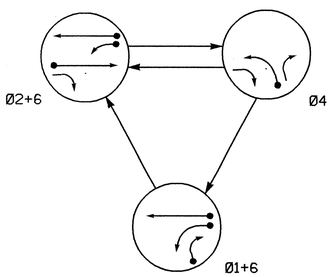
PROJECT REFERENCE NO.	SHEET NO.
R-2417BB	Sig. 8

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

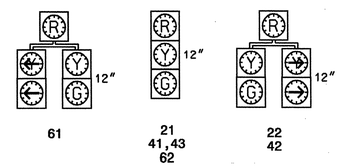
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	PHASE Ø2+6	PHASE Ø4	FLASH
21	R	G	R	Y
22	R	G	R/G	Y
41,43	R	R	G	R
42	R/G	R	G	R
61	G/R	G	R	Y
62	G	G	R	Y

SIGNAL FACE I.D.

Denotes L.E.D.



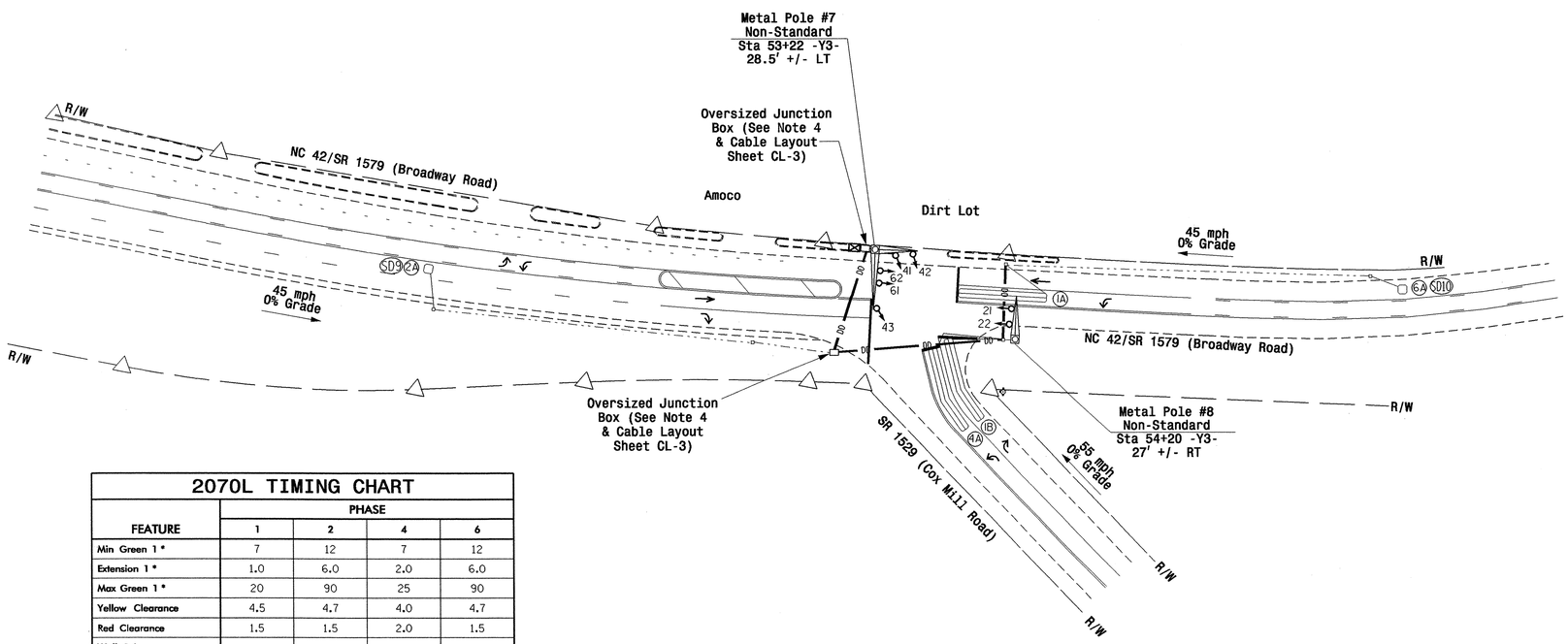
2070L LOOP & DETECTOR INSTALLATION

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-SD9	6x6	5	300	Y	2	Y	Y	-	Y	--	--	Y
4A	6x60	2-4-2	0	Y	4	Y	Y	-	-	--	--	Y
6A-SD10	6x6	5	300	Y	6	Y	Y	-	Y	--	--	Y

3 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. Program controller to clear from phase 2+6 to phase 1+6 by progressing through phase 4 (see Electrical Details).
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
8. Set all detector units to presence mode.
9. Closed loop system data:
   Controller Asset #: 0649.



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	
	Metal Pole with Mastarm	
N/A	Fire Hydrant	
DD	Directional Drill	N/A

2070L TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 4	PHASE 6
Min Green 1 *	7	12	7	12
Extension 1 *	1.0	6.0	2.0	6.0
Max Green 1 *	20	90	25	90
Yellow Clearance	4.5	4.7	4.0	4.7
Red Clearance	1.5	1.5	2.0	1.5
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	2.5	-	2.5
Max Variable Initial *	-	34	-	34
Time Before Reduction *	-	15	-	15
Time To Reduce *	-	30	-	30
Minimum Gap	-	3.2	-	3.2
Recall Mode	-	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	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.

PLAN QUANTITIES

Pay Item	Feet
Signal Cable	560
Messenger Cable	0
Lead-in Cable	1460

Signal Upgrade - Final Design

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

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

NC 42/SR 1579 (Broadway Road)
at
SR 1529 (Cox Mill Road)

Division 08 Lee County Sanford

PLAN DATE:	June 2004	REVIEWED BY:	MR Cooney
PREPARED BY:	LM Moon	REVIEWED BY:	DL Jones

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. 08-0649

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