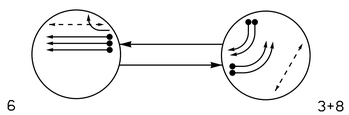
PROJECT REFERENCE NO.	SHEET NO.
U-5302	Sig. 16.0

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	~~R~~	~~→~~	~~R~~
61	↑	R	R
62, 63	G	R	R
64	~~F~~	R	R
81, 82	R	→	R
P61, P62	W	DW	DRK
P81, P82	DW	W	DRK

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING																
							TIMING		OPERATION MODE											STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 1 CALL	3 STOP A	4 STOP B	5 PROT/PER LEFT	6 PROT/PER THROUGH	7 AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING
3A	6X40	2-4-2	0	X	-	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
3B	6X40	2-4-2	0	X	-	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6A	6X6	6	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6B	6X6	6	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6C	6X6	6	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
8A	6X40	2-4-2	0	X	-	8	15.0 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
8B	6X40	2-4-2	0	X	-	8	15.0 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
S17	6X6	4	+250	X	-	-	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	X	-
S18	6X6	4	+250	X	-	-	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	X	-
S19	6X6	4	+250	X	-	-	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	X	X	-

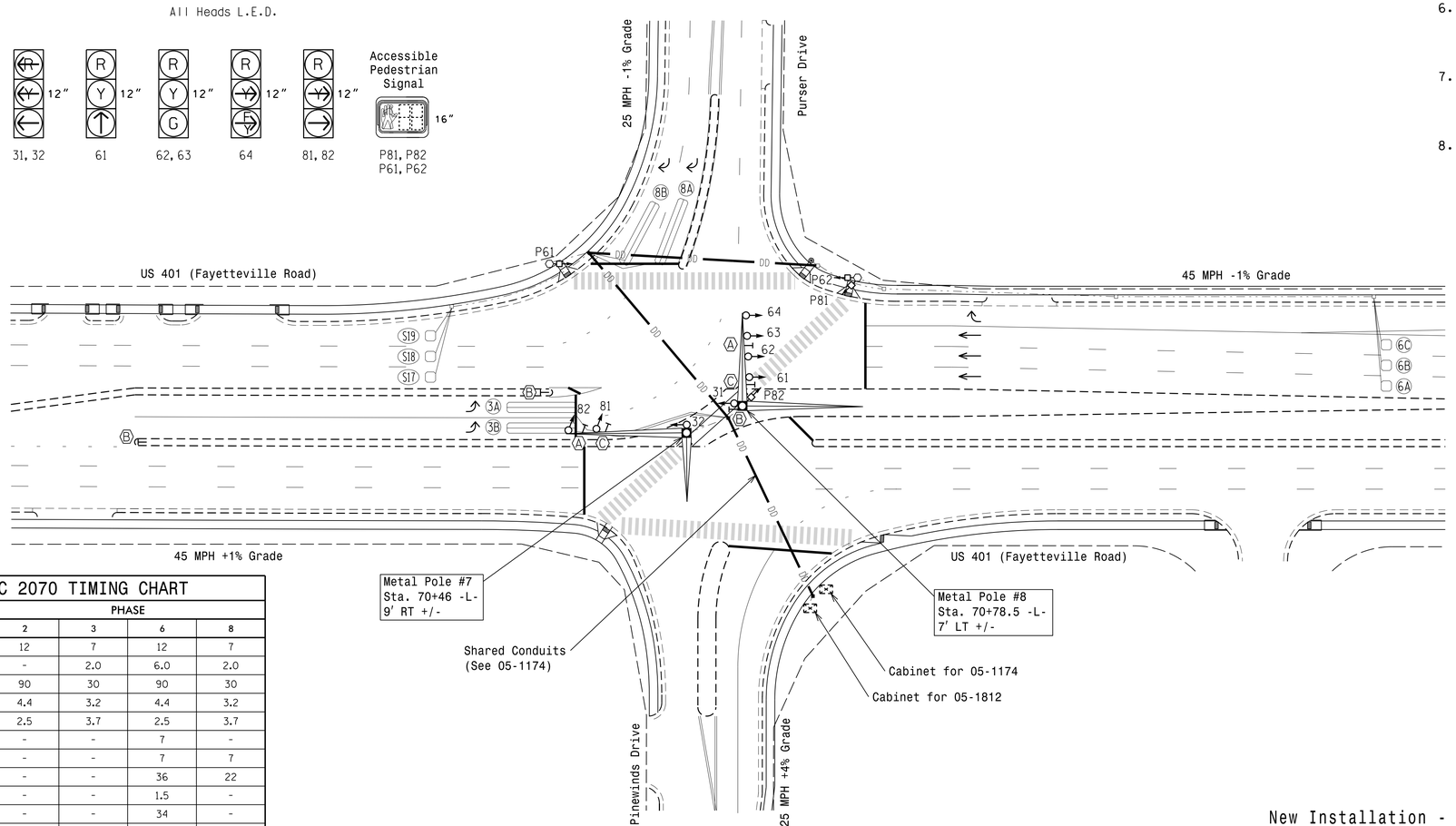
2 Phase
Fully Actuated
(Raleigh Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications 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. This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Program phase 2 as a dummy phase for Ring 1.

SIGNAL FACE I.D.

All Heads L.E.D.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	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	
	Metal Pole with Mastarm	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
DD	Directional Drill	N/A
N/A	Curb Ramp	
A	Street Name Sign (D3-1)	A
B	No U-Turn Sign (R3-4)	B
C	No Left Turn Sign (R3-2)	C

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 3	PHASE 6	PHASE 8
Min Green *	12	7	12	7
Passage Gap *	-	2.0	6.0	2.0
Maximum Green *	90	30	90	30
Yellow Change	4.4	3.2	4.4	3.2
Red Clear	2.5	3.7	2.5	3.7
Advance Walk	-	-	7	-
Walk *	-	-	7	7
Pedestrian Clear	-	-	36	22
Added Initial *	-	-	1.5	-
Maximum Initial *	-	-	34	-
Time Before Reduction *	-	-	15	-
Time To Reduce *	-	-	30	-
Minimum Gap	-	-	3.0	-
Recall Mode	-	-	MIN RECALL	-
Vehicle Call Memory	-	NON-LOCK	LOCK	NON-LOCK
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* 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.

ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

SIGNAL FACE	VOICE	TONES	INTERVAL	SPEECH MESSAGE
P81, P82	-	X	Walk	(Percussive Tone)
	X	-	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Fayetteville.
P61, P62	-	X	Walk	(Percussive Tone)
	X	-	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Purser.

New Installation - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared In the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 401 SB (Fayetteville Road) at Purser Drive

Division 5 Wake County Raleigh

PLAN DATE: February 2025	REVIEWED BY:	
PREPARED BY: J.A. Lohr	REVIEWED BY:	

REVISIONS	INIT.	DATE

SCALE 1"=40' (0 – 40)

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA
DocuSigned by: 1B9BA8F6277AA4A... 03/27/2025
DATE

SIG. INVENTORY NO. 05-1812

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