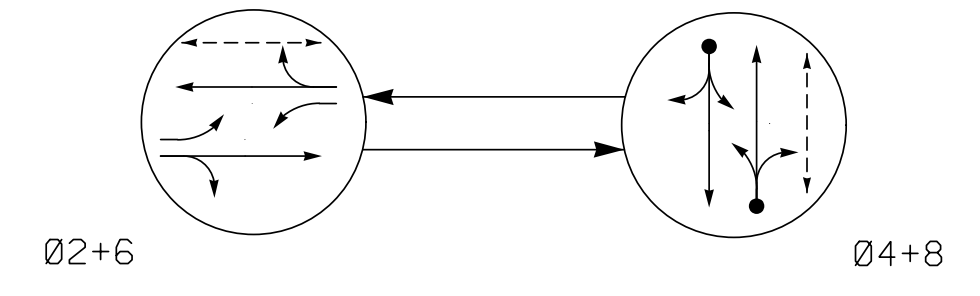


PHASING DIAGRAM



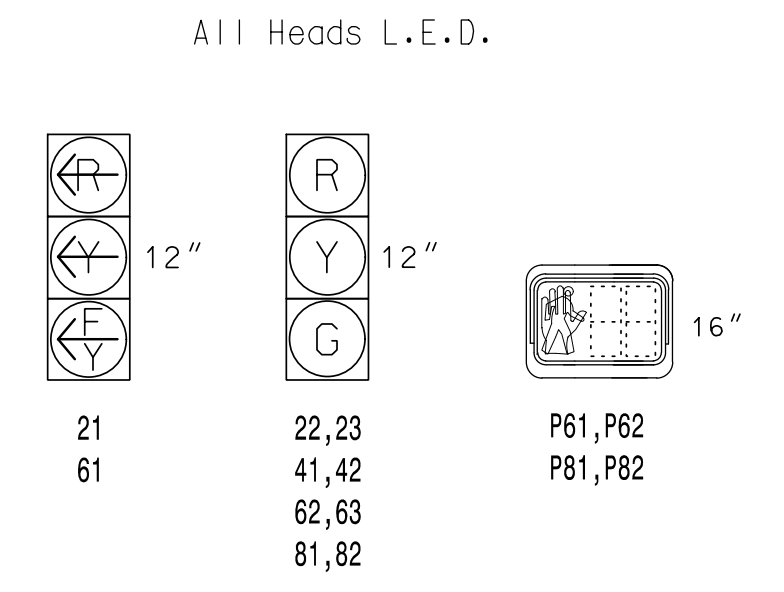
PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE		
	02+6	04+8	FLASH
21	F	R	Y
22,23	G	R	Y
41,42	R	G	R
61	F	R	Y
62,63	G	R	Y
81,82	R	G	R
P61,P62	W	DW	DRK
P81,P82	DW	W	DRK

SIGNAL FACE I.D.



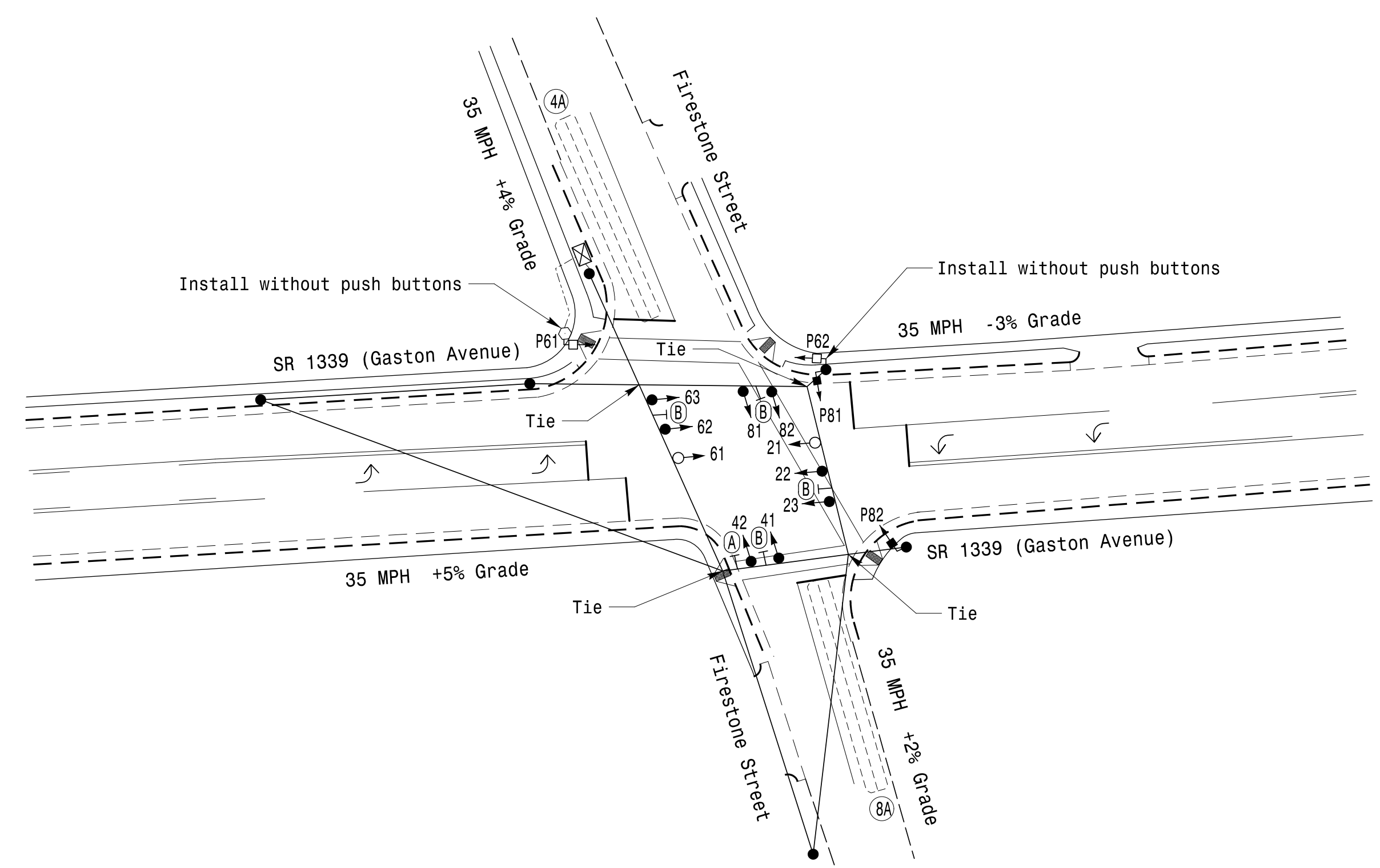
DETECTOR INSTALLATION CHART

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
4A	6X60	0	2-4-2	-	4	Yes	-	10	-	N	-	X
8A	6X60	0	2-4-2	-	8	Yes	-	10	-	N	-	X

2 Phase Semi-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.
- Reposition existing signal heads numbered 22, 23, 62, 63, and P81.
- 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 on phase 8.
- 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.
- Install new cabinet on the existing cabinet foundation.
- Existing signal heads 21, 22, 61, & 62 have been relabeled to 22, 23, 62, & 63, respectively.
- All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
- All proposed signal heads shall be black in color. See Project Special Provisions for details.
- All proposed pedestrian pedestals and pushbutton posts shall be black in color. See Project Special Provisions for details.
- City of system data:
Controller Asset #0060.



TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green *	10	7	10	7
Walk *	-	-	7	7
Ped Clear	-	-	9	15
Veh. Extension *	-	2.0	-	2.0
Max 1 *	35	20	35	20
Yellow	4.1	3.7	4.1	3.7
Red Clear	1.6	1.7	1.6	1.7
Red Revert	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-
Seconds /Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Locking Detector	-	-	-	-
Recall Position	PED/MAX	-	PED/MAX	-
Dual Entry	-	X	-	X
Simultaneous Gap	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	— Sign
⊥ Pedestrian Signal Head With Sign	⊥ Type II Signal Pedestal
○ Signal Pole with Guy	● Signal Pole with Sidewalk Guy
○ Signal Pole with Sidewalk Guy	⊠ Inductive Loop Detector
⊠ Controller & Cabinet	⊠ Junction Box
⊠ 2-in Underground Conduit	⊠ Right of Way
N/A Directional Arrow	⊠ "NO TURN ON RED" Sign (R10-11)
⊠ Street Name Sign (D3-1)	⊠

Signal Upgrade

Prepared For:
Kimley-Horn

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

SR 1339 (Gaston Avenue) at Firestone Street

Division 12 Gaston County Gastonia

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

REVISIONS: _____ INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

KEVIN P. BAUMANN
PROFESSIONAL ENGINEER
SEAL 044434

DocuSigned by:
Kevin P. Baumann
3/11/2022

SIG. INVENTORY NO. 12-0060

3/9/2022 11:15:22 AM Don'tell,Curr1 ***Kimley-Horn.com\\E-RAL\\RAL\\RAL\\TIP\\DK-LTIS\\011036569_Gastonia Signal System\\Signal\\SWS4 - Signal Design\\ME120660-2021.dgn