PROJECT REFERENCE NO.	SHEET NO.
W-5705C	Sig. 1.1

EDI MODEL 2010ECL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-15, 2-5, 2-6, 2-13, 2-15, 3-7, 3-8, 4-7, 4-8, 4-14, 5-13, 6-13, 6-15, 7-14, 8-14, 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. 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 9,10,11,12,13,14,15 and 16 tie unused red monitor inputs to load switch AC+ per the cabinet manufacturer's instructions.
3. Program controller to Start Up in phases 2 and 6 green.
4. Set power-up flash time to 0 seconds within the controller programming. The conflict monitor will govern startup flash. Ensure STARTUP "RED START" is set to 0 seconds.
5. Enable Simultaneous Gap-Out feature for all phases.
6. Program all timing information into phase banks 1, 2, and 3 unless otherwise noted.
7. Set phase bank 3 maximum limit to 250 seconds for phases used.
8. Ensure start up flash phases are coordinated with flash program block assignments.
9. Program Startup Ped Calls for phases 2, 4, and 6.
10. Set the Red Revert interval on the controller to 1 second.
11. This cabinet and controller are part of the Durham Signal System.

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1		S2	S2P	S3		S4	S4P	S5		S6	S6P	S7		S8	S8P
PHASE	1		2	2 PED	3		4	4 PED	5		6	6 PED	7		8	8 PED
SIGNAL HEAD NO.	11,12	82	21,22 23	P21, P22	23	31	41,42	P41, P42	42	51,52	61,62 63	P61, P62	63	71,72	81,82	NU
RED			128				101				134				107	
YELLOW			129				102				135				108	
GREEN			130				103				136				109	
RED ARROW	125					116				131				122		
YELLOW ARROW	126	126			117	117			132	132			123	123		
GREEN ARROW	127	127			118	118			133	133			124	124		
✋				113				104				119				
🚶				115				106				121				

NU = Not Used

EQUIPMENT INFORMATION

CONTROLLER.....2070E
CABINET.....332
SOFTWARE.....McCAIN 2033
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED.....S1,S2,S2P,S3,S4,S4P,S5, S6,S6P,S7,S8
PHASES USED.....1,2,2PED,3,4,4PED,5,6,6PED,7,8
OVERLAPS.....NONE

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)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø1 1A	Ø2 2A,2B,2C	SLOT EMPTY	SLOT EMPTY	Ø3 3A	Ø4 4A	SYS. DET. S1	Ø1 1C	SYS. DET. S3	SLOT EMPTY	SLOT EMPTY	Ø2 PED DC ISOLATOR	Ø6 PED DC ISOLATOR	FS DC ISOLATOR
	L	Ø1 1B	Ø2 2D,2E,2F			NOT USED	NOT USED	SYS. DET. S2	NOT USED	SYS. DET. S4			Ø4 PED DC ISOLATOR	NOT USED	ST DC ISOLATOR
FILE "J"	U	Ø5 5A	Ø6 6A,6B,6C	Ø7 7A	SLOT EMPTY	SLOT EMPTY	SYS. DET. S5	SYS. DET. S7	Ø8 8A	Ø5 5C	SLOT EMPTY	SLOT EMPTY	CH. 3 UNUSED TOMAR	CH. 1 EVB 4-CH	SLOT EMPTY
	L	Ø5 5B	Ø6 6D,6E,6F	Ø7 7B			SYS. DET. S6	SYS. DET. S8	NOT USED	NOT USED			CH. 4 UNUSED	CH. 2 UNUSED	

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

FS = FLASH SENSE
ST = STOP TIME
EVB = EMERGENCY VEHICLE PREEMPT

4 CHANNEL TOMAR OSP CARD
INSERT CARD INTO SLOT J13

TYPICAL TOMAR FIELD WIRE DETAIL

(input file, rear view)

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	DETECTOR NO.	PIN NO.	ATTRIBUTES	NEMA PHASE
1A	TB2-1,2	I1U	14	56	5 7	1
1B	TB2-3,4	I1L	14	56	5 7	1
1C	TB6-5,6	I8U	11	49	5 7	1
2A,2B,2C	TB2-5,6	I2U	1	39	5 7	2
2D,2E,2F	TB2-7,8	I2L	5	43	5 7	2
3A	TB4-5,6	I5U	16	58	5 7	3
4A	TB4-9,10	I6U	3	41	5 7	4
5A	TB3-1,2	J1U	13	55	5 7	5
5B	TB3-3,4	J1L	13	55	5 7	5
5C	TB7-9,10	J9U	17	59	5 7	5
6A,6B,6C	TB3-5,6	J2U	2	40	5 7	6
6D,6E,6F	TB3-7,8	J2L	6	44	5 7	6
7A	TB3-9,10	J3U	22	64	5 7	7
7B	TB3-11,12	J3L	30	77	5 7	7
8A	TB7-5,6	J8U	12	50	5 7	8
S1	TB6-1,2	I7U	23	65	4	SYS
S2	TB6-3,4	I7L	31	78	4	SYS
S3	TB6-9,10	I9U	18	60	4	SYS
S4	TB6-11,12	I9L	20	62	4	SYS
S5	TB5-9,10	J6U	4	42	4	SYS
S6	TB5-11,12	J6L	8	46	4	SYS
S7	TB7-1,2	J7U	24	66	4	SYS
S8	TB7-3,4	J7L	32	79	4	SYS
PED PUSH BUTTONS						
P21,P22	TB8-4,6	I12U	25	67	2	2 PED
P41,P42	TB8-5,6	I12L	27	69	2	4 PED
P61,P62	TB8-7,9	I13U	26	68	2	6 PED

NOTE: PROGRAM DETECTOR DELAY AND CARRYOVER TIMES AS SPECIFIED ON SIGNAL DESIGN PLANS.

DETECTOR ATTRIBUTES LEGEND:

1-FULL TIME DELAY
2-PED CALL
3-RESERVED
4-COUNTING
5-EXTENSION
6-TYPE 3
7-CALLING
8-ALTERNATE

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

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

MIN WALK DURING PREEMPTION PROGRAMMING

To disable MIN WALK pedestrian timing during preemption, program the controller as follows:
Main Menu - 9) UTILITIES - 5) CONFIGURATION
EXTRA TWO = 3

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-0384
DESIGNED: July 2017
SEALED: 8/22/2017
REVISED: N/A

Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 15-501
(Durham-Chapel Hill Blvd.)
at
SR 1116 (Garrett Road)

Division 5 Durham County Durham

PLAN DATE: August 2017 REVIEWED BY:
PREPARED BY: S. Armstrong REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ITS & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MINS

DocuSigned by: Keith M. Mins 9/11/2017
2F80766E6CD34A5... DATE
SIG. INVENTORY NO. 05-0384

07-SEP-2017 08:02
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