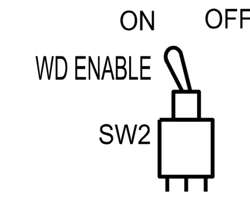
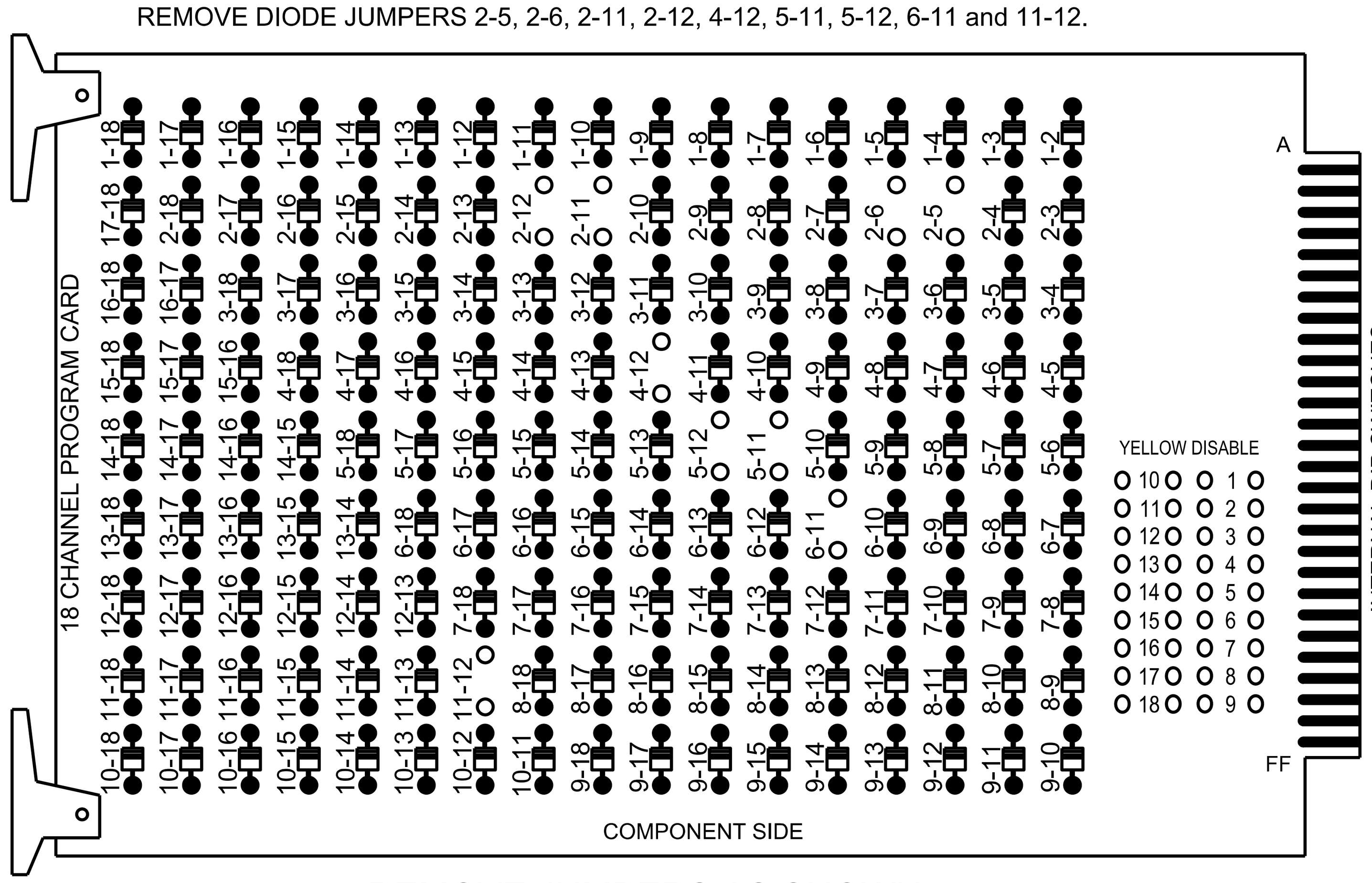
PROJECT REFERENCE NO.	SHEET NO.
U-5711	Sig.3.1

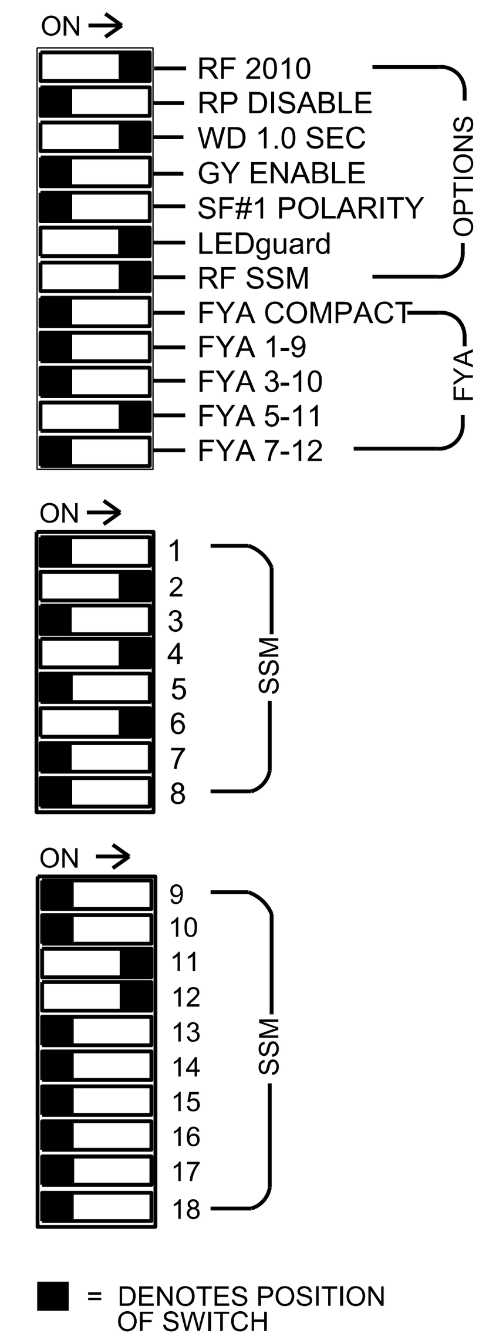
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 2-5, 2-6, 2-11, 2-12, 4-12, 5-11, 5-12, 6-11 and 11-12.





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.

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, S5, S7, S8, AUX S4, AUX S5
Phases Used..2, 4, 5, 6
Overlap "1"...NOT USED
Overlap "2"...NOT USED
Overlap "3"...*
Overlap "4"...*

*See overlap programming detail on this sheet

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	41,43	NU	51★	61,62 63	NU	NU	NU	NU	NU	NU	NU	51★	42	NU
RED		128						134									A101	
YELLOW		129					*	135										
GREEN		130						136										
RED ARROW					101											A114		
YELLOW ARROW					102											A115	A102	
FLASHING YELLOW ARROW																A116		
GREEN ARROW					103		133										A103	

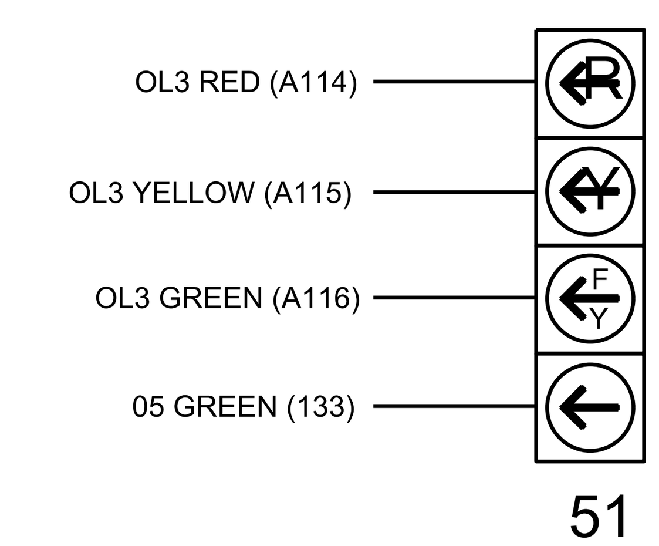
NU = Not Used

* 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)



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INPUT FILE POSITION LAYOUT

(front view)

FILE		1	2	3	4	5	6	7	8	9	10	11	12	13	14
"I"	U	SLOT EMPTY	∅2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	∅4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
"I"	L		NOT USED				∅5 5B								ST DC ISOLATOR
"J"	U	∅5 5A	∅6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
"J"	L	NOT USED	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.	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	
4A	TB4-9,10	I6U	41	3	8	4	3.0		X		X	
5A	TB3-1,2	J1U	55	17	15	5	15.0		X		X	
				-	31	2	3.0		X		X	X
5B	TB4-11,12	I6L	45	7	9	5	15.0		X		X	
6A	TB3-5,6	J2U	40	2	16	6			X	X	X	

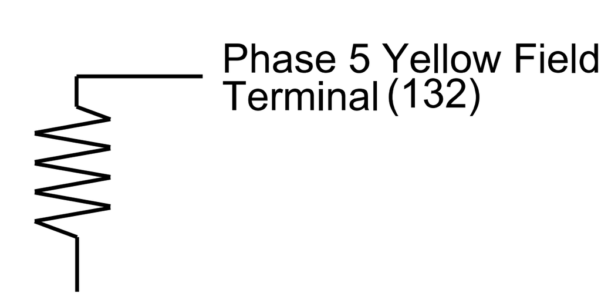
INPUT FILE POSITION LEGEND: J2L

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)



OVERLAP PROGRAMMING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3	4
Type	Off	Off	FYA 4 - Section	Normal
Included Phases	-	-	6	4;5
Modifier Phases	-	-	5	-
Modifier Overlaps	-	-	-	-
Trail Green	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 08-0580
DESIGNED: November 2025
SEALED: 11/24/2025
REVISED:

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
930 Main Campus Drive
Suite 200
RALEIGH, NC 27606
License No. F-0669

Electrical Detail - Sheet 1 of 2 - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:
Prepared for the Offices of:
Transportation Mobility and Safety Division, ITS & Signals Management Section, State of North Carolina Department of Transportation
750 N.Greenfield Pkwy,Garner,NC 27529

US 220 Bus (N Fayetteville St)
at
SR 1712 (Pineview Street)

Division 8 Randolph County Asheboro

PLAN DATE: November 2025	REVIEWED BY: R Mullinax
PREPARED BY: LD Stouchko	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034437 LORI D. STOUCHKO

DocuSigned by: Lori Stouchko
FF586C7596C645A...
24-Nov-2025
SIGNATURE DATE

SIG. INVENTORY NO. 08-0580