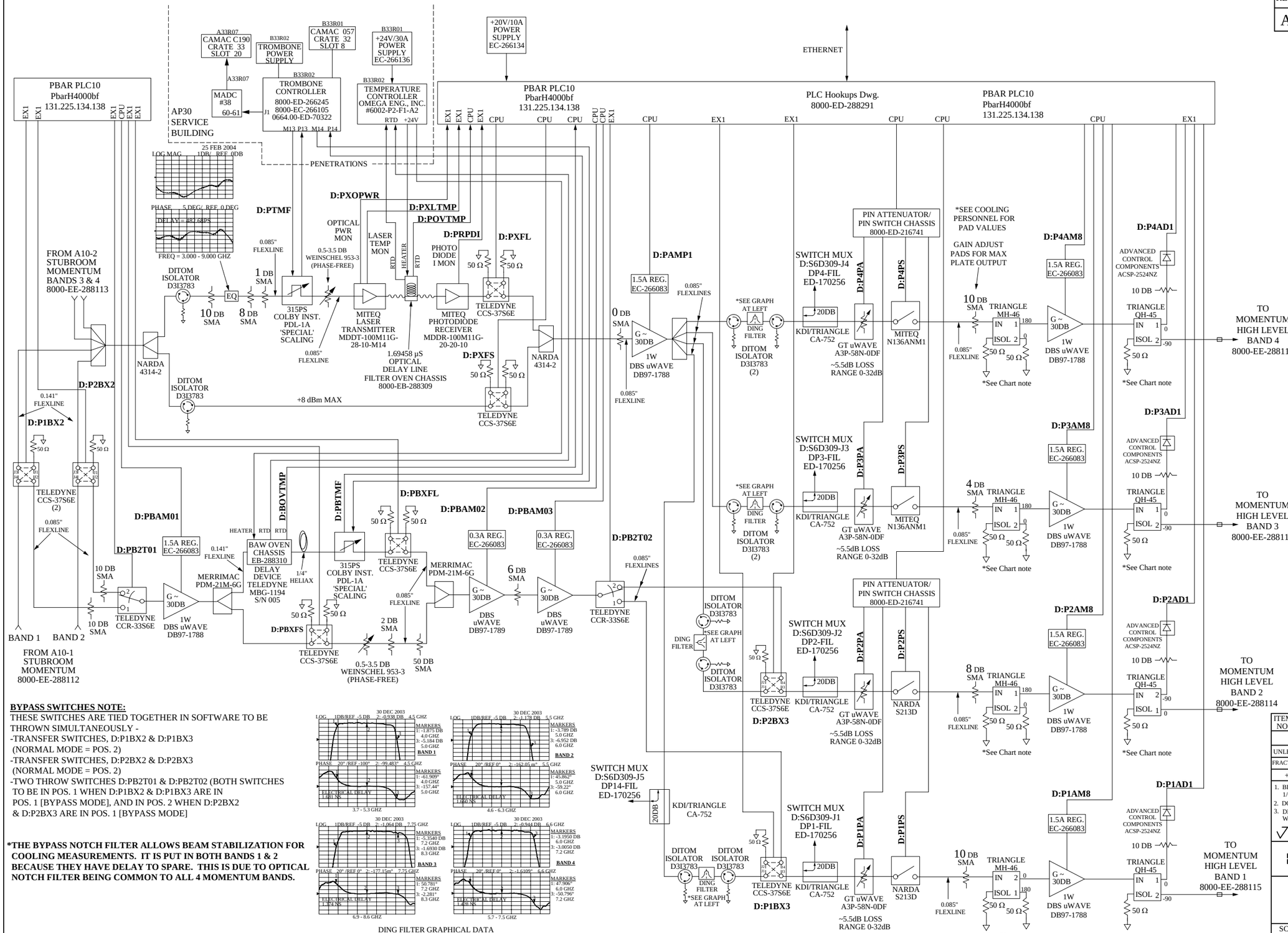
REV.	DESCRIPTION	DRAWN	DATE
		APPD.	DATE
A			



8/22/06

HYBRID ORIENTATION CHART

180° Hybrid	90° Hybrid	Output
In - Out2 thru	In - Out1 =	0°
In - Out2 thru	In - Out2 =	-90°
In - Out1 thru	In - Out1 =	-180°
In - Out1 thru	In - Out2 =	-270°
Isol-Out1 thru	In - Out1 =	+90°

*BOTH HYBRIDS ARE FLIPPABLE
ACTUAL ORIENTATION MAY VARY
SEE COOLING PERSONNEL

BYPASS SWITCHES NOTE:

THESE SWITCHES ARE TIED TOGETHER IN SOFTWARE TO BE THROWN SIMULTANEOUSLY -
-TRANSFER SWITCHES, D:P1BX2 & D:P1BX3
(NORMAL MODE = POS. 2)
-TRANSFER SWITCHES, D:P2BX2 & D:P2BX3
(NORMAL MODE = POS. 2)
-TWO THROW SWITCHES D:PB2T01 & D:PB2T02 (BOTH SWITCHES TO BE IN POS. 1 WHEN D:P1BX2 & D:P1BX3 ARE IN POS. 1 [BYPASS MODE], AND IN POS. 2 WHEN D:P2BX2 & D:P2BX3 ARE IN POS. 1 [BYPASS MODE]

***THE BYPASS NOTCH FILTER ALLOWS BEAM STABILIZATION FOR COOLING MEASUREMENTS. IT IS PUT IN BOTH BANDS 1 & 2 BECAUSE THEY HAVE DELAY TO SPARE. THIS IS DUE TO OPTICAL NOTCH FILTER BEING COMMON TO ALL 4 MOMENTUM BANDS.**

DING FILTER GRAPHICAL DATA
(FILTER ONLY, NOT CIRCULATORS)

ITEM NO.	PART NO.	DESCRIPTION OR SIZE	QTY. REQ.
		PARTS LIST	

UNLESS OTHERWISE SPECIFIED			ORIGINATOR	RALPH PASQUINELLI	
FRACTIONS	DECIMALS	ANGLES	DRAWN	WESLEY J MUELLER	2/26/04
+/-	+/-	+/-	CHECKED		
			APPROVED		

1. BREAK ALL SHARP EDGES 1/64 MAX.
2. DO NOT SCALE DRAWING
3. DIMENSIONING IN ACCORD WITH ANSI Y14.5 STD'S

√ MAX. ALL MACHINED SURFACES

USED ON

MATERIAL-

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

ANTI-PROTON SOURCE
DEBUNCHER MOMENTUM A30
MEDIUM LEVEL ELECTRONICS

SCALE	FILMED	DRAWING NUMBER	REV.
		8000-ED-288274	