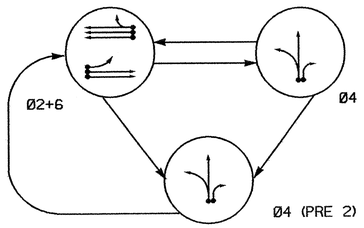
PROJECT REFERENCE NO.	SHEET NO.
I-2102	Sig. 11

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION				
SIGNAL FACE	PHASE Ø2+6	PHASE Ø4	PHASE PRE 2	PHASE FLASH
21,22	G	R	R	Y
41,42,43	R	G	G	R
61,62	G	R	R	Y

SIGNAL FACE I.D.

Denotes L.E.D.

21,22
41,42,43
61,62

2070L LOOP & DETECTOR INSTALLATION

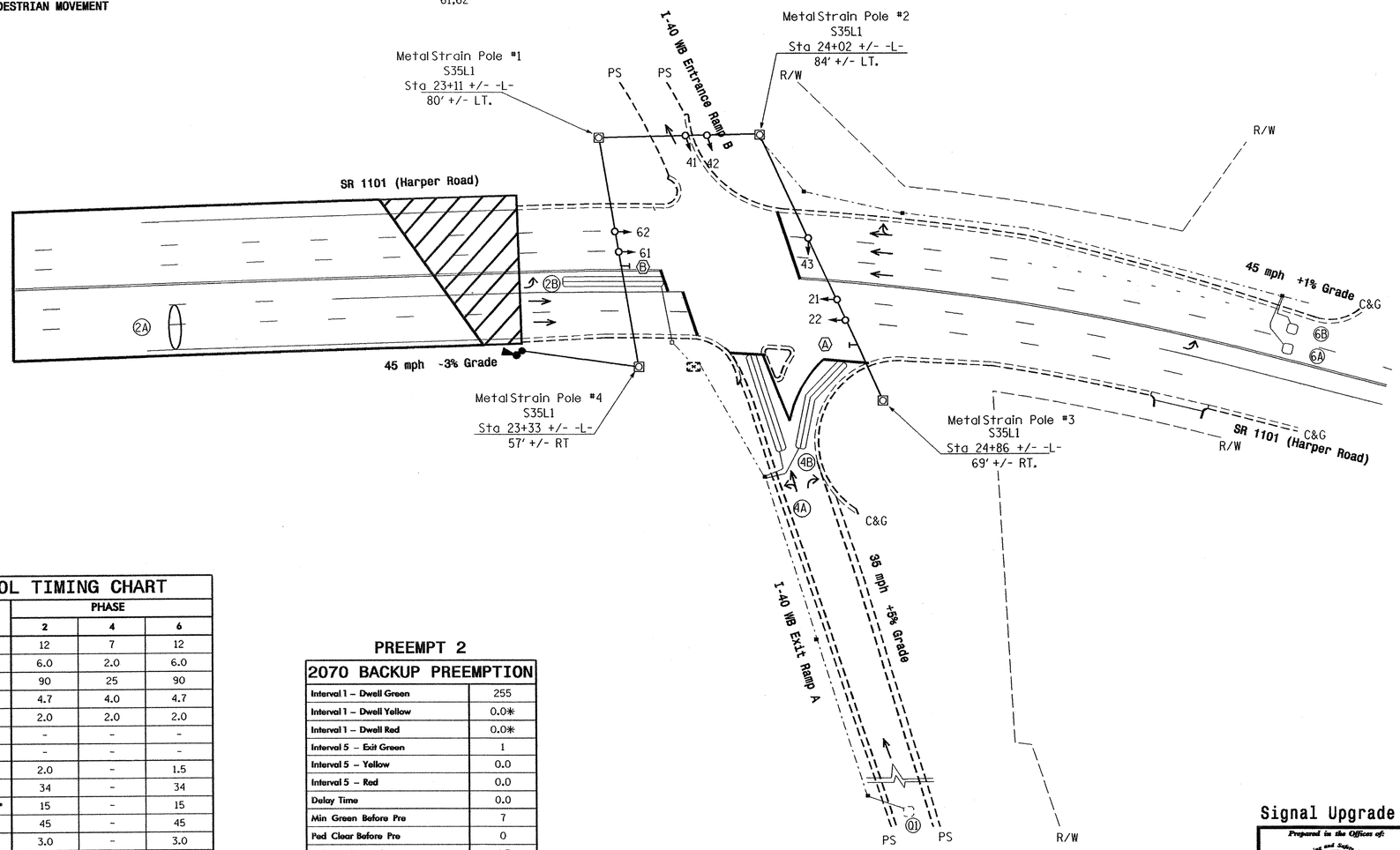
INDUCTIVE LOOPS					DETECTOR PROGRAMMING										
LOOP	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	QUEUE MAX OCCUPANCY TIME	QUEUE GAP RESET TIME	PREEMPT INDEX FOR QUEUE	NEW CARD
2A	*	*	300	*	2	Y	Y	-	-	-	-	-	-	-	-
2B	6x60	2-4-2	0	Y	2	Y	Y	Y	-	-	3	-	-	-	-
4A	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	-	-	-	-	-
4B	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	15	-	-	-	-
6A	6x6	5	300	Y	6	Y	Y	-	-	-	-	-	-	-	-
6B	6x6	4	300	Y	6	Y	Y	-	-	-	-	-	-	-	-
** 01	6x6	5	400	-	PRE 2	-	-	-	-	-	-	5	0.1	2	-

* Microwave Detection Zone
** See note 4

2 Phase
Fully Actuated with Backup Preemption
Isolated

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. Set all detector units to presence mode.
4. Program controller to initiate backup preemption upon activation of queue backup loops.



PLAN QUANTITIES

Pay Item	Feet
Signal Cable	870
Messenger Cable	490
Lead-in Cable	100

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	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Pavement Marking Arrow	
	Metal Strain Pole	
	Microwave Detector	
A	No Right Turn Sign (R3-1)	A
B	No Left Turn Sign (R3-2)	B
	Microwave Detection Zone	

2070L TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6
Min Green 1 *	12	7	12
Extension 1 *	6.0	2.0	6.0
Max Green 1 *	90	25	90
Yellow Clearance	4.7	4.0	4.7
Red Clearance	2.0	2.0	2.0
Walk 1 *	-	-	-
Don't Walk 1	-	-	-
Seconds Per Actuation *	2.0	-	1.5
Max Variable Initial *	34	-	34
Time Before Reduction *	15	-	15
Time To Reduce *	45	-	45
Minimum Gap	3.0	-	3.0
Recall Mode	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	YELLOW
Dual Entry	-	-	-
Simultaneous Gap	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.

PREEMPT 2

2070 BACKUP PREEMPTION	
Interval 1 – Dwell Green	255
Interval 1 – Dwell Yellow	0.0*
Interval 1 – Dwell Red	0.0*
Interval 5 – Exit Green	1
Interval 5 – Yellow	0.0
Interval 5 – Red	0.0
Delay Time	0.0
Min Green Before Pre	7
Ped Clear Before Pre	0
Yellow Clear Before Pre	4.7
Red Clear Before Pre	2.0
Dwell Min Time	45
Enable Backup Protection	N
Ped Clear Through Yellow	N

*Clearance time defaults to time used for phase during normal operation.

Signal Upgrade

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

SR 1101 (Harper Road)
At
I-40 Westbound Off Ramp

Division 9 Forsyth County Clemmons

PLAN DATE:	April 2004	REVIEWED BY:	J.P. Galloway
PREPARED BY:	C.J. Collins	REVIEWED BY:	

REVISIONS	INIT.	DATE

SCALE 0 40 1"=40'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 24393 ENGINEER TIMOTHY W WILLIAMS
SIGNATURE 7/1/04. DATE

SIG. INVENTORY NO. 09-0763

01-JUL-2004 12:03
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cjcollins