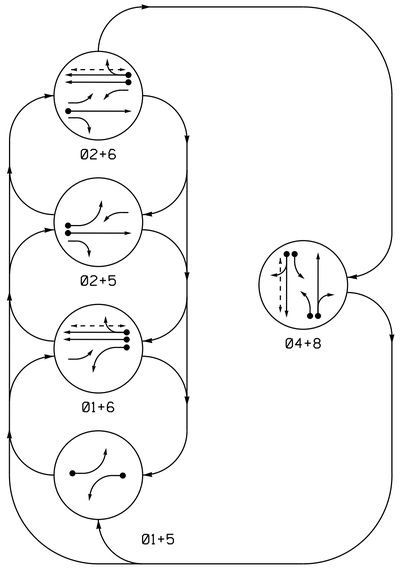
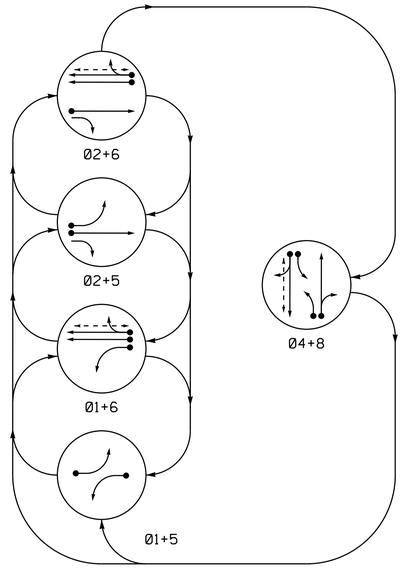
PROJECT REFERENCE NO.	SHEET NO.
HS-2005G	Sig 2.0

5 Phase
Fully Actuated
(Raleigh Signal System)

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

LOOP & DETECTOR UNIT INSTALLATION CHART

SE-PAC 2070 CONTROLLER WITH 170 CABINET

INDUCTIVE LOOPS						DETECTOR PROGRAMMING													
							TIMING		OPERATION MODE									STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN*	2 1 CALL	3 STOP A	4 STOP B	5 PROTPER LEFT	6 PROTPER THROUGH	7 AND	SWITCH SYSTEM LOOPS	NEW	EXISTING
1A	6X40	2-4-2	0	-	X	1	5 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
2A	6X6	EXIST	284	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
4A	6X40	2-4-2	+7	-	X	4	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
4B	6X40	2-4-2	+7	-	X	4	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
5A	6X40	2-4-2	0	-	X	5	5 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
6A	6X6	5	300	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
6B	6X6	5	300	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
8A	6X60	EXIST	0	-	X	8	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-
8B	6X60	EXIST	+5	-	X	8	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	-

DEFAULT PHASING TABLE OF OPERATION

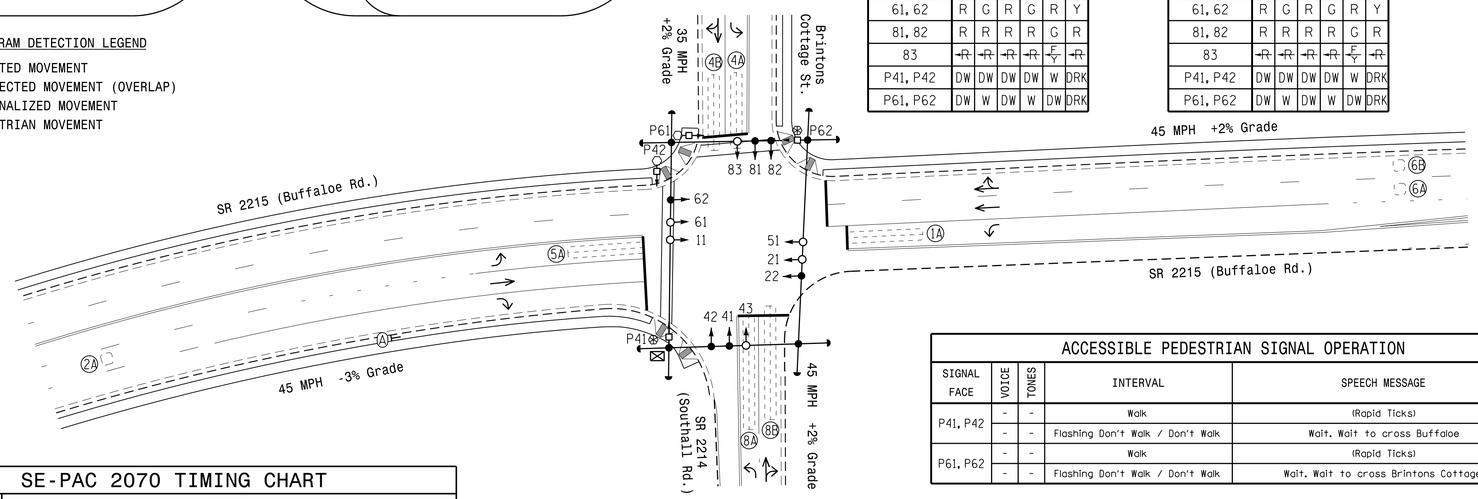
SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	FLASH
11	↚	↚	F̸Y	F̸Y	R̸	Y̸
21, 22	R	R	G	G	R	Y
41, 42	R	R	R	R	G	R
43	R̸	R̸	R̸	R̸	F̸Y	R̸
51	↚	F̸Y	↚	F̸Y	R̸	Y̸
61, 62	R	G	R	G	R	Y
81, 82	R	R	R	R	G	R
83	R̸	R̸	R̸	R̸	F̸Y	R̸
P41, P42	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	FLASH
11	↚	↚	R̸	R̸	R̸	Y̸
21, 22	R	R	G	G	R	Y
41, 42	R	R	R	R	G	R
43	R̸	R̸	R̸	R̸	F̸Y	R̸
51	↚	R̸	↚	R̸	R̸	Y̸
61, 62	R	G	R	G	R	Y
81, 82	R	R	R	R	G	R
83	R̸	R̸	R̸	R̸	F̸Y	R̸
P41, P42	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DRK

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
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. Reposition existing signal heads as shownn
5. Set all detector units to presence mode.
6. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
10. This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
11. Pavement markings are existing unless otherwise shown.
12. The Division (City) Traffic Engineer will determine the hours of use for each phasing plan.
13. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



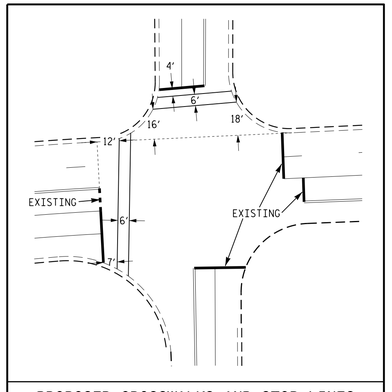
ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

SIGNAL FACE	VOICE	TONES	INTERVAL	SPEECH MESSAGE
P41, P42	-	-	Walk	(Rapid Ticks)
	-	-	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Buffaloe
P61, P62	-	-	Walk	(Rapid Ticks)
	-	-	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Brintons Cottage.

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green *	7	12	7	7	12	7
Passage Gap *	2.0	6.0	2.0	2.0	6.0	2.0
Maximum Green *	15	120	25	15	120	25
Yellow Change	3.0	4.8	4.3	3.0	4.8	4.3
Red Clear	2.4	1.3	1.7	2.8	1.3	1.7
Advance Walk *	-	-	6	-	4	-
Walk *	-	-	7	-	7	-
Pedestrian Clear	-	-	17	-	8	-
Added Initial *	-	2.5	-	-	1.5	-
Maximum Initial *	-	32	-	-	34	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	45	-	-	45	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	NONLOCK	LOCK	NONLOCK	NONLOCK	LOCK	NONLOCK
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

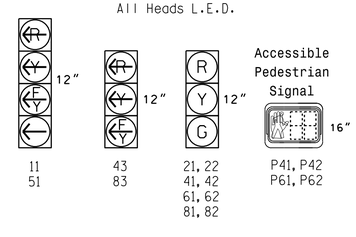
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



PROPOSED CROSSWALKS AND STOP LINES

SIGNAL FACE I.D.

All Heads L.E.D.



This plan supersedes the plan signed and sealed on 5/25/21.

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	
N/A	Curb Ramp	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
	"RIGHT LANE MUST TURN RIGHT" Sign (R3-7R)	

Signal Upgrade

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 2215 (Buffaloe Road)
at
SR 2214 (Southall Road)/
Brintons Cottage Street

Division 5 Wake County Raleigh

PLAN DATE: February 2024 REVIEWED BY:
PREPARED BY: J.A. Lohr REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA
DocuSigned by: 1B0E4B6627A4494
02/27/2024
DATE

SIG. INVENTORY NO. 05-1780

27-FEB-2024 12:33
\\DOT\Shared\Groups-TECC\ITSASU\ITS Signals\Signal Design Section\Central Region\Div 5\HS-2005G\05178D_sig_dsn_2024mmds.dgn
JALOHR