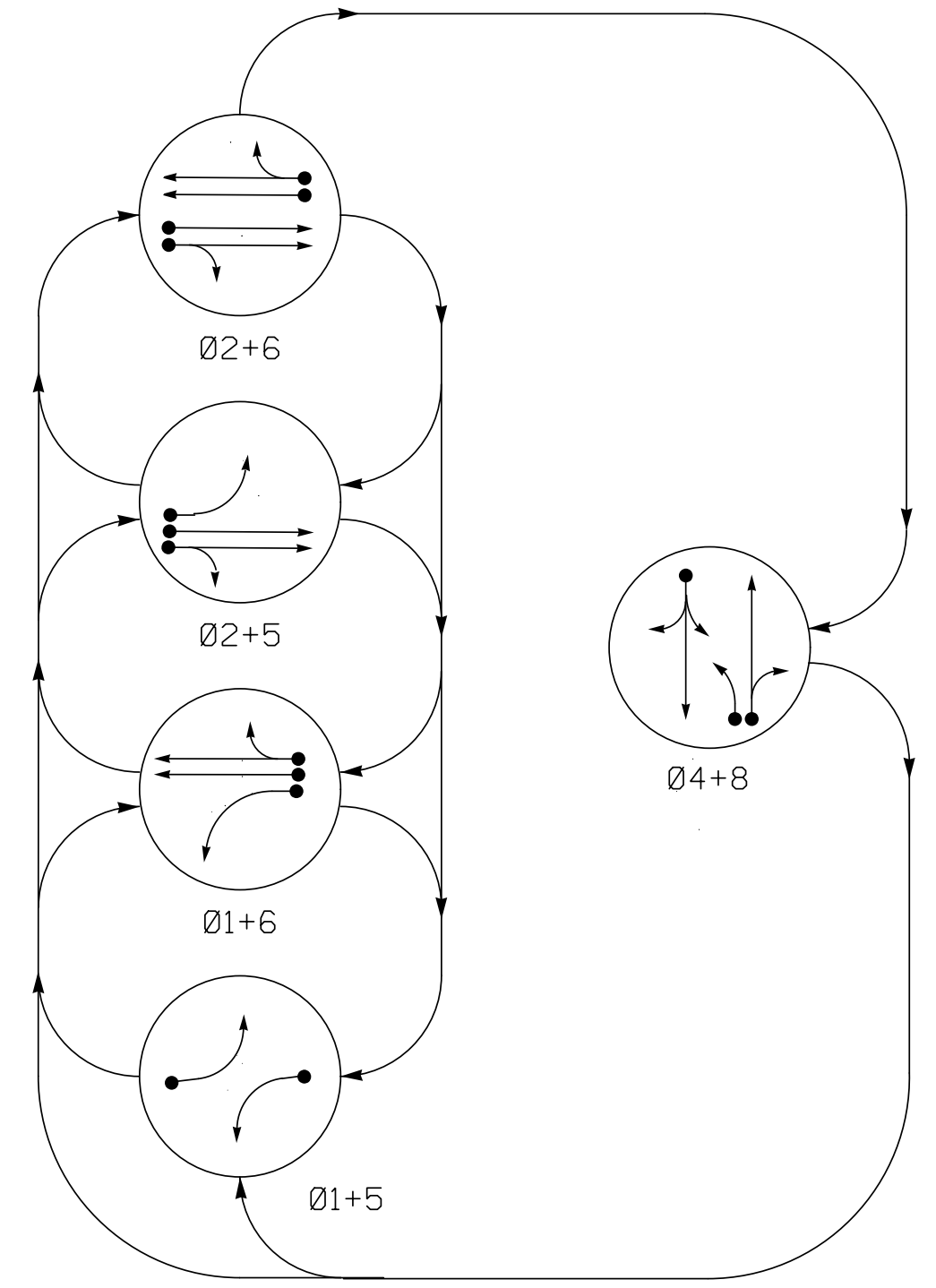


**PHASING DIAGRAM**



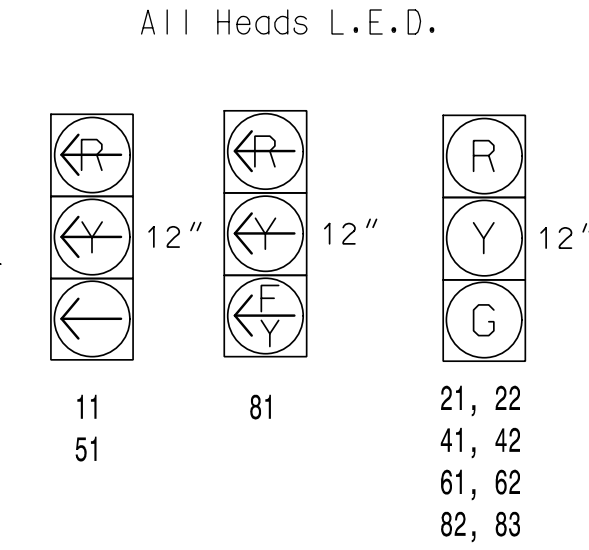
**PHASING DIAGRAM DETECTION LEGEND**

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

**TABLE OF OPERATION**

SIGNAL FACE	PHASE					
	Ø 1+5	Ø 1+6	Ø 2+5	Ø 2+6	Ø 4+8	F H S D
11	←	←	→	→	→	→
21, 22	R	R	G	G	R	Y
41, 42	R	R	R	R	G	R
51	←	←	→	→	→	→
61, 62	R	G	R	G	R	Y
81	←	←	→	→	→	→
82, 83	R	R	R	R	G	R

**SIGNAL FACE I.D.**



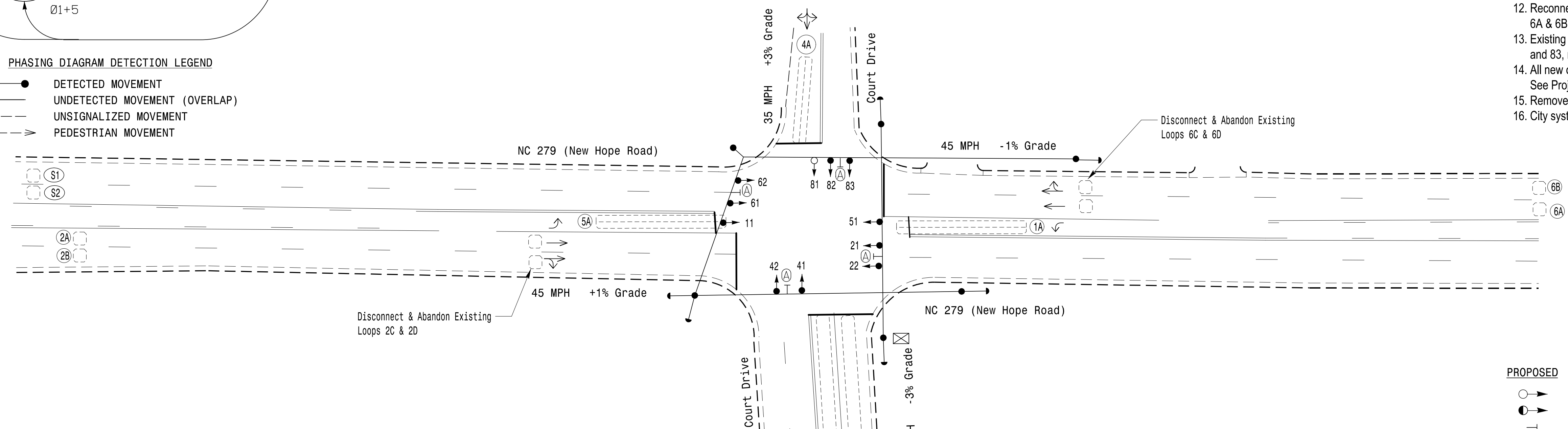
**DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X60	+5	2-4-2	-	1	Yes	-	-	-	N	-	X
2A	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
4A	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
5A	6X60	+5	2-4-2	-	5	Yes	-	-	-	N	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
8A	6X60	0	EXIST	-	8	Yes	-	-	-	N	-	X
8B	6X60	0	EXIST	-	8	Yes	-	-	-	N	-	X
S1	6X6	+390	EXIST	-	-	NO	-	-	-	N	X	X
S2	6X6	+390	EXIST	-	-	NO	-	-	-	N	X	X

**5 Phase Fully Actuated Gastonia Signal System**

**NOTES**

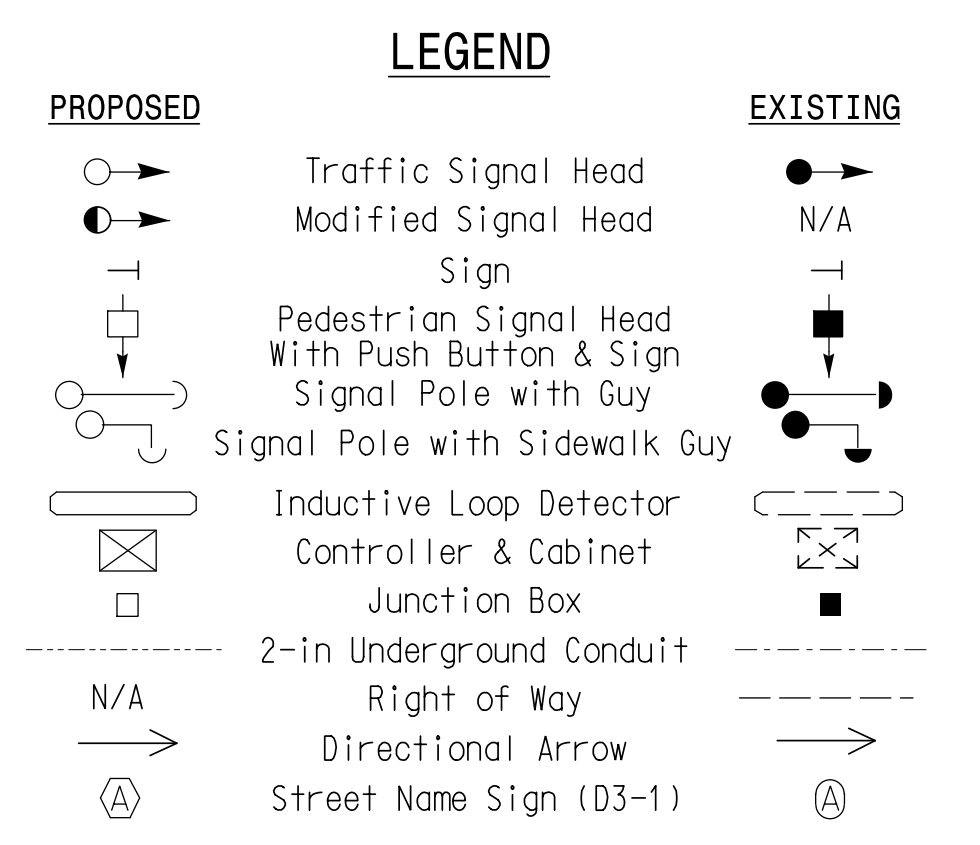
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Reposition existing signal head numbered 82.
- 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.
- 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.
- Reconnect lead-in cable to separate loops 2A & 2B and 6A & 6B, as shown.
- Existing signal head 81 and 82 have been relabeled to 82 and 83, respectively.
- All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
- Remove existing signs R1-2 and R3-5L.
- City system data:  
Controller Asset #0169.



**TIMING CHART**

FEATURE	PHASE					
	1	2	4	5	6	8
Min Green *	7	12	7	7	12	7
Walk *	-	-	-	-	-	-
Ped Clear	-	-	-	-	-	-
Veh. Extension *	1.0	6.0	2.0	1.0	6.0	1.0
Max I *	20	45	30	20	45	30
Yellow	3.0	4.4	4.1	3.0	4.6	4.1
Red Clear	1.9	1.5	2.0	2.1	1.5	2.0
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	-
Latching 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.



**Signal Upgrade**

Prepared For: **Kimley-Horn**

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 (919) 677-2000

**NC 279 (New Hope Road) at Court Drive**

Division 12 Gaston County Gastonia  
 PLAN DATE: May 2021 REVIEWED BY: SL Phillips  
 PREPARED BY: SP Pennington REVIEWED BY: KP Baumann

REVISIONS: \_\_\_\_\_ INIT: \_\_\_\_\_ DATE: \_\_\_\_\_

Seal of Professional Engineer: **KEVIN P. BAUMANN**, No. 044434

Discussed by: \_\_\_\_\_ DATE: 3/11/2022

SIG. INVENTORY NO. 12-0169

3/9/2022 11:16:47 AM DanHilleb.Cur1 \*\*\*Kimley-Horn.com/E:\RAL\MRAL\TIPDK\TIPDK101036569\_Gastonia Signal System9\_Signal\_Sig.58.0 - Signal Design\G120169-2021.dgn