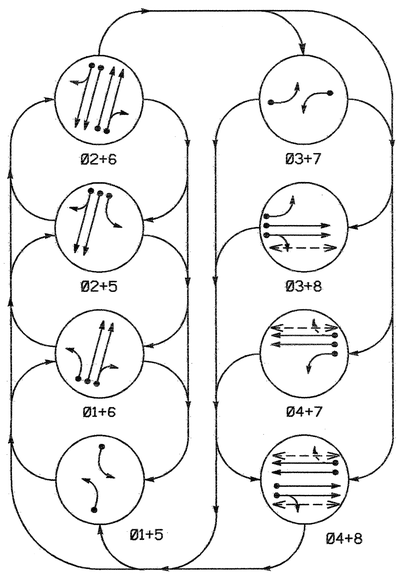
PROJECT REFERENCE NO.	SHEET NO.
U-4736	SIG195

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

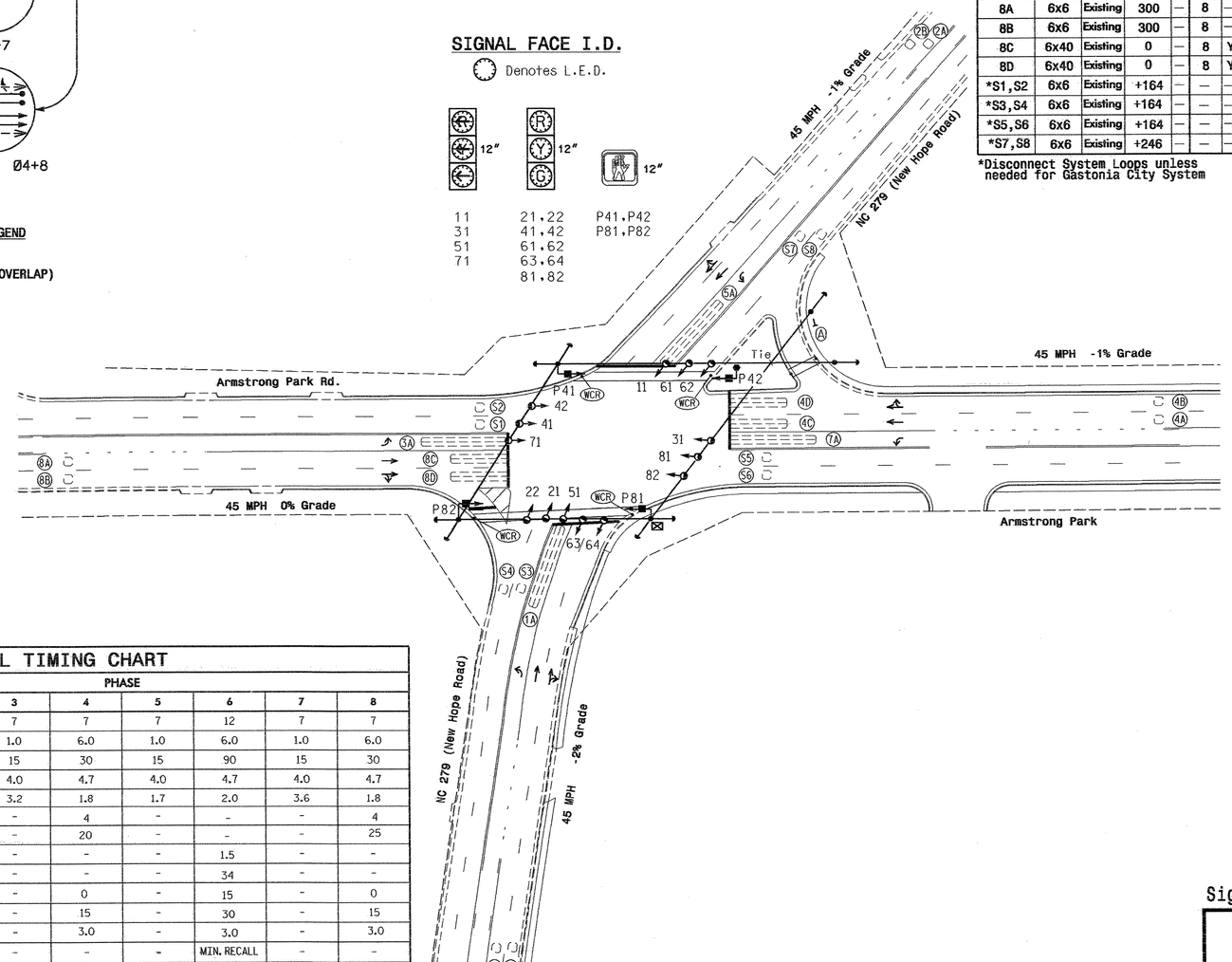
SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21,22	R	R	G	G	R	R	R	R	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	←	←	~~R~~	~~R~~	~~R~~
41,42	R	R	R	R	R	R	G	G	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
61,62	R	G	R	G	R	R	R	R	Y
63,64	R	G	R	G	R	R	R	R	Y
71	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	←	~~R~~	~~R~~
81,82	R	R	R	R	R	G	R	G	R
P41,P42	DW	DW	DW	DW	DW	DW	W	W	DRK
P81,P82	DW	DW	DW	DW	DW	W	DW	W	DRK

SIGNAL FACE I.D.

Denotes L.E.D.

12" 12" 12"

11	21,22	P41,P42
31	41,42	P81,P82
51	61,62	
71	63,64	
	81,82	



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	Existing	+5	–	1	Y	Y	–	–	–	3	Y
2A	6x6	Existing	300	–	2	Y	Y	–	–	–	–	Y
2B	6x6	Existing	300	–	2	Y	Y	–	–	–	–	Y
3A	6x60	Existing	0	–	3	Y	Y	–	–	–	–	Y
4A	6x6	Existing	300	–	4	–	Y	–	–	–	–	Y
4B	6x6	Existing	300	–	4	–	Y	–	–	–	–	Y
4C	6x40	Existing	0	–	4	Y	Y	Y	–	2	5	Y
4D	6x40	Existing	0	–	4	Y	Y	Y	–	2	5	Y
5A	6x60	Existing	+5	–	5	Y	Y	–	–	–	3	Y
6A	6x6	Existing	300	–	6	Y	Y	–	–	–	–	Y
6B	6x6	Existing	300	–	6	Y	Y	–	–	–	–	Y
7A	6x60	Existing	0	–	7	Y	Y	–	–	–	–	Y
8A	6x6	Existing	300	–	8	–	Y	–	–	–	–	Y
8B	6x6	Existing	300	–	8	–	Y	–	–	–	–	Y
8C	6x40	Existing	0	–	8	Y	Y	Y	–	2	5	Y
8D	6x40	Existing	0	–	8	Y	Y	Y	–	2	5	Y
*S1,S2	6x6	Existing	+164	–	–	–	–	–	Y	–	–	Y
*S3,S4	6x6	Existing	+164	–	–	–	–	–	Y	–	–	Y
*S5,S6	6x6	Existing	+164	–	–	–	–	–	Y	–	–	Y
*S7,S8	6x6	Existing	+246	–	–	–	–	–	Y	–	–	Y

*Disconnect System Loops unless needed for Gastonia City System

8 Phase Fully Actuated (Gastonia City 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. Phase 1 or phase 5 may be lagged.
4. Phase 3 or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Pavement markings are existing.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Closed loop system data: Controller Asset #0986.

2070L TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green 1 *	7	12	7	7	7	12	7	7
Extension 1 *	1.0	6.0	1.0	6.0	1.0	6.0	1.0	6.0
Max Green 1 *	15	90	15	30	15	90	15	30
Yellow Clearance	4.0	4.7	4.0	4.7	4.0	4.7	4.0	4.7
Red Clearance	1.8	2.0	3.2	1.8	1.7	2.0	3.6	1.8
Walk 1 *	-	-	-	4	-	-	-	4
Don't Walk 1	-	-	-	20	-	-	-	25
Seconds Per Actuation *	-	1.5	-	-	-	1.5	-	-
Max Variable Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	0	-	15	-	0
Time To Reduce *	-	30	-	15	-	30	-	15
Minimum Gap	-	3.0	-	3.0	-	3.0	-	3.0
Recall Mode	-	MIN. RECALL	-	-	-	MIN. RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	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.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
N/A	Utility Pole with Guy	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
N/A	Guard Rail	
N/A	Wheel Chair Ramp	
	2-in Underground Conduit	
N/A	Right of Way with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
	Pedestrian Signal Pedestal	
	"YIELD" Sign (R1-2)	

Signal Upgrade

Prepared in the Offices of: Traffic Engineering and Safety Systems Branch, STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, Geometric Section
1722 N. McDowell St., Raleigh, NC 27603

NC 279 (New Hope Road) at Armstrong Park Rd.

Division 12 Gaston County Gastonia

PLAN DATE: December 2004 REVIEWED BY:
PREPARED BY: C. Pierce REVIEWED BY: D. I. Ishak

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 022021 ENGINEER RICHARD E. MULLINAX 5 JANUARY 05

SIGNATURE DATE
SIG. INVENTORY NO. 12-0986

12-JAN-2005 11:27
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