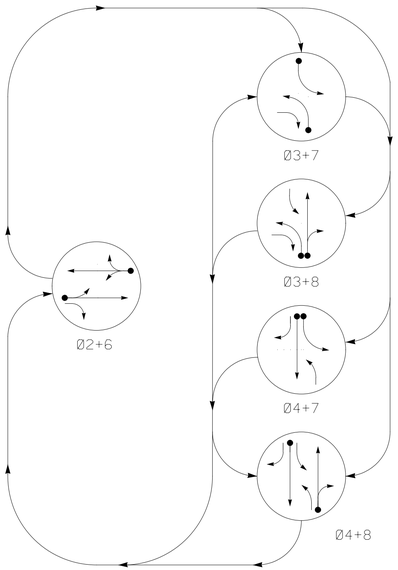
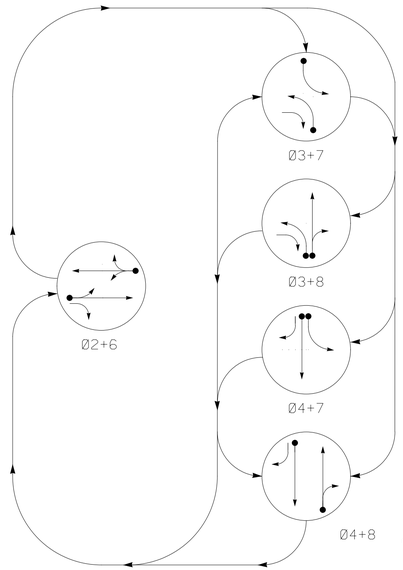
PROJECT REFERENCE NO.	SHEET NO.
W-5704E	SIG.8.0

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

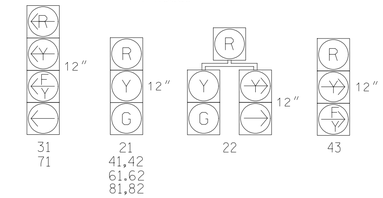
SIGNAL FACE	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	FLASH
21	G	R	R	R	R	R
22	G	R	R	R	R	R
31	R	←	←	F Y	F Y	R
41, 42	R	R	R	G	G	R
43	R	R	R	F Y	F Y	R
61, 62	G	R	R	R	R	R
71	R	←	F Y	←	F Y	R
81, 82	R	R	G	R	G	R

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	FLASH
21	G	R	R	R	R	R
22	G	R	R	R	R	R
31	R	←	←	R	R	R
41, 42	R	R	R	G	G	R
43	R	R	R	F Y	F Y	R
61, 62	G	R	R	R	R	R
71	R	←	R	←	R	R
81, 82	R	R	G	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



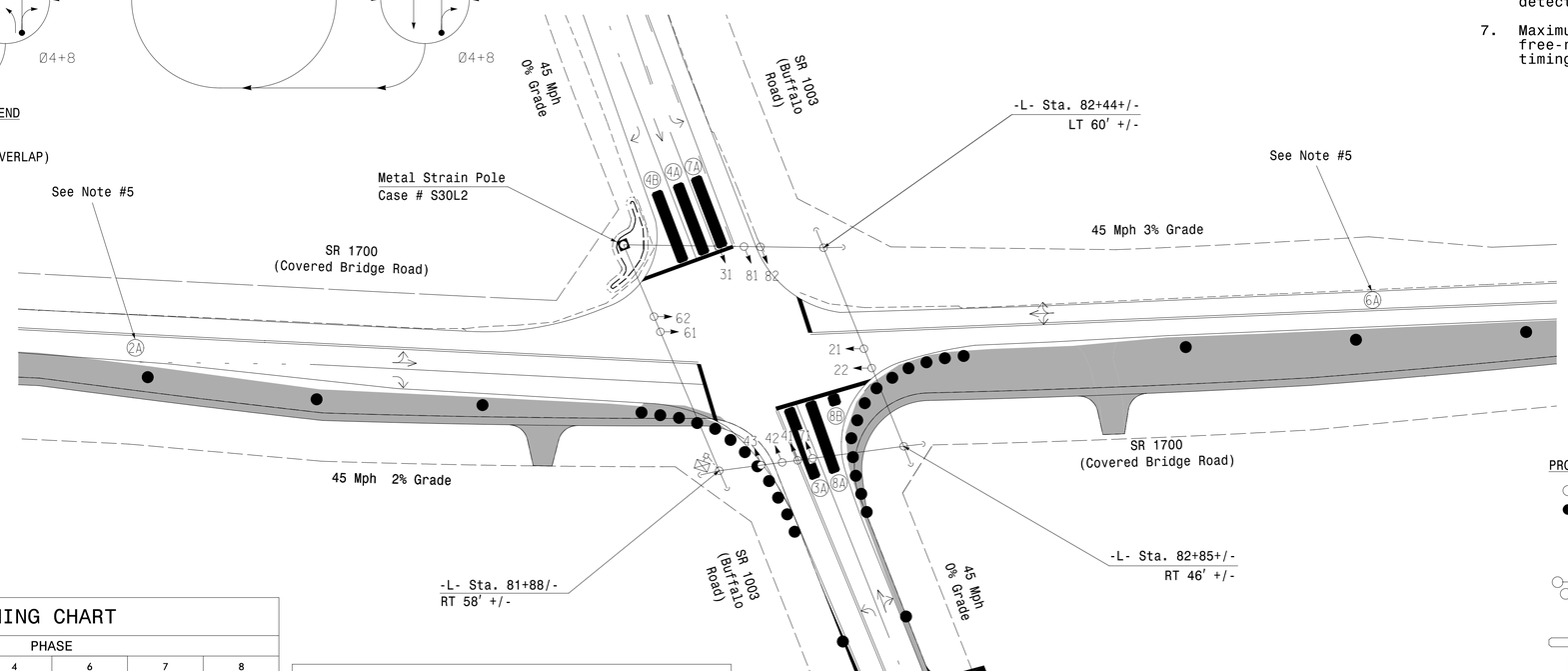
5 PHASE
FULLY ACTUATED
SR 1700 (COVERED BRIDGE ROAD)
CLOSED LOOP SYSTEM

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 operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet as to not obstruct sight distance of vehicles turning right on red.
5. The Division Traffic Engineer will determine the hours of use for each phasing plan.
6. This intersection features mulitzone microwave detection. Install detectors according to the manufacturers instructions to achieve the desired detection scheme.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

PHASING DIAGRAM DETECTION LEGEND

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



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	
	Metal Strain Pole	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Microwave Detection Zone	N/A
	Construction Area	N/A

MAXTIME TIMING CHART

FEATURE	PHASE 2	3	4	6	7	8
Walk *	0	0	0	0	0	0
Ped Clear *	0	0	0	0	0	0
Min Green *	12	7	7	12	7	7
Passage *	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	75	15	30	75	15	30
Yellow Change	4.3	3.0	4.5	4.3	3.0	4.5
Red Clear	1.0	1.9	1.4	1.0	2.3	1.4
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	–	–	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.

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
3A	✳	0	✳	✳	3	15.0*	-	X	-	X	-	✳
				✳	8#	3.0	-	X	-	X	-	✳
4A	✳	0	✳	✳	4	-	-	X	-	X	-	✳
4B	✳	0	✳	✳	4	15.0	-	X	-	X	-	✳
7A	✳	0	✳	✳	7	15.0*	-	X	-	X	-	✳
				✳	4#	3.0	-	X	-	X	-	✳
8A	✳	0	✳	✳	8	10.0	-	X	-	X	-	✳
8B	✳	0	✳	✳	8	15.0	-	X	-	X	-	✳

✳ Multizone Microwave Detection Zone
* Reduce Delay to 3 seconds during Alternate Phasing Operation.
\# Disable Phase Calls for Loop during Alternate Phasing Operation.

RADAR DETECTION SYSTEM

FUNCTION	Sensor 1 (2A)	Sensor 2 (6A)
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	500–100	500–100
Enable Speed	Y	Y
Speed Range (mph)	35–100	35–100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5–6.5	2.5–6.5

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

Signal Upgrade - Temporary Design (TCP Phase 1)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1700 (Covered Bridge Road) at SR 1003 (Buffalo Road)

Division 4 Johnston County Archer Lodge

PLAN DATE: April 2025 REVIEWED BY: M.L. Stygles
PREPARED BY: L. Gottlieb REVIEWED BY: J. Ma

SCALE 1"=40' (0 – 40)

REVISIONS | INIT. | DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 046057 ENGINEER MATTHEW L. STYGLES

Signed by: 4/24/2025
SIGNATURE DATE

SIG. INVENTORY NO. 04-118ITI

$$$$$SYSTIME$$$$
$$$$$$USERNAME$$$$
$$$$$$