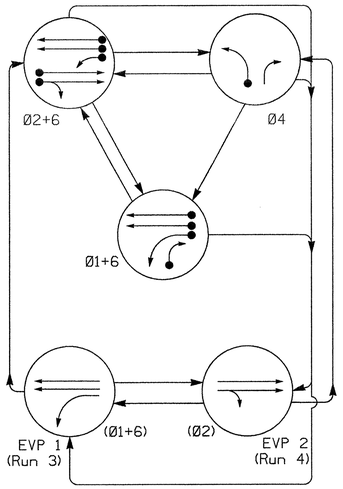
PROJECT REFERENCE NO.	SHEET NO.
U-3328	SIG.14

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

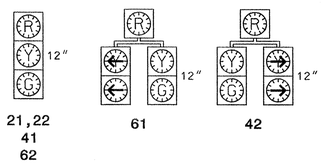
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	Ø2+6	Ø4	EVP 1	EVP 2	FLASH
21,22	R	G	R	R	G	Y
41	R	R	G	R	R	R
42	R	R	G	R	R	R
61	G	G	R	G	R	Y
62	G	G	R	G	R	Y

SIGNAL FACE I.D.

Denotes L.E.D.



PLAN QUANTITIES

Pay Item	Feet
Signal Cable	420
Messenger Cable	320
Lead-in Cable	1350

EMERGENCY VEHICLE PRE EMPTION TIMING CHART

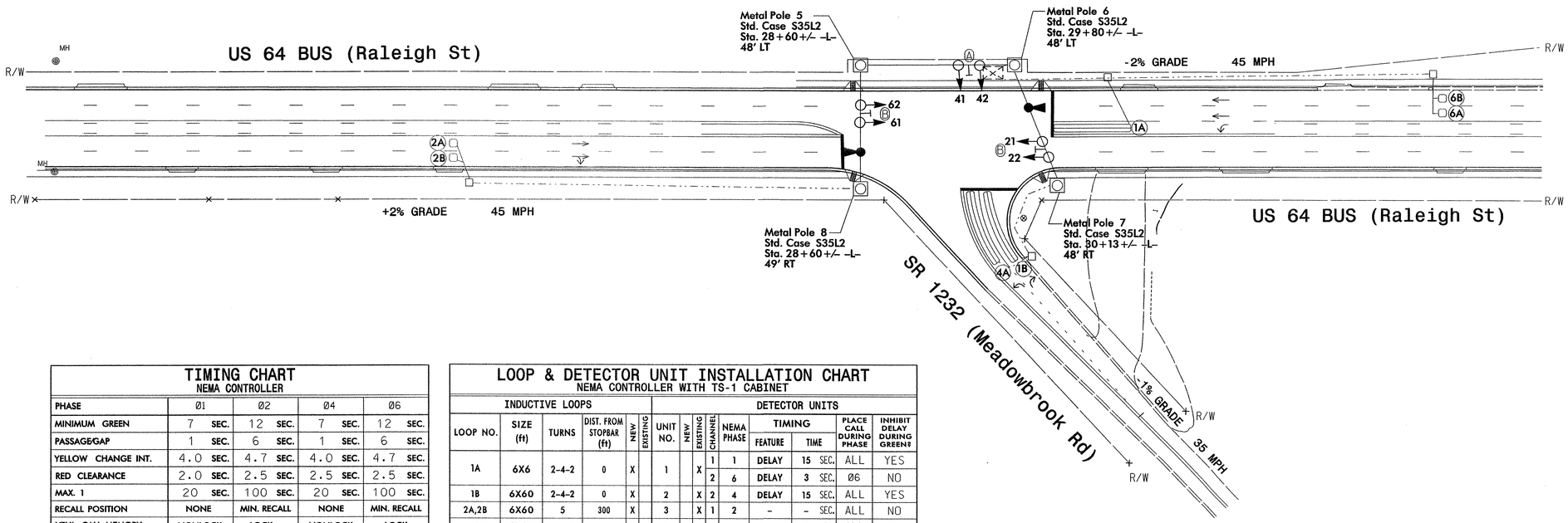
	PRE EMPT 1	PRE EMPT 2
DELAY BEFORE PRE EMPT	0 SEC	0 SEC
WALK CLR BEFORE PRE EMPT	- SEC	- SEC
MIN GREEN BEFORE PRE EMPT	▲ SEC	▲ SEC
YEL CLR BEFORE PRE EMPT	▲ SEC	▲ SEC
RED CLR BEFORE PRE EMPT	▲ SEC	▲ SEC
PREEMPT DWELL MIN GREEN	5.0 SEC	5.0 SEC
YEL CLR AFTER EV PRE EMPT	4.0 SEC	4.7 SEC
RED CLR AFTER EV PRE EMPT	2.0 SEC	2.5 SEC

▲ SEE NOTE 2

3 Phase
Fully Actuated
w/EV Preemption
(Rocky Mount Closed Loop System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Preemption timing to enter the preempt phase sequence only after satisfying minimum green time and clearance interval requirements of the active phase sequence.
3. Relocate existing sign "Raleigh St" and "Meadowbrook Rd."
4. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
5. Set all detector units to presence mode.
6. Relocate Opticom detector units.
7. Closed Loop System Data: Controller Asset #703.
8. To ensure heads 21 and 22 clear to all-red when transitioning to EVP 2, a fixed all-red interval of 5 seconds will be used to initiate the preempt sequence.



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 with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
	Metal Strain Pole	
	Opticom Detector	
	"Raleigh St" Sign	
	"Meadowbrook Rd" Sign	

TIMING CHART
NEMA CONTROLLER

PHASE	Ø1	Ø2	Ø4	Ø6
MINIMUM GREEN	7 SEC.	12 SEC.	7 SEC.	12 SEC.
PASSAGE/GAP	1 SEC.	6 SEC.	1 SEC.	6 SEC.
YELLOW CHANGE INT.	4.0 SEC.	4.7 SEC.	4.0 SEC.	4.7 SEC.
RED CLEARANCE	2.0 SEC.	2.5 SEC.	2.5 SEC.	2.5 SEC.
MAX. 1	20 SEC.	100 SEC.	20 SEC.	100 SEC.
RECALL POSITION	NONE	MIN. RECALL	NONE	MIN. RECALL
VEHI. CALL MEMORY	NONLOCK	LOCK	NONLOCK	LOCK
WALK	– SEC.	– SEC.	– SEC.	– SEC.
FLASHING DON'T WALK	– SEC.	– SEC.	– SEC.	– SEC.
VOLUME DENSITY	OFF	ON	OFF	ON
ACTUATION B4 ADD	– VEH.	0 VEH.	– VEH.	0 VEH.
SEC. PER ACTUATION	– SEC.	1.5 SEC.	– SEC.	1.5 SEC.
MAX. INITIAL	– SEC.	30 SEC.	– SEC.	30 SEC.
TIME B4 REDUCTION	– SEC.	15 SEC.	– SEC.	15 SEC.
TIME TO REDUCE	– SEC.	50 SEC.	– SEC.	50 SEC.
MINIMUM GAP	– SEC.	3.0 SEC.	– SEC.	3.0 SEC.

LOOP & DETECTOR UNIT INSTALLATION CHART
NEMA CONTROLLER WITH TS-1 CABINET

INDUCTIVE LOOPS						DETECTOR UNITS									
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	UNIT NO.	NEW	EXISTING	CHANNEL	NEMA PHASE	TIMING FEATURE	TIMING TIME	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN#
1A	6X6	2-4-2	0	X		1		X	1	1	DELAY	15 SEC.	ALL	YES
									2	6	DELAY	3 SEC.	Ø6	NO
1B	6X60	2-4-2	0	X		2		X	2	4	DELAY	15 SEC.	ALL	YES
2A,2B	6X60	5	300	X		3		X	1	2	–	– SEC.	ALL	NO
4A	6X60	2-4-2	0	X		2		X	1	4	DELAY	3 SEC.	ALL	YES
6A,6B	6X60	4	300	X		3		X	2	6	–	– SEC.	ALL	NO

SIGNAL UPGRADE FINAL DESIGN

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

SCALE 0 50 1"=50'

US 64 BUS (RALEIGH ST)
AT
SR 1232 (MEADOWBROOK RD)

DIVISION 04 EDGECOMBE COUNTY ROCKY MOUNT

PLAN DATE:	Aug 2004	REVIEWED BY:	L Eddins
PREPARED BY:	C Kincaid	REVIEWED BY:	S Asefnia

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 20104 ENGINEER SEYDEN S. ASEFNIA
SIGNATURE 8/16/04 DATE
SIG. INVENTORY NO. 04-0685