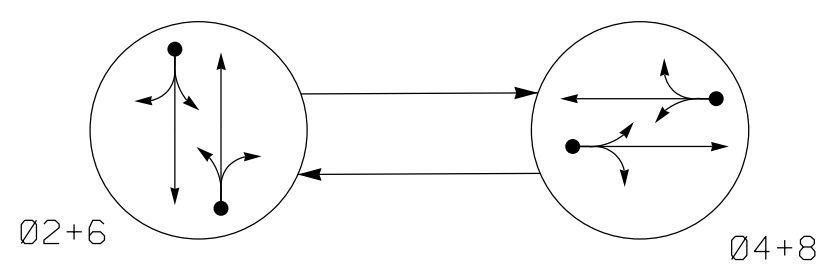
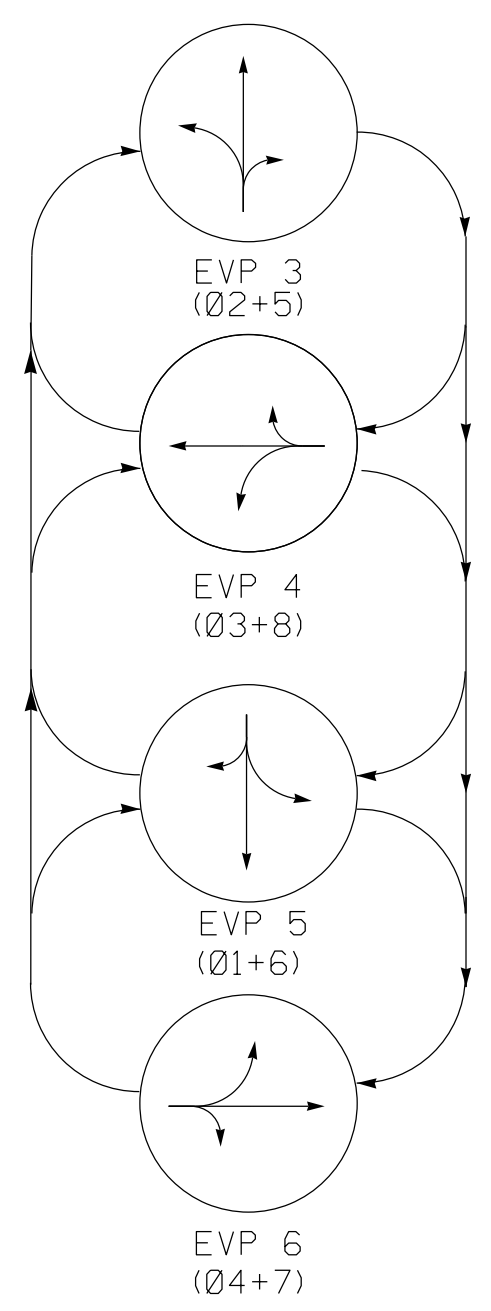


**PHASING DIAGRAM**



**EV PREEMPT PHASES**



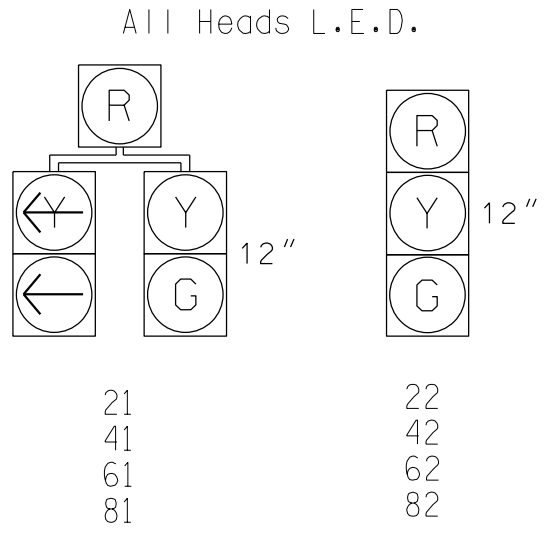
**PHASING DIAGRAM DETECTION LEGEND**

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

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

\* Allows normal phase times to be used.

**SIGNAL FACE I.D.**



ASC/3 DETECTOR INSTALLATION CHART												
DETECTOR				PROGRAMMING								
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP SYSTEM	NEW CARD
2A	6X40	0	2-4-2	X	2	Yes	-	-	-	S	-	X
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	S	-	X
6A	6X40	0	2-4-2	X	6	Yes	-	-	-	S	-	X
8A	6X40	0	2-4-2	X	8	Yes	-	5	-	S	-	X

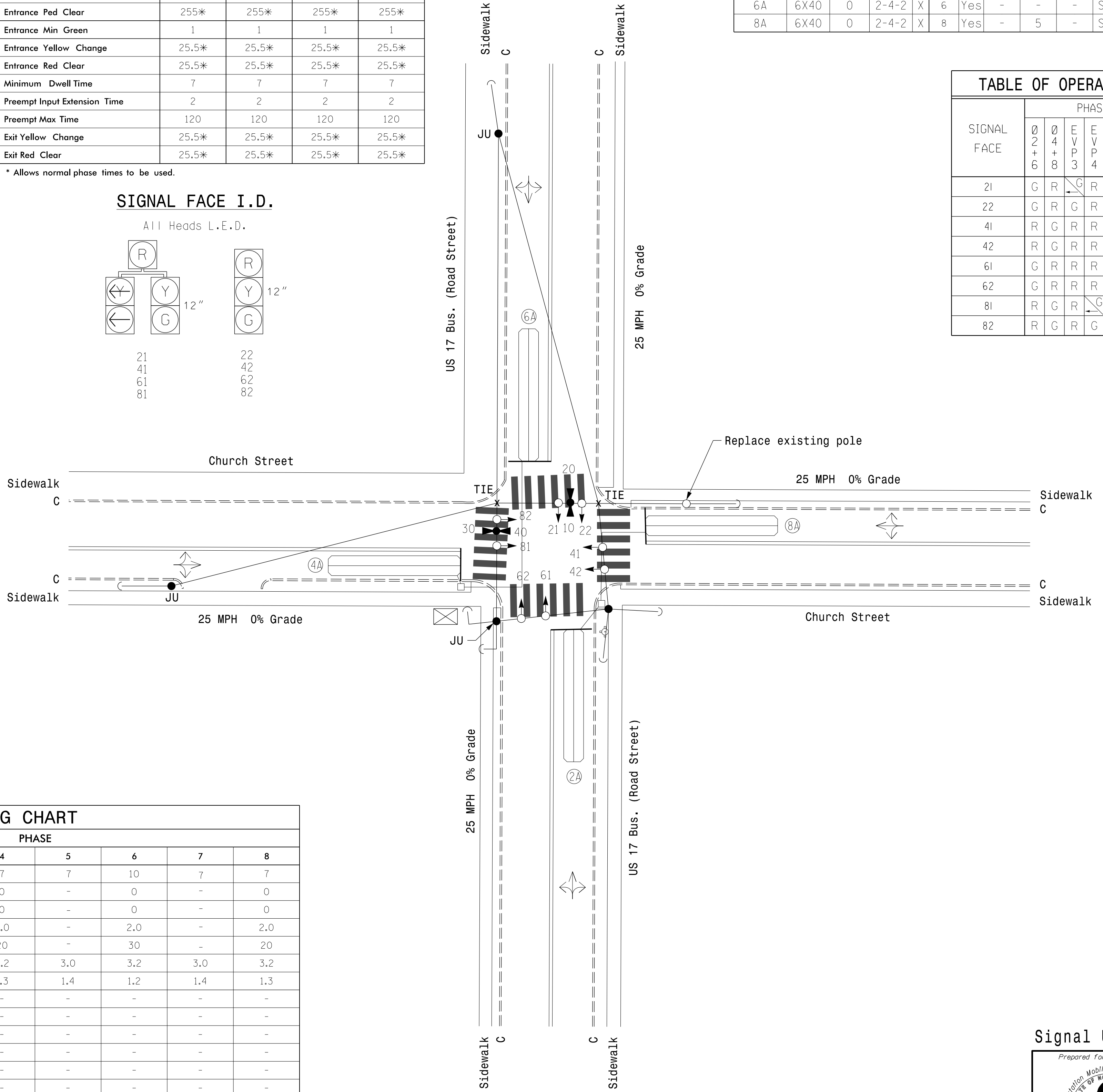
**TABLE OF OPERATION**

SIGNAL FACE	PHASE						FLASH
	Ø 2 + 6	Ø 4 + 8	EVP 3	EVP 4	EVP 5	EVP 6	
21	G	R	G	R	R	Y	
22	G	R	G	R	R	Y	
41	R	G	R	R	R	G	
42	R	G	R	R	R	G	
61	G	R	R	R	G	R	
62	G	R	R	R	G	R	
81	R	G	R	R	R	R	
82	R	G	R	R	R	R	

**2 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.
- 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. Repaint stop bars, crosswalks and 50' of double yellow lane lines in same locations on eastbound and westbound approaches.
- Relocate existing optical detector system to integrate into new controller cabinet and signal installation.
- This intersection features an optical preemption system. Shown location of optical detectors are conceptual only.
- Optical detector 10 calls EVP3; Optical detector 20 calls EVP5; Optical detector 30 calls EVP6; Optical detector 40 calls EVP4.
- 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	3	4	5	6	7	8
Min Green *	7	10	7	7	7	10	7	7
Walk *	-	0	-	0	-	0	-	0
Ped Clear	-	0	-	0	-	0	-	0
Veh. Extension *	-	2.0	-	2.0	-	2.0	-	2.0
Max 1 *	-	30	-	20	-	30	-	20
Yellow	3.0	3.2	3.0	3.2	3.0	3.2	3.0	3.2
Red Clear	1.4	1.2	1.2	1.3	1.4	1.2	1.4	1.3
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	-	-	-	X	-	-	-	X
Simultaneous Gap	X	X	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.

**LEGEND**

- | PROPOSED   | EXISTING                          |
|--|-----------------------------------|
| ○ → Traffic Signal Head                            | ● → Traffic Signal Head           |
| ○ → Modified Signal Head                           | N/A                               |
| □ → Sign   | —                                 |
| □ → Pedestrian Signal Head With Push Button & Sign | □ → Pedestrian Signal Head        |
| □ → Signal Pole with Guy                           | □ → Signal Pole with Guy          |
| □ → Signal Pole with Sidewalk Guy                  | □ → Signal Pole with Sidewalk Guy |
| □ → Inductive Loop Detector                        | □ → Inductive Loop Detector       |
| □ → Controller & Cabinet                           | □ → Controller & Cabinet          |
| □ → Junction Box                                   | □ → Junction Box                  |
| — 2-in Underground Conduit                         | — 2-in Underground Conduit        |
| N/A  | — Right of Way                    |
| → Directional Arrow                                | → Directional Arrow               |
| N/A  | ⊕ Fire Hydrant                    |
| ○ Optical Detector                                 | ○ Optical Detector                |

**Signal Upgrade**

Prepared for the offices of:

DRMP, Inc.  
8000 Regency Parkway, Suite 175  
Cary, NC 27519  
NC License No. C-2213 (919) 650-1038

**US 17 Bus. (Road Street) at Church Street**

Division 1 Pasquotank County Elizabeth City

PLAN DATE: February 2018 REVIEWED BY: AJ Davis

PREPARED BY: JA Le REVIEWED BY: LM Moon

REVISIONS: \_\_\_\_\_ INIT. DATE

DocuSigned by: Lisa M. Moon 8/21/2018

SIG. INVENTORY NO. 01-0006

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

SEAL

21-AUG-2018 16:54 R:\05942\51001\0005\Signal\01-0006.dgn lmoon AT CAR-LMCDN1-W7