

6 PHASE FULLY ACTUATED GASTONIA CITY SIGNAL SYSTEM

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Set all detector units to presence mode.
3. Omit Phase 1 during Phase 2 on.
4. Omit Phase 3 during Phase 4 on.
5. Omit Phase 5 during Phase 6 on.
6. Program controller to clear from phase 2+6 to phase 1 and/or 5 by progressing through phase 4+8 (see Electrical Details).
7. Maximum times shown in timing chart are for free run operation only. Coordinated signal system timing values shall supersede these volumes.
8. System data: Controller Asset: 0636
9. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
10. Do not program signal for late night flashing operation unless otherwise directed by the engineer.

PLAN QUANTITIES

Pay Item	Meters
Signal Cable	660
Messenger Cable	0
Loop Lead-in Cable	1240

SIGNAL FACE I.D.

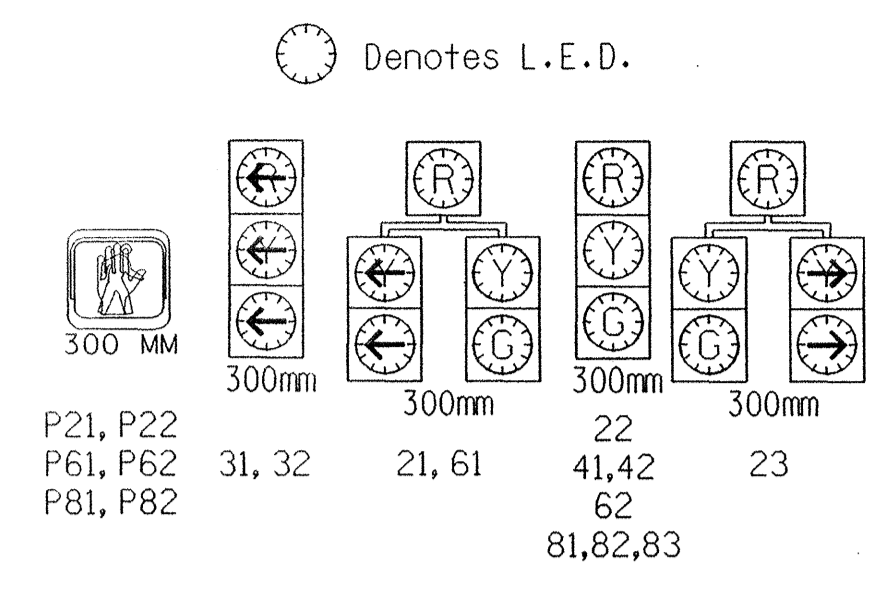
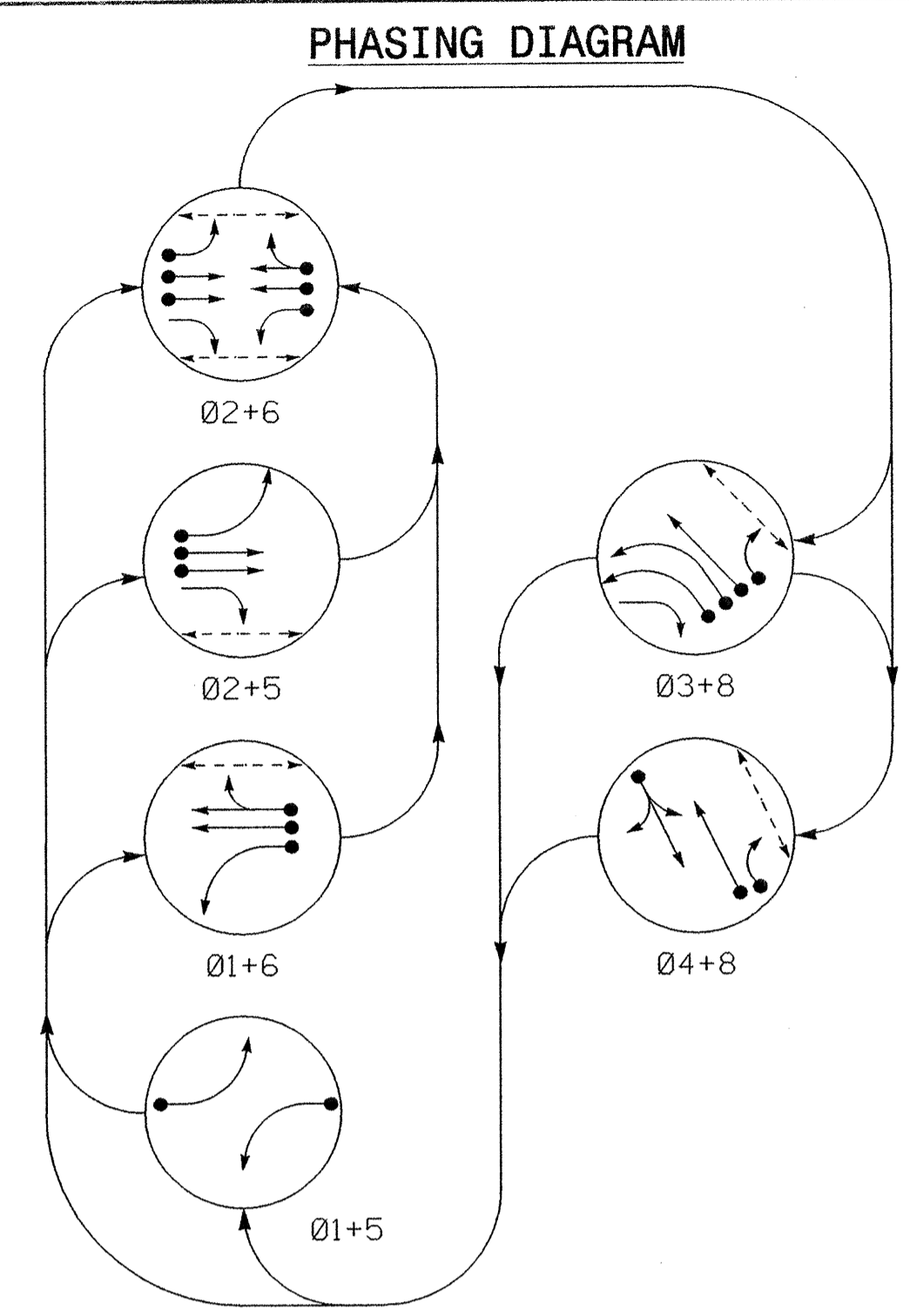


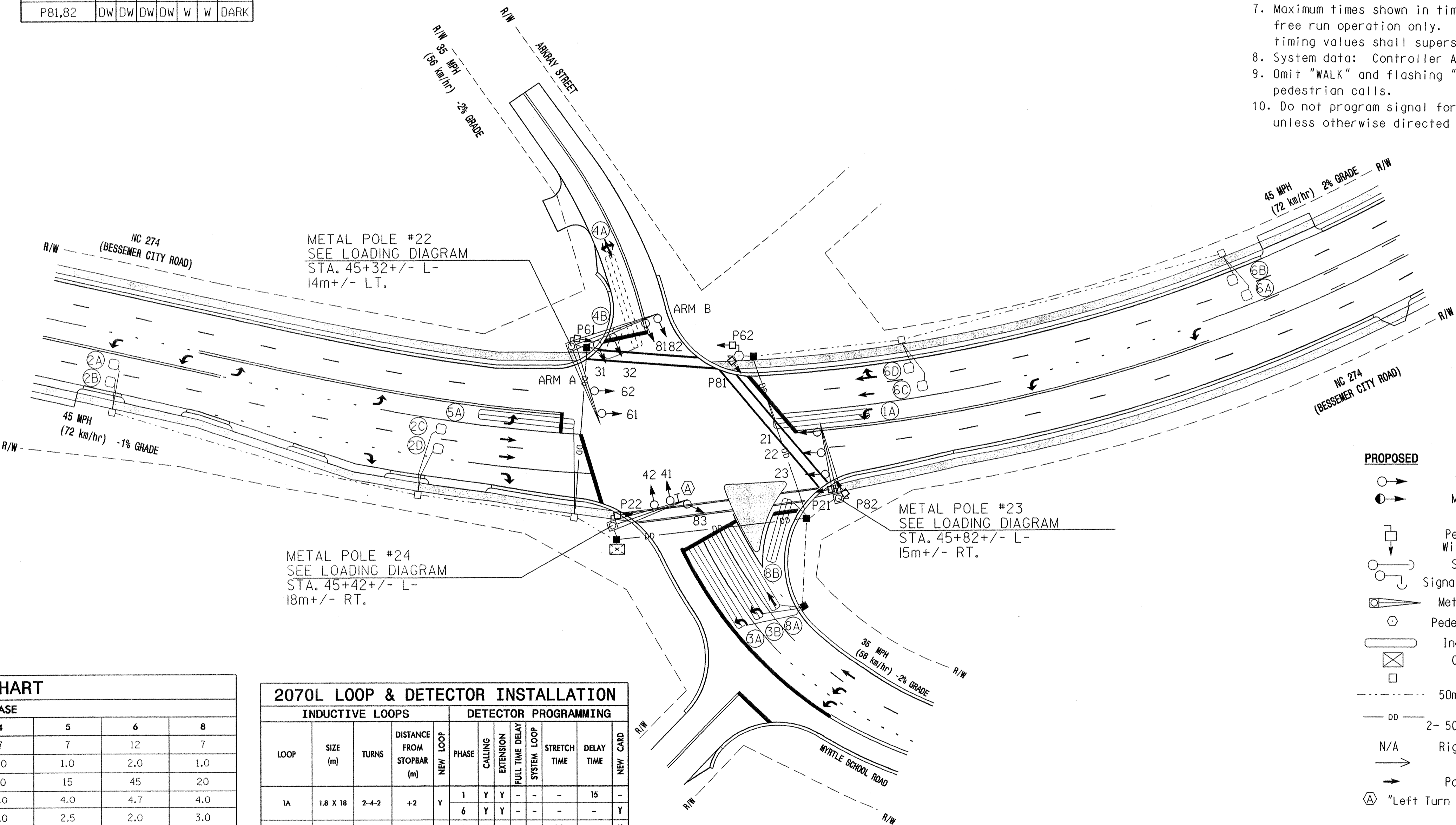
TABLE OF OPERATION

SIGNAL FACE	PHASE								FLASH
	01+5	01+6	02+5	02+6	03+8	04+8	04+8	04+8	
21	R	R	G	R	R	Y			
22	R	R	G	R	R	Y			
23	R	R	G	R	R	Y			
31,32	R	R	R	R	R	R			
41,42	R	R	R	R	R	G			
61	R	G	R	G	R	R	Y		
62	R	G	R	G	R	R	Y		
81,82,83	R	R	R	R	G	G	R		
P21,22	DW	DW	W	W	DW	DW	DARK		
P61,62	DW	W	DW	W	DW	DW	DARK		
P81,82	DW	DW	DW	DW	W	W	DARK		



PHASING DIAGRAM DETECTION LEGEND

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- ←○→ UNSIGNALIZED MOVEMENT
- ←○→ PEDESTRIAN MOVEMENT



2070L TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	8	
Min Green 1 *	7	12	7	7	7	12	7	
Extension 1 *	1.0	2.0	1.0	1.0	1.0	2.0	1.0	
Max Green 1 *	15	45	15	20	15	45	20	
Yellow Clearance	4.0	4.7	4.5	4.0	4.0	4.7	4.0	
Red Clearance	2.5	2.0	3.0	3.0	2.5	2.0	3.0	
Walk 1 *	-	5	-	-	-	5	5	
Don't Walk 1	-	24	-	-	-	13	19	
Seconds Per Actuation *	-	-	-	-	-	-	-	
Max Variable Initial *	-	-	-	-	-	-	-	
Time Before Reduction *	-	-	-	-	-	-	-	
Time To Reduce *	-	-	-	-	-	-	-	
Minimum Gap	-	-	-	-	-	-	-	
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	
Dual Entry	-	-	-	-	-	-	ON	
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	

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	1.8 X 1.8	2-4-2	+2	Y	1	Y	Y	-	-	-	15	-
2A,2B	1.8 X 1.8	4	90	Y	2	Y	Y	-	-	1.8	-	Y
2C,2D	1.8 X 1.8	4	27	Y	2	Y	Y	-	-	-	-	Y
3A	1.8 X 1.8	4	0	Y	3	Y	Y	-	-	-	3	-
3B	1.8 X 1.8	4	0	Y	3	Y	Y	-	-	-	3	Y
4A	1.8 X 1.8	2-4-2	+2	-	4	Y	Y	-	-	-	5	-
4B	1.8 X 4.5	4	+2	-	4	Y	Y	-	-	-	10	-
5A	1.8 X 1.8	2-4-2	+2	Y	5	Y	Y	-	-	-	15	-
6A,6B	1.8 X 1.8	4	90	Y	6	Y	Y	-	-	1.8	-	Y
6C,6D	1.8 X 1.8	4	27	Y	6	Y	Y	-	-	-	-	Y
8A	1.8 X 1.8	2-4-2	0	Y	8	Y	Y	-	-	-	-	-
8B	1.8 X 1.2	2-4-2	+2	Y	8	Y	Y	-	-	-	15	-

LEGEND

PROPOSED	EXISTING
○ → Traffic Signal Head	● → N/A
○ → Modified Signal Head	○ → N/A
□ → Pedestrian Signal Head With Push Button & Sign	□ → N/A
○ → Signal Pole with Guy	○ → N/A
○ → Signal Pole with Sidewalk Guy	○ → N/A
○ → Metal Pole with Mast Arm	○ → N/A
○ → Pedestrian Signal Pedestal	○ → N/A
○ → Inductive Loop Detector	○ → N/A
○ → Controller & Cabinet	○ → N/A
○ → Junction Box	○ → N/A
○ → 50mm Underground Conduit	○ → N/A
○ → Directional Drill	○ → N/A
○ → 2- 50mm Polyethylene Conduit	○ → N/A
N/A → Right of Way with Marker	N/A → N/A
○ → Directional Arrow	○ → N/A
○ → Pavement Marking Arrow	○ → N/A
○ → "Left Turn Yield on Green" Sign (R10-12)	○ → N/A

SIGNAL UPGRADE - FINAL DESIGN

Prepared in the Office of:  
**THE LPA GROUP**  
 TRANSPORTATION CONSULTANTS  
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 4904 PROFESSIONAL COURT, SUITE 201  
 Raleigh, North Carolina 27609

N.C. 274 (BESSEMER CITY ROAD) AT ARKRAY ST. & MYRTLE SCHOOL ROAD

DIVISION 12 GASTON COUNTY GASTONIA

PLAN DATE: OCT. 30, 2003 REVIEWED BY: R. DUBNICKA, P.E.

PREPARED BY: RGL REVIEWED BY:

SCALE: 1:500

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

SEAL: ROBERT J. DUBNICKA, PROFESSIONAL ENGINEER, No. 027742

SIG. INVENTORY NO. 12-0636

\* 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.