

PHASING DIAGRAM

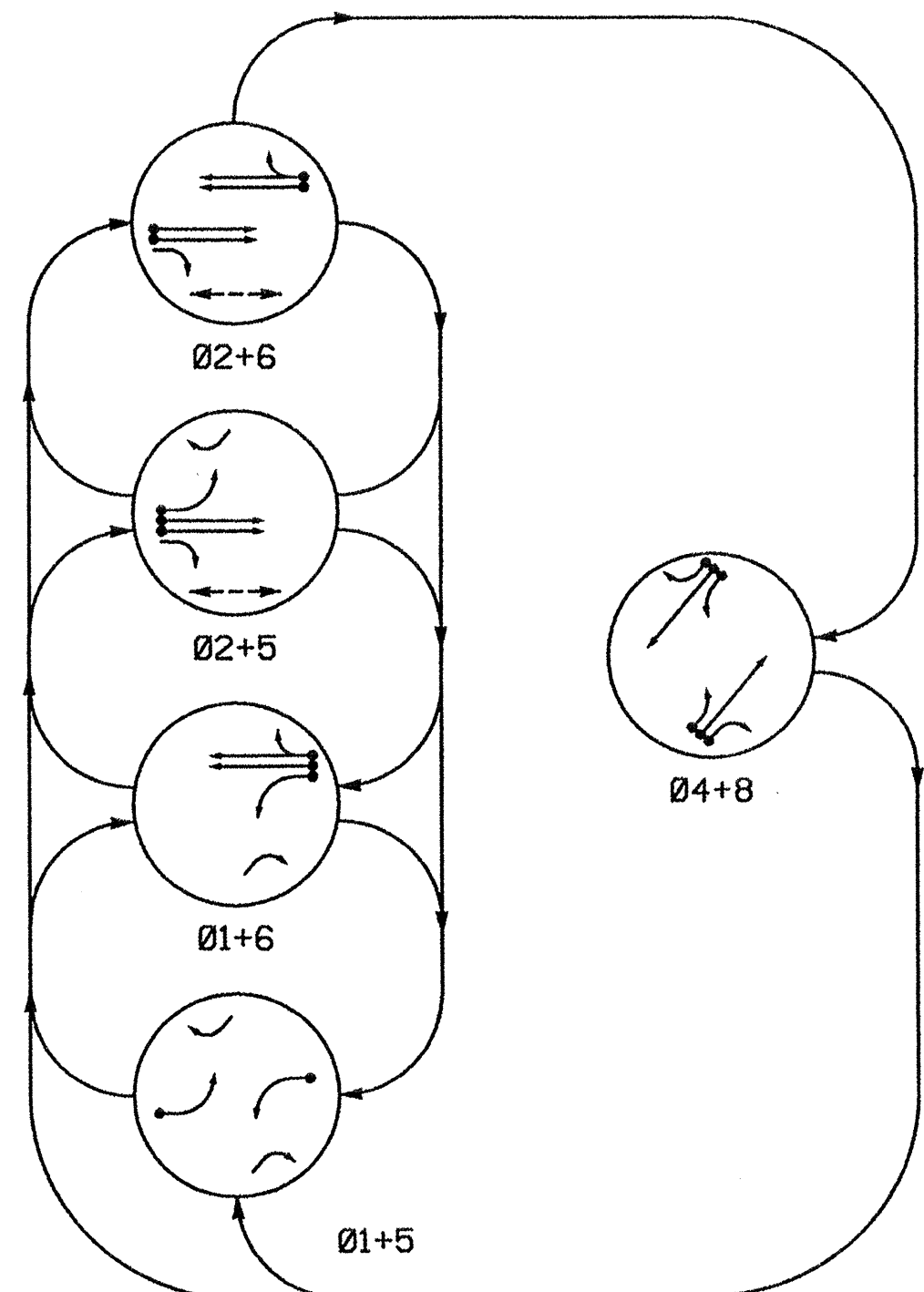
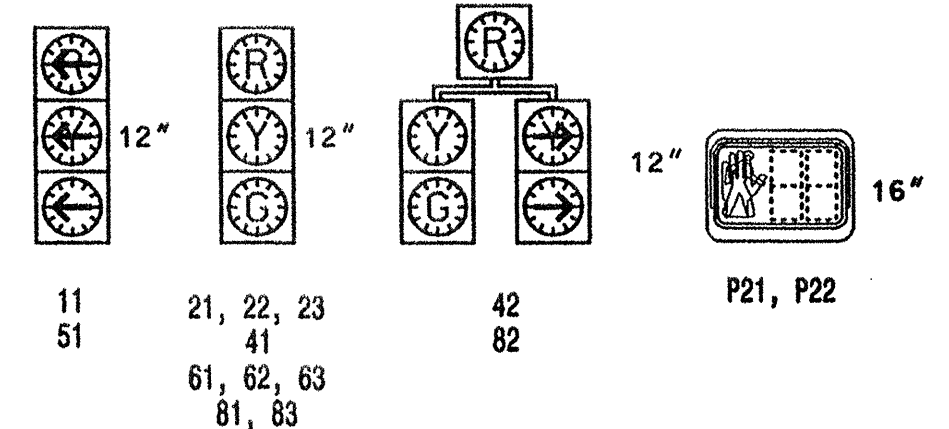


TABLE OF OPERATION

SIGNAL FACE	PHASE					FLASH
	Ø1+5	Ø2+6	Ø4+8	Ø1+6	Ø2+5	
11						
21, 22, 23	R	R	G	G	R	Y
41	R	R	R	R	G	R
42	R	R	R	R	G	R
51						
61, 62, 63	R	G	R	G	R	Y
81, 83	R	R	R	R	G	R
82	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.



VIDEO ZONE DETECTION CHART  
170 CONTROLLER AND CABINET

ZONE NO.	SIZE (ft)	DIST. FROM STOPBAR (ft)	NEMA PHASE	DETECTOR PROGRAMMING											STATUS		
				TIMING		ATTRIBUTES											
				DELAY	CARRY (STRETCH)	1	2	3	4	5	6	7	8	9		10	
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	6X60	0	4	- SEC.	- SEC.								X	X		X	
4C	6X60	0	4	15 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	-	- SEC.	- SEC.	X											X

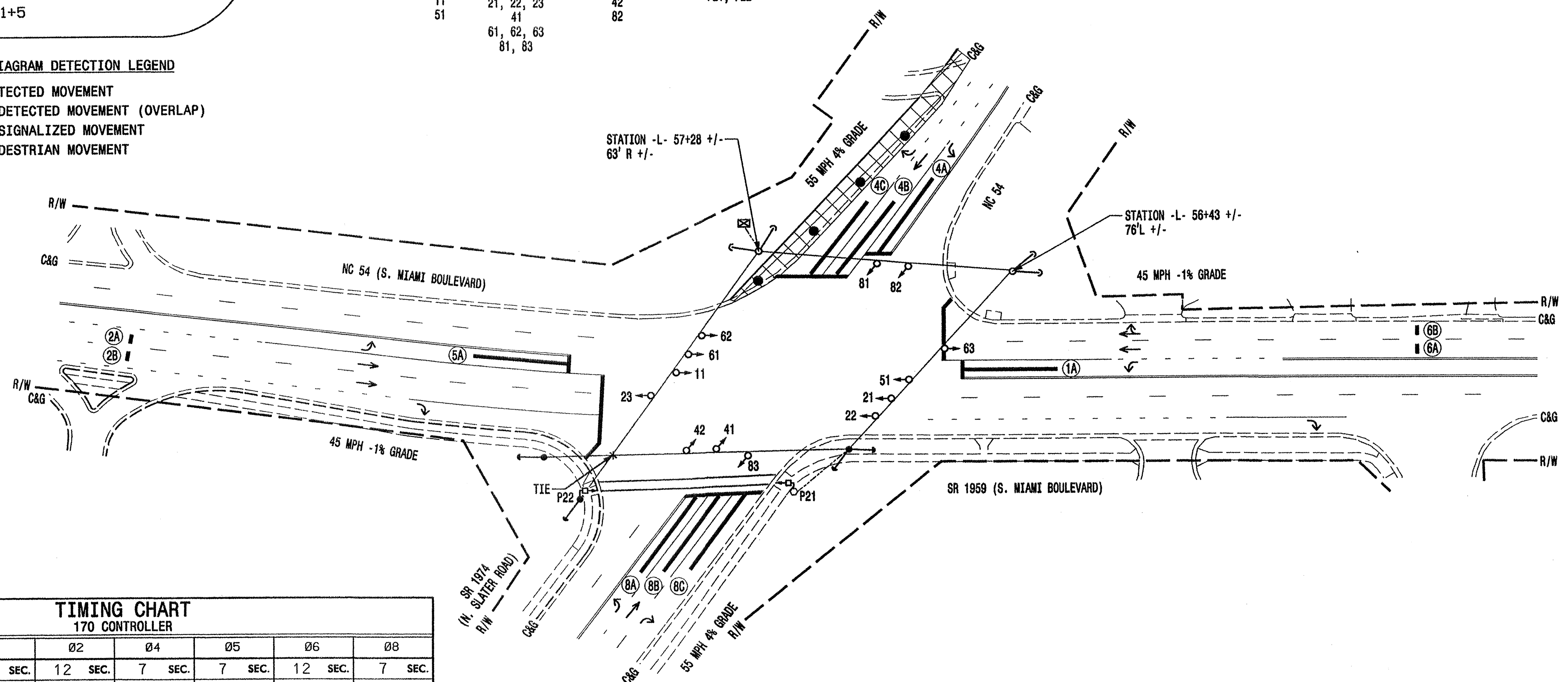
5 PHASE FULLY ACTUATED (ISOLATED)

NOTES

- 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.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Pavement markings are existing.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Program all timing information into phase bank 1, 2 and 3 unless otherwise noted.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Set all detection zones to presence mode.
- 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.

PHASING DIAGRAM DETECTION LEGEND

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



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.	5.0 SEC.	4.7 SEC.	5.1 SEC.	5.9 SEC.	4.7 SEC.	5.1 SEC.
RED CLEARANCE	3.0 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.

LEGEND

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

SIGNAL UPGRADE - TEMPORARY DESIGN ONE

PLANS PREPARED IN THE OFFICE OF:  
**Kimley-Horn and Associates, Inc.**  
P.O. Box 33068  
Raleigh, NC 27636  
(919) 877-2100

122 N. McDowell St., Raleigh, NC 27603

**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: DE MARCEAU

PREPARED BY: SP PENNINGTON

REVISIONS: \_\_\_\_\_ INIT. DATE

SCALE: 1" = 50'

SIGNATURE: *Daren E. Marceau* DATE: 7/19/04

SIC. INVENTORY NO. 05-04321