

PHASING DIAGRAM

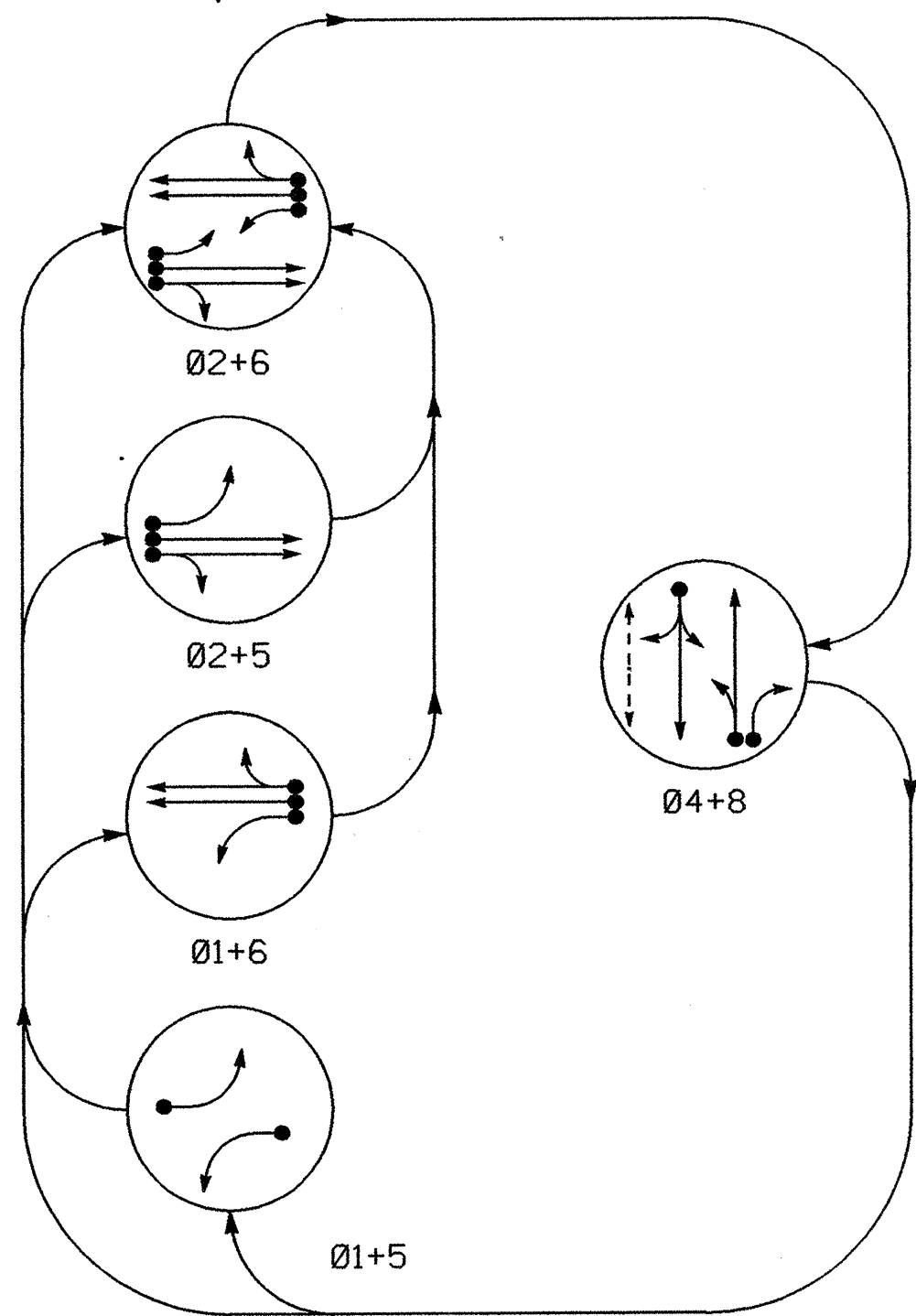


TABLE OF OPERATION

SIGNAL FACE	PHASE					FLOW
	01+5	02+5	02+6	04+8	04+8	
21	R	R	G	G	R	Y
22	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
61	R	G	R	G	R	Y
62	R	G	R	G	R	Y
81,82	R	R	R	R	G	R
P41,42	DW	DW	DW	DW	W	DRK

SIGNAL FACE I.D.

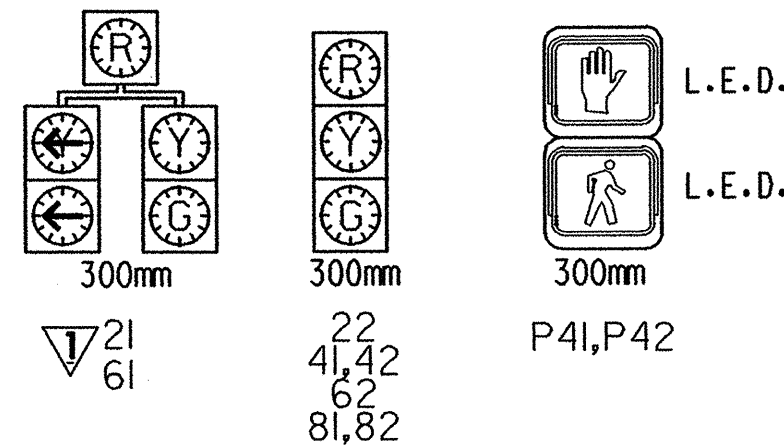
Denotes L.E.D.

PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

Denotes L.E.D.



2070L LOOP & DETECTOR INSTALLATION

LOOP	SIZE (M)	TURNS	DISTANCE FROM STOPBAR (M)	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	NEW CARD
1A	1.8X18	2-4-2	0	Y	1	Y	Y	-	-	-	15	Y
2A	1.8X1.8	4	90	Y	2	Y	Y	-	-	-	3	Y
2B	1.8X1.8	4	90	Y	2	Y	Y	-	-	-	-	Y
4A	1.8X12	2-4-2	0	-	4	Y	Y	-	-	-	3	-
4B	1.8X4.5	4	0	-	4	Y	Y	-	-	-	10	-
5A	1.8X18	2-4-2	0	Y	2	Y	Y	-	-	-	15	-
6A	1.8X1.8	5	90	Y	6	Y	Y	-	-	-	-	-
6B	1.8X1.8	5	90	Y	6	Y	Y	-	-	-	-	Y
8A	1.8X12	2-4-2	0	Y	8	Y	Y	-	-	-	3	-
8B	1.8X18	2-4-2	0	Y	8	Y	Y	-	-	-	10	-
8C	1.8X6	2-4-2	0	Y	8	Y	Y	-	-	-	15	-
S9	1.8X1.8	4	+45	Y	-	-	-	Y	-	-	-	Y
S10	1.8X1.8	4	+45	Y	-	-	-	Y	-	-	-	Y
S11	1.8X1.8	4	+50	Y	-	-	-	Y	-	-	-	Y
S12	1.8X1.8	4	+50	Y	-	-	-	Y	-	-	-	Y

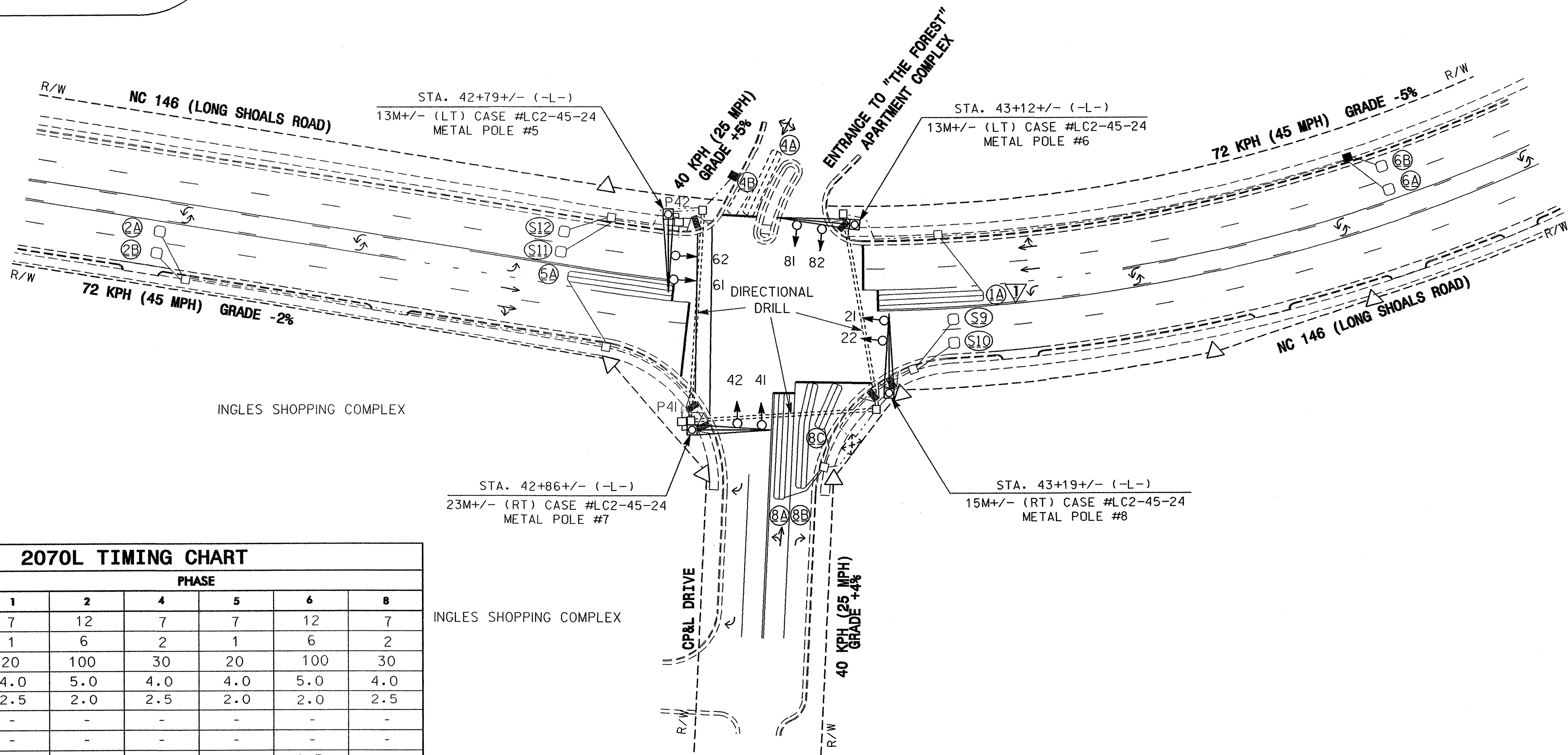
5 Phase Fully Actuated (Closed Loop Signal System)

NOTES

1. REFER TO "ROADWAY STANDARD DRAWINGS NCDOT", DATED JANUARY 2002 AND "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2002.
2. OMIT PHASE 1 DURING PHASE 2 ON.
3. OMIT PHASE 5 DURING PHASE 6 ON.
4. PROGRAM CONTROLLER TO CLEAR FROM PHASE 2+6 TO PHASE 1 AND/OR 5 BY PROGRESSING THROUGH PHASE 4+8 (SEE ELECTRICAL DETAILS).
5. OMIT "WALK" AND FLASHING "DON'T WALK" WITH NO PEDESTRIAN CALLS.
6. MAXIMUM TIMES SHOWN IN TIMING CHART ARE FOR FREE-RUN OPERATIONS ONLY. COORDINATED SIGNAL SYSTEM TIMING VALUES SHALL SUPERSEDE THESE VALUES.
7. SET ALL DETECTOR UNITS TO PRESENCE MODE.
8. CLOSED LOOP SYSTEM DATA: INTERSECTION CONTROLLER ASSET # 0954

PLAN QUANTITIES

Pay Item	Meters
Signal Cable	230
Messenger Cable	-
Lead-in Cable	945



LEGEND

- | PROPOSED | EXISTING |
|--|---------------------------------|
| ○ Traffic Signal Head | ● Traffic Signal Head |
| ○ Modified Signal Head | N/A |
| ○ Sign | N/A |
| ○ Pedestrian Signal Head With Push Button & Sign | N/A |
| ○ Signal Pole with Guy | ○ Signal Pole with Guy |
| ○ Signal Pole with Sidewalk Guy | ○ Signal Pole with Sidewalk Guy |
| □ Inductive Loop Detector | □ Inductive Loop Detector |
| □ Controller & Cabinet | □ Controller & Cabinet |
| □ Junction Box | □ Junction Box |
| - - - 50mm Underground Conduit | - - - 50mm Underground Conduit |
| N/A Right of Way with Marker | — Right of Way with Marker |
| → Directional Arrow | → Directional Arrow |
| □ Directional Drill | □ Directional Drill |
| □ 2-50 mm Polyethylene Conduit | □ 2-50 mm Polyethylene Conduit |
| ▲ Wheelchair Ramp | N/A |
| ○ Metal Pole with Mastarm | ○ Metal Pole with Mastarm |

2070L TIMING CHART

FEATURE	PHASE					
	1	2	4	5	6	8
Min Green 1*	7	12	7	7	12	7
Extension 1*	1	6	2	1	6	2
Max Green 1*	20	100	30	20	100	30
Yellow Clearance	4.0	5.0	4.0	4.0	5.0	4.0
Red Clearance	2.5	2.0	2.5	2.0	2.0	2.5
Walk 1*	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	1.5	-
Max Variable Initial *	-	34	-	-	34	-
Time Before Reduction *	-	20	-	-	20	-
Time To Reduce *	-	60	-	-	60	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

SIGNAL UPGRADE - FINAL

REVISION SEAL

Timothy J. Williams 12/6/04

PLANS PREPARED BY :

RUMMEL KLEPPER & KAHL, LLP
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RALEIGH, NORTH CAROLINA 27609-3960

FOR
DIVISION OF HIGHWAYS

Prepared for the Office of:

122 N. McDowell St., Raleigh, NC 27603

NC 146 (LONG SHOALS ROAD)
AT
CP&L DRIVE/ ENTRANCE TO "THE FOREST"
APARTMENT COMPLEX

DIVISION 13 BUNCOMBE COUNTY ASHEVILLE

PLAN DATE: 02-07-04 REVIEWED BY: D. MORTON

PREPARED BY: C.B. HOLDEN RJKK PROJECT NO. 302-079-SIG1

REVISIONS

REVISOR INIT. DATE

1 5 10
SCALE 1 : 500

REVISED WESTBOUND LEFT TURN TO PROTECTED/
PERMISSIVE PHASING.

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