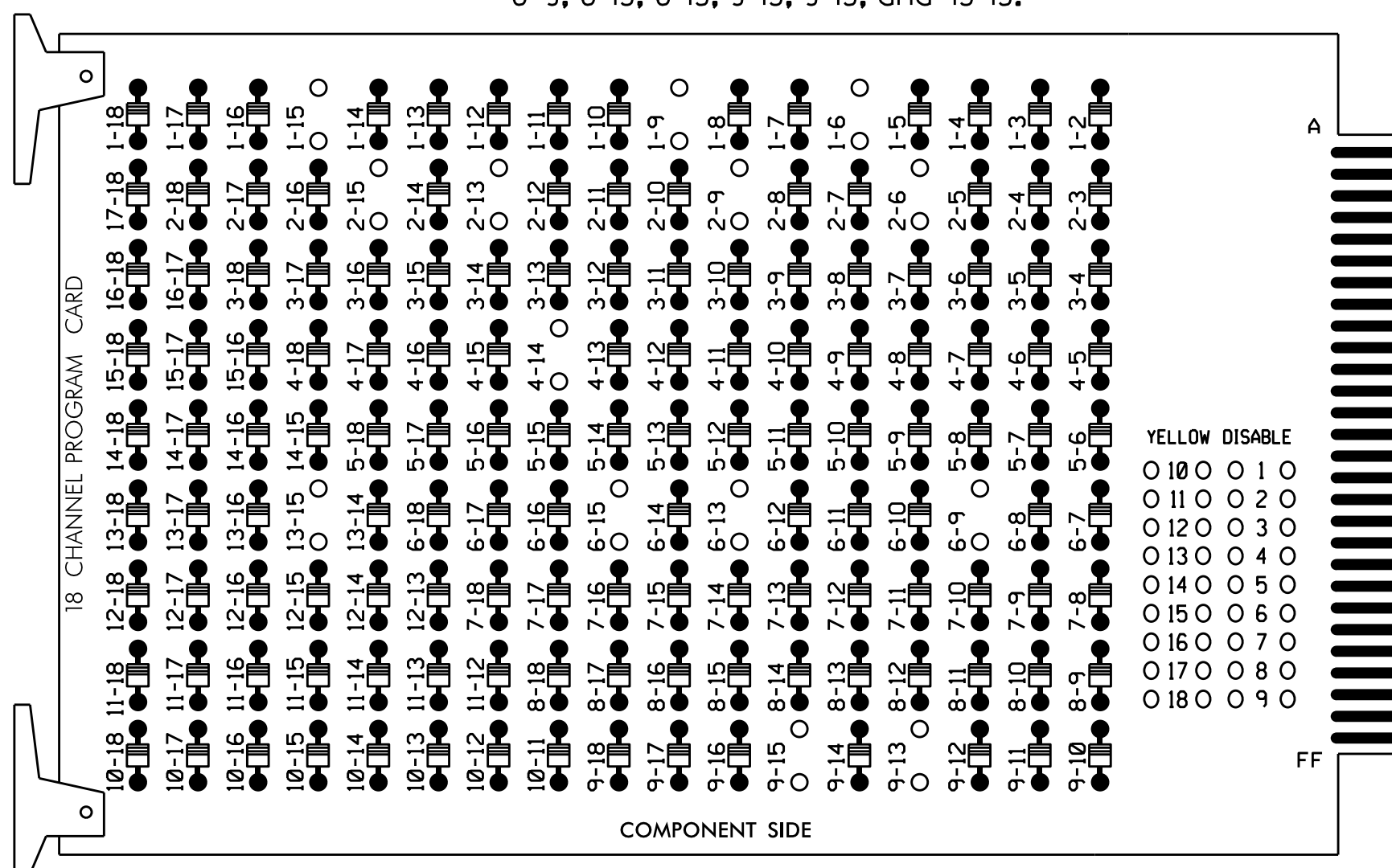


EDI MODEL 2018ECL-NC CONFLICT MONITOR

PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-6, 1-9, 1-15, 2-6, 2-9, 2-13, 2-15, 4-14, 6-9, 6-13, 6-15, 9-13, 9-15, and 13-15.



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.

■ = DENOTES POSITION OF SWITCH

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 Calls for phases 2, 4, and 6.
9. Set the Red Revert interval on the controller to 1 second.
10. This cabinet and controller are part of the Durham Signal System.

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,S5,S6,S8,S9,AUX S1
 PHASES USED.....1,2,2PED,4,4PED,6,6PED
 OVERLAP 1.....*
 OVERLAP 2.....NOT USED
 OVERLAP 3.....NOT USED
 OVERLAP 4.....NOT USED

* See FYA PPLT 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	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11	21,22	P21, P22	NU	41	42	P41, P42	NU	61,62	P61, P62	NU	NU	11	NU	NU	NU	NU	NU
RED		128			101	101			134									
YELLOW	*	129			102	102			135									
GREEN		130			103	103			136									
RED ARROW													A121					
YELLOW ARROW													A122					
FLASHING YELLOW ARROW													A123					
GREEN ARROW	127					103												
Hand				113				104				119						
Walker				115				106				121						

NU = Not Used

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

* See pictorial of head wiring in detail below.

INPUT FILE POSITION LAYOUT

(front view)

FILE "I"	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	∅ 1	∅ 2	∅ 3	∅ 4	∅ 5	∅ 6	∅ 7	∅ 8	∅ 9	∅ 10	∅ 11	∅ 12	∅ 13	∅ 14
L	1A	2A	∅ 3	∅ 4	∅ 5	4A	4C	∅ 8	∅ 9	∅ 10	∅ 11	∅ 12	∅ 13	∅ 14
U	NOT USED	∅ 2	∅ 3	∅ 4	∅ 5	4B	NOT USED	∅ 8	∅ 9	∅ 10	∅ 11	∅ 12	∅ 13	∅ 14
L	2B	∅ 3	∅ 4	∅ 5	∅ 6	∅ 7	∅ 8	∅ 9	∅ 10	∅ 11	∅ 12	∅ 13	∅ 14	∅ 15

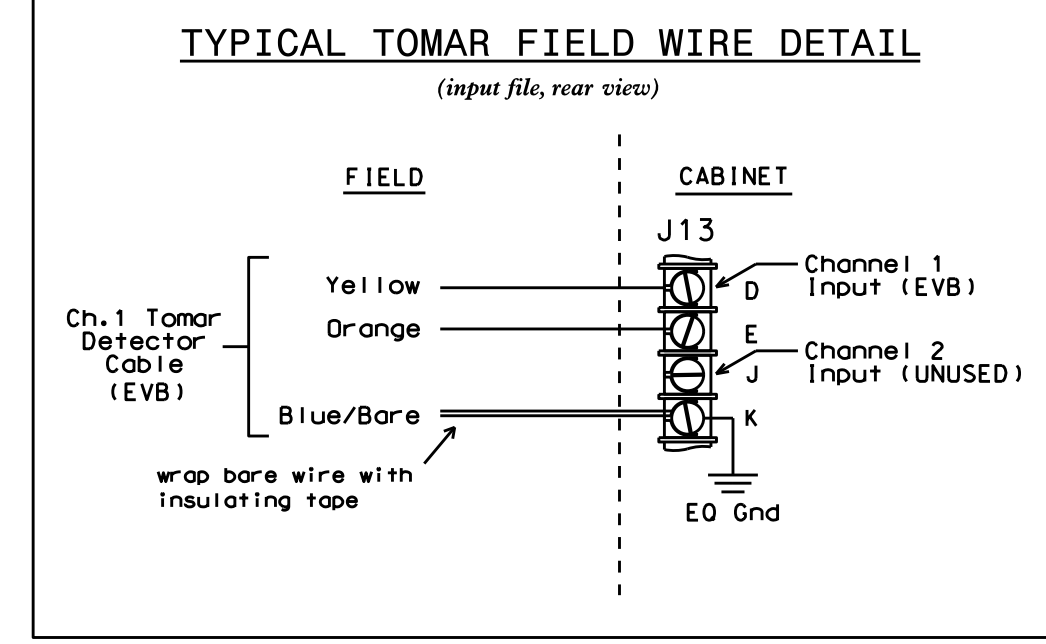
EX.: 1A, 2A, ETC. = LOOP NO.'S

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

SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection for zones 6A and 6B.

Perform installation according to manufacturer's directions and NCDOT engineer approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.



INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
1A	TB2-1,2	I1U	14	56	5 7	1
2A	TB2-5,6	I2U	10	56	5 7	6
2B	TB2-7,8	I2L	1	39	5 7	2
4A	TB4-9,10	I6U	5	43	5 7	2
4B	TB4-11,12	I6L	3	41	5 7	4
4C	TB6-1,2	I7U	7	45	5 7	4
* 6A	-	-	23	65	5 7	4
* 6B	-	-	-	-	5 7	6
PED PUSH BUTTONS						
P21,P22	TB8-4,6	I12U				2 PED
P41,P42	TB8-5,6	I12L	25	67	2	4 PED
P61,P62	TB8-7,9	I13U	27	69	2	6 PED

* VIDEO DETECTION ZONE. SEE SPECIAL DETECTOR NOTE THIS PAGE.

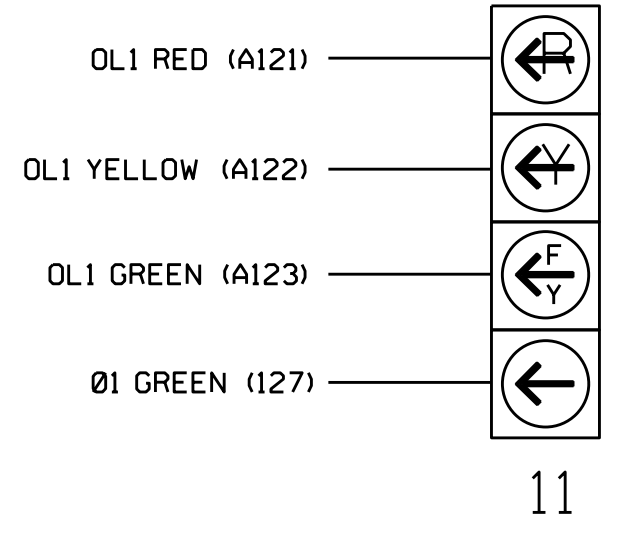
NOTE: PROGRAM DETECTOR DELAY AND CARRYOVER TIMES AS SPECIFIED ON SIGNAL DESIGN PLANS.

- 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

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1028
 DESIGNED: September 2014
 SEALED: 4/2/15
 REVISED: N/A

FYA SIGNAL WIRING DETAIL

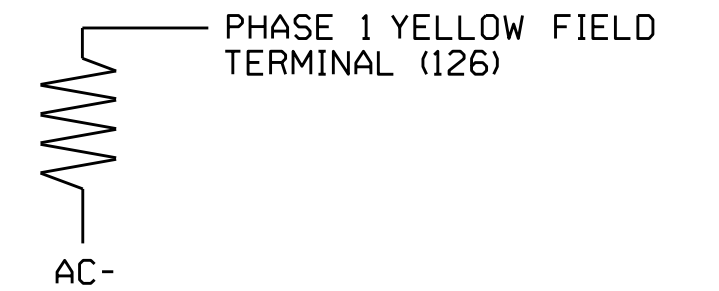
(wire signal head as shown)



LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown below)

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



Electrical Detail - Final Design - Sheet 1 of 2

Electrical and Programming Details for: **NC 55 (South Alston Avenue) at NC 147 SB Ramps**

Prepared In the Offices of: **Transporatio Mobility and Safety Solutions**

Division 5 Durham County, Durham

PLAN DATE: November 2014 REVIEWED BY: *JTR*

PREPARED BY: S. Armstrong REVIEWED BY:

REVISIONS: INIT. DATE

Sealed by: **John T. Rowe, Jr.** 4/2/2015

SIG. INVENTORY NO. 05-1028

27-MAR-2015 08:31
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