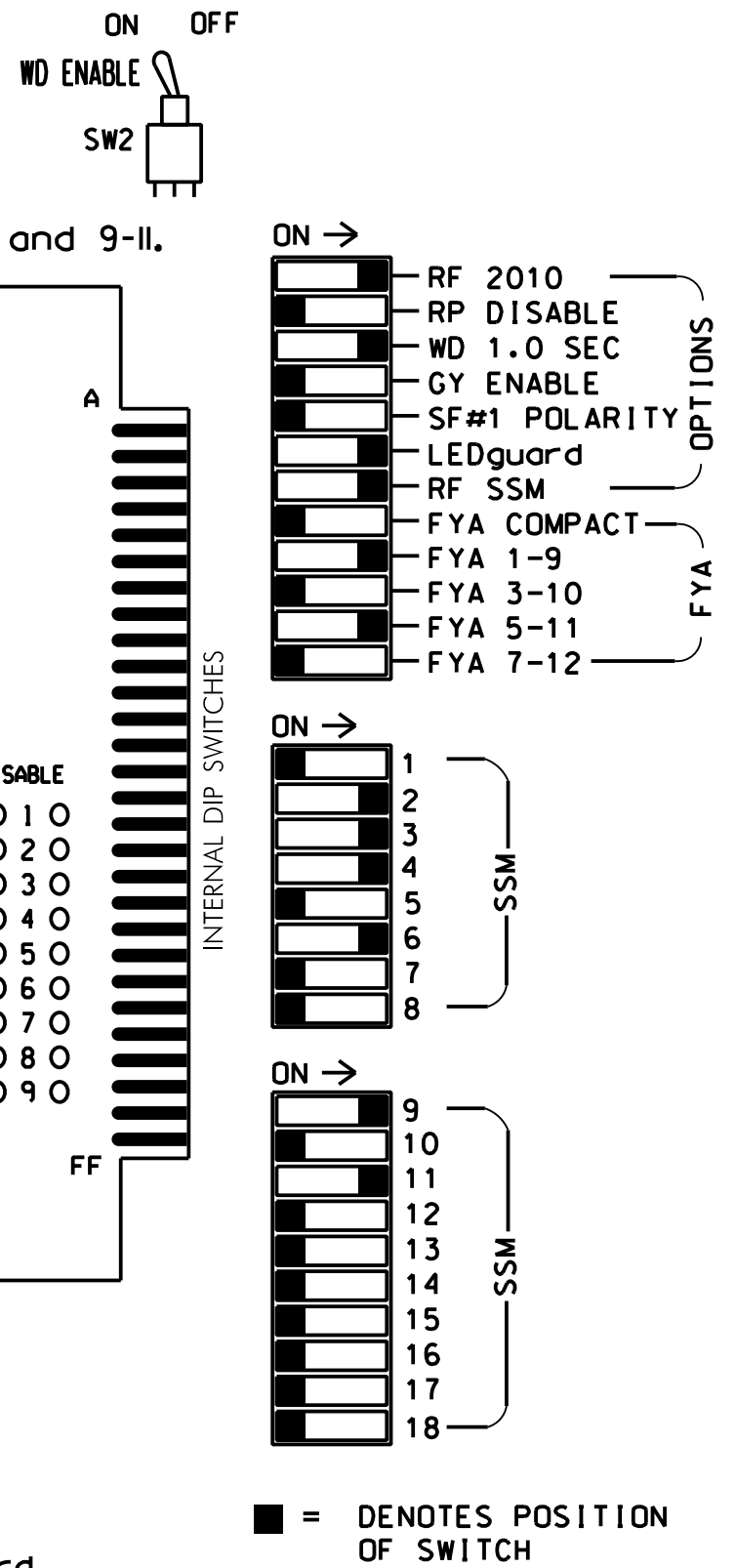
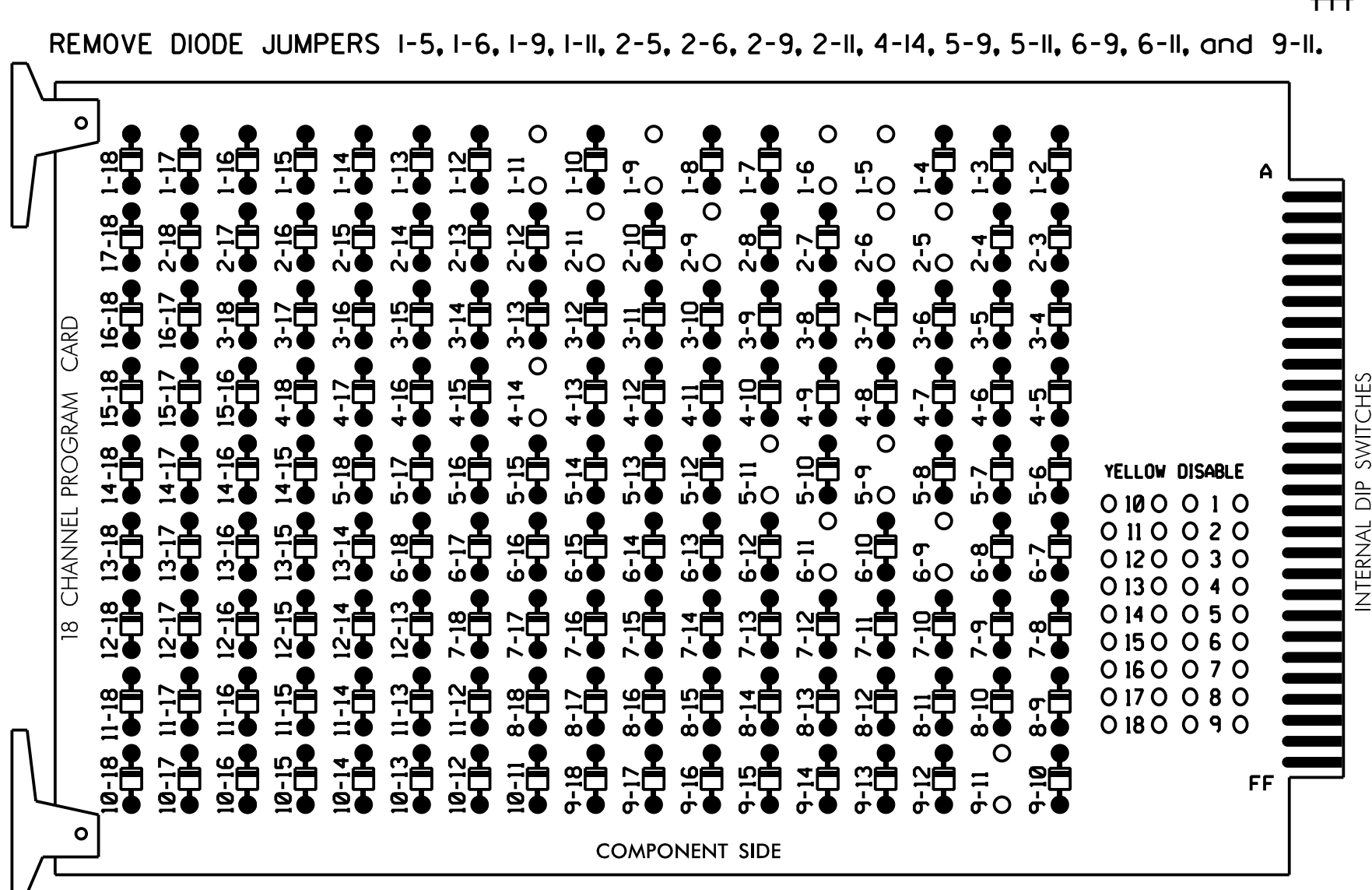


EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches 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.
- Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

NOTES

- 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.
- Enable Simultaneous Gap-Out for all Phases.
- Program phases 2 and 6 for Variable Initial and Gap Reduction.
- Program phases 2 and 6 for Startup In Green.
- Program phase 4 for Startup Ped Call.
- Program phases 2 and 6 for Yellow Flash, and overlap 1 as Wag Overlaps.
- The cabinet and controller are part of the Havelock US 70 Business Closed Loop Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070E
 CABINET.....332 W/AUX
 SOFTWARE.....ECONOLITE OASIS
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE AUX S1,AUX S4
 LOAD SWITCHES USED.....S1,S2,S3*,S4,S5,S6,S7,S8
 PHASES USED.....1,2,3,4,4 PED,5,6
 OVERLAP "A".....1+2
 OVERLAP "B".....NOT USED
 OVERLAP "C".....5+6
 OVERLAP "D".....NOT USED
 *USED FOR FIRE STATION PILOT LAMP CONTROL

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	FIRE PILOT LAMP	31	32	41	42	P41, P42	51*	61,62	NU	NU	NU	NU	NU	51*	NU	NU
RED	128		116	116	101	101			134									
YELLOW	*	129		117	117	102	102		*	135								
GREEN		130		118	118	103	103			136								
RED ARROW													A121				A114	
YELLOW ARROW													A122				A115	
FLASHING YELLOW ARROW													A123				A116	
GREEN ARROW	127			118		103			133									
PED YELLOW									104									

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)

FILE "I"	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	∅ 1 1A	∅ 2 2A,2B	∅ 3 3A	∅ 3 3B	∅ 4 4A	∅ 4 4B	SYS S15	SYS S16	NOT USED ∅ 4 PED	FS ISOLATOR	FS ISOLATOR	FS ISOLATOR	FS ISOLATOR	FS ISOLATOR
L	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
U	∅ 5 5A	∅ 6 6A,6B	∅ 7 7A	∅ 7 7B	∅ 8 8A	∅ 8 8B	SYS S17	SYS S30	NOT USED ∅ 9 PED	FS ISOLATOR	FS ISOLATOR	FS ISOLATOR	FS ISOLATOR	FS ISOLATOR
L	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED

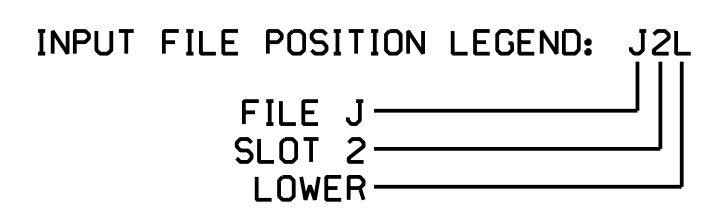
EX.: 1A, 2A, ETC. = LOOP NO.'S
 FS = FLASH SENSE
 ST = STOP TIME
 PRE2 = EV PREEMPT
 * Wired Input - Do not populate slot with detector card

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
1A ¹	TB2-1,2	I1U	56	18	1	1	Y	Y			15
		J4U	48	10	26	6	Y	Y	Y		3
2A,2B	TB2-5,6	I2U	39	1	2	2	Y	Y			
3A	TB4-5,6	I5U	58	20	3	3	Y	Y			
3B	TB4-9,10	I6U	41	3	4	3	Y	Y			5
4A	TB6-1,2	I7U	65	27	34	4	Y	Y			
4B	TB6-3,4	I7L	78	40	44	4	Y	Y			5
5A ²	TB3-1,2	J1U	55	17	5	5	Y	Y			15
		I4U	47	9	22	2	Y	Y	Y		3
* S15	TB6-9,10	I9U	60	22	11	SYS					
* S16	TB6-11,12	I9L	62	24	13	SYS					
6A,6B	TB3-5,6	J2U	40	2	6	6	Y	Y			
* S17	TB7-1,2	J7U	66	28	38	SYS	Y	Y			
* S30	TB7-9,10	J9U	59	21	15	SYS					
* S31	TB7-11,12	J9L	61	23	17	SYS					
PED PUSH BUTTONS											
P41,P42	TB8-5,6	I12L	69	31	PED 4	4 PED					

NOTE:
 INSTALL DC ISOLATOR IN INPUT FILE SLOT I12.

- Add jumper from I1-W to J4-W. on rear of input file.
 - Add jumper from J1-W to I4-W. on rear of input file.
- * System detector only. Remove the vehicle phase assigned to this detector in the default programming.

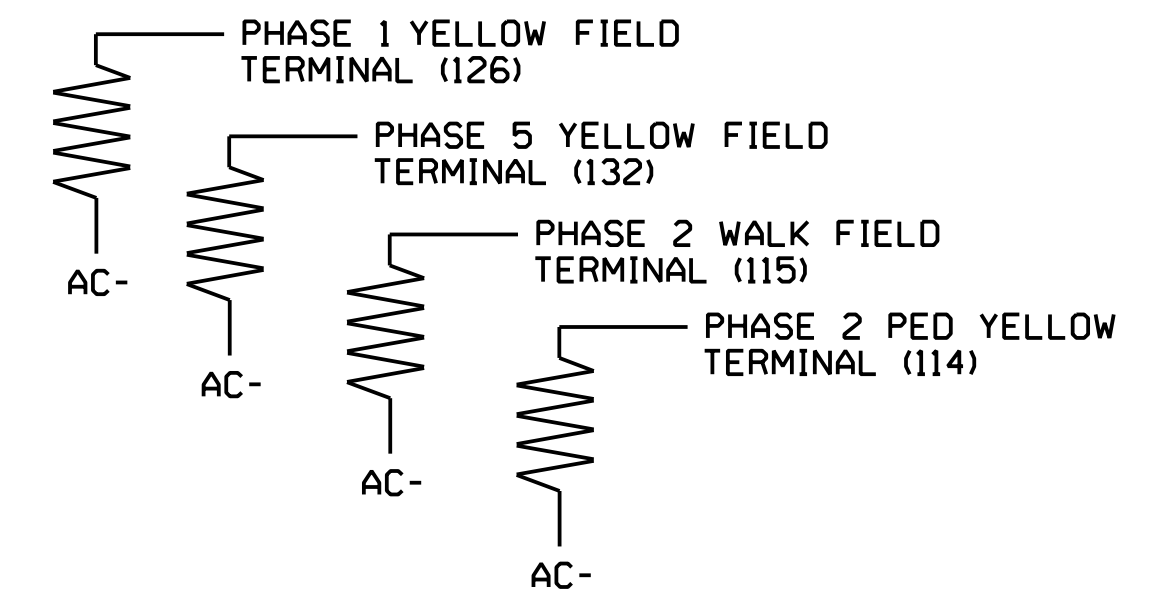


LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

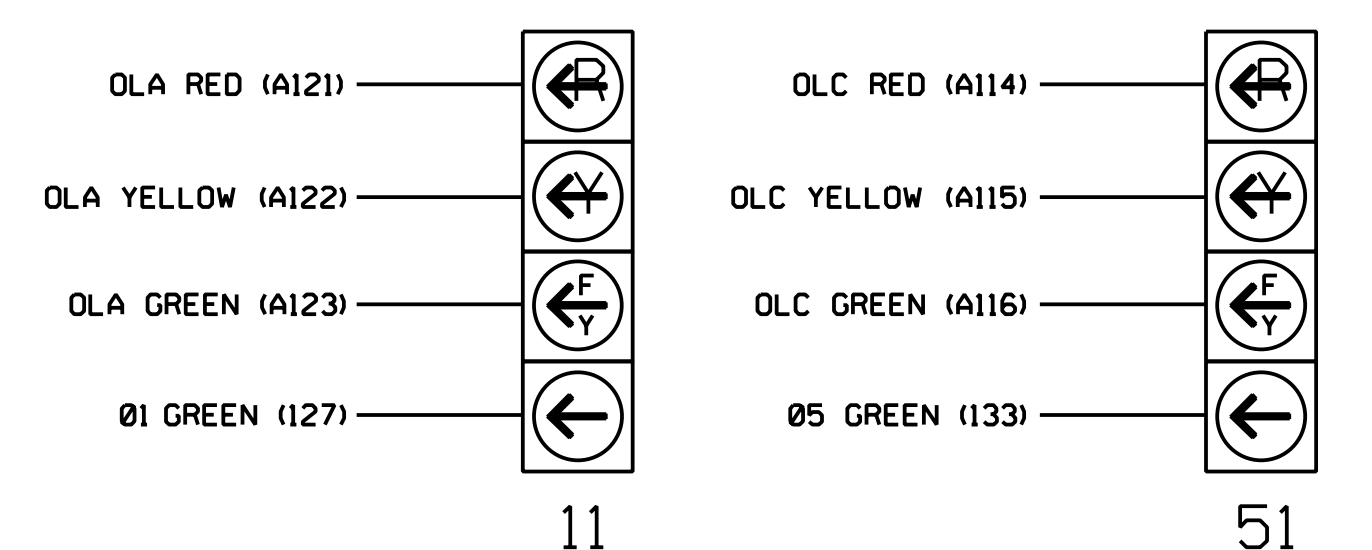
ACCEPTABLE VALUES

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



FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



NOTE

The sequence display for signal heads 11 and 51 requires special logic programming. See sheet 2 for programming instructions.

COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 02-0190
 DESIGNED: March 2018
 SEALED: 12-7-18
 REVISED: N/A

Electrical Detail - Sheet 1 of 3
 Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for:

 750 N. Greenfield Pkwy, Corner, NC 27529

US 70 Business (E Main St) at SR 1735 (Cunningham Boulevard)/ Annunciation Catholic School

Division 02 Craven Co. Havelock

PLAN DATE: March 2018 REVIEWED BY: A.D. Klinksiek

PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons

REVISIONS	INIT.	DATE

SEAL

 SEAL 031464
 NATASHA R. SIMMONS
 ENGINEER

HNTB
 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 546-8997

DocuSigned by:

 12/7/2018
 DATE
 SIG. INVENTORY NO. 02-0190