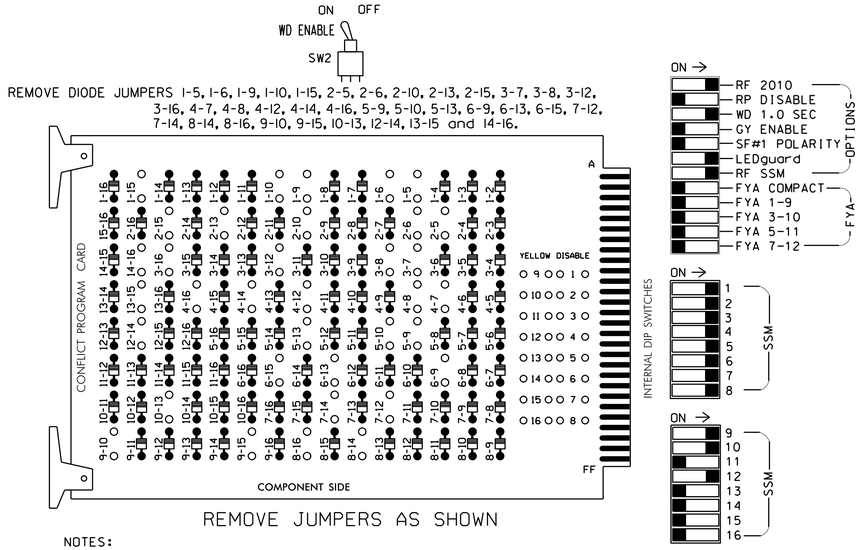
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| 2017CPT.03.05.10671 | Sig. 7.1 |

# EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

*(remove jumpers and set switches as shown)*




REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-10, 1-15, 2-5, 2-6, 2-10, 2-13, 2-15, 3-7, 3-8, 3-12, 3-16, 4-7, 4-8, 4-12, 4-14, 4-16, 5-9, 5-10, 5-13, 6-9, 6-13, 6-15, 7-12, 7-14, 8-14, 8-16, 9-10, 9-15, 10-13, 12-14, 13-15 and 14-16.

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. Make sure jumpers SEL2-SEL5 are present on the monitor board.

■ = 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. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. 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 11, 13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6, for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Start Up In Green.
6. Program phases 2,4,6 and 8 for 'STARTUP PED CALL'.
7. Program phases 2 and 6 for Yellow Flash.
8. The cabinet and controller are part of the Jacksonville Signal System.

## SIGNAL HEAD HOOK-UP CHART

| LOAD SWITCH NO. | S1 | S2 | S2P | S3 | | S4 | S4P | S5 | S6 | S6P | S7 | S8 | S8P | S9 | S10 | S11 | S12 | S13 | S14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | P21, P22 | 31,32 | 22 | 41,42 | P41, P42 | 51,52 | 61,62 | P61, P62 | 71 | 81,82 | P81, P82 | 82 | 42 | NU | NU | 62 | NU |
| RED | | 128 | | | | 101 | | | 134 | | | 107 | | * | * | | | * | |
| YELLOW | | 129 | | | | 102 | | | 135 | | | 108 | | | | | | | |
| GREEN | | 130 | | | | 103 | | | 136 | | | 109 | | | | | | | |
| RED ARROW | 125 | | | 116 | | | | 131 | | | 122 | | | | | | | | |
| YELLOW ARROW | 126 | | | 117 | 117 | | | 132 | | | 123 | | | A122 | A125 | | | A102 | |
| GREEN ARROW | 127 | | | 118 | 118 | | | 133 | | | 124 | | | A123 | A126 | | | A103 | |
| ✋ | | | 113 | | | | 104 | | | 119 | | | 110 | | | | | | |
| 🚶 | | | 115 | | | | 106 | | | 121 | | | 112 | | | | | | |

NU = Not Used

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

## EQUIPMENT INFORMATION

CONTROLLER.....2070
CABINET.....332 W/ AUX
SOFTWARE .....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS..18 (12-STD, 6-AUX)
LOAD SWITCHES USED.....S1,S2,S2P,S3,S4,S4P,S5,S6,S6P,S7,S8,S8P,S9,S10,S13
PHASES USED.....1,2,3,4,5,6,7,8,2PED,4PED,6PED,8PED
OVERLAP "A".....1
OVERLAP "B".....5
OVERLAP "C".....NOT USED
OVERLAP "D".....7

## 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.

## 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 1A | Ø2 2A,2B | SLOT EMPTY | SLOT EMPTY | Ø3 3A | Ø4 4A | SLOT EMPTY | SYS. DET. SØ1 | SLOT EMPTY | SLOT EMPTY | Ø2 PED DC ISOLATOR | Ø6 PED DC ISOLATOR | FS DC ISOLATOR |
| | L | | Ø1 1B | NOT USED | | | Ø3 3B | Ø4 4B | | SYS. DET. SØ2 | | | Ø4 PED DC ISOLATOR | Ø8 PED DC ISOLATOR | ST DC ISOLATOR |
| FILE "J" | U | Ø5 5A | Ø5 5B | Ø6 6A,6B | SLOT EMPTY | Ø7 7A | Ø8 8A | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | PRE3 Opticom 4-CHANNEL PRE5 | PRE4 | SLOT EMPTY |
| | L | NOT USED | Ø5 5C | NOT USED | | NOT USED | Ø8 8B | | | | | | | NOT USED | |

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

FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT

## 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 | TB2-5,6 | I2U | 39 | 1 | 2 | 1 | Y | Y | | | 3 |
| 1B | TB2-7,8 | I2L | 43 | 5 | 12 | 1 | Y | Y | | | 15 |
| 2A,2B | TB2-9,10 | I3U | 63 | 25 | 32 | 2 | Y | Y | | | |
| 3A | TB4-9,10 | I6U | 41 | 3 | 4 | 3 | Y | Y | | | 3 |
| 3B | TB4-11,12 | I6L | 45 | 7 | 14 | 3 | Y | Y | | | |
| 4A | TB6-1,2 | I7U | 65 | 27 | 34 | 4 | Y | Y | | | |
| 4B | TB6-3,4 | I7L | 70 | 40 | 44 | 4 | Y | Y | | | |
| * SØ1 | TB6-9,10 | I9U | 60 | 22 | 11 | SYS | | | | | |
| * SØ2 | TB6-11,12 | I9L | 62 | 24 | 13 | SYS | | | | | |
| 5A | TB3-1,2 | J1U | 55 | 17 | 5 | 5 | Y | Y | | | 3 |
| 5B | TB3-5,6 | J2U | 40 | 2 | 6 | 5 | Y | Y | | | |
| 5C | TB3-7,8 | J2L | 44 | 6 | 16 | 5 | Y | Y | | | 15 |
| 6A,6B | TB3-9,10 | J3U | 64 | 26 | 36 | 6 | Y | Y | | | |
| 7A | TB5-5,6 | J5U | 57 | 19 | 7 | 7 | Y | Y | | | 3 |
| 8A | TB5-9,10 | J6U | 42 | 4 | 8 | 8 | Y | Y | | | |
| 8B | TB5-11,12 | J6L | 46 | 8 | 18 | 8 | Y | Y | | | |
| PED PUSH BUTTONS | | | | | | | | | | | |
| P21,P22 | TB8-4,6 | I12U | 67 | 29 | PED 2 | 2 PED | | | | | |
| P41,P42 | TB8-5,6 | I12L | 69 | 31 | PED 4 | 4 PED | | | | | |
| P61,P62 | TB8-7,9 | I13U | 68 | 30 | PED 6 | 6 PED | | | | | |
| P81,P82 | TB8-8,9 | I13L | 70 | 32 | PED 8 | 8 PED | | | | | |

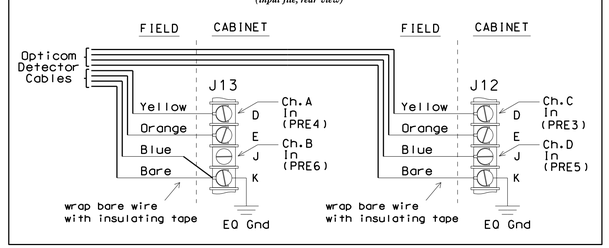
NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

* SYSTEM DETECTOR ONLY. REMOVE THE VEHICLE PHASE ASSIGNED TO THIS TO THIS DETECTOR IN THE DEFAULT PROGRAMMING.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

## TYPICAL OPTICOM FIELD WIRE DETAIL

*(input file, rear view)*

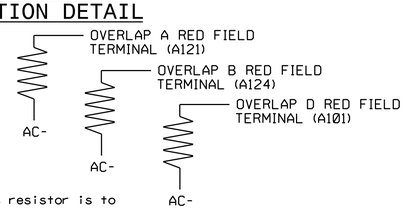



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 03-0091
DESIGNED: October 2016
SEALED: 10-20-16
REVISED: N/A

## LOAD RESISTOR INSTALLATION DETAIL

ACCEPTABLE VALUES

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




NOTE: The purpose of this resistor 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.

Electrical Detail - Sheet 1 of 2

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

REVISION SEAL

NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MINS

DocuSigned by: Keith M. Mins 2F8078EE8CD34A5... 11-10-16 DATE

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

# US 17 Bus. (Marine Boulevard) at SR 1336/1718 (Onslow Dr)

Division 03 | Onslow County | Jacksonville

PLAN DATE: 5-5-11 | REVIEWED BY:
PREPARED BY: D.H. Spaulding | REVIEWED BY:

| REVISIONS | INIT. | DATE |
|---|---|---|
| Upgraded loops, no change to electrical detail. (JP) | KMM | 11-10-16 |

SEAL

Not a certified document as to the Original Document but Only as to the Revisions - This document originally issued and sealed by George C. Brown, PE #022013, on 5-27-11.
This document is only certified as to the revisions.

SIGNATURE | DATE

SIG. INVENTORY NO. 03-0091

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