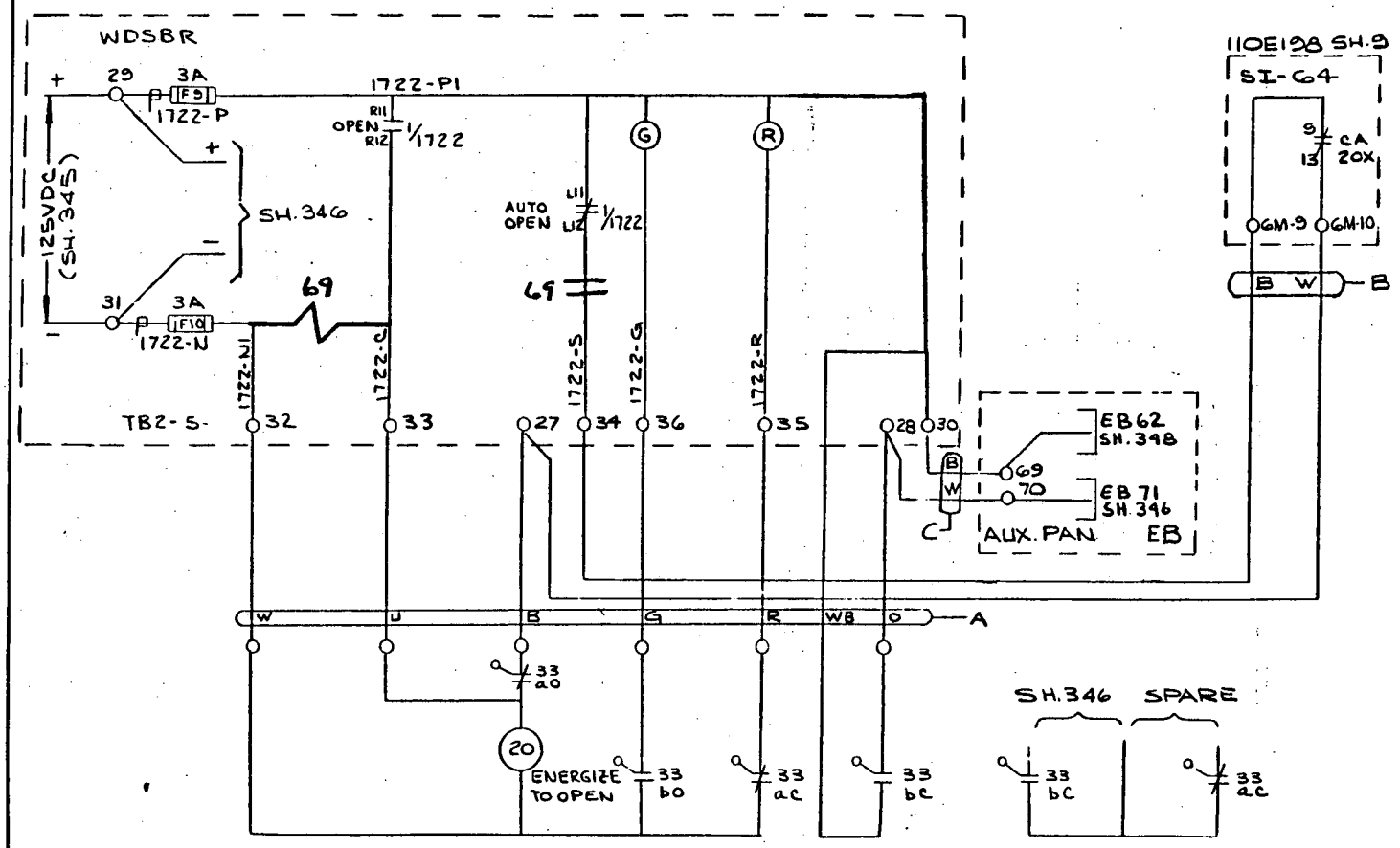
NOTES:
VALVE SHOWN IN FULL OPEN POSITION.
1/1721 DEV. 5, DET. D, SHEET 40
CAIOX-DWG. 110E198 SHEET 9

ECN-5380 4/2/70	ECN-5706 2-20-70	ECN-4737		S.O. CPL-380	Westinghouse Electric Corporation
5	4	3	2	1	ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG. SOLENOID VALVE 1721

M. HABERCHAK	2569		
R. WILSON	8/22/69		
	4/24/69	4/24	

500B452
SHEET- 346



NOTES:
VALVE SHOWN IN FULL OPEN POSITION.
1/1722 DEV. 5, DET. D, SHEET 40
CA20X DWG. 1102198 SHEET 9

6	5	4	3	2	1 SUB
System Review T.W. 8-14-78	ECN-5980 9/12/70	ECN-5706 C.J.D. 2.9.70 3.26.70 3/25/70	ECN-4737	J. SANDWICH 4/7/61 4/14/69	S.O. C.P.L.-380

Westinghouse Electric Corporation

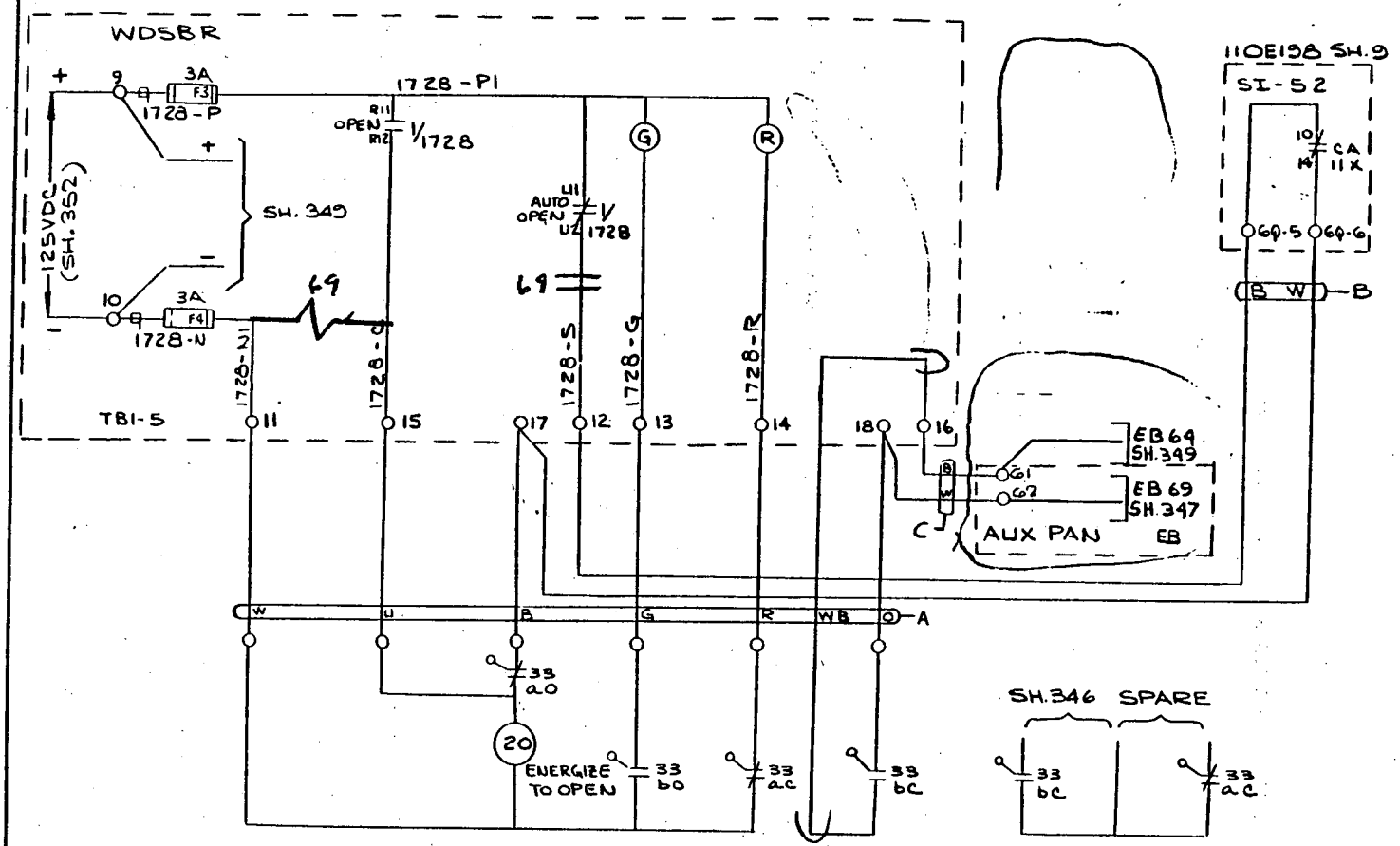
TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG. SOLENOID VALVE 1722

M. HABERCHAK	2-7-69		500B452
R. WILSON	2/27/69		SHEET- 347
	2/26/69	2/26/69	2/26/69

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

B A A O A A B

348



NOTES:
VALVE SHOWN IN FULL OPEN POSITION
1/1728 DEV. 5, DET. D, SHEET 40
CA11X DWG. 1108198 SHEET-9

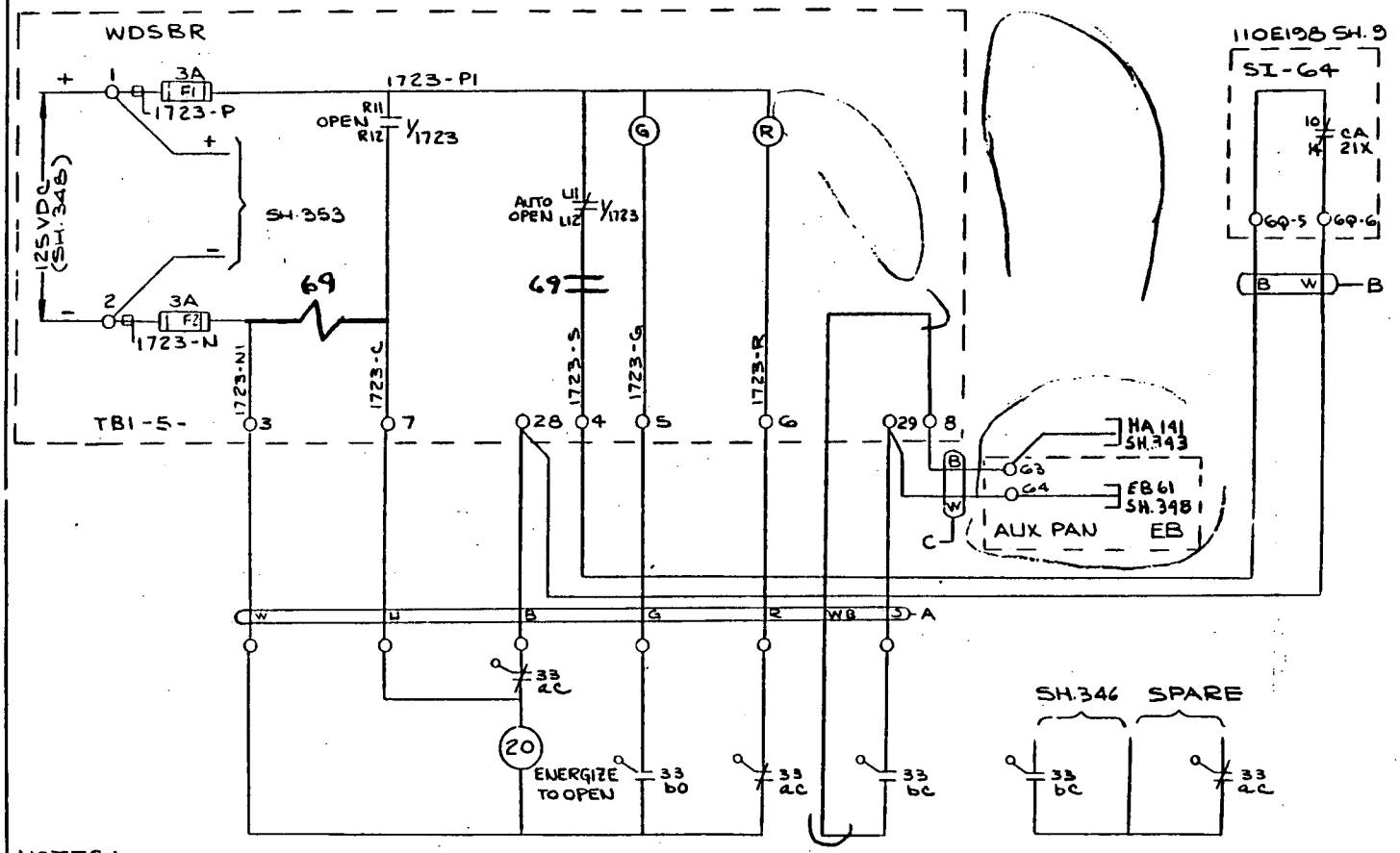
ECN-5980 WFM 9/2/70 4/15/70	ECN-5706 EJP 2-9-70 3-25-70	ECN-4737 3/5/70			S.O. CPL-380	
5	4	3	2	1	SUB	

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG. | SOLENOID VALVE 1728

M. HABERCHAK	2-1-69		500B452
R. WILSON	2/24/69	3/24/69	SHEET- 348

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

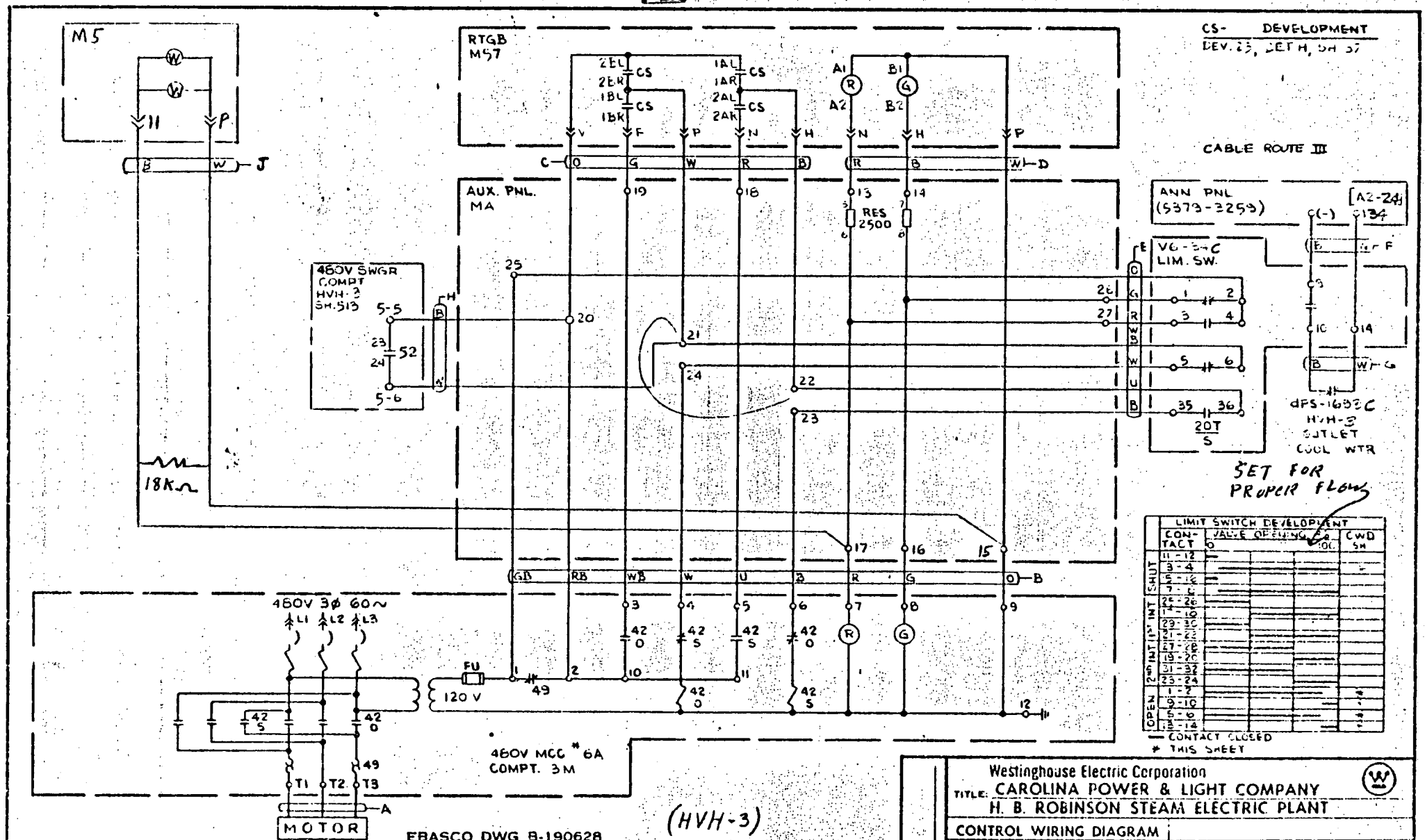


NOTES:
VALVE SHOWN IN FULL OPEN POSITION.
1/1723 DEV. 5, DET. D, SHEET 40
CA21X DWG. 1108198 SHEET 9

ECN-5980 WFM 9/12/70 9/16/70	ECN-5706 C.W.P. 2.9.70 3.25.70	ECN-4737		S.O. CPL-380	Westinghouse Electric Corporation
5	4	3	2	1 SUB	ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO 2
ELEMENTARY WIRING DIAG | SOLENOID VALVE 1723

M. HABERCHAK	2-6-69		500B452
R. WILSON	2/12/69		SHEET- 349
	2/14/69	3/3/69	



EBASCO DWG B-190628

(HVH-3)

FAN COOLERS

VA. V6-34C

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3			
6				2			
5				1			

EBASCO SERVICES INCORPORATED
NEW YORK

DIV. ELEC. OR C&SC
SCALE ___ CH. VB
DATE MAR 11 1963
APPROVED E. Bretwell

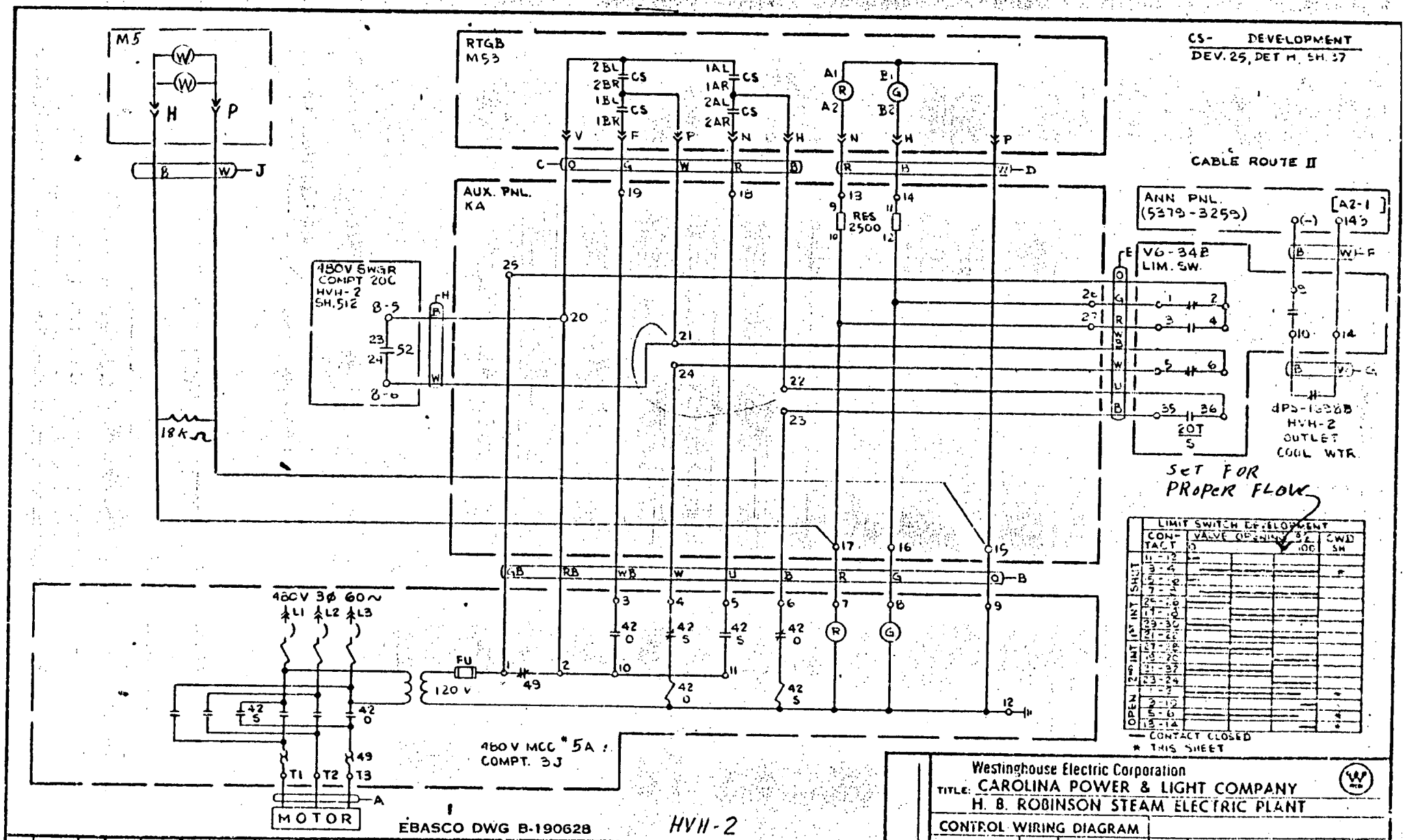
S.O. 1 SUB

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

5[redacted]8452
SH [redacted]06

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

HVH-2
FAN COOLERS
VA. V6-34B

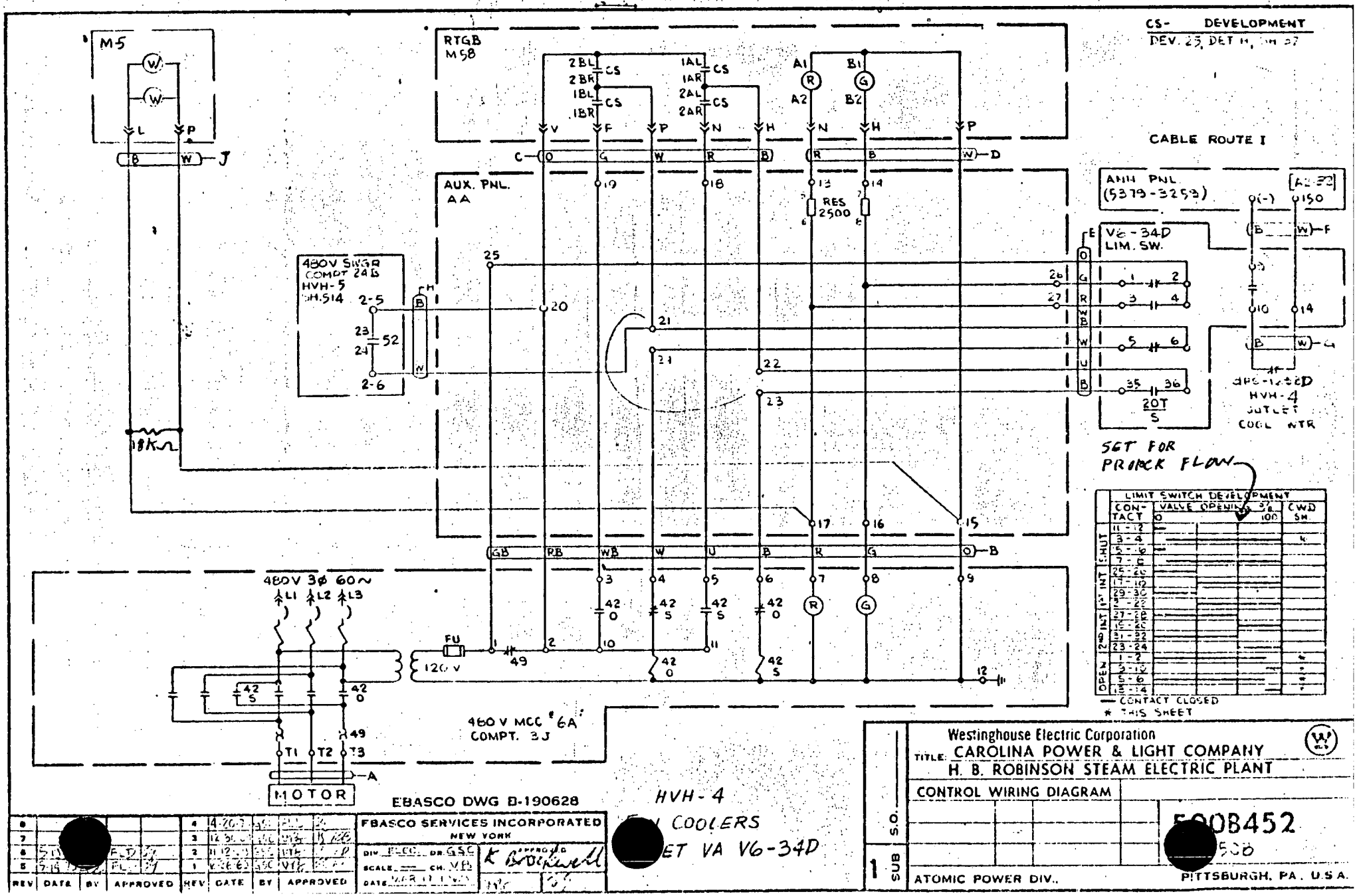
REV	DATE	BY	APPROVED
8			
7			
6			
5			

REV	DATE	BY	APPROVED
4	4-26-79	FL	
3	12-29-78		
2	6-27-78		
1			

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE MAR 17 19[illegible]
APPROVED

S.O. 1 SUB

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
5008452
SH 07
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



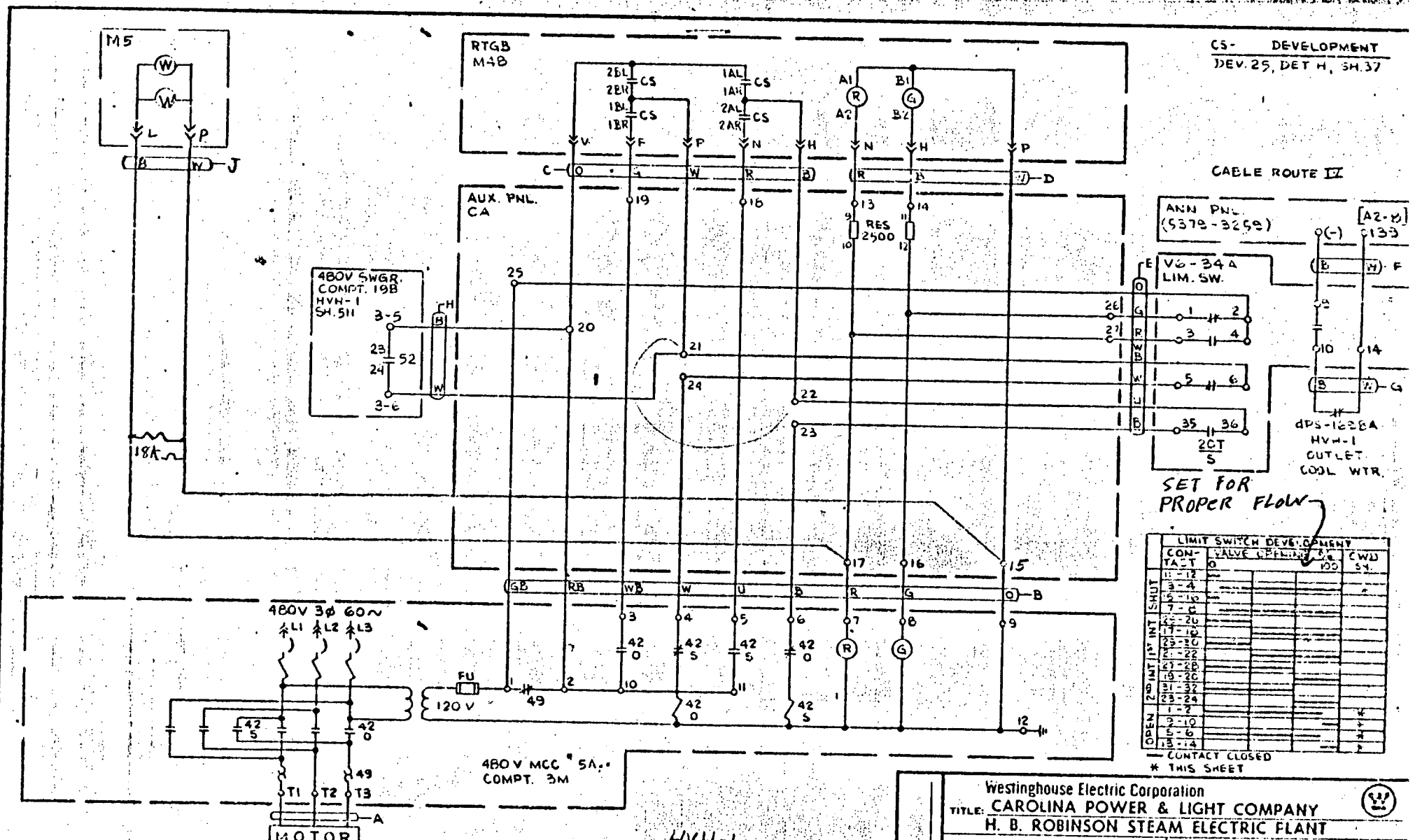
EBASCO DWG B-190628

HVH-4
COOLERS
ET VA V6-34D

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	4-20-?		
7				3			
6	5-19			2			
5	7-16			1			

EBASCO SERVICES INCORPORATED
NEW YORK
DWN. DR. GSG
SCALE CH. VB
DATE
APPROVED

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. 500B452
SUB 1 500
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

HVH-1
FAN COOLERS
ET VA V6-34A

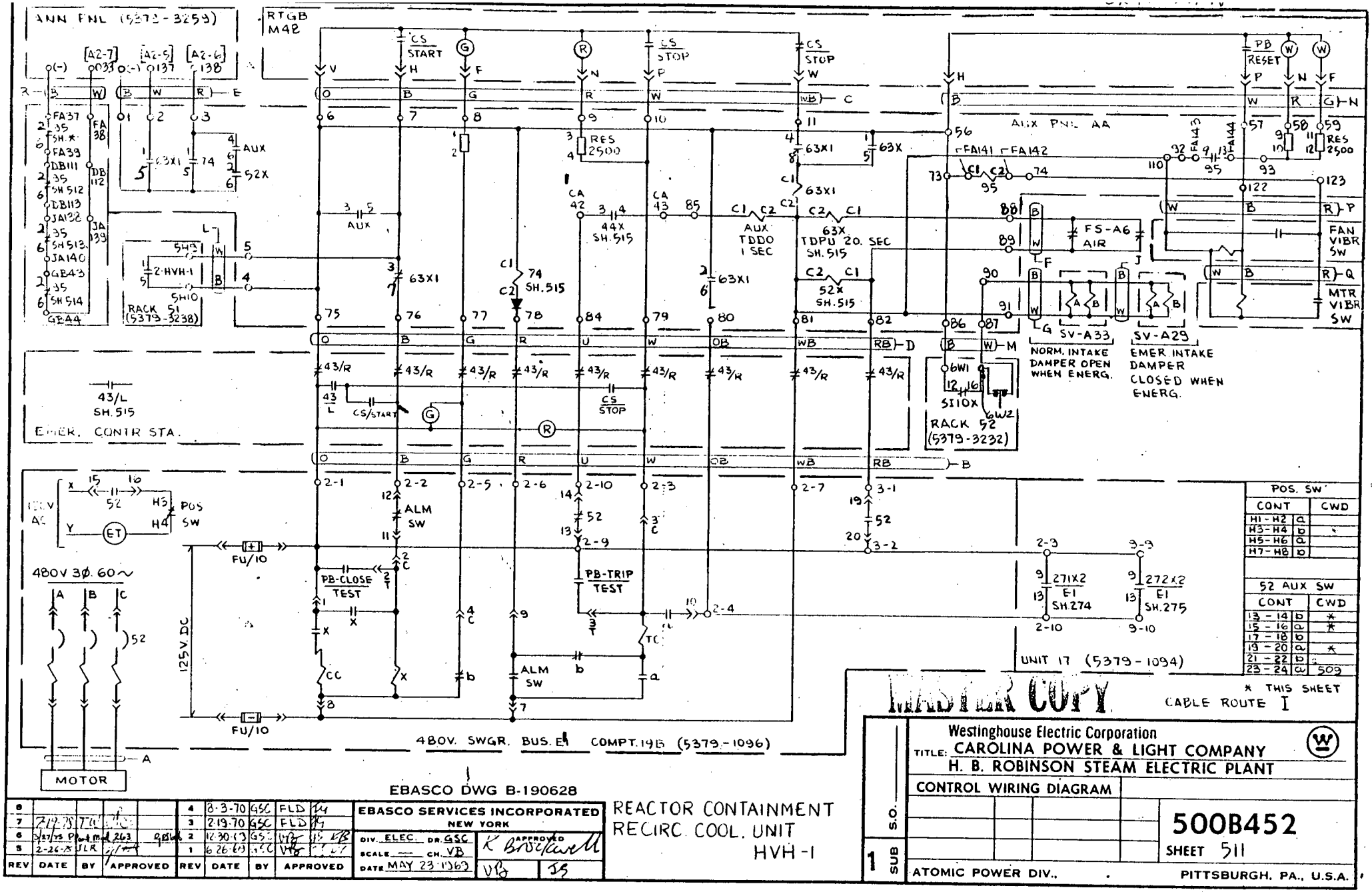
REV	DATE	BY	APPROVED
8			
7			
6	[redacted]	FLD	JJ
5			
4	12-20-[illegible]	[illegible]	[illegible]
3	11-12-[illegible]	[illegible]	[illegible]
2	10-27-[illegible]	[illegible]	[illegible]
1	[illegible]	[illegible]	[illegible]

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE ____ CH. VB
DATE MAR 17 [illegible]
APPROVED [signature]

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. [redacted]0B452
SUB 1 509

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



POS. SW	
CONT	CWD
H1-H2	a
H3-H4	b
H5-H6	a
H7-H8	b

52 AUX SW	
CONT	CWD
13-14	b *
15-16	a *
17-18	b
19-20	a *
21-22	b
23-24	a 509

* THIS SHEET

CABLE ROUTE I

EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	8-3-70	GSC	FLD
7	2-19-70	TCW		3	2-19-70	GSC	FLD
6	5/27/75	Pl. mod 263		2	12-30-63	GSC	VB
5	2-26-65	JLR		1	6-26-63	GSC	VB

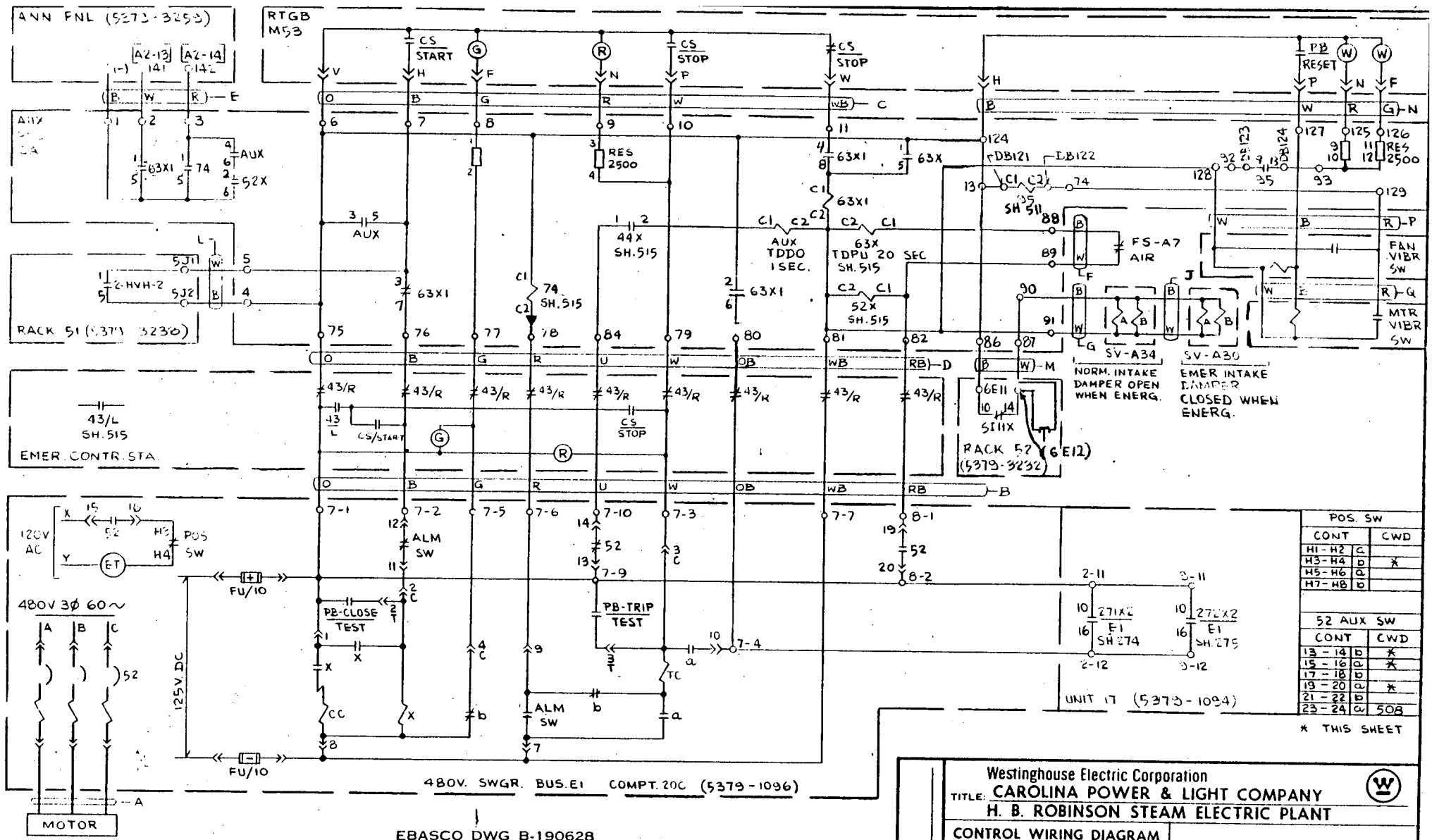
EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE MAY 23 1962
APPROVED K Brockwell
VB JS

REACTOR CONTAINMENT RECIRC. COOL. UNIT HVH-1

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 500B452
SUB 1
SHEET 511

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



POS. SW		
CONT		CWD
H1-H2	c	
H3-H4	b	X
H5-H6	a	
H7-H8	b	

52 AUX SW		
CONT		CWD
13-14	b	X
15-16	a	X
17-18	b	
19-20	a	X
21-22	b	
23-24	a	508

X THIS SHEET

EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	8-3-70	GSC	FLD
7	[illegible]			3	2-19-70	GSC	FLD
6	3/27/75	Mod 249		2	12-20-69	GSC	VTB
5	2/26/75	JLR		1	[illegible]	GSC	VTB

EBASCO SERVICES INCORPORATED NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE MAY 23 1963
APPROVED

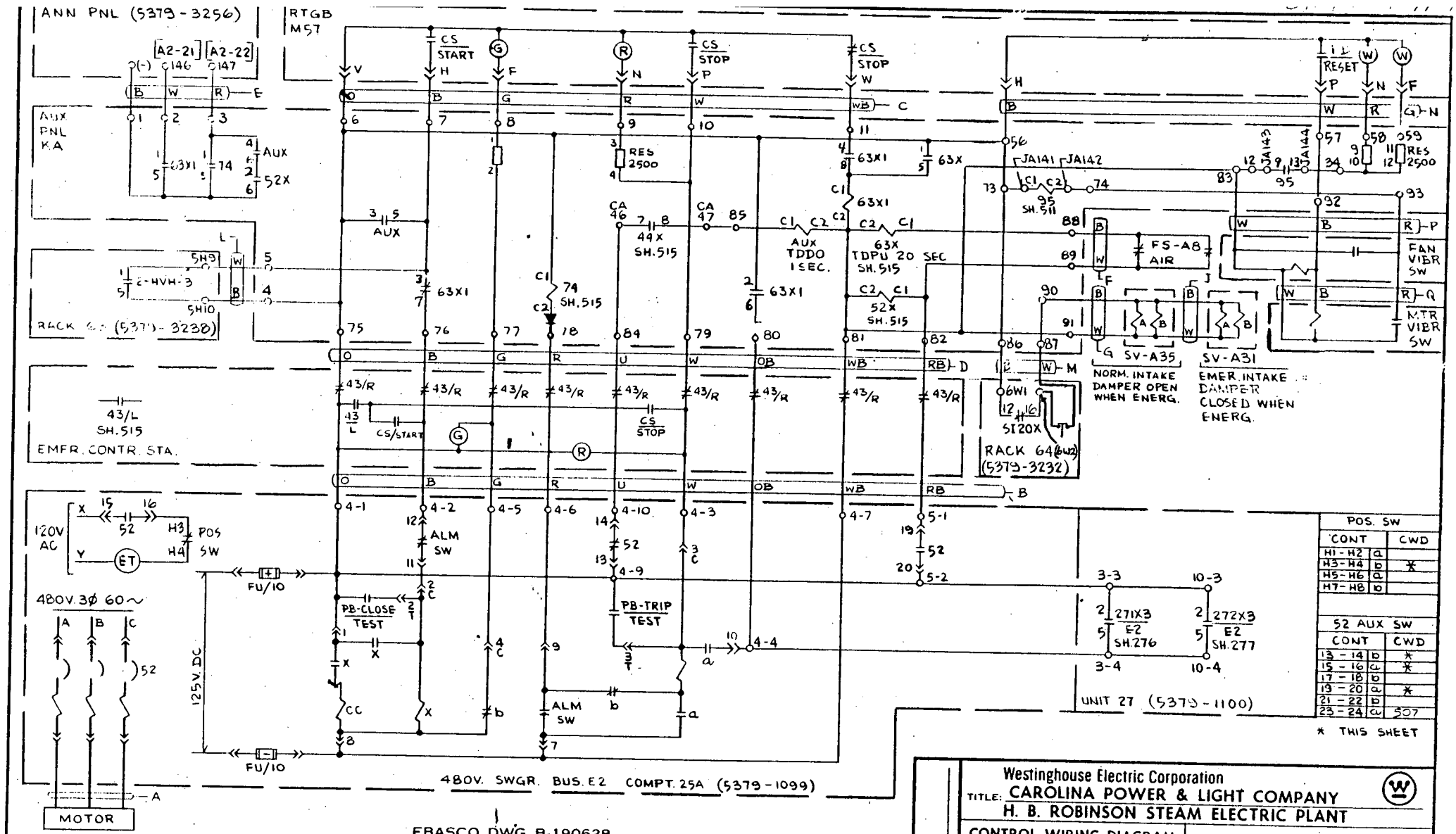
REACTOR CONTAINMENT RECIRC. COOL. UNIT HVH-2

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 1 SUB

500B452
SHEET 512

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



POS. SW	
CONT	CWD
H1-H2 a	
H3-H4 b	*
H5-H6 a	
H7-H8 b	

52 AUX SW	
CONT	CWD
13-14 b	*
15-16 a	*
17-18 b	
19-20 a	*
21-22 b	
23-24 a	507

* THIS SHEET

REV	DATE	BY	APPROVED
8			
7	7-17-70	TA	VC
6	3/27/70	mod 263	GSC FLD VB
5	2/26/70	ILO	
4	8-3-70	GSC	FLD
3	2-19-70	GSC	FLD
2	12-30-69	GSC	VB
1	6-26-69	GSC	VB

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE MAY 23, 1969
APPROVED K Brockwell

REACTOR CONTAINMENT RECIRC. COOL. UNIT HVH-3

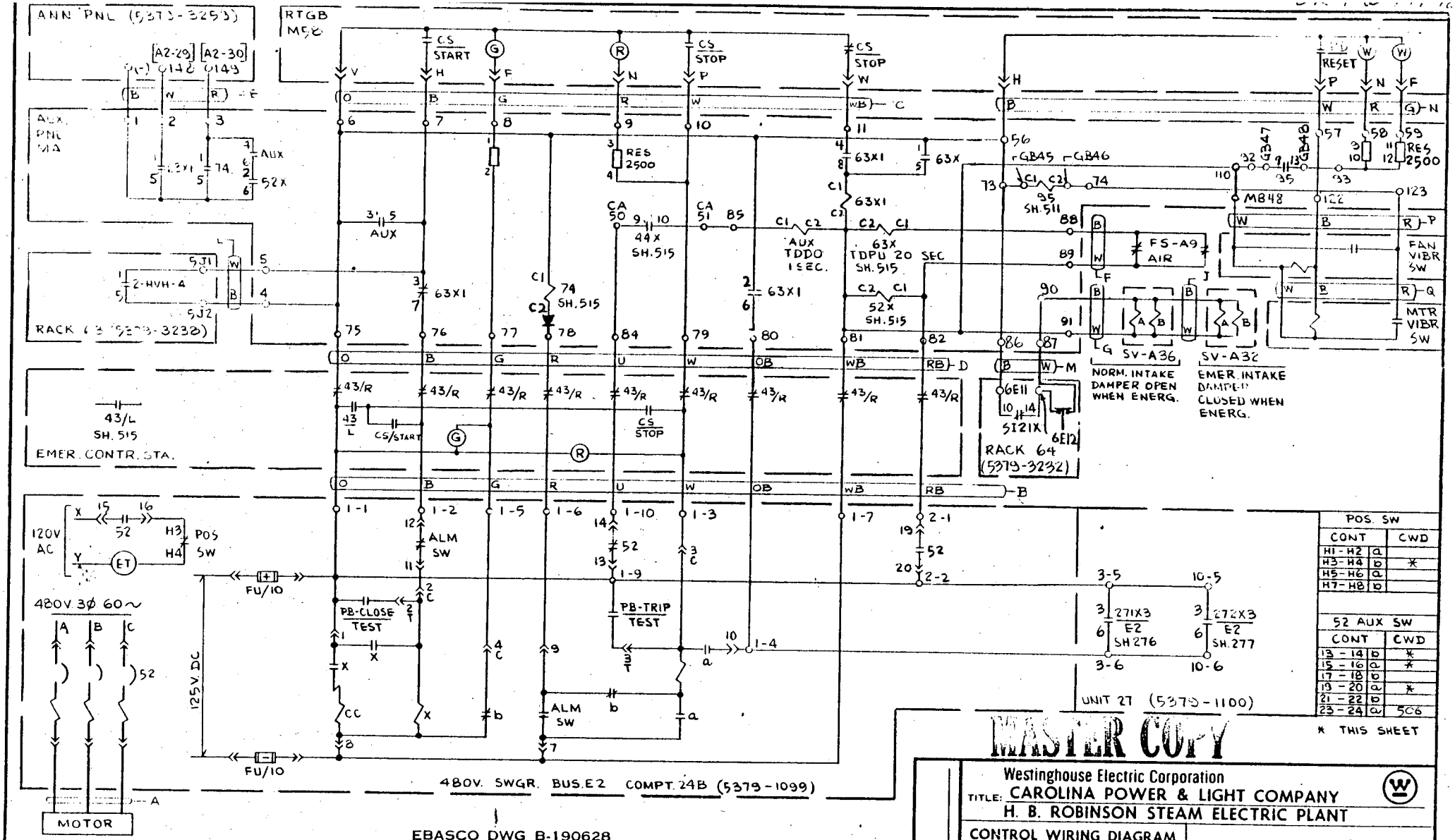
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 1 SUB

500B452
SHEET 513

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

514



POS. SW	
CONT	CWD
H1-H2	a
H3-H4	b *
H5-H6	a
H7-H8	b

52 AUX SW	
CONT	CWD
13-14	b *
15-16	a b *
17-18	a b
19-20	a *
21-22	b
23-24	a 506

* THIS SHEET

MASTER COPY

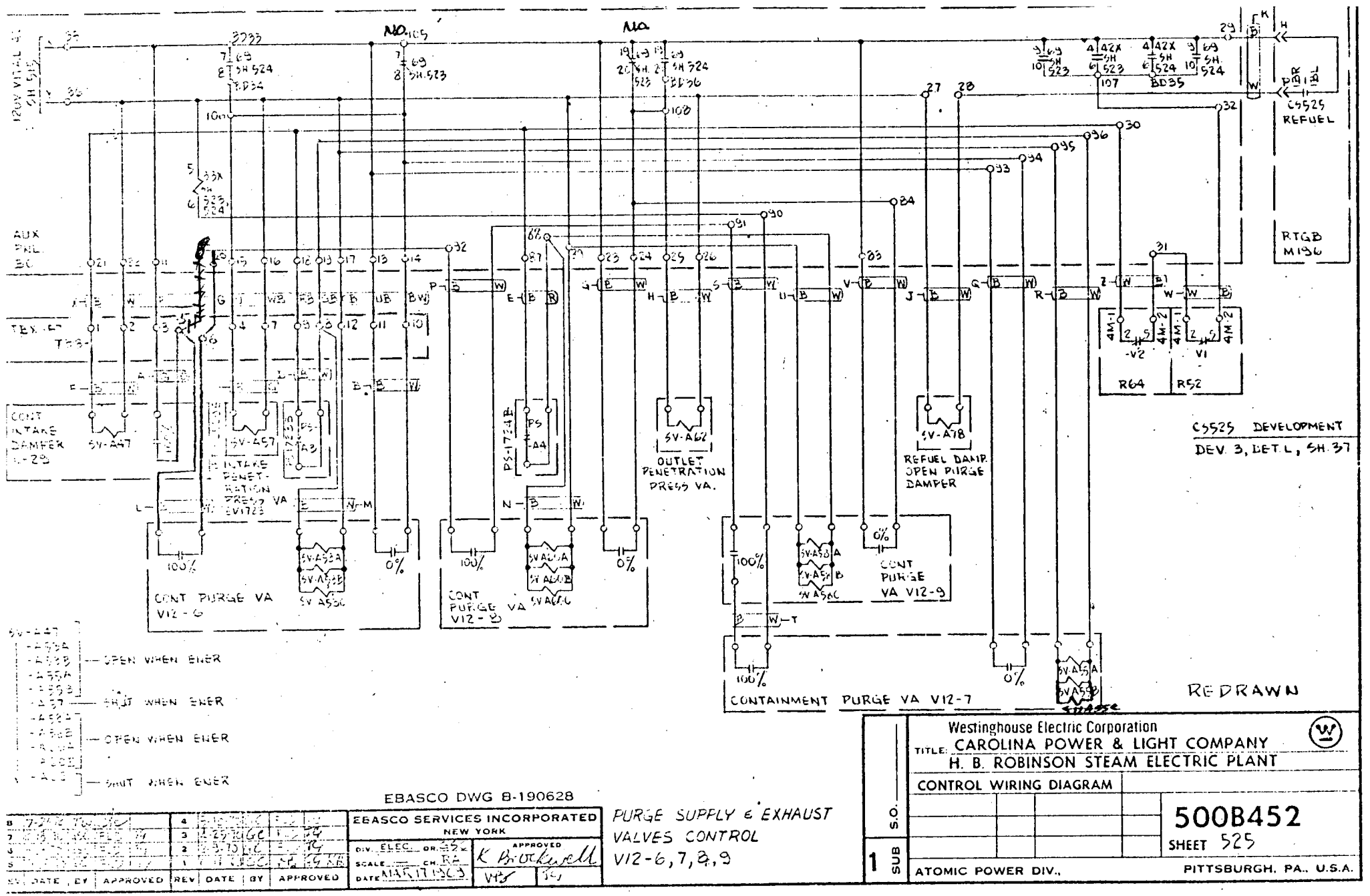
EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	8-3-70	GSC	FLD
7	7-19-70	TLR		3	7-19-70	GSC	FLD
6	3/27/75	mal	263	2	6-30-69	GSC	VB
5	2-26-75	TLR		1	2-26-69	GSC	VB

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE MAY 23 1969
APPROVED K Brockett VB JS

REACTOR CONTAINMENT RECIRC. COOL. UNIT HVH-4

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. 500B452
SUB 1
SHEET 514
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG 8-190628

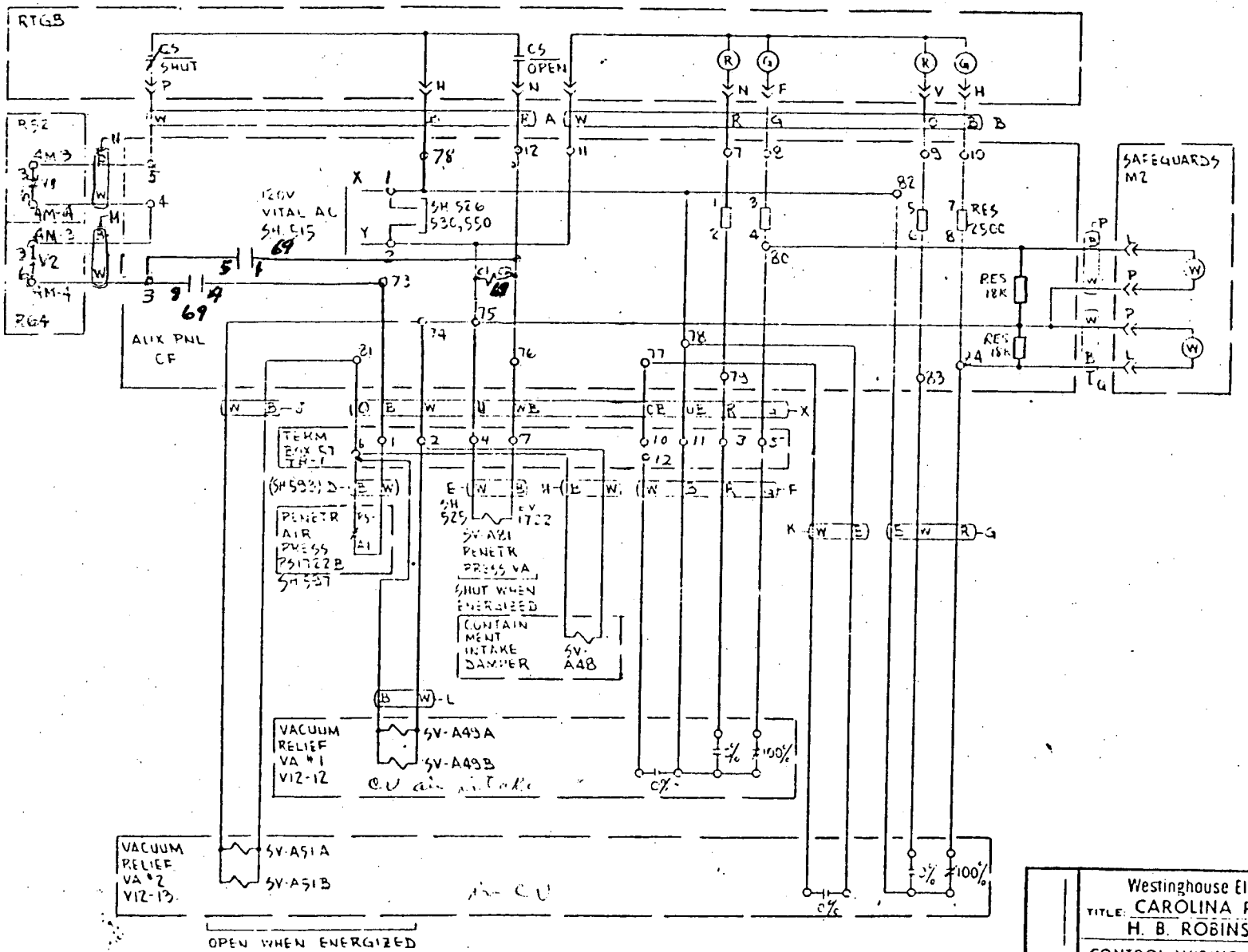
REV	DATE	BY	APPROVED
4			
3	1-29-69	GC	
2	5-10-68	LC	
1	7-31-67	LC	

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. OR. 552
SCALE — CH. RA
DATE MAR 17 1967
APPROVED K Brockwell V.P.

PURGE SUPPLY & EXHAUST VALVES CONTROL V12-6,7,8,9

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 525
S.O. 1 SUB
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK TW 7-20-7



EBASCO DWG 8-190628

8							
7							
6							
5							
4	10 [illegible]	FLD					
3	5-18-70	GSC	FLD				
2	5-7-70	GSC	FLD				
1	[illegible]						
NO.	DATE	BY	APPROVED				

EBASCO SERVICES INCORPORATED
NEW YORK
DIV ELEC DR GSC
SCALE — VB
APPROVED K. Bird

CONTAINMENT VACUUM
[illegible] VALVES
[illegible] V12-13

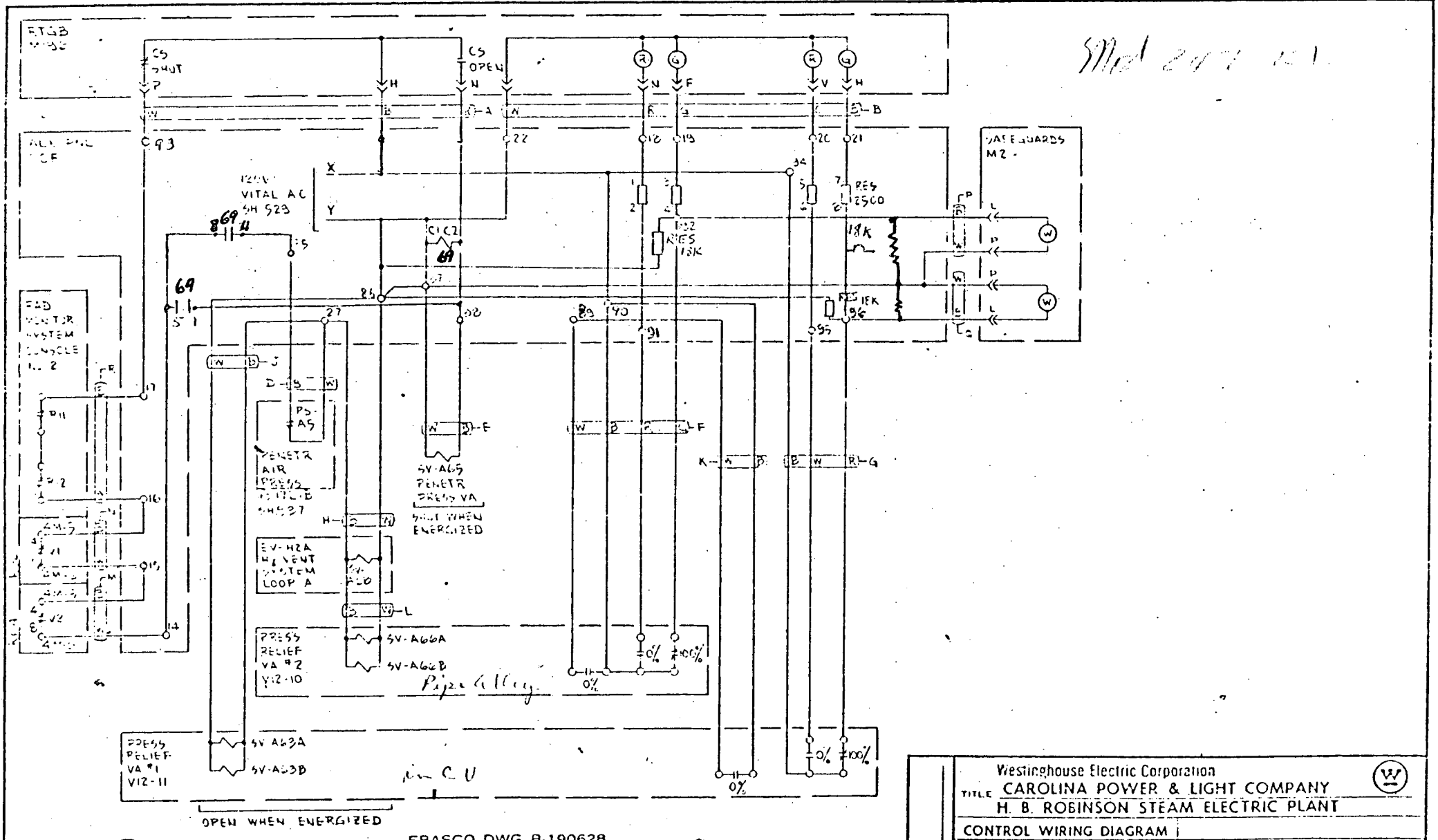
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. [illegible]B452
SH [illegible]529

1 SUB

[illegible]MIC POWER DIV.,

OK TW 7-21-78



EBASCO DWG B-190628

EBASCO SERVICES INCORPORATED NEW YORK

CONTAINMENT PRESSURE RELIEF VALVES V12-10, V12-11

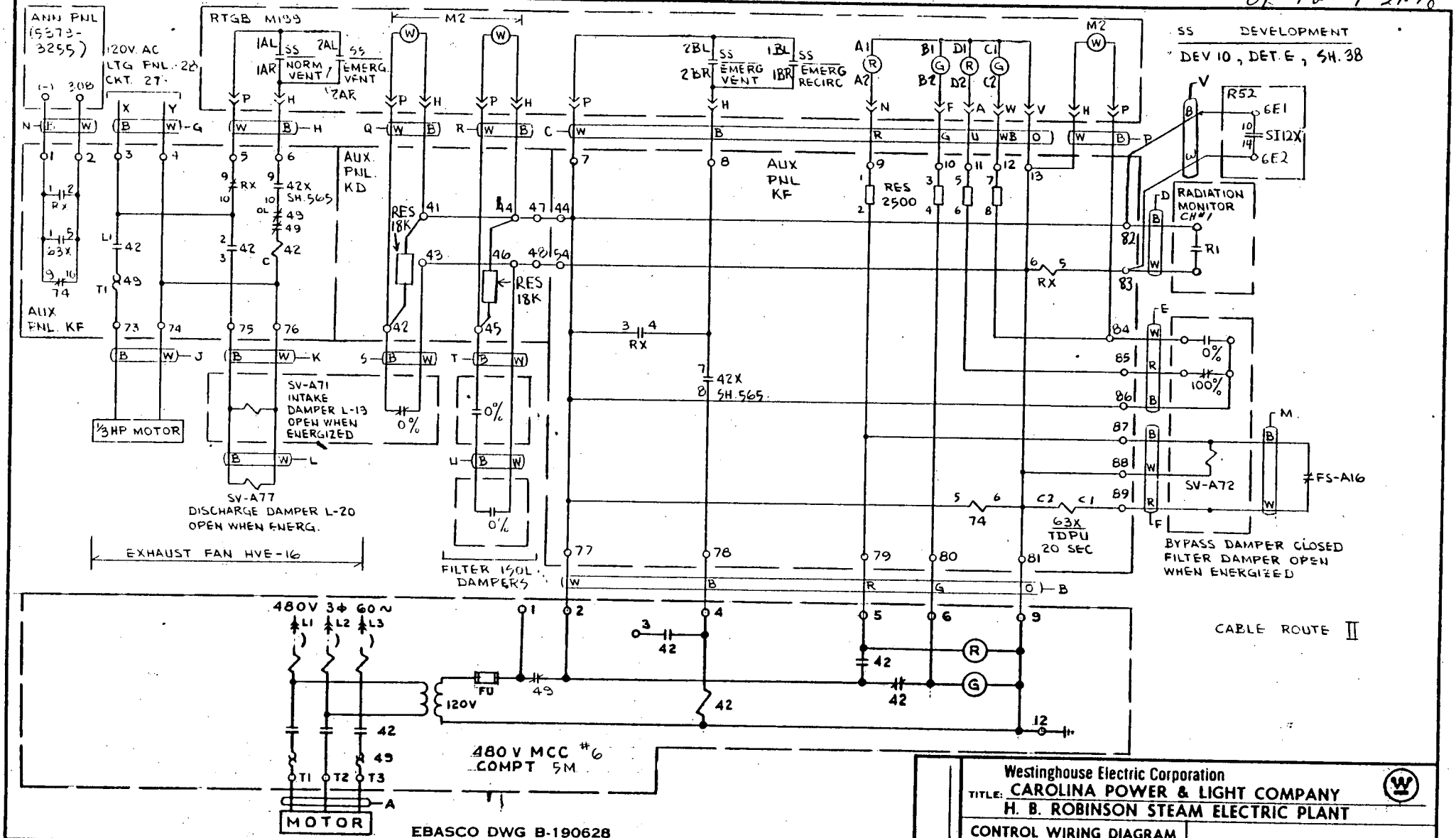
Westinghouse Electric Corporation

TITLE CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 5[redacted]452

SHEET [redacted]0

OK TW 7-21-78



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	5-3-70	GSC	FJ
7				3	3-19-70	GSC	FLD
6	7-21-70	TW	[illegible]	2	12-2-69	[illegible]	[illegible] KP
5	12-10-70	GSC	FLD	1	[illegible]	[illegible]	[illegible]

EBASCO SERVICES INCORPORATED NEW YORK

DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE APR 14 1969
APPROVED K Brockwell

CONTR. RM. FILTER FAN HVE-19 & EXHAUST FAN HVE-16

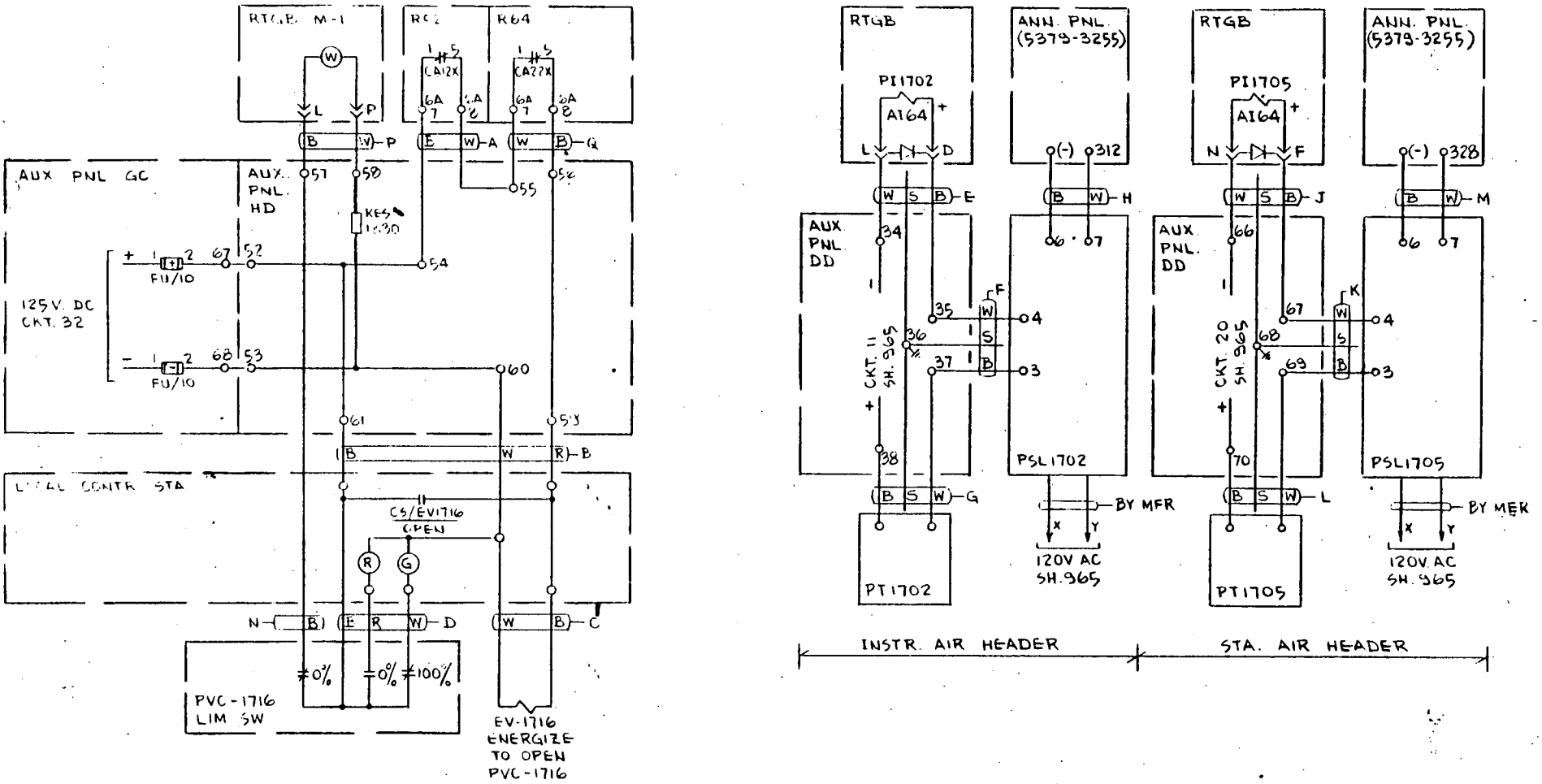
S.O. 1 SUB

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

500B452
SHEET 566

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	6-18-70	GSC	FLD JG
7				3	5-19-70	GSC	FLD JG
6				2	4-27-70	GSC	VB JG
5	9-18-70	GSC	FLD JG	1	1-15-70	GSC	VB JG

EBASCO SERVICES INCORPORATED NEW YORK

DIV. ELEC. DR. GSC APPROVED K Brockwell

SCALE — CH. VB DATE AUG. 12, 1969 VB. JG

INSTRUMENT AIR TO CONTAINMENT ISOLATION VA.

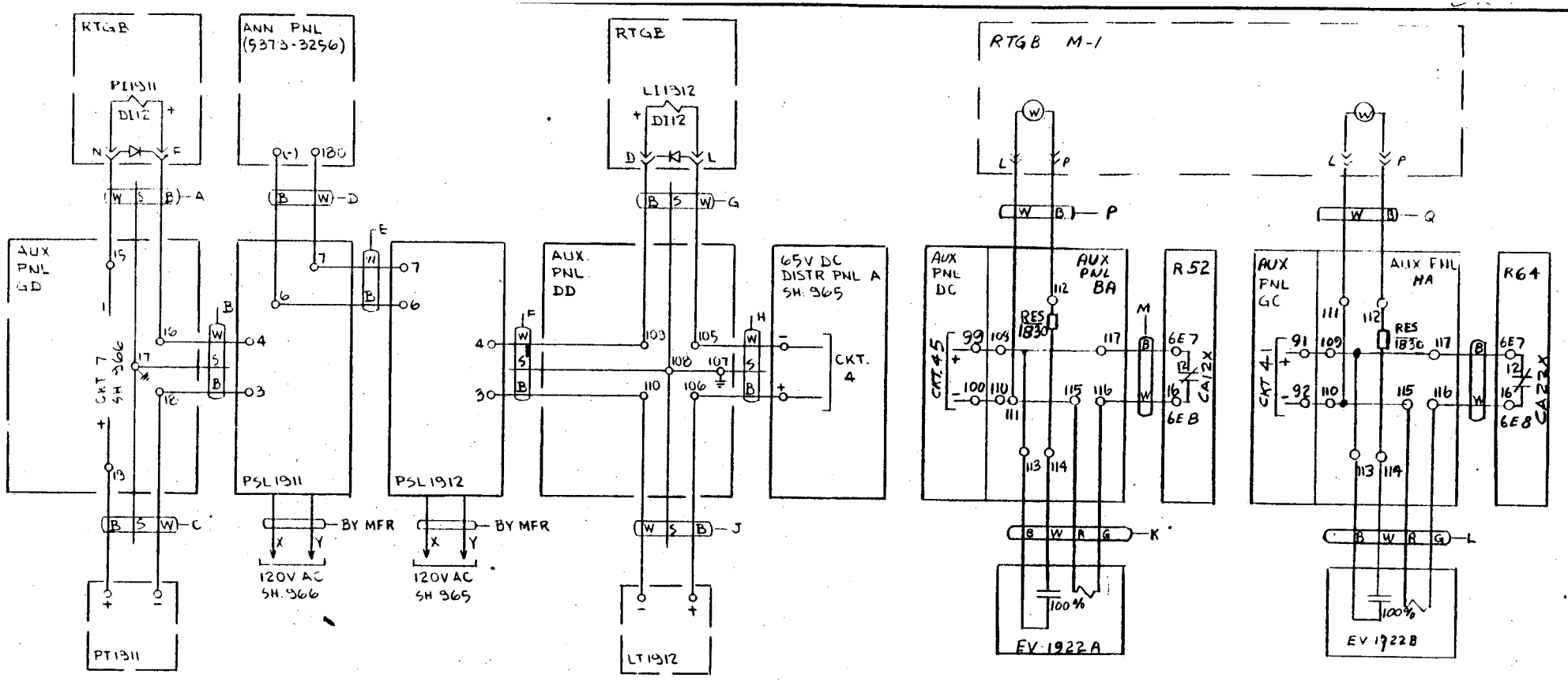
S.O. 1 SUB

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

500B452
SHEET 590

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



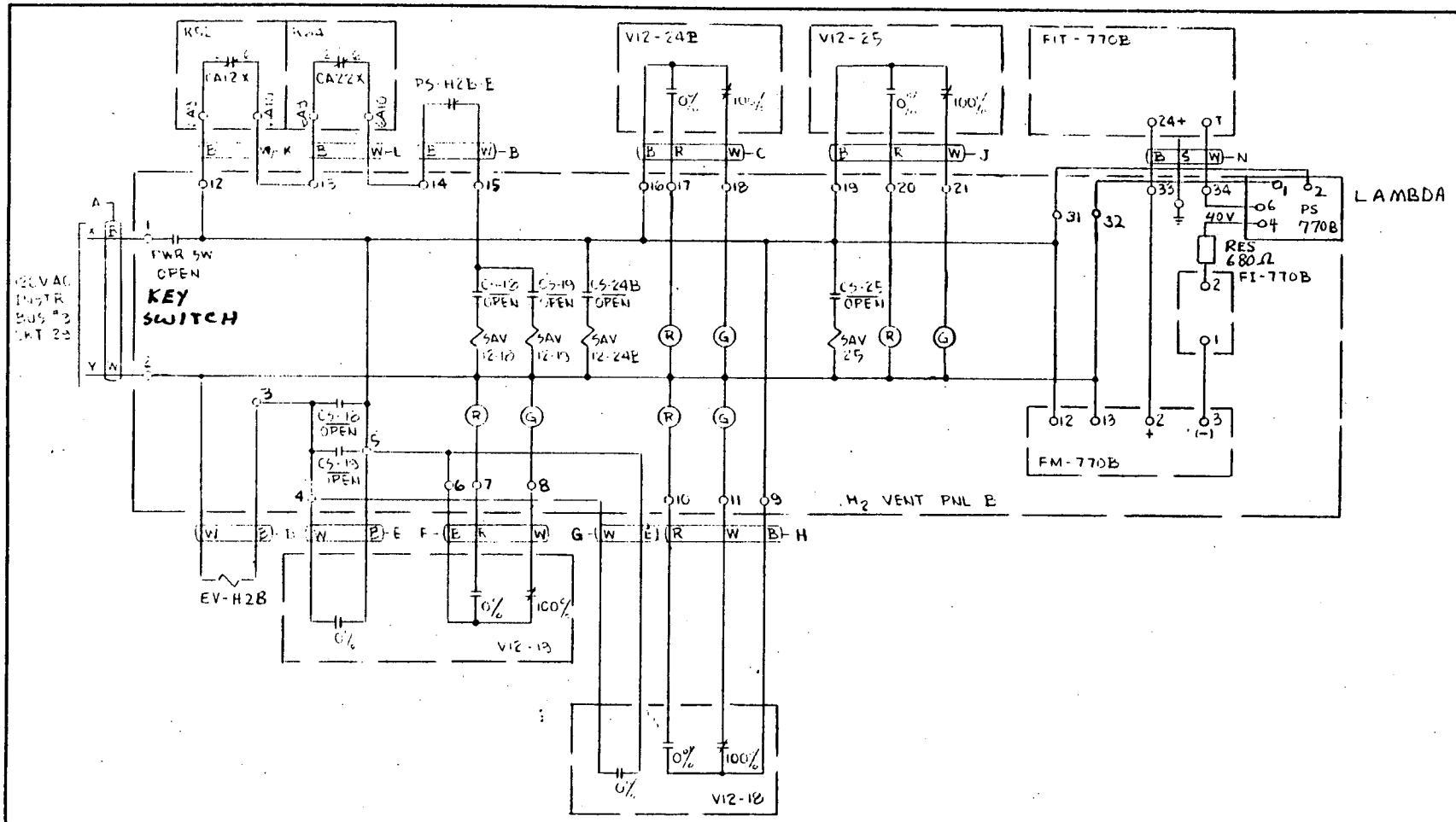
EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	8-26-70	GSL	FLD
7				3	8-15-70	GSL	FLD
6	7-12-70	TA	JC	2	3-18-70	GSL	FLD
5	2-11-70	GSL	FLD	1	2-12-70	GSL	FLD

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSL
SCALE — CH. VB
DATE JAN. 21, 1970
APPROVED

CONTAINMENT ISOLATION SEAL WATER

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. 1 SUB
500B452
SHEET 594
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EV-H2B —— ENER. TO CLOSE
SAV-12-10
SAV-12-13
SAV-12-24B
SAV-12-25
ENER. TO OPEN

EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	1-24-7		FLD
7				3	6-26-70		FLD
6				2	5-13-70		FLD
5	2-10-70	TJO		1	5-7-70		FLD

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC APPROVED
SCALE — CH. VB
DATE APR 22 1970

H_2 VENT SYSTEM
LOOP B

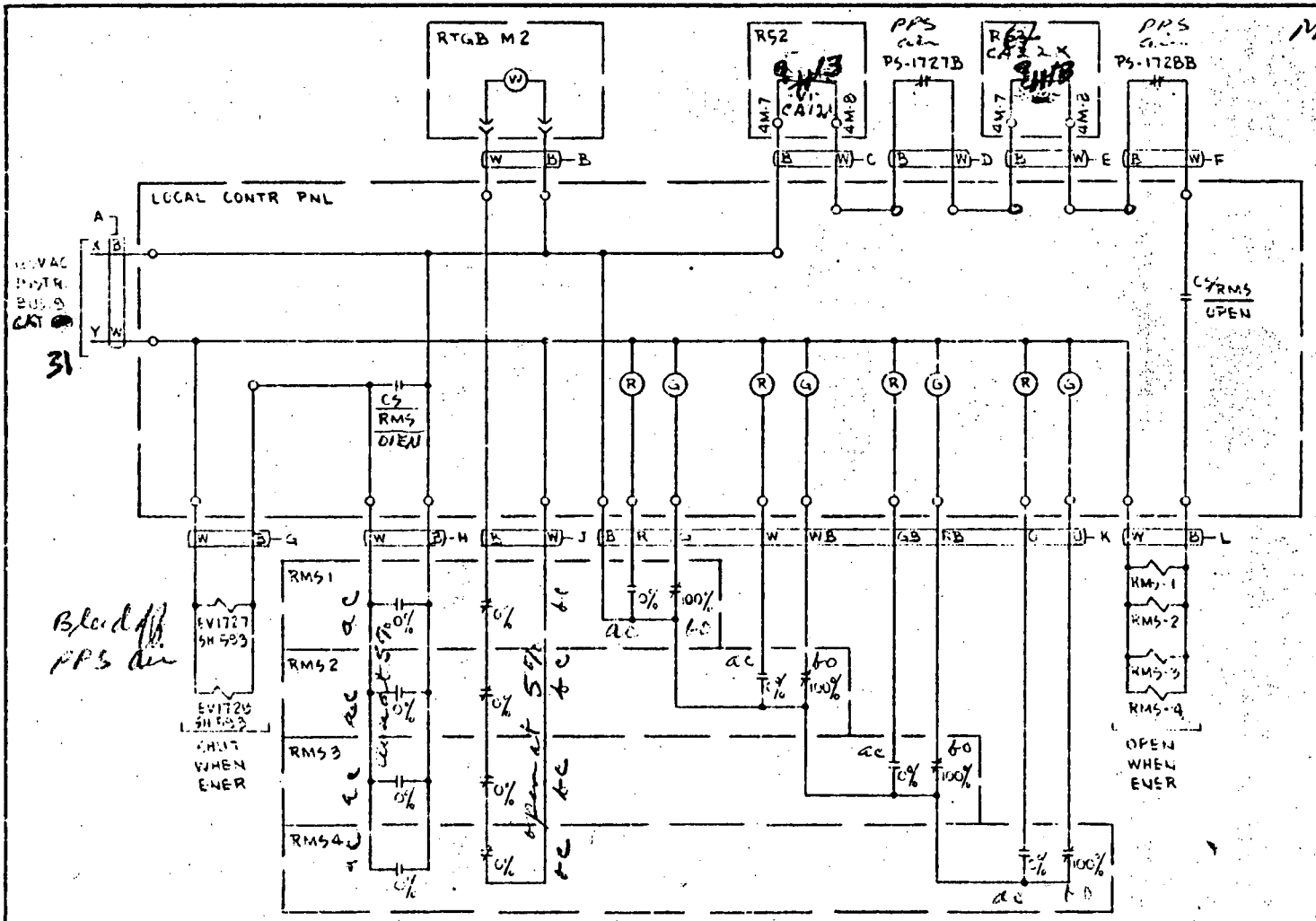
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

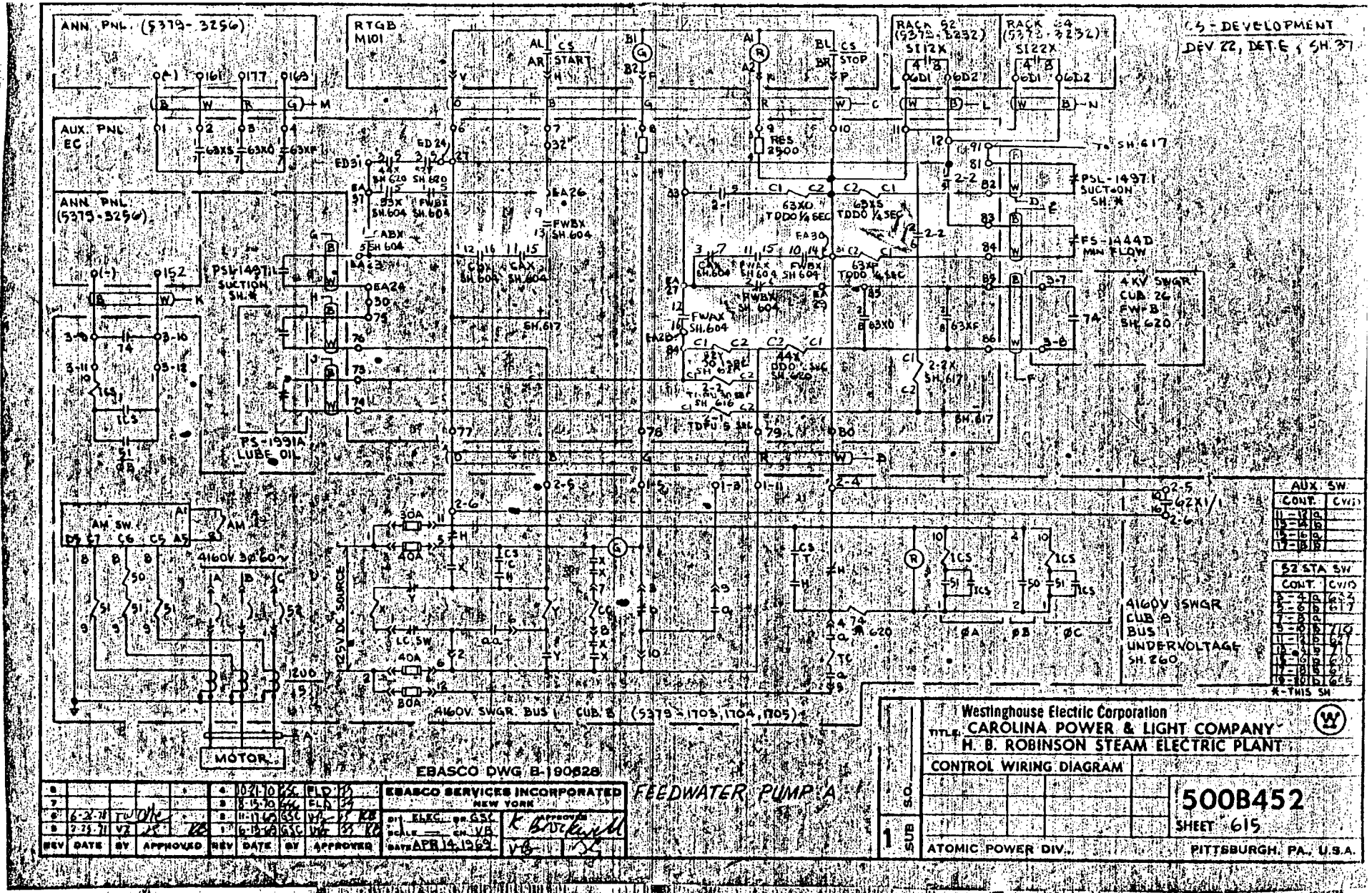
S.O. 500B452
SUB 1 SHEET 598

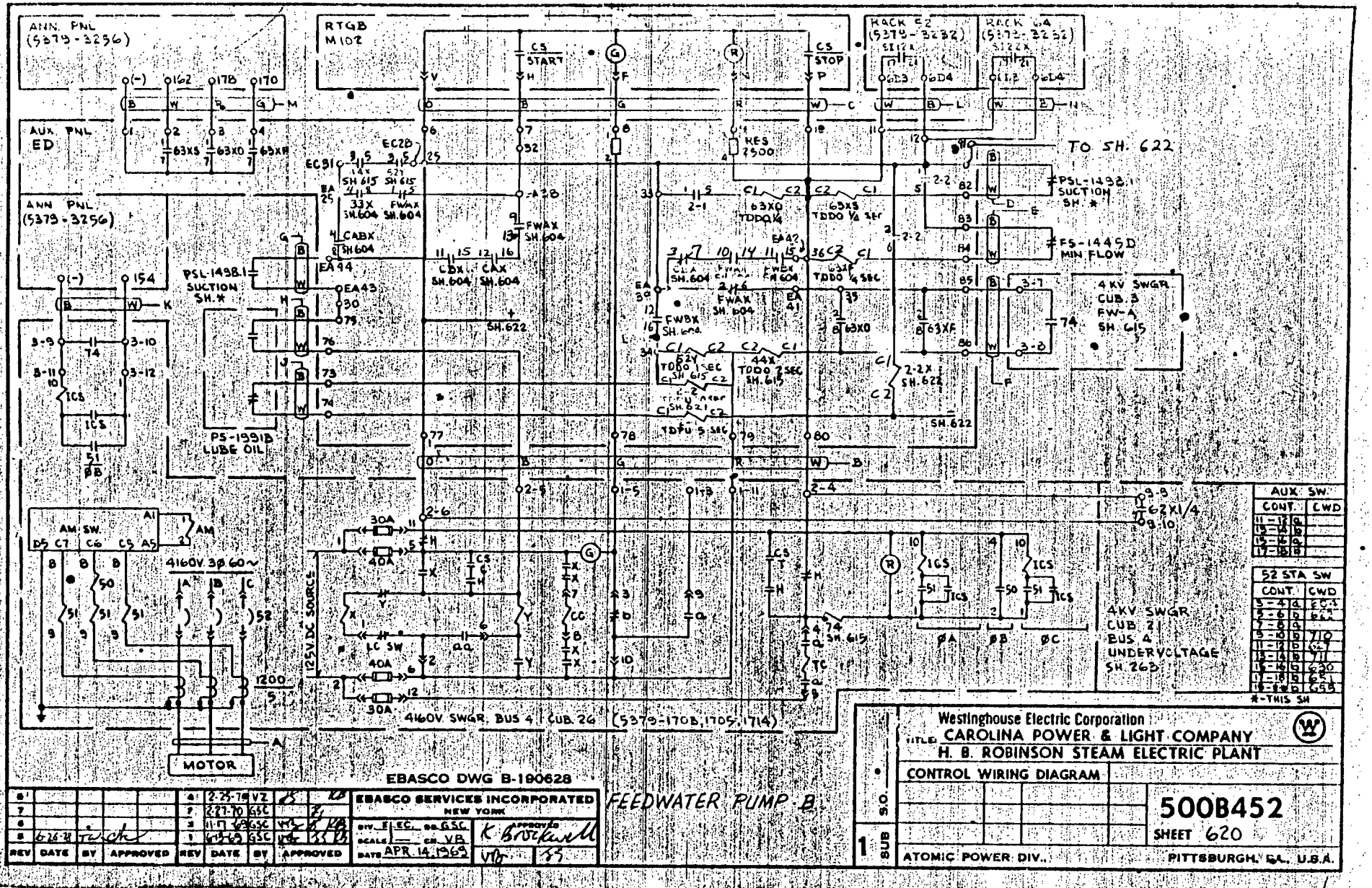
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

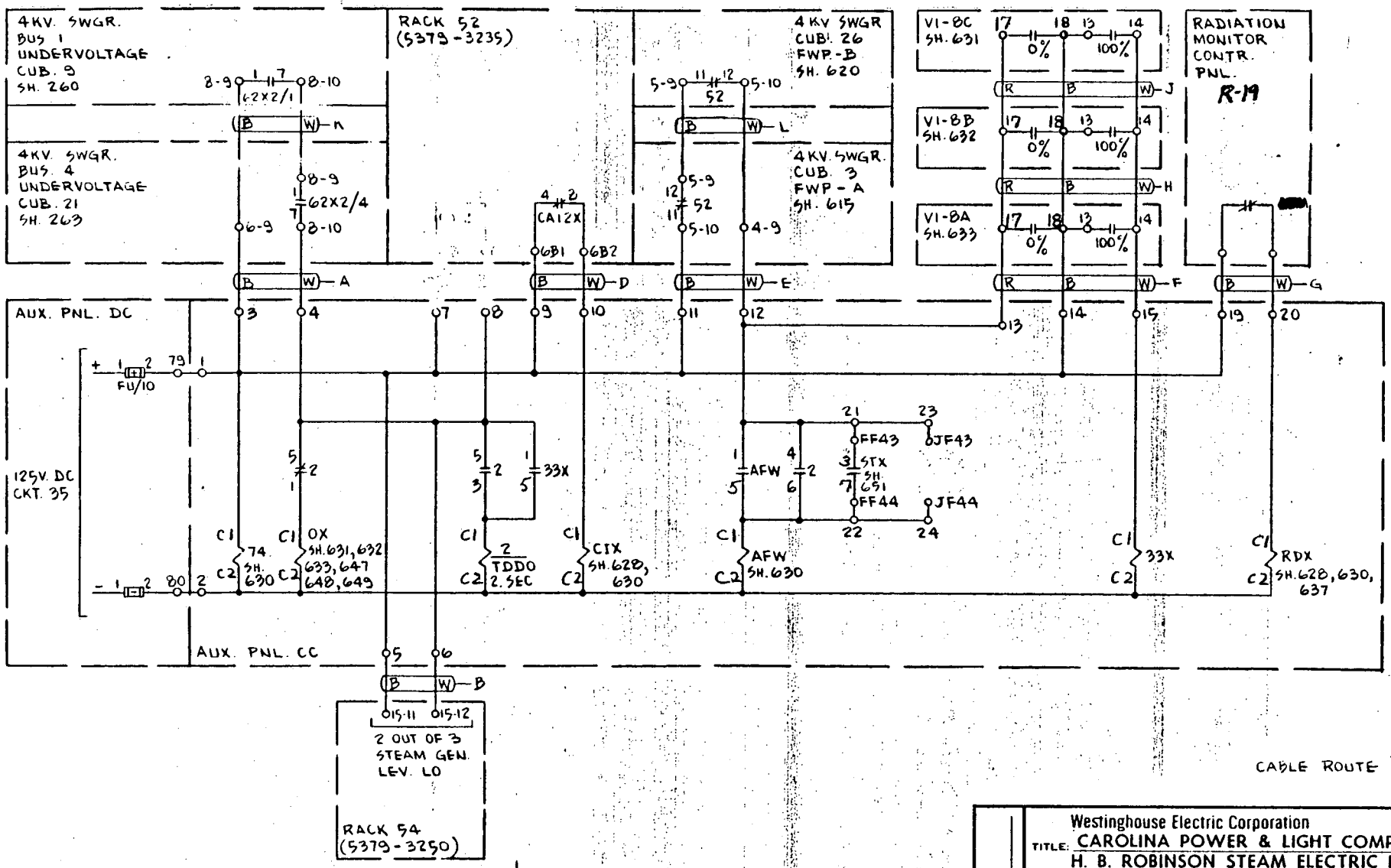
99

Mod #35


RTGB M2
R52
PS-1727B
PS-1728B
LOCAL CONTR PNL
CS/RMS OPEN
CS/RMS OPEN
RMS1
RMS2
RMS3
RMS4
RMS-1
RMS-2
RMS-3
RMS-4
EV1727 SH 593
EV1728 SH 593
CLOSE WHEN ENER
OPEN WHEN ENER
Bleed off PPS air
CONTAINMENT AIR SA... VA's RM... 2,3,4
EBASCO DWG B-190628
EBASCO SERVICES INCORPORATED
NEW YORK
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
5008452
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.
C.P.&L.


ANN. PNL. (5379-3256)
RTGB M101
RACK 52 (5373-3232)
RACK 54 (5373-3234)
AUX. PNL EC
ANN. PNL (5379-3256)
PSL-1497 SUCTION SH. *
PS-1991A LUBE OIL
AM SW.
4160V 3Ø 60~
MOTOR
FEEDWATER PUMP A
4160V SWGR BUS CUB. 8 (5379-1703, 1704, 1705)
EBASCO DWG B-190828
AUX. SW
52 STA SW
4160V SWGR CUB 8 BUS UNDERVOLTAGE SH. 260
Westinghouse Electric Corporation
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 615
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.
EBASCO SERVICES INCORPORATED NEW YORK
APR 14, 1969


ANN. PNL (5379-3256)
RTGB M102
CS START
CS STOP
RACK C2 (5379-3232)
RACK C4 (5379-3232)
AUX. PNL ED
TO SH. 622
#PSL-1498.1 SUCTION SH. *
#FS-1445D MIN FLOW
PSL-1498.1 SUCTION SH.*
PS-1991B LUBE OIL
4 KV SWGR CUB. 3 FW-A SH. 615
AM SW.
4160V 3Ø 60~
125V DC SOURCE
MOTOR
4160V SWGR. BUS 4 CUB. 24 (5379-1708, 1705, 1714)
4KV SWGR CUB 21 BUS 4 UNDERVOLTAGE SH. 263
AUX. SW.
52 STA SW
EBASCO DWG B-190628
EBASCO SERVICES INCORPORATED NEW YORK
FEEDWATER PUMP B
Westinghouse Electric Corporation
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 620
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3	6-26-70	TW	CK
6				2	10-5-70	GSC	FLD 14
5				1	8-24-70	GSC	FLD 14

EBASCO SERVICES INCORPORATED NEW YORK
DIV. ELEC. DR. GSC APPROVED K Brockwell
SCALE — CH. VB
DATE JAN 16 1970 VB

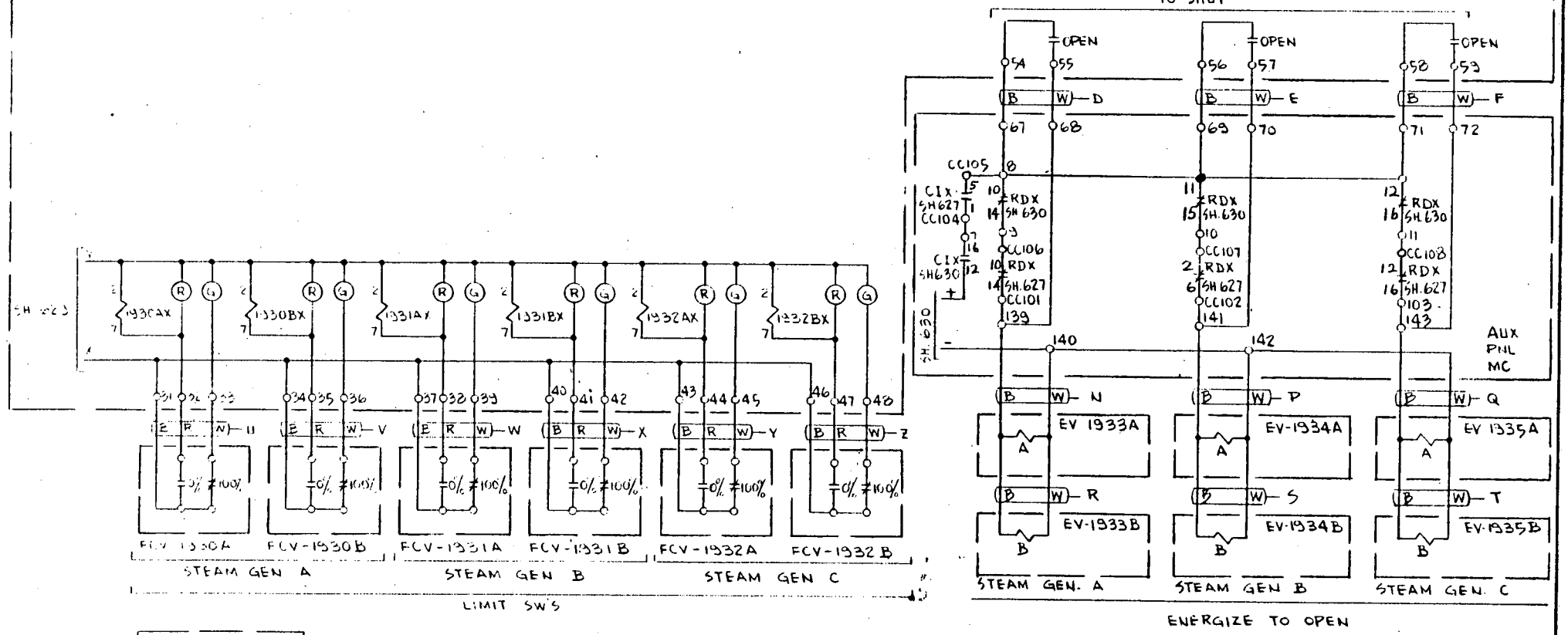
STEAM DRIVEN FWP BACK-UP

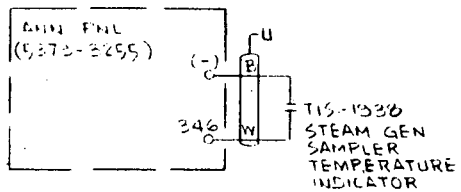
S.O. 1 SUB

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 627
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

AL CNTR STA

"SHUT - OPEN"
SPRING RETURN
TO SHUT





EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	10-5-70	[illegible]	FLD
7				3	2-24-70	[illegible]	FLD
6				2	1-6-70	[illegible]	[illegible]
5	1-22-70	TW	[illegible]	1	2-27-69	[illegible]	[illegible]

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR 435
SCALE — CH. VB
DATE JUL 11 1969
APPROVED K Brockwell
VB | FS

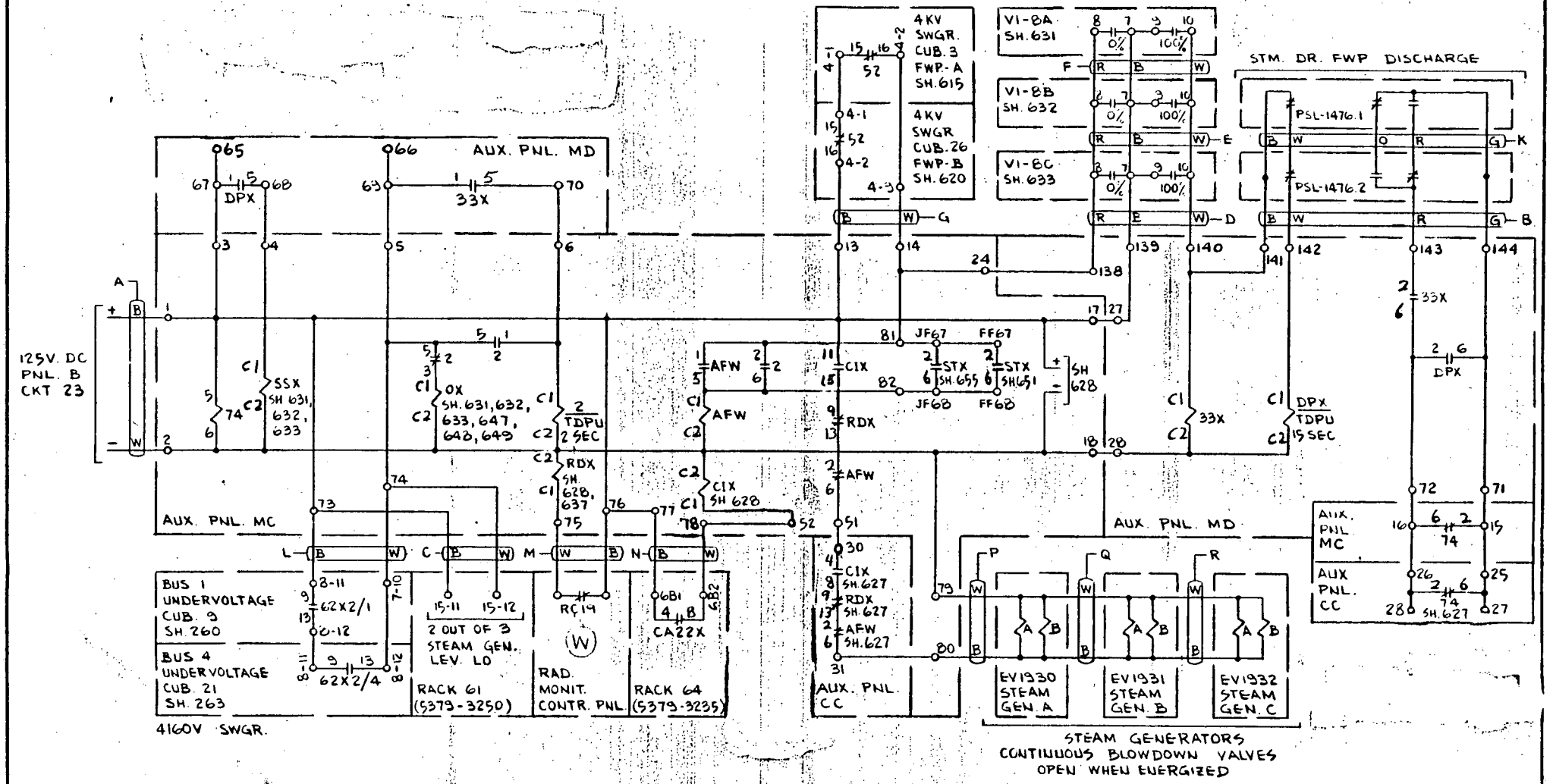
STEAM GENERATOR
BLOWDOWN SAMPLING
VALVES

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 1 SUB

500B452
SHEET 628

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4	5-19-70	GSC	FLD SG
7				3	2-23-70	GSC	FLD SG
6	6-26-70	TW	[illegible]	2	1-6-70	GSC	VB LB
5	8-26-70	GSC	FLD TG	1	8-15-69	GSC	VB KB

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE JUL. 11 1969
APPROVED K. Brockwell
VB SG

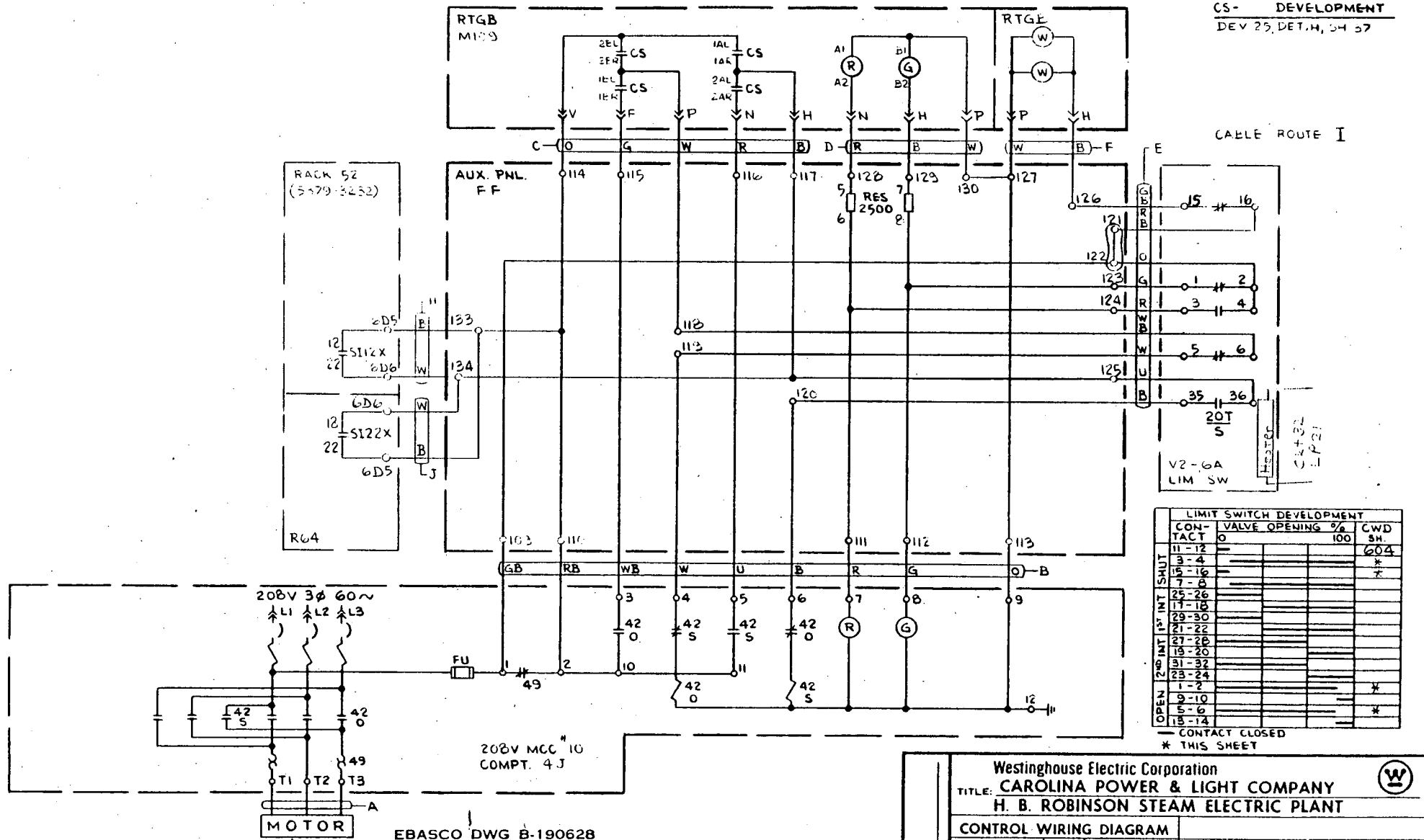
STEAM DRIVEN FEEDWATER PUMP

S.O. 1 SUB

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

500B452
SHEET 630

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3			
6				2			
5				1			

EBASCO SERVICES INCORPORATED
NEW YORK

DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE

APPROVED K Brockwell

FEEDWATER HEADER
DISCHARGE VA. V2-6A

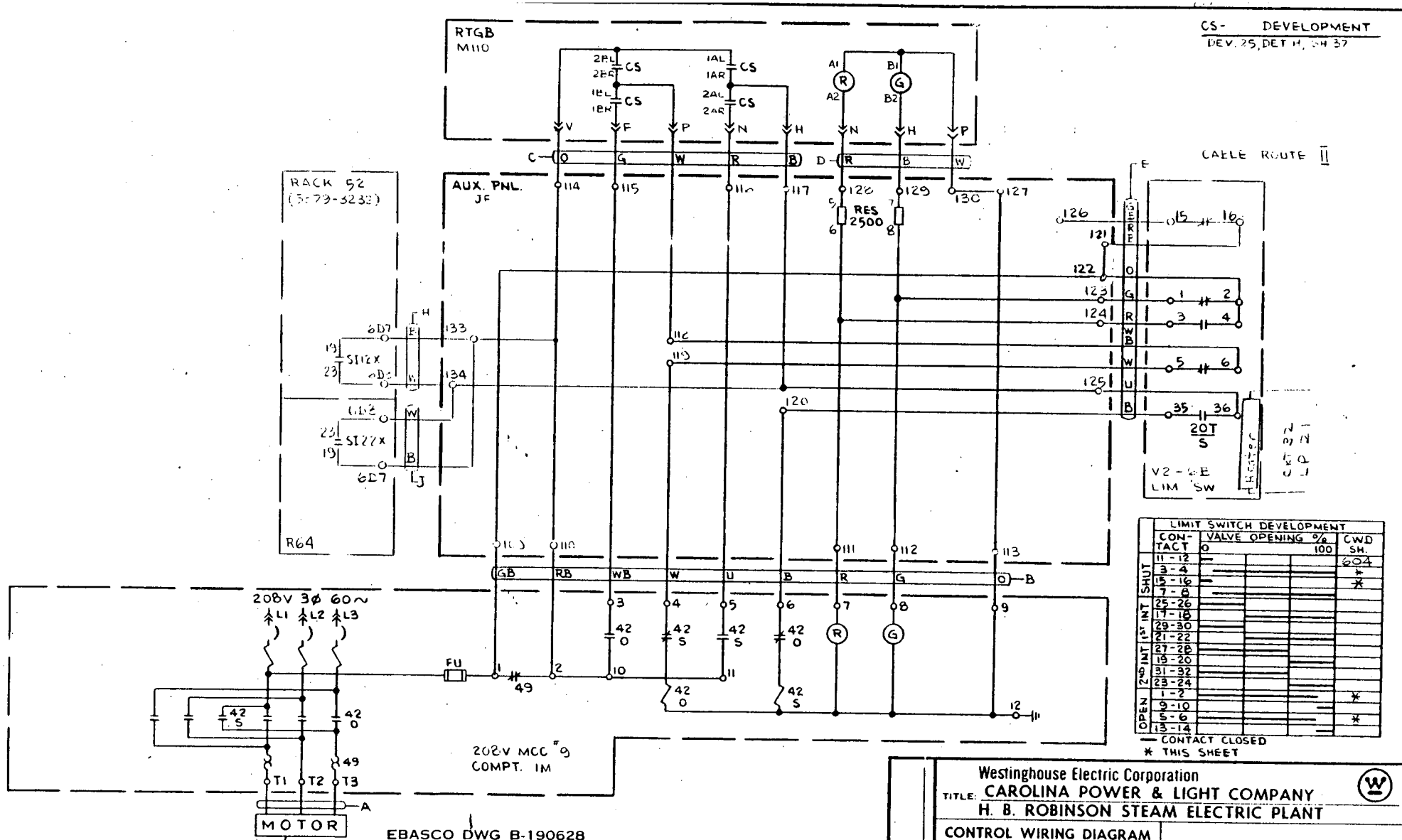
S.O. 1 SUB

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

500B452
SHEET 638

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

CS- DEVELOPMENT
DEV. 25, DET H, SH 37



LIMIT SWITCH DEVELOPMENT

	CONTACT	VALVE OPENING % 0 100	CWD SH.
SHUT	11-12		604
	3-4		*
	15-16		*
	7-8		
INT 1ST	25-26		
	17-18		
	29-30		
INT 2ND	21-22		
	27-28		
	19-20		
	31-32		
	23-24		
OPEN	1-2		*
	9-10		
	5-6		*
	13-14		

— CONTACT CLOSED
* THIS SHEET

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3			
6				2			
5				1			

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC DR. GSC
SCALE — CH. VB
DATE JUN 11 1963
APPROVED K. Brockwell

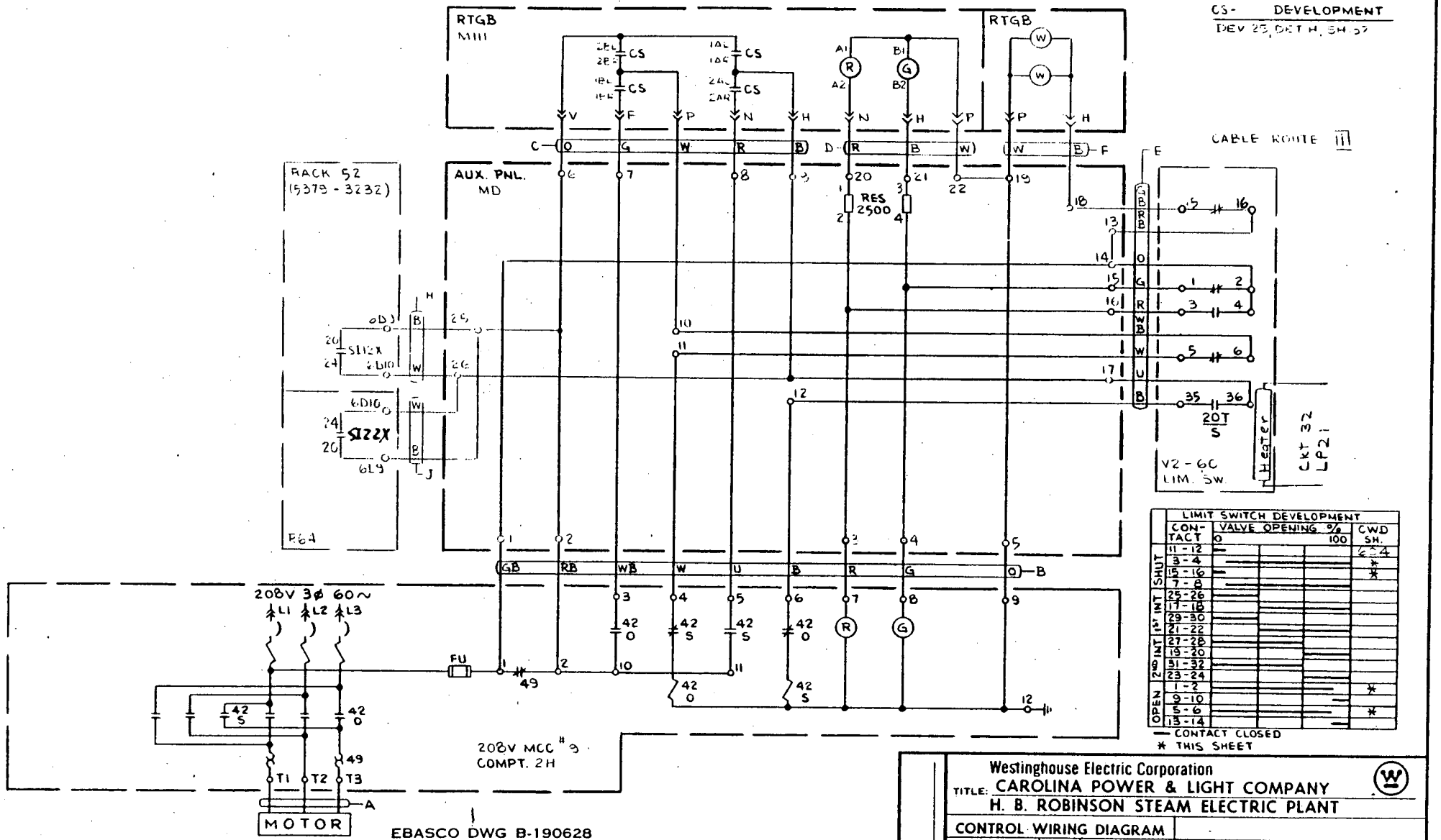
FEEDWATER HEADER
DISCHARGE VA. V2-6B

S.O. 1 SUB

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

500B452
SHEET 639

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

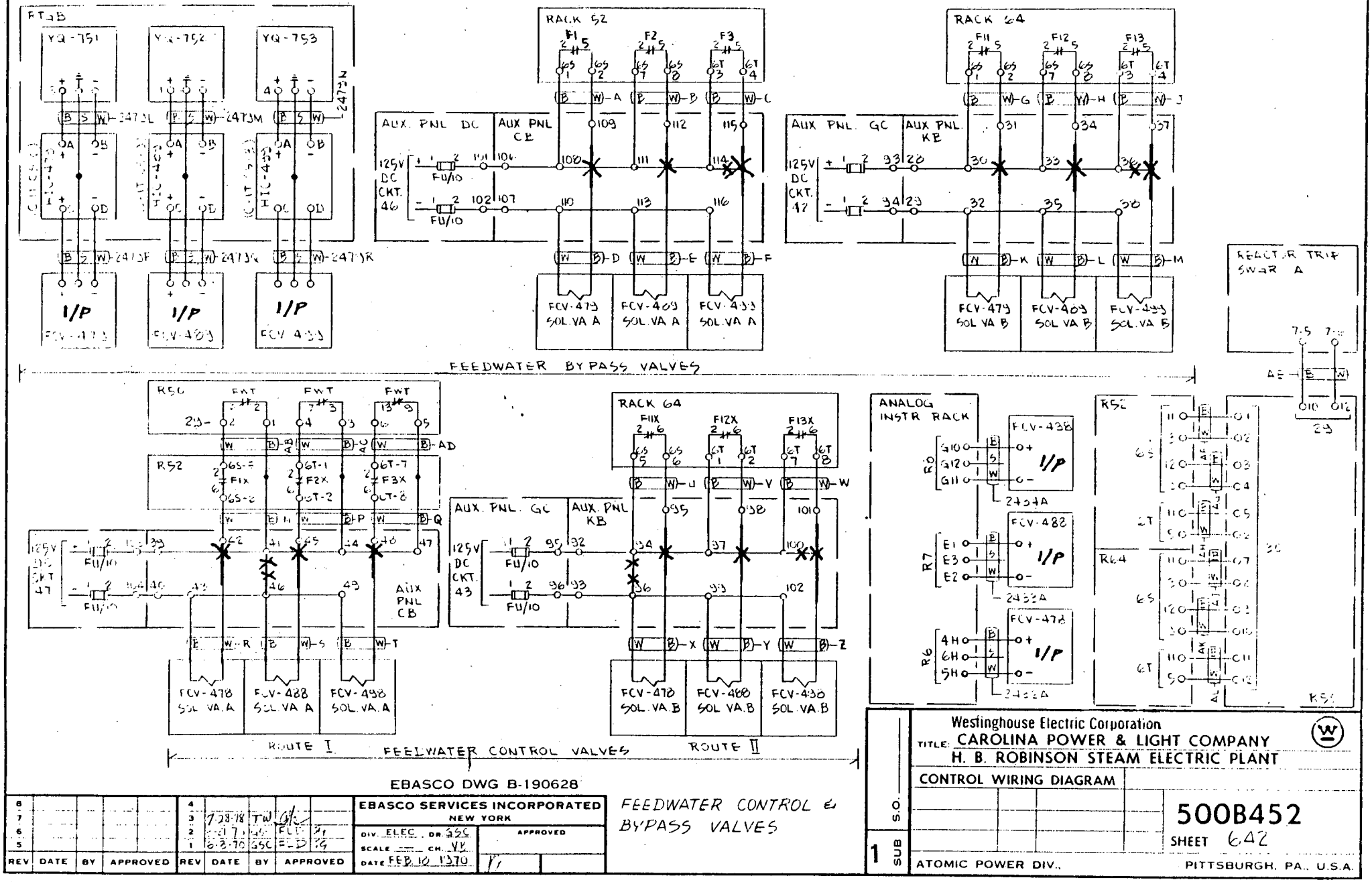


REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3			
6				2			
5				1			

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE JUL 11 1963
APPROVED

FEEDWATER HEADER
DISCHARGE VA V2-6C

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 640
S.O. 1 SUB
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3	7-28-78	TW	GC
6				2	6-17-70	GSC	FLD
5				1	6-3-70	GSC	FLD

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC APPROVED
SCALE — CH. VV
DATE FEB 10 1970

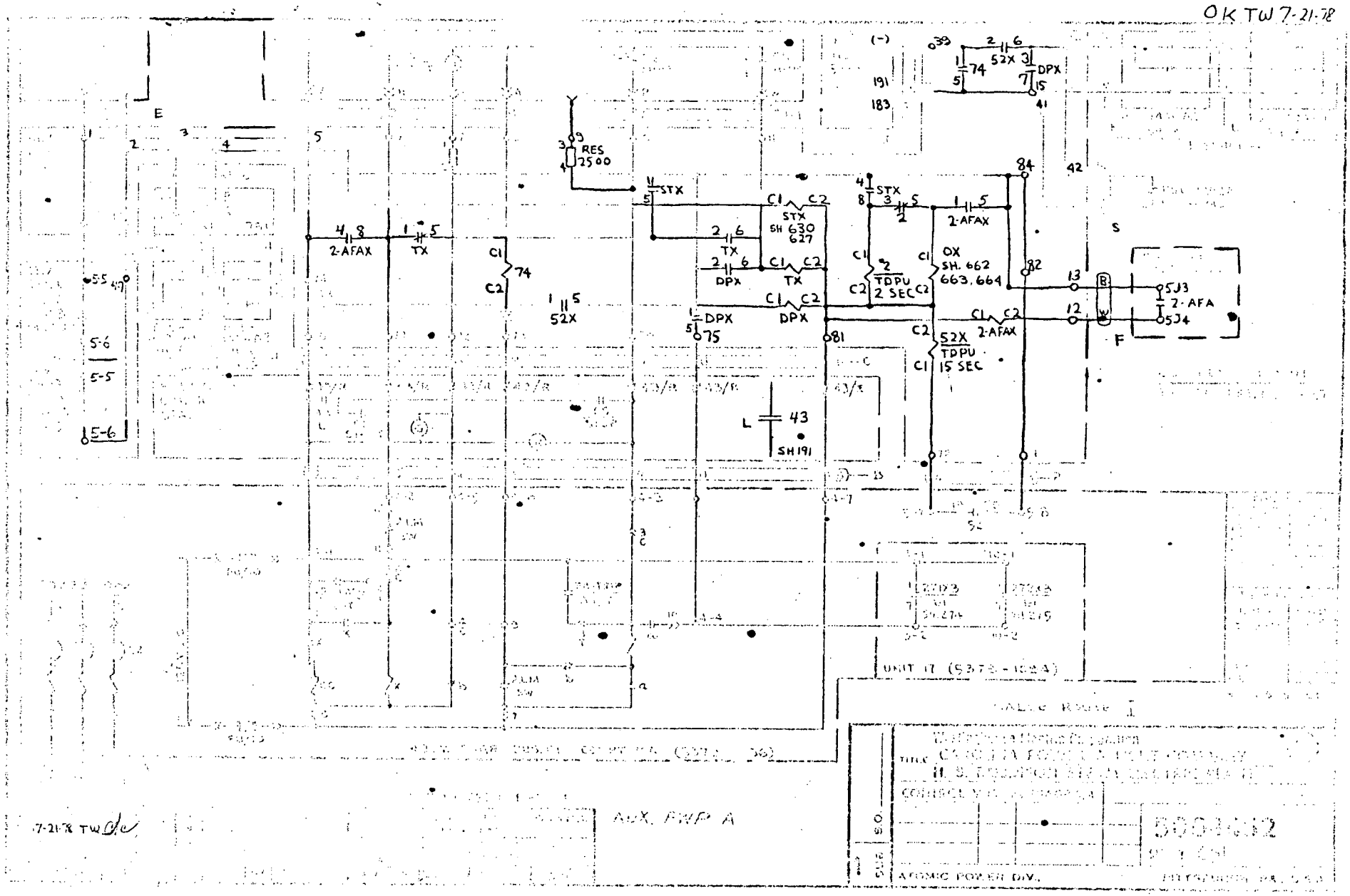
FEEDWATER CONTROL & BYPASS VALVES

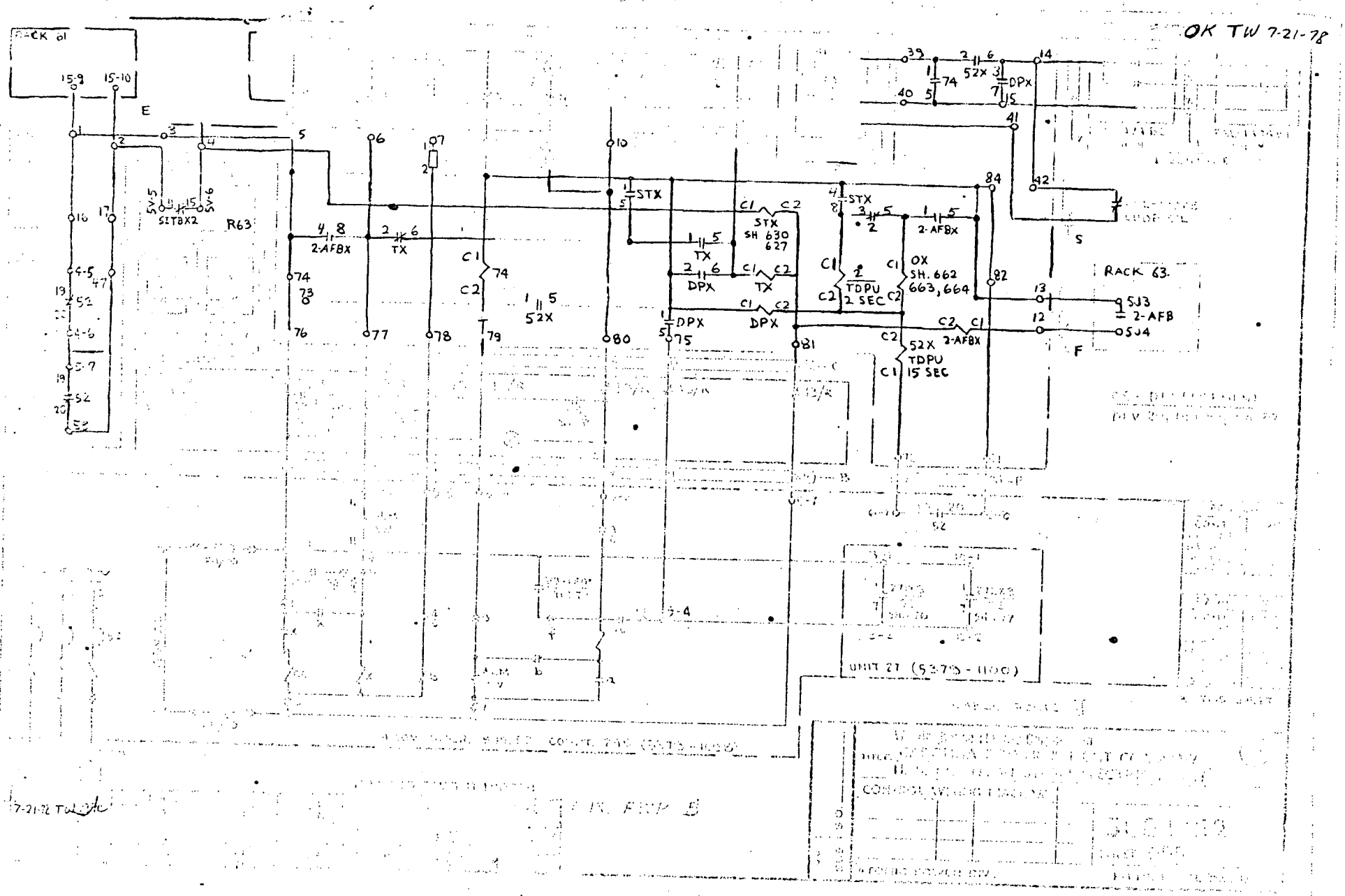
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

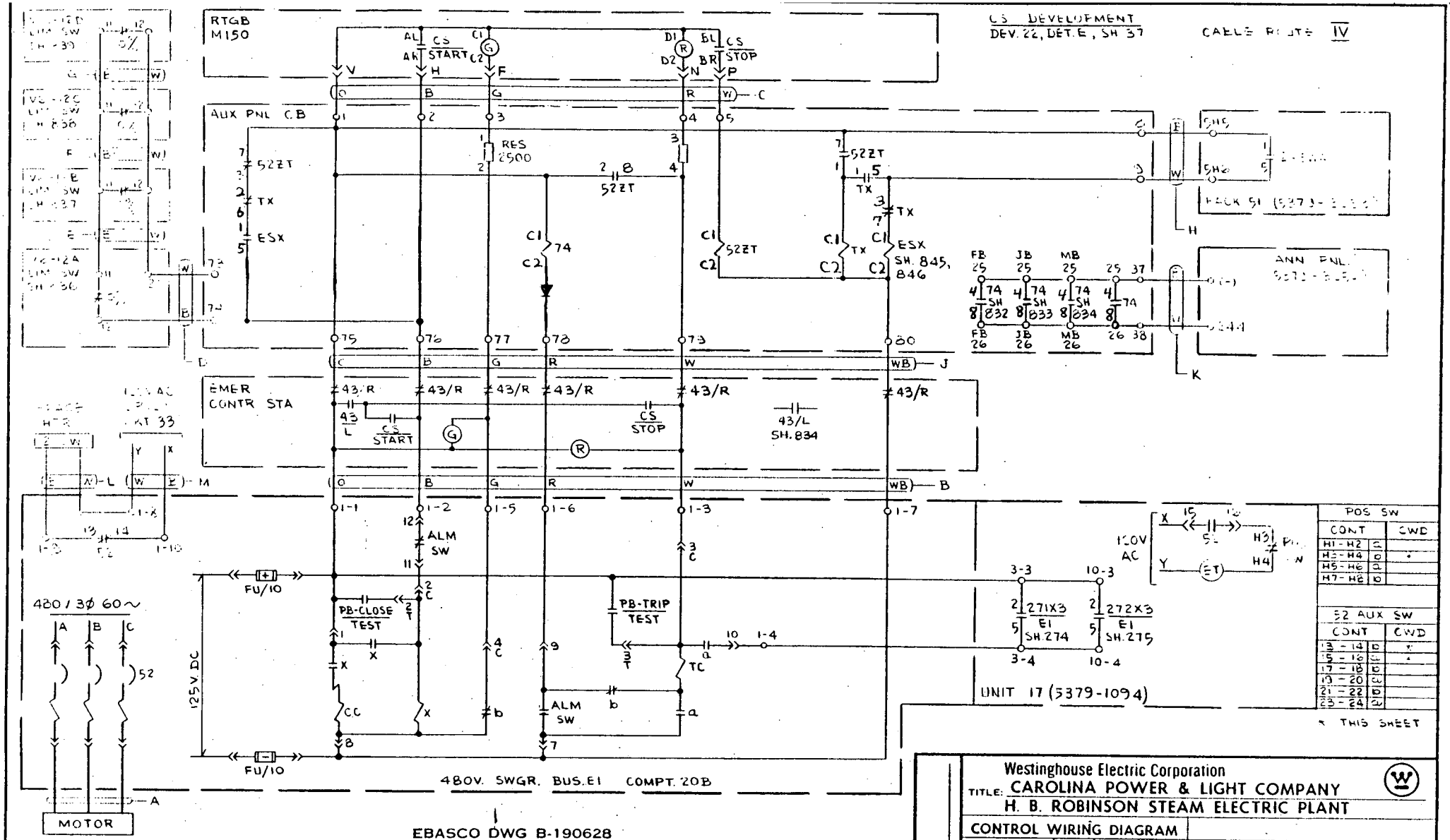
S.O. 500B452
SUB 1
SHEET 642

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

OK TW 7-21-78


RES 2500
STX
2-AFAX
TX
74
52X
DPX
75
STX SH 630 627
TX
DPX
DPX
43
SH 191
OX SH. 662 663, 664
TDPU 2 SEC
52X TDPU 15 SEC
2-AFAX
5J3 2-AFA
5J4
UNIT 17 (5375-1024)
AUX. BWR A
7-21-78 TW


OK TW 7-21-78
RACK 01
15-9
15-10
E
SITBX2
R63
2-AFBX
TX
STX
SH 630
627
DPX
TX
TDPU
2 SEC
OX
SH. 662
663,664
52X
TDPU
15 SEC
2-AFBX
RACK 63.
SJ3
2-AFB
SJ4
F
S
UNIT 27 (53-75 - 1100)
7-21-78 TW



EBASCO DWG B-190628

SERVICE WATER PUMP A

REV	DATE	BY	APPROVED
8			
7			
6			
5			
4	7/10 A	TWL	MC
3	6/20/71	GSC	FLD
2	1/7/70	GSC	VB
1	12/23/69	GSC	VB

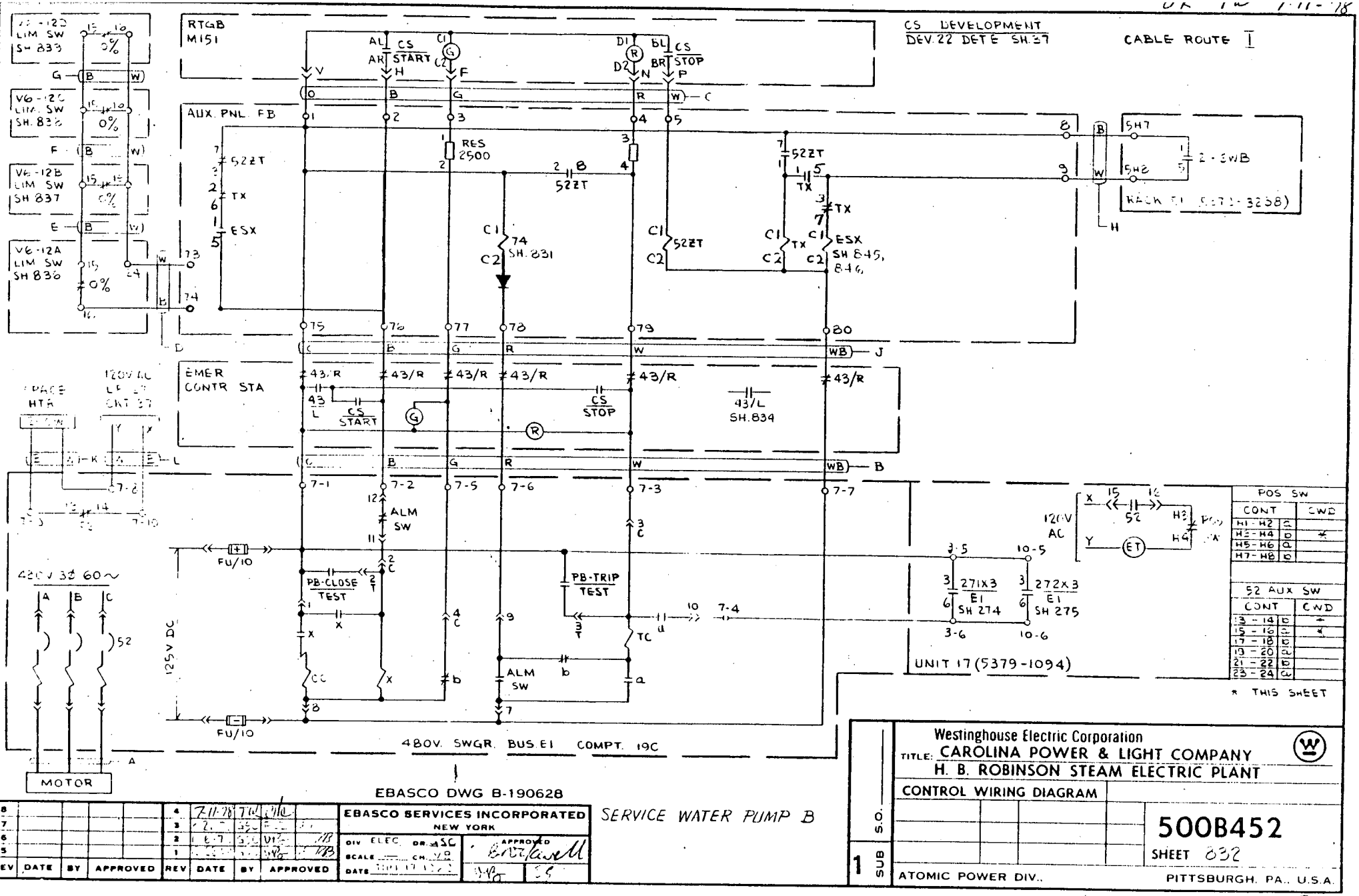
EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC DR. GSC
SCALE — CH. VB
DATE JUNE 17 1969
APPROVED K Brockwell VB SS

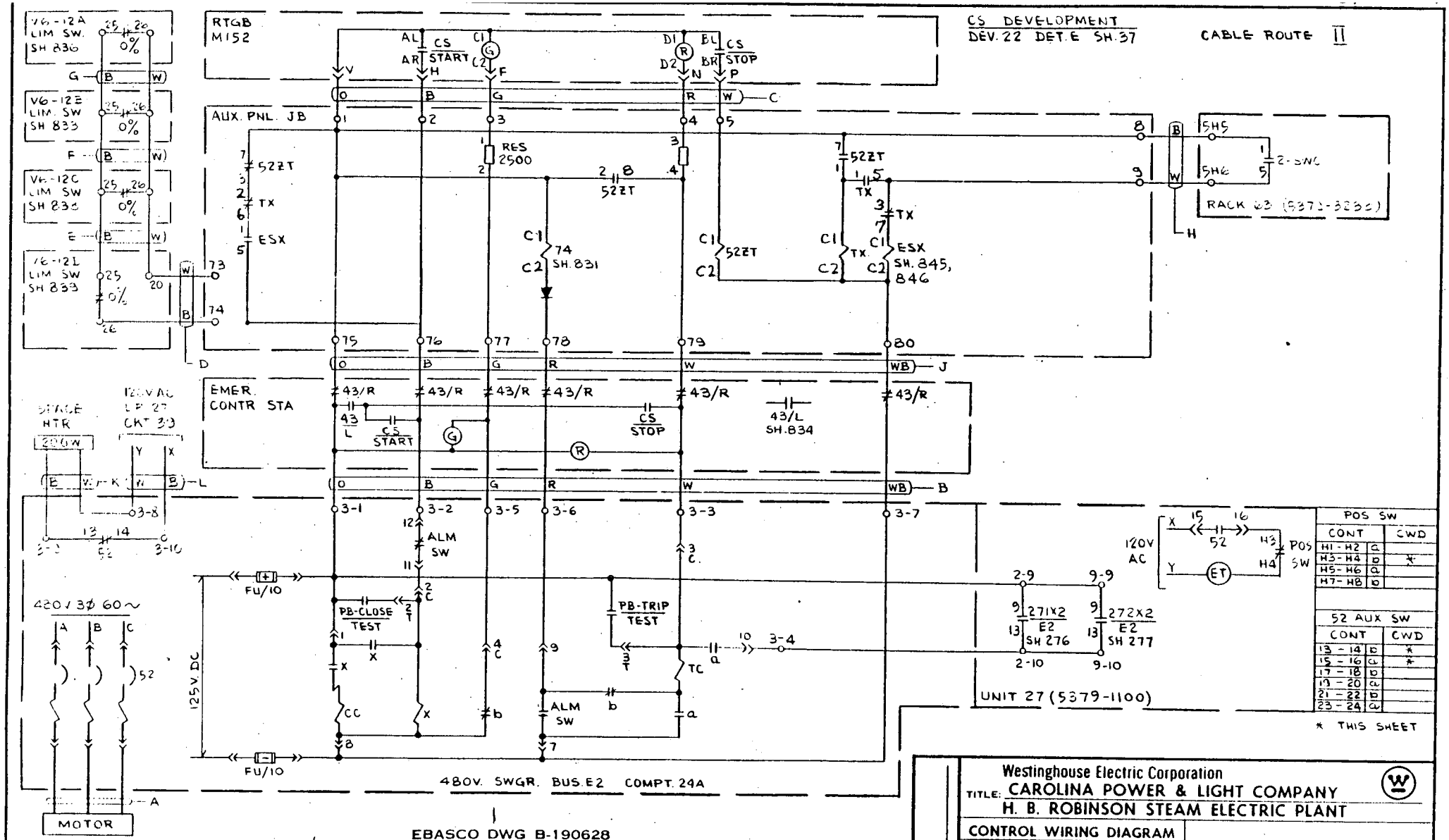
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 1 SUB

500B452
SHEET 231

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.


RTGB M151
CS DEVELOPMENT
DEV. 22 DETE SH. 37
CABLE ROUTE I
AUX. PNL. FB
EMER CONTR STA
RES 2500
52ZT
TX
ESX
74 SH. 831
ESX SH 845, 846
43/R
43/L SH. 834
CS START
CS STOP
ALM SW
PB-CLOSE TEST
PB-TRIP TEST
FU/10
125V DC
120V AC
480V 3Ø 60~
52
MOTOR
271X3 E1 SH 274
272X3 E1 SH 275
POS SW
52 AUX SW
UNIT 17 (5379-1094)
* THIS SHEET
480V. SWGR. BUS E1 COMPT. 19C
EBASCO DWG B-190628
SERVICE WATER PUMP B
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 032
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.
EBASCO SERVICES INCORPORATED
NEW YORK
S.O. 1 SUB



EBASCO DWG B-190628

SERVICE WATER PUMP C

REV	DATE	BY	APPROVED
8			
7			
6			
5			
4	7-11-78	TJG	CHC
3	6-26-70	GSC	FLL
2	1-6-70	GSC	VB
1	12-26-63	GSC	VB

EBASCO SERVICES INCORPORATED
NEW YORK

DIV. ELEC. DR. GSC
SCALE — CH. VB
DATE JUN 17 1963
APPROVED C. Brockwell

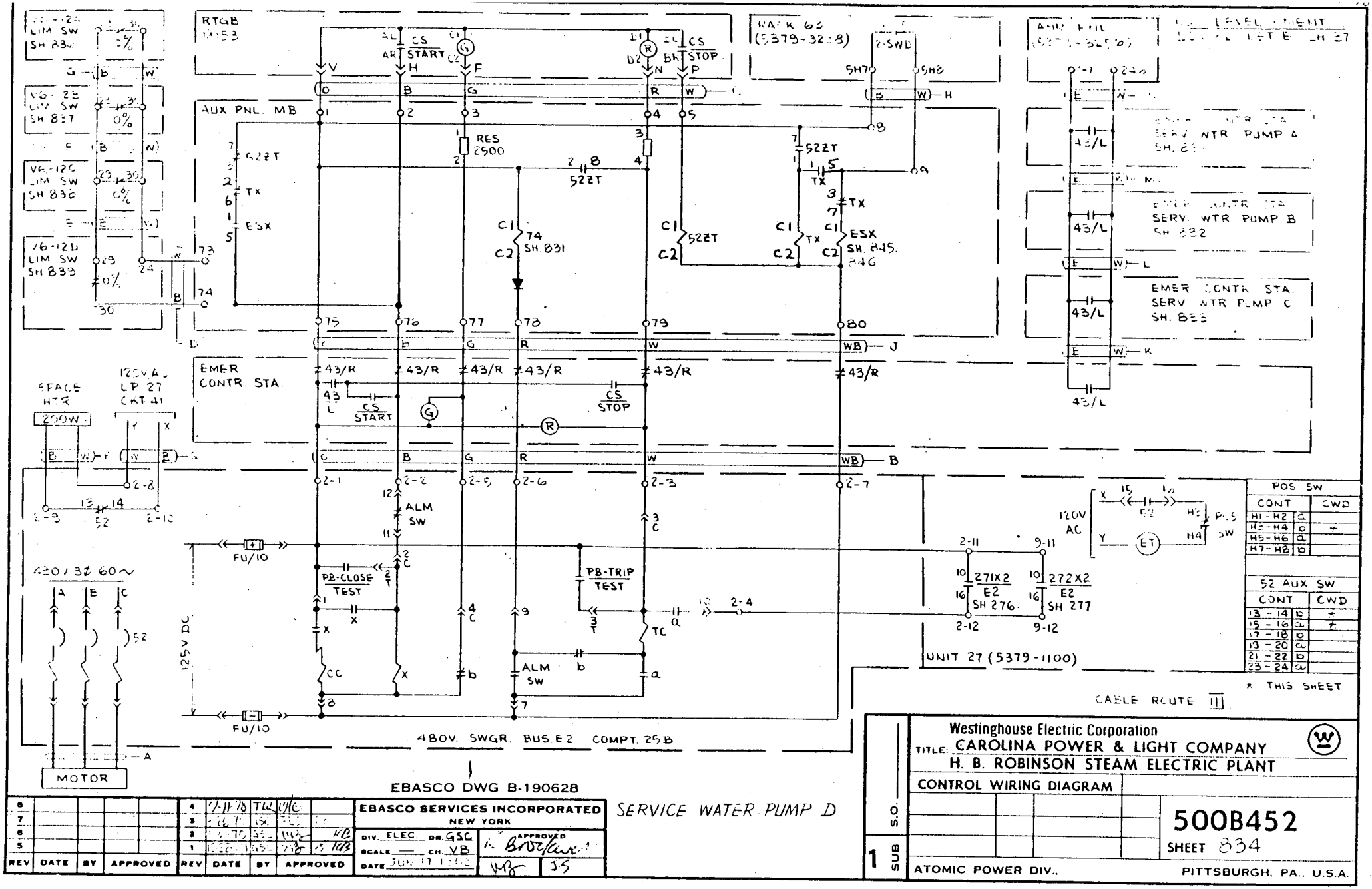
Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM

S.O. 1 SUB

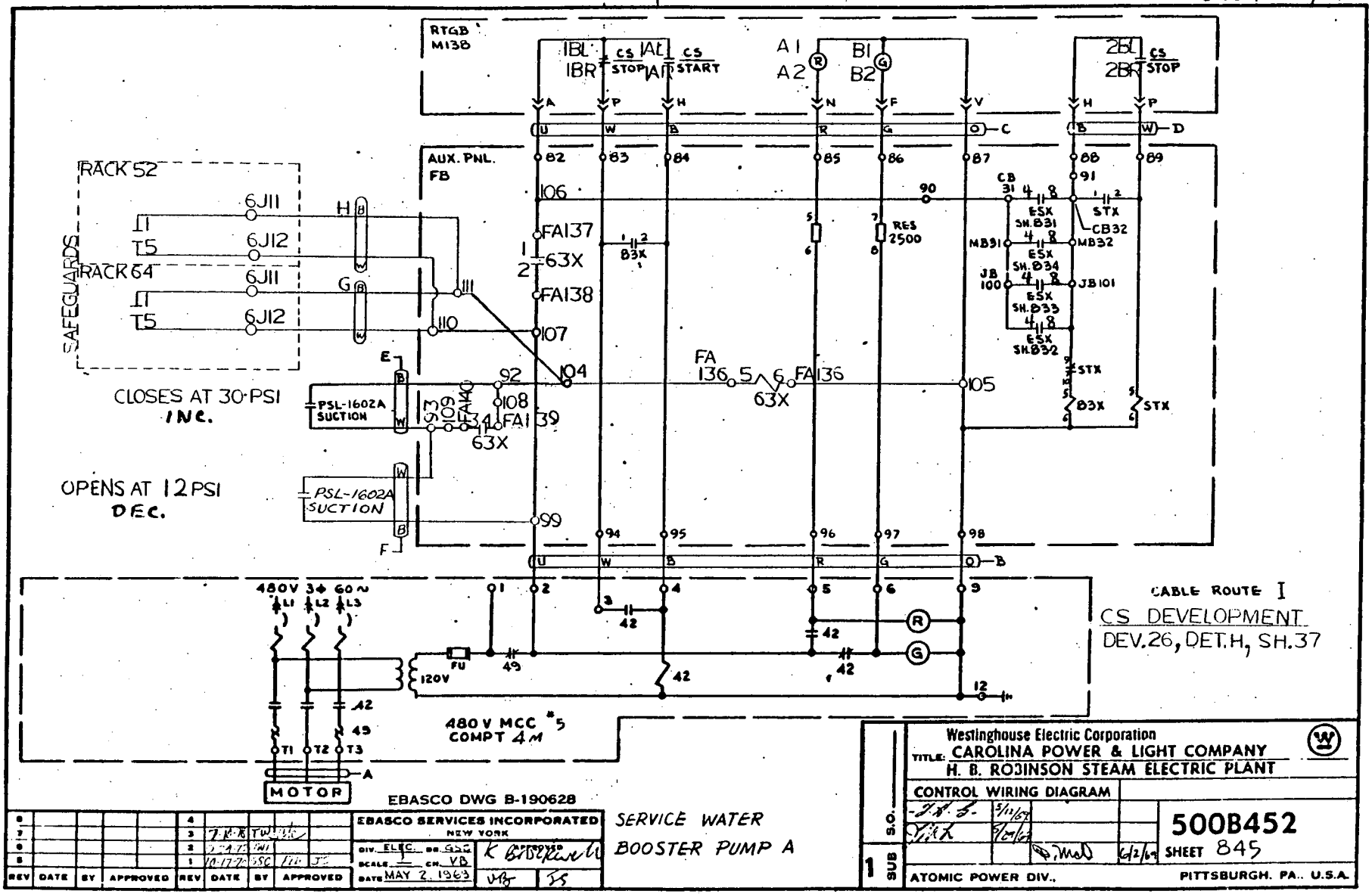
500B452
SHEET 833

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.


RTGB
AUX PNL. MB
EMER CONTR. STA.
SPACE HTR
200W
120V A.C. LP 27 CKT 41
480/3Ø 60~
MOTOR
125V DC
FU/10
PB-CLOSE TEST
PB-TRIP TEST
ALM SW
RES 2500
52ZT
74 SH. 831
SH. 845, 846
43/L
43/R
CS START
CS STOP
120V AC
POS SW
CONT
CWD
52 AUX SW
UNIT 27 (5379-1100)
CABLE ROUTE III
480V. SWGR. BUS E2 COMPT. 25B
EBASCO DWG B-190628
SERVICE WATER PUMP D
Westinghouse Electric Corporation
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 834
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.
EBASCO SERVICES INCORPORATED
NEW YORK
APPROVED
S.O. 1 SUB

845

OK TW 7-10-78



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3	7-K-8	TW	
6				2	3-4-71	TW	
5				1	10-17-67	DSC	

EBASCO SERVICES INCORPORATED NEW YORK
DIV. ELEC. DR. GSC CH. VB
SCALE — DATE MAY 2, 1963
APPROVED K B Stevens

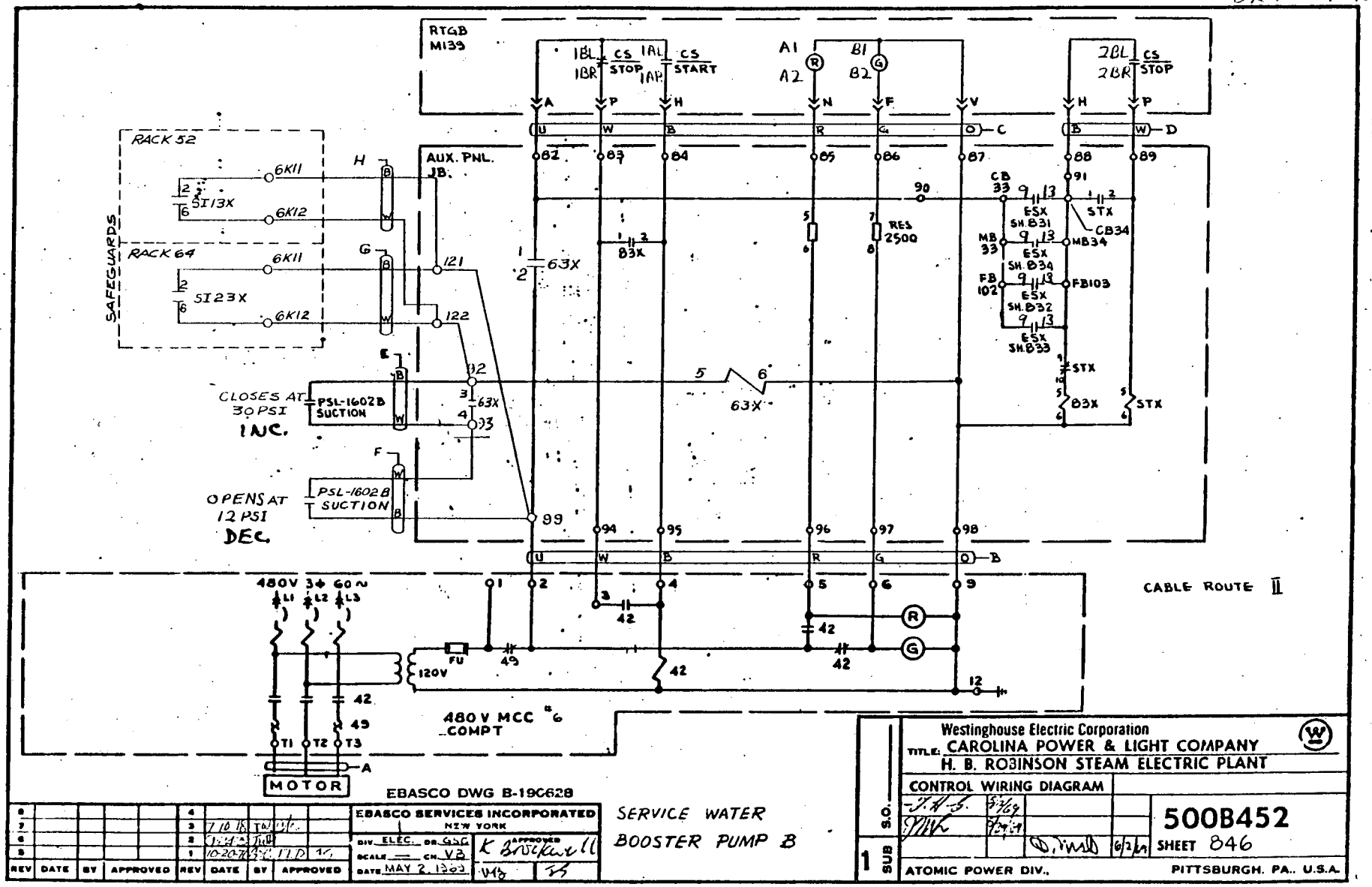
SERVICE WATER BOOSTER PUMP A

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
S.O. 1 SUB
500B452
SHEET 845
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

B A A 0 A A

846

OK TW 7-10-78



EBASCO DWG B-190628

REV	DATE	BY	APPROVED	REV	DATE	BY	APPROVED
8				4			
7				3	7/10/78	TW	
6				2	6-14-78	TW	
5				1	10-20-77	C.T.D.	

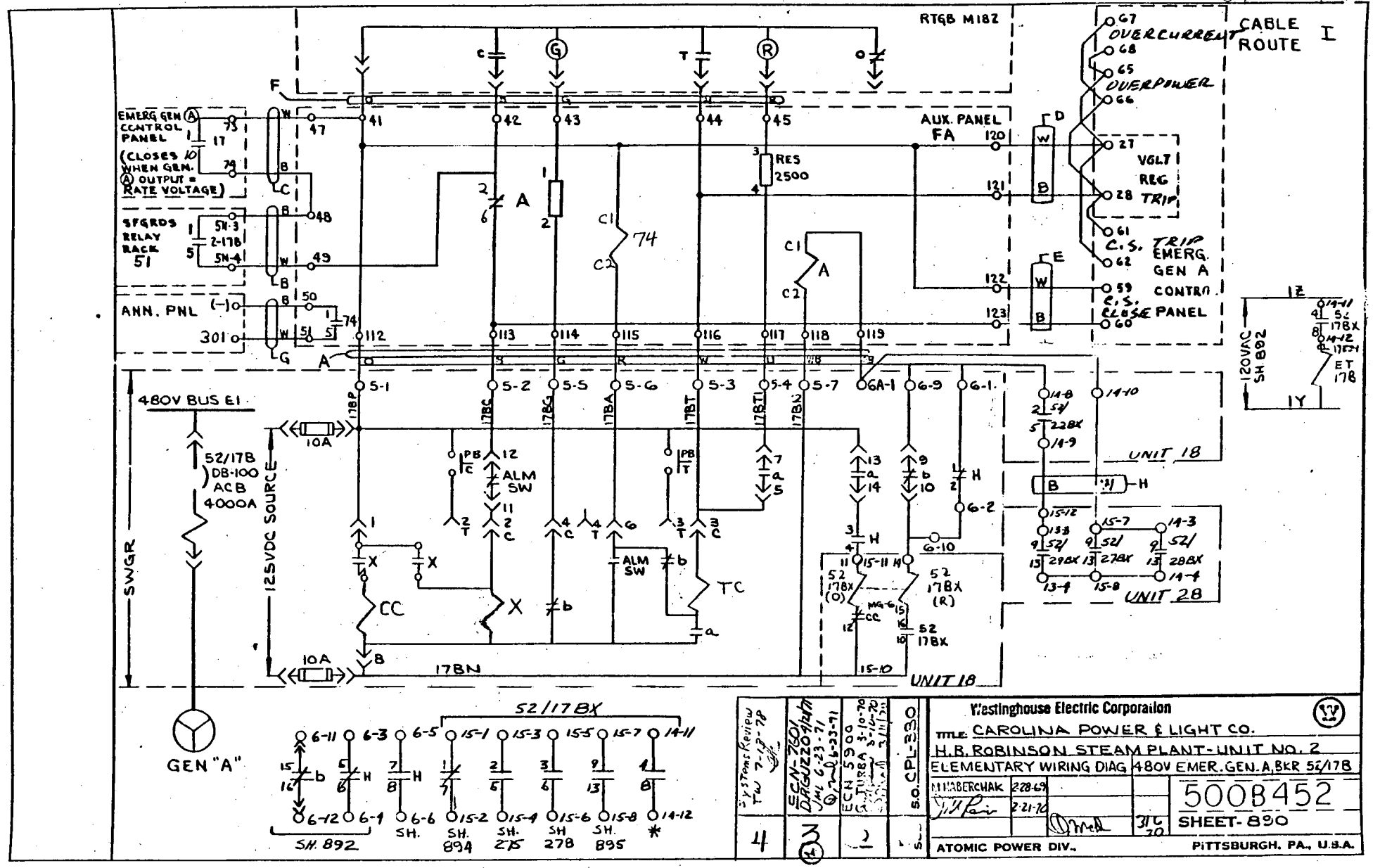
EBASCO SERVICES INCORPORATED NEW YORK
DIV. ELEC. DR. GSG
SCALE — CH. VB
DATE MAY 2, 1969
APPROVED K Brockwell

SERVICE WATER BOOSTER PUMP B

S.O. 1 SUB

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM
500B452
SHEET 846
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

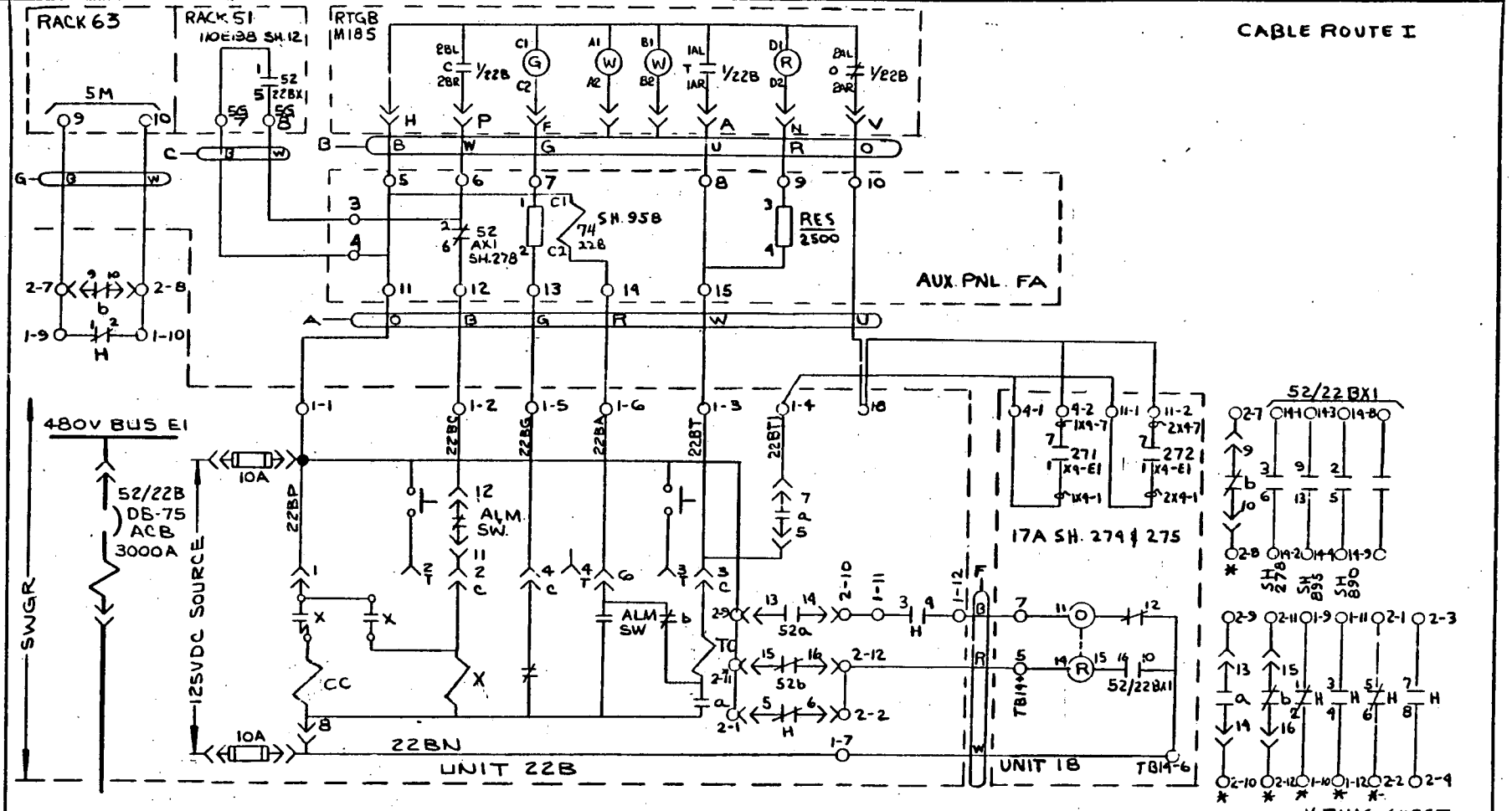
890



Systems Review TW 7-12-78	ECN-7601 DRG 12204 Sht 4 Jul 6-23-71 Rev 6-23-71	ECN 5900 C. TURBA 3-10-70	S.O. CPL-330	Westinghouse Electric Corporation
4	3 (2)	2		TITLE: CAROLINA POWER & LIGHT CO.
				H.B. ROBINSON STEAM PLANT-UNIT NO. 2
				ELEMENTARY WIRING DIAG 480V EMER. GEN. A BKR 52/17B
				M.H. ABERCHAK 2-28-69; J.H. Lair 2-21-70; 316/70
				5008452 SHEET-890
				ATOMIC POWER DIV. PITTSBURGH, PA., U.S.A.

PITTSBURGH, PA., U.S.A.

891



NOTE:
1/22B DEV. 16, DET. G, SHEET 37
52/22BX DWG. 110E198 SH. 12

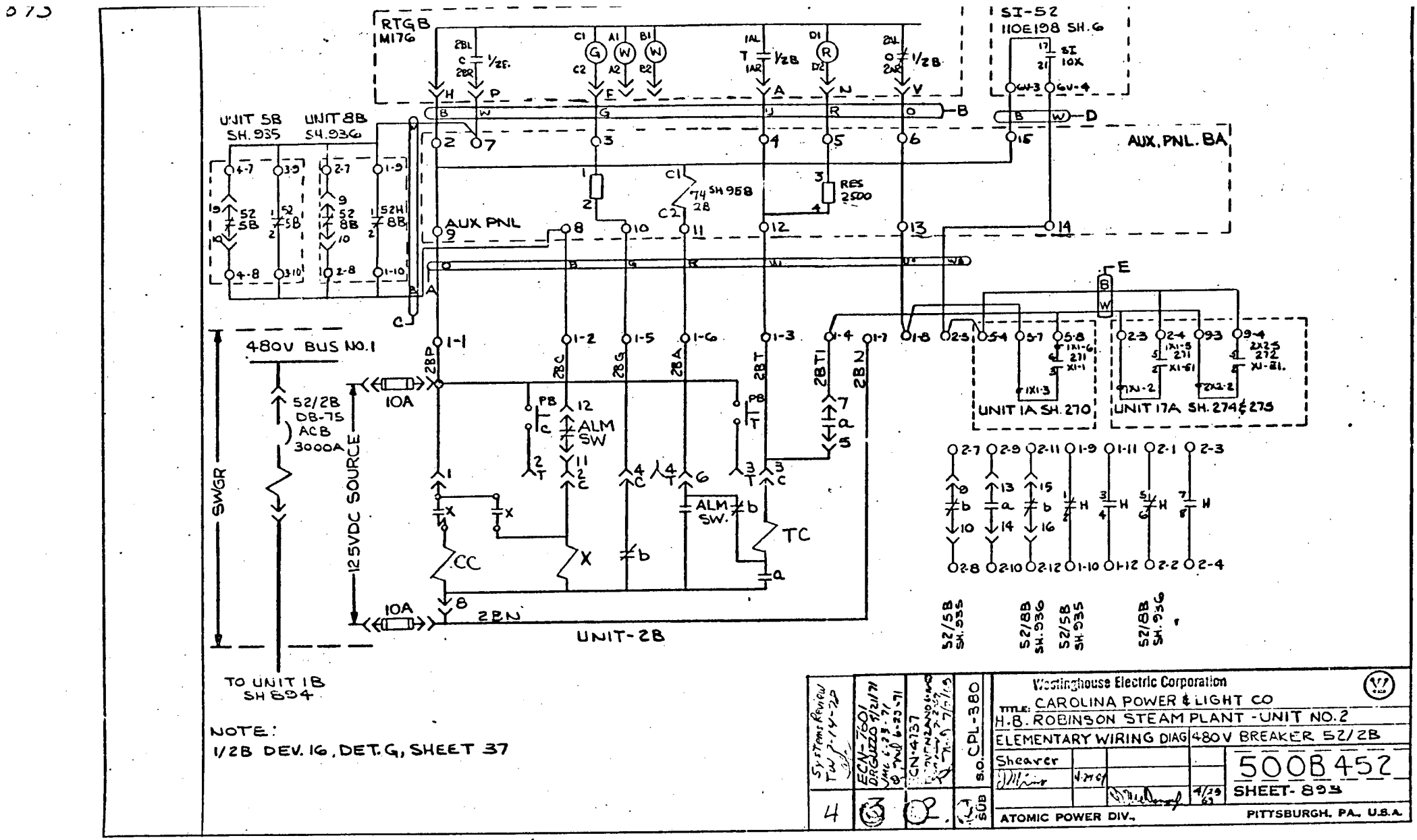
Systems Review TW 7-13-78	ECN-7601 DR6U220421/71 Vnl 6-23-71	ECN-S980 FA 911970 4-5-70 2nd 4-5-70	ECN 5900 TURBA 3-10-70	ECN-4737		S.O. CPL-380	
6	5	4	3	2	1	SUB	

Westinghouse Electric Corporation

TITLE: CAROLINA POWER & LIGHT CO.
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG. - 480V BREAKER 52/22B

M. HABERCHAK	3-10-69			500B452
	4-17-69			SHEET- 891
			9/29	

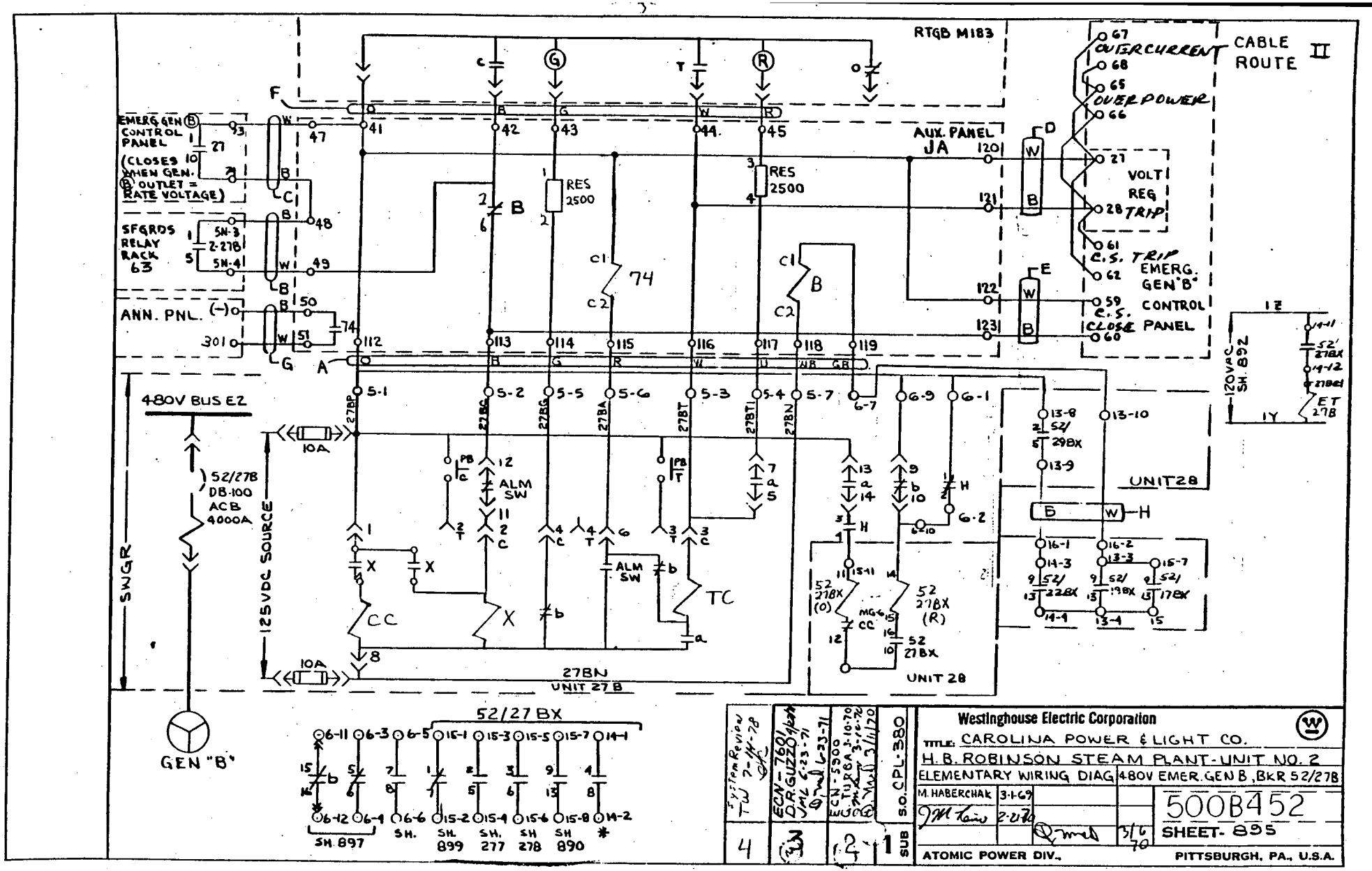
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

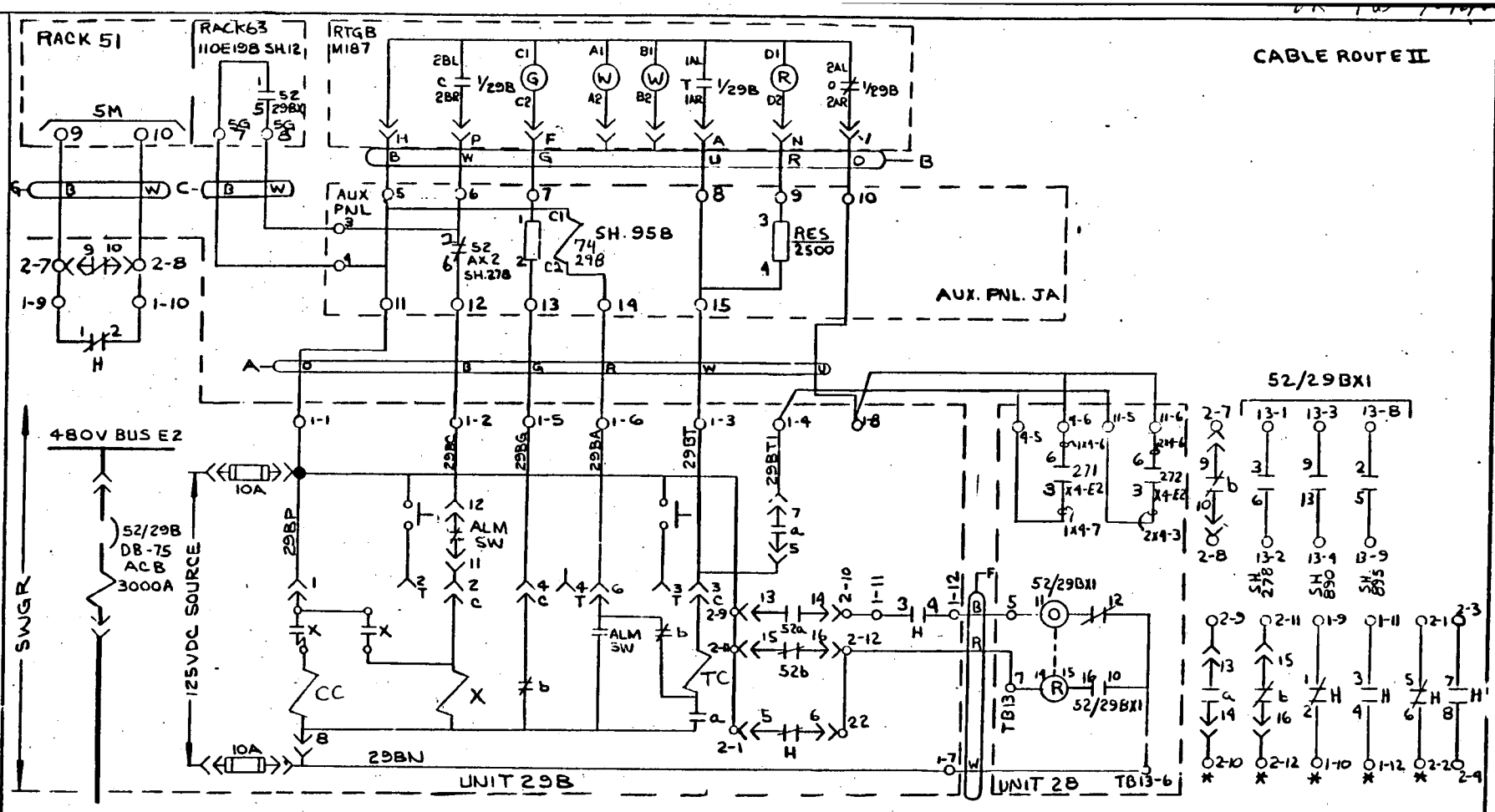


NOTE:
1/2B DEV. 16, DET. G, SHEET 37

Westinghouse Electric Corporation				
TITLE: CAROLINA POWER & LIGHT CO				
H.B. ROBINSON STEAM PLANT - UNIT NO. 2				
ELEMENTARY WIRING DIAG 480V BREAKER 52/2B				
Shearer				500B452
			4/29/69	SHEET- 893
4				ATOMIC POWER DIV. PITTSBURGH, PA. U.S.A.

895


RTGB M183
CABLE ROUTE II
67 OUTER CURRENT
68
65 OVER POWER
66
27 VOLT REG TRIP
28
61 C.S. TRIP EMERG. GEN "B"
62
59 C.S. CONTROL
60 CLOSE PANEL
AUX. PANEL JA
120
121
122
123
RES 2500
EMERG GEN CONTROL PANEL (CLOSES WHEN GEN. "B" OUTLET = RATE VOLTAGE)
SFGRDS RELAY RACK 63
ANN. PNL. (-)
301
74
74
ALM SW
TC
CC
X
52/27B DB-100 ACB 4000A
480V BUS E2
SWGR
125VDC SOURCE
10A
27BP
27BG
27BA
27BT
27BN
UNIT 27B
UNIT 28
120VAC SH. 892
52/27BX
GEN "B"
SH. 897
SH. 899
SH. 277
SH. 278
SH. 890
Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT CO.
H. B. ROBINSON STEAM PLANT-UNIT NO. 2
ELEMENTARY WIRING DIAG. 480V EMER. GEN B, BKR 52/27B
M. HABERCHAK 3-1-69
2-27-70
5/6/70
500B452
SHEET- 895
ATOMIC POWER DIV.
PITTSBURGH, PA., U.S.A.
S.O. CPL-380
ECN-7601
ECN-5900
ECN-5906



NOTE:
1/29B DEV. 1G, DET. G, SHEET 37.
52/29BX DWG. 110E198 SH. 12

Systems Review T.W. 7-14-70	ECN-7609 Dgn 2-23-71 Mfg 6-23-71	ECN-5980 Dgn 3-31-70 Mfg 4-7-70	CLI 3300 TUB3A 3-9-70	37		S.O. CPL-380
7	6	5			1 SUB	

Westinghouse Electric Corporation

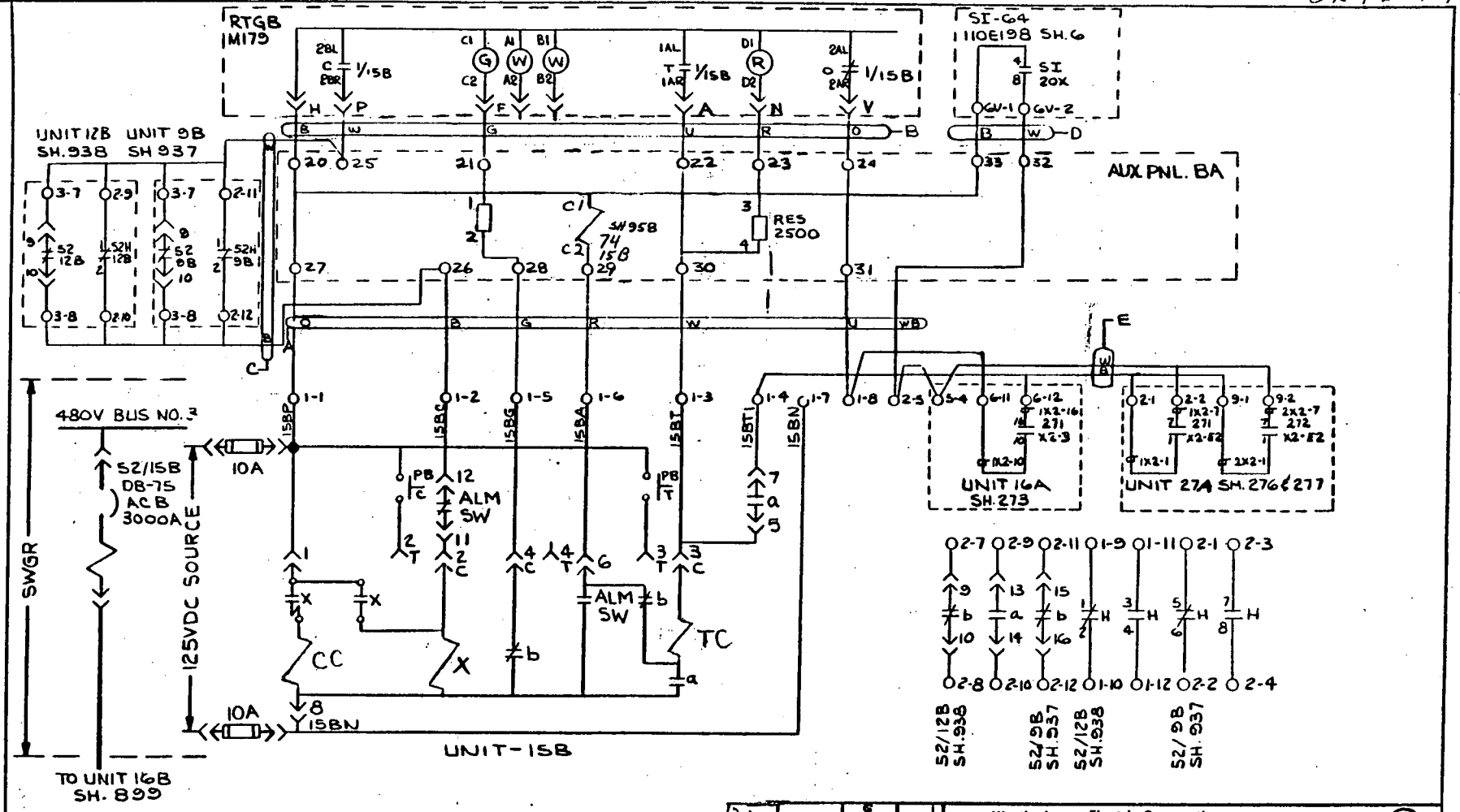
TITLE: CAROLINA POWER & LIGHT CO
H.B. ROBINSON STEAM PLANT - UNIT NO. 2
ELEMENTARY WIRING DIAG. 480V BREAKER 52/29B

M. HABERCHAK	3-12-69		500B452
	4-29-69	4/29/69	SHEET- 896

ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

598

ORTD 1-14-

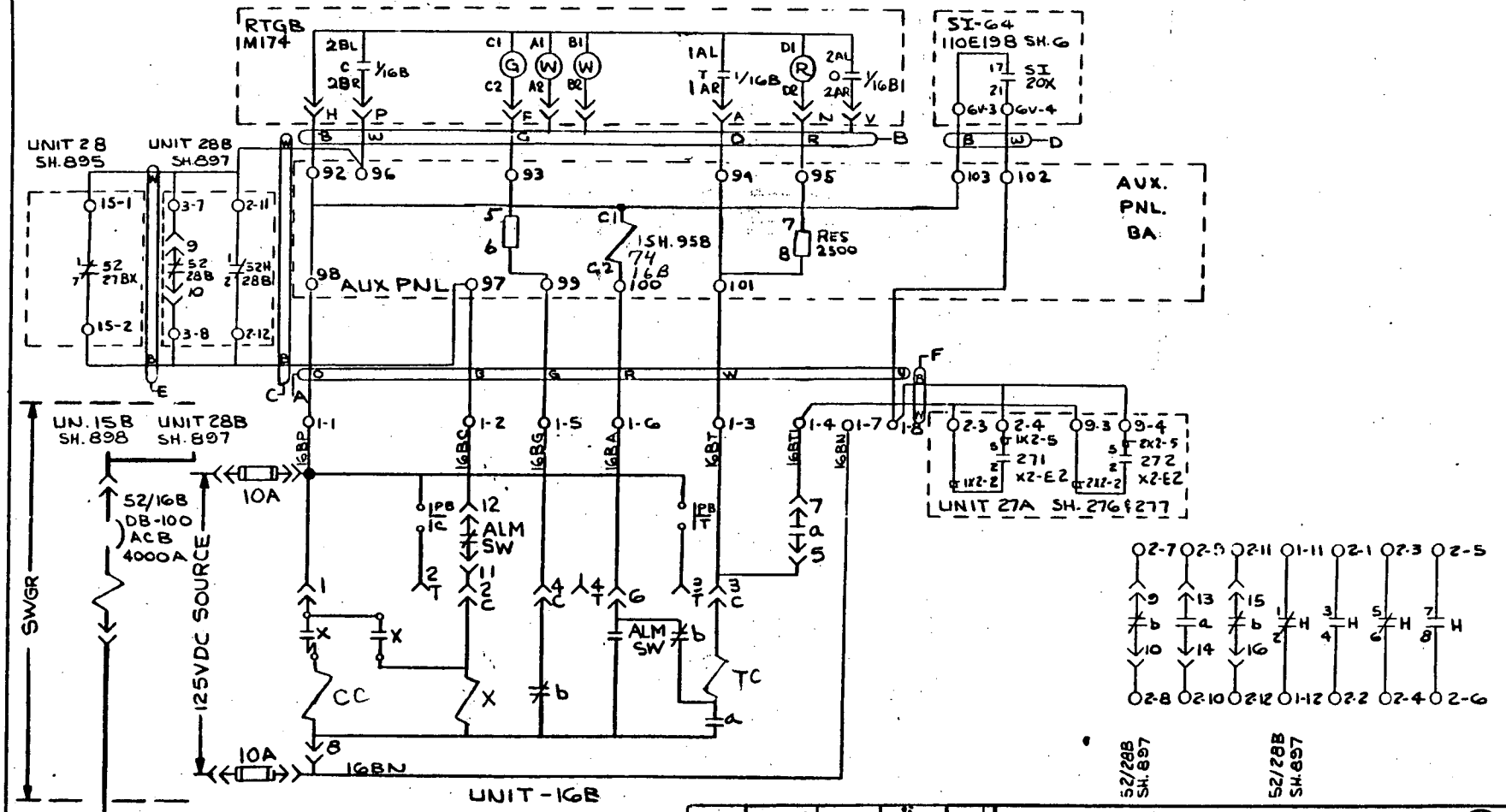


NOTE:
1/15B DEV. 16, DET. G, SHEET 37

SYSTEM REVIEW TW 7-14-72	ECN-7601 LIGUZZO 6-23-71	ECN-4737 LIGUZZO 6-23-71	S.O. CPL-380	Westinghouse Electric Corporation
4			SUB	TITLE: CAROLINA POWER & LIGHT CO.
				H.B. ROBINSON STEAM PLANT - UNIT NO. 2
				ELEMENTARY WIRING DIAG 480V BREAKER 52/15B
				Shearer 4-1-66 — 500B452
				4/30/69 — SHEET- 898
				ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

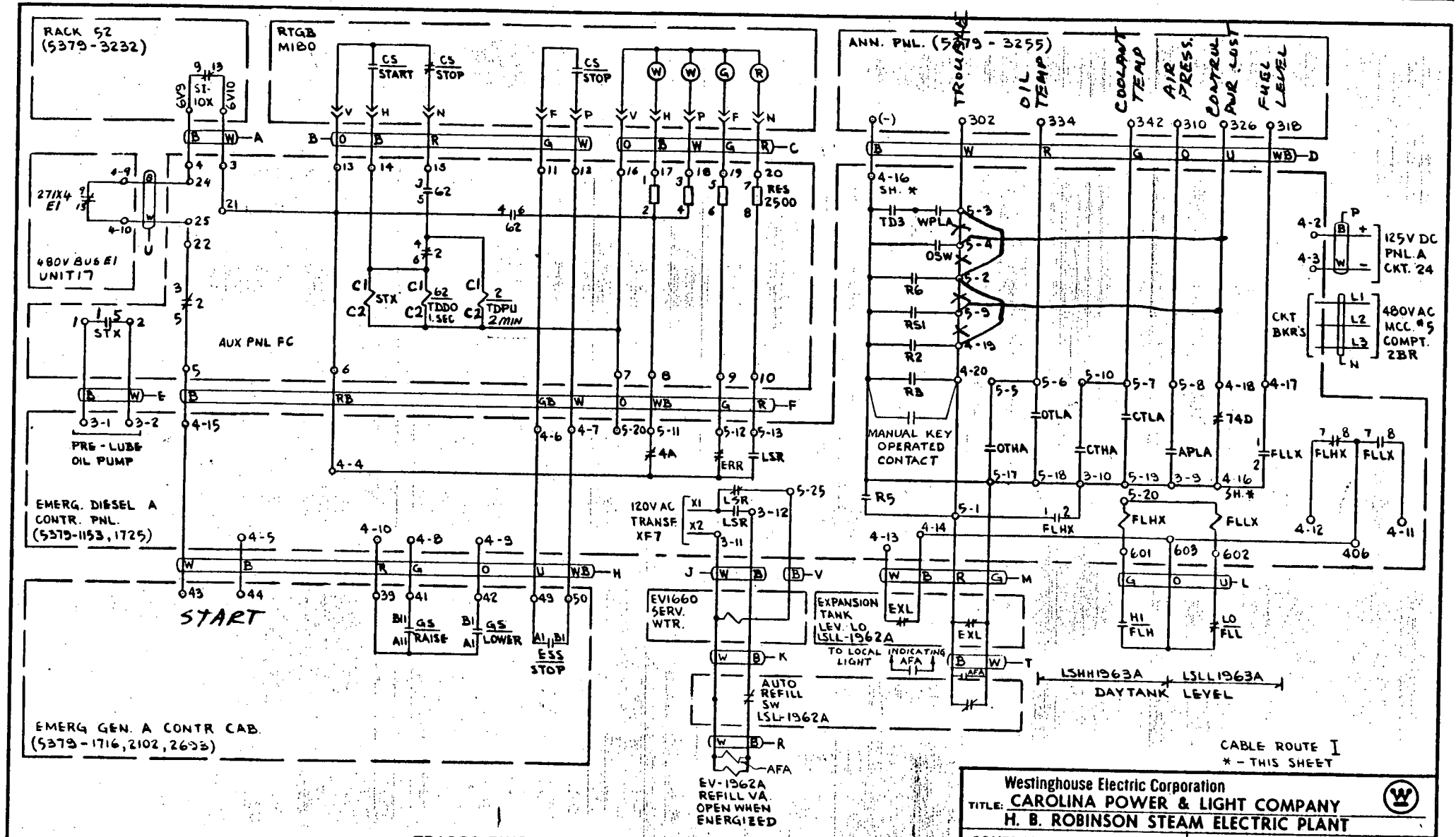
899

OK TW 1-14-72



NOTE:
1/16B DEV. 16 DET. G, SHEET 37

Systems Review TW 7-14-72	ECN-7601 DQUZZO 9/22/71 JWL 6-23-71	ECN-5980 JWL 5/20/70 JWL 4/8/70	ECN-4737 PROVENZANO 7/2/69 7/2/69	S.O. CPL-380	Westinghouse Electric Corporation
5	4	3	2	1 SUB	TITLE: CAROLINA POWER & LIGHT CO. H.B. ROBINSON STEAM PLANT - UNIT NO.2 ELEMENTARY WIRING DIAG 480V BREAKER 52/16B
					Sheaver 4-29-69 9-29-69 500B452 SHEET- 899
					ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.



EBASCO DWG B-190628

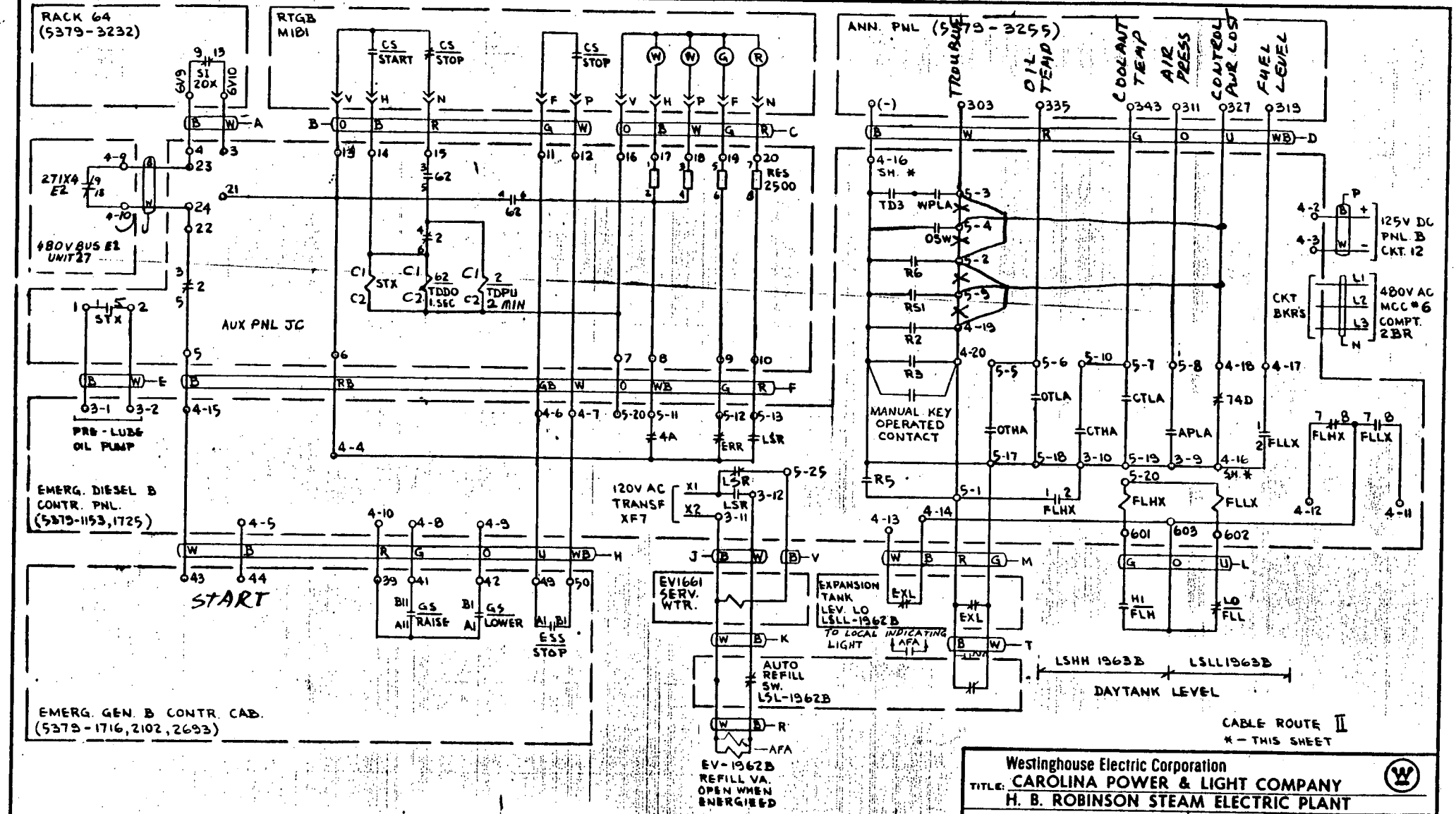
REV	DATE	BY	MOD. #
8	8-4-78	TW	Misc
7	3-25-75	WR	MOD. # 17
6	1-14-75	MSW	MOD. # 52
5	8-11-70	GSC	FLD 74 & 79

REV	DATE	BY	APPROVED
4	5-13-70	GSC	FLD 74
3	4-7-70	GSC	GM 74
2	4-6-70	FLD	
1	11-5-69	GSC	VB 75 100

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. BR. GSC
SCALE — CH. VB
DATE JUL 8 1969
APPROVED K Brockwell

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM — EMERG. DIESEL GENERATOR "A"
500B452
SHEET 945
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

11X17



EBASCO DWG B-190628

REV	DATE	BY	MOD. #	REV	DATE	BY	APPROVED
8	8-4-78	TW		4	5-12-70	GC	FLD 34
7	3-25-75	LR	MOD. #17	3	4-7-70	GC	GM 34
6	3-14-75	MSW	MOD. #52	2	4-6-70	FLD	
5	8-11-70	GSC	FLD 34	1	11-5-69	GSC	

EBASCO SERVICES INCORPORATED
NEW YORK
DIV. ELEC. DR. GSC APPROVED K Brockwell
SCALE — CH. VB
DATE JUL. 8 1969

Westinghouse Electric Corporation
TITLE: CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT
CONTROL WIRING DIAGRAM — EMERG. DIESEL GENERATOR "B"
500B452
SHEET 950
ATOMIC POWER DIV., PITTSBURGH, PA., U.S.A.

11X17