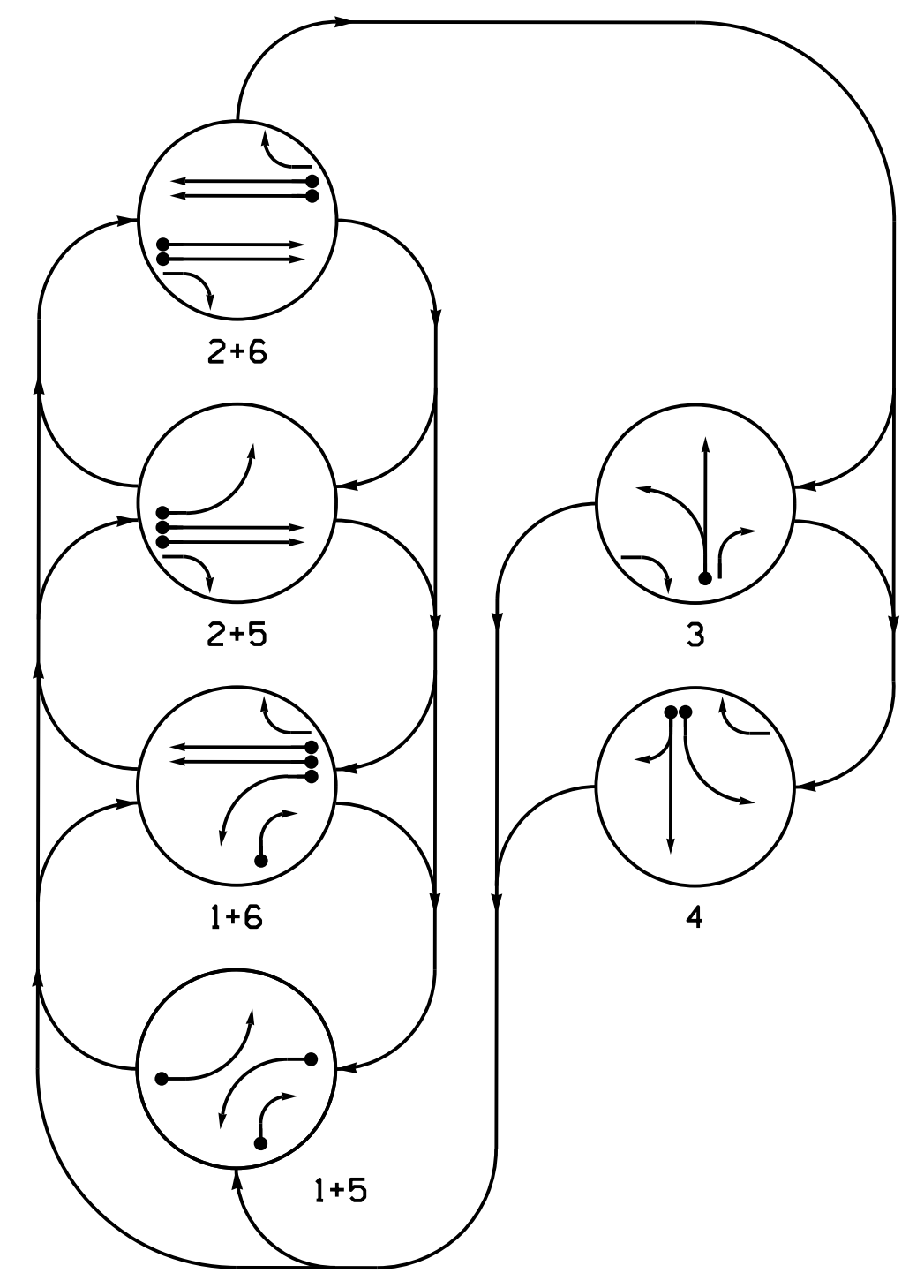


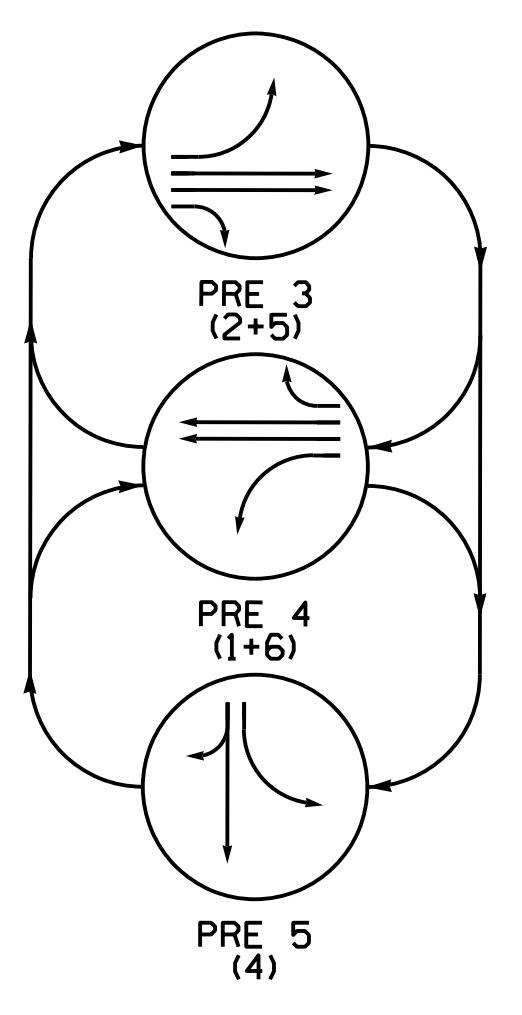
**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

- ←•→ DETECTED MOVEMENT
- ←-→ UNDETECTED MOVEMENT (OVERLAP)
- ←- - -→ UNSIGNALIZED MOVEMENT
- ←- - - -> PEDESTRIAN MOVEMENT

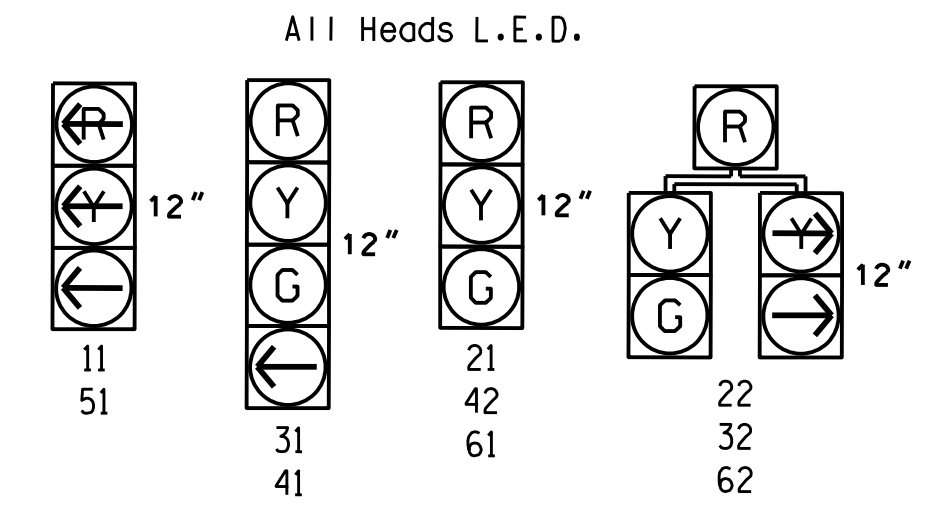
**EV PREEMPT PHASES**  
(Medium Priority)



**TABLE OF OPERATION**

SIGNAL FACE	PHASE											
	1+5	1+6	2+5	2+6	3	4	PRE 3	PRE 4	PRE 5	F	Foot	P
11	---	---	---	---	---	---	---	---	---	---	---	---
21	R	R	G	G	R	R	G	R	R	R	R	R
22	R	R	G	G	R	R	G	R	R	R	R	R
31	R	R	R	R	G	R	R	R	R	R	R	R
32	R	R	R	R	G	R	R	R	R	R	R	R
41	R	R	R	R	R	G	R	R	R	R	R	R
42	R	R	R	R	R	G	R	R	R	R	R	R
51	---	---	---	---	---	---	---	---	---	---	---	---
61	R	G	R	G	R	R	R	G	R	R	R	R
62	R	G	R	G	R	R	R	G	R	R	R	R

**SIGNAL FACE I.D.**



**MICROWAVE DETECTION**

FUNCTION	Sensor 1 (2A)	Sensor 2 (6A)
Channel	1	1
Phase	2	6
Direction of Travel	EB	WB
Type	PRIORITY	PRIORITY
Level	2	2
Discovery Zone(ft)	<750	<750
Detection Zone/Range(ft)	600-100	150-100
Enable Speed	Y	Y
Speed Range (mph)	35-100	1-35
Enable Estimated Time of Arrival	Y	N
Estimated Time of Arrival (sec)	2.5-5.5	2.5-5.5

**OASIS 2070 LOOP & DETECTOR INSTALLATION CHART**

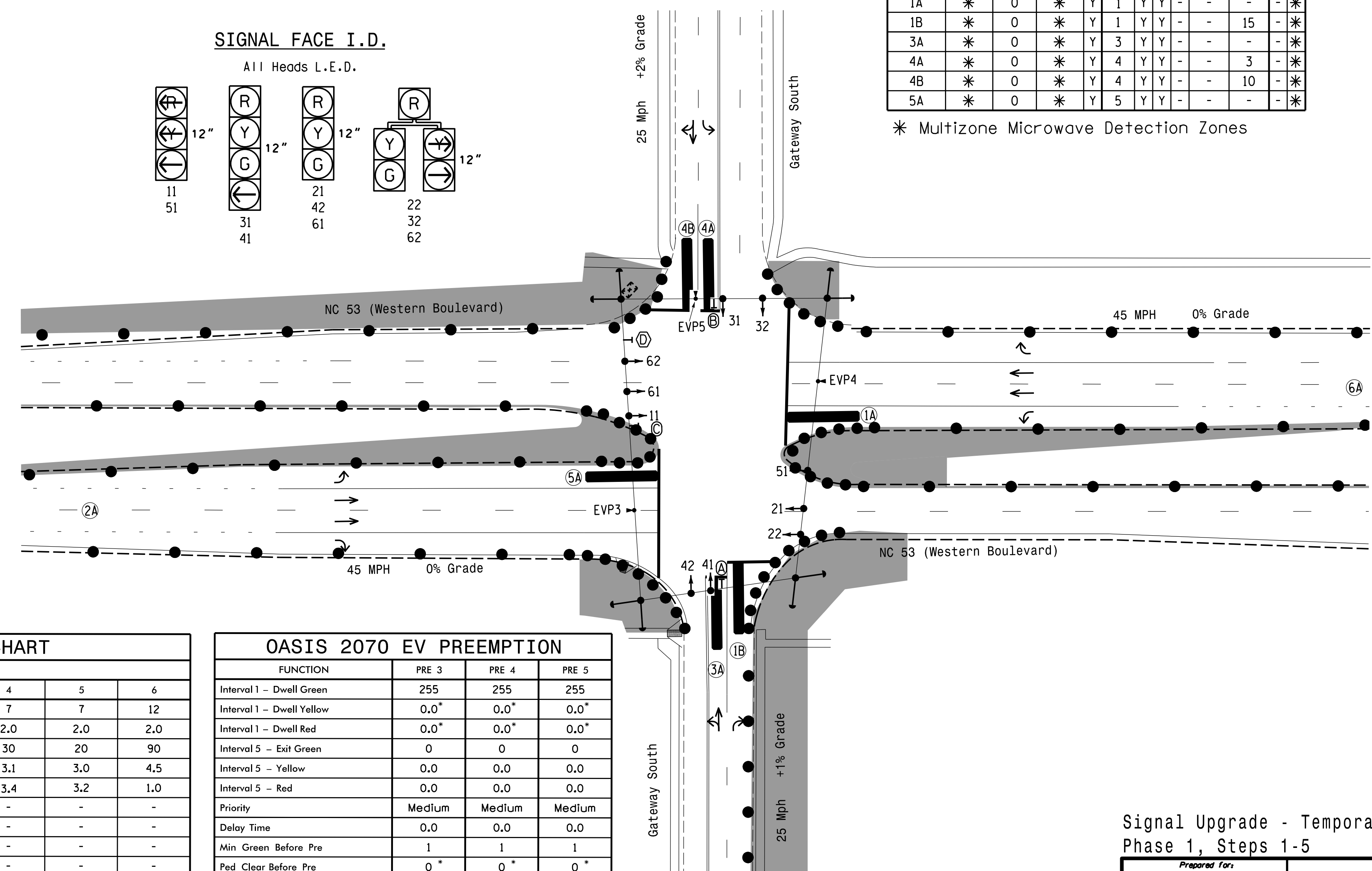
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTENSION	FULL TIME DELAY				
1A	*	0	*	Y	1	Y	Y	-	-	-	-	*
1B	*	0	*	Y	1	Y	Y	-	-	15	-	*
3A	*	0	*	Y	3	Y	Y	-	-	-	-	*
4A	*	0	*	Y	4	Y	Y	-	-	3	-	*
4B	*	0	*	Y	4	Y	Y	-	-	10	-	*
5A	*	0	*	Y	5	Y	Y	-	-	-	-	*

\* Multizone Microwave Detection Zones

**6 Phase Fully Actuated w/EV Preempt Jacksonville Signal System**

**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.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- This intersection features a GPS preemption system.
- This intersection uses multi-zone 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.
- Closed loop system data: Controller Asset # 0896.



**OASIS 2070 TIMING CHART**

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1 *	7	12	7	7	7	12
Extension 1 *	2.0	2.0	2.0	2.0	2.0	2.0
Max Green 1 *	20	90	30	30	20	90
Yellow Clearance	3.0	4.5	3.1	3.1	3.0	4.5
Red Clearance	3.2	1.0	3.5	3.4	3.2	1.0
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

**OASIS 2070 EV PREEMPTION**

FUNCTION	PRE 3	PRE 4	PRE 5
Interval 1 - Dwell Green	255	255	255
Interval 1 - Dwell Yellow	0.0*	0.0*	0.0*
Interval 1 - Dwell Red	0.0*	0.0*	0.0*
Interval 5 - Exit Green	0	0	0
Interval 5 - Yellow	0.0	0.0	0.0
Interval 5 - Red	0.0	0.0	0.0
Priority	Medium	Medium	Medium
Delay Time	0.0	0.0	0.0
Min Green Before Pre	1	1	1
Ped Clear Before Pre	0 *	0 *	0 *
Yellow Clear Before Pre	0.0*	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*	0.0*
Dwell Min Time	12	12	7
Enable Backup Protection	N	N	N
Ped Clear Through Yellow	N	N	N
Preempt Extend**	2	2	2
Omit Overlaps	-	A	B

**LEGEND**

PROPOSED	EXISTING
○ → Traffic Signal Head	● → N/A
○ → Modified Signal Head	○ → N/A
○ → Pedestrian Signal Head	○ → N/A
○ → Signal Pole with Guy	○ → N/A
○ → Signal Pole with Sidewalk Guy	○ → N/A
▬ → Non-Intrusive Detection Zone	▬ → N/A
⊠ → Controller & Cabinet	⊠ → N/A
□ → Junction Box	□ → N/A
▬ → 2-in Underground Conduit	▬ → N/A
→ → Right of Way	→ → N/A
→ → Directional Arrow	→ → N/A
○ → Optical Detector	○ → N/A
Ⓐ → Left Arrow "ONLY" Sign (R3-5L)	Ⓐ → N/A
Ⓑ → Combined Through and Left Arrow Sign (R3-6L)	Ⓑ → N/A
Ⓒ → "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓒ → N/A
Ⓓ → Right Arrow "ONLY" Sign (R3-5R)	Ⓓ → N/A

**Signal Upgrade - Temporary Design 1**  
Phase 1, Steps 1-5

Project #: 230907

**DAVENPORT**

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NCBELS FIRM LICENSE NO. C-2622

NC 53 (Western Boulevard) at Gateway South

Division 3 Onslow County Jacksonville

PLAN DATE: May 2025 REVIEWED BY: D. Bennett

PREPARED BY: B. Dowell REVIEWED BY:

REVISIONS

NO.	INIT.	DATE

SCALE: 1" = 40'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

SEAL 020608

Donald K. Bennett II

SIGNATURE DATE

SIG. INVENTORY NO. 03-089611

\* 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.

\* Time defaults to time used for phase during normal operation  
\*\* Program Timing on Optical Detection Unit