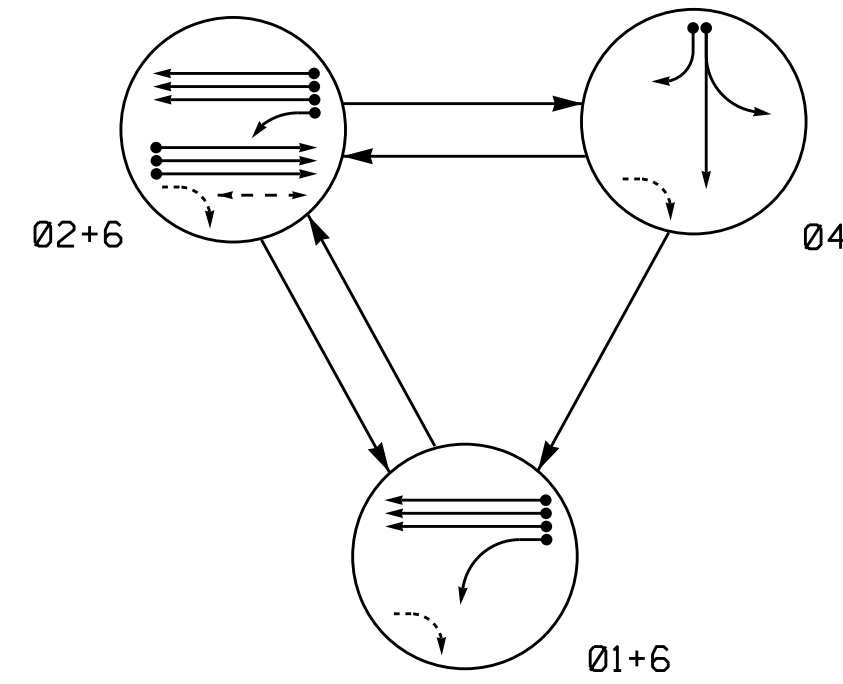
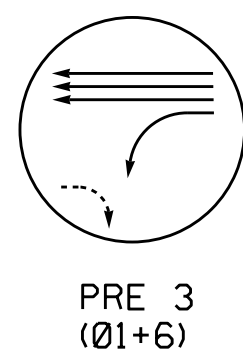


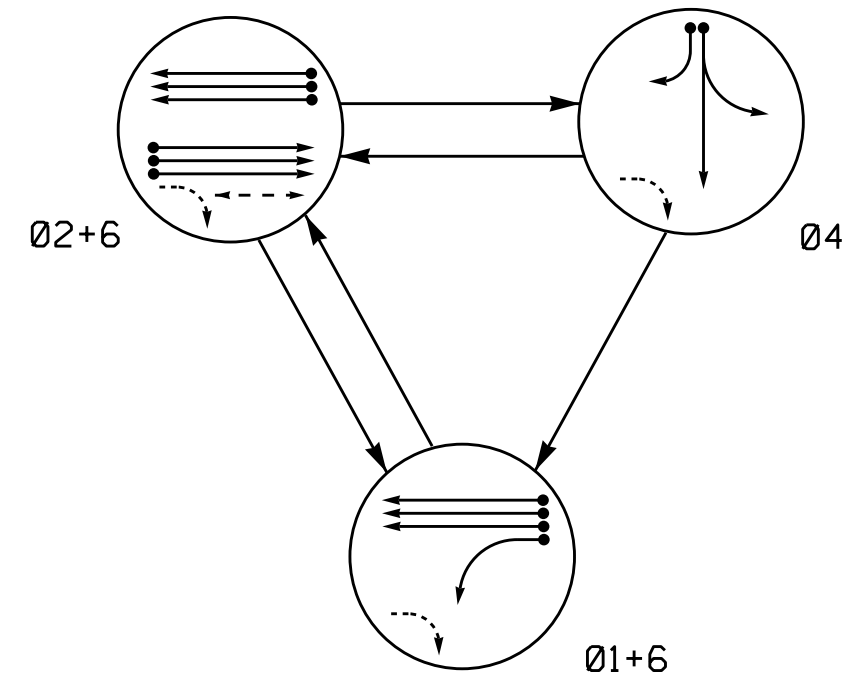
DEFAULT PHASING DIAGRAM



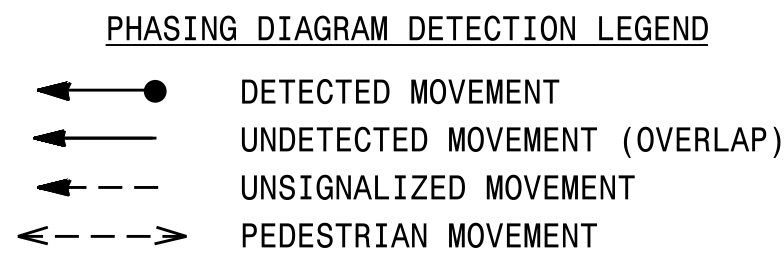
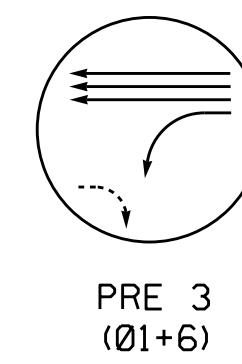
DEFAULT EV PREEMPT PHASES



ALTERNATE PHASING DIAGRAM



ALTERNATE EV PREEMPT PHASES



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE				
	01+6	02+6	04	PRE 3	FLASH
11	←	←	←	←	←
21, 22	R	↑	R	R	Y
41, 42	R	R	G	R	R
61, 62	↑	↑	R	↑	Y
P21, P22	DW	W	DW	DW	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE				
	01+6	02+6	04	PRE 3	FLASH
11	←	←	←	←	←
21, 22	R	↑	R	R	Y
41, 42	R	R	G	R	R
61, 62	↑	↑	R	↑	Y
P21, P22	DW	W	DW	DW	DRK

ASC/3 DETECTOR INSTALLATION CHART

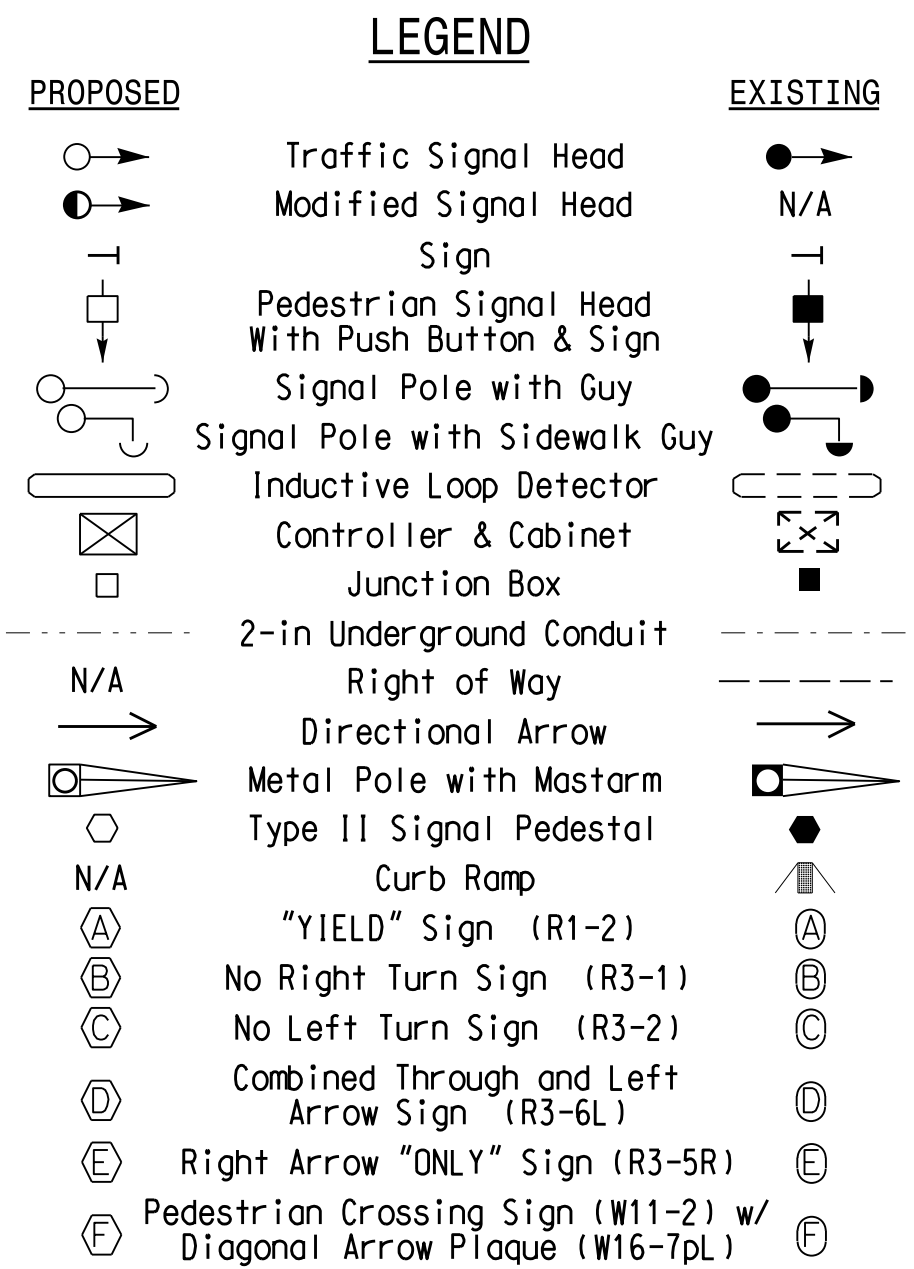
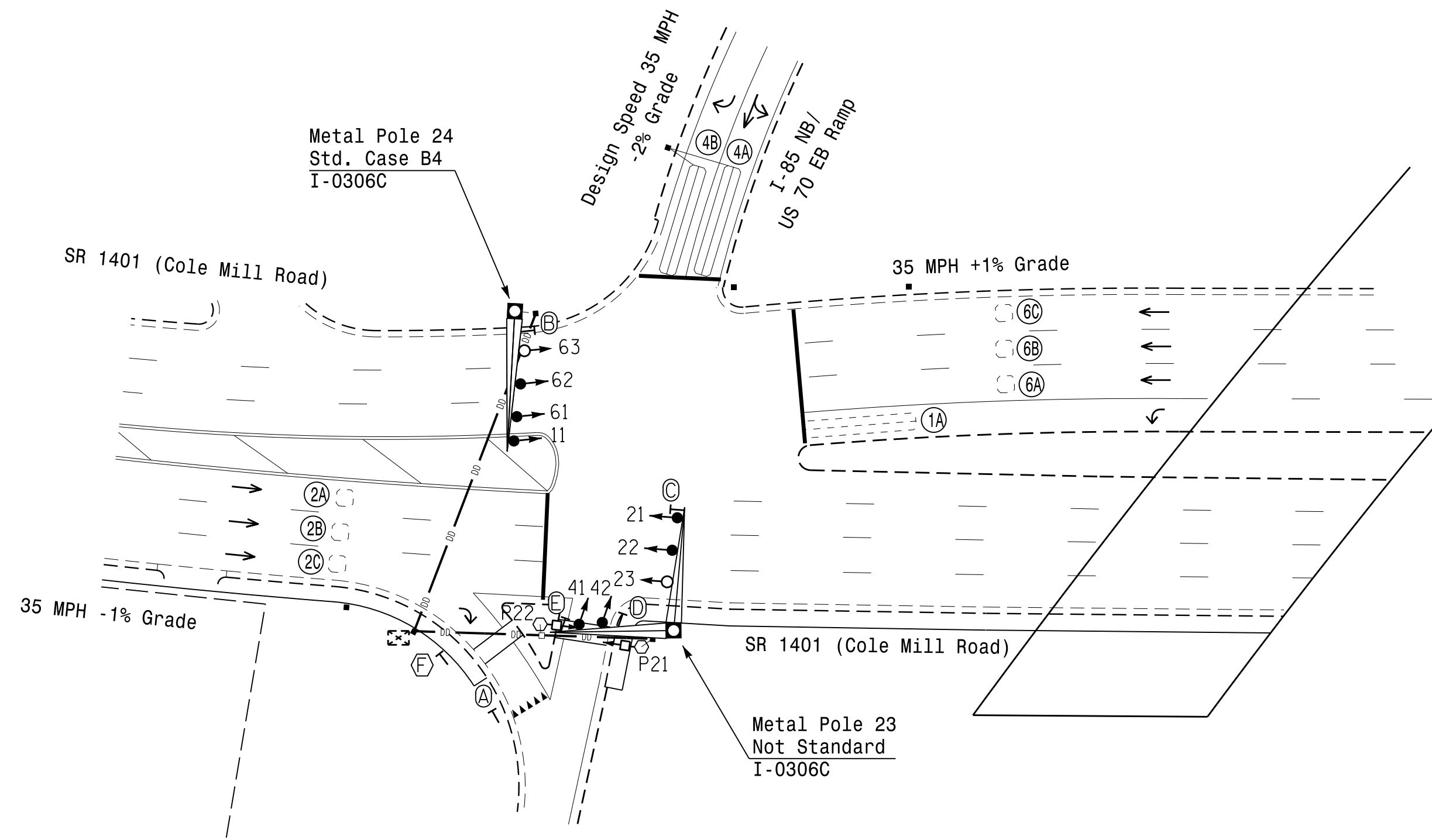
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP SYSTEM	NEW CARD
1A	6X40	0	2-4-2	-	1	Yes	-	15*	-	N	-	-
2A	6X6	70	3	-	2	Yes	-	-	-	N	-	-
2B	6X6	70	3	-	2	Yes	-	-	-	N	-	-
2C	6X6	70	3	-	2	Yes	-	-	-	N	-	-
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	N	-	-
4B	6X40	0	2-4-2	X	4	Yes	-	15	-	N	-	-
6A	6X6	70	4	-	6	Yes	-	-	-	N	-	-
6B	6X6	70	4	-	6	Yes	-	-	-	N	-	-
6C	6X6	70	4	-	6	Yes	-	-	-	N	-	-

* Disable delay during Alternate Phasing operation.
Disable phase call for loop during Alternate Phasing operation.

3 Phase Fully Actuated w/ Emergency Vehicle Preemption (Durham Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 may be lagged.
- Reposition existing signal heads 11, 21, 22, 61, and 62.
- All existing vehicle signal heads have backplates.
- Install backplates on new signal heads 23 and 63.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing unless otherwise shown.
- This intersection features a GPS preemption system.
- The Division (City) Traffic Engineer will determine the hours of use for each phasing plan.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



ASC/3 TIMING CHART

FEATURE	PHASE			
	1	2	4	6
Min Green *	7	10	7	10
Walk *	-	7	-	-
Ped Clear	-	4	-	-
Veh. Extension *	2.0	3.0	2.0	3.0
Max I *	25	50	20	50
Yellow	3.0	3.9	4.0	3.9
Red Clear	3.2	2.4	2.6	2.4
Actuations B4 Add *	-	-	-	-
Seconds / Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Locking Detector	-	X	-	X
Recall Position	-	VEH. RECALL	-	VEH. RECALL
Dual Entry	-	-	-	-
Simultaneous Gap	X	X	X	X

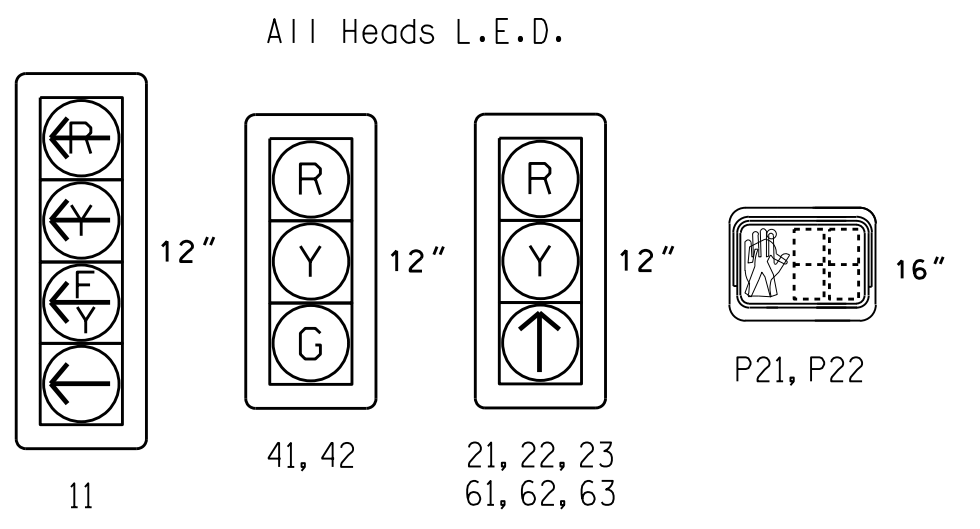
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

ASC/3 EV PREEMPT

FUNCTION	PRE 3
Exit Phase(s)	2+6
Preempt Override	OFF
Delay Time	0
Ped Clear Through Yellow	Y
Terminate Phases	N
Entrance Walk	1
Entrance Ped Clear	255*
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	7
Preempt Input Extension Time**	2
Preempt Max Time	120
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

* Time defaults to time used for phase during normal operation.
** Program Timing on GPS Detection Unit.

SIGNAL FACE I.D.



Signal Upgrade

Prepared in the Offices of:
TRANSPORTATION MOBILITY AND SAFETY DIVISION
STATE OF NORTH CAROLINA
SIGNAL DESIGN SECTION

750 N. Greenfield Pkwy, Garner, NC 27529

SR 1401 (Cole Mill Road) at I-85 NB/ US 70 EB Ramps

Division 5 Durham County Durham

PLAN DATE: June 2023 REVIEWED BY:

PREPARED BY: J.A. Lohr REVIEWED BY:

REVISIONS: INIT. DATE

SCALE: 1" = 40'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026486

DATE: 09/05/2023

SIG. INVENTORY NO. 05-1235

27-007-2023, 13:29 S:\IT\5\K\15\SIGNAL\Signal Design Section\Central Region\401iv 5\I-5941\051235...sig_dsm_20230905.dgn J. Lohr