



AIR TRAINING COMMAND

COMPUTER SYSTEMS DEPARTMENT

AN/FSQ-7 CENTRAL COMPUTER

VOLUME 2

CIRCUIT DIAGRAMS

June 1966

Course Nr. ABR30533-1

KEESLER AFB, MISS

FOR ATC INSTRUCTIONAL PURPOSES ONLY

June 1966

This Schematics and Logic Diagrams Book provides
student Study material in support of Course
ABR30533-1.

SCHEMATICS
FOR
CENTRAL COMPUTER SYSTEM
OF
AN/FSQ-7
COMBAT DIRECTION CENTRAL

June 1966

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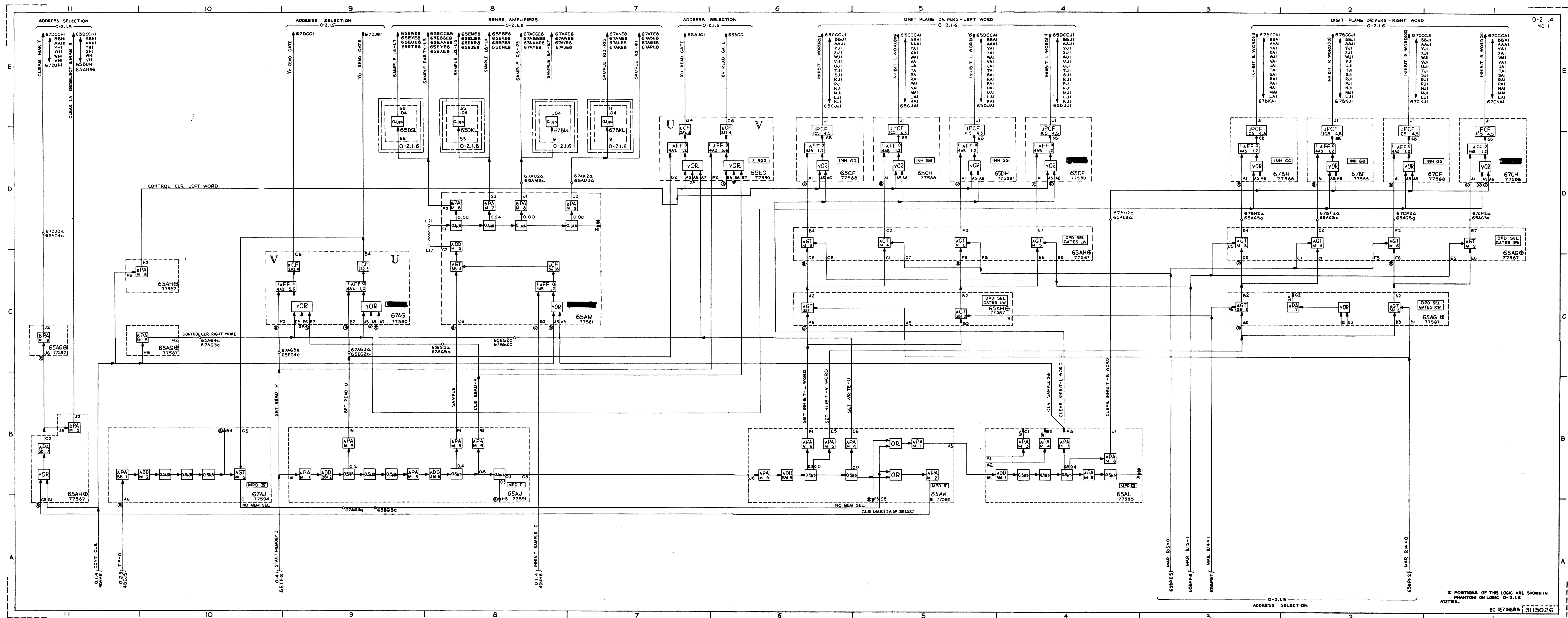
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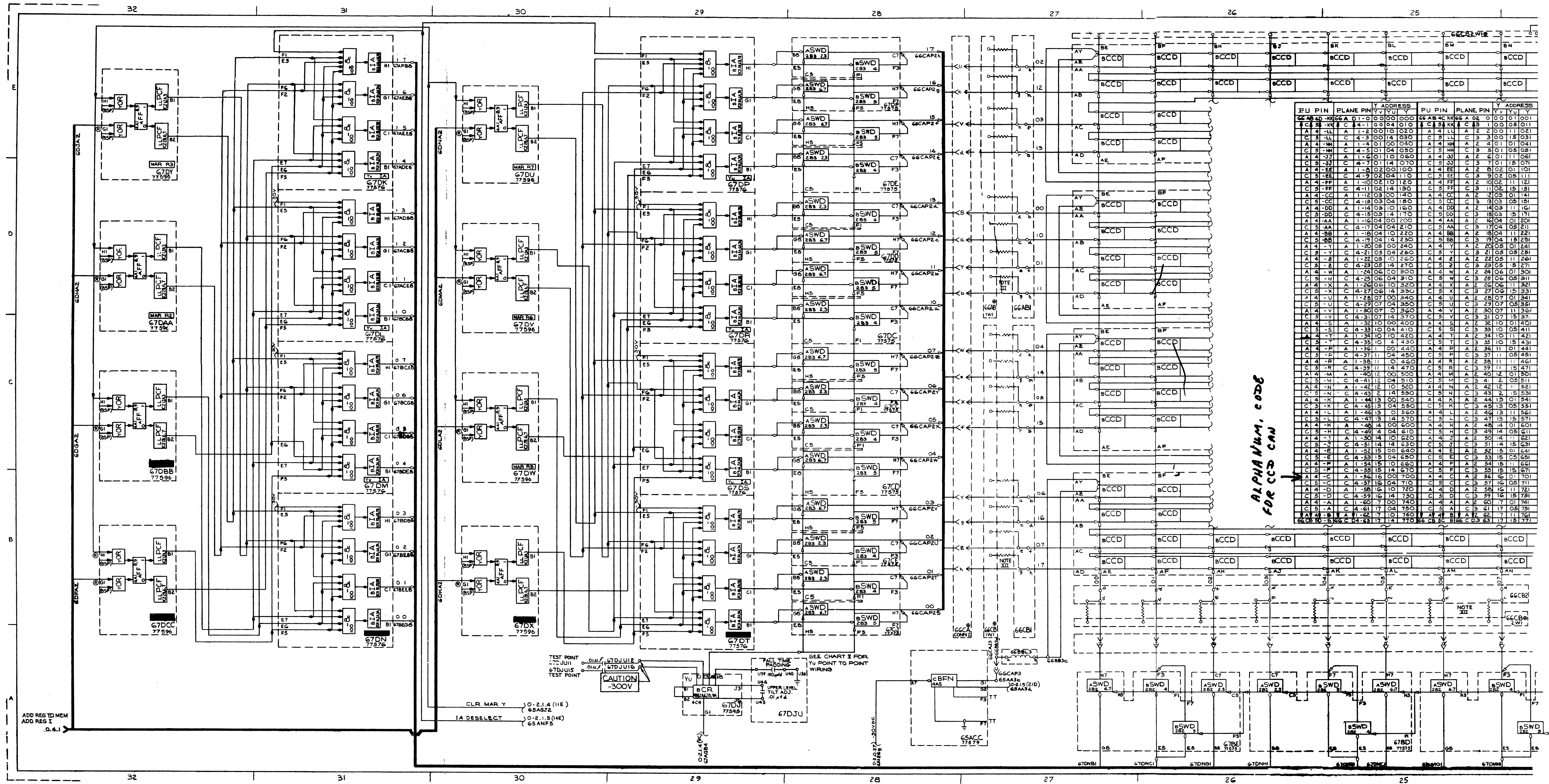
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0-2-1-6	CORE MEMORY ISA & PDP
0-2-1-7	CORE MEMORY 2 ARRAY UNIT 65
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0-1-1-6	CORE MEMORY SENSE AMPLIFIERS & DIGIT PLANE DRIVERS
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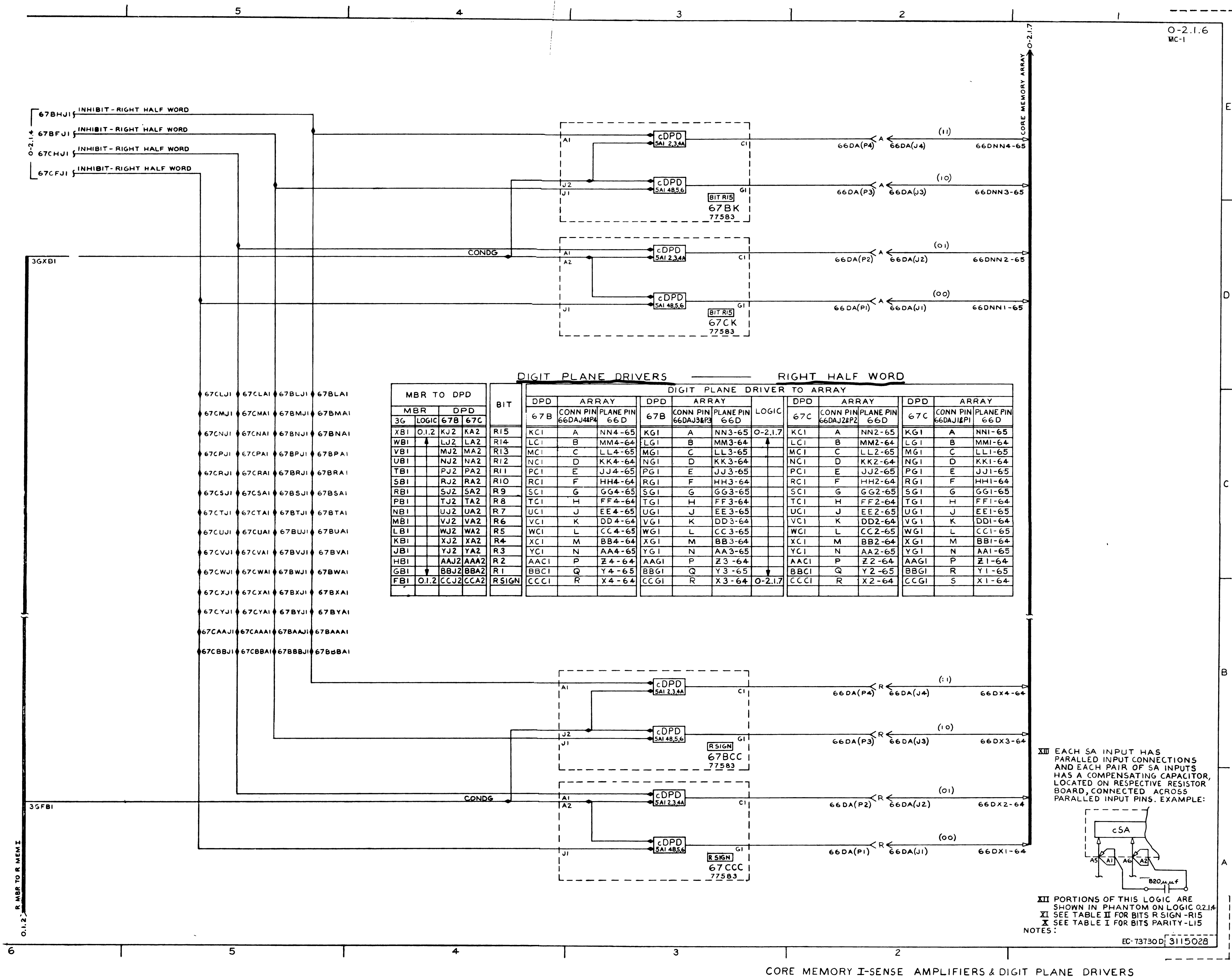
CORE MEMORY I-TIMING & GATING

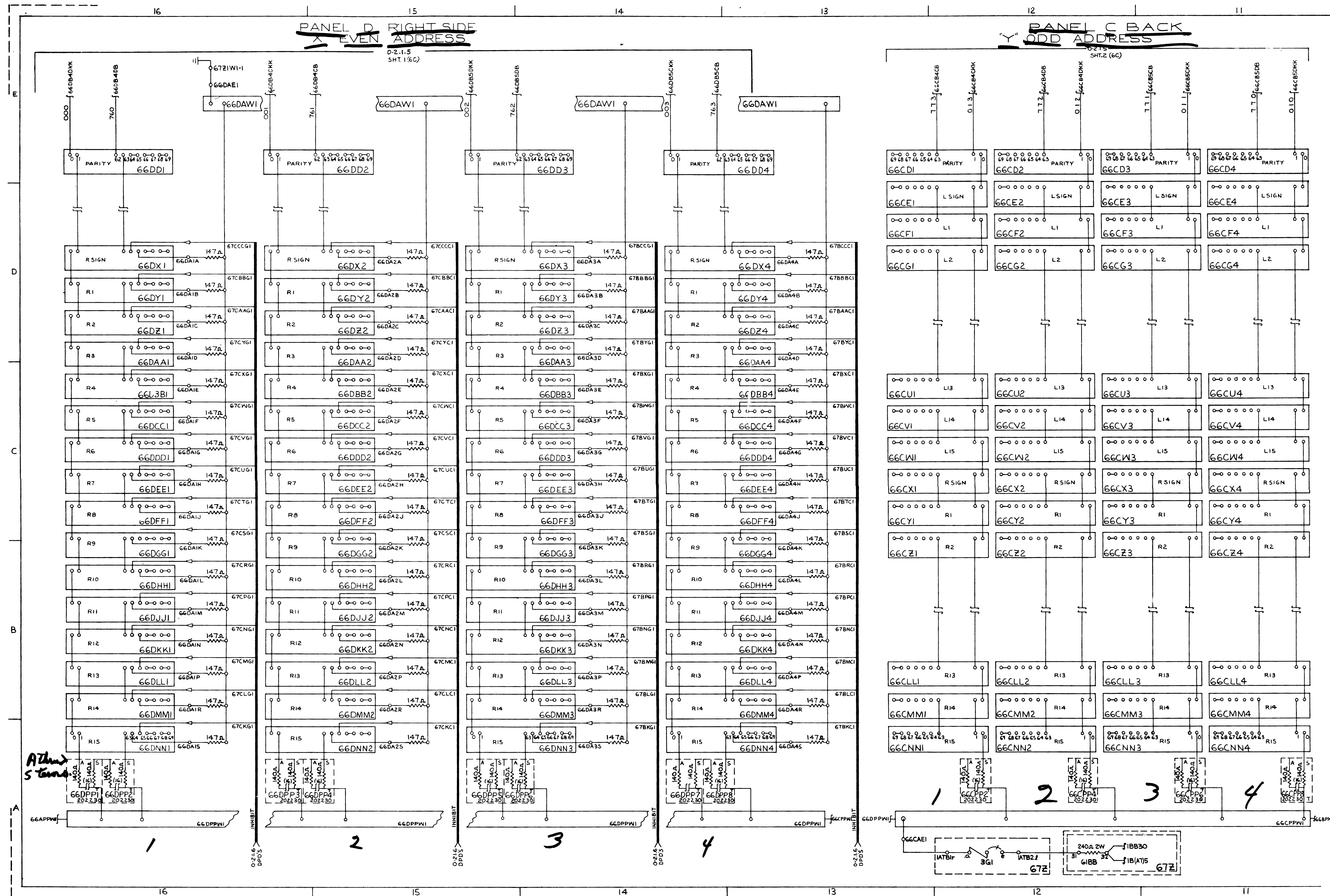
PORTIONS OF THIS LOGIC ARE SHOWN IN
PHANTOM ON LOGIC 0-2.1.6
NOTES:
EC R75605 3115026

A mod SWD - 660 ma
B mod SWD - 330 ma
990 ma



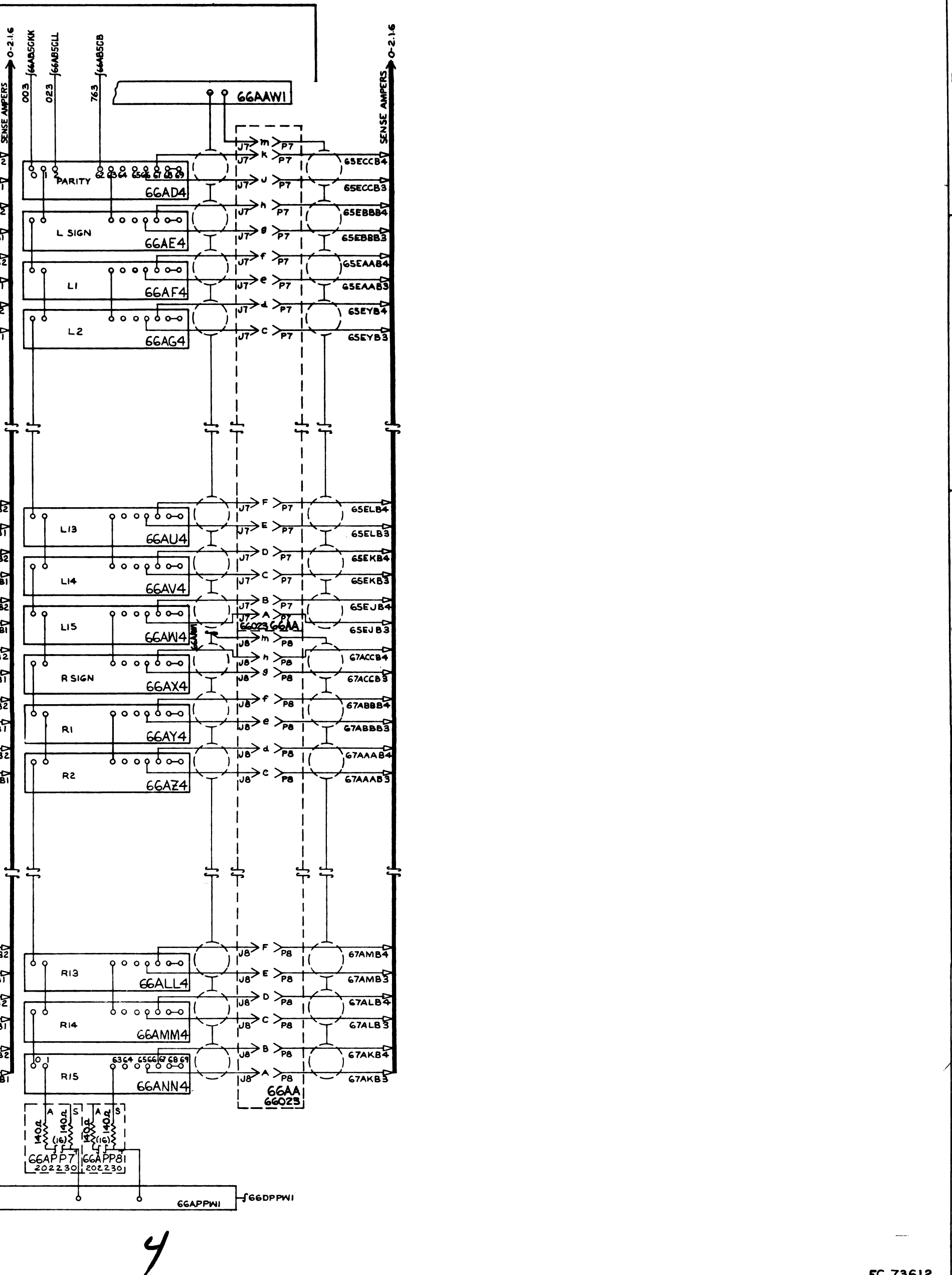
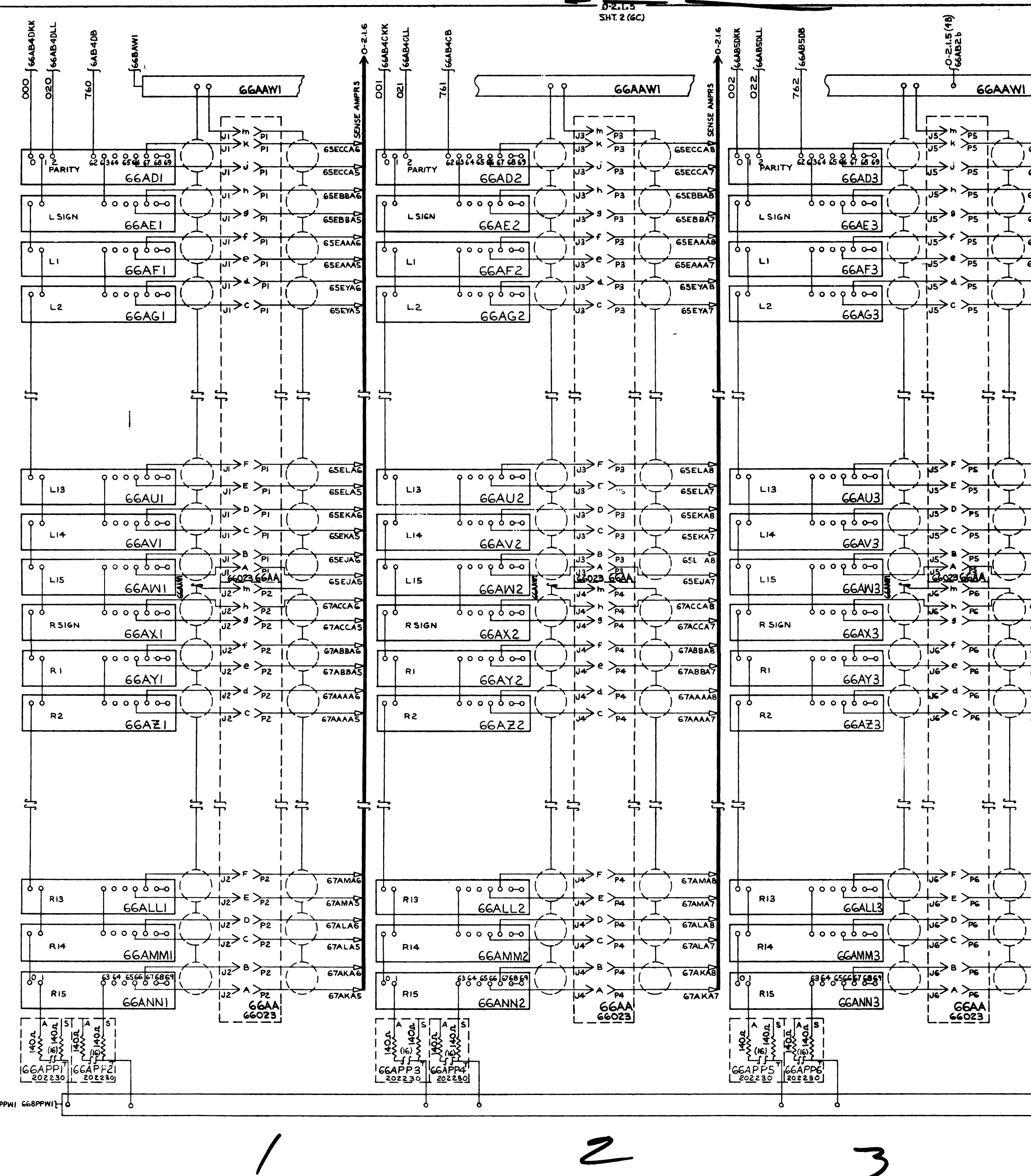
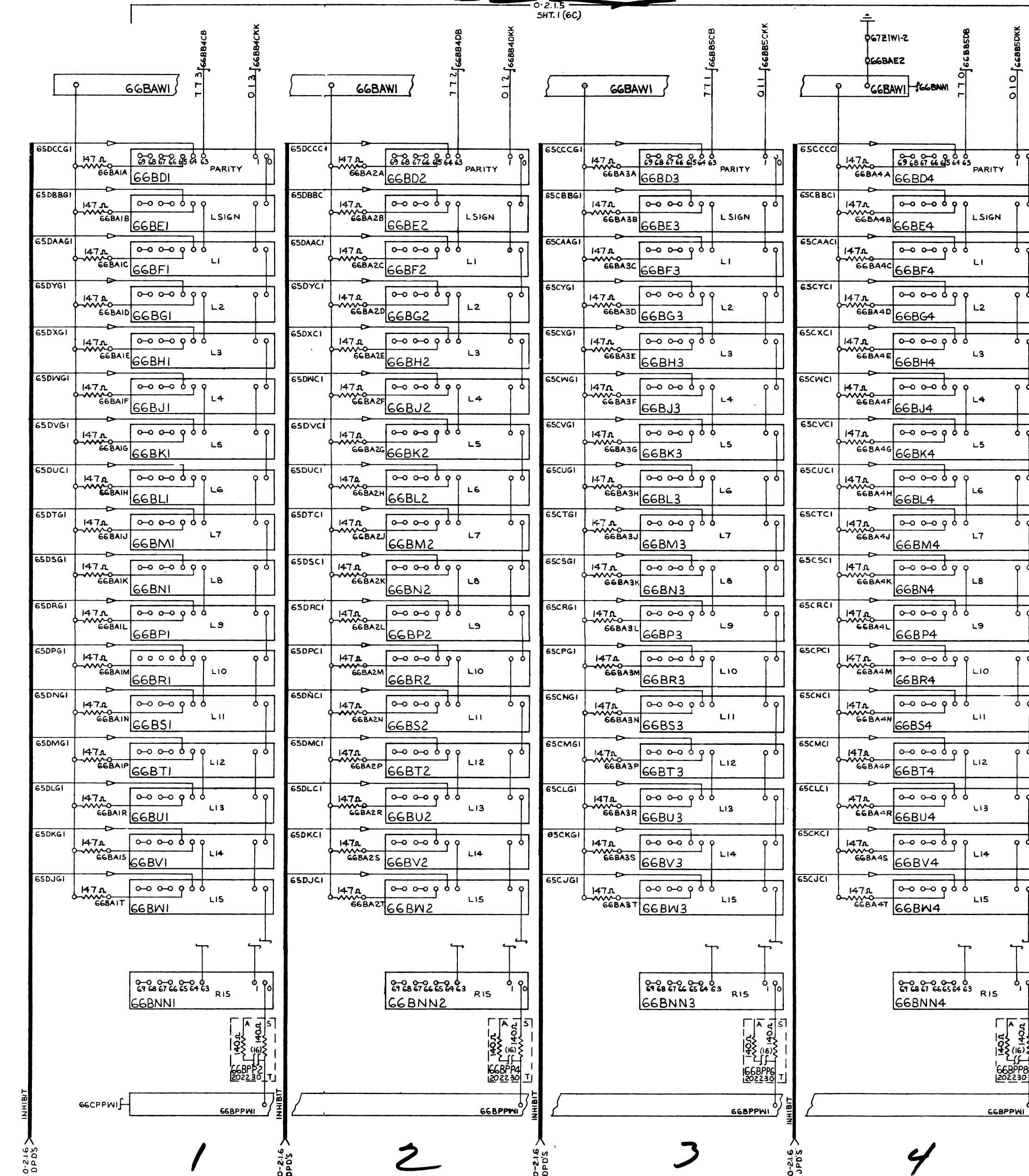


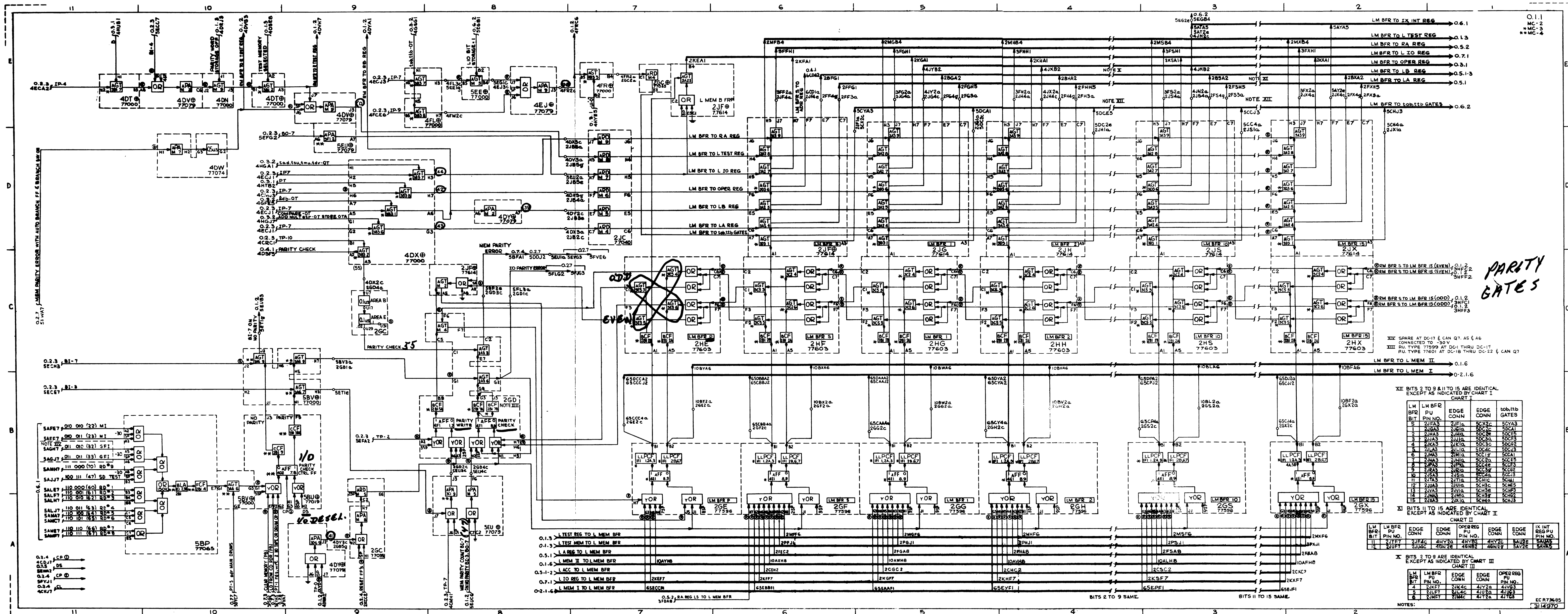




PANEL B LEFT SIDE X ODD ADDRESS

PANEL A FRONT Y EVEN ADDRESS





PARITY
GATES

TABLE 1: LOGIC FUNCTIONS FOR PARITY GATES

LM BFR	PU	EDGE	EDGE	EDGE
BIT	PIN NO.	CONN	CONN	CONN
1	21F1A	21F1A	21F1A	21F1A
2	21F1B	21F1B	21F1B	21F1B
3	21F1C	21F1C	21F1C	21F1C
4	21F1D	21F1D	21F1D	21F1D
5	21F1E	21F1E	21F1E	21F1E
6	21F1F	21F1F	21F1F	21F1F
7	21F1G	21F1G	21F1G	21F1G
8	21F1H	21F1H	21F1H	21F1H
9	21F1I	21F1I	21F1I	21F1I
10	21F1J	21F1J	21F1J	21F1J
11	21F1K	21F1K	21F1K	21F1K
12	21F1L	21F1L	21F1L	21F1L
13	21F1M	21F1M	21F1M	21F1M
14	21F1N	21F1N	21F1N	21F1N
15	21F1O	21F1O	21F1O	21F1O

TABLE 2: LOGIC FUNCTIONS FOR LEFT MEMORY BUFFER

LM BFR	PU	EDGE	EDGE	EDGE
BIT	PIN NO.	CONN	CONN	CONN
1	21F1A	21F1A	21F1A	21F1A
2	21F1B	21F1B	21F1B	21F1B
3	21F1C	21F1C	21F1C	21F1C
4	21F1D	21F1D	21F1D	21F1D
5	21F1E	21F1E	21F1E	21F1E
6	21F1F	21F1F	21F1F	21F1F
7	21F1G	21F1G	21F1G	21F1G
8	21F1H	21F1H	21F1H	21F1H
9	21F1I	21F1I	21F1I	21F1I
10	21F1J	21F1J	21F1J	21F1J
11	21F1K	21F1K	21F1K	21F1K
12	21F1L	21F1L	21F1L	21F1L
13	21F1M	21F1M	21F1M	21F1M
14	21F1N	21F1N	21F1N	21F1N
15	21F1O	21F1O	21F1O	21F1O

NOTES:
X BITS 2 TO 9 ARE IDENTICAL EXCEPT AS INDICATED BY CHART III
Y BITS 11 TO 15 ARE IDENTICAL EXCEPT AS INDICATED BY CHART II

LEFT MEMORY BUFFER

ECR73695
314970

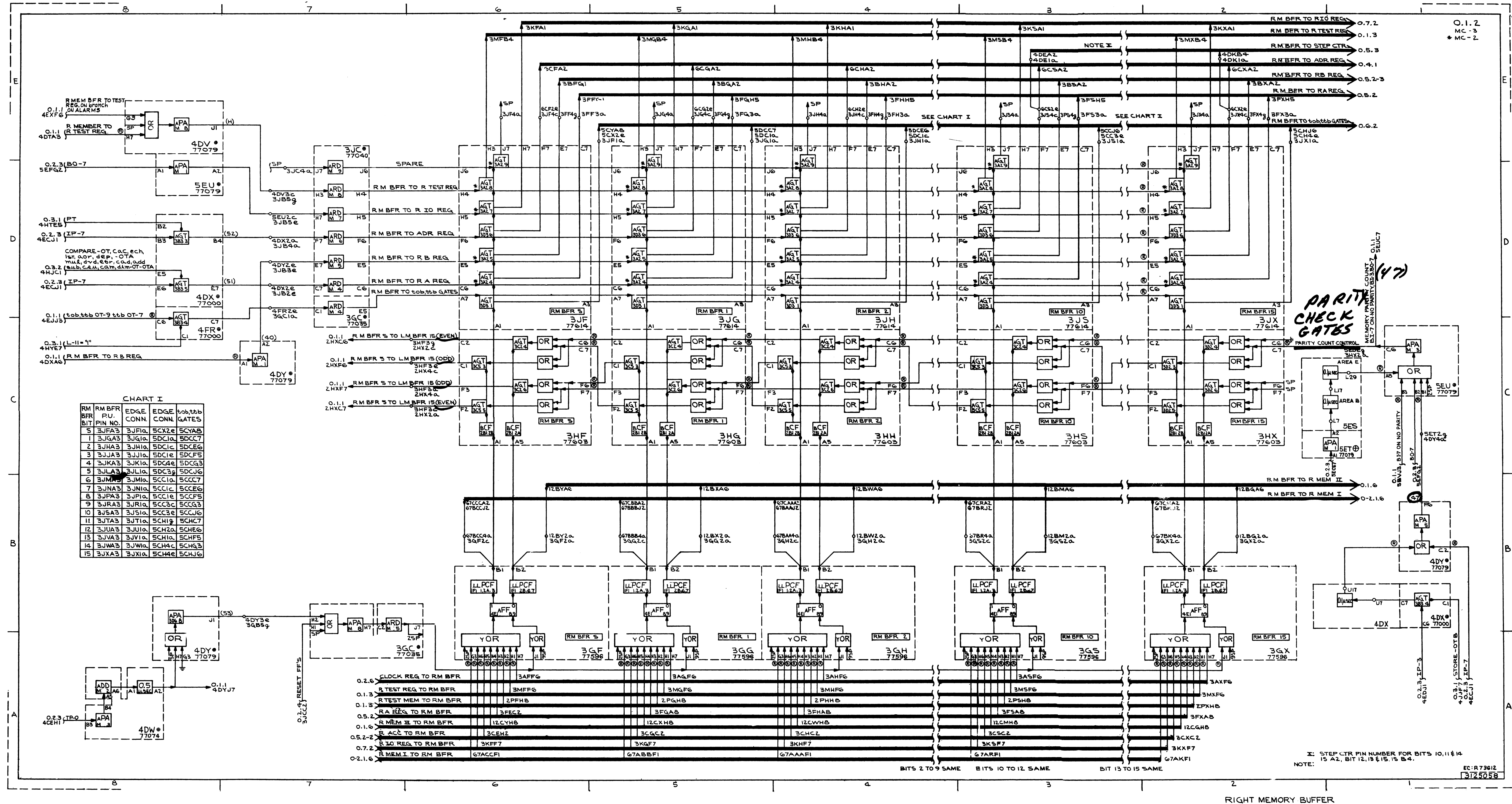


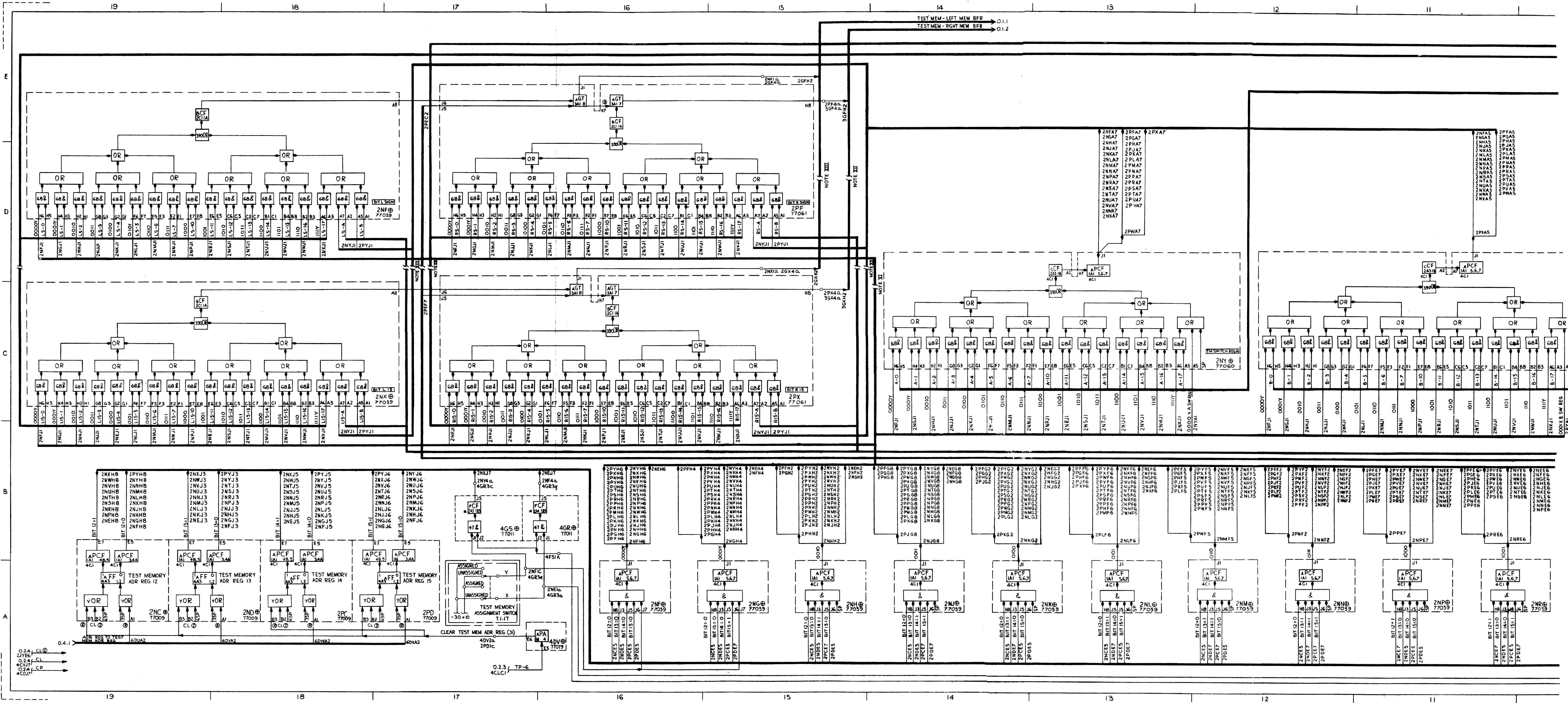
CHART I

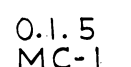
RM BFR	P.U.	EDGE	EDGE	to bbb
BFR	CONN.	CONN.	GATES	
1	3JFA3	3JF1a	5CX2e	5CYAa
2	3JGA3	3JG1a	5DC1a	5DCC7
3	3JHA3	3JH1a	5DC1c	5DCE6
4	3JJA3	3JJ1a	5DC1e	5DCF5
5	3JKA3	3JK1a	5DC4e	5DCG3
6	3JLA3	3JL1a	5DC3g	5DCJ6
7	3JNA3	3JN1a	5CC1a	5CCC7
8	3JPA3	3JP1a	5CC1c	5CCE6
9	3JRA3	3JR1a	5CC3c	5CCG3
10	3JSA3	3JS1a	5CC3e	5CCJ6
11	3JTA3	3JT1a	5CH1g	5CHC7
12	3JUA3	3JU1a	5CH2a	5CHE6
13	3JVA3	3JV1a	5CH1a	5CHF5
14	3JWA3	3JW1a	5CH4c	5CHG3
15	3JXA3	3JX1a	5CH4e	5CHJ6

PARITY CHECK GATES

NOTE: STEP CTR PIN NUMBER FOR BITS 10, 11 & 14 IS A2, BIT 12, 13 & 15 IS B4.

EC:R73612
3725059



[illegible]

JXC & Y3C PIN NO.	JXC & Y3C PLANE PIN NO.	CMD TUBE	CMD TUBE	JXC & Y3C PIN NO.	JXC & Y3C PLANE PIN NO.	CMD TUBE	CMD TUBE
18	41	32	15a,16a	32	50	16	17
3	42	23	13a,14a	13	62	24	35a
20	43	31	13b,14b	30	63	18	34a
5	44	22	11a,12a	28	64	27	55a
25	45	11	11b,12b	11	65	19	55a
2	46	21	9a,10a	26	71	8	71a
24	47	29	9b,10b	9	67	20	7a,8a
9	50	20	7a,8a	24	70	29	9b,10b
26	51	28	7b,8b	7	71	21	9a,10a
11	52	19	5a,6a	22	72	30	11b,12b
28	53	27	9b,10b	22	73	22	11a,12a
13	54	28	31a,32a	20	74	20	13b,14b
30	55	26	31b,32b	3	75	23	13a,14a
15	56	17	1a,2a	10	76	32	15b
57	57	25	1b,2b	1	77	24	15a

IIX MARGINAL CHECK	
JACK CONNECTOR	MC MARK/LOG
IIXAJ1-31	D1
IIXBJ1-31	D2
IIXCJ1-31	D3
IIXDJ1-31	D4
IIXJ1-30	F1

I1Y MARGINAL CHECK	
JACK CONNECTOR	MC MARG/LOGIC
I1YA J1-31	E1
I1YB J1-31	E2
I1YC J1-31	E3
I1YD J1-31	E4
J1-30	F2

NOTE: II
11 E 25
8409

DRIVE LINES

CORE MEM.
DRIVERS

MATRIX OUT
AMPS.

Q-30V
ID

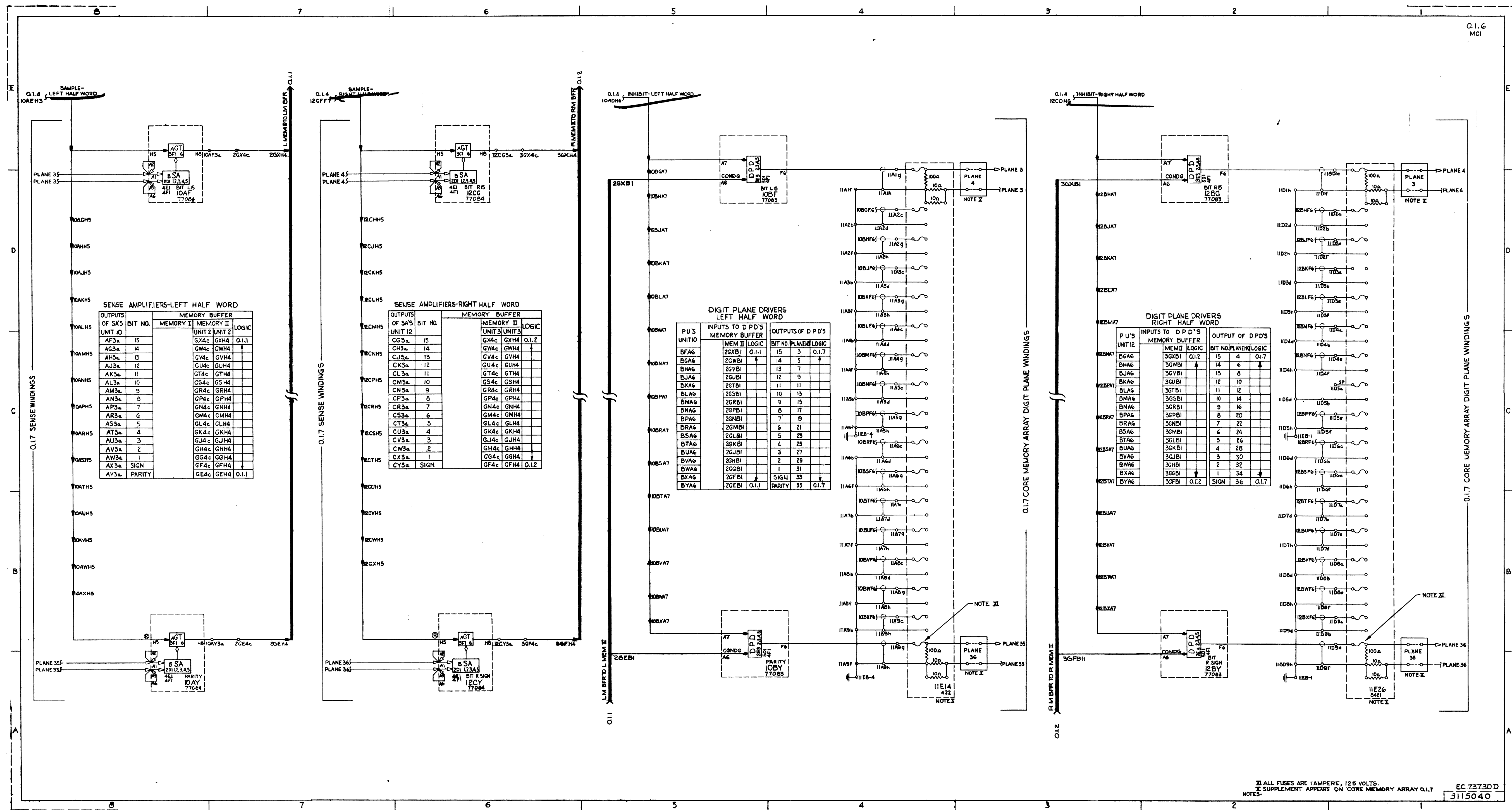
DIODE CLAMP BOARD WE21 8599

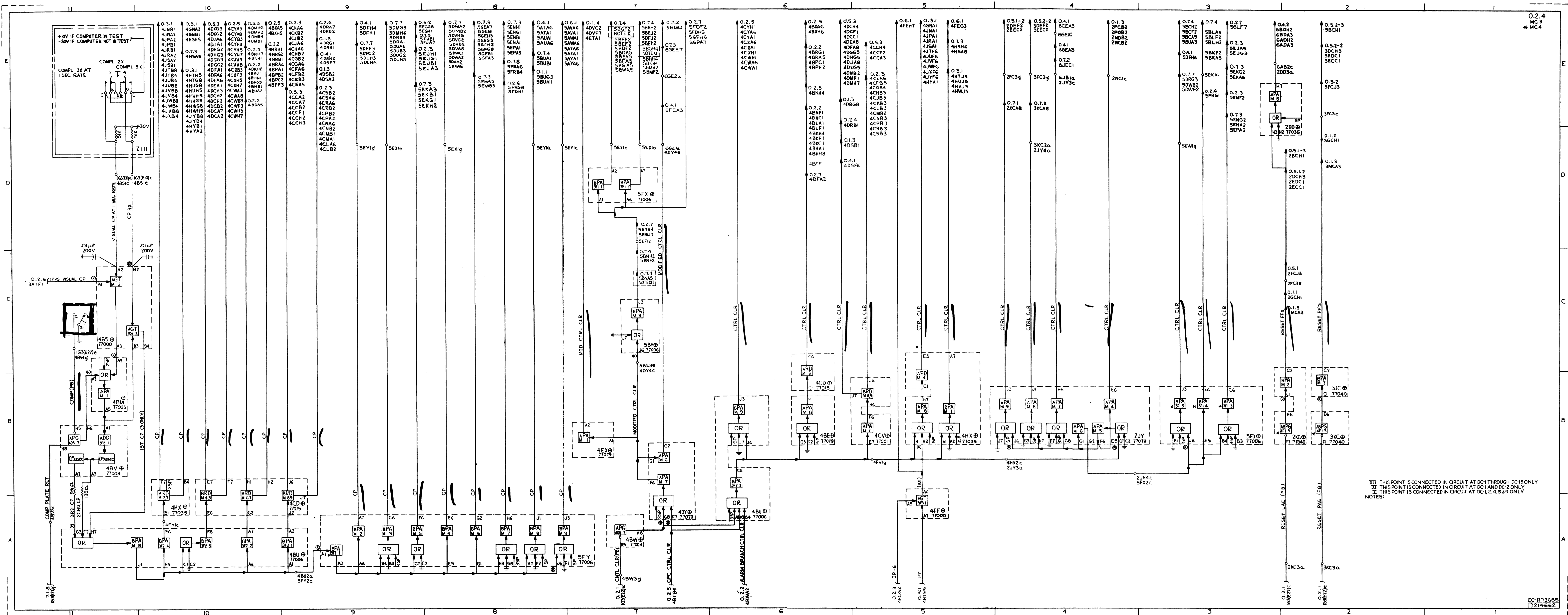
FOR MATRIX
DIODE PROTECTION

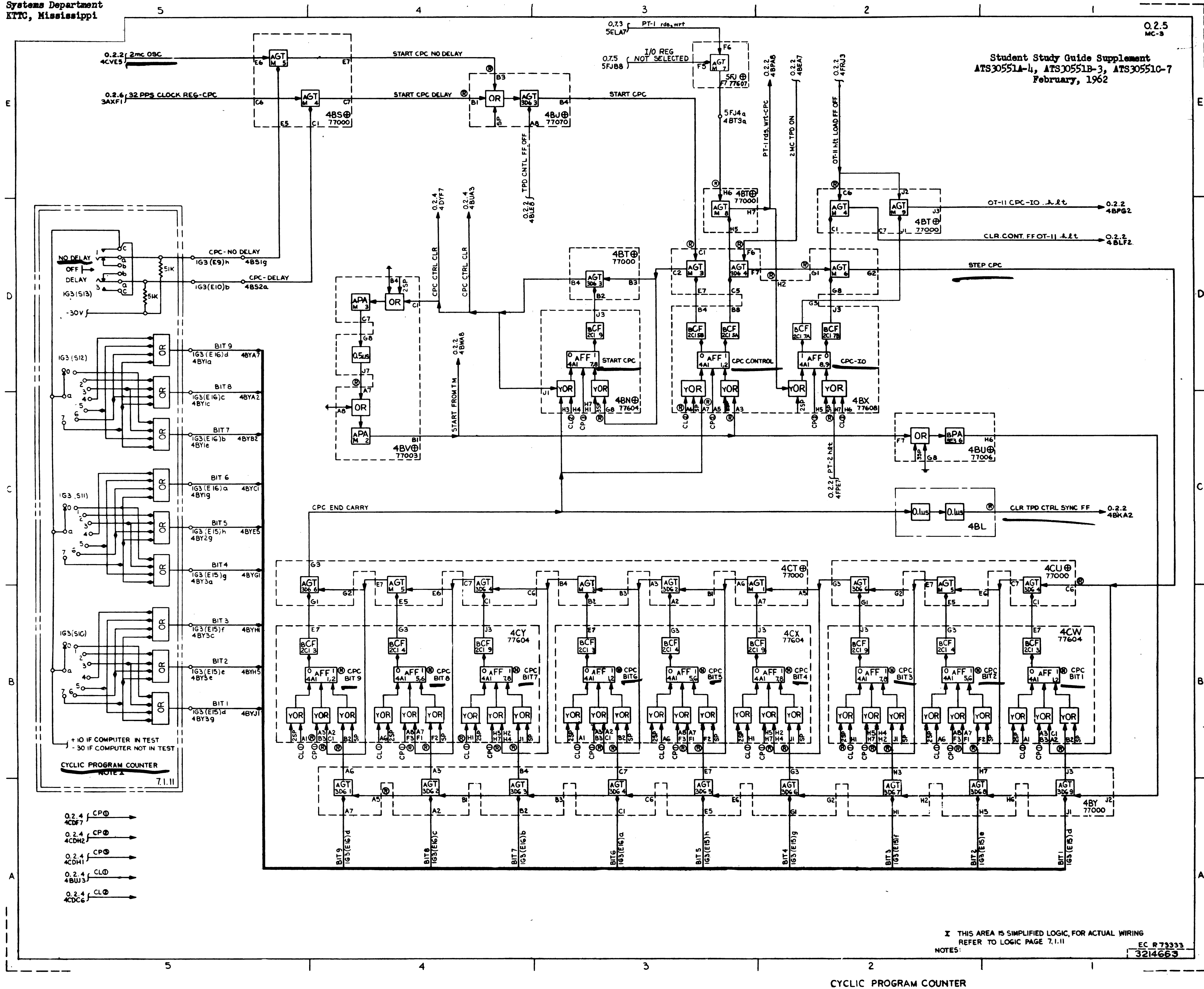
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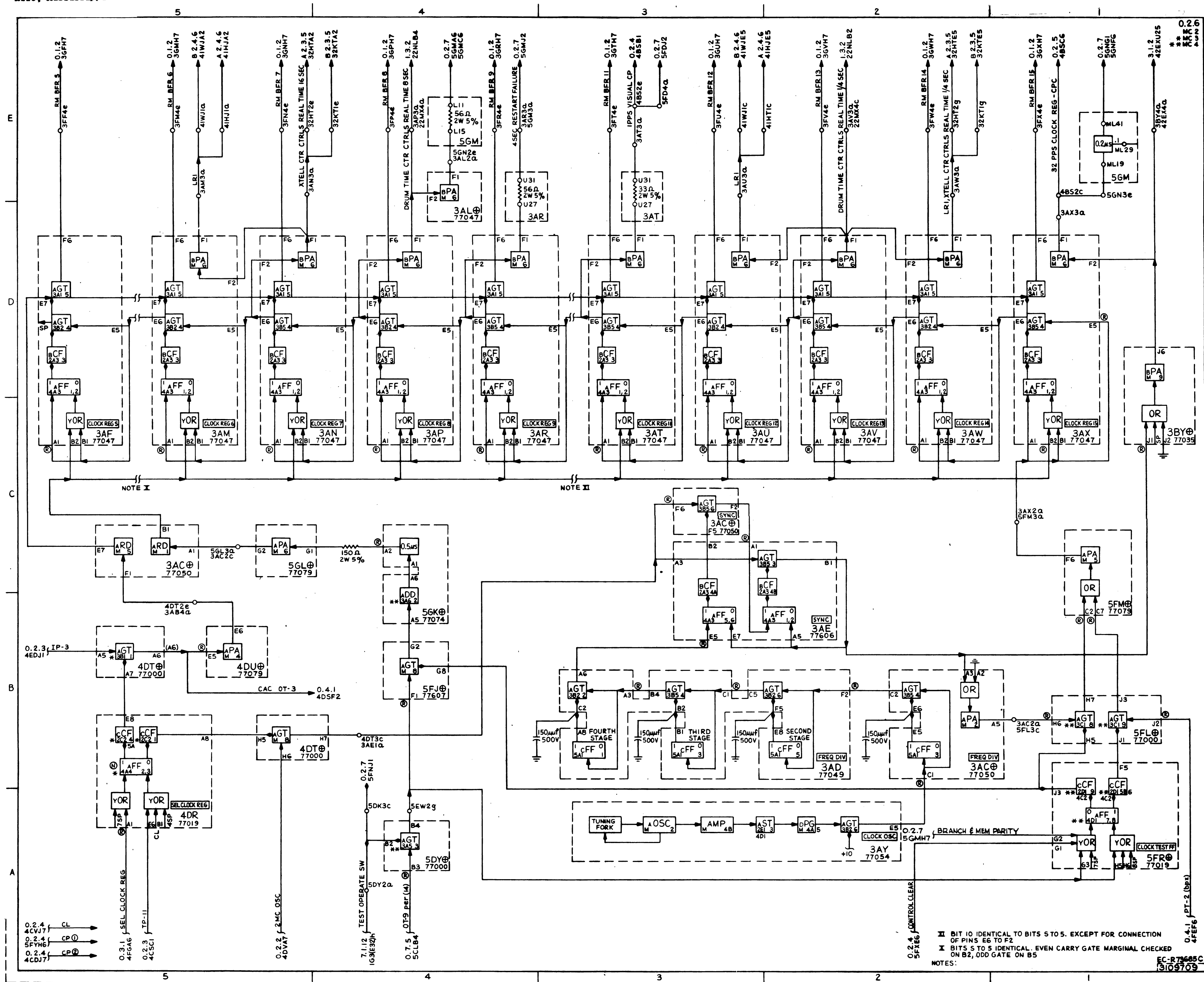
MAR

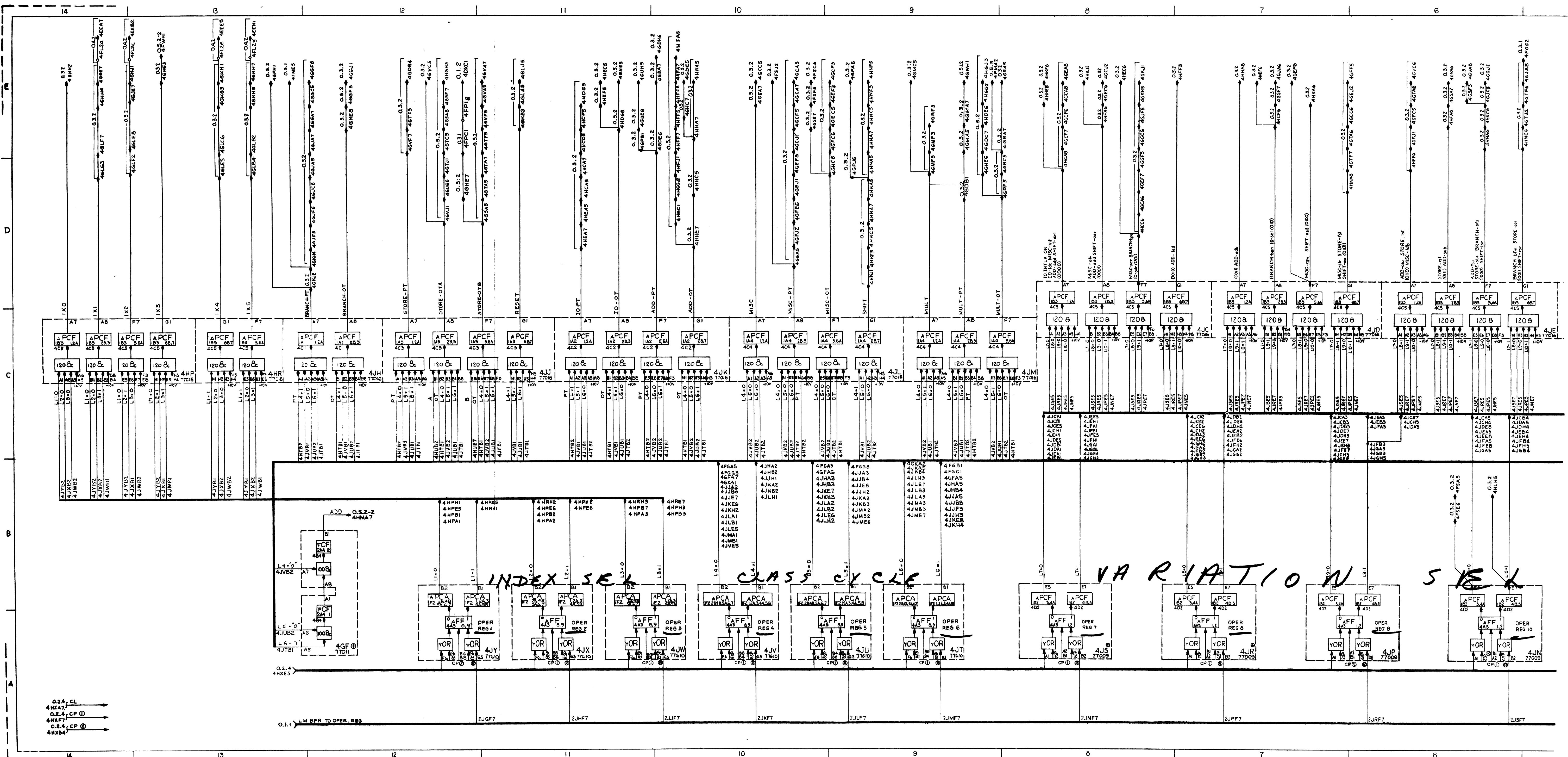
- XIII ALL CORE MEMORY LOCATIONS ARE DESIGNATED BY THEIR, OCTAL ADDRESSES.
- XIII ALL SHIELDS OF COAX CABLE TO DRIVER PANEL JACKS (J1) ARE GROUNDED. TO ADJACENT J4 AND J5 EDGE CONNECTORS
- XI SUPPLEMENT APPEARS ON LOGIC 0.1.7 (CORE MEMORY ARRAY UNIT)
- X FOR CMD'S 00 THRU 77 SEE TABLES.

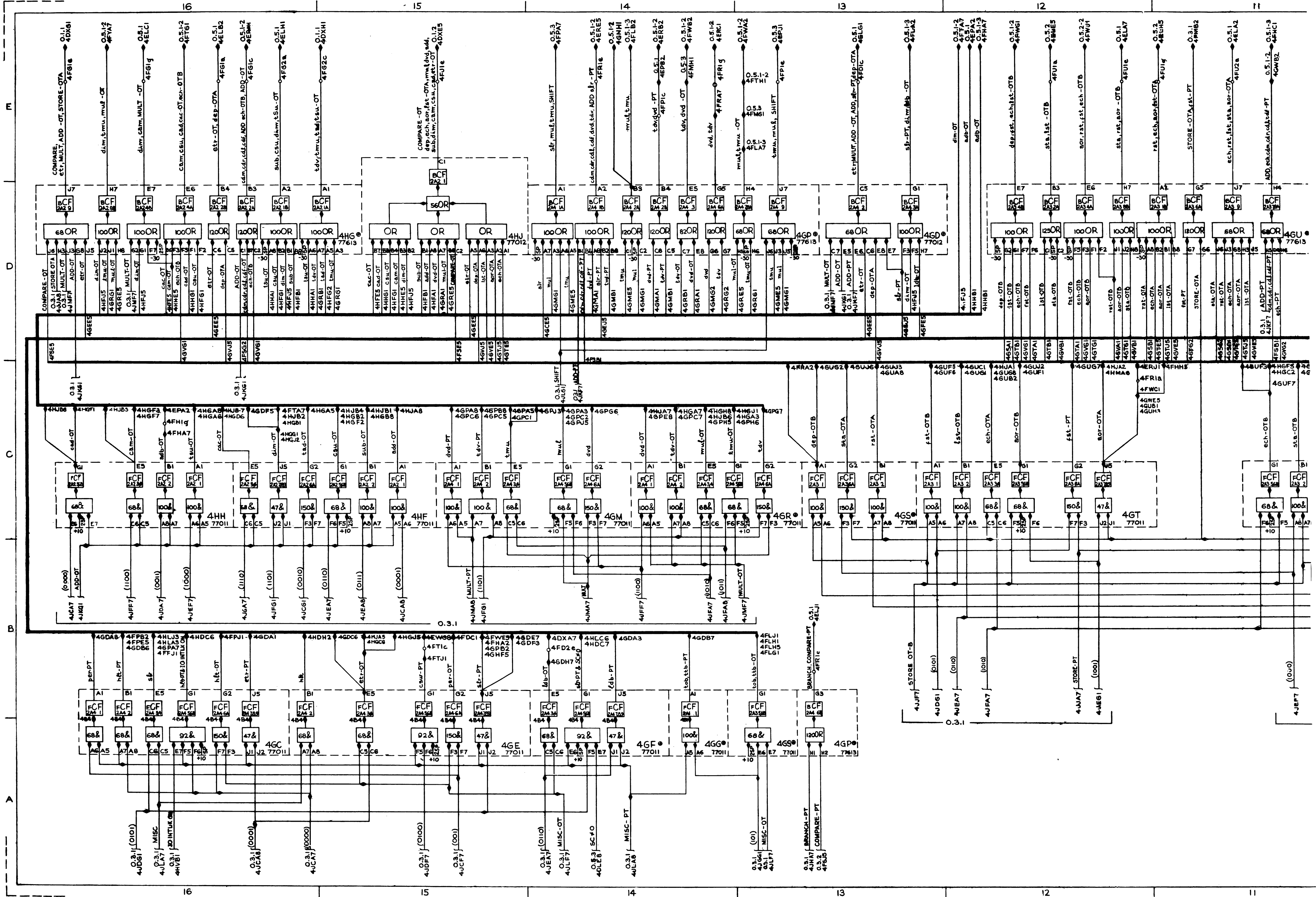




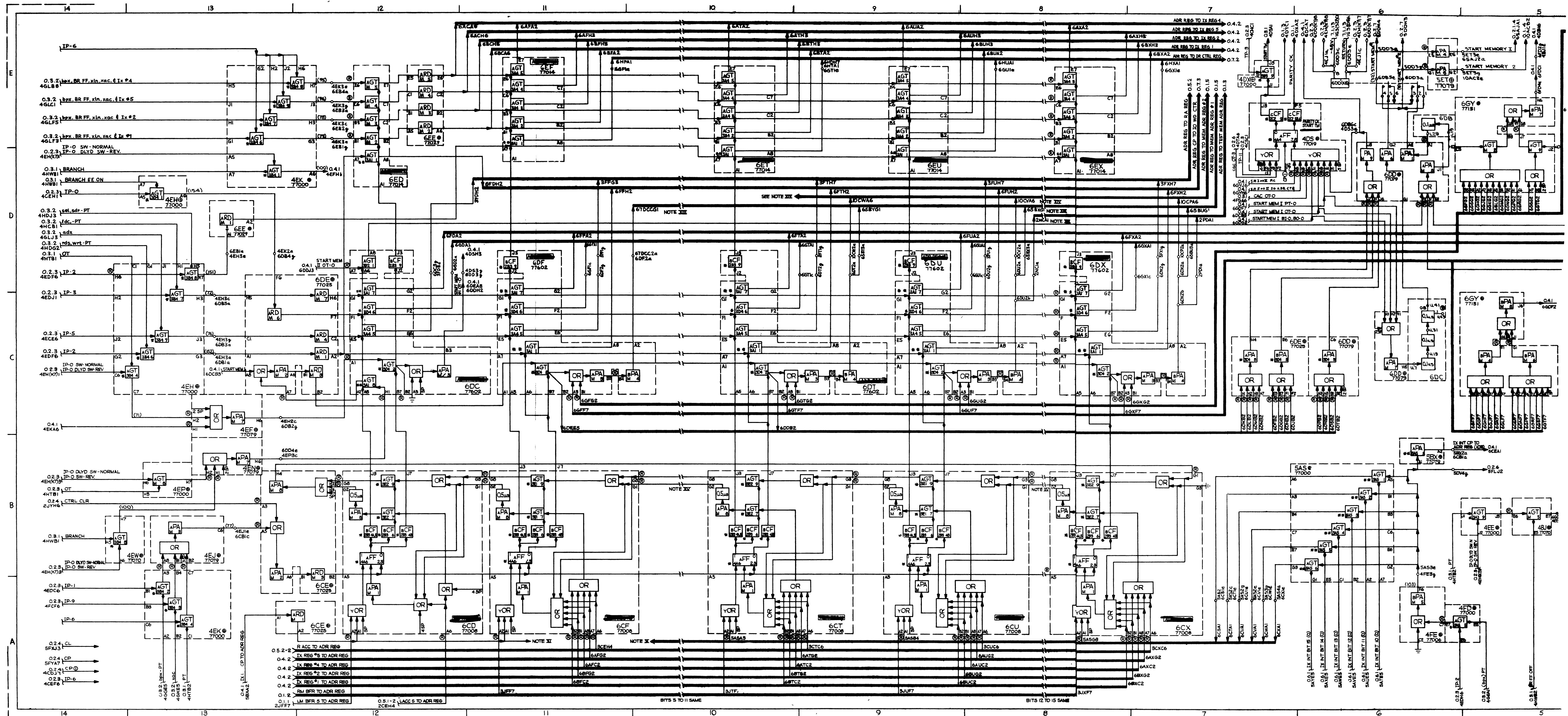






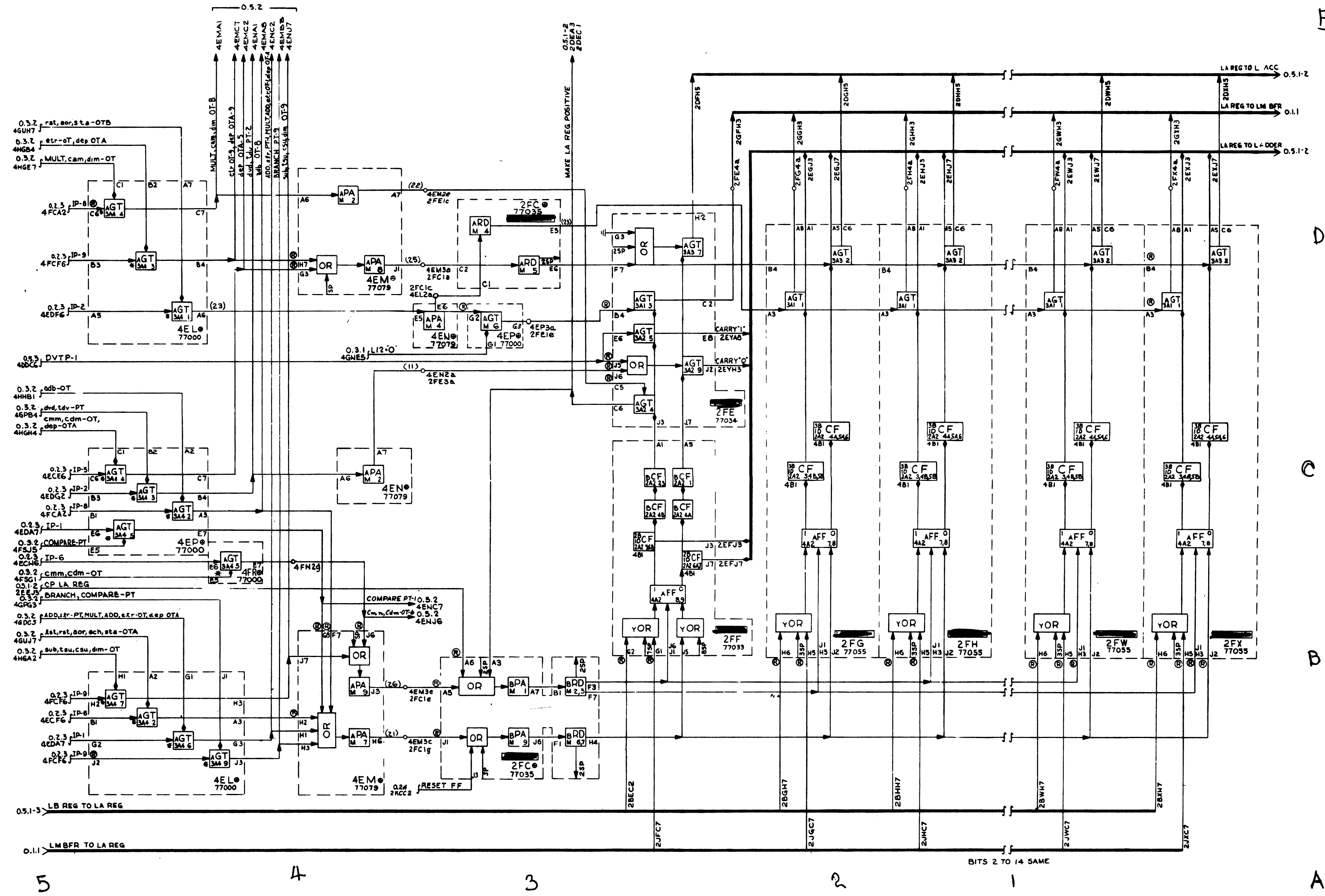




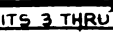




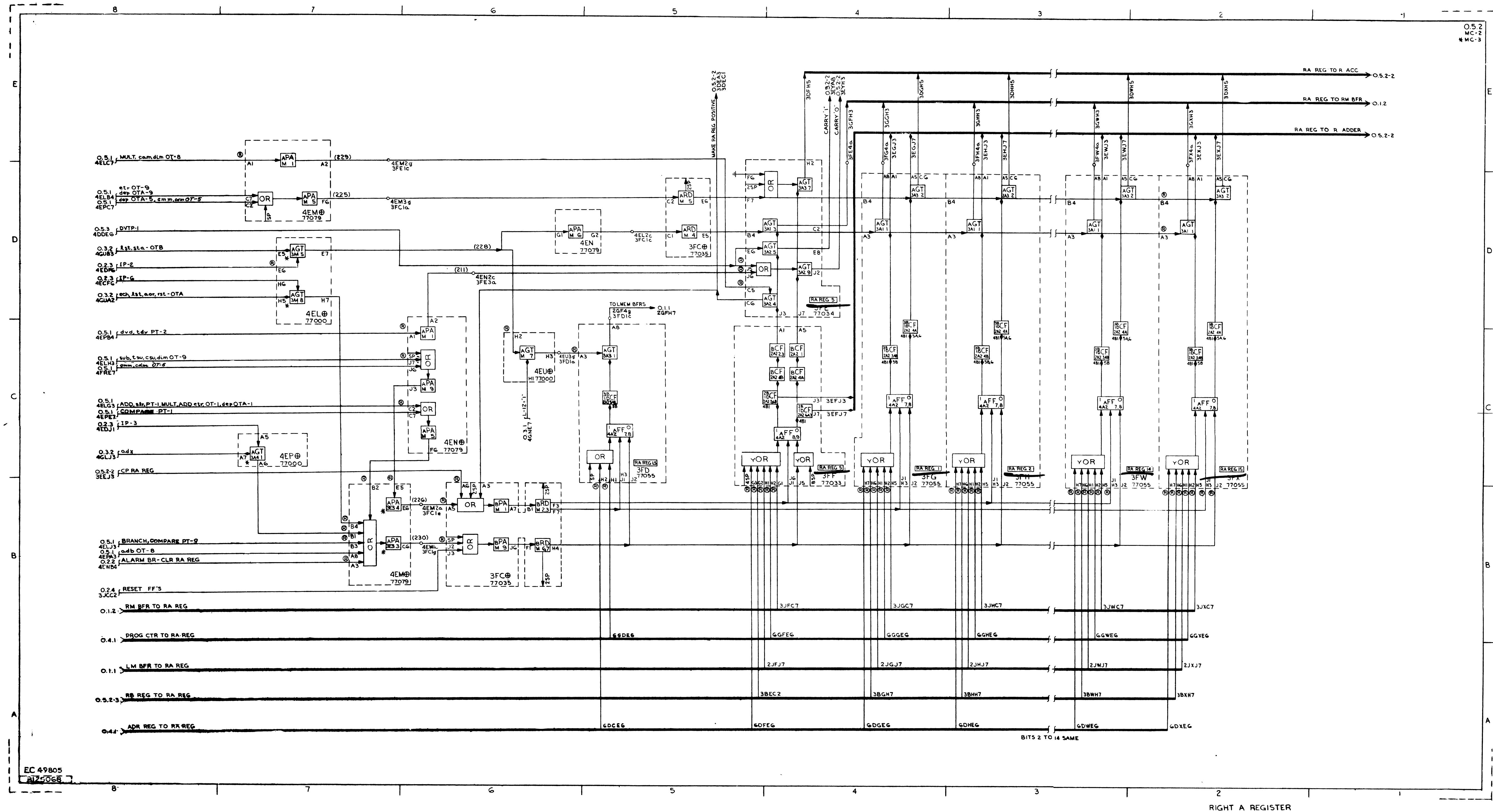
0.5.1
MC-2
• MC-3

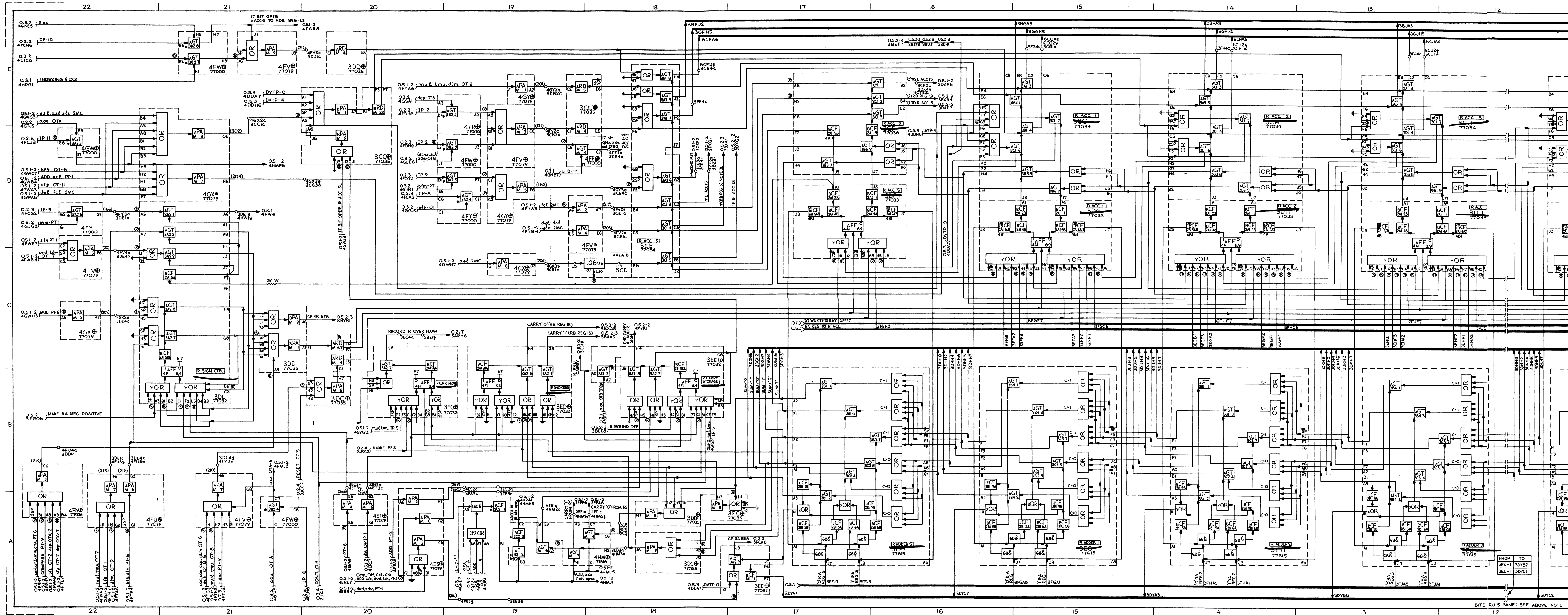


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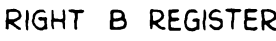






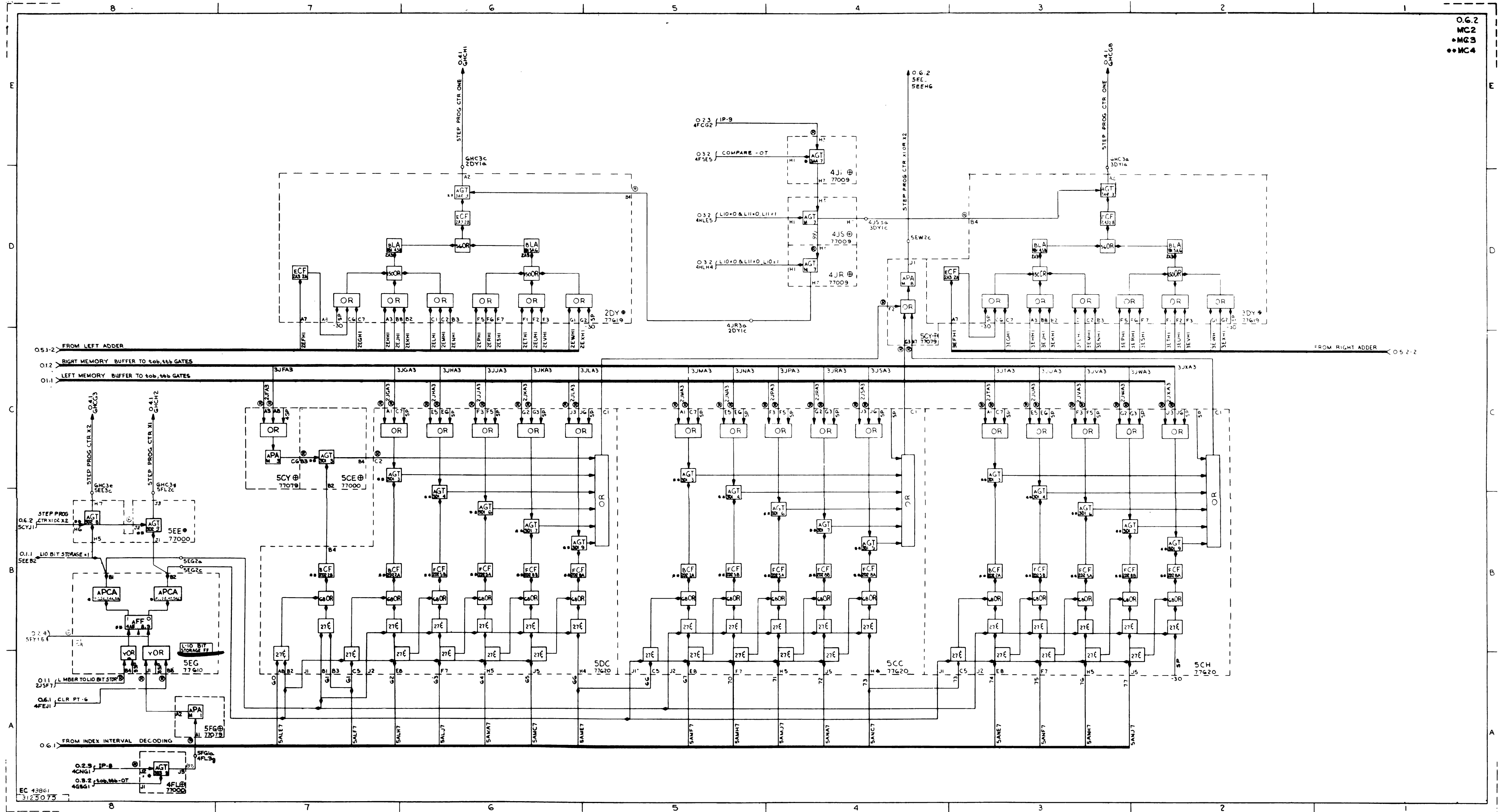


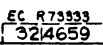




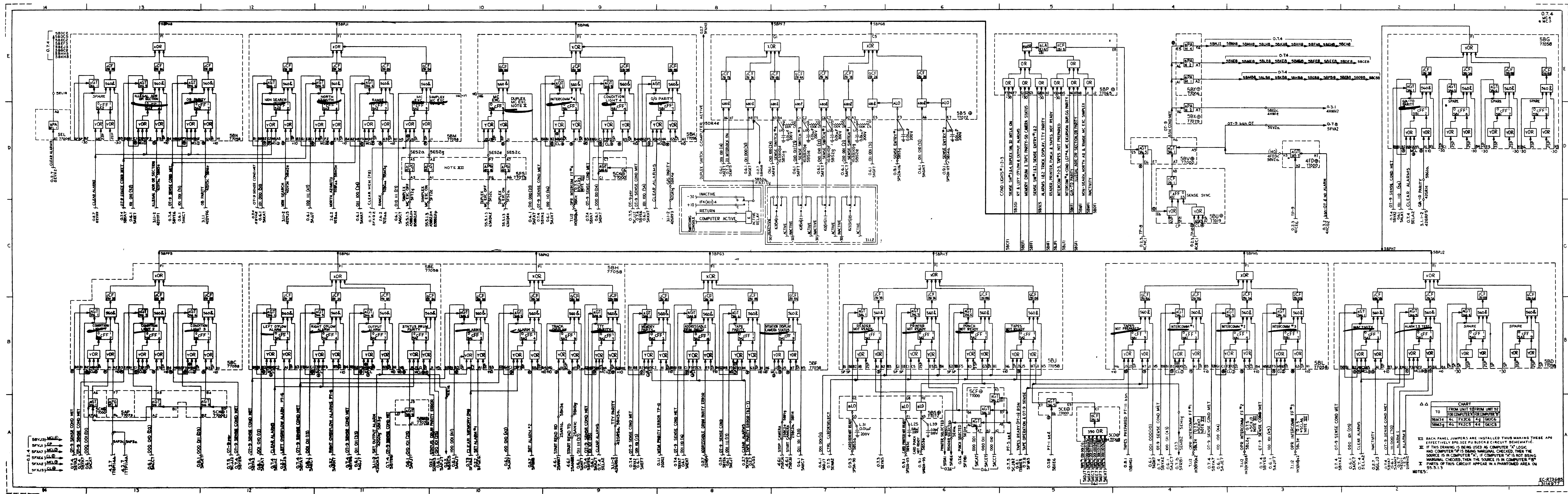


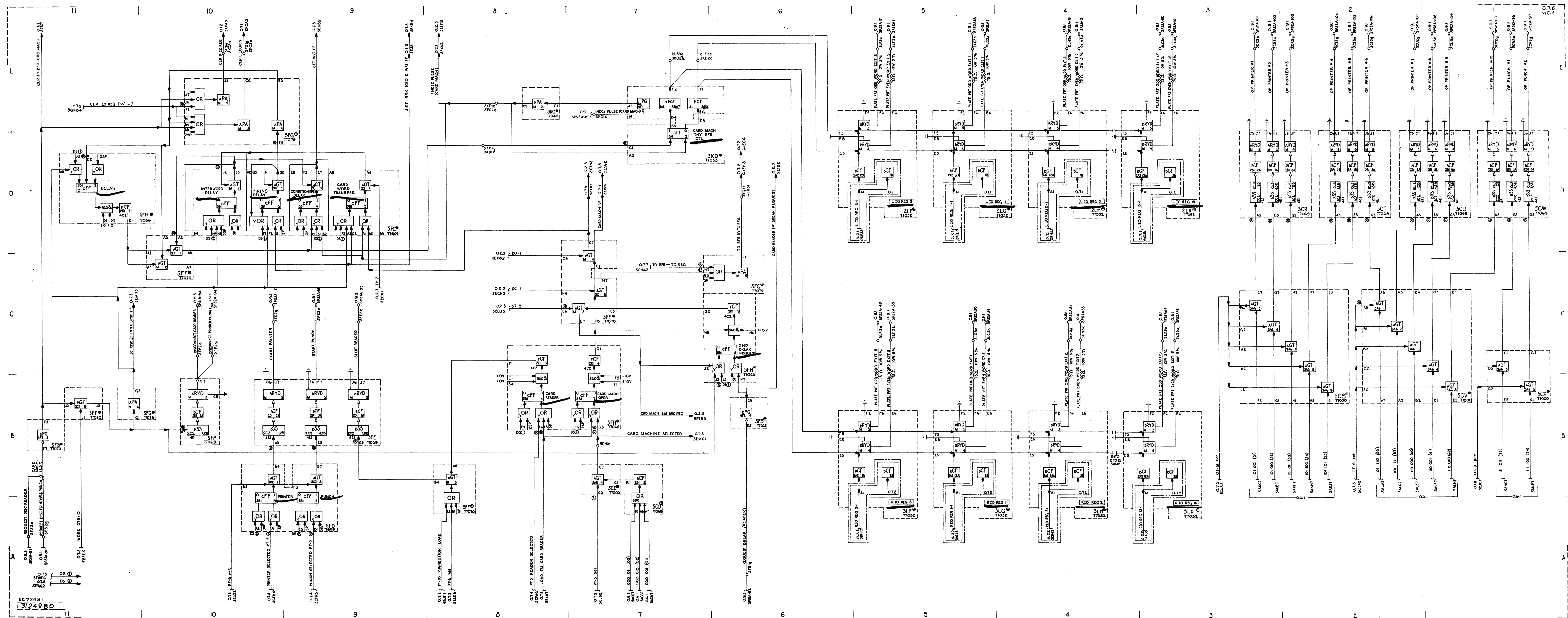














5

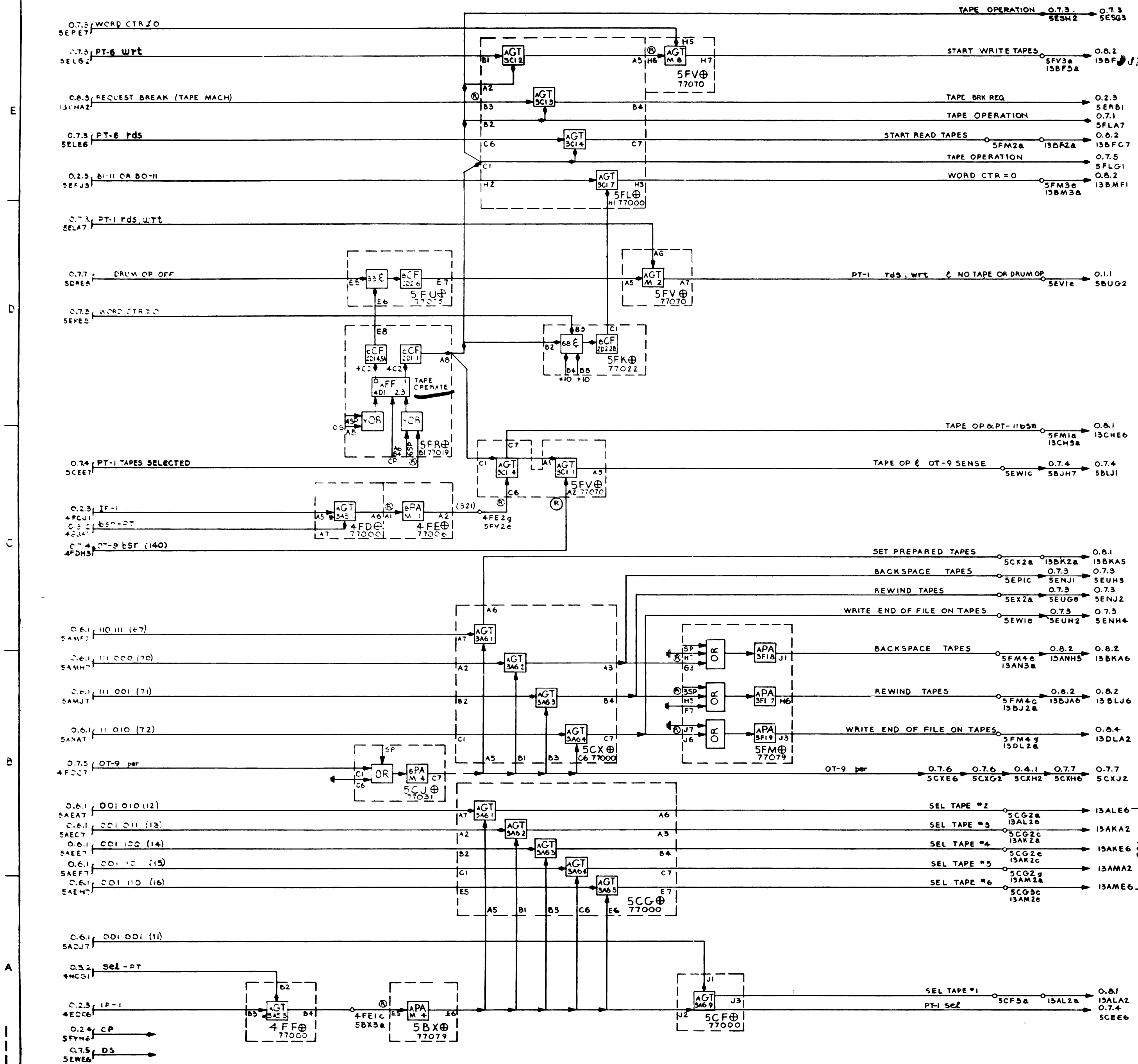
4

3

2

0.7.8
MC-4
*MC-3

Student Study Guide Supplement
ATS30551A-4
February 1962

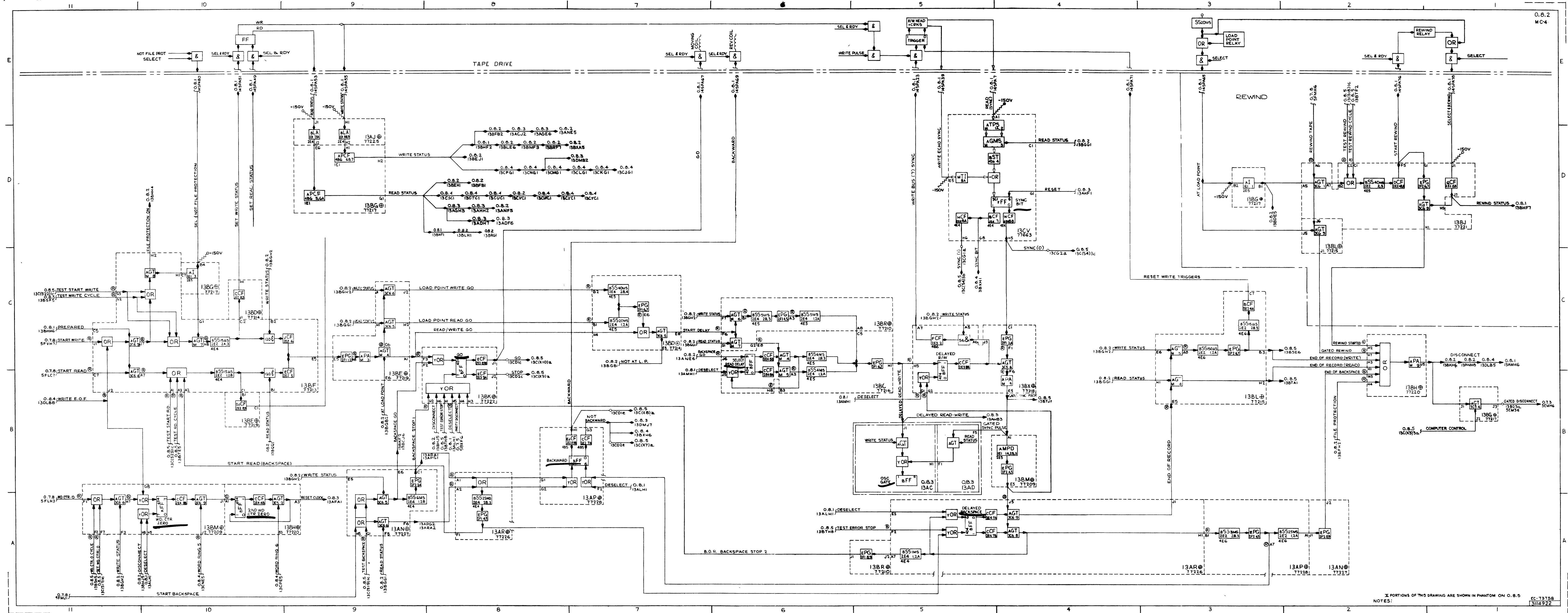


TAPE CONTROLS

EC-R73333
3214677

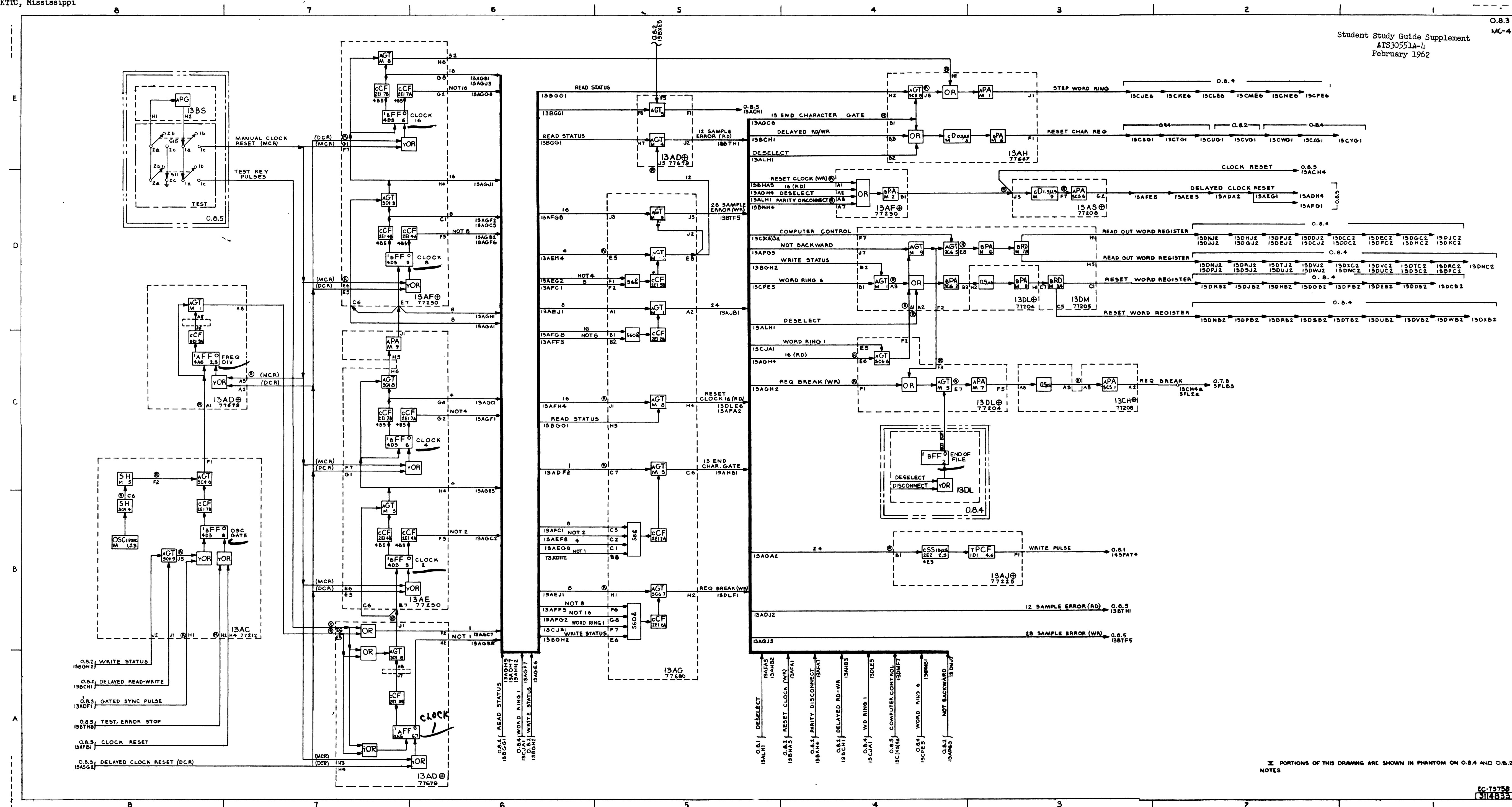


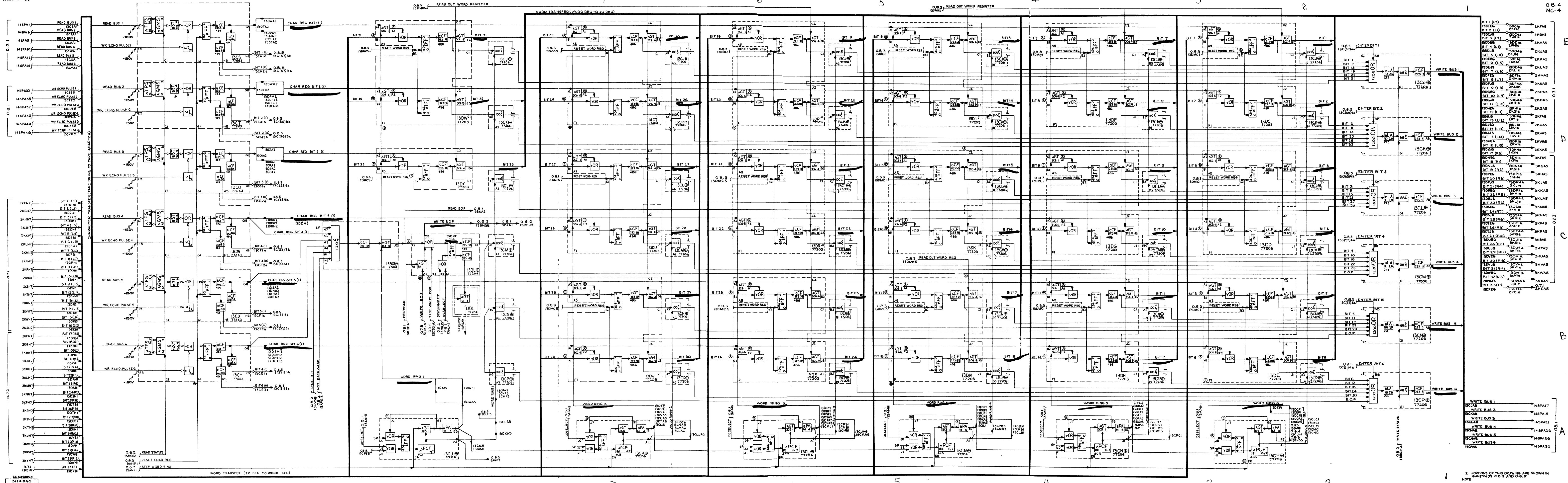


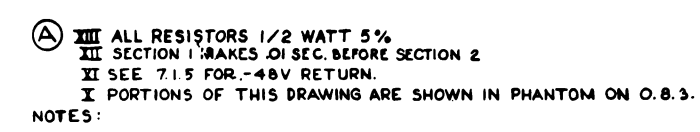


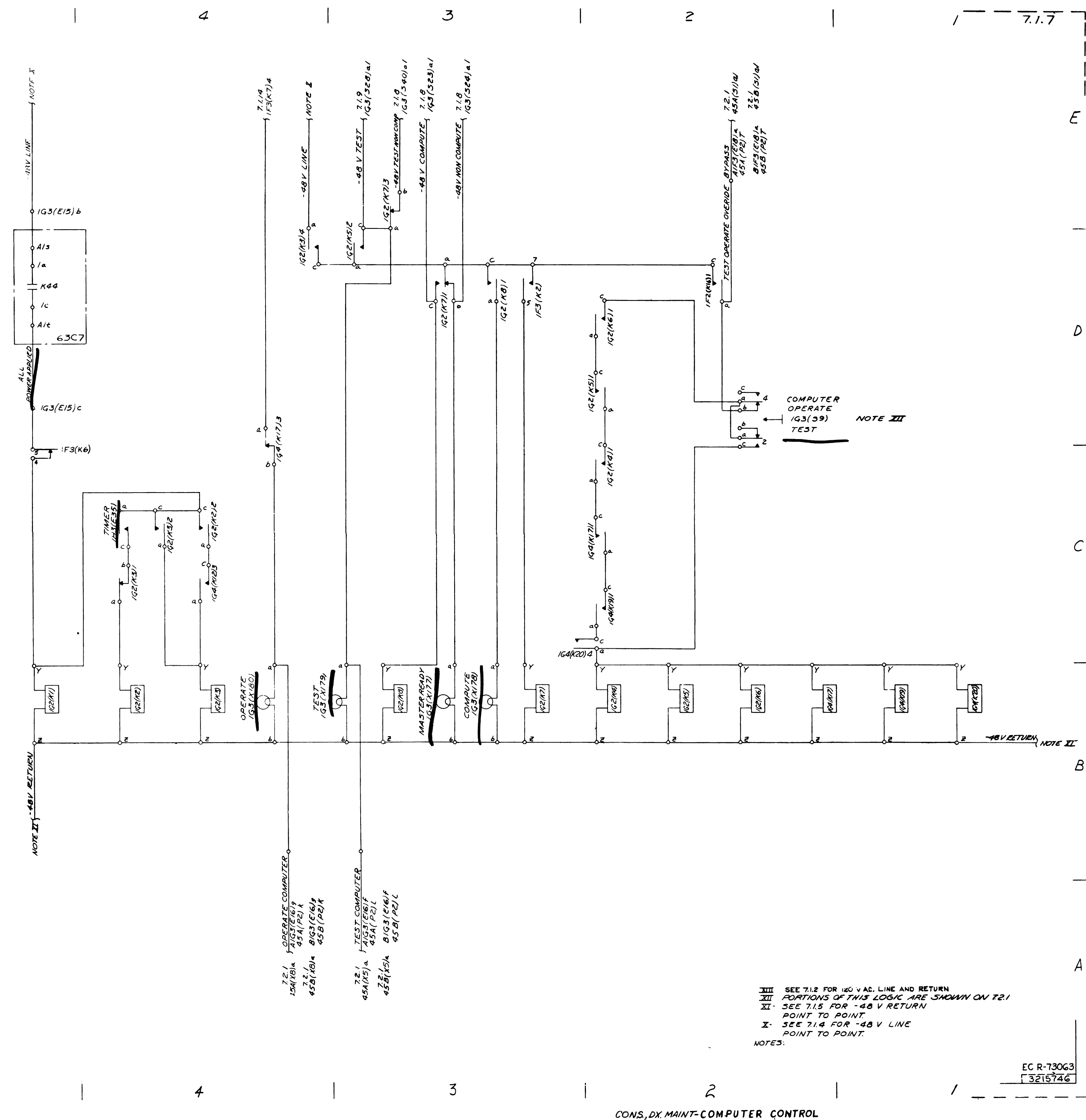
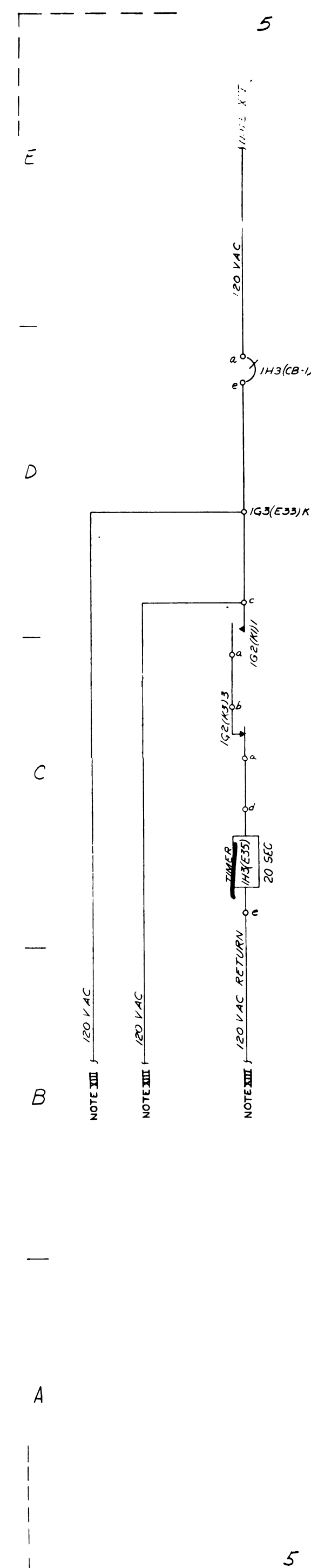
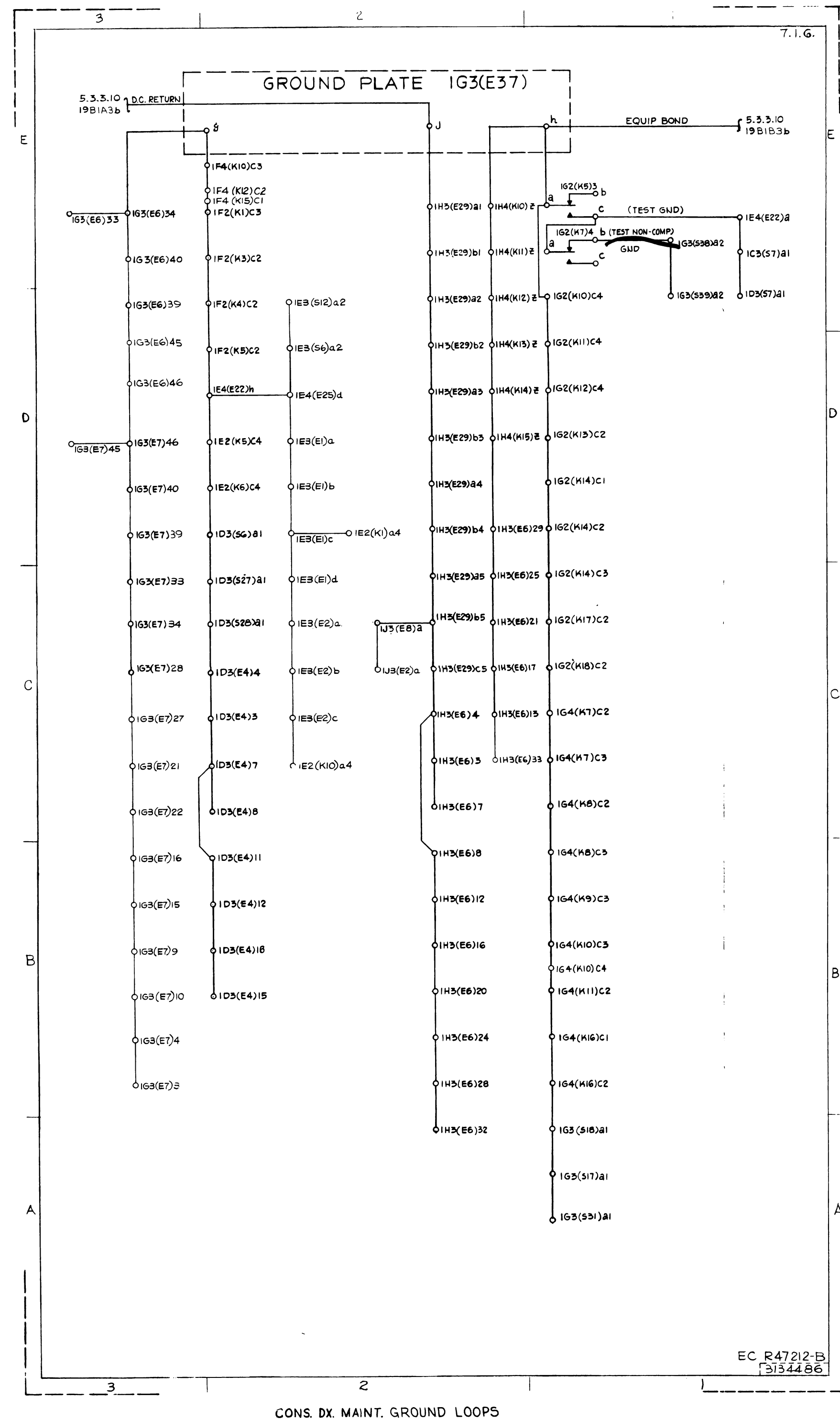
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NOTES: EC-73158
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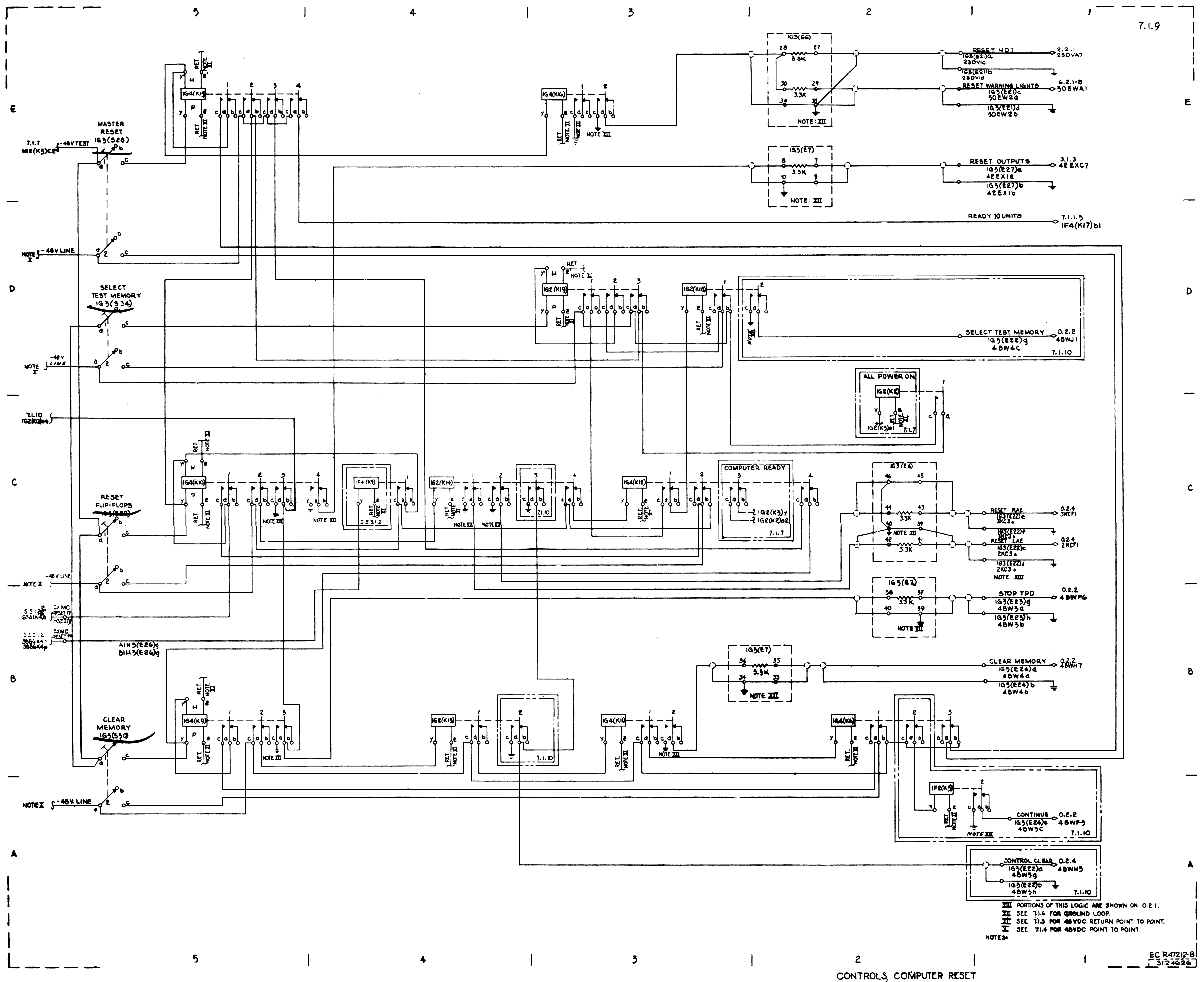
MAGNETIC TAPE SYSTEM OPERATION CONTROL



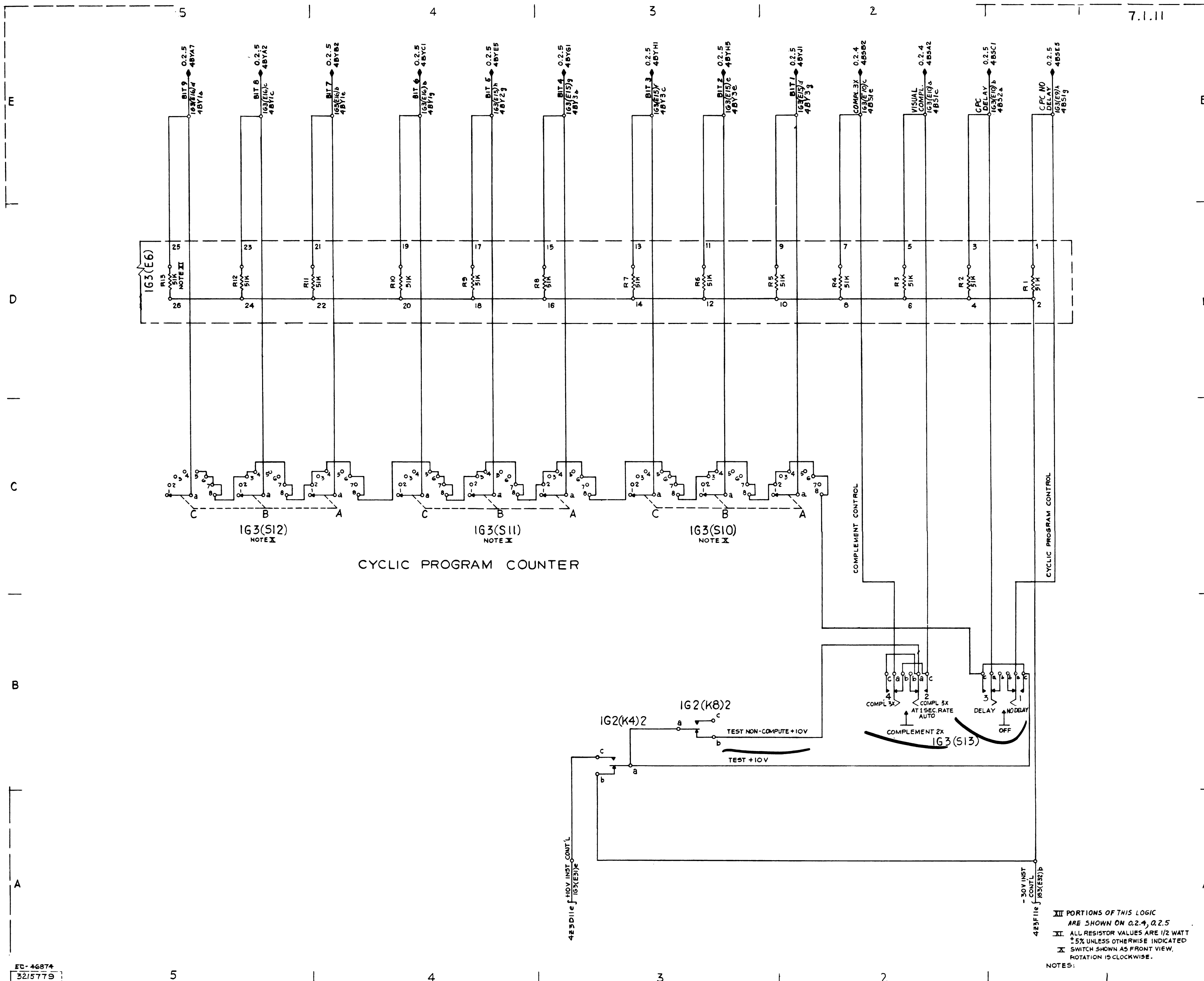




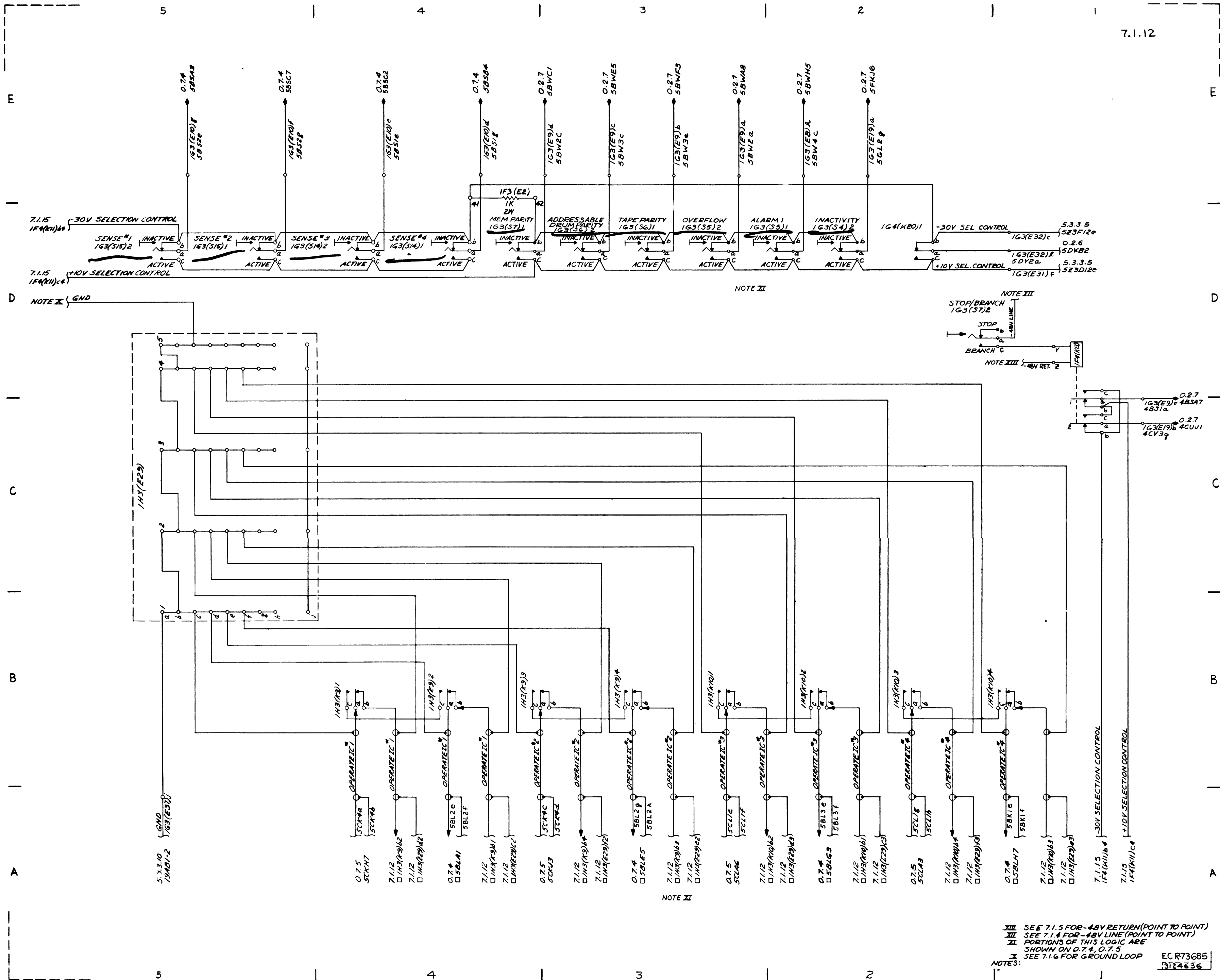




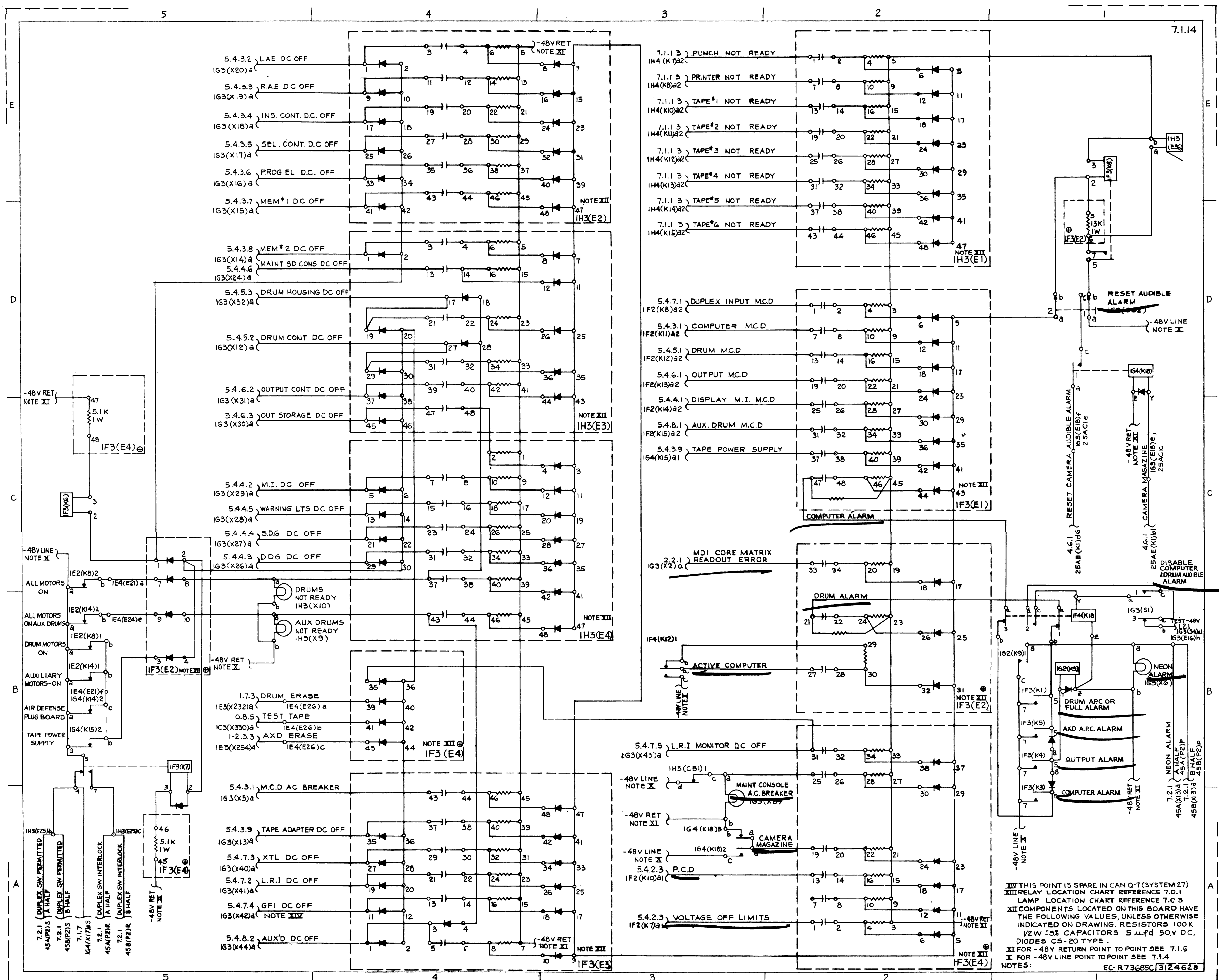
CONTROLS, COMPUTER RESET

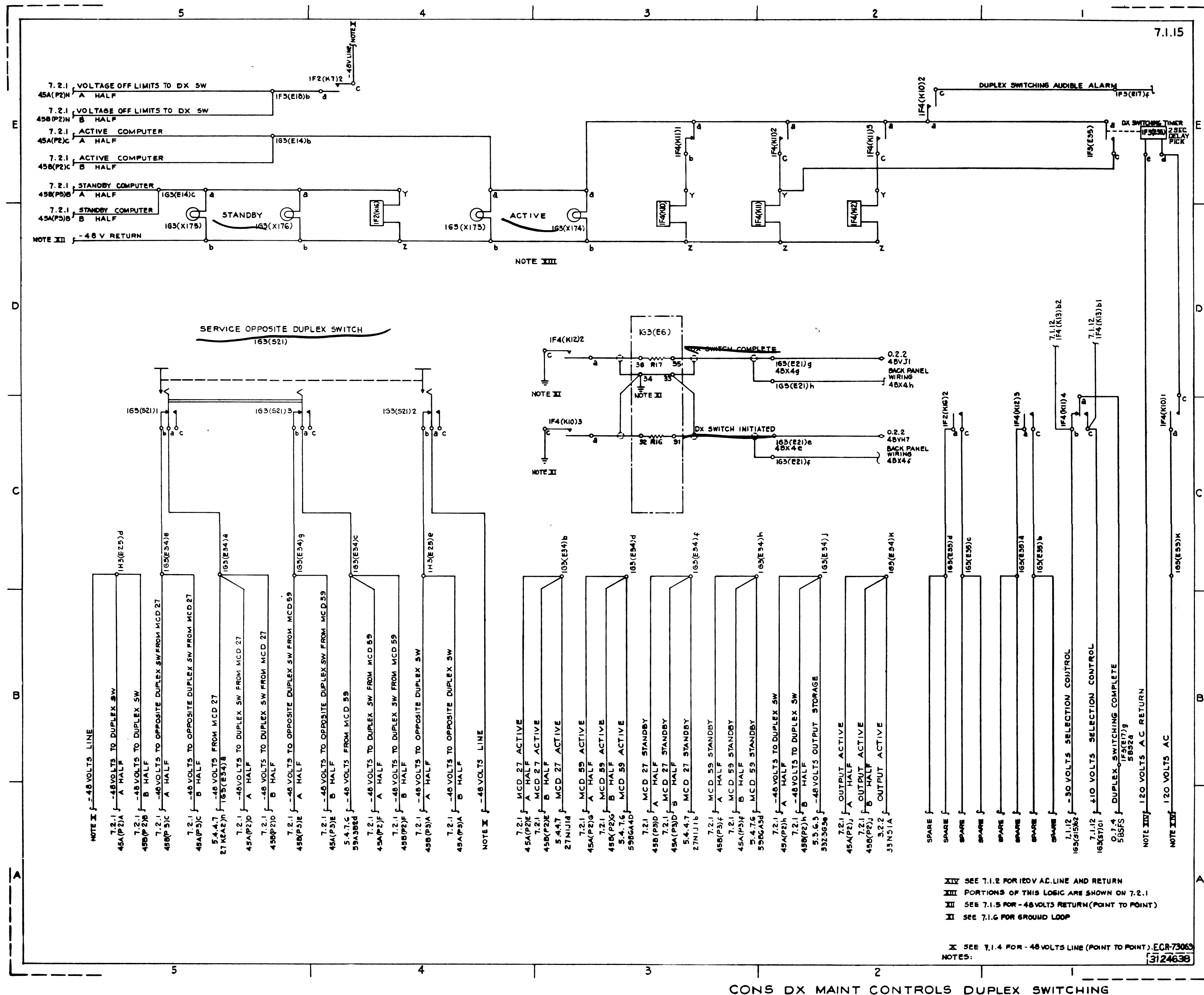


EC-46874
3215779



BLOCK SCHEMATIC - CONS.DX, MAINT. COMP. ALARM & IC CONTROL





5					4					3					2					1				
304827					304827					304827					304827					304827				
REV B					REV B					REV B					REV B					REV B				
7.1.7					7.1.7					7.1.7					7.1.7					7.1.7				
ED CONN					ED CONN					ED CONN					ED CONN					ED CONN				
ED CONN					ED CONN					ED CONN					ED CONN					ED CONN				
PLUG UNIT					PLUG UNIT					PLUG UNIT					PLUG UNIT					PLUG UNIT				
LOGIC					LOGIC					LOGIC					LOGIC					LOGIC				
DESCRIPTION					DESCRIPTION					DESCRIPTION					DESCRIPTION					DESCRIPTION				
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3(E)A4					3(E)E9					3(E)J14					3(E)N19					3(E)N19				
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3(E)A6					3(E)E11					3(E)J16					3(E)N21					3(E)N21				
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3(E)A22					3(E)E27					3(E)J32					3(E)N37					3(E)N37				
3(E)A23					3(E)E28					3(E)J33					3(E)N38					3(E)N38				
3(E)A24					3(E)E29					3(E)J34					3(E)N39					3(E)N39				
3(E)A25					3(E)E30					3(E)J35					3(E)N40					3(E)N40				
3(E)A26					3(E)E31					3(E)J36					3(E)N41					3(E)N41				
3(E)A27					3(E)E32					3(E)J37					3(E)N42					3(E)N42				
3(E)A28					3(E)E33					3(E)J38					3(E)N43					3(E)N43				
3(E)A29					3(E)E34					3(E)J39					3(E)N44					3(E)N44				
3(E)A30					3(E)E35					3(E)J40					3(E)N45					3(E)N45				
3(E)A31					3(E)E36					3(E)J41					3(E)N46					3(E)N46				
3(E)A32					3(E)E37					3(E)J42					3(E)N47					3(E)N47				
3(E)A33					3(E)E38					3(E)J43					3(E)N48					3(E)N48				
3(E)A34					3(E)E39					3(E)J44					3(E)N49					3(E)N49				
3(E)A35					3(E)E40					3(E)J45					3(E)N50					3(E)N50				
3(E)A36					3(E)E41					3(E)J46					3(E)N51					3(E)N51				
3(E)A37					3(E)E42					3(E)J47					3(E)N52					3(E)N52				
3(E)A38					3(E)E43					3(E)J48														

