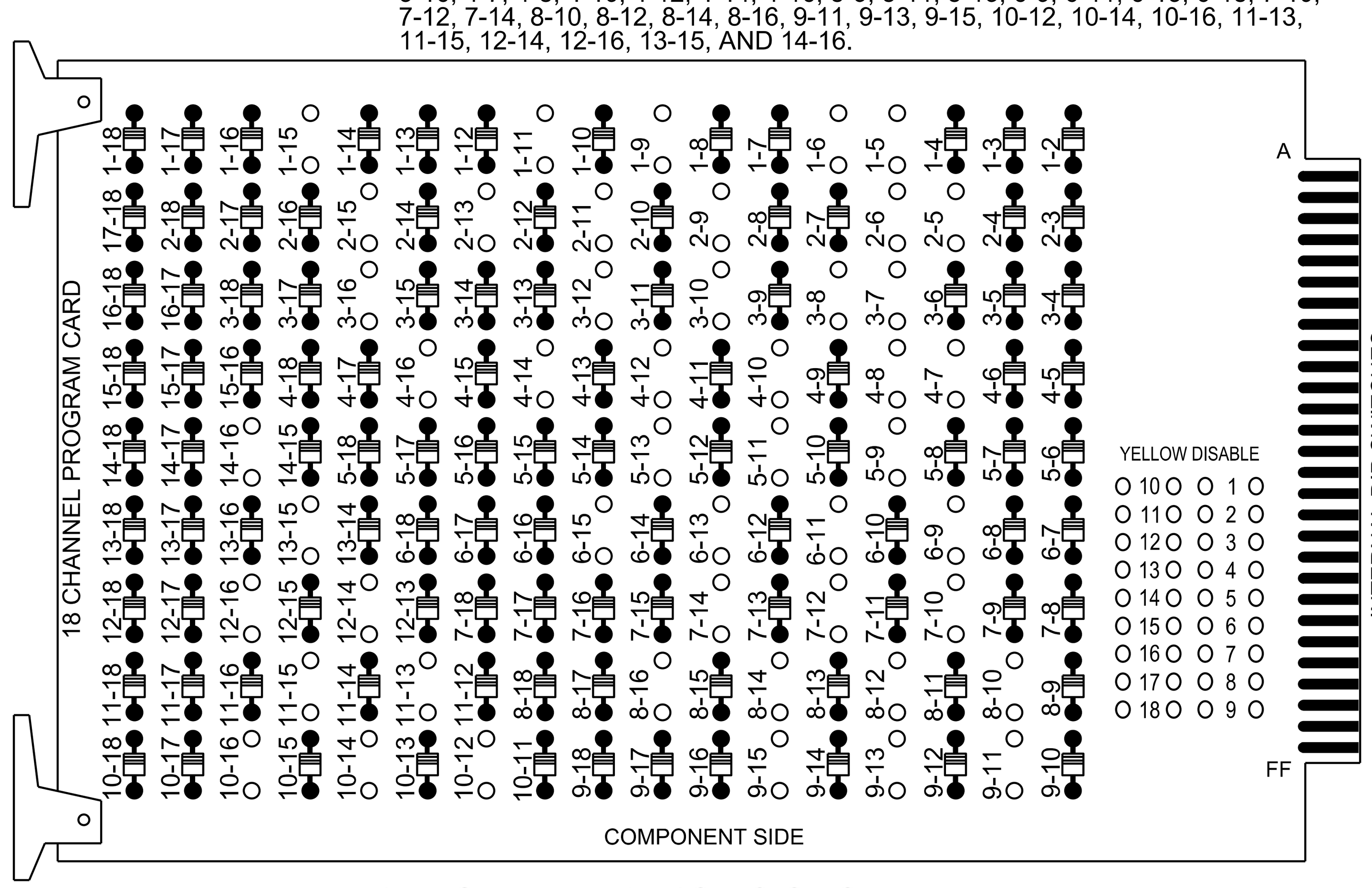
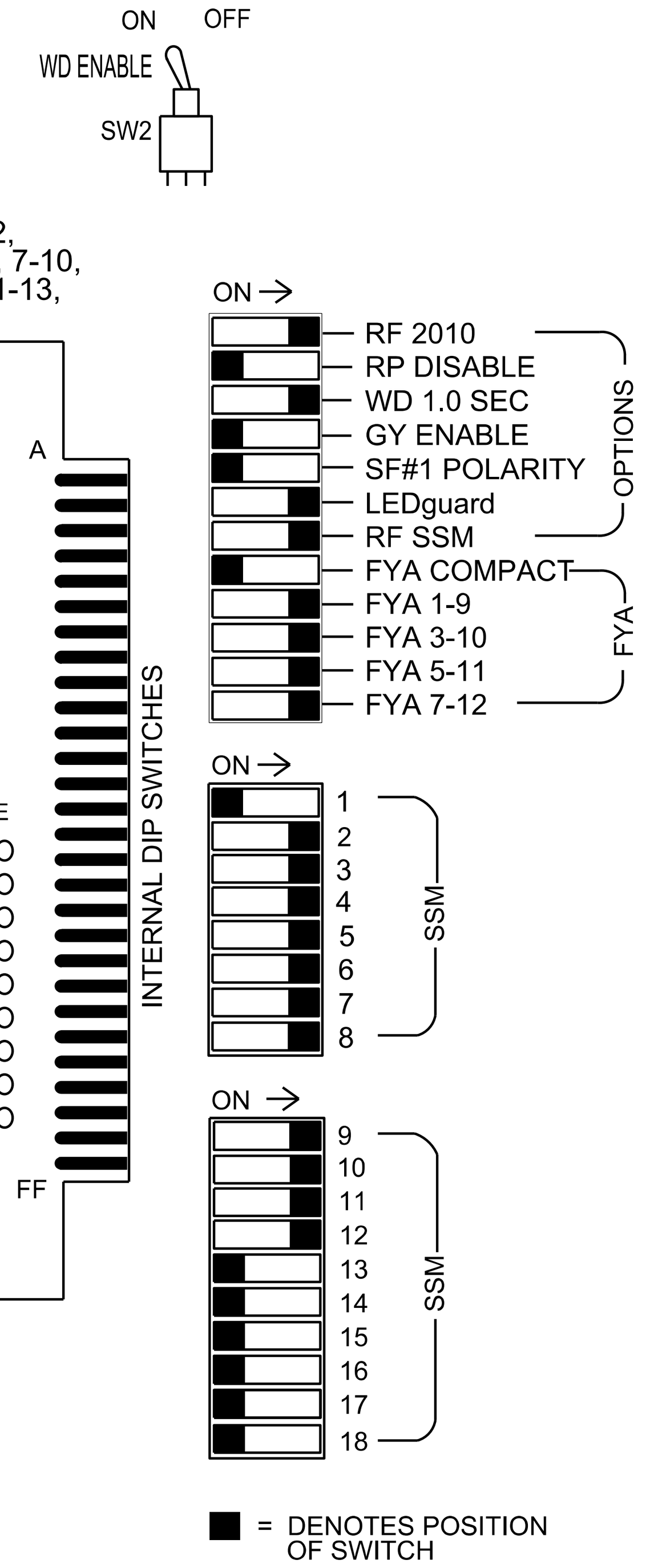
PROJECT REFERENCE NO.	SHEET NO.
R-5725	Sig-7.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 1-15, 2-5, 2-6, 2-9, 2-11, 2-13, 2-15, 3-7, 3-8, 3-10, 3-12, 3-16, 4-7, 4-8, 4-10, 4-12, 4-14, 4-16, 5-9, 5-11, 5-13, 6-9, 6-11, 6-13, 6-15, 7-10, 7-12, 7-14, 8-10, 8-12, 8-14, 8-16, 9-11, 9-13, 9-15, 10-12, 10-14, 10-16, 11-13, 11-15, 12-14, 12-16, 13-15, AND 14-16.





REMOVE JUMPERS AS SHOWN

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that the Red Enable is active at all times during normal operation.
4. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
2. Program phases 4 and 8 for Dual Entry.
3. Program controller to start up in phase 2 Walk and 6 Walk.
4. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.

EQUIPMENT INFORMATION

Controller...2070LX
Cabinet..332 w/ Aux
Software...Q-Free MAXTIME
Cabinet Mount......................................Base
Output File Positions............................18 With Aux. Output File
Load Switches Used..............................S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, AUX S1, AUX S2, AUX S4, AUX S5
Phases Used...1, 2, 2PED, 3, 4, 4PED, 5, 6, 6PED, 7, 8, 8PED
Overlap "1"..*
Overlap "2"..*
Overlap "3"..*
Overlap "4"..*

*See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4		S5	S6	S7		S8	S9	S10		S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3		4	14	5		6	15	7		8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3		4	4 PED	5		6	6 PED	7		8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11★	21,22	P21, P22	31★	22	41,42	P41, P42	51★	42	61,62	P61, P62	71★	62	81,82	P81, P82	11★	31★	NU	51★	71★	NU
RED		128		*		101		*		134		*		107							
YELLOW	*	129				102				135				108							
GREEN		130				103				136				109							
RED ARROW																A121	A124		A114	A101	
YELLOW ARROW					117				132				123			A122	A125		A115	A102	
FLASHING YELLOW ARROW																A123	A126		A116	A103	
GREEN ARROW	127			118	118			133	133			124	124								
(Don't Walk hand symbol)			113				104				119				110						
(Walk symbol)			115				106				121				112						

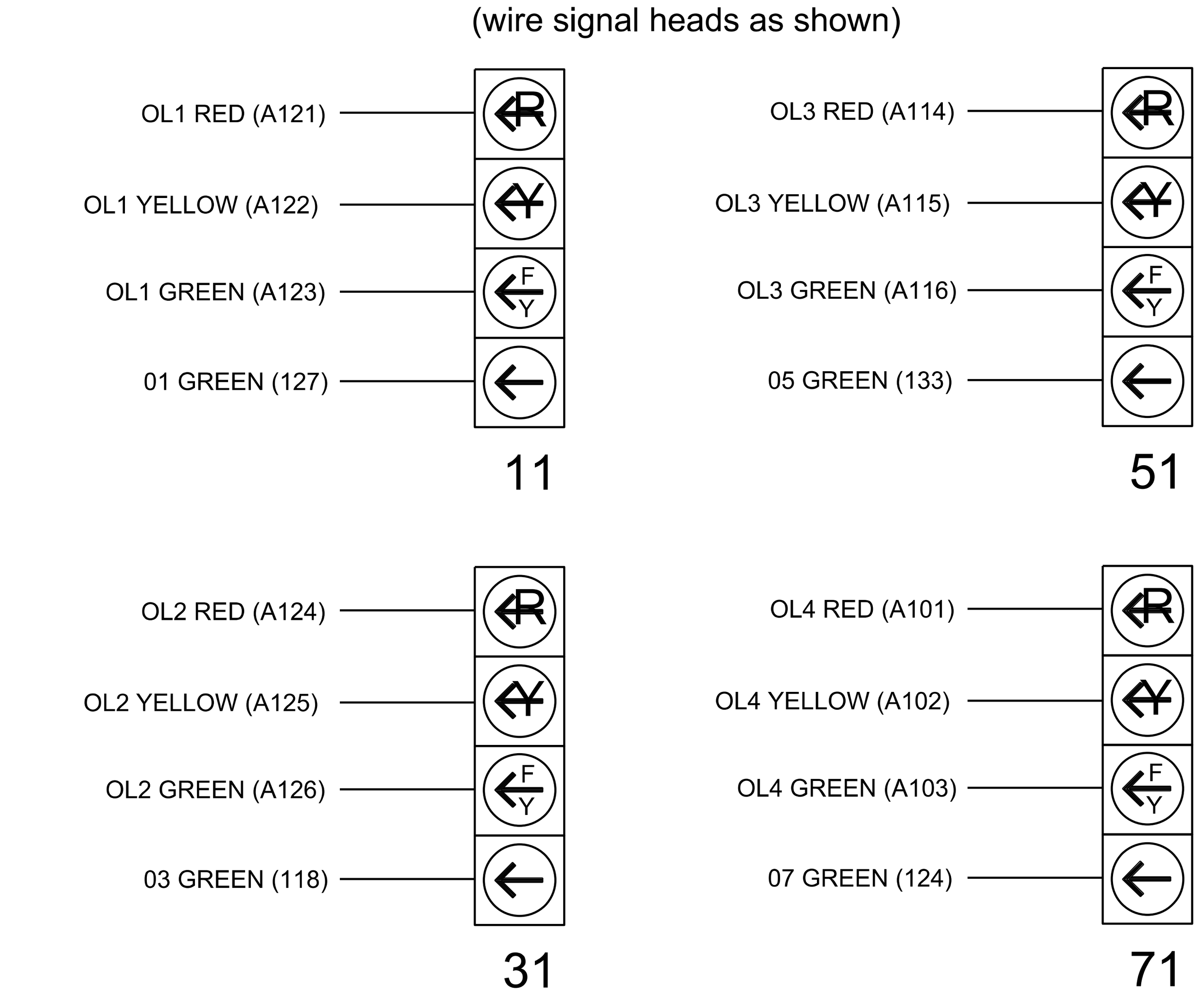
NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT

(front view)

FILE		1	2	3	4	5	6	7	8	9	1O	11	12	13	14
FILE "I"	U	Ø 1 1A	Ø 2 2A	SLOT EMPTY	SLOT EMPTY	Ø 3 3A	Ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 2 PED DC ISOLATOR	Ø 6 PED DC ISOLATOR	FS DC ISOLATOR
	L	NOT USED	NOT USED			NOT USED	NOT USED						Ø 4 PED DC ISOLATOR	Ø 8 PED DC ISOLATOR	ST DC ISOLATOR
FILE "J"	U	Ø 5 5A	Ø 5 5B	Ø 6 6A	SLOT EMPTY	Ø 7 7A	Ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	NOT USED	NOT USED		NOT USED	NOT USED								

EX. : 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1A	TB2-1,2	I1U	56	18	1	1	15		X		X	
				-	29	6	3		X		X	X
2A	TB2-5,6	I2U	39	1	2	2			X	X	X	
3A	TB4-5,6	I5U	58	20	7	3	15		X		X	
				-	30	8	3		X		X	
4A	TB4-9,10	I6U	41	3	8	4			X		X	
5A	TB3-1,2	J1U	55	17	15	5	15		X		X	
				-	31	2	3		X		X	X
5B	TB3-5,6	J2U	40	2	16	5	15		X		X	
6A	TB3-9,10	J3U	64	30	18	6			X	X	X	
7A	TB5-5,6	J5U	57	19	21	7	15		X		X	
				-	32	4	3		X		X	
8A	TB5-9,10	J6U	42	4	22	8			X		X	
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2						
P41,P42	TB8-5,6	I12L	69	35	4	PED 4						
P61,P62	TB8-7,9	I13U	68	34	6	PED 6						
P81,P82	TB8-8,9	I13L	70	36	8	PED 8						

NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

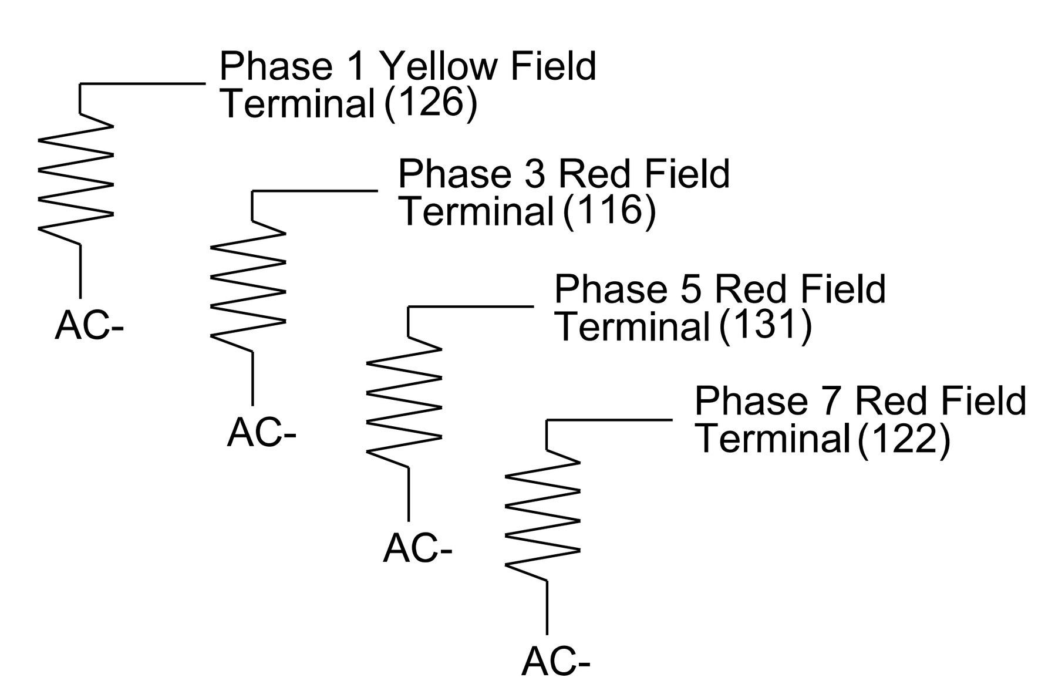
INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)

ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 07-0883
DESIGNED: Apr 2023
SEALED: 04/05/2023
REVISED: N/A

Electrical Detail - Sheet 1 of 2
Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Transportation Mobility and Safety Division — ITS & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 68
at
NC 150 (Oak Ridge Road)

Division 7 Guilford County Oak Ridge

PLAN DATE: April 2023	REVIEWED BY: TS Popelka
PREPARED BY: JA Wendt	RKA PROJ. NO.: 18062 (040)

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 051573 ENGINEER TIMOTHY S. POPELKA

DocuSigned by: Timothy Popelka
7FE20E3E07CA470...
SIGNATURE 04/05/2023 DATE

SIG. INVENTORY NO. 07-0883

Infrastructure Consulting Services, Inc. dba RKA RAMEY KEMP ASSOCIATES
5808 Faringdon Place
Raleigh, North Carolina 27609
Phone: 919-872-5115
NC License No. F-1489
www.rameykemp.com