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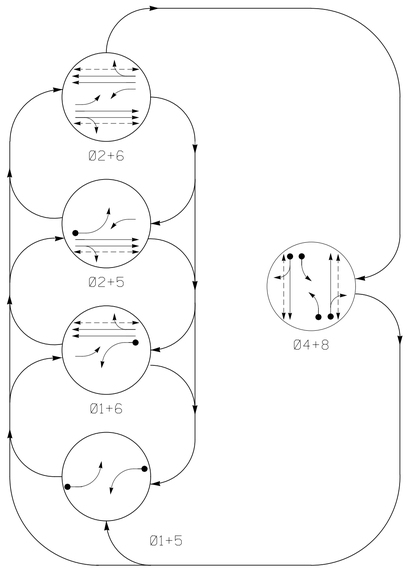
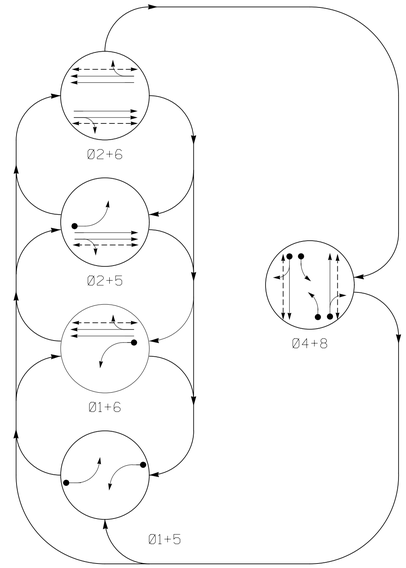
PROJECT REFERENCE NO.	SHEET NO.
C-5703	Sig.9.0

5 Phase Semi-Actuated w/ Alternate Phasing Operation Gastonia Signal System

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	↚	↚	F̸Y	F̸Y	R̸	Y̸
21,22	R	R	G	G	R	Y
41	R̸	R̸	R̸	R̸	F̸Y	R̸
42,43	R	R	R	R	G	R
51	↚	F̸Y	↚	F̸Y	R̸	Y̸
61,62	R	G	R	G	R	Y
81	R̸	R̸	R̸	R̸	F̸Y	R̸
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	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	↚	↚	R̸	R̸	R̸	Y̸
21,22	R	R	G	G	R	Y
41	R̸	R̸	R̸	R̸	F̸Y	R̸
42,43	R	R	R	R	G	R
51	↚	R̸	↚	R̸	R̸	Y̸
61,62	R	G	R	G	R	Y
81	R̸	R̸	R̸	R̸	F̸Y	R̸
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

DETECTOR INSTALLATION CHART

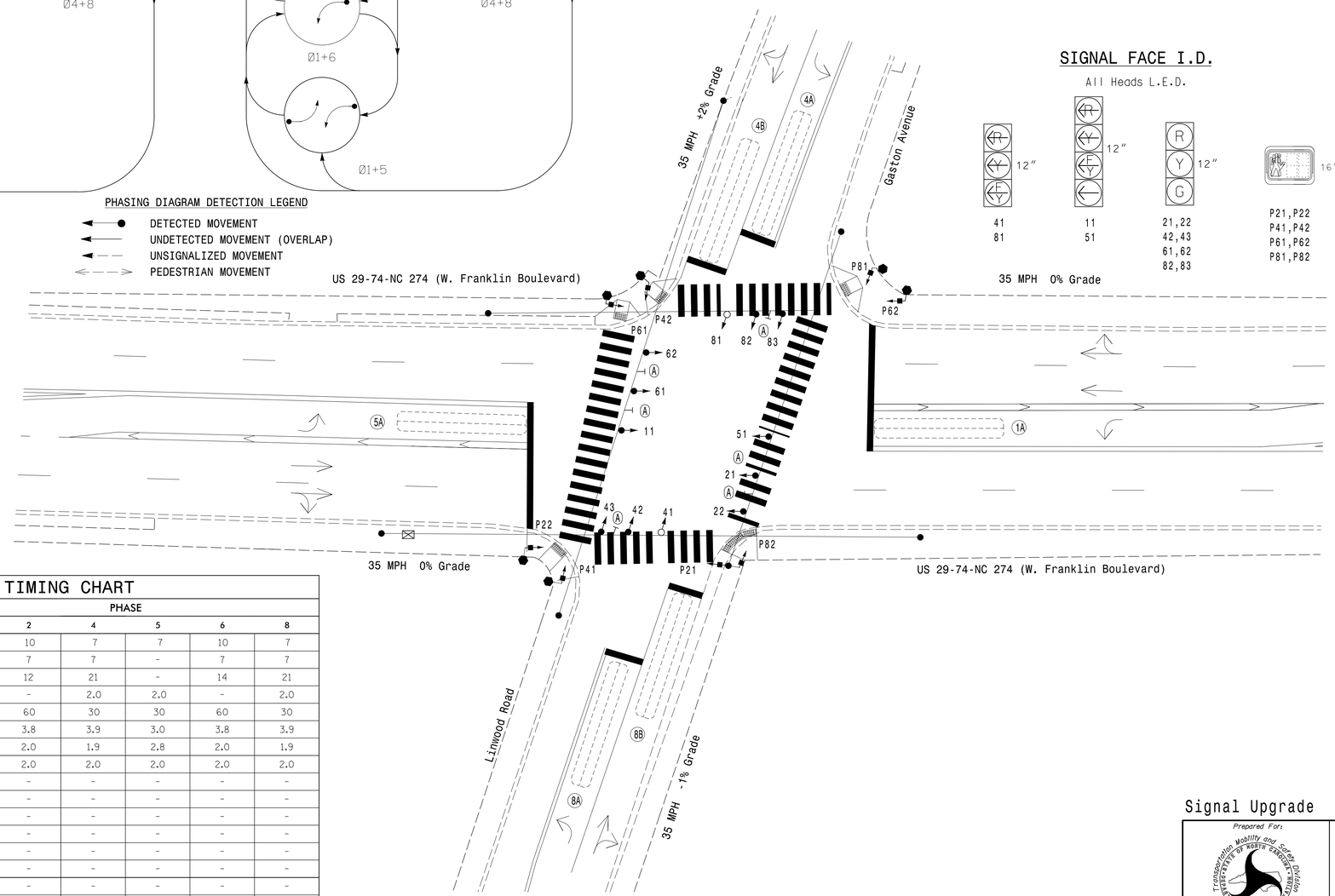
DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	-	1	Yes	-	3	-	N	-	X
4A	6X40	0	2-4-2	-	4	Yes	-	3	-	N	-	X
4B	6X40	0	2-4-2	-	4	Yes	-	3	-	N	-	X
5A	6X40	0	2-4-2	-	5	Yes	-	3	-	N	-	X
8A	6X40	0	2-4-2	-	8	Yes	-	3	-	N	-	X
8B	6X40	0	2-4-2	-	8	Yes	-	3	-	N	-	X

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. Reposition existing signal heads numbered 42, 43, 82, and 83.
5. Set all detector units to presence mode.
6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls on pedestrian phases 4 and 8.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. The City Engineer or their representative will determine the hours of use for each phasing plan.
10. Pavement markings are existing.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
12. Install new cabinet on the existing cabinet foundation.
13. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
14. Existing signal heads 41, 42, 81, and 82 have been relabeled to 42, 43, 82, and 83, respectively.
15. City system data:
    Controller Asset #0032

PHASING DIAGRAM DETECTION LEGEND

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



SIGNAL FACE I.D.

All Heads L.E.D.

TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green *	7	10	7	7	10	7
Walk *	-	7	7	-	7	7
Ped Clear	-	12	21	-	14	21
Veh. Extension *	2.0	-	2.0	2.0	-	2.0
Max 1 *	30	60	30	30	60	30
Yellow	3.0	3.8	3.9	3.0	3.8	3.9
Red Clear	2.8	2.0	1.9	2.8	2.0	1.9
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Locking Detector	-	-	-	-	-	-
Recall Position	-	PED/MAX	-	-	PED/MAX	-
Dual Entry	-	-	X	-	-	X
Simultaneous Gap	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.

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	
	Street Name Sign (D3-1)	

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

US 29-74-NC 274 (W. Franklin Boulevard) at Linwood Road/Gaston Avenue

Division 12 Gaston County Gastonia

PLAN DATE:	May 2021	REVIEWED BY:	SL Phillips
PREPARED BY:	DM Curri	REVIEWED BY:	KP Baumann

SCALE 0 20 1"=20'

REVISIONS	INIT.	DATE

NORTH CAROLINA PROFESSIONAL SEAL 044434 ENGINEER KEVIN P. BAUMANN

DocuSigned by: 3/11/2022
SIGNATURE DATE

SIG. INVENTORY NO. 12-0032

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

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