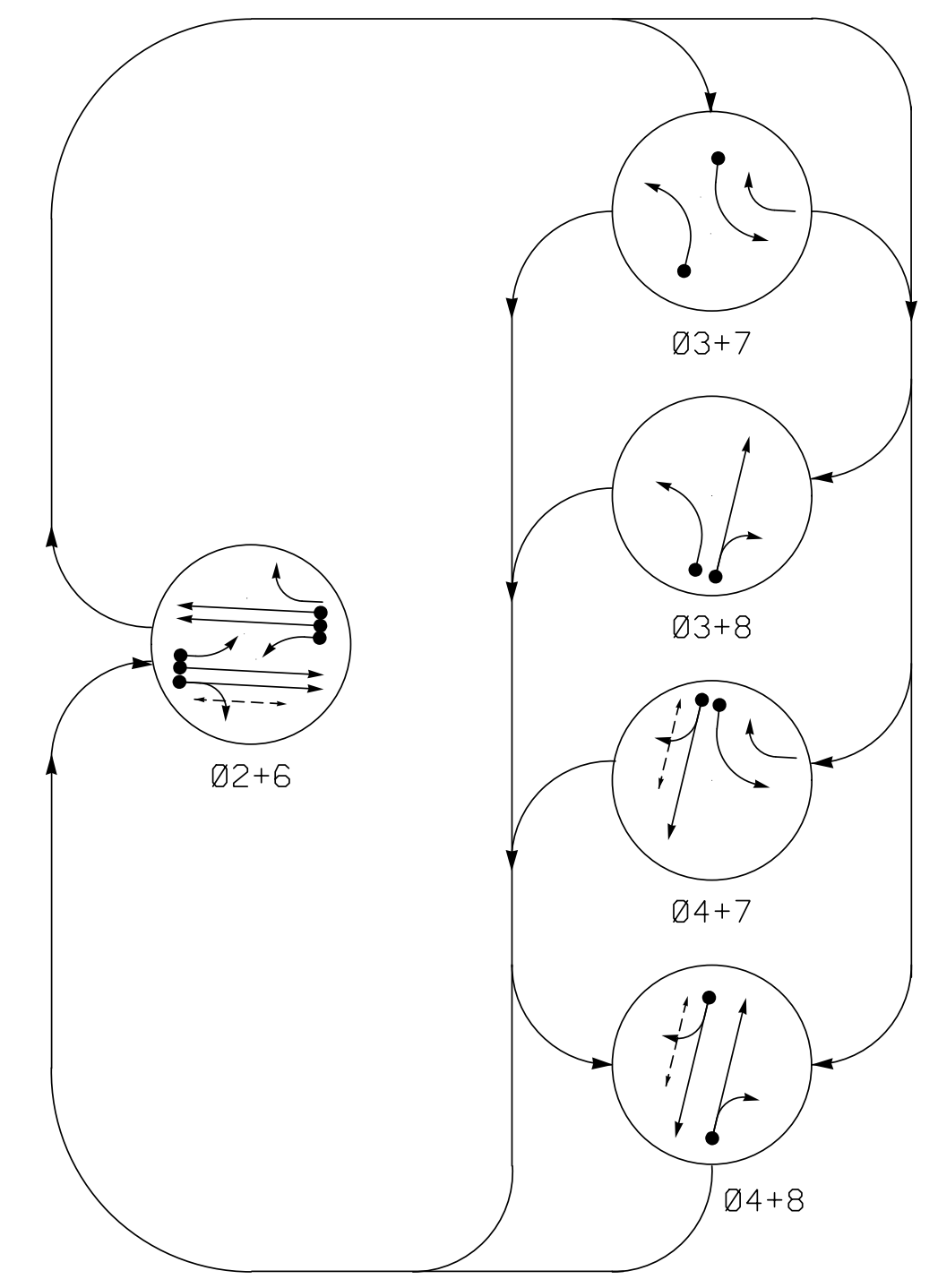


PHASING DIAGRAM

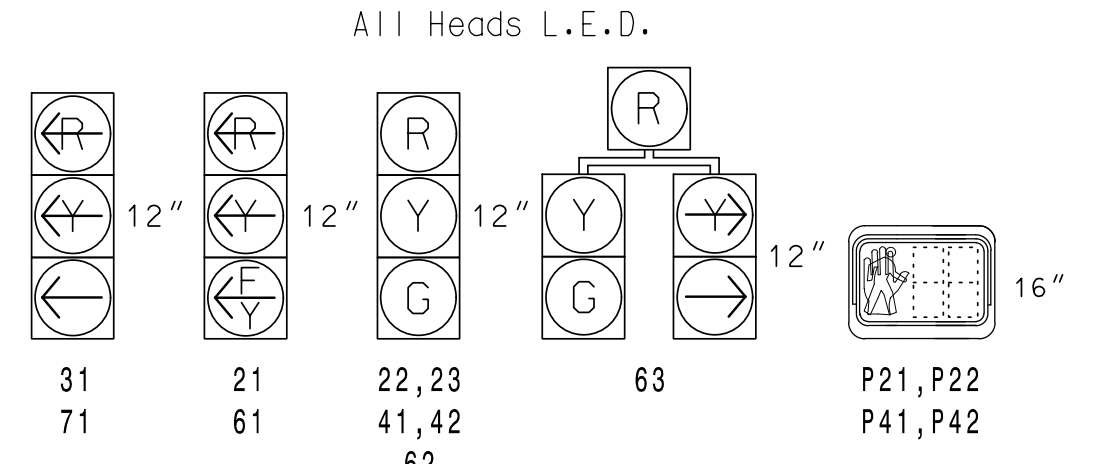


PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE					
	Ø 2+6	Ø 3+7	Ø 3+8	Ø 4+7	Ø 4+8	F L HEADS
21	Y	R	R	R	R	Y
22, 23	G	R	R	R	R	Y
31	R	R	R	R	R	Y
41, 42	R	R	R	G	G	R
61	Y	R	R	R	R	Y
62	G	R	R	R	R	Y
63	G	R	R	R	R	Y
71	R	R	R	R	R	Y
81, 82	R	R	G	R	G	R
P21, P22	W	DW	DW	DW	DW	DRK
P41, P42	DW	DW	DW	W	W	DRK

SIGNAL FACE I.D.



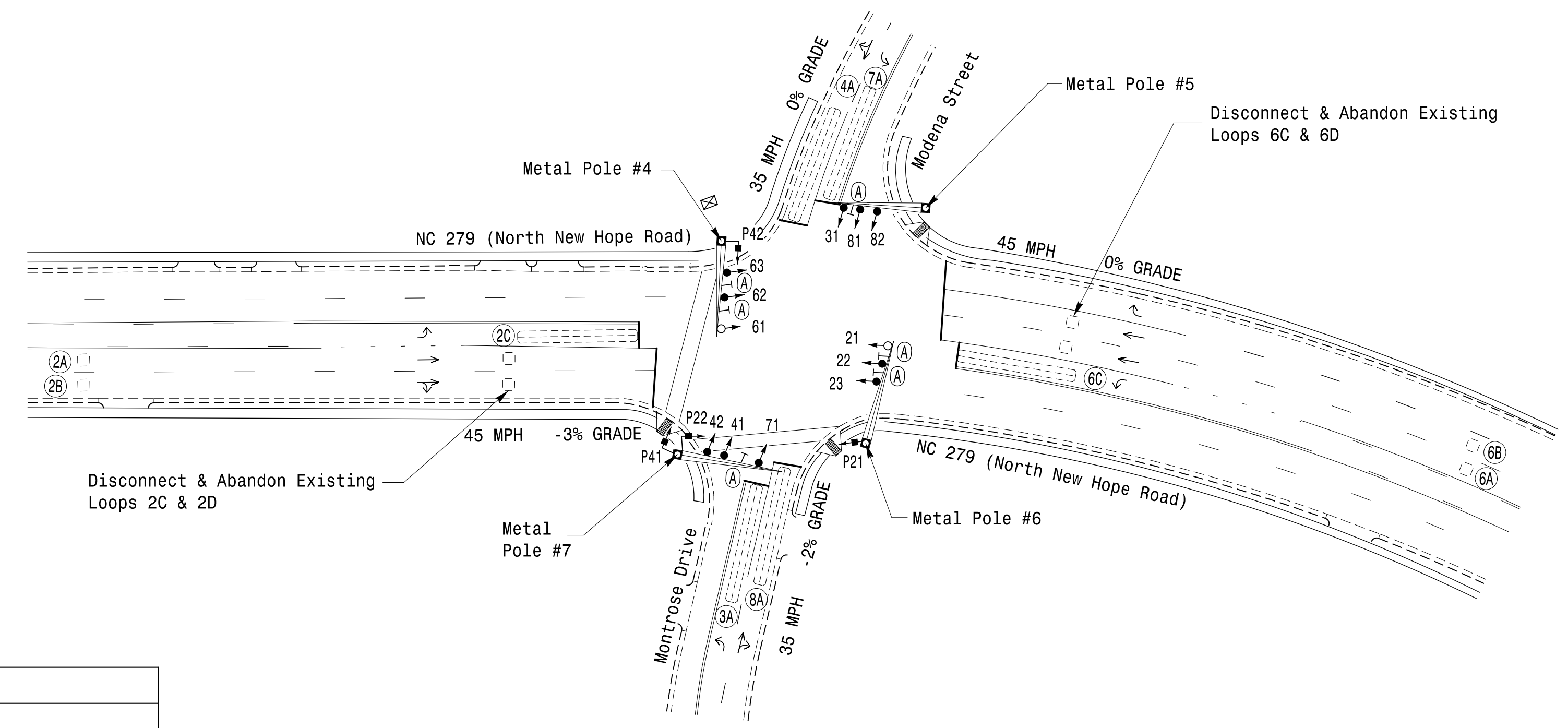
DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	PROGRAMMING								
				NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
2A	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
2C	6X60	0	2-4-2	-	2	Yes	-	-	-	G	-	X
3A	6X60	0	2-4-2	-	3	Yes	-	3	-	N	-	X
4A	6X60	0	2-4-2	-	4	Yes	-	10	-	N	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
6C	6X60	0	2-4-2	-	6	Yes	-	-	-	G	-	X
7A	6X60	0	2-4-2	-	7	Yes	-	3	-	N	-	X
8A	6X60	0	2-4-2	-	8	Yes	-	10	-	N	-	X

5 Phase Fully Actuated Gastonia Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 3 and/or phase 7 may be lagged.
- Reposition existing signal heads numbered 22, 23, 62, & 63.
- Set all detector units to presence mode.
- 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.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
- Disconnect and abandon existing loops 2C, 2D, 6C, & 6D.
- Install new cabinet on the existing cabinet foundation.
- All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
- Existing signal heads 21 & 22 have been relabeled to 22 & 23, respectively.
- Existing loops 2E & 6E have been relabeled to 2C & 6C, respectively.
- Do NOT install backplates on Metal Pole #6.
- City system data: Controller Asset #1373



TIMING CHART

FEATURE	PHASE					
	2	3	4	6	7	8
Min Green *	12	7	7	12	7	7
Walk *	7	-	7	-	-	-
Ped Clear	17	-	20	-	-	-
Veh. Extension *	6.0	1.0	1.0	6.0	1.0	1.0
Max 1 *	60	15	30	60	15	30
Yellow	4.8	3.0	3.8	4.8	3.0	4.0
Red Clear	2.0	3.1	2.3	2.0	2.6	2.3
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	-	-	-	-	-	-
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 | ● → N/A |
| ◐ → Modified Signal Head | ◑ → N/A |
| ⊥ Sign | ⊥ Sign |
| ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ Pedestrian Signal Head With Push Button & Sign |
| ○ Signal Pole with Guy | ○ Signal Pole with Guy |
| ○ Signal Pole with Sidewalk Guy | ○ Signal Pole with Sidewalk Guy |
| ⊥ Metal Pole with Mastarm | ⊥ Metal Pole with Mastarm |
| ⊥ Inductive Loop Detector Controller & Cabinet | ⊥ Inductive Loop Detector Controller & Cabinet |
| ⊥ Junction Box | ⊥ Junction Box |
| ⊥ 2-in Underground Conduit | ⊥ 2-in Underground Conduit |
| → N/A | → Right of Way |
| → Directional Arrow | → Directional Arrow |
| (A) Street Name Sign (D3-1) | (A) Street Name Sign (D3-1) |

Signal Upgrade

Prepared For:

 750 N. Greenfield Pkwy, Garner, NC 27529
 NC License #F-0102
 421 Fayetteville Street, Suite 600
 Raleigh, NC 27601
 (919) 677-2000

**NC 279 (N. New Hope Road)
at
Modena Street / Montrose Drive**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips
 PREPARED BY: EE Dogbe REVIEWED BY: KP Baumann

REVISIONS: _____ INIT. DATE

SCALE: 1" = 50'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

 KEVIN P. BAUMANN
 ENGINEER
 Discussed by: _____ DATE: 3/11/2022
 SIGNED BY: _____ DATE: _____
 SIG. INVENTORY NO. 12-1373

3/9/2022 11:17:19 AM Dantelle.Curt1 ***K:\mley-horn.com\SE-RAL\MRAL-TIP\DK-TIS\011036569_Gastonia_Signal_System9_Signal\SW4 - Signal Design\0121373-2021.dgn