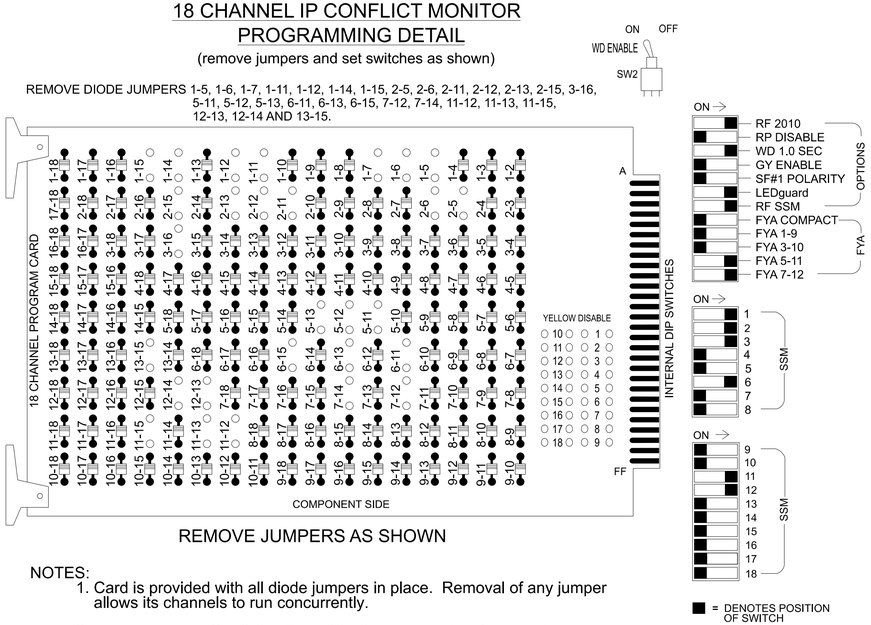
Docusign Envelope ID: 79B3A8A1-0FC4-4E1A-B88D-18F38FA00C9B

PROJECT REFERENCE NO.	SHEET NO.
R-5600	Sig-8.1

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-7, 1-11, 1-12, 1-14, 1-15, 2-5, 2-6, 2-11, 2-12, 2-13, 2-15, 3-16, 5-11, 5-12, 5-13, 6-11, 6-13, 6-15, 7-12, 7-14, 11-12, 11-13, 11-15, 12-13, 12-14 AND 13-15.



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 the Red Enable is active at all times during normal operation.
4. Integrate monitor with Ethernet network in cabinet.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan
2. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
3. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
4. The cabinet and controller are part of the NC 107 Time Based System.

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....332 w/ Aux
Software.....Q-Free MAXTIME
Cabinet Mount.....Base
Output File Positions.....18 With Aux. Output File
Load Switches Used.....S1, S2, S3, S4, S6, S7, S8, S9, S10, S12, AUX S4, AUX S5
Phases Used.....1, 2, 2PED, 3, 3PED, 4, 4PED, 5, 6, 6PED
Overlap "1".....NOT USED
Overlap "2".....NOT USED
Overlap "3".....*
Overlap "4".....*
Overlap "5".....NOT USED
Overlap "6".....NOT USED
Overlap "7".....*
Overlap "8".....*

*See overlap programming detail on sheet 2.

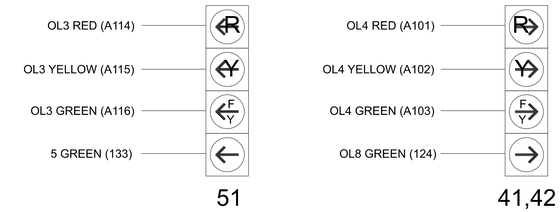
SIGNAL HEAD HOOK-UP CHART

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	OL7	2	2 PED	3			4	4 PED	5	6	6 PED	OL8	8	3 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11	21,22	P21, P22	31	32	33	NC	P41, P42	51★	61,62	P61,P62 P63,P64	41,42★	NU	P31, P32	NU	NU	NU	51★	41,42★	NU
RED		128			116	116				134										
YELLOW		129			117	117			*	135		*								
GREEN		130			118	118				136										
RED ARROW	125		116															A114	A101	
YELLOW ARROW	126		117															A115	A102	
FLASHING YELLOW ARROW																		A116	A103	
GREEN ARROW	127		118	118					133			124								
✋			113					104			119			110						
🚶			115					106			121			112						

NU = Not Used NC = Not Connected
* Denotes install load resistor. See load resistor installation detail this sheet.
★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT

(front view)

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

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

FS = FLASH SENSE
ST = STOP TIME

Note: For Detection Zone 5A the equipment and slots reserved are typical for a NCDOT Installation.

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
5A	TB3-1,2	J1U	55	17	15	5	15.0		X		X	
				-	31	2	-		X		X	
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2						
P31,P32	TB8-8,9	I13L	70	36	3	PED 3						
P41,P42	TB8-5,6	I12L	69	35	4	PED 4						
P61,P62 P63,P64	TB8-7,9	I13U	68	34	6	PED 6						

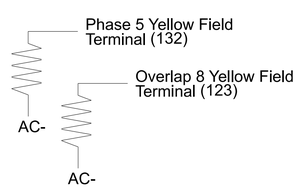
NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)

ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



SPECIAL DETECTOR NOTE

1. Install a multi-zone microwave 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.
2. For zone 5A, detector card placement is typical for a NCDOT Installation. Detectors associated with these slots are compatible with the Vehicle Detector Programming Detail located on sheet 2 of this electrical detail.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 14-0397T6
DESIGNED: Aug 2025
SEALED: 8/26/2025
REVISED: N/A

Electrical Detail - Sheet 1 of 2
Temporary Design 6 - TMP Ph3, S1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Plans Prepared By:

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CHARLOTTE, NC 28262
NC LICENSE NO. F-1524 (704) 549-4260

Electrical and Programming Details For:

Transportation Mobility and Safety Division, Traffic Engineering & Signals Management Section, STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION

750 N. Greenfield Pkwy, Garner, NC 27529

US 23 Bus./NC 107 (E. Main Street) at US 23 Bus. (Asheville Hwy)/ SR 1355 (Sunrise Park)

Division 14 Jackson County Sylva

PLAN DATE:	August 2025	REVIEWED BY:	ZM Esposito
PREPARED BY:	DJ White	REVIEWED BY:	BN Groome

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 052936 ENGINEER BRITTANY N. GROOME

Signed by: Brittany Groome 8/26/2025
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SIG. INVENTORY NO. 14-0397T6

25-AUG-2025 12:34
rzwilliams@dot.nc.gov
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