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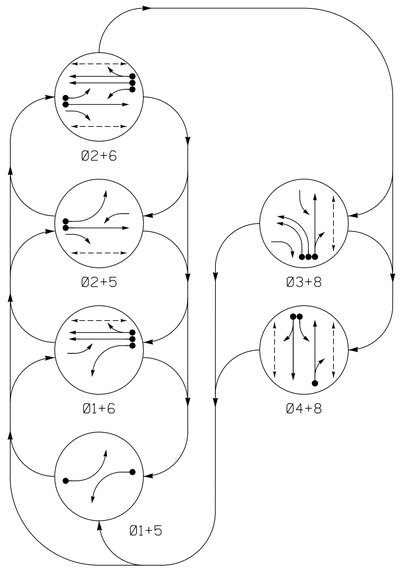
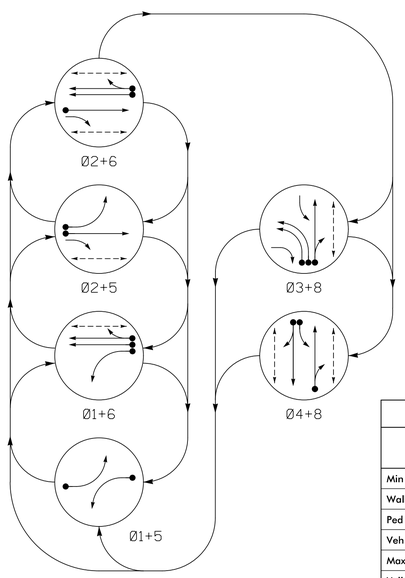
PROJECT REFERENCE NO.	SHEET NO.
I-5711	Sig 24.0

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	03+8	04+8	FLASH
11	←	←	F Y	F Y	R	R	Y
21	R	R	G	G	R	R	Y
22	R	R	G	G	R	R	Y
31,32	R	R	R	R	←	R	R
41	R	R	R	R	F Y	F Y	R
42,43	R	R	R	R	R	G	R
51	←	F Y	←	F Y	R	R	Y
61,62	R	G	R	G	R	R	Y
81,82	R	R	R	R	G	G	R
P21,P22	DW	DW	W	W	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK
P81,P82	DW	DW	DW	DW	W	W	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+8	04+8	FLASH
11	←	←	R	R	R	R	Y
21	R	R	G	G	R	R	Y
22	R	R	G	G	R	R	Y
31,32	R	R	R	R	←	R	R
41	R	R	R	R	F Y	F Y	R
42,43	R	R	R	R	R	G	R
51	←	R	←	R	R	R	Y
61,62	R	G	R	G	R	R	Y
81,82	R	R	R	R	G	G	R
P21,P22	DW	DW	W	W	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK
P81,P82	DW	DW	DW	DW	W	W	DRK

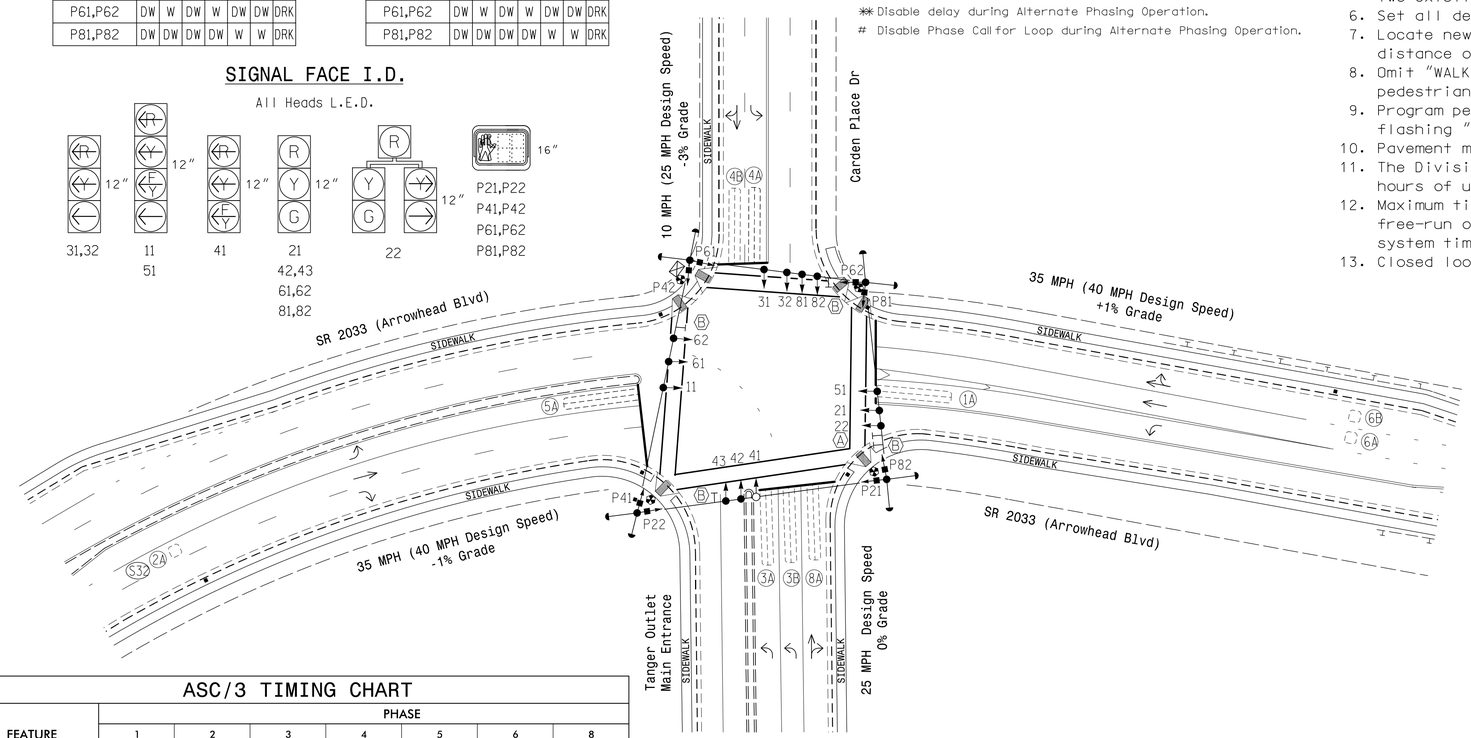
SIGNAL FACE I.D.

All Heads L.E.D.

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	6x40	0	2-4-2	–	1	Yes	–	✳15	–	S	–	X
					#6	Yes	–	3	–	G	–	X
2A/S32	6x6	250	5	–	2	Yes	–	–	X	N	X	X
3A	6x40	0	2-4-2	–	3	Yes	–	–	–	S	–	X
3B	6x40	0	2-4-2	–	3	Yes	–	–	–	S	–	X
4A	6x40	0	2-4-2	–	4	Yes	–	3	–	S	–	X
4B	6x40	0	2-4-2	–	4	Yes	–	10	–	S	–	X
5A	6x40	0	2-4-2	–	5	Yes	–	✳✳15	–	S	–	X
					#2	Yes	–	3	–	G	–	X
6A	6x6	250	4	–	6	Yes	–	–	X	N	–	X
6B	6x6	250	4	–	6	Yes	–	–	X	N	–	X
8A	6x40	0	2-4-2	–	8	Yes	–	10	–	S	–	X

✳ Reduce delay to 3 seconds during Alternate Phasing Operation.
✳✳ Disable delay during Alternate Phasing Operation.
Disable Phase Call for Loop during Alternate Phasing Operation.



ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	8
Min Green *	7	12	7	7	7	12	7
Walk *	0	7	0	4	0	7	4
Ped Clear	0	25	0	22	0	15	19
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0
Max 1 *	15	90	40	20	15	90	20
Yellow	3.0	4.2	3.0	3.3	3.0	4.2	3.3
Red Clear	2.9	1.9	3.2	3.0	3.1	1.9	3.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	0	-	-	-	0	-
Seconds /Actuation *	-	2.5	-	-	-	1.5	-
Max Initial *	-	29	-	-	-	29	-
Time Before Reduction *	-	30	-	-	-	30	-
Time To Reduce *	-	45	-	-	-	45	-
Minimum Gap	-	3.0	-	-	-	3.0	-
Locking Detector	-	X	-	-	-	X	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-
Dual Entry	-	-	-	X	-	-	X
Simultaneous Gap	X	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.

6 Phase
Fully Actuated
SR 1007 (Mebane Oaks Rd) CLS
Signal System: 10705

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. Phase 3 may be lagged.
5. Renumber existing signal heads 41 and 42 as signal heads 42 and 43, and reposition these two existing signal heads.
6. Set all detector units to presence mode.
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. Pavement markings are existing.
11. The Division Traffic Engineer will determine the hours of use for each phasing plan.
12. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
13. Closed loop system data: Controller Asset #: 2147.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Type I Pushbutton Post	
N/A	Curb Ramp	
N/A	Guardrail	
Ⓐ	"RIGHT LANE MUST TURN RIGHT" Sign (R3-7R)	Ⓐ
Ⓑ	Right "TURNING VEHICLES" Yield "TO" Pedestrians Sign (R10-15R)	Ⓑ

Signal Upgrade

PREPARED IN THE OFFICE OF:
Accelerate Engineering, PLLC
875 Walnut Street, Suite 316
Cary, NC 27511
Tel: 919.263.5678 Fax: 919.263.5687
NC License No. P-1442

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

SCALE 0 40
1" = 40'

SR 2033 (Arrowhead Boulevard)
at Carden Place Drive/
Tanger Outlet Main Entrance

Division 7 Alamance County Mebane

PLAN DATE: November 2019 REVIEWED BY: Z. "Gavin" Teng
PREPARED BY: Z. "Gavin" Teng REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032179 ENGINEER ZHAOLONG TENG

DocuSigned by: Zhaolong Teng 12/17/2019
CERTIFICATE NO. DATE

SIG. INVENTORY NO. 07-2147

$$$$$SYSTIME$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$