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S01&S02 GO TO P3,4,5,6,7,8,9,10&12

TCLKI

S01 S02 S01 S02

THB P3

S01 S02 1D5 H01 H02

TSYNC S01 S02

N1C6 A02 P13 14 N1C6

H01 H02 1C5

TCB TSYNC HS S02 S01 S01 S02 SHB ERR END CNT RHS RCB SHS LRHB RHB

NSD1 VSYN P11 HMOVE P11 RHBE VBLK P11 VB VS BLEC P2 NVB P12 WSYN P11 RDYF

B01 B02 NHB BLEC SB01 SB02 1B4-2 1B4-1 1B5 S01 1A5-1 1A5-2 S02 H02 H01 1A4

1B3-1 1B3-2 1B3-3

BL_PRIME P4,12

P6,8,9 NHB P11 BLRE P11 SEC P2 P4,12 BLANK P13,14 A01 S01

NOTE 1 : SEE CIRCUIT ENGINEER
ALL TRANSFER GATES ARE 3.5/3.5 UNLESS OTHERWISE NOTED
** : INPUT MUST BE CLOSEST TO GNDN ON S01

BLCT P4 CNT P3 RCB P3 RHB P3 S02 NBLSIZE11 P4 NBLSIZ22 P4 NBGR P12

ATARI

NOTES:	ATARI A.S.G.
STEVE CANN	
SC 11-01-83	TIA_MARIA_STEPHANIE
RDH 4/6/84	HOR CNTR AND BALL CNTR
	SHEET 1 OF 15 REV

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ATARI A.S.G.	NOTES: S. CANN
TIA_MARIA_STEPHANIE HMOVE LOGIC	SC 11-2-83
	RDH 4/6/84
SHEET 2 OF 15	REV

ATARI

C4 OUTPUTS INVERTED IN LAST CELL

SEC P1 PIEC P8 P0EC P5 M1EC P9 M0EC P6 BLEC P1

H011 H022

C4 NC4 C3 NC3 C2 NC2 C1 NC1

H022 H011

H011 H022

P3 H011

P3 H022

P1HM P0HM M1HM M0HM BLHM HMCLR NSD7 NSD6 NSD5 NSD4

P11 P11 P11 P11 P11 P11 P3 P3 P3 P3

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NOTES: S. CANN 8-4-84 RDH 4/6/84	ATARI A.S.G. TIA_MARIA STEPHANIE PLAYFIELD GENERATOR
	SHEET 3 OF 15 REV

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ATARI A.S.G.	SHEET 4 OF 15 REV
TIA_MARIA_STEPHANIE COLOR_LUMINANCE	
RDH 4/6/84	
11-2-83	
STEVE CANN	
NOTES:	

ATARI

TLIF TL2F TL3F TC0 TC1 TC2 TC3

S02 S01

P1 P1

NSD1 NSD2 NSD3 NSD4 NSD5 NSD6 NSD7

P3

P0CI P1CI PFCI BKCI P11

S01

(P1) NBLSIZE0 NSD0

(P1) NBLSIZE1 NSD1

NFPF NSD2

NSCORE NSD1

P3 NREF P3 NSD0

P1 PFCT

P1 BL_PRIM

P9 M1_PRIME

P10 P1_PRIME

P6 M0_PRIME

P7 P0_PRIME

P3 PF_PRIME

P1 BLCT

P1 BLANK

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** NOTE: SEE CIRCUIT ENGINEER

NHB P1
S01 P1
S02 P1
P0EC P2
P0RE P11
S01
S02
** ** ** **

SP01 P7
SP02 P7

4D7
4D6
P01
P02

XSIG181 P7
XSIG182 P7

NSTART P7
FSTOB P7

4CB P6
4C7_1 P6
4C7_2 P6
4C6_1 P6

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NOTES:	ATARI A.S.G.
S. CANN	TIA_MARIA_STEPHANIE
11-2-83	PLAYER 0 POSITION COUNTER
RDH 4/6/84	
	SHEET 5 OF 15 | REV

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4CB P5
P3 NSD1
4C7_1 P5,7
P3 NSD2
4C7_2 P5
P5 4C6_1
P3 NSD4
P7 4B6_0
P3 NSD5
4C6_2
4C5
S02 P1
NSZ0 P11
NSD0 P3
4B6_1
4B6_2
4B6_3
4B6_4
4B6_5
4B6_6
M02
M01
4B3 P7
M0RE P11
01
M0EC P2
NHB P1
4A6_1
SM01
M02
M01
MISSILE TO PLAYER RESET
M0PRE P11
NSD1
MISSILE ENABLE
M0EN P11
MSL_PLR_RESET P7
S01 P1
4B7
P4,12
M0_PRIME

NOTES:	ATARI A.S.G.
STEVE CANN	
11-2-83	TIA_MARIA_STEPHANIE
RDH 4/6/84	MISSLE 0 POSITION COUNTER
	SHEET 6 OF 15 REV

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NOTES:	SHEET 7 OF 15	REV
STEVE CANN 11-3-83 RDH 4/6/84	TIA_MARIA_STEPHANIE PLAYER 0 GRAPHIC	
ATARI A.S.G.		

ATARI

P4,12 P0_PRIME

P1 S02 P11 P0VD P1 S01 NSD0

NSD7 NSD6 NSD5 NSD4 NSD3 NSD2 NSD1 NSD0 P11 P0GR P11 P1GR

4B2_5 4B2_4 4B2_3 4B2_2 4B2_1 4B2_0 4C2_1 4C2_0

4B3_3 4B3_2 4B3_1

P6 4B3 P6 MSL_PLR_RESET P5 FSTOB

4C4 STOP

4C3_8 4C3_7 4C3_6 4C3_5 4C3_4 4C3_3 4C3_2 4C3_1 4C3_0

S01 NSD3 P0RF P11

4D3 SP01 SP02 NENA P5 SP01 P5 SP02

P5 NSTART P6 4B6_0 P6 4C7_1 P5 XSIG182 P5 XSIG181

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** NOTE: SEE CIRCUIT ENGINEER

NHB P1
S01 P1
S02 P1
P1EC P2
P1RE P11
S01
S02
** ** **
4D7
4D6
P01
P02
P1SP01 P10
P1SP02 P10
P1SIG181 P10
P1SIG182 P10
P1INSTART P10
P1FSTOP P10
P14CB P9
P14C7_1 P9
P14C7_2 P9
P14C6_1 P9

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NOTES:	ATARI A.S.G.
S. CANN	
11-2-83	TIA_MARIA_STEPHANIE
RDH 4/6/84	P1 POSITON COUNTER
	SHEET 8 OF 15 REV

ATARI

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NOTES:	ATARI A.S.G.
STEVE CANN 11-2-83 RDH 4/6/84	TIA_MARIA_STEPHANIE M1 POSITION CNTR & GRAPHICS
SHEET 7 OF15 REV	

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M1_PRIME

P4,12

S02

P1

4C5

4C6_2

NSD5

P3

P14B6_0

P10

NSD4

P14B6_1

P8

P14C7_2

NSD2

P14C7_1

NSD1

P14CB

S01

P1

4B7

PIMLPLRS

P10

MISSILE ENABLE

NSD1

MISSILE TO PLAYER RESET

M1EN

P11

M1PRE

M01

4A6_1

SM01

M02

NHB

P1

M1EC

P2

M1RE

P14B3

4B6_6

4B6_5

4B6_4

4B6_3

4B6_2

4B6_1

NSZ1

NSD0

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P1SIG181 P8
P1SIG182 P8
P14C7_1 P9
P14B6_0 P9
P1NSTART P8
P1FSTOB P8
P1MLPLRS P9
P14B3 P9
P1SP02 P8
P1SP01 P8
NENA
4D3
4C3_0
4C3_1
4C3_2
4C3_3
4C3_4
4C3_5
4C3_6
4C3_7
4C3_8
STOP
4C4
4B3_1
4B3_2
4B3_3
4C2_0
4C2_1
4B2_0
4B2_1
4B2_2
4B2_3
4B2_4
4B2_5
P1RF P11
NSD3
S01
P1GR P11
P0GR P11
NSD0 P3
NSD1 P3
NSD2 P3
NSD3 P3
NSD4 P3
NSD5 P3
NSD6 P3
NSD7 P3
P1_PRIME
P10,12
NSD0
P1 S01
P1VD P11
S02 P1
ATARI

NOTES:	ATARI A.S.G.
STEVE CANN	
11-3-83	TIA_MARIA_STEPHANIE
RDH 4/6/84	PLAYER 1 GRAPHICS
	SHEET 10 OF 15 REV

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NOTES:	ATARI A.S.G.
STEVE CANN 11-3-83 RDH 4/6/84	TIA_MARIA_STEPHANIE ADDR DECODE /COLLISION REG
	SHEET / OF 15 REV

ATARI

P1GR DECODER REPEATED TWO TIMES ON THE LAYOUT

P1GR
IS ALSO P1GRR

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CC1 CC2 CC3 CC4 CC5 CC6 CC7 CC8 CC9 CCA CCB CCC CCD CCE CCF

P1GRR NSD1 BLEN NSD0 BLVD S01 NBGR

P1GR IS ALSO P1GRR

BLANK S02 S01

NO NAME NOT USED ANYMORE

CXCLR P11

NVB02

*CLOSEST TO GND

NLATCH P11

DUMP

NSD6 NSD7 VBLK

S01 PF_PRIME BL_PRIME M1_PRIME M0_PRIME P1_PRIME P0_PRIME

NVB S02

ATARI

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NOTES:	ATARI A.S.G.
STEVE CANN 9-7-83 RDH 4/6/84	TIA_MARIA_STEPHANIE COLLISION REGISTER
	SHEET 12 OF 15 REV

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NOTES:	ATARI A.S.G.
STEVE CANN	
11-3-83	TIA_MARIA STEPHANIE
RDH 4/6/84	AUDIO LOGIC CHAN.0
	SHEET 13 OF 15 REV

ATARI

CONTROL CODES 0 X X X X X
0 X X X X X
0 0 0 1 1 1
0 0 1 0 1 0
(0)(0-3)(C-F)(4-7)(8-B)

AUDCK0 P11
P4CLK
Q9 Q8 Q7 Q6 Q5 Q4 Q3 Q2 Q1
T01 T02
AUC0 P11
NSD3 NSD2 NSD1 NSD0 P3
AUF0 P11
A01 A02 P1

16 MAY 84 19:13 /USER/BOB/TIA-MARIA/STEPHANIE T3.DRAW

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NOTE:** CLOSEST TO GROUND

A02 P1
A01 P1
AUF1 P11
NSD0 P3
NSD1 P3
NSD2 P3
NSD3 P3
NSD4 P3
NSD0
NSD1
NSD2
NSD3
AUC1 P11

T02
T01
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
P4CLK
AUDCK1

CONTROL CODES
0 X X X X
0 X X X X
0 0 1 1 0
0 0 1 0 1
(0)(0-3)(C-F)(4-7)(8-B)

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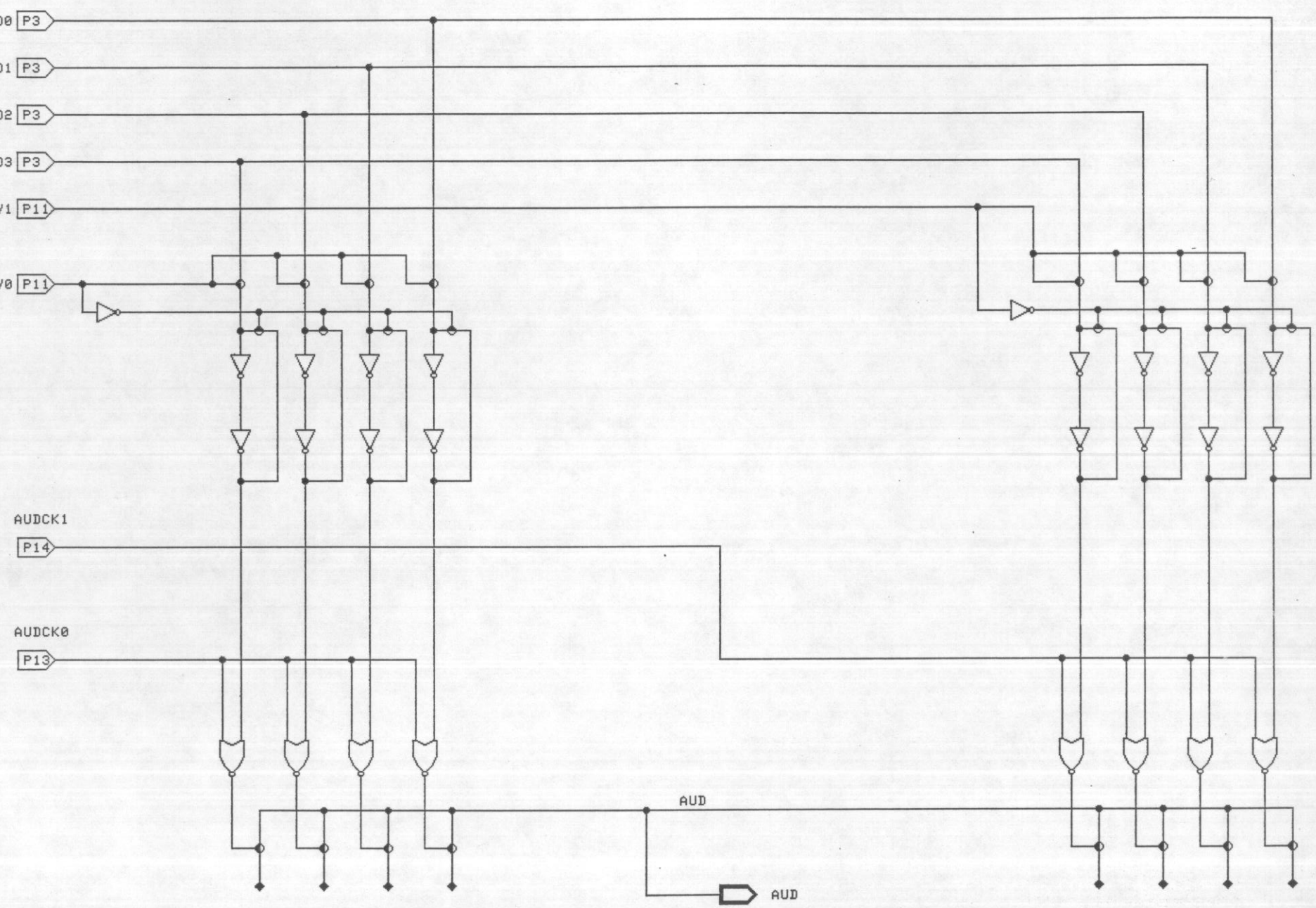
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NOTES: STEVE CANN	ATARI A.S.G.
11-3-83	TIA_MARIA_STEPHANIE
RDH 4/6/84	AUDIO LOGIC CHAN. 1
	SHEET 14 OF 15 REV

ATARI

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NOTES:	ATARI A.S.G.
STEVE CANN	
9-8-83	TIA_MARIA_STEPHANIE
RDH 4/6/84	AUDIO SUMMER CHAN. 0 & 1
	SHEET 13 OF 15 | REV

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PH1 PH1 PH2 PH2 VINC

VB

BLK

BORDERF

EBORDER

MSYNC

RESET

LRCF

LRCF

VS

RPRSTF

MCB

HELRRQ

ELRR

LRR

H0

HQ0B HQ0 H1B H1 H2B H2 H3B H3 H4B H4 H5B H5 H6B H6 H7B H7 H8B H8

HRESET

HBORDERS

HBORDERR

HBLANKS

HBLANKR

HSYNCS

HSYNCR

HLRC

HRPRST

HCBURSTS

HCBURSTR

HELRR

DEC0

DEC1

DEC2

DEC3

DEC7

DEC6

DEC5

DEC4

#1

REV. A: MOVED TCLKI CIRCUIT TO TOP LEVEL DRAWINGS

#1 - SEE CIRCUIT DESIGN ENGINEER.

ATARI

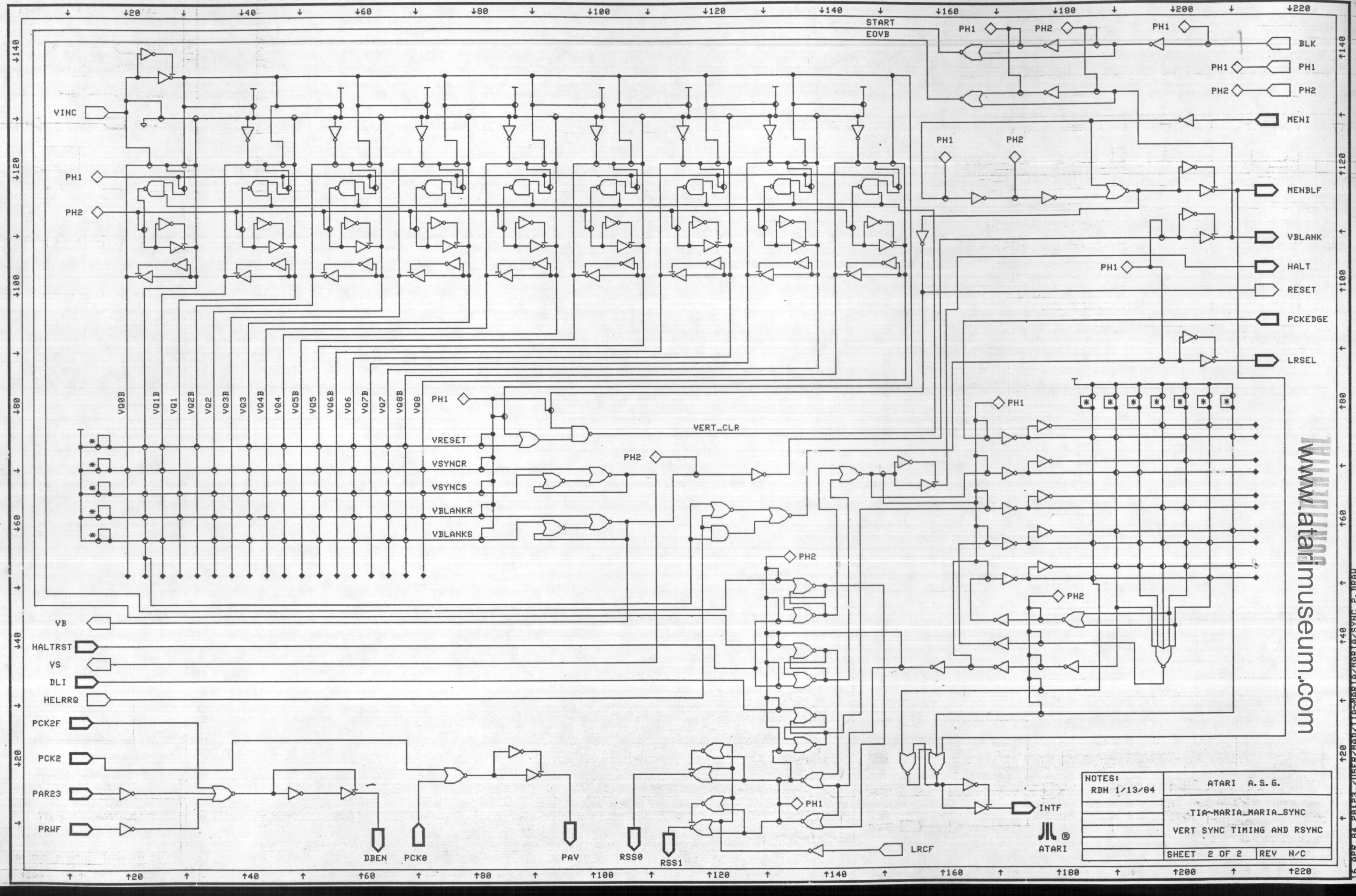
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NOTES:	ATARI A.S.G.
RDH 1/11/84	TIA~MARIA_MARIA_SYNC
RDH 5/16/84	HORIZONTAL SYNC TIMING
	SHEET 1 OF 2 | REV A

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NOTES:
RDH 1/13/84

ATARI A.S.G.

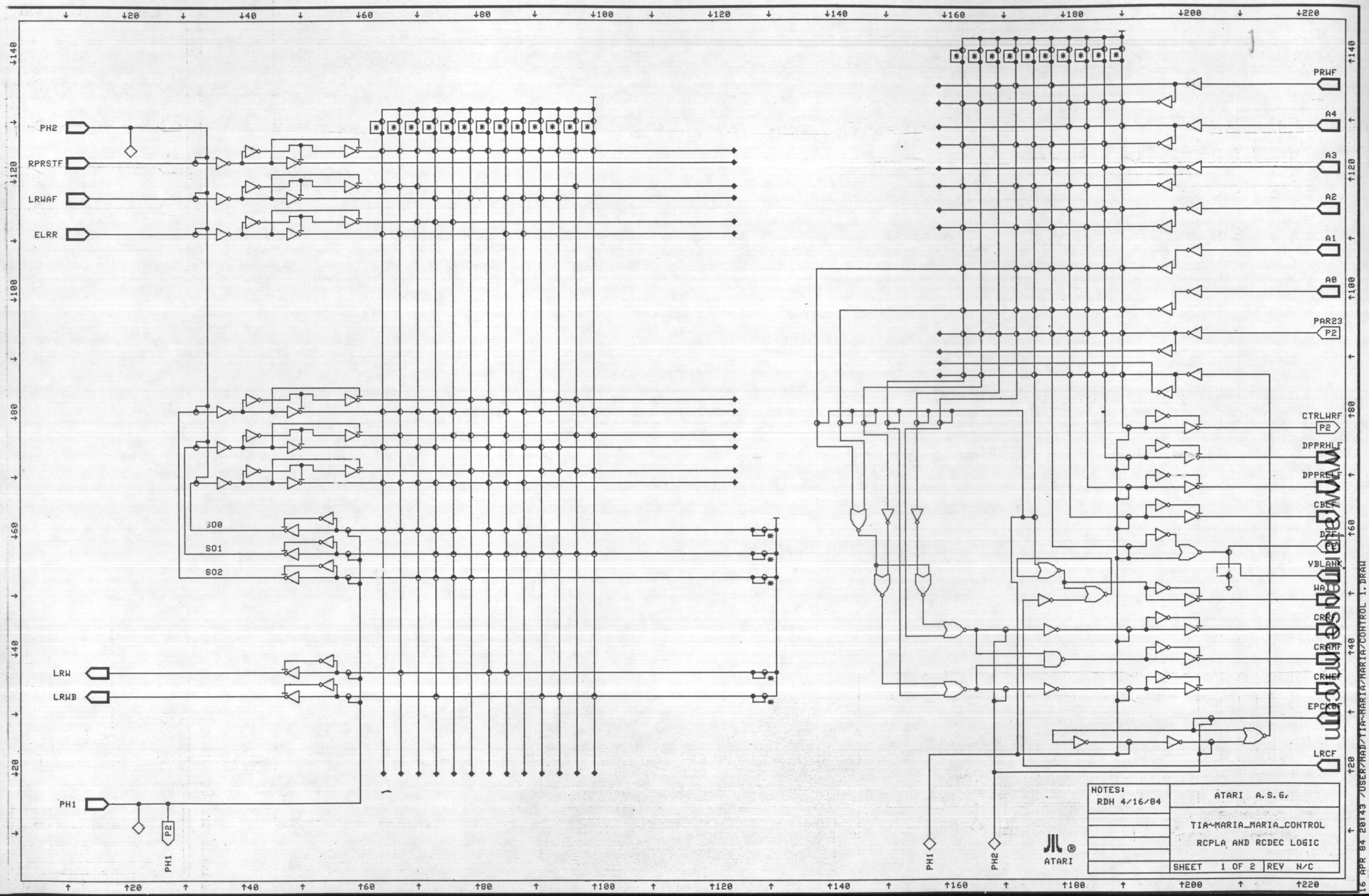
TIA~MARIA_MARIA_SYNC
VERT SYNC TIMING AND RSYNC

SHEET 2 OF 2 | REV N/C

16 APR 84 20:23 /USER/MAD/TIA~MARIA/MARIA/SYNC 2.DRAW

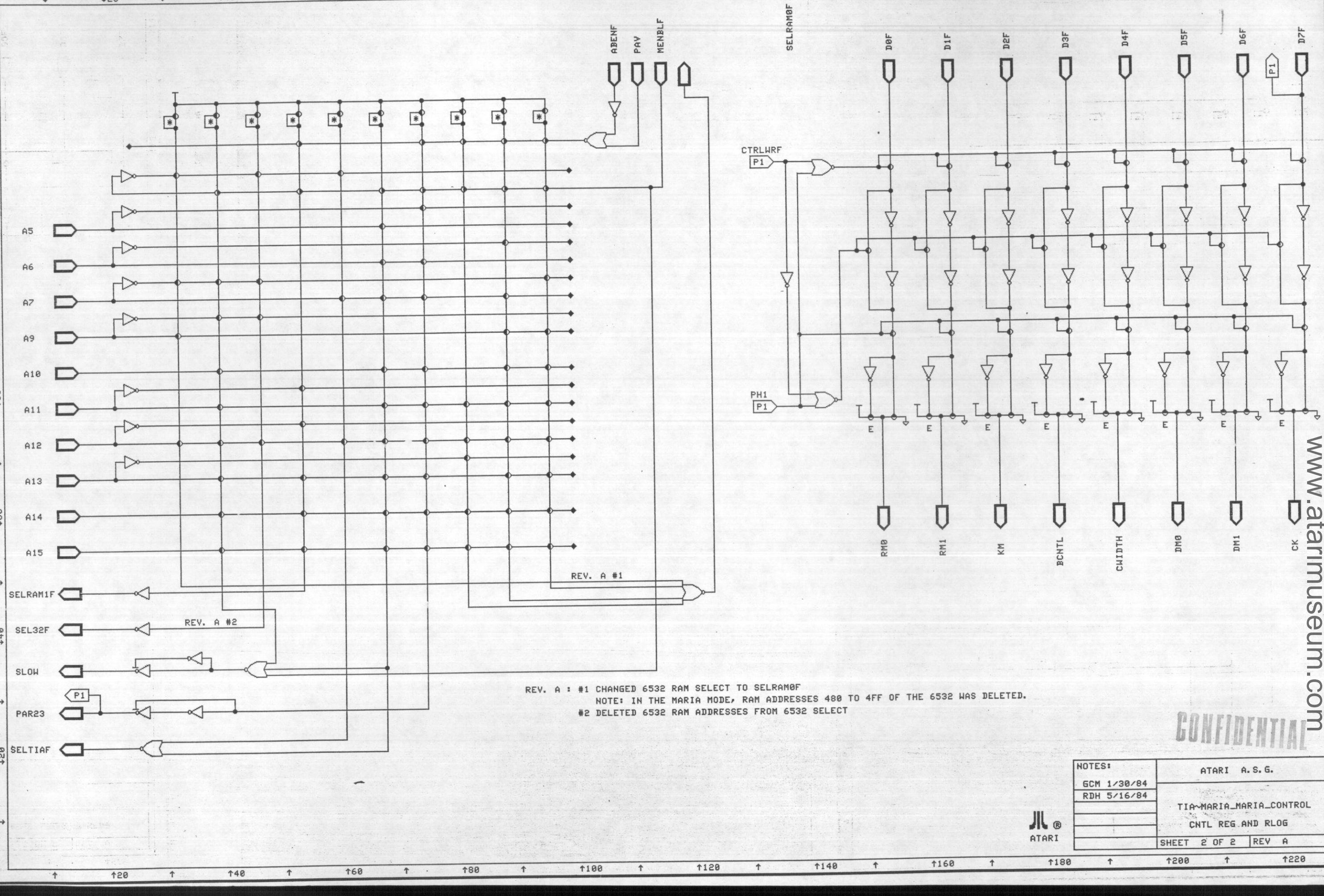
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REV. A : #1 CHANGED 6532 RAM SELECT TO SELRAM0F
NOTE: IN THE MARIA MODE, RAM ADDRESSES 480 TO 4FF OF THE 6532 WAS DELETED.
#2 DELETED 6532 RAM ADDRESSES FROM 6532 SELECT

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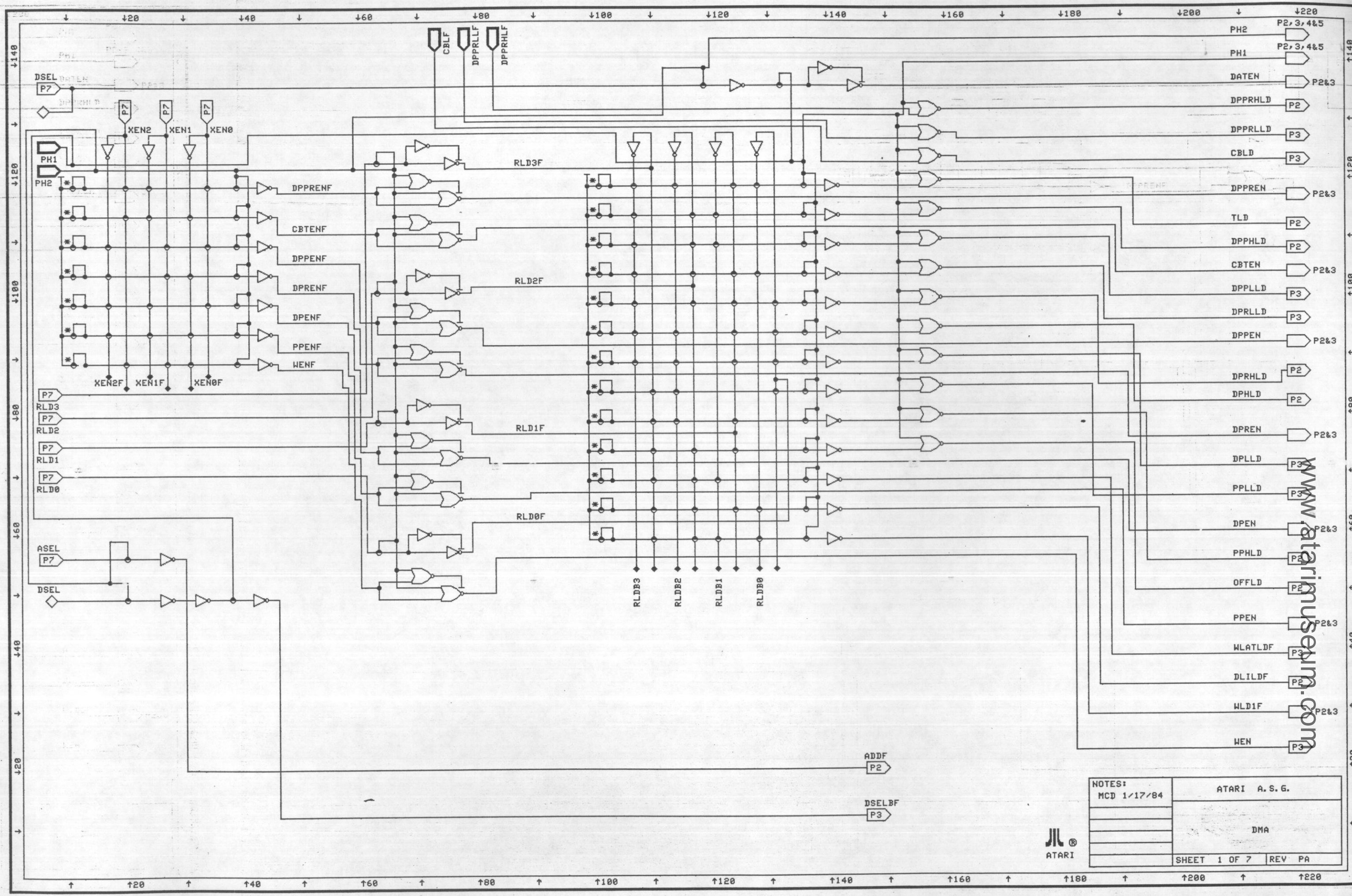
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NOTES:	ATARI A.S.G.
GCM 1/30/84 RDH 5/16/84	TIA~MARIA_MARIA_CONTROL CNTL REG AND RLOG
	SHEET 2 OF 2 | REV A

ATARI

16 MAY 84 18:34 /USER7/BOB7TIA~MARIA/MARIA7CONTROL 2.DRAW

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NOTES: MCD 1/17/84	ATARI A.S.G.
	DMA
	SHEET 1 OF 7 | REV PA

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NOTES:	ATARI A.S.G.
MCD 1/17/84	DMA
	SHEET 2 OF 7 REV PA

ATARI

LONGHDR P6
DLI P6
OFF0 P6
IND P1
WLDIF P1
DLILDF P1
INTENBL P7
OFFLD P1
RDDF P1
PPHLD P1
PPEN P1
DPHLD P1
DPEN P1
DPRHLD P1
DPREN P1
DPPHLD P1
DPPEN P1
TLD P1
CBTEN P1
DPPRHLD P1
DPPREN P1
DATEN P1
PHI P1
P1

LONGF P3
LOCAL P3

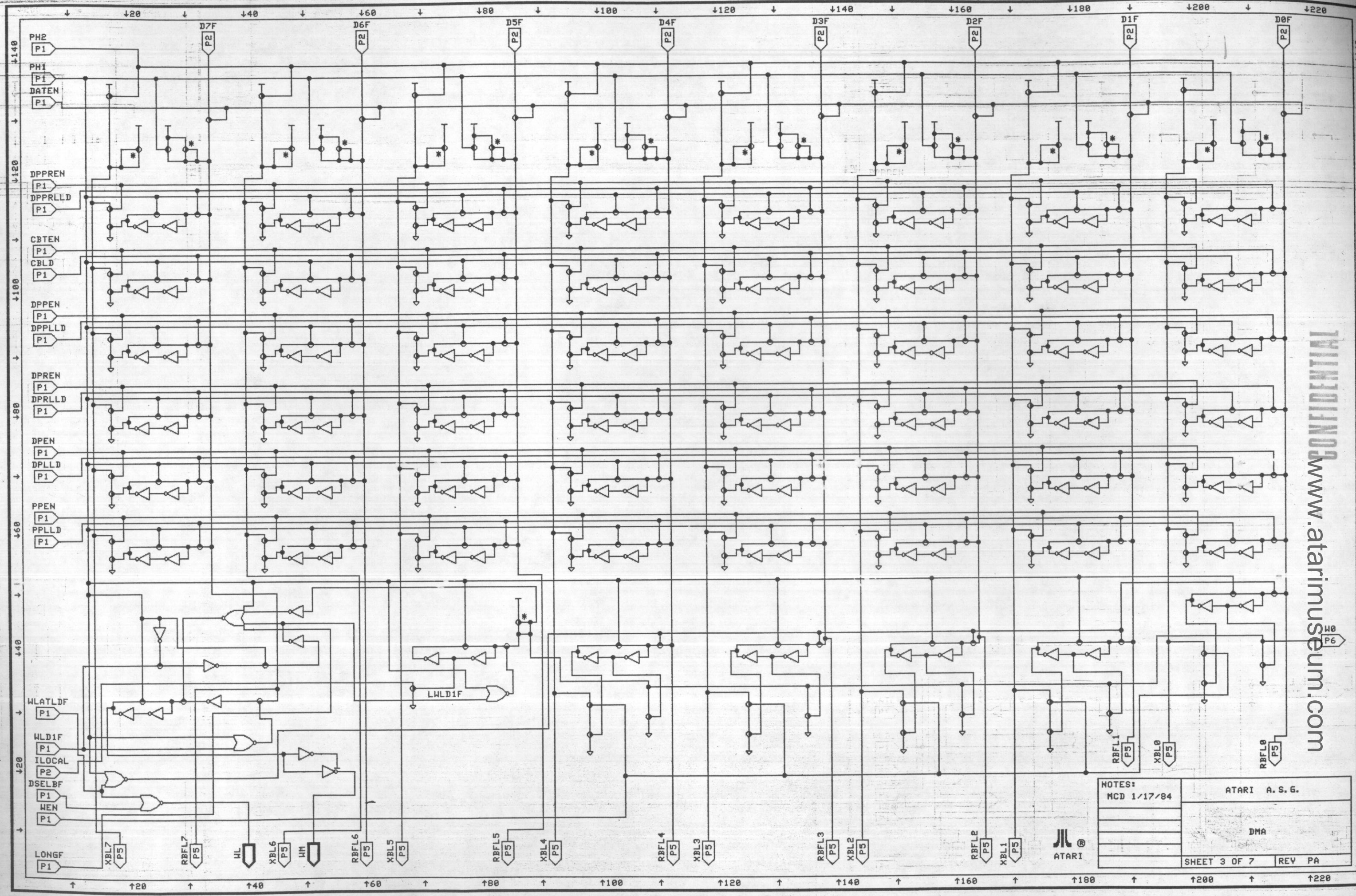
RBFH0 P4
YBH0 P4
XBH0 P4
RBFH1 P4
YBH1 P4
XBH1 P4
RBFH2 P4
YBH2 P4
XBH2 P4
RBFH3 P4
YBH3 P4
XBH3 P4
RBFH4 P4
XBH4 P4
RBFH5 P4
XBH5 P4
RBFH6 P4
XBH6 P4
RBFH7 P4
XBH7 P4

D0F P3
D1F P3
D2F P3
D3F P3
D4F P3
D5F P3
D6F P3
D7F P3

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13 APR 84 13:00 /USER/MAD/TIA_MARIA/MARIA/DMA 2.DRAW

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NOTES:	ATARI A. S. G.	
MCD 1/17/84	DMA	SHEET 4 OF 7 REV PA

ATARI

A8 A9 A10 A11 A12 A13 A14 A15

LRWAF ELRWA ABENF PH2 PH1 ALATCON ASEL CARRY DSEL

ENABLEF ALATCH ENABLE ASELX ASELS DMEN

CO

RBFH0 YBH0 XBH0 RBFH1 YBH1 XBH1 RBFH2 YBH2 XBH2 RBFH3 YBH3 XBH3 RBFH4 XBH4 RBFH5 XBH5 RBFH6 XBH6 RBFH7 XBH7

PH2 PH1 P1 PH1 PH2

↑20 ↑40 ↑60 ↑80 ↑100 ↑120 ↑140 ↑160 ↑180 ↑200 ↑220

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NOTES:	ATARI A.S.G.
MCD 1/17/84	
	DMA
	SHEET 5 OF 7 REV PA

ATARI

A0 A1 A2 A3 A4 A5 A6 A7

ENABLEF P4
ENABLE P4
ALATCH P4
ASELS P4
ASELX P4
SUMEN P4
CO P4
CARRY P4
PH1 P1
PH2 P1

RBFL0 XBL0 RBFL1 XBL1 RBFL2 XBL2 RBFL3 XBL3 RBFL4 XBL4 RBFL5 XBL5 RBFL6 XBL6 RBFL7 XBL7
P3

E

13 APR 84 13:14 /USER/MAD/ITA_MARIA/MARIA/DMA 5.DRAW

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NOTES:	ATARI A.S.G.	
MCD 1/17/84	DMA	SHEET 6 OF 7 REV PA

ATARI

P7 PLA4 PLA3 PLA2 PLA1 PLA0

DMAS0 DMAS1 DMAS2 DMAS3 DMAS4 DMAS5 DMAS6 DMAS7 DMAS8 DMAS9 DMAS10 DMAS11 DMAS12 DMAS13 DMAS14 DMAS15 DMAS16 DMAS17 DMAS18 DMAS19 DMAS20 DMAS21 DMAS22 DMAS23 DMAS24 DMAS25 DMAS26 DMAS27 DMAS28 DMAS29 DMAS30 DMAS31 DMAS32 DMAS33 DMAS34 DMAS35 DMAS36 DMAS37 DMAS38 DMAS39 DMAS40 DMAS41 DMAS42 DMAS43 DMAS44 DMAS45 DMAS46 DMAS47

CWIDTH
DM1
DM0
LONGHDR P2
IND P2
OFF0 P2
W0 P3
RSSI
RSS0
PH2

MAY 17 1984

MAY 17 1984

PLA4 P6
PLA3 P6
PLA2 P6
PLA1 P6
PLA0 P6

PH1

DMAS0 P6
DMAS1 P6
DMAS2 P6
DMAS3 P6
DMAS4 P6
DMAS5 P6
DMAS6 P6
DMAS7 P6
DMAS8 P6
DMAS9 P6
DMAS10 P6
DMAS11 P6
DMAS12 P6
DMAS13 P6
DMAS14 P6
DMAS15 P6
DMAS16 P6
DMAS17 P6
DMAS18 P6
DMAS19 P6
DMAS20 P6
DMAS21 P6
DMAS22 P6
DMAS23 P6
DMAS24 P6
DMAS25 P6
DMAS26 P6
DMAS27 P6
DMAS28 P6
DMAS29 P6
DMAS30 P6
DMAS31 P6
DMAS32 P6
DMAS33 P6
DMAS34 P6
DMAS35 P6
DMAS36 P6
DMAS37 P6
DMAS38 P6
DMAS39 P6
DMAS40 P6
DMAS41 P6
DMAS42 P6
DMAS43 P6
DMAS44 P6
DMAS45 P6
DMAS46 P6
DMAS47 P6

ABENF
ABENF P4
ELRWA P4
ALATCON P4
DSEL P1 P1&4
INTENBL P2
ASEL P1 P1&4
RLD0 P1
XEN0 P1
RLD1 P1
XEN1 P1
RLD2 P1
XEN2 P1
RLD3 P1
LRICLD
HALTRST

NOTES:
MCD 1/17/84

ATARI A.S.G.

DMA

SHEET 7 OF 7 REV PA

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PH1
PH2
CRWEF
D0F
D1F
D2F
D3F
D4F
D5F
D6F
D7F
P2
R/WVRAM
DF
DL
LUMDELVRAM
ML0F
ML1F
ML2F
ML3F
MC0
MC1
MC2
MC3
BLK
ADD0
PH1
ADD2
BUF0 BUF1 BUF2 BUF3 BUF4 BUF5 BUF6 BUF7 BUF8 BUF9 BUF10 BUF11 BUF12 BUF13 BUF14 BUF15 BUF16 BUF17 BUF18 BUF19 BUF20 BUF21 BUF22 BUF23 BUF24
ADD3
ADD4
RAM

NOTES: GMC 1/25/84	ATARI A.S.G.
	TIA~MARIA_MARIA_VIDEO
	COLOR RAM CORE
	SHEET 1 OF 2 | REV N/C

ATARI

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PH1
PH2
CRWEF
D0F
D1F
D2F
D3F
D4F
D5F
D6F
D7F
P2
RW/VRAM
DF
LUMDELVRAM
ML0F
ML1F
ML2F
ML3F
MC0
MC1
MC2
MC3
BLK
ADD0
ADD2
ADD3
ADD4
BUF0 BUF1 BUF2 BUF3 BUF4 BUF5 BUF6 BUF7 BUF8 BUF9 BUF10 BUF11 BUF12 BUF13 BUF14 BUF15 BUF16 BUF17 BUF18 BUF19 BUF20 BUF21 BUF22 BUF23 BUF24
RAM

NOTES:
GMC 1/25/84

ATARI A.S.G.

TIA~MARIA_MARIA_VIDEO
COLOR RAM CORE

SHEET 1 OF 2 | REV N/C

ATARI

16 APR 84 14:35 /USER/MARIA/TIA_MARIA/MARIA/VIDEO 1.DRAW

ADD0 PH2 PH1 ADD2 BUF0 BUF1 BUF2 BUF3 BUF4 BUF5 BUF6 BUF7 BUF8 BUF9 BUF10 BUF11 BUF12 BUF13 BUF14 BUF15 BUF16 BUF17 BUF18 BUF19 BUF20 BUF21 BUF22 BUF23 BUF24 ADD3 ADD4

BUFVRAM

CRRF CRA0 CRA1 CRA2 CRA3 CRA4

CRAVRAM

METAL LINE

BORDERF BCNTL P1 CRWEF PH1

HD

P.U. 4/8
P.D. 12/3.5

ADD2 CRA(N) (Φ-4)

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NOTES:

ATARI A.S.G.

TIA~MARIA_MARIA_VIDEO
COLOR RAM DECODE LOGIC

SHEET 2 OF 2 REV N/C

ATARI

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16 APR 84 14:55 /USER/MAD/TIA_MARIA/MARIA/VIDEO 1. DRAW

ATARI A.S.G.	SHEET 1 OF 2 REV N/C
TIA~MARIA_MARIA_VIDEO COLOR RAM CORE	
NOTES: GMC 1/25/84	

ATARI

BLK

ADD4 ADD3 BUF24 BUF23 BUF22 BUF21 BUF20 BUF19 BUF18 BUF17 BUF16 BUF15 BUF14 BUF13 BUF12 BUF11 BUF10 BUF9 BUF8 BUF7 BUF6 BUF5 BUF4 BUF3 BUF2 BUF1 BUF0 ADD2 PH1 ADD8

MC3 MC2 MC1 MC0

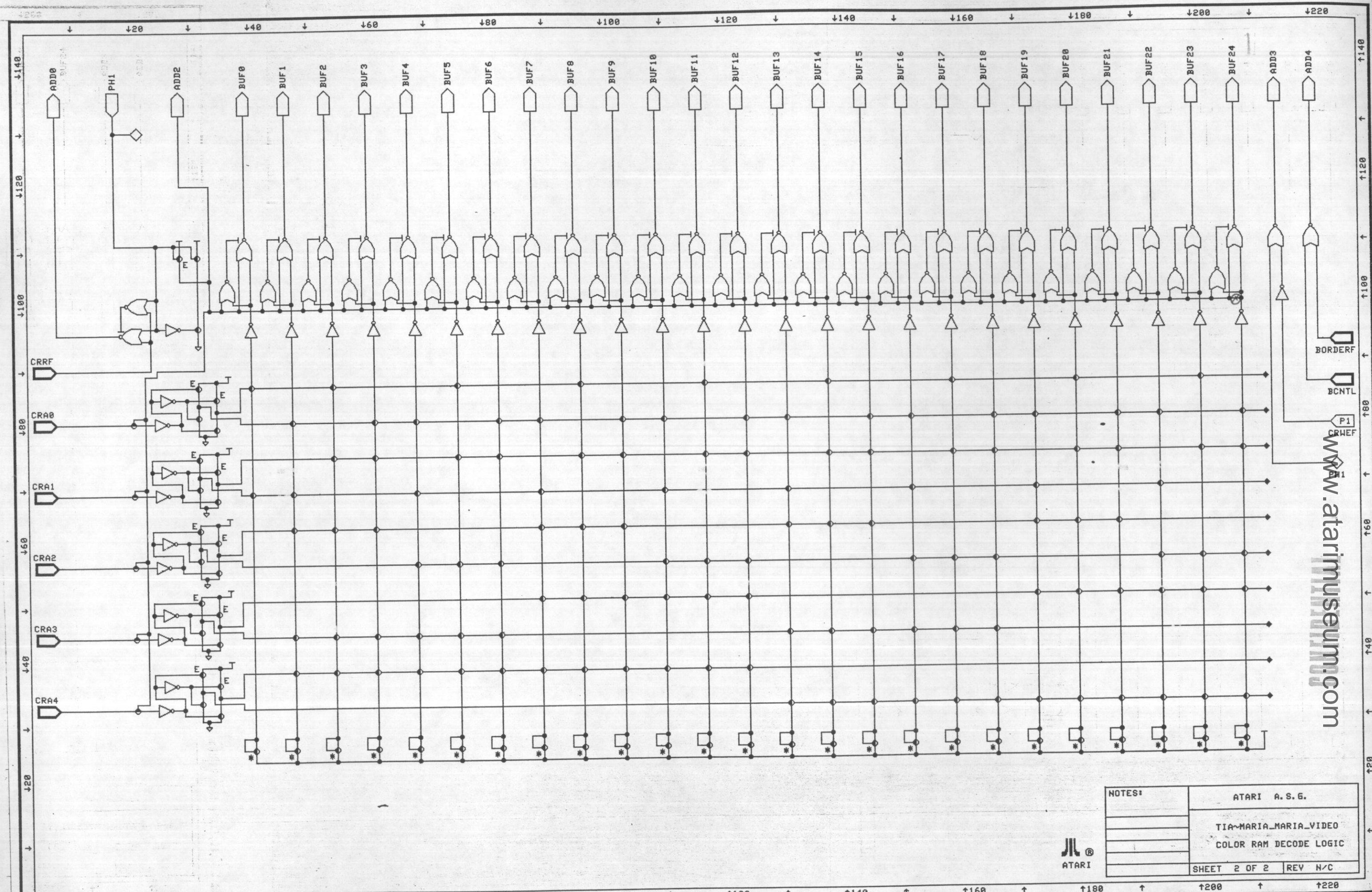
ML3F ML2F ML1F ML0F

D7F D6F D5F D4F D3F D2F D1F D0F

P2 CRWEF PH2 PH1

RAM

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NOTES:	ATARI A.S.G.
RDH 1/5/84	TIA~MARIA_MARIA_LINBUF
	LINE BUFFER OUTPUT DECODER
	SHEET 1 OF 4 REV N/C

ATARI

LRR PH1 PH1 P2&3 H0 H0 RM0 RM1 EBORDER CRAMF

P3 P2

LD70 LD60 LD50 LD40 LD71 LD61 LD51 LD41 LD72 LD62 LD52 LD42 LD73 LD63 LD53 LD43 LD74 LD64 LD54 LD44

P2

PH1

CA4F CA3F CA2F CAINORMF CA0NORMF

LD30 LD20 LD10 LD00 LD31 LD21 LD11 LD01 LD32 LD22 LD12 LD02 LD33 LD23 LD13 LD03 LD34 LD24 LD14 LD04

P2

DEC0 DEC1 DEC2 DEC3 DEC7 DEC6 DEC5 DEC4

NX

NORMAL ODDA EVENA EVENB ODDB

C22 C01 C11 C30 C33 C44 C20 C00

PH2

A4 A3 A2 A1 A0 PCK0

CRA4 CRA3 CRA2 CRA1 CRA0

16 APR 84 15:08 /USER/MAD/TIA_MARIA/MARIA/LINBUF 1.DRAW

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16 APR 84 16:25 /USER/MAD/TIA_MARIA/MARIA/LINBUF 2.DF4W

TIA~MARIA_MARIA_LINBUF	SHEET 2 OF 4 REV N/C
BLOCK DRAWING OF RAM CORE	
ATARI A.S.G.	NOTES: RDH 1/3/84

ATARI

LRWB

JOGC

LRSEL LRA4F LRA3F LRA2F LRA1F LRA0F LRCF PH1 H0

PAL2 PCW4 PCW5 PCW6 PCW7 PCD43 PCD53 PCD63 PCD73 PCD42 PCD52 PCD62 PCD72 PCD1 PCD3 PCD5 PCD7 PCD0 PCD2 PCD4 PCD6

PCW0 PCW1 PCW2 PCW3 PCD03 PCD13 PCD32 PCD33 PCD02 PCD12 PCD22 PCD32

LRWBP2 PH1 LRWF BRSTCL PRCH RAMC0 WL0J WL1J N WL2J WL3J WL4J WL5J WL6J WL7J WL8J WL9J WLAJ WLBJ WLCJ WLDJ WLEJ WLFJ WL10J WL11J WL12J WL13J WL20J WL21J WL22J WL23J WL24J WL25J WL26J WL27J WL28J WL29J WL2AJ WL2BJ WL2CJ WL2DJ WL2EJ WL2FJ WL30J WL31J WL32J WL33J

PCW0 PCD0 <------NOTE: THIS CELL SHOWES INTERCONNECT OF THIS LEVEL TO THE CELL RAMC0-----> PCW1 PCD1 PCW2 PCD2 PCW3 PCD3

WL0 WL1 WL2 WL3 WL4 WL5 WL6 WL7 WL8 WL9 WLA WLB WLC WLD WLE WLF WL10 WL11 WL12 WL13 WL20 WL21 WL22 WL23 WL24 WL25 WL26 WL27 WL28 WL29 WL2A WL2B WL2C WL2D WL2E WL2F WL30 WL31 WL32 WL33

WL1F H0F JOGF

JOG

LSEL

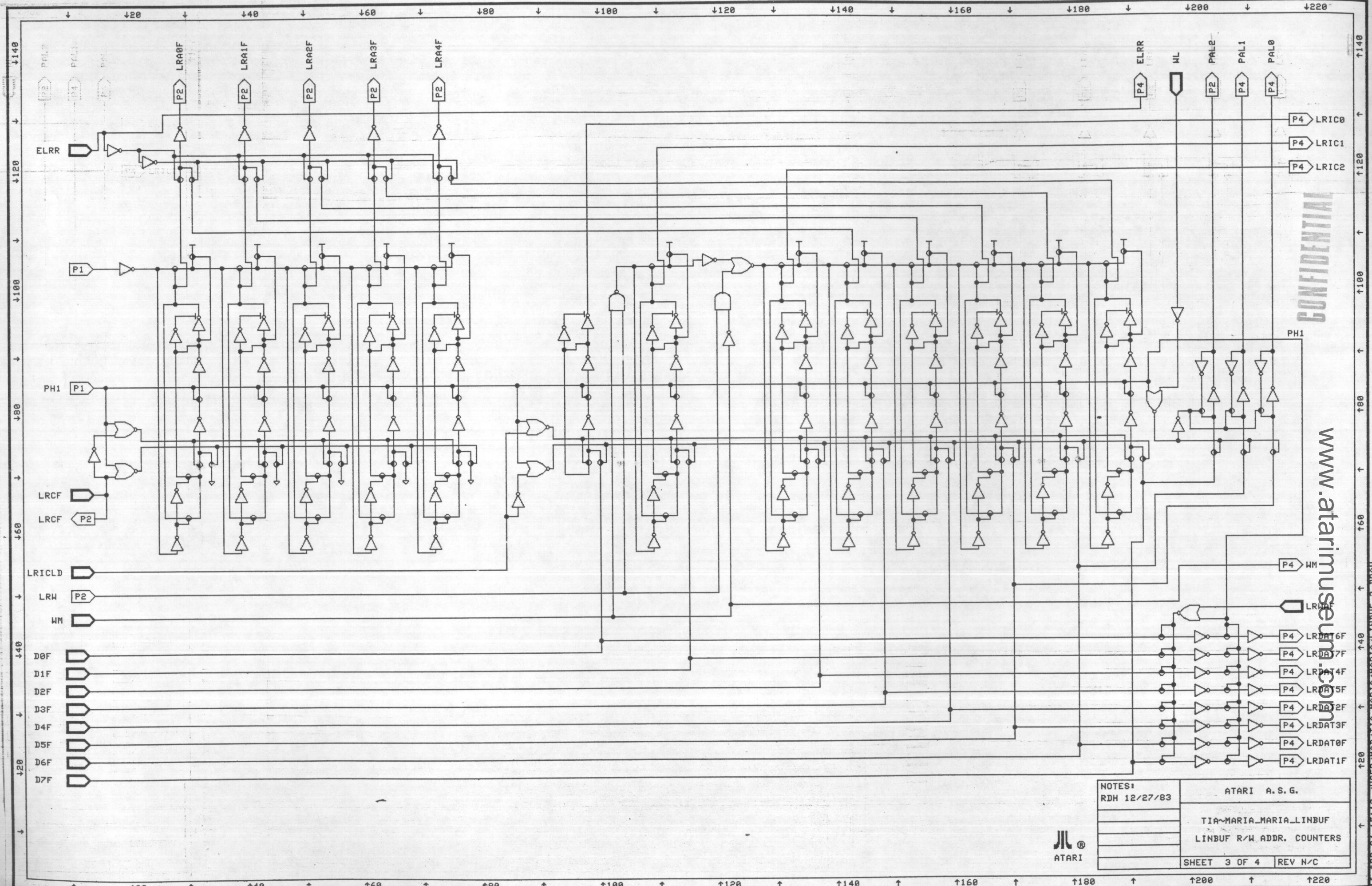
BRSTCLB BRSTCLA

LRW

LD04 LD14 LD24 LD34 LD03 LD13 LD23 LD33 LD02 LD12 LD22 LD32 LD01 LD11 LD21 LD31 LD00 LD10 LD20 LD30 LD44 LD54 LD64 LD74 LD43 LD53 LD63 LD73 LD42 LD52 LD62 LD72 LD41 LD51 LD61 LD71 LD40 LD50 LD60 LD70

C0 C1 C2 C3 P1

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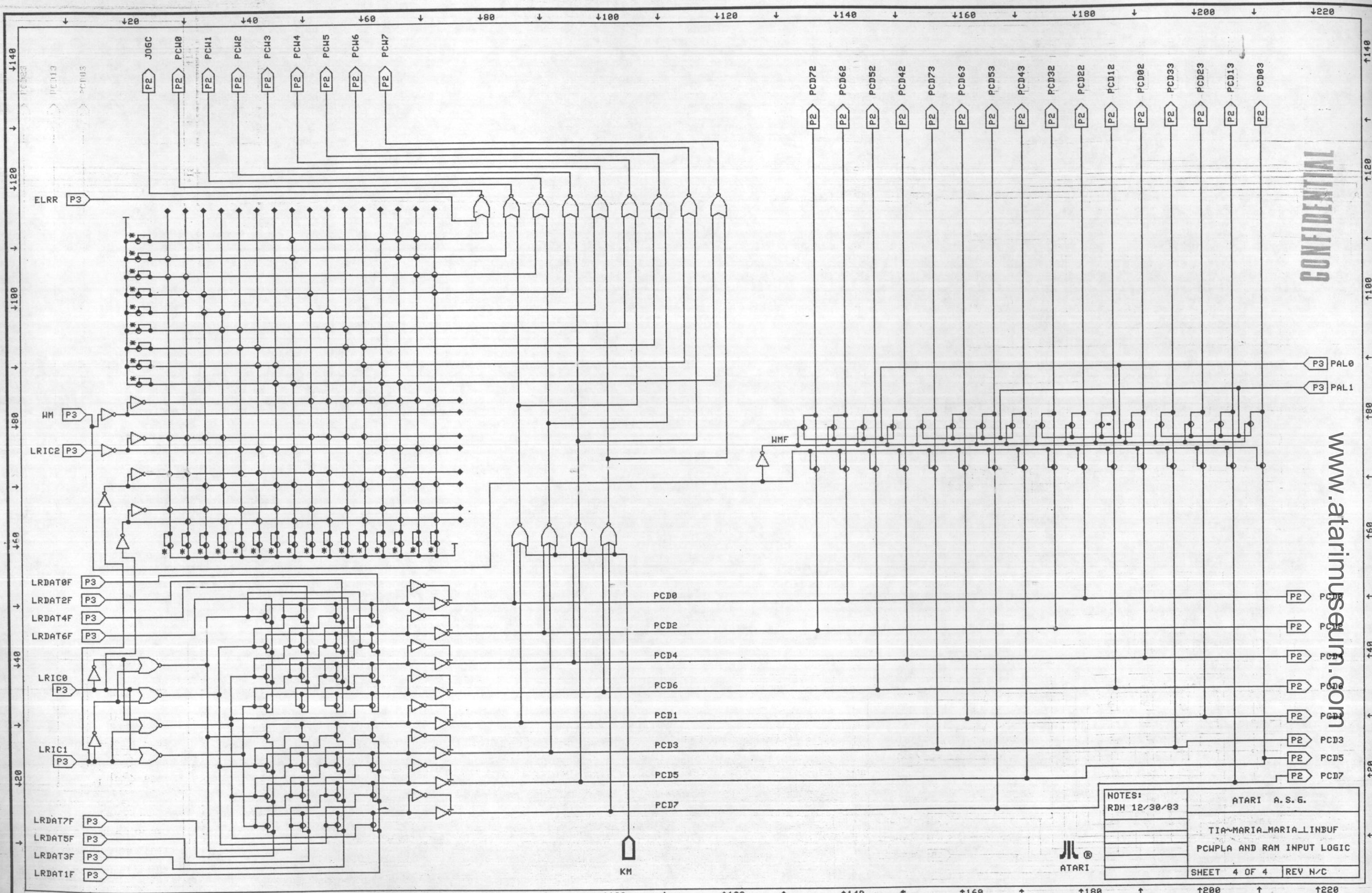


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16 APR 84 15:19 /USER/MAD/TIA_MARIA/MARIA/LINBUF 3.DRAW

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NOTES:
RDH 12/30/83

ATARI A.S.G.

TIA~MARIA_MARIA_LINBUF

PCWPLA AND RAM INPUT LOGIC

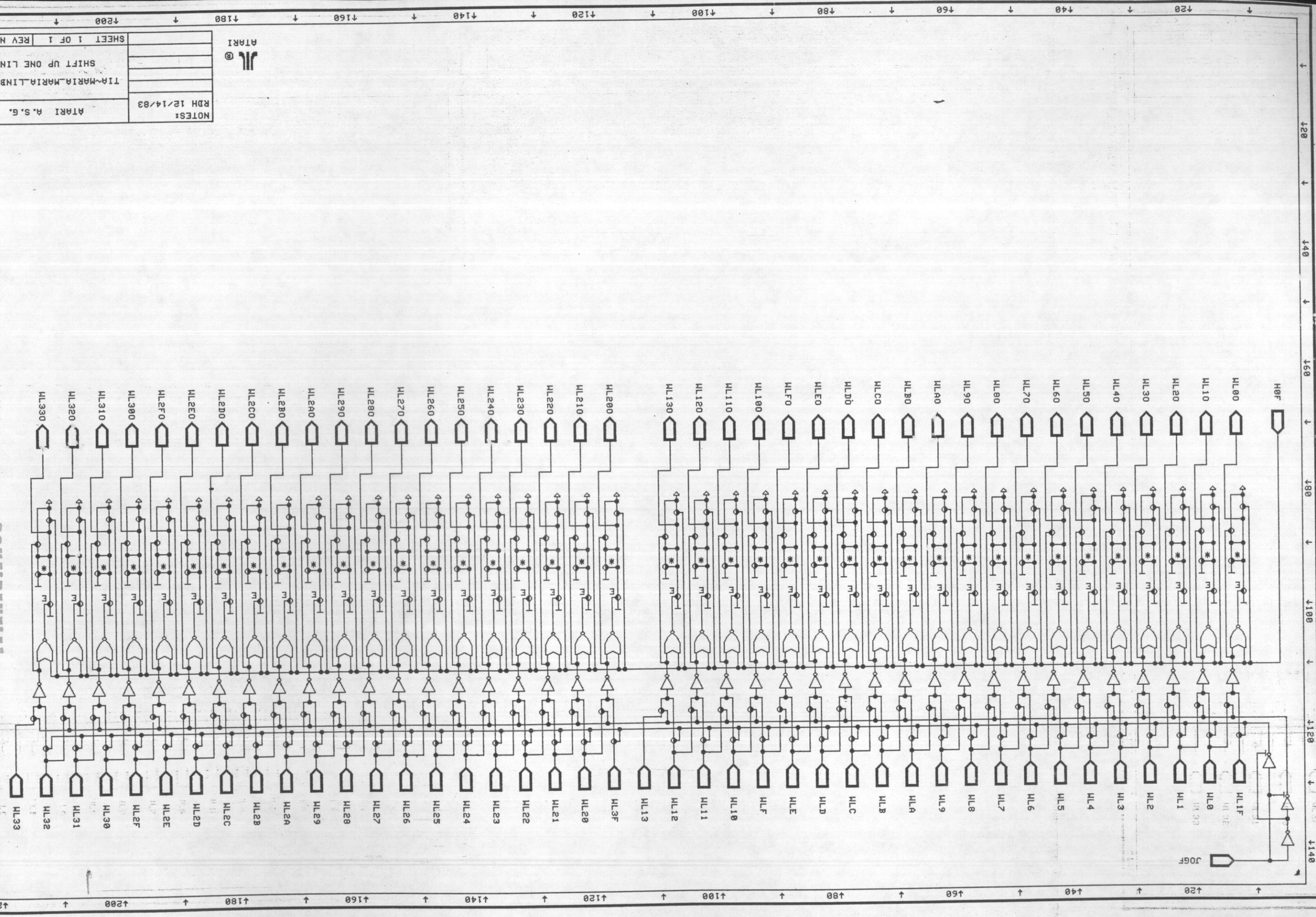
SHEET 4 OF 4 | REV N/C

ATARI

16 APR 84 15:23 /USER/MAD/TIA_MARIA/MARIA/LINBUF 4.DRAW

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NOTES:
RDH 12/14/83

ATARI A.S.G.	
TIA~MARIA_MARIA_LINBUF_JOG	
SHIFT UP ONE LINE	
SHEET 1 OF 1	REV N/C

ATARI

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16 APR 84 16:22 /USER/MAD/TIA_MARIA/MARIA/LINBUF/JOG 1.DRAW

16 APR 84 15:33 /USER7/RAD/TIA_MARIA/MARIA/LINBUF/LINESEL 1.DRAW

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ATARI A.S.G.	NOTES: RDH 12/11/83	
TIA-MARIA_MARIA_LINBUF_LSEL		
RAM ROW SELECT LOGIC		
SHEET 1 OF 1	REV N/C	

ATARI

WL3F WL33 WL32 WL31 WL30 WL2F WL2E WL2D WL2C WL2B WL2A WL29 WL28 WL27 WL26 WL25 WL24 WL23 WL22 WL21 WL20

WL1F WL13 WL12 WL11 WL10 WLF WLE WLD WLC WLB WLA WL9 WL8 WL7 WL6 WL5 WL4 WL3 WL2 WL1 WL0

1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

BRSTCLB BRSTCLA H0F

LRA0F LRA1F LRA2F LRA3F LRA4F LRSEL PRCH

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LRWBP2
PH1
LRWF
BRSTCL
PRCH
WL0 WL1 WL2 WL3 WL4 WL5 WL6 WL7 WL8 WL9 WLA WLB WLC WLD WLE WLF WL10 WL11 WL12 WL13 WL20 WL21 WL22 WL23 WL24 WL25 WL26 WL27 WL28 WL29 WL2A WL2B WL2C WL2D WL2E WL2F WL30 WL31 WL32 WL33

PCD3
PCW3
PCD2
PCW2
PCD1
PCW1
PCD0
PCW0

RAM

C3
C3F
C2
C2F
C1
C1F
C0
C0F

LRWBP20
PH10
LRWF0
BRSTCL0
PRCH0
WL00 WL10 WL20 WL30 WL40 WL50 WL60 WL70 WL80 WL90 WLA0 WLB0 WLC0 WLD0 WLE0 WLF0 WL100 WL110 WL120 WL130 WL200 WL210 WL220 WL230 WL240 WL250 WL260 WL270 WL280 WL290 WL2A0 WL2B0 WL2C0 WL2D0 WL2E0 WL2F0 WL300 WL310 WL320 WL330

NOTES:
RDH 12/11/83

ATARI A.S.G.

TIA~MARIA_MARIA_LINBUF_RAMC0

RAM SUB-BLOCK (4 BY 40 BITS)

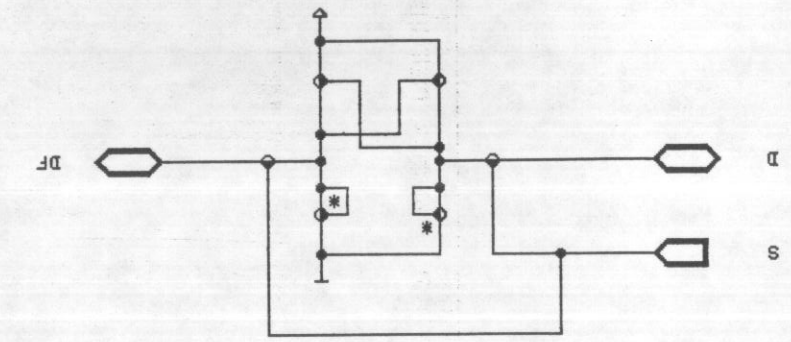
SHEET 1 OF 1 | REV N/C

ATARI

16 APR 84 16:55 /USER/MAD/TIA~MARIA/MARIA/LINBUF/RAMC0 1.DRW

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NOTES: RDH 4/16/84	ATARI A.S.G.
	TIA~MARIA_MARIA_LINBUF_RAM RAM CELL (USED IN COLOR AND LINBUF)
	SHEET 1 OF 1 REV N/C

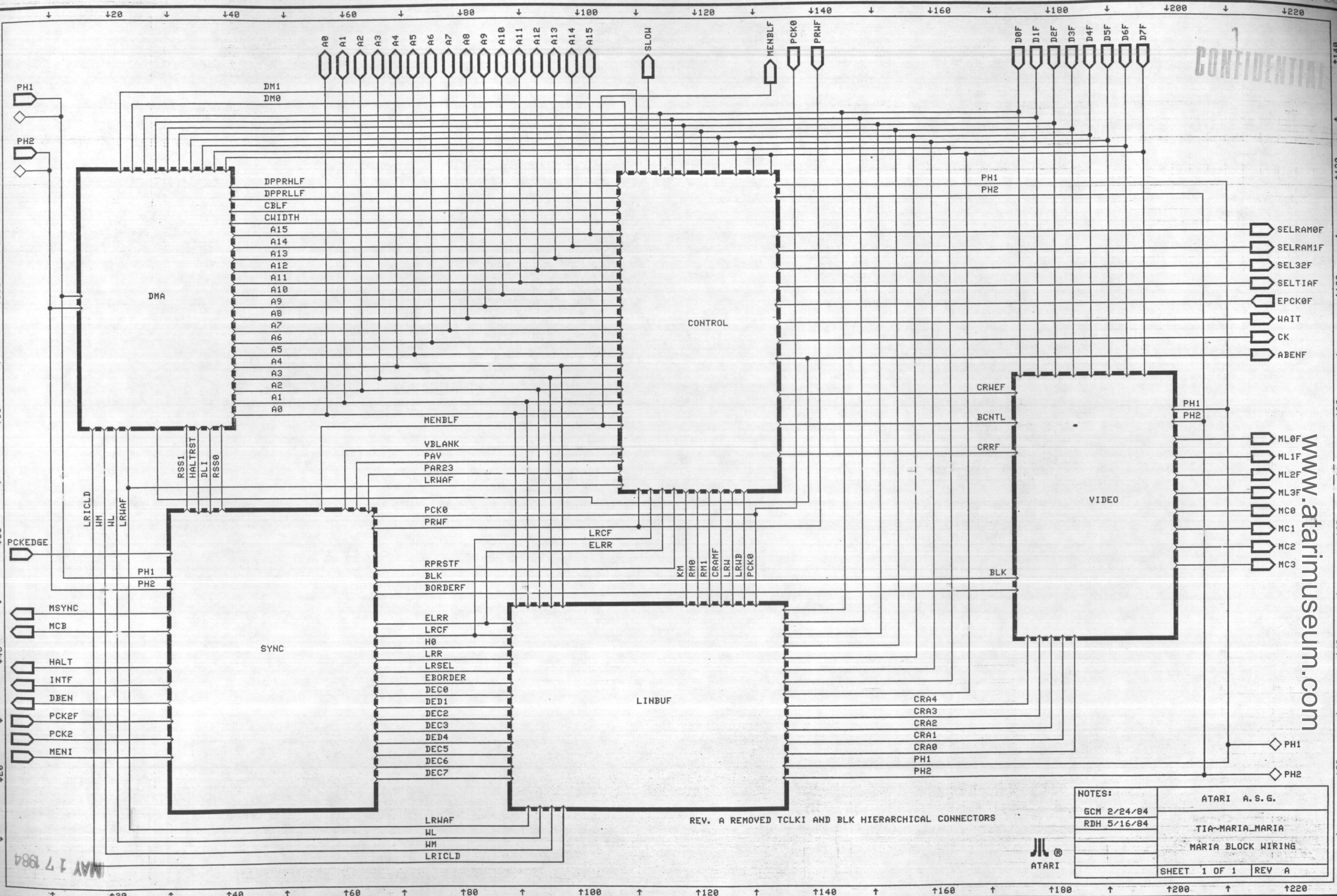
ATARI

16 APR 84 17:04 /USER/MARC/TIA/MARIA/MARIA/LINBUF/RAM 1.DRAW

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REV. A REMOVED TCLKI AND BLK HIERARCHICAL CONNECTORS

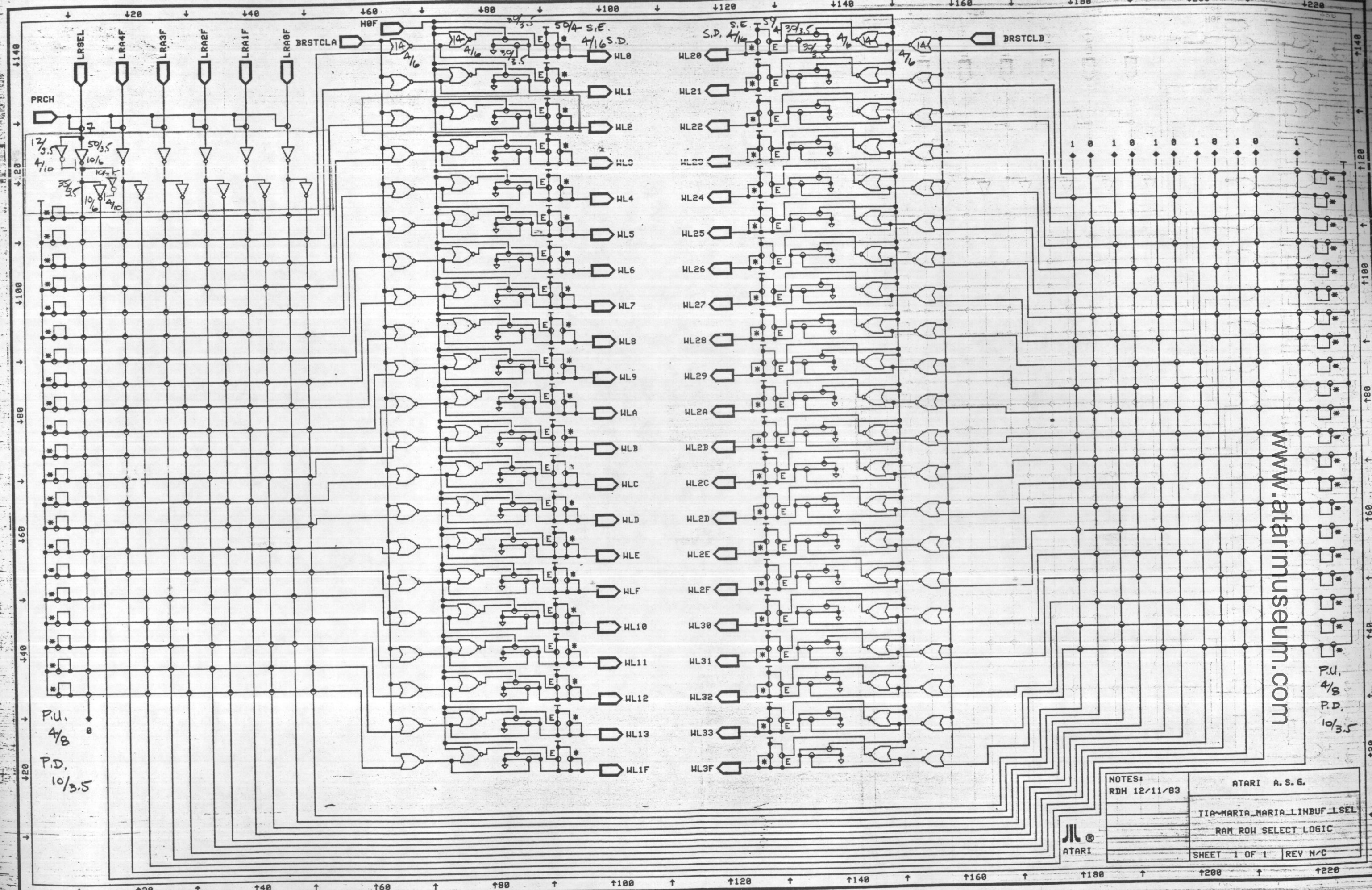
NOTES:	ATARI A.S.G.
GCM 2/24/84	
RDH 5/16/84	TIA~MARIA_MARIA
	MARIA BLOCK WIRING
	SHEET 1 OF 1 REV A

ATARI

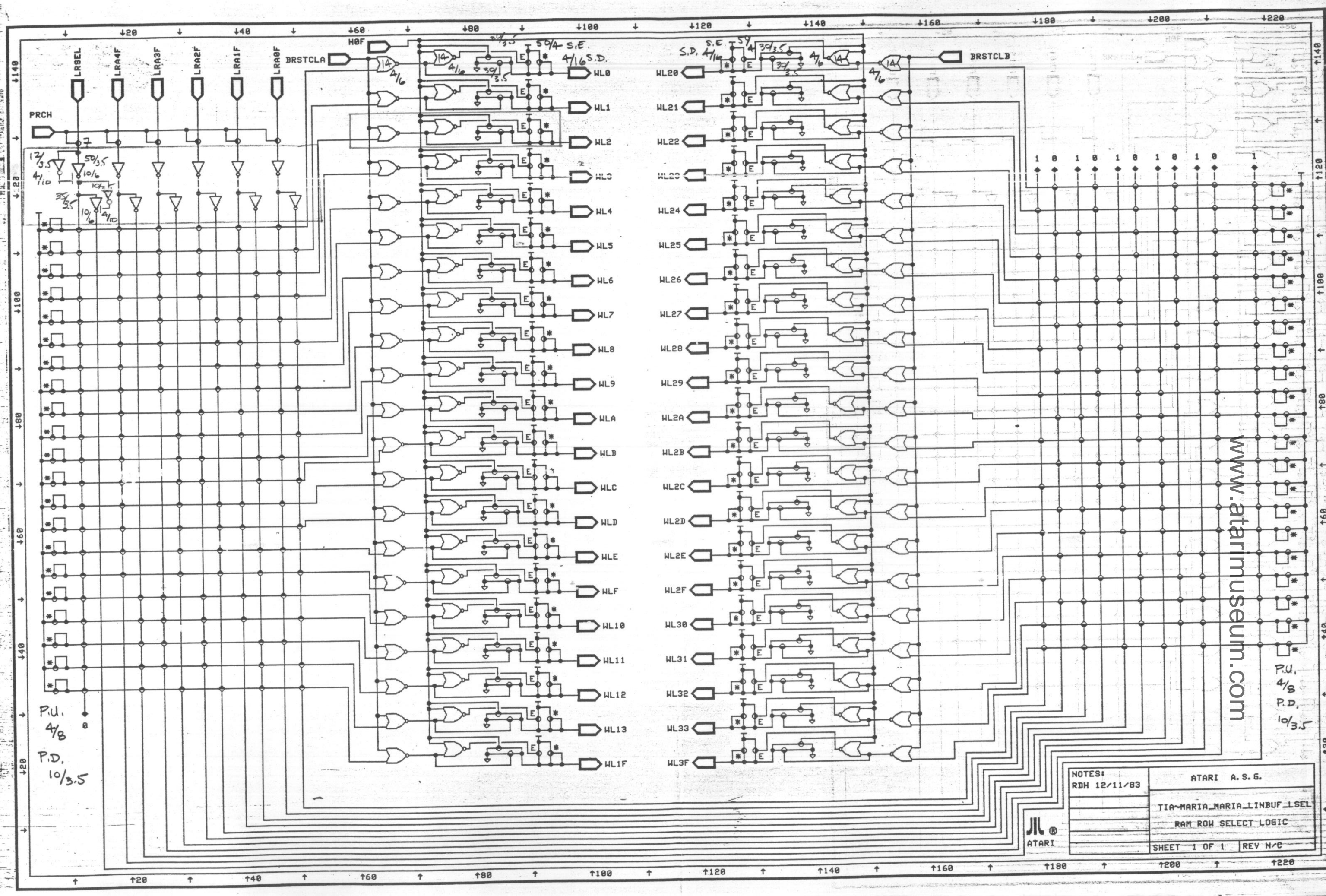
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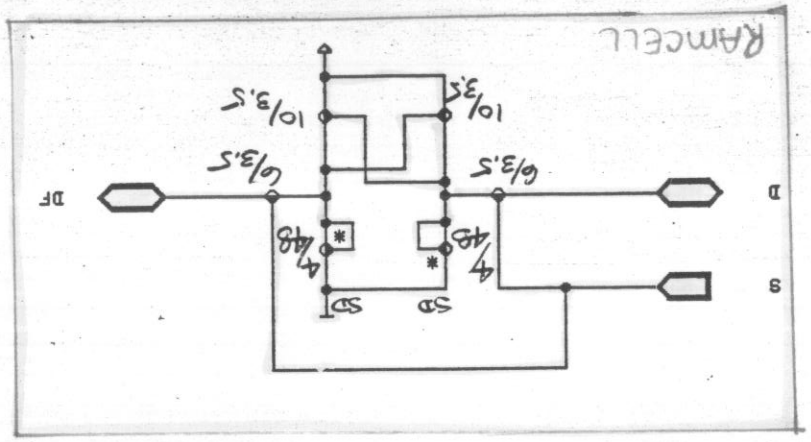
16 MAY 84 18:42 /USER/BOB/TIA~MARIA/MARIA 1.DRAW



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NOTES:	ATARI A.S.G.	
RDH 4/16/84	TIA-MARIA_MARIA_LINBUF_RAM	4/19/84
	RAM CELL	
	(USED IN COLOR AND LINBUF)	
	SHEET 1 OF 1	REV N/C

ATARI

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16 APR 84 17:04 /USER/MARIA/MARIA/MARIA/LINBUF/RAM.1.DRAW

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NOTES: RDH 12/11/83	ATARI A.S.G.
	TIA~MARIA_MARIA_LINBUF_RAMC0
	RAM SUB-BLOCK (4 BY 40 BITS)
	SHEET 1 OF 1 REV N/C

ATARI

(PH2) LRHBP2 PH1 LRHF BRSTCL PRCH

PCM0 PCM1 PCM2 PCM3

WL0 WL1 WL2 WL3 WL4 WL5 WL6 WL7 WL8 WL9 WLA WLB WLC WLD WLE WLF WL10 WL11 WL12 WL13 WL20 WL21 WL22 WL23 WL24 WL25 WL26 WL27 WL28 WL29 WL2A WL2B WL2C WL2D WL2E WL2F WL30 WL31 WL32 WL33

C0F C1F C2F C3F C0 C1 C2 C3

RAM

16 APR 84 16:55 /USER/MAD/TIA~MARIA/MARIA/LINBUF/RAMC0 1.DRAW

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11 MAY 84 12:14 /USER/BOB/TIA~MARIA I.DRAW

NOTES:	ATARI A.S.G.	
RDH 4/10/84	TIA~MARIA	
	ADDRESS I/O BUFFERS	
	SHEET 1 OF 6	REV N/C

ATARI

A15 — PAD AB15 I/O PIN 30 — TP
A14 — PAD AB14 I/O PIN 29 — TP
A13 — PAD AB13 I/O PIN 28 — TP
A12 — PAD AB12 I/O PIN 27 — TP
A8 — PAD AB8 I/O PIN 19 — TP
A9 — PAD AB9 I/O PIN 20 — TP
A10 — PAD AB10 I/O PIN 21 — TP
A11 — PAD AB11 I/O PIN 22 — TP
A7 — PAD AB7 I/O PIN 18 — TP
A6 — PAD AB6 I/O PIN 17 — TP
A5 — PAD AB5 I/O PIN 16 — TP
A4 — PAD AB4 I/O PIN 15 — TP
A0 — PAD AB0 I/O PIN 11 — TP
A1 — PAD AB1 I/O PIN 12 — TP
A2 — PAD AB2 I/O PIN 13 — TP
A3 — PAD AB3 I/O PIN 14 — TP

TA0 TA1 TA2 TA3 TA4 TA5

A(0:15) (P2) ADDR

TA(0:5) (P2&5) TADDR

ABENF (P2)

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11 MAY 84 12:15 /USER/BOB/TIA~MARIA 2.DRAW

NOTES:
RDH 4/10/84

ATARI A.S.G.

TIA~MARIA
MARIA & STEPHANIE BLOCKS

SHEET 2 OF 6 | REV N/C

ATARI

STEPHANIE

MARIA

PAD AUD O PIN 26

PAD RDY O PIN 41

PAD HALT_NMI O PIN 40

PAD RWF I PIN 39

PAD RAMCS0 O PIN 24

PAD RAMCS1 O PIN 10

5K OHM PULL-UP

(P4) MDB
(P4,P5) PRWF
(P4) SELTIAF
(P3) MENBLF
(P3) TCOL
(P3) MCOL
(P5) TIB
(P5) DUMP
(P4) TRD6
(P4) TRD7
(P4) NSD(0:7)
(P6) NTC6

D(0:7)F
TC(0:3),TL(1,3)F,TCB,TSYNC
MC(0:3),ML(0,3)F,MCB,MSYNC
TI(0:5)

TI5 TI4 TI3 TI2 TI1 TI0 DUMP TRD6 TRD7 NSD7 NSD6 NSD5 NSD4 NSD3 NSD2 NSD1 NSD0

TSYNC TCB TL3F TL2F TL1F TC3 TC2 TC1 TC0

NTC6

(P6) NTB
(P6) TCLKI
(P6) SLOW
(P6) PH2
(P6) PH1
(P6) EPCK0F
(P6) PCKEDGE
(P6) PCK0
(P6) PCK2F
(P6) PCK2

NTB
TCLKI
RDYF
SLOW
PH2
PH1
EPCK0F
PCKEDGE
PCK0
WAIT
INTF
HALT
PCK2F
PCK2
SELRAM1F
SELRAM0F

TA5 TA4 TA3 TA2 TA1 TA0

D7F D6F D5F D4F D3F D2F D1F D0F

MSYNC MCB ML3F ML2F ML1F ML0F MC3 MC2 MC1 MC0

MENBLF MENI PRWF CK DBEN SEL32F

(P6) MENI
(P3) CK
(P4) DBEN
(P4) SEL32F

ABENF A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0

(P1) TADDR TA(0:5)
(P1) ADDR A(0:15)
(P1) ABENF

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* NOTE: R1,R2 6 MICRON WIDE
R1= 274 SQR OR 1480 MICRO
R2= 109.5 SQR OR 591 MICRO
C1= 11.8 PF OR 17013 SQ MICRO
C2= 4.5 PF OR 6512 SQ MICRO

TCLKI

PH1

PH2

R1
POLY

METAL

POLY

C1 *

C2 *

REF

6915 SQ MICS

PAD
COLOR
0
PIN 43

(P2)
CK

(P6)
MENI

PAD
LUM3
0
PIN 44

PAD
LUM2
0
PIN 45

PAD
LUM1
0
PIN 47

PAD
LUM0
0
PIN 42

PAD
SYNCB
0
PIN 48

(P2)
TCOL

(P2)
MCOL

TC(0:3),TL(1,3)F,TCB,TSYNC

TSYNC MSYNC TL3F ML3F TL2F ML2F TL1F ML1F ML0F TCB MCB TC3 MC3 TC2 MC2 TC1 MC1 TC0 MC0

MC(0:3),ML(0,3)F,MCB,MSYNC

1 2 3 4 5 6 7 8 9 A B C D E F

(P2)
MENBLF

TCLKI

TCLKI
(P6)

ATARI

NOTES:	ATARI A.S.G.
STEVE CANN 11-2-83 RDH 4/6/84	TIA-MARIA COLOR DELAY LINE & LUM.
	SHEET 3 OF 6 | REV N/C

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16 MAY 84 19:32 /USER/BOB/TIA-MARIA 3.DRAW

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NOTES: RDH 4/11/84	ATARI A.S.G.
	TIA~MARIA
	DATA BUS I/O INTERFACE
	SHEET 4 OF 6 REV N/C

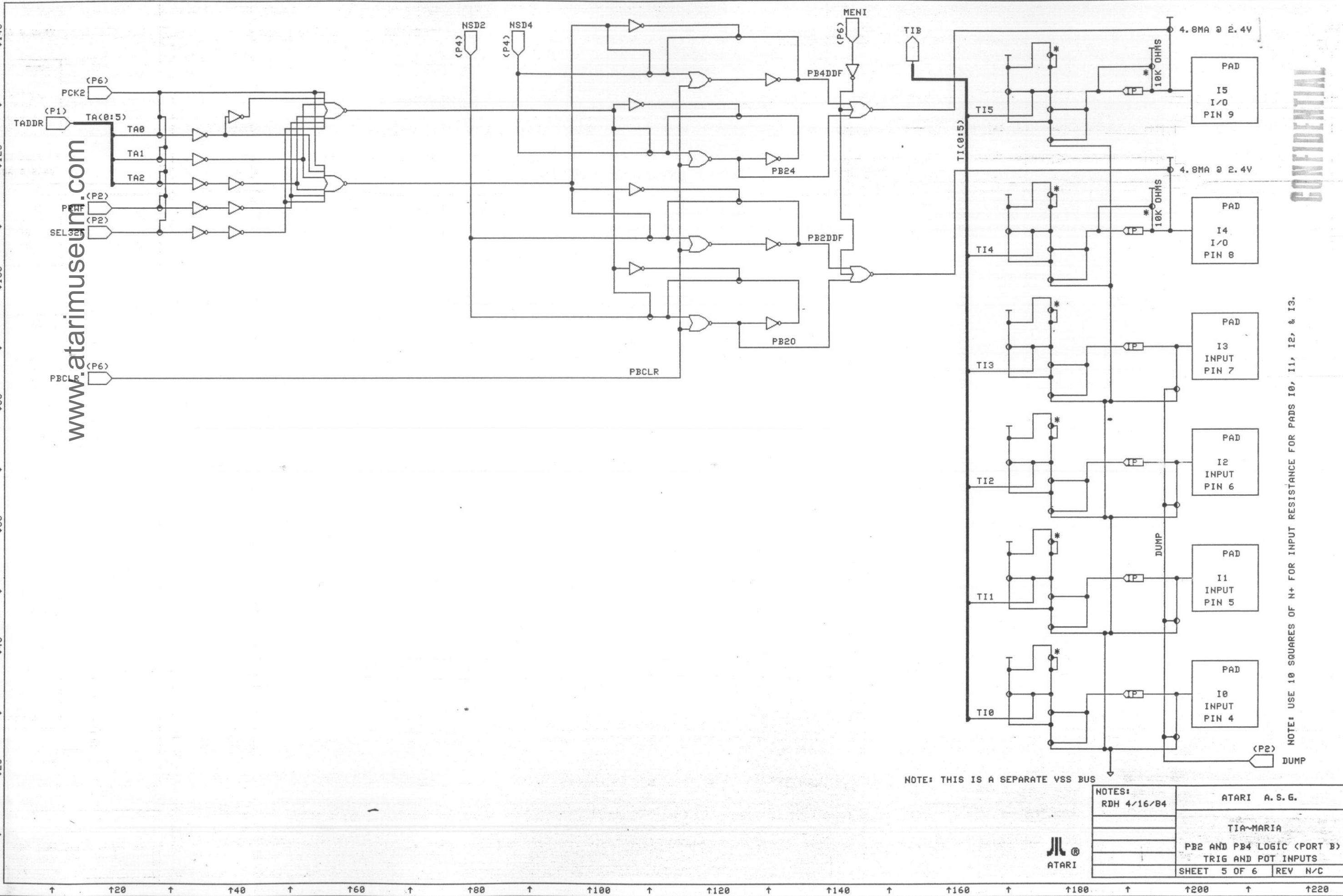
ATARI

11 MAY 84 12:18 /USER/BOB/TIA~MARIA 4.DRAW

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NOTES:
RDH 4/16/84

ATARI A.S.G.

TIA-MARIA
PB2 AND PB4 LOGIC (PORT B)
TRIG AND POT INPUTS

SHEET 5 OF 6 | REV N/C

ATARI

11 MAY 84 12:19 /USER/BOB/TIA-MARIA 5.DRAW

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PAD MEN I PIN 46

* 5K OMH PULL-UP

IP

MENI

MENI (P2,P3,P5)

PCK2 PCK2F PCK2 PCK2F

PBCLR (P5)

OSCCLKF

OSCCLK

PAD OSC I PIN 2

XTAL

E

E

XTALF

PH2

PH1

SENRES

SLOW (P2)

(P2) PH2

(P2,P4) PH1

EPCK0F (P2,P4)

EPCK0F

EPCK0

TOGF

PH2

PH1

Q0

Q1

SCLRN

SCLR

TOG

PH2

PH1

PH2

PH1

PH2

PH1

PH2

FREEZE

FREEZEN

PCK0 (P2)

PCK2 PCK2 (P2,P4,P5)

PCK2F PCK2F (P2)

PCKEDGE

PAD PHI2 I PIN 23

IP

PAD PHI0 O PIN 3

(P2) PCKEDGE

(P2) NTB

(P2,P3) TCLKI

(P2) N1C6

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NOTES: RDH 5/11/84	ATARI A.S.G.
	TIA-MARIA
	MARIA & STEPHANIE TIMING LOGIC
	SHEET 6 OF 6 | REV N/C

ATARI

11 MAY 84 12:20 /USER/BOB/TIA-MARIA 6.DRAW

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