PROJECT REFERENCE NO.	SHEET NO.
HS-2005K	Sig. 2.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches 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 phases 2 and 6 green.
3. Enable simultaneous gap-out feature for all phases.
4. The cabinet and controller are part of the Raleigh Signal System.

EQUIPMENT INFORMATION

```
CONTROLLER.............2070
CABINET................332 W/ AUX
SOFTWARE...............SE-PAC2070
CABINET MOUNT..........BASE
OUTPUT FILE POSITIONS...18 WITH AUX FILE
LOAD SWITCHES USED......S1,S2,S3,S4,S5,S6,S8,S12,
                        AUX S1,AUX S2,AUX S3
PHASES USED............1,2,2PED,3,3PED,4,4PED,6,6PED
OVERLAP A..............*
OVERLAP B..............*
OVERLAP C..............NOT USED
OVERLAP D..............NOT USED
OVERLAP E..............*
OVERLAP F..............NOT USED
OVERLAP G..............1+4
```

* SEE SHEET 2 FOR OVERLAP PROGRAMMING

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	OLG	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	OLE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11★	21,22	P21, P22	33★	41,42	P41, P42	NU	61,62	NU	NU	NU	P31, P32	11★	33★	31,32	NU	NU	NU
RED		128			101			134						A124				
YELLOW	*	129		*	102			135										
GREEN		130			103			136										
RED ARROW													A121		A111			
YELLOW ARROW													A122	A125	A112			
FLASHING YELLOW ARROW													A123	A126				
GREEN ARROW	127			118											A113			
✋			113			104						110						
🚶			115			106						112						

NU = Not Used

*Denotes install load resistor. See load resistor installation detail this sheet.

**See Phase 3 PED output programming deatil on sheet 2.

★See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)

NOTE: See sheet 2 for Protected & Permitted Phases programming.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø1 1A	Ø2 2A	Ø2 2C	SLOT EMPTY	Ø3 3A	Ø3 3B	Ø4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø2 PED DC ISOLATOR	Ø6 PED DC ISOLATOR	FS DC ISOLATOR
	L	NOT USED	Ø2 2B	NOT USED		NOT USED	NOT USED	Ø4 4B					Ø4 PED DC ISOLATOR	Ø3 PED DC ISOLATOR	ST DC ISOLATOR
FILE "J"	U	Ø5 5A	Ø6 6A	Ø6 6C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	Ø6 6B	NOT USED											

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
1A	TB2-1,2	I1U	56	1	1	5	
2A	TB2-5,6	I2U	39	3	2		
2B	TB2-7,8	I2L	43	4	2		
1B	TB2-9,10	I3U	63	5	2		
3A	TB4-5,6	I5U	58	9	3	3	
3B	TB4-9,10	I6U	41	11	3	10	
6A	TB3-5,6	J2U	40	21	6		
6B	TB3-7,8	J2L	44	22	6		
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		
P31,P32	TB8-8,9	I13L	70	PED 8	3 PED		

NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

ACCEPTABLE VALUES

VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)

This Electrical Detail supersedes the detail sealed on 10-18-22

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1902
DESIGNED: February 2024
SEALED: 02-27-24
REVISED: N/A

Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Traffic Engineering, Mobility and Safety Division
Traffic Engineering & Signals Management Section
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N.Greenfield Pkwy,Garner,NC 27529

US 401 (Louisburg Road)
at
Calvary Drive and
State Employee's Credit Union

Division 5 Wake County Raleigh

PLAN DATE: February 2024 REVIEWED BY:
PREPARED BY: James Peterson REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH

DocuSigned by: Ryan W. Hough 02/29/2024
430320FAA2654C3 DATE

SIG. INVENTORY NO. 05-1902

28-FEB-2024 07:24
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JTPeterson