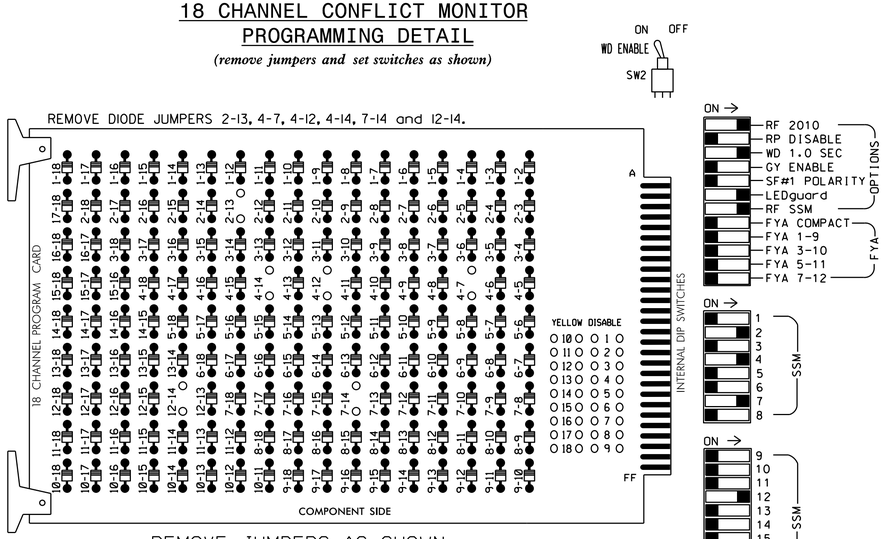
PROJECT REFERENCE NO.	SHEET NO.
U-5302	Sig.14.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS AS SHOWN

■ = DENOTES POSITION OF SWITCH

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that Red Enable is active at all times during normal operation.
4. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Program controller to start up in phase 2 Green/ Don't Walk.
3. Enable simultaneous gap-out feature for all phases.
4. Program phases 4 and 7 for dual entry.
5. Program phase 2 for volume density operation.
6. The cabinet and controller are part of the Raleigh Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
CABINET.....332 W/ AUX
SOFTWARE.....SE-PAC2070 ver 5.5 or later
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S2,S3,S5,S6,S10,AUX S5
PHASES USED.....2,2PED,4,4PED,7
OVERLAP "A".....NOT USED
OVERLAP "B".....NOT USED
OVERLAP "C".....NOT USED
OVERLAP "D".....*

* See sheet 2 for Overlap Programming Detail

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2		S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2		13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2		2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	21	22,23	P21, P22	NU	41,42	P41, P42	NU	NU	NU	71	NU	NU	NU	NU	NU	NU	72	NU
RED		128	128			101													
YELLOW		129	129																
GREEN			130																
RED ARROW											122							A101	
YELLOW ARROW						102					123							A102	
GREEN ARROW		130				103					124							A103	
✋				113			104												
🚶				115			106												

NU = Not Used

ALL RED FLASH STARTUP PROGRAMMING DETAIL

(program controller as shown below)

1. From Main Menu select [4 - UNIT DATA]
2. From UNIT DATA Submenu select [1 - STARTUP & MISC]

```
EPAC STARTUP & MISC
STARTUP TIME.:  6 (SEC) STATE: 2 (O-FL
RED REV/10...: 40 (TSEC)          1-RED
AUTO PED CLR.:  0 (O-NO  1-YES)   2-RAF)
STOP T RESET.:  0 (O-NO  1-YES)
SEQUENCE.....:  1 (1-19)
SPECIAL SEQ  :  0 (SEE HELP)
A-UP B-DN C-LT D-RT E-ENTER F-PRIOR MENU
```

STARTUP PROGRAMMING COMPLETE

PRESS 'F' TO RETURN TO UNIT DATA

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT	Ø2 2A	Ø2 2C	SLOT	SLOT	Ø4 4A	SLOT	SLOT	SYS. DET. S13	SLOT	SLOT	Ø2 PED DC ISOLATOR	SLOT	FS DC ISOLATOR
	L	EMPTY	Ø2 2B	NOT USED	EMPTY	EMPTY	Ø4 4B	EMPTY	EMPTY	SYS. DET. S14	EMPTY	EMPTY	Ø4 PED DC ISOLATOR	EMPTY	ST DC ISOLATOR
FILE "J"	U	SLOT	SLOT	SLOT	SLOT	SLOT	Ø7 7A	SLOT	SLOT	SYS. DET. S15	SLOT	SLOT	SLOT	SLOT	SLOT
	L	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	NOT USED	EMPTY	EMPTY	NOT USED	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	DELAY TIME	EXTEND (STRETCH) TIME
2A	TB2-5,6	I2U	39	3	2		
2B	TB2-7,8	I2L	43	4	2		
2C	TB2-9,10	I3U	63	5	2		
4A	TB4-9,10	I6U	41	11	4	15	
4B	TB4-11,12	I6L	45	12	4	15	
7A	TB5-9,10	J6U	42	31	7		
* S13	TB6-9,10	I9U	60	17	SYS		
* S14	TB6-11,12	I9L	62	18	SYS		
* S15	TB7-9,10	J9U	59	37	SYS		
PED PUSH BUTTONS							
P21,P22	TB8-4,6	I12U	67	PED 2	2 PED		
P41,P42	TB8-5,6	I12L	69	PED 4	4 PED		

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOT I12.

* System Detector only. Remove the vehicle phase assigned to this detector in the default programming.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

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.

INIT & N.A. RESP PROGRAMMING DETAIL

1. From Main Menu select [3 - PHASE DATA]
2. From PHASE DATA Submenu select [4 - INIT & N.A RESP]

Note Phases 1, 3, 5, 6 and 8 NOT used! →

```
PHASE......1...2...3...4...5...6...7...8
 INITIAL   0   6   0   1   0   0   1   0
 NA RESP   0   1   0   2   0   1   0   2
 UPDT GRN  0   0   0   0   0   0   0   0
CODES.....0....1....2....3....4....5...6
 INITL  NONE INACT RED  YEL  GRN  DRK G/DW
 NA RSP NONE  NA1  NA2  1&2  ---  --- ---
                                      ***
```

INIT & N.A. RESP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1174
DESIGNED: February 2025
SEALED: 03/27/2025
REVISED: N/A

Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ITS & Signals Management Section

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at
Pinewinds Drive

Division 5 | Wake County | Raleigh

PLAN DATE: March 2025 | REVIEWED BY:
PREPARED BY: S.Kirkpatrick | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH
Signed by: Ryan W. Hough
A3D3206E6A3654AC3...
03/27/2025
SIGNATURE | DATE
SIG. INVENTORY NO. 05-1174

27-MAR-2025 15:24
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sgkirkpatrick