PROJECT REFERENCE NO.	SHEET NO.
HS-2005Q	Sig 1

DEFAULT PHASING DIAGRAM

ALTERNATE PHASING DIAGRAM

PHASING DIAGRAM DETECTION LEGEND

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

DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	FLASH
11	←—	←—	F Y	F Y	~~R~~	~~Y~~
21, 22	R	R	G	G	R	Y
41	~~R~~	~~R~~	~~R~~	~~R~~	F Y	~~R~~
42, 43	R	R	R	R	G	R
51	←—	F Y	←—	F Y	~~R~~	~~Y~~
61, 62	R	G	R	G	R	Y
81	~~R~~	~~R~~	~~R~~	~~R~~	F Y	~~R~~
82, 83	R	R	R	R	G	R
P21, P22	DW	DW	W	W	DW	DRK
P41, P42	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DRK
P81, P82	DW	DW	DW	DW	W	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	FLASH
11	←—	←—	~~R~~	~~R~~	~~R~~	~~Y~~
21, 22	R	R	G	G	R	Y
41	~~R~~	~~R~~	~~R~~	~~R~~	F Y	~~R~~
42, 43	R	R	R	R	G	R
51	←—	~~R~~	←—	~~R~~	~~R~~	~~Y~~
61, 62	R	G	R	G	R	Y
81	~~R~~	~~R~~	~~R~~	~~R~~	F Y	~~R~~
82, 83	R	R	R	R	G	R
P21, P22	DW	DW	W	W	DW	DRK
P41, P42	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DRK
P81, P82	DW	DW	DW	DW	W	DRK

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	2-4-2	X	1	15 *	-	X	-	X	-	X
					6 #	3	-	X	-	X	X	X
2A	6X6	300	5	X	2	-	-	X	X	X	-	X
4A	6X40	0	2-4-2	X	4	3	-	X	-	X	-	X
4B	6X40	0	2-4-2	X	4	10	-	X	-	X	-	X
5A	6X40	0	2-4-2	X	5	15 *	-	X	-	X	-	X
					2 #	3	-	X	-	X	X	X
6A	6X6	300	5	X	6	-	-	X	X	X	-	X
8A	6X40	0	2-4-2	X	8	3	-	X	-	X	-	X
8B	6X40	0	2-4-2	X	8	10	-	X	-	X	-	X

* Reduce Delay to 3 seconds during Alternate Phasing Operation.
\# Disable call for loop during Alternate Phasing Operation.

5 Phase
Fully Actuated
(Isolated)

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. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pavement markings are existing unless otherwise shown.
9. The Division Traffic Engineer will determine the hours of use for each phasing plan.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Walk *	–	12	12	–	11	11
Ped Clear	–	7	11	–	7	10
Min Green	7	12	7	7	12	7
Passage *	2.0	6.0	2.0	2.0	6.0	2.0
Max 1 *	30	60	30	20	60	30
Yellow Change	3.0	4.5	3.3	3.0	4.5	3.3
Red Clear	2.4	1.3	2.8	1.6	1.3	2.8
Added Initial *	–	2.5	–	–	2.5	–
Maximum Initial *	–	34	–	–	34	–
Time Before Reduction *	–	15	–	–	15	–
Time To Reduce *	–	30	–	–	30	–
Minimum Gap	–	3.0	–	–	3.0	–
Advance Walk	–	5	5	–	4	4
Non Lock Detector	X	–	X	X	–	X
Vehicle Recall	–	MIN RECALL	–	–	MIN RECALL	–
Dual Entry	–	–	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.

SIGNAL FACE I.D.

All Heads L.E.D.

11
51

41
81

21, 22
42, 43
61, 62
82, 83

P21, P22
P41, P42
P61, P62
P81, P82

PROPOSED POLE, STOP LINE, AND CROSSWALK LOCATIONS

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	
	Type II Signal Pedestal	
	"TURNING TRAFFIC MUST YIELD TO" PEDESTRIANS" Sign (R10-15)	

New Installation

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1142 (Humie Olive Road)
at
Blazing Trail Drive and
Apex Friendship Elementary School

Division 5 Wake County Apex

PLAN DATE: March 2023 REVIEWED BY:
PREPARED BY: J.A. Lohr REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA
DocuSigned by: Robert J. Ziemba 1B9B4B9B27A4494...
04/13/2023
DATE

SIG. INVENTORY NO. 05-1319

23-FEB-2024 16:12
23-HS-5M-15 Signals&Signal Design Section&Central Region&Div 5&HS-2005Q&05-1319_sig_dsn_20230413.dgn
r2ziemba