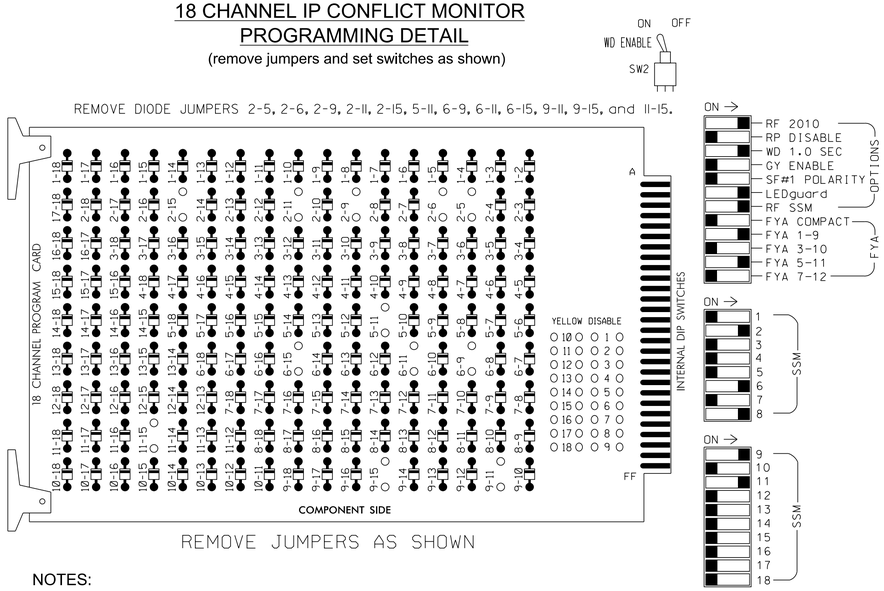
Docusign Envelope ID: BD03E172-E609-4F7C-9562-9DADBA96D9EA

PROJECT REFERENCE NO.	SHEET NO.
I-5898	Sig 15.1

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches 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 Signal System #: D07-09_Mayodan

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.....S2, S7, S8, S9, S11, AUX S1, AUX S4
Phases Used.....2, 5, 6, 6PED, 8
Overlap "1".....*
Overlap "2".....NOT USED
Overlap "3".....*
Overlap "4".....NOT USED

*See overlap programming detail on sheet 2

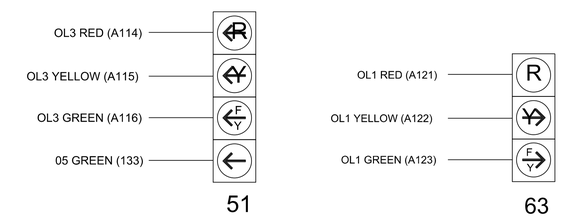
SIGNAL HEAD HOOK-UP CHART

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	3	4	4 PED	5	6		6 PED	7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	NU	21	22	NU	NU	NU	NU	51★	61	62	P61, P62	NU	81,82 83	NU	63★	NU	NU	51★	NU	NU
RED		128	128						134	134			107		A121					
YELLOW		129	129					*	135	135			108							
GREEN		130								136			109							
RED ARROW																		A114		
YELLOW ARROW															A122			A115		
FLASHING YELLOW ARROW															A123			A116		
GREEN ARROW			130					133	136											
✋											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	Ø 2 2A	SLOT EMPTY	SLOT EMPTY	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											NOT USED	ST DC ISOLATOR
FILE "J"	U	Ø 5 5A	Ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	NOT USED				NOT USED								

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

FS = FLASH SENSE
ST = STOP TIME

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold
6

Unit Flash Parameters

All Red Flash Exit Time
6

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 07-1417
DESIGNED: June 2025
SEALED: 6/27/2025
REVISED: N/A

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
2A	TB2-5,6	I2U	39	1	2	2	_	_	X	X	X	_
5A	TB3-1,2	J1U	55	17	15	5	15	_	X	_	X	_
				_	31	2	3	_	X	_	X	X
6A	TB3-5,6	J2U	40	2	16	6	_	_	X	X	X	_
8A	TB5-9,10	J6U	42	4	22	8	_	_	X	_	X	_
PED PUSH BUTTONS												
P61,P62	TB8-7,9	I13U	68	34	6	PED 6						

NOTE: INSTALL DC ISOLATOR IN INPUT FILE SLOT I13.

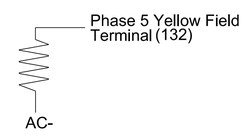
*System detector only. Remove any assigned vehicle phase.

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)



Signal Upgrade - Final Design
Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared for the Offices of:
Traffic Engineering Division
Mobility and Safety Division
Signal Management Section
DEPT. OF TRANSPORTATION
STATE OF NORTH CAROLINA
750 N.Greenfield Pkwy.Garner,NC 27529

US 311/NC 135 at US 220 Northbound Ramps

Division 7 | Rockingham County | Mayodan

PLAN DATE: June 2025 | REVIEWED BY:
PREPARED BY: Golam Moinuddin | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034454 ENGINEER GOLAM M. MOINUDDIN

Signed by: Golam Moinuddin
92697C4B27ED4EC...
6/27/2025
DATE

SIG. INVENTORY NO. 07-1417

Prepared in the Offices of:
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License No: C-3097

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