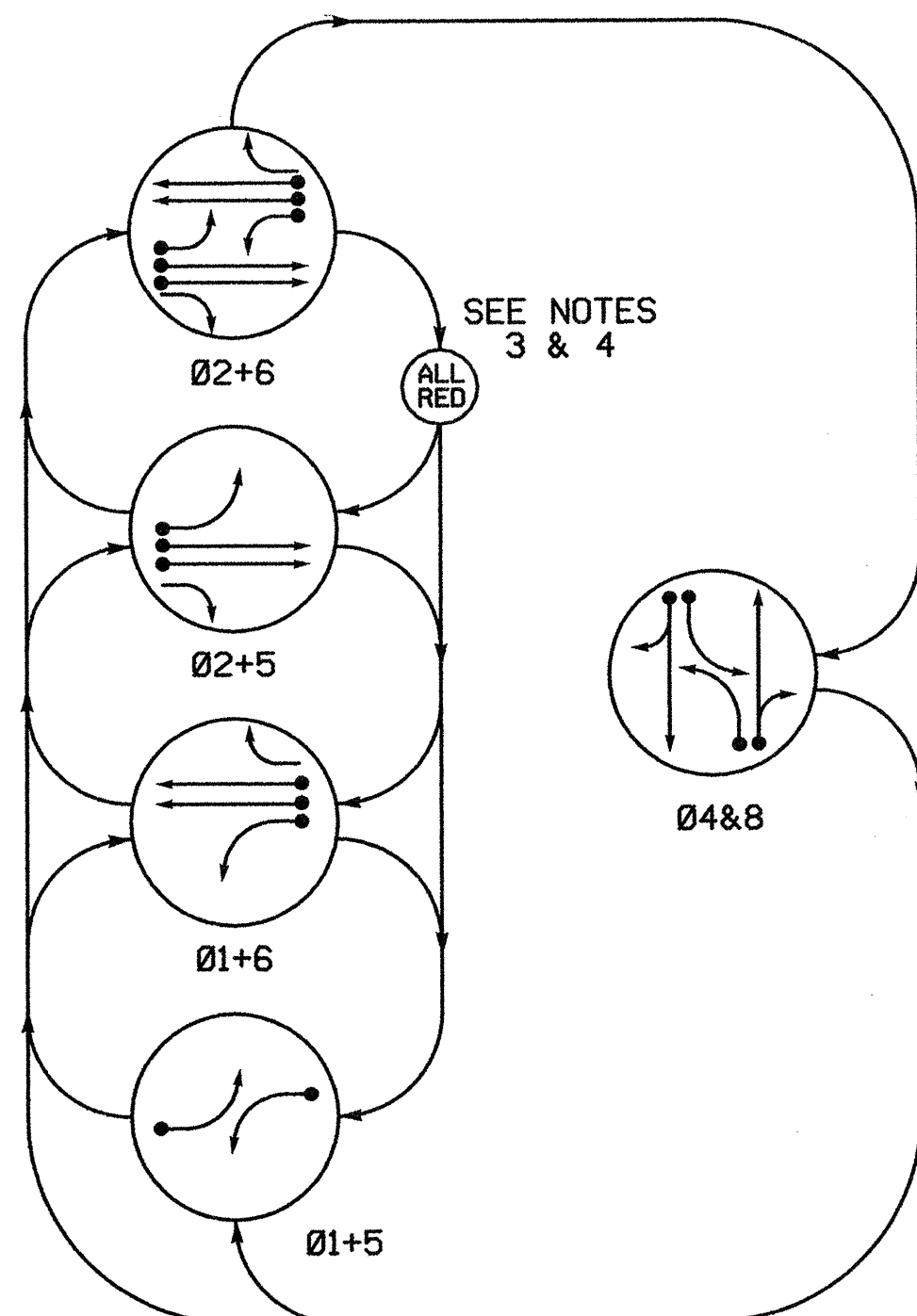


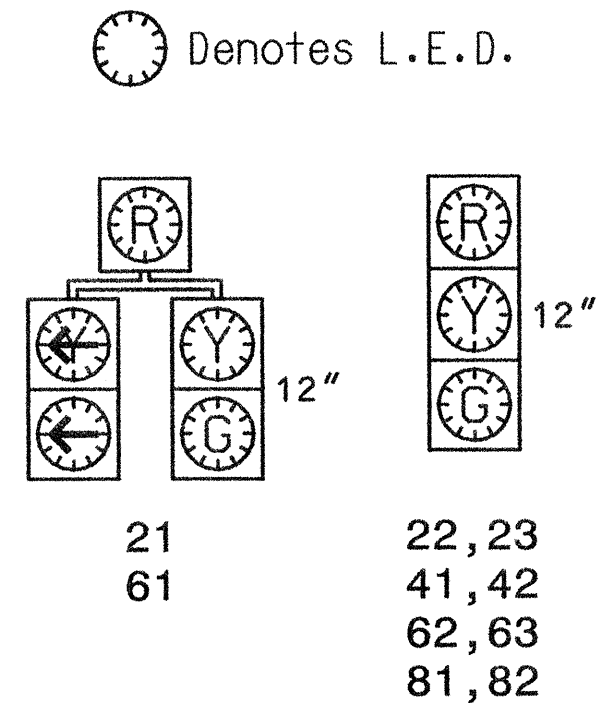
**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

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

**SIGNAL FACE I.D.**



SIGNAL FACE	PHASE					
	01+5	01+6	02+5	02+6	04+8	FLASH
21	R	R	G	G	R	Y
22,23	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
61	R	G	R	G	R	Y
62,63	R	G	R	G	R	Y
81,82	R	R	R	R	G	R

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	-
2A	6X6	6	420	Y	2	Y	Y	-	-	-	3	-
2B	6X6	6	420	Y	2	Y	Y	-	-	-	-	Y
4A	6X60	2-4-2	0	-	4	Y	Y	-	-	-	3	-
4B	6X60	2-4-2	0	-	4	Y	Y	-	-	-	10	-
5A	6X60	2-4-2	0	Y	5	Y	Y	-	-	-	15	-
6A	6X6	6	420	-	6	Y	Y	-	-	-	-	-
6B	6X6	6	420	-	6	Y	Y	-	-	-	-	-
8A	6X60	2-4-2	0	-	8	Y	Y	-	-	-	3	-
8B	6X60	2-4-2	0	-	8	Y	Y	-	-	-	10	-

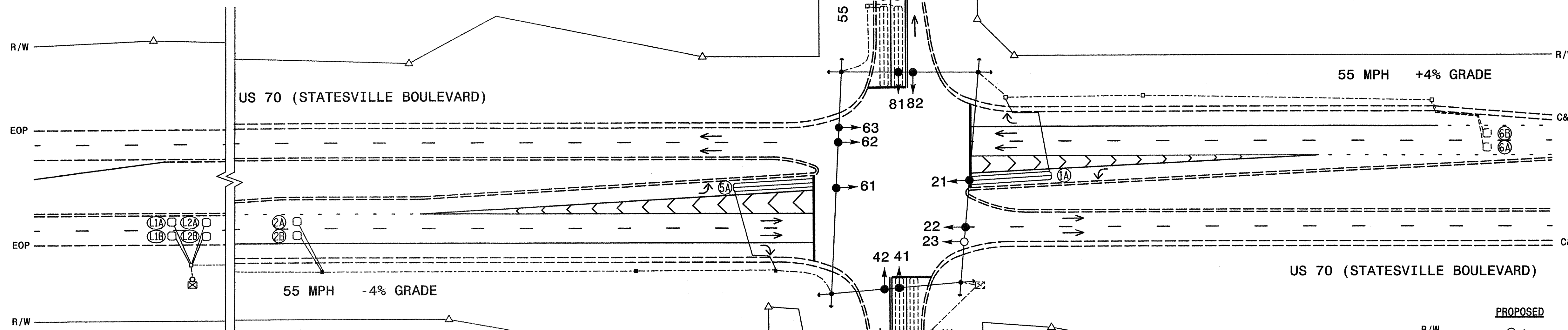
NORTHSTAR LONG VEHICLE OVERSPEED DETECTION SYSTEM LOOP & DETECTION INSTALLATION CHART														
INDUCTIVE LOOPS				DETECTOR PROGRAMMING										
LOOP	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	NEW	EXISTING	SYSTEM NO.	DET. NO.	NEW	EXISTING	LANE NO.	CHANNEL	PLACE CALL HOLD DURING PHASE	LYODS THRESHOLD SPEED (MPH)	LYODS ALARM TIME (SEC)
L1A	6X6	6	1003	Y	-	1	1	Y	-	1	1	2	55	12
L1B	6X6	6	1003	Y	-	1	2	Y	-	2	1	2		
L2A	6X6	6	975	Y	-	1	1	Y	-	1	2	2		
L2B	6X6	6	975	Y	-	1	2	Y	-	2	2	2		

**5 PHASE FULLY ACTUATED (Isolated)**

**NOTES**

- Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
- Do not program signal for late night flashing operation unless otherwise directed by the engineer.
- Enable backup protect for phase 2 to allow the controller to clear from phase 2+6 to phase 5 by progressing through all red.
- Enable backup protect for phase 6 to allow the controller to clear from phase 2+6 to phase 1 by progressing through all red.
- Set all detector units to presence mode.
- Long vehicle detection loops are in addition to regular loops.
- When activated, long vehicle detection loops will override regular loops.

PLAN QUANTITIES	
Pay Item	Feet
Signal Cable	20
Messenger Cable	0
Lead-in Cable	1610



2070L TIMING CHART						
FEATURE	PHASE					
	1	2	4	5	6	8
Min Green 1 *	7	14	7	7	14	7
Extension 1 *	1.0	6.0	1.0	1.0	6.0	1.0
Max Green 1 *	20	90	25	20	90	25
Yellow Clearance	4.0	5.7	4.0	4.0	5.7	4.0
Red Clearance	3.0	1.5	3.0	3.0	1.5	3.0
Red Revert	2.0	5.0	2.0	2.0	5.0	2.0
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	1.5	-
Max Variable Initial *	-	46	-	-	46	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduction *	-	45	-	-	45	-
Minimum Gap	-	3.4	-	-	3.4	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

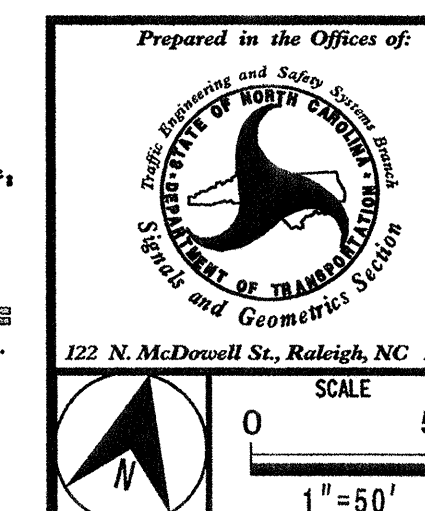
\* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

**LEGEND**

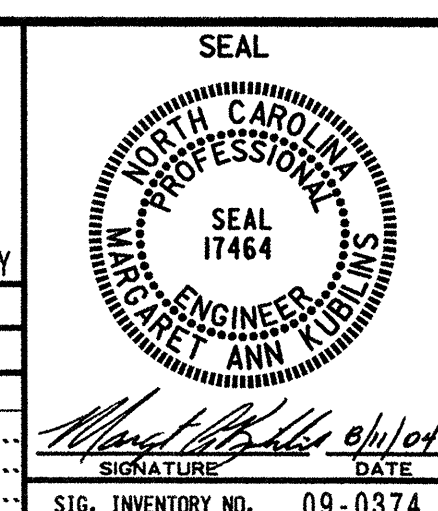
- |                                 |                                 |
|---------------------------------|---------------------------------|
| <b>PROPOSED</b>                 | <b>EXISTING</b>                 |
| ○ Traffic Signal Head           | ● Traffic Signal Head           |
| ○ Modified Signal Head          | N/A                             |
| ○ Sign                          | -                               |
| ○ 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                  |
| - - - 2-in Underground Conduit  | - - - 2-in Underground Conduit  |
| N/A Right of Way with Marker    | △ Right of Way with Marker      |
| → Directional Arrow             | → Directional Arrow             |
| → Pavement Marking Arrow        | → Pavement Marking Arrow        |

**SIGNAL INSTALLATION - FINAL**

PLAN PREPARED IN THE OFFICE OF:  
*Kubilins*  
TRANSPORTATION GROUP, INC.  
201 PRODUCTION DR.  
2ND FLOOR  
YORKTOWN, VA 23693  
PH: (757) 594-1419 FAX: (757) 594-9010



Prepared in the Office of:		US 70 (Statesville Boulevard)	
at		at	
NC 801/SR 1827		NC 801/SR 1827	
(Hoechst Celanese Road)		(Hoechst Celanese Road)	
DIVISION 9		ROWAN CO. W. OF SALISBURY	
PLAN DATE:	JULY 2004	REVIEWED BY:	MAK
PREPARED BY:	CED	REVIEWED BY:	
REVISIONS		INIT.	DATE



SIG. INVENTORY NO. 09-0374