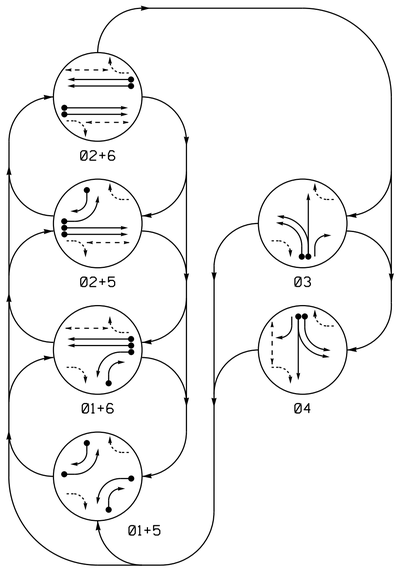
PROJECT REFERENCE NO.	SHEET NO.
U-6036	Sig 3.2

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

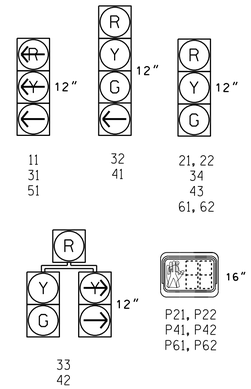
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03	04	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21, 22	R	R	G	G	R	R	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	~~R~~
32	R	R	R	R	G ←	R	R
33	R/←	R/←	R	R	G	R	R
34	R	R	R	R	G	R	R
41	R	R	R	R	R	G ←	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	Y
P21, P22	DW	DW	W	W	DW	DW	DRK
P41, P42	DW	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



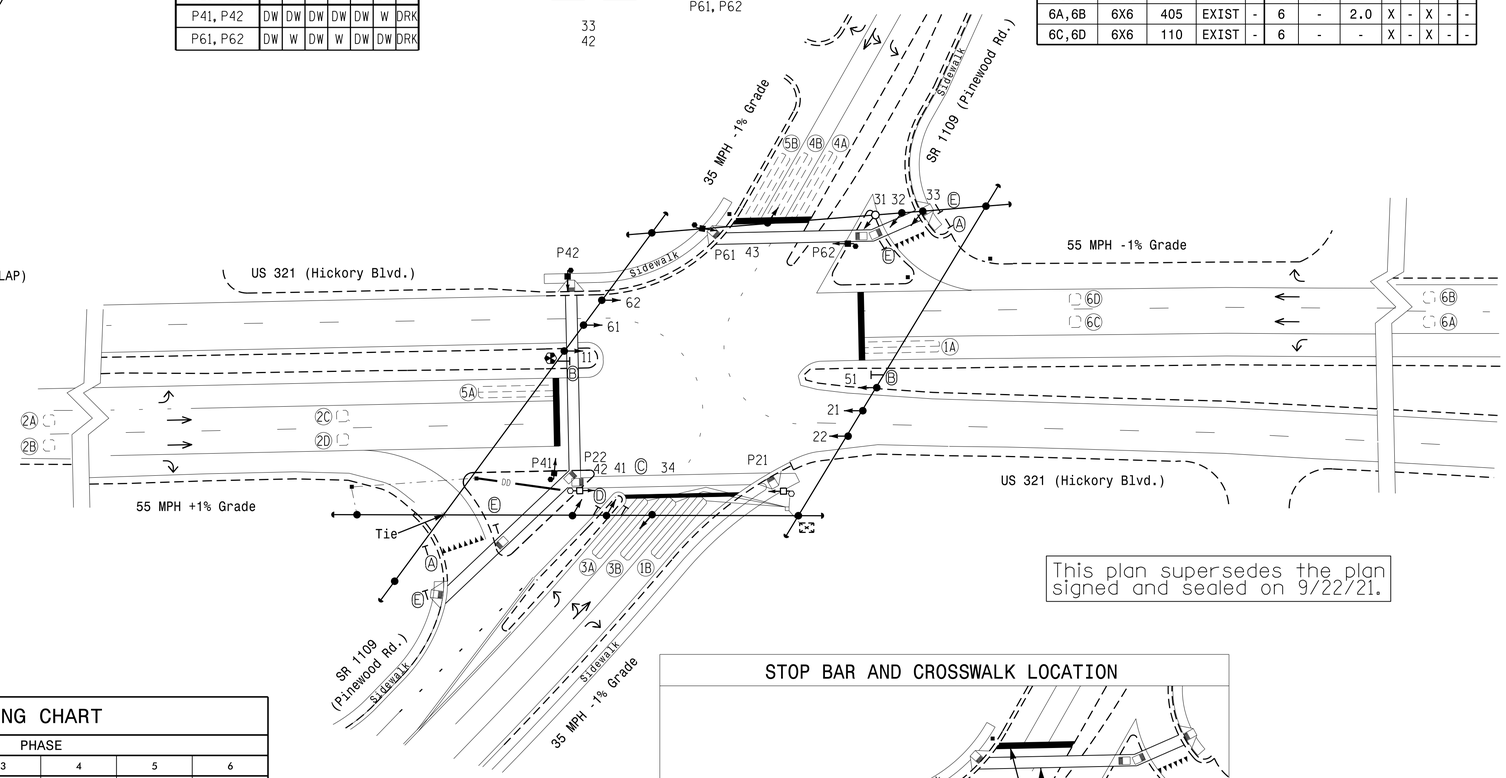
MAXTIME DETECTOR INSTALLATION CHART

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
1A	6X40	0	2-4-2	-	1	-	-	X	-	X	-	-
1B	6X40	0	2-4-2	X	1	15.0	-	X	-	X	-	X
2A	6X6	405	EXIST	-	2	-	2.0	X	-	X	-	-
2B	6X6	405	EXIST	-	2	-	2.0	X	-	X	-	-
2C,2D	6X6	110	EXIST	-	2	-	-	X	-	X	-	-
3A	6X40	0	2-4-2	X	3	-	-	X	-	X	-	X
3B	6X40	0	2-4-2	X	3	-	-	X	-	X	-	X
4A	6X40	0	2-4-2	-	4	-	-	X	-	X	-	-
4B	6X40	0	2-4-2	-	4	-	-	X	-	X	-	-
5A	6X40	0	2-4-2	-	5	-	-	X	-	X	-	-
5B	6X40	0	2-4-2	-	5	15.0	-	X	-	X	-	-
6A,6B	6X6	405	EXIST	-	6	-	2.0	X	-	X	-	-
6C,6D	6X6	110	EXIST	-	6	-	-	X	-	X	-	-

6 Phase
Fully Actuated
Isolated

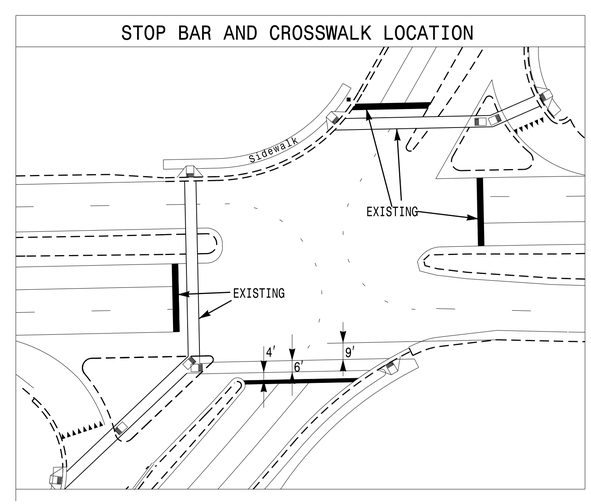
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024, "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. The order of phase 3 and phase 4 may be reversed.
5. Reposition existing signal heads numbered 32 and 33.
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.



This plan supersedes the plan signed and sealed on 9/22/21.

STOP BAR AND CROSSWALK LOCATION



MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Walk *	–	7	–	7	–	7
Ped Clear *	–	23	–	24	–	17
Min Green *	7	14	7	7	7	14
Passage *	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	15	75	30	30	15	75
Yellow Change	3.0	5.3	3.9	3.9	3.0	5.3
Red Clear	4.0	1.9	3.1	3.2	4.4	1.9
Added Initial *	–	–	–	–	–	–
Maximum Initial *	–	–	–	–	–	–
Time Before Reduction *	–	–	–	–	–	–
Time To Reduce *	–	–	–	–	–	–
Minimum Gap	–	–	–	–	–	–
Advance Walk	–	–	–	–	–	–
Non Lock Detector	X	–	X	X	X	–
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL
Dual Entry	–	–	–	–	–	–

* 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.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
N/A	Curb Ramp	
	Directional Drill	N/A
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓑ
Ⓒ	Left Turn Only Sign (R3-5L)	Ⓒ
Ⓓ	Left/Straight Arrow Sign (R3-6L)	Ⓓ
Ⓔ	Pedestrian Sign (W11-2) and Diagonal Downward Arrow (W16-7p)	Ⓔ

Signal Upgrade-Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for: Transportation Mobility and Safety Division, Signal Design Section, Department of Transportation, State of North Carolina
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40' 1"=40'

US 321 (Hickory Blvd.) at SR 1109 (Pinewood Rd.)

Division 11 Caldwell County Granite Falls

PLAN DATE: August 2023 REVIEWED BY: R.N. Zinser
PREPARED BY: T.A. Kenion REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043914 ENGINEER RICHARD N. ZINSER

DocuSigned by: R. Nicholas Zinser 12/04/2023
E13B6B7A7F2A4E... DATE

SIG. INVENTORY NO. 11-0082

04-DEC-2023 09:44
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