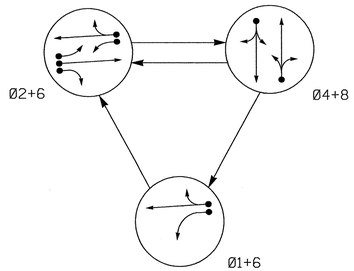
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	U-2734	Sig. 39

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

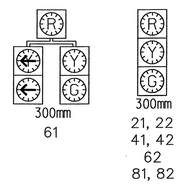
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

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

SIGNAL FACE I.D.

Denotes L.E.D.



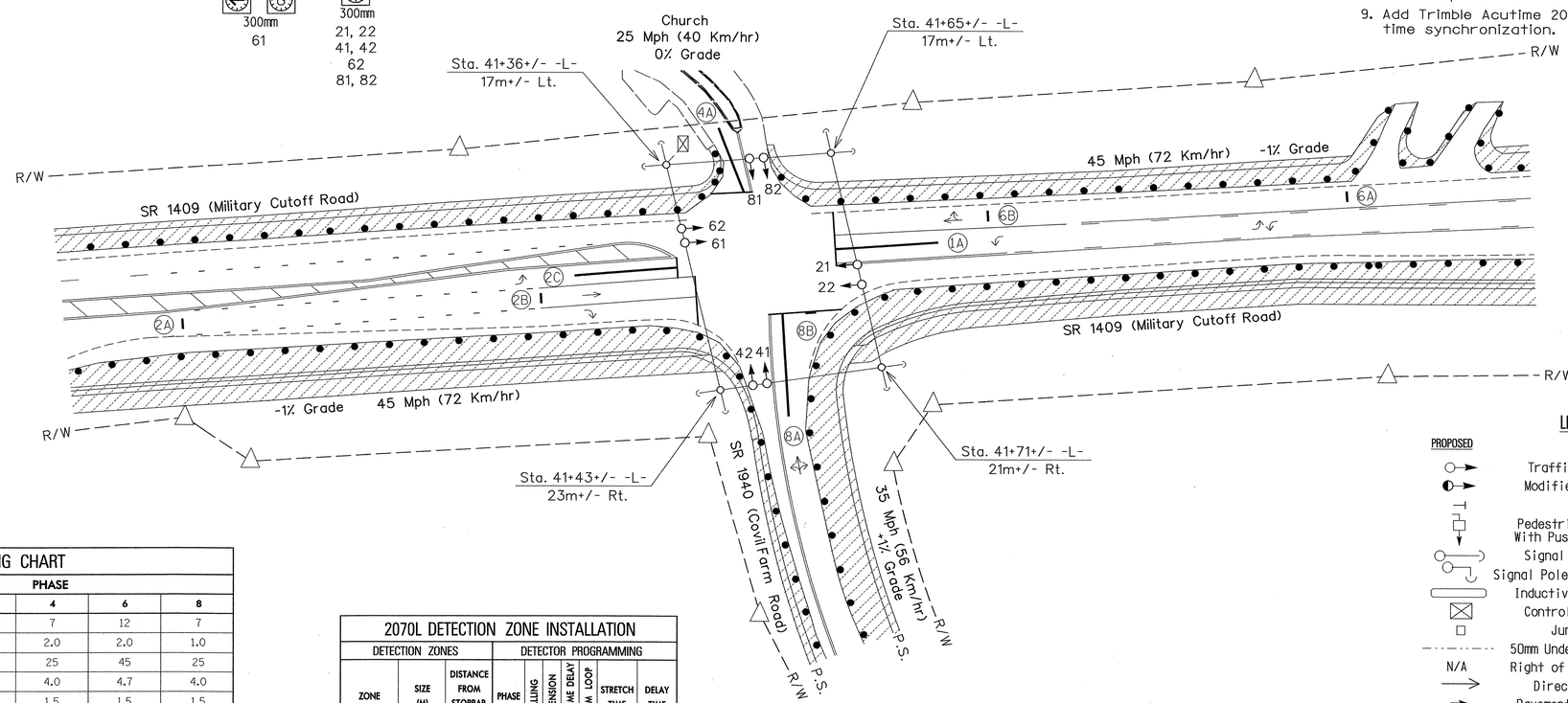
PLAN QUANTITIES

Pay Item	Meters
Signal Cable	200
Messenger Cable	140
Lead-in Cable	0

3 Phase
(Fully Actuated)
(Time – Based Coordination)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Pavement markings are existing.
3. Omit phase 1 during phase 2 on.
4. Program controller to clear from phase 2+6 to phase 1+6 by progressing through phase 4+8 (See Electrical Details).
5. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
6. Set all detector units to presence mode.
7. Loop Emulation Detection System shall be incorporated for vehicle detection.
8. Contractor shall be responsible for having the manufacturer provide the Engineer approved camera locations and mounting heights to obtain optimum detection zones as shown.
9. Add Trimble Acutime 2000 (RS-232) GPS Unit for time synchronization.



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	
	Pavement Marking Arrow	
	Construction Zone	
	Construction Zone Drums	
	Video Detection Zone	

2070L TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	7	12	7	12	7
Extension 1 *	1.0	2.0	2.0	2.0	1.0
Max Green 1 *	15	45	25	45	25
Yellow Clearance	4.0	4.7	4.0	4.7	4.0
Red Clearance	1.5	1.5	1.5	1.5	1.5
Walk 1 *	-	-	-	-	-
Don't Walk 1	-	-	-	-	-
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	-	ON
Simultaneous Gap	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.

2070L DETECTION ZONE INSTALLATION

DETECTION ZONES			DETECTOR PROGRAMMING						
ZONE	SIZE (M)	DISTANCE FROM STOPBAR (M)	PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME
1A	1.8X18	0	1	Y	Y	–	–	—	15
			6	Y	Y	Y	–	—	3
2A	1.8X1.8	90	2	Y	Y	–	–	1.8	—
2B	1.8X1.8	27	2	Y	Y	–	–	—	—
2C	1.8X18	0	2	Y	Y	–	–	—	3
4A	1.8X12	0	4	Y	Y	–	–	—	10
6A	1.8X1.8	0	6	Y	Y	–	–	1.8	—
6B	1.8X1.8	0	6	Y	Y	–	–	—	—
8A	1.8X18	0	8	Y	Y	–	–	—	10
8B	1.8X1.8	0	8	Y	Y	–	–	—	25

Signal Upgrade Temporary Design 1 Construction Phase I

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Prepared for:
Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

SCALE 1:500

SR 1409 (Military Cutoff Road)
at
SR 1940 (Covil Farm Road) and Church

Division 3	New Hanover County		Wilmington
PLAN DATE: Sept 2003		REVIEWED BY:	L. M. Eddins
PREPARED BY: H. M. Surti		REVIEWED BY:	S. S. Asefnia

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 20104 ENGINEER SEIFNIA S. ASEFNIA
SIGNATURE DATE 12/11/03
SIG. INVENTORY NO. 03-088271

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