Revised 02/02/2015

DCC DEF.	DCC - OUT	DESCRIPTION	DCC - IN	POLARITY
COMMON	J1-A	COMMON APS Control Unit Return	J6-A, J7-A	
5V	J1-B			
	J1-C			
MW0-0	J1-D	APS - Modulator #01 Connect / Disconnect	J6-R	Connected=1
MW0-1	J1-E	APS - Modulator #02 Connect / Disconnect	J6-S	Connected=1
MW0-2	J1-F	APS - Modulator #03 Connect / Disconnect	J6-T	Connected=1
MW0-3	J1-G	APS - Modulator #04 Connect / Disconnect	J6-U	Connected=1
MW0-4	J1-H	APS - Modulator #05 Connect / Disconnect	J6-V	Connected=1
MW0-5	J1-J	APS - Modulator #06 Connect / Disconnect	J6-W	Connected=1
MW0-6	J1-K	APS - Modulator #07 Connect / Disconnect	J6-X	Connected=1
MW0-7	J1-L	APS - Modulator #08 Connect / Disconnect	J6-Y	Connected=1
MW0-8	J1-M	APS - Modulator #09 Connect / Disconnect	J6-Z	Connected=1
MW0-9	J1-N	APS - Modulator #10 Connect / Disconnect	J6-a	Connected=1
MW0-10	J1-P	APS - Fault	J7 - U	Alarm = 1
MW0-11	J1-R	APS - HV On / Off	J6 - b	On = 1
MW0-12	J1-S	APS - 13.8 Kv On/Off	J7 - B	On = 1
MW0-13	J1-T	APS - Ground Hook Stored	J7 - C	On = 1
MW0-14	J1-U	APS - Water Flow Fault	J7 - D	OK = 1
MW0-15	J1-V	APS - Modulator Doors Fault	J7 - E	Closed = 1
MW1-0	J1-W	APS - DC Cab Control PWR On	J7-F	On = 1
MW1-1	J1-X	APS - Dc Cab power	J7-G	OK = 1
MW1-2	J1-Y	APS - Dc Cabinet Heater PWR	J7-H	On = 1
MW1-3	J1-Z	APS - CrowBar Circuit PWR	J7-J	On = 1
MW1-4	J1-a	APS - Ac Cabinet Control PWR	J7-K	On = 1
MW1-5	J1-b	APS - AC Cabinet Heater PWR	J7-L	On = 1
MW1-6	J1-c	APS - AC Cabinet Power OK = 1	J7-M	OK = 1
MW1-7	J1-d	APS - AC Cabinet VCB Closed CKT Power	J7-N	On = 1
MW1-8	J1-e	APS - AC Cabinet VCB Trip Circuit Power	J7-P	On = 1
MW1-9	J1-f	APS - AC Input	J7-R	Overload = 1
MW1-10	J1-g	APS - AC Input Imbalance	J7-S	Imbal = 1
MW1-11	J1-h	APS CrowBar Fired	J7-T	Fired = 1
MW1-12	J1-i	APS - Transformer Oil OverTemp	J7-V	OvrTemp = 1
MW1-13	J1-j	APS - Doors	J7-W	Open =1
MW1-14	J1-k	APS - High Cabinet temp	J7-X	temp = 1
MW1-15	J1-m	APS - Input AC Monitor	J7-Y	Trip =1

DCC DEF.	DCC - OUT	DESCRIPTION	DCC - IN	POLARITY
COMMON	J2-A	COMMON -	J8-A, J9-A, J10-A	
5V	J2-B			
	J2-C			
MW2-0	J2-D	APS - Control Unit in Manual = 1	J7-Z	
MW2-1	J2-E			
MW2-2	J2-F			
MW2-3	J2-G			
MW2-4	J2-H			
MW2-5	J2-J			
MW2-6	J2-K			
MW2-7	J2-L			
MW2-8	J2-M			
MW2-9	J2-N			
MW2-10	J2-P	SWIXn K1 Monitor n=E/W	J9-G	On = 1
MW2-11	J2-R	SWIXn K2 Monitor n=E/W	J9-H	On = 1
MW2-12	J2-S	SWIXn K3 Monitor n=E/W	J9-J	On = 1
MW2-13	J2-T	SWIXn K4 Monitor n=E/W	J9-K	On = 1
MW2-14	J2-U	SWIXn K5 Monitor n=E/W	J9-L	On = 1
MW2-15	J2-V	SWIXn K6 Monitor n=E/W	J9-M	On = 1
MW3-0	J2-W	SWIXn K7 Monitor n=E/W	J9-N	On = 1
MW3-1	J2-X	SWIXn +5v Monitor	J9-E	
MW3-2	J2-Y	SWIXn +26v Monitor	J9-F	
MW3-3	J2-Z	WatchDog Crate Fault = 1	J10-C	
MW3-4	J2-a	WatchDog Crate Slot 1 Fault	J10-D	
MW3-5	J2-b	WatchDog Crate Slot 2 Fault	J10-E	
MW3-6	J2-c	WatchDog Crate Slot 3 Fault	J10-F	
MW3-7	J2-d	WatchDog Crate Slot 4 Fault	J10-G	
MW3-8	J2-e	WatchDog Crate Slot 5 Fault	J10-H	
MW3-9	J2-f	WatchDog Crate Slot 6 Fault	J10-J	
MW3-10	J2-g	WatchDog Crate Slot 7 Fault	J10-K	
MW3-11	J2-h	WatchDog Crate Slot 8 Fault	J10-L	
MW3-12	J2-i	WatchDog Crate Slot 9 Fault	J10-M	
MW3-13	J2-j	WatchDog Crate Slot 10 Fault	J10-N	
MW3-14	J2-k	WatchDog Crate Slot 11 Fault	J10-P	
MW3-15	J2-m	Modulator Deck Fault From APS Control Unit	J7-a	Fault = 1

DCC DEF.	DCC - OUT	DESCRIPTION	DCC - IN	POLARITY
COMMON	J3-A	COMMON - Spark Detector	J11-A	
5V	J3-B			
	J3-C			
MW4-0	J3-D	RF Station Spark Detector Inhibit - Slot 1	J11-B	INHIBIT=1
MW4-1	J3-E	RF Station Spark Detector Inhibit - Slot 2	J11-C	INHIBIT=1
MW4-2	J3-F	RF Station Spark Detector Inhibit - Slot 3	J11-D	INHIBIT=1
MW4-3	J3-G	RF Station Spark Detector Inhibit - Slot 4	J11-E	INHIBIT=1
MW4-4	J3-H	RF Station Spark Detector Inhibit - Slot 5	J11-F	INHIBIT=1
MW4-5	J3-J	RF Station Spark Detector Inhibit - Slot 6	J11-G	INHIBIT=1
MW4-6	J3-K	RF Station Spark Detector Inhibit - Slot 7	J11-H	INHIBIT=1
MW4-7	J3-L	RF Station Spark Detector Inhibit - Slot 8	J11-J	INHIBIT=1
MW4-8	J3-M	RF Station Spark Detector Inhibit - Slot 9	J11-K	INHIBIT=1
MW4-9	J3-N	RF Station Spark Detector Inhibit - Slot 10	J11-L	INHIBIT=1
MW4-10	J3-P			
MW4-11	J3-R			
MW4-12	J3-S			
MW4-13	J3-T			
MW4-14	J3-U			
MW4-15	J3-V			
MW5-0	J3-W			
MW5-1	J3-X			
MW5-2	J3-Y			
MW5-3	J3-Z			
MW5-4	J3-a			
MW5-5	J3-b			
MW5-6	J3-c			
MW5-7	J3-d			
MW5-8	J3-e			
MW5-9	J3-f			
MW5-10	J3-g			
MW5-11	J3-h			
MW5-12	J3-i			
MW5-13	J3-j			
MW5-14	J3-k			
MW5-15	J3-m			

DCC DEF.	DCC - OUT	DESCRIPTION	DCC - IN	POLARITY
COMMON	J4-A	COMMON	**J8-j**	
5V	J4-B			
	J4-C			
MW6-0	J4-D	RF Station #01 Deck Fault	J8-A	Fault=0
MW6-1	J4-E	RF Station #02 Deck Fault	J8-B	Fault=0
MW6-2	J4-F	RF Station #03 Deck Fault	J8-C	Fault=0
MW6-3	J4-G	RF Station #04 Deck Fault	J8-D	Fault=0
MW6-4	J4-H	RF Station #05 Deck Fault	J8-E	Fault=0
MW6-5	J4-J	RF Station #06 Deck Fault	J8-F	Fault=0
MW6-6	J4-K	RF Station #07 Deck Fault	J8-G	Fault=0
MW6-7	J4-L	RF Station #08 Deck Fault	J8-H	Fault=0
MW6-8	J4-M	RF Station #09 Deck Fault	J8-J	Fault=0
MW6-9	J4-N	RF Station #10 Deck Fault	J8-K	Fault=0
MW6-10	J4-P	RF Station #11 Deck Fault	J8-L	Fault=0
MW6-11	J4-R	RF Station #12 Deck Fault	J8-M	Fault=0
MW6-12	J4-S	Modulator Deck Fault - From APS Interlock Box	J8-b	**Fault=1**
MW6-13	J4-T			
MW6-14	J4-U			
MW6-15	J4-V			
MW7-0	J4-W	RF Station #01 Disabled / Enabled	J8-Z	Enable =0
MW7-1	J4-X	RF Station #02 Disabled / Enabled	J8-a	Enable =0
MW7-2	J4-Y	RF Station #03 Disabled / Enabled	J8-X	Enable =0
MW7-3	J4-Z	RF Station #04 Disabled / Enabled	J8-Y	Enable =0
MW7-4	J4-a	RF Station #05 Disabled / Enabled	J8-V	Enable =0
MW7-5	J4-b	RF Station #06 Disabled / Enabled	J8-W	Enable =0
MW7-6	J4-c	RF Station #07 Disabled / Enabled	J8-T	Enable =0
MW7-7	J4-d	RF Station #08 Disabled / Enabled	J8-U	Enable =0
MW7-8	J4-e	RF Station #09 Disabled / Enabled	J8-R	Enable =0
MW7-9	J4-f	RF Station #10 Disabled / Enabled	J8-S	Enable =0
MW7-10	J4-g	RF Station #11 Disabled / Enabled	J8-N	Enable =0
MW7-11	J4-h	RF Station #12 Disabled / Enabled	J8-P	Enable =0
MW7-12	J4-i			
MW7-13	J4-j	Deck Protection Enabled / Disabled	J8-e	**Enabled =1**
MW7-14	J4-k	System Reset -status	J8-d	Reset = 1
MW7-15	J4-m	48v Power supply OK	J8-c	OK = 0
CW0-10	J5-P	APS - Remote Reset Input J6-f	**J8-f, J6-C**	Reset = **1**

DCC DEF.	DCC - IN	DESCRIPTION	DCC - OUT	POLARITY
COMMON	J5-A			
5V	J5-B			
	J5-C			
CW0-0	J5-D	Modulator #01 Connect / Disconnect	J6-E	1=Connect
CW0-1	J5-E	Modulator #02 Connect / Disconnect	J6-F	1=Connect
CW0-2	J5-F	Modulator #03 Connect / Disconnect	J6-G	1=Connect
CW0-3	J5-G	Modulator #04 Connect / Disconnect	J6-H	1=Connect
CW0-4	J5-H	Modulator #05 Connect / Disconnect	J6-J	1=Connect
CW0-5	J5-J	Modulator #06 Connect / Disconnect	J6-K	1=Connect
CW0-6	J5-K	Modulator #07 Connect / Disconnect	J6-L	1=Connect
CW0-7	J5-L	Modulator #08 Connect / Disconnect	J6-M	1=Connect
CW0-8	J5-M	Modulator #09 Connect / Disconnect	J6-N	1=Connect
CW0-9	J5-N	Modulator #10 Connect / Disconnect	J6-P	1=Connect
CW0-10	J5-P	APS / Mod Deck Box Reset	J6-C, J8f	1 0 1=Reset
CW0-11	J5-R	APS On / Off	J6-D	1=On
CW0-12	J5-S			
CW0-13	J5-T			
CW0-14	J5-U			
CW0-15	J5-V	WatchDog Crate Reset	J10-B	1 0 1=Reset
CW1-0	J5-W			
CW1-1	J5-X			
CW1-2	J5-Y			
CW1-3	J5-Z	Swix Line 4	J8-B	1= 0n
CW1-4	J5-a	Swix Line 2	J8-C	1= 0n
CW1-5	J5-b	Swix Line 1	J8-D	1= 0n
CW1-6	J5-c			
CW1-7	J5-d			
CW1-8	J5-e			
CW1-9	J5-f			
CW1-10	J5-g			
CW1-11	J5-h			
CW1-12	J5-i			
CW1-13	J5-j			
CW1-14	J5-k			
CW1-15	J5-m			

DCC OUT to IRM	DESCRIPTIONS:	DCC IN
J1: MW0 & MW1	APS Control Unit Status and Control	**J6 & J7**
J2: MW2 & MW3	SWIX: Analog Switch For MCR	**J9:**
J2: MW3	WatchDog NIM Crate Fault Status	**J10**
J3: MW4	Spark Detector NIM Crate Status	**J11**
J3: MW5		
J4: MW6 & MW7	Modulator HV Deck Interface Monitor Chassis	**J8**
	Remote Computer Control	**J5: CW0 & CW1**

Originator:	Bob Ducar	April 3, 1979
Drawn By:	Bob Scala	March 18, 2014
Checked By:		
Approved By:		

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

DRAWING NAME
BOOSTER HLRF SYSTEM RCC
COMPUTER CONTROL (DCC)
INTERNET RACK MONITOR (IRM), WORD ASSIGNMENTS

DRAWING NUMBER
0337.020-