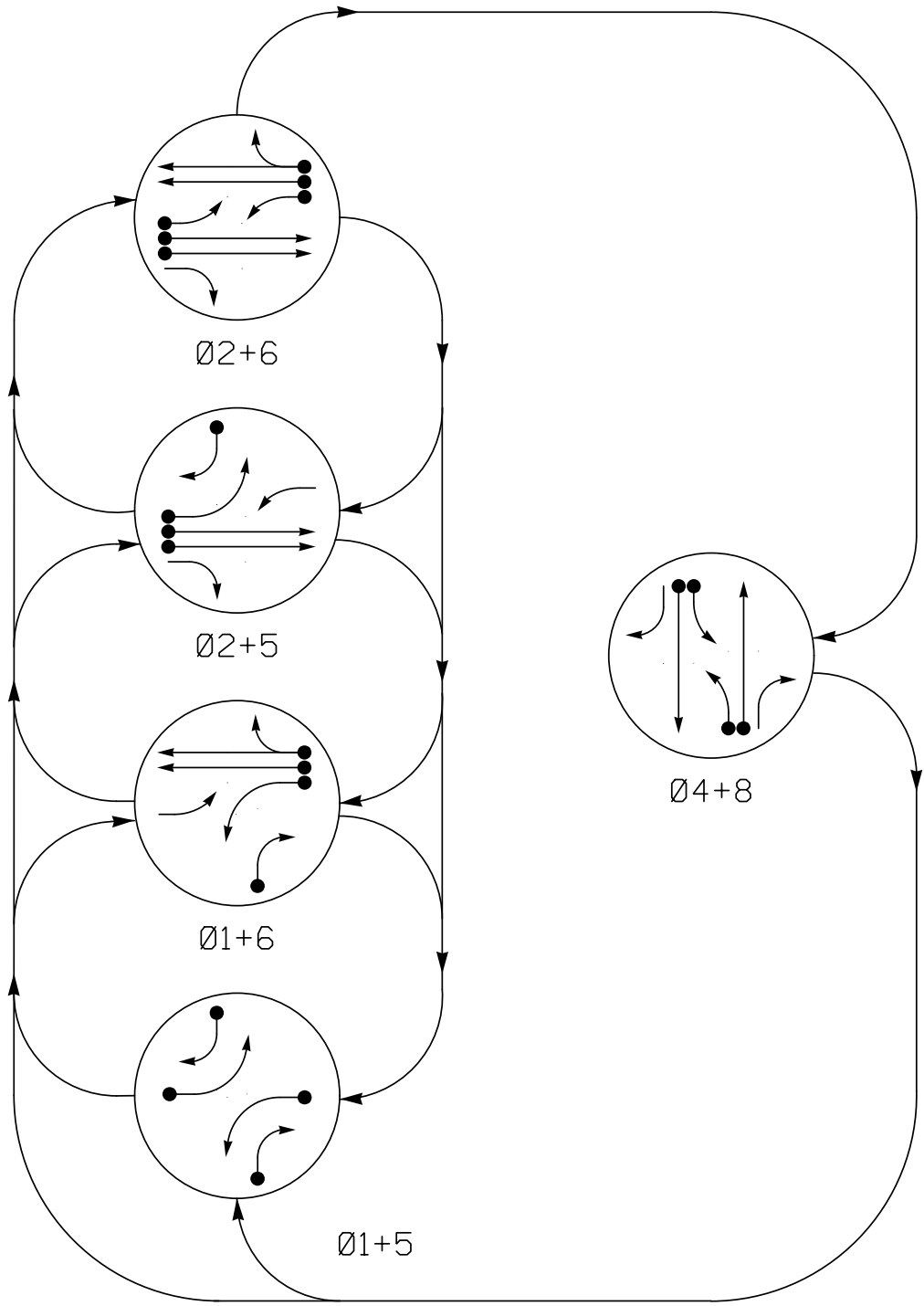


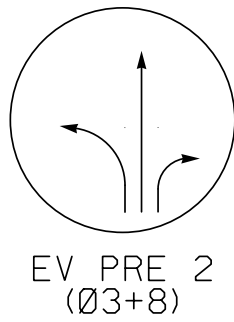
PHASING DIAGRAM



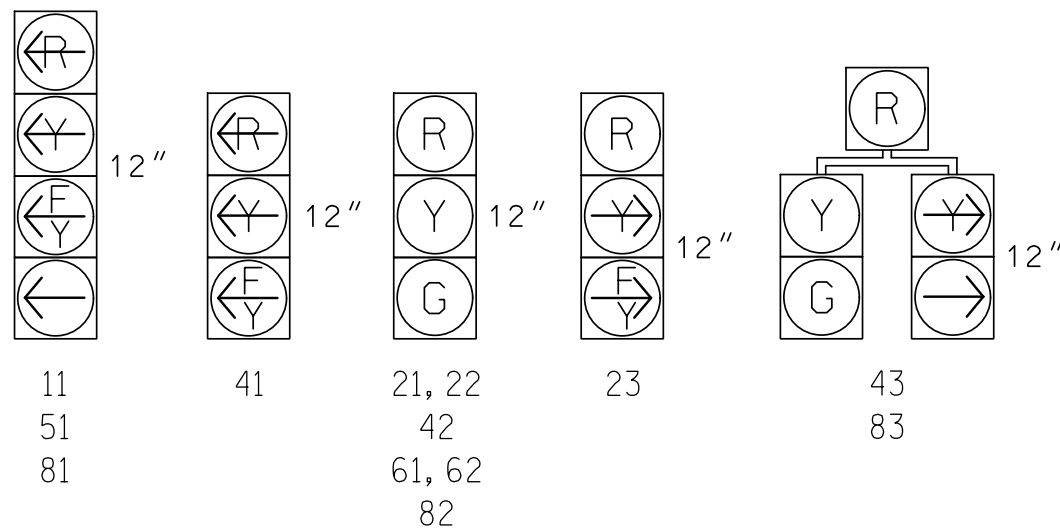
PHASING DIAGRAM DETECTION LEGEND

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

EV PREEMPT PHASE
(Medium Priority)



SIGNAL FACE I.D.
All Heads L.E.D.



SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	04+8	PRE 2	FLASH	
11	←	←	←	←	←	←	←	
21, 22	R	R	G	G	R	R	R	
23	R	R	←	←	R	R	R	
41	←	←	R	R	←	←	←	
42	R	R	R	R	G	R	R	
43	←	←	R	R	G	R	R	
51	←	←	←	←	R	R	R	
61, 62	R	G	R	G	R	R	R	
81	←	←	←	←	←	←	←	
82	R	R	R	R	G	G	R	
83	←	←	R	R	G	G	R	

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
1A	6X40	0	*	*	1	15	-	X	-	X
1B	6X40	0	*	*	6	-	-	X	-	X
4A	6X40	0	*	*	1	15	-	X	-	X
4B	6X40	0	*	*	4	3	-	X	-	X
5A	6X40	0	*	*	4	-	-	X	-	X
5B	6X40	0	*	*	5	15	-	X	-	X
8A	6X40	0	*	*	2	-	-	X	-	X
8B	6X40	0	*	*	5	15	-	X	-	X

* Multi-zone Microwave Detection Zone

5 Phase
Fully Actuated with EV Preemption
D06-18 Lumberton NC 211 (N. Roberts Avenue)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- The Division Traffic Engineer will determine the Delay Time and Minimum Dwell Time for the emergency vehicle preemption timing.
- This intersection uses microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Emergency vehicle preemption switch is located inside rescue squad building. When switch is actuated, controller will display interval and then emergency preemption phasing.

RADAR DETECTION SYSTEM

FUNCTION	SENSOR 1 - 2A	SENSOR 2 - 6A
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	200 - 70	200 - 70
Enable Speed	Y	Y
Speed Range (mph)	25 - 100	25 - 100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5 - 5.5	2.5 - 5.5

MAXTIME TIMING CHART

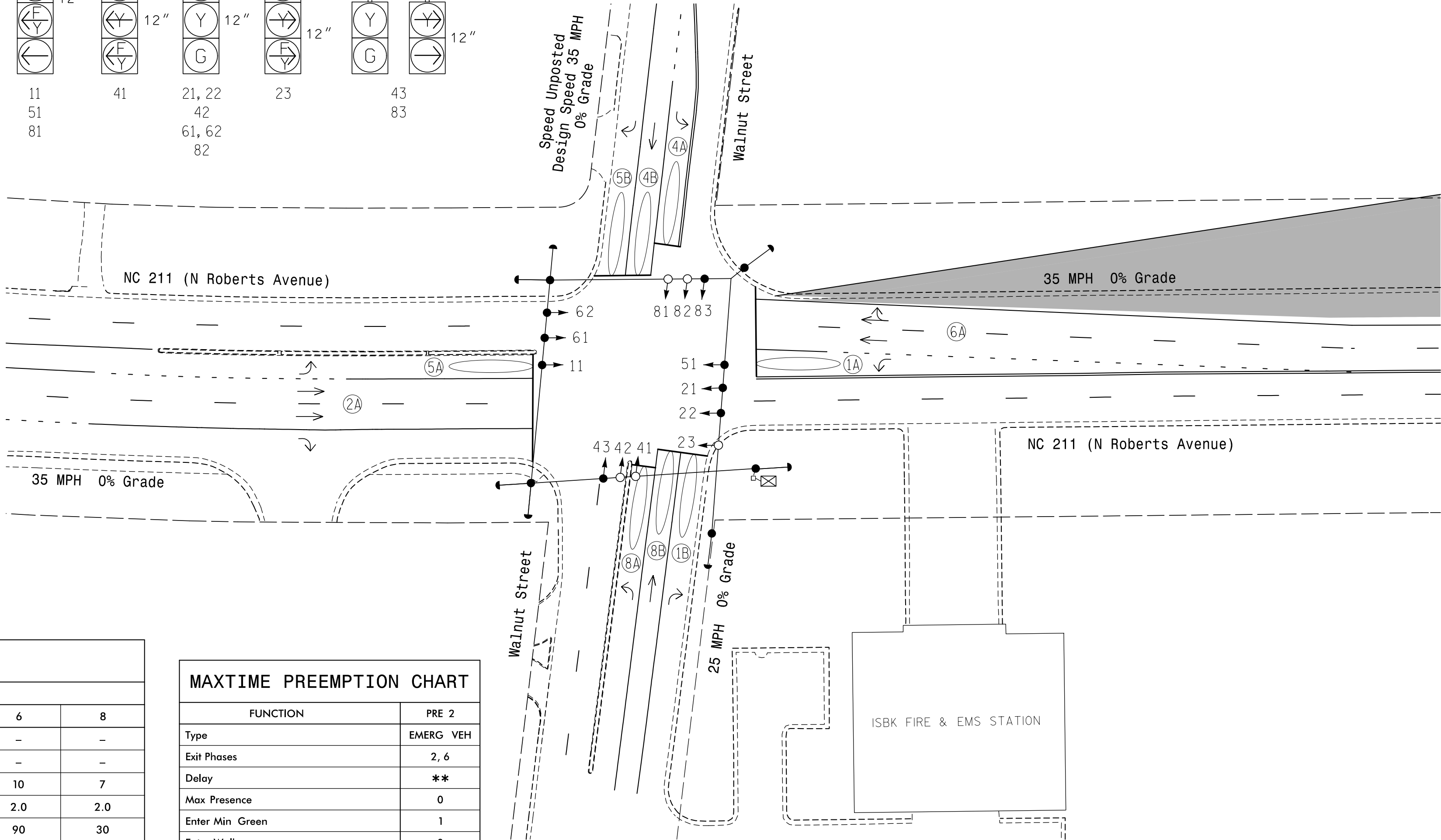
FEATURE	PHASE					
	1	2	4	5	6	8
Walk *	-	-	-	-	-	-
Ped Clear *	-	-	-	-	-	-
Min Green	7	10	7	7	10	7
Passage *	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	20	90	30	20	90	30
Yellow Change	3.0	3.8	3.8	3.0	3.8	3.8
Red Clear	2.8	2.0	2.1	2.8	2.0	2.1
Added Initial *	-	-	-	-	-	-
Maximum Initial *	-	-	-	-	-	-
Time Before 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 Extension 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 PREEMPTION CHART

FUNCTION	PRE 2
Type	EMERG YEH
Exit Phases	2, 6
Delay	**
Max Presence	0
Enter Min Green	1
Enter Walk	0
Enter Ped Clear	25.5 *
Enter Yellow Change	25.5 *
Enter Red Clear	25.5 *
Dwell Green	**
Exit Min Green	25.5 *
Exit Yellow Change	25.5 *
Exit Red Clear	25.5 *
Call Extend Time	1.0
Exit Type	EXIT PHASES
Ped Clear Through Yellow	N
Require All Red Entry	N

* Directs controller to use default phase timing.
** See Note 6.



LEGEND

- | PROPOSED | EXISTING |
|--------------------------------|-------------------------------|
| Traffic Signal Head | Modified Signal Head |
| Signal Pole with Guy | Signal Pole with Sidewalk Guy |
| Inductive Loop Detector | Controller & Cabinet |
| Controller & Cabinet | Junction Box |
| 2-in Underground Conduit | Right of Way |
| Directional Arrow | Microwave Detection Zone |
| Microwave Detection Zone | Construction Zone |
| Left Arrow "ONLY" Sign (R3-5L) | |

Signal Upgrade
Temporary Design 1 - TMP Phase IV, Step 4

stv
STV Engineers, Inc.
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(704) 372-1885
NC License Number F-0991

Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N. Greenfield Pkwy, Garner, NC 27529
SCALE
0 40'

NC 211 (N Roberts Avenue)
at
Walnut Street

Division 6	Robeson County	Lumberton
PLAN DATE: Feb 2025	REVIEWED BY: H.M. Surti	
PREPARED BY: R.L. Aristondo	REVIEWED BY: T.M. Moody	
REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
T.M. MOODY
040329
3/19/2025
DATE
SIGNATURE
SIC. INVENTORY NO. 06-089711