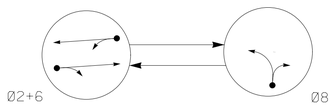
PROJECT REFERENCE NO.	SHEET NO.
W-5704E	SIG.1.0

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

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø8	FLASH
21, 22	G	R	R
61, 62	G	R	R
81	R	←	R
82	R	→	R

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

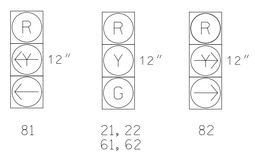
MAXTIME DETECTOR INSTALLATION CHART

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
8A	*	0	*	*	8	3.0	-	X	-	X	-	*

* Multizone Microwave Detection Zone

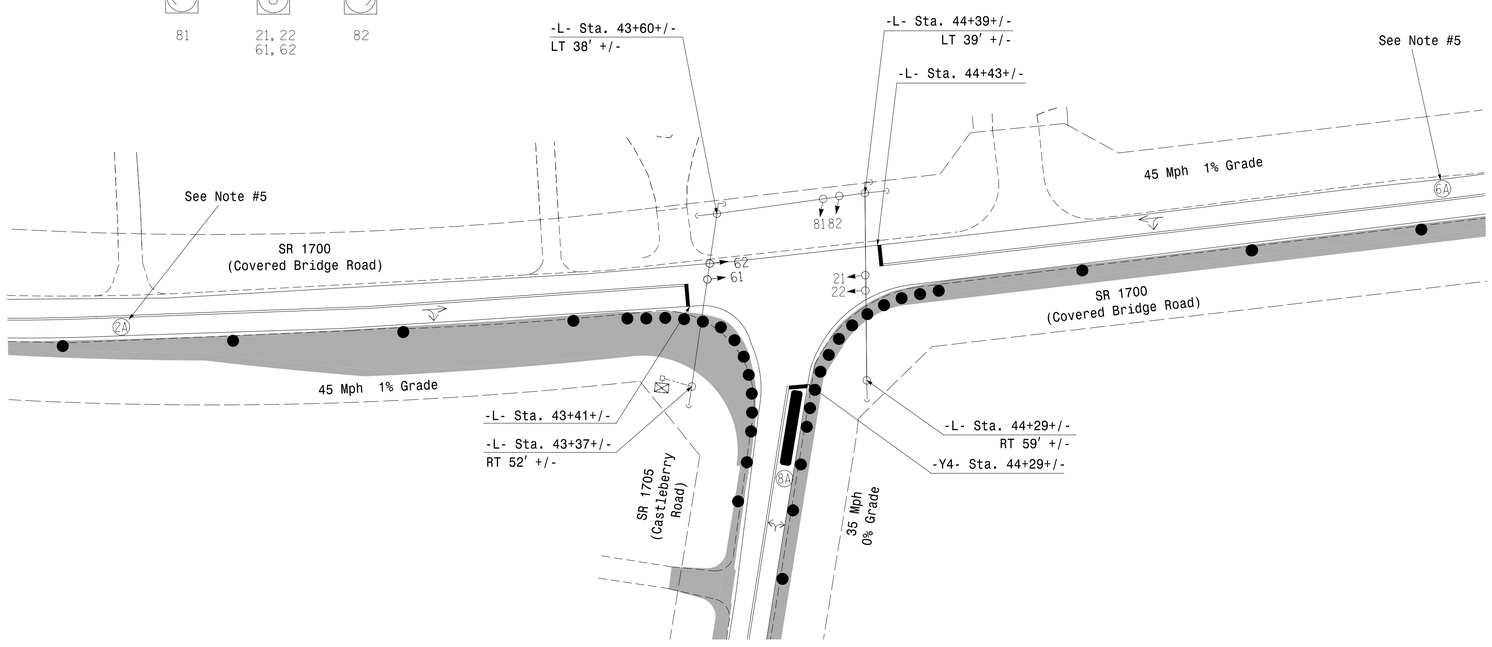
SIGNAL FACE I.D.

All Heads L.E.D.



NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
2. Do no program signal for late night operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
5. This intersection features multizone microwave detection. Install detectors according to the manufacturers instructions to achieve the desired detection scheme.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



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	
	Microwave Detection Zone	N/A
	Construction Area	N/A

MAXTIME TIMING CHART

FEATURE	PHASE 2	PHASE 6	PHASE 8
Walk *	–	–	–
Ped Clear *	–	–	–
Min Green *	12	12	7
Passage *	2.0	2.0	2.0
Max 1 *	100	100	20
Yellow Change	4.4	4.4	3.0
Red Clear	1.2	1.2	2.1
Added Initial *	–	–	–
Maximum Initial *	–	–	–
Time Before Reduction *	–	–	–
Time To Reduce *	–	–	–
Minimum Gap	–	–	–
Advance Walk	–	–	–
Non Lock Detector	–	–	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.

New Installation - Temporary Design (TCP Phase 1)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

Prepared for the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40 1"=40'

SR 1700 (Covered Bridge Road)
at
SR 1705 (Castleberry Road)

Division 4 Johnston County Archer Lodge

PLAN DATE:	February 2025	REVIEWED BY:	M.L. Stygles
PREPARED BY:	L. Gottlieb	REVIEWED BY:	J. Ma/J.L. Lewis

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 046057 ENGINEER MATHEW L. STYGLES

DocuSigned by:
Mathew L. Stygles
SIGNATURE
2/4/2025
DATE

SIG. INVENTORY NO. 04-1470TI

$$$$SYSTIME$$$$
$$$$PROJDIR$$$$
$$$$USERNAME$$$$