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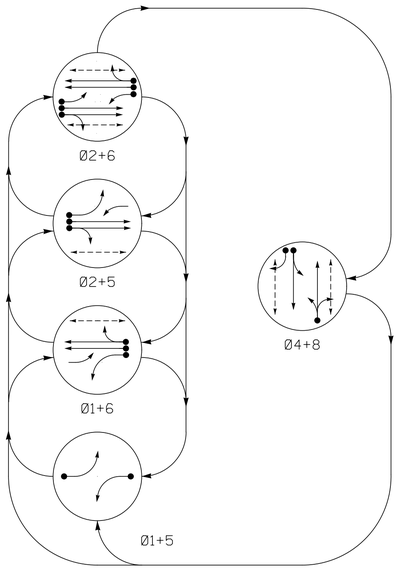
PROJECT REFERENCE NO.	SHEET NO.
C-5703	Sig.69.0

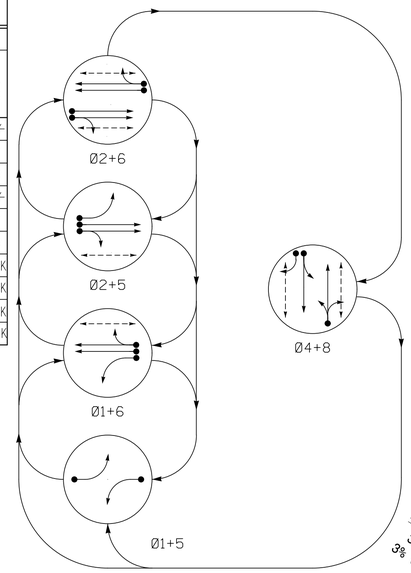
DEFAULT PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	←●	←●	F Y	F Y	←R	←Y
21, 22	R	R	G	G	R	Y
41, 42	R	R	R	R	G	R
51	←●	F Y	←●	F Y	←R	←Y
61, 62	R	G	R	G	R	Y
81, 82	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 DIAGRAM



ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	←●	←●	←R	←R	←R	←Y
21, 22	R	R	G	G	R	Y
41, 42	R	R	R	R	G	R
51	←●	←R	←●	←R	←R	←Y
61, 62	R	G	R	G	R	Y
81, 82	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	6X60	+5	2-4-2	-	1	Yes	-	10 *	-	N	-	X
					6 #	Yes	-	3	-	G	-	X
2A	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
4A	6X40	+3	2-4-2	-	4	Yes	-	3	-	N	-	X
4B	6X40	+3	2-4-2	-	4	Yes	-	15	-	N	-	X
5A	6X60	+5	2-4-2	-	5	Yes	-	10*	-	N	-	X
					2 #	Yes	-	3	-	G	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
8A	6X60	+5	2-4-2	-	8	Yes	-	3	-	N	-	X

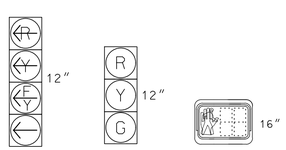
* Reduce Delay to 3 seconds during Alternate Phasing operation.
\# Disable Phase call for loop during Alternate Phasing operation.

PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

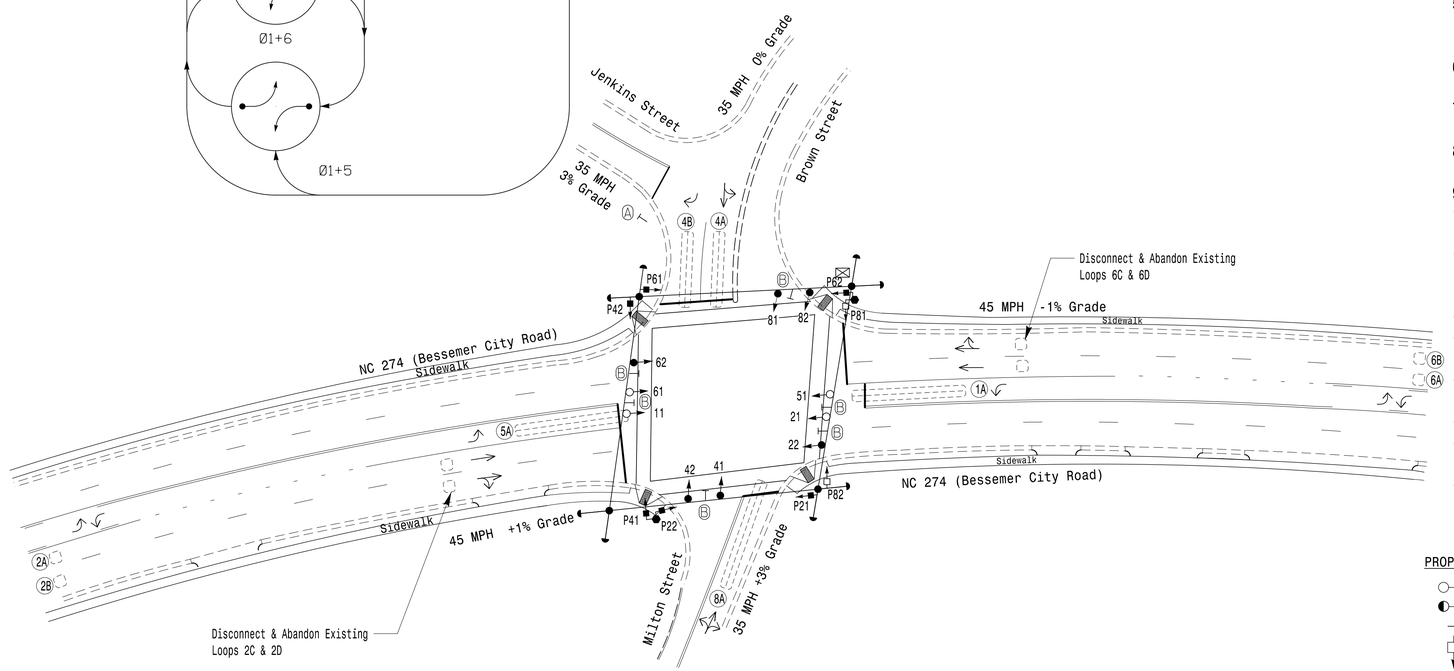
All Heads L.E.D.



11
51

21, 22
41, 42
61, 62
81, 82

P21, P22
P41, P42
P61, P62
P81, P82



5 Phase
Fully Actuated w/
Alternate Phasing Operation
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. Phase 1 and/or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. 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.
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.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. Pavement markings are existing.
10. The City Engineer or their representative will determine the hours of use for each phasing plan.
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. All proposed pedestrian signal heads shall be black in color. See Project Special Provisions for details.
15. Disconnect and abandon existing loops 2C, 2D, 6C, and 6D.
16. Reconnect lead-in cable to separate loops 2A, 2B, 6A, and 6B,as shown.
17. City system data:
    Controller Asset # 0264.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Type II Signal Pedestal	
	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	
A	"STOP" Sign (R1-1)	A
B	Street Name Sign (D3-1)	B

TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green *	7	12	7	7	12	7
Walk *	-	7	7	-	7	7
Ped Clear	-	20	22	-	23	21
Veh. Extension *	1.0	6.0	2.0	2.0	6.0	1.0
Max 1 *	15	55	25	15	55	25
Yellow	3.0	4.6	3.8	3.0	4.6	3.8
Red Clear	2.8	1.6	2.2	2.9	1.6	2.2
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-
Seconds /Actuation *	-	1.5	-	-	1.5	-
Max Initial *	-	34	-	-	34	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	30	-	-	30	-
Minimum Gap	-	3.0	-	-	3.0	-
Locking Detector	-	X	-	-	X	-
Recall Position	-	MIN RECALL	-	-	MIN RECALL	-
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.

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

Signal Upgrade

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

NC 274 (Bessemer City Road) at Brown Street and Milton Street

Division 12 Gaston County Gastonia

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

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 044434 ENGINEER KEVIN P. BAUMANN

DocuSigned by: 5E07B0A0B9B447... SIGNATURE 3/11/2022 DATE

SIG. INVENTORY NO. 12-0264

3/9/2022 11:14:05 AM Danielle.Curri \\kimley-horn.com\SE_RAL1\RAL_TPTO_ITS\011036569 Gastonia Signal System\Signals\S4 - Signal Design\C120264-2021.dgn