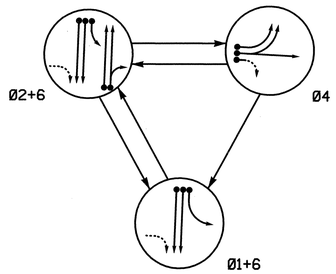
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	R-2552AA/AB	SIG. 8

3 Phase
Fully Actuated
(NC 42 Closed Loop System)

PHASING DIAGRAM



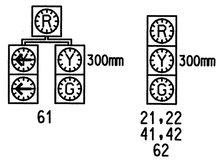
PHASING DIAGRAM DETECTION LEGEND

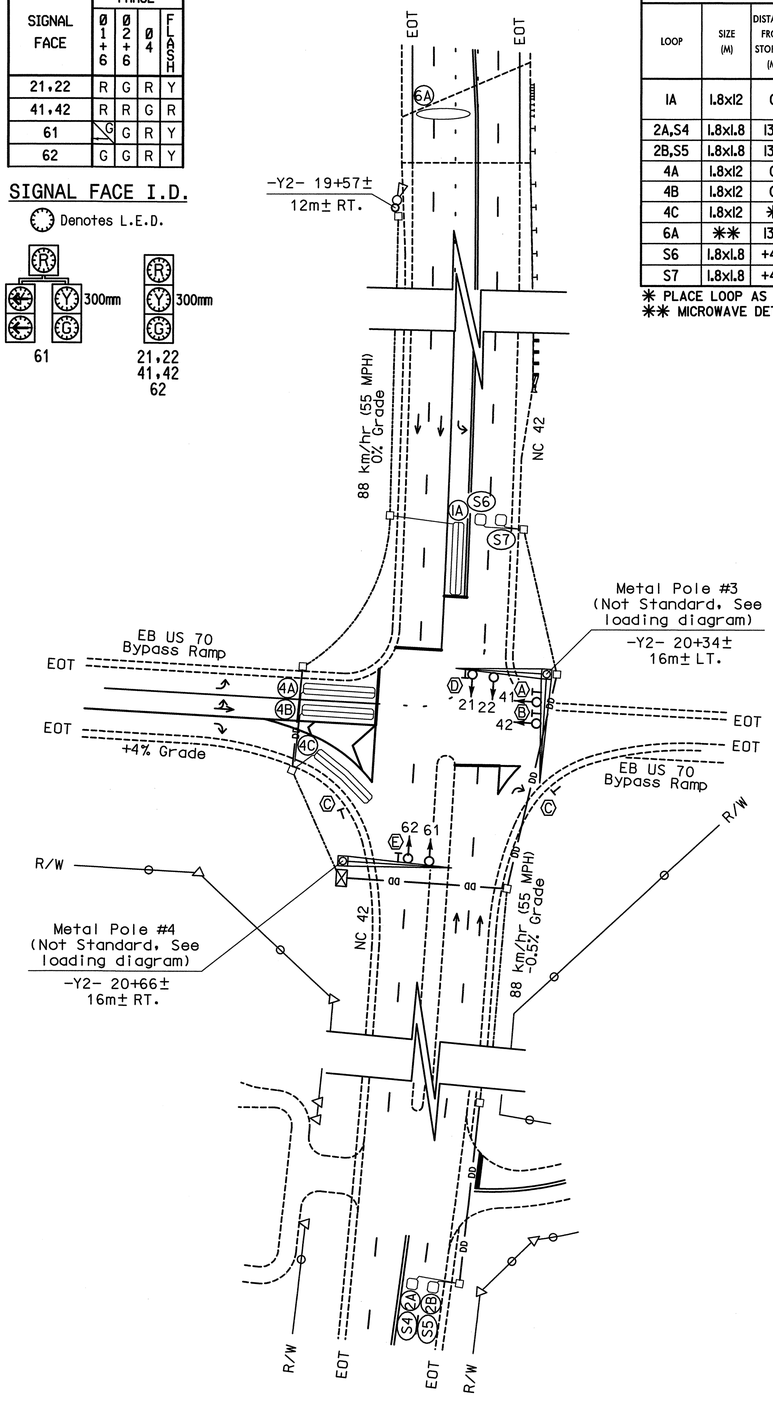
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION				
SIGNAL FACE	PHASE Ø1+6	PHASE Ø2+6	PHASE Ø4	FLASH
21,22	R	G	R	Y
41,42	R	R	G	R
61	G	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 (M)	DISTANCE FROM STOPBAR (M)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	1.8x12	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
					6	Y	Y	Y	-	3	-	Y
2A,S4	1.8x1.8	130	6	Y	2	Y	Y	-	-	-	Y	Y
2B,S5	1.8x1.8	130	6	Y	2	Y	Y	-	-	-	Y	Y
4A	1.8x12	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
4B	1.8x12	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
4C	1.8x12	✳	2-4-2	Y	4	Y	Y	-	-	20	-	Y
6A	✳✳	130	✳✳	Y	6	Y	Y	-	-	-	-	Y
S6	1.8x1.8	+40	4	Y	-	-	-	-	-	-	Y	Y
S7	1.8x1.8	+40	4	Y	-	-	-	-	-	-	Y	Y

✳ PLACE LOOP AS SHOWN ON PLAN.
✳✳ MICROWAVE DETECTION ZONE

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 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Closed loop system data:
   Controller Asset #1262

PLAN QUANTITIES	
Pay Item	Meters
Signal Cable	210
Messenger Cable	0
Loop Lead-in Cable	540

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	■
----------	50mm Underground Conduit	-----
N/A	Right of Way with Marker	—△—
→	Directional Arrow	→
N/A	Fence	—○—
N/A	Guardrail	
— DD —	Directional Drill	N/A
◁	Metal Pole with Mast Arm	◁
⬭	Microwave Detection Zone	⬭
○◁	Out of Pavement Detector	●◁
Ⓐ	Left Arrow "ONLY" Sign (R3-5L)	N/A
Ⓑ	Combined Through and Left Arrow Sign (R3-6L)	N/A
Ⓒ	"YIELD" Sign (R1-2)	N/A
Ⓓ	No Left Turn Sign (R3-2)	N/A
Ⓔ	No Right Turn Sign (R3-1)	N/A

2070L TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 4	PHASE 6
Min Green 1 *	7	14	7	14
Extension 1 *	2.0	6.0	2.0	6.0
Max Green 1 *	15	90	30	90
Yellow Clearance	3.5	5.2	3.8	5.2
Red Clearance	2.5	1.0	2.5	1.0
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	1.5	-	2.5
Max Variable Initial *	-	46	-	46
Time Before Reduction *	-	15	-	15
Time To Reduce *	-	30	-	30
Minimum Gap	-	3.4	-	3.4
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.

New Signal Design

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609

NC 42
At
US 70 Bypass EB Ramps

Division 04 Johnston County S of Clayton

PLAN DATE: November 2004 REVIEWED BY: S.T. Franklin
PREPARED BY: T.R. Terrell REVIEWED BY: C.A. Johnson

SCALE 5 0 10 1:500

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028657 SPENCER T. FRANKLIN

SIGNATURE 1-10-05 DATE

SIG. INVENTORY NO. 04-1262