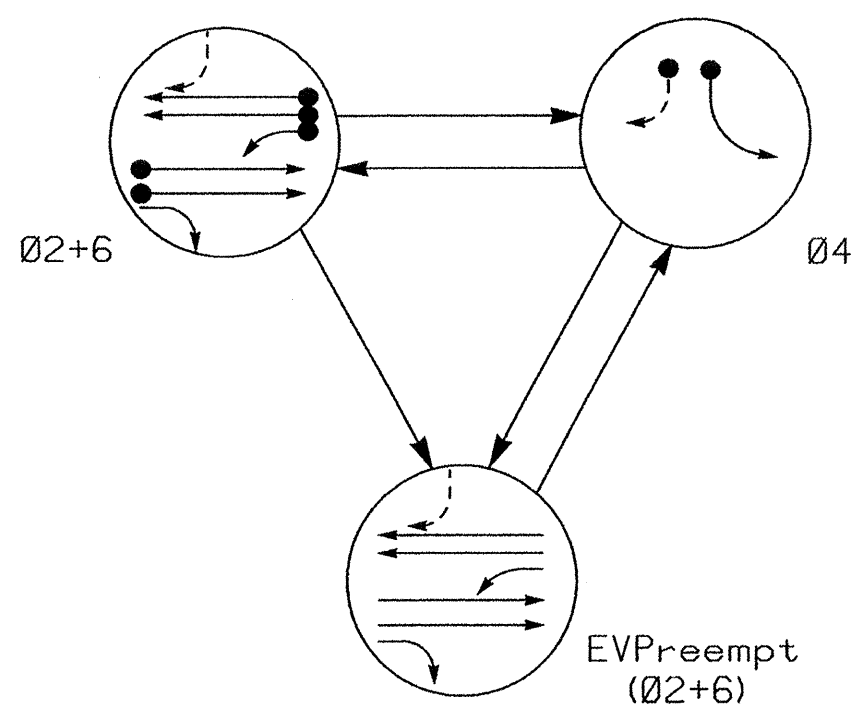


PHASING DIAGRAM



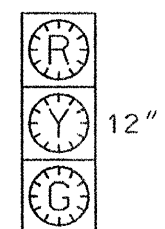
PHASING DIAGRAM DETECTION LEGEND
 ● DETECTED MOVEMENT
 ◀ UNDETECTED MOVEMENT (OVERLAP)
 - - - UNSIGNALIZED MOVEMENT
 - - - PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE		
	Ø2+6	Ø4	EVPreempt (Ø2+6)
21,22	G R G Y		
41,42	R G R R		
61,62	G R G Y		

SIGNAL FACE I.D.

⌚ Denotes L.E.D.



21,22
41,42
61,62

EMERGENCY VEHICLE PRE EMPTION TIMING CHART

DELAY BEFORE PRE EMPT	0 SEC
PED CLR BEFORE PRE EMPT	- SEC
MIN GREEN BEFORE PRE EMPT	▲ SEC
YEL CLR BEFORE PRE EMPT	▲ SEC
RED CLR BEFORE PRE EMPT	▲ SEC
PREEMPT DWELL MIN GREEN	5.0 SEC
YEL CLR AFTER EV PRE EMPT	4.7 SEC
RED CLR AFTER EV PRE EMPT	1.5 SEC

▲ SEE NOTE 7

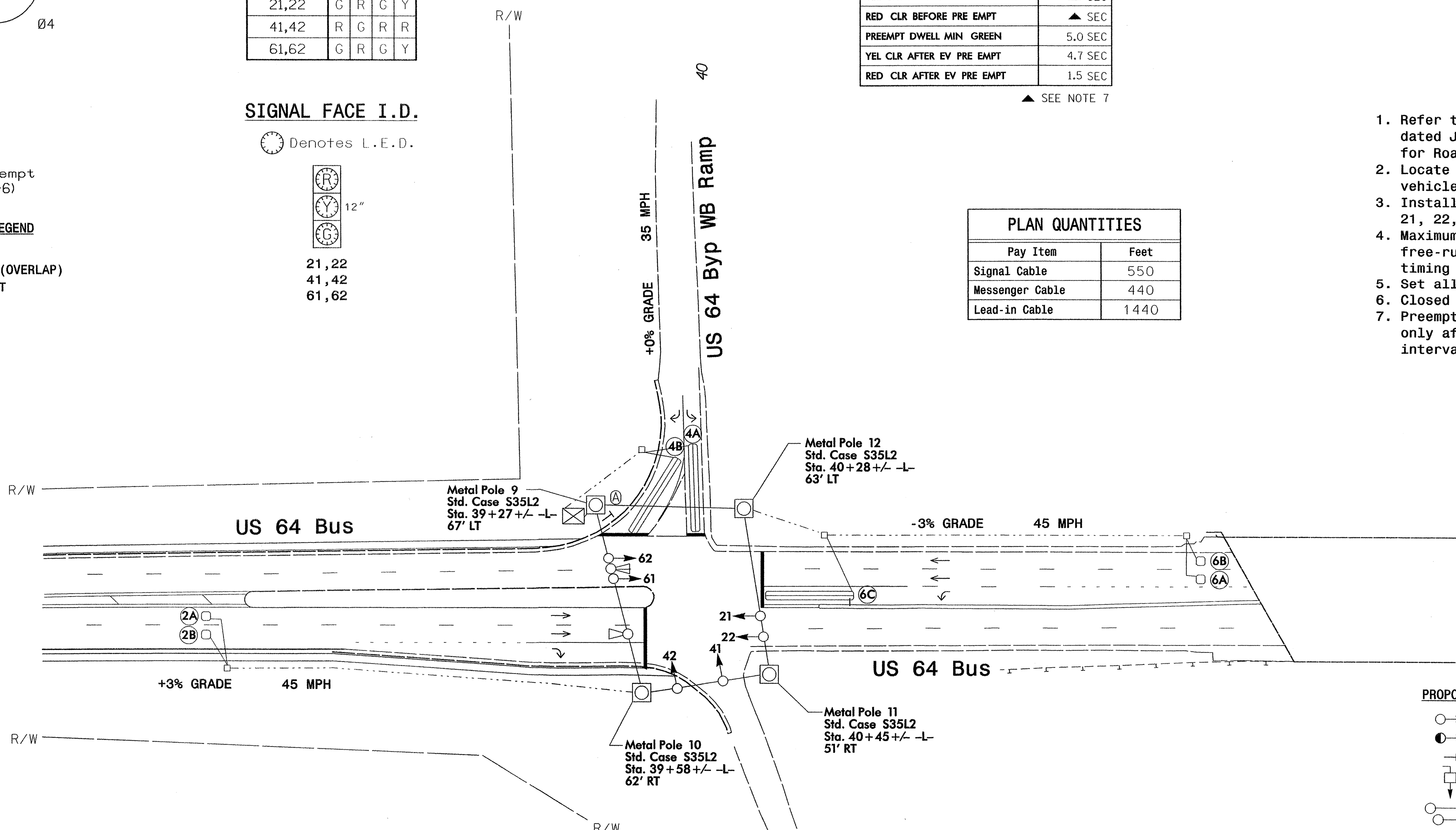
2 Phase Fully Actuated w/ EV preemption (Rocky Mount Closed Loop System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Locate cabinet so as not to obstruct sight distance of vehicles turning right on red.
3. Install backplates for signal heads numbered 21, 22, 61, and 62.
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. Closed Loop System Data: Controller Asset #704.
7. Preemption timing to enter the preempt phase sequence only after satisfying minimum green time and clearance interval requirements of the active phase sequence.

PLAN QUANTITIES

Pay Item	Feet
Signal Cable	550
Messenger Cable	440
Lead-in Cable	1440



LEGEND

PROPOSED	EXISTING
○ → Traffic Signal Head	● → N/A
● → Modified Signal Head	— Sign
⊥ Pedestrian Signal Head With Push Button & Sign	⊥ Signal Pole with Guy
⊥ 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	○ "YIELD" Sign (R1-2)

TIMING CHART NEMA CONTROLLER

PHASE	Ø2	Ø4	Ø6
MINIMUM GREEN	12 SEC.	7 SEC.	12 SEC.
PASSAGE/GAP	6 SEC.	1 SEC.	6 SEC.
YELLOW CHANGE INT.	4.7 SEC.	4.0 SEC.	4.7 SEC.
RED CLEARANCE	1.5 SEC.	2.0 SEC.	1.5 SEC.
MAX. 1	100 SEC.	25 SEC.	100 SEC.
RECALL POSITION	MIN. RECALL	NONE	MIN. RECALL
VEHI. CALL MEMORY	LOCK	NONLOCK	LOCK
WALK	- SEC.	- SEC.	- SEC.
FLASHING DON'T WALK	- SEC.	- SEC.	- SEC.
VOLUME DENSITY	ON	OFF	ON
ACTUATION B4 ADD	0 VEH.	- VEH.	0 VEH.
SEC. PER ACTUATION	1.5 SEC.	- SEC.	1.5 SEC.
MAX. INITIAL	34 SEC.	- SEC.	34 SEC.
TIME B4 REDUCTION	15 SEC.	- SEC.	15 SEC.
TIME TO REDUCE	30 SEC.	- SEC.	30 SEC.
MINIMUM GAP	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	NEMA PHASE	TIMING FEATURE	TIME	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN?
2A,2B	6X6	5	300	X		1	X		1 2	- SEC.	ALL	NO	
4A	6X60	2-4-2	0	X		1	X		1 4	- SEC.	ALL	NO	
4B	6X60	2-4-2	0	X		2	X		2 4	DELAY 25 SEC.	ALL	YES	
6A,6B	6X6	5	300	X		1	X		2 6	- SEC.	ALL	NO	
6C	6X60	2-4-2	0	X		3	X		1 6	DELAY 3 SEC.	Ø6	NO	

SIGNAL UPGRADE - FINAL DESIGN

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Prepared for the Offices of:
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 STATE and Geometric Section

US 64 BUS (RALEIGH ST) AT US 64 BYP WB RAMP

DIVISION 04 EDGECOMB COUNTY ROCKY MOUNT
 PLAN DATE: Aug 2004 REVIEWED BY: L Eddins
 PREPARED BY: C Kincaid REVIEWED BY: S Asefnia

SCALE: 1"=50'

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER 2004 DEWIDEN S. ASEFNIA

SIGNATURE: 8/16/04 DATE: 8/16/04
 SIG. INVENTORY NO. 04-0653