

	DETECTED MOVEMENT
	UNDETECTED MOVEMENT (OVERLAP)
	UNSIGNALIZED MOVEMENT
	PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE				
	1	2	3	4	FLASH
11	<u>G</u>	R	R	R	R
12	G	R	R	R	R
13	<u>F</u>	R	R	<u>F</u>	R
21	R	<u>G</u>	R	R	R
22	R	G	R	R	R
23	R	<u>F</u>	<u>F</u>	R	R
31	R	R	<u>G</u>	R	R
32	R	R	G	R	R
41	R	R	R	<u>G</u>	R
42	R	R	R	G	R
P11,P12	W	DW	DW	DW	DRK
P41,P42	DW	DW	DW	W	DRK

ART MODES LEVEL:

The diagram shows the Art Modes Level layout. It consists of three vertical columns of buttons, each 12 inches high, and two horizontal displays, each 16 inches wide. The buttons are labeled 11 through 42. The displays are labeled P11, P12, P41, P42 and P22. The display P22 is noted as being disconnected and bagged.

Button Label	Button Label	Button Label	Display Label	Display Label
11	12	13	P11, P12	P22
21	22	23	P41, P42	(Disconnected & Bagged)
31	32			
41	42			

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

Plan view of the intersection of US 221 and NC 108, showing proposed and existing conditions. The diagram includes road names, grades, speeds, and various engineering details like tie points, disconnects, and retaining walls. A table in the top right corner provides data for Multizone Microwave Detection.

	31	32	41	42	P11,P12	P41,P42
31	R	R	G	R	R	
32	R	R	G	R	R	
41	R	R	G	R		
42	R	R	G	R		
P11,P12	W	DW	DW	DW	DRK	
P41,P42	DW	DW	DW	W	DRK	

* Multizone Microwave Detection

US 221 (Main St)

US 221 Alt/US 74 Bus (Charlotte Rd)

NC 108 (Washington St)

20 MPH -7% Grade

35 MPH +3% Grade

35 MPH +4% Grade

35 MPH +8% Grade

Sidewalk

Disconnect & Bag

Retaining Wall

Tie

3A

3B

3C

2A

2B

1A

4A

4B

21

22

23

31

32

41

42

P11

P12

P41

P42

US 221-US 74 Bus

MAXTIME TIMING CHART				
FEATURE	PHASE			
	1	2	3	4
Walk *	14	–	–	14
Ped Clear	13	–	–	15
Min Green *	10	7	10	10
Passage *	2.0	3.0	2.0	2.0
Max 1 *	40	40	40	40
Yellow Change	3.6	3.7	3.2	3.4
Red Clear	1.8	1.7	2.6	1.7
Red Revert	2.0	2.0	2.0	2.0
Added Initial *	–	–	–	–
Maximum Initial *	–	–	–	–
Time Before Reduction *	–	–	–	–
Time To Reduce *	–	–	–	–
Minimum Gap	–	–	–	–
Advance Walk	**	–	–	7
Non Lock Detector	X	X	X	X
Vehicle Recall	–	–	–	–
Dual Entry	–	–	–	–

** See Note 9.

** See Note 9.

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	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
	Directional Drill	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Construction Zone	
	Construction Drums	
N/A	Curb Ramp	
	Street Name Sign	

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

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 and/or phase 2 may be lagged.
4. Phase 3 and/or phase 4 may be lagged.
5. Reposition existing signal heads numbered 21 and 22 and sign (A).
6. Set all detector units to presence mode.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. To provide a leading pedestrian interval on phase 1 program FYA head numbered 13 to delay for 7 seconds after the start of the phases 1 walk interval. See Electrical Details for programming.
10. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
11. Maximum times shown in the timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
12. See HL-0065 TMP Phase II for Pavement Marking.

Signal Upgrade
Temporary Design 2
(Construction Phase 2)

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REAL

US 221 Alt-US 74 Bus (Charlotte Rd)/NC 108 (Washington St) at US 221 (Main St)/US 221-74 Bus		
Division 13	Rutherford County	Rutherfordton



SEAL

NORTH CAROLINA
PROFESSIONAL
SEAL
031464
ENGINEER

Signed by:

Nasha R. Simmons 5/12/2026

SIGNATURE	DATE
BOB CARROLL	10/01/00

G. INVENTORY NO. 13-018312

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