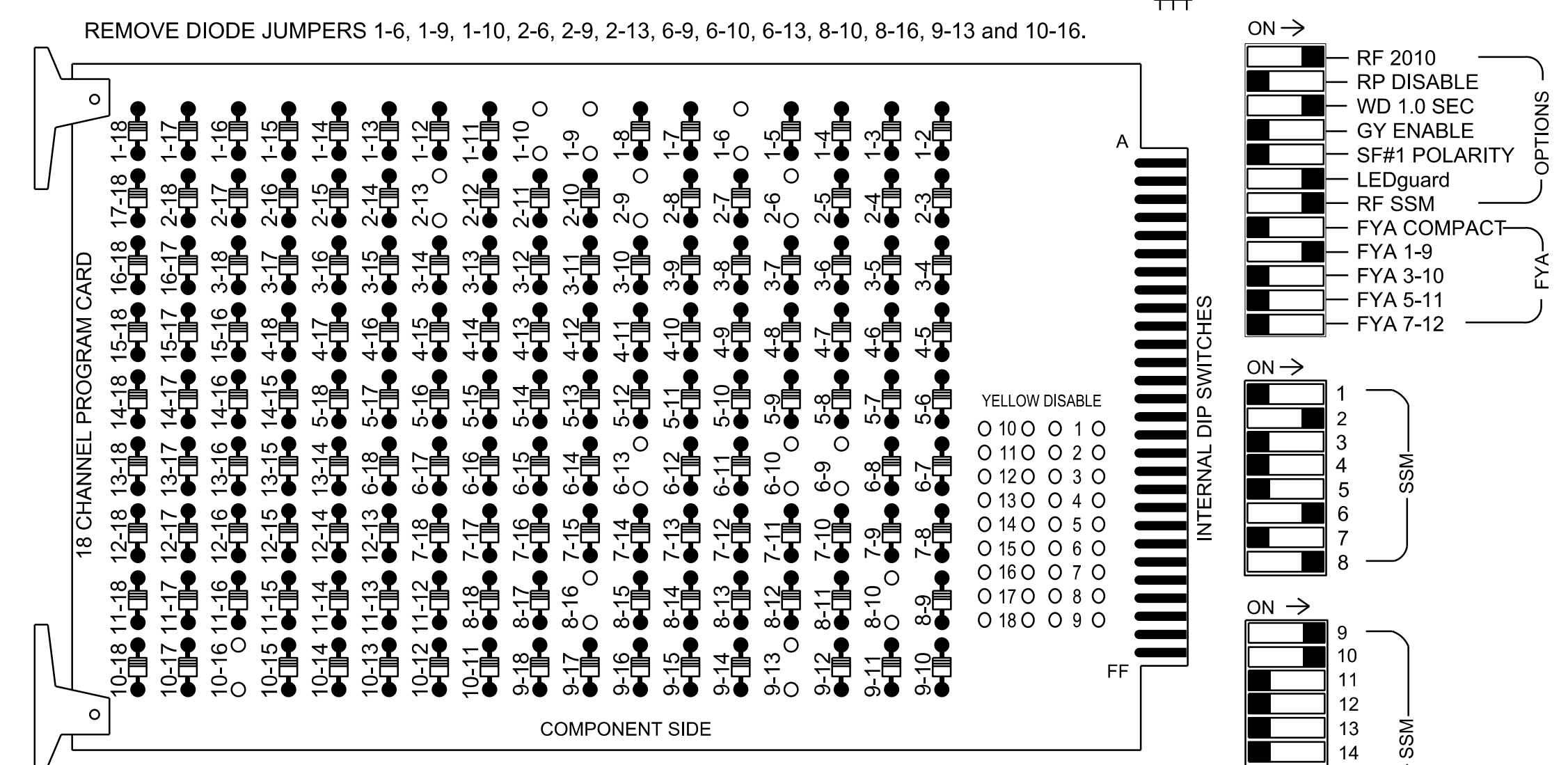


18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(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 the Red Enable is active at all times during normal operation.
 - Integrate monitor with Ethernet network in cabinet.

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 plan.
- Program controller to start up in phase 2 Green Walk and 6 Green No Walk.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
- The cabinet and controller are part of the D14-12 Waynesville Signal System.

EQUIPMENT INFORMATION

Controller.....2070LX
 Cabinet.....332 w/ Aux
 Software.....Q-Free MAXTIME
 Cabinet Mount.....Base
 Output File Positions.....18 With Aux. Output File
 Load Switches Used.....S1, S2, S3, S8, S11, S12, AUX S1, AUX S2
 Phases Used.....1, 2, 2PED, 6, 8, 8PED
 Overlap "1".....*
 Overlap "2".....*
 Overlap "3".....NOT USED
 Overlap "4".....NOT USED

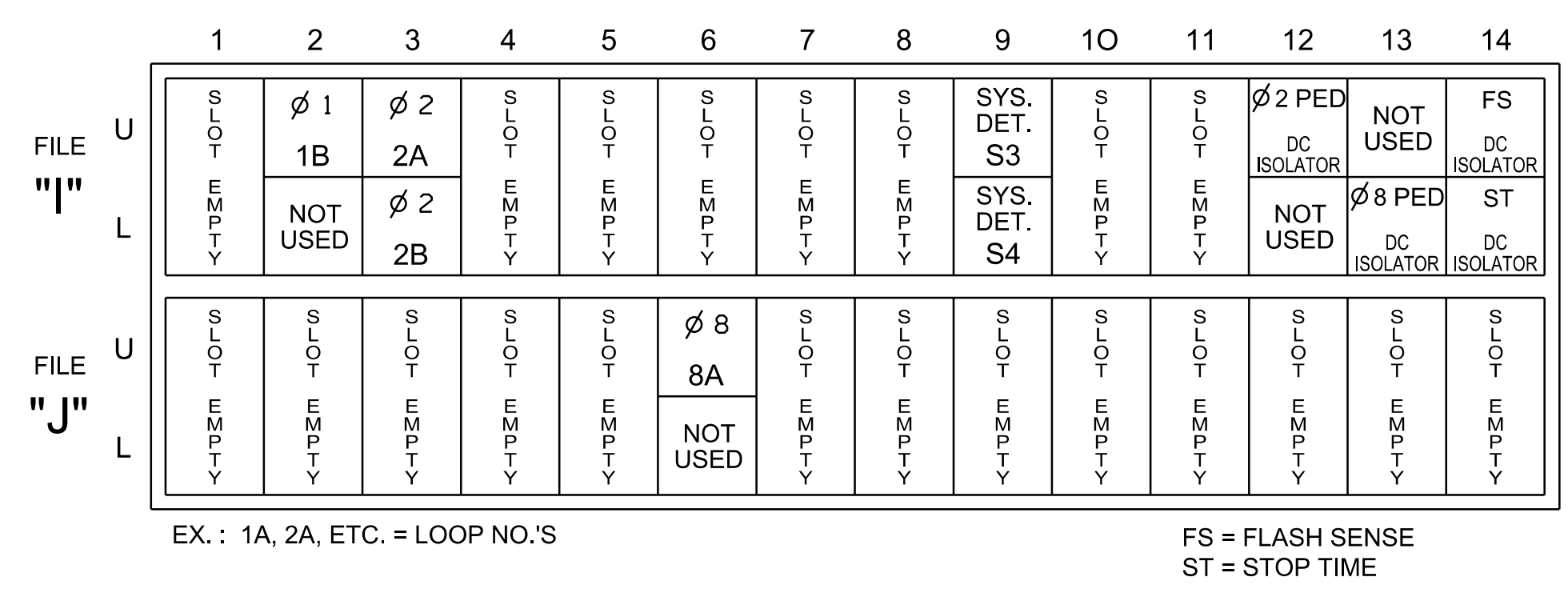
*See overlap programming detail on sheet 2

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, 23 | P21, P22 | NU | NU | NU | NU | 61, 62, 63 | NU | NU | 81 | P81, P82 | 11 | 82, 83 | NU | NU | NU | NU |
| RED | | 128 | | | | | | 134 | | | | | | | | | | A124 |
| YELLOW | * | 129 | | | | | | 135 | | | | | | | | | | |
| GREEN | | 130 | | | | | | 136 | | | | | | | | | | |
| RED ARROW | | | | | | | | | | | | | 107 | | | | | A121 |
| YELLOW ARROW | | | | | | | | | | | | | 108 | | | | | A122 A125 |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | | | | | | A123 |
| GREEN ARROW | 127 | | | | | | | | | | | | 109 | | | | | A126 |
| Hand icon | | | | | | | | | | | | | | | | | | 110 |
| Person icon | | | | | | | | | | | | | | | | | | 115 |

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)



SPECIAL DETECTOR NOTE

For detection zones 1A, 6A and 6B, install a multizone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

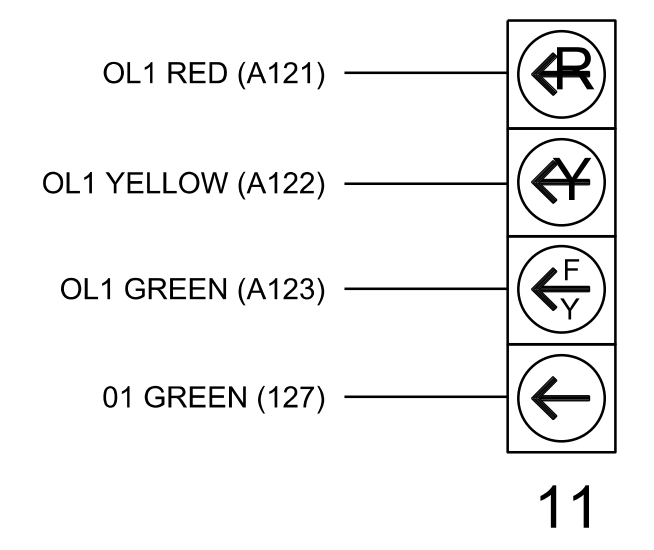
INPUT FILE CONNECTION & PROGRAMMING CHART

| LOOP NO. | LOOP TERMINAL | INPUT FILE POS. | PIN NO. | INPUT POINT | DETECTOR NO. | CALL PHASE | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | DELAY DURING GREEN |
|------------------|---------------|-----------------|---------|-------------|--------------|------------|------------|-------------|--------|---------------|------|--------------------|
| 1B | TB2-5,6 | I2U | 39 | 1 | 2 | 1 | 15 | | X | | X | |
| 2A | TB2-9,10 | I3U | 63 | 29 | 4 | 2 | | | X | | X | |
| 2B | TB2-11,12 | I3L | 76 | 42 | 5 | 2 | | | X | | X | |
| 8A | TB5-9,10 | J6U | 42 | 4 | 22 | 8 | | | X | | X | |
| *S3 | TB6-9,10 | I9U | 60 | 22 | 13 | | | | | | | |
| *S4 | TB6-11,12 | I9L | 62 | 24 | 14 | | | | | | | |
| PED PUSH BUTTONS | | | | | | | | | | | | |
| P21,P22 | TB8-4,6 | I12U | 67 | 33 | 2 | PED 2 | | | | | | |
| P81,P82 | TB8-8,9 | I13L | 70 | 36 | 8 | PED 8 | | | | | | |

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

*System detector only. Remove any assigned vehicle phase.

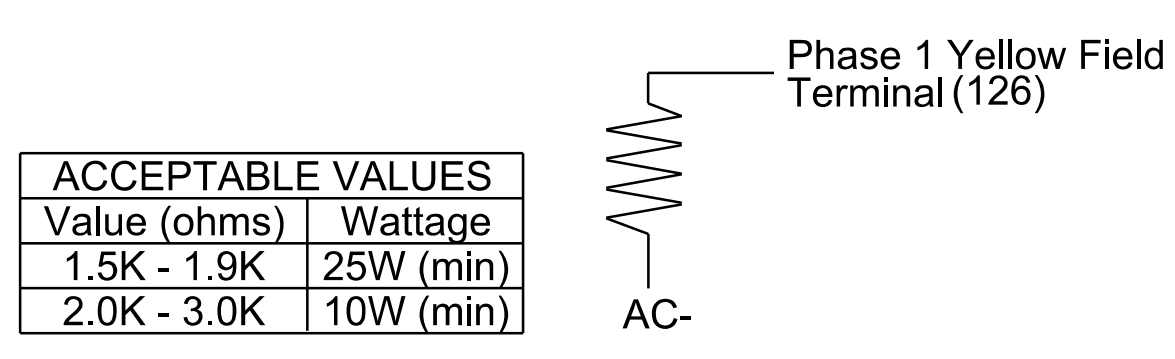
FYA SIGNAL WIRING DETAIL (wire signal head as shown)



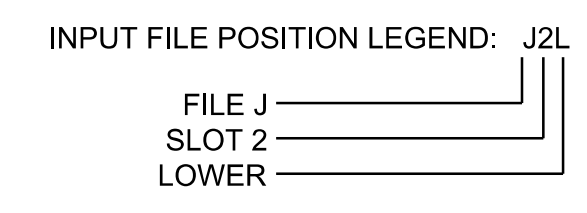
COUNTDOWN PEDESTRIAN SIGNAL OPERATION

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.

LOAD RESISTOR INSTALLATION DETAIL (install resistor as shown)



| ACCEPTABLE VALUES | |
|-------------------|-----------|
| Value (ohms) | Wattage |
| 1.5K - 1.9K | 25W (min) |
| 2.0K - 3.0K | 10W (min) |



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 14-0417
 DESIGNED: Apr 2023
 SEALED: 04/11/2023
 REVISED: N/A

Electrical Detail - Sheet 1 of 2
 Final Design



US 276 (Russ Avenue) at Walnut Street

Division 14 Haywood County Waynesville

PLAN DATE: April 2023 REVIEWED BY: WJ Hamilton

PREPARED BY: TS Popelka RKA PROJ. NO: 16085 (040)

750 N. Greenfield Pkwy, Garner, NC 27529

DocuSign Envelope ID: 82D8C649-8B56-4745-B9CD-FF1402C4349A

Seal of William J. Hamilton, Professional Engineer, License No. 32396

DATE: 04/11/2023

SIGNATURE: William J. Hamilton

DATE: 04/11/2023

SIG. INVENTORY NO. 14-0417

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED