

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
INSTRUCTION FORMAT	S ₁	S ₀	C	L	ALU FCN				OPERAND								
ARITHMETIC	0	0	C	0	ALU FCN				R _{WE}	INPUT				REG ADRS			
	0	1	C	0	ALU FCN				A _{WD}	INPUT				REG ADRS			
LOGICAL	0	0	0	1	ALU FCN				R _{WE}	INPUT				REG ADRS			
	0	1	0	1	ALU FCN				OUTPUT				REG ADRS				
FLAG	0	1	1	1					S/C	FLAG DECODE							
JUMP FORMAT	S ₁	S ₀	P/P	FE	F/T	ADDRESS											
JUMP INST.	1	1	1	1	0	ADDRESS											
	1	0	0	1	0	ADDRESS											
	1	1	X	0	0	ADDRESS											
	1	X	0	0	F/T	COND CODE											

Q (ACC, INPUT) → REG
 Q (ACC, INPUT) → ACC
 R (ACC, INPUT) → REG
 R (ACC, REG) → OUTPUT
 R (ACC, CONSTANT) → ACC
 JSR - JUMP & PUSH
 RET - RETURN & POP
 JUMP
 CONDITIONAL SKIP

INPUT (LOW TRUE PULSE)

- 0 REG
- 1 SWITCHES
- 2 DRIVE STAT
- 3 ECC HI
- 4 ECC LO
- 5 DATA BUS
- 6 AUX STAT
- 7 SPARE

OUTPUT REGS (LOW TRUE PULSE)

- 0 LD ACCUMULATOR
- 1 WR ADRS MARK
- 2 LD DSR
- 3 LD CCL
- 4 LD OHR
- 5 ECC CLK
- 6 LD LED
- 7 LD RWCL
- 8 UP INC
- 9 LD BUFFER ADRS LO
- A LD BUFFER ADRS HI
- B SPARE
- C SPARE
- D SPARE
- E SPARE
- F SPARE

BYTE	BIT							
	7	6	5	4	3	2	1	0
DRV STAT	SEK COMPL	I _N D _X	DRV RDY	TRK 00	WR FLT	ACK *	SEL *	BUSY HOST *
ECC LO	E21	E20	E19	E18	E17	E16	E15	E14
ECC HI	SEL'D 3	SEL'D 2	SEL'D 1	SEL'D 0	PAR OK	ECC OK	E23	E22

ARITHMETIC DECODE

C	S ₃	S ₂	S ₁	S ₀	
1	0	0	0	0	INC (PORT A)
1	0	1	1	0	SUB
0	0	1	1	0	SBWC
1	1	0	0	1	ADD
0	1	0	0	1	ADWC
1	1	1	0	0	SHFT
0	1	1	0	0	ROT
1	1	1	1	1	DEC
0	1	1	1	1	MOVIA

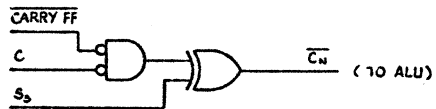
R_{WE} = IF SET ENA REG WRITE
 A_{WD} = IF SET DISABLE ACC WRITE
 C = PSEUDO CARRY
 S/C = SET/CLR
 F/T = FALSE / TRUE
 P/P = PUSH / POP
 X = DON'T CARE

FLAGS (HIGH TRUE SIGNALS)

- 0 WRITE GATE
- 1 DIRECTION IN
- 2 REDUCED WRITE CURRENT
- 3 STEP
- 4 BUFFER XCVR DISABLE
- 5 SERDES LOAD / SHIFT
- 6 SERDES HOLDING REG OUTPUT DISABLE
- 7 DISABLE OUTPUT HOLDING REG
- 8 READ GATE
- 9 DISABLE HOST RCVR
- A TBUSY
- B REQUEST DATA
- C COMMAND / DATA
- D HARD / FLOPPY PLL SELECT
- E REG BANK SEL
- F ENABLE HOST XMTR

CONDITION CODES

- 0 ALU 1
- 1 3
- 2 5
- 3 T
- 4 CARRY FF
- 5 ALU = 0
- 6 BYTE RDY
- 7 ADDRESS MARK

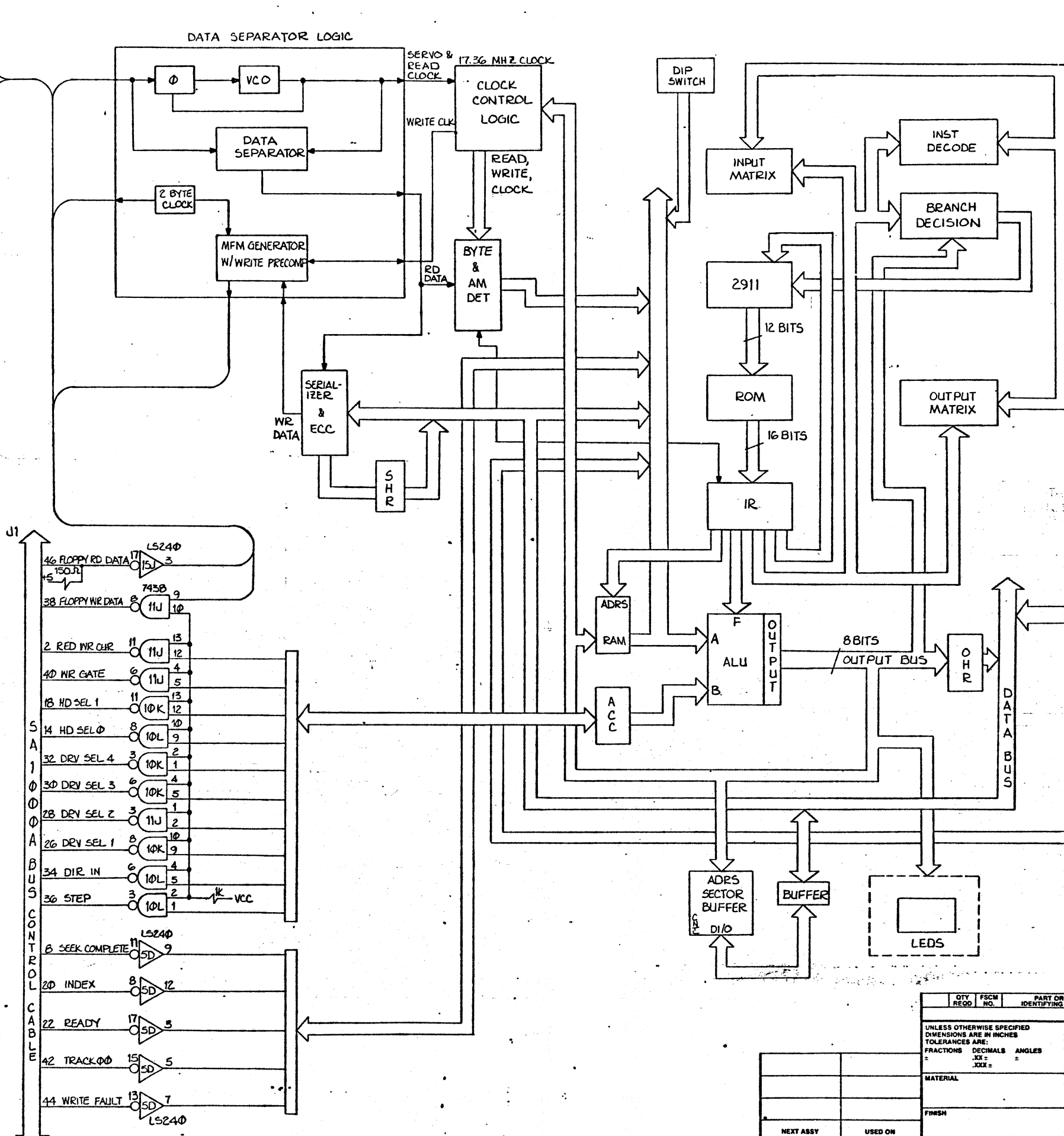
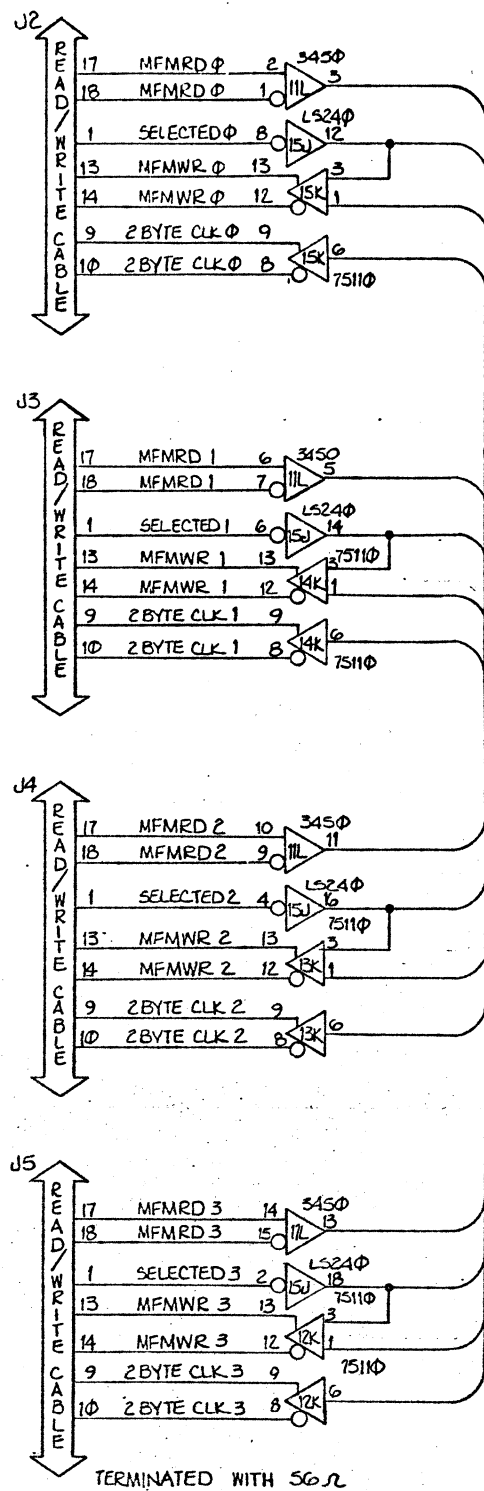


BYTE	BIT							
	7	6	5	4	3	2	1	0
DSR	DRV 4	DRV 3	DRV 2	DRV 1	SPARE	HD 2	HD 1	HD 0
CCL	SPARE	SPARE	INTR	TSEL	SPARE	W/R BUF	C _{MUX} B	C _{MUX} A
R/W CL	CLR SER	CLR ECC	WR DATA	EN WR SEL	EN RD BUF	ECC BUF	ECC CLK	S/L EN

* = LOW TRUE

AUG 05 1986

QTY REQD	PSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .005 ± .002 ± .005		CONTRACT NO. 1403		
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN C. THEIN	9-22-80	DTC 1403 CONTROLLER INSTRUCTION SET DECODE
NEXT ASSY		CHECKED	ISSUED	
USED ON		SIZE PSCM NO. DWG. NO. REV.		D 01000 -00010 SHEET 1 OF 1
APPLICATION		SCALE		



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
		L5240		J6
		9 6K 11 DB0		2
		12 6K 8 DB1		4
		7 6K 13 DB2		6
		14 6K 6 3		8
		5 6K 15 4		10
		16 6K 4 5		12
		3 6K 17 6		14
		18 6K 2 7		16
		9 4U 11 PAR		18
		1K +5 7438		50
		2 3K 3 I/O		2
		10 7K 8 DB0		4
		10 8K 8 DB1		6
		5 7K 6 DB2		8
		5 8K 6 DB3		10
		13 7K 11 DB4		12
		13 8K 11 DB5		14
		1 7K 3 DB6		16
		2 8K 3 DB7		18
		10 4K 8 PAR		48
		5 7438		46
		4 3K 6 REQ		42
		13 3K 11 C/D		36
		1 4K 3 MSG		44
		13 4K 11 BUSY		38
		10 3K 8 SELECT		36
		12 4U 8 SELECT		40
		18 4U 2 ACK		
		16 4U 4 BUSY		
		14 4U 6 RESET		

TERMINATED WITH 220/330Ω

TERMINATED WITH 220/330Ω

QTY	FSCM	PART OR	NOMENCLATURE	MATERIAL
REQD	NO.	IDENTIFYING NO.	OR DESCRIPTION	SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XXX = .XXX =				
MATERIAL		CONTRACT NO.		
FINISH		APPROVALS DATE		
NEXT ASSY		USED ON		
APPLICATION		DO NOT SCALE DRAWING		
SCALE		SHEET		

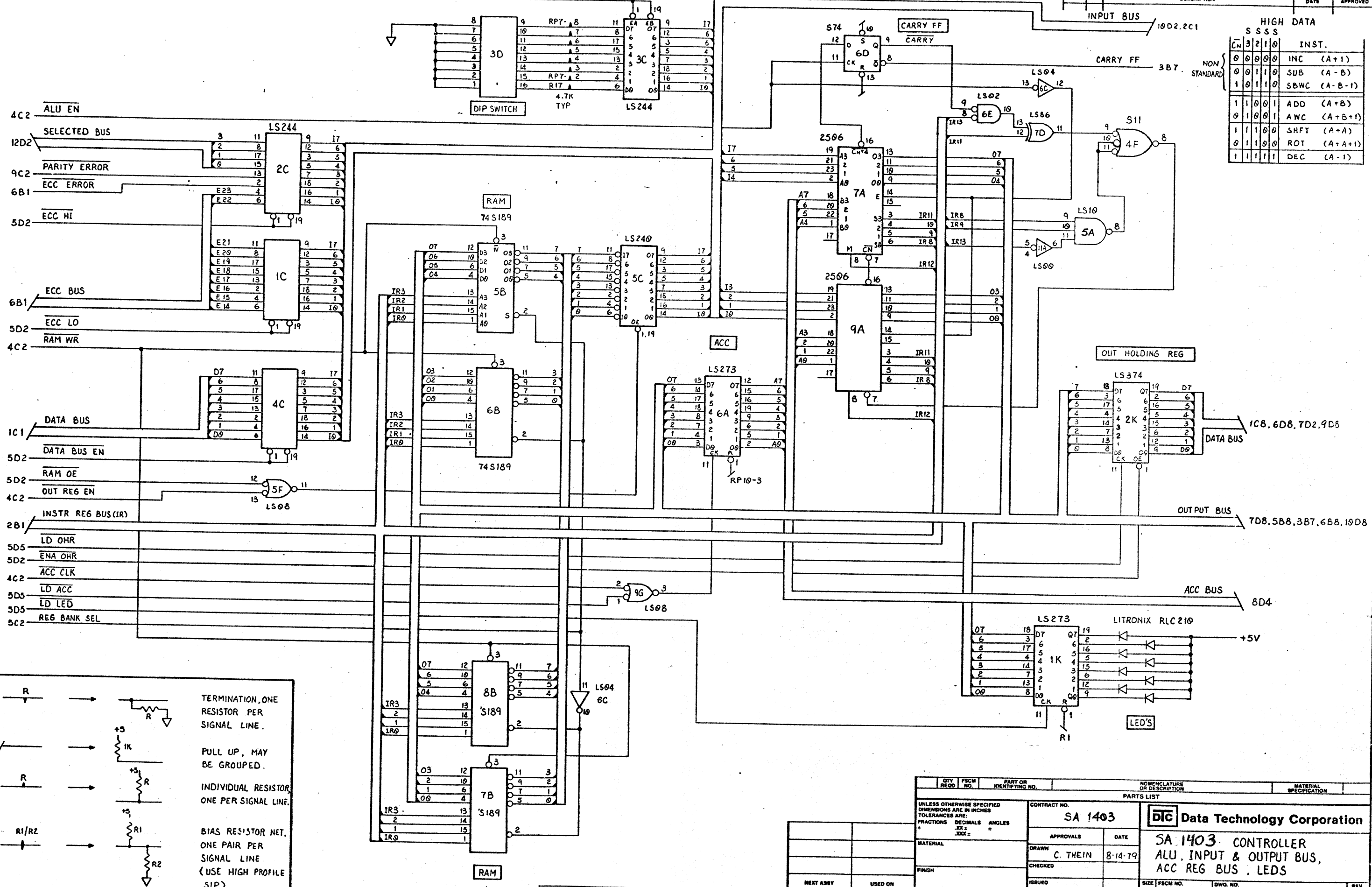
ECO#001.15 ASSY REV. B1 SCH. REV. B1 9-13-83 CB

D

C

B

A



HIGH DATA				
CN	S	S	S	INST.
0	0	0	0	INC (A+1)
0	0	1	0	SUB (A-B)
1	0	1	0	SBWC (A-B-1)
1	1	0	0	ADD (A+B)
0	1	0	1	AWC (A+B+1)
1	1	0	0	SHFT (A+A)
0	1	1	0	ROT (A+A+1)
1	1	1	1	DEC (A-1)

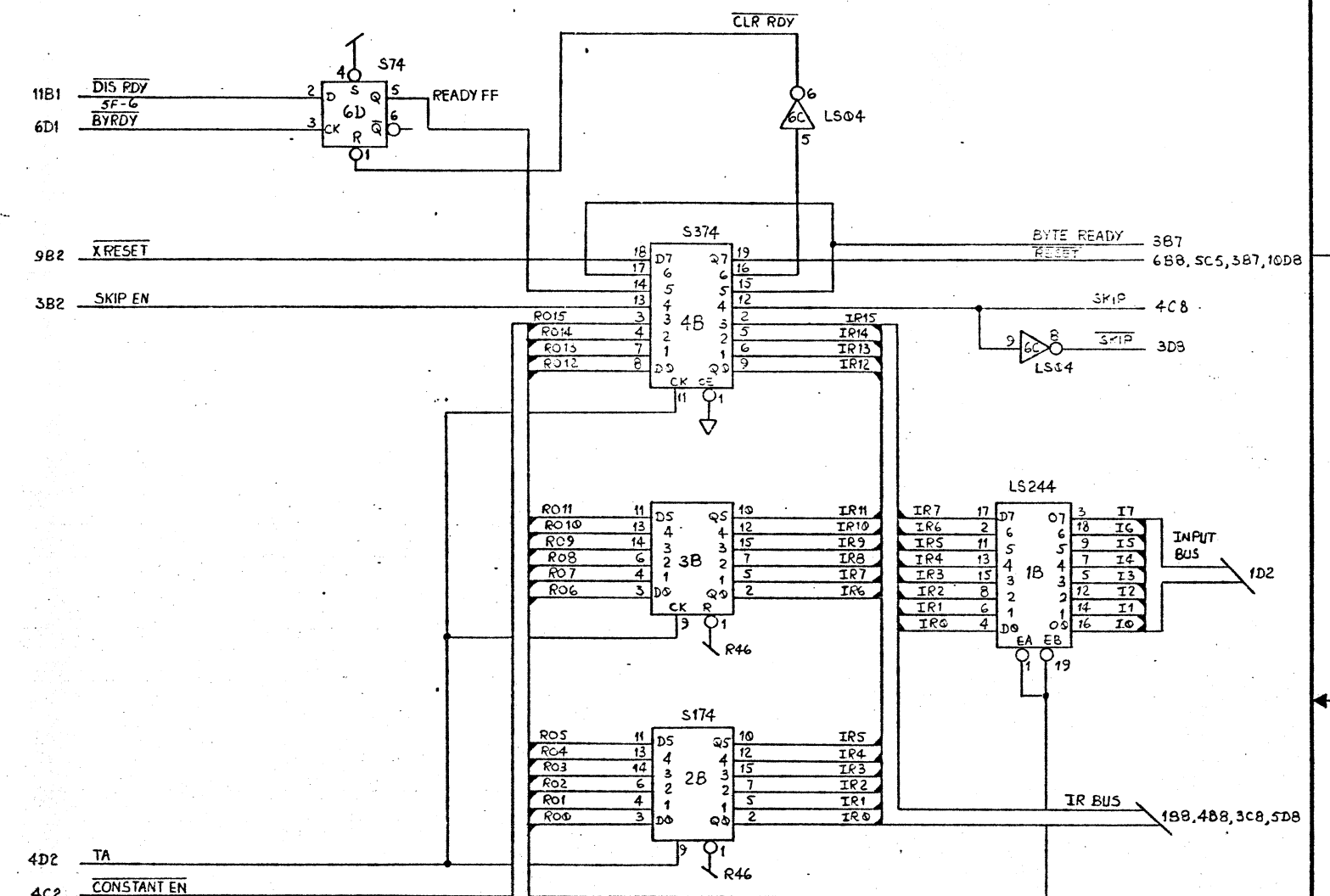
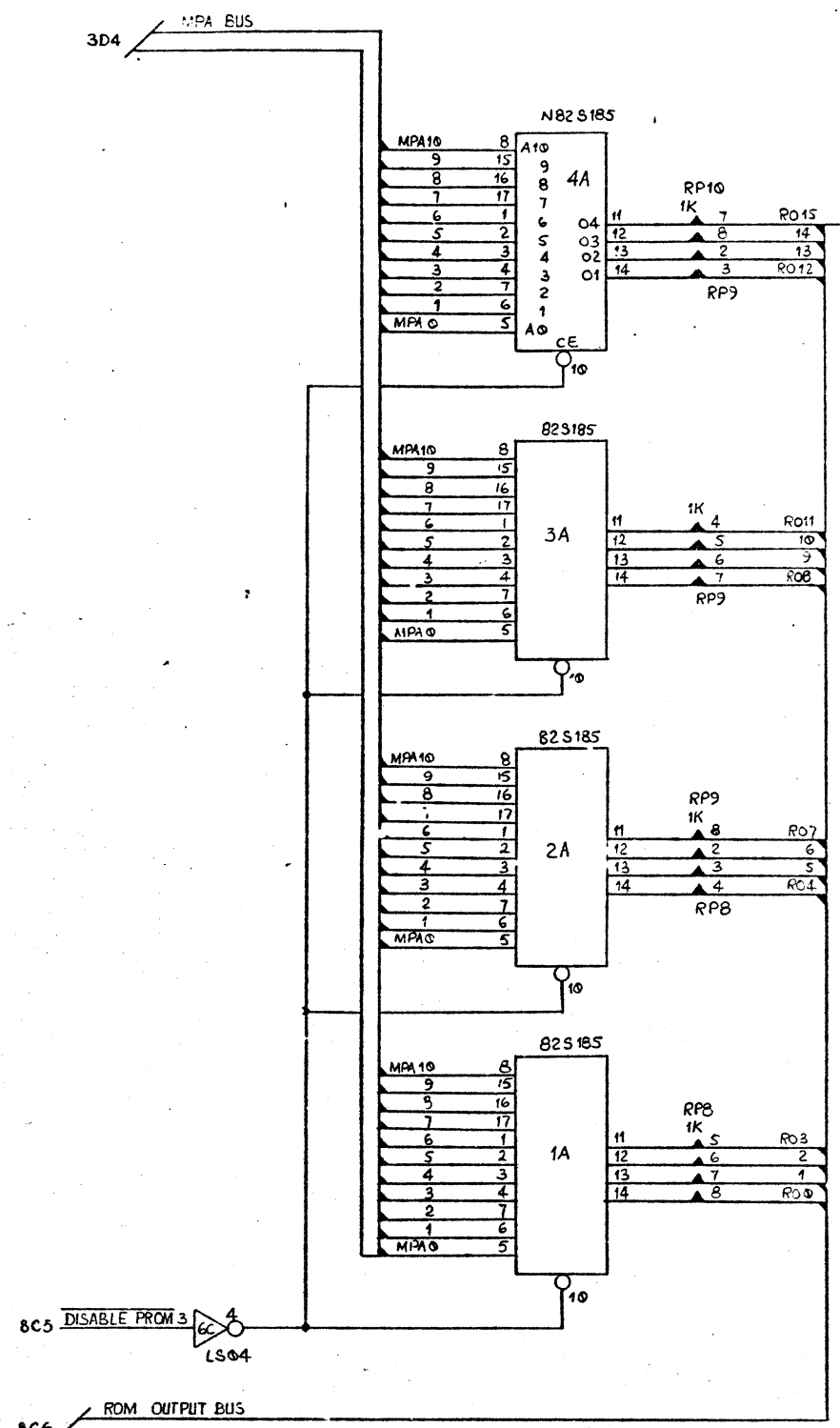
NOTES:

- TERMINATION, ONE RESISTOR PER SIGNAL LINE.
- PULL UP, MAY BE GROUPED.
- INDIVIDUAL RESISTOR, ONE PER SIGNAL LINE.
- BIAS RESISTOR NET, ONE PAIR PER SIGNAL LINE (USE HIGH PROFILE SIP)

ECO#001.15 ASSY REV. B1 9-13-83 CB

QTY	FSCM	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX ± .XXX ± °				
CONTRACT NO. SA 1403		DTC Data Technology Corporation		
APPROVALS		DATE 8-14-79		
DRAWN C. THEIN		CHECKED		
ISSUED		SCALE		
NEXT ASSY		USED ON		APPLICATION
DO NOT SCALE DRAWING		DO NOT SCALE DRAWING		DO NOT SCALE DRAWING
SIZE	D	FSCM NO.	DWG. NO. 01000-00006	REV. B1
SHEET 1 OF 13				

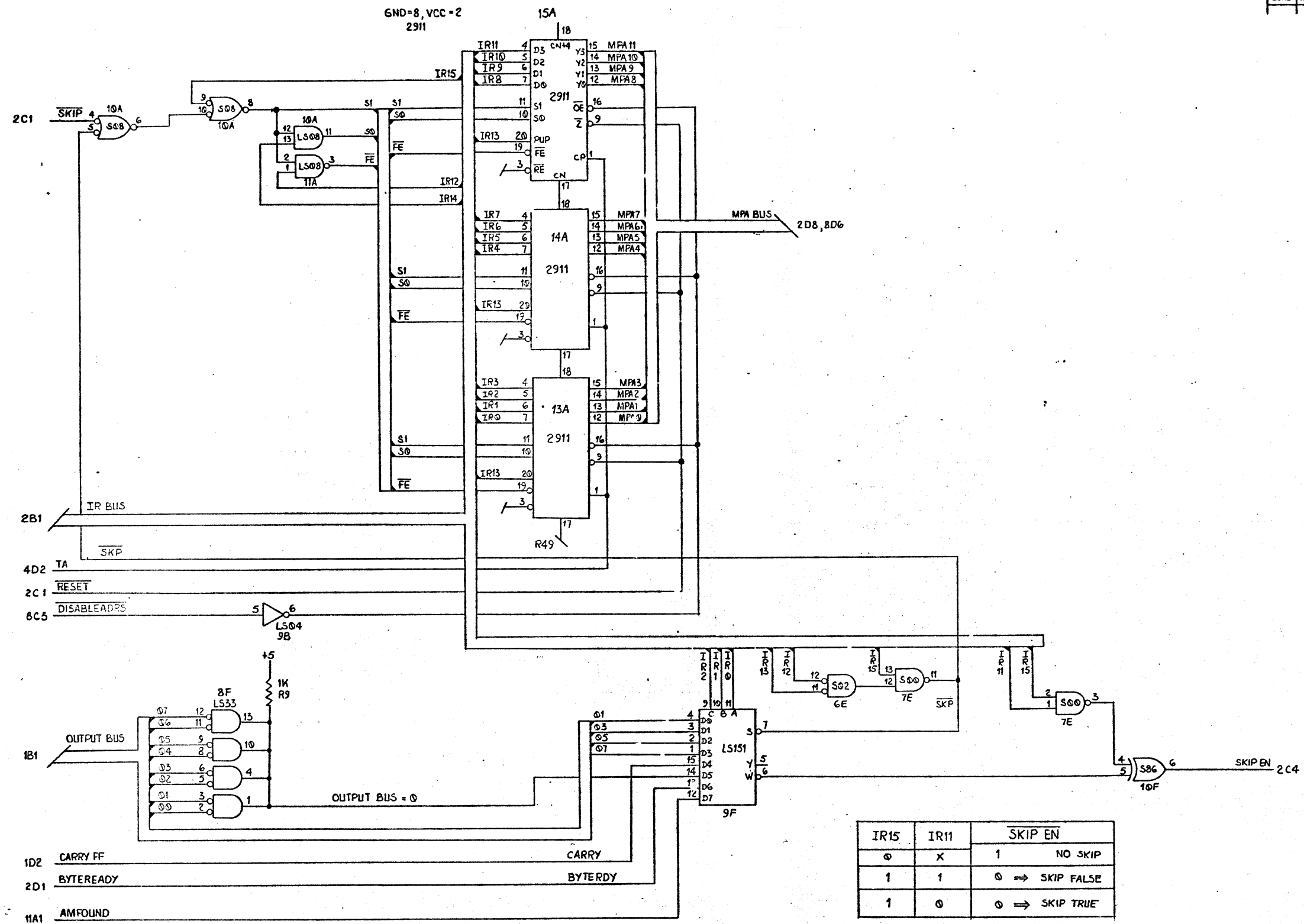
REVISED		REVISIONS	DATE	APPROVED
ZONE	REV	DESCRIPTION		



D
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B
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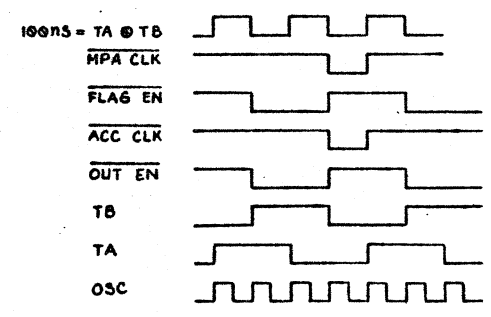
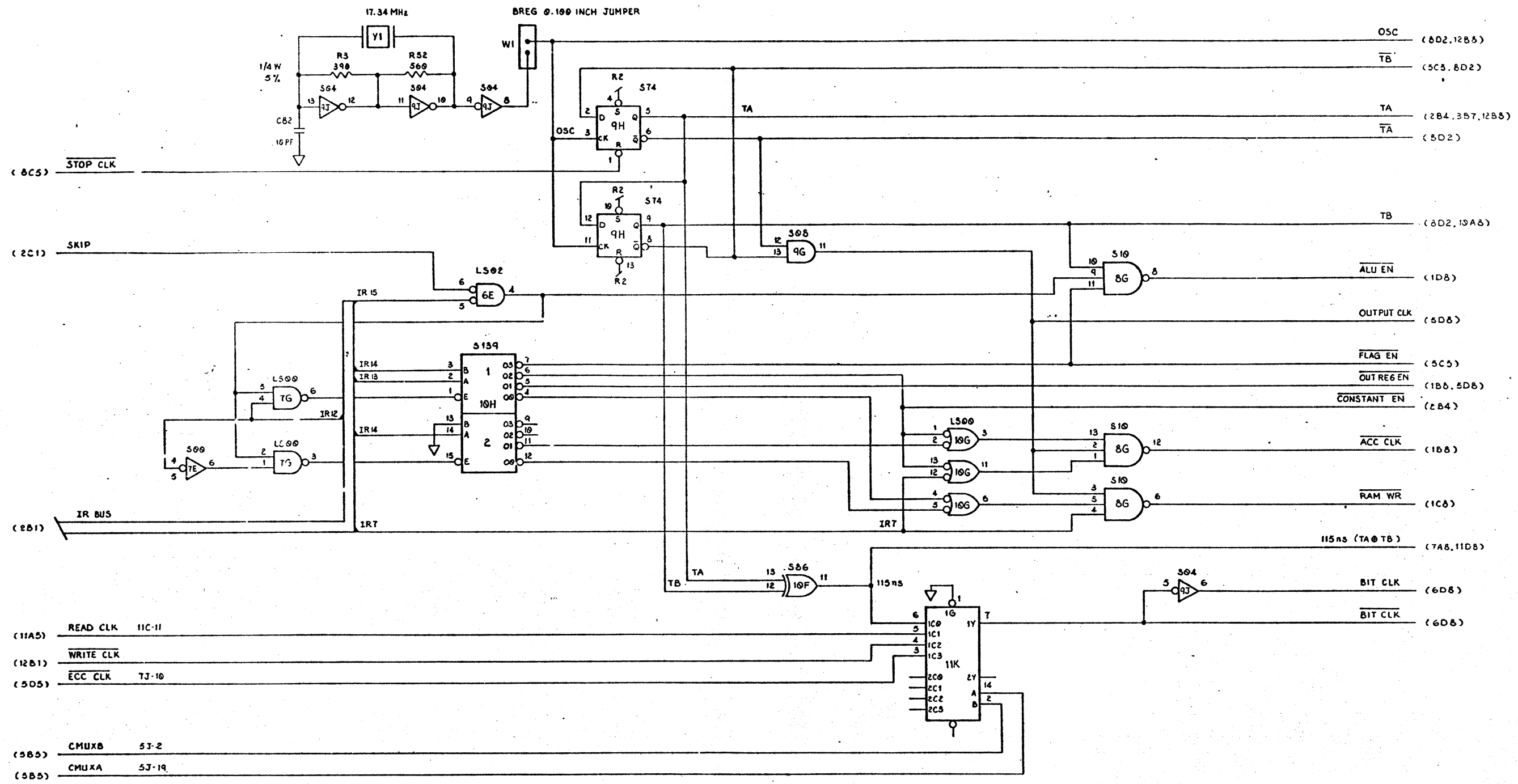
D
C
B
A

QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX ± .XXX ± °		CONTRACT NO. SA 1403		
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN L TSENG 8-20-80		SA 1403 CONTROLLER ROMS & INST. REG. (IR)
NEXT ASSY		CHECKED	ISSUED	
USED ON		SCALE		SIZE FSCM NO. DWG. NO. 01000-00006 REV. B1 SHEET 2 OF 13
APPLICATION		DO NOT SCALE DRAWING		



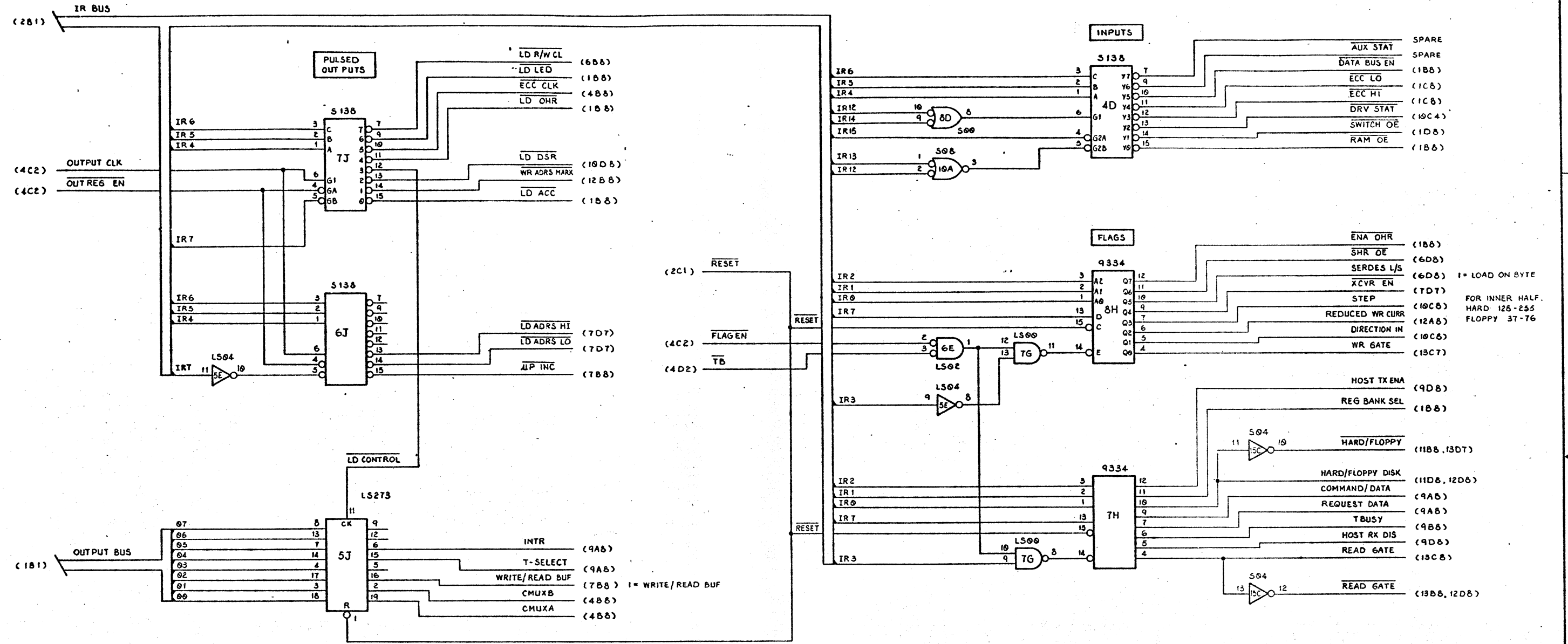
QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		CONTRACT NO. SA 1403		
FRACTIONS	DECIMALS	ANGLES	DTIC Data Technology Corporation SA 1403 CONTROLLER ADDRESS REG & SKIP DECODE	
=	=	=		
MATERIAL		APPROVALS	DATE	SA 1403 CONTROLLER ADDRESS REG & SKIP DECODE
FINISH		CHECKED	ISSUED	
NEXT ASSY	USED ON	ISSUED		SIZE FSCM NO. DWG. NO. 01000-00006 REV. B1
APPLICATION		DO NOT SCALE DRAWING		SCALE SHEET 3 OF 15

ZONE		REV.	DESCRIPTION	DATE	APPROVED



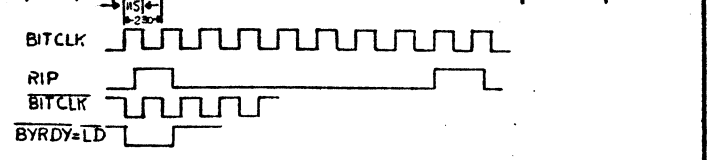
QTY	PSCM	PART OR	NOMENCLATURE	MATERIAL
REQD	NO.	IDENTIFYING NO.	OR DESCRIPTION	SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XX ± .XXX ± °		CONTRACT NO. SA 1403		DTIC Data Technology Corporation
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN	9-11-80	SA 1403 CONTROLLER TO, TI, CLOCKS & DECODE (INST)
NEXT ASSY		CHECKED		
USED ON		ISSUED		SIZE PSCM NO. D DWG. NO. 01000-00000 REV. B1
APPLICATION		DO NOT SCALE DRAWING		SHEET 4 OF 15

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

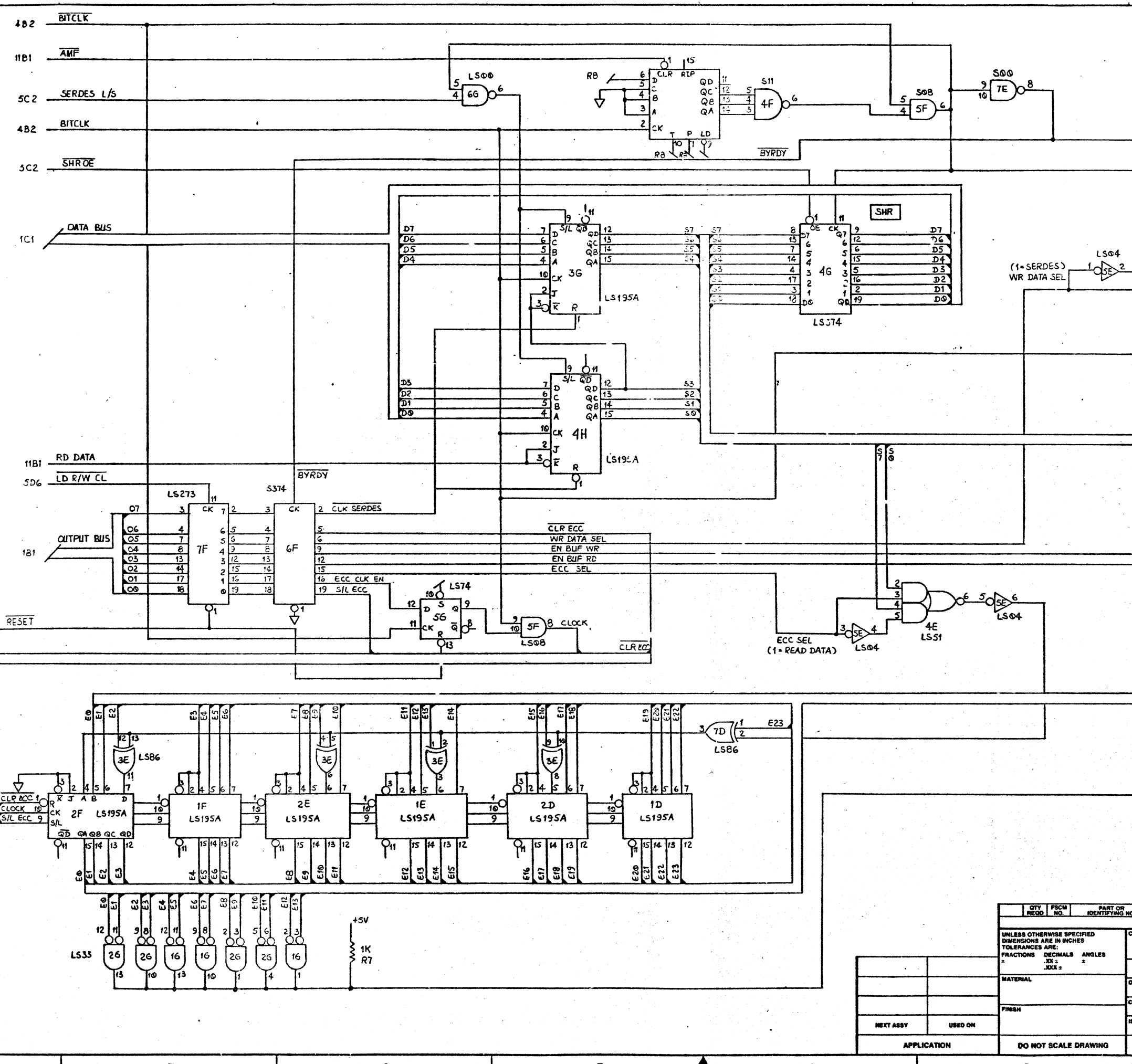


QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX ± .XXX ±		CONTRACT NO. SA 1403		
DRAWN C. THEIN		DATE 9/11/80		
MATERIAL		APPROVALS		SA 1403 CONTROLLER
FINISH		CHECKED		
NEXT ASSY		ISSUED		SIZE FSCM NO. 01000-00006 DWG. NO. 01000-00006 REV B1
USED ON		SCALE		
APPLICATION		DO NOT SCALE DRAWING		SHEET 5 OF 13

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED



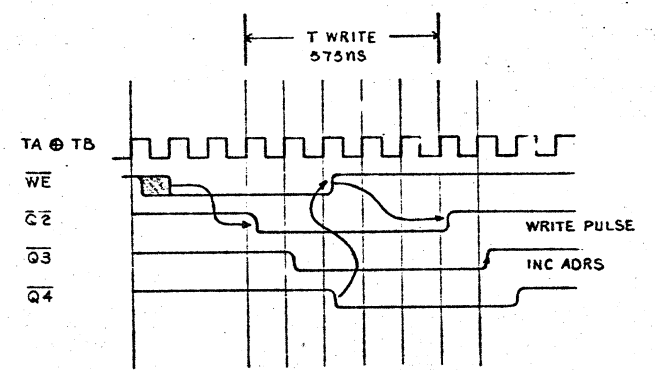
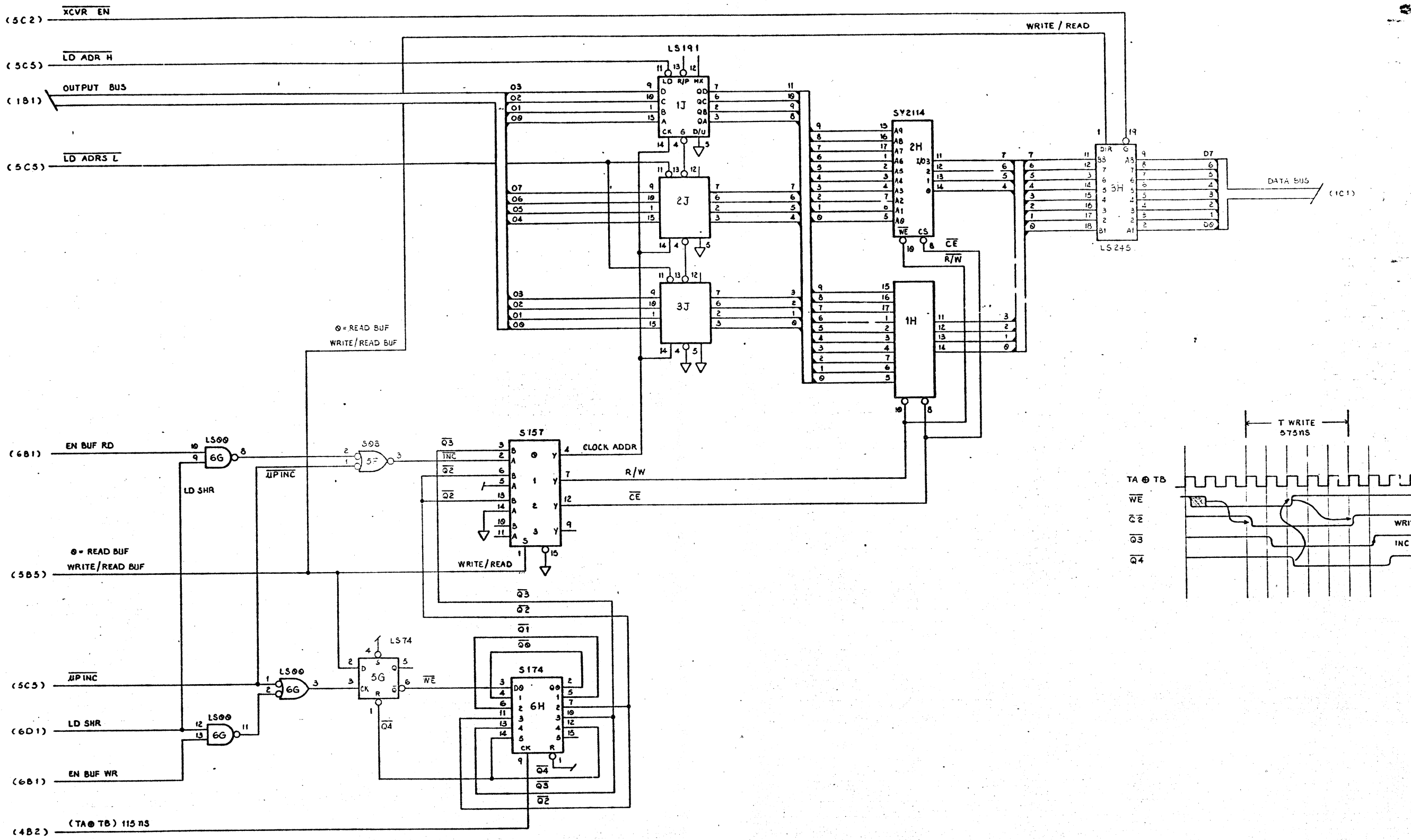
BYRDY 2D4
LD SHR 7B5
T_d (LS195A) 26ns
T_{su} (LS374) 25ns



8 7 6 5 4 3 2 1

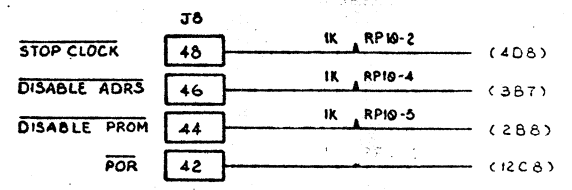
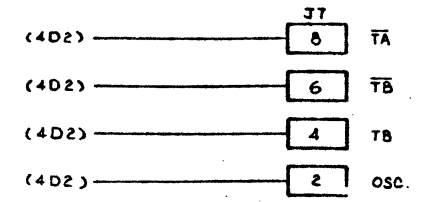
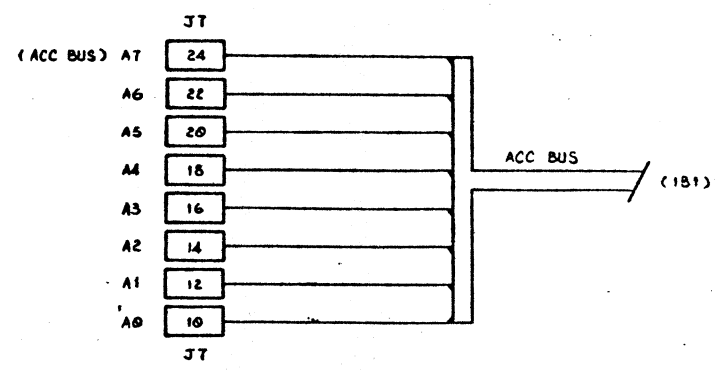
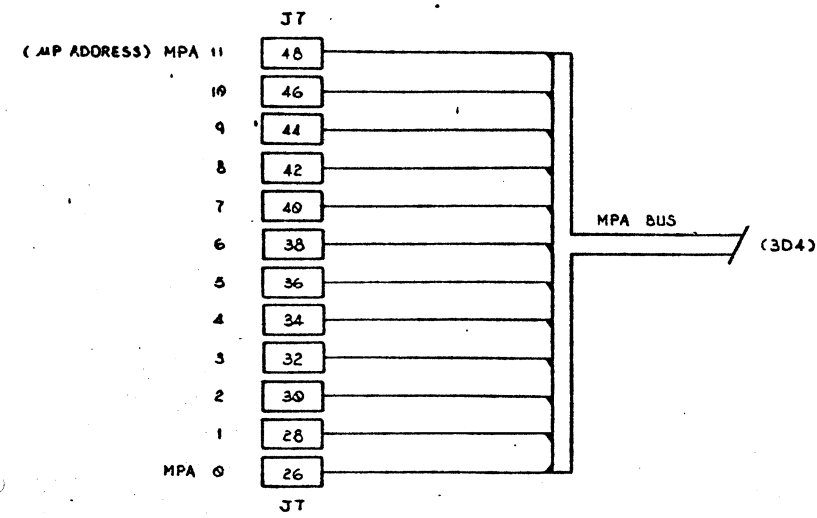
QTY	FSCM	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
			PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XXX ±				
CONTRACT NO. SA 1403		Data Technology Corporation		
APPROVALS		DATE 19-8-80		
DRAWN L TSENG		SA 1403 CONTROLLER SERIALIZER/DESERIALIZER		
CHECKED		ISSUED		
NEXT ASSY		USED ON		SCALE
APPLICATION		DO NOT SCALE DRAWING		SIZE FSCM NO. DWG. NO. 01000 - 00006 REV. B1
				SHEET 6 OF 13

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED



QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX ± .XXX ±		CONTRACT NO. SA 1403		
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN C. THEIN 9-12-80		SA 1403 CONTROLLER SECTOR BUFFER
NEXT ASSY		ISSUED		SIZE FSCM NO. D
USED ON		DO NOT SCALE DRAWING		DWG. NO. 01000-00006
APPLICATION		SCALE		REV. B1
				SHEET 7 OF 13

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

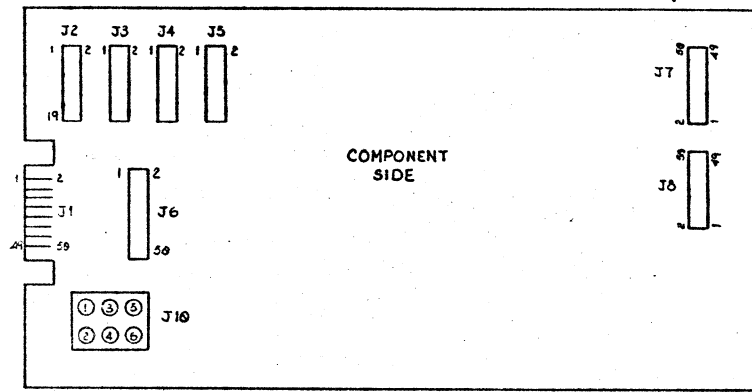
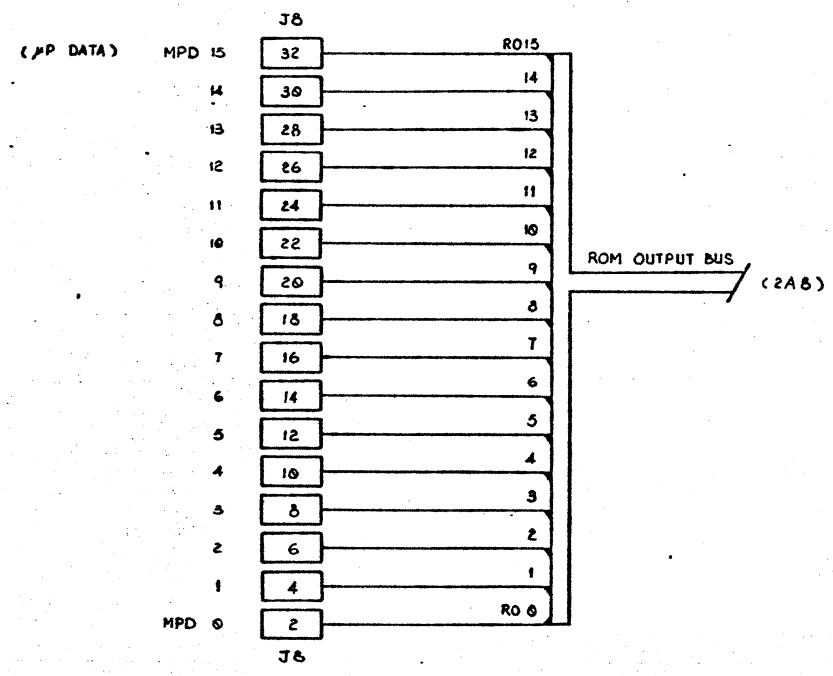


J8- 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49

J7- 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49

(J2,J3,J4,J5) - 8,11,12,15,16,19,20

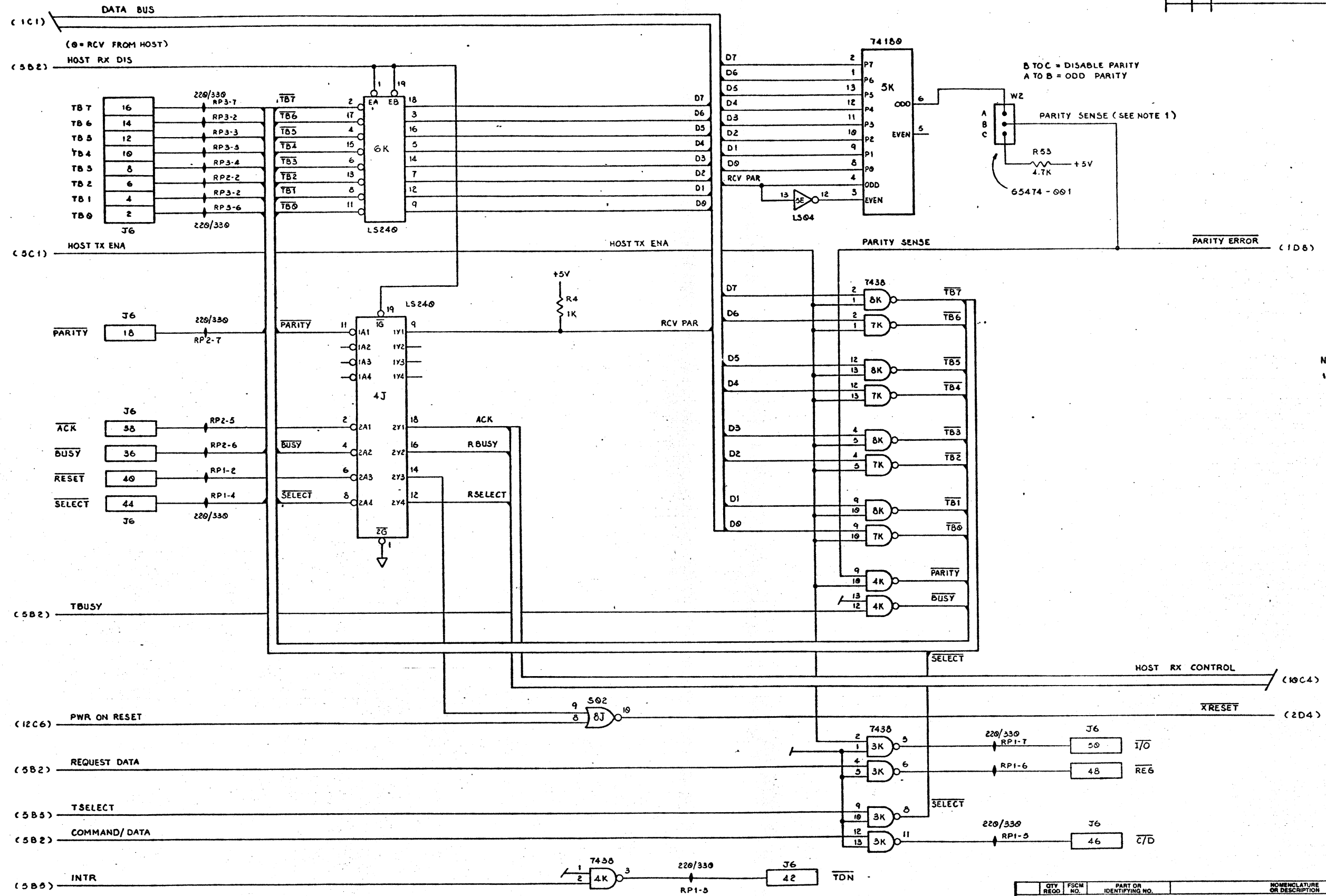
(J6,J1) - 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49



QTY	FSCM	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		CONTRACT NO. SA 1403		
FRACTIONS	DECIMALS	ANGLES	DTC Data Technology Corporation	
±	.XX ±	±	SA 1403 CONTROLLER BREAKPOINT PANEL I/O	
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN	C. THEIN	9-15-80
NEXT ASSY		CHECKED		
USED ON		ISSUED		
APPLICATION		DO NOT SCALE DRAWING		
SIZE	FSCM NO.	DWG. NO.	REV.	
D		01000-00006	B1	
SCALE		SHEET 8 OF 13		

D
C
B
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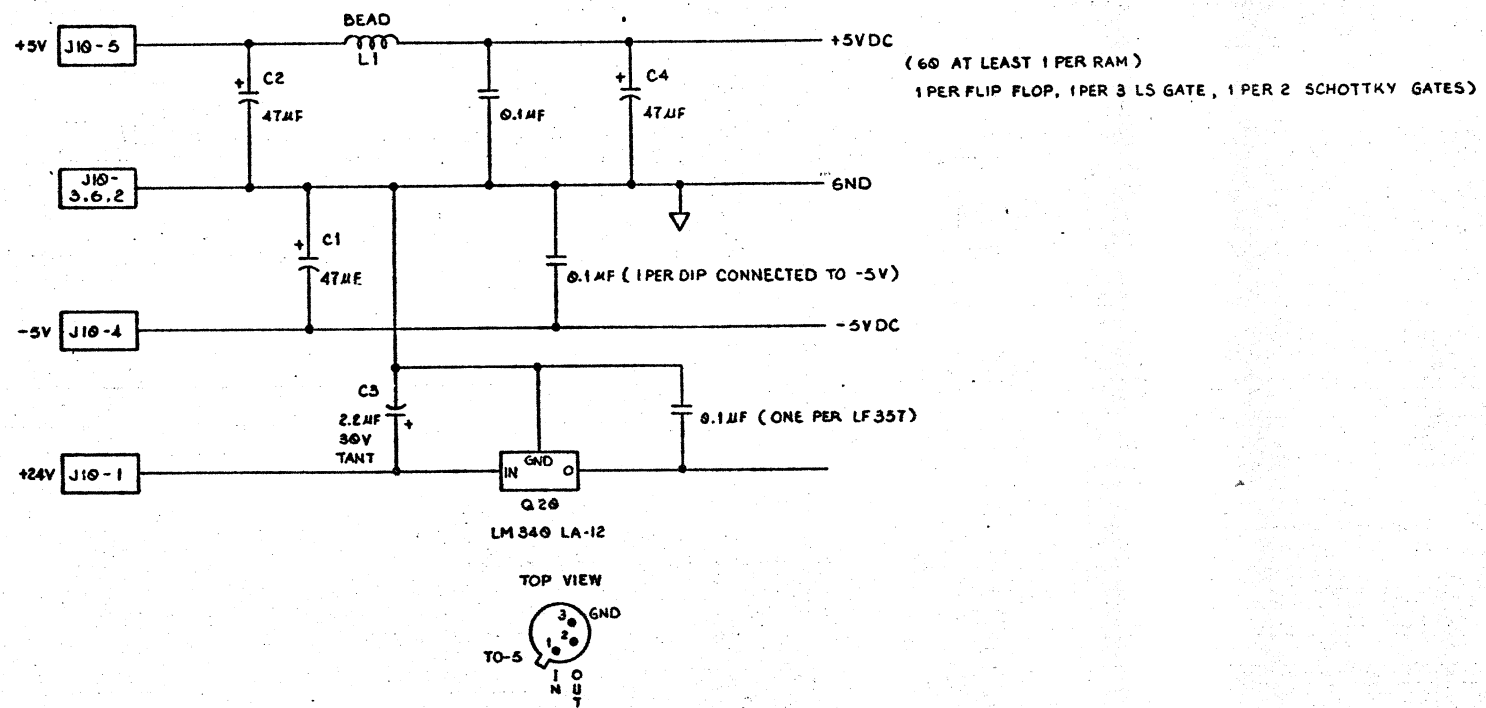
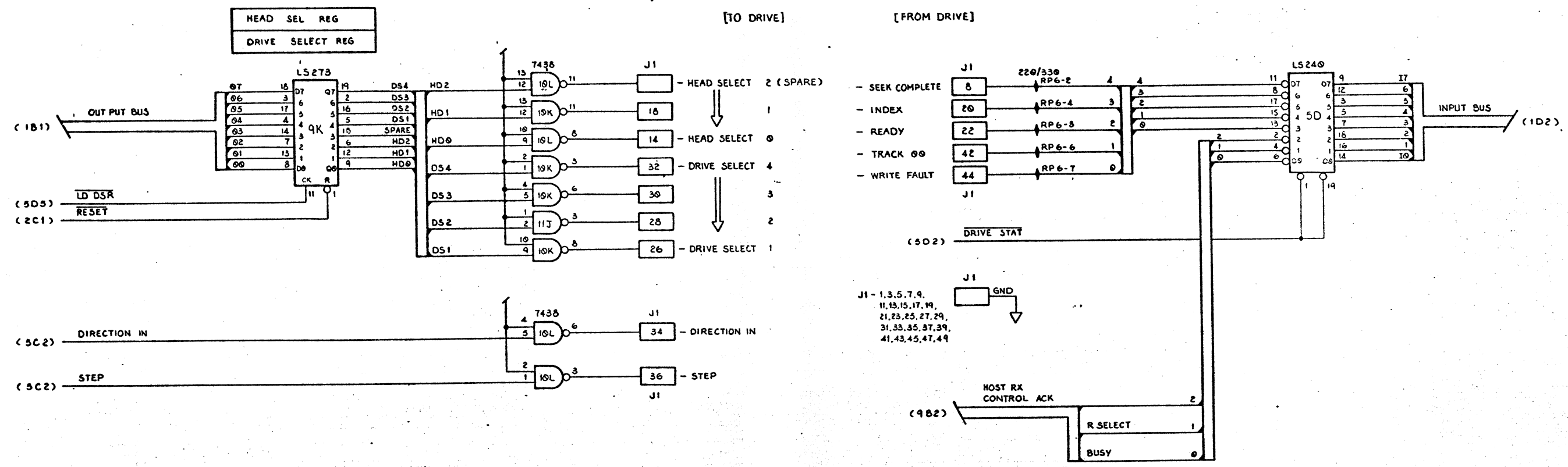
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED



NOTES:
 1. UPON XMISSION, 'PARITY SENSE' IS THE PARITY BIT SENT TO THE HOST. 'RCV PAR' IS BIASED TO 1. UPON RECEPTION 'PARITY SENSE' IS THE 'PARITY ERROR' INDICATOR; 0 = ERROR.

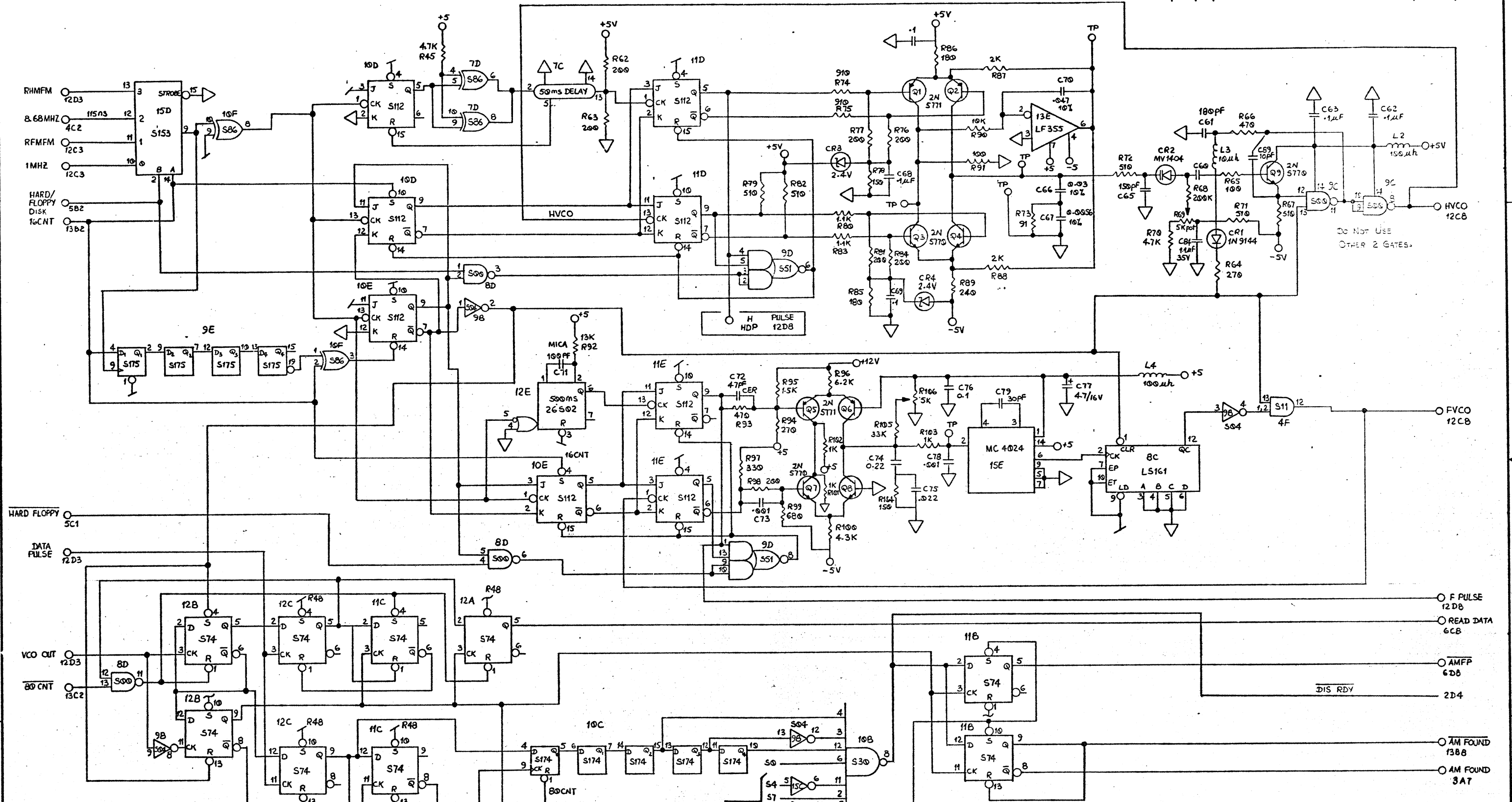
QTY	FSCM RECD.	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:			CONTRACT NO. SA 1403		
FRACTIONS DECIMALS ANGLES			APPROVALS DATE SA 1403 CONTROLLER		
.XX = .XX			DRAWN C. THEIN 9-15-80		
.XXX = .XXX			CHECKED		
MATERIAL			ISSUED		
FINISH			SIZE FSCM NO. DWG. NO. 01000-00006		
NEXT ASSY USED ON			SCALE		
APPLICATION			DO NOT SCALE DRAWING		
			SHEET 9 OF 13		

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED



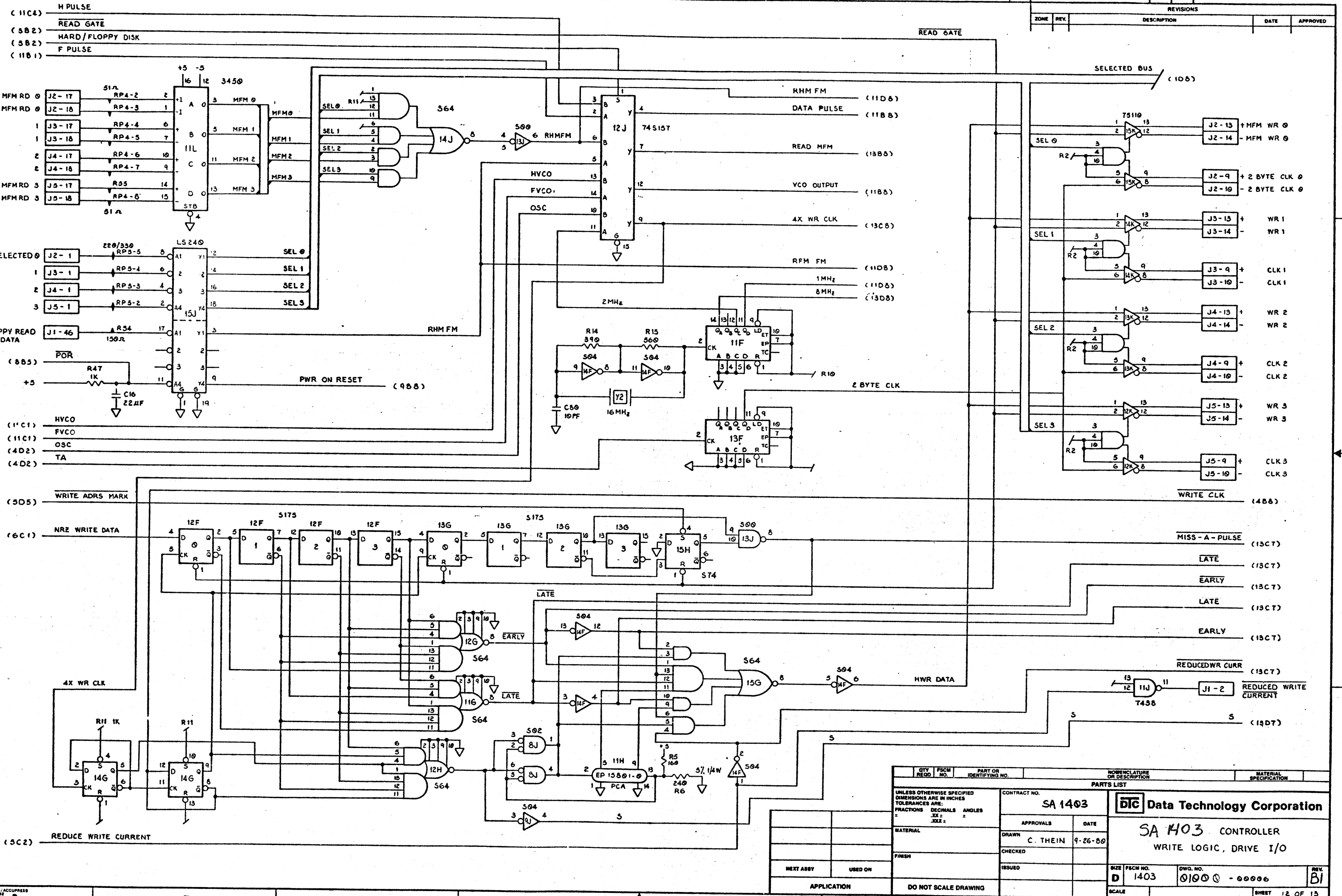
QTY	PCB	PART OR	NOMENCLATURE	MATERIAL
REQD	NO.	IDENTIFYING NO.	OR DESCRIPTION	SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± ± °		CONTRACT NO. SA 1403		DTIC Data Technology Corporation
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN C. THEIN 9-17-80		SA 1403 CONTROLLER DRIVE INTERFACE, CONTROL CABLE
NEXT ASSY		CHECKED	ISSUED	
USED ON		ISSUED		SIZE PCB NO. DWG. NO. REV.
APPLICATION		DO NOT SCALE DRAWING		D 01000-00000 B1
		SCALE		SHEET 10 OF 13

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED



PARTS LIST		NOMENCLATURE OR DESCRIPTION		MATERIAL SPECIFICATION	
QTY	FRGM NO.	PART OR IDENTIFYING NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES					
CONTRACT NO. SA 14-03					
APPROVALS		DATE		8-25-80	
DRAWN L TSENG		CHECKED		ISSUED	
NEXT ASSY		USED ON		APPLICATION	
DO NOT SCALE DRAWING		SCALE		D	
SA 1403 CONTROLLER VFO & DATA SEPARATOR			NEW SHEET 11		
DWG. NO. 01000-00006			REV. B1		
SHEET 11 OF 13					

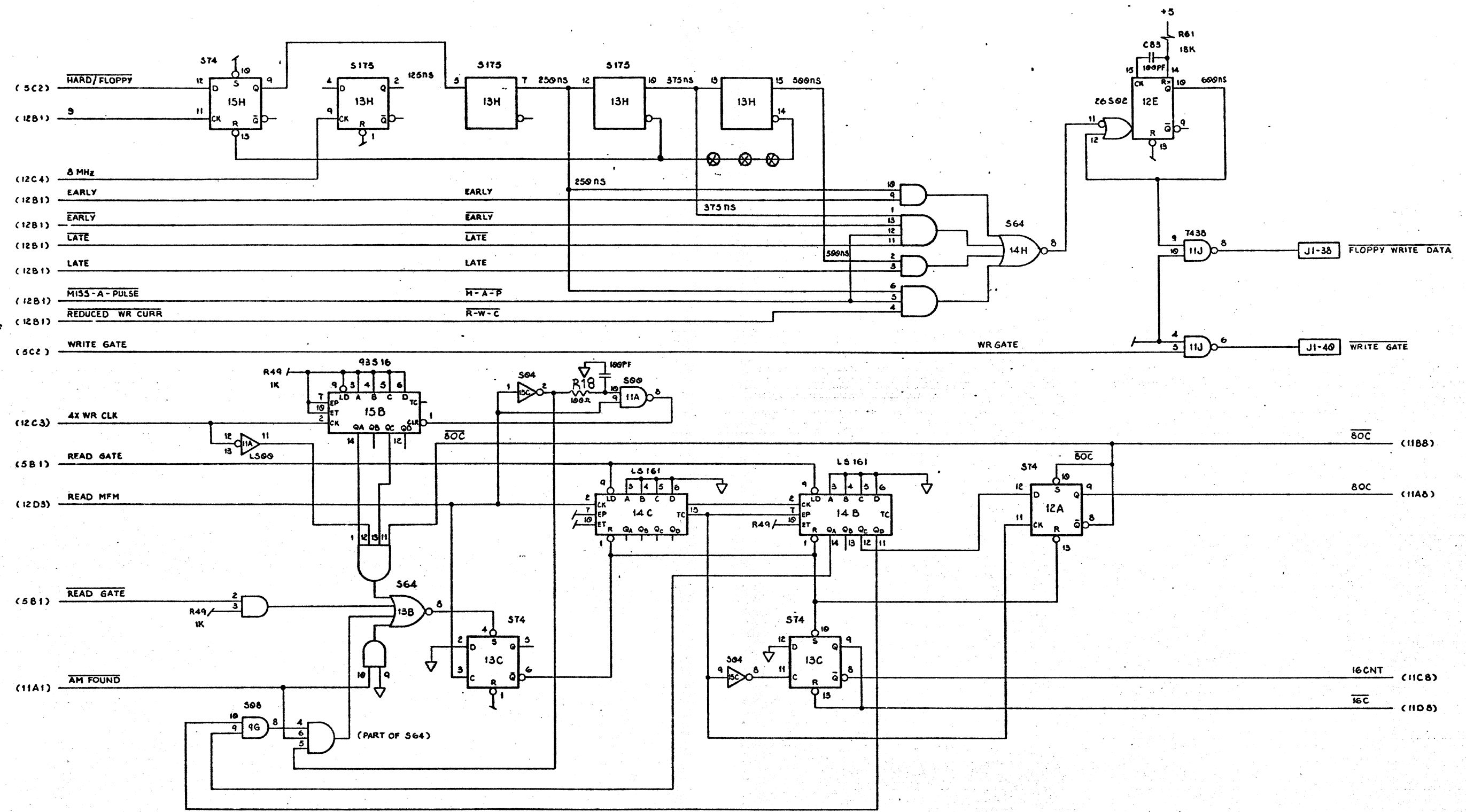
REVISIONS			
ZONE	REV.	DESCRIPTION	DATE



GTY RECD		FSCM NO.		PART OR IDENTIFYING NO.		NOMENCLATURE OR DESCRIPTION		MATERIAL SPECIFICATION	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± ± ±									
CONTRACT NO. SA 1403				PARTS LIST					
APPROVALS				DATE					
DRAWN C. THEIN				9-26-80					
CHECKED				ISSUED					
NEXT ASSY				USED ON		APPLICATION		DO NOT SCALE DRAWING	
SCALE		SIZE FSCM NO. D 1403		DWG. NO. 01000-00000		REV. B1		SHEET 12 OF 15	

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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED



QTY	FRSM	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .XX ± .XX ±				
CONTRACT NO. SA 1403			DTC Data Technology Corporation	
APPROVALS		DATE		
DRAWN C. THEIN		9-30-80		
CHECKED		ISSUED		
MATERIAL		FINISH		
NEXT ASSY		USED ON		APPLICATION
DO NOT SCALE DRAWING		SCALE		
SA 1403 CONTROLLER		FLOPPY WRITE PRECOMP & RDMFM ZEROES DETECT		
SIZE	FRSM NO.	DWG. NO.	REV.	REV.
D	01000	00000	B1	
SHEET 13 OF 13				