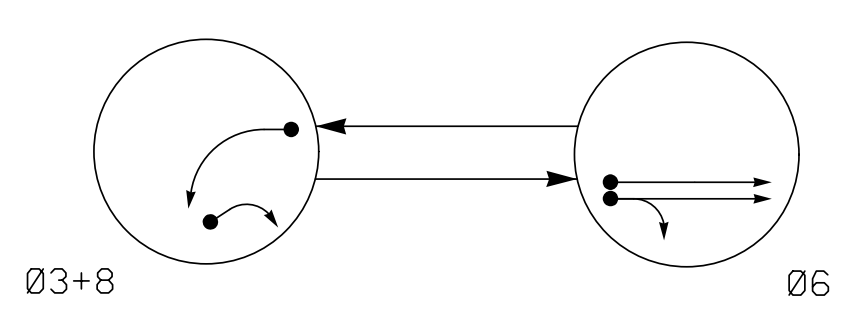


**PHASING DIAGRAM**



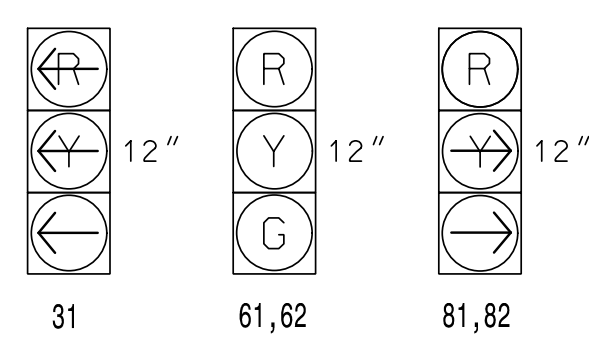
**PHASING DIAGRAM DETECTION LEGEND**

- ←● DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- ←... UNSIGNALIZED MOVEMENT
- ←--- PEDESTRIAN MOVEMENT

**TABLE OF OPERATION**

SIGNAL FACE	PHASE		
	Ø 3+8	Ø 6	FLASH
31	←	←R	←R
61,62	R	G	Y
81,82	→	R	

**SIGNAL FACE I.D.**  
All Heads L.E.D.



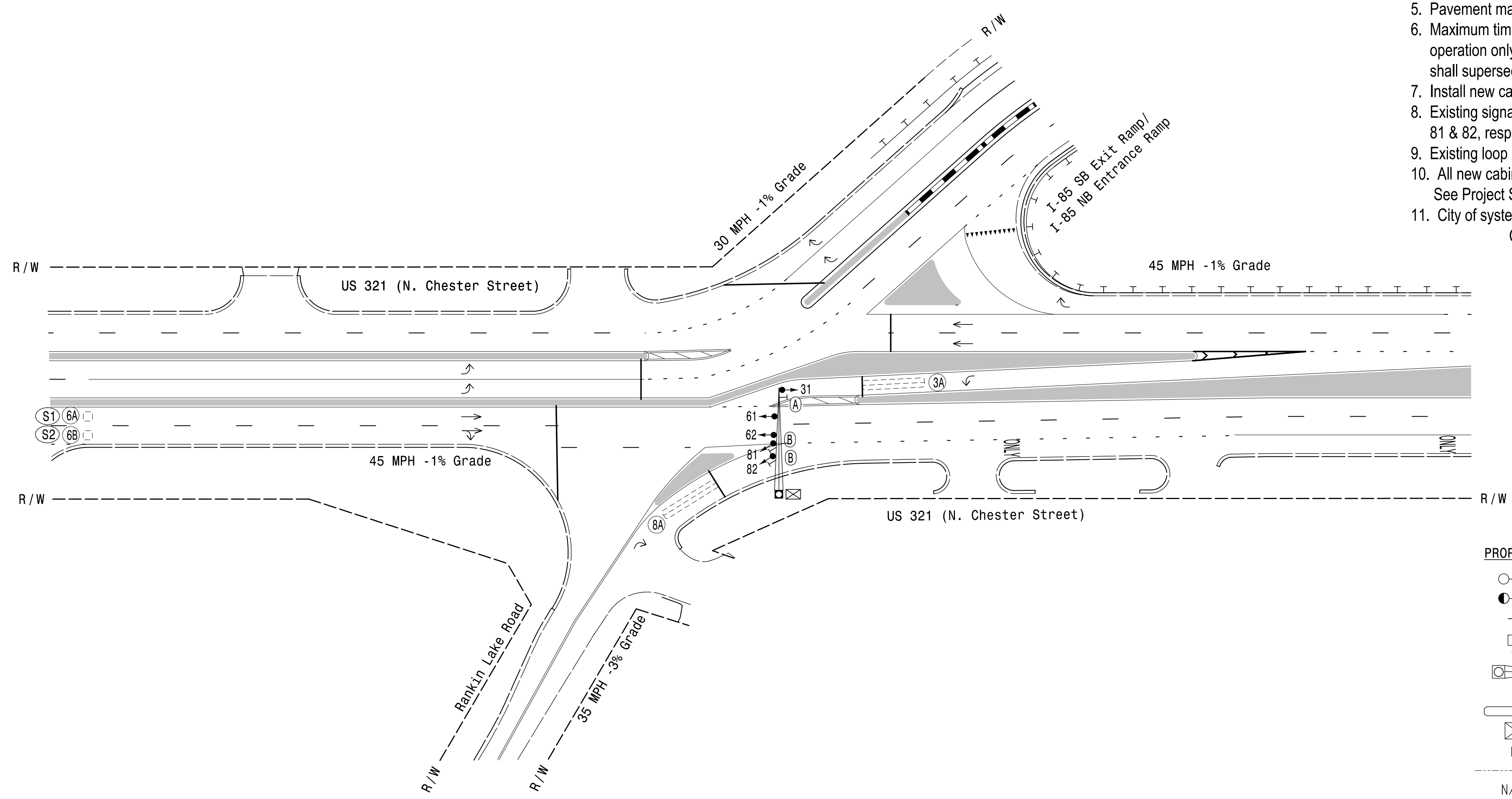
**DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP SYSTEM	NEW CARD
3A	6X40	0	2-4-2	-	3	Yes	-	-	-	N	-	X
6A/S1	6X6	300	EXIST	-	6	Yes	-	-	X	N	X	X
6B/S2	6X6	300	EXIST	-	6	Yes	-	-	X	N	X	X
8A	6X40	0	2-4-2	-	8	Yes	-	15	-	N	-	X

**2 Phase Fully Actuated 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. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
5. Pavement markings are existing.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
7. Install new cabinet on the existing cabinet foundation.
8. Existing signal heads 32 & 33 have been relabeled to 81 & 82, respectively.
9. Existing loop 3B has been relabeled to 8A.
10. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
11. City of system data:  
Controller Asset #0921.



**TIMING CHART**

FEATURE	PHASE		
	3	6	8
Min Green *	7	12	7
Walk *	-	-	-
Ped Clear	-	-	-
Veh. Extension *	2.0	6.0	2.0
Max I *	25	90	25
Yellow	3.0	4.6	3.0
Red Clear	3.4	3.0	3.4
Red Revert	2.0	2.0	2.0
Actuations B4 Add *	-	-	-
Seconds / Actuation *	-	1.5	-
Max Initial *	-	34	-
Time Before Reduction *	-	15	-
Time To Reduce *	-	30	-
Minimum Gap	-	3.0	-
Locking Detector	-	X	-
Recall Position	-	MIN RECALL	-
Dual Entry	X	-	X
Simultaneous Gap	X	X	X

\* These values may be field adjusted. Do not adjust Min Green and Extension times for phase 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

**LEGEND**

	Traffic Signal Head		EXISTING
	Modified Signal Head		N/A
	Sign		N/A
	Pedestrian Signal Head With Push Button & Sign		N/A
	Metal Pole with Mastarm		EXISTING
	Inductive Loop Detector		EXISTING
	Controller & Cabinet		EXISTING
	Junction Box		EXISTING
	2-in Underground Conduit		EXISTING
	Right of Way		EXISTING
	Directional Arrow		EXISTING
	Guardrail		EXISTING
	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)		EXISTING
	Right Arrow "ONLY" Sign (R3-5R)		EXISTING

**Signal Upgrade**

Prepared For:  
**Kimley-Horn**

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

**US 321 (N. Chester Street) at Rankin Lake Road**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips  
PREPARED BY: CF Davis REVIEWED BY: KP Baumann

REVISIONS: \_\_\_\_\_ INITI: \_\_\_\_\_ DATE: \_\_\_\_\_

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DocuSigned by:  
  
3/11/2022

SIG. INVENTORY NO. 12-0921

3/9/2022 11:15:38 AM DanHelle.Cur1 \*\*\*Kinley-Horn.com/E-RAL/MRAL-TIP/DK-LTS/K011036569 Gastonia Signal System9 Signal.kws4 - Signal Design/ME120921-2021.dgn