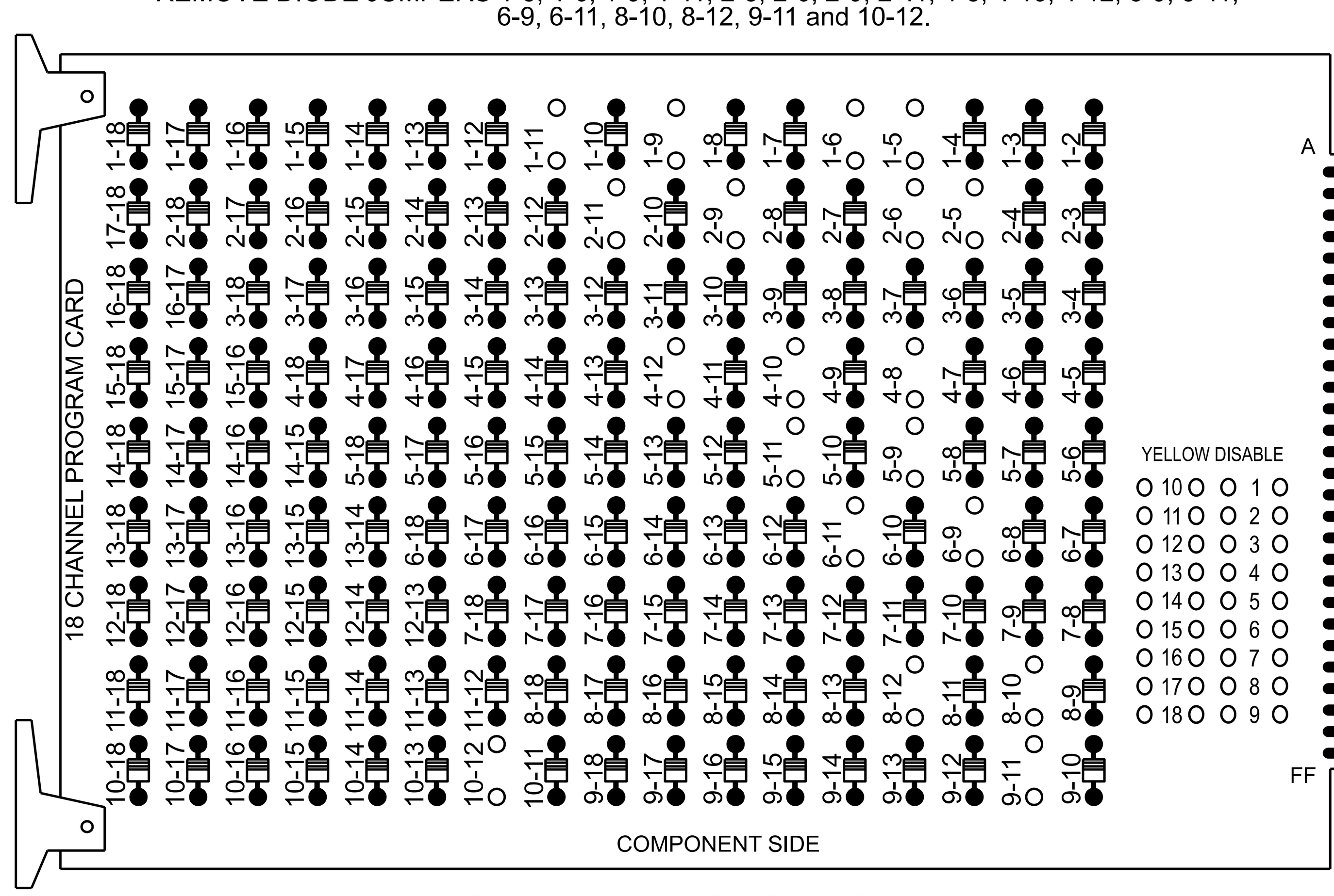
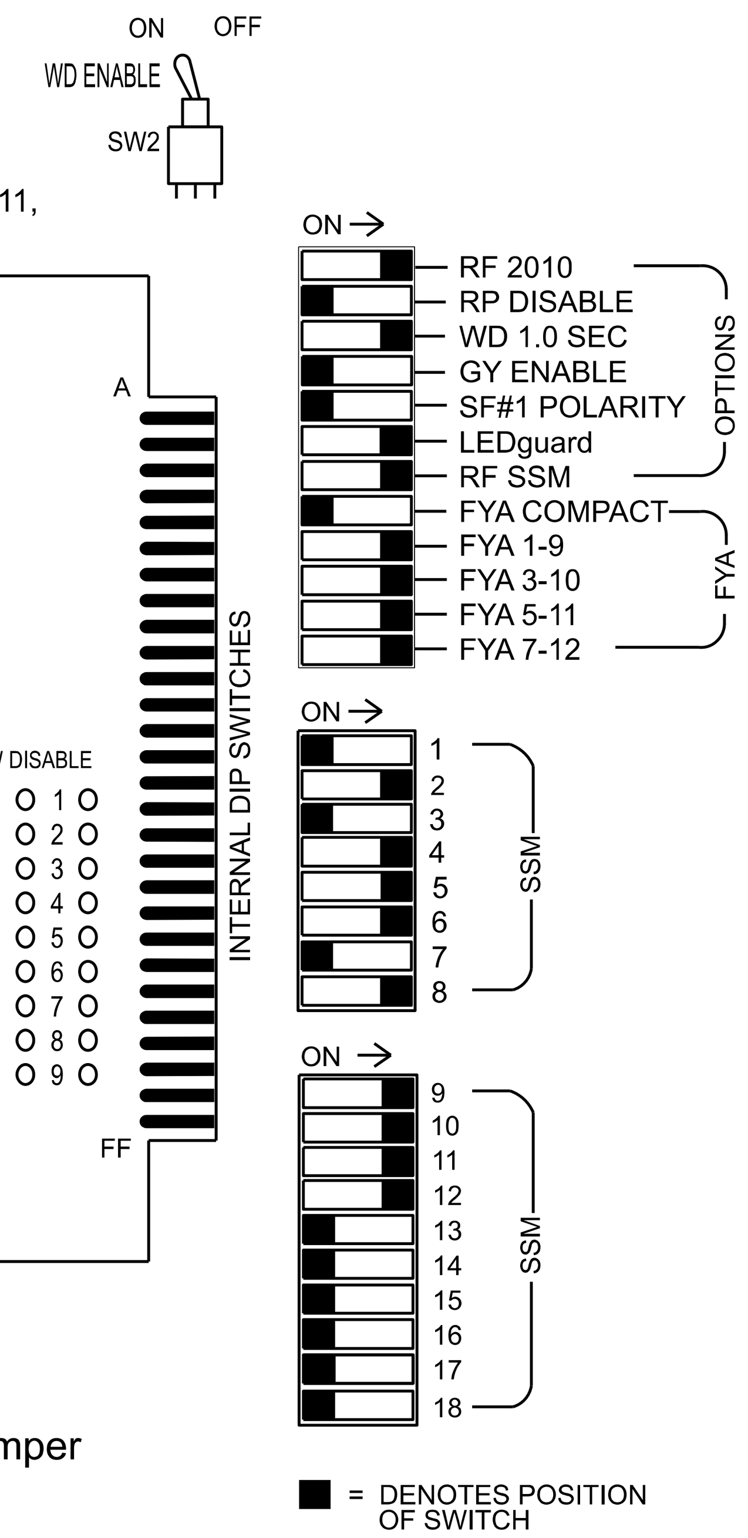
PROJECT REFERENCE NO.	SHEET NO.
U-5302	Sig. 18.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 2-5, 2-6, 2-9, 2-11, 4-8, 4-10, 4-12, 5-9, 5-11, 6-9, 6-11, 8-10, 8-12, 9-11 and 10-12.





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. 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 vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Program controller to start up in phases 2 and 6 green Don't Walk.
3. Enable simultaneous gap-out feature for all phases.
4. Program phases 4 and 8 for dual entry.
5. Program phases 2 and 6 for volume density operation.
6. The cabinet and controller are part of the Raleigh City Signal System.

EQUIPMENT INFORMATION

Controller..2070LX
Cabinet...332 w/ Aux
Software...SE-PAC2070 (version 5)
Cabinet Mount....................................Base
Output File Positions...........................18 With Aux. Output File
Load Switches Used...........................S1, S2, S5, S7, S8, S11, AUX S1, AUX S2, AUX S4, AUX S5
Phases Used.......................................1, 2, 4, 5, 6, 8
Overlap "A"..*
Overlap "B"..*
Overlap "C"..*
Overlap "D"..*

*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	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11★	21,22	NU	NU	42,43	NU	43	51★	61,62	NU	NU	82,83	NU	11★	81★	NU	51★	41★	NU
RED		128			101		*		134			107							
YELLOW	*	129			102				135			108							
GREEN		130			103				136			109							
RED ARROW														A121	A124		A114	A101	
YELLOW ARROW							132							A122	A125		A115	A102	
FLASHING YELLOW ARROW														A123	A126		A116	A103	
GREEN ARROW	127						133	133											
(Don't Walk)																			
(Walk)																			

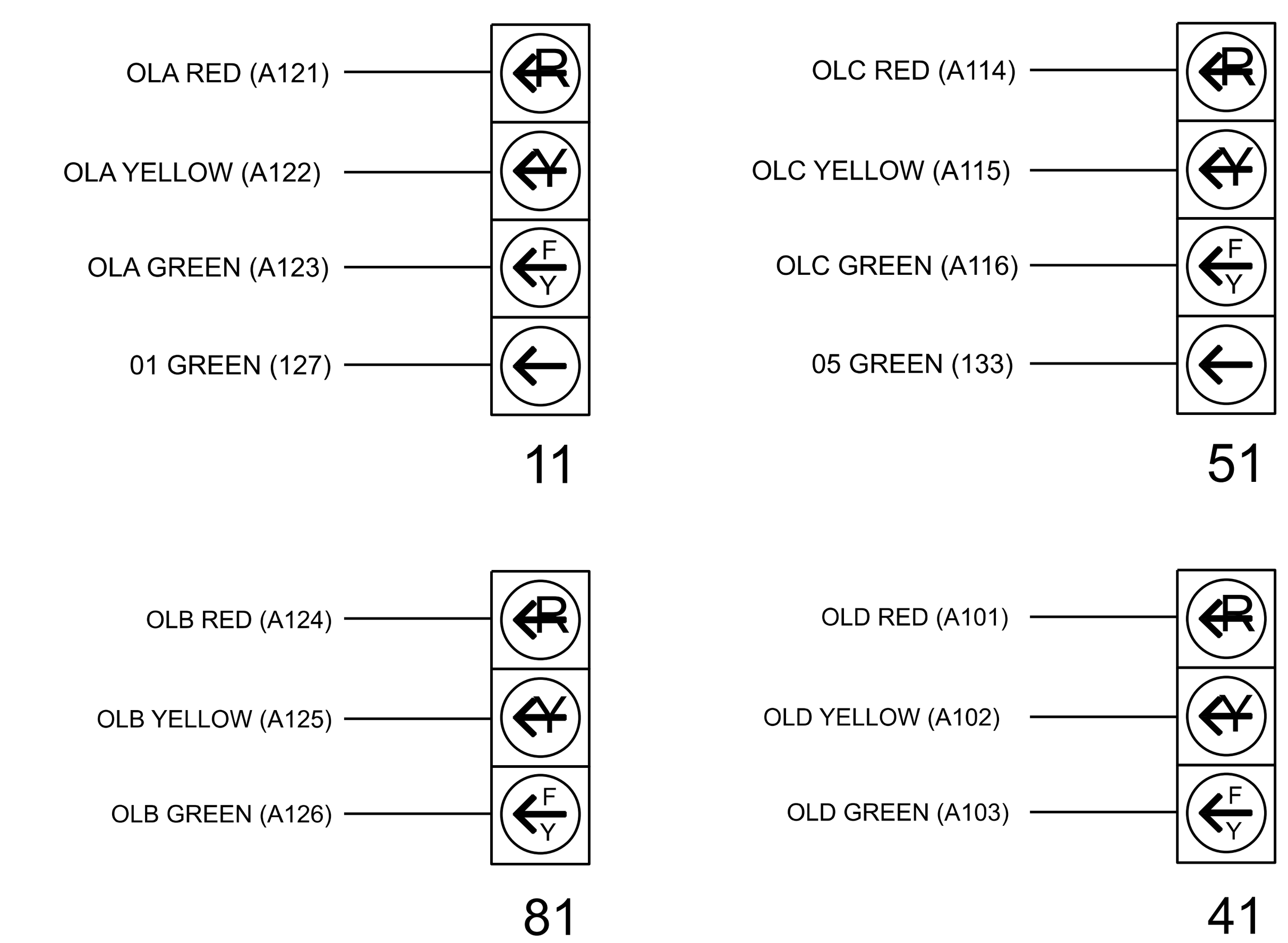
NU = Not Used

* 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)

FILE		1	2	3	4	5	6	7	8	9	1O	11	12	13	14
"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	SLOT EMPTY	FS DC ISOLATOR
	L														ST DC ISOLATOR
"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

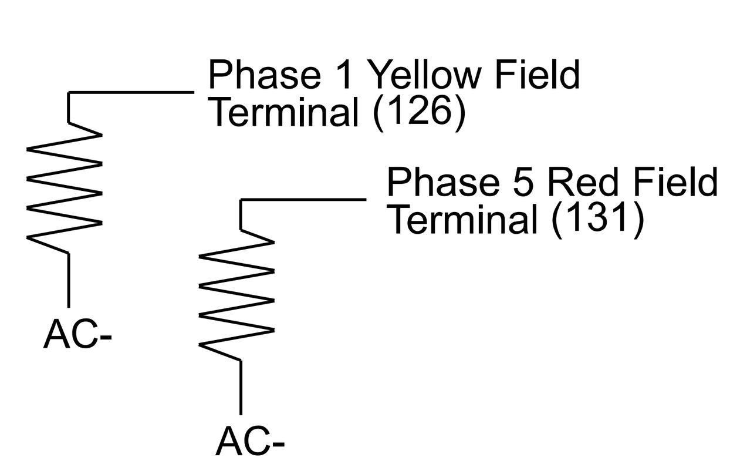
SPECIAL DETECTOR NOTE

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

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)



INIT & N.A. RESP PROGRAMMING DETAIL

(program controller as shown below)

1. From Main Menu select `3-PHASE DATA`
2. From PHASE DATA Submenu select `4-INIT & N.A. RESP+`

```
PHASE......1...2...3...4...5...6...7...8
 INITIAL   1   4   0   1   1   4   0   1
 NA RESP   0   1   0   2   0   1   0   2
 UPDT GRN  0   0   0   0   0   0   0   0
CODES.....0....1....2...3...4...5...6
 INIL    NONE INACT RED YEL GRN DRK G/DW
 NA RSP NONE  NA1  NA2 1&2 --- --- ---
                                     ***
```

← Phases 3 & 7 NOT used!

INIT & N.A. RESP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1714T1
DESIGNED: February 2025
SEALED: 3/27/2025
REVISED: N/A

Electrical Detail - Temporary Design 1 (TMP Phases I & II) - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Electrical and Programming Details For:

US 401 (Fayetteville Road)
at
Annaron Court

Division 5 | Wake County | Raleigh

PLAN DATE: March 2025	REVIEWED BY:
PREPARED BY: Tim Langston	REVIEWED BY:

REVISIONS	INIT.	DATE

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

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 03/28/2025
A90CADFDBD4241D...
DATE

SIG. INVENTORY NO. 05-1714T1

28-MAR-2025 08:49
pw://ncdot-pw.bentley.com:ncdot-pw-01/Documents/NCDOT TSMO/Signal Design Section/Division_05/05-1714/Signals Management/051714T1_sm_ele_yyyymmdd.dgn
tslangston