

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART												
INDUCTIVE LOOPS				DETECTOR PROGRAMMING								
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	*	0	*	Y	1	Y	Y	-	-	15**	-	-
3A	*	0	*	-	3	Y	Y	-	-	3	-	-
3B	*	0	*	Y	3	Y	Y	-	-	-	-	*
3C	*	0	*	Y	3	Y	Y	-	-	-	-	*
4A	*	0	*	Y	4	Y	Y	-	-	-	-	-
4B	*	0	*	Y	4	Y	Y	-	-	-	-	-
4C	*	0	*	Y	4	Y	Y	-	-	-	-	-
4D	*	0	*	Y	4	Y	Y	-	-	-	-	*
4E	*	0	*	Y	4	Y	Y	-	-	15	-	*
5A	*	0	*	Y	5	Y	Y	-	-	-	-	-
5B	*	0	*	Y	5	Y	Y	-	-	-	-	-
5C	*	0	*	Y	5	Y	Y	-	-	15	-	*

* Multizone Microwave Detection
 # Disable Phase call for loop during Alternate Phasing Operation.
 ** Disable Delay During Alternate Phasing Operation.

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	QUEUE	2	QUEUE
Discovery Zone(ft)	<750		<750	
Detection ZoneRange(ft)	600-100	150-100	600-100	150-100
Enable Speed	Y	Y	Y	Y
Speed Range (mph)	35-100	1-35	35-100	1-35
Enable Estimated Time of Arrival	Y	N	Y	N
Estimated Time of Arrival (sec)	2.5-5.5	-	2.5-5.5	-

OASIS 2070 EV PREEMPT				
FUNCTION	PRE 3	PRE 4	PRE 5	PRE 6
Interval 1 - Dwell Green	255	255	255	255
Interval 1 - Dwell Yellow	0.0*	0.0*	0.0*	0.0*
Interval 1 - Dwell Red	0.0*	0.0*	0.0*	0.0*
Interval 5 - Exit Green	1	1	1	1
Interval 5 - Yellow	0.0	0.0	0.0	0.0
Interval 5 - Red	0.0	0.0	0.0	0.0
Exit Phase(s)	2+6	2+6	3	4
Priority	MED	MED	MED	MED
Delay Time	0.0	0.0	0.0	0.0
Min Green Before Pre	1	1	1	1
Ped Clear Before Pre	0 *	0 *	0 *	0 *
Yellow Clear Before Pre	0.0*	0.0*	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*	0.0*	0.0*
Dwell Min Time	12	12	7	7
Dwell Max Time (Minutes)	2	2	2	2
Enable Backup Protection	N	N	N	N
Ped Clear Through Yellow	Y	Y	Y	Y
Omit Overlaps	B	-	E	-
Preempt Extend**	2	2	2	2

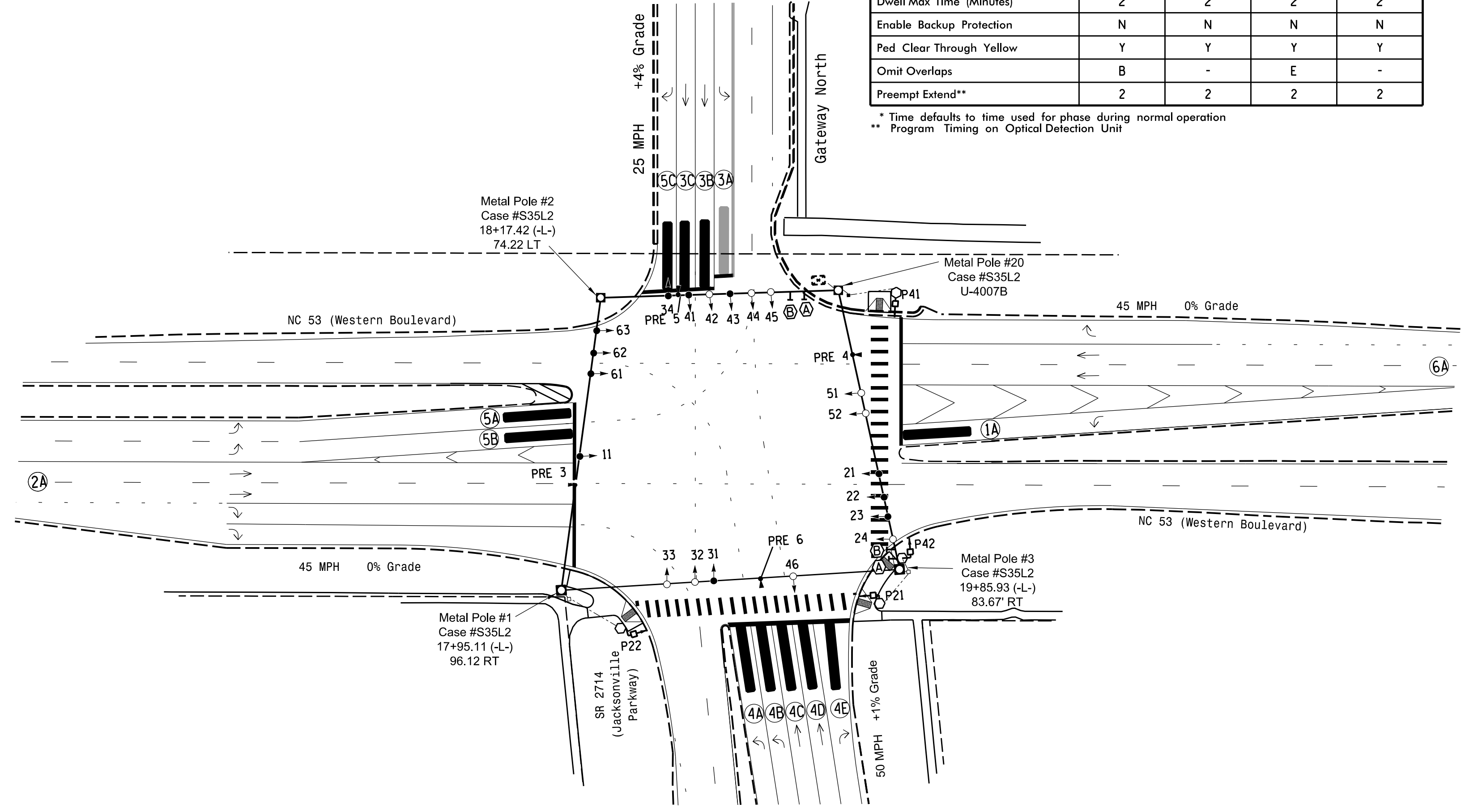
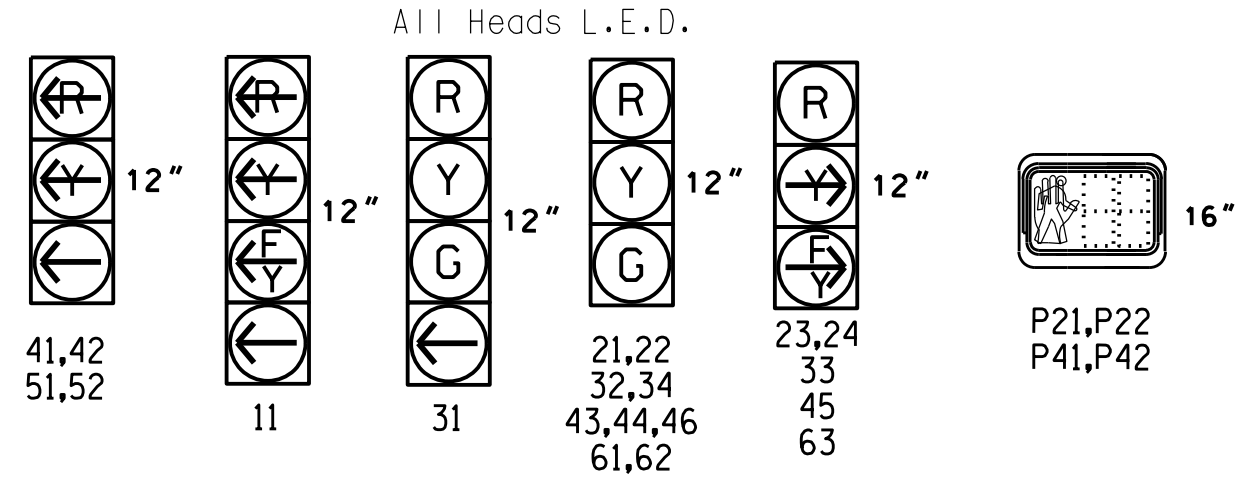
* Time defaults to time used for phase during normal operation
 ** Program Timing on Optical Detection Unit

6 Phase Fully Actuated w/ EV Preemption Jacksonville City Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024, "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.
- Reposition existing signal heads numbered 11, 31, 41, and 43.
- Reposition head 33 and renumber as 34.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Remove existing signs R3-5L, R3-6L, R3-6R, and R10-16.
- To provide a leading pedestrian interval on phases 2 and 4, program FYA heads 11, 23, 24, and 45 to delay 7.0 seconds after the start of the phase 2 or 4 WALK interval. See Electrical Details for programming.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- The Division (City) Traffic Engineer will determine the hours of use for each phasing plan.
- 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.

SIGNAL FACE I.D.

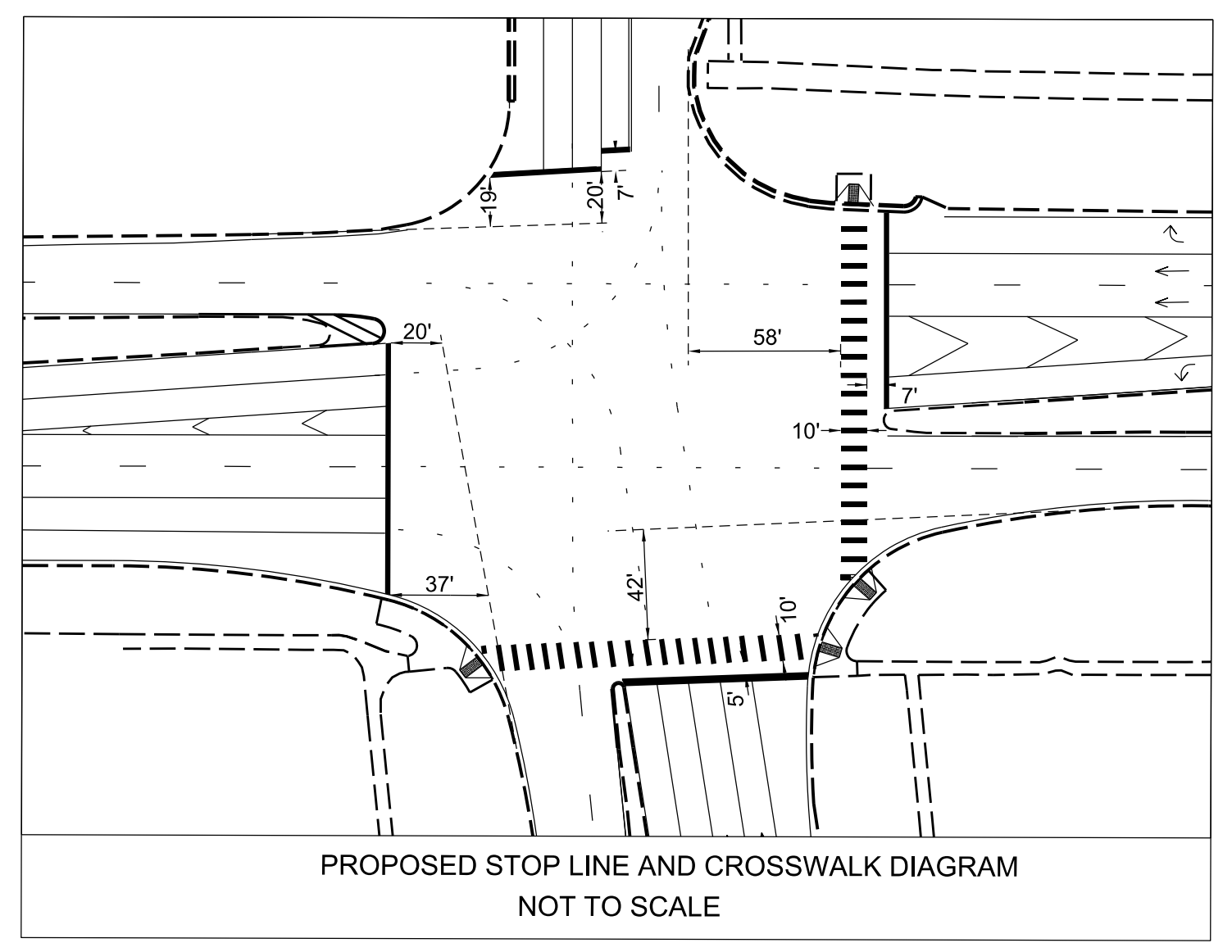


LEGEND

PROPOSED	EXISTING

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	6.0	2.0	3.0	2.0	6.0
Max Green 1 *	20	90	30	30	20	90
Yellow Clearance	3.0	4.5	3.0	4.7	3.0	4.5
Red Clearance	4.1	2.7	4.0	2.7	3.8	2.7
Walk 1 *	-	14	-	14	-	-
Don't Walk 1	-	33	-	37	-	-
Advance Walk	-	-	-	-	-	-
Seconds Per Actuation *	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Recall Mode	-	-	-	-	-	-
Vehicle Call Memory	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* 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.



Project #: 230907

DAVENPORT

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Signal Upgrade - Sheet 1 of 2

Prepared for: **TRANSPORTATION MOBILITY AND SAFETY DIVISION**
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 SIGNAL DESIGN SECTION

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE: 0 50
 1" = 50'

NC 53 (Western Boulevard) at SR 2714 (Jacksonville Parkway) / Gateway North

Division 03 Onslow County Jacksonville

PLAN DATE: May 2025 REVIEWED BY: L. Boyer

PREPARED BY: J. Dollarhite REVIEWED BY:

REVISIONS: _____ INIT. DATE

Signed by: **Jeri M. Boyer** 07/07/2025
 2E04AS19878400
 SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 030912
 JERI M. BOYER
 ENGINEER

SIG. INVENTORY NO. 03-0822