



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

August 13, 2026

Addendum No. 3

RE: Contract # C205195

WBS # 50133.3.1

FEDERAL-AID NO. 0402166

Catawba County (I-5716)

INTERCHANGE AT I-40 AND SR-1007 (LENOIR RHYNE BOULEVARD)

August 18, 2026 Letting

To Whom It May Concern:

Reference is made to the plans furnished to you on this project.

The following revisions have been made to the Signal plans.

Sheet Nos.	Revision
Sig. 6.0, Sig. 10.0, Sig. 12.0	Revised to include the metal strain pole standard cases.

Please void the above listed sheets in your proposal and staple the revised sheets thereto.

The contract will be prepared accordingly.

Sincerely,

Signed by:

E45DA45396074A0...

Jon Weathersbee, PE
State Contract Officer

JHW/jjr
Attachments

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

cc: Mr. Troy B. Brooks, PE
Mr. Mark Stafford, PE
Mr. Joshua C. Sellers, PE
Mr. Malcolm Bell

Mr. Forrest Dungan, PE
Ms. Jaci Kincaid
Project File (2)

PHASING DIAGRAM

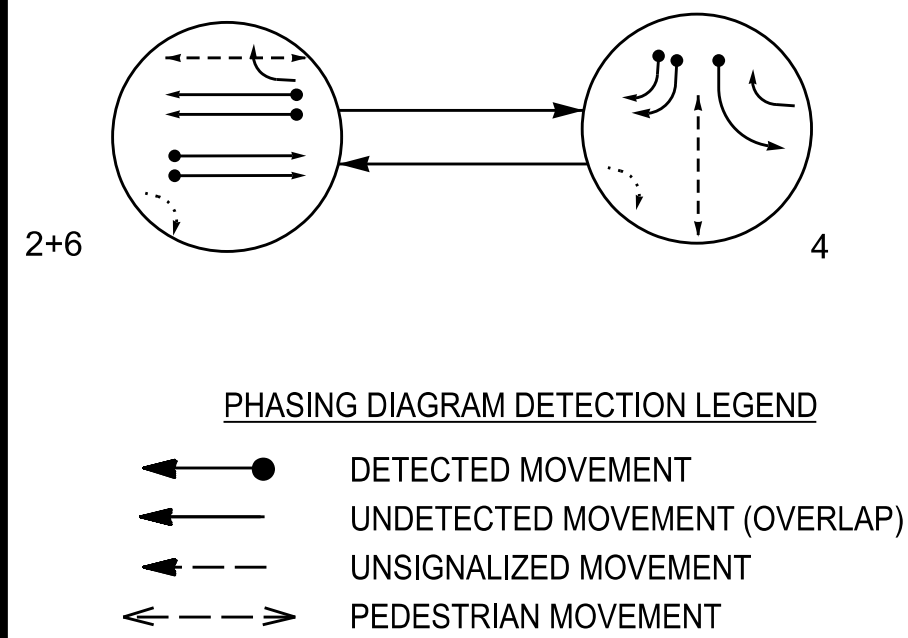
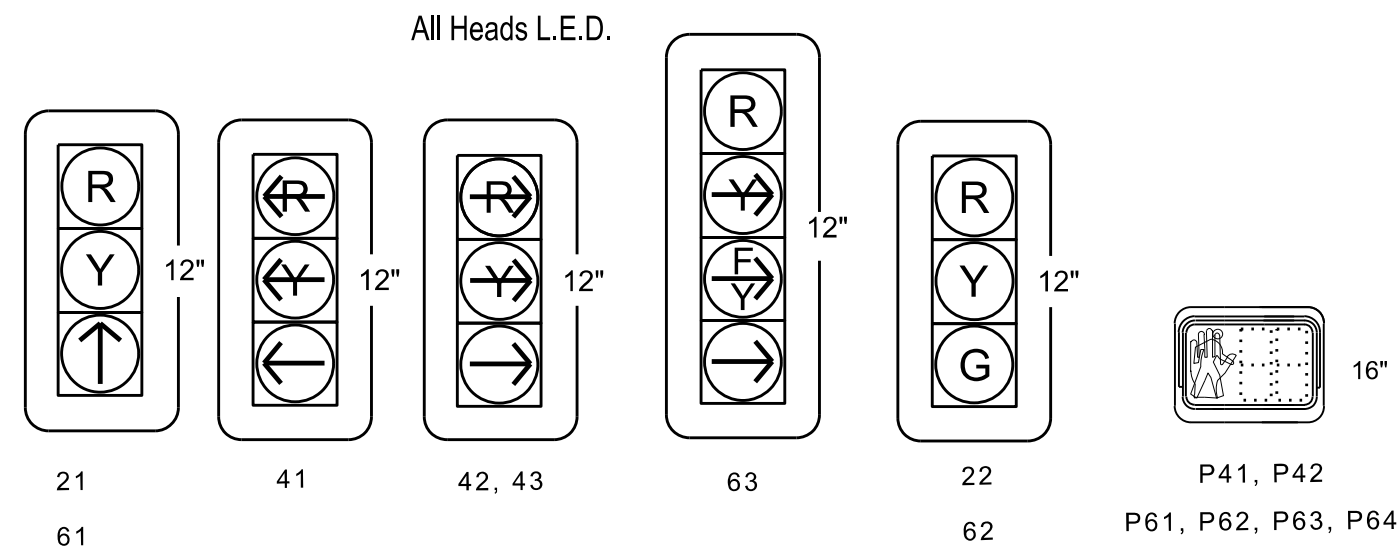


TABLE OF OPERATION			
SIGNAL FACE	2 4 6	4	F L S H
21	↑	R	R
22	G	R	R
41	R	←	R
42, 43	R	→	R
61	↑	R	R
62	G	R	R
63	F Y	→	R
P41, P42	DW	W	DRK
P61, P62, P63, P64	W	DW	DRK

SIGNAL FACE I.D.



SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

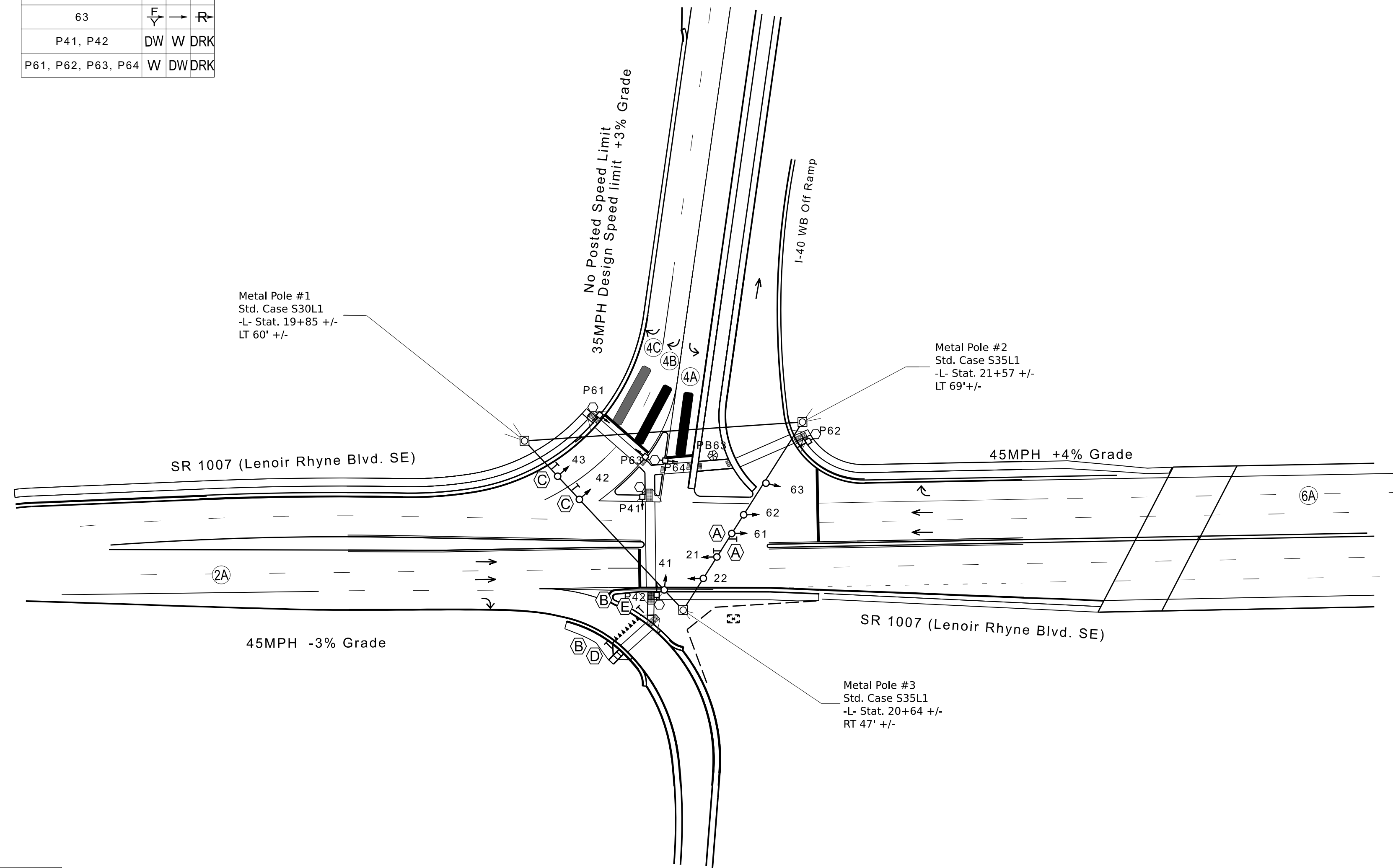
[illegible]

- * Multi -Zone Microwave Detection

2-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. Set all detector units to presence mode.
4. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
5. Install backplates with retro-reflective sheetings on signal all signal heads .
6. 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	
	Non-Intrusive detector	
N/A	2-in Underground Conduit	
	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
(A)	"No U - Turn / No Left Turn" Sign (R3-18)	(A)
(B)	Pedestrian Crossing Sign (W11 - 2)	(B)
(C)	"NO TURN ON RED" Sign (R10-11)	(C)
(D)	Left Downward Diagonal Arrow Plaque (W16 - 7PL)	(D)
(E)	Right Downward Diagonal Arrow Plaque (W16 - 7PR)	(E)
N/A	Curb ramp	
○	Type II Push Button	●

FEATURE	PHASE		
	2	4	6
Min Green*	12	7	12
Passage Gap*	2.0	2.0	2.0
Maximum Green*	90	30	90
Yellow Change	4.8	3.7	4.8
Red Clear	3.1	2.6	3.1
Walk*	-	11	14
Pedestrian Clear	-	13	35
Advance Walk	-	4	7
Added Initial*	-	-	-
Maximum Initial*	-	-	-
Time Before Reduction*	-	-	-
Time To Reduce*	-	-	-
Minimum Gap	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-
Simultaneous Gap	ON	ON	ON

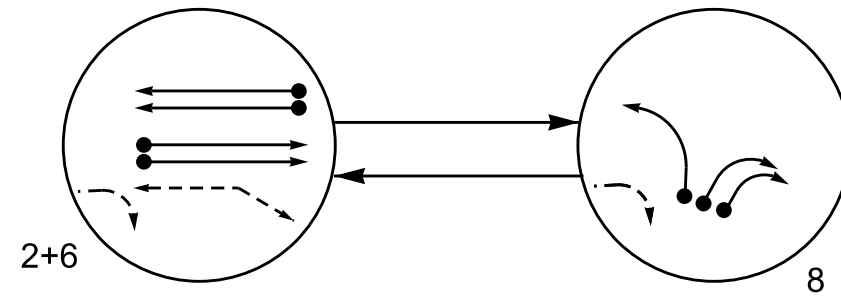
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

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 - Final Design

Prepared in the Offices of: 	I-40 EB Ramp at SR 1007 (Lenoir Rhyne Blvd. SE)			SEAL 
	Division 12		Catawba County	Hickory
	PLAN DATE:	August 2026	REVIEWED BY:	R. N. Zinzer
	PREPARED BY:	Adja Fall	REVIEWED BY:	
750 N. Greenfield Pkwy. Garner, NC 27529 	SCALE 0  50			
	REVISIONS		INIT.	DATE
DocuSigned by: 		08/12/2026 DATE		
611888016733568 SIG. INVENTORY NO.		12-0309 DATE		

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

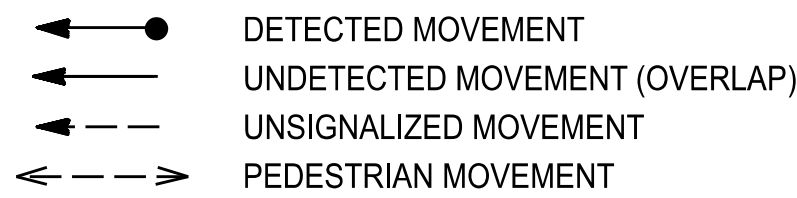
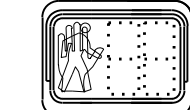
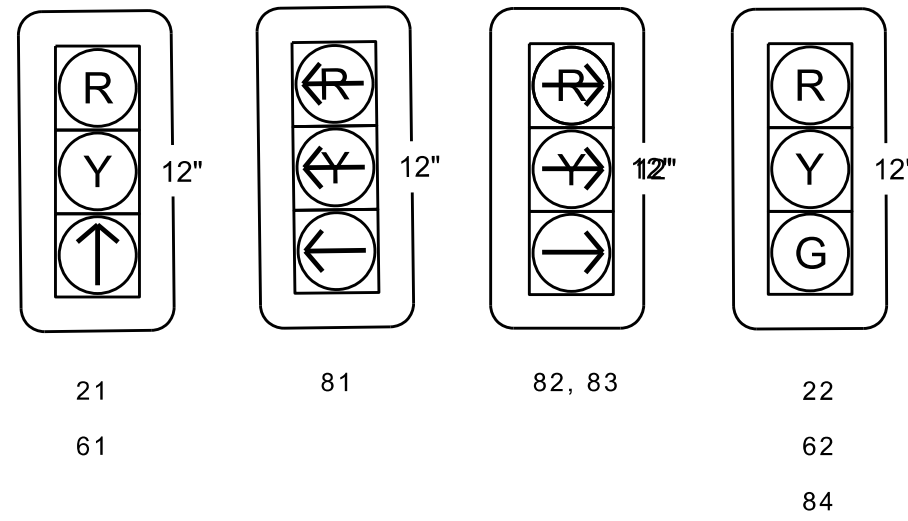


TABLE OF OPERATION

TABLE OF OPERATION				
SIGNAL FACE	2 7 6		8	F A S H
21	↑	R	R	
22	G	R	R	
61	↑	R	R	
62	G	R	R	
81	R	←	R	
82, 83	R	→	R	
84	R	G	R	
P21, P22, P23, P24	W	DW	DR	

SIGNAL FACE I.D.

All Heads L.E.D.



P21, P22, P23, P24

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

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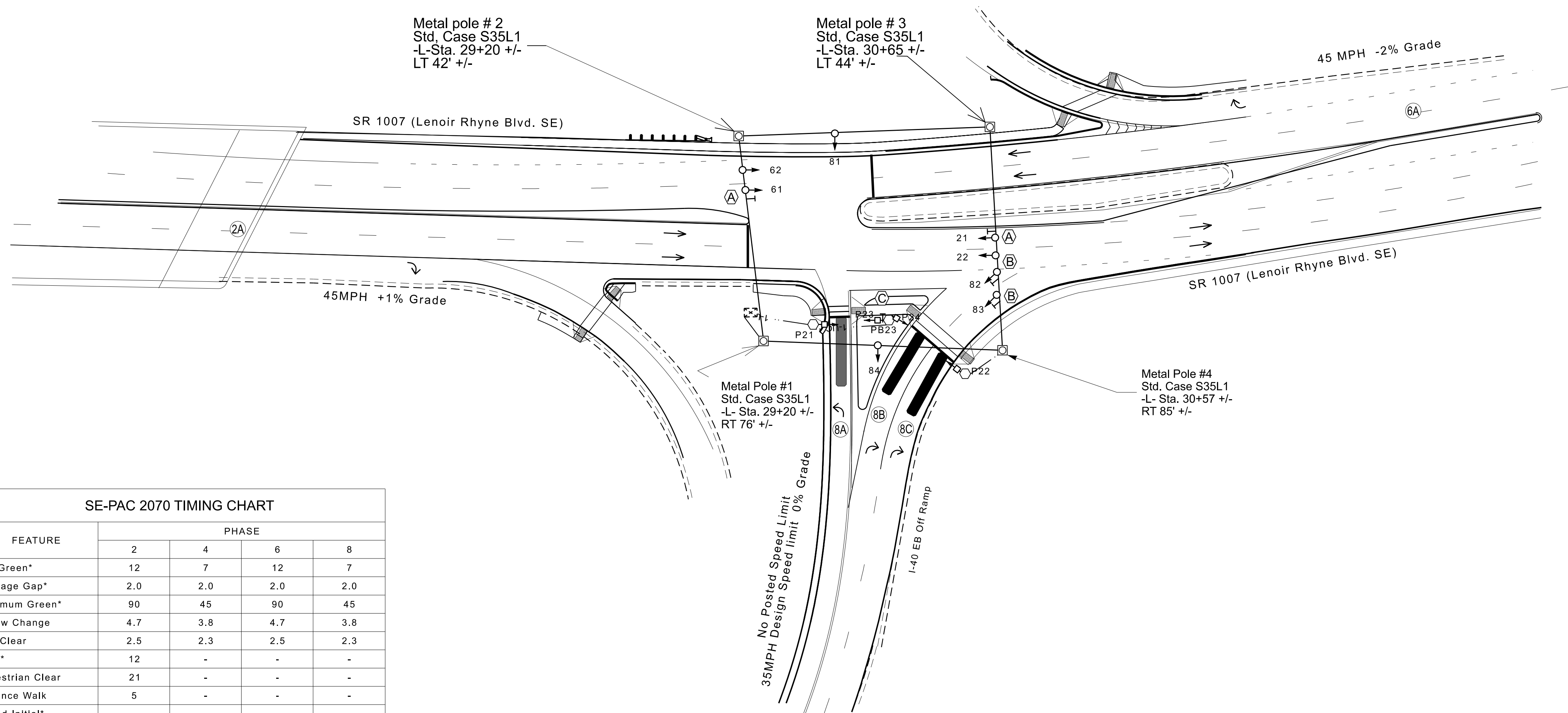
* Multi -Zone Microwave Detection

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	-

2-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. 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 uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
7. Install backplates with retro-reflective sheeting for all signal heads.
8. Program phase 4 as a dummy phase for ring 1.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



SE-PAC 2070 TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green*	12	7	12	7
Passage Gap*	2.0	2.0	2.0	2.0
Maximum Green*	90	45	90	45
Yellow Change	4.7	3.8	4.7	3.8
Red Clear	2.5	2.3	2.5	2.3
Walk*	12	-	-	-
Pedestrian Clear	21	-	-	-
Advance Walk	5	-	-	-
Added Initial*	-	-	-	-
Maximum Initial*	-	-	-	-
Time Before Reduction*	-	-	-	-
Time To Reduce*	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	LOCK	NON-LOCK	LOCK	NON-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.

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	
	Metal Strain Poles	
	Non-Intrusive Detection Zone	
--- X UC ---	2-in Underground Conduit	--- UC ---
N/A	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
N/A	Curb Ramp	
(A)	"No U-Turn/ No Left Turn" Sign (R3-18)	(A)
(B)	"NO TURN ON RED" Sign (R10-11)	(B)
(C)	Pedestrian Signal Information (Countdown) Sign (R10-3E)	(C)
	Type II Push Button	

Signal Upgrade -Final Design

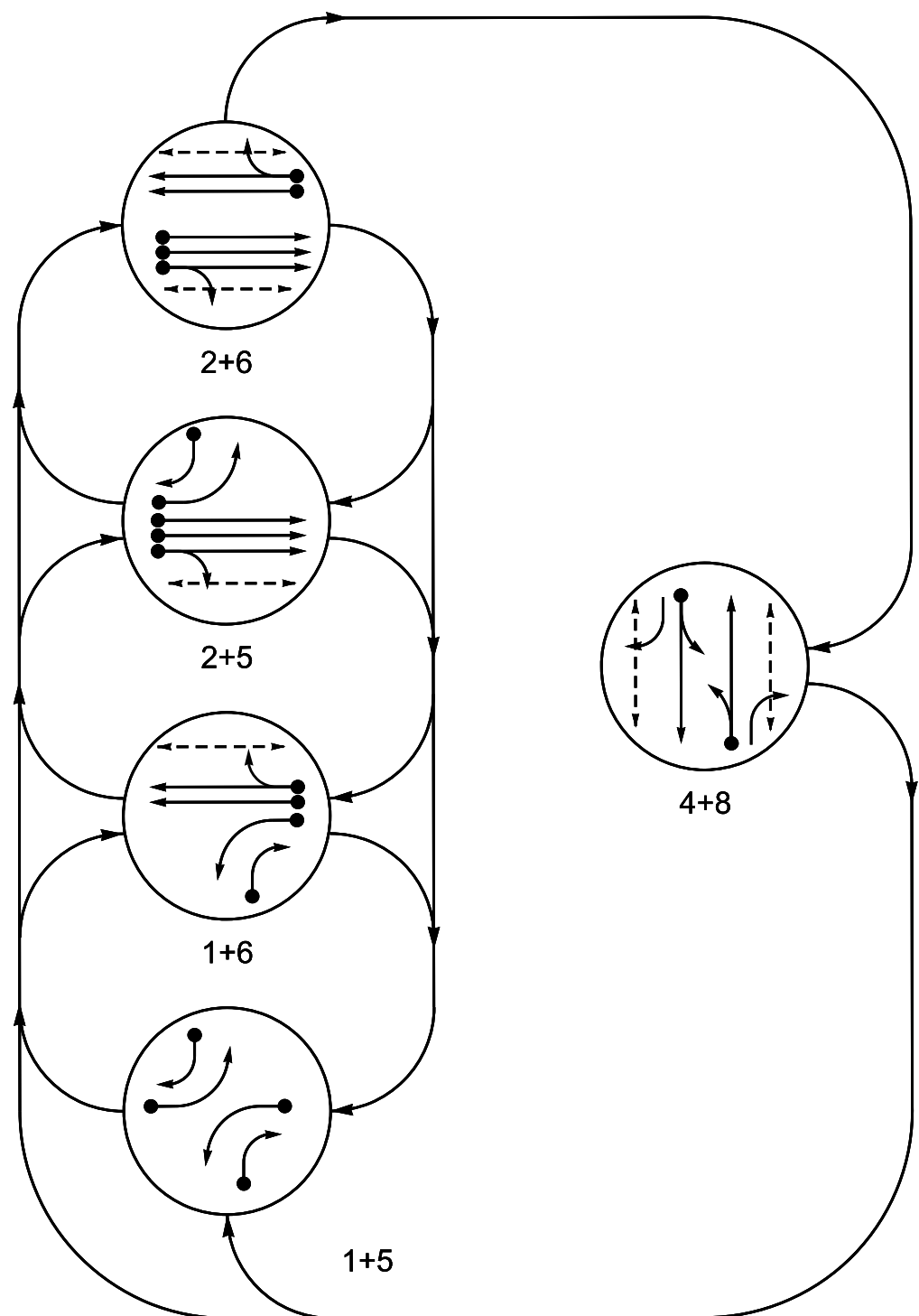
Prepared in the Offices of: 	I-40 EB Ramp at & SR 1007 (Lenoir Rhyne Blvd) & SR 1534 (8th St SE) (West Intersection) Division 12 Catawba County Hickory	SEAL 										
750 N. Greenfield Pkwy, Garner, NC 27529												
	SCALE 0 40 1" = 40'											
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REVISIONS												
	INIT.											
	DATE											
DocuSigned by:  08/12/2026 EL18880017727265 DATE:												
SIG. INVENTORY NO. 12-0308												

5 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 and/or phase 5 may be lagged.
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. Set all detector units to presence mode.
7. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

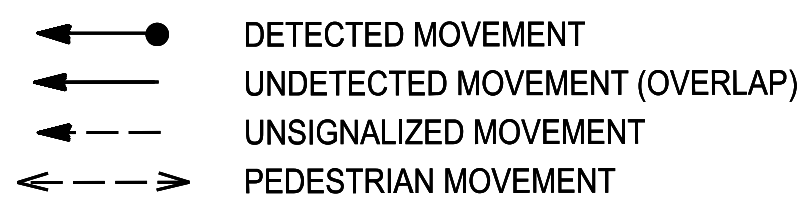
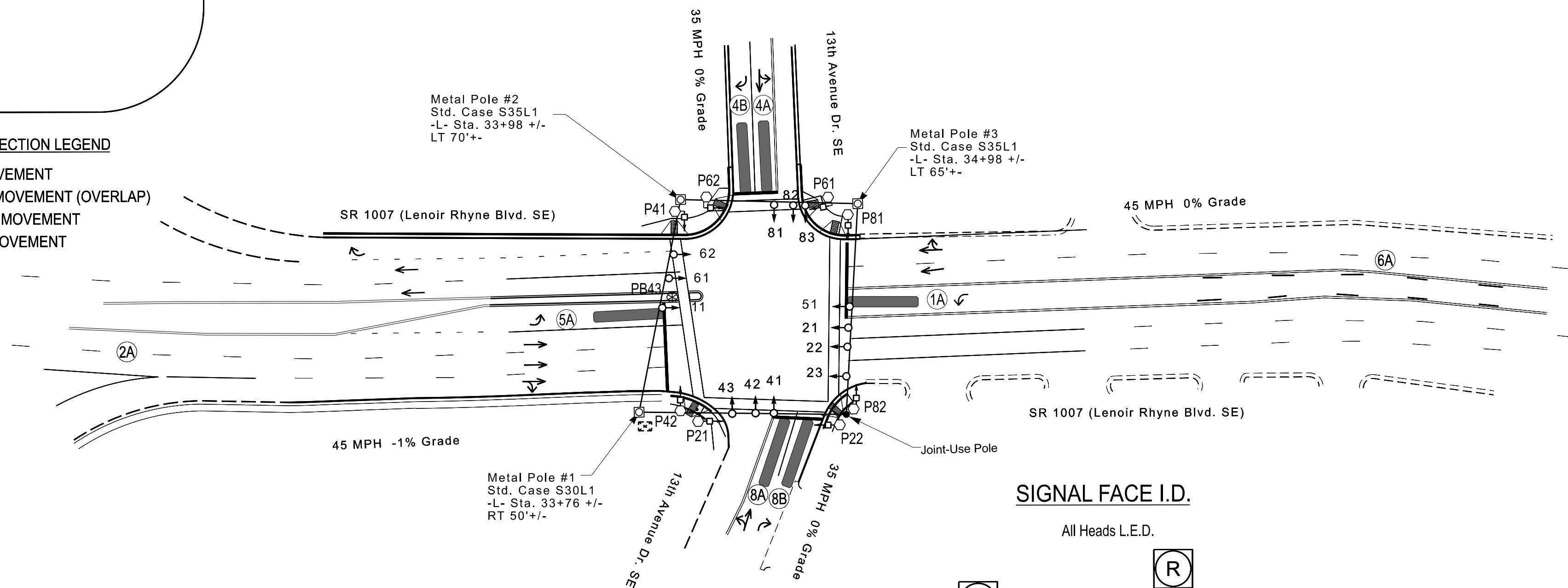


TABLE OF OPERATION						
SIGNAL FACE	PHASE					
	1 + 5	1 6	2 5	2 6	4 8	1 + 8 5
11	←	←	←	←	←	←
21, 22, 23	R	R	G	G	R	R
41, 42	R	R	R	R	G	R
43	←	R	→	R	↯	R
51	←	←	←	←	←	←
61, 62	R	G	R	G	R	R
81, 82	R	R	R	R	G	R
83	→	→	R	↯	↯	R
P21, 22	DW	DW	W	W	DW	DRK
P41, 42	DW	DW	DW	DW	DW	DRK
P61, P62	DW	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	DW	DRK

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

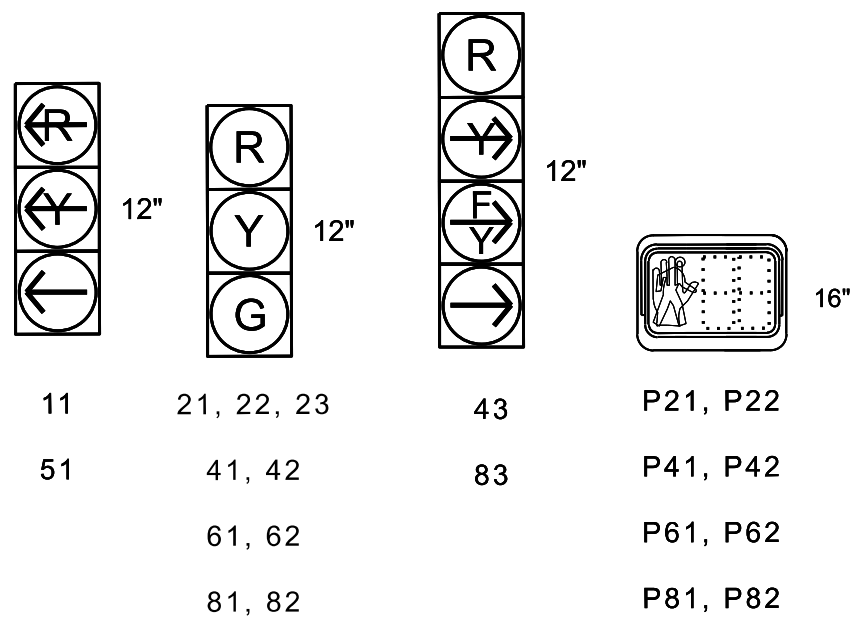
[illegible]

* Multi -Zone Microwave Detection



SIGNAL FACE I.D.

All Heads L.E.D.



SE-PAC 2070 TIMING CHART

FEATURE	PHASE					
	1	2	4	5	6	8
Min Green*	7	12	7	7	12	7
Passage Gap*	2.0	2.0	2.0	2.0	2.0	2.0
Maximum Green*	15	90	25	15	90	25
Yellow Change	3.0	4.6	3.8	3.0	4.6	3.8
Red Clear	2.6	1.5	2.5	3.2	1.5	2.5
Walk*	-	14	13	-	12	14
Pedestrian Clear	-	18	24	-	9	24
Advance Walk	-	7	6	-	5	7
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	NON-LOCK	LOCK	NON-LOCK
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	-	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 - Final

Prepared in the Offices of: 	SR 1007 (Lenoir -Rhyne Blvd) at SR 2267 (13th Avenue Drive SE)	SEAL 						
Division 12 Catawba County Hickory								
PLAN DATE: August 2026		REVIEWED BY: R. N. Zinser						
PREPARED BY: Adja Fall		REVIEWED BY:						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">REVISONS</th> <th style="width: 20%;">INT.</th> <th style="width: 20%;">DATE</th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISONS	INT.	DATE			
REVISONS	INT.	DATE						
 SCALE 0 50 1" = 50'								
750 N. Greenfield Pkwy, Garner, NC 27529								
Drawn by: <u>R. Nicholas Zinser</u> 08/12/2026 DATE: _____ F:\3660734\272406 SIG. INVENTORY NO. 12-1218								