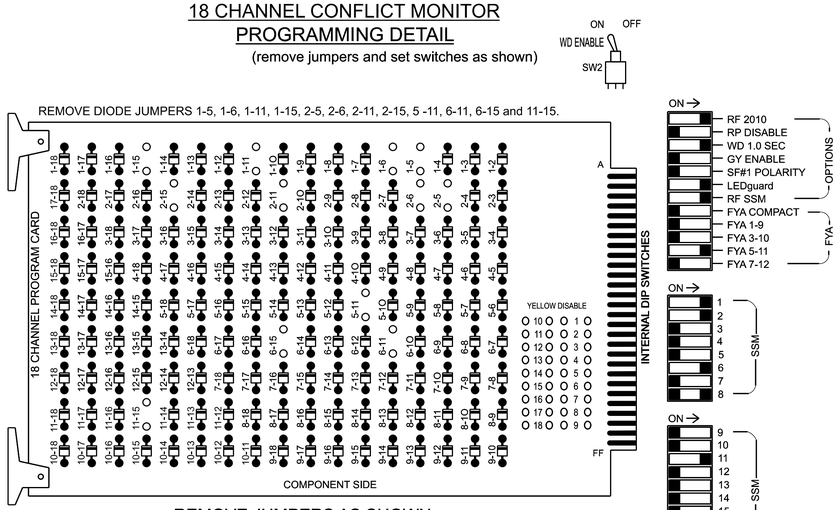
PROJECT REFERENCE NO.	SHEET NO.
BR-0168	Sig. 6.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS AS SHOWN

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.

■ = DENOTES POSITION OF SWITCH

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. Return controller to Factory Defaults before programming per this electrical detail.
3. Enable Simultaneous Gap-Out for all Phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Disable all phases for Startup In Green.
6. Program phases 2 and 6 as First Phases.
7. Disable all phases for Yellow Flash.
8. The cabinet and controller are part of the Winston-Salem Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070
CABINET.....332 W/ AUX
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S1,S2,S7,S8,S9,S11,AUX S4
PHASES USED.....1,2,5,6,6PED,8
OVERLAP "A".....NOT USED
OVERLAP "B".....NOT USED
OVERLAP "C".....5+6
OVERLAP "D".....NOT USED

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.	11	82	21,22	NU	NU	NU	NU	51 ★	61,62	P61, P62	NU	81	82,83	NU	NU	NU	NU	51 ★	NU	NU
RED			128						134			107	107							
YELLOW			129					*	135			108	108							
GREEN			130						136			109	109							
RED ARROW	125																	A114		
YELLOW ARROW	126	126																A115		
FLASHING YELLOW ARROW																		A116		
GREEN ARROW	127	127						133				109								
✋										119										
🚶										121										

NU = Not Used

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

★ See pictorial of head wiring in detail this sheet.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	WIRED ⊗ INPUT	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 6 PED DC ISOLATOR	FS DC ISOLATOR
	L													NOT USED	ST DC ISOLATOR
FILE "J"	U	Ø 5 5A NOT USED	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L														

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

FS = FLASH SENSE
ST = STOP TIME

⊗ Wired Input - Do not populate slot with detector card

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
5A [1]	TB3-1,2	J1U	55	17	5	5	Y	Y			15
	-	I4U	47	9 ★	22	2	Y	Y	Y		3
	-	J1U	55	17 ★	55	5	Y	Y			
PED PUSH BUTTONS											
P61,P62	TB8-7,9	I13U	68	30	PED 6	6 PED					

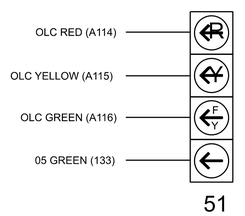
NOTE:
INSTALL DC ISOLATOR IN INPUT FILE SLOT I13.

[1] Add jumper from J1-W to I4-W, on rear of input file.

★ See Input Page Assignment programming details on sheet 3.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL



NOTE

The sequence display for signal head 51 requires special logic programming. See sheet 2 for programming instructions.

SPECIAL DETECTOR NOTE

Install a non-intrusive detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

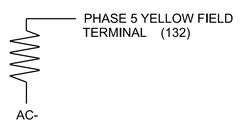
For detection zone 5A, detector card placement and slots reserved for wired inputs are typical for a NCDOT installation. Inputs associated with this slot are compatible with time of day instructions located on sheets 3 and 4.

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 IS FOR
THE SIGNAL DESIGN: 09-0798T2
DESIGNED: December 2025
SEALED: 2-12-26
REVISED: N/A

Electrical Detail - Sheet 1 of 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

SR 4000 (University Parkway)
at
N. Pattern Avenue and
US 52 NB Ramps

Division 9 | Forsyth County | Winston-Salem

PLAN DATE: February 2026 | REVIEWED BY:
PREPARED BY: James Peterson | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Traffic Engineering Branch
Traffic Signals Management Section
750 N. Greenfield Pkwy, Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MIMS

DocuSigned by: Keith M. Mims 02/12/2026
DATE
SIG. INVENTORY NO. 09-0798T2

12-FEB-2026 12:48
pw://ncdot.bentley.com:ncdot-pw-01/Documents/NCDOT Units/NCDOT TSMO/Signal Design Section/Division_09/09-0798/Signals Management/2026-02/09079B_sm_ele_yyyymmdd.dgn
jpeterson