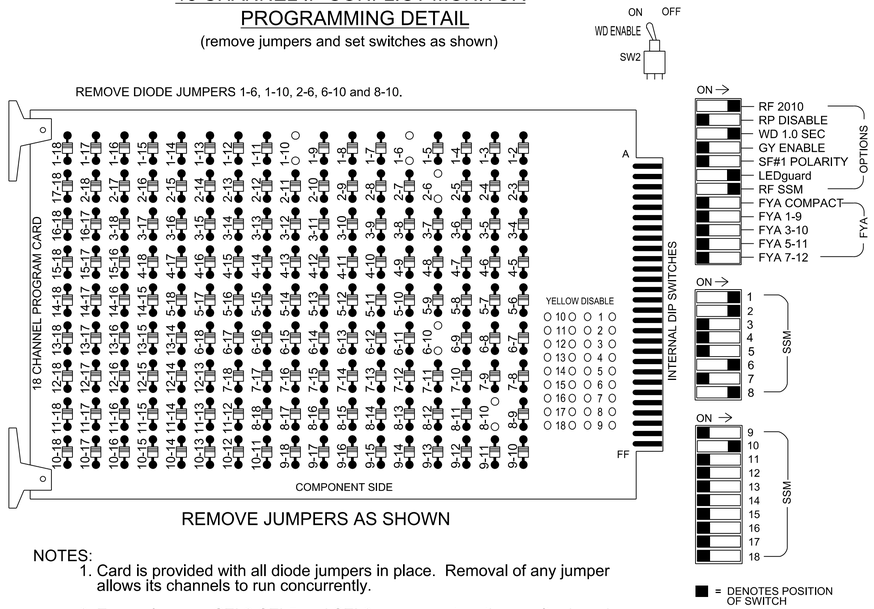
PROJECT REFERENCE NO.	SHEET NO.
R-2577A	Sig. 15.1

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



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. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that the Red Enable is active at all times during normal operation.
4. Integrate monitor with Ethernet network in cabinet.

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 plan.
2. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
3. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
4. The cabinet and controller are part of the US 158 Signal System, Signal System : D09-11_Winston-Salem 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, S8, S11, AUX S2
Phases Used.....1, 2, 6, 8
Overlap "1".....NOT USED
Overlap "2".....*
Overlap "3".....NOT USED
Overlap "4".....NOT USED
*See overlap programming detail this sheet.

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.	11,12	21	22	NU	NU	NU	NU	NU	61,62	NU	NU	81,82	NU	NU	13	NU	NU	NU	NU
RED	·	128	128	·	·	·	·	·	134	·	·	·	·	·	A124	·	·	·	·
YELLOW	·	129	129	·	·	·	·	·	135	·	·	·	·	·	·	·	·	·	·
GREEN	·	·	130	·	·	·	·	·	136	·	·	·	·	·	·	·	·	·	·
RED ARROW	125	·	·	·	·	·	·	·	·	·	·	107	·	·	·	·	·	·	·
YELLOW ARROW	126	·	·	·	·	·	·	·	·	·	·	108	·	·	A125	·	·	·	·
GREEN ARROW	127	130	·	·	·	·	·	·	·	·	·	109	·	·	A126	·	·	·	·

NU = Not Used

OVERLAP PROGRAMMING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	2
Type	Normal
Included Phases	1,8
Modifier Phases	-
Modifier Overlaps	-
Trail Green	0
Trail Yellow	0.0
Trail Red	0.0

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	1O	11	12	13	14
FILE "I"	U	Ø 1 1C	Ø 1 1A	Ø 2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L	NOT USED	Ø 1 1B	Ø 2 2B											ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	Ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		Ø 6 6B				Ø 8 8B								

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 POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1A	TB2-5,6	I2U	39	1	2	1			X		X	
1B	TB2-7,8	I2L	43	5	3	1			X		X	
1C	TB2-1,2	I1U	56	18	1	1	15		X		X	
2A	TB2-9,10	I3U	63	29	4	2			X	X	X	
2B	TB2-11,12	I3L	76	42	5	2			X	X	X	
6A	TB3-5,6	J2U	40	2	16	6			X	X	X	
6B	TB3-7,8	J2L	44	6	17	6			X	X	X	
8A	TB5-9,10	J6U	42	4	22	8			X		X	
8B	TB5-11,12	J6L	46	8	23	8			X		X	

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO INSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

1. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
2. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
3. REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 09-0510
DESIGNED: February 2024
SEALED: February 12, 2024
REVISED:

Signal Upgrade - Final Design - Electrical Detail

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

RK&K
P: (919) 878-9560
8601 Six Forks Road Suite 700 | Raleigh, North Carolina 27615-2965
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

Electrical and Programming Details For:

Prepared for the Offices of:

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

US 158 (Reidsville Rd.) at NC 74 Eastbound Ramps

Division 9 | Forsyth County | Winston-Salem

PLAN DATE: February 2024 | REVIEWED BY: DT Sears
PREPARED BY: WP Erickson-Jones | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 056142 ENGINEER W. PORTER JONES

DocuSigned by: Porter Jones 2/12/2024
DOBE13F3ADE0498...
DATE

SIG. INVENTORY NO. 09-0510

2/12/2024
R:\Traffic\Signals\Designs\Signals\090510_sig_dsn_XXXXXXXX.dgn
wpjones