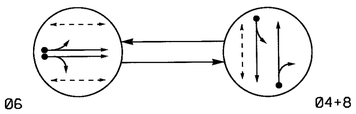
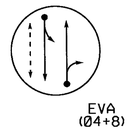
PROJECT REFERENCE NO.	SHEET NO.
SS-4905BP	Sig. 1

PHASING DIAGRAM



OVERHEIGHT PREEMPTION



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø6	Ø4+8	EVA	FLASH
41, 42	R	G	G	R
61, 62	G	R	R	Y
81, 82	R	G	G	R
P61, P62	W	DW	DW	DRK
P63, P64	W	DW	DW	DRK
P81, P82	DW	W	W	DRK
SIGN A	*	*	*	*

*See Notes 9 & 10
W - Walk
DW - Don't Walk
DRK - Dark

SIGNAL FACE I.D.

All Heads L.E.D.

41, 42
61, 62
81, 82

P61, P62
P63, P64
P81, P82

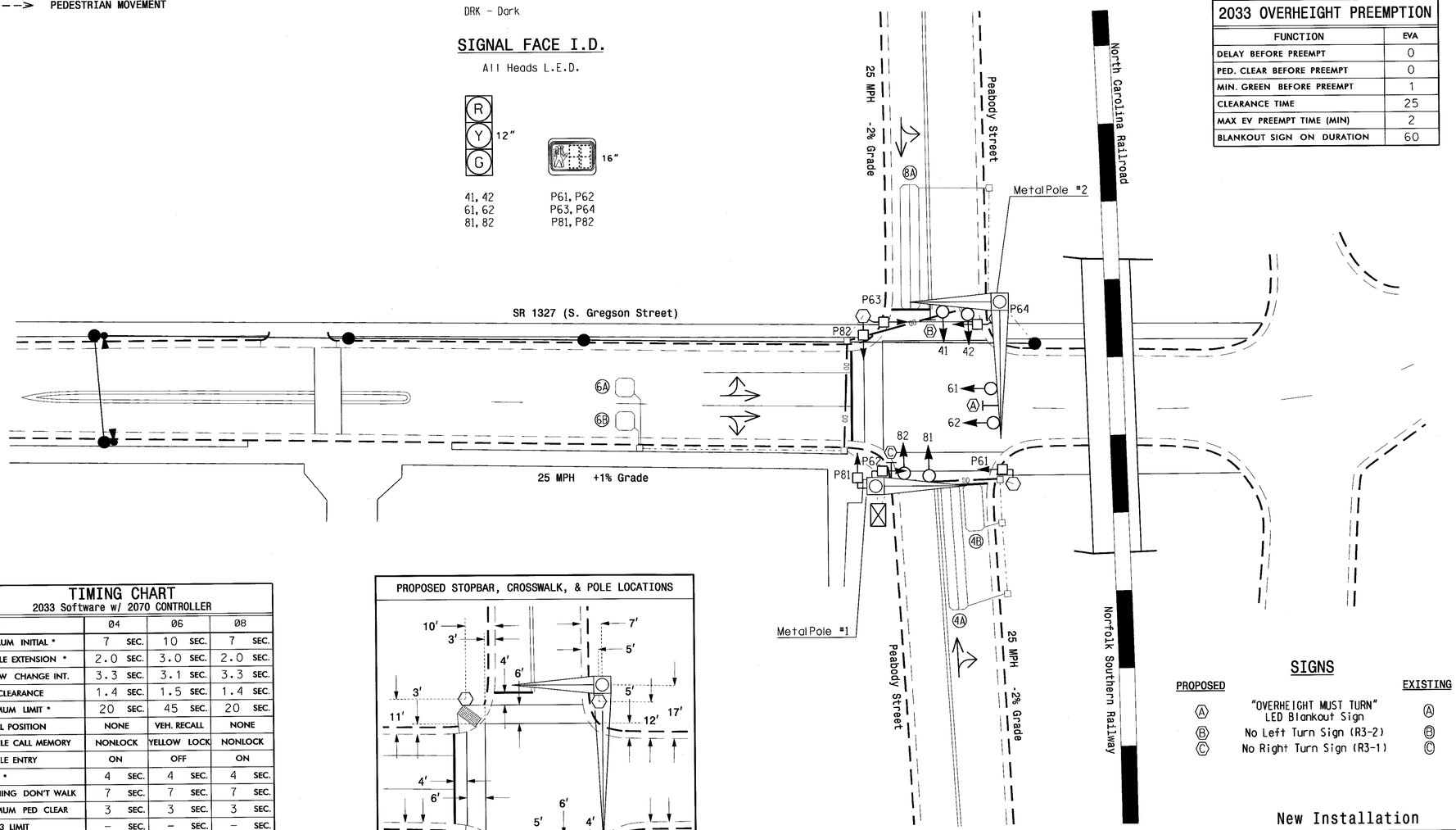
2033 SOFTWARE w/ 2070 CONTROLLER LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING														
							TIMING		ATTRIBUTES								LOOPS	STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	DELAY	CARRY (STRETCH)	1 FULL TIME PEDALERT	2 PEDESTRIAN CALL	3 RESERVED	4 COUNT	5 EXTENSION	6 TYPE 3	7 CALLING	8 ALTERNATE	SYSTEM	NEW	EXISTING
4A	6X40	2-4-2	0	X	-	4	10 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	X	-
4B	6X15	2	0	X	-	4	10 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	X	-
6A, 6B	6X6	3	70	X	-	6	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	X	-
8A	6X40	2-4-2	0	X	-	8	5 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	X	-
P61, P62	-	-	-	X	-	6	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-	X	-
P63, P64	-	-	-	X	-	6	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-	X	-
P81, P82	-	-	-	X	-	8	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-	X	-

2 Phase
Fully Actuated
w/ Overheight Vehicle Preemption
(Durham Signal System)

2033 OVERHEIGHT PREEMPTION

FUNCTION	EVA
DELAY BEFORE PREEMPT	0
PED. CLEAR BEFORE PREEMPT	0
MIN. GREEN BEFORE PREEMPT	1
CLEARANCE TIME	25
MAX EV PREEMPT TIME (MIN)	2
BLANKOUT SIGN ON DURATION	60

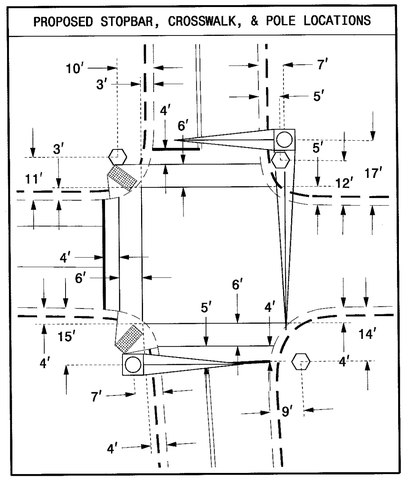


TIMING CHART
2033 Software w/ 2070 CONTROLLER

PHASE	Ø4	Ø6	Ø8
MINIMUM INITIAL *	7 SEC.	10 SEC.	7 SEC.
VEHICLE EXTENSION *	2.0 SEC.	3.0 SEC.	2.0 SEC.
YELLOW CHANGE INT.	3.3 SEC.	3.1 SEC.	3.3 SEC.
RED CLEARANCE	1.4 SEC.	1.5 SEC.	1.4 SEC.
MAXIMUM LIMIT *	20 SEC.	45 SEC.	20 SEC.
RECALL POSITION	NONE	VEH. RECALL	NONE
VEHICLE CALL MEMORY	NONLOCK	YELLOW LOCK	NONLOCK
DOUBLE ENTRY	ON	OFF	ON
WALK *	4 SEC.	4 SEC.	4 SEC.
FLASHING DON'T WALK	7 SEC.	7 SEC.	7 SEC.
MINIMUM PED CLEAR	3 SEC.	3 SEC.	3 SEC.
TYPE 3 LIMIT	– SEC.	– SEC.	– SEC.
ALTERNATE EXTENSION	– SEC.	– SEC.	– SEC.
ADD PER VEHICLE *	– SEC.	– SEC.	– SEC.
MAXIMUM INITIAL *	– SEC.	– SEC.	– SEC.
MAXIMUM GAP*	2.0 SEC.	3.0 SEC.	2.0 SEC.
REDUCE 0.1 SEC EVERY *	– SEC.	– SEC.	– SEC.
MINIMUM GAP	2.0	3.0 SEC.	2.0 SEC.

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

PROPOSED STOPBAR, CROSSWALK, & POLE LOCATIONS



NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
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. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
7. Pavement markings are existing unless otherwise shown.
8. This intersection features an overheight vehicle detection preemption system. Shown location of overheight vehicle detectors are conceptual only. See ITS plans for exact location.
9. Ensure flashing operation does not alter operation of blankout sign.
10. Blankout sign shall illuminate ON immediately upon detection of overheight vehicle and remain ON for 60 seconds irregardless of signal phasing display.
11. Upon completion of Overheight Vehicle Preemption, controller returns to normal operation based on vehicle demand.
12. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

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	
N/A	Railroad Tracks	
	Metal Pole with Mastarm	
	Directional Drill	N/A
	Overheight Detector	
	Type II Signal Pedestal	

SIGNS

PROPOSED		EXISTING
A	"OVERHEIGHT MUST TURN" LED Blankout Sign	A
B	No Left Turn Sign (R3-2)	B
C	No Right Turn Sign (R3-1)	C

New Installation

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy, Garner, NC 27529

SCALE 0 20 1"=20'

SR 1327 (S. Gregson Street) at Peabody Street

Division 5 Durham County Durham

PLAN DATE: January 2014 REVIEWED BY:
PREPARED BY: N. Zinser REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIELMA
SIGNATURE DATE 7/14
SIG. INVENTORY NO. 05-1236

26-MAR-2014 09:53
S:\TSGSU\ITS Signals\Signal Design Section\Central Region\Div 5\05-1236\05123c_sig_dsn.20140307.dgn
rmzinser