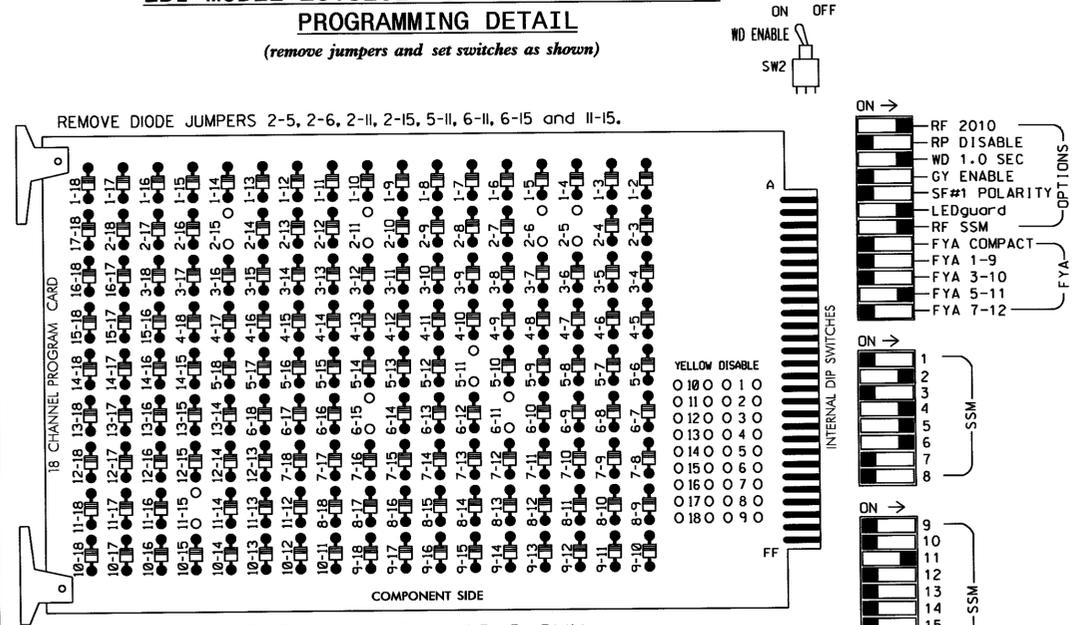




**EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL**  
(remove jumpers and set switches as shown)



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

**NOTES**

- 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 Plans.
- Enable Simultaneous Gap-Out for all phases.
- Program phases 2 and 6 for Volume Density.
- Program phases 2 and 6 for Start Up In Green.
- The cabinet and controller are part of the Raleigh City Signal System.

**EQUIPMENT INFORMATION**

CONTROLLER.....2070L  
 CABINET.....332 /W/ AUX  
 SOFTWARE.....SE-PAC2070  
 CABINET MOUNT.....BASE  
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE  
 LOAD SWITCHES USED.....S2,S5,S7,S8,S9,AUX S4.  
 PHASES USED.....2,4,5,6,6 PED  
 OVERLAP "A".....NOT USED  
 OVERLAP "B".....NOT USED  
 OVERLAP "C".....\*  
 OVERLAP "D".....NOT USED

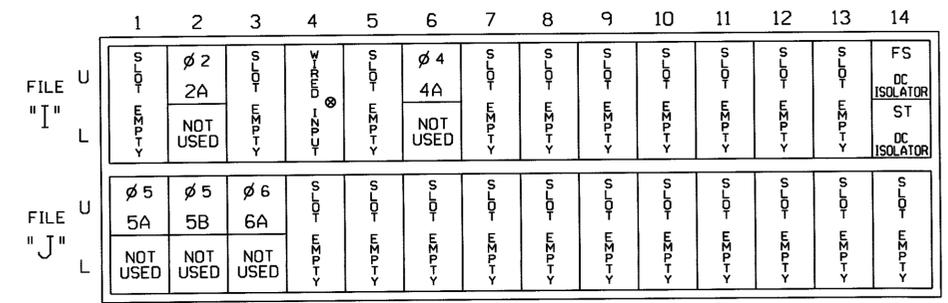
\* See sheet 2 for Overlap and Protected & Permissive Phases programming.

**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	
CHU 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	OLA	OLB	SPARE	OLC	OLD	SPARE	
SIGNAL HEAD NO.	NU	21,22	NU	NU	41,42	62	NU	42	51	61,62	P61, P62	NU	NU	NU	NU	51	NU	NU	
RED		128			101				*	134									
YELLOW		129			102					135									
GREEN		130			103					136									
RED ARROW																		A114	
YELLOW ARROW						102	132												A115
FLASHING YELLOW ARROW																			A116
GREEN ARROW						103	133	133											
Hand													119						
Person																			121

NU = Not Used  
 \* Denotes install load resistor. See load resistor installation detail this sheet.  
 \* See pictorial of head wiring in detail below.

**INPUT FILE POSITION LAYOUT**  
(front view)

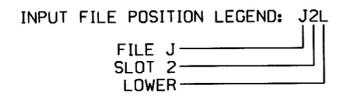


EX.: 1A, 2A, ETC. = LOOP NO.'S  
 FS = FLASH SENSE  
 ST = STOP TIME

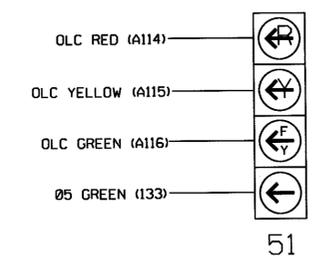
**INPUT FILE CONNECTION & PROGRAMMING CHART**

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	DELAY TIME	EXTEND (STRETCH) TIME
2A	TB2-5,6	I2U	39	3	2		
4A	TB4-9,10	I6U	41	11	4	3	
5A <sup>1</sup>	TB3-1,2	J1U	55	19	5	15	
		I4U	47	7	2		
5B	TB3-5,6	J2U	40	21	5	15	
6A	TB3-9,10	J3U	64	23	6		

<sup>1</sup>Add jumper from J1-W to I4-W. on rear of input file.



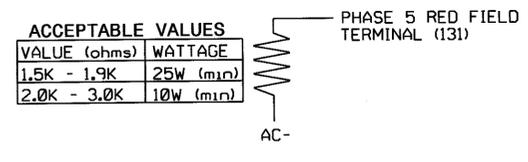
**4 SECTION FYA PPLT SIGNAL WIRING DETAIL**  
(wire signal heads as shown)



- NOTE**
- See sheet 2 for Protected & Permissive Phases programming.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-0034  
 DESIGNED: August 2013  
 SEALED: 9-24-13  
 REVISED: N/A

**LOAD RESISTOR INSTALLATION DETAIL**  
(install resistors as shown below)



VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)

**ELECTRICAL DETAIL SHEET 1 OF 2**

Electrical and Programming Details For:

Prepared in the Offices of:

750 N. Greenfield Pkwy, Corner, NC 27529

SR 1822 (Leesville Road) at SR 1836 (Fairbanks Road)

Division 5 Wake County Raleigh

PLAN DATE: September 2013 REVIEWED BY: JTR

PREPARED BY: James Peterson REVIEWED BY:

REVISIONS	INIT.	DATE

Signature: John T. Rowe, Jr. 9-27-13

Seal: JOHN T. ROWE, JR. ENGINEER

Sig. Inventory No. 05-0034

27-SEP-2013 08:48 S:\TTS\SS\WITS\SIGNALS\WIRING\groups\4510\_Mar\Refer\com0034\_ame\_e.le.xxx.dgn J Peterson

## FLASHING YELLOW ARROW PROTECTED/PERMISSIVE SEQUENCE

for  
**OVERLAP "C"**

(program controller as shown below)  
FROM MAIN MENU PRESS 4 (UNIT DATA)

SE-PAC UNIT DATA	PRESS # DESIRED
1-STARTUP & MISC	6-ALT SEQUENCES
2-REMOTE FLASH	7-PORT 1 DATA
3- <b>OVERLAP STANDARD</b>	8-I/O MISC
4-OVERLAP SPECIAL	9-SIG DRV OUT
5-RING STRUCTURE	
F-PRIOR MENU	

HIT "B" TWICE

SE-PAC OVERLAP - C	(0-NO/1-YES)
OVL PHASES:	00000000 0000000
PHS/CHN:	123456789 0123456789 01234
OVL CHN(S):	00000000 0000010000 00000
A-UP B-DN D-DspChn E-EDIT F-PRIOR MENU	

DO NOT enter any OVL PHASES! →

OVERLAP PROGRAMMING COMPLETE  
PRESS 'F' TO RETURN TO UNIT DATA

## PROTECTED & PERMISSIVE PHASES

for  
**FLASHING YELLOW ARROW**

(program controller as shown below)  
FROM MAIN MENU PRESS 4 (UNIT DATA)

SE-PAC UNIT DATA	PRESS # DESIRED
1-STARTUP & MISC	6-ALT SEQUENCES
2-REMOTE FLASH	7-PORT 1 DATA
3- <b>OVERLAP STANDARD</b>	8-I/O MISC
4- <b>OVERLAP SPECIAL</b>	9-SIG DRV OUT
5-RING STRUCTURE	
F-PRIOR MENU	

SE-PAC OVLP.A...B...C...D...E...F...G...H.									
TR GRN	0	0	0	0	0	0	0	0	
YEL/10	40	40	40	40	40	40	40	40	
RED/10	20	20	20	20	20	20	20	20	
-G/Y	0	0	5	0	0	0	0	0	
+GRN	0	0	6	0	0	0	0	0	
(-) #-PH G/Y KILLS OVLP= (+) #-PH G STRT									
A-UP B-DN C-LT D-RT E-ENTER F-PRIOR MENU									

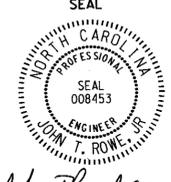
← PROTECTED PHASES  
← PERMISSIVE PHASES

NOTE: THIS PROGRAMMING IS REQUIRED FOR SIGNAL HEAD 51 SO THAT THE SOLID GREEN ARROW TURNS ON EXCLUSIVELY DURING PROTECTED GREEN PHASE 5, AND THE FLASHING YELLOW ARROW ONLY TURNS ON EXCLUSIVELY DURING PERMITTED GREEN PHASE 6.

PPLT DEFINITION PROGRAMMING COMPLETE  
PRESS 'F' TO RETURN TO UNIT DATA

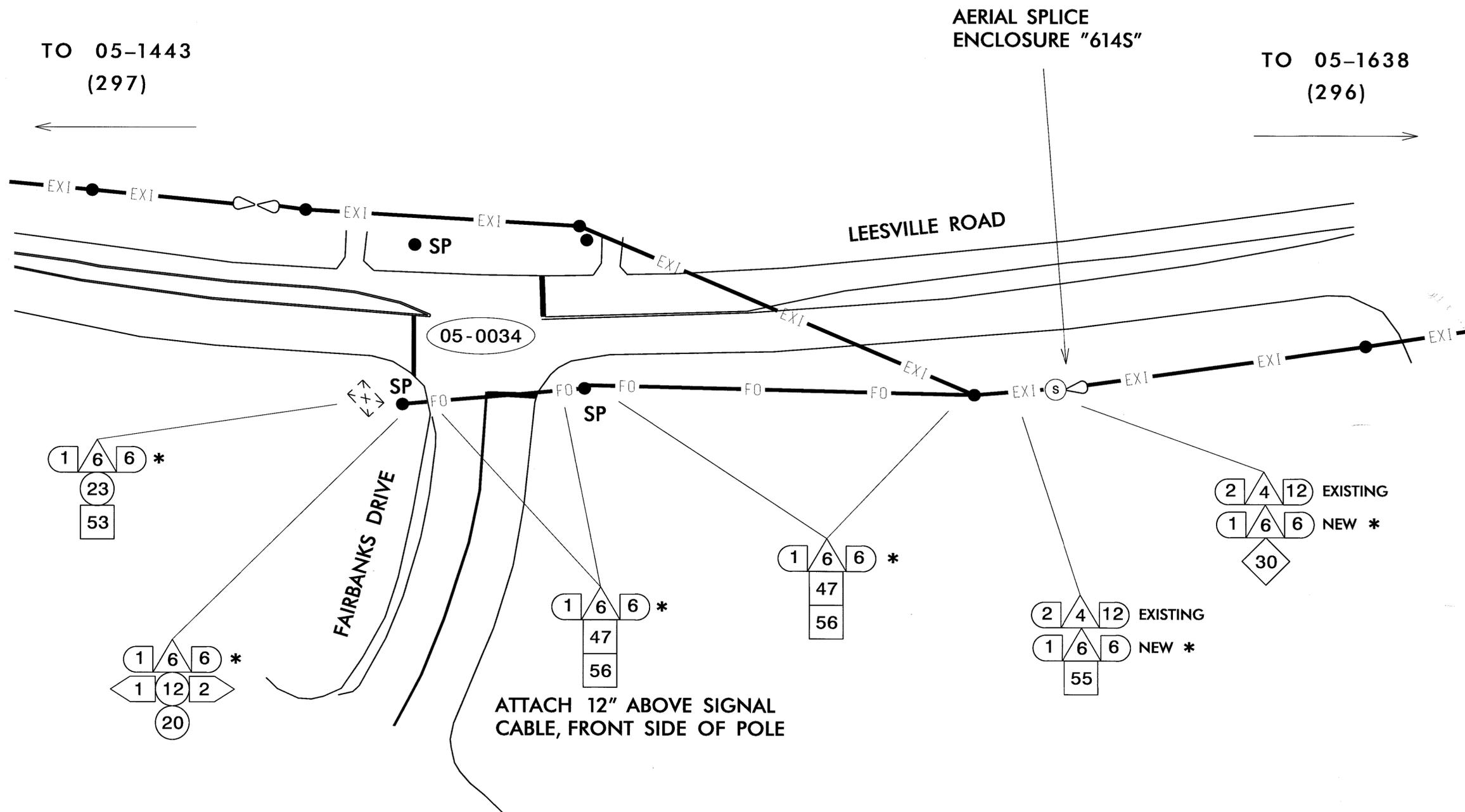
THIS ELECTRICAL DETAIL IS FOR  
THE SIGNAL DESIGN: 05-0034  
DESIGNED: August 2013  
SEALED: 9-24-13  
REVISED: N/A

ELECTRICAL DETAIL SHEET 2 OF 2

	<p><b>SR 1822 (Leesville Road) at SR 1836 (Fairbanks Road)</b></p>										
	<p>Division 5 Wake County Raleigh</p> <p>PLAN DATE: September 2013 REVIEWED BY: JTR</p> <p>PREPARED BY: James Peterson REVIEWED BY:</p>										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISIONS	INIT.	DATE						
REVISIONS	INIT.	DATE									
<p>750 N. Grant Field Pkwy, Garner, NC 27529</p>		<p>SIGNATURE: <i>John T. Rowe</i> 9-27-13 DATE</p> <p>SIG. INVENTORY NO. 05-0034</p>									

26-SEP-2013 09:34  
I:\\*11533\KTS\_Sig\151\work\output\sig\_mon\peterson\050034\_sml\_e\_000.dgn

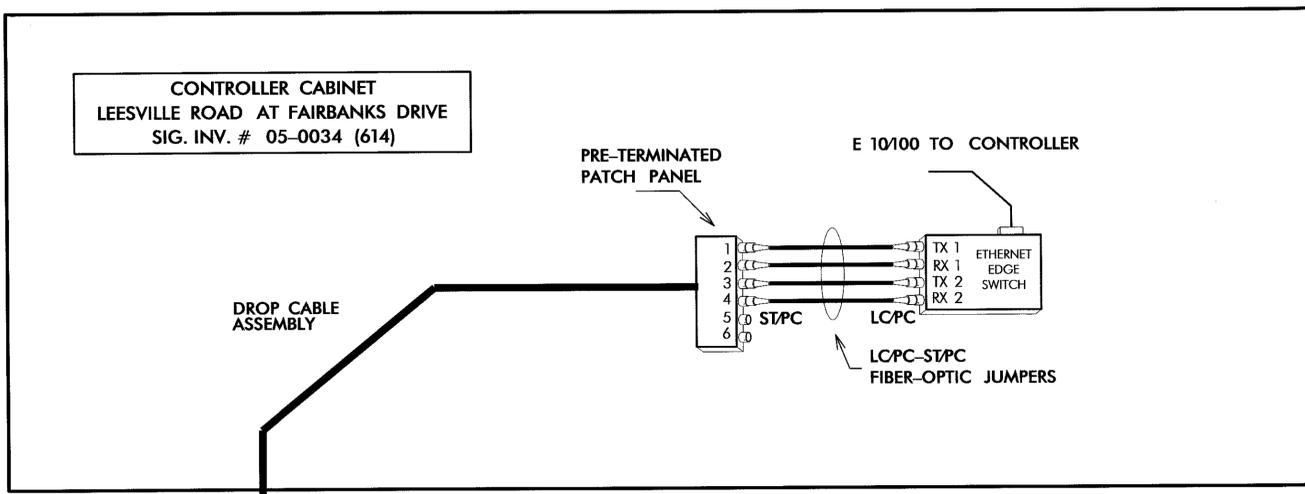
**\* DROP CABLE ASSEMBLY (PRE-ASSEMBLED)**



ATTACH 12" ABOVE SIGNAL CABLE, FRONT SIDE OF POLE

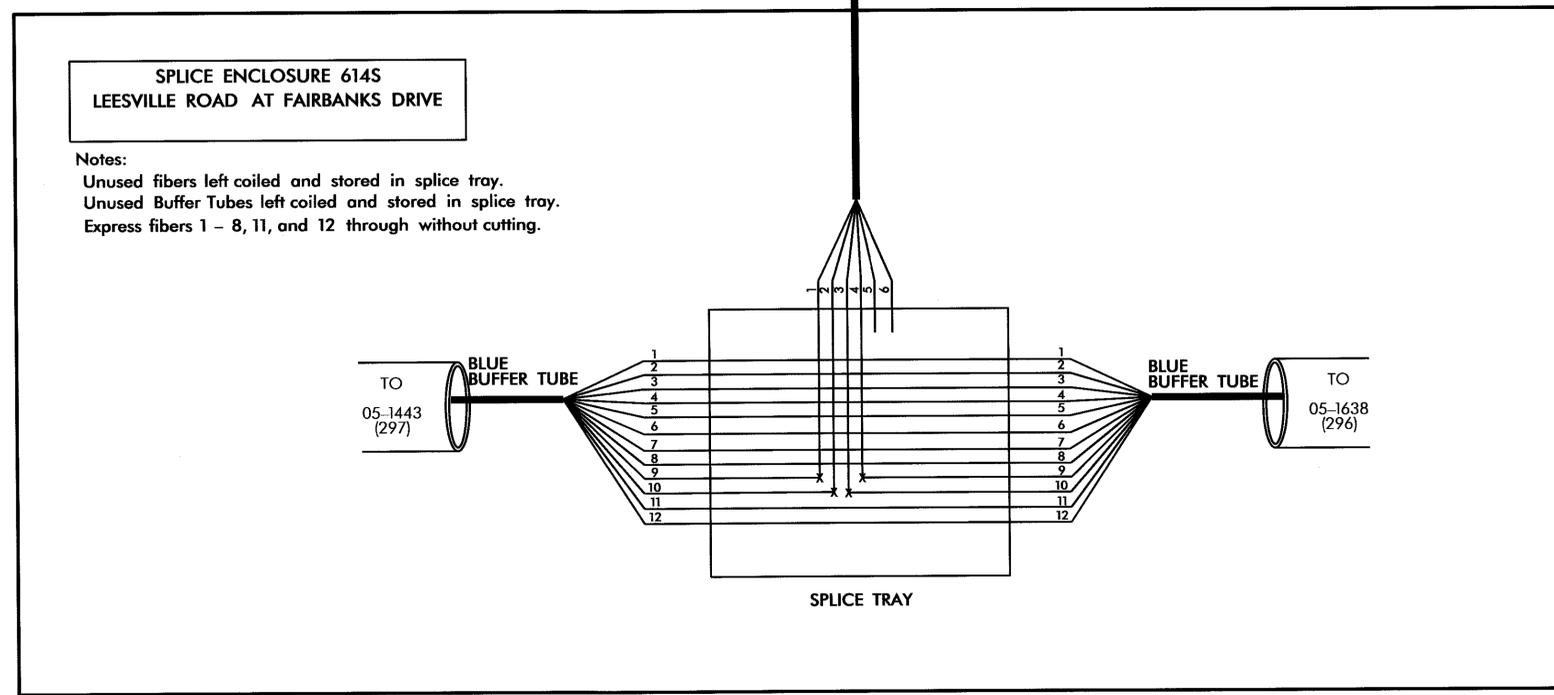
	<b>COMMUNICATIONS CABLE ROUTING PLANS</b>		
	DIVISION 05 WAKE CO. RALEIGH PLAN DATE: SEPTEMBER 2013 PREPARED BY: B.A. STOUCHKO REVIEWED BY: I.N. AVERY PREPARED BY: B.A. STOUCHKO REVIEWED BY: G.A. FULLER		
750 N. Greenfield Pkwy., Garner, NC 27529 SCALE 0 30			SEAL PROFESSIONAL ENGINEER GREGORY A. FULLER

**\* DROP CABLE ASSEMBLY (PRE-ASSEMBLED)**



**LEGEND**  
X = FUSION SPLICE

COLOR CODE TIA/EIA 598-A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA



**SPLICE ENCLOSURE 614S**  
LEESVILLE ROAD AT FAIRBANKS DRIVE

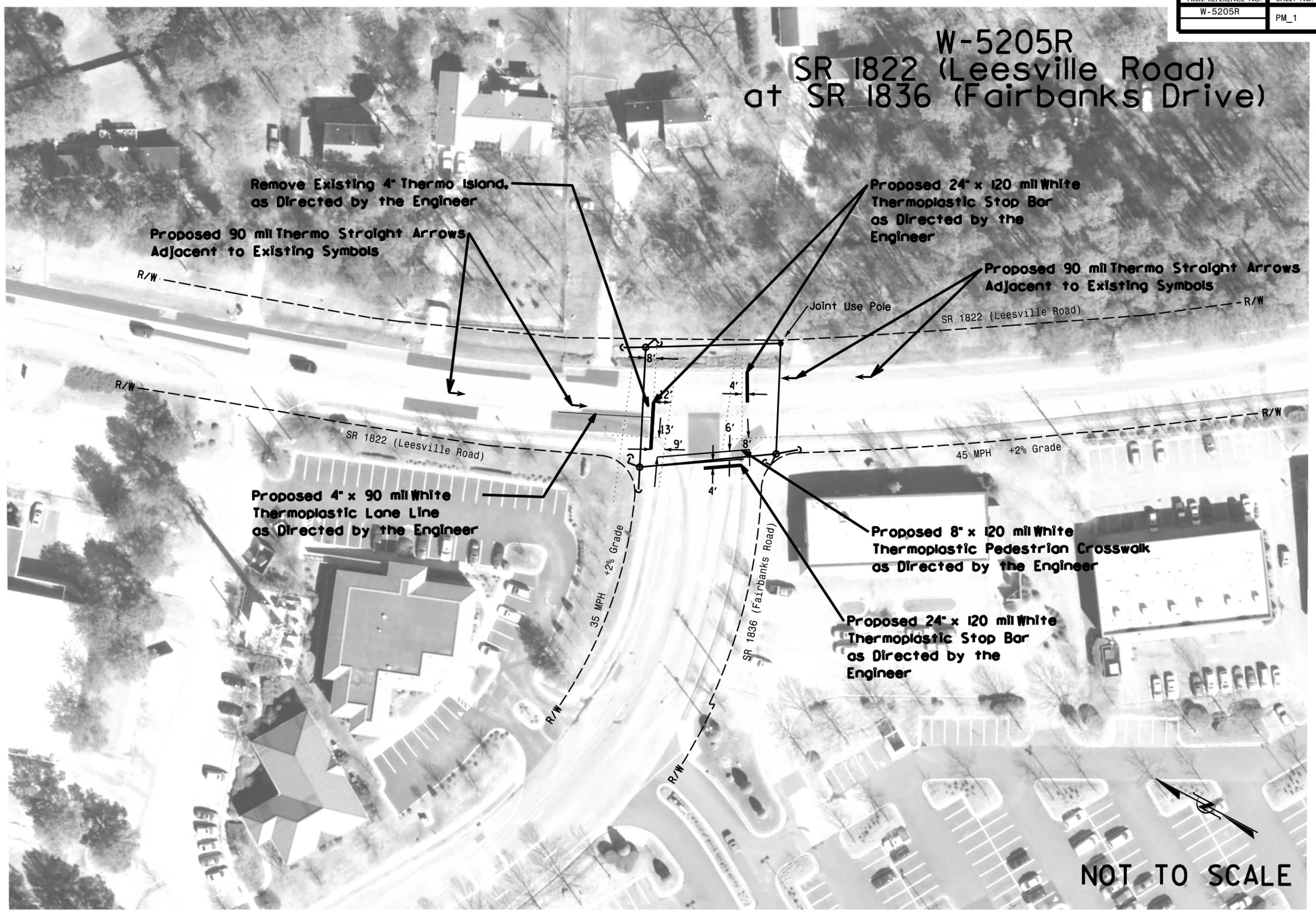
**Notes:**  
Unused fibers left coiled and stored in splice tray.  
Unused Buffer Tubes left coiled and stored in splice tray.  
Express fibers 1 - 8, 11, and 12 through without cutting.

**NOTES:**

- 1) ETHERNET EDGE SWITCH TO BE PROVIDED BY THE CITY OF RALEIGH. CONTACT JED NIFFENEGGER, SENIOR TRANSPORTATION ENGINEER, AT 919-996-4039 TO OBTAIN EDGE SWITCH. PROVIDE 5 WORKING DAYS NOTICE.
- 2) THE CITY WILL PROVIDE THE ETHERNET EDGE SWITCH PRE-PROGRAMMED WITH REQUIRED NETWORK CONFIGURATION DATA (INCLUDING BUT NOT LIMITED TO PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK, AND VLAN ID INFORMATION).

	<b>SPLICE PLAN</b>	
	DIVISION 05 WAKE CO. RALEIGH PLAN DATE: SEPTEMBER 2013 REVIEWED BY: I.N. AVERY PREPARED BY: B.A. STOCHKO REVIEWED BY: G.A. FULLER	
SCALE 0	REVISIONS _____	INIT. DATE _____
Signature: <i>Gregory A. Fuller</i> DATE: 9/17/20		SEAL

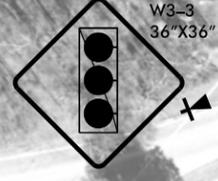
# W-5205R SR 1822 (Leesville Road) at SR 1836 (Fairbanks Drive)



NOT TO SCALE

# W-5205R SR 1822 (Leesville Road) at SR 1836 (Fairbanks Drive)

**36" Signal Ahead Sign  
500'+/- Back from Intersection  
or as Directed by the Engineer**



**36" Signal Ahead Sign  
500'+/- Back from  
Intersection or as  
Directed by the Engineer**



**36" Signal Ahead Sign  
500'+/- Back from Intersection  
or as Directed by the Engineer**



**NOT TO  
SCALE**

