2 Phase Fully Actuated W/ FV Preemption

- 1. Refer to gs NCDOT" dated January cations for
- 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 all timing information into phase banks
- 5. Set phase bank 3 maximum limit to 250 seconds for phases used.
- 6. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- controller returns to normal operation.
- 8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- #82 during this phase of construction.
- 10. Signal head #21 to remain bagged during this phase of construction

LEGEND

Traffic Signal Head

Modified Signal Head

Sign Pedestrian Signal Head With Push Button & Sign Signal Pole with Guy Signal Pole with Sidewalk Guy

Inductive Loop Detector Controller & Cabinet

Junction Box

Right of Way Directional Arrow "No Left Turn" (R3-2) "No Right Turn" (R3-1)

"Dual Turn Arrows" (R10-21) w/ Flags Work Area

Drums

Barricades

Direct Bury

Optical Detector

Video Detector

Video Detection Area

---- E---- Construction Easement

—— PUE —— Permanent Utility Easement

2-in Underground Conduit -----

EXISTING

●

N/A

N/A N/A

N/A

N/A

N/A

11. Contractor shall adjust video detection zones as required.

-	Signal	
	NOTES	
	Standard 'Standard	_

- Roads and Structures" dated January 2012.

- 1,2, and 3 unless otherwise noted.
- 7. Upon completion of Emergency Vehicle Preemption,

- 9. Disconnect and bag signal heads #11, #81 and

PROPOSED

 \bigcirc

N/A

 \bigcirc

NC 55 (N. Alston Ave.)	PUE 35 Mph PUE 35 Mph PUE 35 Mph A 81 82	
\rightarrow 2AO	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
	E R/W R/W R/W R/W R/W	
35 Mph +1% Grade	E	
	10000 100000 10000 10000 10000 10000 10000 10000 10000 10000 100000 10000 10000 10000 10000 10000 10000 10000 10000 100000 10000	
	E	

2033 SOFTWARE w/ 2070 CONTROLLER

LOOP & DETECTOR UNIT INSTALLATION CHART

- SEC.

- SEC. - SEC. - | - | -

PHASE DELAY

0 | -| * | 4 | 10 SEC.

70 |- |* | 6 |

INDUCTIVE LOOPS

SIZE

6×40

* Video Detection Zone

LOOP NO.

4 A

TURNS STOPBAR | NEMA | NEMA |

DETECTOR PROGRAMMING

ATTRIBUTES

2033 EV PREEMPTION

PHASING DIAGRAM

PHASING DIAGRAM DETECTION LEGEND

DETECTED MOVEMENT

 $<\!\!--\!\!>$ PEDESTRIAN MOVEMENT

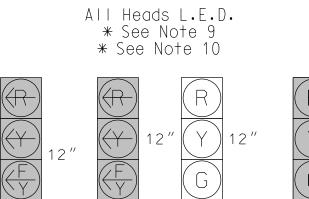
UNSIGNALIZED MOVEMENT

UNDETECTED MOVEMENT (OVERLAP)

FUNCTION	EVB (SECONDS)
DELAY BEFORE PREEMPT	0
PED. CLEAR BEFORE PREEMPT	0
MIN. GREEN BEFORE PREEMPT	1
CLEARANCE TIME	2
PREEMPT EXTEND**	2.0
** D T' ' O I' D I	

** Program Timing on Optical Detector Unit

SIGNAL FACE I.D.



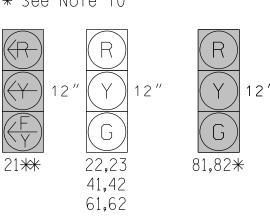


TABLE OF OPERATION

SIGNAL

FACE

22,23

PHASE

EV Preempt Phases

SEE NOTE #7

EVB (Ø6)

TIMING CHART 2033 SOFTWARE w/2070 CONTROLLER							
PHASE	Ø2	Ø4	Ø6				
MINIMUM INITIAL *	1 () SEC .	7 SEC .	1 () SEC .				
VEHICLE EXTENSION *	3.0 SEC .	2.0 SEC .	3.0 SEC .				
YELLOW CHANGE INT.	3.8 SEC .	3.0 SEC .	3.7 SEC .				
RED CLEARANCE	1.4 SEC.	1 . 4 SEC.	1.4 SEC.				
MAXIMUM LIMIT *	50 SEC .	35 SEC .	50 SEC .				
RECALL POSITION	VEH. RECALL	NONE	VEH. RECALL				
VEHICLE CALL MEMORY	YELLOW LOCK	NONE	YELLOW LOCI				
DOUBLE ENTRY	OFF	OFF	OFF				
WALK *	- SEC.	- SEC.	- SEC.				
FLASHING DON'T WALK	- SEC.	– SEC.	- SEC.				
MIN PED CLEARANCE	- SEC.	– SEC.	- 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*	3 . () SEC .	2 . 0 SEC .	3 . 0 SEC .				
REDUCE 0.1 SEC EVERY *	- SEC.	- SEC.	– SEC.				
MINIMUM GAP	3 . 0 SEC .	2 . () SEC .	3 . 0 SEC .				

* 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. Signal Upgrade - Temporary Design 4 (TMP Phase 1, Steps 11-21) Prepared for the Offices of: NC 55 (North Alston Avenue)

Taylor Street Division 5 Durham County PLAN DATE: September 2014 REVIEWED BY: J Hochanadel 750 N.Greenfield Pkwy, Garner, NC 27529 PREPARED BY: C Lawson REVIEWED BY:

INIT. DATE

1025 Wade Avenue Raleigh, NC 27605 Tel:919-789-9977 Fax:919-789-9591

Durham MyPAN

4/02/15 DATE SIG. INVENTORY NO. 05-0228T4