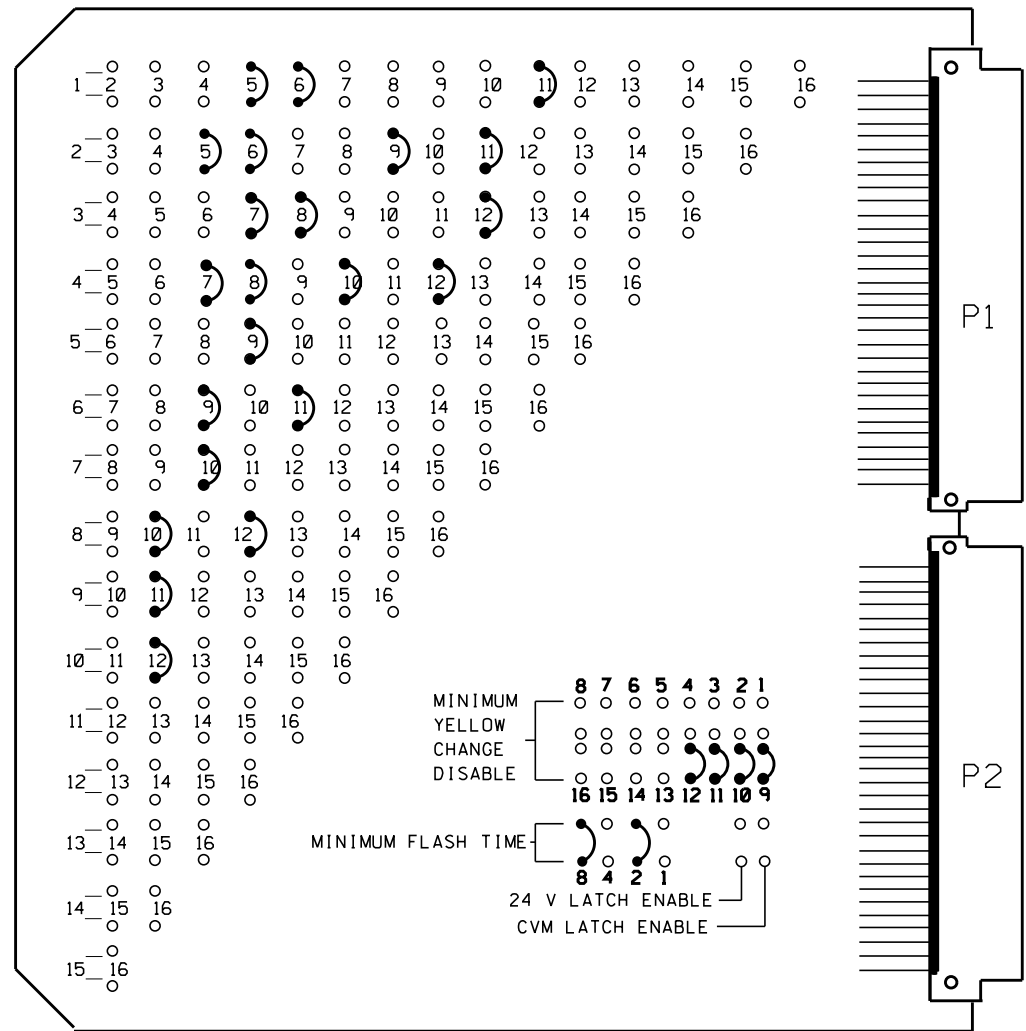


**EDI MODEL MMU2-16LE  
MALFUNCTION MANAGEMENT UNIT  
PROGRAMMING DETAIL**  
(program card and tables as shown below)



**FIELD CHECK ENABLE  
DUAL IND ENABLE  
RED FAIL ENABLE**

CHANNEL NUMBER	ENABLE/DISABLE
1	ENABLE
2	ENABLE
3	ENABLE
4	ENABLE
5	ENABLE
6	ENABLE
7	ENABLE
8	ENABLE
9	ENABLE
10	ENABLE
11	ENABLE
12	ENABLE
13	DISABLE
14	DISABLE
15	DISABLE
16	DISABLE

**UNIT OPTIONS**

OPTION	SETTING
RECURRENT PULSE	ON
WALK DISABLE	OFF
LOG CVM FAULTS	ON
EXTERN WATCHDOG	OFF
24V-2=12VDC	OFF
PGM CARD MEMORY	ON
LEDgaurd	ON
FORCE TYPE 16	OFF
TYPE12-SDLC	OFF
VM 3x/Day Latch	ON

**FLASHING YELLOW ARROW**

CONFIG MODE	A
ENABLE CHANNEL PAIR, FYA	
CH 1-9	OFF
CH 3-10	OFF
CH 5-11	OFF
CH 7-12	OFF
RED/YEL INPUT ENABLE	
CH 1-9	OFF
CH 3-10	OFF
CH 5-11	OFF
CH 7-12	OFF
FLASH RATE FAULT	OFF
FYA TRAP DETECT	OFF

- NOTES**
- To prevent "Flash-conflict" problems, wire all unused load switches to flash red. Verify that signal heads flash in accordance with the signal plans.
  - To prevent red failures on unused monitor channels, tie unused load switch red outputs 13,14, 15 and 16 to load switch AC+ by inserting a jumper plug in the unused load switch socket from pin 1 (LS AC+) to pin 3 (red out). Make sure all flash transfer relays are in place.
  - Program controller to start up in phases 2 and 6 green.
  - Set power-up flash time to 10 seconds and implement on the Malfunction Management Unit. Set controller power-up flash time to 0 seconds.
  - Enable simultaneous gap-out feature, on controller unit, for all phases.
  - Program detectors in accordance with the manufacturer's instructions to accomplish the detection schemes shown on the signal design plans.
  - Program detector call delay and extension timing on the controller, unless otherwise specified.
  - Set all detector card unit channels to "presence" mode.
  - Program phases 2 and 6, on controller unit, for volume density operation.
  - This controller and cabinet are part of the Greenville Signal System.

**MMU PROGRAMMING CARD**

**MMU PROGRAMMING NOTE**  
ENSURE YELLOW CHANGE PLUS RED CLEARANCE MONITORING IS ENABLED FOR ALL CHANNELS.

**DETECTOR RACK SET-UP DETAIL**

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

**DETECTOR RACK #1**

DETECTOR RACK #1	CH1	CH1	CH1	CH1	CH1	CH1	CH1	CH1	CH1	CH2	CH2	CH2	CH2	CH2	CH2	CH2	CH2	CH2	CH2	SLOT	SLOT	SLOT
BIU	L3	L1	L7	L5	L11	L9	L15	L13	∅ 2	∅ 1	∅ 3	∅ 2	∅ 5	∅ 4	∅ 6	∅ 6	∅ 6	∅ 6	∅ 6	SLOT	SLOT	SLOT
	∅ 2	∅ 1	∅ 3	∅ 2	∅ 5	∅ 4	∅ 6	∅ 6												EMPTY	EMPTY	EMPTY

**DETECTOR RACK #2**

DETECTOR RACK #2	CH1	CH1	SLOT	SLOT
BIU	L19	L17	SLOT	SLOT
	∅ 8	∅ 7	EMPTY	EMPTY
	CH2	CH2	EMPTY	EMPTY
	L20	L18	EMPTY	EMPTY
	∅ 8	∅ 7	EMPTY	EMPTY

WIRE LOOPS TO TERMINALS ON LOOP PANEL AS SHOWN IN THE CHART BELOW

LOOP NO.	LOOP PANEL TERMINALS
1A	L1A,L1B
1B	L2A,L2B
2A	L3A,L3B
2B	L4A,L4B
2C	L5A,L5B
-	L6A,L6B
3A	L7A,L7B
-	L8A,L8B
4A	L9A,L9B
4B	L10A,L10B
5A	L11A,L11B
5B	L12A,L12B
6A	L13A,L13B
6B	L14A,L14B
6C	L15A,L15B
-	L16A,L16B
7A	L17A,L17B
7B	L18A,L18B
8A	L19A,L19B
8B	L20A,L20B
-	L21A,L21B
-	L22A,L22B
-	L23A,L23B
-	L24A,L24B

**NOTE**  
BE SURE TO PROGRAM DETECTOR TYPES AND TIMERS (EXTEND AND DELAY) AS SHOWN ON THE SIGNAL PLANS.

PROGRAM CONTROLLER DETECTORS ACCORDING TO THE SCHEDULE SHOWN IN THE CHART BELOW

CONTROLLER DETECTOR NO.	FUNCTION	TIMING	
		FEATURE	TIME (SEC)
1	∅ 1	-	-
2	∅ 1	-	-
3	∅ 2	-	-
4	∅ 2	-	-
5	∅ 2	-	-
6	-	-	-
7	∅ 3	-	-
8	-	-	-
9	∅ 4	-	-
10	∅ 4	-	-
11	∅ 5	-	-
12	∅ 5	-	-
13	∅ 6	-	-
14	∅ 6	-	-
15	∅ 6	-	-
16	-	-	-
17	∅ 7	-	-
18	∅ 7	-	-
19	∅ 8	-	-
20	∅ 8	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-

**COUNTDOWN PEDESTRIAN SIGNAL OPERATION**

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

**LOAD SWITCH ASSIGNMENT DETAIL**

(program controller according to schedule in chart below)

LOAD SWITCH NUMBER	FUNCTION
1	∅ 1
2	∅ 2
3	∅ 3
4	∅ 4
5	∅ 5
6	∅ 6
7	∅ 7
8	∅ 8
9	∅ 2 PED
10	∅ 4 PED
11	∅ 6 PED
12	∅ 8 PED
13	OLA
14	OLB
15	OLC
16	OLD

**SIGNAL HEAD HOOK-UP CHART**

PHASE	1	2	3	4	5	6	7	8	2 PED	4 PED	6 PED	8 PED	OLA	OLB	OLC	OLD	
SIGNAL HEAD NO.	11,12	21,22 23,24	23	31	41,42 43	51,52	61,62 63,64	71,72	63	81,82 83	P21, P22	P41, P42	P61, P62	P81, P82	NU	NU	NU
RED		2R		4R		6R		8R									
YELLOW		2Y		4Y		6Y		8Y									
GREEN		2G		4G		6G		8G									
RED ARROW	1R			3R		5R		7R									
YELLOW ARROW	1Y		3Y	3Y		5Y		7Y	7Y								
GREEN ARROW	1G		3G	3G		5G		7G	7G								
WALK										9G	10G	11G	12G				
DON'T WALK										9R	10R	11R	12R				

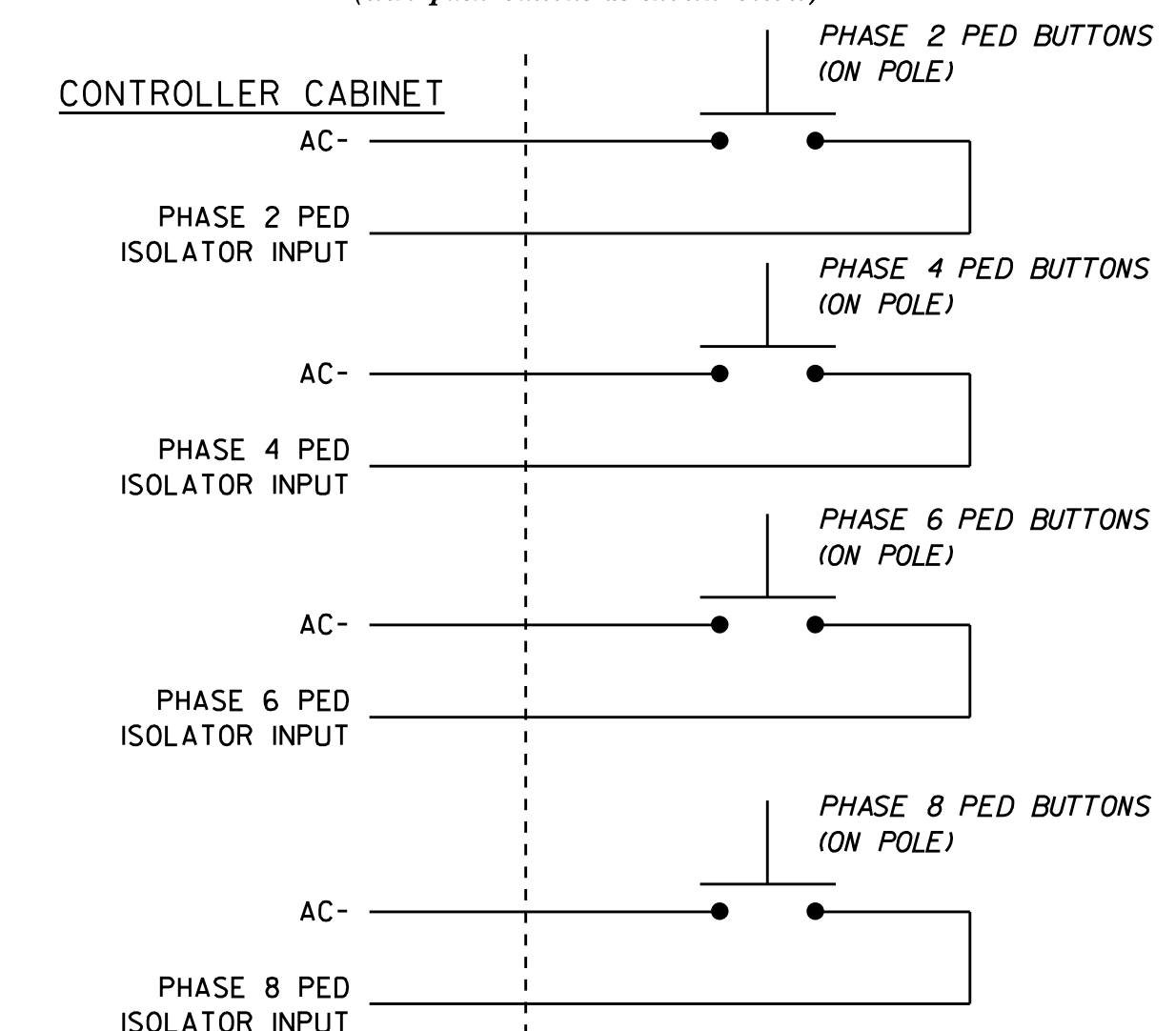
NU = Not Used

**EQUIPMENT INFORMATION**

CONTROLLER.....ECONOLITE ASC/3  
 CABINET .....NC-8A TS-2  
 CABINET MOUNT.....BASE  
 LOADBAY POSITIONS.....16  
 LOAD SWITCHES USED.....1,2,3,4,5,6,7,8,9,10,11,12  
 PHASES USED.....1,2,2PED,3,4,4PED,5,6,6PED,7,8,8PED  
 OLA.....NOT USED  
 OLB.....NOT USED  
 OLC.....NOT USED  
 OLD.....NOT USED

**PEDESTRIAN PUSH-BUTTON WIRING DETAIL**

(wire push-buttons as shown below)



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 02-0053  
 DESIGNED: JUNE 2014  
 SEALED: 9/2/2014  
 REVISED: N/A

**FINAL DESIGN**

ELECTRICAL AND PROGRAMMING DETAILS FOR: US 13- NC 11-43-903(MEMORIAL DRIVE)  
 AT SR 1200 (STANTONSURG ROAD)/ 10th STREET  
 DIVISION 2 PITT COUNTY GREENVILLE  
 PLAN DATE: JUNE 2014 REVIEWED BY: SL PHILLIPS  
 PREPARED BY: SP PENNINGTON REVIEWED BY:  
 REVISIONS INIT. DATE  
 DocuSigned by: Stacie Phillips 9/2/2014  
 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032607 STACIE L. PHILLIPS  
 SIGNATURE DATE  
 SIG. INVENTORY NO. 02-0053

PLANS PREPARED IN THE OFFICE OF:  
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