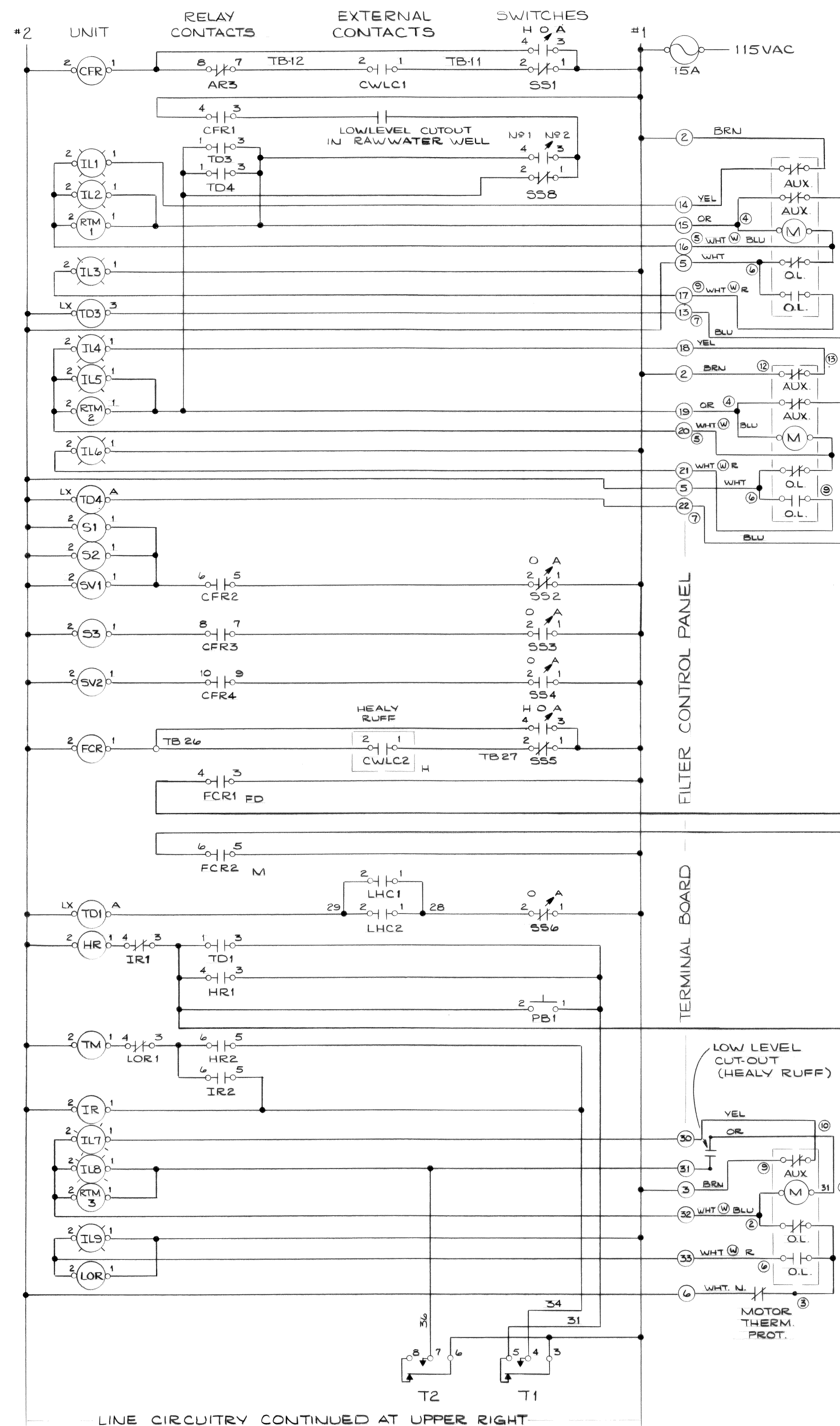
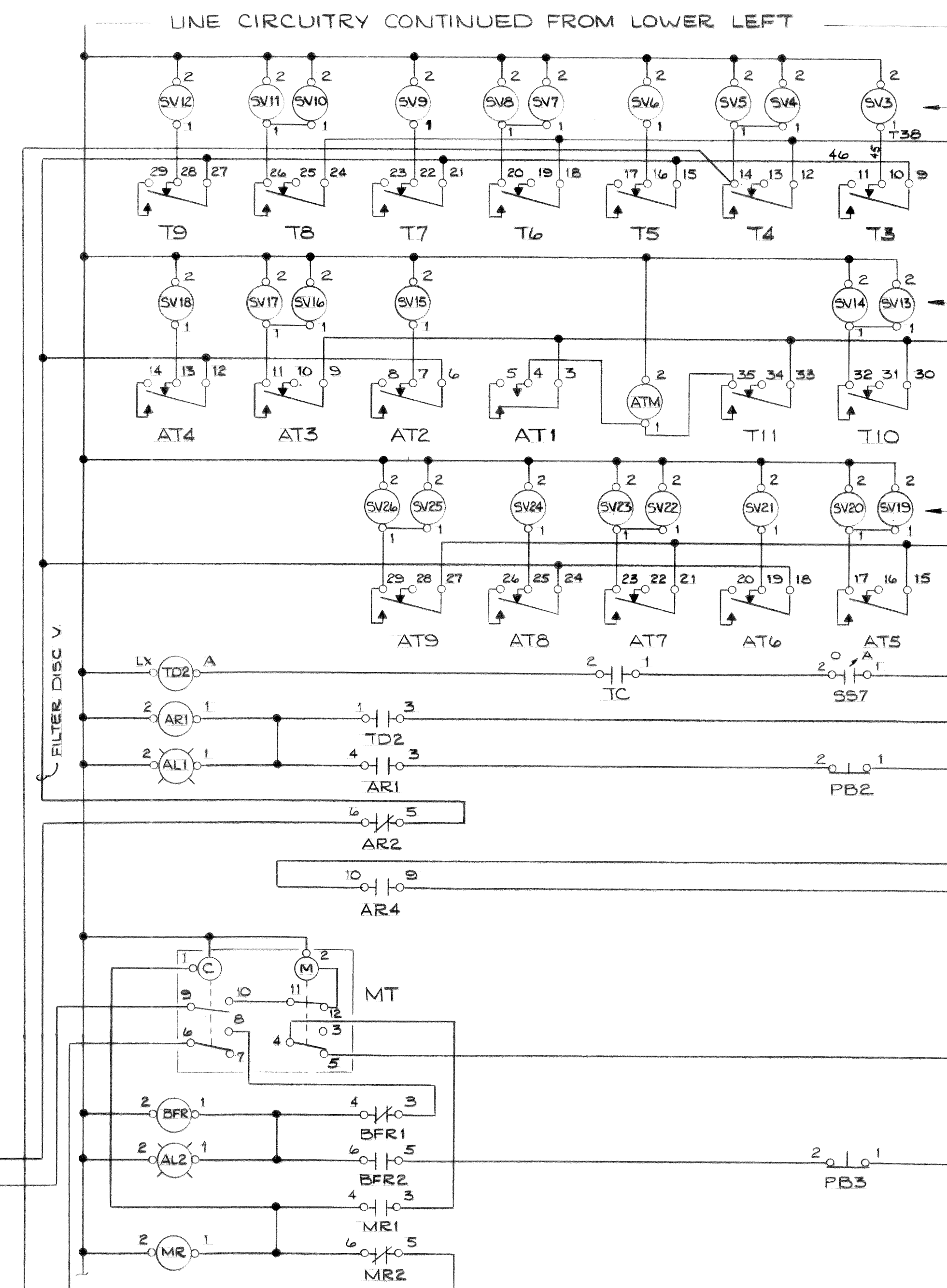




- SS1- SELECTOR SWITCH (HAND-OFF-AUTO)
 CWLC1- CLEARWELL LEVEL CONTACT
 CFR- CHEMICAL FEED RELAY
- SS8- SELECTOR SWITCH - RAWWATER (2 POS.) (PUMP N°1 - PUMP N°2)
- IL1- INDICATING LIGHT "STANDBY"
 IL2- INDICATING LIGHT "RUN"
 RTM1- RUNNING TIME METER RAW WATER PUMP N°1
 STARTER-RAW WATER PUMP N°1 (BY OTHERS)
 IL3- INDICATING LIGHT "FAIL"
- TD3- TIME DELAY RELAY
- IL4- INDICATING LIGHT "STANDBY"
 IL5- INDICATING LIGHT "RUN"
 RTM2- RUNNING TIME METER RAW WATER PUMP N°2
 STARTER-RAW WATER PUMP N°2 (BY OTHERS)
 IL6- INDICATING LIGHT "FAIL"
- TD4- TIME DELAY RELAY
- S1- STARTER-CLAY FEEDER (BY OTHERS)
 S2- STARTER-CLAY MIXER (BY OTHERS)
 SV1- SOLENOID VALVE-CLAY EDUCTOR WATER SUPPLY
 SS2- SELECTOR SWITCH-CLAY (OFF-AUTO)
 SS3- SELECTOR SWITCH-POLY (OFF-AUTO)
 S3- STARTER-POLYMER FEEDER (BY OTHERS)
 SS4- SELECTOR SWITCH-CHLOR (OFF-AUTO)
 SV2- SOLENOID VALVE-CHLORINATOR WATER SUPPLY
 SS5- SELECTOR SWITCH (HAND-OFF-AUTO)
 CWLC2- CLEARWELL LEVEL CONTACT
 FCR- FILTER CONTROL RELAY
- SS6- SELECTOR SWITCH (OFF-AUTO)
 LHC1- LOSS OF HEAD CONTACTS FILTER BAY N°1
 LHC2- LOSS OF HEAD CONTACTS FILTER BAY N°2
 TD1- TIME DELAY RELAY
 HR- HOLDING RELAY
- PB1- PUSHBUTTON (MANUAL BACKWASH)
- TM- TIMER MOTOR (BACKWASH)
- IR- INTERLOCK RELAY
- IL7- INDICATING LIGHT "STANDBY"
 IL8- INDICATING LIGHT "RUN"
 RTM- RUNNING TIME METER BACKWASH PUMP (BY OTHERS)
 STARTER-BACKWASH PUMP (BY OTHERS)
 IL9- INDICATING LIGHT "FAIL"
 LOR- LOCKOUT RELAY
- T1, T2- TIMER SWITCHES (BACKWASH)

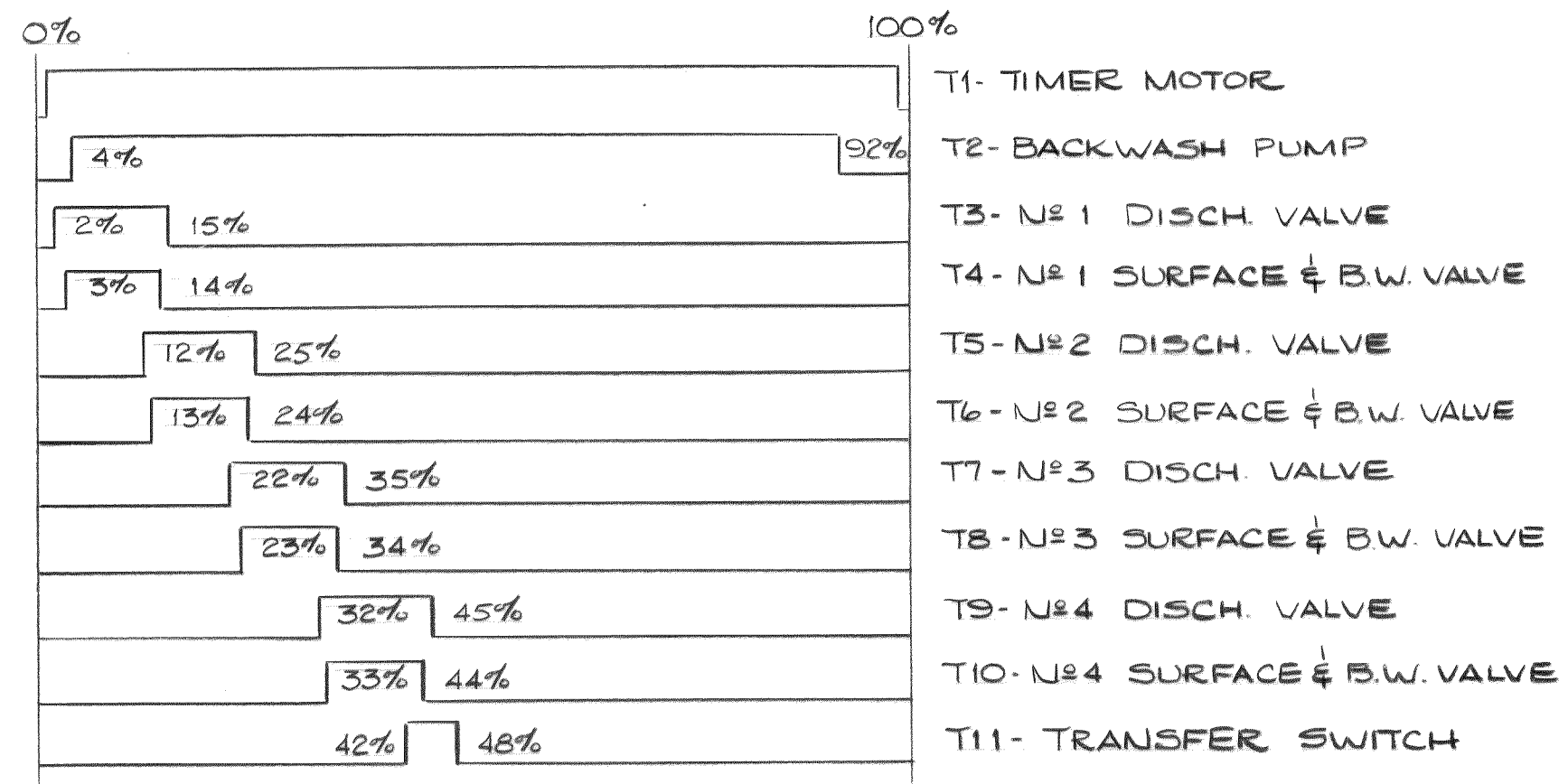


- SV3- FILTER DISCH. VALVE-FILTER N°1
 SV4- SURFACE WASH VALVE-FILTER N°1-2" PIPE
 SV5- BACKWASH VALVE - FILTER N°1
 SOLENOID VALVES ON MAIN VALVES
 SV6- FILTER DISCH. VALVE - FILTER N°2
 SV7- SURFACE WASH VALVE - FILTER N°2
 SV8- BACKWASH VALVE - FILTER N°2
 SV9- FILTER DISCH. VALVE - FILTER N°3
 SV10- SURFACE WASH VALVE - FILTER N°3
 SV11- BACKWASH VALVE - FILTER N°3
 SV12- FILTER DISCH. VALVE - FILTER N°4
 SV13- SURFACE WASH VALVE - FILTER N°4
 SV14- BACKWASH VALVE - FILTER N°4
 SOLENOID VALVES ON MAIN VALVES
 T3 THRU T11- TIMER SWITCHES (BACKWASH)
 ATM- AUX. TIMER MOTOR (BACKWASH)
 SV15- FILTER DISCH. VALVE - FILTER N°5
 SV16- SURFACE WASH VALVE - FILTER N°5
 SV17- BACKWASH VALVE - FILTER N°5
 SV18- FILTER DISCH. VALVE - FILTER N°6
 SV19- SURFACE WASH VALVE - FILTER N°6
 SV20- BACKWASH VALVE - FILTER N°6
 AT1 THRU AT9- AUX. TIMER SWITCHES (BACKWASH)
 SOLENOID VALVES ON MAIN VALVES
 SV21- FILTER DISCH. VALVE - FILTER N°7
 SV22- SURFACE WASH VALVE - FILTER N°7
 SV23- BACKWASH VALVE - FILTER N°7
 SV24- FILTER DISCH. VALVE - FILTER N°8
 SV25- SURFACE WASH VALVE - FILTER N°8
 SV26- BACKWASH VALVE - FILTER N°8
 SS7- SELECTOR SWITCH (OFF-AUTO)
 TC- TURBIDITY CONTACTS (IN RECORDER BY OTHERS)
 TD2- TIME DELAY RELAY
 AR1- ALARM RELAY
 PB2- PUSH BUTTON - ALARM RESET (HIGH TURBIDITY)
 AL1- ALARM LIGHT (HIGH TURBIDITY)
- REMOTE ALARM (BY OTHERS)
- MT- MONITOR TIMER (BACKWASH FREQUENCY)
- BFR- BACKWASH FREQUENCY RELAY
 AL2- ALARM LIGHT (BACKWASH FREQUENCY)
 PB3- PUSH BUTTON - ALARM RESET (BACKWASH FREQUENCY ALARM)
 MR- MONITOR RELAY

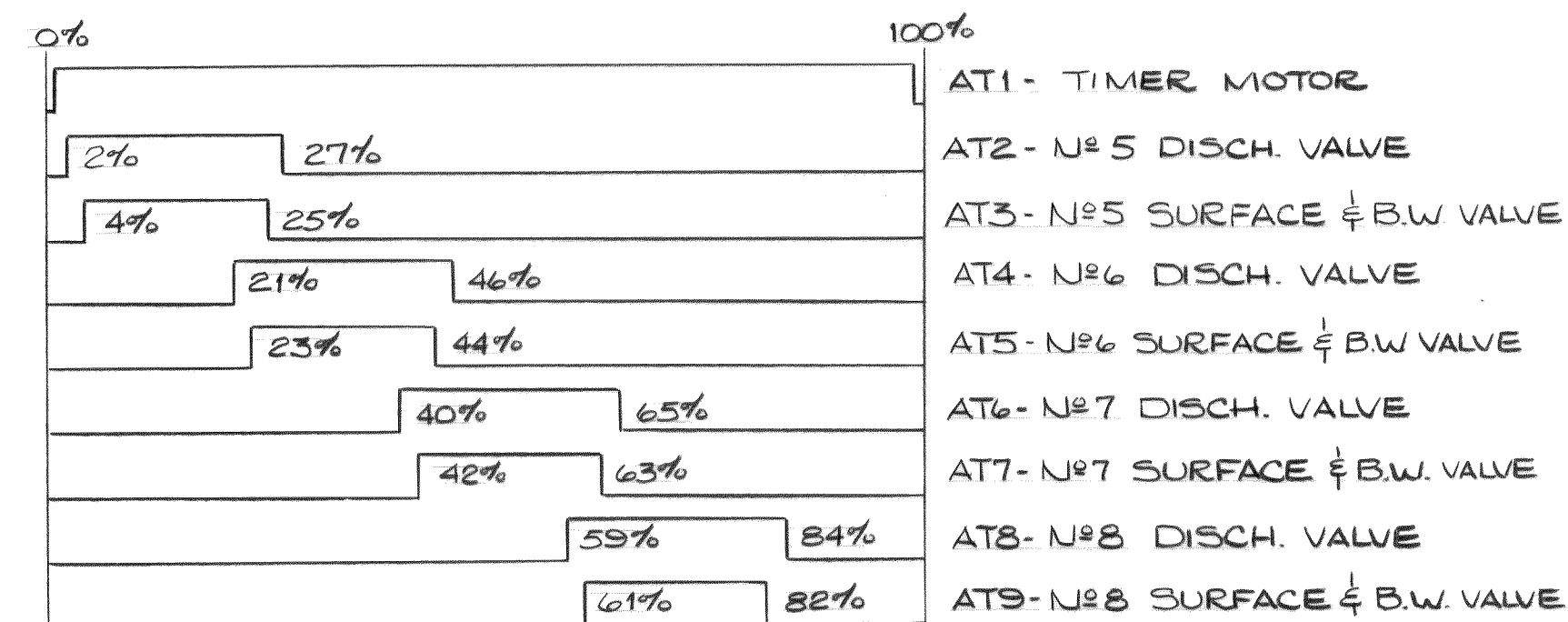
LINE CIRCUITRY CONTINUED AT UPPER RIGHT

NO	DATE	REVISION
3	5-20-83	REVISED & REDRAWN - S.R. BURKHALTER
2	1-24-75	SS8, TD3, & TD4 ADDED - R.W. PUMP STARTERS CHGD
1	12-26-74	REVISED DESTROYED PREVIOUS ISSUE

KEYSTONE ENGINEERING		
AND PRODUCTS CO., INC.		
DATE 12-26-74	SCALE NONE	SH 15 OF 16
DRN J.D.T.	4.0 MGD WATER TREATMENT PLANT	2102
CKD C.ZB	FERNDAL, WASHINGTON	



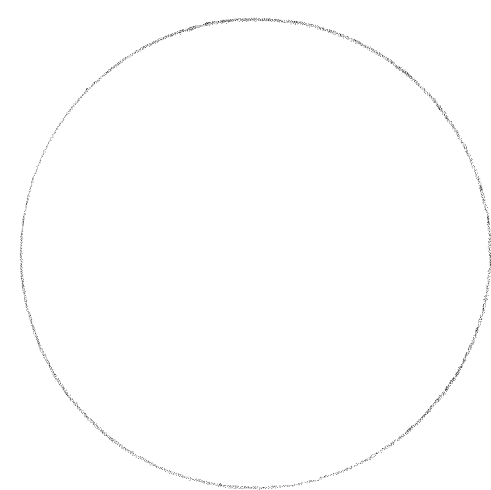
0 MINS 1.0 MINS = 2.08% 48 MINS
TIMING SCHEDULE - "T" TIMER



0 MINS 1.0 MINS = 4.16% 24 MINS
TIMING SCHEDULE - "AT" TIMER

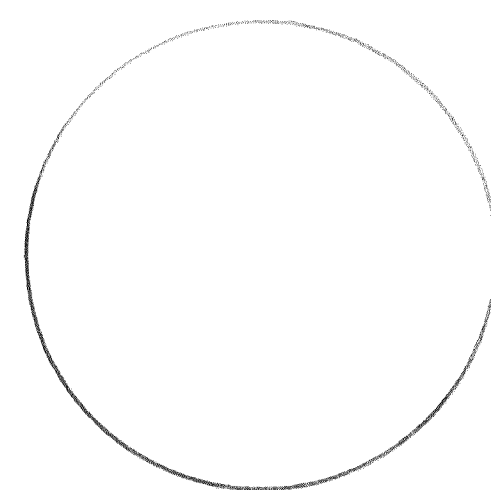
EQUIPMENT

ICR-RELAY-FURNAS 46FB40
 FCR,HR-RELAY-FURNAS 46FB20
 IR,LOR,MR-RELAY-FURNAS 46FB11
 BFR-RELAY-FURNAS 46ZBAO
 TD1,TD2-TIME DELAY RELAY-EAGLE SIGNAL HD32A622
 MT-MONITOR TIMER-EAGLE SIGNAL HP59A6
 T-TIMER (BACKWASH)-EAGLE SIGNAL MP12A622/MP5-64
 AT-TIMER (BACKWASH)-EAGLE SIGNAL MP10A620/MP5-48
 IL1,IL4,IL7-INDICATING LIGHT-CUTLER-HAMMER E30DA/E30KF30
 IL2,IL5,IL8-INDICATING LIGHT-CUTLER-HAMMER E30DA/E30KF20
 IL3,IL6,IL9-INDICATING LIGHT-CUTLER-HAMMER E30DA/E30KF10
 AL1,AL2-INDICATING LIGHT-CUTLER-HAMMER E30DA/E30KF10
 PB1-PUSHBUTTON-CUTLER-HAMMER E30AA/E30KLA1/E30KA180
 PB2,PB3-PUSHBUTTON-CUTLER-HAMMER E30AA/E30KLA2/E30KA250
 SS2,SS3,SS4,SS6,SS7-SELECTOR SWITCH-CUTLER-HAMMER E30AD/E30KLA1/E30KB101/E30KB218
 SS1,SS5-SELECTOR SWITCH-CUTLER-HAMMER E30AG/E30KLA3/E30KC108/E30K101
 CWLC1 & 2-CLEARWELL LEVEL CONTROL-HEALY-RUFF-ROTTOTROL BULL 940/6
 LHC1 & 2-LOSS OF HEAD SWITCH-STATIC "O" RING 12NM-K614
 TD3,TD4-TIME DELAY RELAY-EAGLE SIGNAL HD32A621
 SS8-SELECTOR SWITCH-CUTLER-HAMMER-E30AD/E30KLA3



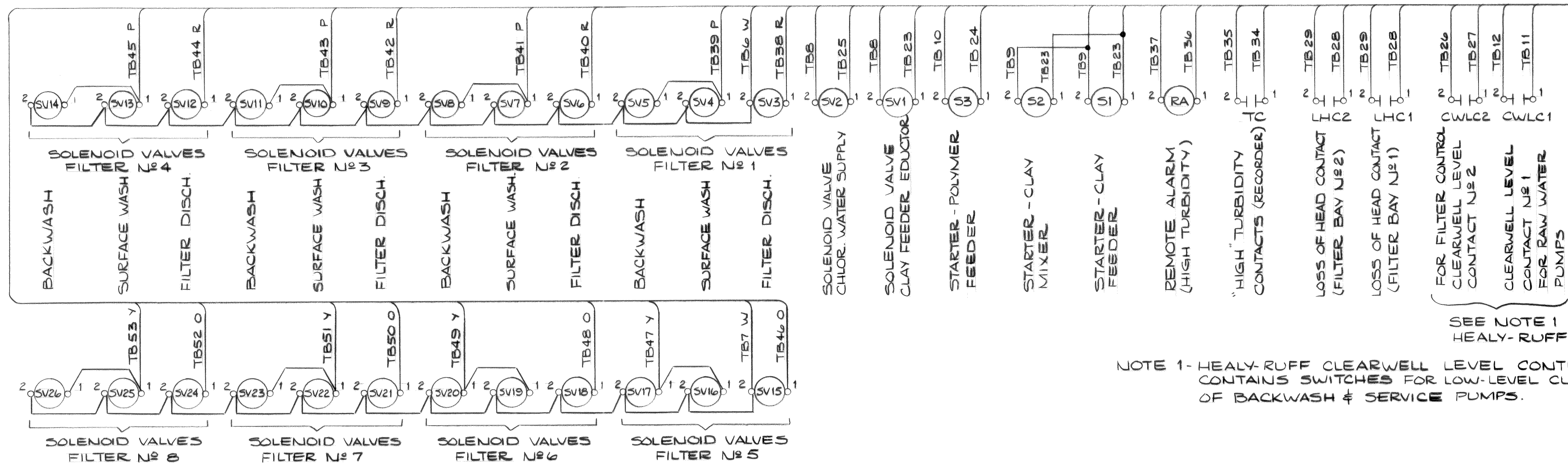
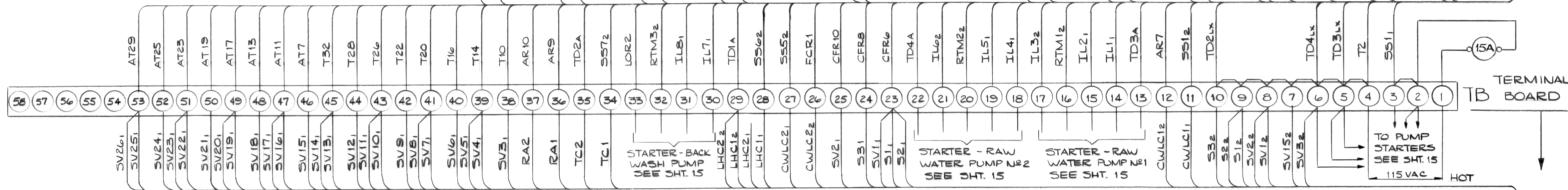
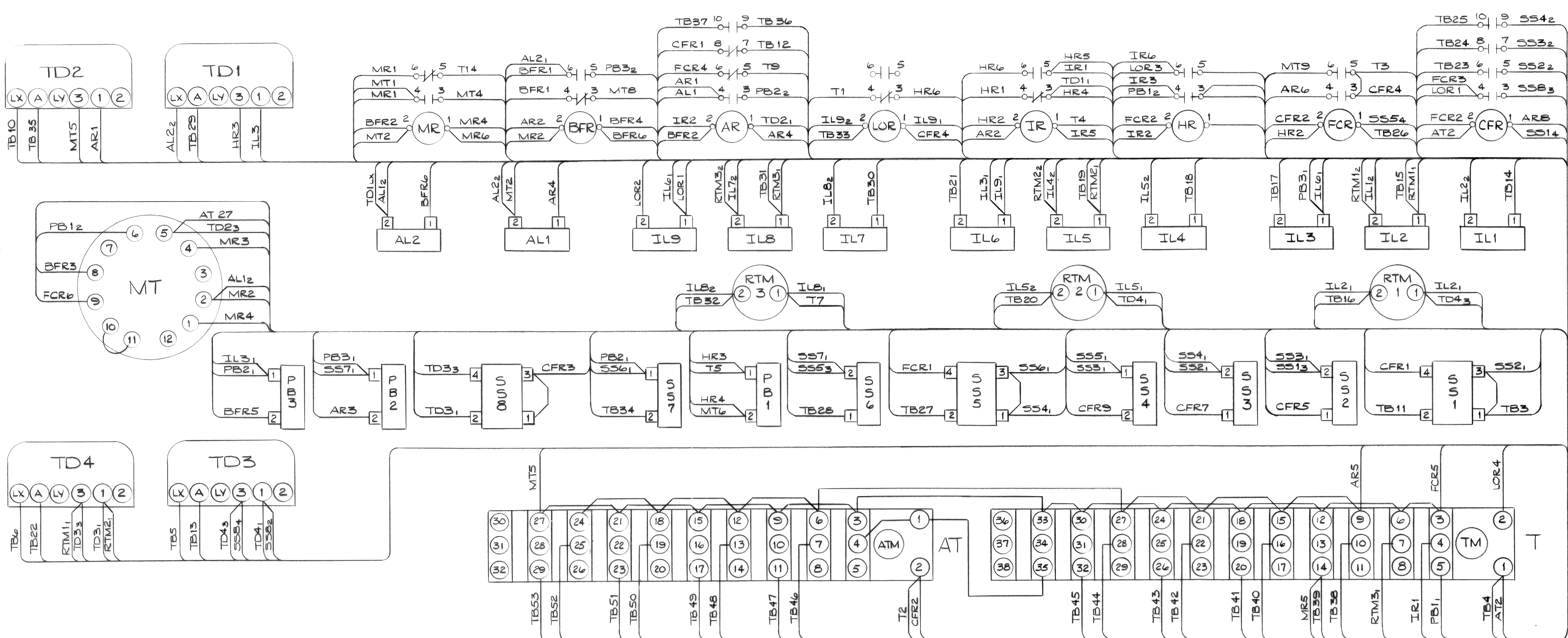
FILTER Nº 1	FILTER Nº 2	FILTER Nº 3	FILTER Nº 4
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FILTER BAY Nº 1



FILTER Nº 5	FILTER Nº 6	FILTER Nº 7	FILTER Nº 8
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FILTER BAY Nº 2



NOTE 1-HEALY-RUFF CLEARWELL LEVEL CONTROL CONTAINS SWITCHES FOR LOW-LEVEL CUT-OUT OF BACKWASH & SERVICE PUMPS.

KEYSTONE ENGINEERING
 AND PRODUCTS CO., INC.
 CONTROL WIRING DIAGRAM
 4.0 MGD WATER TREATMENT PLANT
 FERDALE, WASHINGTON

NO	DATE	REVISION
3	5/20/83	REVISED & REDRAWN - J.R. BURKHALTER
2	1-24-75	REVISED - DESTROYED PREV. ISSUE
1	12-26-74	REVISED - DESTROYED PREV. ISSUE

DATE 12-26-74	SCALE NONE	SH 16 OF 16
DRN J.D.T.	CKD C.D.	
2102		

00295.002 2-2-06 KR