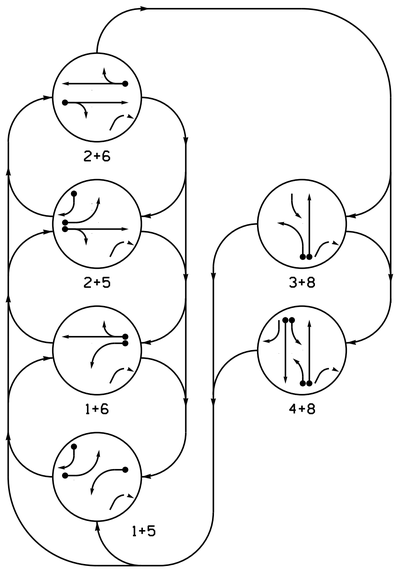
PROJECT REFERENCE NO.	SHEET NO.
HL-0065	Sig. 10.0

6 Phase
Fully Actuated
Signal System #: D13-24_Rutherfordton

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

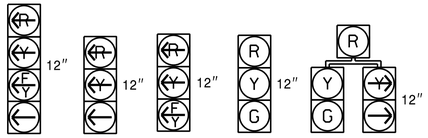
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 1+5	1+6	2+5	2+6	3+8	4+8	FLASH
11	←	—	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21,22	R	R	G	G	R	R	R
31	~~R~~	~~R~~	~~R~~	~~R~~	←	~~F Y~~	~~R~~
41	~~R~~	~~R~~	~~R~~	~~R~~	~~F Y~~	~~F Y~~	~~R~~
42	R	R	R	R	R	G	R
43	~~R~~	R	~~R~~	R	R	G	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~
61,62	R	G	R	G	R	R	R
81,82	R	R	R	R	G	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



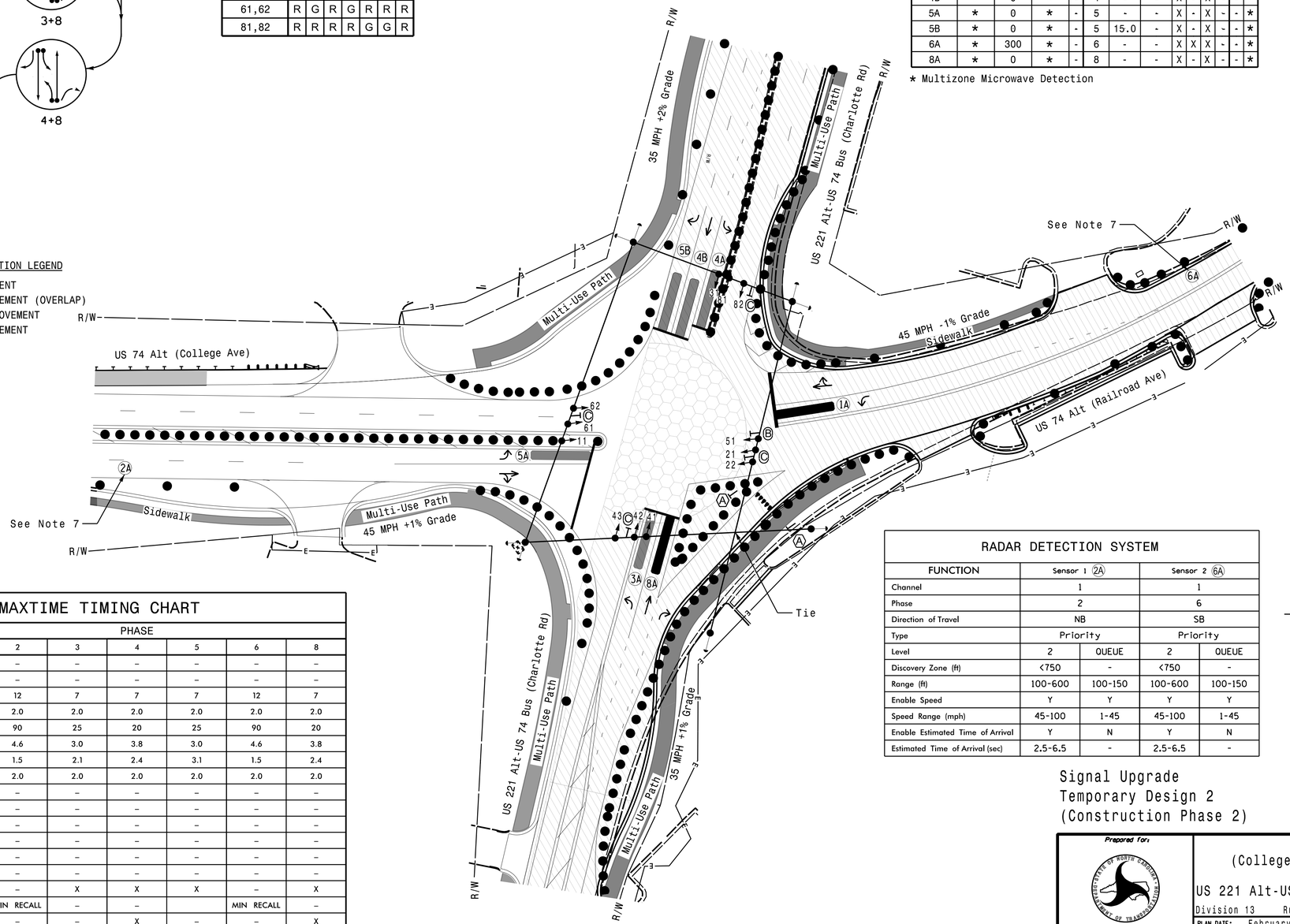
MAXTIME DETECTOR INSTALLATION CHART

DETECTOR ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	SYSTEM LOOP	NEW CARD
1A	*	0	*	-	1	3.0	-	X	-	X	-	-	*
2A	*	300	*	-	2	-	-	X	X	X	-	-	*
3A	*	0	*	-	3	15.0	-	X	-	X	-	-	*
					8	3.0	-	X	-	X	-	-	*
4A	*	0	*	-	4	-	-	X	-	X	-	-	*
4B	*	0	*	-	4	-	-	X	-	X	-	-	*
5A	*	0	*	-	5	-	-	X	-	X	-	-	*
5B	*	0	*	-	5	15.0	-	X	-	X	-	-	*
6A	*	300	*	-	6	-	-	X	X	X	-	-	*
8A	*	0	*	-	8	-	-	X	-	X	-	-	*

* Multizone Microwave Detection

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications January 2024.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 or phase 5 may be lagged.
4. Phase 3 may be lagged.
5. Reposition existing signal heads numbered 81 and 82 and existing sign Ⓒ.
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.
9. See HL-0065 TMP Phase II for pavement markings.
10. Relocate existing street name signs.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Non-Intrusive Detection Zone	
	Controller & Cabinet	
	Junction Box	
X-DD	Directional Drill	DD
X-UC	2-in Underground Conduit	UC
N/A	Right of Way	
N/A	Construction Easement	E
	Directional Arrow	
	Construction Zone	
	Wedge/Widen	
	Pavement Removal	
	Construction Drums	
N/A	Curb Ramp	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	'U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓑ
Ⓒ	Street Name Sign	Ⓒ

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	8
Walk *	–	–	–	–	–	–	–
Ped Clear	–	–	–	–	–	–	–
Min Green *	7	12	7	7	7	12	7
Passage *	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	25	90	25	20	25	90	20
Yellow Change	3.0	4.6	3.0	3.8	3.0	4.6	3.8
Red Clear	3.5	1.5	2.1	2.4	3.1	1.5	2.4
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial *	–	–	–	–	–	–	–
Maximum Initial *	–	–	–	–	–	–	–
Time Before Reduction *	–	–	–	–	–	–	–
Time To Reduce *	–	–	–	–	–	–	–
Minimum Gap	–	–	–	–	–	–	–
Advance Walk	–	–	–	–	–	–	–
Non Lock Detector	X	–	X	X	X	–	X
Vehicle Recall		MIN RECALL	–	–		MIN RECALL	–
Dual Entry	–	–	–	X	–	–	X

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

RADAR DETECTION SYSTEM

FUNCTION	Sensor 1 (2A)		Sensor 2 (6A)	
Channel	1		1	
Phase	2		6	
Direction of Travel	NB		SB	
Type	Priority		Priority	
Level	2	QUEUE	2	QUEUE
Discovery Zone (ft)	<750	-	<750	-
Range (ft)	100-600	100-150	100-600	100-150
Enable Speed	Y	Y	Y	Y
Speed Range (mph)	45-100	1-45	45-100	1-45
Enable Estimated Time of Arrival	Y	N	Y	N
Estimated Time of Arrival (sec)	2.5-6.5	-	2.5-6.5	-

Signal Upgrade
Temporary Design 2
(Construction Phase 2)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N.Greenfield Pkwy.Garner,NC 27529

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

0 40
1"=40'

US 74 Alt
(College Ave/Railroad Ave)
at
US 221 Alt-US 74 Bus (Charlotte Rd)

Division 13 Rutherford County Rutherfordton

PLAN DATE: February 2026 REVIEWED BY: N.K. Vlanich
PREPARED BY: E.E. Tiller REVIEWED BY: N.R. Simmons

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA R. SIMMONS

DocuSigned by: Natasha R. Simmons 5/12/2026
SIGNATURE DATE

SIG. INVENTORY NO. 13-0184T2