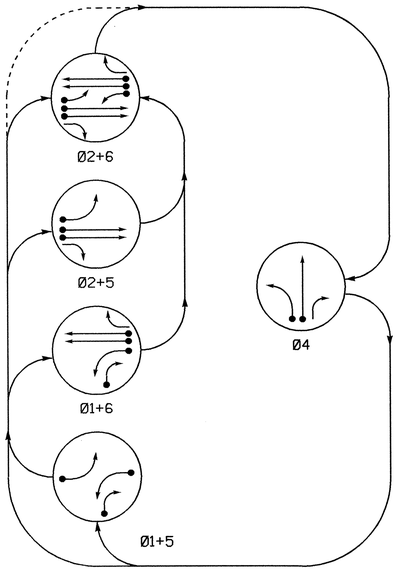
PROJECT REFERENCE NO.	SHEET NO.
R-2417BB	Sig. 4

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

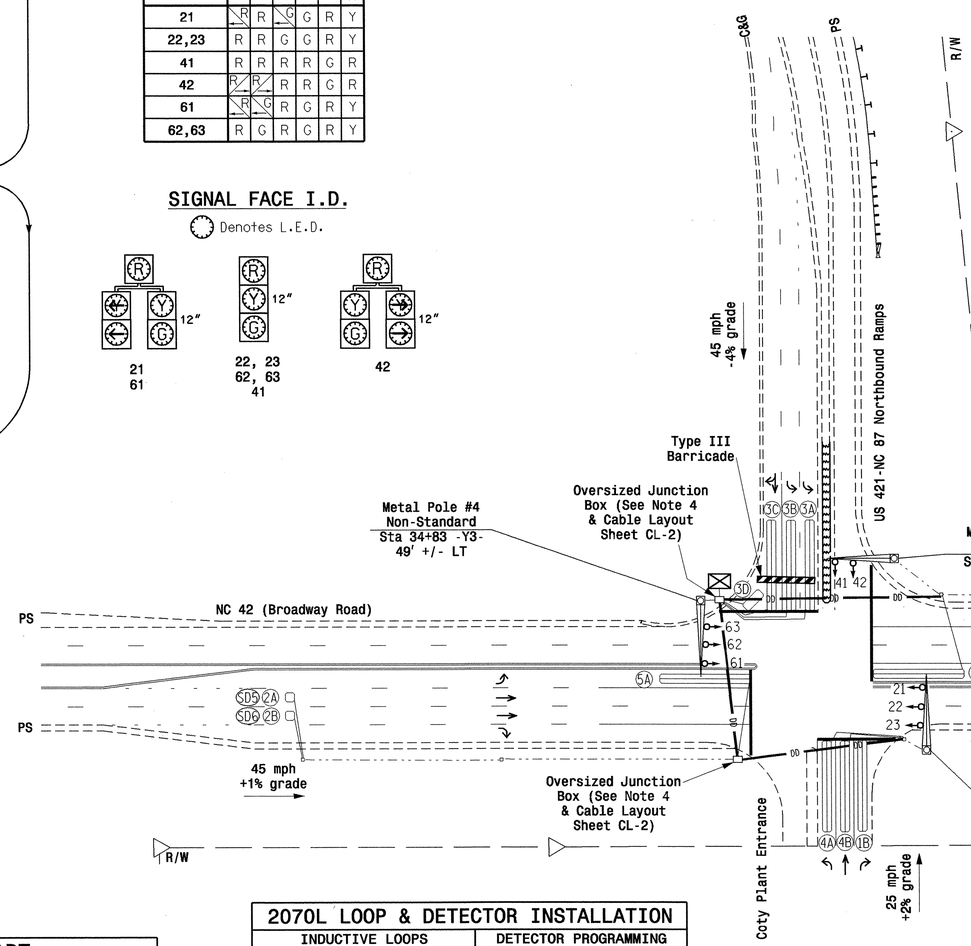
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4	FLASH
21	R	R	G	G	R	Y
22,23	R	R	G	G	R	Y
41	R	R	R	R	G	R
42	R	R	R	R	G	R
61	R	G	R	G	R	Y
62,63	R	G	R	G	R	Y

SIGNAL FACE I.D.

Denotes L.E.D.



5 Phase
Fully Actuated
(NC 42 Closed-Loop System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Place cabinet so as not to obstruct sight distance of vehicles turning right on red.
4. Install a separate 1-1/4" polyethylene conduit for each cable type (i.e., fiber optic cable, lead-in cable, signal cable) between the oversized junction boxes.
5. Omit phase 1 during phase 2 on.
6. Omit phase 1 during phase 5 on.
7. Program controller to clear from phase 2+6 to phase 1 and/or 5 by progressing through phase 4 (see Electrical Details).
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
9. Set all detector units to presence mode.
10. Loops 3A, 3B, 3C, & 3D are for future use. Do not wire in cabinet or program in controller.
11. Closed loop system data:
    Controller Asset #: 1065.

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	
	Oversized Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Pavement Marking Arrow	

2070L TIMING CHART

FEATURE	PHASE 1	2	4	5	6
Min Green 1 *	4	12	7	4	12
Extension 1 *	1.0	6.0	1.0	1.0	6.0
Max Green 1 *	20	90	20	20	90
Yellow Clearance	4.0	4.7	4.0	4.0	4.7
Red Clearance	2.0	1.5	2.0	2.0	1.5
Walk 1 *	-	-	-	-	-
Don't Walk 1	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	1.5
Max Variable Initial *	-	34	-	-	34
Time Before Reduction *	-	15	-	-	15
Time To Reduce *	-	30	-	-	30
Minimum Gap	-	3.2	-	-	3.2
Recall Mode	-	SOFT RECALL	-	-	SOFT RECALL
Vehicle Call Memory	-	YELLOW	-	-	YELLOW
Dual Entry	-	ON	-	-	ON
Simultaneous Gap	ON	ON	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.

2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	NEW CARD
1A	6x60	2-4-2	0	Y	1	Y	Y	-	-	-	15	Y
					6	Y	Y	Y	-	-	3	Y
1B	6x60	2-4-2	0	Y	1	Y	Y	-	-	-	15	Y
2A-SD5	6x6	5	300	Y	2	Y	Y	-	Y	-	-	Y
2B-SD6	6x6	5	300	Y	2	Y	Y	-	Y	-	-	Y
5A	6x60	2-4-2	0	Y	5	Y	Y	-	-	-	15	Y
					2	Y	Y	Y	-	-	3	Y
* 3A	6x60	2-4-2	0	Y	3	Y	Y	-	-	-	-	-
* 3B	6x60	2-4-2	0	Y	3	Y	Y	-	-	-	-	-
* 3C	6x60	2-4-2	0	Y	3	Y	Y	-	-	-	15	-
* 3D	6x15	3	0	Y	3	Y	Y	-	-	-	15	-
4A	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	-	Y
4B	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	-	Y
6A-SD7	6x6	5	300	Y	6	Y	Y	-	Y	-	-	Y
6B-SD8	6x6	5	300	Y	6	Y	Y	-	Y	-	-	Y

* See note 10.

PLAN QUANTITIES

Pay Item	Feet
Signal Cable	770
Messenger Cable	0
Lead-in Cable	1470

New Installation

Prepared for the Offices of: Traffic Engineering and Safety Systems Branch, Signals and Geometrics Section, Department of Transportation, State of North Carolina
122 N. McDowell St., Raleigh, NC 27603

NC 42 (Broadway Road)
at
US 421-NC 87 Northbound Ramp/
Coty Plant Entrance

Division 08 Lee County Sanford

PLAN DATE: June 2004 REVIEWED BY: MR Cooney
PREPARED BY: LM Moon REVIEWED BY: JT Brooks

SCALE 1"=50' (0 – 50)

REVISIONS | INIT. | DATE

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

SIGNATURE Lisa M. Moon DATE 6-14-04

SIG. INVENTORY NO. 08-1065

PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888

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