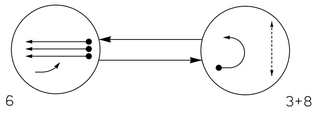
PROJECT REFERENCE NO.	SHEET NO.
B-6051/U-6143	Sig.13.0

PHASING DIAGRAM



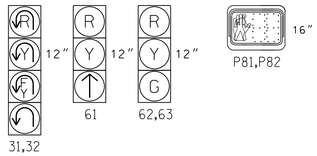
PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION			
SIGNAL FACE	PHASE 6	PHASE 3+8	FLASH
31,32	Y		R
61		R	R
62,63	G	R	R
P81,P82	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



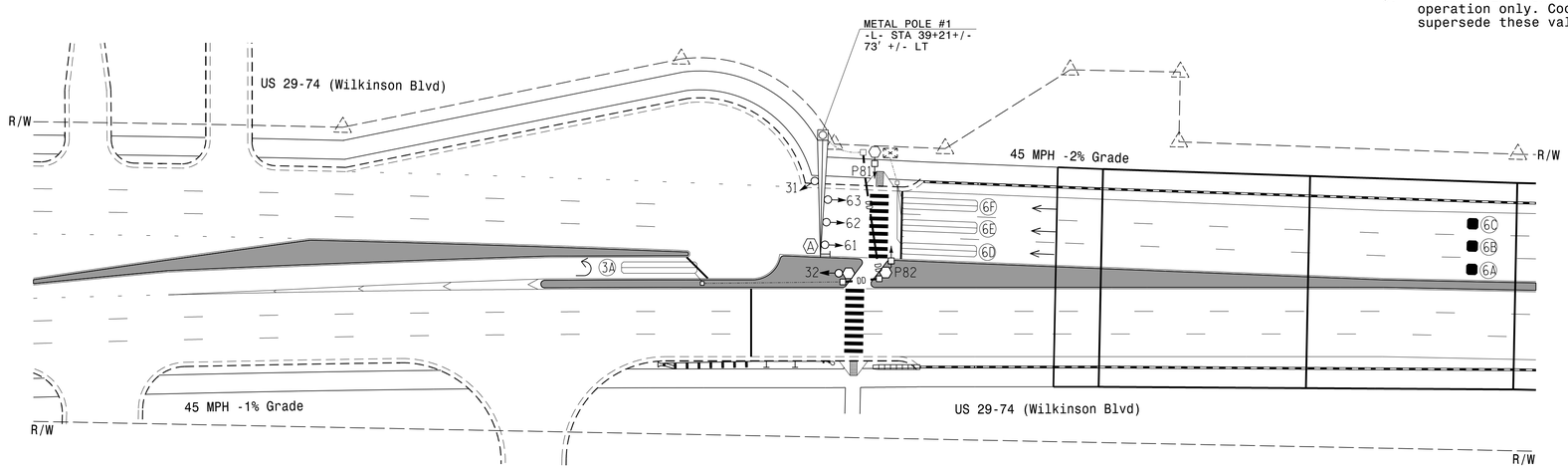
MAXTIME DETECTOR INSTALLATION CHART											
DETECTOR					PROGRAMMING						
LOOP/ ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
3A	6X40	0	2-4-2	X	3	15.0	-	X	-	X	-	X
6A	6X6	300	✳	✳	6	-	-	X	X	X	-	✳
6B	6X6	300	✳	✳	6	-	-	X	X	X	-	✳
6C	6X6	300	✳	✳	6	-	-	X	X	X	-	✳
6D	6X40	0	2-4-2	X	6	5.0	2.0	X	-	X	X	X
6E	6X40	0	2-4-2	X	6	5.0	2.0	X	-	X	X	X
6F	6X40	0	2-4-2	X	6	5.0	2.0	X	-	X	X	X

✳ VIDEO DETECTION ZONE

2 Phase
Fully Actuated
(Belmont Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specification for Roads and Structures" dated January 2024.
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. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
5. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



MAXTIME TIMING CHART			
FEATURE	PHASE 3	PHASE 6	PHASE 8
Walk *	–	–	7
Ped Clear	–	–	8
Min Green *	7	12	7
Passage *	2.0	6.0	2.0
Max 1 *	30	90	30
Yellow Change	3.0	4.7	3.0
Red Clear	4.2	1.8	4.2
Added Initial *	–	–	–
Maximum Initial *	–	–	–
Time Before Reduction *	–	15	–
Time To Reduce *	–	30	–
Minimum Gap	–	3.0	–
Advance Walk	–	–	–
Non Lock Detector	X	X	X
Vehicle Recall	–	MIN RECALL	–
Dual Entry	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

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
DD	Directional Drill	N/A
	Metal Pole with Mastarm	
N/A	Guardrail	
	Type II Signal Pedestal	
N/A	Curb Ramp	
A	No Left Turn Sign (R3-2)	A

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

N

SCALE
0 40
1"=40'

US 29-74 (Wilkinson Blvd)
at
Eastbound U-Turn Bulb
West of Catawba River Bridge

Division 12 Gaston County Belmont

PLAN DATE: August 2025 REVIEWED BY: DT Sears
PREPARED BY: WP Erickson-Jones REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 044558
ENGINEER
DAVID T. SEARS

DocuSigned by:
David T Sears
0691B3F28E5741E...
8/1/2025
SIGNATURE DATE

SIG. INVENTORY NO. 12-1920

8/1/2025
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dsears