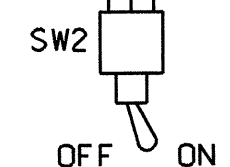


**EDI MODEL 2010ECL CONFLICT MONITOR**

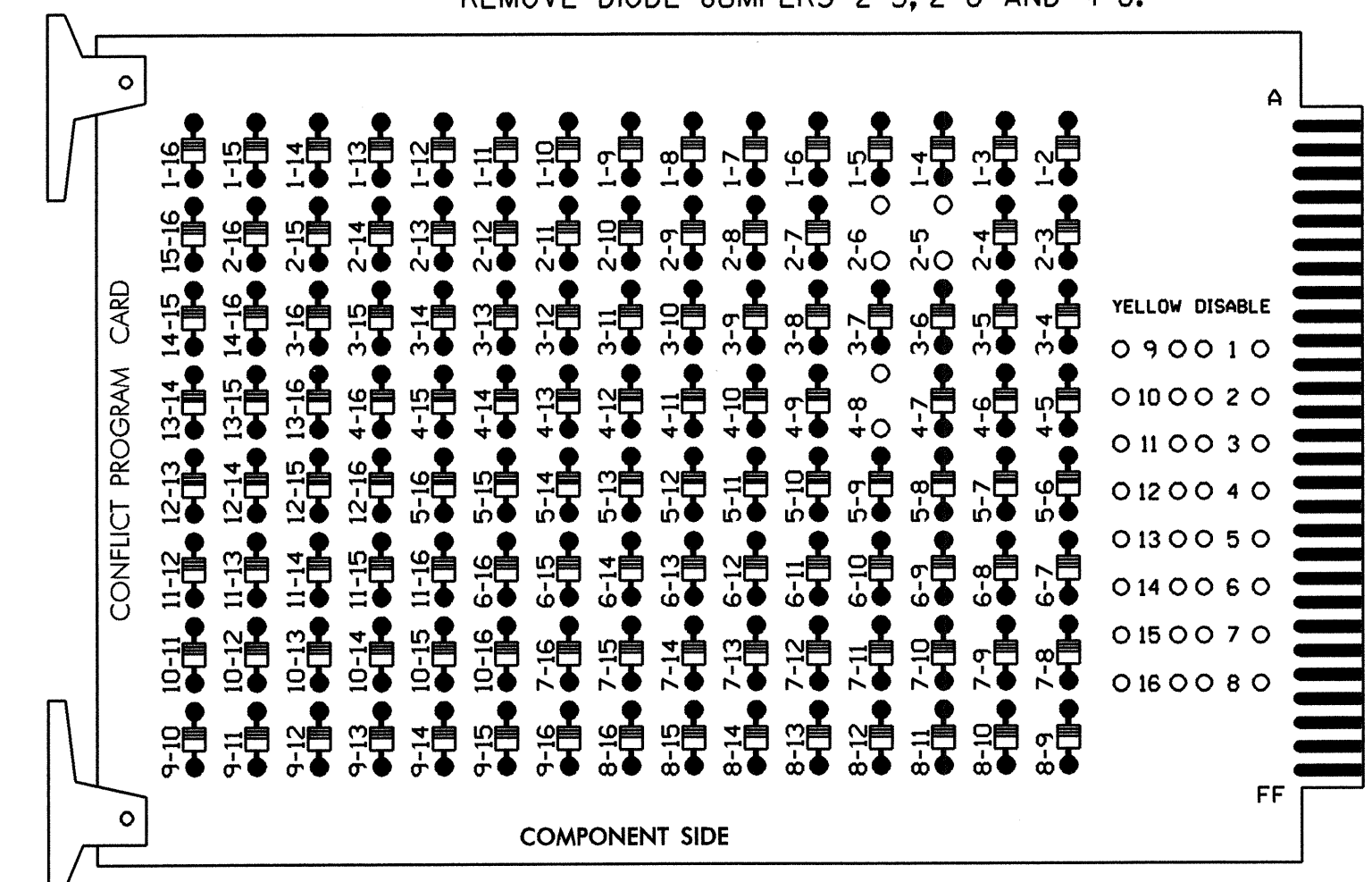
**PROGRAMMING DETAIL**

WD ENABLE

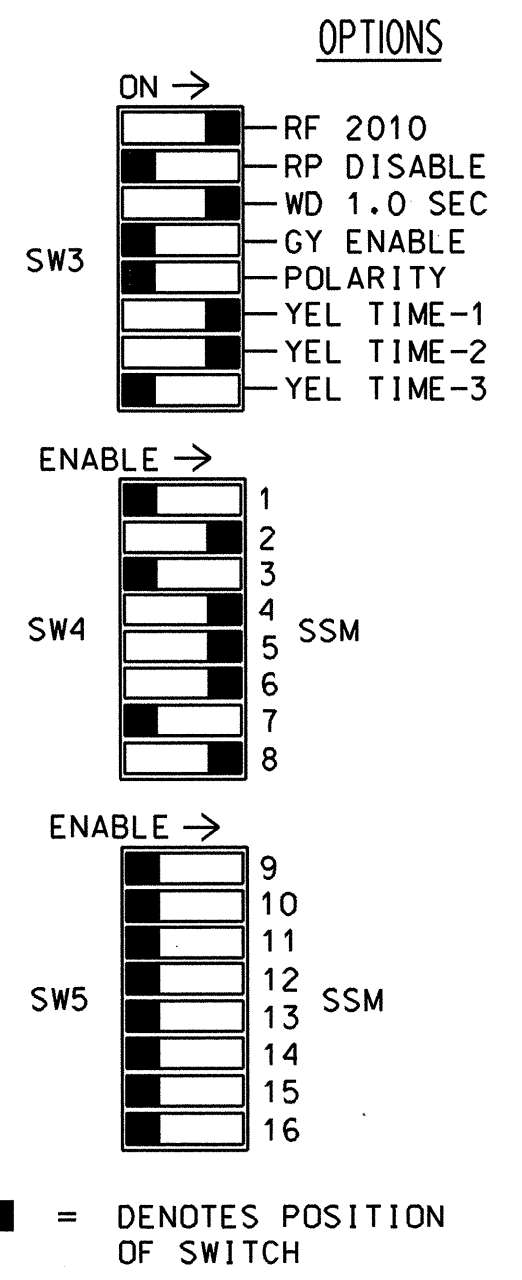


(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 2-5, 2-6 AND 4-8.



REMOVE JUMPERS AS SHOWN



NOTES:

- CARD IS PROVIDED WITH ALL DIODE JUMPERS IN PLACE. REMOVAL OF ANY JUMPER ALLOWS ITS CHANNELS TO RUN CONCURRENTLY.
- MAKE SURE JUMPERS SEL1-SEL5 ARE PRESENT ON THE MONITOR BOARD.

**INPUT FILE POSITION LAYOUT**

(from view)

|          |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                   |
|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|
|          | 1              | 2              | 3              | 4              | 5              | 6              | 7              | 8              | 9              | 10             | 11             | 12             | 13             | 14             |                   |
| FILE "I" | S<br>Ø 2<br>2A | S<br>Ø 2<br>2A | S<br>Ø 5<br>5B | S<br>Ø 6<br>6B | S<br>Ø 8<br>8A | S<br>Ø 4<br>4A | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | FS<br>DC ISOLATOR |
| FILE "J" | S<br>Ø 5<br>5A | S<br>Ø 6<br>6A | S<br>Ø 5<br>5A | S<br>Ø 6<br>6A | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | S<br>Ø 8<br>8B | ST<br>DC ISOLATOR |

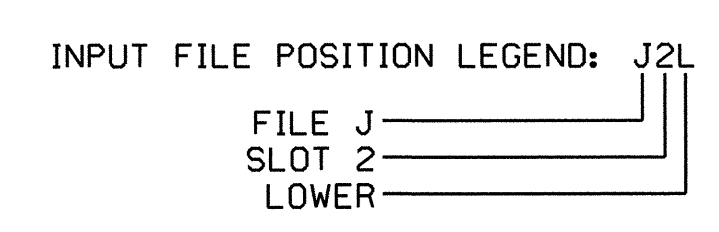
EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE  
ST = STOP TIME

**INPUT FILE CONNECTION & PROGRAMMING CHART**

| LOOP NO.        | LOOP TERMINAL | INPUT FILE POS. | PIN NO. | INPUT ASSIGNMENT NO. | DETECTOR NO. | NEMA PHASE | CALL | EXTEND | FULL TIME DELAY | STRETCH TIME | DELAY TIME |
|-----------------|---------------|-----------------|---------|----------------------|--------------|------------|------|--------|-----------------|--------------|------------|
| 2A              | TB2-5,6       | I2U             | 39      | 1                    | 2            | 2          | Y    | Y      | -               | ---          | --         |
| 4A              | TB4-9,10      | I6U             | 41      | 3                    | 4            | 4          | Y    | Y      | -               | ---          | 3          |
| 5A <sup>1</sup> | TB3-5,6       | J2U             | 40      | 2                    | 6            | 2          | Y    | Y      | -               | ---          | --         |
|                 | TB3-7,8       | J2L             | 44      | 6                    | 16           | 5          | Y    | Y      | -               | ---          | 15         |
| 5B              | TB3-9,10      | J3U             | 64      | 26                   | 36           | 5          | Y    | Y      | -               | ---          | 15         |
| 6A              | TB3-11,12     | J3L             | 77      | 39                   | 46           | 6          | Y    | Y      | -               | ---          | --         |
| 6B              | TB5-1,2       | J4U             | 48      | 10                   | 26           | 6          | Y    | Y      | -               | ---          | --         |
| 8A              | TB7-1,2       | J7U             | 66      | 28                   | 38           | 8          | Y    | Y      | -               | ---          | 3          |
| 8B              | TB7-3,4       | J7L             | 79      | 41                   | 48           | 8          | Y    | Y      | -               | ---          | 10         |

<sup>1</sup> DENOTES ADD JUMPERS FOR LOOP 5A FROM TB3-5 TO TB3-7, AND FROM TB3-6 TO TB3-8.



**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.
- ENSURE THAT RED ENABLE IS ACTIVE AT ALL TIMES DURING NORMAL OPERATION. TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS, TIE UNUSED RED MONITOR INPUTS 1,3,7,9,10,11,12,13,14,15 & 16 TO LOAD SWITCH AC+ PER CABINET MANUFACTURER'S INSTRUCTIONS.
- PROGRAM CONTROLLER TO START UP IN PHASES 2 AND 6 GREEN.
- ENABLE SIMULTANEOUS GAP-OUT FEATURE, ON CONTROLLER UNIT, FOR ALL PHASES.
- PROGRAM PHASES 4 AND 8, ON CONTROLLER UNIT, FOR DUAL ENTRY.

**EQUIPMENT INFORMATION**

CONTROLLER.....CONTRACTOR SUPPLIED 2070L  
 CABINET .....CONTRACTOR SUPPLIED 332  
 SOFTWARE .....ECONOLITE OASIS  
 CABINET MOUNT.....BASE  
 OUTPUT FILE POSITIONS...12  
 LOAD SWITCHES USED.....S2,S4,S5,S6,S8  
 PHASES USED.....2,4,5,6,8  
 OVERLAPS.....NONE

**BACK-UP PROTECTION PROGRAMMING DETAIL**

(program controller as shown below)

- FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE DYNAMIC/BACKUP CONTROL FUNCTION 1.
- FROM PHASE CONTROL FUNCTIONS MENU PRESS '2' (DYNAMIC/BACKUP CONTROL FUNCTIONS).

```

DYNAMIC/BACKUP CONTROL FUNCTION #01
OVERLAPS: ABCDEFGHIJKLMNPO
IF OVERLAPS ARE ACTIVE:
OR PHASES: 12345678910111213141516
IF PHASES ARE ON: X
OMIT PHASES: X
CALL PHASES: X
    
```

BACKUP PROTECTION PROGRAMMING COMPLETE

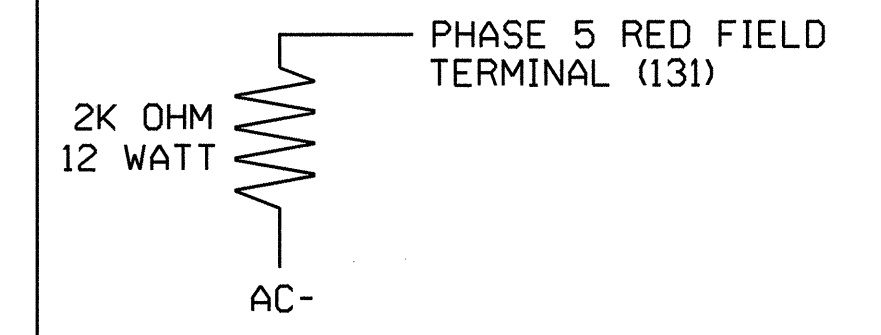
**FIELD CONNECTION HOOK-UP CHART**

| 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. | NU | 21,22 | NU    | NU | 41,42,43 | NU    | 21,43 | 61,62 | NU    | NU | 81,82 | NU    |
| GREEN           |    | 130   |       |    | 103      |       |       | 136   |       |    | 109   |       |
| YELLOW          |    | 129   |       |    | 102      |       |       | 135   |       |    | 108   |       |
| RED             |    | 128   |       |    | 101      |       | *     | 134   |       |    | 107   |       |
| RED ARROW       |    |       |       |    |          |       |       |       |       |    |       |       |
| YELLOW ARROW    |    |       |       |    |          |       |       | 132   |       |    |       |       |
| GREEN ARROW     |    |       |       |    |          |       |       | 133   |       |    |       |       |
| ⤴               |    |       |       |    |          |       |       |       |       |    |       |       |
| ⤵               |    |       |       |    |          |       |       |       |       |    |       |       |

NU = NOT USED

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

**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.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 13-0444T3  
 DESIGNED: 02/15/2003  
 SEALED: 02/26/2004  
 REVISED: TBD

TEMPORARY SIGNAL 3 - PHASE II TCP 25

ELECTRICAL AND PROGRAMMING DETAILS FOR:  
 Prepared for the Offices of:  
 North Carolina Department of Transportation  
 Signal Management Section  
 122 N. McDowell St., Raleigh, NC 27603

NC 146 (LONG SHOALS ROAD)  
 AT  
 SR 3503 (OVERLOOK ROAD)

DIVISION 13 BUNCOMBE COUNTY ASHEVILLE  
 PLAN DATE: JULY 2003 REVIEWED BY: J O DEATON  
 PREPARED BY: M W YALCH REVIEWED BY:  
 REVISIONS INIT. DATE

SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 07438  
 JAMES O. DEATON  
 SIGNATURE DATE  
 SIG. INVENTORY NO. 13-0444T3

PLANS PREPARED BY:  
**RUMMEL KLEPPER & KAHL, LLP**  
 consulting engineers  
 5800 FARINGDON PLACE SUITE 105  
 RALEIGH, NORTH CAROLINA 27609-3960  
 FOR  
**DIVISION OF HIGHWAYS**