

## LOGICAL I/O PROCESSOR PROGRAMMING DETAIL TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE

(program controller as shown below)

1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2, 3, 4, 5 AND 6.
2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).

LOGICAL I/O COMMAND #1 (+/-COMMAND#)  
IF ACTIVE PHASE #1 IS ON  
AND RED CLEAR ON PHASE #1 IS ON

↓  
SCROLL DOWN

THEN:  
SET OUTPUT ASSIGNMENT #50 ON  
SET OUTPUT ASSIGNMENT #51 OFF

PRESS '+'

NOTE: LOGIC FOR PHASE 1 RED CLEAR WHEN TRANSITIONING FROM PHASE 1 TO PHASE 2 (HEAD 11).

LOGICAL I/O COMMAND #2 (+/-COMMAND#)  
IF ACTIVE PHASE #1 IS ON

↓  
SCROLL DOWN

THEN:  
SET OUTPUT ASSIGNMENT #52 OFF

PRESS '+'

NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 1 (HEAD 11).

LOGICAL I/O COMMAND #3 (+/-COMMAND#)  
IF YELLOW ON PHASE #1 IS ON

↓  
SCROLL DOWN

THEN:  
SET OUTPUT ASSIGNMENT #51 ON

PRESS '+'

NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 1 (HEAD 11).

LOGICAL I/O COMMAND #4 (+/-COMMAND#)  
IF ACTIVE PHASE #5 IS ON  
AND RED CLEAR ON PHASE #5 IS ON

↓  
SCROLL DOWN

THEN:  
SET OUTPUT ASSIGNMENT #42 ON  
SET OUTPUT ASSIGNMENT #43 OFF

PRESS '+'

NOTE: LOGIC FOR PHASE 5 RED CLEAR WHEN TRANSITIONING FROM PHASE 5 TO PHASE 6 (HEAD 51).

LOGICAL I/O COMMAND #5 (+/-COMMAND#)  
IF ACTIVE PHASE #5 IS ON

↓  
SCROLL DOWN

THEN:  
SET OUTPUT ASSIGNMENT #44 OFF

PRESS '+'

NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 5 (HEAD 51).

LOGICAL I/O COMMAND #6 (+/-COMMAND#)  
IF YELLOW ON PHASE #5 IS ON

↓  
SCROLL DOWN

THEN:  
SET OUTPUT ASSIGNMENT #43 ON

PRESS '+'

NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 5 (HEAD 51).

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

### OUTPUT REFERENCE SCHEDULE

- OUTPUT 42 = Overlap C Red
- OUTPUT 43 = Overlap C Yellow
- OUTPUT 44 = Overlap C Green
- OUTPUT 50 = Overlap A Red
- OUTPUT 51 = Overlap A Yellow
- OUTPUT 52 = Overlap A Green

## OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

- FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).

PAGE 1: VEHICLE OVERLAP 'A' SETTINGS  
PHASE: 12345678910111213141516  
VEH OVL PARENTS: XX  
VEH OVL NOT VEH:  
VEH OVL NOT PED:  
VEH OVL GRN EXT:  
STARTUP COLOR: - RED - YELLOW - GREEN  
FLASH COLORS: - RED - YELLOW X GREEN

SELECT VEHICLE OVERLAP OPTIONS: (Y/N)  
FLASH YELLOW IN CONTROLLER FLASH?...Y  
GREEN EXTENSION (0-255 SEC)...0  
YELLOW CLEAR (0=PARENT,3-25.5 SEC)...0.0  
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0  
OUTPUT AS PHASE # (0=NONE, 1-16)...0

← NOTICE GREEN FLASH

PRESS '+' TWICE

PAGE 1: VEHICLE OVERLAP 'C' SETTINGS  
PHASE: 12345678910111213141516  
VEH OVL PARENTS: XX  
VEH OVL NOT VEH:  
VEH OVL NOT PED:  
VEH OVL GRN EXT:  
STARTUP COLOR: - RED - YELLOW - GREEN  
FLASH COLORS: - RED - YELLOW X GREEN

SELECT VEHICLE OVERLAP OPTIONS: (Y/N)  
FLASH YELLOW IN CONTROLLER FLASH?...Y  
GREEN EXTENSION (0-255 SEC)...0  
YELLOW CLEAR (0=PARENT,3-25.5 SEC)...0.0  
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0  
OUTPUT AS PHASE # (0=NONE, 1-16)...0

← NOTICE GREEN FLASH

USING + OR - KEY POSITION ON OVERLAP 'P'

PAGE 1: VEHICLE OVERLAP 'P' SETTINGS  
PHASE: 12345678910111213141516  
VEH OVL PARENTS: XX XXX X  
VEH OVL NOT VEH:  
VEH OVL NOT PED:  
VEH OVL GRN EXT:  
STARTUP COLOR: - RED - YELLOW - GREEN  
FLASH COLORS: - RED - YELLOW - GREEN

SELECT VEHICLE OVERLAP OPTIONS: (Y/N)  
FLASH YELLOW IN CONTROLLER FLASH?...N  
GREEN EXTENSION (0-255 SEC)...0  
YELLOW CLEAR (0=PARENT,3-25.5 SEC)...0.0  
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0  
OUTPUT AS PHASE # (0=NONE, 1-16)...0

← THE UTILIZATION OF OVERLAP 'P' ENSURES CONSISTENT CLEARANCE TIMING DURING TRANSITION TO PREEMPTION.

OVERLAP PROGRAMMING COMPLETE

This plan supersedes the one signed and sealed on 2/15/2017.

NC Dept of Transportation  
Division of Highways  
Final Drawing Date: 7/10/2018  
*R. N. Zinser*  
ITS & Signals Unit

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 14-0196T1  
DESIGNED: JULY 2018  
SEALED: 7/10/2018  
REVISED:

**STV** 100 Years  
STV Engineers, Inc.  
900 West Trade St., Suite 715  
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NC License Number F-0991

SIGNAL UPGRADE - TEMPORARY ELECTRICAL DETAIL SHEET 2 OF 3

<p>ELECTRICAL AND PROGRAMMING DETAILS FOR:</p> <p style="text-align: center;">SR 1547 (Old Airport Road)/ SR 1551 (Mills Gap Road) at SR 1545 (Cane Creek Road)</p>	<p>Division 14 Henderson County NE of Fletcher</p> <p>PLAN DATE: July 2018 REVIEWED BY: R Dubnicka</p> <p>PREPARED BY: J Trueblood REVIEWED BY: J Carroll</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS	INIT.	DATE				<p style="text-align: center;">SEAL</p> <p style="text-align: center;">NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030005 J. CARROLL</p> <p style="text-align: center;">DocuSigned by <i>Justin T. Carroll</i> 7/10/2018</p> <p style="text-align: center;">SIGNATURE DATE</p> <p style="text-align: center;">SIG. INVENTORY NO. 14-0196T1</p>
REVISIONS	INIT.	DATE						