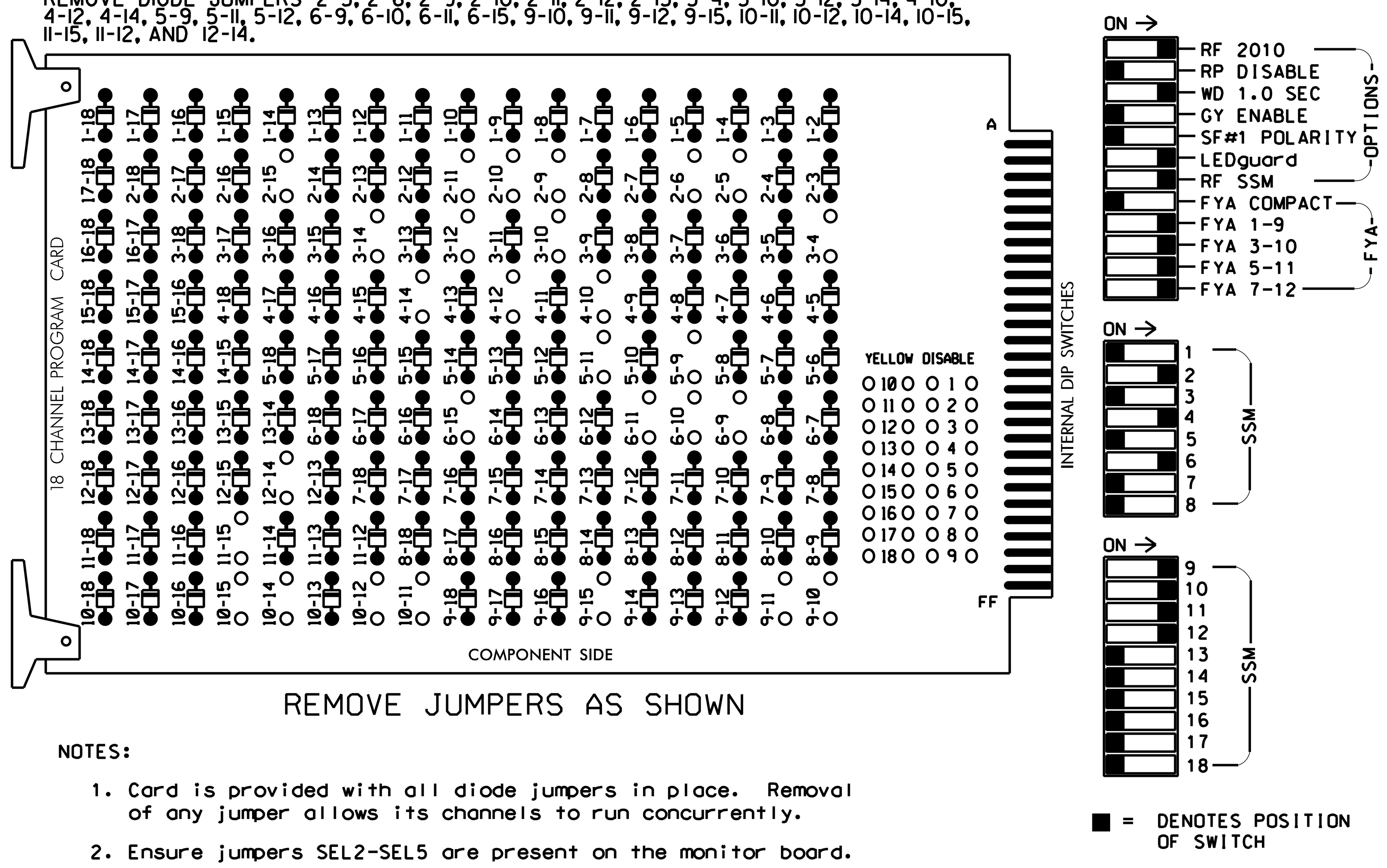
Docusign Envelope ID: F1095CE2-3707-4DB7-B397-037CBA81F1C6

PROJECT REFERENCE NO.	SHEET NO.
U-6202	Sig. 24.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 2-5, 2-6, 2-9, 2-10, 2-11, 2-12, 2-15, 3-4, 3-10, 3-12, 3-14, 4-10, 4-12, 4-14, 5-9, 5-11, 5-12, 6-9, 6-10, 6-11, 6-15, 9-10, 9-11, 9-12, 9-15, 10-11, 10-12, 10-14, 10-15, 11-15, 11-12, AND 12-14.



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 are present on the monitor board.
3. Ensure th Red Enable is active 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.

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. Enable Simultaneous Gap-Out for all Phases.
3. Program phases 2 and 6 for Startup in Green.
4. Program phases 2 and 6 for Yellow Flash, and overlaps 1 and 2 as Wag Overlaps.
5. The cabinet and controller are part of the Wilmington 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......S2,S4,S5,S6,S7,S8,S9,AUX S1, AUX S2,AUX S4,AUX S5
PHASES USED.............2,4,5,6
OVERLAP "A".............2
OVERLAP "B".............4+6
OVERLAP "C".............5+6
OVERLAP "D".............4
OVERLAP "E".............NOT USED
OVERLAP "F".............NOT USED
OVERLAP "G".............4

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	OLG	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	21,22	NU	64★	41,43	P41, P42	51★	62,63	P61, P62	NU	NU	NU	61★	64★	NU	51★	42★	NU
RED		128						134						A124			A101	
YELLOW		129		*			*	135										
GREEN		130						136										
RED ARROW					101								A121			A114		
YELLOW ARROW					102								A122	A125		A115	A102	
FLASHING YELLOW ARROW													A123	A126		A116	A103	
GREEN ARROW				118	103		133											
(hand)						104			119									
(walking person)						106			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	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	NOT USED	Ø6PED DC ISOLATOR	FS DC ISOLATOR
	L												Ø4PED DC ISOLATOR	NOT USED	ST DC ISOLATOR
FILE "J"	U	Ø5 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

SPECIAL DETECTOR NOTE

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

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	TB3-1,2	J1U	55	17	5	5	Y	Y			15
	-	I4U	47	9 ★	22	2	Y	Y			
	-	J1U	55	17 ★	55	5	Y	Y			
PED PUSH BUTTONS											
P41,P42	TB8-5,6	I12L	69	31	PED 4	4 PED					
P61,P62	TB8-7,9	I13U	68	30	PED 6	6 PED					

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

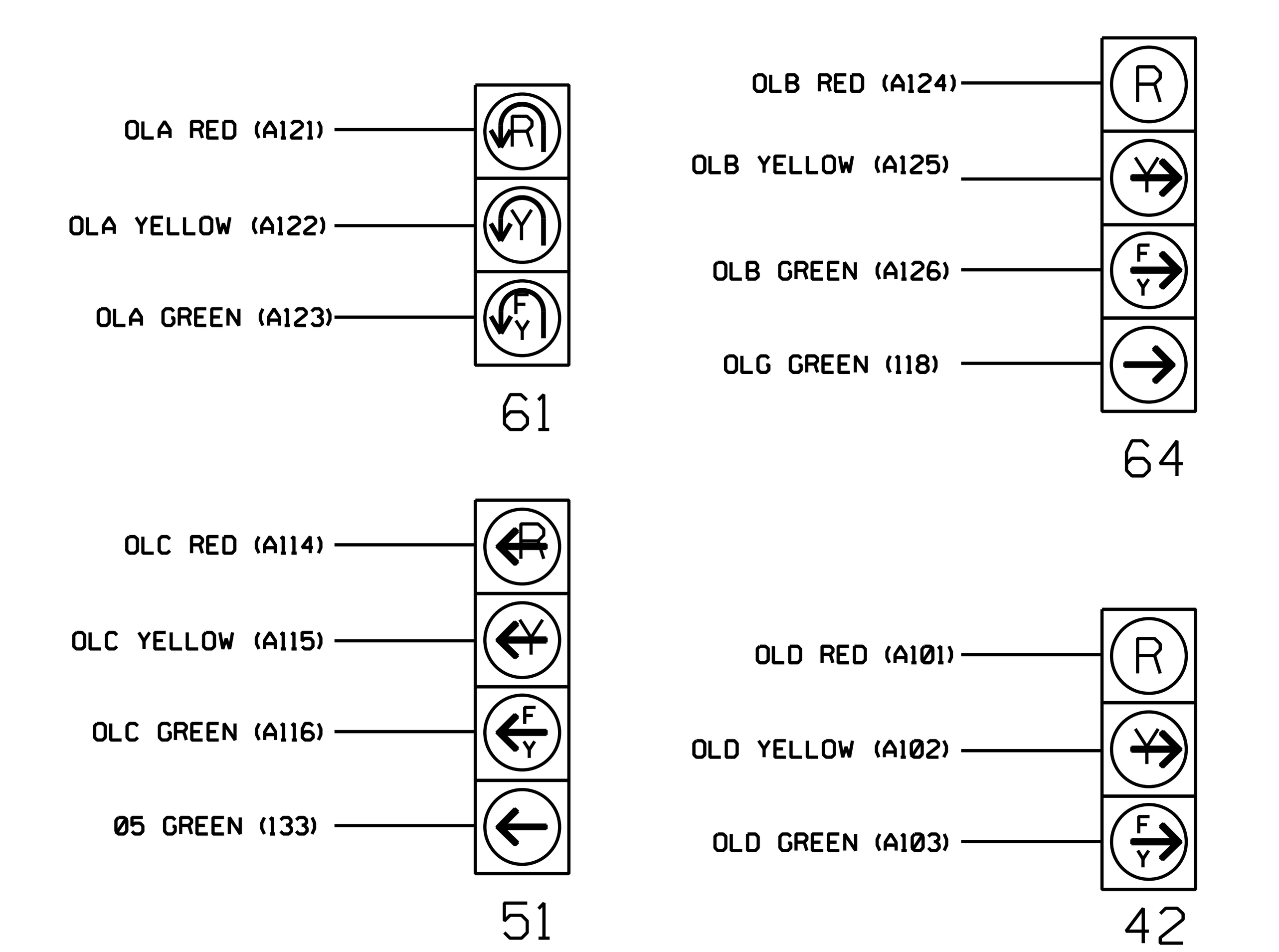
★ See Input Page Assignment programming details on sheet 3.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



NOTE

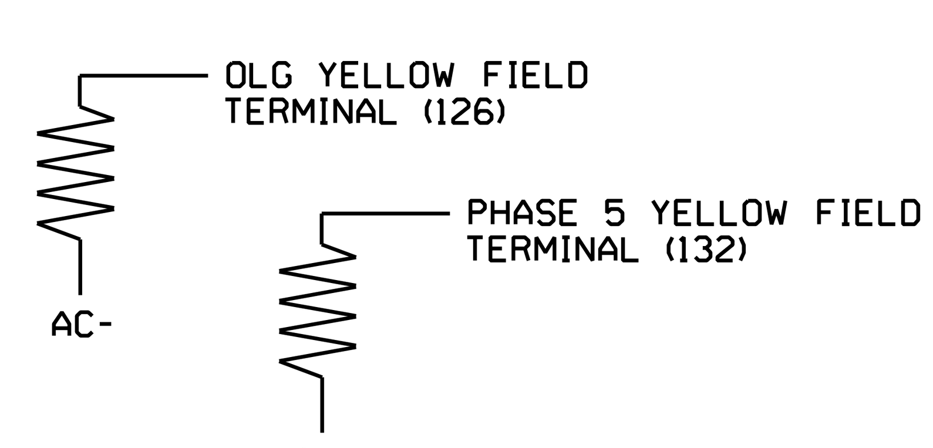
The sequence display for signal heads 51 and 64 require special logic programming. See sheet 2 for programming instructions.

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown below)

ACCEPTABLE VALUES

VALUE (ohms)	WTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



This plan supersedes the plan signed and sealed on 5/17/2024.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 03-1216
DESIGNED: May 2022
SEALED: 5/17/2024
REVISED:

HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

Signal Upgrade - Final Design
Electrical Detail - Sheet 1 of 5

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Transportation Mobility and Safety Division
ITS & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 2048 (Gordon Rd)
at
SR 2772 (Farrington Farms Dr)

Division 3 New Hanover County Wilmington

PLAN DATE:	August 2023	REVIEWED BY:	N.K. Vlanich
PREPARED BY:	E.E. Tiller	REVIEWED BY:	N.R. Simmons

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA R. SIMMONS

DocuSigned by:
Natasha R. Simmons 11/8/2024
SIGNATURE DATE

SIG. INVENTORY NO. 03-1216