PHASING DIAGRAM

Ø2+6

Ø2+5

Ø3

Ø1+6

Ø4

Ø1+5

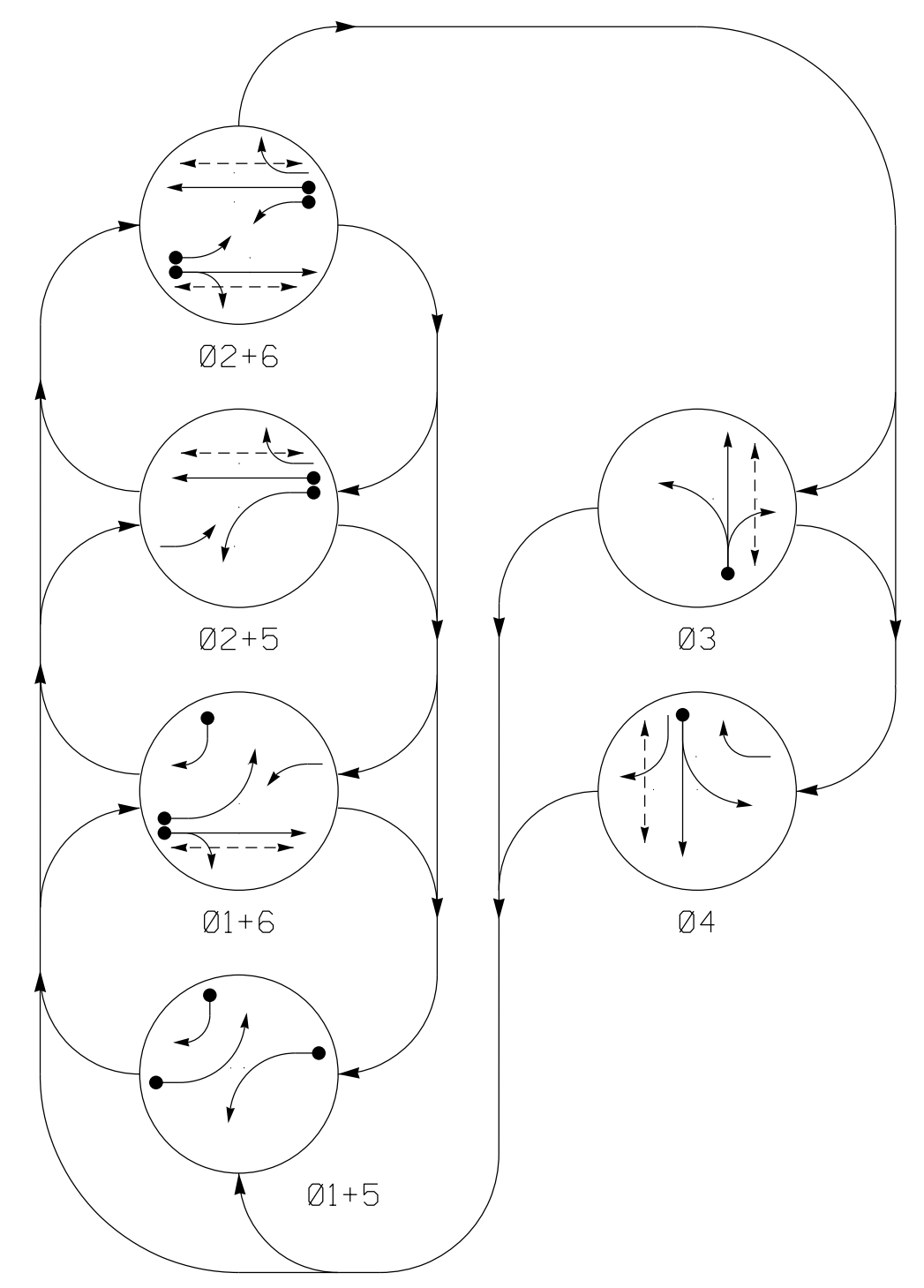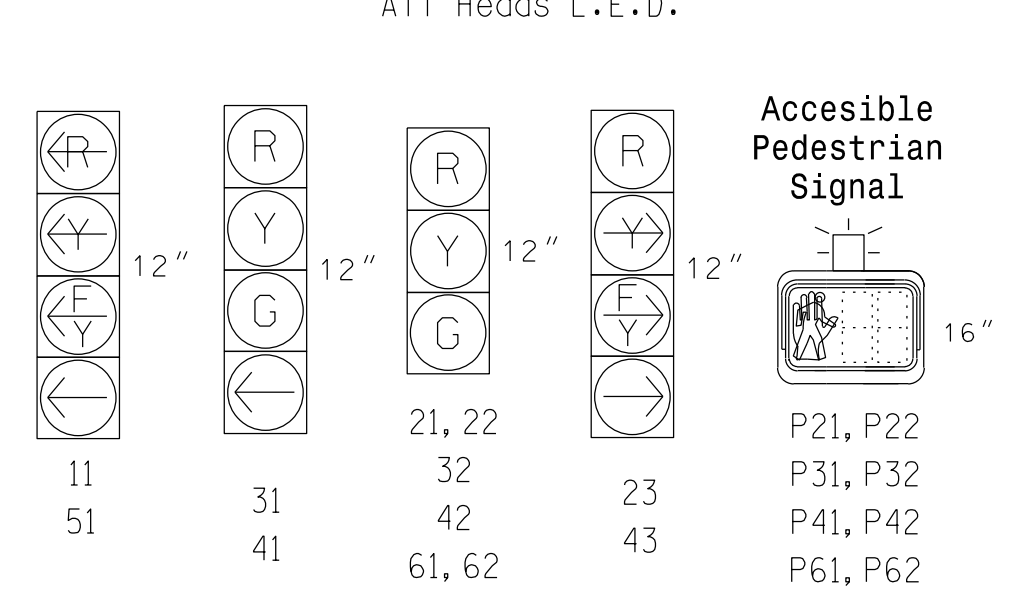### PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
11	←	←	F Y	F Y	R	R	Y
21, 22	R	R	G	G	R	R	Y
23	R	R	F Y	F Y	R		Y
31	R	R	R	R	G	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	R	R	F Y	R
51	←	←	F Y	F Y	R	R	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	W	DW	DRK
P41,P42	DW	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.

11
51

31
41

21, 22
32
42
61, 62

23
43

Accessible Pedestrian Signal

P21, P22
P31, P32
P41, P42
P61, P62

ASC/3 DETECTOR INSTALLATION CHART

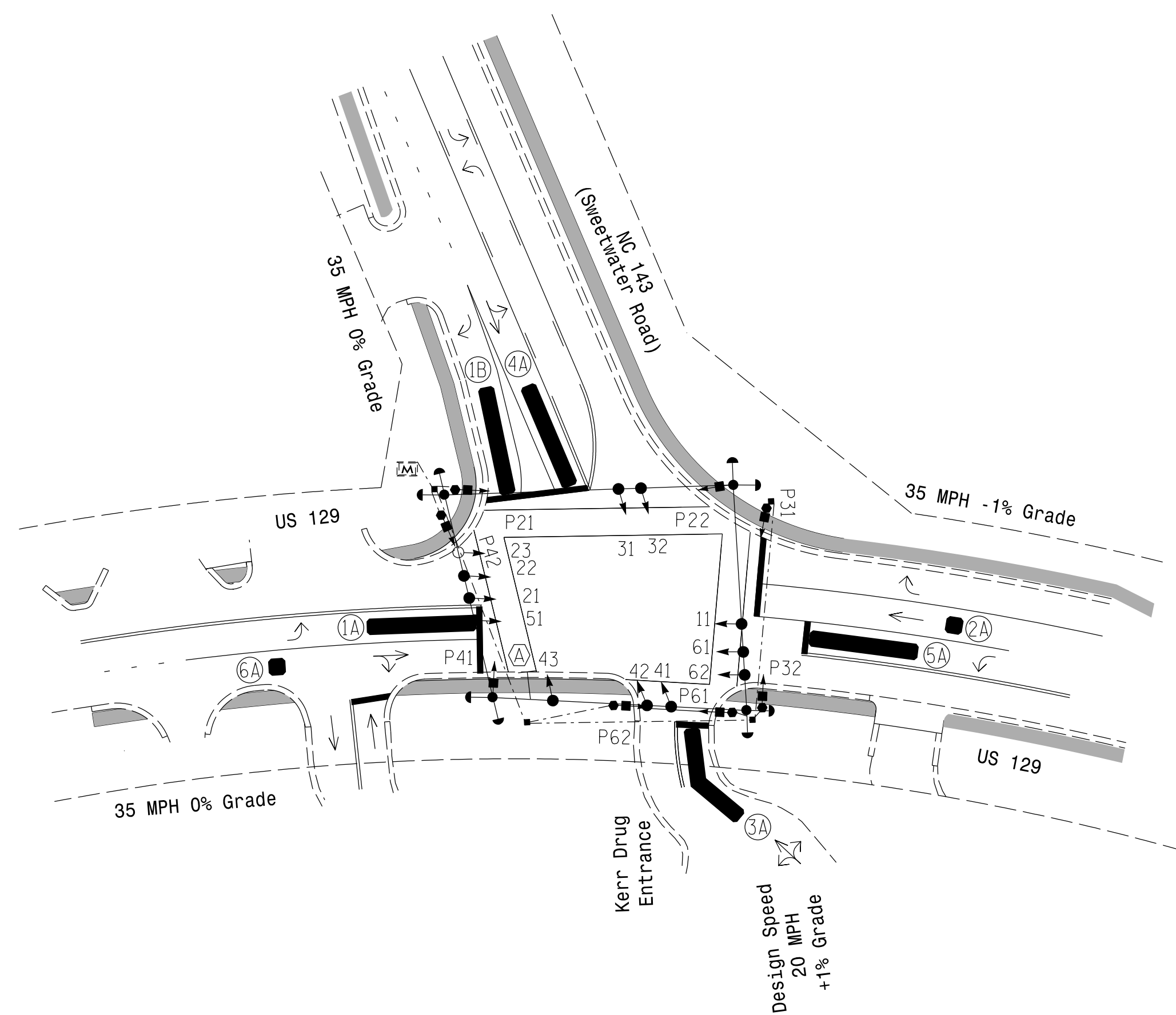|	DETECTOR				PROGRAMMING								
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD	
1A	*	0	*	Y	1	Yes	-	15	-	N	-	*	
					6	Yes	-	3	-	N	-	*	
1B	*	0	*	Y	1	Yes	-	15	-	N	-	*	
2A	*	70	*	Y	2	Yes	-	-	-	N	-	*	
3A	*	0	*	Y	3	Yes	-	10	-	N	-	*	
4A	*	0	*	Y	4	Yes	-	-	-	N	-	*	
5A	*	0	*	Y	5	Yes	-	15	-	N	-	*	
					2	Yes	-	-	-	N	-	*	
6A	*	70	*	Y	6	Yes	-	-	-	N	-	*	

* Multizone Microwave Detection Zones

6 Phase
Fully Actuated
Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing 'Don't Walk' time only.
7. This intersection features a multizone microwave detection system. Install detectors according to manufacturer's specifications to ensure optimum detection zone coverage.
8. Pavement markings for stop lines and crosswalks are existing.
9. This intersection features accessible pedestrian signals utilizing percussive tone walk indications.
10. Reposition all existing signal heads.

NC 143 (Sweetwater Road)

35 MPH 0% Grade

35 MPH -1% Grade

US 129

US 129

35 MPH 0% Grade

Kerr Drug Entrance

Design Speed 20 MPH +1% Grade

LEGEND

PROPOSED		EXISTING
○▶	Traffic Signal Head	●▶
◗▶	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
⊠	Controller & Cabinet	⊠
□	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
→	Directional Arrow	
Ⓐ	Right Arrow "ONLY" Sign (R3-5R)	Ⓐ
○	Type II Signal Pedestal	●
— DD —	Directional Drill	N/A
⌂	Curb Ramp	N/A
	Construction Zone	N/A
	Multizone Microwave Detection	N/A

ASC/3 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.
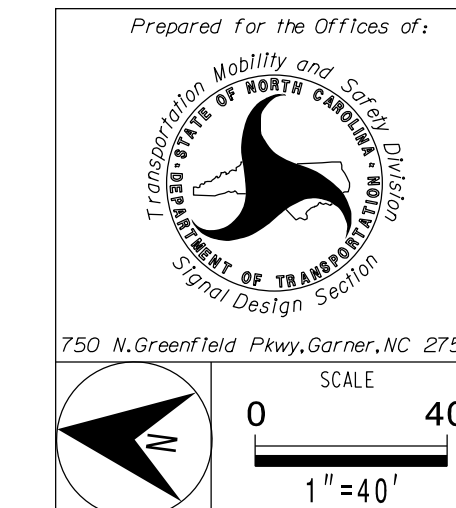
ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

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.

vhb

Signal Upgrade-Temporary Design 2
(TMP Phase II)

Prepared for the Offices of:

Transportation Mobility and Safety
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signal Design Section

750 N.Greenfield Pkwy,Garner,NC 27529

US 129
at
NC 143 (Sweetwater Road) /
Kerr Drug Entrance

Division 14	Graham County	Robbinsville
PLAN DATE: May 2022	REVIEWED BY: M. Stygles	
PREPARED BY: J. Ma	REVIEWED BY:	

SEAL

NORTH CAROLINA
PROFESSIONAL
SEAL
033108
ENGINEER
JIANXIN MA

REVISIONS		INIT.	DATE

SCALE
0   40
1" = 40'

SIG. INVENTORY NO. 14-0750T2

PLAN DATE: 5/10/2022