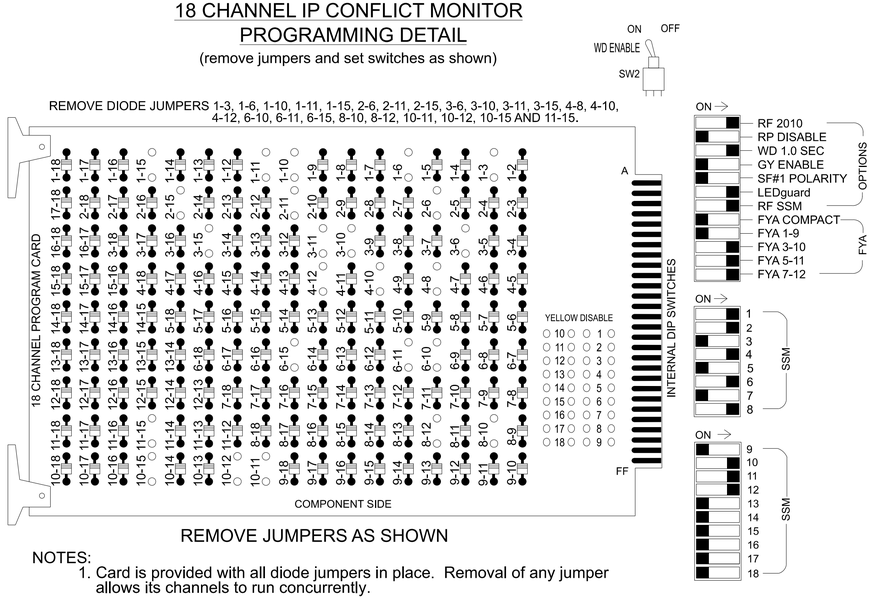
Docusign Envelope ID: EDBF09DE-B24D-4F89-928A-48F3924CA521

PROJECT REFERENCE NO.	SHEET NO.
R-5600	Sig.45.1

18 CHANNEL IP 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 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 phases 4 and 8 for Dual Entry.
3. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
4. The cabinet and controller are part of the NC 107 Timed 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, S4, S5, S8, S9, S11, AUX S2, AUX S4, AUX S5
Phases Used.....1, 2, 4, 6PED, 6, 8
Overlap "1".....NOT USED
Overlap "2".....*
Overlap "3".....*
Overlap "4".....*
Overlap "5".....NOT USED
Overlap "6".....NOT USED
Overlap "7".....*

*See overlap programming detail on sheet 2

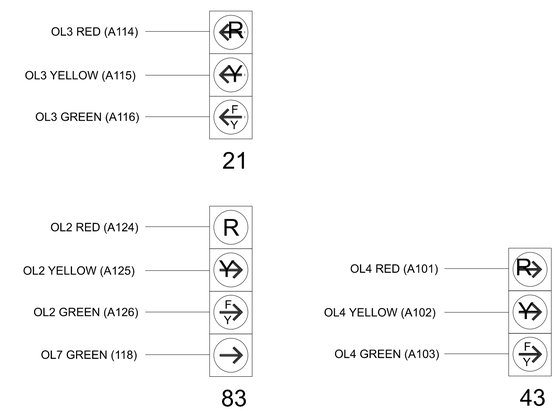
SIGNAL HEAD HOOK-UP CHART

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	1	2	2 PED	OL7	4	4 PED	5	6	6 PED	7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11	22,23, 24	NU	83★	41,42, 44	NU	NU	61,62, 63	P61, P62	NU	81,82, 84	NU	NU	83★	NU	21★	43★	NU
RED		128			101			134			107			A124				
YELLOW		129		*	102			135			108							
GREEN		130			103			136			109							
RED ARROW	125															A114	A101	
YELLOW ARROW	126													A125		A115	A102	
FLASHING YELLOW ARROW														A126		A116	A103	
GREEN ARROW	127			118														
✋									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.

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	SLOT EMPTY	∅ 6 PED DC ISOLATOR	FS DC ISOLATOR
	L													NOT USED	ST DC ISOLATOR
FILE "J"	U	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	SLOT EMPTY
	L														

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.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
PED PUSH BUTTONS												
P61,P62	TB8-7,9	I13U	68	34	6	PED 6						

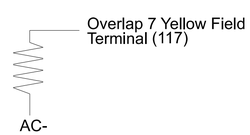
NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOT I13.

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

Modify the 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.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 14-0727T3
DESIGNED: Aug 2025
SEALED: 8/26/2025
REVISED: N/A

Electrical Detail - Sheet 1 of 2
Temporary Design 3 - TMP Ph2, S2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Plans Prepared By:
DRMP, INC.
8210 UNIVERSITY EXECUTIVE PARK DR.
SUITE 220
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. (Asheville Hwy)
at
SR 1432 (Skyland Drive) /
SR 1438 (Dillardtown Road)

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
1E0934DE1094484...
DATE

SIG. INVENTORY NO. 14-0727T3

22-AUG-2025 10:32
w:\Projects\R5600_US23Bus_Ph2\Design\Signal Management\14-0727\14072T3_sm_ele_2024mmdd.dgn
Fernando.Vazquez AT CH4-FVA20UE2
ress/R-5600 NCDOT File Structure/Traffic/Signals/Design/Signal Management/14-0727/14072T3_sm_ele_2024mmdd.dgn
22-AUG-2025 10:32
w:\Projects\R5600_US23Bus_Ph2\Design\NCDOT\NCDOT_Western_Div_On-Call_M_/NCDOT_6170_R5600_NCTTO_US23BUS/6.0_CAD_BIM/6.2_Work_In_Progress/R-5600 NCDOT File Structure/Traffic/Signals/Design/Signal Management/14-0727/14072T3_sm_ele_2024mmdd.dgn
Fernando.Vazquez AT CH4-FVA20UE2