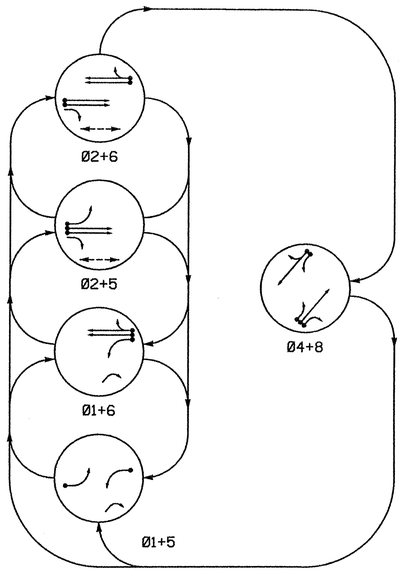
VIDEO DETECTION	PROJECT REFERENCE NO.	SHEET NO.
	R-2904	SIG. 13

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

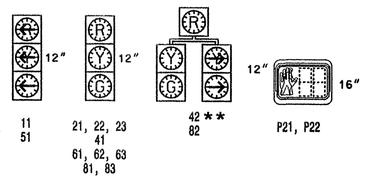
SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	*FLASH
11	~~-~~	~~-~~	~~R~~	~~R~~	~~R~~	~~R~~
21, 22, 23	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
51	~~-~~	~~R~~	~~-~~	~~R~~	~~R~~	~~R~~
61, 62, 63	R	G	R	G	R	Y
81, 83	R	R	R	R	G	R
82	R/~~R~~	R/~~R~~	R	R	G	R
P21, P22	DW	DW	W	W	DW	DRK

*SEE NOTE #2

SIGNAL FACE I.D.

Denotes L.E.D.

**SEE NOTE #8



VIDEO ZONE DETECTION CHART
170 CONTROLLER AND CABINET

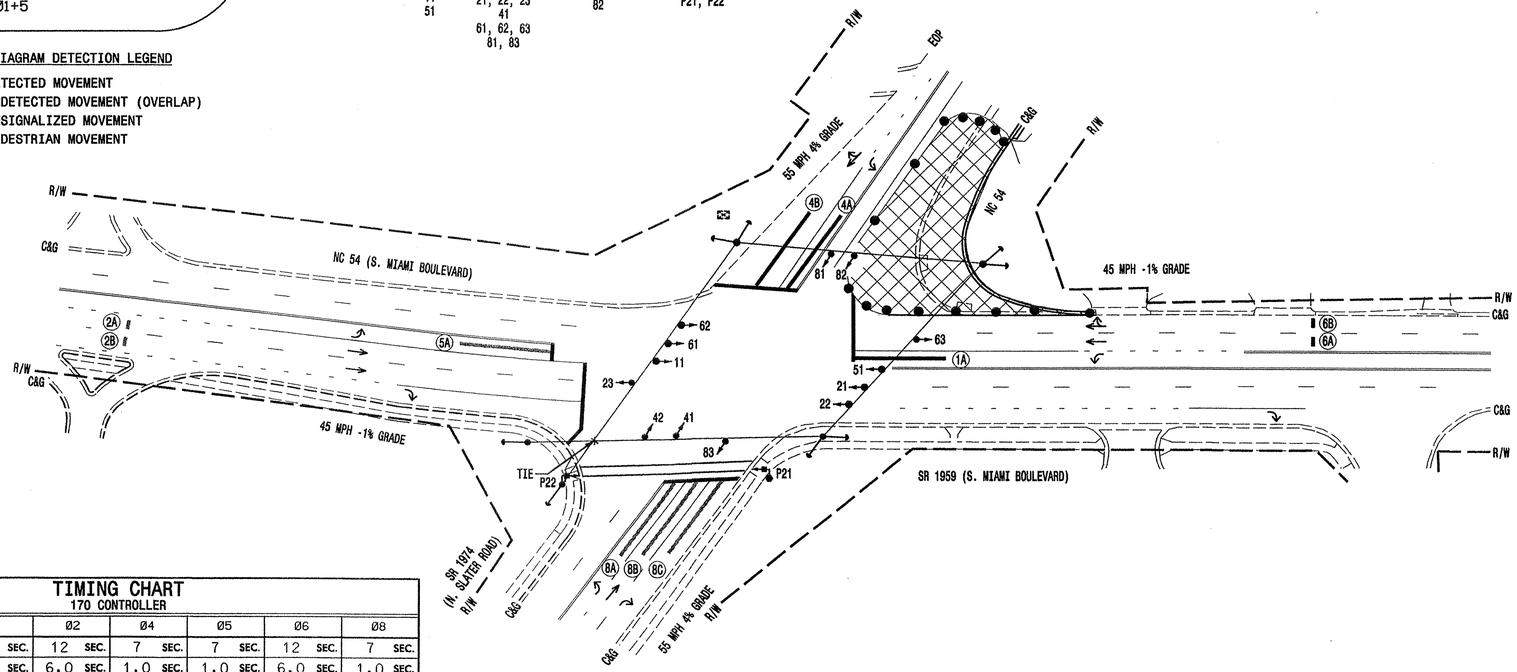
DECTECTON ZONES			DETECTOR PROGRAMMING															
				TIMING		ATTRIBUTES									LOOPS	STATUS	
ZONE NO.	SIZE (ft)	DIST. FROM STOPBAR (ft)	NEMA PHASE	DELAY	CARRY (STRETCH)	1 FULL TIME DELAY	2 PEDESTRIAN CALL	3 RESERVED	4 COUNT	5 EXTENSION	6 TYPE 3	7 CALLING	8 ALTERNATE	SYSTEM	NEW	EXISTING
1A	6X60	0	1	3 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
2A	6X6	300	2	- SEC.	- SEC.	-	-	-	X	X	-	X	-	-	-	X
2B	6X6	300	2	- SEC.	- SEC.	-	-	-	X	X	-	X	-	-	-	X
4A	6X60	0	4	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
4B	10X60	0	4	10 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
5A	6X60	0	5	3 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
6A	6X6	300	6	- SEC.	- SEC.	-	-	-	X	X	-	X	-	-	-	X
6B	6X6	300	6	- SEC.	- SEC.	-	-	-	X	X	-	X	-	-	-	X
8A	6X60	0	8	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
8B	6X60	0	8	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
8C	6X60	0	8	15 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X
P21,P22	N/A	N\A	8	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-		X

5 PHASE
FULLY ACTUATED
(ISOLATED)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002, and all applicable sections of the latest version of the Project Special Provisions.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Reposition existing signal head number 41, 42, 81 and 82.
4. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
5. Program all timing information into phase banks 1, 2 and 3 unless otherwise noted.
6. Set all detection zones to presence mode.
7. A video detection system is in use at this location. The contractor shall locate cameras and modify the detection zone locations per manufacturer's instructions to accomplish the detection scheme shown.

**8. De-energize and bag arrow signal faces on head 42.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Pedestrian Signal Pedestal	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Video Detection Area	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
	Right of Way with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
	Construction Zone Drums	N/A
	Construction Zone	N/A

TIMING CHART
170 CONTROLLER

PHASE	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
MINIMUM INITIAL	7 SEC.	12 SEC.	7 SEC.	7 SEC.	12 SEC.	7 SEC.
VEHICLE EXTENSION	1.0 SEC.	6.0 SEC.	1.0 SEC.	1.0 SEC.	6.0 SEC.	1.0 SEC.
YELLOW CHANGE INT.	4.0 SEC.	4.7 SEC.	5.1 SEC.	5.0 SEC.	4.7 SEC.	5.1 SEC.
RED CLEARANCE	2.5 SEC.	2.5 SEC.	2.0 SEC.	3.0 SEC.	2.5 SEC.	2.0 SEC.
MAXIMUM LIMIT	30 SEC.	90 SEC.	40 SEC.	30 SEC.	90 SEC.	40 SEC.
RECALL POSITION	NONE	VEH. RECALL	NONE	NONE	VEH. RECALL	NONE
VEHICLE CALL MEMORY	NONE	YELLOW LOCK	NONE	NONE	YELLOW LOCK	NONE
DOUBLE ENTRY	OFF	OFF	ON	OFF	OFF	ON
WALK	- SEC.	7 SEC.	- SEC.	- SEC.	- SEC.	- SEC.
FLASHING DON'T WALK	- SEC.	25 SEC.	- SEC.	- SEC.	- SEC.	- SEC.
TYPE 3 LIMIT	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.
ALTERNATE EXTENSION	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.
ADD PER VEHICLE	- SEC.	1.5 SEC.	- SEC.	- SEC.	1.5 SEC.	- SEC.
MAXIMUM INITIAL	- SEC.	34 SEC.	- SEC.	- SEC.	34 SEC.	- SEC.
MAXIMUM GAP	1.0 SEC.	7.0 SEC.	1.0 SEC.	1.0 SEC.	7.0 SEC.	1.0 SEC.
REDUCE 0.1 SEC EVERY	- SEC.	1.5 SEC.	- SEC.	- SEC.	1.5 SEC.	- SEC.
MINIMUM GAP	1.0 SEC.	3.0 SEC.	1.0 SEC.	1.0 SEC.	3.0 SEC.	1.0 SEC.

SIGNAL UPGRADE - TEMPORARY DESIGN TWO

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh, NC 27636
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Roads and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

SCALE 0 50' 1"=50'

NC 54/SR 1959 (S. MIAMI BLVD.) AT NC 54/SR 1974 (N. SLATER ROAD)

DIVISION 5 DURHAM COUNTY DURHAM

PLAN DATE: JUNE 2004 REVIEWED BY:

PREPARED BY: SP PENNINGTON REVIEWED BY: DE MARCEAU

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 024910 ENGINEER DARREN E. MARCEAU

SIGNATURE DATE 7/19/04

SIG. INVENTORY NO. 05-0432T2

t:\01108106\signals\05-0432\05-0432t2_2004.sig

07/19/2004