

**TABLE OF OPERATION**

SIGNAL FACE	PHASE							
	01+6	02+6	03	04	EVP 3	EVP 4	EVP 5	PRE 7
11	F	R	R	R	F	R	R	R
21	F	R	R	R	F	R	R	R
22,23	R	G	R	R	R	G	R	R
31	R	R	G	R	R	R	R	R
32	R	R	G	R	R	R	R	R
41	R	R	R	G	R	R	G	R
42	R	R	R	G	R	R	G	R
43, 44	R	R	R	R	R	R	R	R
61, 62, 63	G	G	R	G	G	R	G	Y

**ASC/3 DETECTOR INSTALLATION CHART**

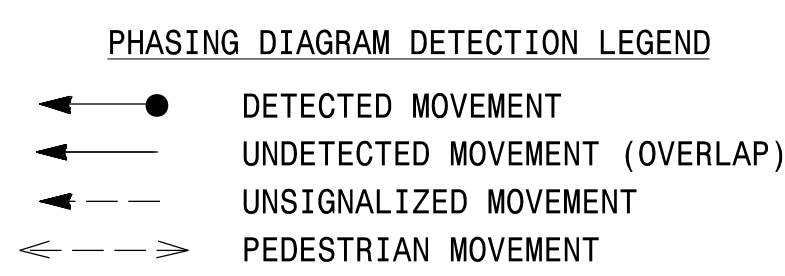
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP SYSTEM	NEW CARD
1A	6X60	+5	2-4-2	-	1	Yes	-	15	-	S	-	X
1B	6X60	+5	2-4-2	-	6	Yes	-	3	-	G	-	X
1C	6X60	+5	2-4-2	-	1	Yes	-	15*	-	S	-	X
1D	6X6	180	EXIST	-	Pre7	-	-	5	-	N	-	X
2A	6X6	300	EXIST	-	2	Yes	-	-	-	X	N	-
2B	6X6	300	EXIST	-	2	Yes	-	-	-	X	N	-
2C	6X60	+5	2-4-2	-	2	Yes	-	3	-	S	-	X
3A	6X60	+5	2-4-2	-	3/10	Yes	-	-	-	S	-	X
4A	6X60	+5	2-4-2	-	4	Yes	-	3	-	S	-	X
4B	6X60	+5	2-4-2	-	4	Yes	-	-	-	S	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	-	X	N	-
6B	6X6	300	EXIST	-	6	Yes	-	-	-	X	N	-

\* Disable Delay From 6:00a.m. to 7:00p.m.

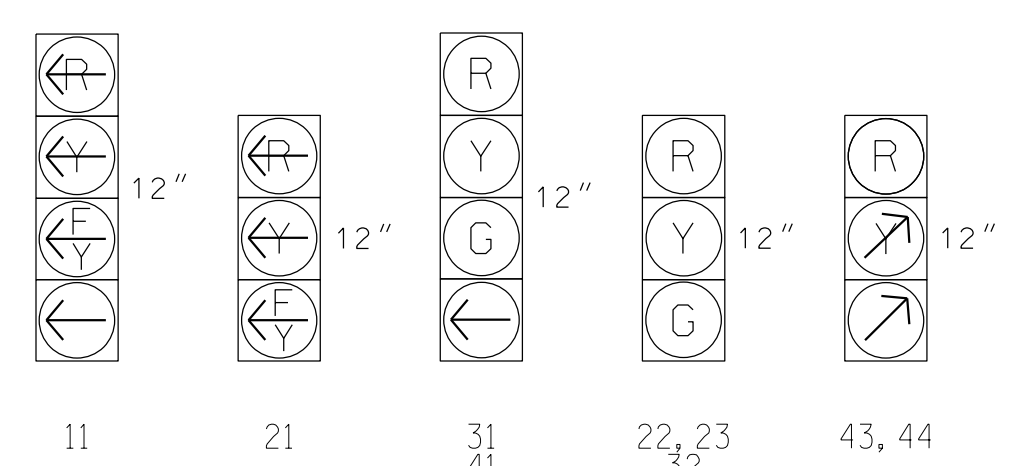
**4 Phase Fully Actuated W/ EV Preemption (Elizabeth City Signal System)**

**NOTES**

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Relocate existing optical detection equipment from existing cabinet to new cabinet.
- Optical detector 10 calls EVP3; Optical detector 20 calls EVP4; Optical detector 30 calls EVP5.
- Install new poles directly adjacent to existing poles and raise signal spans to obtain 17' minimum clearance for signal head heights.
- Loop 1D serves as queue backup detector. After 5 seconds of constant actuation, the detector unit places a call to the controller to preempt normal operation to clear out the storage lanes.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



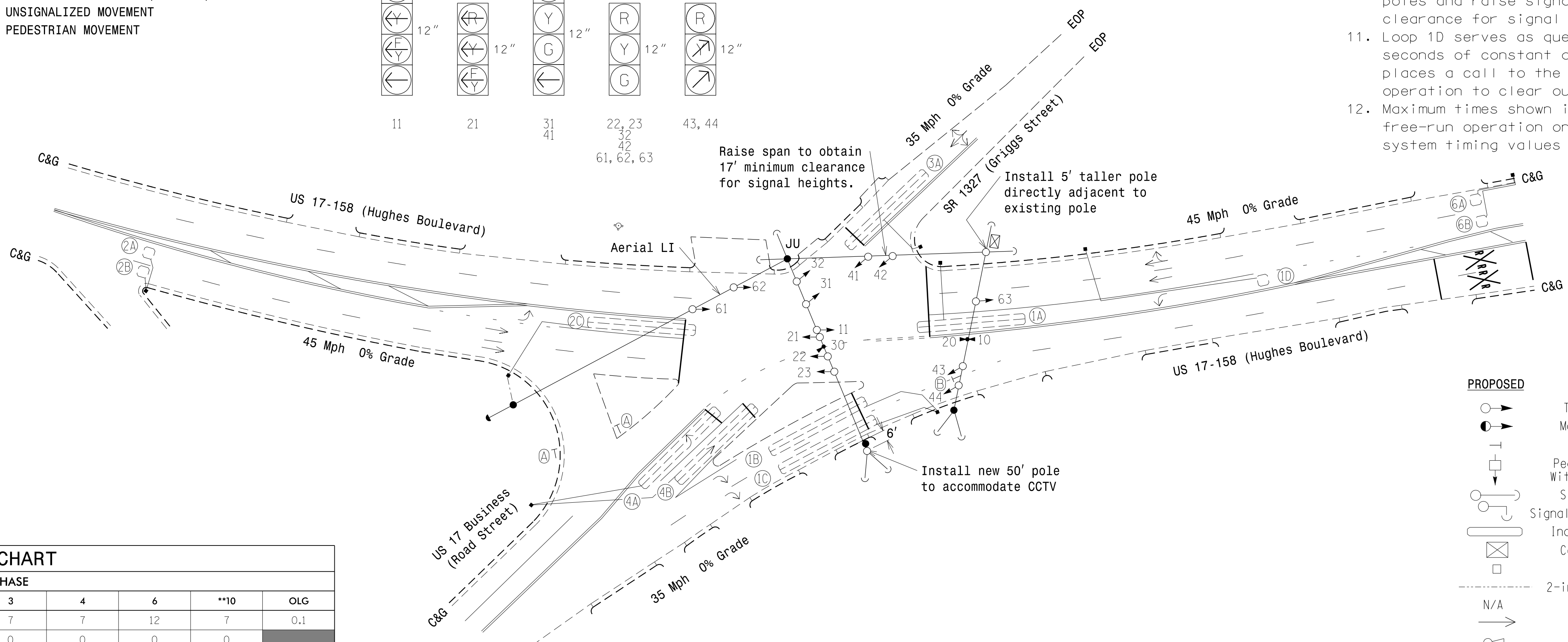
**SIGNAL FACE I.D.**



**ASC/3 BACKUP PREEMPT**

FUNCTION	PRE 7
Exit Phase(s)	2,6
Preempt Override	OFF
Delay Time	0
Ped Clear Through Yellow	N
Terminate Phases	N
Entrance Walk	255*
Entrance Ped Clear	255*
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	25
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

\* Time defaults to time used for phase during normal operation.



**ASC/3 TIMING CHART**

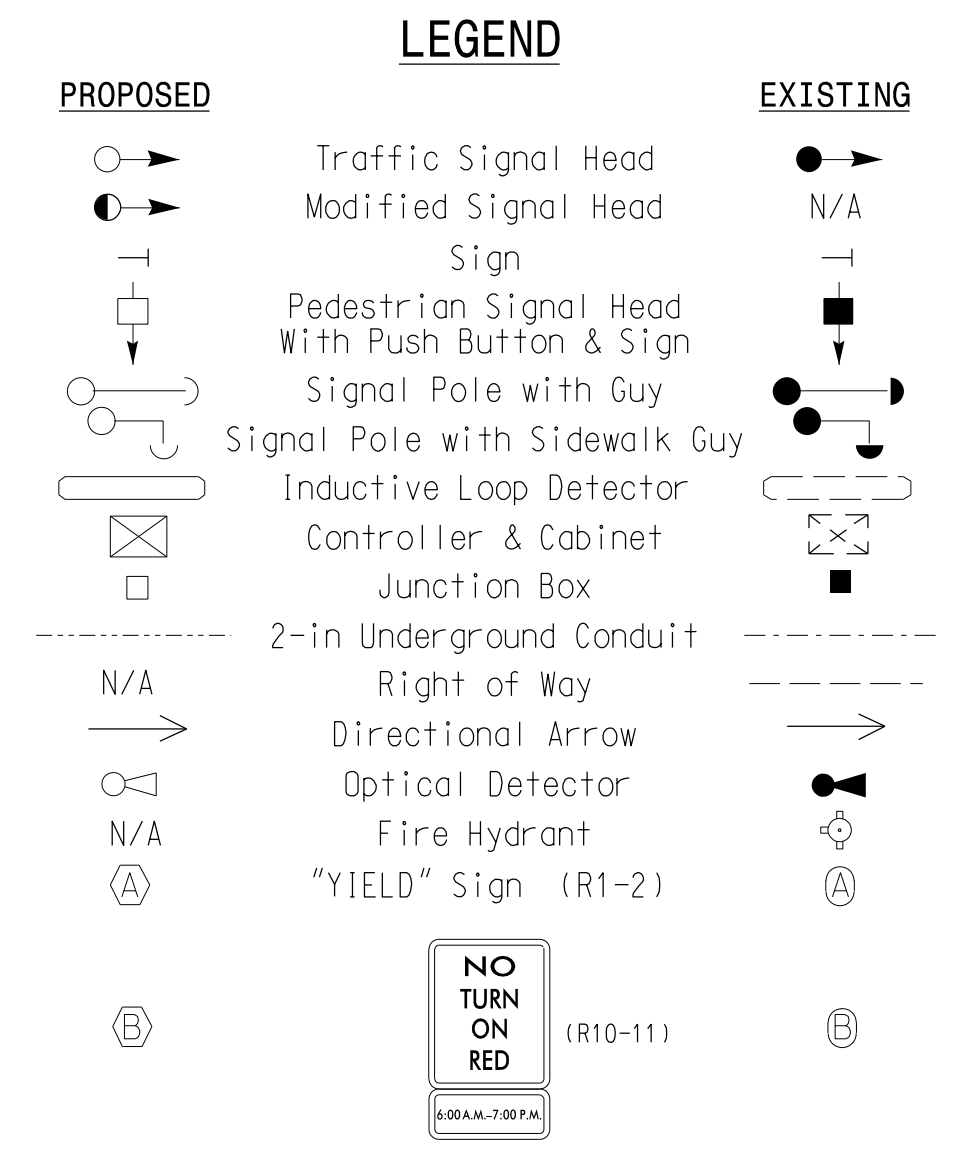
FEATURE	PHASE						OLG
	1	2	3	4	6	**10	
Min Green *	7	12	7	7	12	7	0.1
Walk *	0	0	0	0	0	0	
Ped Clear	0	0	0	0	0	0	
Veh. Extension *	1.0	6.0	1.0	1.0	6.0	1.0	
Max 1 *	30	90	15	30	90	15	
Yellow	3.0	4.5	3.8	3.8	4.5	3.8	3.8
Red Clear	3.5	2.0	2.3	2.0	2.0	2.3	2.3
Actuations B4 Add *	-	0	-	-	0	-	
Seconds / Actuation *	-	1.5	-	-	1.5	-	
Max Initial *	-	34	-	-	34	-	
Time Before Reduction *	-	15	-	-	15	-	
Time To Reduce *	-	30	-	-	30	-	
Minimum Gap	-	3.0	-	-	3.0	-	
Locking Detector	-	X	-	-	X	-	
Recall Position	-	VEH. RECALL	-	-	VEH. RECALL	-	
Dual Entry	-	-	-	-	-	-	
Simultaneous Gap	X	X	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.  
 \*\* Phase used for timing purposes only.

**ASC/3 EV PREEMPT**

FUNCTION	PRE 3	PRE 4	PRE 5
Exit Phase(s)	2,6	3	2,6
Preempt Override	OFF	OFF	ON
Delay Time	0	0	0
Ped Clear Through Yellow	N	N	N
Terminate Phases	N	N	N
Entrance Walk	255*	255*	255*
Entrance Ped Clear	255*	255*	255*
Entrance Min Green	1	1	1
Entrance Yellow Change	25.5*	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*	25.5*
Minimum Dwell Time	12	12	7
Preempt Input Extension Time	2	2	2
Preempt Max Time	120	120	120
Exit Yellow Change	25.5*	25.5*	25.5*
Exit Red Clear	25.5*	25.5*	25.5*

\* Allows normal phase times to be used.



**Signal Upgrade**

DRMP, Inc. 8000 Regency Parkway, Suite 175 Cary, NC 27518 NC License No. C-2213 (919) 650-1038

Plans Prepared By: **DRMP**

750 N. Greenfield Pkwy, Garner, NC 27529

Scale: 1" = 40'

**US 17-158 (Hughes Boulevard) at US 17 Business (Road Street) / SR 1327 (Griggs Street)**

Division 1 Pasquotank County Elizabeth City

PLAN DATE: March 2018 REVISIONS: \_\_\_\_\_

PREPARED BY: JA Le REVISIONS: \_\_\_\_\_

REVIEWED BY: AJ Davis REVISIONS: \_\_\_\_\_

REVIEWED BY: LM Moon REVISIONS: \_\_\_\_\_

DATE: 9/20/2018

**SEAL**

**PROFESSIONAL ENGINEER**

SEAL 022516

LISA M. MOON

DocuSigned By: Lisa M. Moon

SIG. INVENTORY NO. 01-0025