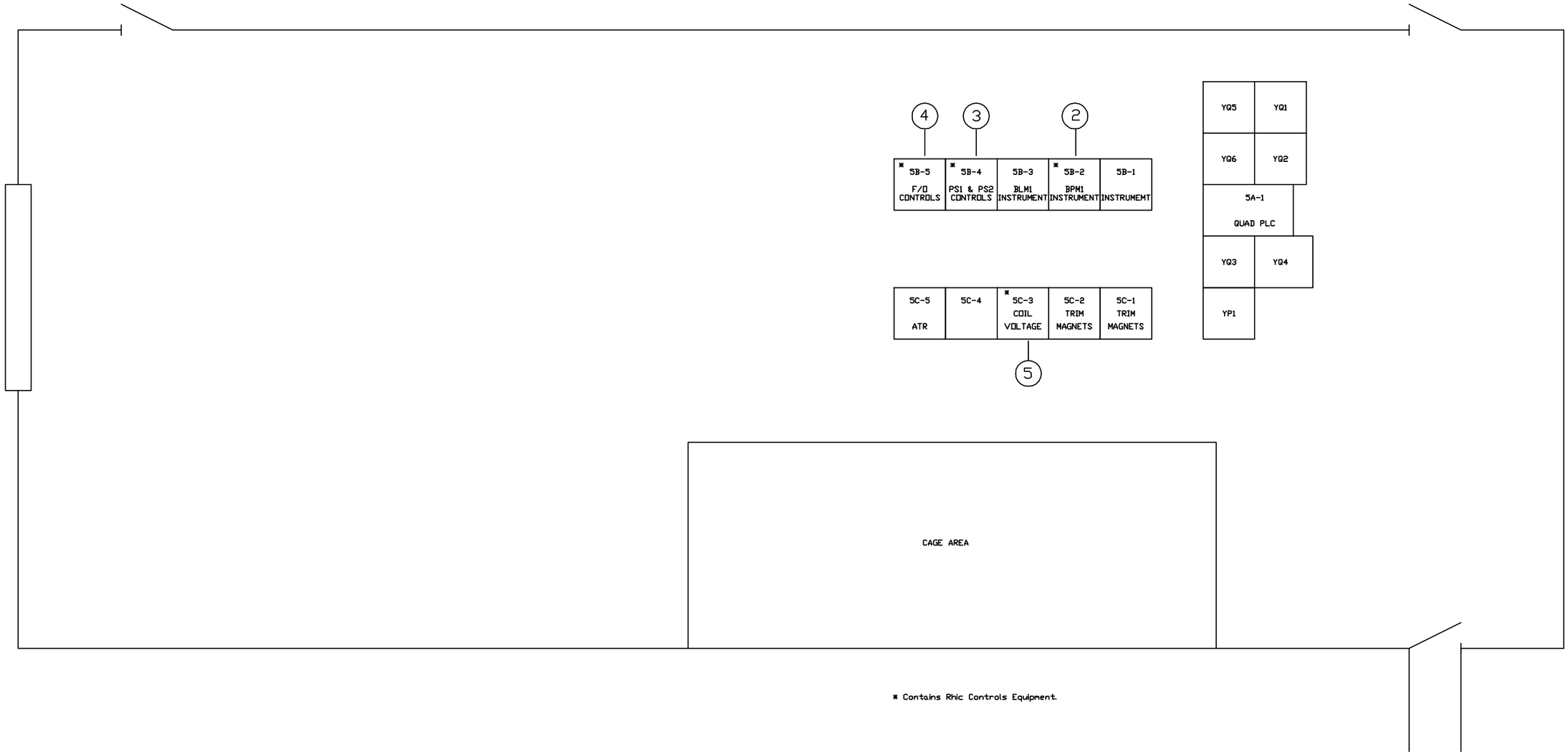
REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/4/99 9:06 AM 8264.dwg



* Contains Rhic Controls Equipment.

QTY REQD -3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO./BNL NO.
		1	5C-3	5	BLDG. 1005E RACK 5C-3 ASSY.	94028255
		1	5B-5	4	BLDG. 1005E RACK 5B-5 ASSY.	94028254
		1	5B-4	3	BLDG 1005E RACK 5B-4 ASSY.	94028253
		1	5B-2	2	BLDG. 1005E RACK 5B-2 ASSY.	94028252
		1	X	1	RHIC CONTROLS BLDG. 1005E WIRING DIAGRAM	94028263

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES MAX. XX MIN. XX

Q.A. CATEGORY A-3

		DATE
DRAWN BY	D.DITTRICH	03/19/97
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	5/16/97
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

Middle Title

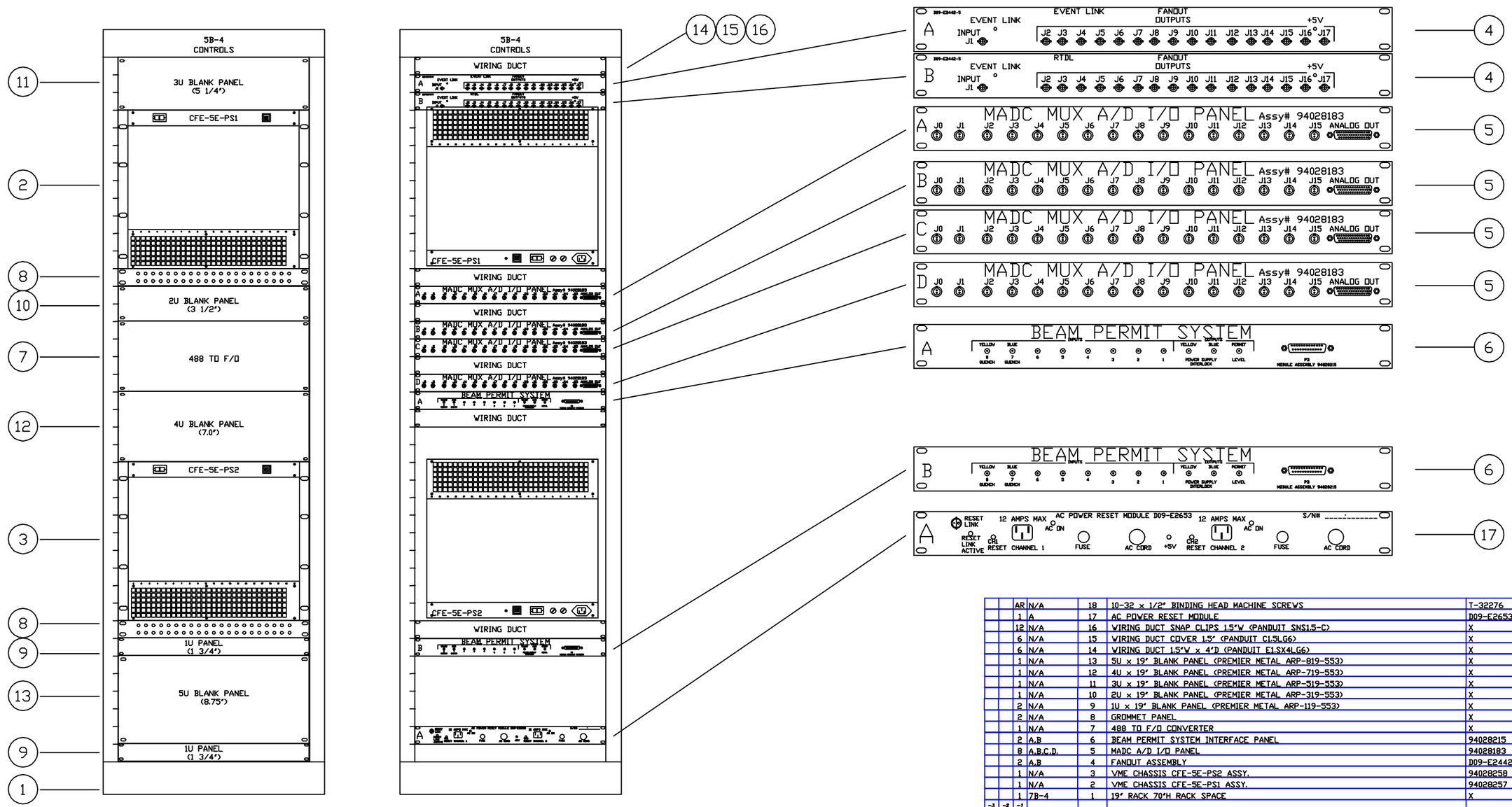
BLDG. 1005E FLOOR PLAN

SIZE D | DRAWING NUMBER 94028264 | REV. A

MATERIAL: ——— SCALE: FULL WEIGHT: – SHEET 1 OF 1

*AUTOCAD

ACS, BNL 10/7/99 9:00 AM 8253.dwg



		AR	N/A	18	10-32 x 1/2" BINDING HEAD MACHINE SCREWS	T-32276
		1	A	17	AC POWER RESET MODULE	D09-E2653
		12	N/A	16	WIRING DUCT SNAP CLIPS 1.5"W (PANDUIT SNS1.5-C)	X
		6	N/A	15	WIRING DUCT COVER 1.5" (PANDUIT C1.5LG6)	X
		6	N/A	14	WIRING DUCT 1.5"W x 4"D (PANDUIT E1.5X4LG6)	X
		1	N/A	13	5U x 19" BLANK PANEL (PREMIER METAL ARP-819-553)	X
		1	N/A	12	4U x 19" BLANK PANEL (PREMIER METAL ARP-719-553)	X
		1	N/A	11	3U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		1	N/A	10	2U x 19" BLANK PANEL (PREMIER METAL ARP-319-553)	X
		2	N/A	9	1U x 19" BLANK PANEL (PREMIER METAL ARP-119-553)	X
		2	N/A	8	GROMMET PANEL	X
		1	N/A	7	488 TO F/O CONVERTER	X
		2	A,B	6	BEAM PERMIT SYSTEM INTERFACE PANEL	94028215
		8	A,B,C,D,	5	MADC A/D I/O PANEL	94028183
		2	A,B	4	FANOUT ASSEMBLY	D09-E2442
		1	N/A	3	VME CHASSIS CFE-5E-PS2 ASSY.	94028258
		1	N/A	2	VME CHASSIS CFE-5E-PS1 ASSY.	94028257
		1	7B-4	1	19" RACK 70"H RACK SPACE	X
-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO./BNL NO.
QTY REQD						

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	D. DITTRICH	03/20/97
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	05/13/97
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS
BLDG. 1005E

RACK 5E-4 ASSY.

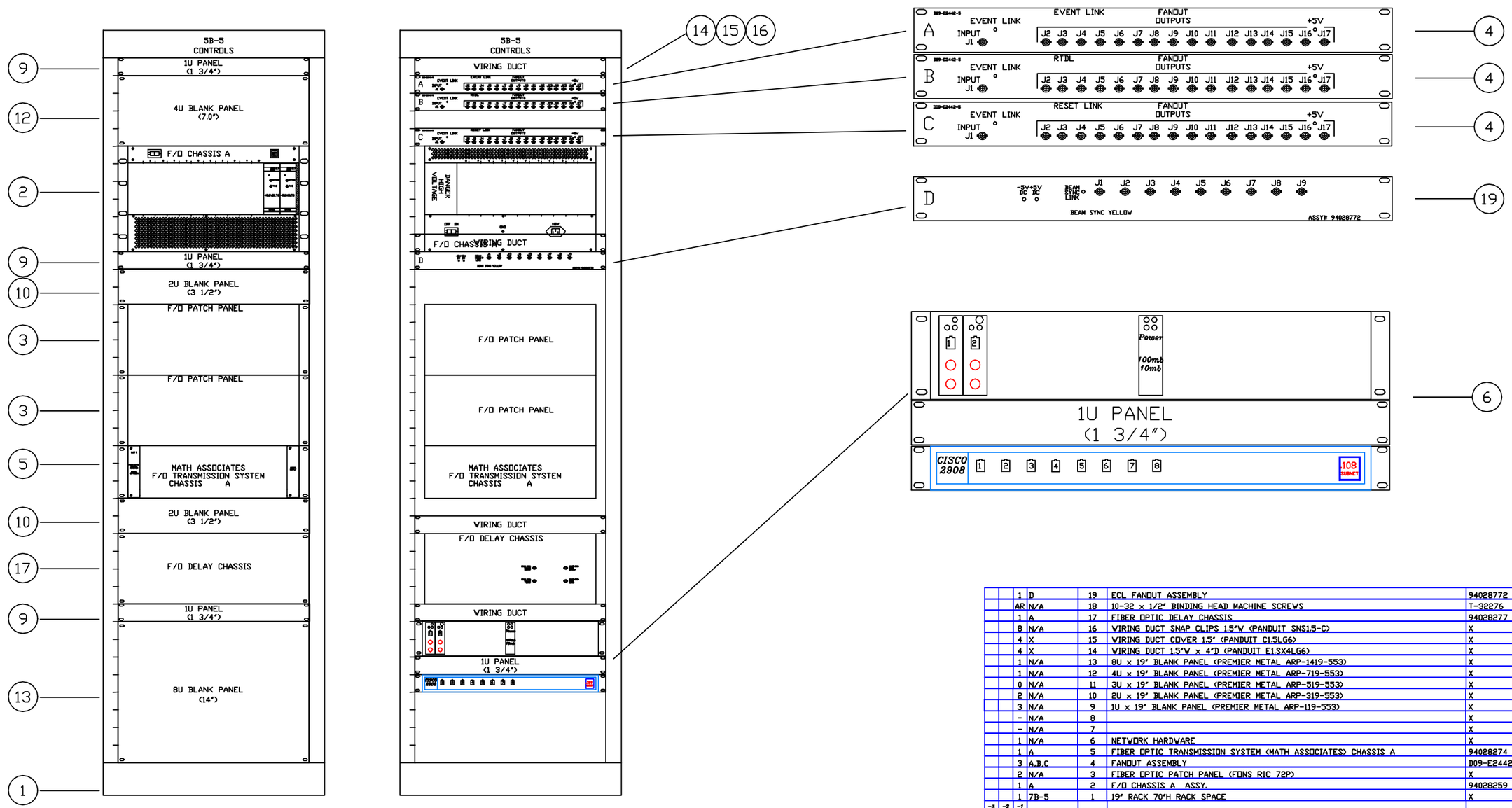
SIZE D | DRAWING NUMBER 94028253 | REV. A

MATERIAL: ——— SCALE: FULL WEIGHT: – SHEET 1 OF 1

*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/7/99 9:09 AM 8254.dwg



QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	D	19	ECL FANOUT ASSEMBLY	94028772
		AR	N/A	18	10-32 x 1/2" BINDING HEAD MACHINE SCREWS	T-32276
		1	A	17	FIBER OPTIC DELAY CHASSIS	94028277
		8	N/A	16	WIRING DUCT SNAP CLIPS 1.5"W (PANDUIT SNS1.5-C)	X
		4	X	15	WIRING DUCT COVER 1.5" (PANDUIT C1.5LG6)	X
		4	X	14	WIRING DUCT 1.5"W x 4"D (PANDUIT E1.5X4LG6)	X
		1	N/A	13	8U x 19" BLANK PANEL (PREMIER METAL ARP-1419-553)	X
		1	N/A	12	4U x 19" BLANK PANEL (PREMIER METAL ARP-719-553)	X
		0	N/A	11	3U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		2	N/A	10	2U x 19" BLANK PANEL (PREMIER METAL ARP-319-553)	X
		3	N/A	9	1U x 19" BLANK PANEL (PREMIER METAL ARP-119-553)	X
		-	N/A	8		X
		-	N/A	7		X
		1	N/A	6	NETWORK HARDWARE	X
		1	A	5	FIBER OPTIC TRANSMISSION SYSTEM (MATH ASSOCIATES) CHASSIS A	94028274
		3	A,B,C	4	FANOUT ASSEMBLY	D09-E2442
		2	N/A	3	FIBER OPTIC PATCH PANEL (FONS RIC 72P)	X
		1	A	2	F/O CHASSIS A ASSY.	94028259
		1	7B-5	1	19" RACK 70"H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	D. DITTRICH	03/20/97
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	05/13/97
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS
BLDG. 1005E

RACK 5B-5 ASSY.

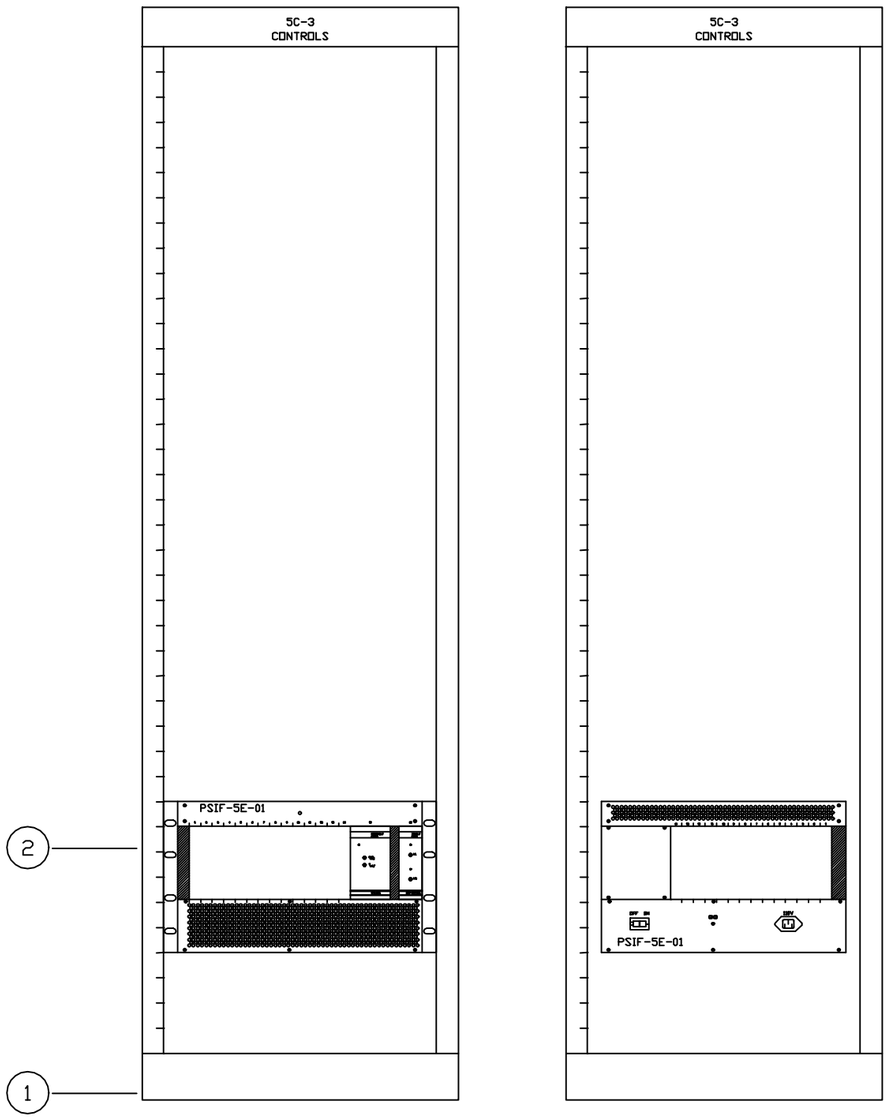
SIZE D
DRAWING NUMBER 94028254
REV. A

MATERIAL: ——— SCALE: FULL WEIGHT: – SHEET 1 OF 1

*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/4/99 2:31 PM 8255.dwg



QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		AR	N/A	3	10-32 x 1/2" BINDING HEAD MACHINE SCREWS	T-32276
		1	A	2	LO RES PS IF CHASSIS A ASSY.	94028260
		1	5C-3	1	19" RACK 70"H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

Q.A. CATEGORY A-3		DATE
DRAWN BY	D. DITTRICH	03/20/97
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	05/13/97
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

BLDG. 1005E

RACK 5C-3 ASSY.

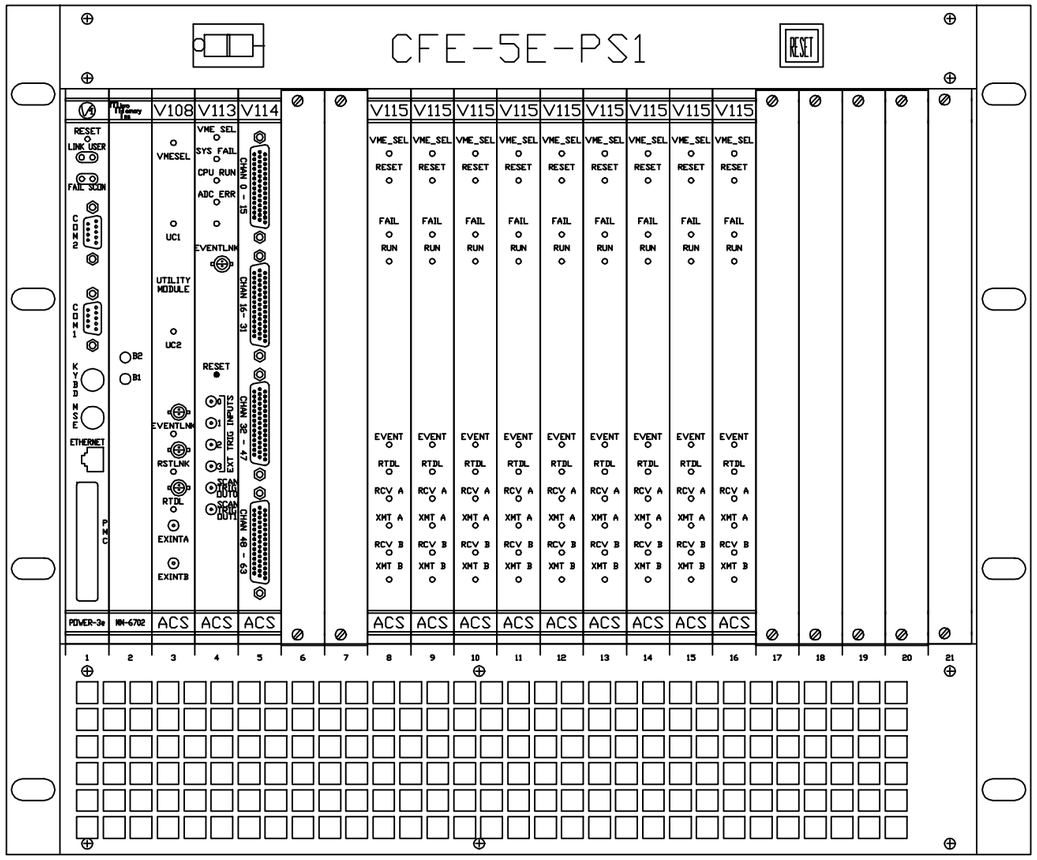
SIZE D | DRAWING NUMBER 94028255 | REV. A

MATERIAL: ——— | SCALE: FULL | WEIGHT: – | SHEET 1 OF 1

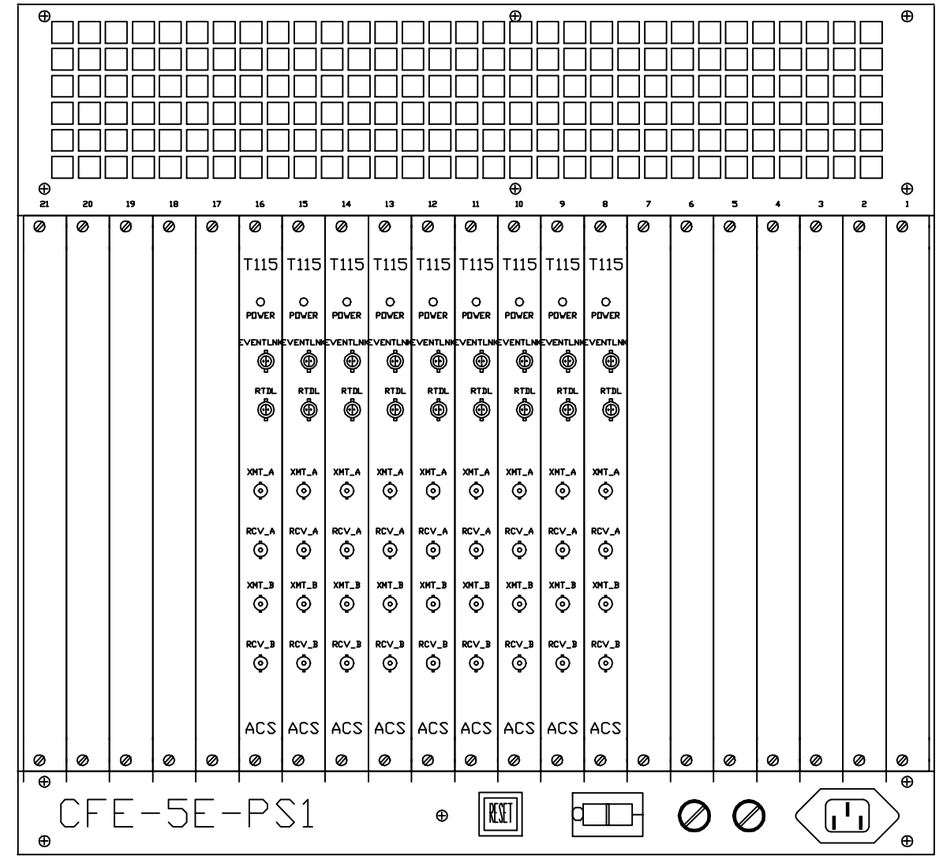
1 *AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/7/99 9:21 AM 8257.dwg



FRONT VIEW



REAR VIEW

NOTE:

1. ALL UNUSED SLOTS, FRONT AND REAR

QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	SLOT 2	9	MEMORY BOARD	MM-6702
		12	SEE NOTE 1	8	VME BLANK PANEL (ELECTRO-SPACE ESFE-2985)	
		9	SLOT 8-16	7	T115 WAVEFORM GENERATOR TRANSITION MODULE	94028126
		9	SLOT 8-16	6	V115 WAVEFORM GENERATOR MODULE	94028108
		1	SLOT5	5	V114 MADC A/D CONVERTER MODULE	94028226
		1	SLOT4	4	V113 MADC CONTROLLER MODULE	94028140
		1	SLOT 3	3	V108 UTILITY MODULE	94028094
		1	SLOT 1	2	FRONT END COMPUTER	POWER3e
		1	N/A	1	VME CHASSIS	RHIC-93008000

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

FINISH: NA

BREAK SHARP EDGES MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ed Koropsak	9/27/99
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	9/27/99
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
BLDG. 1005E RACK 5B-4
VME CHASSIS CFE-5E-PS1 ASSY.

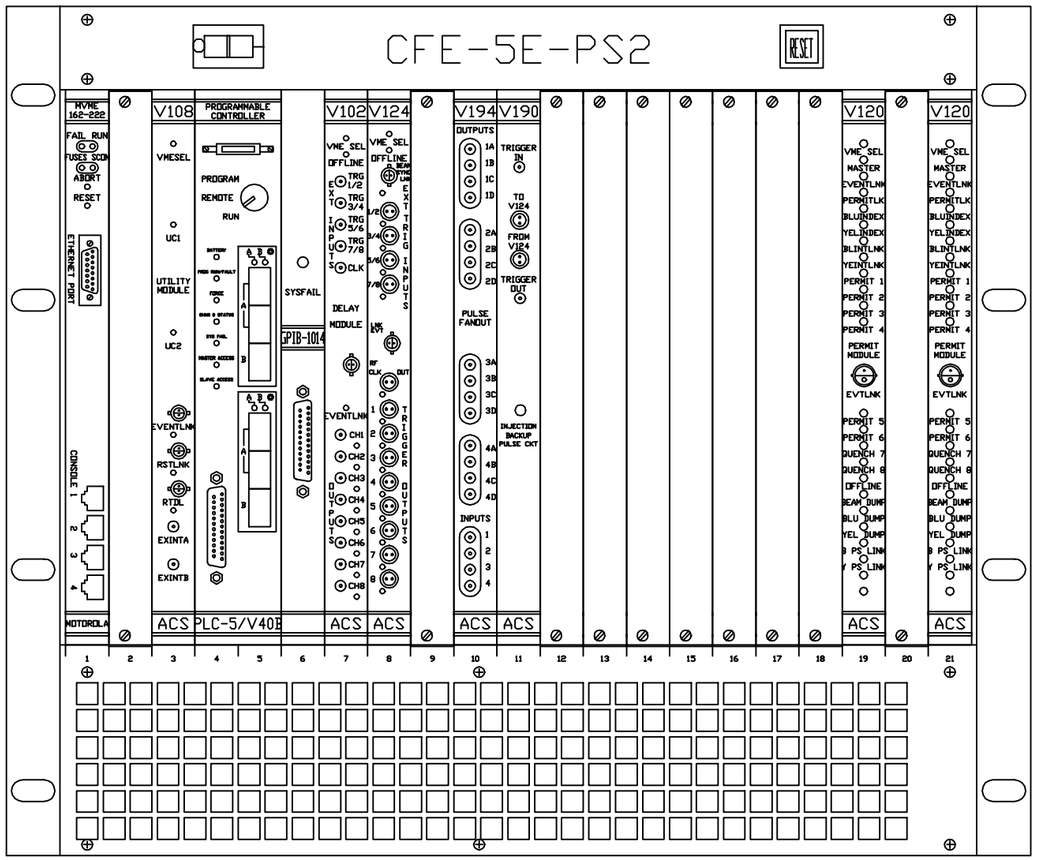
SIZE D | DRAWING NUMBER 94028257 | REV. A

MATERIAL: ——— | SCALE: FULL | WEIGHT: – | SHEET 1 OF 1

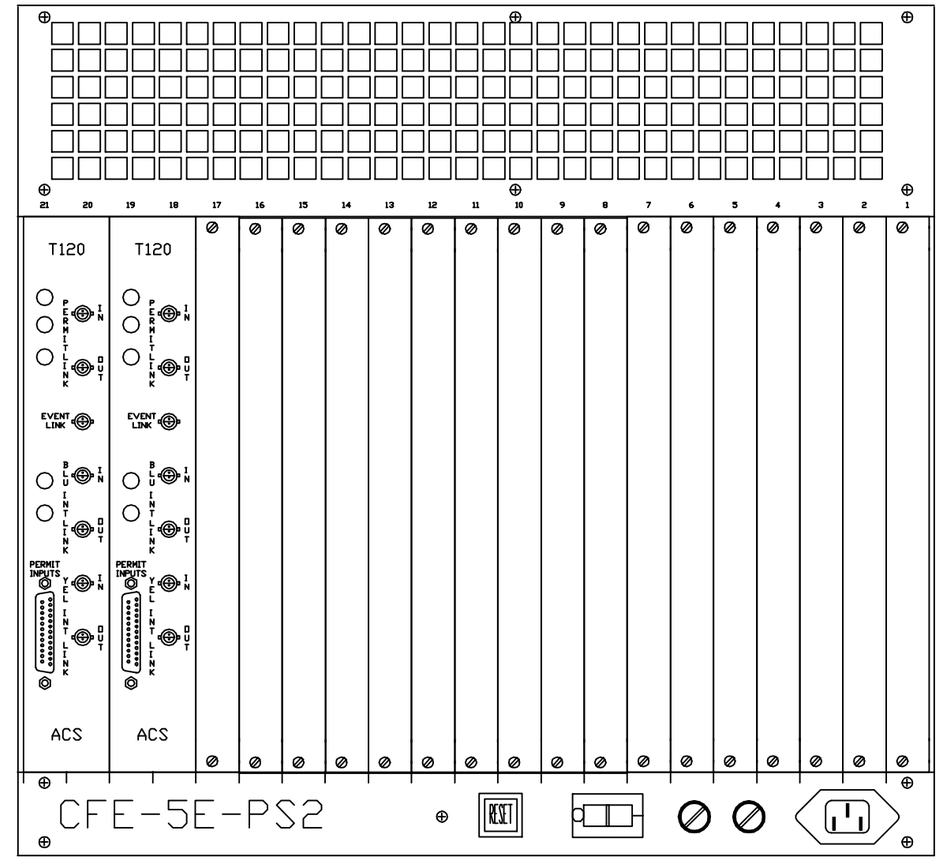
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/7/99 9:25 AM 8258.dwg



FRONT VIEW



REAR VIEW

NOTE:

1. ALL UNUSED SLOTS, FRONT AND REAR

QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO./BNL NO.
		1	SLOT 11	11	INJECTION BACKUP PULSE MODULE	94028672
		1	SLOT 8	10	V124 BEAM SYNC TRIGGER MODULE	94028432
		1	SLOT 6	9	GPIB MODULE (GPIB-1014)	X
		27	SEE NOTE 1	8	VME BLANK PANEL (ELECTRO-SPACE ESFE-2985)	
		2	SLOT 19,21	7	V120 PERMIT SYSTEM TRANSITION MODULE	94028199-2
		2	SLOT 19,21	6	V120 PERMIT SYSTEM MODULE	94028077
		1	SLOT 7	5	V102 DELAY MODULE	94028072
		1	SLOT4,5	4	VME PLC PROCESSOR MODULE (ALLEN-BRADLEY PLC-5/40B)	X
		1	SLOT 3	3	V108 UTILITY MODULE	94028094
		1	SLOT 1	2	FRONT END COMPUTER (MOTOROLA)	MVME 162-222
		1	N/A	1	VME CHASSIS	RHIC-93008000

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

FINISH NA

BREAK SHARP EDGES MAX. XX MIN. XX

OUTSTANDING ECN

NEXT ASSEMBLY

Q.A. CATEGORY A-3		DATE
DRAWN BY	Ed Koropsak	9/27/99
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	9/27/99
SUPVR. APPROVAL		

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
BLDG. 1005E RACK 5B-4
VME CHASSIS CFE-5E-PS2 ASSY.

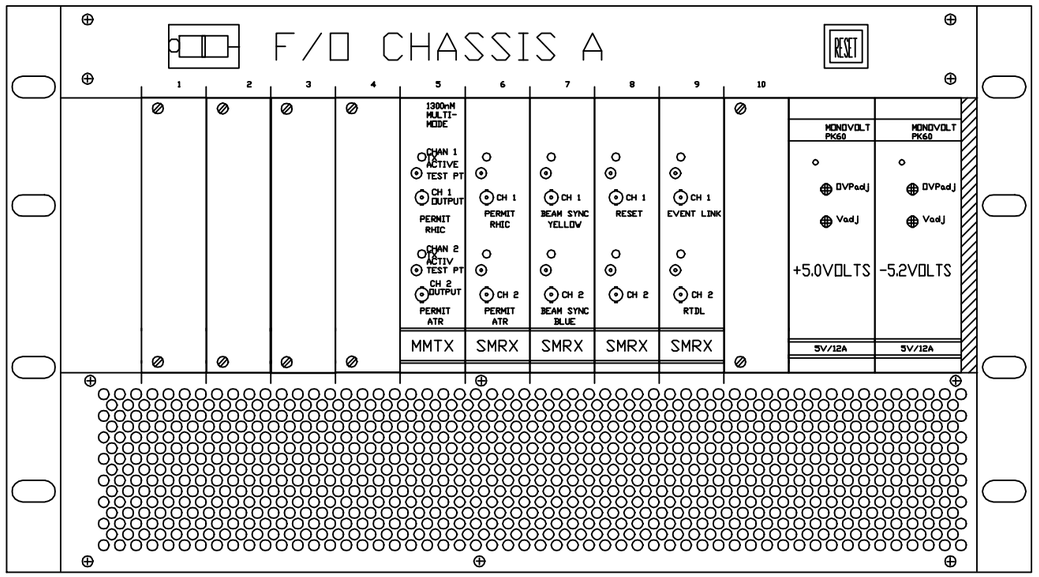
SIZE D | DRAWING NUMBER 94028258 | REV. A

MATERIAL: ——— | SCALE: FULL | WEIGHT: – | SHEET 1 OF 1

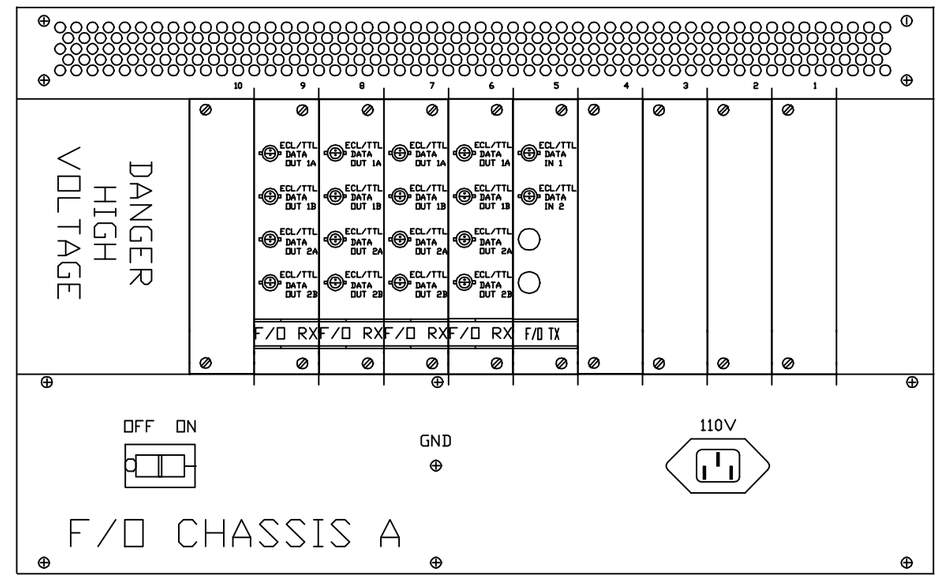
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/7/99 9:27 AM 8259.dwg



FRONT VIEW



REAR VIEW

QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	SLOT 7	7	3U FIBER OPTIC RECEIVER TRANSITION MODULE, ECL	D09-E2541-3
		10	ALL UNUSED	6	3U x 6HP BLANK PANEL (ELECTRO-SPACE ESFE-3032)	X
		3	SLOT6,8,9	5	3U FIBER OPTIC RECEIVER TRANSITION MODULE, TTL	D09-E2542-3
		4	SLOT6,7,8,9	4	3U FIBER OPTIC RECEIVER MODULE, MULTIMODE/SINGLEMODE	94028101
		1	SLOT 5	3	3U FIBER OPTIC TRANSMITTER TRANSITION MODULE, TTL	D09-E2495-3
		1	SLOT 5	2	3U FIBER OPTIC TRANSMITTER MODULE, MULTIMODE	94028168
		1	N/A	1	3U FIBER OPTIC CHASSIS	94028261

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES MAX. XX MIN. XX

Q.A. CATEGORY A-3		DATE
DRAWN BY	Koropsak	9/27/99
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	9/27/99
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
ALCOVE 1005E RACK 5B-5
F/O CHASSIS A ASSY.

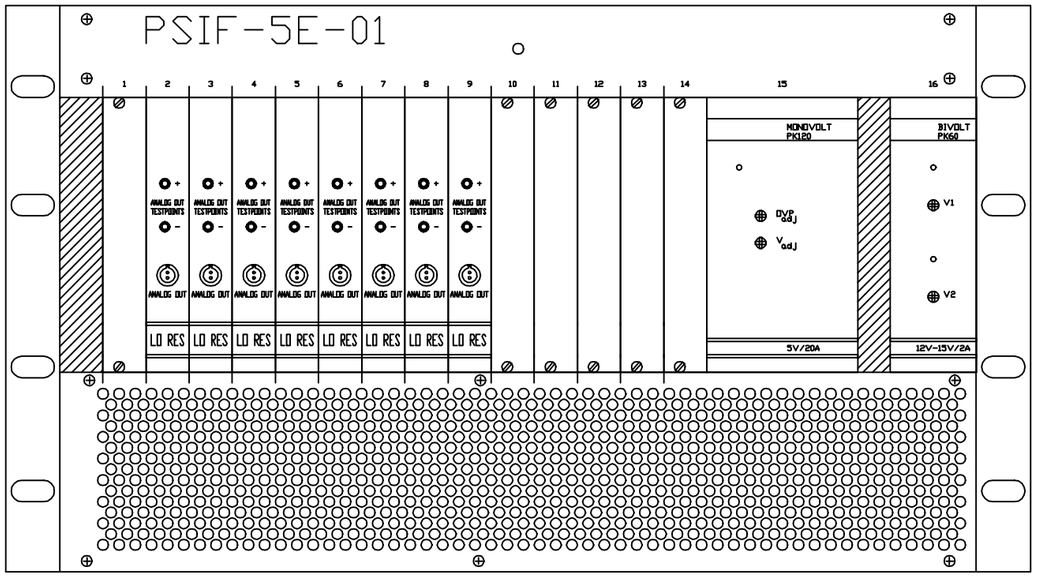
SIZE D | DRAWING NUMBER 94028259 | REV. A

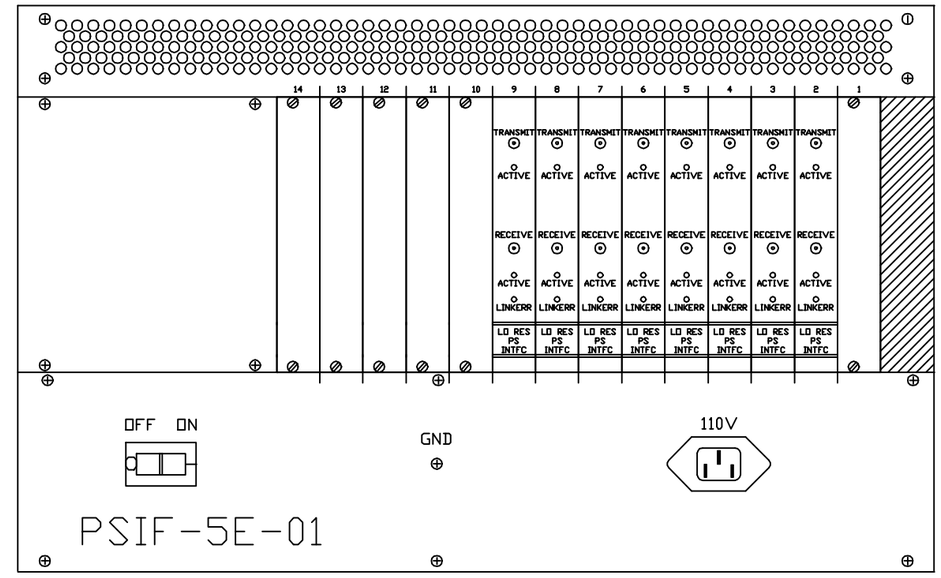
MATERIAL: ——— | SCALE: NA | WEIGHT: – | SHEET 1 OF 1

*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/4/99 2:34 PM 8260.dwg





QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		12	SLOT1,10-14	4	3U x 4HP BLANK PANEL (ELECTRO-SPACE)	ESFE3549
		8	SLOTS 2-9	3	LO RES PS INTERFACE TRANSITION MODULE	94028198
		8	SLOTS 2-9	2	LO RES PS INTERFACE MODULE	94028191
		1	N/A	1	3U LO RES POWER SUPPLY INTERFACE CHASSIS	94028262

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3		DATE
DRAWN BY	Koropsak	9/27/99
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	9/27/99
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

ALCOVE 1005E RACK 5C-3

LO RES PS IF CHASSIS A ASSY.

SIZE D | DRAWING NUMBER 94028260 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

ACS, BNL 10/4/99 2:37 PM 8274.dwg

MATH ASSOCIATES
F/O TRANSMISSION SYSTEM
CHASSIS A

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	SLOT 1	3	FIBER OPTIC DIGITAL RECEIVER (MATH ASSOCIATES)	RD-7430-1
		1	N/A	2	CHASSIS MOUNT ADAPTER PLATE (MATH ASSOCIATES)	AP-2000
		1	N/A	1	3U 10 SLOT CHASSIS WITH INTEGRATED POWER SUPPLY (MATH ASSOCIATES)	MCR1000A

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3		DATE
DRAWN BY	Koropsak	9/27/99
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	9/27/99
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

ALCOVE 1005E RACK 5B-5

MATH ASSOCIATES CHASSIS A ASSY.

SIZE D | DRAWING NUMBER 94028274 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

*AUTOCAD