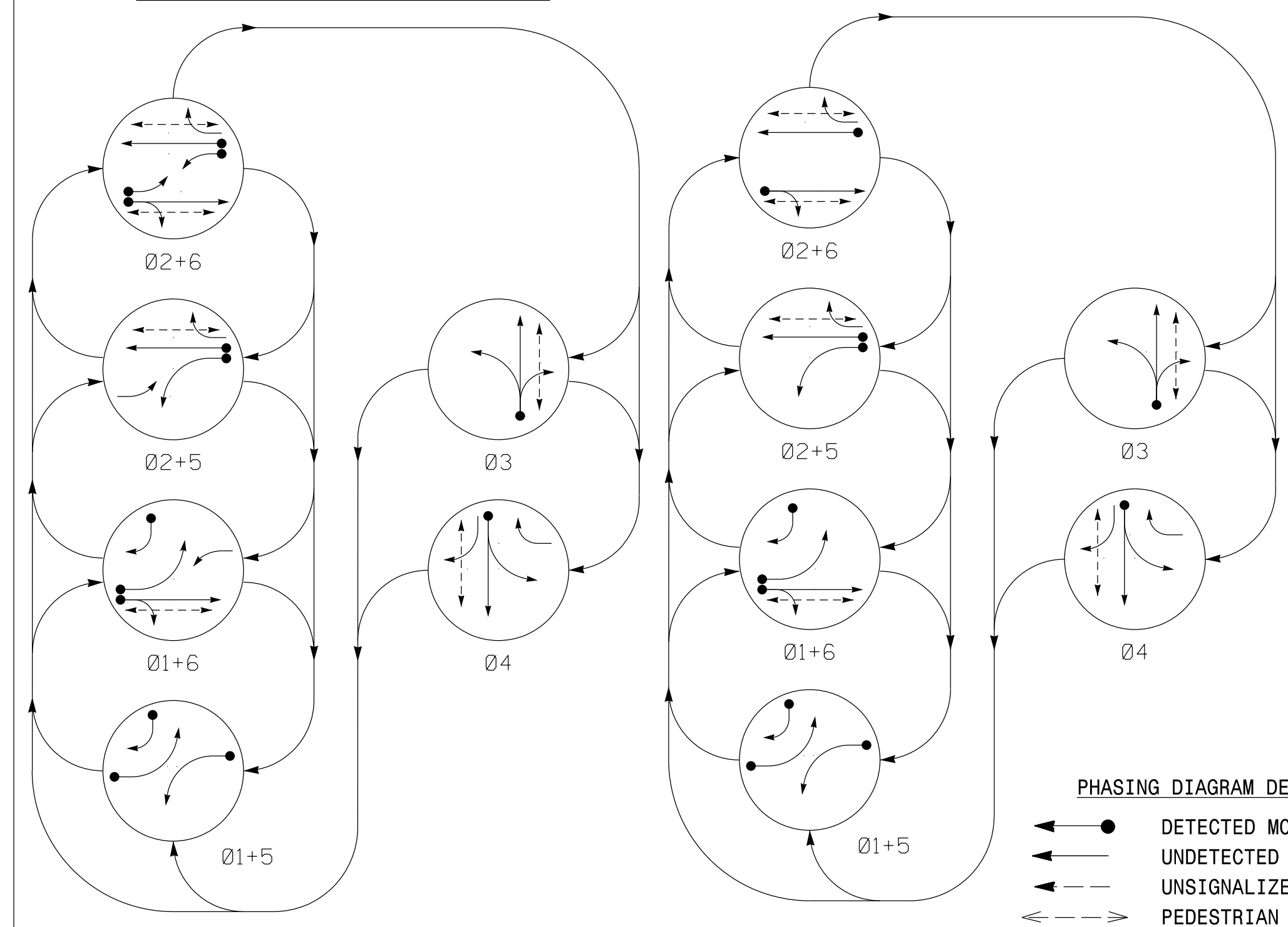


DEFAULT PHASING DIAGRAM

ALTERNATE PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE						FLASH
	01+5	01+6	02+5	02+6	03	04	
11	←	←	←	←	←	←	Y
21, 22	R	R	G	G	R	R	Y
23	R	R	←	←	←	←	Y
31	R	R	R	R	←	←	R
32	R	R	R	R	G	R	R
41	R	R	R	R	R	G	R
42	R	R	R	R	R	G	R
43	←	←	R	R	←	←	R
51	←	←	←	←	←	←	Y
61, 62	R	G	R	G	R	R	Y
P21,P22	DW	DW	W	W	DW	DW	DRK
P31,P32	DW	DW	DW	DW	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	DW	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE						FLASH
	01+5	01+6	02+5	02+6	03	04	
11	←	←	←	←	←	←	Y
21, 22	R	R	G	G	R	R	Y
23	R	R	←	←	←	←	Y
31	R	R	R	R	←	←	R
32	R	R	R	R	G	R	R
41	R	R	R	R	R	G	R
42	R	R	R	R	R	G	R
43	←	←	R	R	←	←	R
51	←	←	←	←	←	←	Y
61, 62	R	G	R	G	R	R	Y
P21,P22	DW	DW	W	W	DW	DW	DRK
P31,P32	DW	DW	DW	DW	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	DW	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK

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	Y	1	Yes	-	15*	-	N	-	Y
1B	6X40	0	2-4-2	Y	1	Yes	-	15	-	N	-	Y
2A	6X6	70	4	Y	2	Yes	-	-	-	N	-	Y
3A	6X40	0	2-4-2	Y	3	Yes	-	10	-	N	-	Y
4A	6X40	0	2-4-2	Y	4	Yes	-	3	-	N	-	Y
5A	6X40	0	2-4-2	Y	5	Yes	-	15*	-	N	-	Y
6A	6X6	70	3	Y	6	Yes	-	-	-	N	-	Y

* Reduce delay to 3 seconds during Alternate Phasing Operation.
Disable phase call for loop(s) during Alternate Phasing Operation.

6 Phase Fully Actuated w/ Alternate Phasing Operation (US 129-NC 143 Closed Loop System)

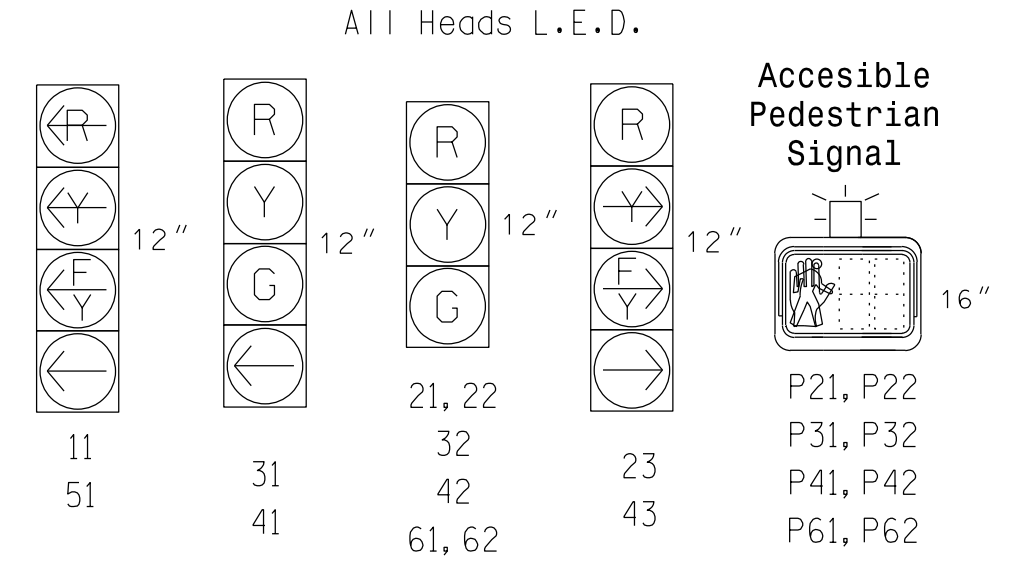
NOTES

- 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.
- The order of phase 3 and phase 4 may be reversed.
- 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.
- This intersection features accessible pedestrian signals utilizing percussive tone walk indications.
- The Division 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.
- Closed loop system data: Master Asset #0750, Controller Asset #0750.

PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.



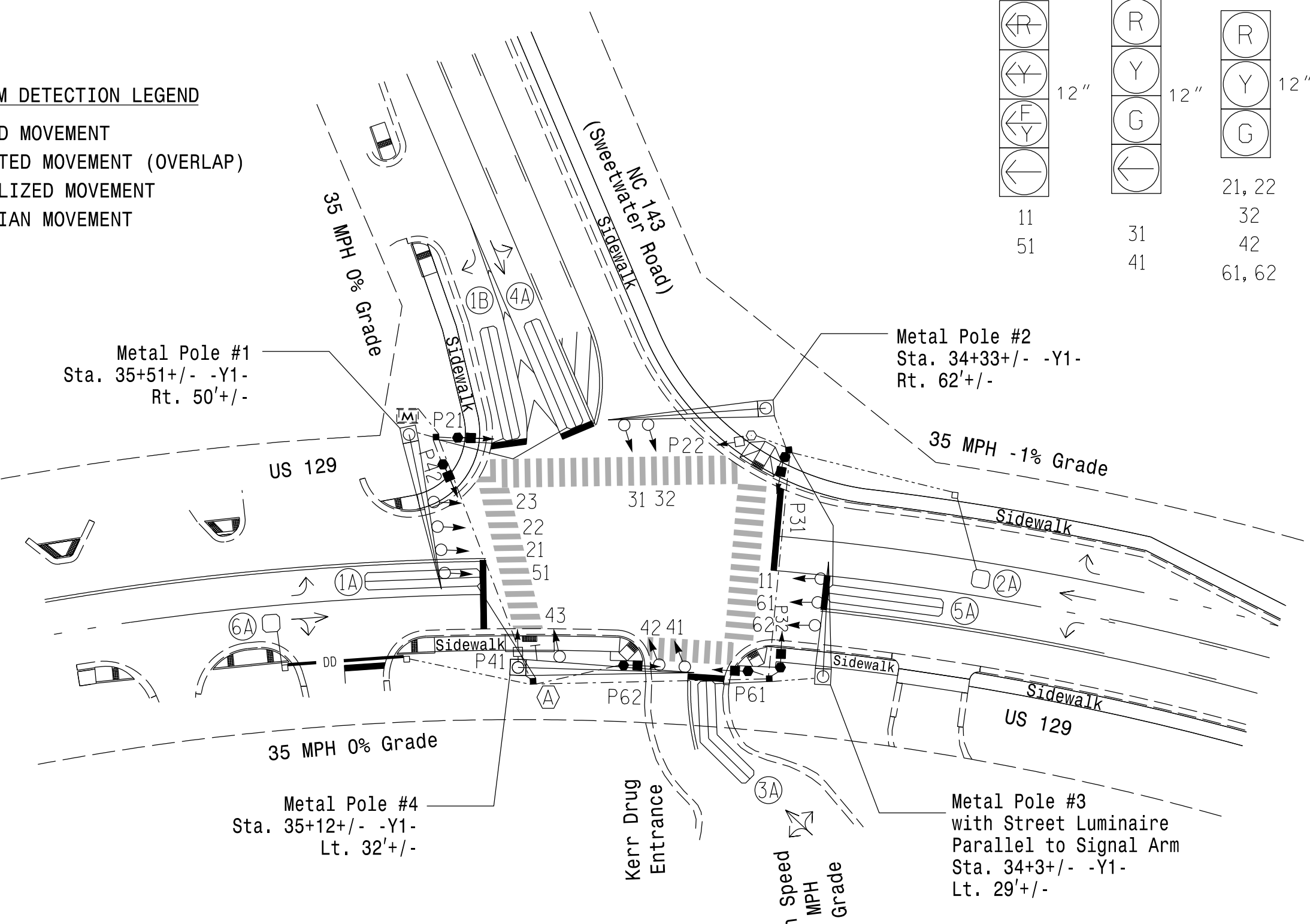
ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

SIGNAL FACE	VOICE TONES	INTERVAL	SPEECH MESSAGE
P21	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross Sweetwater.
P22	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross Sweetwater.
P31	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross US 129.
P32	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross US 129.
P41	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross US 129.
P42	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross US 129.
P61	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross Kerr Drug.
P62	- X	Walk	(Percussive Tone)
X	-	Flashing Don't Walk/Don't Walk	Wait. Wait to cross Kerr Drug.

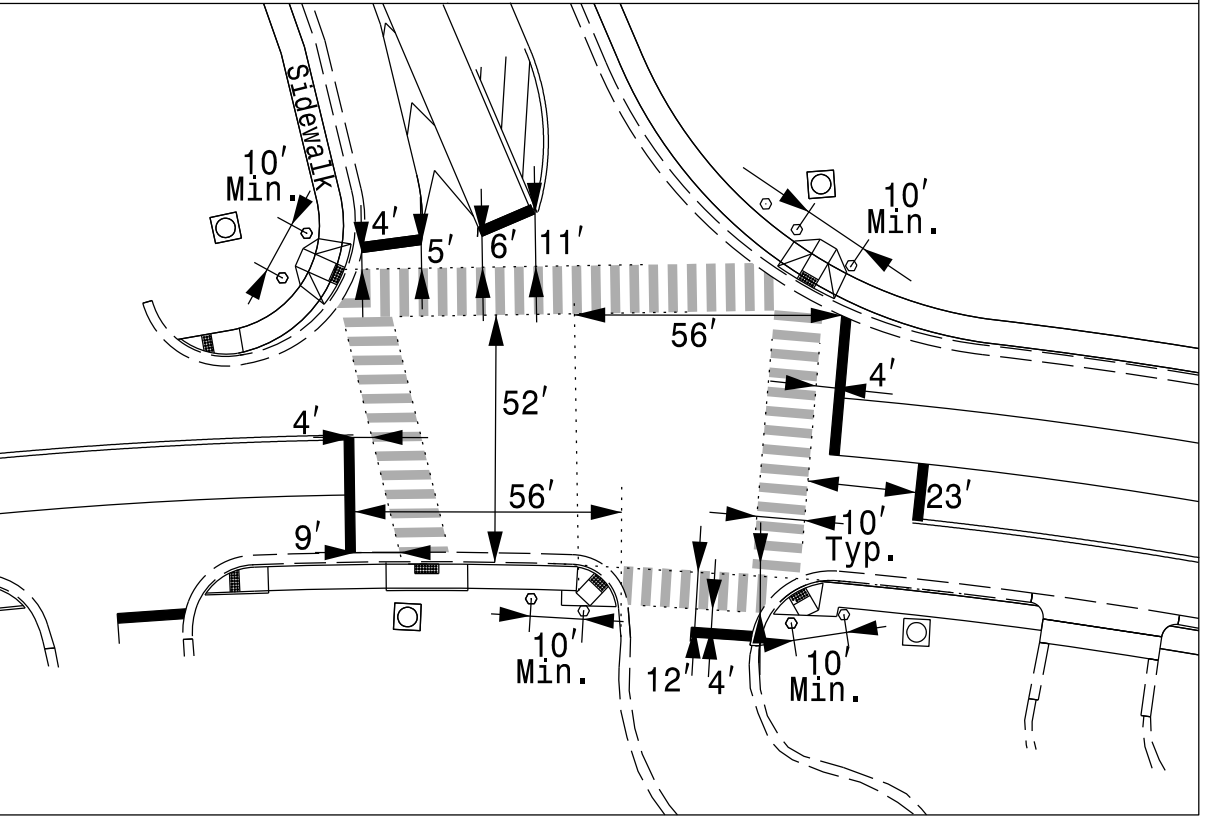
TIMING CHART

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green *	7	10	7	7	7	10
Walk *	-	7	7	7	-	7
Ped Clear	-	24	15	16	-	8
Veh. Extension *	2.0	3.0	2.0	2.0	2.0	3.0
Max 1 *	15	45	15	25	15	45
Yellow	3.0	3.9	3.8	3.0	3.0	3.9
Red Clear	2.6	1.8	2.1	2.9	1.9	1.8
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Locking Detector	-	-	-	-	-	-
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.



STOP LINE & CROSSWALK LOCATIONS



LEGEND

- | PROPOSED | EXISTING |
|----------|----------|
| | |
| | N/A |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| N/A | |
| | |
| | |
| | |
| | |
| | N/A |
| | N/A |

Signal Upgrade-Final Design

Prepared for the Offices of:

 750 N. Greenfield Pkwy, Garner, NC 27529
 SCALE: 1" = 40'

US 129 at NC 143 (Sweetwater Road) / Kerr Drug Entrance
 Division 14 Graham County Robbinsville
 PLAN DATE: May 2022 REVIEWED BY: M. L. Stygles
 PREPARED BY: J. Ma REVIEWED BY:
 REVISIONS: INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 033108
 J. MA
 5/10/2022
 DATE
 SIG. INVENTORY NO. 14-0750

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