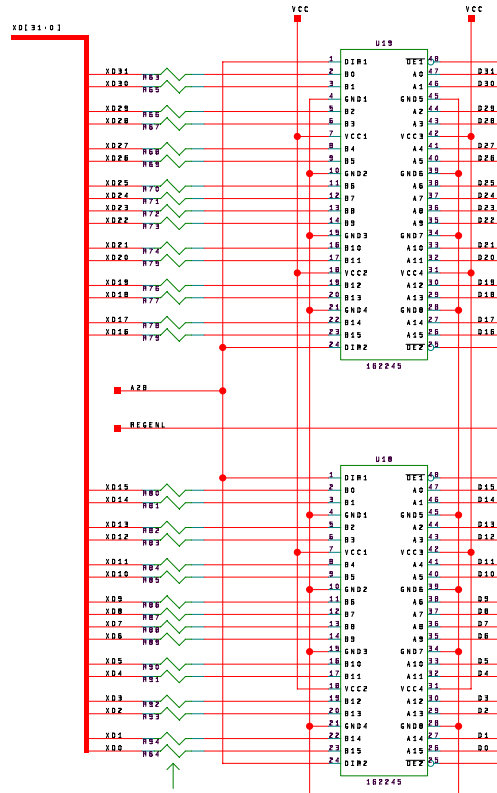
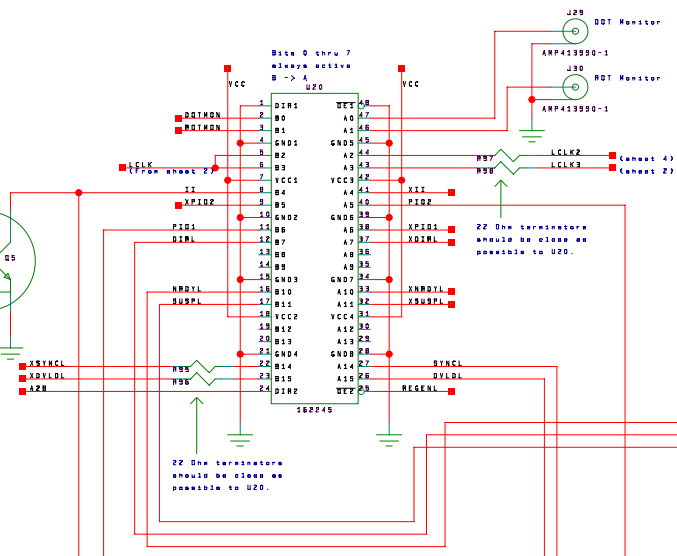


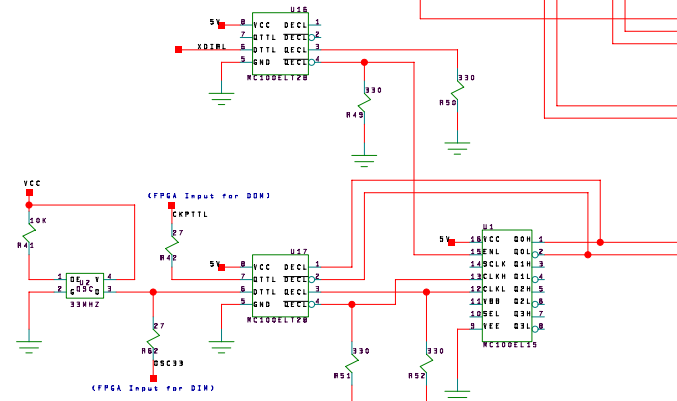
Bypassing for 182745's
Capacitor per VCC pin



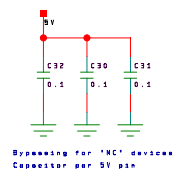
These 22 Ohm terminators
should be close as possible
to their driving IC's
(USB and USB)



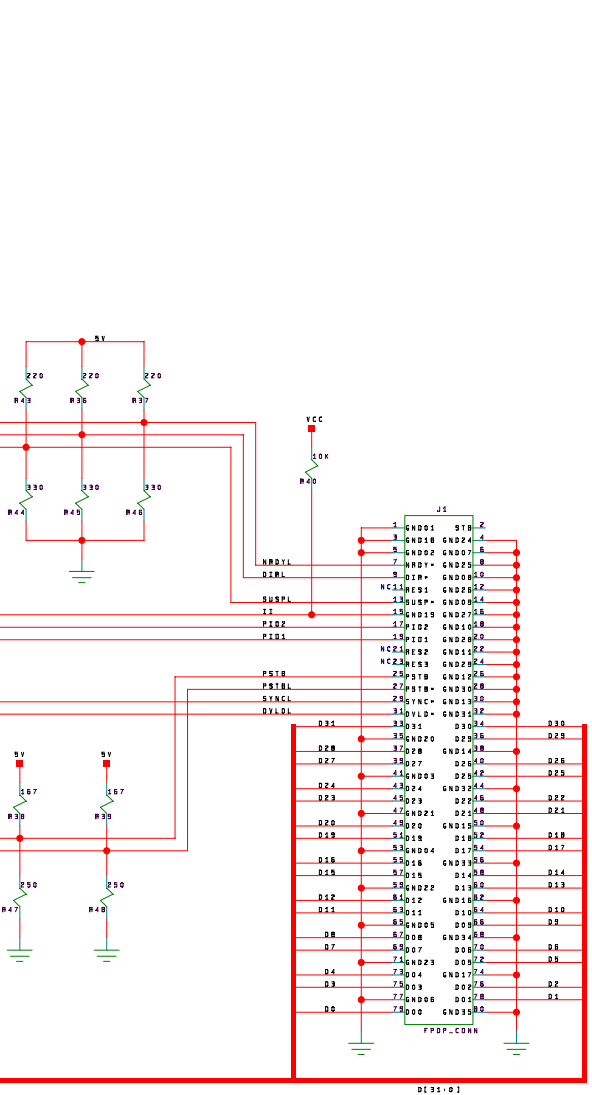
22 Ohm terminators
should be close as
possible to U20.



(FPGA Input for DDI)



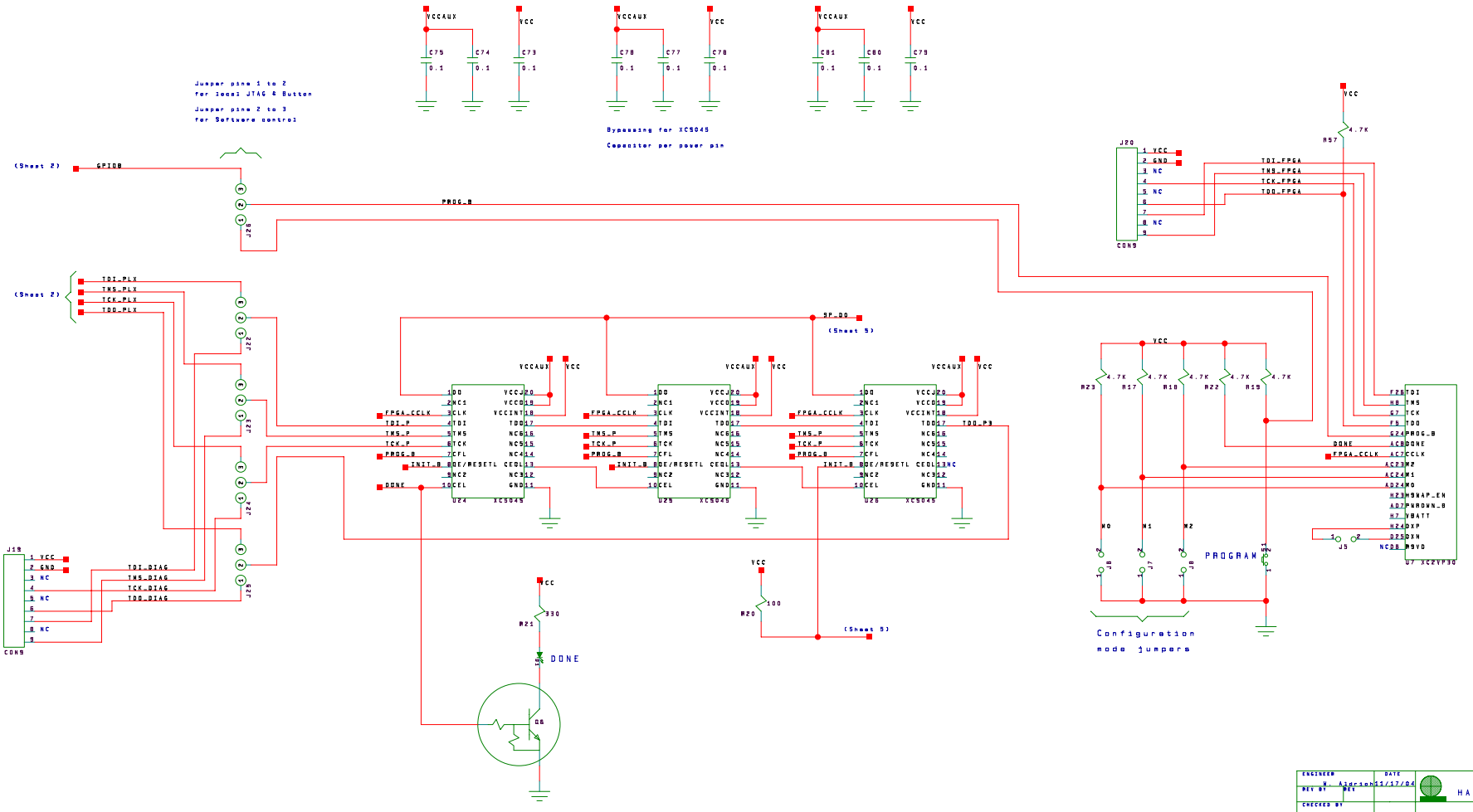
Bypassing for 'NC' devices
Capacitor per V pin



D131-01

ENGINEER	W. Adams	DATE	05/17/84
REV BY	W. Adams		
CHECKED BY			
APPROVALS			

MIT
HAYSTACK OBSERVATORY
MARK 5B I/O BOARD
FPDP INTERFACE
REV 0001
DRAWING NUMBER
SHEET 1
OF 13

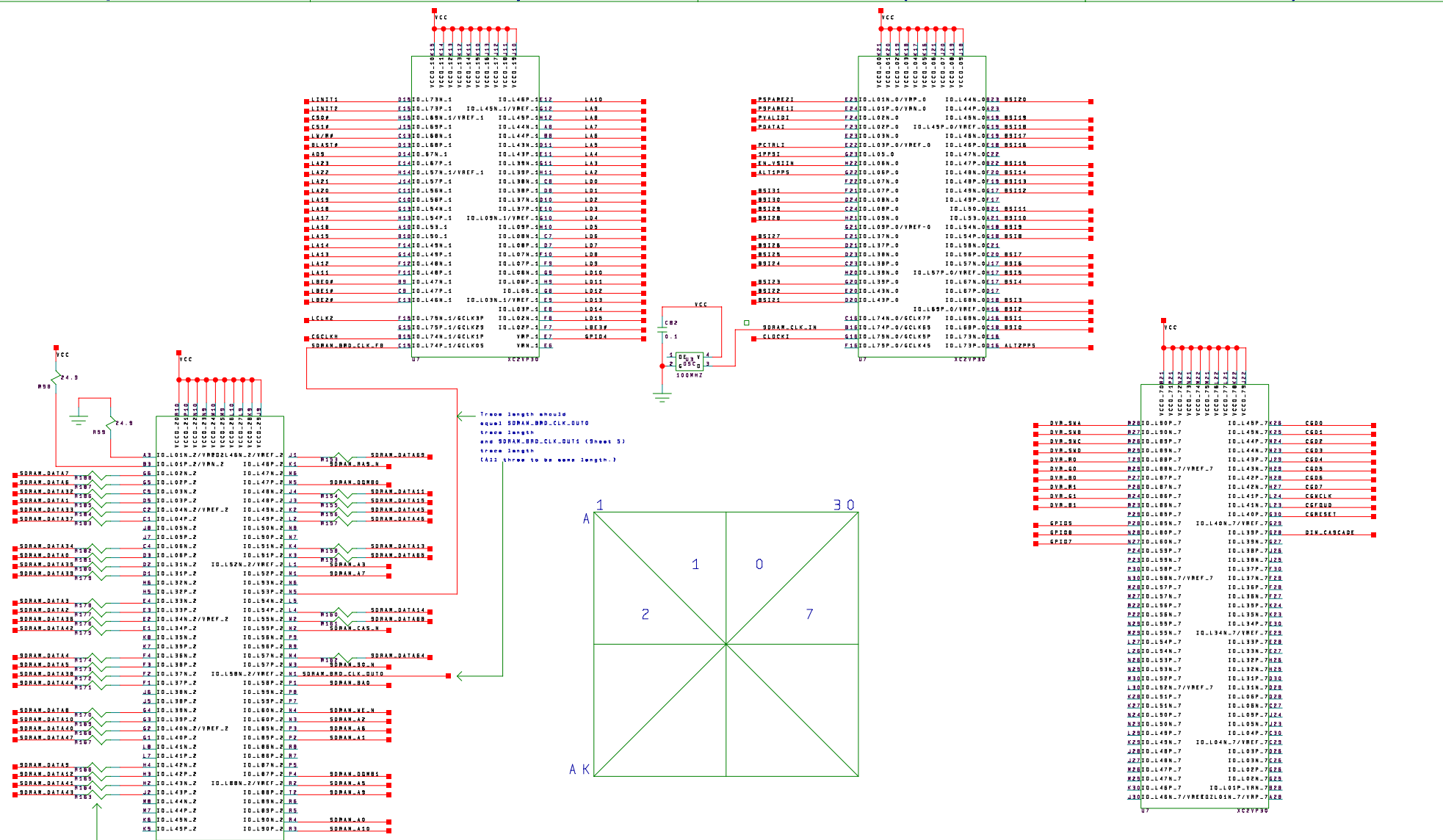


Jumper pins 1 to 2
for Icest JTAG & Button
Jumper pins 2 to 3
for Software control

Bypassing for XCS045
Capacitor per power pin

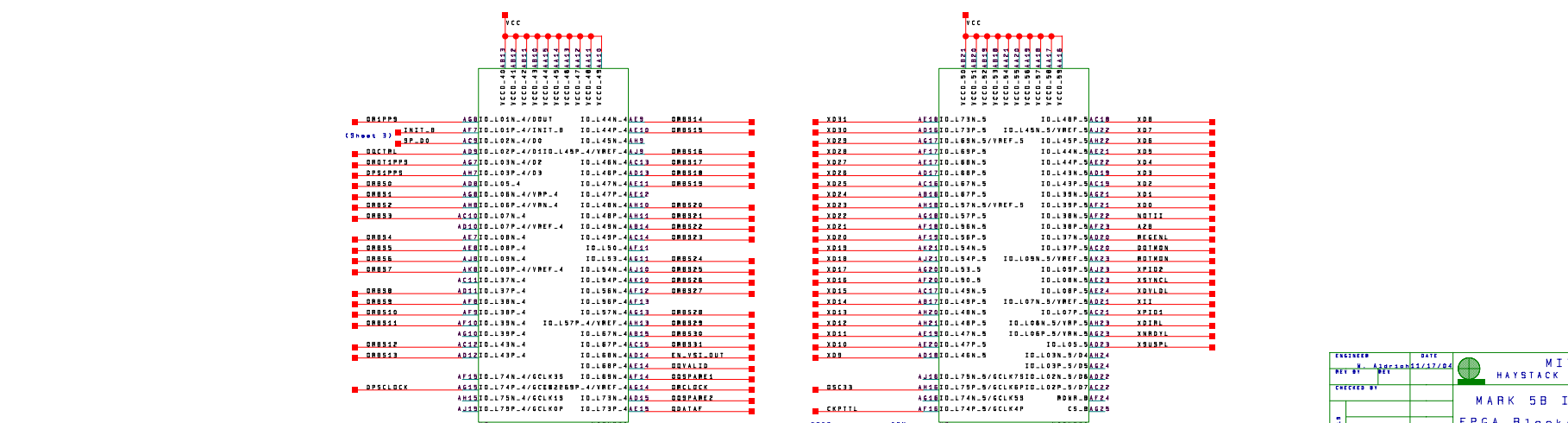
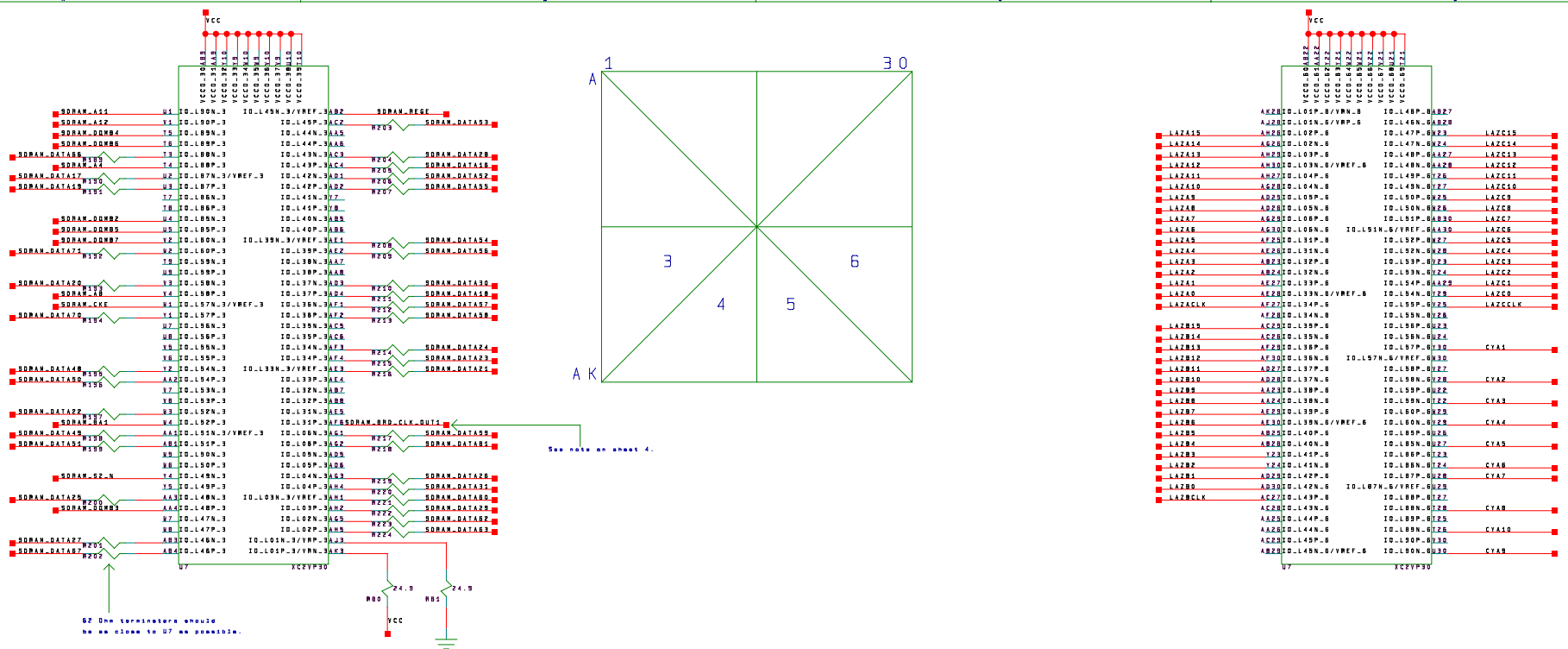
Configuration
mode jumpers

ENGINEER	W. Adams	DATE	11/17/04
REV BY	W. Adams	REV	1
CHECKED BY			
APPROVALS			
MIT HAYSTACK OBSERVATORY			
MARK 5B I/O BOARD CONFIGURATION			
REV	DATE	DRAWING NUMBER	SHEET 3 OF 13
D			

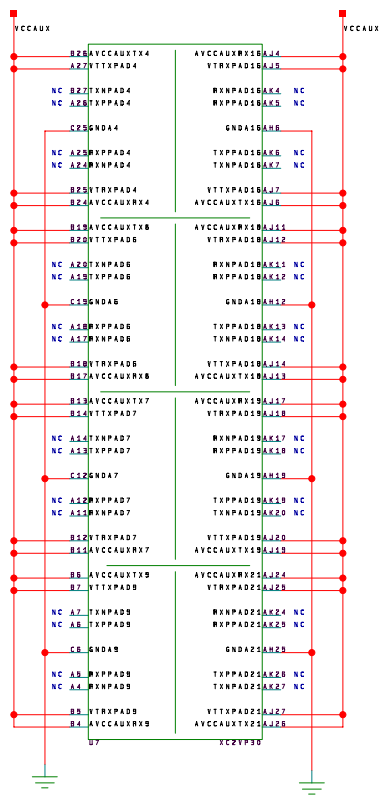
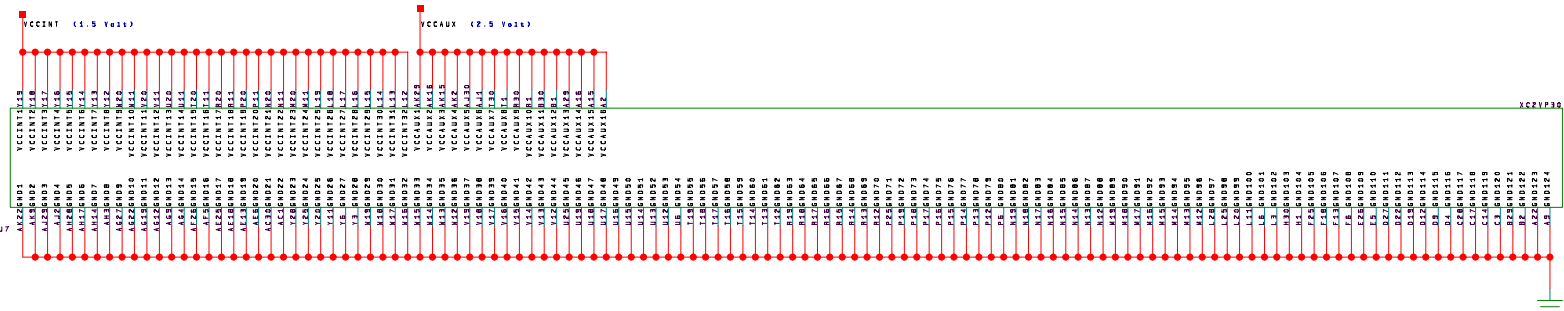


82 Ohm termination should be as close to U7 as possible.

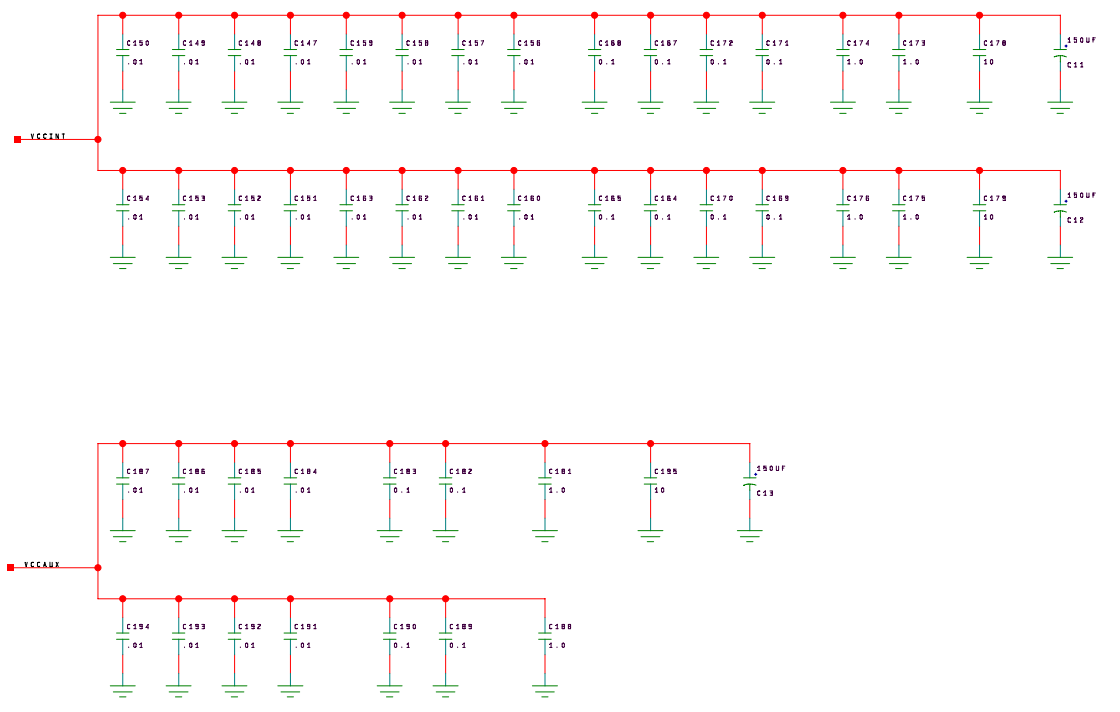
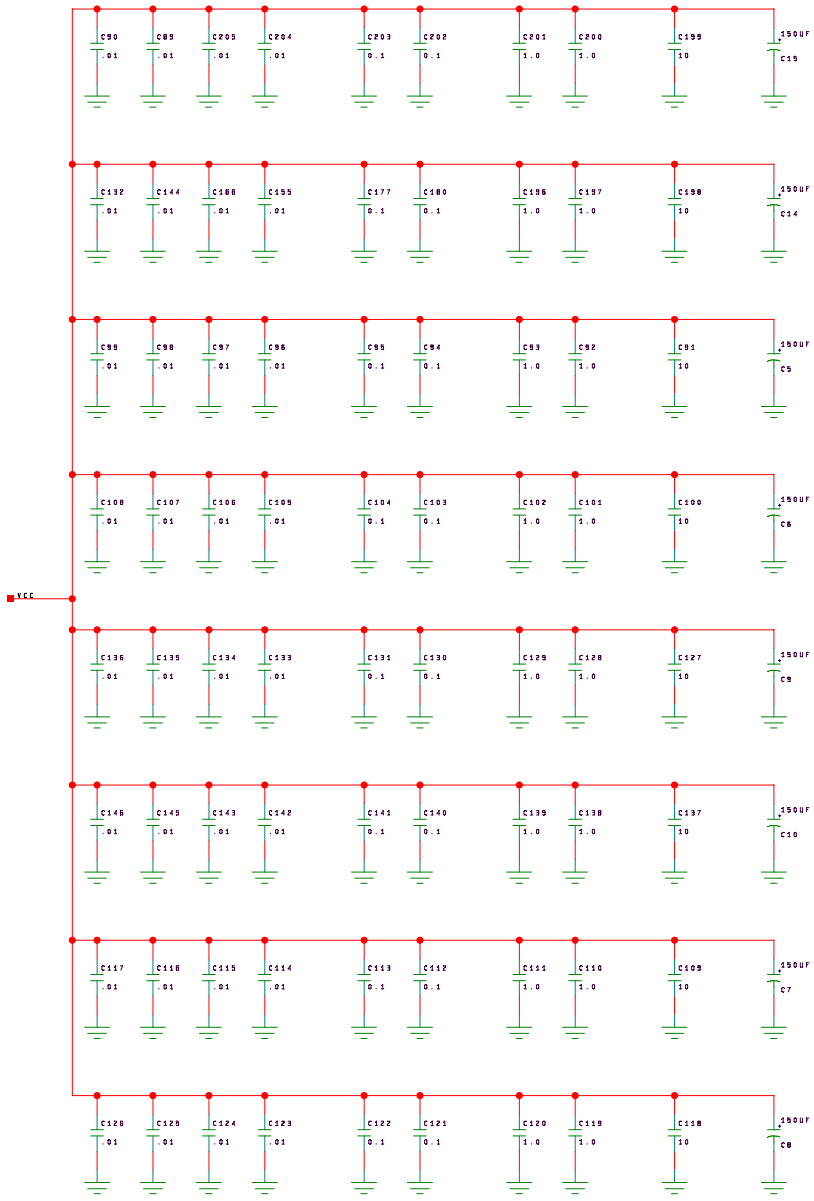
DESIGNED BY	W. Alford	DATE	5/28/04	MIT HAYSTACK OBSERVATORY
REV. NO.	1	REV.		
CHECKED BY				MARK 5B I/O BOARD
				FPGA Blocks 2.1.0.7
APPROVALS				TRAC STYLE D
				DRAWING NUMBER
				SHEET 4 OF 13



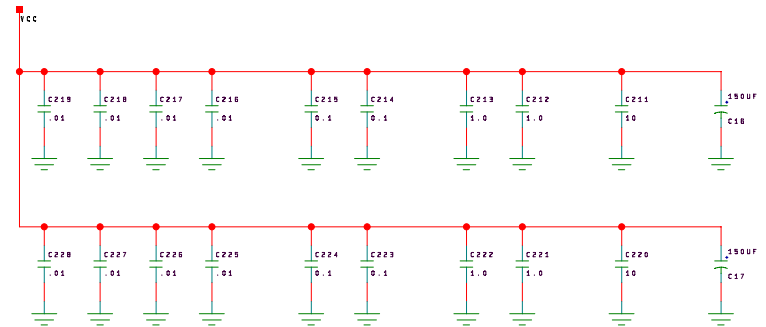
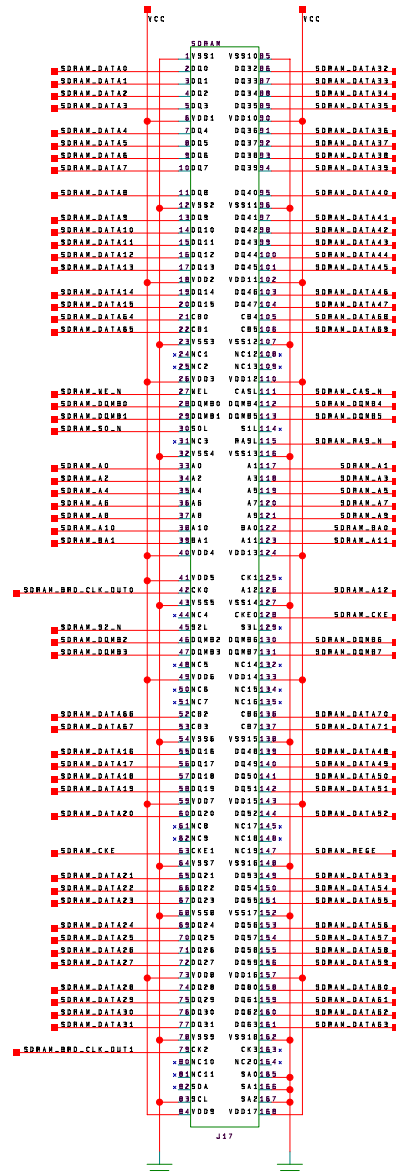
ENGINEER	W. A. Johnson	DATE	05/17/04
REV. BY	W. A. Johnson	REV.	1
CHECKED BY			
APPROVALS			
MIT HAYSTACK OBSERVATORY MARK 5B I/O BOARD FPGA Blocks 3.4.5.6			
DATE	05/17/04	DRAWING NUMBER	
REV.	D	SHEET NUMBER	5
		OF 13	



ENGINEER	DATE	MIT HAYSTACK OBSERVATORY
REV BY	REV	
CHECKER BY		MARK 5B I/O BOARD
APPROVALS		FPGA Blocks Ser. PWR
		REV: 0204
		D
		DRAWING NUMBER
		SHEET 6
		OF 13



ENGINEER	DATE	MIT HAYSTACK OBSERVATORY
DESIGN BY	12/17/2012	
CHECKED BY		MARK 5B I/O BOARD
		FPGA Bypassing
APPROVALS		REV. SIZE
		D
		DRAWING NUMBER
		SHEET 10
		OF 13



Bypassing for SDRAM

ENGINEER	DATE	MIT HAYSTACK OBSERVATORY
REV BY	REV	
CHECKED BY		MARK 5B I/O BOARD SDRAM
APPROVALS		DATE ISSUED
		DRAWING NUMBER
		SHEET 13 OF 13