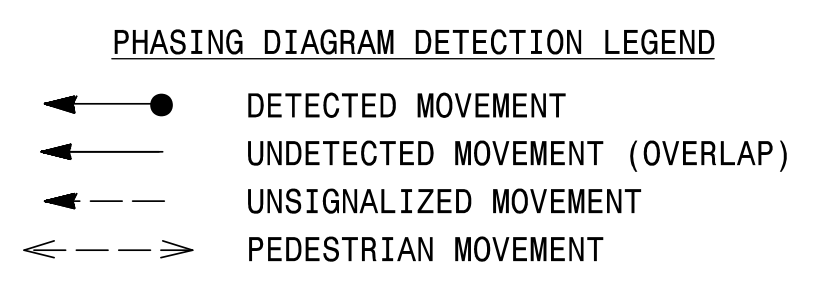
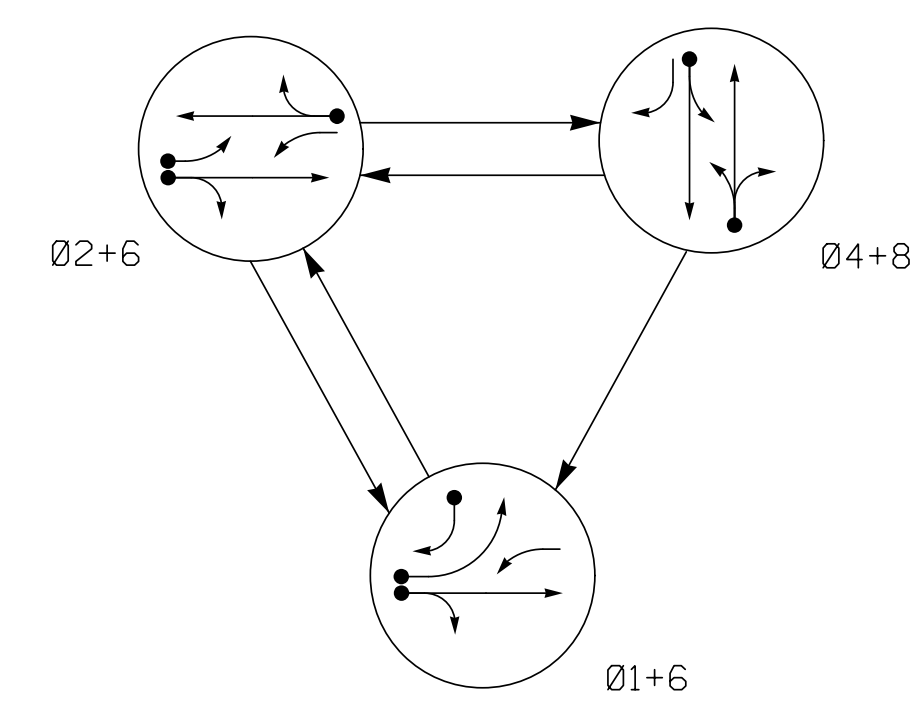


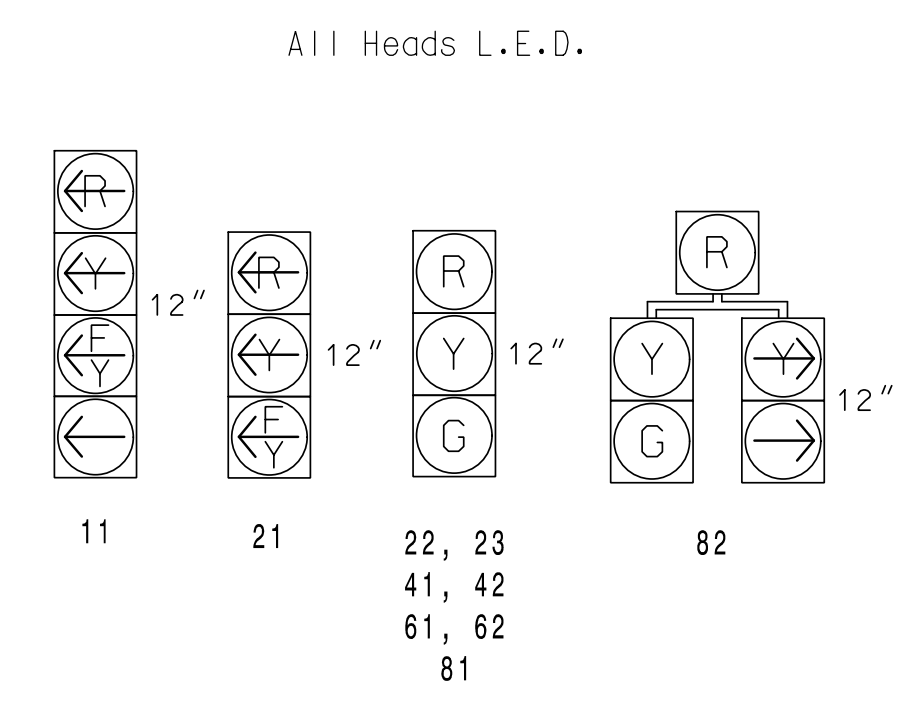
**PHASING DIAGRAM**



**TABLE OF OPERATION**

SIGNAL FACE	PHASE			
	Ø 1 + 6	Ø 2 + 6	Ø 4 + 8	F L CROSS
11	←	←	←	←
21	←	←	←	←
22, 23	R	G	R	Y
41, 42	R	R	G	R
61, 62	G	G	R	Y
81	R	R	G	R
82	R	R	G	R

**SIGNAL FACE I.D.**



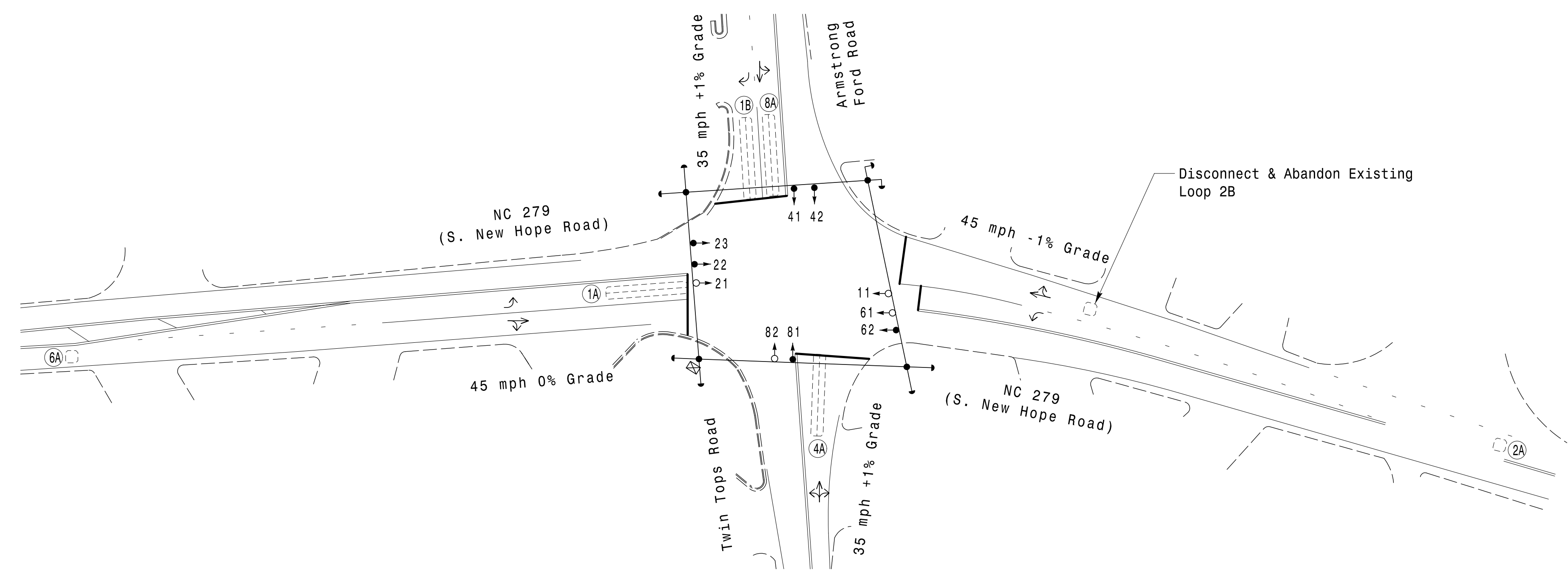
**DETECTOR INSTALLATION CHART**

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
1A	6X40	0	2-4-2	-	1	Yes	-	15	-	N	-	X
1B	6X40	0	2-4-2	-	6	Yes	-	3	-	G	-	X
2A	6X6	300	EXIST	-	2	Yes	-	15	-	N	-	X
4A	6X40	0	2-4-2	-	4	Yes	-	3	-	N	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
8A	6X40	0	2-4-2	-	8	Yes	-	3	-	N	-	X

**3 Phase Fully Actuated Gastonia Signal System**

**NOTES**

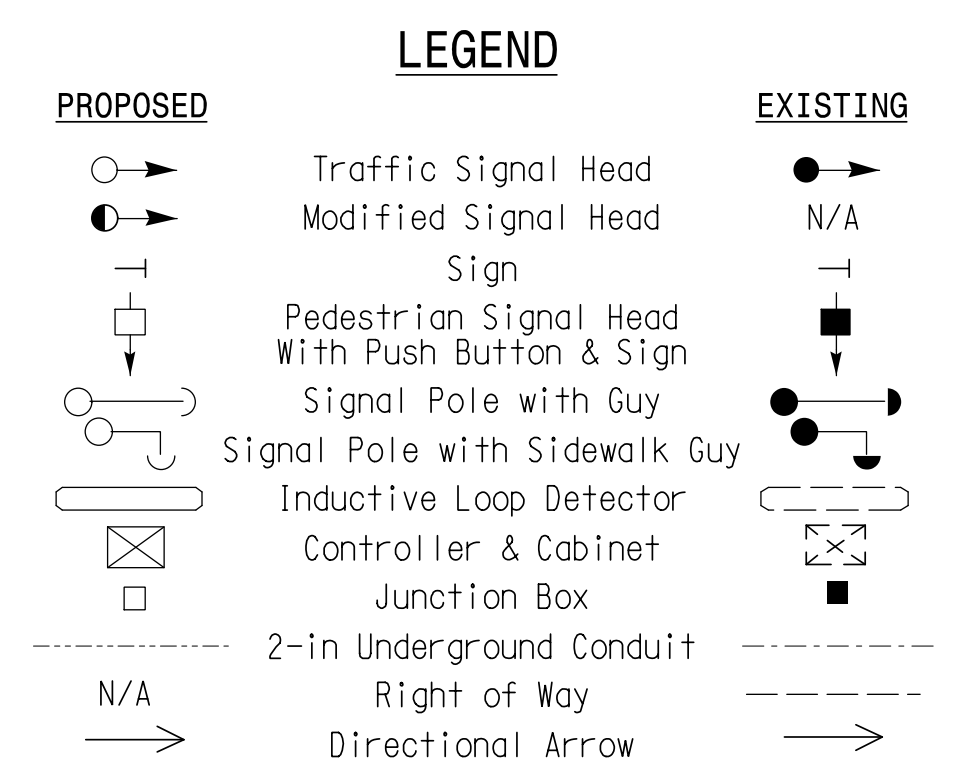
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 may be lagged.
- Set all detector units to presence 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.
- 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.
- Disconnect and abandon existing loop 2B.
- Existing signal head 21 and 22 have been relabeled to 22 and 23, respectively.
- Existing loop 8B has been relabeled to 1B.
- City system data:  
Controller Asset #1195.



**TIMING CHART**

FEATURE	PHASE				
	1	2	4	6	8
Min Green *	7	12	7	12	7
Walk *	-	-	-	-	-
Ped Clear	-	-	-	-	-
Veh. Extension *	2.0	6.0	2.0	6.0	2.0
Max I *	15	45	20	45	20
Yellow	3.0	4.6	3.8	4.6	3.8
Red Clear	2.1	1.3	1.5	1.3	1.5
Red Revert	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-
Seconds /Actuation *	-	2.5	-	2.5	-
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

\* 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:  
  
 750 N. Greenfield Pkwy, Garner, NC 27529  
 NC License #0102  
 421 Fayetteville Street, Suite 600  
 Raleigh, NC 27601  
 (919) 617-2000

**NC 279 (S. New Hope Road)**  
 at  
**Twin Tops Road/  
 Armstrong Ford Road**  
 Division 12 Gaston County Gastonia  
 PLAN DATE: May 2021 REVIEWED BY: SL Phillips  
 PREPARED BY: SP Pennington REVIEWED BY: KP Baumann

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

  
 KEVIN P. BAUMANN  
 ENGINEER  
 DATE: 3/11/2022  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 SIG. INVENTORY NO. 12-1195

3/9/2022 11:14:40 AM Dantellb.Curr1 \*\*\*K:\meyer-horn.com\SE-RAL\MRAL\_TIP\DK-TIS\011036569\_Gastonia Signal System9\_Signal\KWS4 - Signal Design\0121195-2021.dgn