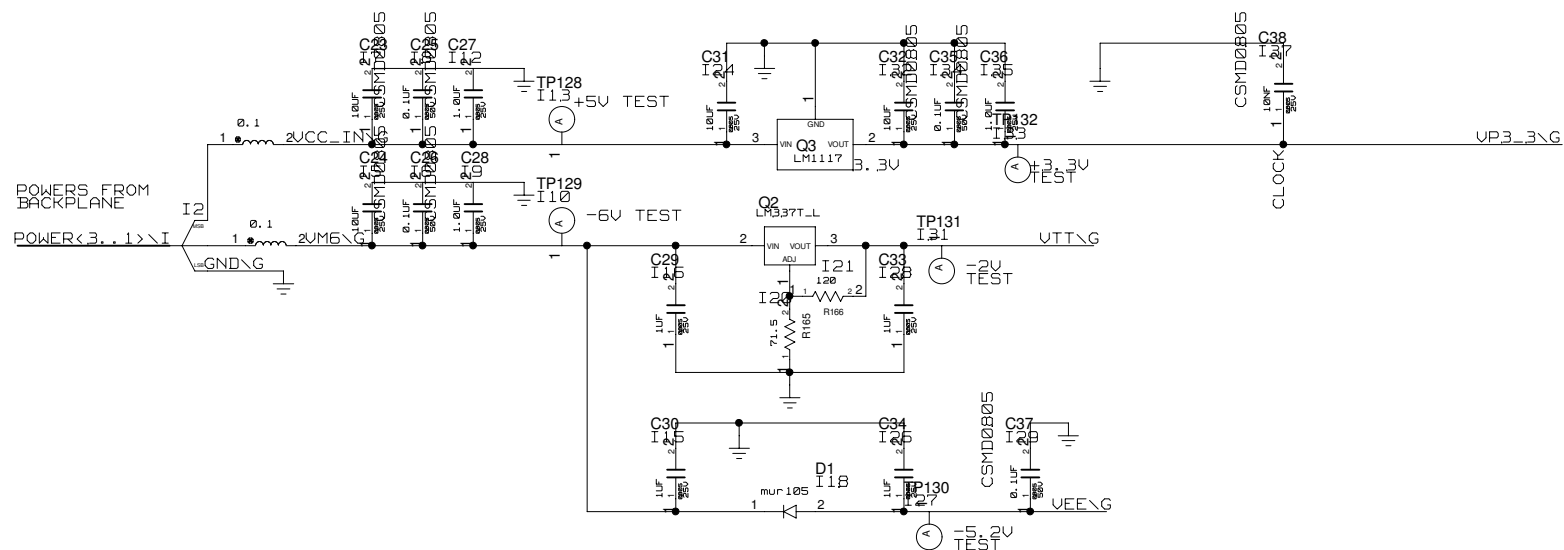

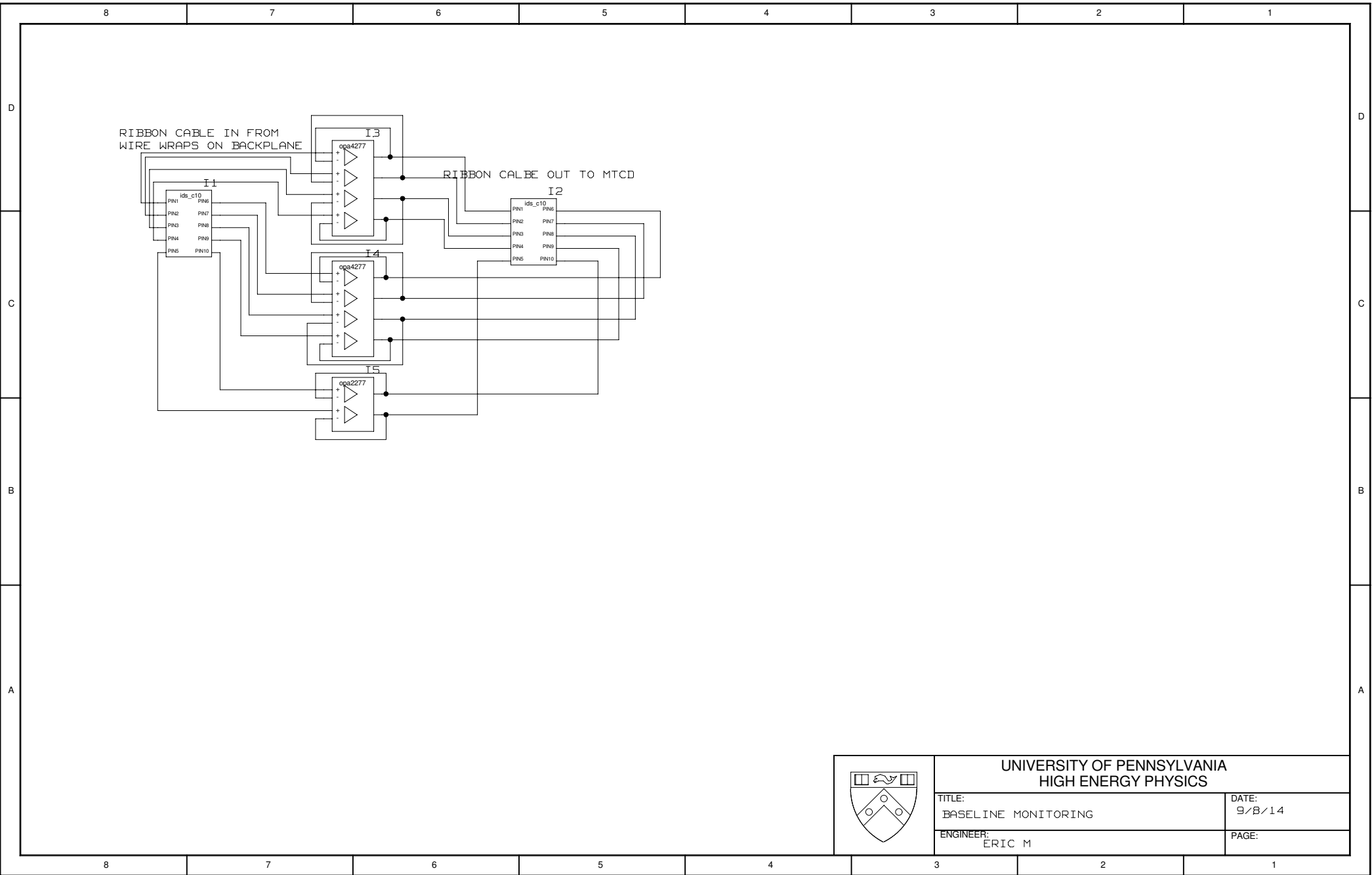


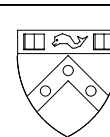
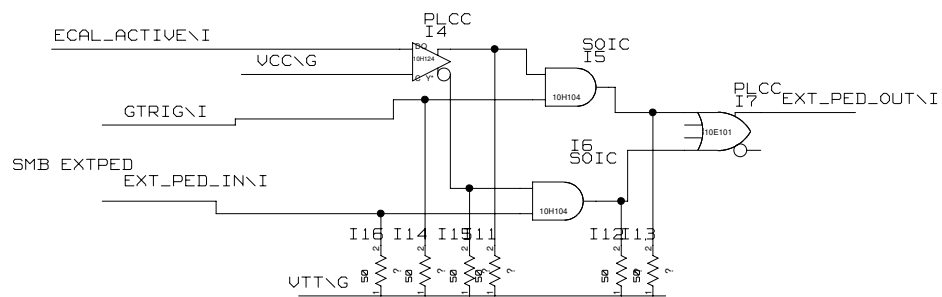
UNIVERSITY OF PENNSYLVANIA HIGH ENERGY PHYSICS

TITLE:	TUBII	DATE:	MAY 25TH
ENGINEER:	GDOG	PAGE:	



	UNIVERSITY OF PENNSYLVANIA HIGH ENERGY PHYSICS	
	TITLE: _____	
	DATE: _____	
ENGINEER: _____		PAGE: _____





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HIGH ENERGY PHYSICS

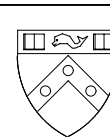
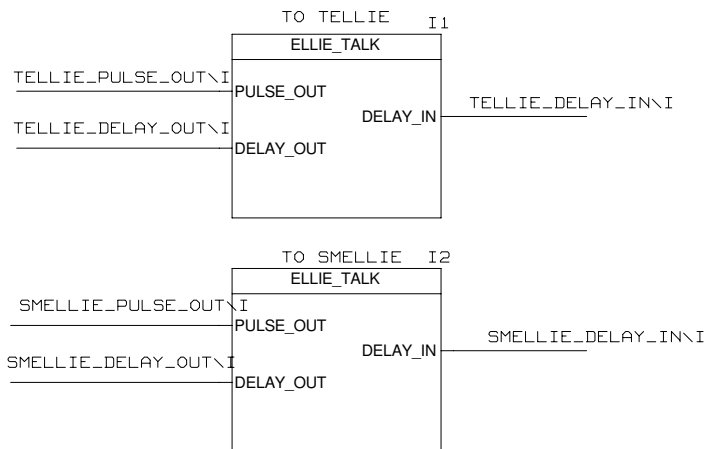
TITLE: ECAL CONTROL

DATE: 9/19/14

ENGINEER: ERIC M

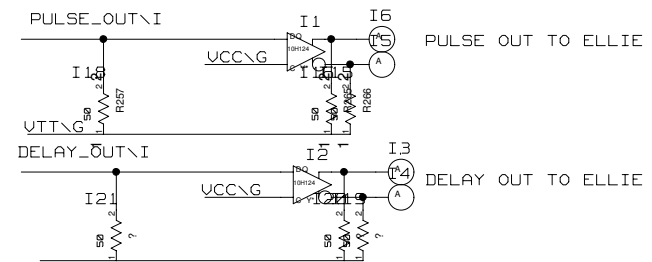
PAGE:

ELLIE
ALL THINGS ELLIE RELATED



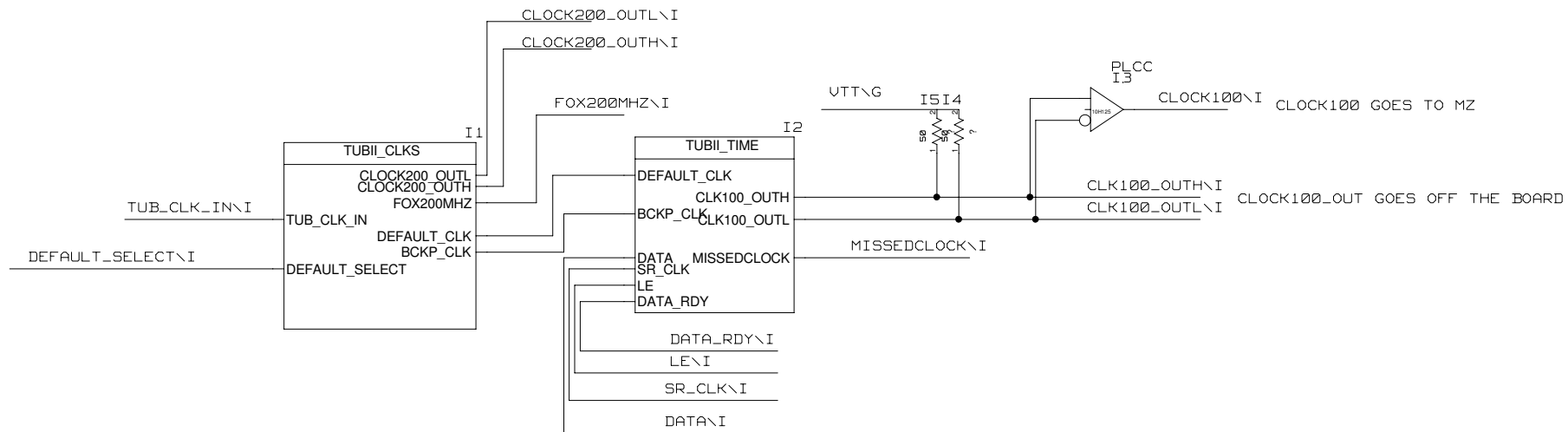
UNIVERSITY OF PENNSYLVANIA
HIGH ENERGY PHYSICS

TITLE: ELLIE		DATE: 9/24/14
ENGINEER: ERIC M		PAGE:

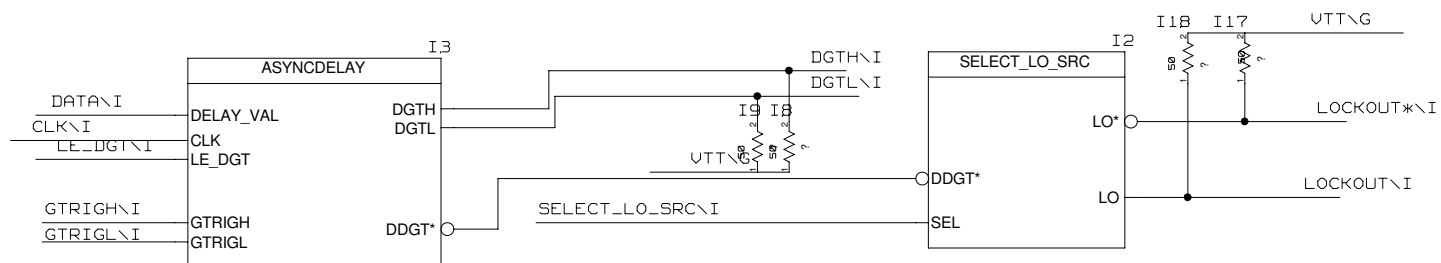


CLOCKS

ALL THINGS CLOCK RELATED



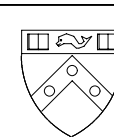
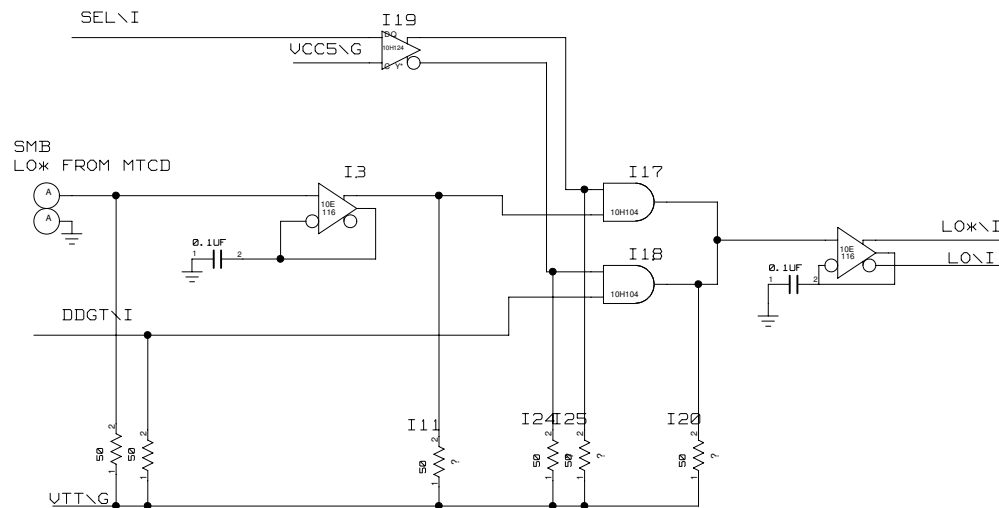
DELAYED GT

UNIVERSITY OF PENNSYLVANIA
HIGH ENERGY PHYSICS

TITLE:	DATE:
ENGINEER:	PAGE:

IN THIS BRAVE NEW TUBII WORLD LO* WILL JUST BE DDGT IN GENERAL
 BUT PERHAPS PEOPLE WILL WANT TO USE THE MTCD'S LO*
 IF FOR NO OTHER REASON THAN NOSTALGIA.
 THIS BLOCK PROVIDES USERS WITH THE ABILITY TO SELECT WHERE
 THEIR LO* COMES FROM, SHOULD SUCH FEELINGS OF NOSTALGIA ARISE

ADD LED'S TO INDICATE WHICH IS BEING USED?



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 HIGH ENERGY PHYSICS

TITLE:
 SELECT LOCKOUT SOURCE

DATE:
 9/11/14

ENGINEER:
 ERIC M

PAGE:

ASYNCHRONOUS DELAY

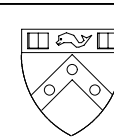
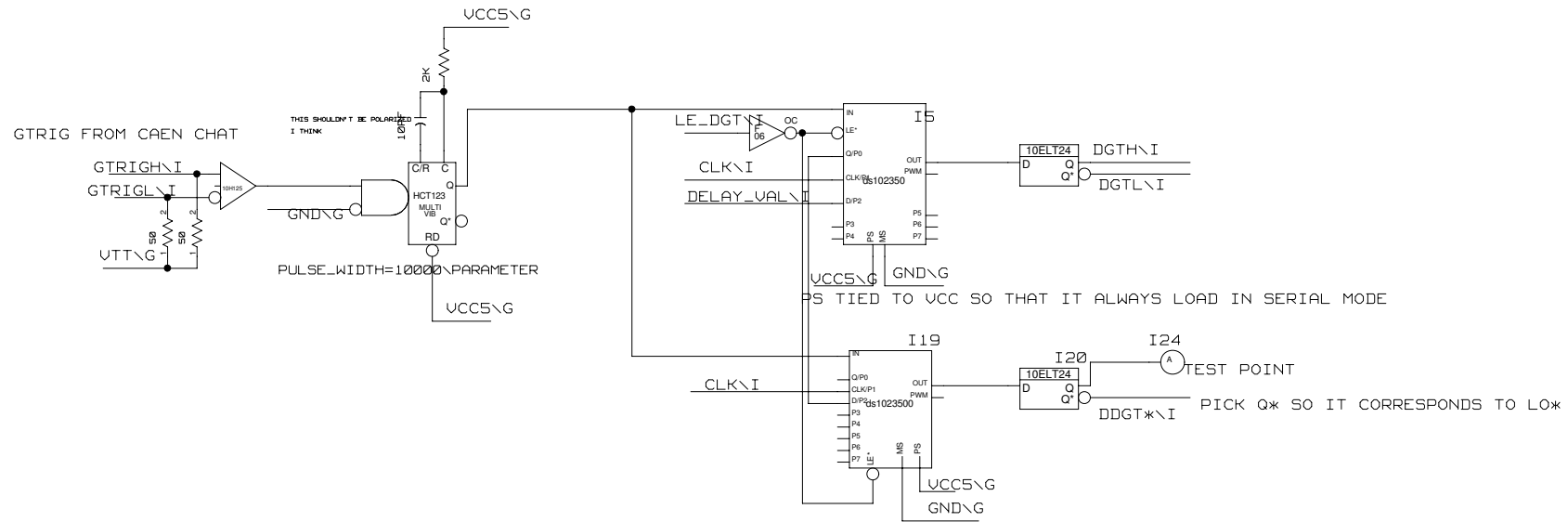
0 - 127.5 NS DELAY

IN 0.5NS STEPS

AND 0 - 1275 NS DELAY

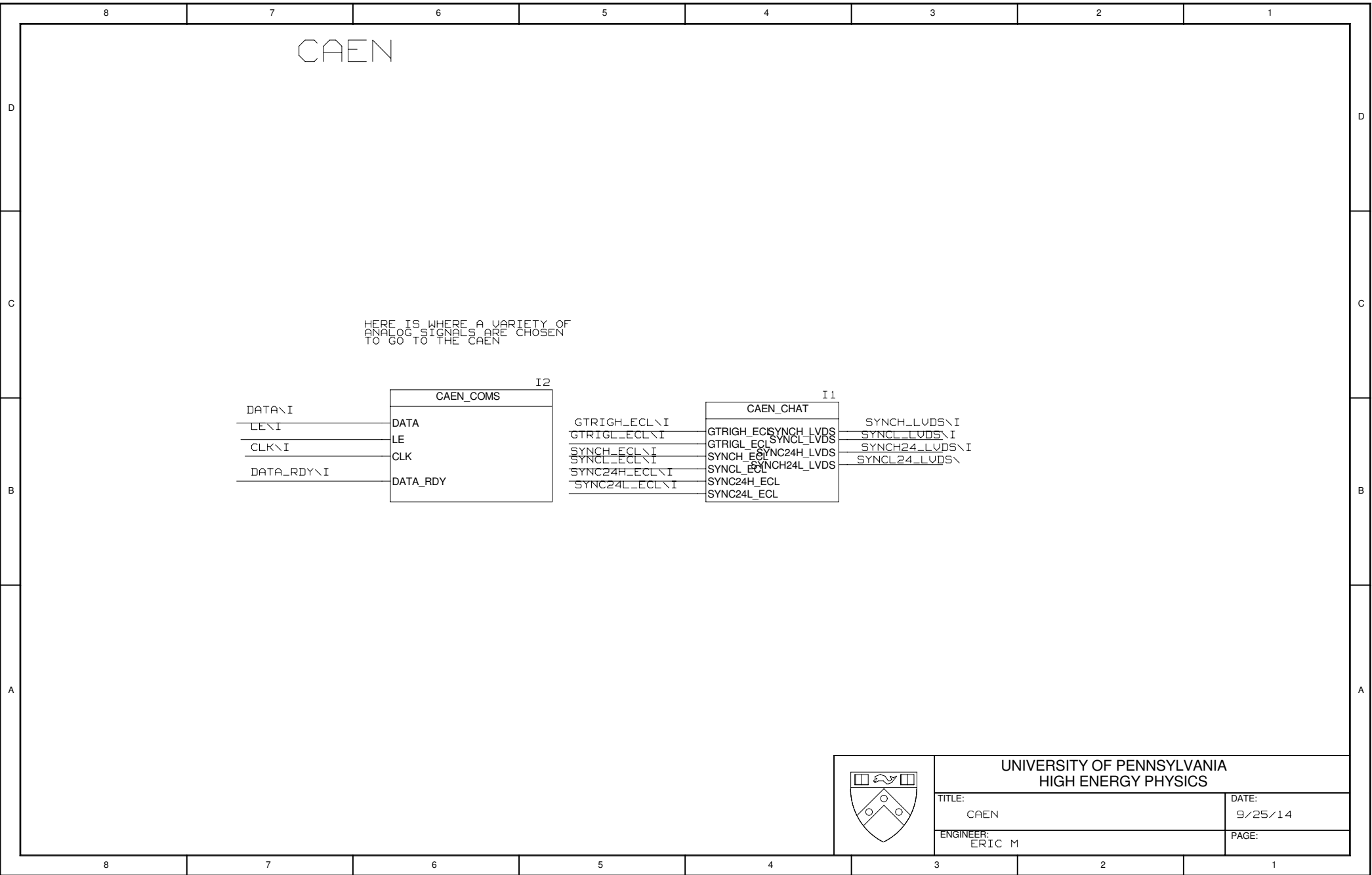
IN 5 NS STEPS

THE TWO DELAYS ARE DAISY CHAINED TOGETHER
SO THEY'RE PROGRAMMED LIKE ONE 16 BIT REGISTER

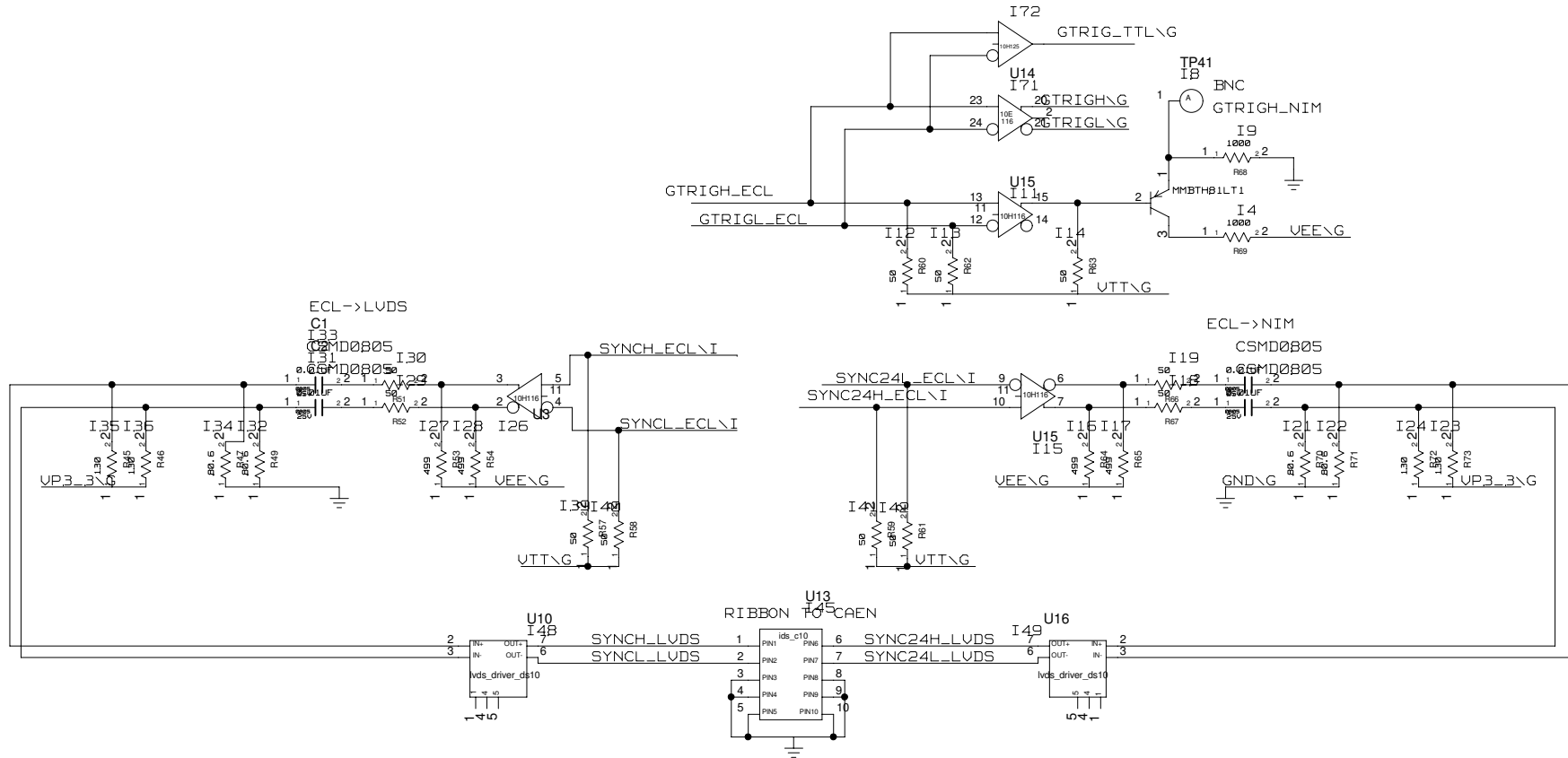


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HIGH ENERGY PHYSICS

TITLE:	ASYNC DELAY	DATE:
ENGINEER:		PAGE:

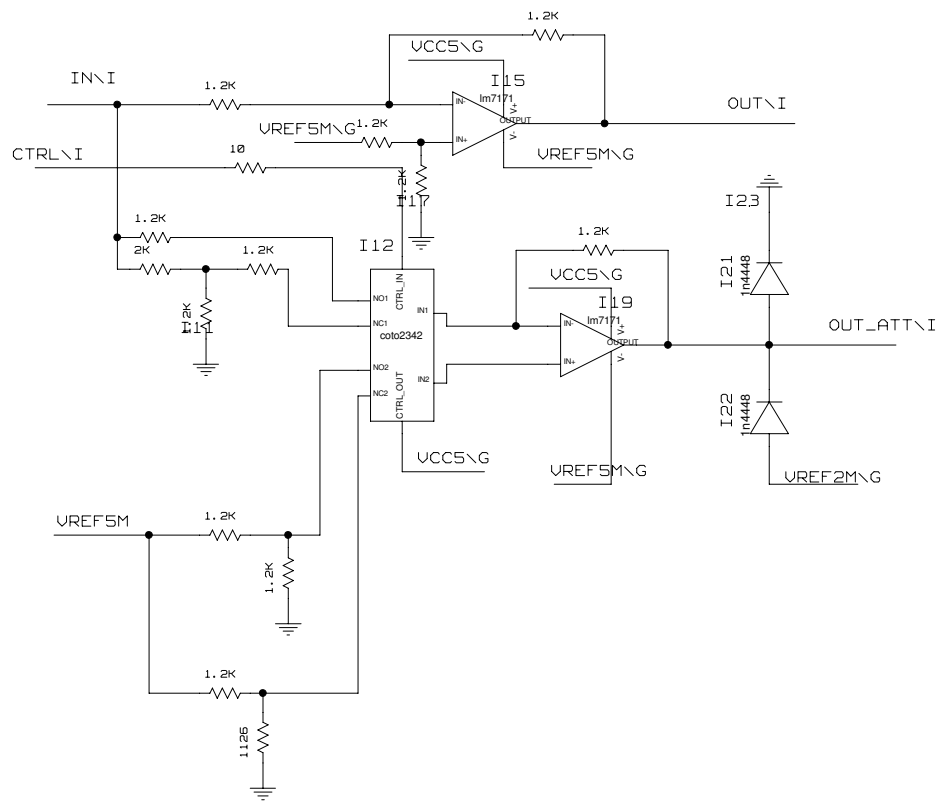



CAEN CONVERSATIONS



8 7 6 5 4 3 2 1

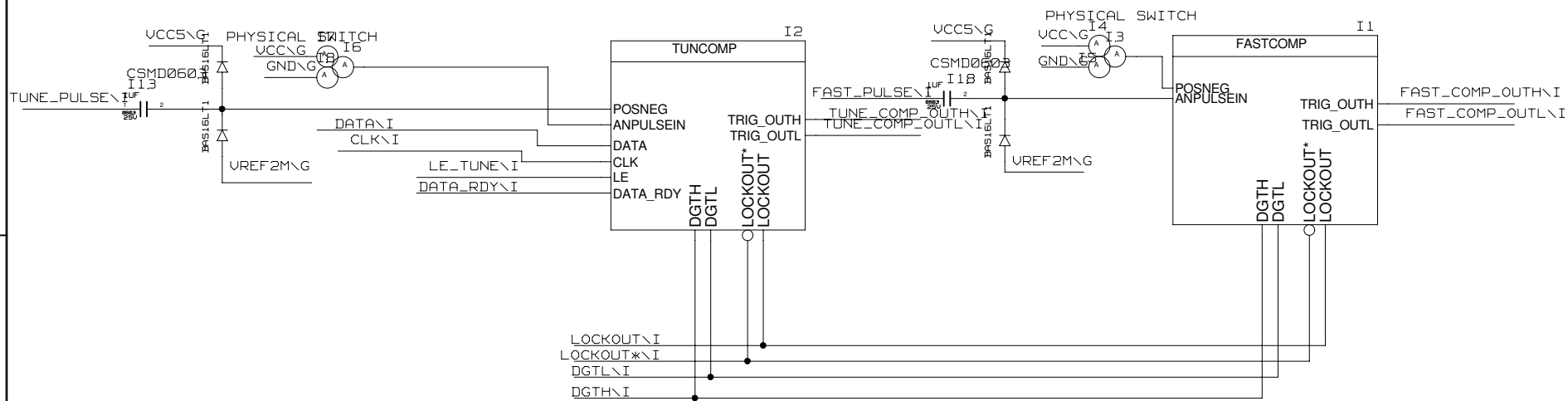
LM7171 NEEDS TO BE REPLACED WITH SOMETHING BETTER



	UNIVERSITY OF PENNSYLVANIA HIGH ENERGY PHYSICS	
	TITLE: CAEN_BUFFER	DATE: 8/18/14
	ENGINEER: ERIC M	PAGE:

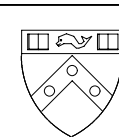
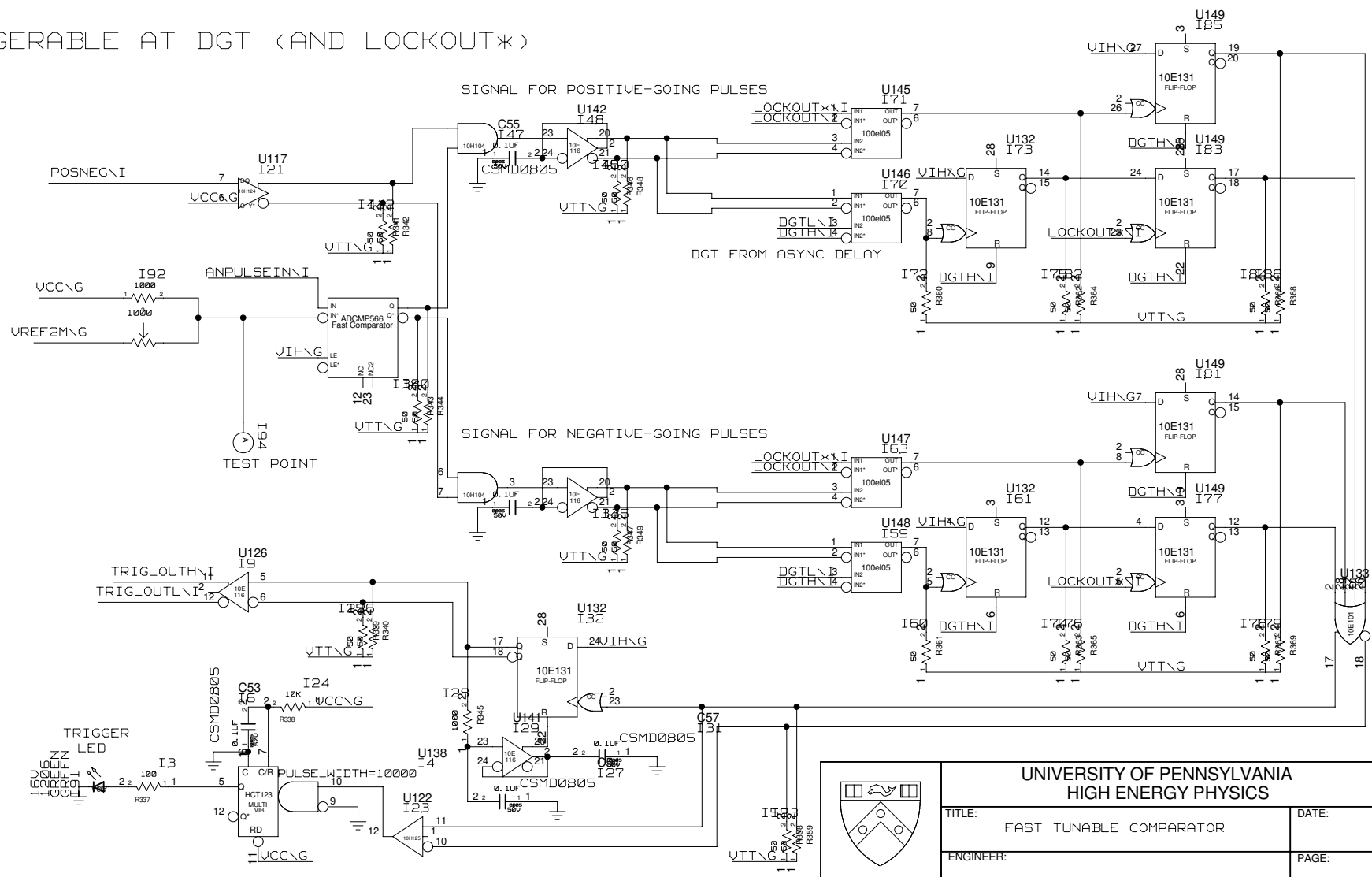
8 7 6 5 4 3 2 1

COMPARATORS



EXTRA SPEEDY TUNABLE COMPARATOR CIRCUIT
 RANGE: -2.0 TO +3 V; 4.25 NS DELAY (250PS FROM COMPARATOR)
 NB DAC_OE NEEDS TO CLOCK THE SERIAL DATA AT <50MHZ (PREF 25MHZ)
 NB2 VDD = +15V VSS = -15V TO SUPPLY DAC


RETRIGGERABLE AT DGT (AND LOCKOUT*)



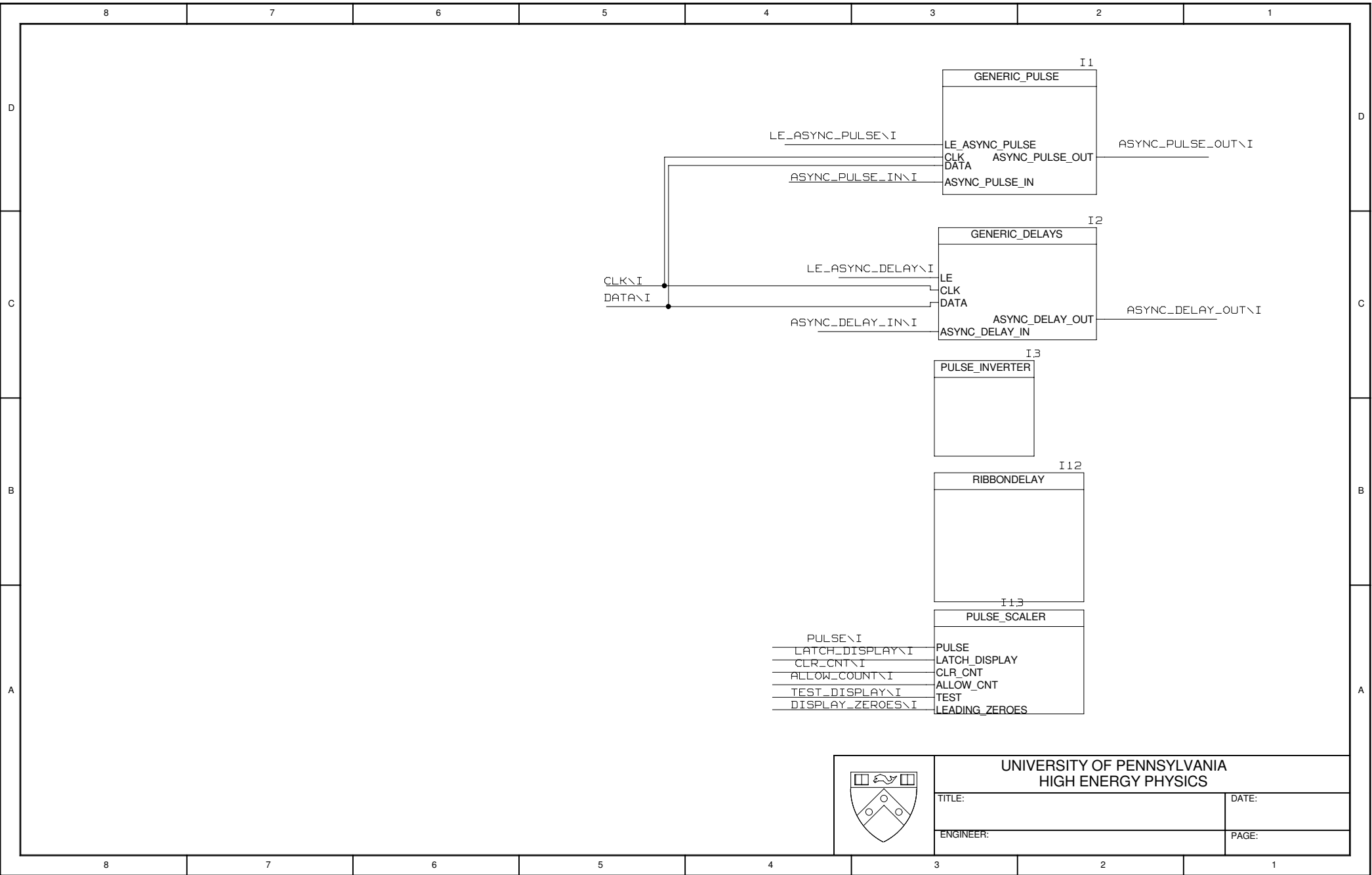
UNIVERSITY OF PENNSYLVANIA
 HIGH ENERGY PHYSICS

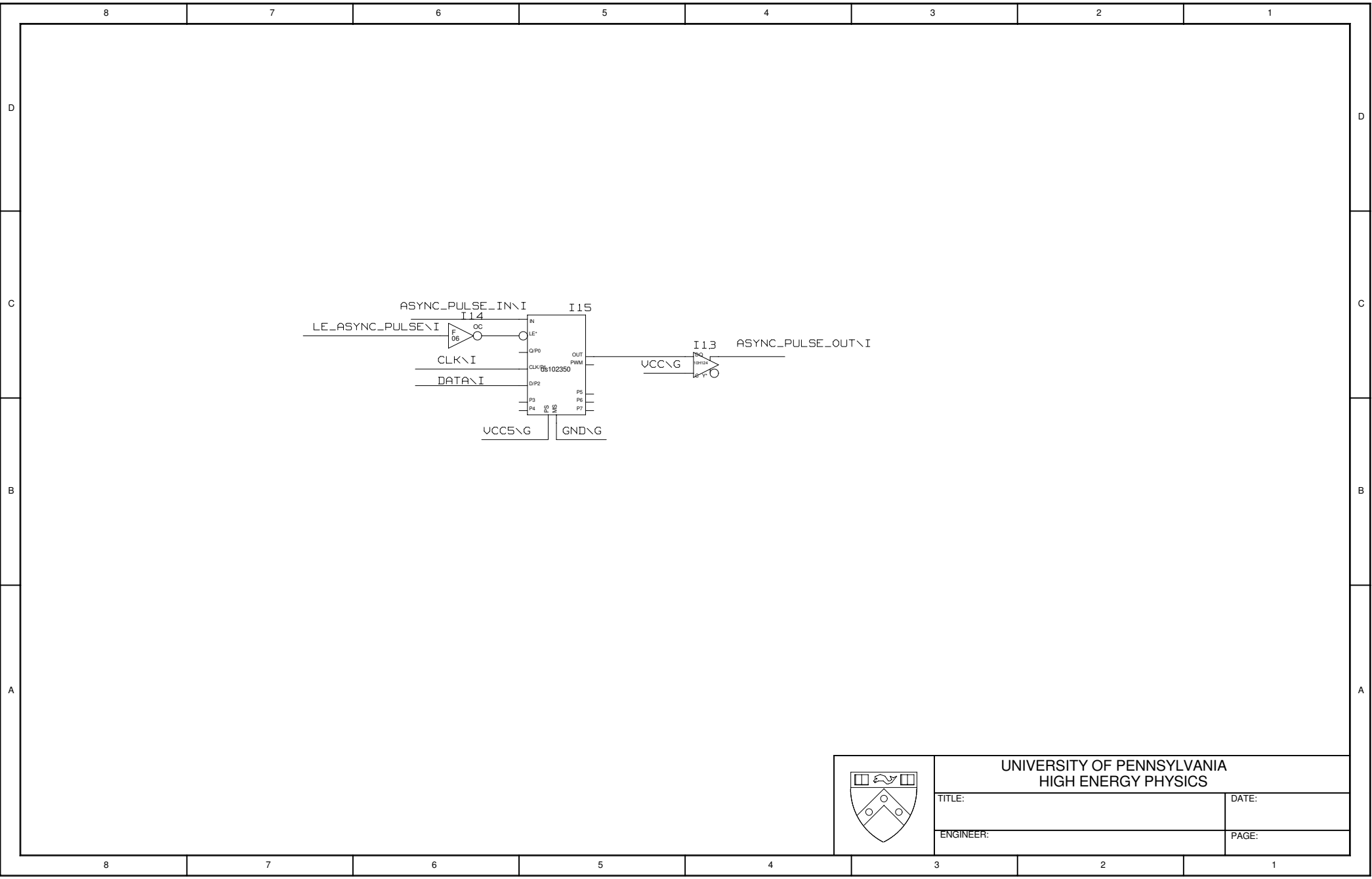
TITLE:	FAST TUNABLE COMPARATOR	DATE:
ENGINEER:		PAGE:

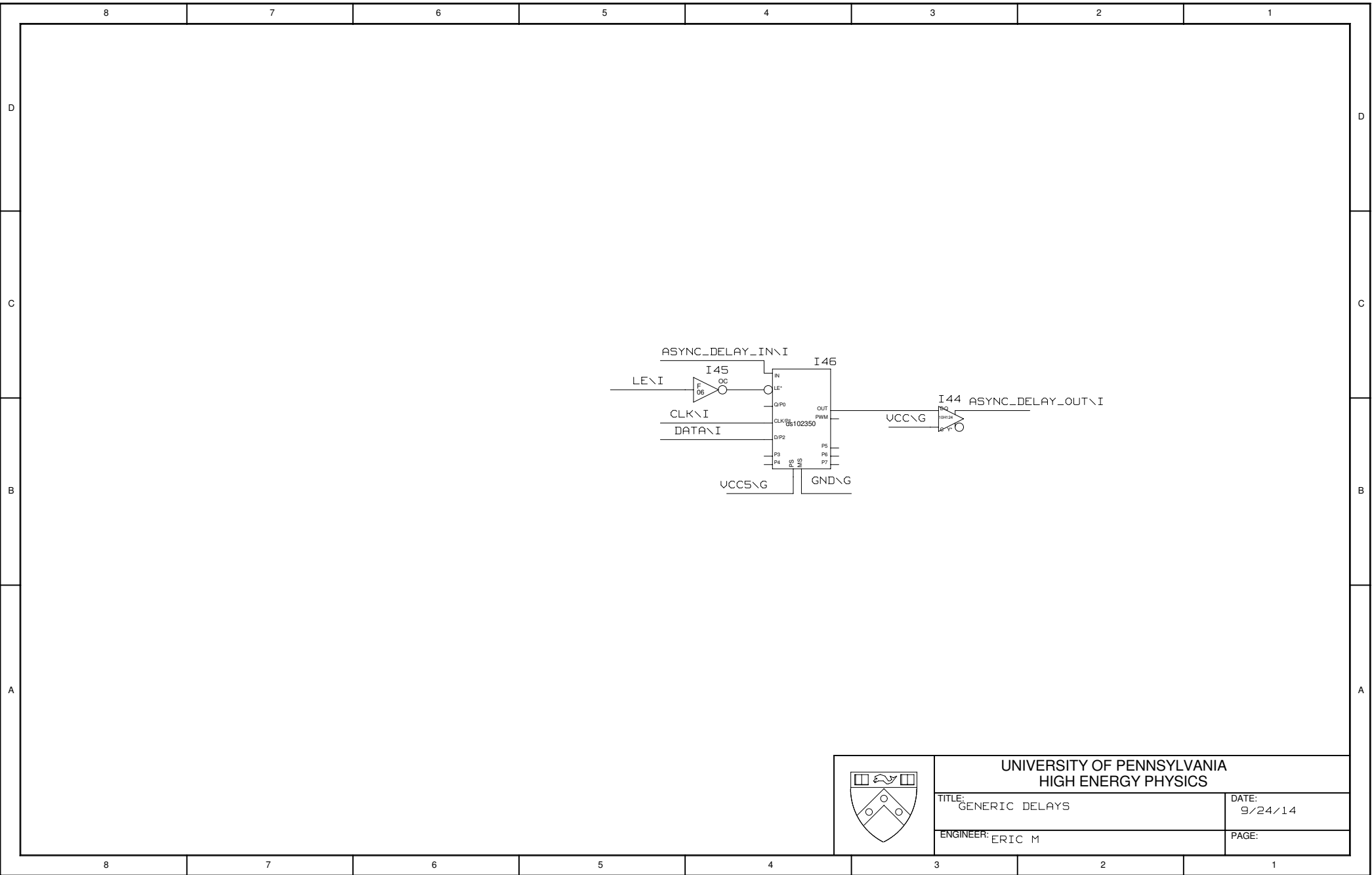
RETRIGGERABLE AT DGT (AND LOCKOUT*)

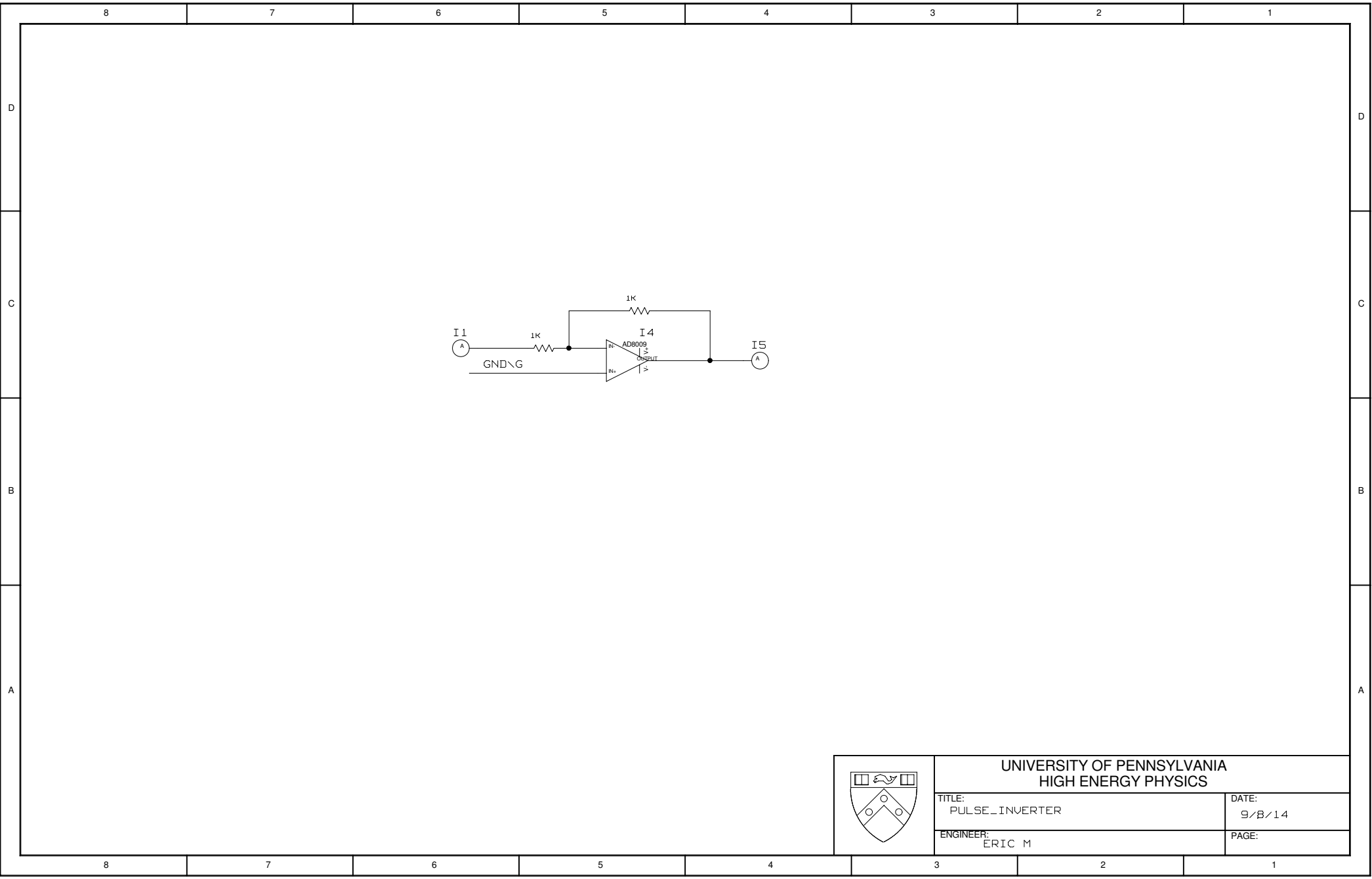


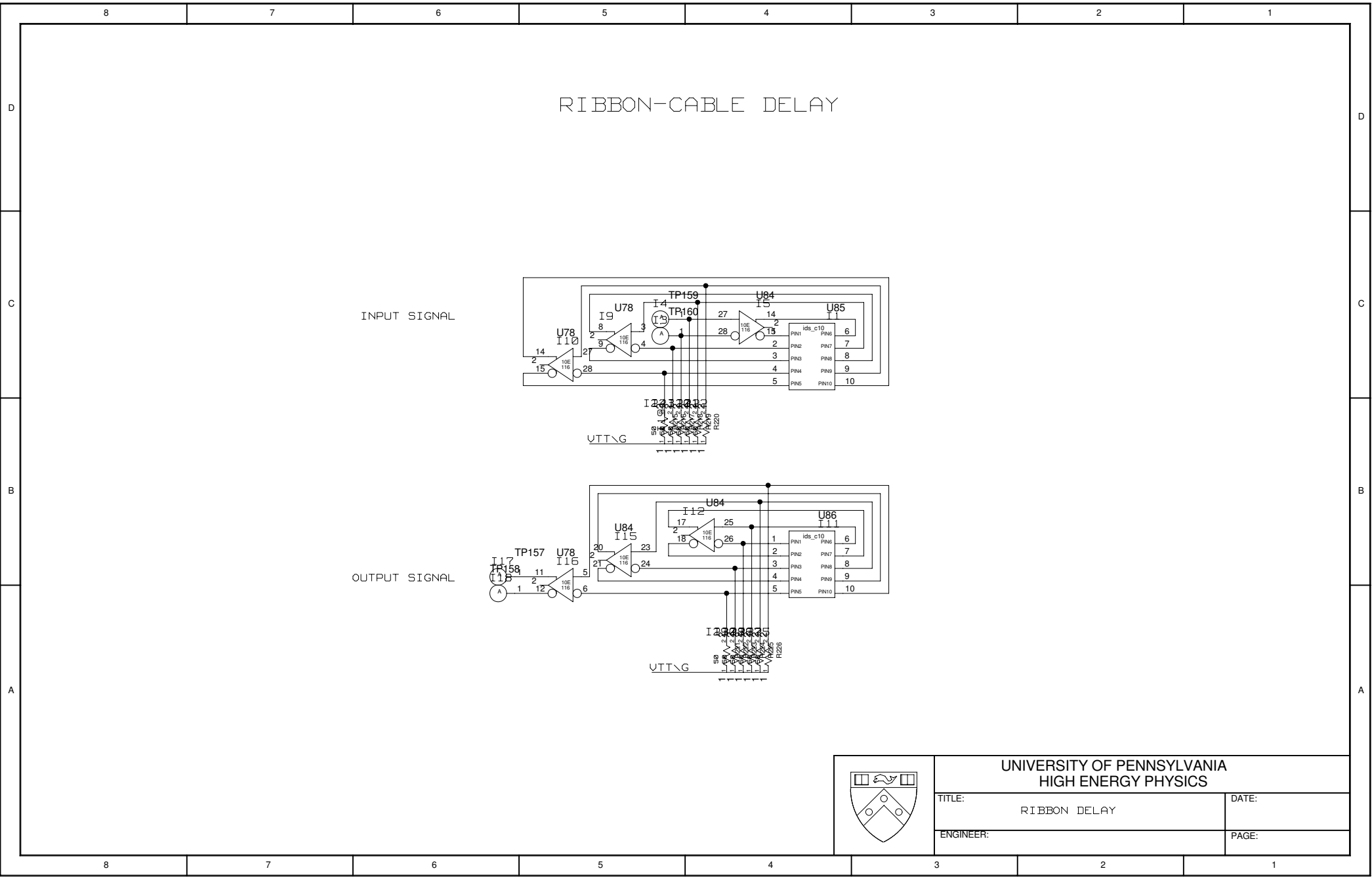
TITLE:	TUNABLE COMPARATOR
ENGINEER:	

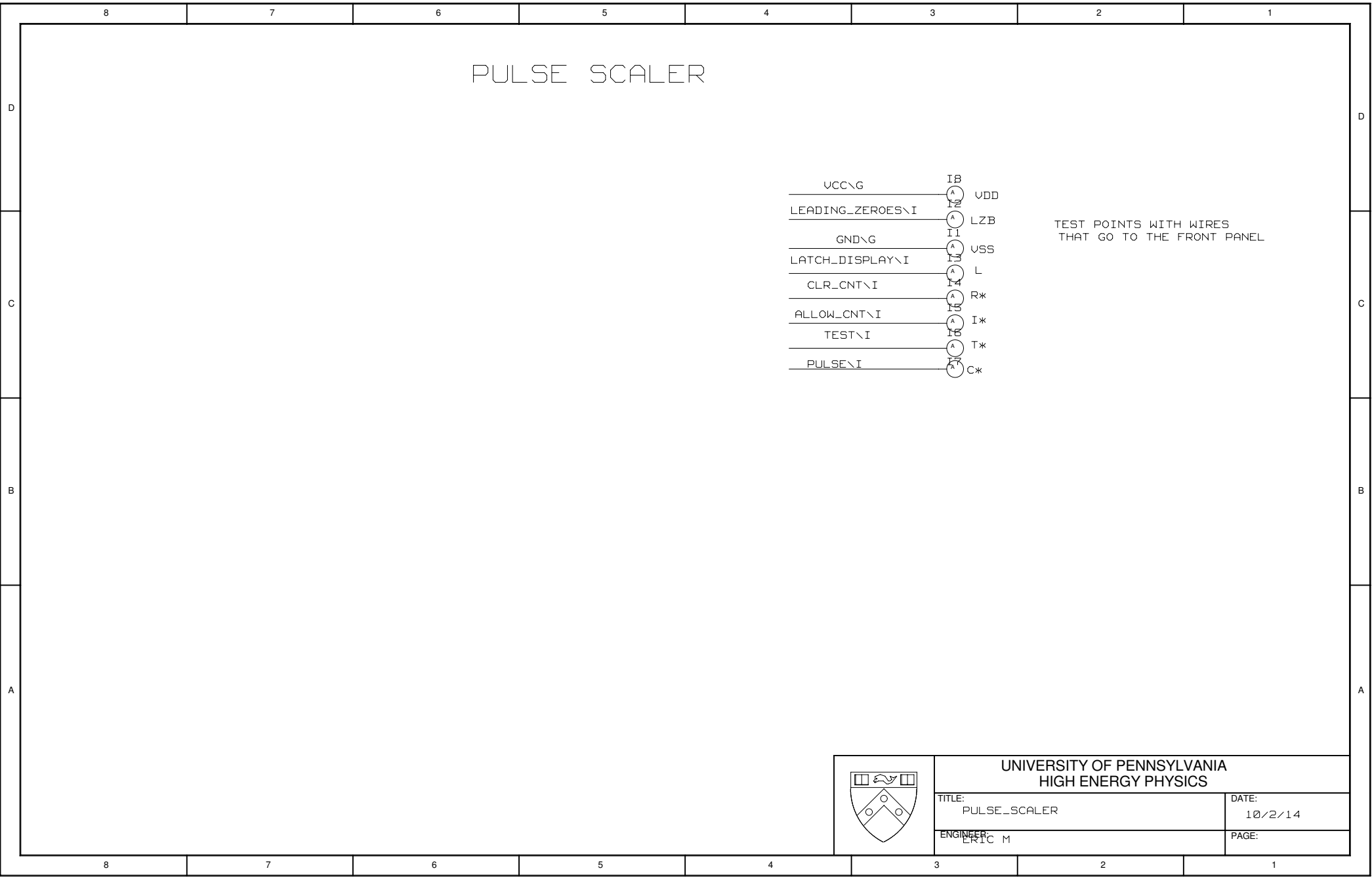







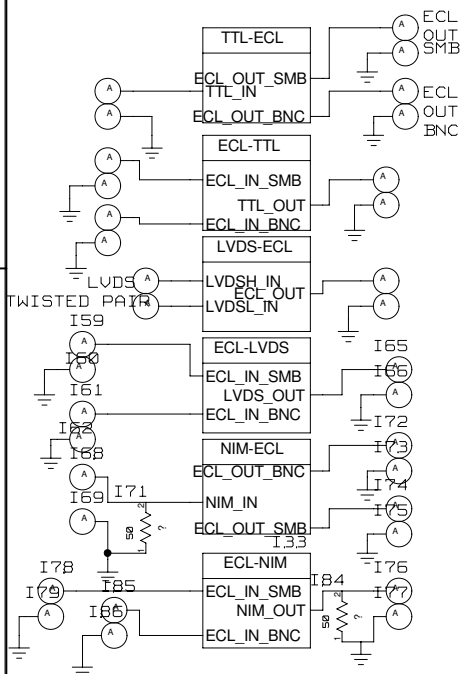
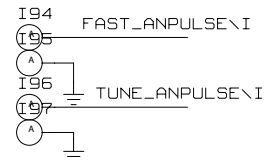
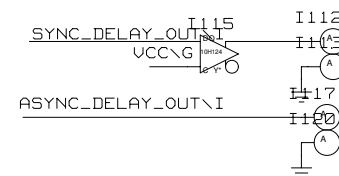
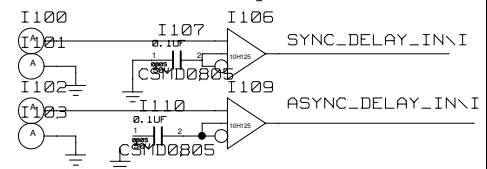
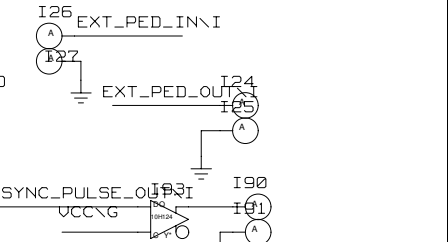
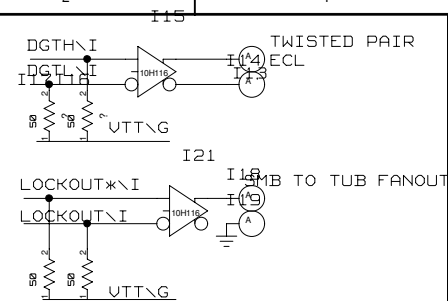
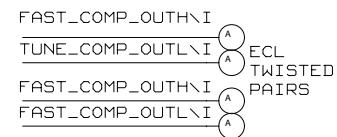
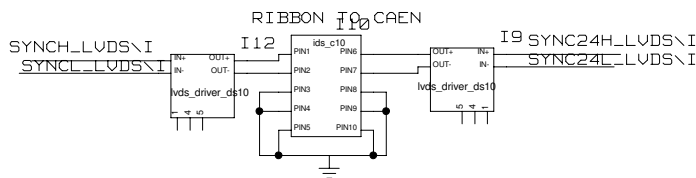
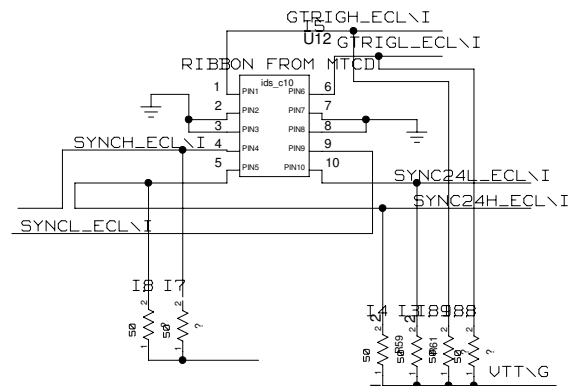


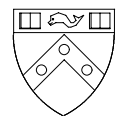


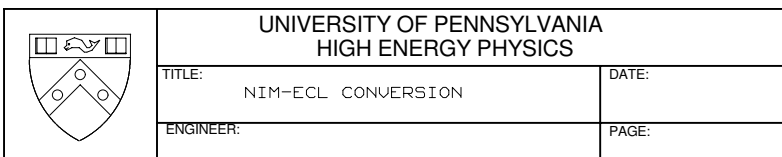


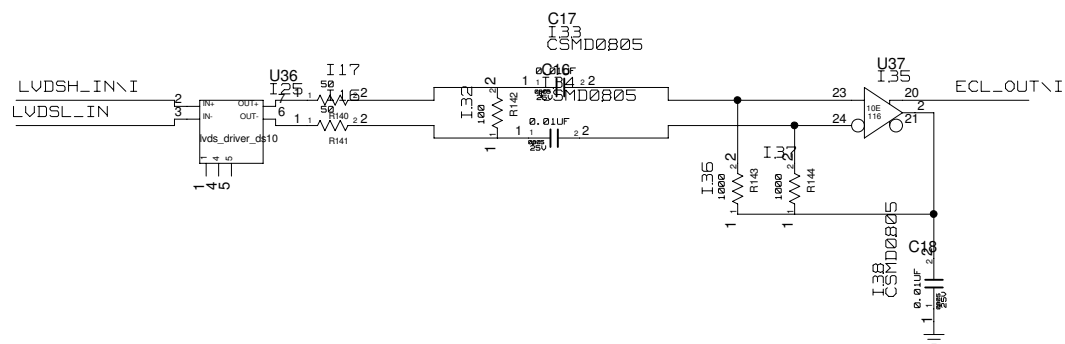
	UNIVERSITY OF PENNSYLVANIA HIGH ENERGY PHYSICS	
	TITLE: PULSE_SCALER	DATE: 10/2/14
	ENGINEER: ERIC M	PAGE:

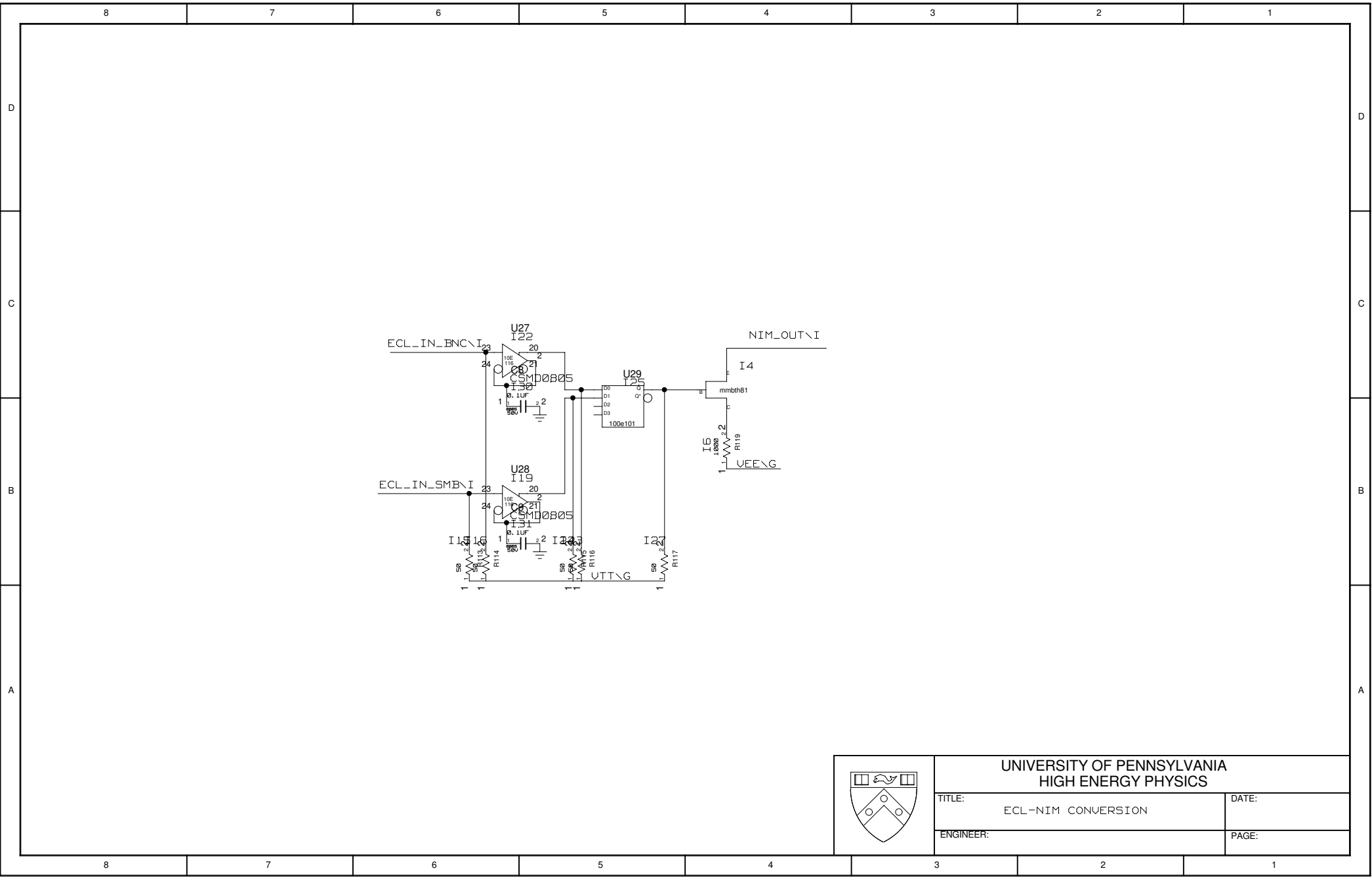
PORTS PORTS IN/OUT OF TUBII

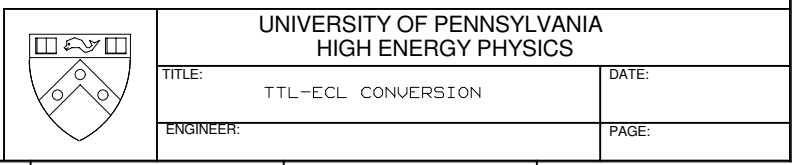


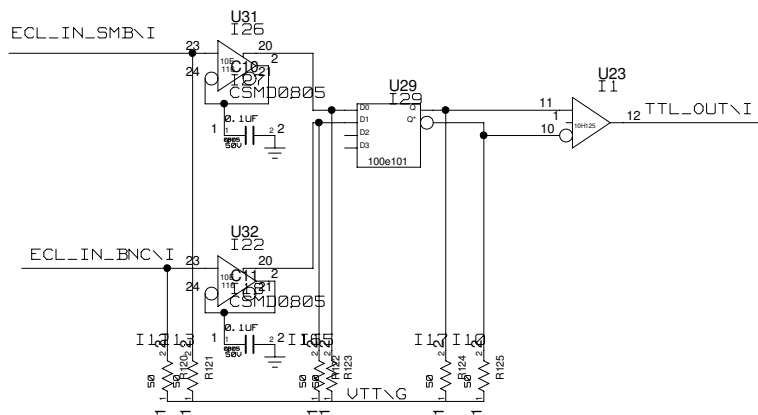
		UNIVERSITY OF PENNSYLVANIA HIGH ENERGY PHYSICS	
TITLE: PORTS		DATE: 9/26/14	
ENGINEER: ERIC M		PAGE:	









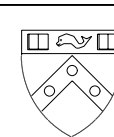
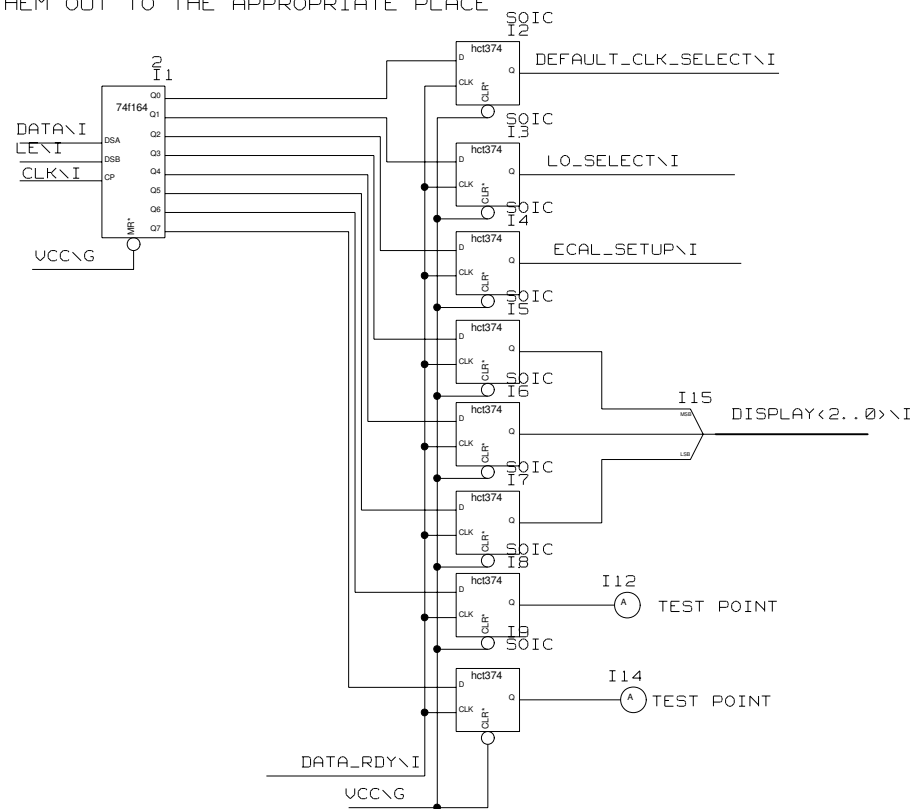


UNIVERSITY OF PENNSYLVANIA HIGH ENERGY PHYSICS

TITLE: ECL-TTL CONVERSION	DATE:
ENGINEER:	PAGE:

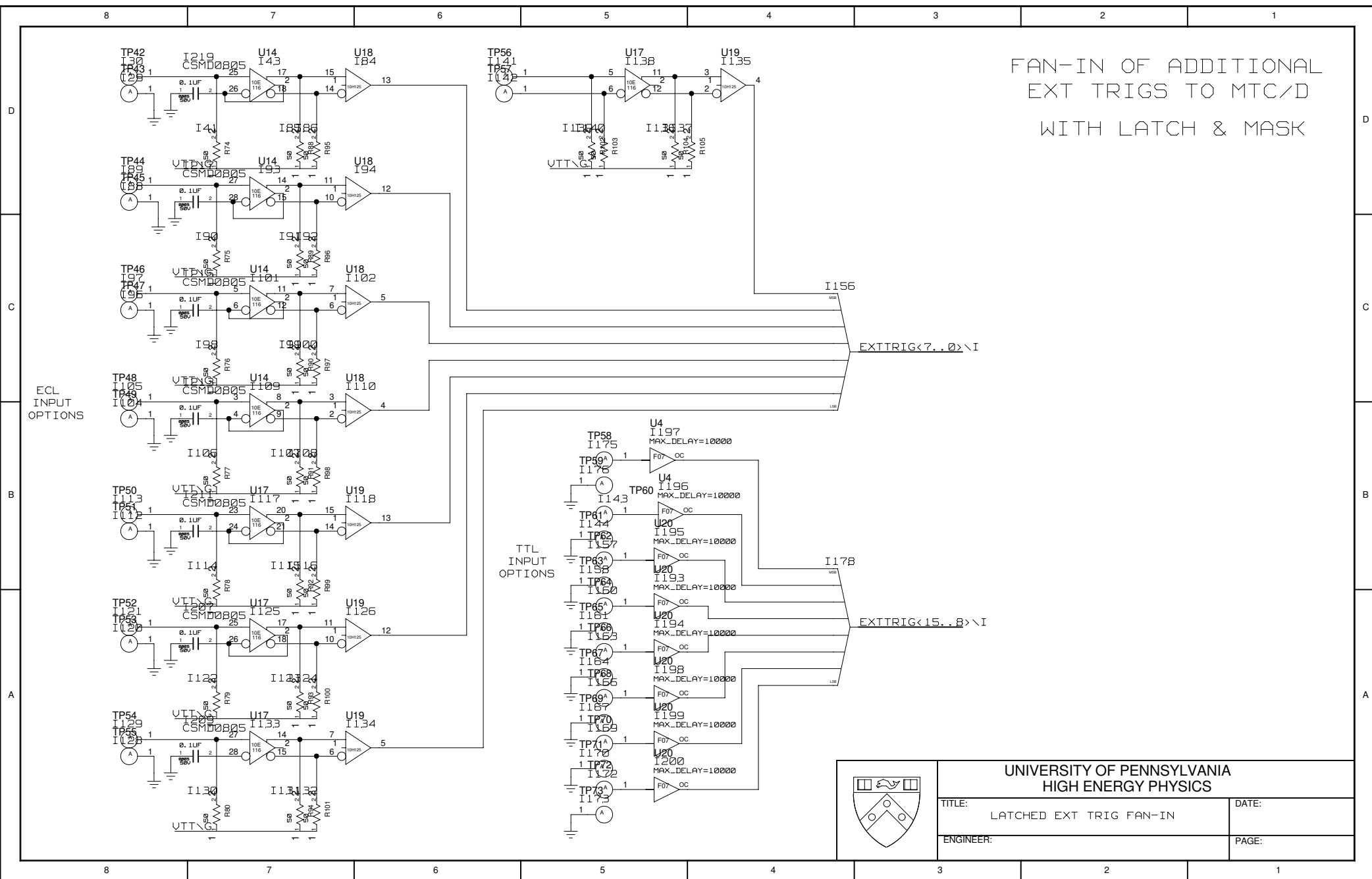
CNTRL REGISTER

ANY SET-IT-AND-FORGET-IT TYPE SIGNALS
GET LOADED INTO A SHIFT REGISTER WHICH
SENDS THEM OUT TO THE APPROPRIATE PLACE

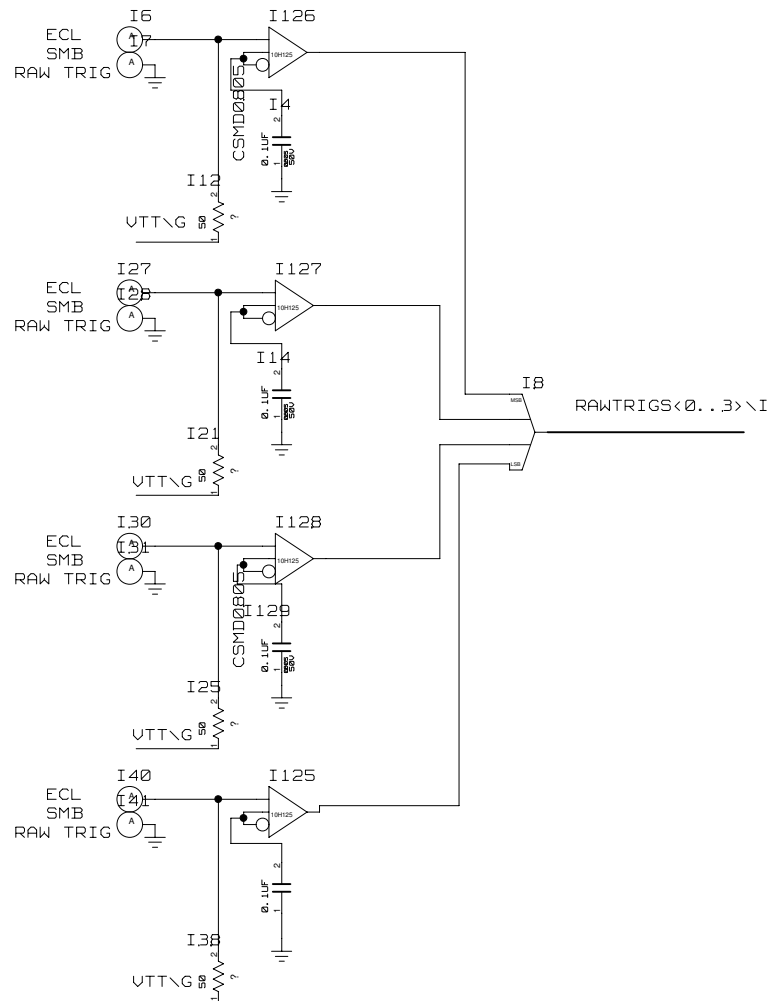


UNIVERSITY OF PENNSYLVANIA
HIGH ENERGY PHYSICS

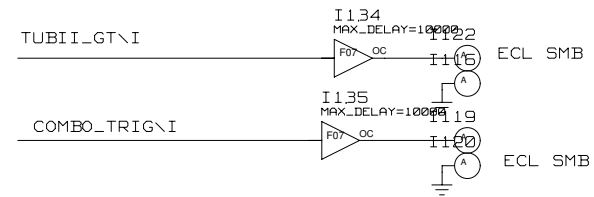
TITLE: CNTRL_REGISTER	DATE: 9/30/14
ENGINEER ERIC M	PAGE:



TRIGGER INPUTS AND OUTPUTS TO/FROM MICRO ZED



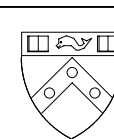
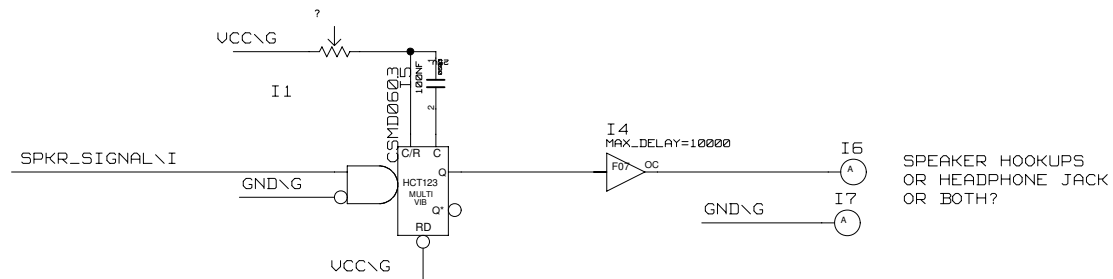
I TOOK THE TRANSLATORS OFF THESE OUTPUTS
...BUT I DON'T RECALL WHY



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HIGH ENERGY PHYSICS

TITLE: TUBII TRIGGERS	DATE: 9/22/14
ENGINEER: ERIC M (ALSO GDOG)	PAGE:

TUBII SPEAKER



UNIVERSITY OF PENNSYLVANIA
HIGH ENERGY PHYSICS

TITLE: TUBII_SPKR	DATE: 10/2/14
ENGINEER: ERIC M	PAGE: