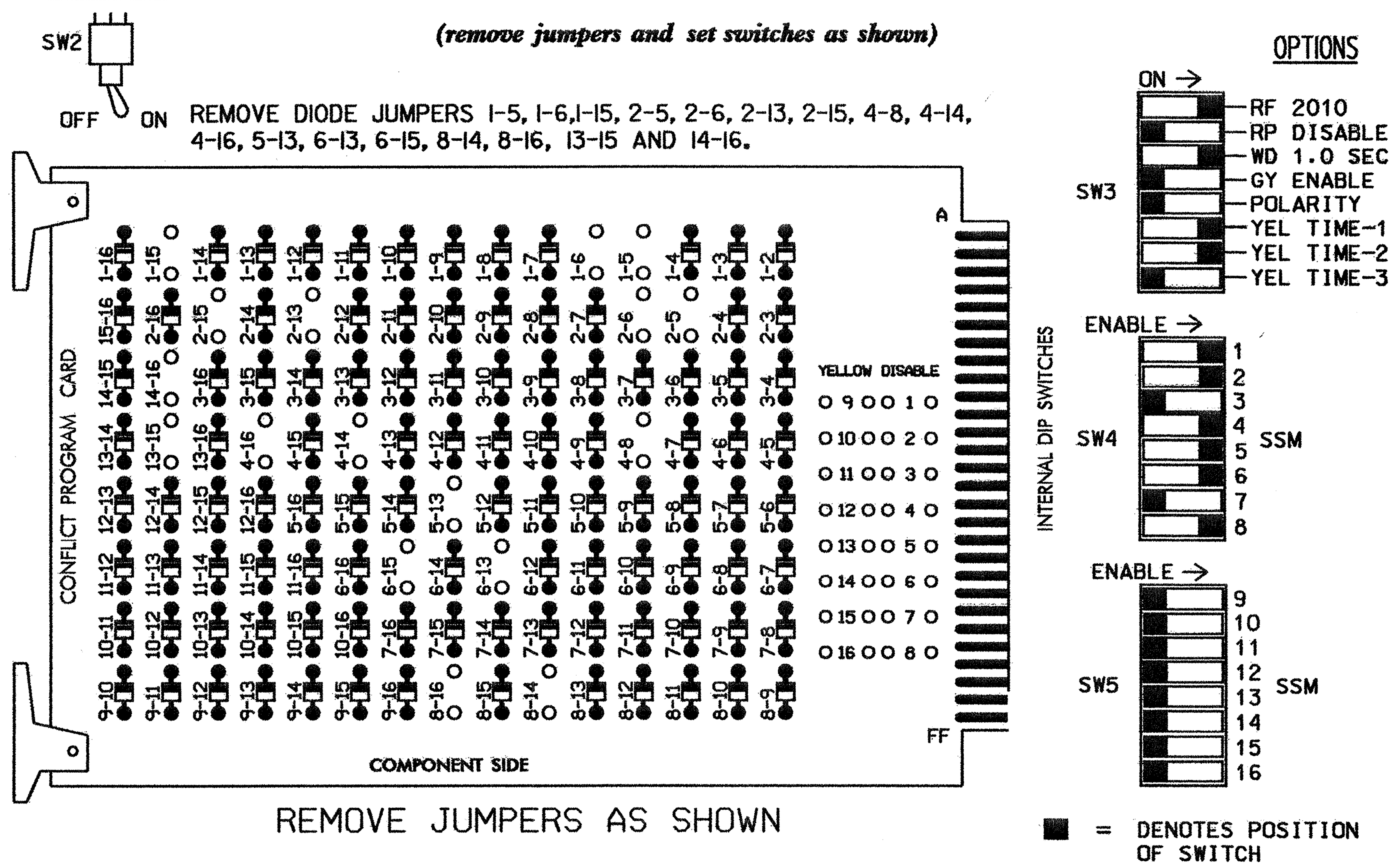
EDI MODEL 2010ECL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



NOTES:

1. CARD IS PROVIDED WITH ALL DIODE JUMPERS IN PLACE. REMOVAL OF ANY JUMPER ALLOWS ITS CHANNELS TO RUN CONCURRENTLY.
2. MAKE SURE JUMPERS SEL1-SEL5 ARE PRESENT ON THE MONITOR BOARD.
3. ENSURE THAT RED ENABLE IS ACTIVE AT ALL TIMES DURING NORMAL OPERATION.

NOTES

1. TO PREVENT "FLASH-CONFLICT" PROBLEMS, INSERT RED FLASH PROGRAM BLOCKS FOR ALL UNUSED VEHICLE LOAD SWITCHES IN OUTPUT FILE. VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
2. TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS 3,7, 9,10, 11, 12, 13, 14, 15 & 16, TIE UNUSED LOAD SWITCH RED OUTPUTS TO LOAD SWITCH AC+ PER CABINET MANUFACTURER'S INSTRUCTIONS.
3. PROGRAM THE CONTROLLER TO START UP IN PHASES 2 AND 6 GREEN.
4. SET POWER-UP FLASH TIME TO 10 SECONDS AND IMPLEMENT WITHIN THE CONTROLLER PROGRAMMING.
5. ENABLE SIMULTANEOUS GAP-OUT FEATURE, ON CONTROLLER UNIT, FOR ALL PHASES.
6. PROGRAM PHASES 4 AND 8, ON CONTROLLER UNIT, FOR DOUBLE ENTRY.
7. THE CABINET AND CONTROLLER ARE A PART OF THE DURHAM SIGNAL SYSTEM.

PROJECT REFERENCE NO.	SHEET NO.
U-4010	SIG. 15

FIELD CONNECTION HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	61	21,22	P21, P22	NU	41,42	P41, P42	21	61,62	P61, P62	NU	81,82	P81, P82
GREEN		130			103			136			109	
YELLOW		129			102			135			108	
RED	*	128			101		*	134			107	
RED ARROW												
YELLOW ARROW	126						132					
GREEN ARROW	127						133					
(WALK)			115			106			121			112
(DON'T WALK)			113			104			119			110

NU = NOT USED

* DENOTES INSTALL LOAD RESISTOR. SEE LOAD RESISTOR INSTALLATION DETAIL THIS PAGE.

EQUIPMENT INFORMATION

CONTROLLER.............CONTRACTOR SUPPLIED 170E
CABINET ....CONTRACTOR SUPPLIED 332
SOFTWARE ....BI TRANS 233NC2
CABINET MOUNT..........BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED......S1,S2,S4,S5,S6,S8,S2P,S4P,S6P,S8P
PHASES USED............1,2,4,5,6,8,2 PED,4 PED,6 PED,8 PED
OVERLAPS...............NONE

PEDESTRIAN PHASE PROGRAMMING

PROGRAM PEDESTRIAN 2P OUTPUT AT KEYPAD INPUT E/125+F+5= 2.
PROGRAM PEDESTRIAN 4P OUTPUT AT KEYPAD INPUT E/125+F+7= 4.
PROGRAM PEDESTRIAN 6P OUTPUT AT KEYPAD INPUT E/125+F+6= 6.
PROGRAM PEDESTRIAN 8P OUTPUT AT KEYPAD INPUT E/125+F+8= 8.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	Ø1,6,4 1A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø2 PED DC ISOLATOR	Ø6 PED DC ISOLATOR	FS DC ISOLATOR
	L		Ø 2 2A,2B				NOT USED						Ø4 PED DC ISOLATOR	Ø8 PED DC ISOLATOR	ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	Ø2,5,4 5A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		Ø 6 6A,6B				NOT USED								

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

FS = FLASH SENSE
ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
1A	TB2-5,6	I2U	1	39	5 7	1
			2	39	5 7	6
			3	39	7	4
2A,2B	TB2-7,8	I2L	4	43	5 7	2
4A	TB4-9,10	I6U	5	41	5 7	4
5A	TB3-5,6	J2U	6	40	5 7	2
			7	40	5 7	5
			8	40	7	4
6A,6B	TB3-7,8	J2L	9	44	5 7	6
8A	TB5-9,10	J6U	10	42	5 7	8
PED PUSH BUTTONS						
P21,P22	TB8-4,6	I12U	11	67	2	2 PED
P41,P42	TB8-5,6	I12L	12	69	2	4 PED
P61,P62	TB8-7,9	I13U	13	68	2	6 PED
P81,P82	TB8-8,9	I13L	14	70	2	8 PED

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

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

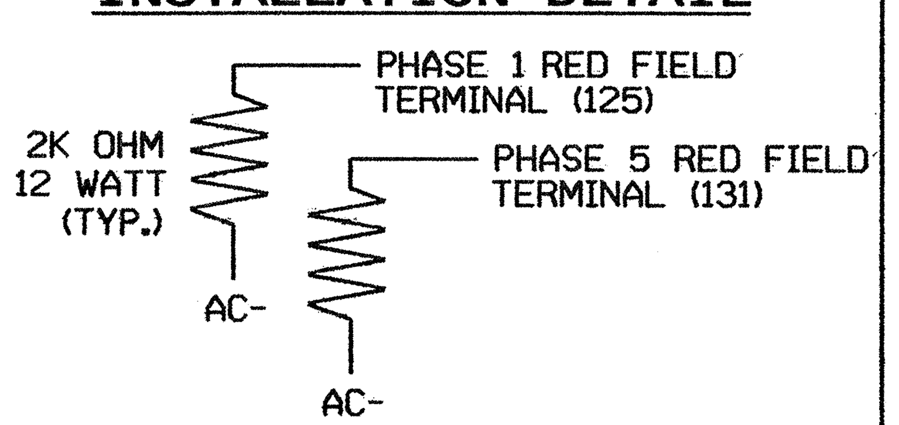
INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

DETECTOR ATTRIBUTES LEGEND:

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

LOAD RESISTOR INSTALLATION DETAIL



NOTE: THE PURPOSE OF THESE RESISTORS IS TO LOAD THE CHANNEL RED MONITOR INPUTS IN ORDER FOR THE SIGNAL SEQUENCE MONITOR TO USE THE FULL SIGNAL SEQUENCE MONITORING CAPABILITY ON CHANNELS THAT DO NOT USE THE RED DISPLAY IN THE FIELD.

BACK-UP PROTECTION NOTE

TO INSURE THAT THE CONTROLLER WILL NOT SEQUENCE FROM PHASE 2+6 DIRECTLY TO PHASE 1 AND/OR 5, SPECIAL PROGRAMMING HAS TO BE ENABLED IN THE BI TRANS 233NC SOFTWARE. PROGRAM 170E CONTROLLER AS FOLLOWS:

1. PROGRAM PHASES 1 AND 5 AS PROTECTED/PERMITTED AT KEYPAD INPUT E/125+E+4= Ø1,5.
2. LOOPS 1A AND 5A WILL HAVE TO BE PROGRAMMED TO CALL PHASE 4 (WITH APPROPRIATE DELAY TIME) TO ALLOW CONTROLLER TO SEQUENCE THRU PHASE 4 BEFORE PROCEEDING TO PHASE 1 AND/OR 5. SEE INPUT FILE PROGRAMMING ON THIS SHEET.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1655
DESIGNED: JANUARY 2004
SEALED: 02-17-04
REVISED:

SIGNAL UPGRADE - FINAL DESIGN

ELECTRICAL AND PROGRAMMING DETAILS FOR:

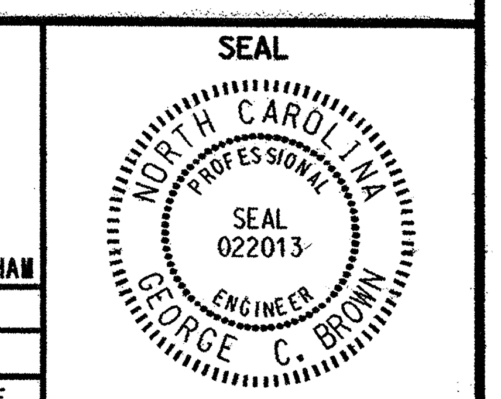
Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals Management Section
122 N. McDowell St., Raleigh, NC 27603

NC 98 (HOLLOWAY STREET)
AT
HOOVER ROAD/
SHOPPING CENTER DRIVE

DIVISION 05 DURHAM COUNTY DURHAM
PLAN DATE: MARCH 2004 REVIEWED BY: T Joya
PREPARED BY: JAMES PETERSON REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL



George C. Brown 4/13/04
SIGNATURE DATE

SIG. INVENTORY NO. 05-1655

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jpeterson