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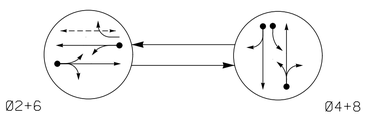
PROJECT REFERENCE NO.	SHEET NO.
C-5703	Sig.77.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

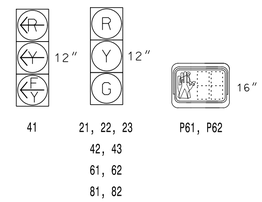
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	FLASH
21, 22, 23	G	R	Y
41	~~R~~	~~F~~ Y	~~R~~
42, 43	R	G	R
61, 62	G	R	Y
81, 82	R	G	R
P61, P62	W	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



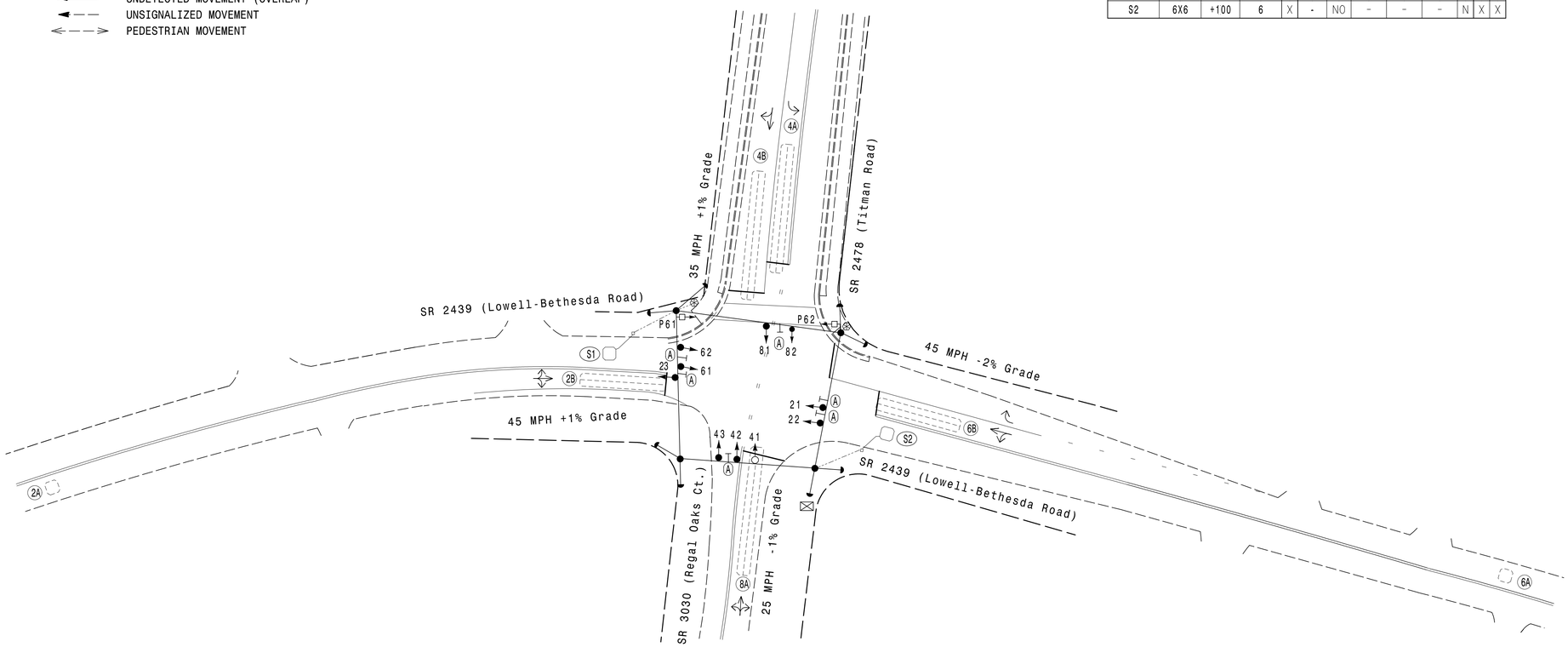
DETECTOR INSTALLATION CHART

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
2A	6X6	300	EXIST	-	2	Yes	-	-	-	N	-	X
2B	6X40	0	2-4-2	-	2	Yes	2	5	-	G	-	X
4A	6X60	+3	2-4-2	-	4	Yes	-	3	-	N	-	X
4B	6X60	+3	2-4-2	-	4	Yes	-	15	-	N	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	-	N	-	X
6B	6X40	0	2-4-2	-	6	Yes	2	5	-	G	-	X
8A	6X60	+3	2-4-2	-	8	Yes	-	5	-	N	-	X
S1	6X6	+100	6	X	-	NO	-	-	-	N	X	X
S2	6X6	+100	6	X	-	NO	-	-	-	N	X	X

2 Phase
Fully Actuated
Gastonia Signal System

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. Set all detector units to presence mode.
4. In the event of loop replacement, refer to the current ITS and Signal Design Manual and submit a Plan of Record to the Signal Design Section.
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.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
10. Install new cabinet on the existing cabinet foundation.
11. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
12. Existing signal heads 41 and 42 have been relabeled to 42 and 43.
13. All proposed pedestrian signal heads shall be black in color. See Project Special Provisions for details.
14. All proposed pedestrian pedestals and pushbutton posts shall be black in color. See Project Special Provisions for details.
15. City system data:
    Controller Asset #0373.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Type I Pushbutton Post	
	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	
	Street Name Sign (D3-1)	

TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green *	12	10	12	10
Walk *	-	-	7	-
Ped Clear	-	-	10	-
Veh. Extension *	6.0	4.0	6.0	4.0
Max 1 *	100	35	100	35
Yellow	4.7	3.8	4.7	3.8
Red Clear	1.3	1.8	1.3	1.8
Red Revert	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-
Seconds /Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	40	-	40	-
Minimum Gap	3.0	-	3.0	-
Locking Detector	-	-	-	-
Recall Position	MIN RECALL	-	MIN RECALL	-
Dual Entry	-	X	-	X
Simultaneous Gap	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.

Signal Upgrade

Prepared For:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 2439 (Lowell-Bethesda Road)
at
SR 2478 (Titman Road) and
SR 3030 (Regal Oaks Ct)

Division 12 Gaston County Gastonia

PLAN DATE: May 2021		REVIEWED BY:	SL Phillips
PREPARED BY: SP Pennington		REVIEWED BY:	KP Baumann

REVISIONS	INIT.	DATE

SCALE 0 30 1"=30'

PLANS PREPARED IN THE OFFICE OF:
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NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 044434 ENGINEER KEVIN P. BAUMANN

DocuSigned by:
SIGNATURE 3/11/2022 DATE

SIG. INVENTORY NO. 12-0373

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