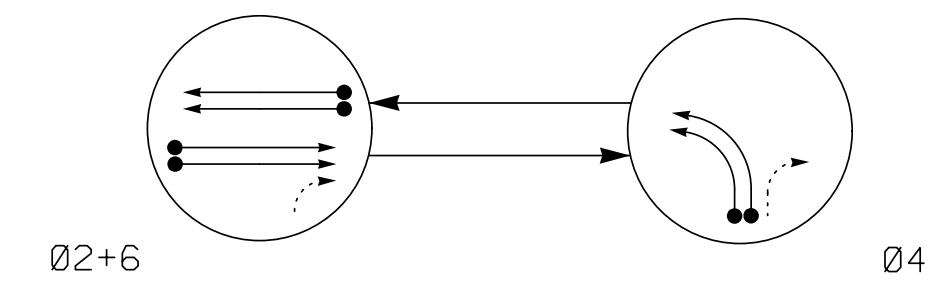


PHASING DIAGRAM



- PHASING DIAGRAM DETECTION LEGEND**
- ←● DETECTED MOVEMENT
 - ← UNDETECTED MOVEMENT (OVERLAP)
 - ←..... UNSIGNALIZED MOVEMENT
 - ←- - - PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE		
	Ø 2 + 6	Ø 4	F
21,22	↑	R	Y
41,42	←R	←	←R
61,62	↑	R	Y

DETECTOR INSTALLATION CHART

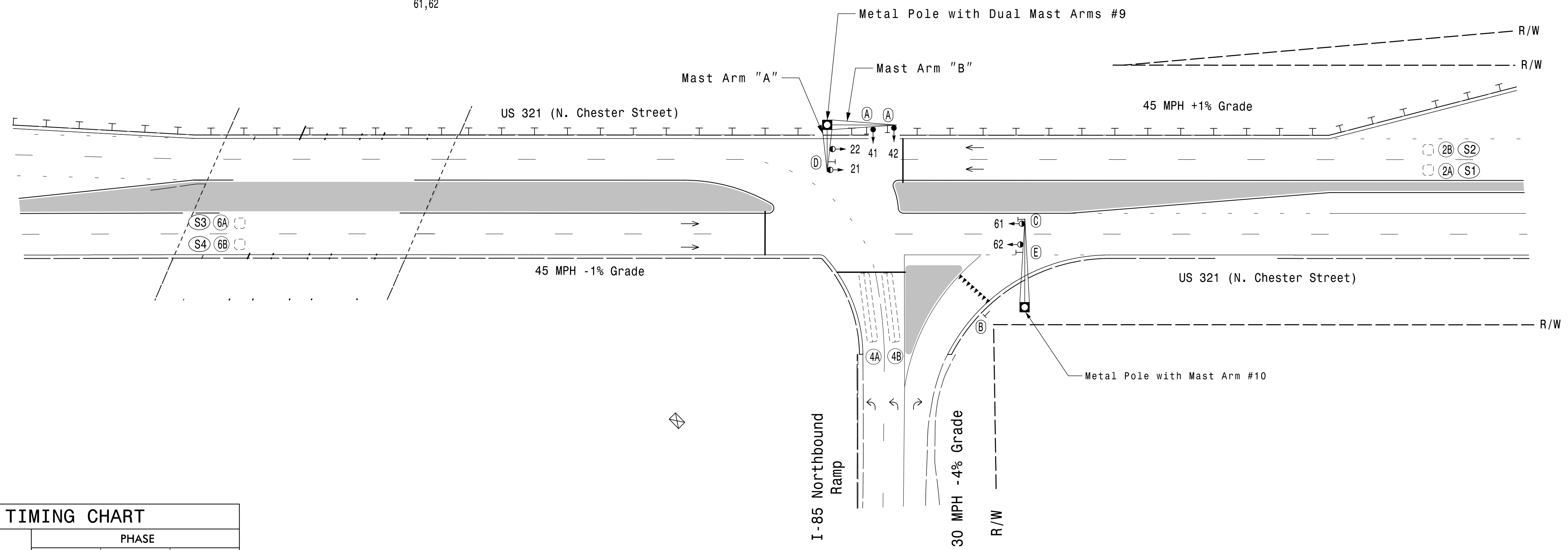
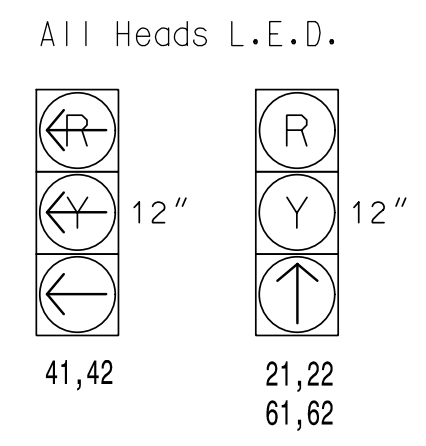
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
2A/S1	6X6	300	EXIST	-	2	Yes	-	-	X	N	X	X
2B/S2	6X6	300	EXIST	-	2	Yes	-	-	X	N	X	X
4A	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
4B	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
6A/S3	6X6	300	EXIST	-	6	Yes	-	-	X	N	X	X
6B/S4	6X6	300	EXIST	-	6	Yes	-	-	X	N	X	X

2 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.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Modify signal heads numbered 21, 22, 61, and 62, as shown.
- 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 62 & 61 have been relabeled to 61 & 62, respectively.
- All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
- City of system data:
Controller Asset #0162.

SIGNAL FACE I.D.



TIMING CHART

FEATURE	PHASE		
	2	4	6
Min Green *	12	7	12
Walk *	-	-	-
Ped Clear	-	-	-
Veh. Extension *	6.0	2.0	6.0
Max I *	90	25	90
Yellow	4.4	3.0	4.6
Red Clear	1.2	3.3	1.3
Red Revert	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

* 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	○ → N/A
○ → Pedestrian Signal Head With Push Button & Sign	○ → N/A
○ → Signal Pole with Guy	○ → N/A
○ → Signal Pole with Sidewalk Guy	○ → N/A
○ → Inductive Loop Detector	○ → N/A
○ → Controller & Cabinet	○ → N/A
○ → Junction Box	○ → N/A
○ → 2-in Underground Conduit	○ → N/A
○ → Right of Way	○ → N/A
○ → Directional Arrow	○ → N/A
○ → Metal Pole with Mastarm	○ → N/A
○ → Guardrail	○ → N/A
(A) Left Arrow "ONLY" Sign (R3-5L)	(A)
(B) "YIELD" Sign (R1-2)	(B)
(C) No U-Turn Sign (R3-4)	(C)
(D) No U-Turn / No Left Turn Sign (R3-18)	(D)
(E) No Right Turn Sign (R3-1)	(E)

Signal Upgrade

Prepared For: **US 321 (N. Chester Street) at I-85 Northbound Ramp**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips

PREPARED BY: CF Davis REVIEWED BY: KP Baumann

750 N. Greenfield Pkwy, Garner, NC 27529

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Raleigh, NC 27601
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0 SCALE 40
1" = 40'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Seal of North Carolina Professional Engineer KEVIN P. BAUMANN 044434

3/11/2022

SIG. INVENTORY NO. 12-0162

3/9/2022 11:15:28 AM DanHelle.Cur1 ***Kimley-Horn.comSE_RAL1\MRAL1\PI\DK_115\011036569_Gastonia Signal System9_Signal\KWS4 - Signal Design\ME120162-2021.dgn