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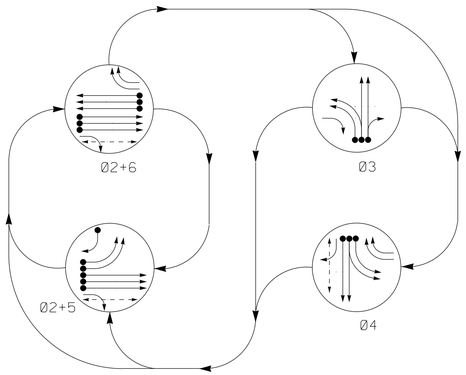
PROJECT REFERENCE NO.	SHEET NO.
U-4751	Sig 5.6

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

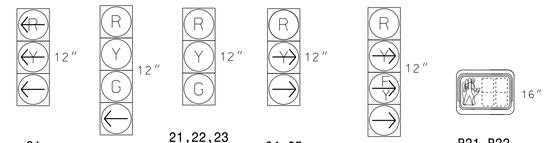
TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	PHASE 02+6	PHASE 03	PHASE 04	PHASE FLASH
21,22,23	G	G	R	R	Y
24	F Y	F Y	→	R	~~Y~~
31	~~R~~	~~R~~	←	~~R~~	~~R~~
32	R	R	G ←	R	R
33	R	R	G	R	R
41	~~R~~	~~R~~	~~R~~	←	~~R~~
42	R	R	R	G ←	R
43	R	R	R	G	R
44	→	R	R	F Y →	R
51,52	←	~~R~~	~~R~~	~~R~~	~~R~~
61,62,63	R	G	R	R	Y
64,65	R	→	R	→	~~Y~~
P21,P22	W	W	DW	DW	DRK
P41,P42	DW	DW	DW	W	DRK

W - Walk
DW - Don't Walk
DRK - Dark

SIGNAL FACE I.D.

All Heads L.E.D.



31
41
51,52

32
42

21,22,23
33
43
61,62,63

64,65

24
44

P21,P22
P41,P42

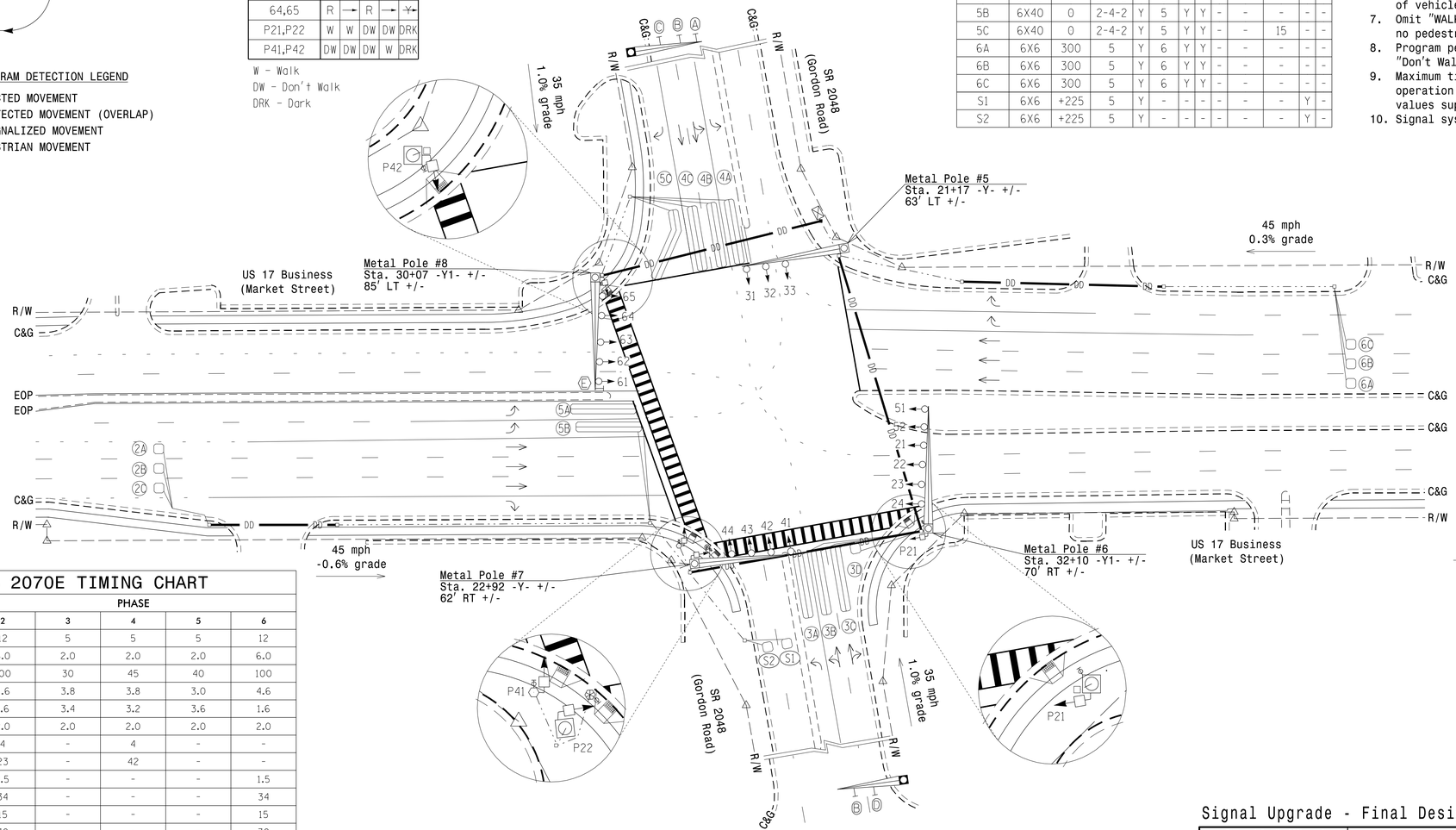
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS				DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	5	Y	2	Y	Y	-	-	-	-	-
2B	6X6	300	5	Y	2	Y	Y	-	-	-	-	-
2C	6X6	300	5	Y	2	Y	Y	-	-	-	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	-	-	-
3B	6X40	0	2-4-2	Y	3	Y	Y	-	-	-	-	-
3C	6X40	0	2-4-2	Y	3	Y	Y	-	-	10	-	-
3D	6X6	0	5	Y	3	Y	Y	-	-	20	-	-
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	-
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	-
4C	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	-
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	-	-	-
5B	6X40	0	2-4-2	Y	5	Y	Y	-	-	-	-	-
5C	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	-
6A	6X6	300	5	Y	6	Y	Y	-	-	-	-	-
6B	6X6	300	5	Y	6	Y	Y	-	-	-	-	-
6C	6X6	300	5	Y	6	Y	Y	-	-	-	-	-
S1	6X6	+225	5	Y	-	-	-	-	-	-	Y	-
S2	6X6	+225	5	Y	-	-	-	-	-	-	Y	-

4 Phase
Fully Actuated
Wilmington Signal System

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. Locate new cabinet so as not to obstruct sight distance of of vehicles turning right on red.
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. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Signal system data: Controller Asset #0390.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Push Button & Sign	
	Pedestrian Signal Head	
	Metal Pole with Mastarm	
	Pedestrian Pedestal	
	Type I Pushbutton Post	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
A	Left Arrow "ONLY" Sign (R3-5L)	A
B	Combined Through and Left Arrow Sign (R3-6L)	B
C	Through Arrow "ONLY" Sign (R3-5A)	C
D	Combined Through and Right Arrow Sign (R3-6R)	D
E	No Left Turn Sign (R3-2)	E

OASIS 2070E TIMING CHART

FEATURE	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
Min Green 1 *	12	5	5	5	12
Extension 1 *	6.0	2.0	2.0	2.0	6.0
Max Green 1 *	100	30	45	40	100
Yellow Clearance	4.6	3.8	3.8	3.0	4.6
Red Clearance	1.6	3.4	3.2	3.6	1.6
Red Revert	2.0	2.0	2.0	2.0	2.0
Walk 1 *	4	-	4	-	-
Don't Walk 1	23	-	42	-	-
Seconds Per Actuation *	1.5	-	-	-	1.5
Max Variable Initial *	34	-	-	-	34
Time Before Reduction *	15	-	-	-	15
Time To Reduce *	30	-	-	-	30
Minimum Gap	3.0	-	-	-	3.0
Recall Mode	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-
Simultaneous Gap	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.

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

US 17 Business (Market Street) at SR 2048 (Gordon Road)

Division 03 New Hanover County Wilmington

PLAN DATE: April 2017 REVIEWED BY: MB Toth
PREPARED BY: AM Encarnacion REVIEWED BY:

SCALE 1"=40' (0 – 40)

REVISIONS	INIT.	DATE

Designed by Melissa B. Toth 6/6/2017
SIGNATURE DATE
SIG. INVENTORY NO. 03-0390

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025892 ENGINEER MELISSA B. TOTH

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

06-JUN-2017 13:48
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