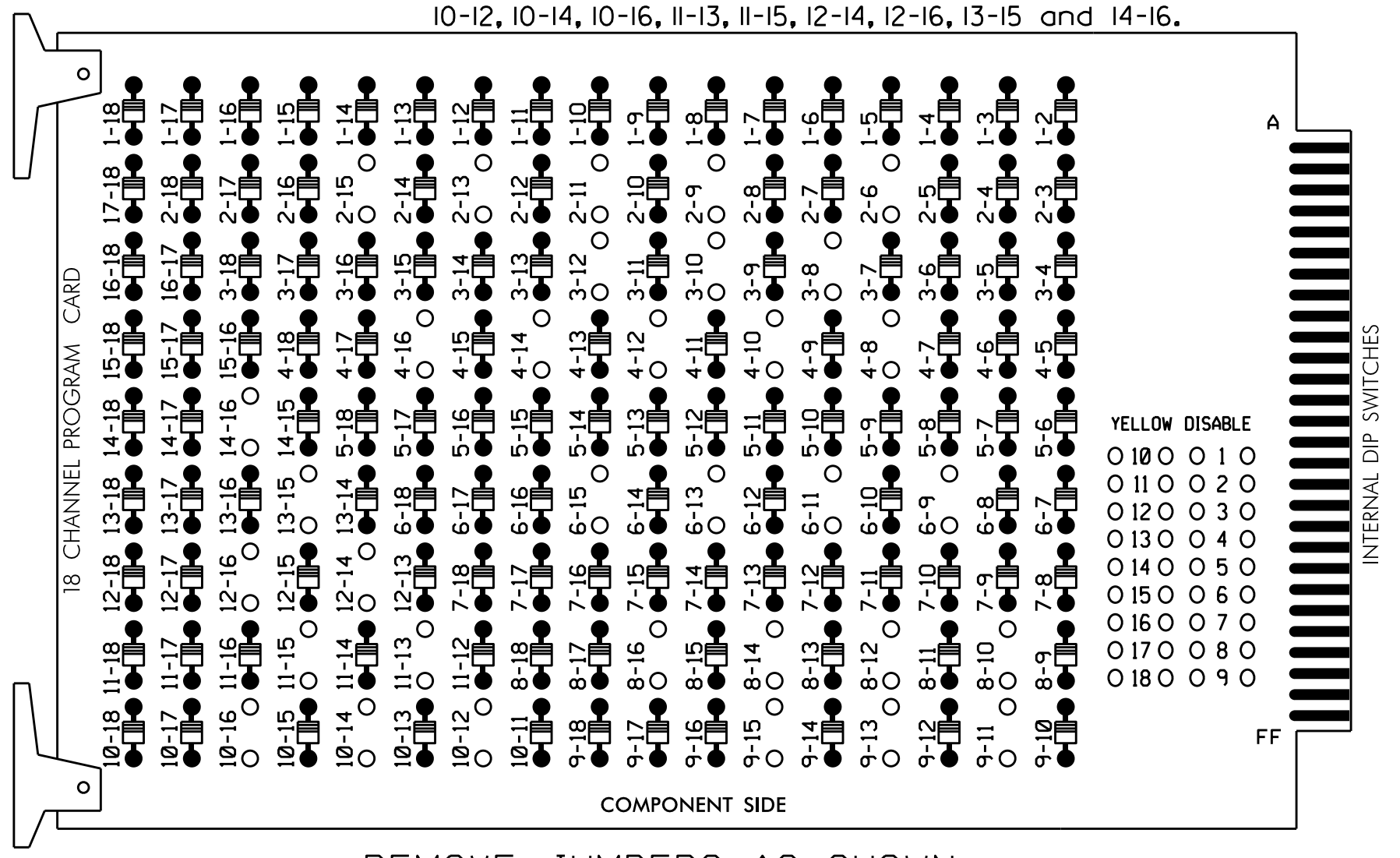


### EDI MODEL 2018ECL-NC CONFLICT MONITOR

#### PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 2-6, 2-9, 2-11, 2-13, 2-15, 3-8, 3-10, 3-12, 4-8, 4-10, 4-12, 4-14, 4-16, 6-9, 6-11, 6-13, 6-15, 8-10, 8-12, 8-14, 8-16, 9-11, 9-13, 9-15, 10-12, 10-14, 10-16, 11-13, 11-15, 12-14, 12-16, 13-15 and 14-16.

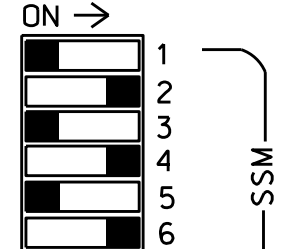
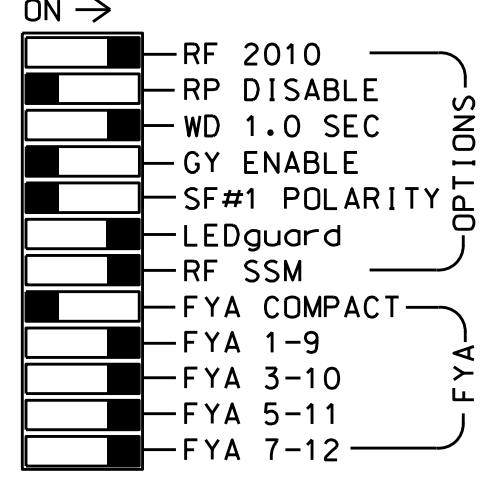
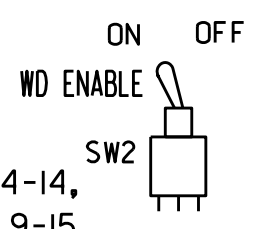


REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.
- Ensure conflict monitor communicates with 2070.

■ = DENOTES POSITION OF SWITCH



### NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. Verify that signal heads flash in accordance with the signal plans.
- Program controller to Start Up in phases 2 and 6 green.
- Set power-up flash time to 0 seconds within the controller programming. The conflict monitor will govern startup flash. Ensure STARTUP "RED START" is set to 0 seconds.
- Enable Simultaneous Gap-Out feature for all phases.
- Program all timing information into phase banks 1, 2, and 3 unless otherwise noted.
- Set phase bank 3 maximum limit to 250 seconds for phases used.
- Program phases 4 and 8 for Double Entry.
- Ensure start up flash phases are coordinated with flash program block assignments.
- Program Startup Ped Calls for phases 2, 4, 6 and 8.
- Set the Red Revert interval on the controller to 1 second.

### 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	22,23	P21, P22	31	42,43	P41, P42	NU	62,63	P61, P62	NU	81,82	P81, P82	61	31	NU	21	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																A122	A125	A115	A102
FLASHING YELLOW ARROW																A123	A126	A116	A103
GREEN ARROW																			
Hand				113		104			119			110							
Walking				115		106			121			112							

NU = Not Used

\* Denotes install load resistor. See load resistor installation detail sheet 2.

\* See pictorial of head wiring in detail below.

### EQUIPMENT INFORMATION

CONTROLLER.....2070E  
 CABINET.....332 W/ AUX  
 SOFTWARE.....McCAIN 2033  
 CABINET MOUNT.....BASE  
 OUTPUT FILE POSITIONS...18 WITH AUX FILE  
 LOAD SWITCHES USED.....S2,S3,S4,S5,S6,S8,S9,S11,S12  
 AUX S1,AUX S2,AUX S4,AUX S5  
 PHASES USED.....2,2 PED,3\*,4,4 PED,6,6 PED,8,8 PED  
 OVERLAP 1.....2+6  
 OVERLAP 2.....\*\*  
 OVERLAP 3.....2+6  
 OVERLAP 4.....4+8  
 \* Phase used only during Preempt.  
 \*\* See FYA PPLT Programming - Sheet 2.

### INPUT FILE POSITION LAYOUT

(front view)

FILE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	∅ 2	∅ 2	∅ 2	∅ 2	∅ 2	∅ 4	∅ 4	∅ 4	∅ 4	∅ 4	∅ 4	∅ 4	∅ 4	∅ 4
L	2A	2A	2B	2B	4A	4A	4B	4B	4B	4B	4B	4B	4B	4B
U	∅ 6	∅ 6	∅ 6	∅ 6	∅ 6	∅ 8	∅ 8	∅ 8	∅ 8	∅ 8	∅ 8	∅ 8	∅ 8	∅ 8
L	6A	6A	6B	6B	8A	8A	8B	8B	8B	8B	8B	8B	8B	8B

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

FS = FLASH SENSE  
 ST = STOP TIME  
 EVB = EMERGENCY VEHICLE PREEMPT

### INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
2A	TB2-5,6	I2U	1	39	5 7	2
2B	TB2-7,8	I2L	5	43	5 7	2
4A	TB4-9,10	I6U	3	41	5 7	4
4B	TB4-11,12	I6L	7	45	5 7	4
6A	TB3-5,6	J2U	2	40	5 7	6
6B	TB3-7,8	J2L	6	44	5 7	6
8A	TB5-9,10	J6U	4	42	5 7	8
8B	TB5-11,12	J6L	8	46	5 7	8
PED PUSH BUTTONS	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
P21,P22	TB8-4,6	I12U	25	67	2	2 PED
P41,P42	TB8-5,6	I12L	27	69	2	4 PED
P61,P62	TB8-7,9	I13U	26	68	2	6 PED
P81,P82	TB8-8,9	I13L	28	70	2	8 PED

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS 112 AND 113

NOTE: PROGRAM DETECTOR DELAY AND CARRYOVER TIMES AS SPECIFIED ON SIGNAL DESIGN PLANS.

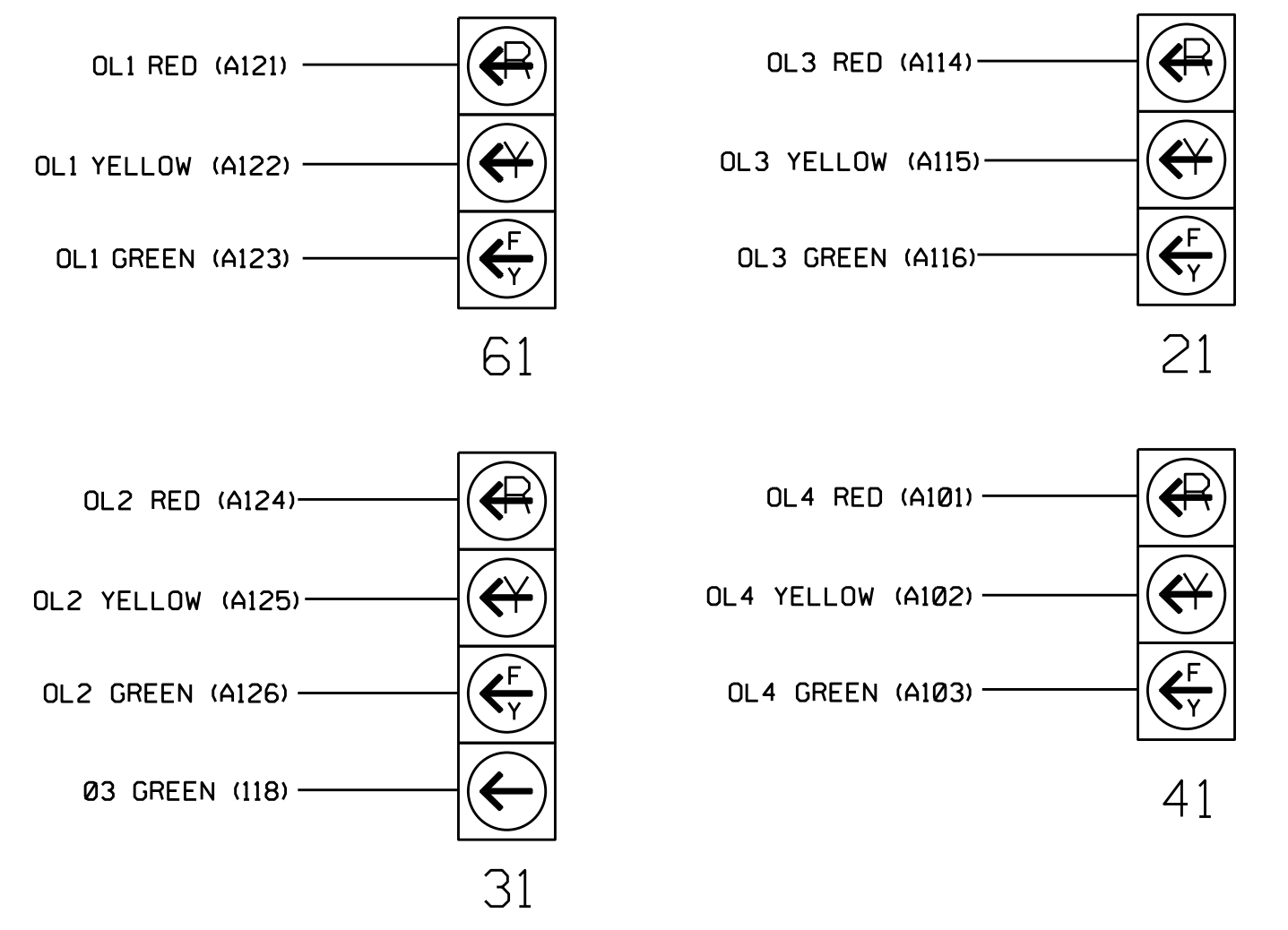
DETECTOR ATTRIBUTES LEGEND: INPUT FILE POSITION LEGEND: J2L

1-FULL TIME DELAY  
 2-PED CALL  
 3-RESERVED  
 4-COUNTING  
 5-EXTENSION  
 6-TYPE 3  
 7-CALLING  
 8-ALTERNATE

FILE J  
 SLOT 2  
 LOWER

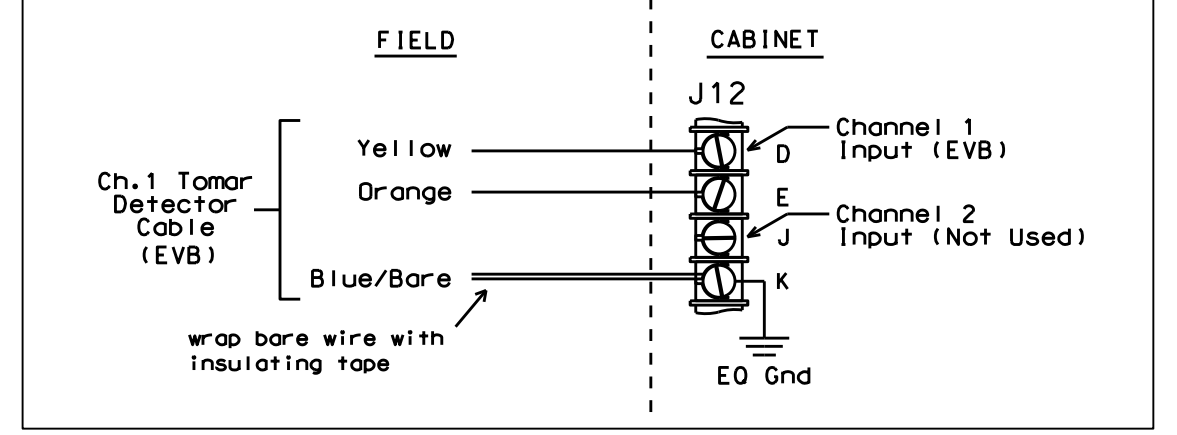
### FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



### TYPICAL TOMAR FIELD WIRE DETAIL

(input file, rear view)



4 CHANNEL TOMAR OSP CARD INSERT CARD INTO SLOT J13

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1029  
 DESIGNED: September 2014  
 SEALED: 4/2/15  
 REVISED: N/A

Electrical Detail - Sheet 1 of 2 (Final)

ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared in the Offices of:  750 N. Greenfield Pkwy, Garner, NC 27529	NC 55 (North Alston Avenue) at Liberty St		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022013 GEORGE C. BROWN
	Division 5 Durham County Durham PLAN DATE: November 2014 REVIEWED BY: T. Joyce PREPARED BY: B. SIMMONS REVIEWED BY:	REVISIONS INIT. DATE _____ _____ _____	

07-10-2014 10:18  
 S:\MITSU\115\_Signal\working\working Folder\Electrical Detail\051029\_smc\_elec\_xxx.dgn  
 B.S. SIMMONS