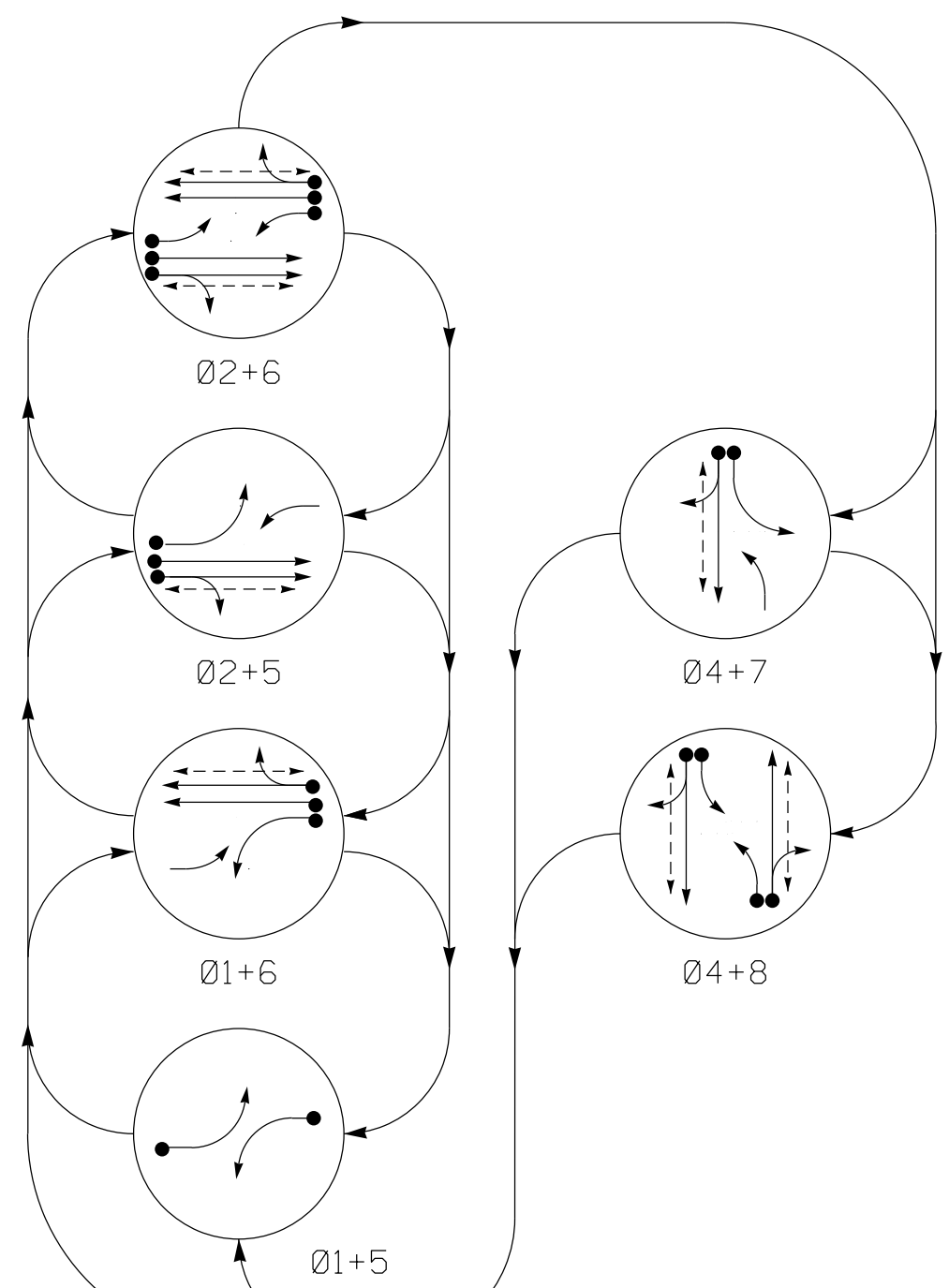
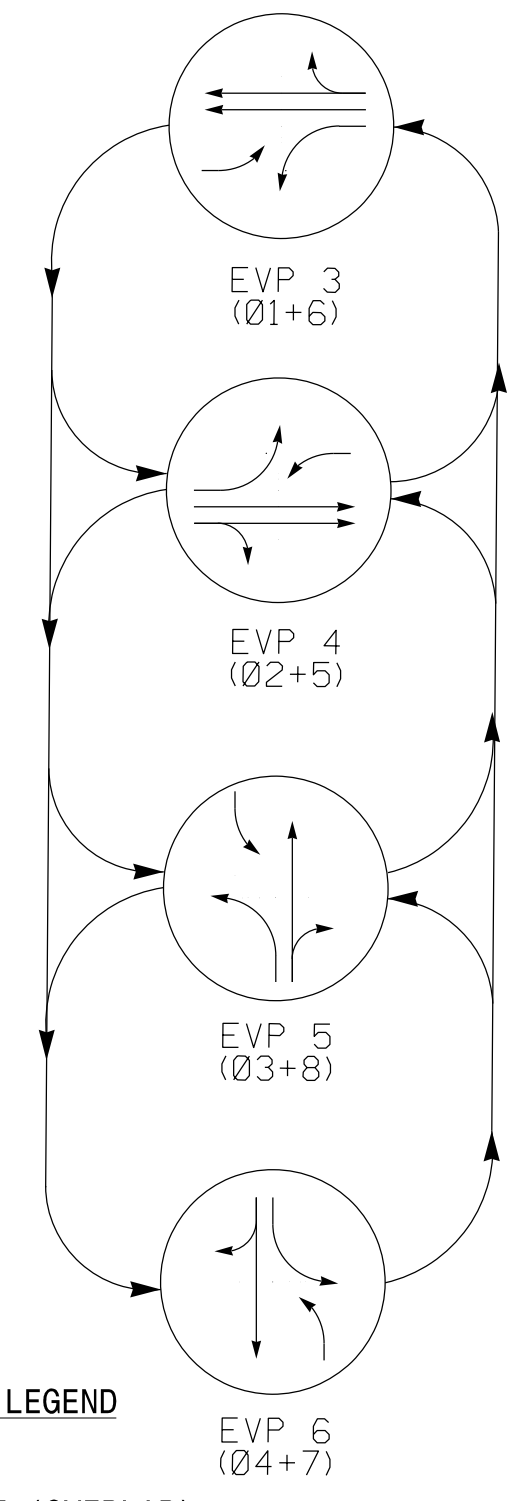


PHASING DIAGRAM



EV PREEMPT PHASES



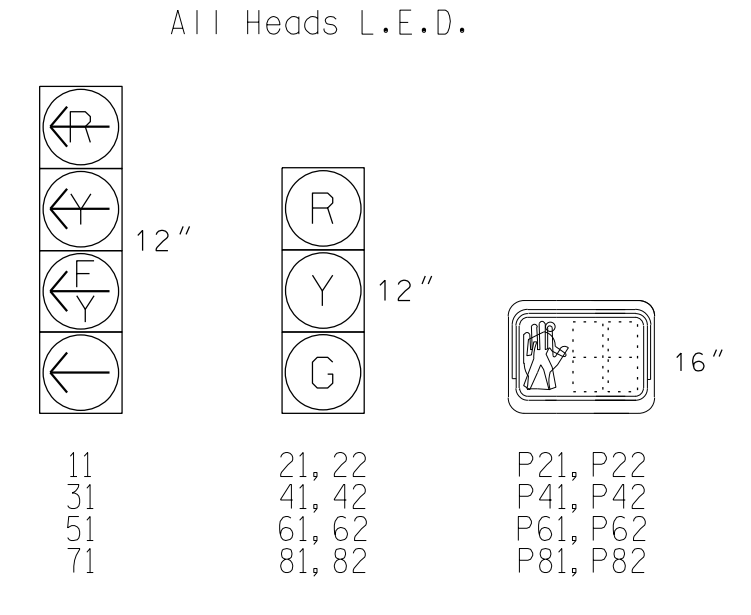
PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE										
	01+5	01+6	02+5	02+6	04+7	04+8	EVP 3	EVP 4	EVP 5	EVP 6	FLASH
11	←	←	←	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	R	G	R	R	Y
31	←	←	←	←	←	←	←	←	←	←	←
41, 42	R	R	R	R	G	G	R	R	R	G	R
51	←	←	←	←	←	←	←	←	←	←	←
61, 62	R	G	R	G	R	R	G	R	R	R	Y
71	←	←	←	←	←	←	←	←	←	←	←
81, 82	R	R	R	R	R	G	R	R	G	R	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DW	DW	DRK
P41, P42	DW	DW	DW	W	W	DW	DW	DW	DW	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DRK

SIGNAL FACE I.D.



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	*	-	1	Yes	-	15	-	S	-	X
2A	6X6	70	*	-	2	Yes	-	3	-	S	-	X
2B	6X6	70	*	-	2	Yes	-	-	-	S	-	X
4A	6X40	0	*	-	4	Yes	-	10	-	S	-	X
5A	6X40	0	*	-	5	Yes	-	15	-	S	-	X
6A	6X6	70	*	-	6	Yes	-	-	-	S	-	X
6B	6X6	70	*	-	6	Yes	-	-	-	S	-	X
7A	6X40	0	*	-	7	Yes	-	15	-	S	-	X
8A	6X6	0	*	-	8	Yes	-	3	-	S	-	X
8B	6X6	0	*	-	8	Yes	-	10	-	S	-	X
S1	6X6	+95	*	-	-	-	-	-	-	N	X	X
S2	6X6	+95	*	-	-	-	-	-	-	N	X	X
S3	6X6	+165	*	-	-	-	-	-	-	N	X	X

* Wireless Detection Zone

ASC/3 EV PREEMPT

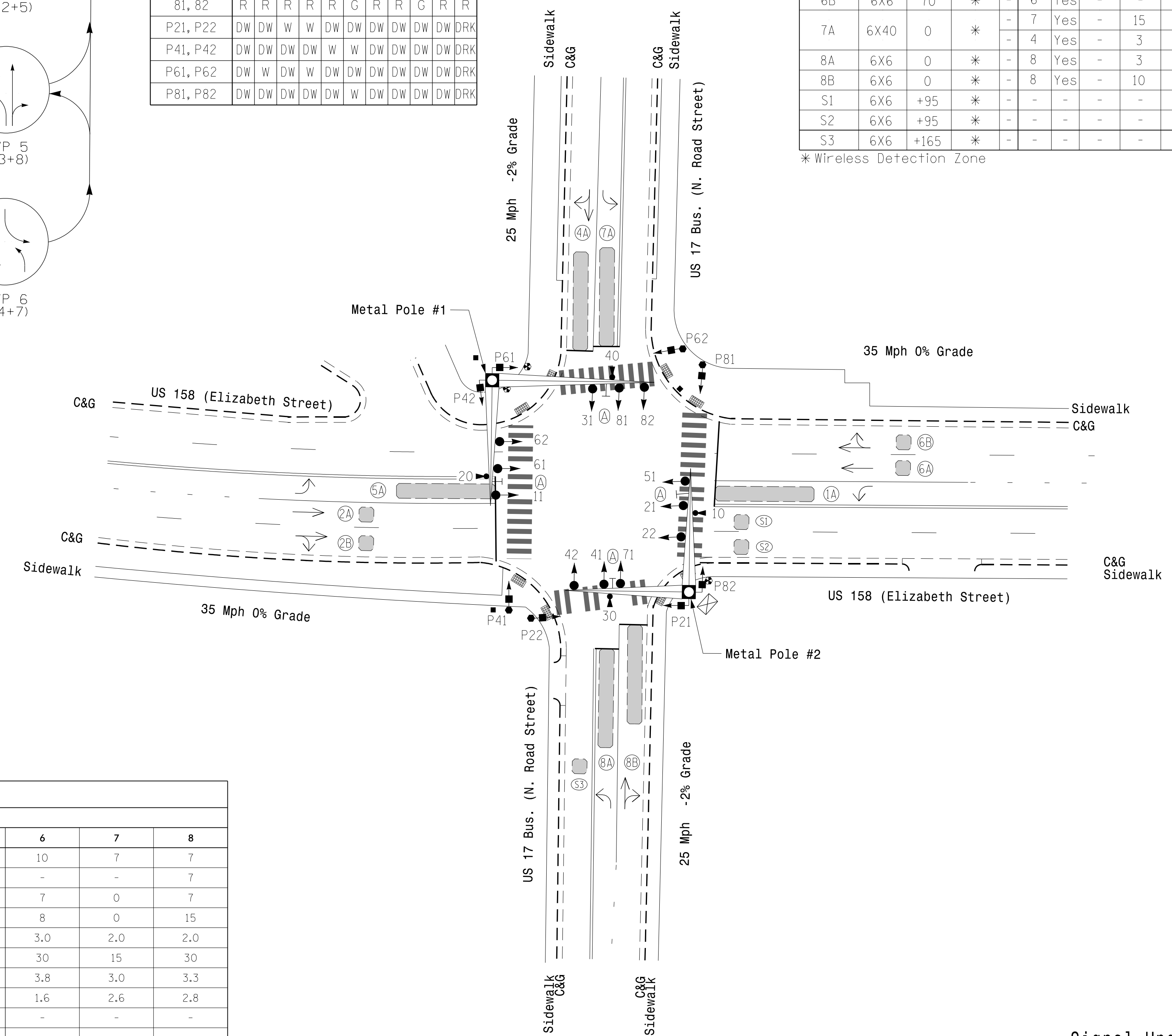
FUNCTION	PRE 3	PRE 4	PRE 5	PRE 6
Exit Phase(s)	2.6	2.6	2.6	2.6
Preempt Override	OFF	OFF	OFF	OFF
Delay Time	0	0	0	0
Ped Clear Through Yellow	Y	Y	Y	Y
Terminate Phases	N	N	N	N
Entrance Walk	255*	255*	255*	255*
Entrance Ped Clear	255*	255*	255*	255*
Entrance Min Green	1	1	1	1
Entrance Yellow Change	25.5*	25.5*	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*	25.5*	25.5*
Minimum Dwell Time	10	10	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.

ASC/3 TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	10	7	7	7	10	7	7
Delay Green	-	-	-	7	-	-	-	7
Walk *	0	7	-	7	0	7	0	7
Ped Clear	0	9	-	15	0	8	0	15
Veh. Extension *	2.0	3.0	-	2.0	2.0	3.0	2.0	2.0
Max 1 *	15	30	-	30	15	30	15	30
Yellow	3.0	3.8	3.0	3.3	3.0	3.8	3.0	3.3
Red Clear	2.3	1.6	2.4	2.8	2.4	1.6	2.6	2.8
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.

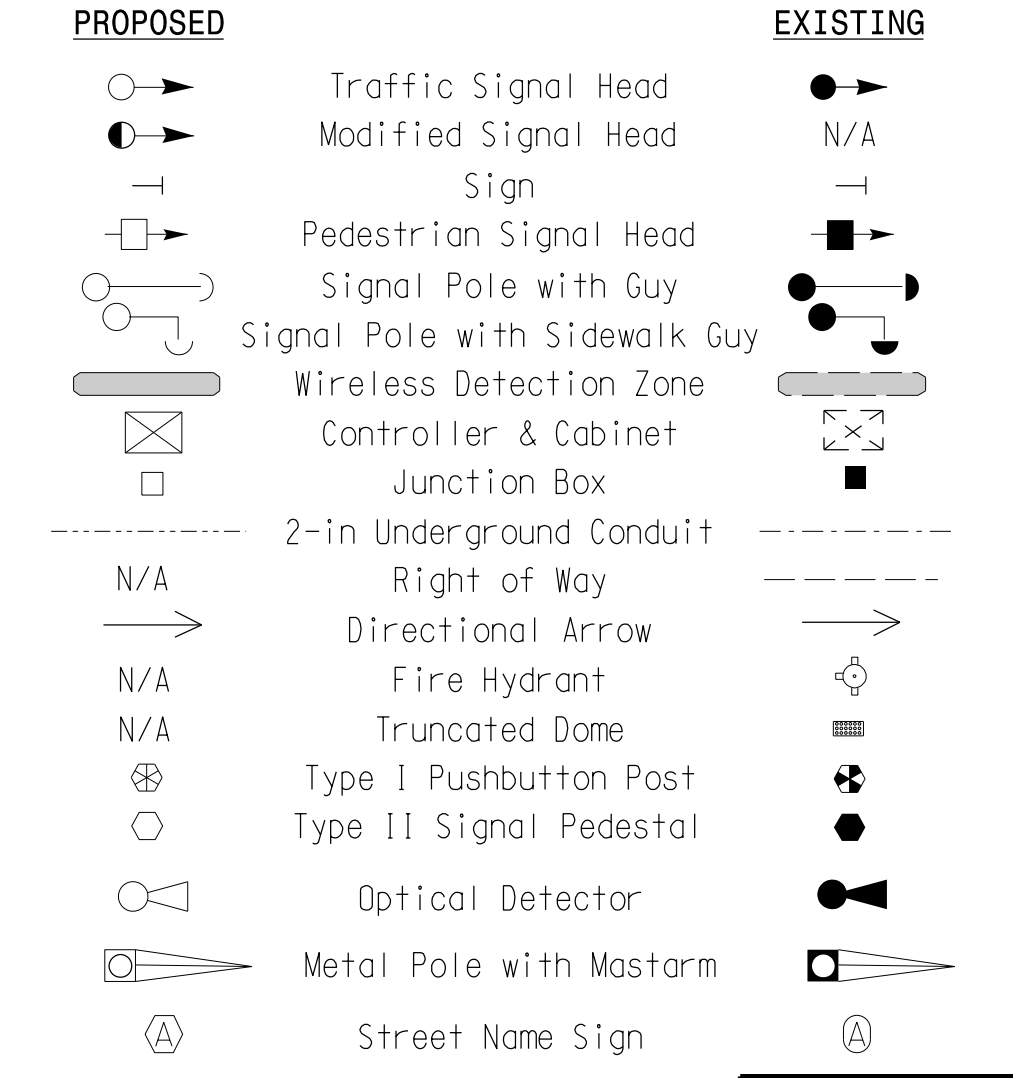


6 Phase Fully Actuated w/ EV Preemption (Elizabeth City Signal System)

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.
- Phase 7 may be lagged.
- Renumber existing head 81 as 31. Renumber existing heads 82 & 83 as 81 & 82 respectively.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- 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.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Relocate existing optical preemption equipment from existing cabinet to new cabinet.
- Relocate existing wireless detection equipment from existing cabinet to new cabinet.
- Optical detector 10 calls EVP 3; Optical detector 20 calls EVP 4; Optical detector 30 calls EVP 5; Optical detector 40 calls EVP 6.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

LEGEND



Signal Upgrade

Prepared for the Offices of:

 750 N. Greenfield Pkwy, Garner, NC 27529
 DRMP, Inc.
 8000 Regency Parkway, Suite 175
 Cary, NC 27519
 NC License No. C-2213 (919) 650-1038

US 158 (Elizabeth Street) at US 17 Bus. (N. Road Street)

Divison 1 Pasquotank County Elizabeth City
 PLAN DATE: March 2018 REVIEWED BY: AJ Davis
 PREPARED BY: JA Le REVIEWED BY: LM Moon

REVISIONS: _____ INIT: _____ DATE: _____

SEAL

 Lisa M. Moon
 9/20/2018
 DATE: _____
 SIG. INVENTORY NO. 01-0004

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED