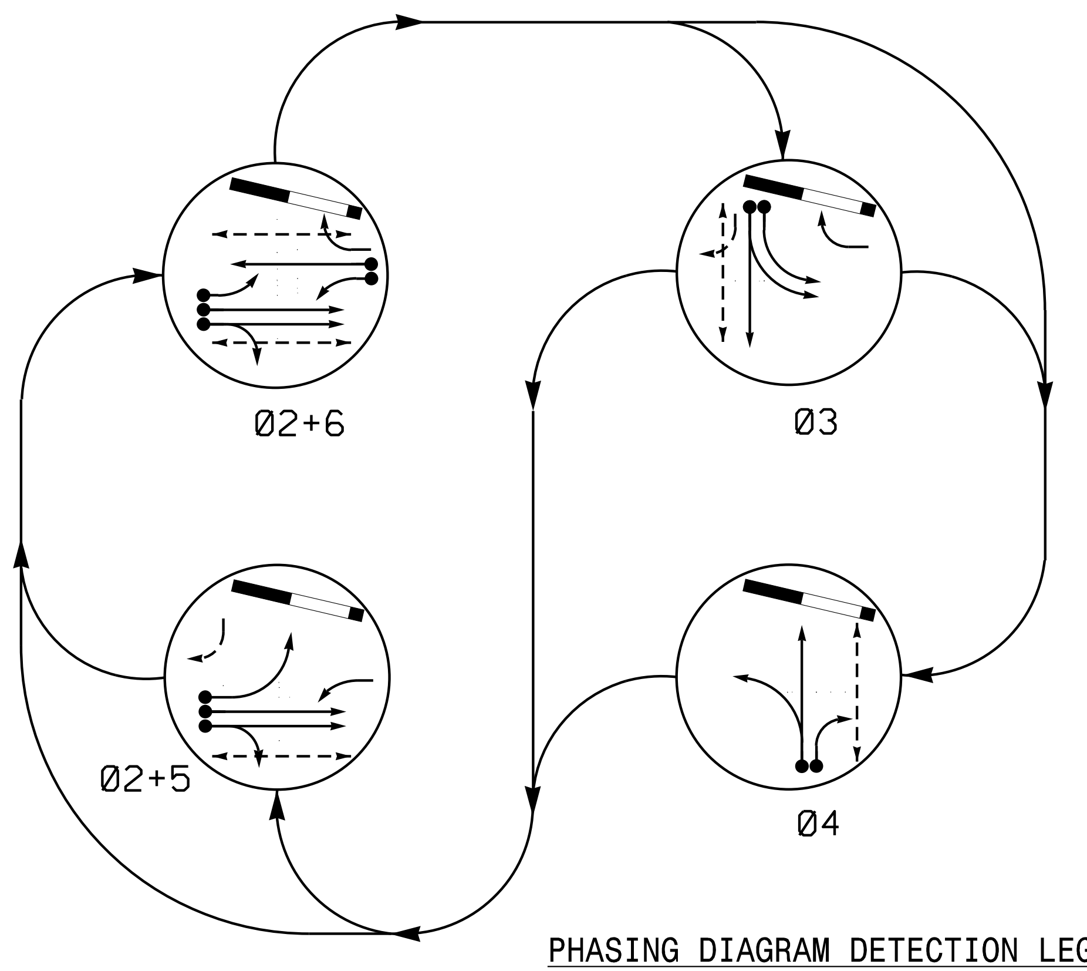
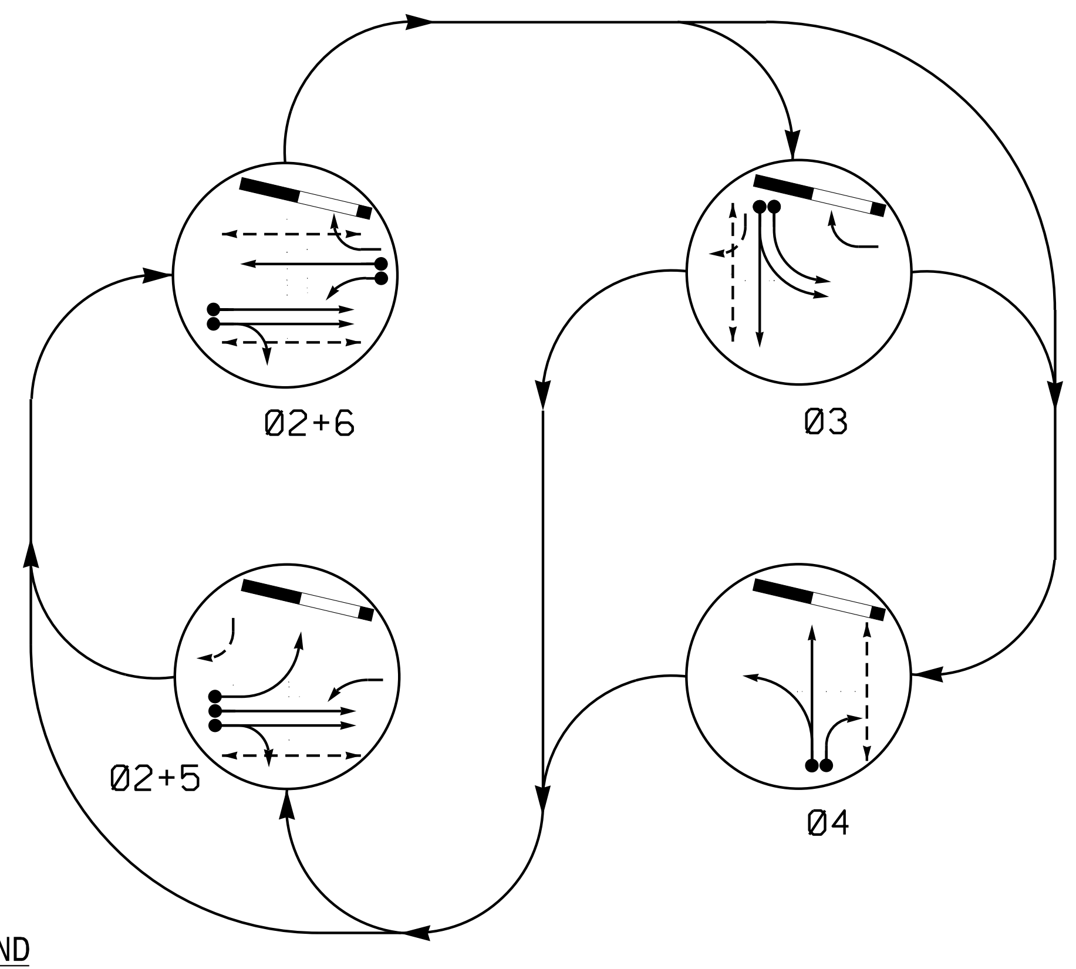
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-5925 | Sig-1 |

## DEFAULT PHASING DIAGRAM

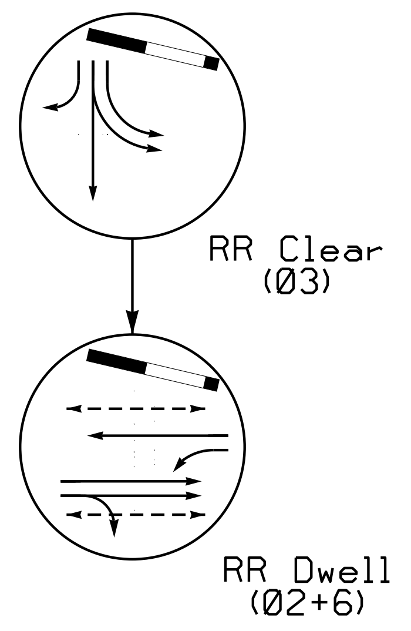


## ALTERNATE PHASING DIAGRAM



## RAIL PREEMPT PHASES

(High Priority)

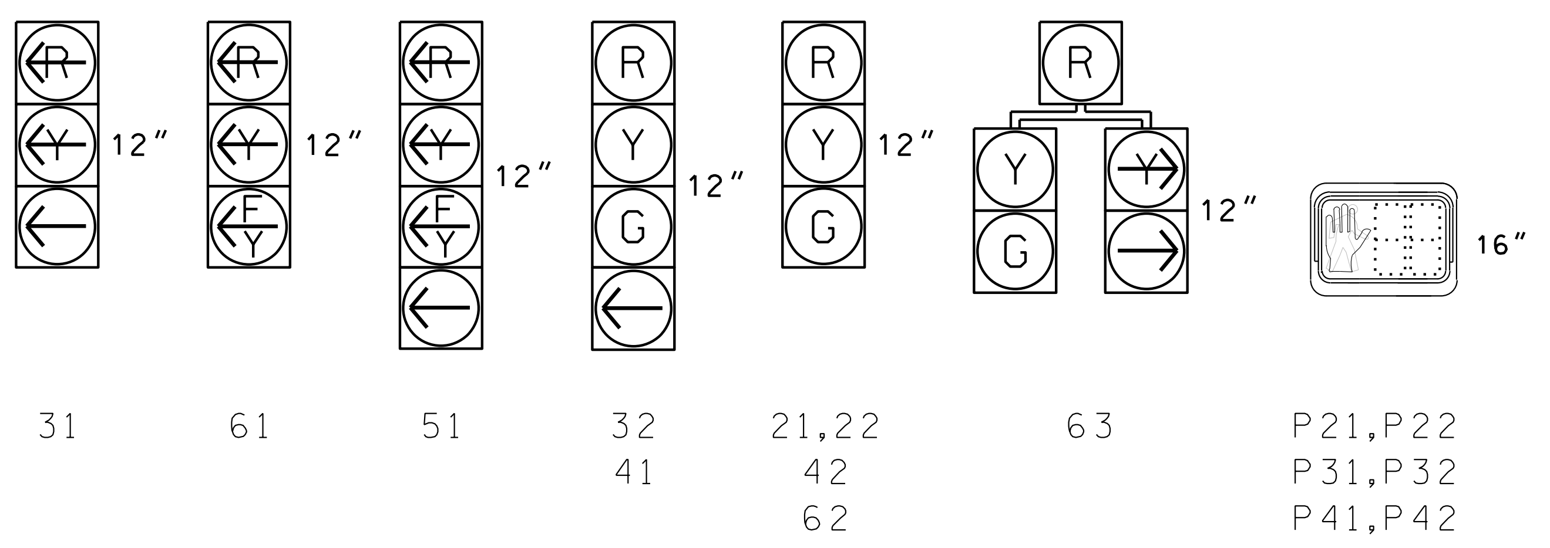


### PHASING DIAGRAM DETECTION LEGEND

←● DETECTED MOVEMENT
← UNDETECTED MOVEMENT (OVERLAP)
←– – UNSIGNALIZED MOVEMENT
←– – → PEDESTRIAN MOVEMENT

## SIGNAL FACE I.D.

All Heads L.E.D.



# 4 Phase
# Fully Actuated
# With RR Preemption
# NC-711 (W. Third Street) CLS

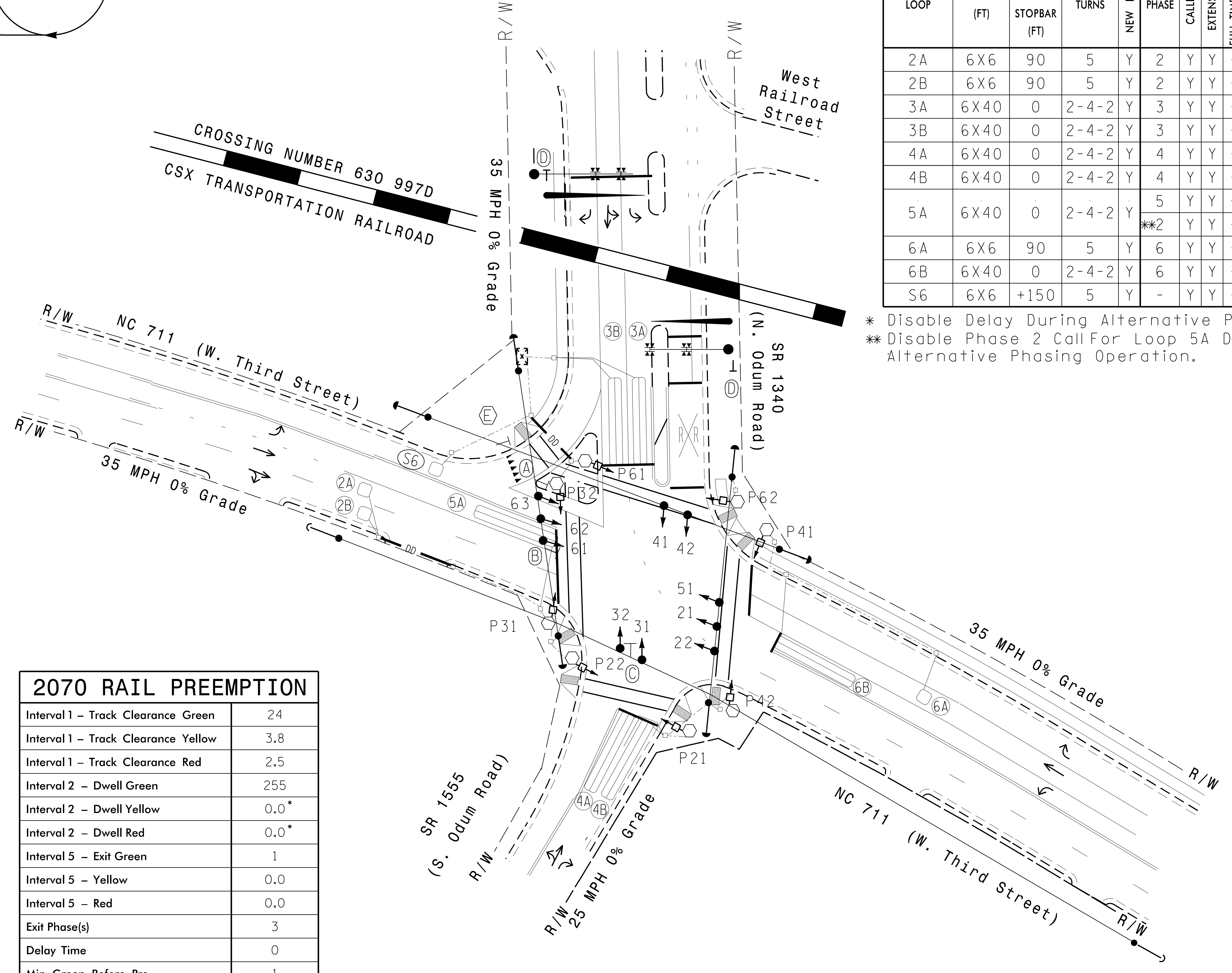
## NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and the "Standard Specifications for Roads and Structures" dated January 2012.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. In the event of loop replacement, refer to the current ITS and signals Design Manual and submit a Plan of Record to the Signal Design Section.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Shown locations of pedestrian signals are conceptual only. See sheets P1-P3 for pushbutton location details.
11. Ensure flashing operation does not alter operation of blankout sings.
12. Program parent phases for Overlap "P" for all phases used in normal operation.
13. The Division Traffic Engineer will determine the hours of use for each phasing plan.
14. Closed loop system data:
    Controller Asset #0229.

## OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

| INDUCTIVE LOOPS | | | | | DETECTOR PROGRAMMING | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PHASE | CALLING | EXTENSION | FULL TIME DELAY | STRETCH TIME | DELAY TIME | SYSTEM LOOP | NEW CARD |
| 2A | 6X6 | 90 | 5 | Y | 2 | Y | Y | - | - | - | - | - |
| 2B | 6X6 | 90 | 5 | Y | 2 | Y | Y | - | - | - | - | - |
| 3A | 6X40 | 0 | 2-4-2 | Y | 3 | Y | Y | - | - | 3 | - | - |
| 3B | 6X40 | 0 | 2-4-2 | Y | 3 | Y | Y | - | - | - | - | - |
| 4A | 6X40 | 0 | 2-4-2 | Y | 4 | Y | Y | - | - | 3 | - | - |
| 4B | 6X40 | 0 | 2-4-2 | Y | 4 | Y | Y | - | - | 15 | - | - |
| 5A | 6X40 | 0 | 2-4-2 | Y | 5 | Y | Y | - | - | ∗15 | - | - |
| | | | | | ∗∗2 | Y | Y | - | - | - | - | - |
| 6A | 6X6 | 90 | 5 | Y | 6 | Y | Y | - | - | - | - | - |
| 6B | 6X40 | 0 | 2-4-2 | Y | 6 | Y | Y | - | - | - | - | - |
| S6 | 6X6 | +150 | 5 | Y | - | Y | Y | - | - | - | Y | - |

∗ Disable Delay During Alternative Phasing Operation.
∗∗ Disable Phase 2 Call For Loop 5A During Alternative Phasing Operation.



## DEFAULT PHASING TABLE OF OPERATION

| SIGNAL FACE | PHASE | | | | | | |
|---|---|---|---|---|---|---|---|
| | Ø2+5 | Ø2+6 | Ø3 | Ø4 | RR CLEAR | RR DWELL | FLASH |
| 21,22 | G | G | R | R | R | G | Y |
| 31 | ←R | ←R | ← | ←R | ← | ←R | ←R |
| 32 | R | R | G ← | R | G ← | R | R |
| 41 | R | R | R | G ← | R | R | R |
| 42 | R | R | R | G | R | R | R |
| 51 | ← | ←F/Y | ←R | ←R | ←R | ←R | ←Y |
| 61 | ←F/Y | ←F/Y | ←R | ←R | ←R | ←F/Y | ←Y |
| 62 | R | G | R | R | R | G | Y |
| 63 | R | G | R/→ | R | R | G | Y |
| P21,P22 | W | W | DW | DW | DW | W | DRK |
| P31,P32 | DW | DW | W | DW | DW | DW | DRK |
| P41,P42 | DW | DW | DW | W | DW | DW | DRK |
| P61,P62 | DW | W | DW | DW | DW | W | DRK |
| SIGN A | OFF | OFF | OFF | OFF | ON | ON | ✳ |

✳ See Note 11.

## ALTERNATE PHASING TABLE OF OPERATION

| SIGNAL FACE | PHASE | | | | | | |
|---|---|---|---|---|---|---|---|
| | Ø2+5 | Ø2+6 | Ø3 | Ø4 | RR CLEAR | RR DWELL | FLASH |
| 21,22 | G | G | R | R | R | G | Y |
| 31 | ←R | ←R | ← | ←R | ← | ←R | ←R |
| 32 | R | R | G ← | R | G ← | R | R |
| 41 | R | R | R | G ← | R | R | R |
| 42 | R | R | R | G | R | R | R |
| 51 | ← | ←R | ←R | ←R | ←R | ←R | ←Y |
| 61 | ←F/Y | ←F/Y | ←R | ←R | ←R | ←F/Y | ←Y |
| 62 | R | G | R | R | R | G | Y |
| 63 | R | G | R/→ | R | R | G | Y |
| P21,P22 | W | W | DW | DW | DW | W | DRK |
| P31,P32 | DW | DW | W | DW | DW | DW | DRK |
| P41,P42 | DW | DW | DW | W | DW | DW | DRK |
| P61,P62 | DW | W | DW | DW | DW | W | DRK |
| SIGN A | OFF | OFF | OFF | OFF | ON | ON | ✳ |

✳ See Note 11.

## OASIS 2070 TIMING CHART

| FEATURE | PHASE | | | | |
|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 |
| Min Green 1 * | 10 | 7 | 7 | 7 | 10 |
| Extension 1 * | 3.0 | 1.0 | 1.0 | 1.0 | 3.0 |
| Max Green 1 * | 45 | 30 | 30 | 30 | 45 |
| Yellow Clearance | 3.8 | 3.8 | 3.8 | 3.0 | 3.8 |
| Red Clearance | 1.8 | 2.5 | 2.3 | 2.1 | 1.8 |
| Walk 1 * | 7 | 7 | 7 | - | 7 |
| Don't Walk 1 | 10 | 11 | 14 | - | 12 |
| Seconds Per Actuation * | - | - | - | - | - |
| Max Variable Initial * | - | - | - | - | - |
| Time Before Reduction * | - | - | - | - | - |
| Time To Reduce * | - | - | - | - | - |
| Minimum Gap | - | - | - | - | - |
| Recall Mode | MIN RECALL | - | - | - | MIN RECALL |
| Vehicle Call Memory | YELLOW | - | - | - | YELLOW |
| Dual Entry | - | - | - | - | - |
| Simultaneous Gap | ON | ON | ON | ON | ON |

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

## 2070 RAIL PREEMPTION

| | |
|---|---|
| Interval 1 – Track Clearance Green | 24 |
| Interval 1 – Track Clearance Yellow | 3.8 |
| Interval 1 – Track Clearance Red | 2.5 |
| Interval 2 – Dwell Green | 255 |
| Interval 2 – Dwell Yellow | 0.0* |
| Interval 2 – Dwell Red | 0.0* |
| Interval 5 – Exit Green | 1 |
| Interval 5 – Yellow | 0.0 |
| Interval 5 – Red | 0.0 |
| Exit Phase(s) | 3 |
| Delay Time | 0 |
| Min Green Before Pre | 1 |
| Ped Clear Before Pre | 4 |
| Yellow Clear Before Pre | 3.8 |
| Red Clear Before Pre | 2.3 |
| Dwell Min Time | 10 |
| Ped Clear Through Yellow | Y |
| Omit Overlaps | A,C,P |

* Time defaults to time used for phase during normal operation.

This location designed
for advanced preemption.

## LEGEND

| PROPOSED | | EXISTING |
|---|---|---|
| ○→ | Traffic Signal Head | ●→ |
| ◐→ | Modified Signal Head | N/A |
| ⊣ | Sign | ⊣ |
| □ | Pedestrian Signal Head With Push Button & Sign | ■ |
| ○—) | Signal Pole with Guy | ●—◗ |
| ○—┐ | Signal Pole with Sidewalk Guy | ●—┐ |
| ▭ | Inductive Loop Detector | ⬚ |
| ☒ | Controller & Cabinet | ⛶ |
| □ | Junction Box | ■ |
| - - - - - | 2-in Underground Conduit | – - – - – |
| N/A | Right of Way | — — — — |
| → | Directional Arrow | → |
| N/A | Railroad Tracks | ▬▭ |
| N/A | Railroad Gate and Flasher | ◄ |
| N/A | Railroad Cantilever | ✕—✕—● |
| ⬡ | Type II Signal Pedestal | ⬢ |
| N/A | Curb Ramp | ▨ |
| Ⓐ | "NO RIGHT TURN - TRAIN" Fiber Optic Blankout Sign | Ⓐ |
| Ⓑ | Left Arrow "ONLY" Sign (R3-5L) | Ⓑ |
| Ⓒ | Combined Through and Left Arrow Sign (R3-6L) | Ⓒ |
| Ⓓ | "DO NOT STOP ON TRACKS" Sign (R8-8) | Ⓓ |
| Ⓔ | "Yield" Sign (R1-2) | Ⓔ |

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

## Signal Upgrade

Prepared in the offices of:

RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com

Prepared for:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE
0 40′
1″=40′

N

# NC 711 (W. Third Street)
# at
# SR 1340 (North Odum Road)/
# SR 1555 (South Odum Road)

Division 6 Robeson County Pembroke

| | | | |
|---|---|---|---|
| PLAN DATE: | November 2017 | REVIEWED BY: | WJ Hamilton |
| PREPARED BY: | TS Popelka | RKA PROJ. NO: | 16154 (040) |

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

SEAL
SEAL 32396
WILLIAM J. HAMILTON

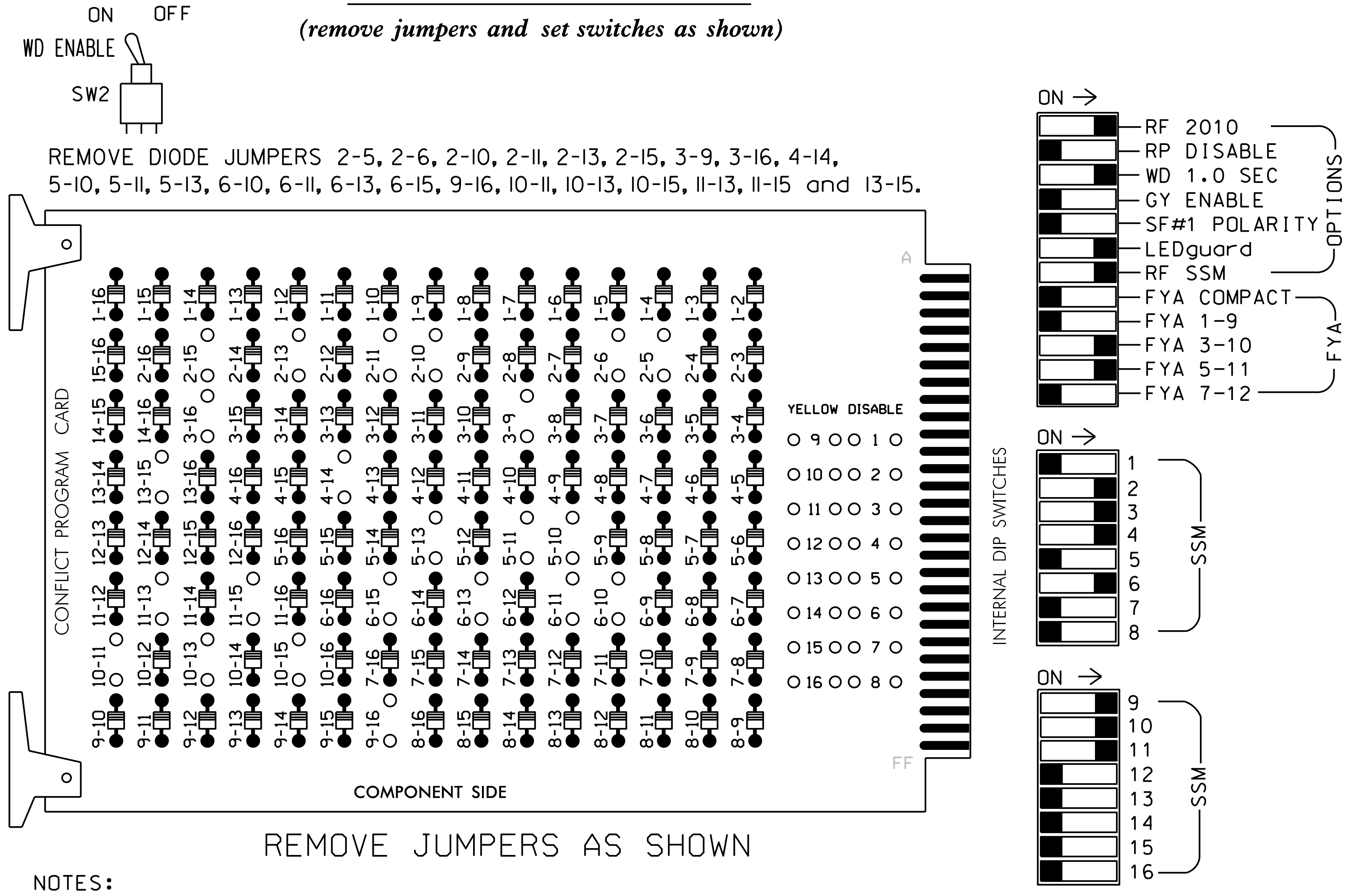
DocuSigned by:
William J. Hamilton
A0500D704048484...
SIGNATURE 11/28/2017 DATE

SIG. INVENTORY NO. 06-0229

# EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

*(remove jumpers and set switches as shown)*

REMOVE DIODE JUMPERS 2-5, 2-6, 2-10, 2-11, 2-13, 2-15, 3-9, 3-16, 4-14, 5-10, 5-11, 5-13, 6-10, 6-11, 6-13, 6-15, 9-16, 10-11, 10-13, 10-15, 11-13, 11-15 and 13-15.



REMOVE JUMPERS AS SHOWN

■ = DENOTES POSITION OF SWITCH

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.

## 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 1,5,7,8,12,13,14,15, & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program phases 2 and 6 for Start Up In Green.
4. Program phases 2, 3, 4, and 6 for 'STARTUP PED CALL'.
5. Program phases 2 and 6 for Yellow Flash and overlap 2 as WAG Overlaps.
6. Enable Simultaneous Gap-Out for all phases.
7. The cabinet and controller are part of the NC-711 (W. Third Street) Closed Loop System.

## EQUIPMENT INFORMATION

| | |
|---|---|
| CONTROLLER | 2070 |
| CABINET | 332 /W/ AUX |
| SOFTWARE | ECONOLITE OASIS 3.03.32E<br>(OR LATEST APPROVED VERSION) |
| CABINET MOUNT | BASE |
| OUTPUT FILE POSITIONS | 18 WITH AUX. OUTPUT FILE |
| LOAD SWITCHES USED | S2,S2P,S3,S4,S4P,S5,S6,S6P,S8P,<br>S9,S10,S12 |
| PHASES USED | 2,2PED,3,3PED,4,4PED,5,6,6PED |
| OVERLAP "A" | 3 |
| OVERLAP "B" | 5+6 |
| OVERLAP "C" | 5+6 |
| OVERLAP "D" | NOT USED |
| OVERLAP "P" | 2+3+4+5+6 |

## 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 | 3 PED | OLA | OLB | SPARE | OLC | OLD | SPARE |
| SIGNAL HEAD NO. | NU | 21,22 | P21, P22 | 31 | 32 | 41 | 42 | P41, P42 | 51★ | 62,63 | P61, P62 | NU | NU | P31, P32 | 63 | 61★ | NU | 51★ | NU | NU |
| RED | | 128 | | | 116 | 101 | 101 | | | 134 | | | | | ✳ | | | | | |
| YELLOW | | 129 | | | 117 | 102 | 102 | | ✳ | 135 | | | | | | | | | | |
| GREEN | | 130 | | | 118 | 103 | 103 | | | 136 | | | | | | | | | | |
| RED ARROW | | | | 116 | | | | | | | | | | | | A124 | | A114 | | |
| YELLOW ARROW | | | | 117 | | | | | | | | | | | A122 | A125 | | A115 | | |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | | | | A126 | | A116 | | |
| GREEN ARROW | | | | 118 | 118 | 103 | | | 133 | | | | | | A123 | | | | | |
| ✋ | | | 113 | | | | | 104 | | | 119 | | | 110 | | | | | | |
| 🚶 | | | 115 | | | | | 106 | | | 121 | | | 112 | | | | | | |

NU = Not Used

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

★ See pictorial of head wiring in detail below.

## 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)*

| FILE | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FILE "I" | U | SLOT EMPTY | Ø2<br>2A | Ø3<br>3B | SLOT EMPTY | Ø3<br>3A | Ø4<br>4A | SLOT EMPTY | SLOT EMPTY | SYS. DET.<br>S6 | SLOT EMPTY | SLOT EMPTY | Ø2 PED<br>DC ISOLATOR | Ø6 PED<br>DC ISOLATOR | FS<br>DC ISOLATOR |
| | L | | Ø2<br>2B | NOT USED | | NOT USED | Ø4<br>4B | | | NOT USED | | | Ø4 PED<br>DC ISOLATOR | Ø3 PED<br>DC ISOLATOR | ST<br>DC ISOLATOR |
| FILE "J" | U | SLOT EMPTY | Ø5<br>5A | Ø6<br>6A | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | PRE1✳<br>AC ISOLATOR |
| | L | | Ø2<br>5A | Ø6<br>6B | | | | | | | | | | | NOT USED |

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

FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT

✳ See AC Isolator Programming Detail on sheet 2.

## 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 | | | |
| 2B | TB2-7,8 | I2L | 43 | 5 | 12 | 2 | Y | Y | | | |
| 3B | TB2-9,10 | I3U | 63 | 25 | 32 | 3 | Y | Y | | | |
| 3A | TB4-5,6 | I5U | 58 | 20 | 3 | 3 | Y | Y | | | 3 |
| 4A | TB4-9,10 | I6U | 41 | 3 | 4 | 4 | Y | Y | | | 3 |
| 4B | TB4-11,12 | I6L | 45 | 7 | 14 | 4 | Y | Y | | | 15 |
| + S6 | TB6-9,10 | I9U | 60 | 22 | 11 | SYS | | | | | |
| 5A[1] | TB3-5,6 | J2U | 40 | 2 | 6 | 5 | Y | Y | | | 15✳ |
| | TB3-7,8 | J2L | 44 | 6 | 16 | 2✳✳ | Y | Y | | | |
| 6A | TB3-9,10 | J3U | 64 | 26 | 36 | 6 | Y | Y | | | |
| 6B | TB3-11,12 | J3L | 77 | 39 | 46 | 6 | Y | Y | | | |
| PED PUSH BUTTONS | | | | | | | | | | | |
| P21,P22 | TB8-4,6 | I12U | 67 | 29 | PED 2 | 2 PED | | | | | |
| P31,P32 | TB8-8,9 | I13L | 70 | 32 | PED 8 | 3 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 | | | | | |

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

[1] Add jumpers from TB3-5 to TB3-7, and from TB3-6 to TB3-8.

+ System detector only. Remove the vehicle phase assigned to this detector in the default programming.

✳ Disable delay during Alternate Phasing Operation.

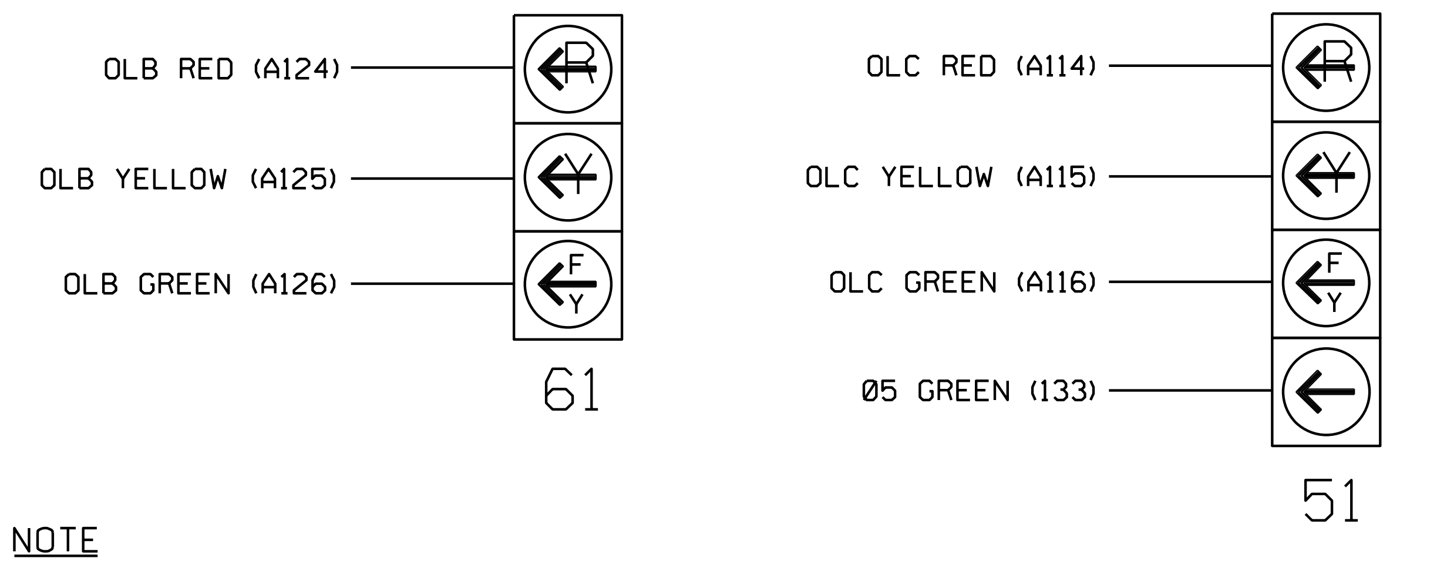
✳✳ Disable phase 2 call for loop 5A during Alternate Phasing Operation.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

## FYA SIGNAL WIRING DETAIL

*(wire signal heads as shown)*



NOTE

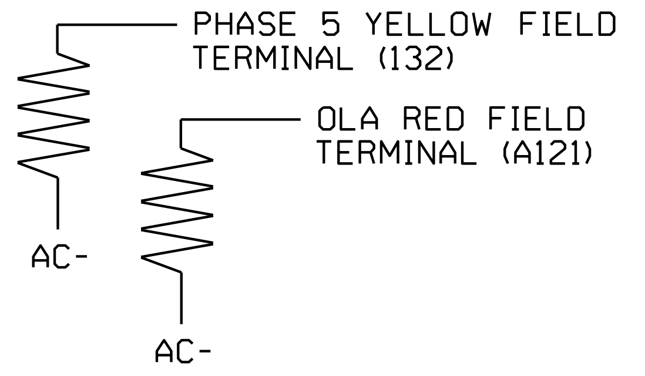
1. The sequence display for signal head 51 requires special programming. See sheet 3 of 4 for programming instructions.

## LOAD RESISTOR INSTALLATION DETAIL

*(install resistors as shown below)*

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: 06-0229
DESIGNED: Nov 2017
SEALED: 11/28/2017
REVISED:

Electrical Detail
Sheet 1 of 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Signal Upgrade

Prepared in the offices of:

RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com, NC License No. C-0910

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Transportation Mobility and Safety Division
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 711 (W. Third Street)
at
SR 1340 (North Odum Road)/
SR 1555 (South Odum Road)

Division 6 Robeson County Pembroke

| | | | |
|---|---|---|---|
| PLAN DATE: | November 2017 | REVIEWED BY: | WJ Hamilton |
| PREPARED BY: | TS Popelka | RKA PROJ. NO: | 16154 (040) |

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

SEAL
SEAL 32396
WILLIAM J. HAMILTON

DocuSigned by:
William J. Hamilton
A0560D704648484...

| SIGNATURE | DATE |
|---|---|
| William J. Hamilton | 11/28/2017 |

SIG. INVENTORY NO. 06-0229

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-5925 | Sig-3 |

# RAILROAD PREEMPTION PROGRAMMING DETAIL

*(program controller as shown below)*

From Main Menu press 'A' (Preemption), then '1' (Standard Preemptions).

```
   PREEMPTION  #1  SETTINGS (NEXT:1-10)
INTERVAL/TIMING ¦  CLEAR/DWELL PHASES
  GRN YEL  RED  ¦12345678910111213141516
1  24  3.8  2.5 ¦  X
2 255  0.0  0.0 ¦ X   X
3   0  0.0  0.0 ¦
4   0  0.0  0.0 ¦
5   1  0.0  0.0 ¦  X
EXIT CALLS      ¦
                OPTIONS
PRIORITY (Y/N TO SELECT) ............HIGH
DELAY TIMER (0-255 SEC) .............0
MIN GREEN BEFORE PRE (0= DEFAULT)....1
PED CLEAR BEFORE PRE (0= DEFAULT)....4
YELLOW CLEAR BEFORE PRE (0= DEFAULT).3.8
RED CLEAR BEFORE PRE (0= DEFAULT)....2.3
DWELL MIN TIMER (0-255 SEC) .........10
DWELL MAX TIMER (0=OFF,1-255MIN) ....0
DWELL HOLD-OVER TIMER (0-255) .......0
LATCH CALL? .........................N
LINK TO NEXT PREEMPT? ...............N
ENABLE BACKUP PROTECTION? ...........N
HOLD CLEAR 1 PHASES DURING DELAY? ...N
FAST GREEN FLASH DWELL PHASES? ......N
PED CLEARANCE THROUGH YELLOW? .......Y
INHIBIT OVERLAP GREEN EXTENSION? ....N
SERVICE DURING SOFTWARE FLASH? ......N
REST IN RED DURING DWELL INTERVAL? ..N
FLASH DWELL INTERVAL? ...............N
ALLOW PEDS IN DWELL INTERVAL? .......Y
RE-TIME DWELL INTERVAL? .............N
OVERLAPS:                  ¦ ABCDEFGHIJKLMNOP
DWELL INT FLASH YELLOW     ¦
OMIT OVERLAPS:             ¦ X X            X
```

# PED 3 PROGRAMMING DETAIL

*(program controller as shown below)*

**CHANGING OUTPUT ASSIGNMENTS**

1. FROM MAIN MENU SELECT '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS)
2. ENTER 17 (PHASE 8 DW) FOR OUTPUT ASSIGNMENT #.
3. SCROLL DOWN TO 'PEDESTRIAN PHASE' AND ENTER 'Y' **REGARDLESS OF DEFAULT PROGRAMMING!**
4. ENTER '3' FOR 'SELECT PEDESTRIAN PHASE'. NO CHANGE NEEDED FOR 'SELECT COLOR'
5. BACKUP TO 'OUTPUT ASSIGNMENTS AND SETTINGS MENU:' BY PRESSING THE 'ESC' BUTTON ON KEYBOARD.
6. SELECT '1' (OUTPUT ASSIGNMENTS)
7. ENTER 18 (PHASE 8 W) FOR OUTPUT ASSIGNMENT #.
8. REPEAT STEPS # 3 AND # 4.

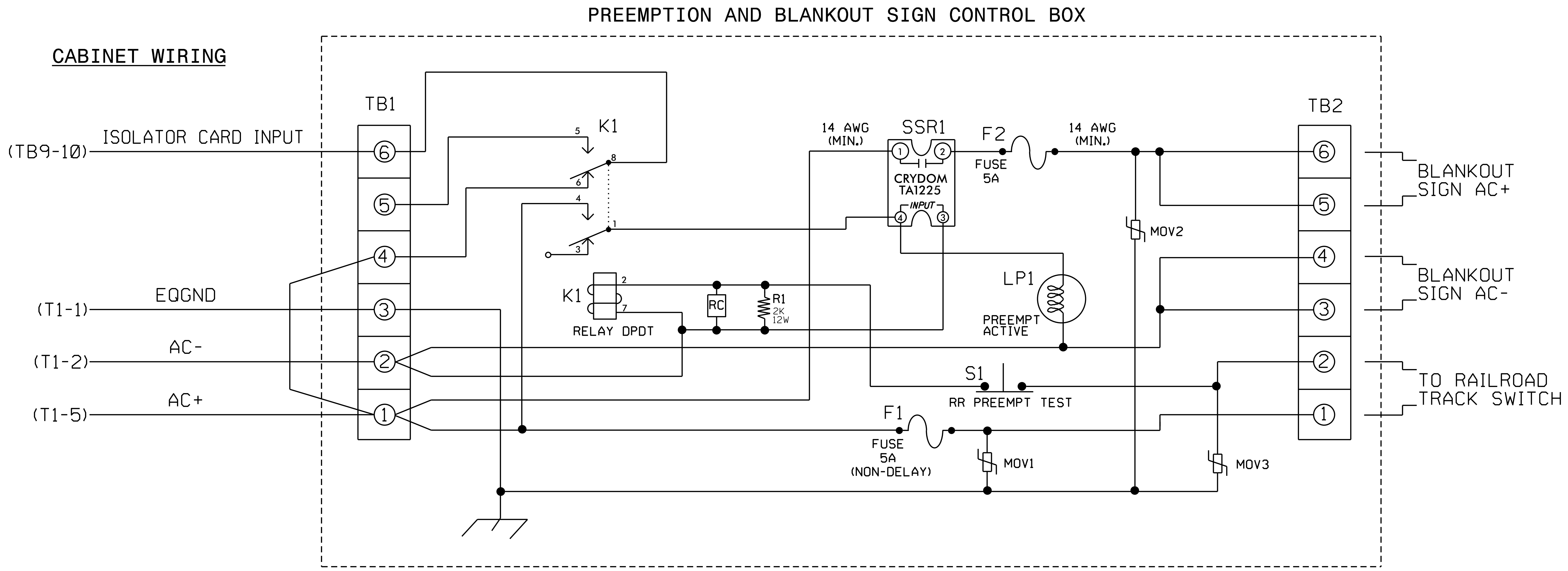
**CHANGING INPUT ASSIGNMENTS**

1. FROM MAIN MENU SELECT '7' (DETECTORS), THEN '2' (PEDESTRIAN DETECTOR ASSIGNMENTS)
2. CYCLE TO PED DETECTOR #8 BY REPEATEDLY DEPRESSING '+' KEY
3. MODIFY PHASE ASSIGNED TO PED DETECTOR # 8 FROM PHASE 8 TO PHASE 3

PROGRAMMING COMPLETE

# RAILROAD PREEMPTION WIRING DETAIL

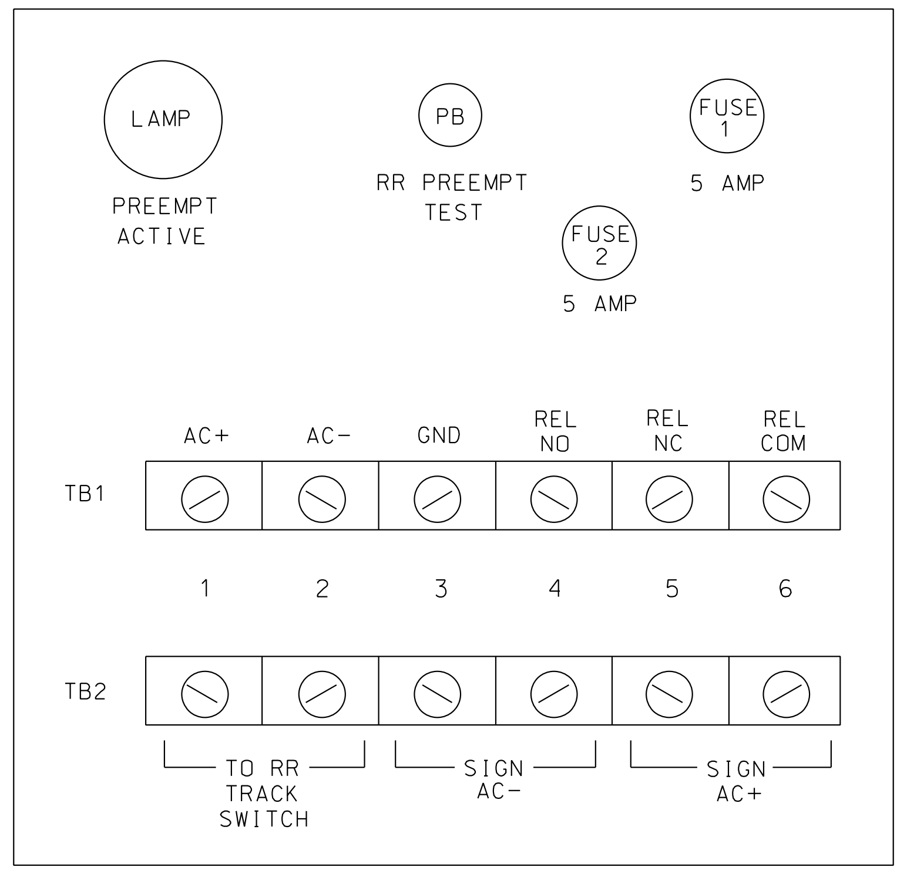
*(wire as shown below)*



## NOTES

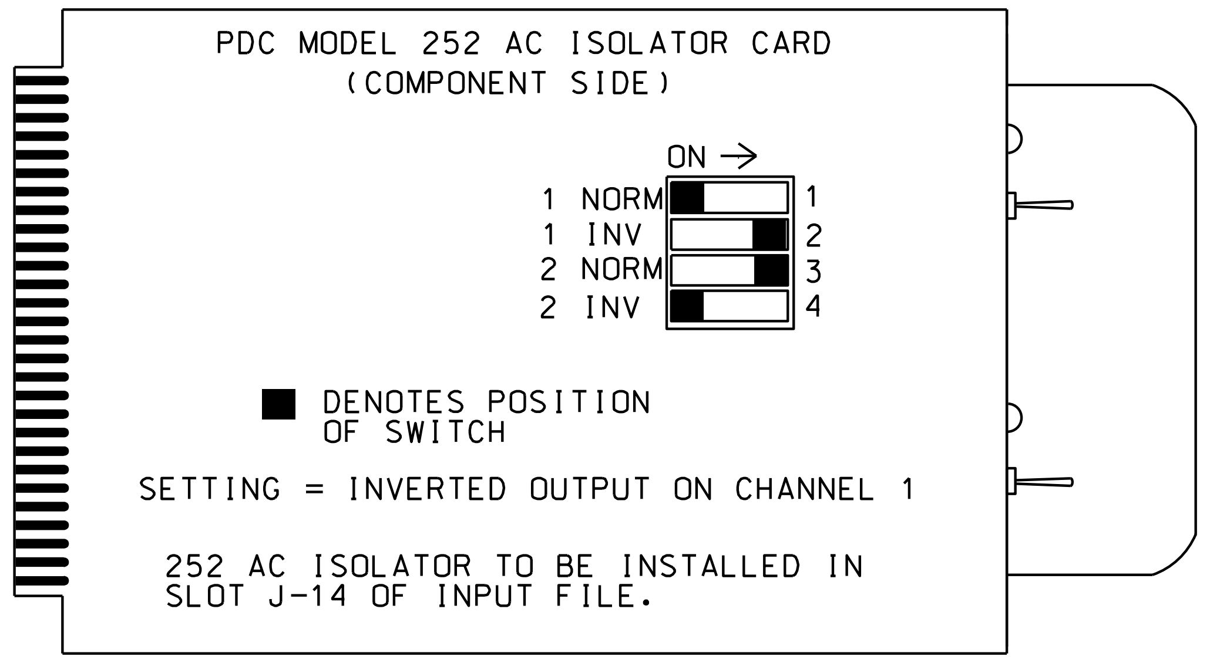
1. Relay K1 is shown in the energized (Preempt not active) normal operation state.
2. Relay K1 is a Potter & Brumfield KRP11AG DPDT Relay with 120VAC coil and octal base.
3. Relay SSR1 Is A Crydom TA1225 SPST (normally open) Solid State Relay with AC input and AC (25 Amp) output. Dot Material# 625028740.
4. AC Isolator Card shall activate preemption upon removal of AC+ from the input (as shown above). To accomplish this set invert dip switch on AC Isolator Card.
5. Resistor is valued at 2K ohm, 12 watt. Clarostat part no. VPR10F-2K; DOT Material# 625011550.
6. RC network is valued at .1 microfarad, 100 ohm.
7. If replacement movs are needed, GE part no. V150LA20A (Dot Material# 106023975) may be used.
8. Preemption and Blankout Sign Control Box is a Control Technologies Part No. 2299-101. DOT Material # 619033450.
9. IMPORTANT!! A jumper must be added between input file terminals J14-E and J14-K if not already present. Also, Terminal TB9-12 (on input panel) shall be connected to AC neutral (jumper may have to be added).

## FRONT VIEW



# PREEMPT 1 AC ISOLATOR (MODEL 252) OUTPUT PROGRAMMING DETAIL

*(set DIP switches as shown below)*



SETTING = INVERTED OUTPUT ON CHANNEL 1

252 AC ISOLATOR TO BE INSTALLED IN SLOT J-14 OF INPUT FILE.

NOTE: IF ANOTHER MANUFACTURER TYPE OF AC ISOLATOR IS USED, OUTPUT PROGRAMMING IS LIKELY NOT TO EQUATE TO THAT SHOWN ABOVE.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0229
DESIGNED: Nov 2017
SEALED: 11/28/2017
REVISED:

Electrical Detail
Sheet 2 of 4

Signal Upgrade

Prepared in the offices of:

**RAMEY KEMP & ASSOCIATES, INC.**
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com, NC License No. C-0910

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Transportation Mobility and Safety Division
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 711 (W. Third Street)
at
SR 1340 (North Odum Road)/
SR 1555 (South Odum Road)

Division 6 Robeson County Pembroke

| | | | |
|---|---|---|---|
| PLAN DATE: | November 2017 | REVIEWED BY: | WJ Hamilton |
| PREPARED BY: | TS Popelka | RKA PROJ. NO: | 16154 (040) |

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
SEAL 32396
WILLIAM J. HAMILTON

DocuSigned by:
William J. Hamilton
A0560D704048484...
SIGNATURE
11/28/2017
DATE

SIG. INVENTORY NO. 06-0229

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-5925 | Sig-4 |

# PPLT SIGNAL OUTPUT PAGE 2 ASSIGNMENT PROGRAMMING DETAIL

*(program controller as shown below)*

NOTE: This programming applies for output page 2 only. Output page 1 will use standard default settings. This programming is necessary for alternate phasing operation.

## OUTPUT ASSIGNMENTS FOR SIGNAL HEAD 51

### STEP 1

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS). PRESS 'NEXT' FOR PAGE 2, WITH CURSOR IN "OUTPUT ASSIGNMENT#" POSITION ENTER "42"

```
PAGE:2  C1 PIN:88  VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.................42
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)..............0
SELECT ASSIGNMENT:
NOT ENABLED.........................._
VEHICLE PHASE........................Y
PEDESTRIAN PHASE....................._
VEHICLE OVERLAP......................Y
PEDESTRIAN OVERLAP..................._
WATCHDOG............................._
DETECTOR RESET......................._
ADVANCE BEACON......................._
OUT OF PHASE FLASHER................._
CONTROLLER FLASH....................._
RUN FREE............................._
RESERVED............................._
PREEMPT.............................._
SOFT PREEMPT........................._
ANY PREEMPT.........................._
COORDINATION PLAN...................._
OFFSET..............................._
PHASE CHECK.........................._
PHASE ON............................._
PHASE NEXT..........................._
```

ENTER A "Y" FOR VEHICLE PHASE.

THE OUTPUT IS SET AS AN OVERLAP BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.

```
PAGE:2  C1 PIN:88  VEHICLE OVERLAP
SELECT VEHICLE PHASE (1-16).........5
SELECT COLOR(0=RED,1=YEL,2=GRN).....0
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE PHASE' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN.

PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE PHASE' AS SHOWN BELOW.

```
PAGE:2  C1 PIN:88  VEHICLE PHASE
OUTPUT ASSIGNMENT #.................42
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)..............0
SELECT ASSIGNMENT:
NOT ENABLED.........................._
VEHICLE PHASE........................Y
PEDESTRIAN PHASE....................._
VEHICLE OVERLAP......................_
PEDESTRIAN OVERLAP..................._
WATCHDOG............................._
DETECTOR RESET......................._
ADVANCE BEACON......................._
OUT OF PHASE FLASHER................._
CONTROLLER FLASH....................._
RUN FREE............................._
RESERVED............................._
PREEMPT.............................._
SOFT PREEMPT........................._
ANY PREEMPT.........................._
COORDINATION PLAN...................._
OFFSET..............................._
PHASE CHECK.........................._
PHASE ON............................._
PHASE NEXT..........................._
```

PRESS "+" KEY FOR OUTPUT 43

### STEP 2

```
PAGE:2  C1 PIN:89  VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.................43
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)..............0
SELECT ASSIGNMENT:
NOT ENABLED.........................._
VEHICLE PHASE........................Y
PEDESTRIAN PHASE....................._
VEHICLE OVERLAP......................Y
PEDESTRIAN OVERLAP..................._
WATCHDOG............................._
DETECTOR RESET......................._
ADVANCE BEACON......................._
OUT OF PHASE FLASHER................._
CONTROLLER FLASH....................._
RUN FREE............................._
RESERVED............................._
PREEMPT.............................._
SOFT PREEMPT........................._
ANY PREEMPT.........................._
COORDINATION PLAN...................._
OFFSET..............................._
PHASE CHECK.........................._
PHASE ON............................._
PHASE NEXT..........................._
```

ENTER A "Y" FOR VEHICLE PHASE.

THE OUTPUT IS SET AS AN OVERLAP BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.

```
PAGE:2  C1 PIN:89  VEHICLE OVERLAP
SELECT VEHICLE PHASE (1-16).........5
SELECT COLOR(0=RED,1=YEL,2=GRN).....1
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE PHASE' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN.

PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE PHASE' AS SHOWN BELOW.

```
PAGE:2  C1 PIN:89  VEHICLE PHASE
OUTPUT ASSIGNMENT #.................43
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)..............0
SELECT ASSIGNMENT:
NOT ENABLED.........................._
VEHICLE PHASE........................Y
PEDESTRIAN PHASE....................._
VEHICLE OVERLAP......................_
PEDESTRIAN OVERLAP..................._
WATCHDOG............................._
DETECTOR RESET......................._
ADVANCE BEACON......................._
OUT OF PHASE FLASHER................._
CONTROLLER FLASH....................._
RUN FREE............................._
RESERVED............................._
PREEMPT.............................._
SOFT PREEMPT........................._
ANY PREEMPT.........................._
COORDINATION PLAN...................._
OFFSET..............................._
PHASE CHECK.........................._
PHASE ON............................._
PHASE NEXT..........................._
```

PRESS "+" KEY FOR OUTPUT 44

### STEP 3

```
PAGE:2  C1 PIN:90  VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.................44
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)..............0
SELECT ASSIGNMENT:
NOT ENABLED..........................Y
VEHICLE PHASE........................_
PEDESTRIAN PHASE....................._
VEHICLE OVERLAP......................Y
PEDESTRIAN OVERLAP..................._
WATCHDOG............................._
DETECTOR RESET......................._
ADVANCE BEACON......................._
OUT OF PHASE FLASHER................._
CONTROLLER FLASH....................._
RUN FREE............................._
RESERVED............................._
PREEMPT.............................._
SOFT PREEMPT........................._
ANY PREEMPT.........................._
COORDINATION PLAN...................._
OFFSET..............................._
PHASE CHECK.........................._
PHASE ON............................._
PHASE NEXT..........................._
```

ENTER A "Y" FOR NOT ENABLED (THIS WILL DISABLE THE OUTPUT)

THE OUTPUT IS SET AS AN OVERLAP BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'NOT ENABLED' AS SHOWN BELOW.

```
PAGE:2  C1 PIN:90  NOT ENABLED
OUTPUT ASSIGNMENT #.................44
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)..............0
SELECT ASSIGNMENT:
NOT ENABLED..........................Y
VEHICLE PHASE........................_
PEDESTRIAN PHASE....................._
VEHICLE OVERLAP......................_
PEDESTRIAN OVERLAP..................._
WATCHDOG............................._
DETECTOR RESET......................._
ADVANCE BEACON......................._
OUT OF PHASE FLASHER................._
CONTROLLER FLASH....................._
RUN FREE............................._
RESERVED............................._
PREEMPT.............................._
SOFT PREEMPT........................._
ANY PREEMPT.........................._
COORDINATION PLAN...................._
OFFSET..............................._
PHASE CHECK.........................._
PHASE ON............................._
PHASE NEXT..........................._
```

OUTPUT PROGRAMMING COMPLETE

NOTE: THE OUTPUT ASSIGNMENT CHANGES, SHOWN ABOVE, ARE NECESSARY FOR THE TIME OF DAY OPERATION OF SIGNAL HEAD 51. IN ALTERNATE PHASING (PROTECTED ONLY) OPERATION, THE RED ARROW CONTROL IS SWITCHED TO THE LEFT TURN PHASE RED. THE SOLID YELLOW ARROW CONTROL IS SWITCHED TO THE LEFT TURN PHASE YELLOW. IN ADDITION, THE FLASHING YELLOW ARROW IS SWITCHED OFF BY DISABLING THE OVERLAP GREEN OUTPUT.

ALL OF THESE OUTPUT CHANGES ARE ACCOMPLISHED ON OUTPUT PAGE 2. THEREFORE IN ALTERNATE PHASING (PROTECTED ONLY) MODE, THE PAGE IS SWITCHED TO "2" BY THE CONTROLLER TOD EVENT SCHEDULING.

IN NORMAL PHASING (PPLT) MODE THE STANDARD, DEFAULT OUPUT ASSIGNMENTS ARE USED WHICH ARE DESIGNATED ON OUTPUT PAGE 1.

# 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, AND 3.

2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).

```
  LOGICAL I/O COMMAND #1  (+/-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
```

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

PRESS '+'

```
  LOGICAL I/O COMMAND #2  (+/-COMMAND#)
IF  ACTIVE PHASE       #5  IS ON

                SCROLL DOWN

THEN:
SET OUTPUT  ASSIGNMENT #44 OFF
```

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

PRESS '+'

```
  LOGICAL I/O COMMAND #3  (+/-COMMAND#)
IF  YELLOW ON PHASE    #5  IS ON

                SCROLL DOWN

THEN:
SET OUTPUT  ASSIGNMENT #43 ON
```

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

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0229
DESIGNED: Nov 2017
SEALED: 11/28/2017
REVISED:

Electrical Detail
Sheet 3 of 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Signal Upgrade

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Transportation Mobility and Safety Division
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 711 (W. Third Street)
at
SR 1340 (North Odum Road)/
SR 1555 (South Odum Road)

Division 6 Robeson County Pembroke

| | | | |
|---|---|---|---|
| PLAN DATE: | November 2017 | REVIEWED BY: | WJ Hamilton |
| PREPARED BY: | TS Popelka | RKA PROJ. NO: | 16154 (040) |

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

Prepared in the offices of:

RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com, NC License No. C-0910

SEAL
SEAL 32396
WILLIAM J. HAMILTON

DocuSigned by:
William J. Hamilton 11/28/2017
A0500D704048484...
SIGNATURE DATE

SIG. INVENTORY NO. 06-0229

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-5925 | Sig-5 |

## 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:¦  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
```

PRESS '+'

```
 PAGE 1: VEHICLE OVERLAP 'B' 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 '+'

```
 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

PRESS '+' REPEATEDLY
TO ACCESS OLP

```
 PAGE 1: VEHICLE OVERLAP 'P' SETTINGS
 PHASE:          ¦12345678910111213141516
VEH OVL PARENTS:¦ XXXXX
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
```

OVERLAP PROGRAMMING COMPLETE

The utilization of Overlap P ensures consistent clearance timing during transition to preemption.

## TOD EVENT SCHEDULING PROGRAMMING DETAIL

## TO CALL ALTERNATE PHASING OPERATION

*(program controller as shown below)*

∗ DENOTES TO BE DETERMINED BY THE DIVISION TRAFFIC ENGINEER.

ALL EVENTS SHOWN BELOW SHALL BE PROGRAMMED TO START AND STOP ON THE SAME TIMES AND DATES.

FROM MAIN MENU PRESS 'B' (SCHEDULING).

NOTE THAT THE TOP LINE WILL CHANGE FROM "NOT ASSIGNED" TO SPECIFIED FUNCTION WHEN EVENT IS ASSIGNED AS SHOWN.

```
SCHEDULED EVENT #1  OUTPUT PAGE CHANGE
START DATE (MM/DD).............**/**
END DATE (MM/DD)...............**/**
START TIME (HH:MM).............**:**
STOP TIME (HH:MM)..............**:**
DOW      ISUN MON TUE WED THR FRI SAT
ENABLED I *   *   *   *   *   *   *
EVENT GROUPS     |12345678910111213141516
ASSIGNED         |

DELETE EVENT WHEN COMPLETED?........N
CONTINUOUS EVENT?...................N
INVERT EVENT?.......................N
SELECT 1 EVENT TYPE:
EVENT GROUP (1-16).................._
PLAN (65=FLSH,66=FREE)..._  OFFSET#.._
PLAN PRIORTY:  LOW..._ MED_..  HIGH.._
CAHNGE PHASE SEQUENCE PAGE (1-12)..._
CHANGE PHASE TIMING PAGE (1-4)......_
CHANGE PHASE CONTROL PAGE (1-4)....._
CHANGE OVERLAP CONTROL PAGE (1-4)..._
CHANGE INPUT PAGE (1-4)............._
CHANGE OUTPUT PAGE (1-4)............2
SET OUTPUT ON  (1-64)..............._
SET OUTPUT OFF (1-64)..............._
SET INPUT ON   (1-64)..............._
SET INPUT OFF  (1-64)..............._
ENABLE FAILURES LOG?................_
ENABLE EVENTS LOG?.................._
ENABLE DATA ENTRIES LOG?............_
ENABLE COORDINATION PLANS LOG?......._
ENABLE SPECIAL FUNCTIONS LOG?.......-
ENABLE SLIT MONITOR LOG?............_
ENABLE DETECTOR DATA LOG?..........._
ENABLE DETECTOR (1-64).............._
ENABLE DETECTOR DIAGNOSTICS (1-64).._
DISABLE DET STRETCH / DELAY (1-64).._
DISABLE DET STOP BAR MODE (1-64)...._
SET LOGIC FLAG ON (1-16)............_
SET LOGIC FLAG OFF (1-64)..........._
OVERIDE PHASE CONTROL FUNCTIONS?...._
```

PRESS "+" FOR NEXT EVENT

```
SCHEDULED EVENT #2  INPUT OVERRIDE
START DATE (MM/DD).............**/**
END DATE (MM/DD)...............**/**
START TIME (HH:MM).............**:**
STOP TIME (HH:MM)..............**:**
DOW      ISUN MON TUE WED THR FRI SAT
ENABLED I *   *   *   *   *   *   *
EVENT GROUPS     |12345678910111213141516
ASSIGNED         |

DELETE EVENT WHEN COMPLETED?........N
CONTINUOUS EVENT?...................N
INVERT EVENT?.......................N
SELECT 1 EVENT TYPE:
EVENT GROUP (1-16).................._
PLAN (65=FLSH,66=FREE)..._  OFFSET#.._
PLAN PRIORTY:  LOW..._ MED_..  HIGH.._
CAHNGE PHASE SEQUENCE PAGE (1-12)..._
CHANGE PHASE TIMING PAGE (1-4)......_
CHANGE PHASE CONTROL PAGE (1-4)....._
CHANGE OVERLAP CONTROL PAGE (1-4)..._
CHANGE INPUT PAGE (1-4)............._
CHANGE OUTPUT PAGE (1-4)............_
SET OUTPUT ON  (1-64)..............._
SET OUTPUT OFF (1-64)..............._
SET INPUT ON   (1-64)..............._
SET INPUT OFF  (1-64)...............6
ENABLE FAILURES LOG?................_
ENABLE EVENTS LOG?.................._
ENABLE DATA ENTRIES LOG?............_
ENABLE COORDINATION PLANS LOG?......._
ENABLE SPECIAL FUNCTIONS LOG?.......-
ENABLE SLIT MONITOR LOG?............_
ENABLE DETECTOR DATA LOG?..........._
ENABLE DETECTOR (1-64).............._
ENABLE DETECTOR DIAGNOSTICS (1-64).._
DISABLE DET STRETCH / DELAY (1-64).._
DISABLE DET STOP BAR MODE (1-64)...._
SET LOGIC FLAG ON (1-16)............_
SET LOGIC FLAG OFF (1-64)..........._
OVERIDE PHASE CONTROL FUNCTIONS?...._
```

PRESS "+" FOR NEXT EVENT

```
SCHEDULED EVENT #5  DETECTOR CONTROL
START DATE (MM/DD).............**/**
END DATE (MM/DD)...............**/**
START TIME (HH:MM).............**:**
STOP TIME (HH:MM)..............**:**
DOW      ISUN MON TUE WED THR FRI SAT
ENABLED I *   *   *   *   *   *   *
EVENT GROUPS     |12345678910111213141516
ASSIGNED         |

DELETE EVENT WHEN COMPLETED?........N
CONTINUOUS EVENT?...................N
INVERT EVENT?.......................N
SELECT 1 EVENT TYPE:
EVENT GROUP (1-16).................._
PLAN (65=FLSH,66=FREE)..._  OFFSET#.._
PLAN PRIORTY:  LOW..._ MED_..  HIGH.._
CAHNGE PHASE SEQUENCE PAGE (1-12)..._
CHANGE PHASE TIMING PAGE (1-4)......_
CHANGE PHASE CONTROL PAGE (1-4)....._
CHANGE OVERLAP CONTROL PAGE (1-4)..._
CHANGE INPUT PAGE (1-4)............._
CHANGE OUTPUT PAGE (1-4)............_
SET OUTPUT ON  (1-64)..............._
SET OUTPUT OFF (1-64)..............._
SET INPUT ON   (1-64)..............._
SET INPUT OFF  (1-64)..............._
ENABLE FAILURES LOG?................_
ENABLE EVENTS LOG?.................._
ENABLE DATA ENTRIES LOG?............_
ENABLE COORDINATION PLANS LOG?......._
ENABLE SPECIAL FUNCTIONS LOG?.......-
ENABLE SLIT MONITOR LOG?............_
ENABLE DETECTOR DATA LOG?..........._
ENABLE DETECTOR (1-64).............._
ENABLE DETECTOR DIAGNOSTICS (1-64).._
DISABLE DET STRETCH / DELAY (1-64)..6
DISABLE DET STOP BAR MODE (1-64)...._
SET LOGIC FLAG ON (1-16)............_
SET LOGIC FLAG OFF (1-64)..........._
OVERIDE PHASE CONTROL FUNCTIONS?...._
```

TOD PROGRAMMING COMPLETE

### ALTERNATE PHASING NOTES

THIS EVENT SCHEDULING DETAIL SHOWS THE TOD PROGRAMMING STEPS NECESSARY FOR THE CONTROLLER TO OPERATE THE "ALTERNATE PHASING" AS SHOWN ON THE SIGNAL PLANS.

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN THESE TOD EVENTS ACTIVATE TO CALL THE "ALTERNATE PHASING":

EVENT NO.

1. OUPUT PAGE 2 IS CALLED: Modifies control circuits for signal head 51.
2. INPUT 6 IS SWITCHED OFF: Disables phase 2 call on loop 5A.
3. DELAY IS DISABLED FOR DETECTOR 6 (Phase 5, Loop 5A).

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0229
DESIGNED: Nov 2017
SEALED: 11/28/2017
REVISED:

Electrical Detail
Sheet 4 of 4

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 711 (W. Third Street)
at
SR 1340 (North Odum Road)/
SR 1555 (South Odum Road)

Division 6 Robeson County Pembroke

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|---|---|---|---|
| PLAN DATE: | November 2017 | REVIEWED BY: | WJ Hamilton |
| PREPARED BY: | TS Popelka | RKA PROJ. NO: | 16154 (040) |

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

Prepared in the offices of:

RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com, NC License No. C-0910

Transportation Mobility and Safety Division
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SEAL

SEAL 32396
WILLIAM J. HAMILTON

DocuSigned by:
William J. Hamilton
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SIGNATURE 11/28/2017 DATE

SIG. INVENTORY NO. 06-0229