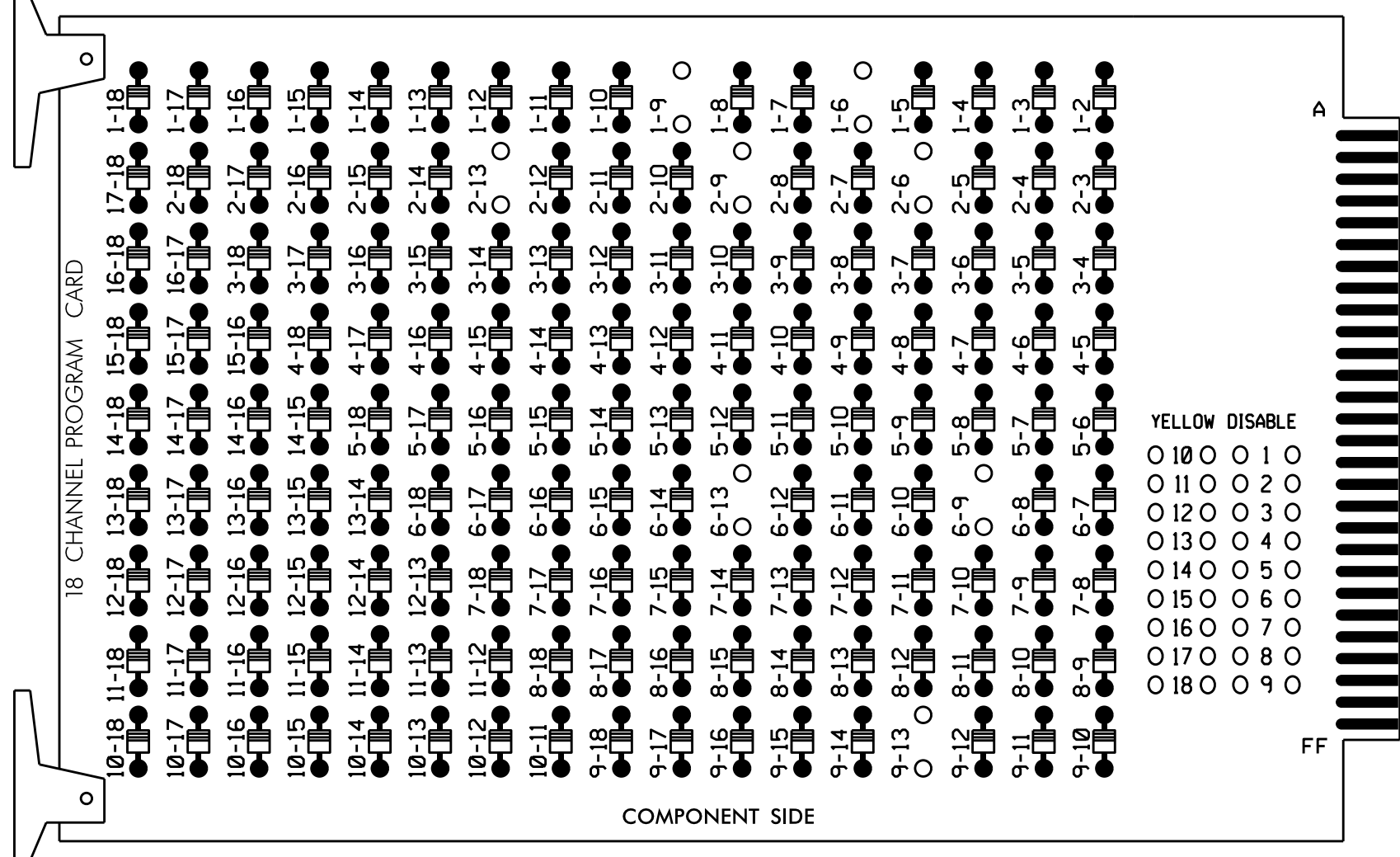


**EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL**

(remove jumpers and set switches as shown)

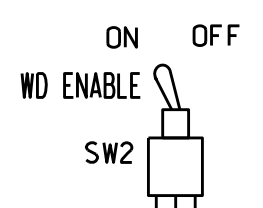
REMOVE DIODE JUMPERS 1-6, 1-9, 2-6, 2-9, 2-13, 6-9, 6-13 and 9-13.



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 Red Enable is active at all times during normal operation.
4. 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. Verify that signal heads flash in accordance with the signal plans.
2. Program controller to Start Up in phases 2 and 6 green.
3. 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.
4. Enable Simultaneous Gap-Out feature for all phases.
5. Program all timing information into phase banks 1, 2, and 3 unless otherwise noted.
6. Set phase bank 3 maximum limit to 250 seconds for phases used.
7. Ensure start up flash phases are coordinated with flash program block assignments.
8. Program Startup Ped Call for phase 2.
9. Set the Red Revert interval on the controller to 1 second.
10. This cabinet and controller are part of the Durham Signal System.

**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.	11	22,23	P21, P22	NU	NU	NU	NU	61,62	NU	NU	81,82	NU	11	NU	NU	NU	NU	NU
RED		128						134			107							
YELLOW	*	129						135			108							
GREEN		130						136			109							
RED ARROW														A121				
YELLOW ARROW														A122				
FLASHING YELLOW ARROW														A123				
GREEN ARROW	127																	
Hand icon																		
Person icon																		

NU = Not Used

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

★ See pictorial of head wiring in detail below.

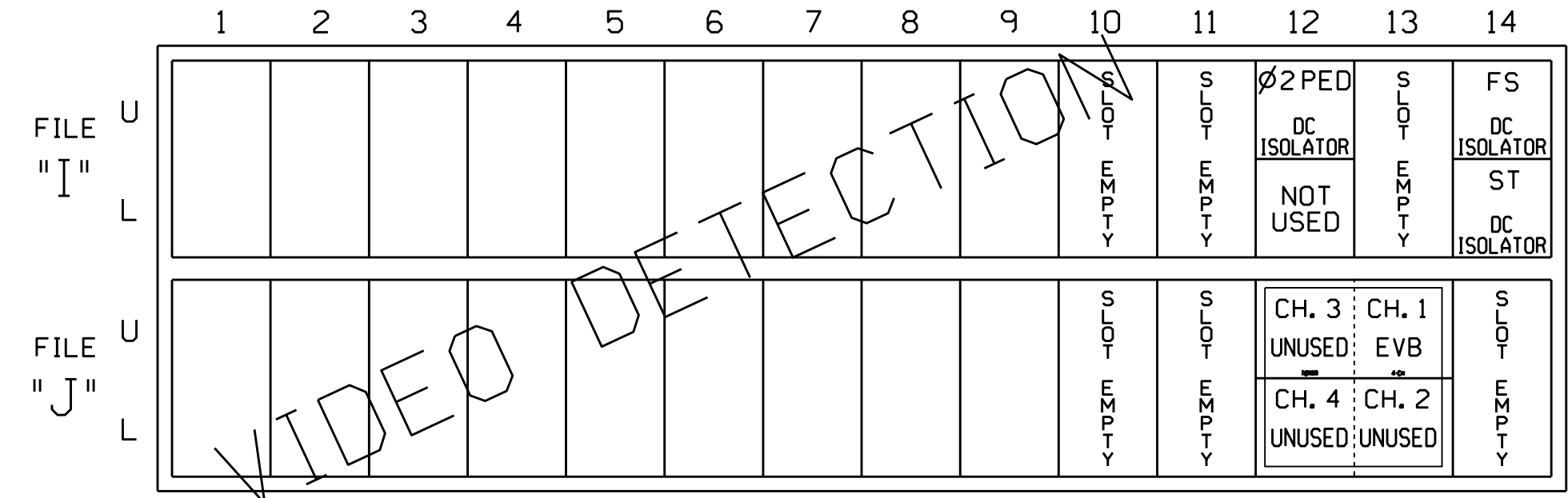
**EQUIPMENT INFORMATION**

CONTROLLER.....2070E  
 CABINET.....332 W/ AUX  
 SOFTWARE.....McCAIN 2033  
 CABINET MOUNT.....BASE  
 OUTPUT FILE POSITIONS...18 WITH AUX FILE  
 LOAD SWITCHES USED.....S1,S2,S3,S8,S11,AUX S1  
 PHASES USED.....\*1,2,2 PED,6,8  
 OVERLAP 1.....\*  
 OVERLAP 2.....NOT USED  
 OVERLAP 3.....NOT USED  
 OVERLAP 4.....NOT USED

\* See FYA PPLT Programming Detail on Sheet 2.  
 \*\* Phase used only during Preempt.

**INPUT FILE POSITION LAYOUT**

(front view)



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

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

**INPUT FILE CONNECTION & PROGRAMMING CHART**

PED PUSH BUTTONS	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
P21,P22	TB8-4,6	112U	25	67	2	2 PED

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOT 112.

**DETECTOR ATTRIBUTES LEGEND:**

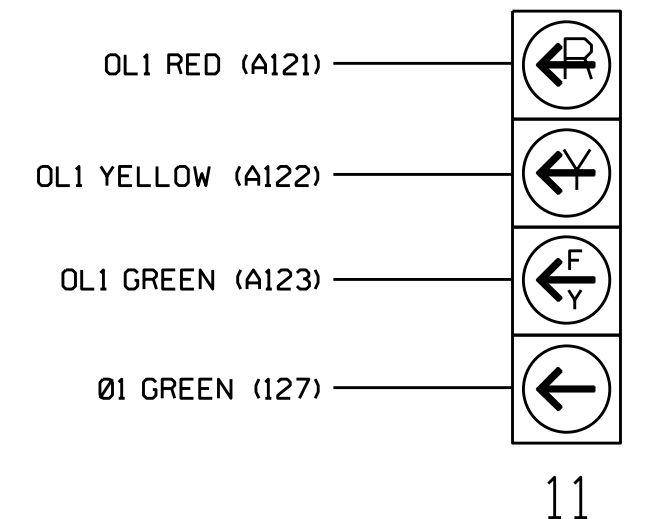
- 1-FULL TIME DELAY
- 2-PED CALL
- 3-RESERVED
- 4-COUNTING
- 5-EXTENSION
- 6-TYPE 3
- 7-CALLING
- 8-ALTERNATE

**INPUT FILE POSITION LEGEND:**

- FILE J
- SLOT 2
- LOWER

**FYA SIGNAL WIRING DETAIL**

(wire signal heads as shown)



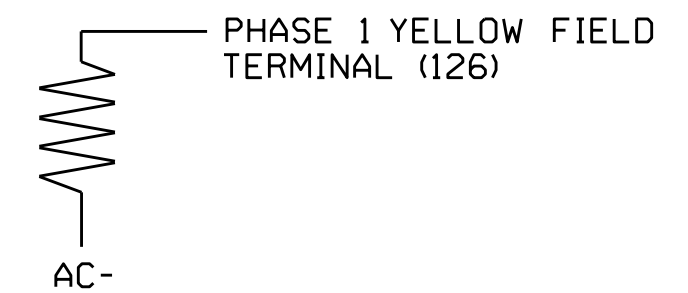
**STARTUP CALLS PROGRAMMING**

Prevents Veh Call to phase 1 during Startup. Phase 1 used only during Preempt.  
 Main Menu - 9) UTILITIES - 1) STARTUP VEHICLE CALLS 2,6,8

**LOAD RESISTOR INSTALLATION DETAIL**

(install resistor as shown below)

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

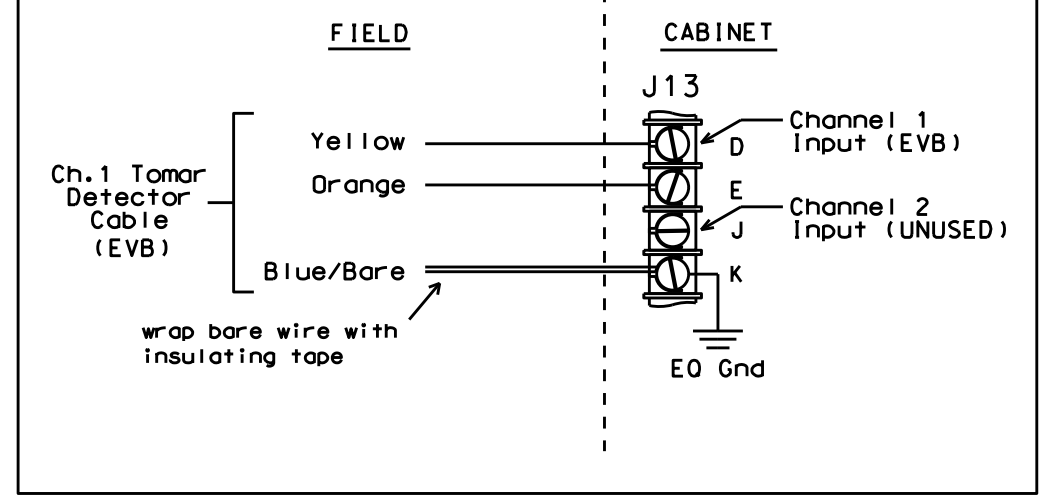


**SPECIAL DETECTOR NOTE**

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

**TYPICAL TOMAR FIELD WIRE DETAIL**

(input file, rear view)



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-0228T7  
 DESIGNED: September 2014  
 SEALED: 04/02/2015  
 REVISED: N/A

Electrical Detail - Temporary 7 - Sheet 1 of 2

ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared In the Offices of:  750 N. Greenfield Pkwy, Garner, NC 27529	NC 55 (North Alston Avenue) at Taylor Street		SEAL  SEAL 022013 ENGINEER GEORGE C. BROWN
	Division 5 PLAN DATE: November 2014 PREPARED BY: C. Strickland	Durham County REVIEWED BY: T. Joyce REVIEWED BY:	

27-AM5-2015-16-13  
 C:\IT\55\16-13\SIG\16-13\EDI Model 2018ECL-NC Conflict Monitor.dgn  
 04/02/2015 10:28:54 AM