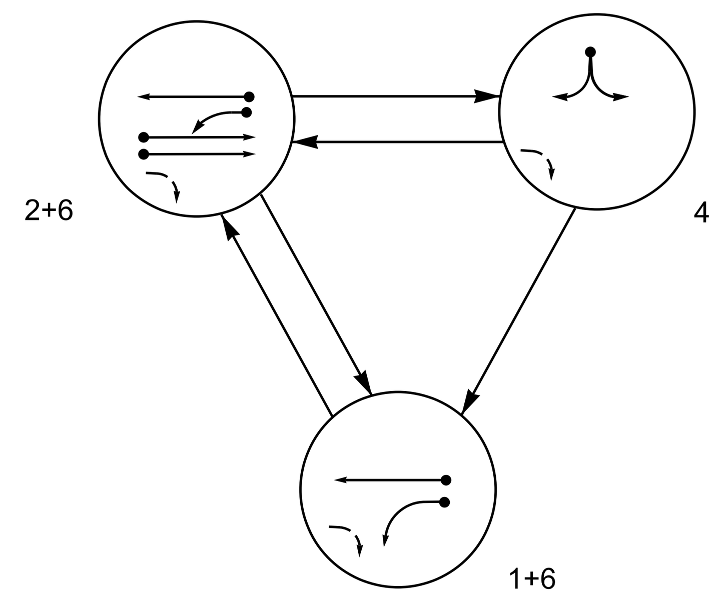
PROJECT REFERENCE NO.	SHEET NO.
I-5716	Sig.3.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

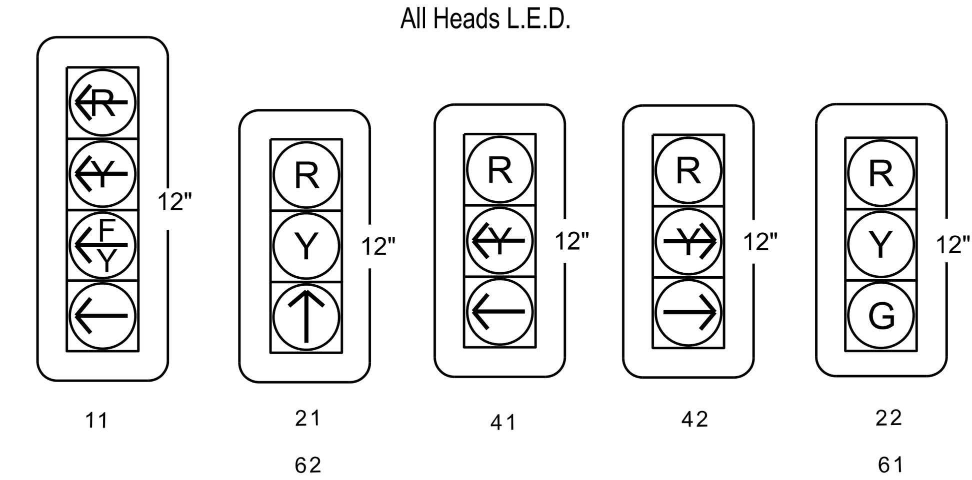
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 1+6	PHASE 2+6	PHASE 4	PHASE FLASH
11	←	← F/Y	←R	←R
21	R	↑	R	R
22	R	G	R	R
41	R	R	←	R
42	R	R	→	R
61	G	G	R	R
62	↑	↑	R	R

SIGNAL FACE I.D.

All Heads L.E.D.



SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

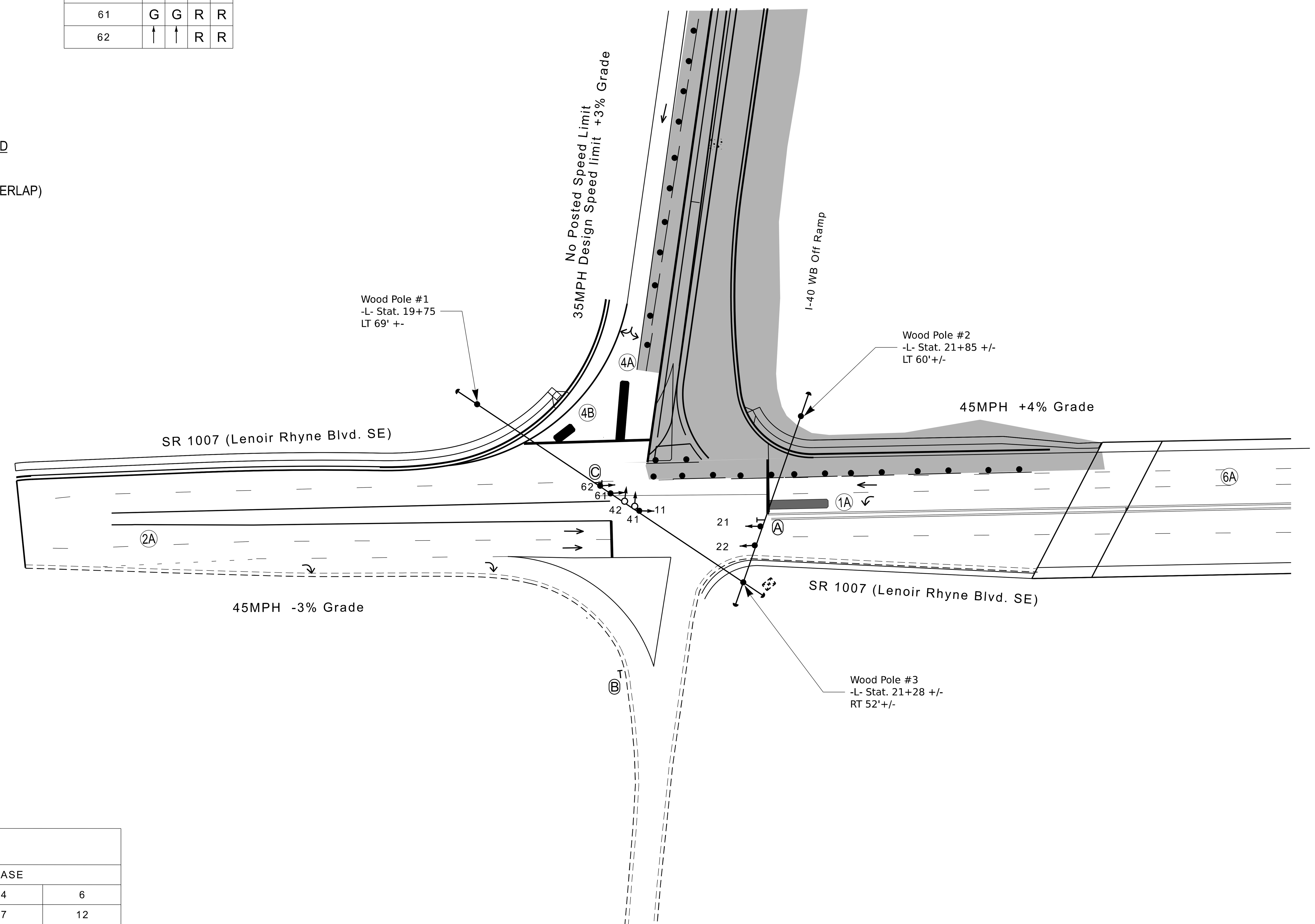
INDUCTIVE LOOP						DETECTOR PROGRAMMING														
LOOP NO.	SIZE (FT)	TURNS	DIST. FROM STOP LINE (FT)	NEW	EXISTING	ASSIGNED PHASE	TIMING: DELAY	TIMING: EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 1 CALL	3 STOP A	4 STOP B	5 PROT/PER LEFT	6 PROT/PER THROUGH	7 AND	SWITCH	SYSTEM LOOPS	STATUS: NEW	STATUS: EXISTING
1A	*	*	0	-	*	1	15.0	-	X	-	-	-	-	-	-	-	-	-	-	*
						6	-	-	X	-	-	-	-	-	-	-	-	-	-	*
4A	*	*	0	*	-	4	5.0	-	X	-	-	-	-	-	-	-	-	-	-	*
4B	*	*	0	*	-	4	15.0	-	X	-	-	-	-	-	-	-	-	-	*	-

* Multi -Zone Microwave Detection

3-Phase
Fully Actuated
Hickory City 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. Phase 1 may be lagged.
4. Reposition Signal heads 61 and 62.
5. Set all detector units to presence mode.
6. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
7. Refer to PMP plans for proposed stop line locations
8. Install backpalates with retro-reflective sheetings for signal heads 41 and 42.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



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	
X-UC	2-in Underground Conduit	UC
N/A	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
	Construction Zone	
	Non - Intrusive Detection	
A	"NO LEFT TURN SIGN" Sign (R3-2)	A
B	"YIELD" Sign (R1-2)	B
C	No Right Turn Sign (R3 - 1)	C

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 4	PHASE 6
Min Green*	7	12	7	12
Passage Gap*	2.0	2.0	2.0	2.0
Maximum Green*	15	90	30	90
Yellow Change	3.0	4.8	3.7	4.8
Red Clear	2.1	2.5	2.6	2.5
Walk*	-	-	-	-
Pedestrian Clear	-	-	-	-
Added Initial*	-	-	-	-
Maximum Initial*	-	-	-	-
Time Before Reduction*	-	-	-	-
Time To Reduce*	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	-	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-	-
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.

Microwave Detection

FUNCTION	SENSOR 1 (2A)			SENSOR 2 (6A)		
Channel	1			1		
Phase	2			6		
Direction of Travel	SB			NB		
Type	Priority			Priority		
Level	1	2	Queue	1	2	Queue
Discovery Zone (ft)	>= 750	<750	-	>= 750	<750	-
Range	900-100	600-100	150-100	900-100	600-100	150-100
Enable Speed	Y	Y	Y	Y	Y	Y
Speed Range(mph)	35-100	35-100	1-35	35-100	35-100	1-35
Enable Estimated Time of Arrival	Y	Y	N	Y	Y	N
Estimated Time of Arrival (sec)	2.5-10.0	2.5-6.5	-	2.5-10.0	2.5-10.0	-

Signal Upgrade -Temporary Design 2 (TMP Phase 3)

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

I-40 EB Ramp
at
SR 1007 (Lenoir Rhyne Blvd. SE)

Division 12 Catawba County Hickory

PLAN DATE:	January 2026	REVIEWED BY:	R.N Zinser
PREPARED BY:	Adja Fall	REVIEWED BY:	

SCALE 0 50

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043914 ENGINEER RICHARD N. ZINSER

DocuSigned by: R. Nicholas Zinser 04/13/2026
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DATE

SIG. INVENTORY NO. 12-0309T2