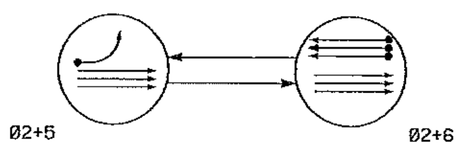
PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

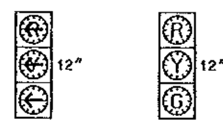
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	PHASE Ø2+6	PHASE FLASH
21, 22	G	G	Y
51	←	-R-	-R-
52	G	R	R
61, 62	R	G	Y

SIGNAL FACE I.D.

Denotes L.E.D.



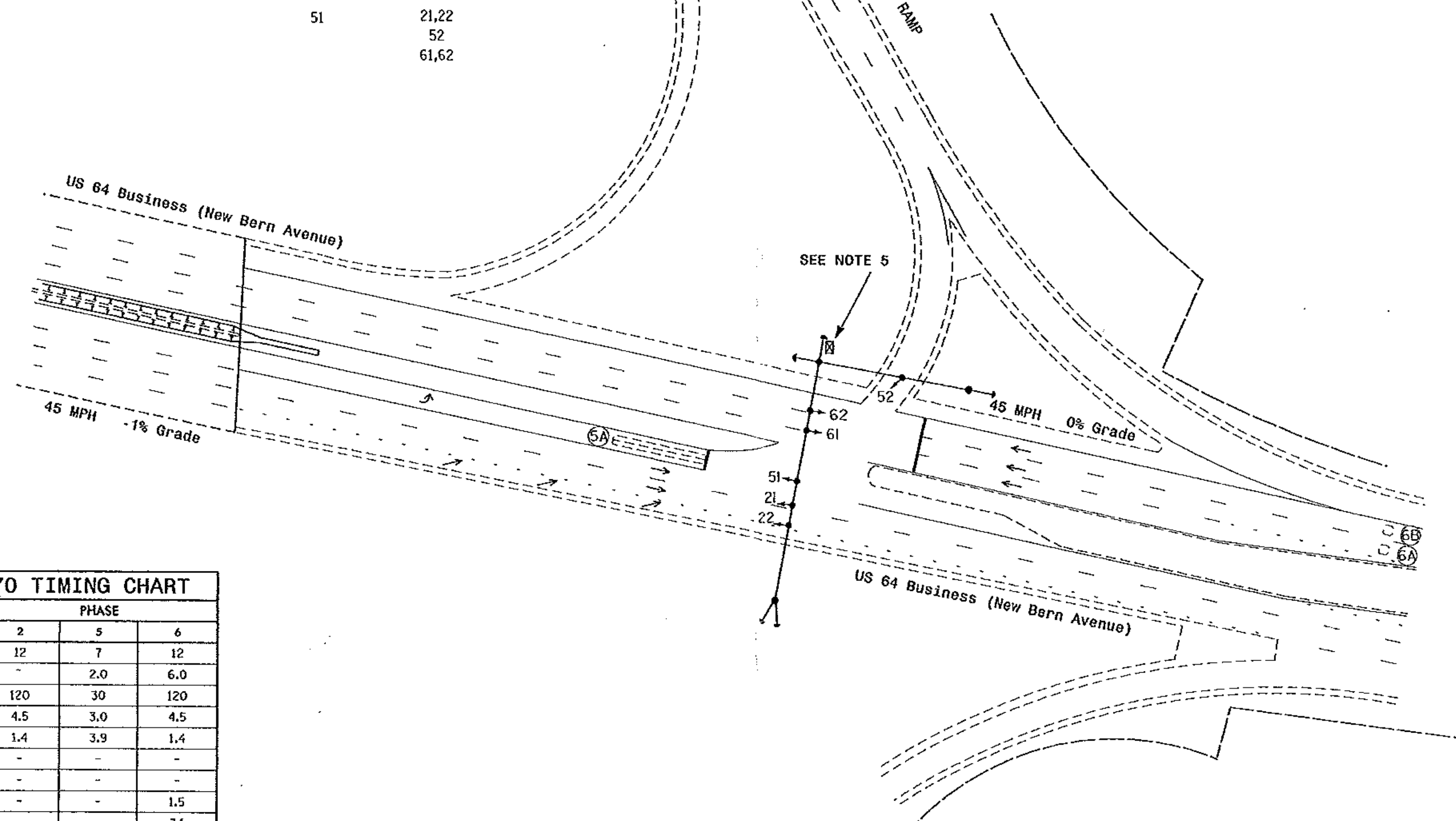
LOOP & DETECTOR UNIT INSTALLATION CHART
SE-PAC 2070 CONTROLLER WITH 170 CABINET

INDUCTIVE LOOPS						DETECTOR PROGRAMMING															
							TIMING		OPERATION MODE											STATUS	
									0	1	2	3	4	5	6	7					
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	VEHICLE	PEDESTRIAN	I CALL	STOP A	STOP B	PROT/PER LEFT	PROT/PER THROUGH	AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING
5A	6X60	EXIST	0	-	X	5	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
6A	6X6	EXIST	300	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X
6B	6X6	EXIST	300	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	-	X

2 Phase
Fully Actuated
(Raleigh Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
5. Replace existing 170 controller with new 2070 controller and reuse existing 170 cabinet.



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	
	Pavement Marking Arrow	

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 5	PHASE 6
Min Green *	12	7	12
Passage Gap *	-	2.0	6.0
Maximum Green *	120	30	120
Yellow Change	4.5	3.0	4.5
Red Clear	1.4	3.9	1.4
Walk *	-	-	-
Pedestrian Clear	-	-	-
Added Initial *	-	-	1.5
Maximum Initial *	-	-	34
Time Before Reduction *	-	-	20
Time To Reduce *	-	-	40
Minimum Gap	-	-	3.0
Recall Mode	-	-	MIN RECALL
Vehicle Call Memory	NON-LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-
Simultaneous Gap	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.

Signal Upgrade #466 10.0.165.53

Prepared in the Offices of: Traffic Engineering and Safety Systems Branch, Signals and Geometrics Section, 750 N. Greenfield Pkwy, Garner, NC 27529

US 64 Business (New Bern Avenue) at I-440 Westbound Ramp
Outer Ramp

Division 5 Wake County Raleigh

PLAN DATE: October 2007 REVIEWED BY: Z. W. Little
PREPARED BY: L. Blount REVIEWED BY:

SCALE 0 50
1" = 50'

REVISIONS INIT. DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 24393 ENGINEER TIMOTHY J. WILLIAMS

SIGNATURE 12/7/07 DATE

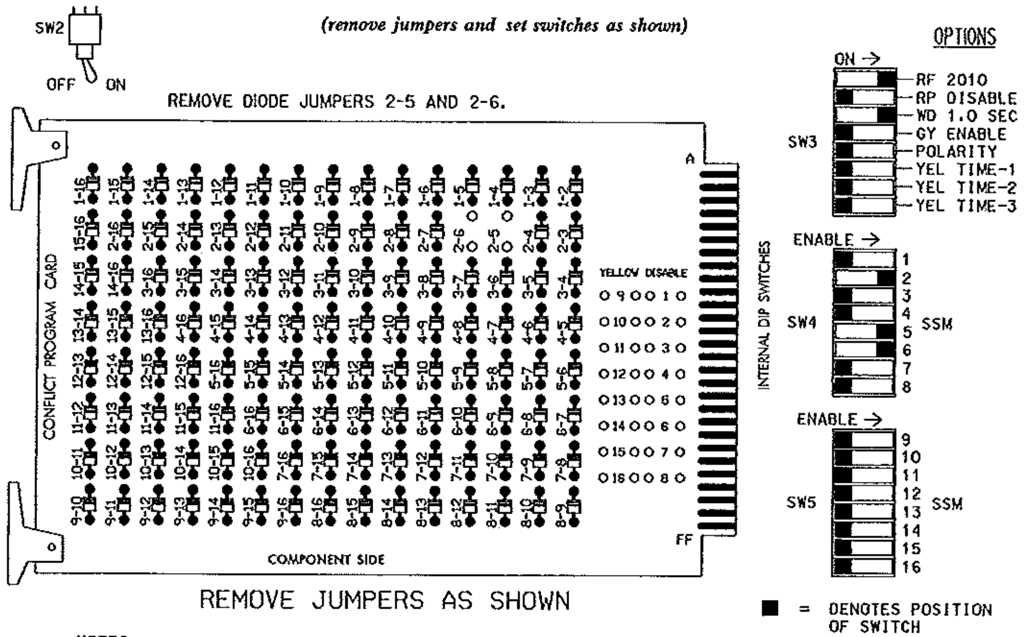
SIG. INVENTORY NO. 05-0296

06-DEC-2007 15:44
S:*ITS Signals\workgroups\tip projects\c-4923\signals\designs\signals\05-0296_050296.dgn

PROJECT REFERENCE NO.	SHEET NO.
C-4923	Sig.

EDI MODEL 2010ECL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



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 SEL1-SEL5 are present on the monitor board.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L														ST DC ISOLATOR
FILE "J"	U	Ø5 5A	Ø6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	Ø6 6B												

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

FS = FLASH SENSE
ST = STOP TIME

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 1,3,4,7,8,9,10,11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program controller to start up in phases 2 and 6 green.
4. Enable simultaneous gap-out feature, on controller unit, for all phases.
5. Program phase 6, on controller unit, for volume density operation.
6. The cabinet and controller are part of the Raleigh City Signal System.

EQUIPMENT INFORMATION

CONTROLLER..............CONTRACTOR SUPPLIED 2070L
CABINET.................EXISTING 332
SOFTWARE................SE-PAC2070
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED......S2,S5,S6
PHASES USED.............2,5,6
OVERLAPS................NONE

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	DELAY TIME	EXTEND (STRETCH) TIME
5A	TB3-1,2	J1U	55	19	5		
6A	TB3-5,6	J2U	40	21	6		
6B	TB3-7,8	J2L	44	22	6		

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

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.	NU	21,22	NU	NU	NU	NU	51	52	61,62	NU	NU	NU	NU
RED		128						131	134				
YELLOW		129						132	135				
GREEN		130						133	136				
RED ARROW							131						
YELLOW ARROW							132						
GREEN ARROW							133						

NU = Not Used

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-0296
DESIGNED: October 2007
SEALED: 12/07/07
REVISED: N/A

Signal Upgrade

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:

Signals Management Section

750 Greenfield Pkwy, Garner, NC 27529

US 64 Business (New Bern Avenue) at I-440 Westbound Ramp

Division 5 | Wake County | Raleigh

PLAN DATE: November 2007 | REVIEWED BY: T. Joyner
PREPARED BY: C. Strickland | REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022013 GEORGE C. BROWN

SIGNATURE: George C. Brown | DATE: 1/3/08

SIG. INVENTORY NO. 05-0296