

SIGNAL FACE	PHASE		
	Ø 2	Ø 4 + 7	FLASH
21	↑	R	R
22	G	R	R
23	↙	R	R
41, 42, 43	R	→	R
71, 72	↙	←	R
P21, P22	W	DW	DRK
P71, P72	DW	W	DRK

SIGNAL FACE	PHASE		
	Ø 2	Ø 4 + 7	FLASH
21	↑	R	R
22	G	R	R
23	↘	R	R
41, 42, 43	R	→	R
71, 72	←R	←	←R
P21, P22	W	DW	DRK
P71, P72	DW	W	DRK

DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
2A	6X6	420	5	X	2	-	-	X	X	X	-	X
2B	6X6	420	5	X	2	-	-	X	X	X	-	X
4A	6X40	0	2-4-2	X	4	15.0	-	X	-	X	-	X
4B	6X40	0	2-4-2	X	4	15.0	-	X	-	X	-	X
7A	6X40	0	2-4-2	X	7	*15.0	-	X	-	X	-	X

Fully Actuated with Alternate Phasing Operation
US 321 Closed Loop System

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. The Division Traffic Engineer will determine the hours of use for each phasing plan.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Pedestal mounted signal heads shall be mounted a minimum of 8' above the high point of the roadway surface elevation.
9. Refer to Roadway and/or Pavement Marking plans for stop bar locations.
10. Suppress FYA for signal heads 71, 72, and 23 for the first 7 seconds of phase 2 ped.

All Heads L.E.D.

	DETECTED MOVEMENT
	UNDETECTED MOVEMENT (OVERLAP)
	UNSIGNALIZED MOVEMENT
	PEDESTRIAN MOVEMENT

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	With Push Button & Sign	
	Metal Pole with Mastarm	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Directional Drill	N/A
	Right of Way	
	Directional Arrow	
	Pedestrian Pushbutton	
N/A	Type II Signal Pedestal	
	Curb Ramp	
	No U-Turn Sign (R3-4)	
	No Left Turn Sign (R3-2)	

MAXTIME TIMING CHART			
FEATURE	PHASE		
	2	4	7
Walk *	14	—	7
Ped Clear	27	—	18
Min Green *	14	7	7
Passage *	6.0	2.0	2.0
Max I *	90	20	30
Yellow Change	5.3	3.0	3.0
Red Clear	1.8	2.8	2.6
Added Initial *	1.5	—	—
Maximum Initial *	46	—	—
Time Before Reduction *	15	—	—
Time To Reduce *	30	—	—
Minimum Gap	3.4	—	—
Advance Walk	—	—	—
Non Lock Detector	—	X	X
Vehicle Recall	MIN RECALL	—	—
Dual Entry	—	X	X

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

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SEA

US 321 (Hickory Boulevard) SB
at
SR 1160 (Mt Herman Road)

Division 11 Caldwell County Hudson

PLAN DATE:	June 2024	REVIEWED BY:	D.J. Darity
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529	PREPARED BY: J.T. Grimm	REVIEWED BY: T.M. Moody
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	REVISIONS	INIT.	DATE
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DocuSigned by:
Trent Moody 6/10/2024
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SIGNATURE DATE
SIG. INVENTORY NO. 11-455

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Prepared for the Offices of

