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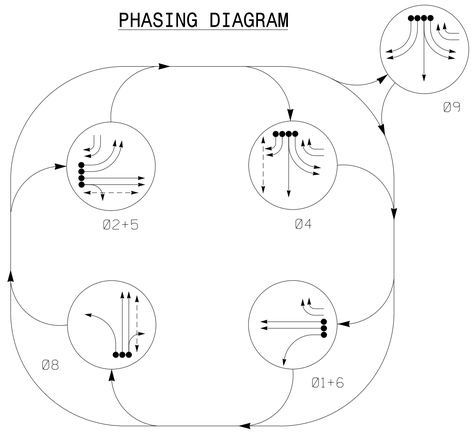
PROJECT REFERENCE NO.	SHEET NO.
R-5816	Sig.1.8

4 Phase Fully Actuated NC 58 (Atlantic Beach) CLS

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

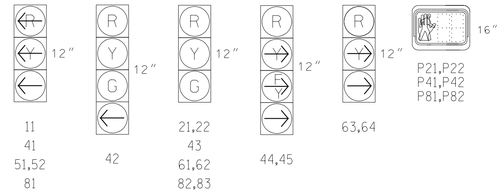
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	Ø2+5	Ø4	Ø8	Ø9	FLASH
11	←R	←R	←R	←R	←R	←R
21,22	R	G	R	R	R	R
41	←R	←R	←	←R	←	←R
42	R	R	G ←	R	G ←	R
43	R	R	G	R	G	R
44,45	R	→	F →	R	→	R
51,52	←R	←	←R	←R	←R	←R
61,62	G	R	R	R	R	R
63,64	→	R	→	R	→	R
81	←R	←R	←R	←	←R	←R
82,83	R	R	R	G	R	R
P21,P22	DW	W	DW	DW	DW	DRK
P41,P42	DW	DW	W	DW	DW	DRK
P81,P82	DW	DW	DW	W	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



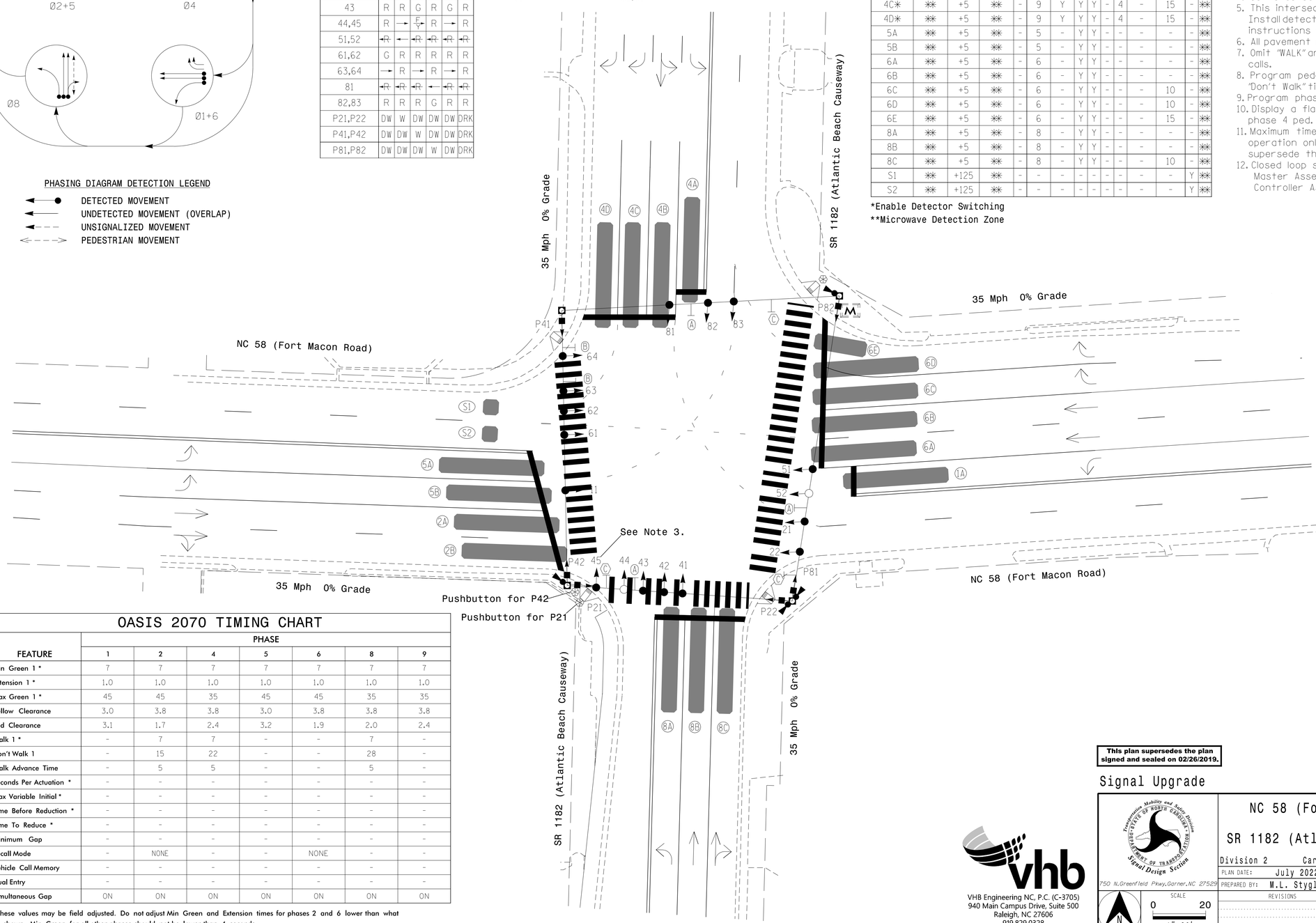
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING								
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	SWITCHING DETECTOR	CALLING	EXTENSION	FULL TIME DELAY	SWITCH PHASE	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	**	+5	**	-	1	-	Y	Y	-	-	-	-	-	**
2A	**	+5	**	-	2	-	Y	Y	-	-	-	-	-	**
2B	**	+5	**	-	2	-	Y	Y	-	-	-	10	-	**
4A*	**	+5	**	-	9	Y	Y	Y	-	4	-	-	-	**
4B*	**	+5	**	-	9	Y	Y	Y	-	4	-	-	-	**
4C*	**	+5	**	-	9	Y	Y	Y	-	4	-	15	-	**
4D*	**	+5	**	-	9	Y	Y	Y	-	4	-	15	-	**
5A	**	+5	**	-	5	-	Y	Y	-	-	-	-	-	**
5B	**	+5	**	-	5	-	Y	Y	-	-	-	-	-	**
6A	**	+5	**	-	6	-	Y	Y	-	-	-	-	-	**
6B	**	+5	**	-	6	-	Y	Y	-	-	-	-	-	**
6C	**	+5	**	-	6	-	Y	Y	-	-	-	10	-	**
6D	**	+5	**	-	6	-	Y	Y	-	-	-	10	-	**
6E	**	+5	**	-	6	-	Y	Y	-	-	-	15	-	**
8A	**	+5	**	-	8	-	Y	Y	-	-	-	-	-	**
8B	**	+5	**	-	8	-	Y	Y	-	-	-	-	-	**
8C	**	+5	**	-	8	-	Y	Y	-	-	-	10	-	**
S1	**	+125	**	-	-	-	-	-	-	-	-	-	Y	**
S2	**	+125	**	-	-	-	-	-	-	-	-	-	Y	**

*Enable Detector Switching
**Microwave Detection Zone

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. Unbag and reconnect existing signal head 45. Reposition existing signal heads 21, 22, 41, 42, 43, 51, 52, 61, and 62 as shown.
4. Set all detector units to presence mode.
5. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to acheive the desired detection.
6. All pavement markings are existing.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. Program phases 2 and 5 as first phases.
10. Display a flashing yellow arrow in heads 44 and 45 during phase 4 ped.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
12. Closed loop system data:
    Master Asset #10209,
    Controller Asset #0256



LEGEND

PROPOSED		EXISTING
	Curb Ramp	N/A
	Traffic Signal Head	
	Sign	
	Pedestrian Signal Head	
	Type I Pushbutton Post	
	Metal Strain Pole	
	Multizone Microwave Zone	
	Multizone Microwave Detector	
M	Master Controller & Cabinet	M
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
A	Street Name Sign (D3-1)	A
B	Right Arrow "ONLY" Sign (R3-5R)	B
C	Turning Vehicles Yield To Peds Sign (R10-15)	C

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8	9
Min Green 1 *	7	7	7	7	7	7	7
Extension 1 *	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Max Green 1 *	45	45	35	45	45	35	35
Yellow Clearance	3.0	3.8	3.8	3.0	3.8	3.8	3.8
Red Clearance	3.1	1.7	2.4	3.2	1.9	2.0	2.4
Walk 1 *	-	7	7	-	-	7	-
Don't Walk 1	-	15	22	-	-	28	-
Walk Advance Time	-	5	5	-	-	5	-
Seconds Per Actuation *	-	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-
Recall Mode	-	NONE	-	-	NONE	-	-
Vehicle Call Memory	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-
Simultaneous Gap	ON	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.

This plan supersedes the plan signed and sealed on 02/26/2019.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Signal Upgrade

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

SCALE 0 20 1"=20'

NC 58 (Fort Macon Road) at SR 1182 (Atlantic Beach Cswy)

Division 2 Carteret County Atlantic Beach

PLAN DATE: July 2022 REVIEWED BY: J.L. Lewis
PREPARED BY: M.L. Stygles REVIEWED BY: J. Ma

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 033108 ENGINEER JIANXIN MA
DocuSigned by: Jianxin Ma 82FE3B0B14A8...
7/26/2022
SIGNATURE DATE

SIG. INVENTORY NO. 02-0256

7/26/2022
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User:jitownsend