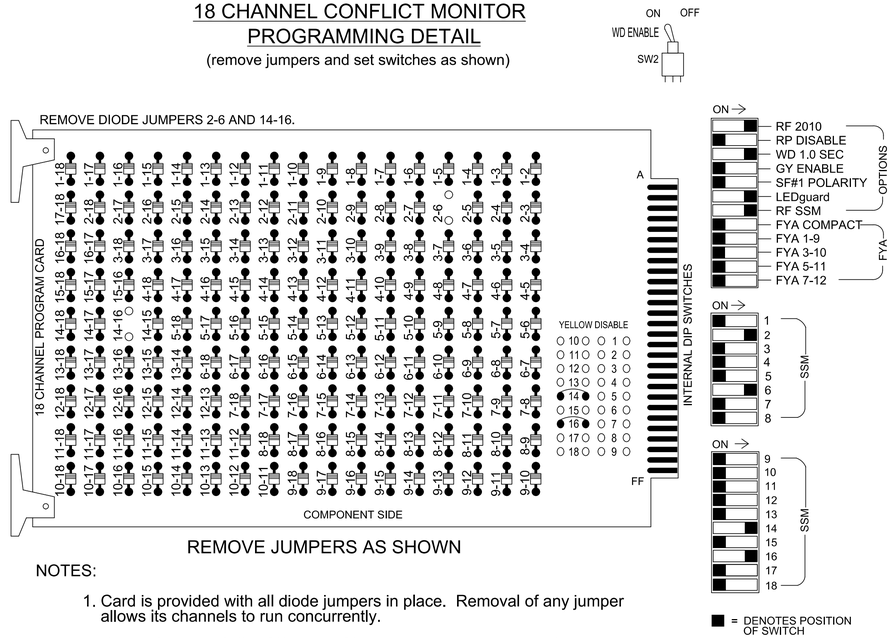
Docusign Envelope ID: 08F04D54-3808-4374-9082-CAF2AD65358D

18 CHANNEL 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. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

INPUT FILE POSITION LAYOUT

(front view)

FILE "I"	1	2	3	4	5	6	7	8	9	1O	11	12	13	14
U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	NOT USED	NOT USED	FS DC ISOLATOR
L												Ø4 PED DC ISOLATOR	Ø8 PED DC ISOLATOR	ST DC ISOLATOR

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
PED PUSH BUTTONS												
P41,P42	TB24-9,10	I12L	69	35	4	PED 4/8*						
P81,P82	TB24-11,12	I13L	70	36	8	PED 8/4*						

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

FOR THE ABOVE DETECTORS TO CALL ANOTHER PHASE, SCROLL OVER AND ENTER THE SECOND PHASE IN "ADDITIONAL CALL PHASES" COLUMN.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

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.

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. Install most current version of 332_NCDOT_HAWK default database onto controller.
3. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
4. Program phases 4 and 8 for No Startup Veh Call and No Startup Ped Call.
5. Program phases 4 and 8 for Ped Clear During Red Clear.

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....336
Software.....Q-Free MAXTIME
Cabinet Mount.....Pole
Output File Positions.....12
Load Switches Used.....S2, S6, S8, S12
Phases Used.....2, 4*, 4PED, 6, 8*, 8PED
Overlaps.....NONE

*Phase used for timing purposes only.

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	★ 21,22 61,62	NU	NU	NC	P41	NU	★ 21,22 61,62	NU	NU	NC	P81
RED		128						134				
YELLOW		129						*				
GREEN		*						*				
RED ARROW												
YELLOW ARROW												
FLASHING YELLOW ARROW												
✋						104						110
GREEN ARROW												
🚶						106						112

NU = Not Used
NC = Not Connected

*Denotes install load resistor. See load resistor installation detail this sheet.
★See pictorial of head wiring in detail this sheet.

TIMING INTERVAL

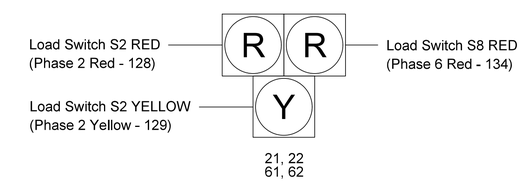
PHASE 2+6 GREEN = DARK DISPLAY
PHASE 2+6 PRE CLEARANCE = FLASHING YELLOW DISPLAY
PHASE 2+6 YELLOW CHANGE = STEADY YELLOW DISPLAY
PHASE 2+6 RED CLEAR = STEADY RED DISPLAY
PED 4+8 WALK = STEADY RED DISPLAY
PED 4+8 DON'T WALK = ALTERNATING FLASHING RED DISPLAY

OPERATIONAL NOTES

1. In order for the controller to perform the Pedestrian Hybrid Beacon (HAWKK signal) sequence, the 336_NCDOT_HAWK default database must be installed on the controller.
2. The Logic Processor flashes Phse 2 Yellow during the Phase 2 Pre-Clearance interval. Phase 2 Yellow drives the solid yellow signal face during the Phase 2 vehicle Yellow Change.
3. The Phase 2 and Phase 6 Red outputs drives the solid Red displays during the Phase 2 and 6 Red Clear and Ped 4 and 8 Walk interval. The Logic Processor flashes Phase 2 and 6 Red Outputs in a wig-wag pattern during Phase 4 Ped Clear interval.
4. The controller must be programmed for Ped Clear During Red Clear for Pedestrian Phases 4 and 8 so that Red displays continue to flash during Phases 4 and 8 Yellow Change and Red Clear.
5. Make sure that all Phase 2 and Phase 6 timings match each other and that all Phase 4 and Phase 8 timings match each other.
6. The Ped 4 push button is programmed to call Ped 4 and Ped 8. The Ped 8 push button is programmed to call Ped 8 and Ped 4.

SIGNAL HEAD WIRING DETAIL

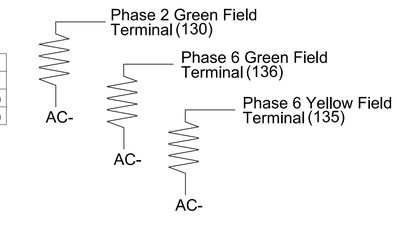
(wire signal heads as shown)



LOAD RESISTOR INSTALLATION DETAIL

(install resistors 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: 06-1416T1
DESIGNED: Feb 2025
SEALED: 2/10/2025
REVISED:

STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
(704) 372-1885
NC License Number F-0991

Temporary Design 1 (TMP Phase I)
Electrical Detail - Sheet 1 of 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared for: Mobility and Safety Division, Traffic Engineering & Signals Management Section, Department of Transportation, State of North Carolina

750 N.Greenfield Pkwy,Garner,NC 27529

SR 1997 (Fayetteville Road)
at
Pedestrian Hybrid Beacon/
N. of SR 1948 (Linkhaw Road)

Division 6 Robeson County Lumberton

PLAN DATE: Feb 2025	REVIEWED BY: H.M. Surti
PREPARED BY: R.L. Aristondo	REVIEWED BY: T.M. Moody

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 040329 ENGINEER TRENT M. MOODY

DocuSigned by: Trent Moody 2/10/2025
SIGNATURE DATE

SIG. INVENTORY NO. 06-1416T1

1/31/2025
WSDOTGroup.stvinc.com:3WDPA#Vol3#Projects#018560#018560_0001#50_Deliverables & Submittals#U-5797#Traffic#Signals#Temporary Signals#06-1416 (Fayetteville-HAWK)#06-1416T1_smallsize_2024xxxx.dgn
LeonarR