

- 1 INSTALL REA, PE - 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 2 INSTALL COAX CABLE
- 3 INSTALL ETHERNET CABLE
- 4 INSTALL SMFO CABLE
- 5 EXISTING SMFO CABLE
- 6 INSTALL FIBER OPTIC DROP CABLE
- 7 INSTALL TRACER WIRE
- 8 TRENCH
- 9 INSTALL PVC CONDUIT
- 10 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 12 INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL
- 13 INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
- 14 INSTALL POLYETHYLENE CONDUIT
- 15 DIRECTIONAL DRILL CONDUIT
- 16 BORE AND JACK CONDUIT
- 17 INSTALL CABLE(S) IN EXISTING CONDUIT
- 18 INSTALL CABLE(S) IN NEW CONDUIT
- 19 INSTALL CABLE(S) IN EXISTING RISER WITH HEAT SHRINK RETROFIT KIT
- 20 INSTALL CABLE(S) IN NEW RISER
- 21 INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS
- 22 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 23 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 24 INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET
- 25 INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET
- 26 MODIFY EXISTING INTERCONNECT CENTER /SPLICE ENCLOSURE
- 27 INSTALL NEW FIBER OPTIC TRANSCEIVER
- 28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET
- 29 INSTALL UNDERGROUND SPLICE ENCLOSURE
- 30 INSTALL AERIAL SPLICE ENCLOSURE
- 31 MODIFY EXISTING SPLICE ENCLOSURE
- 32 INSTALL BASE MOUNTED SPLICE CABINET
- 33 REMOVE EXISTING SPLICE CABINET

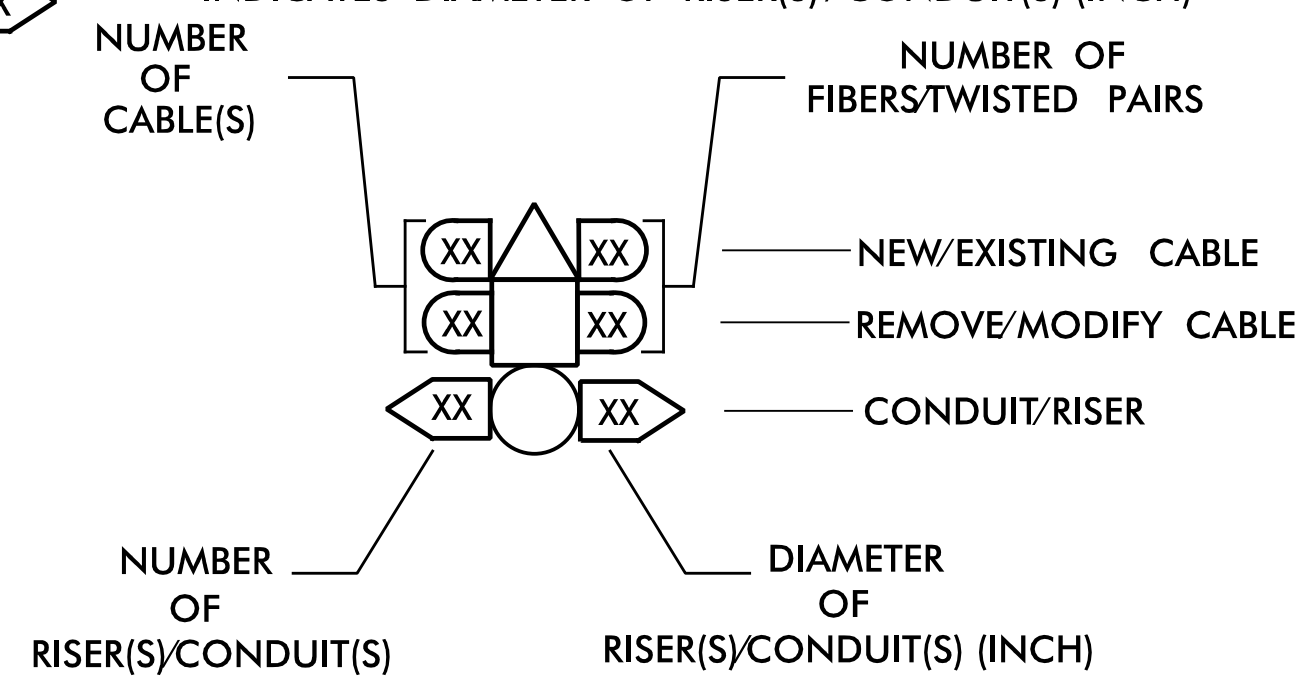
- 34 INSTALL CABINET FOUNDATION
- 35 INSTALL CCTV CAMERA POLE MOUNTED CABINET
- 36 INSTALL CCTV CAMERA ASSEMBLY
- 37 INSTALL CCTV CAMERA WOOD POLE
- 38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION
- 39 INSTALL JUNCTION BOX
- 40A INSTALL OVERSIZED JUNCTION BOX
- 40B INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")
- 41 REMOVE EXISTING JUNCTION BOX
- 42 INSTALL WOOD POLE
- 43 REMOVE EXISTING WOOD POLE
- 44 INSTALL AERIAL GUY ASSEMBLY
- 45 INSTALL STANDARD GUY ASSEMBLY
- 46 INSTALL SIDEWALK GUY ASSEMBLY
- 47 INSTALL MESSENGER CABLE
- 48A REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE
- 48B REMOVE EXISTING COMMUNICATIONS CABLE
- 49 BACK PULL EXISTING COMMUNICATIONS CABLE
- 50 INSTALL CELL MODEM
- 51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- 51A INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 200 FEET OF CABLE
- 52A INSTALL DELINEATOR MARKER
- 52B INSTALL JUNCTION BOX MARKER
- 53 STORE 20 FEET OF COMMUNICATIONS CABLE
- 54 LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE
- 55 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 56 LASH CABLE(S) TO NEW MESSENGER CABLE
- 57 MODIFY EXISTING ELECTRICAL SERVICE
- 58 INSTALL NEW ELECTRICAL SERVICE
- 59 INSTALL NEW ETHERNET EDGE SWITCH
- 60 BOND TRACER WIRE TO EQUIPMENT GROUND BUS  
DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS
- 61 BOND RISER AND MESSENGER CABLE TO POLE GROUND
- 62 BOND RISER TO POLE GROUND
- 63 BOND MESSENGER CABLE TO POLE GROUND
- 64 BOND MESSENGER CABLE TO POLE GROUND
- 65 INSTALL HEAT SHRINK TUBING RETROFIT KIT
- 66 INSTALL MOLDABLE DUCT SEAL
- 67 SLACK SPAN

**LEGEND**

	NEW FIBER OPTIC COMMUNICATIONS CABLE		NEW CABLE STORAGE RACKS (SNOW SHOES)
	NEW TWISTED PAIR COMMUNICATIONS CABLE		EXISTING CABLE STORAGE RACK (SNOW SHOE)
	EXISTING COMMUNICATIONS CABLE		EXISTING CONTROLLER AND CABINET
	EXISTING COMMUNICATIONS CABLE TO BE REMOVED		NEW CCTV CABINET
	NEW AERIAL GUY ASSEMBLY		EXISTING SPLICE CABINET
	NEW CONDUIT		NEW SPLICE CABINET
	EXISTING CONDUIT		
	NEW DIRECTIONAL DRILLED CONDUIT		
	NEW BORED AND JACKED CONDUIT		
	NEW JUNCTION BOX		SIGNAL POLE
	EXISTING JUNCTION BOX		FLAT PANEL ANTENNA (SINGLE)
	NEW WOOD POLE		YAGI ANTENNA (DOUBLE) FOR REPEATER OPERATION
	EXISTING WOOD POLE		YAGI ANTENNA (SINGLE)
	AERIAL SPLICE ENCLOSURE		OMNI ANTENNA
	SPLICE ENCLOSURE		
	EXISTING SPLICE ENCLOSURE		
	NEW METAL POLE		
	EXISTING METAL POLE		
	NEW CCTV ASSEMBLY		
	NEW STANDARD GUY ASSEMBLY		
	NEW SIDEWALK GUY ASSEMBLY		
	EXISTING GUY ASSEMBLY		
	SIGNAL INVENTORY NUMBER		

**CONSTRUCTION NOTE SYMBOLOGY KEY**

- INDICATES NUMBER OF CABLES, LOOPS, ETC.
- INDICATES NUMBER OF FIBERS PER CABLE, TWISTED PAIRS PER CABLE, ETC.
- INDICATES NUMBER OF RISER(S)/CONDUIT(S)
- INDICATES DIAMETER OF RISER(S)/CONDUIT(S) (INCH)



**ATTACHMENT POINT:**

- "SS" YYY symbol"/> DISTANCE ABOVE (IN) ATTACHMENT POINT REFERENCE POINT
- REFERENCE POINT
- "SS" symbol"/> DISTANCE BELOW (IN) ATTACHMENT POINT

"SS" REFERENCE LOCATION  
 FS = FRONT SIDE OF POLE  
 BS = BACK SIDE OF POLE

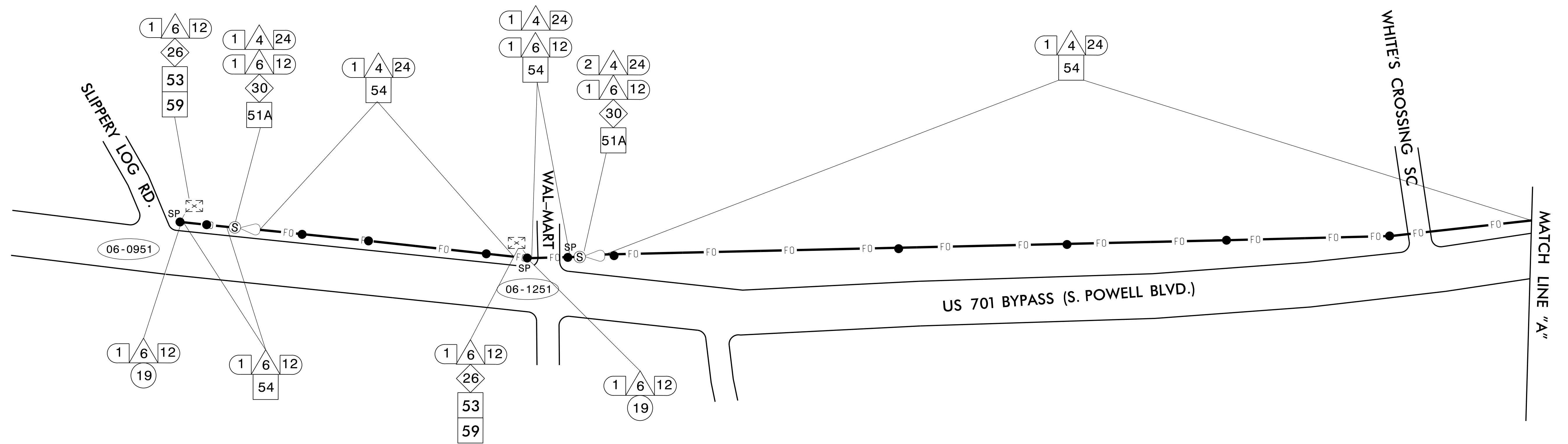
NC Dept of Transportation  
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 ITS & Signals Unit

**SEPI**  
 Engineering & Construction, Inc.  
 1 Glenwood Avenue  
 Raleigh, NC 27603  
 Tel: 919.789.9977  
 Fax: 919.789.9591  
 License: C-2197

<p>Prepared for the Offices of:            PROFESSIONAL ENGINEER          GENE G. MURR, JR.</p>		<p><b>CONSTRUCTION NOTES</b></p> <p>Division 6 Columbus County Whiteville</p> <p>PLAN DATE: March 2020 REVIEWED BY: G.G. Murr, Jr.</p> <p>PREPARED BY: M Ishak M&amp;M PROJECT NO.:</p>	<p>SEAL          14543          GENE G. MURR, JR.          ENGINEER</p>							
<p>SCALE          0 N/A          NONE</p>	<table border="1"> <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				
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DEPARTMENT OF TRANSPORTATION  
Signal Design Section

750 N. Greenfield Pkwy, Garner, NC 27529

**COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS**

DIVISION 6      COLOMBUS COUNTY      WHITEVILLE

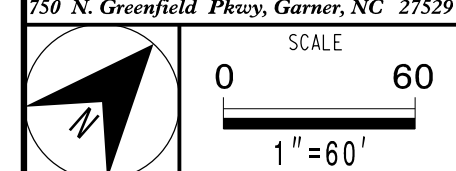
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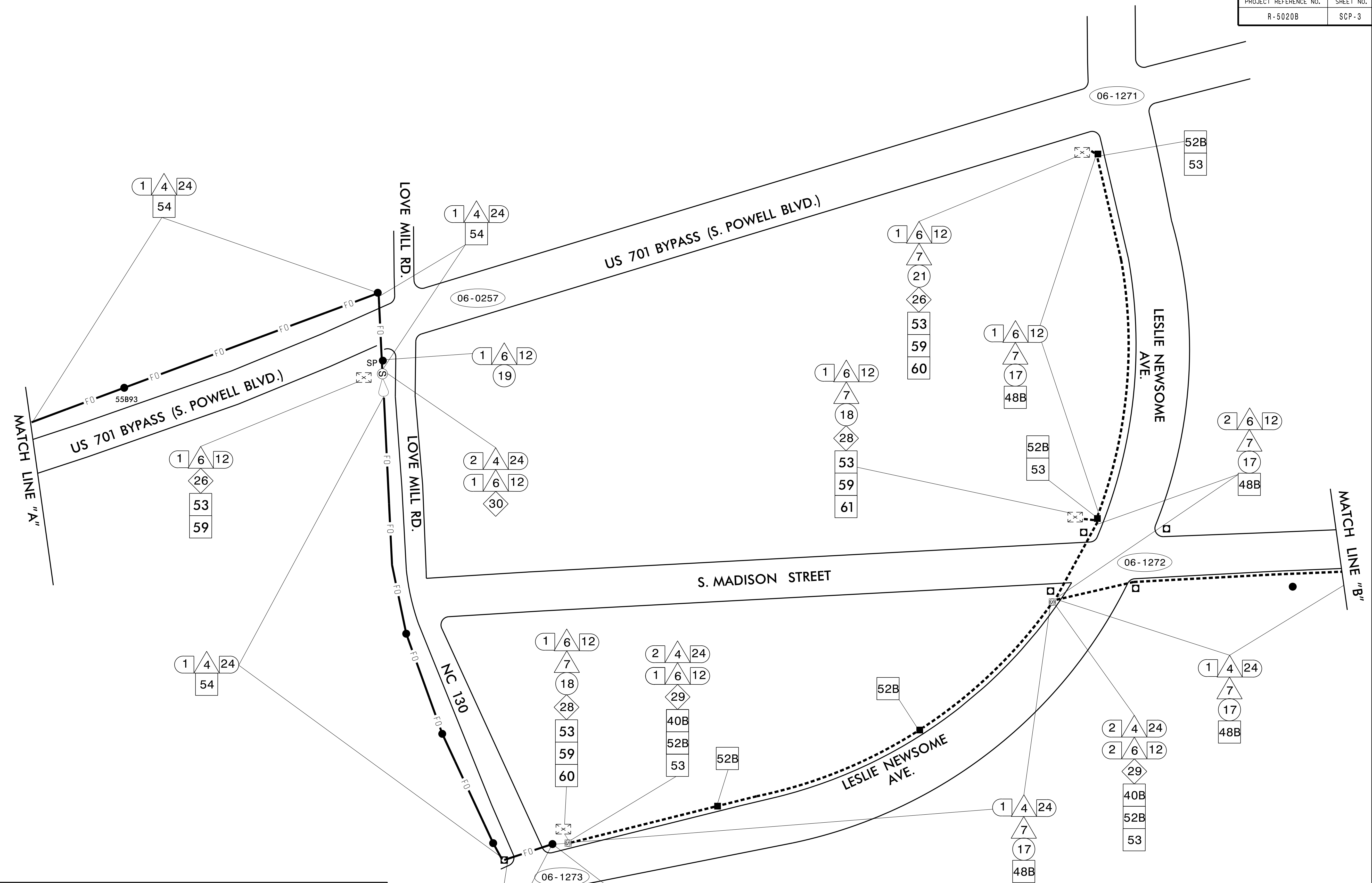
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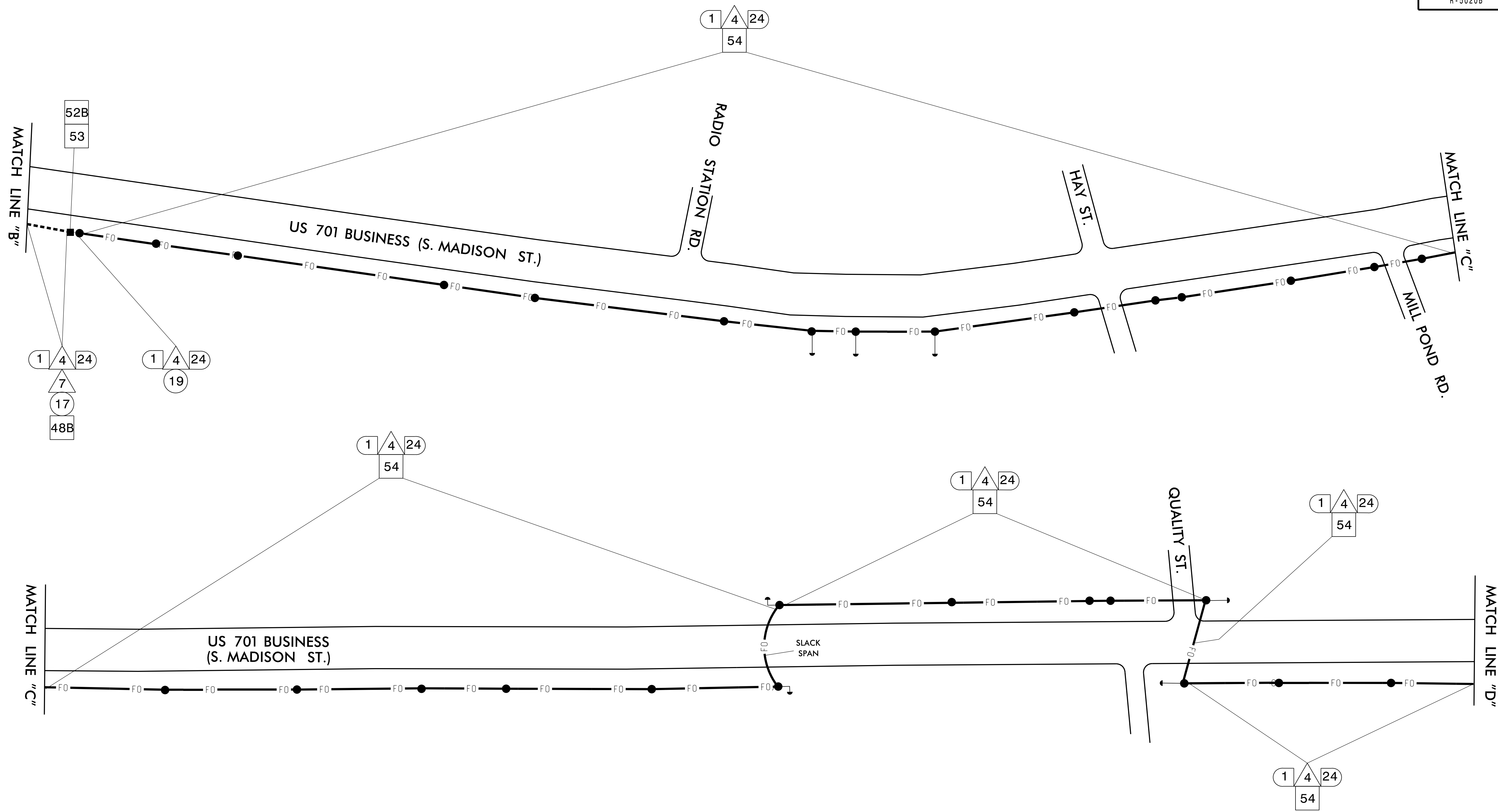
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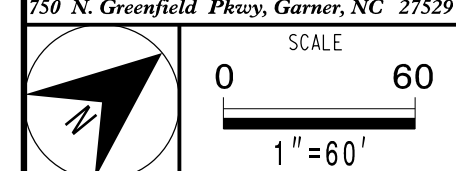
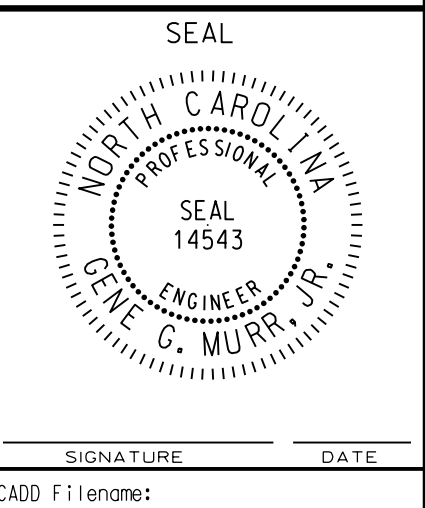
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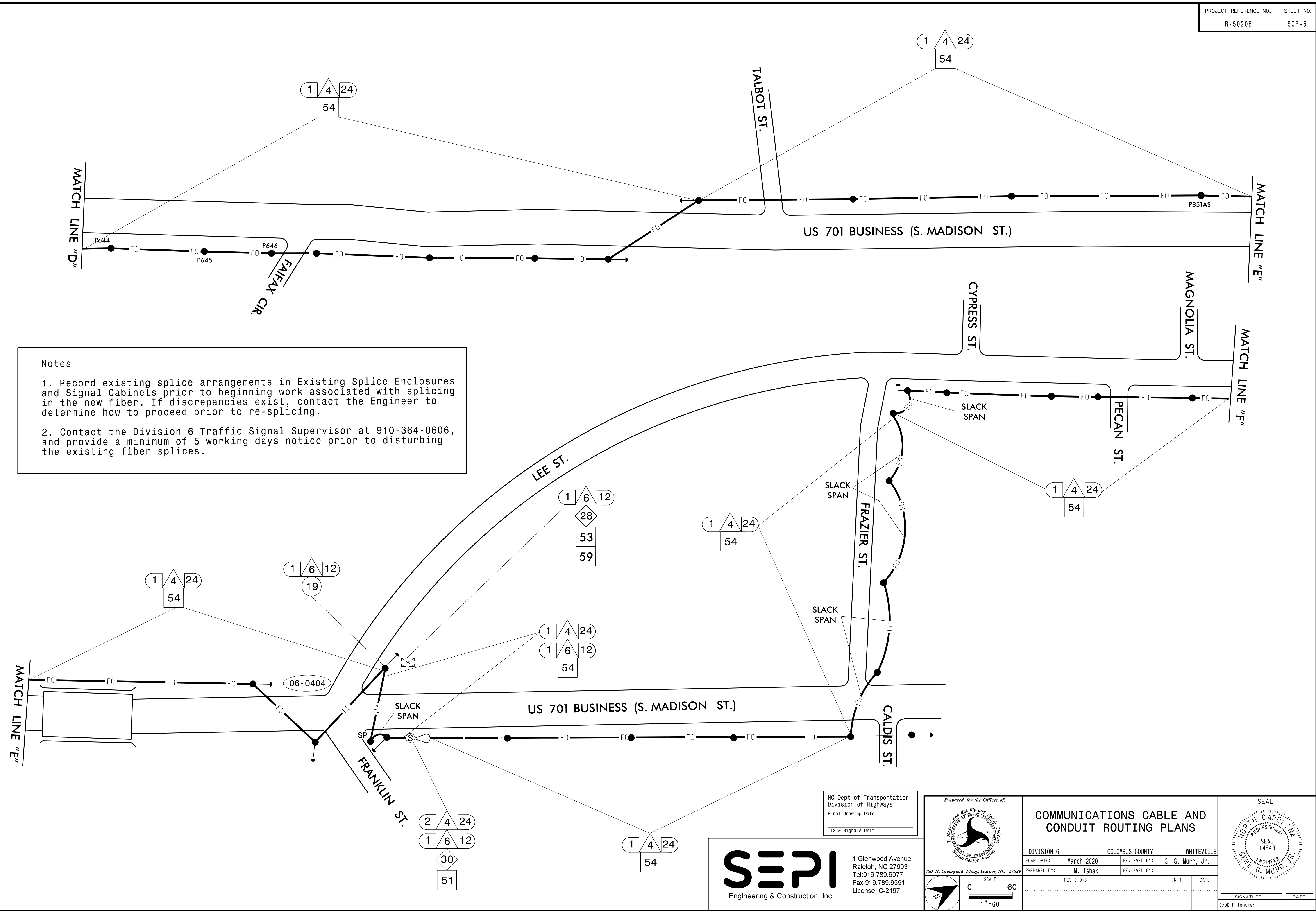
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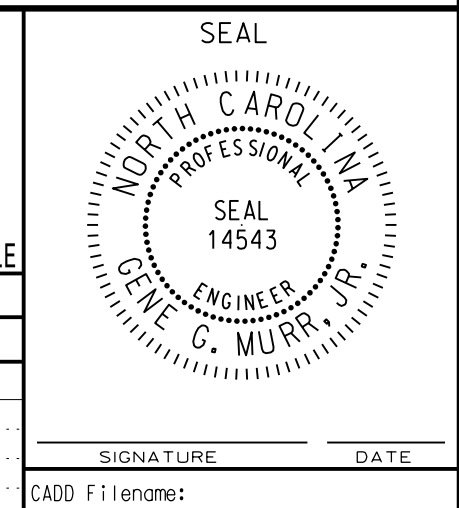
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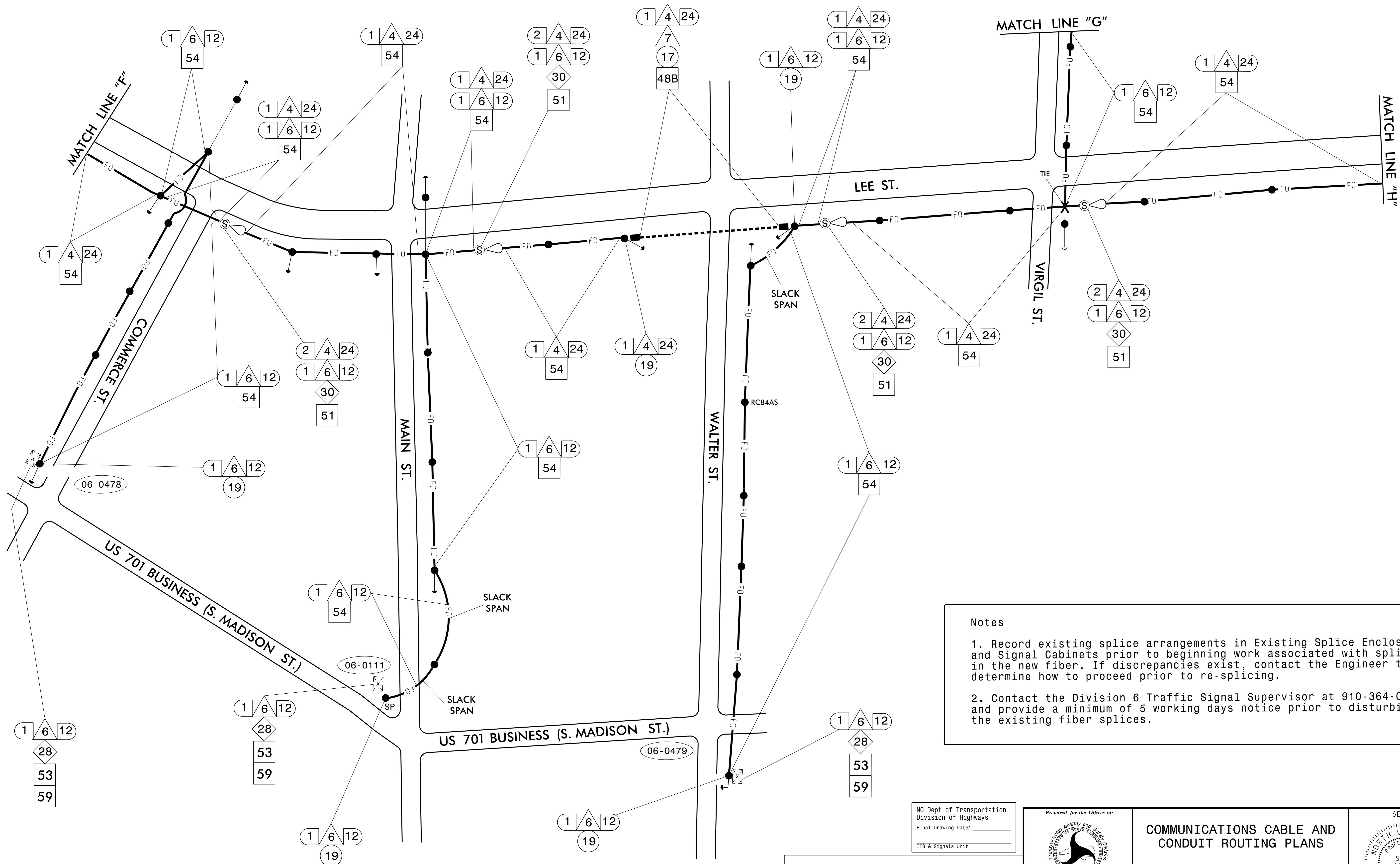
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Signal Design Section

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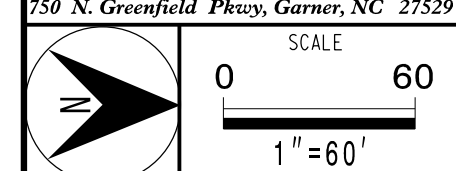
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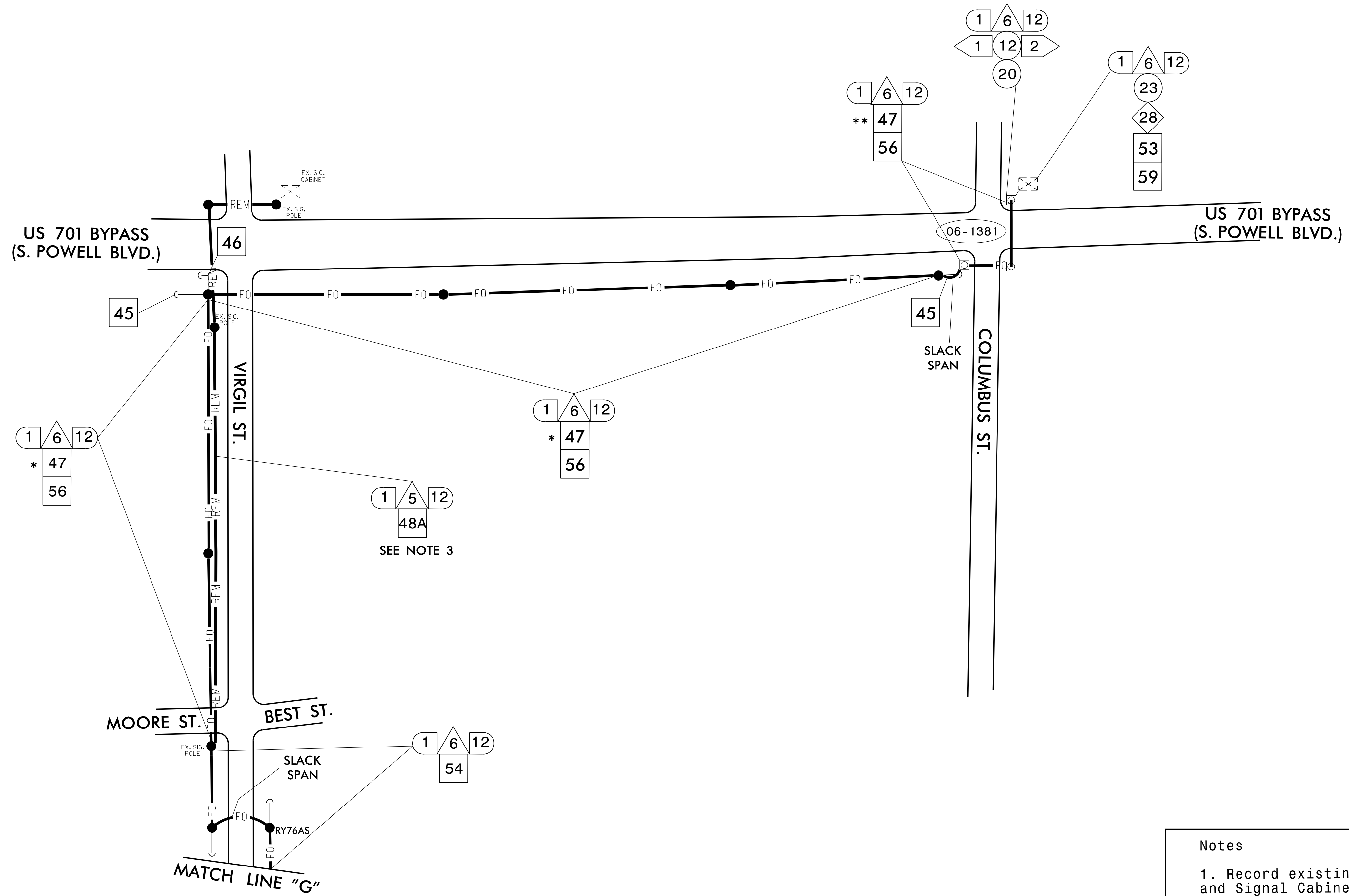
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PROFESSIONAL ENGINEER  
SEAL 14543  
GENE G. MURR, JR.





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  2. Contact the Division 6 Traffic Signal Supervisor at 910-364-0606, and provide a minimum of 5 working days notice prior to disturbing the existing fiber splices.
  3. After removal of the Traffic Signal at S Powell Blvd and Virgil St, remove the Existing Messenger Cable between Moore St and the Signal Cabinet.

\* ALL NCDOT ATTACHMENT POINTS ARE 40" BELOW POWER FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED.  
\*\* ATTACH COMMUNICATIONS MESSENGER CABLE 12" ABOVE SIGNAL CABLE.

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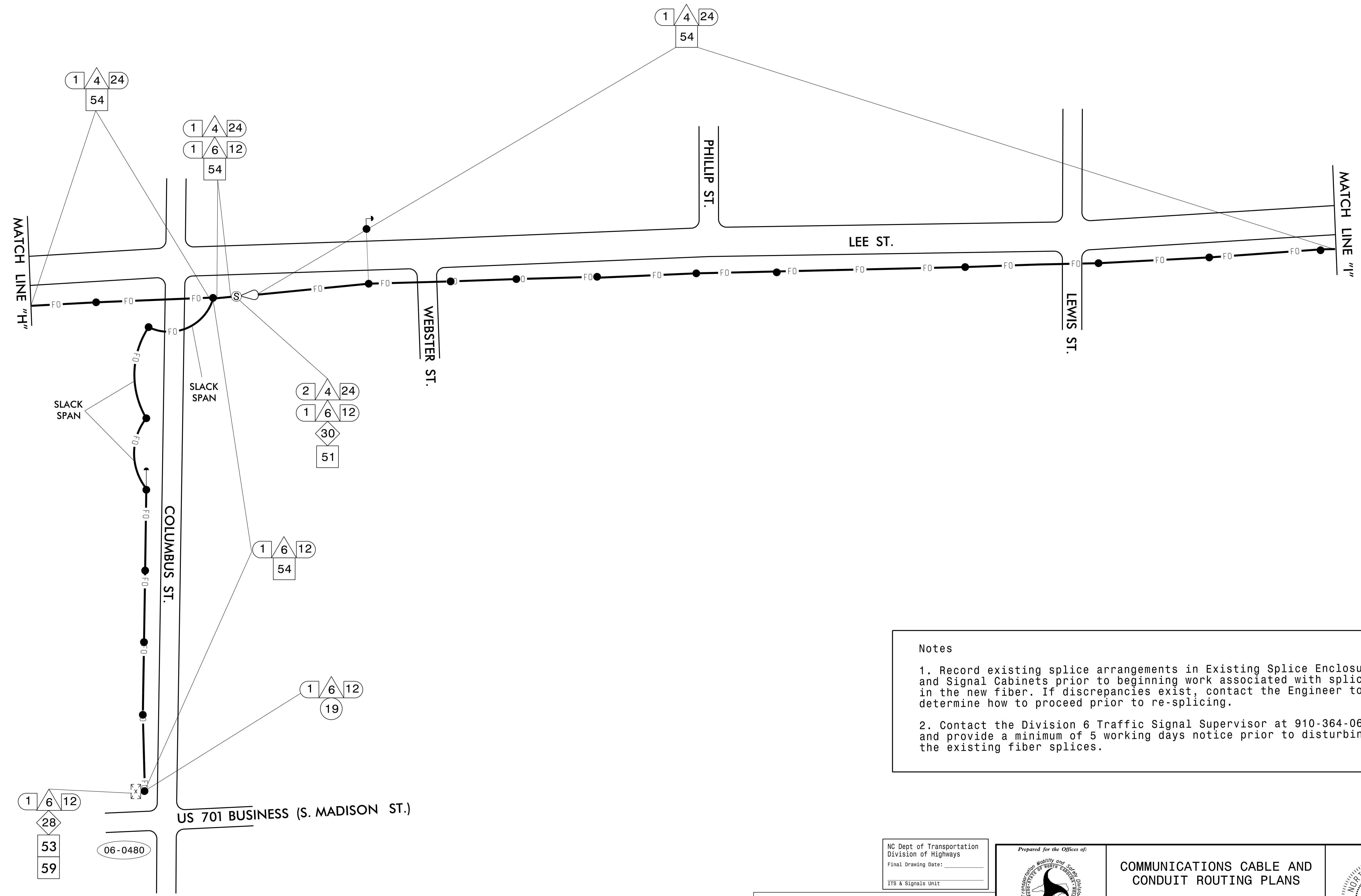
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SCALE: 0 60  
1" = 60'

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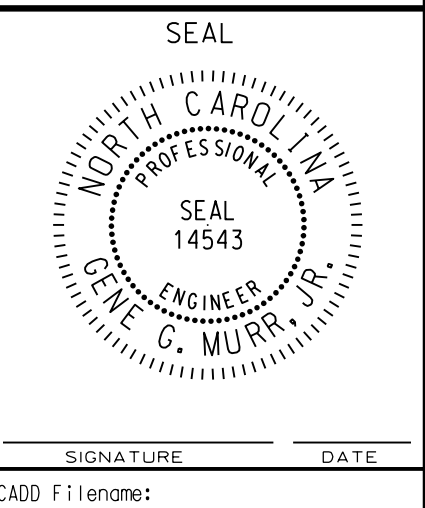
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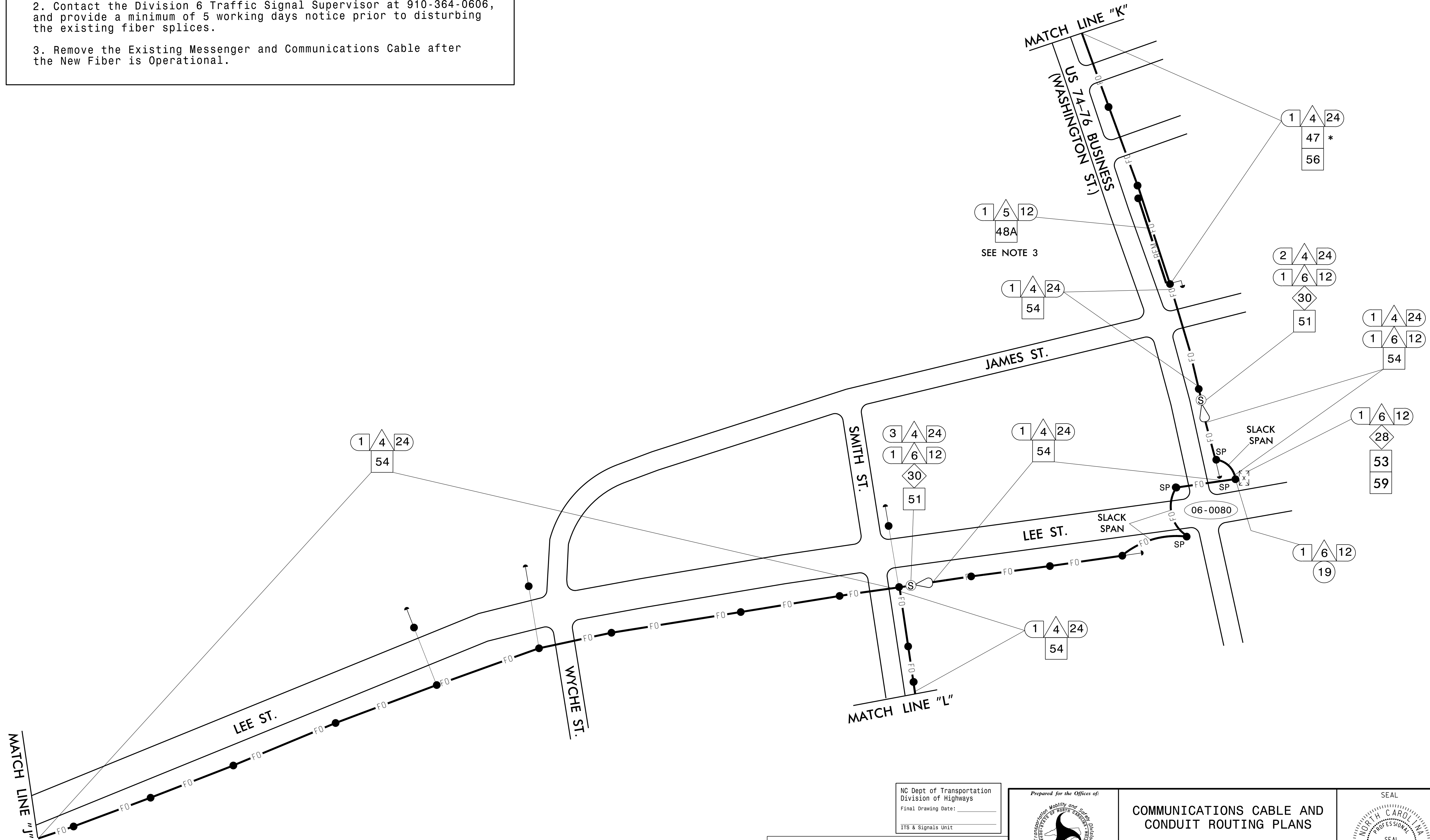
US 701 BUSINESS (S. MADISON ST.)





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3. Remove the Existing Messenger and Communications Cable after the New Fiber is Operational.



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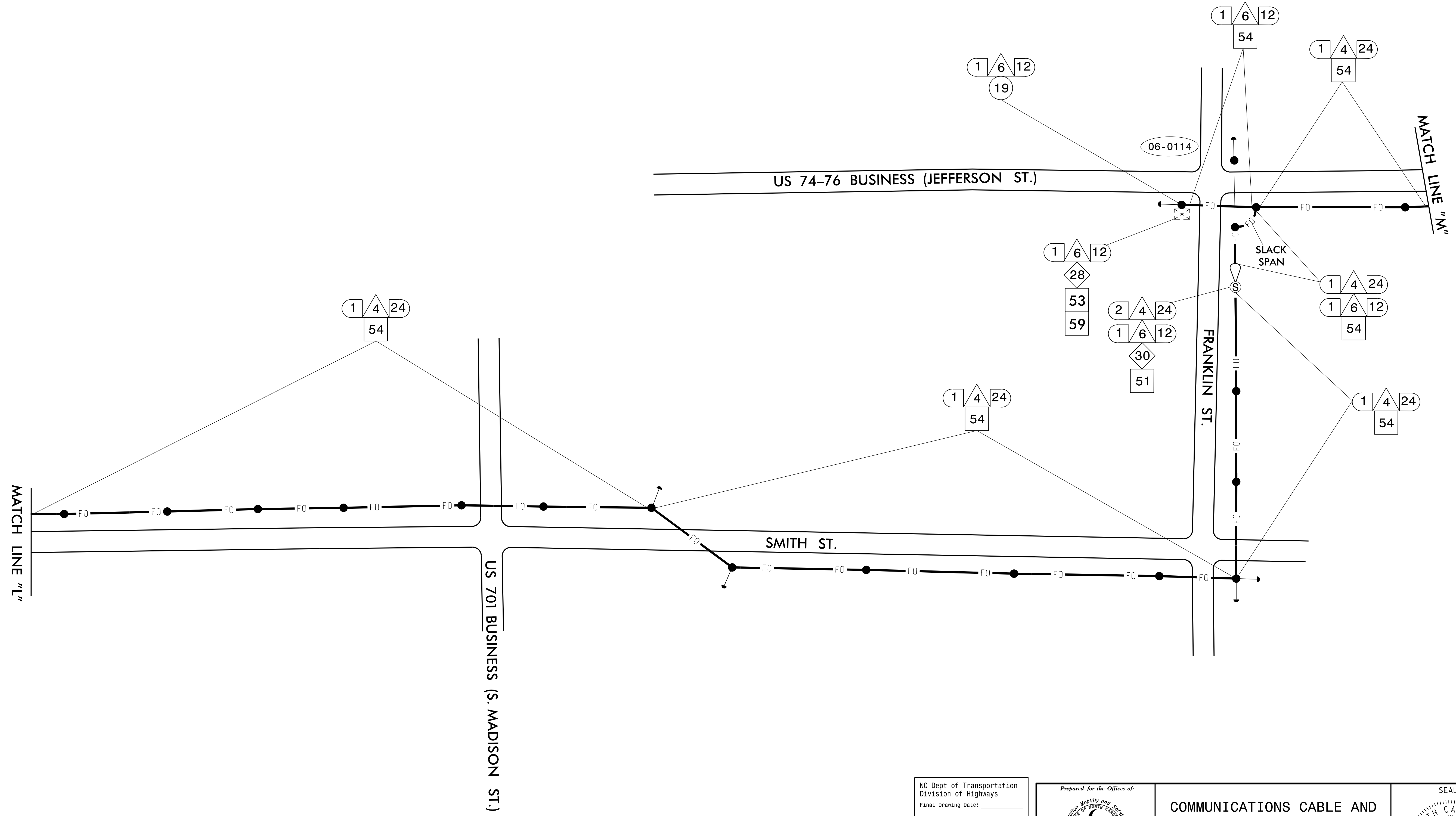
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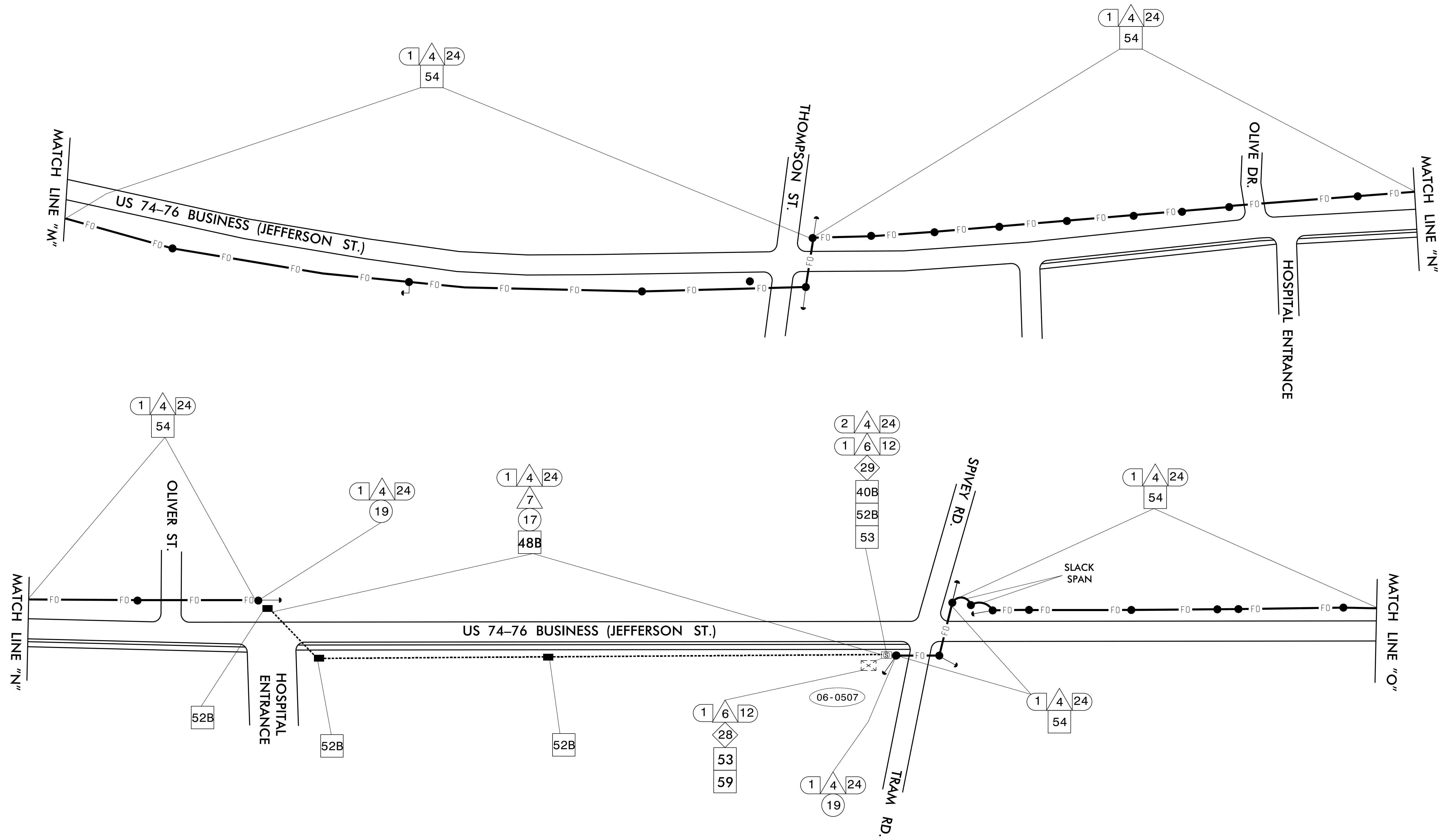
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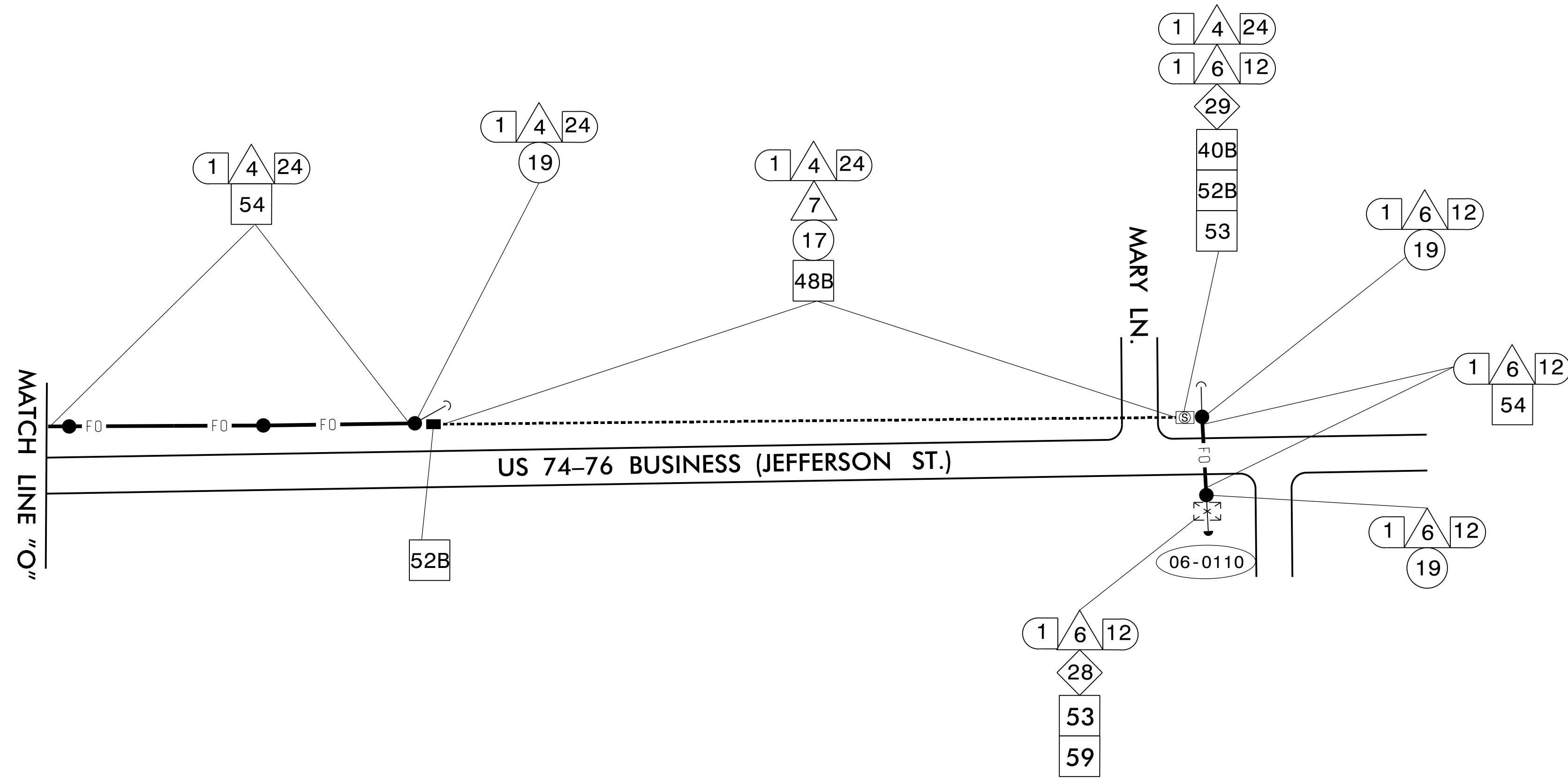
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Signal Design Section

750 N. Greenfield Pkwy, Garner, NC 27529

<b>COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</b>	
DIVISION 6	COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020	REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
CADD Filename: \_\_\_\_\_

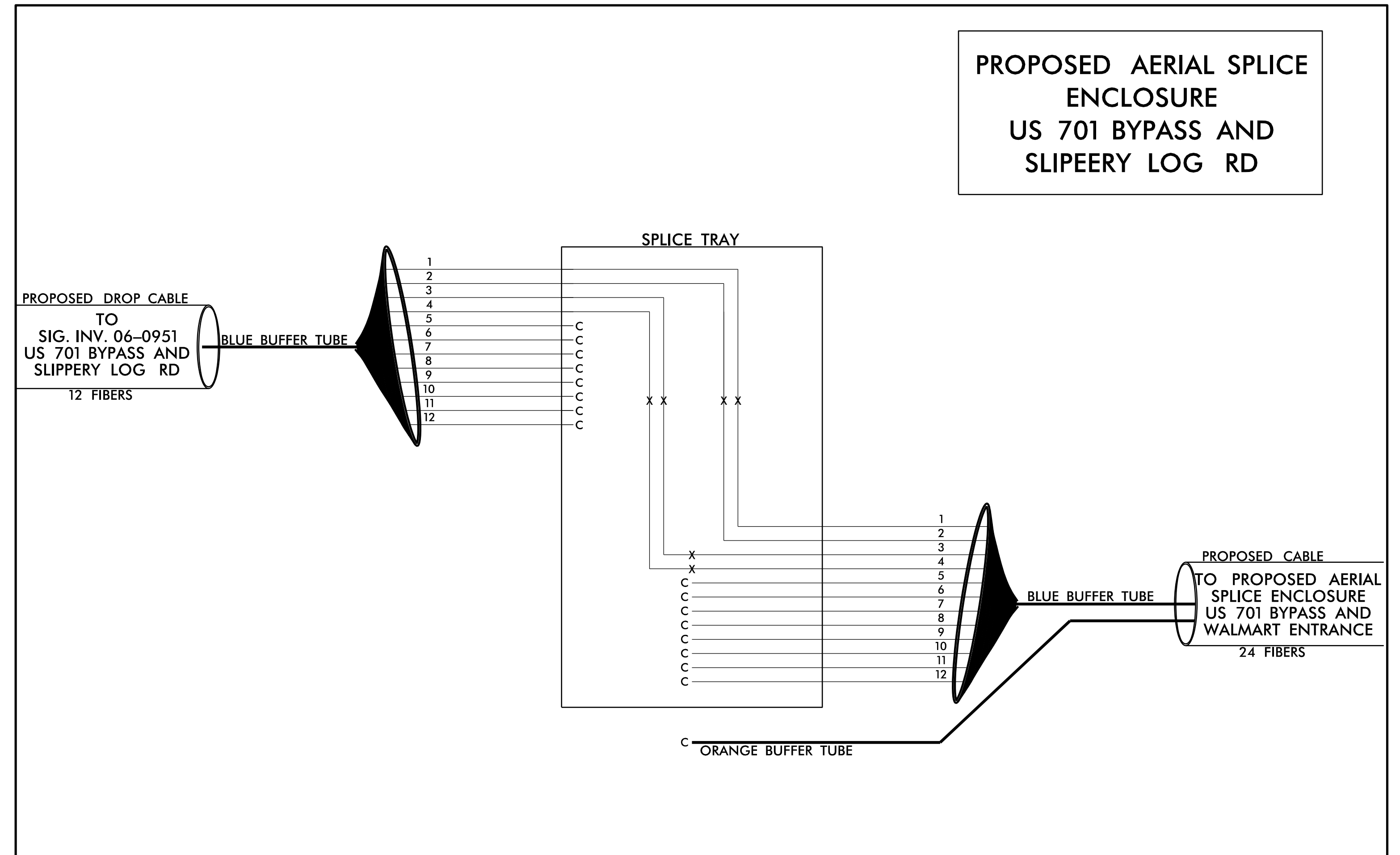
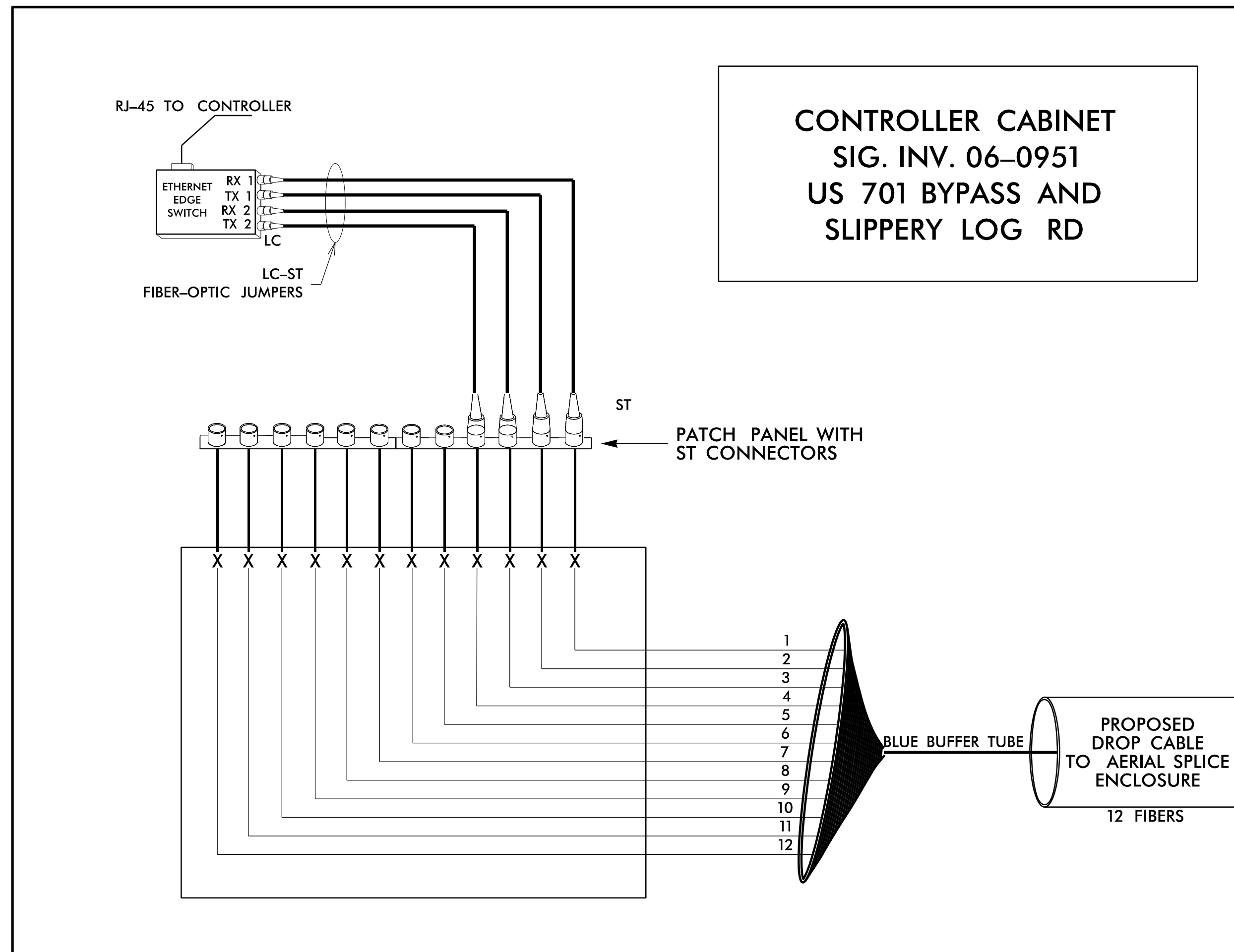


**NOTES**

- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 6 TRAFFIC SIGNAL SUPERVISOR AT (910) 364-0606 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY DIVISION 6 TRAFFIC SIGNAL SUPERVISOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
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- 4) INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"  
a) SPLICE LOCATION  
b) DATE  
c) COMPANY NAME  
d) NAME OF INDIVIDUAL PERFORMING THE SPLICING
- 5) PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.
- 6) UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
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**LEGEND**

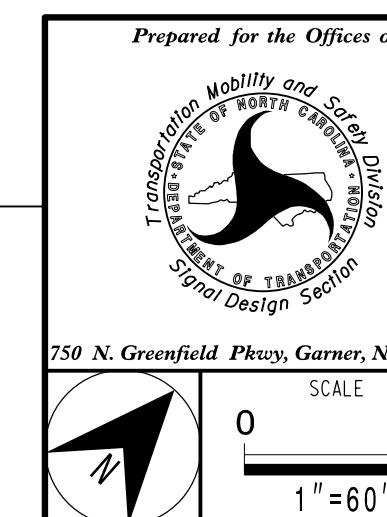
- COLOR CODE**  
TIA/EIA 598-A
- |            |             |
|------------|-------------|
| (1) BLUE   | (7) RED     |
| (2) ORANGE | (8) BLACK   |
| (3) GREEN  | (9) YELLOW  |
| (4) BROWN  | (10) VIOLET |
| (5) SLATE  | (11) ROSE   |
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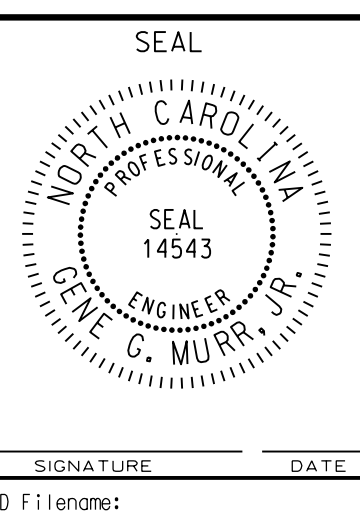
NC Dept of Transportation  
Division of Highways  
Final Drawing Date: \_\_\_\_\_  
ITS & Signals Unit

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Engineering & Construction, Inc.

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Raleigh, NC 27603  
Tel: 919.789.9977  
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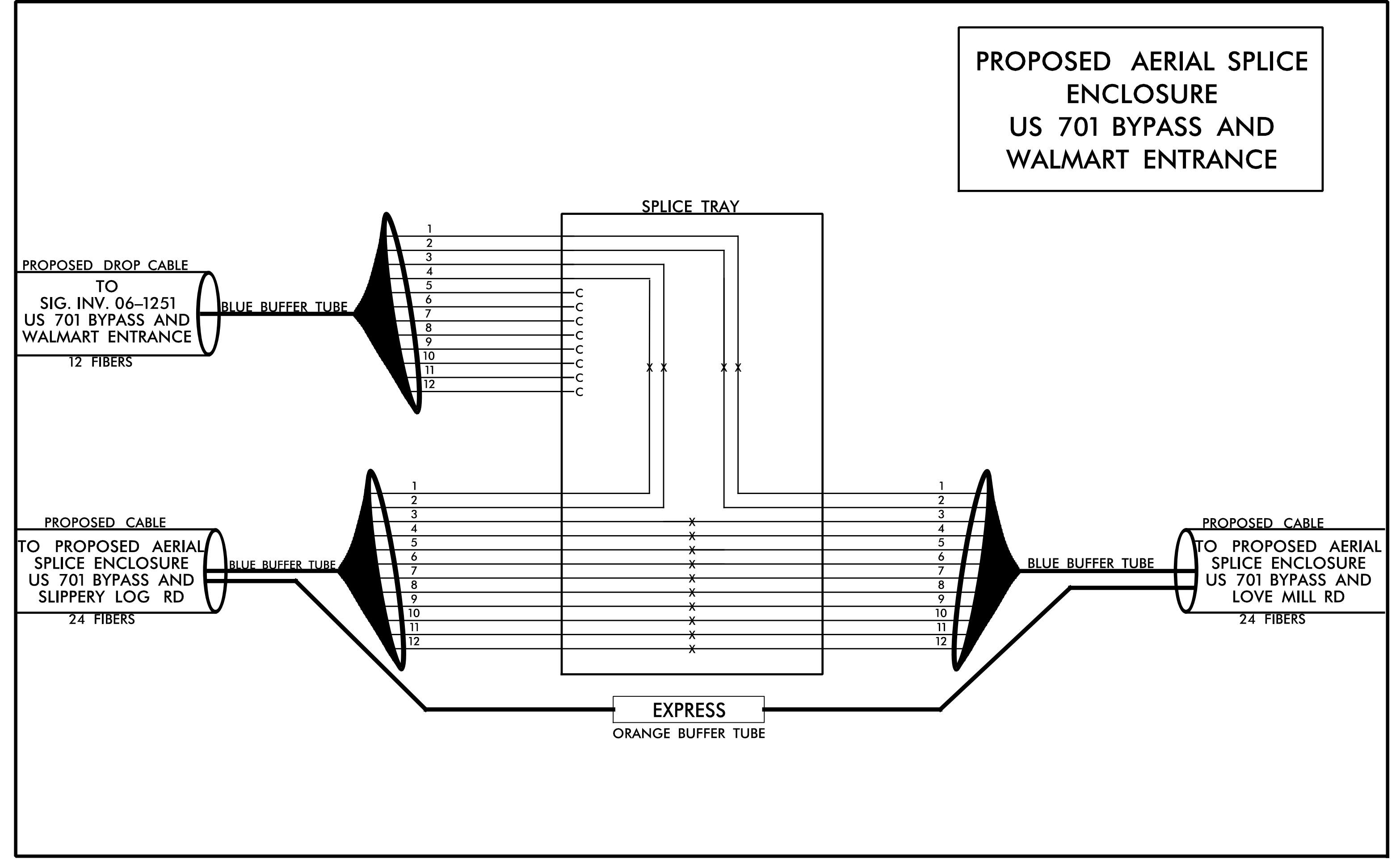
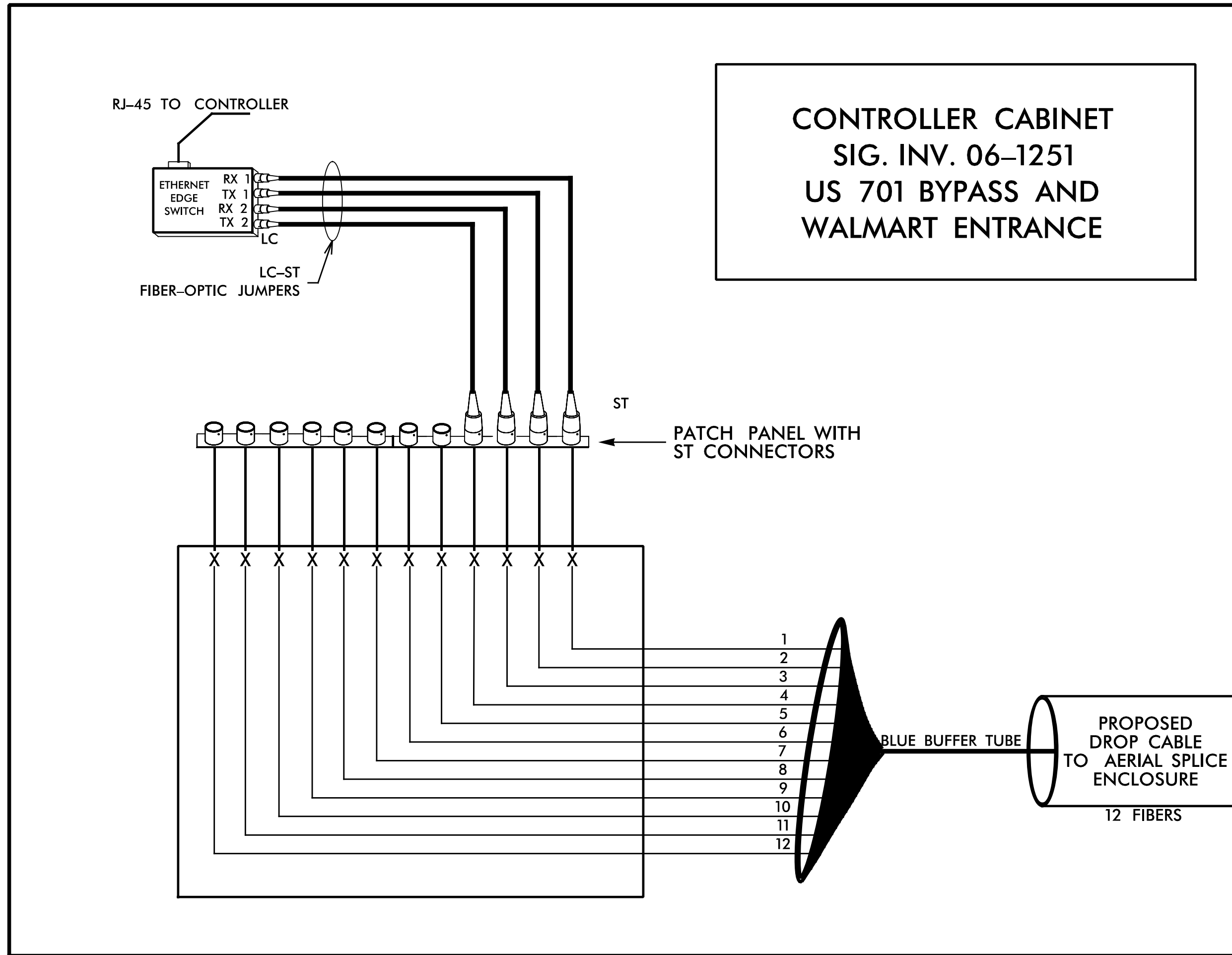


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**SPLICE DETAILS**

DIVISION 6      COLOMBUS COUNTY      WHITEVILLE

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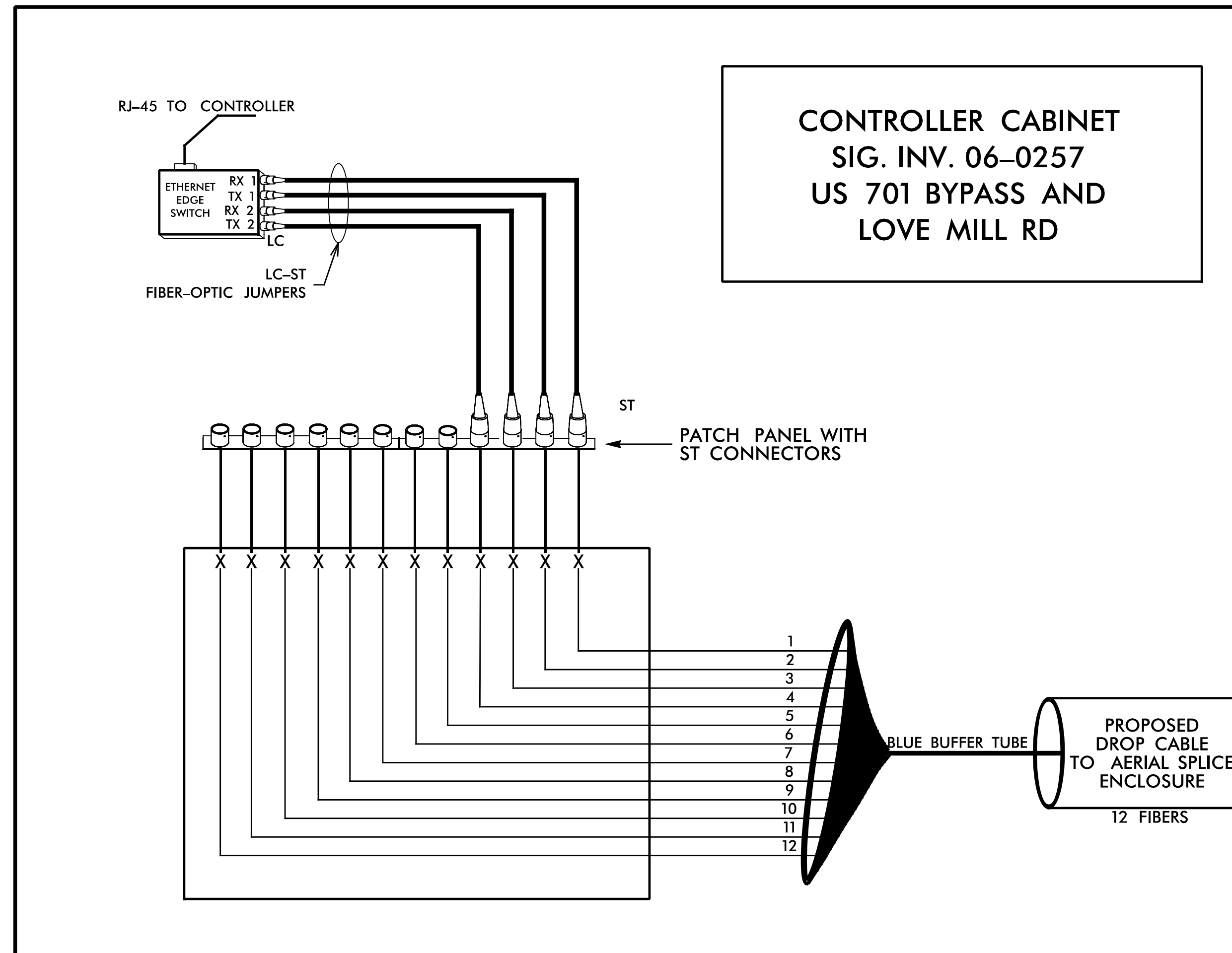
SEAL  
NORTH CAROLINA  
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SEAL 14543  
G. G. MURR, JR.  
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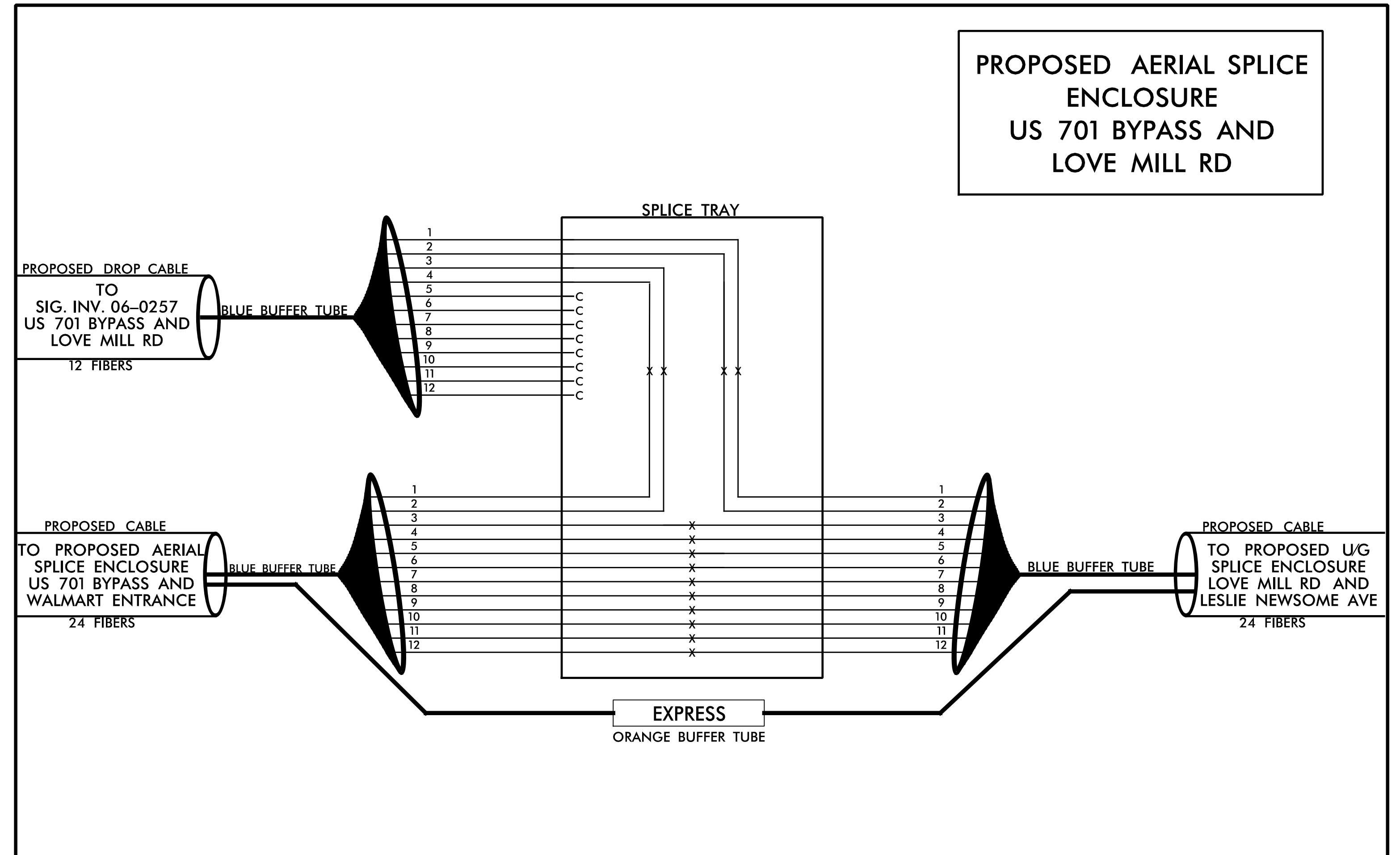
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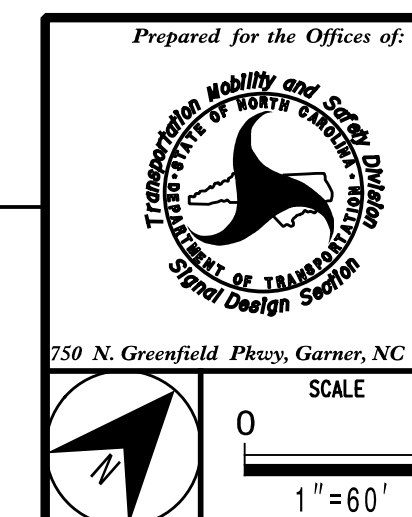
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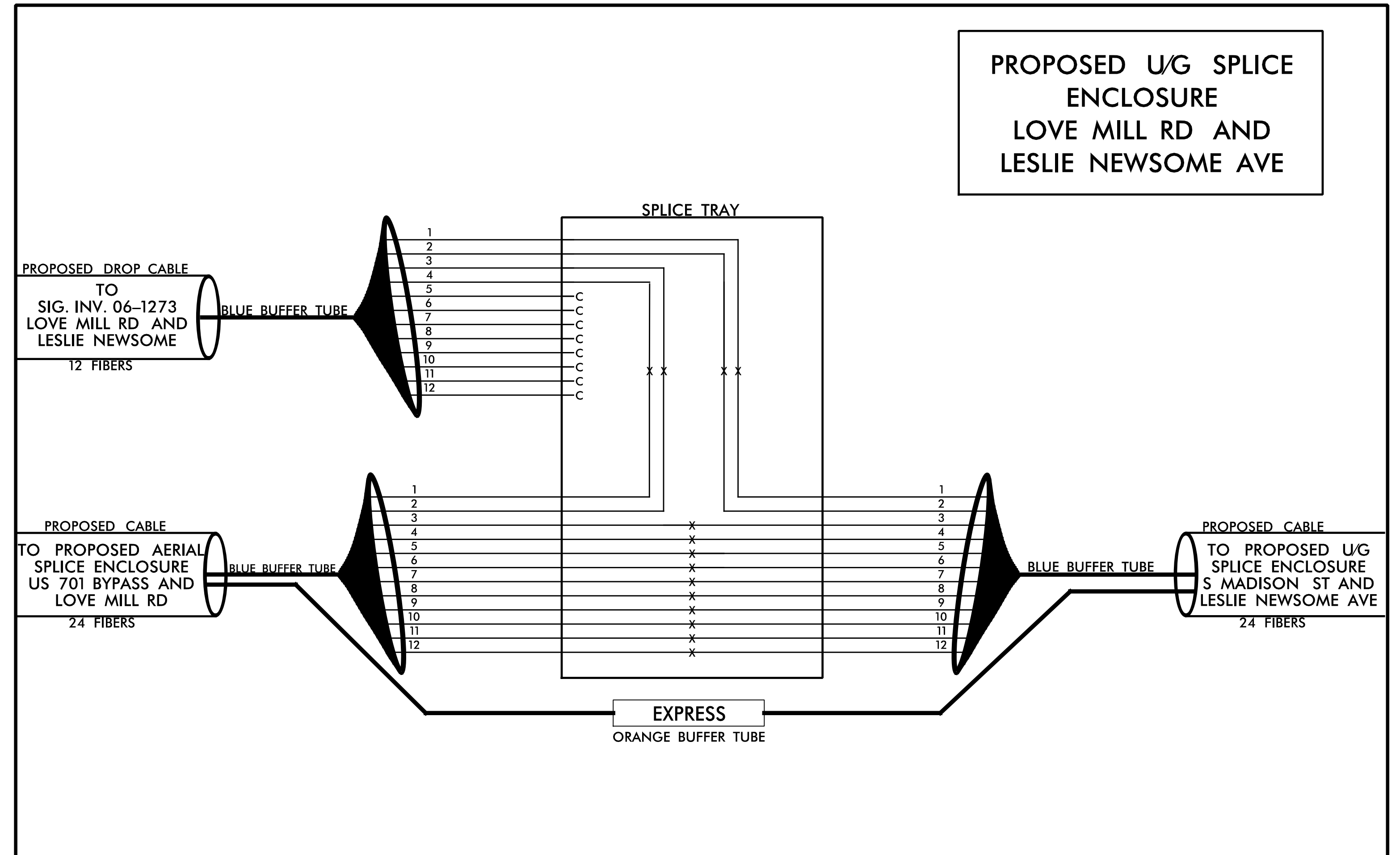
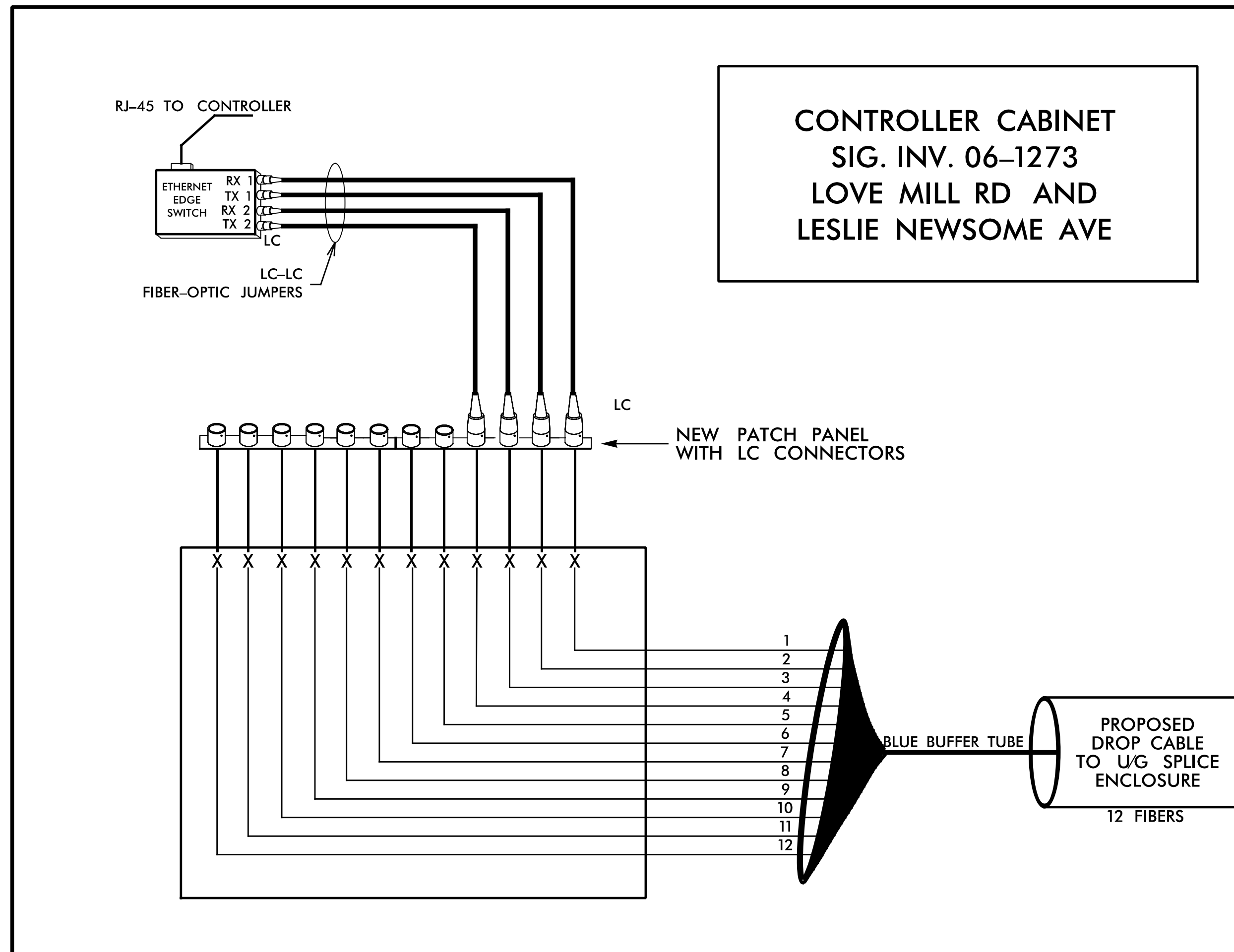
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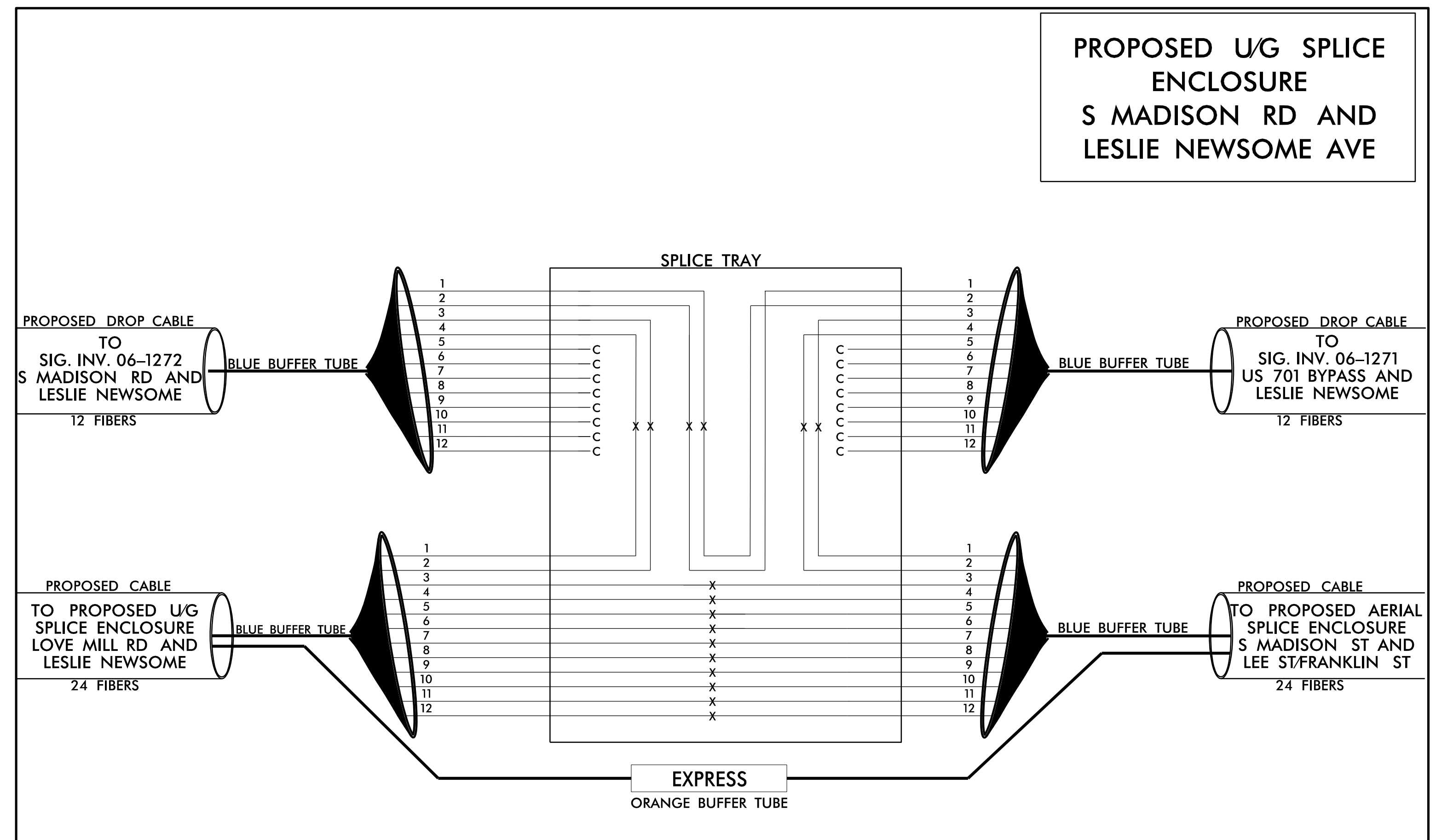
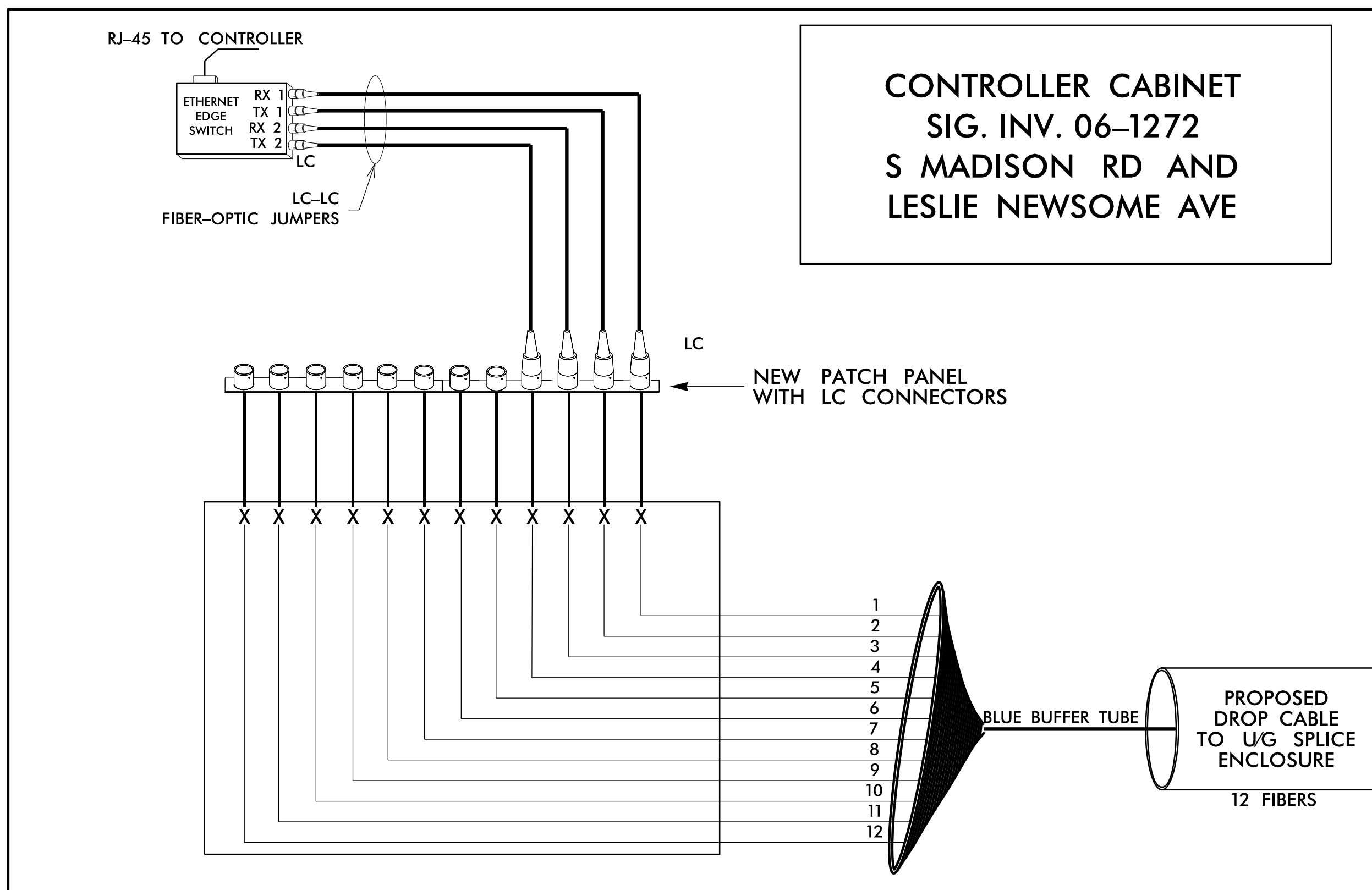
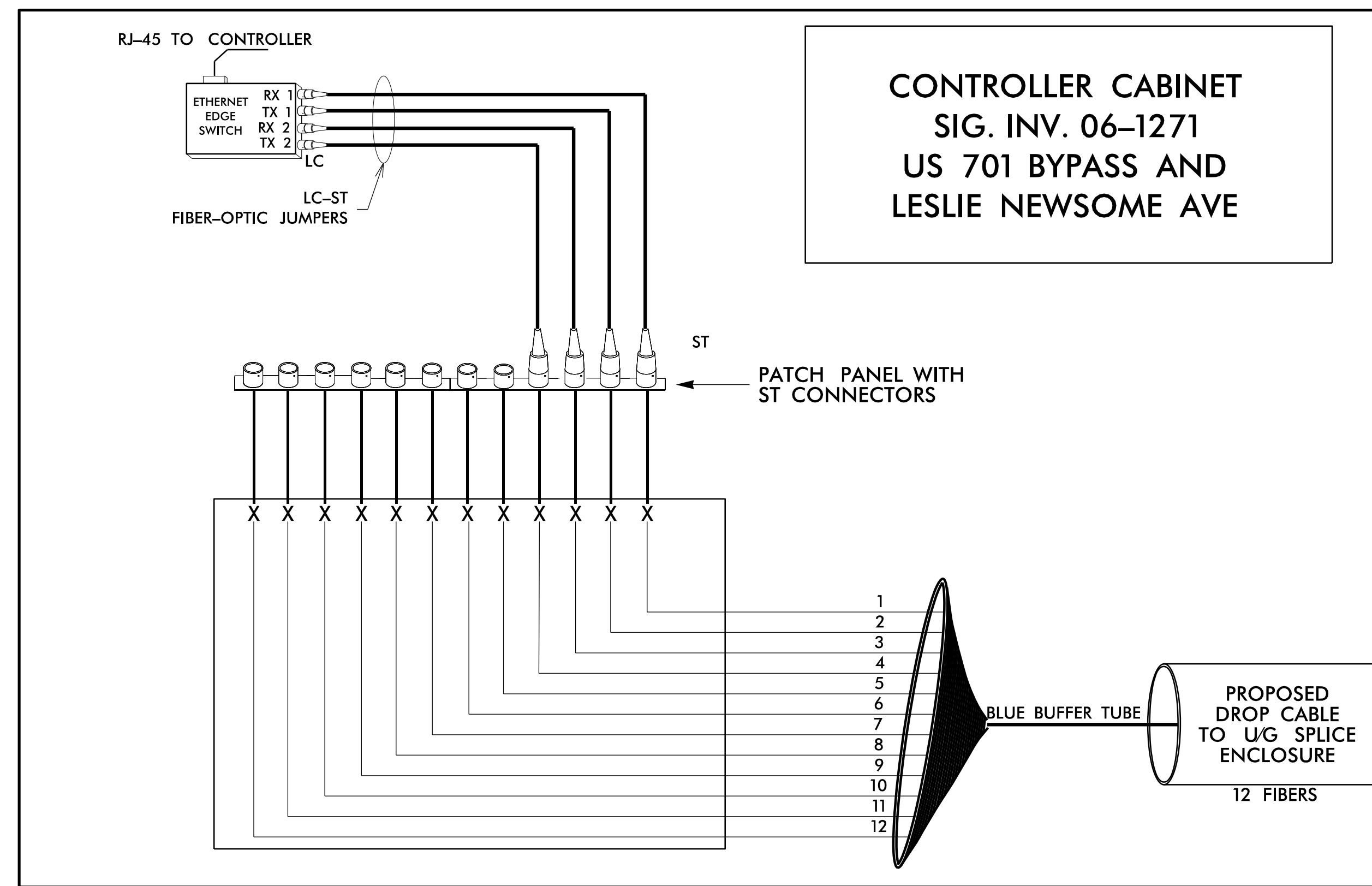


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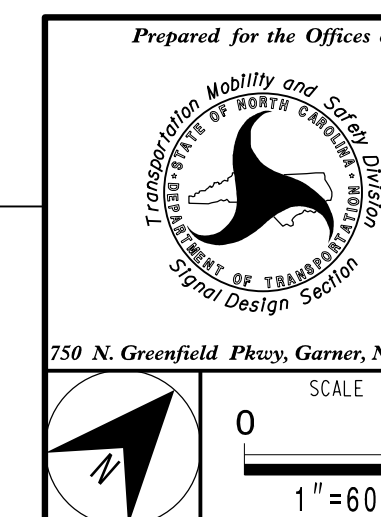
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- |                             |             |                                    |
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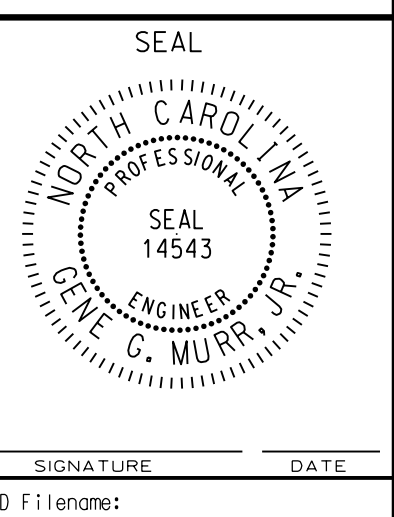
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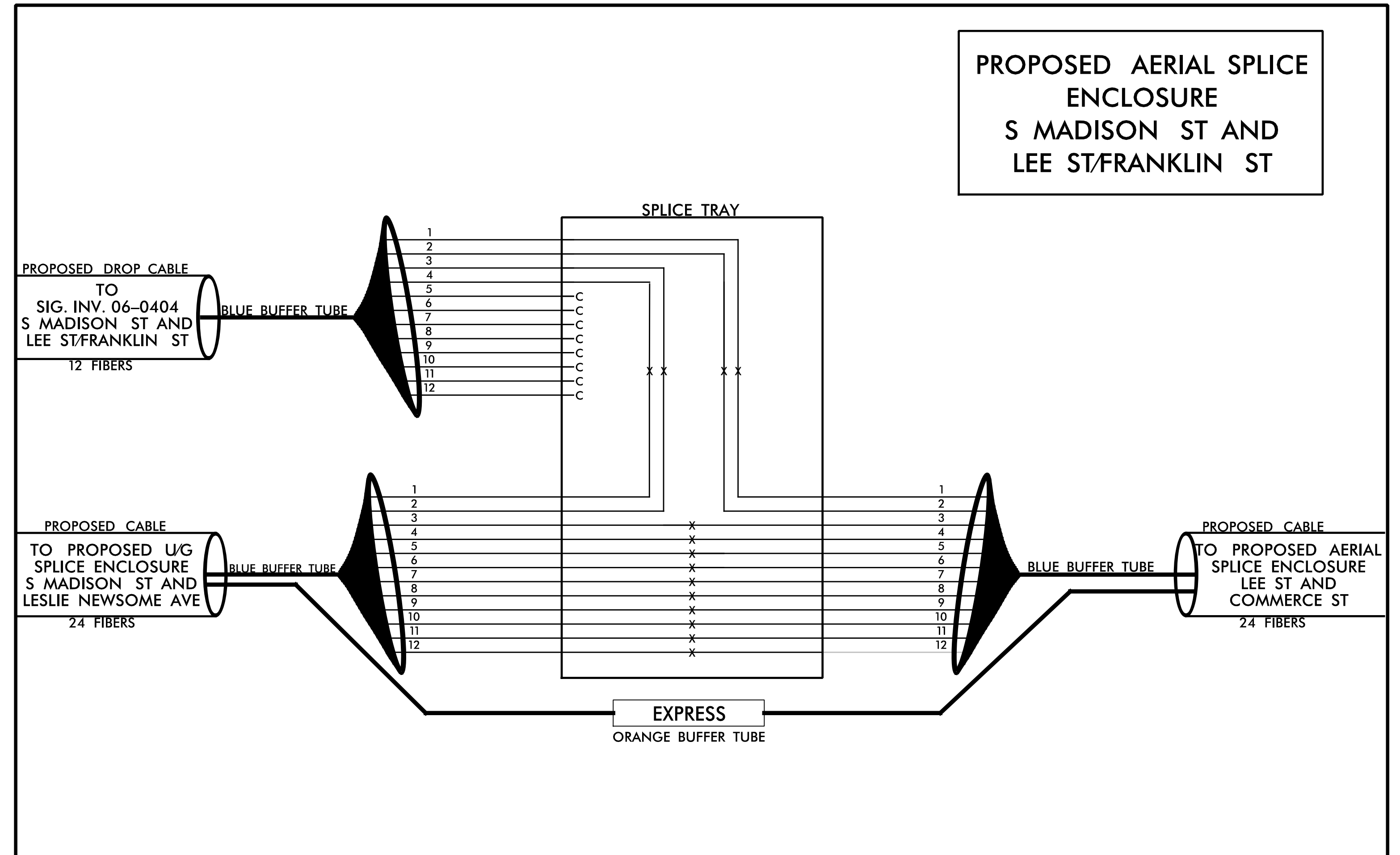
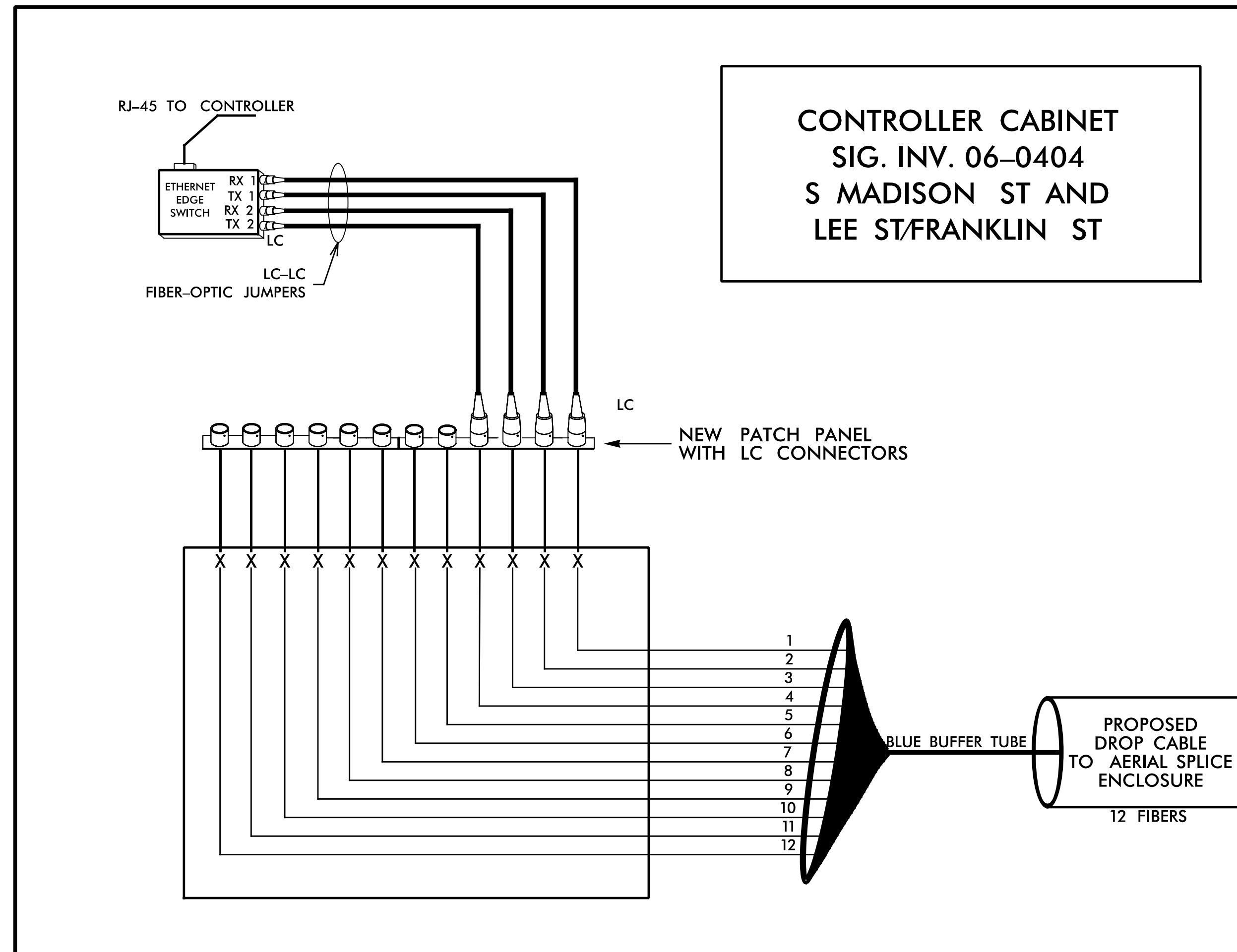


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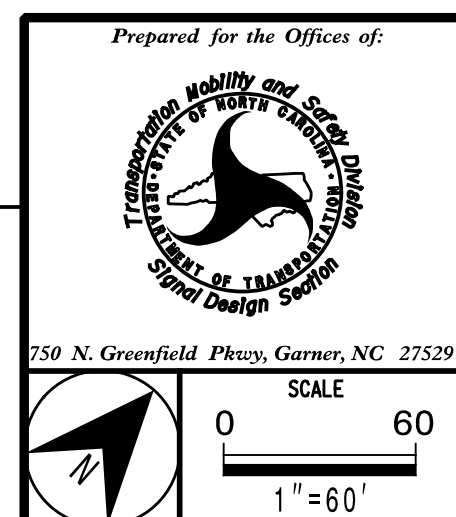
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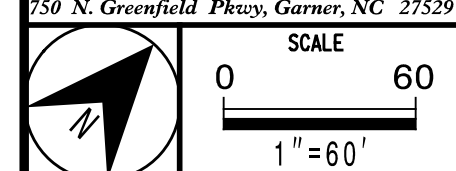
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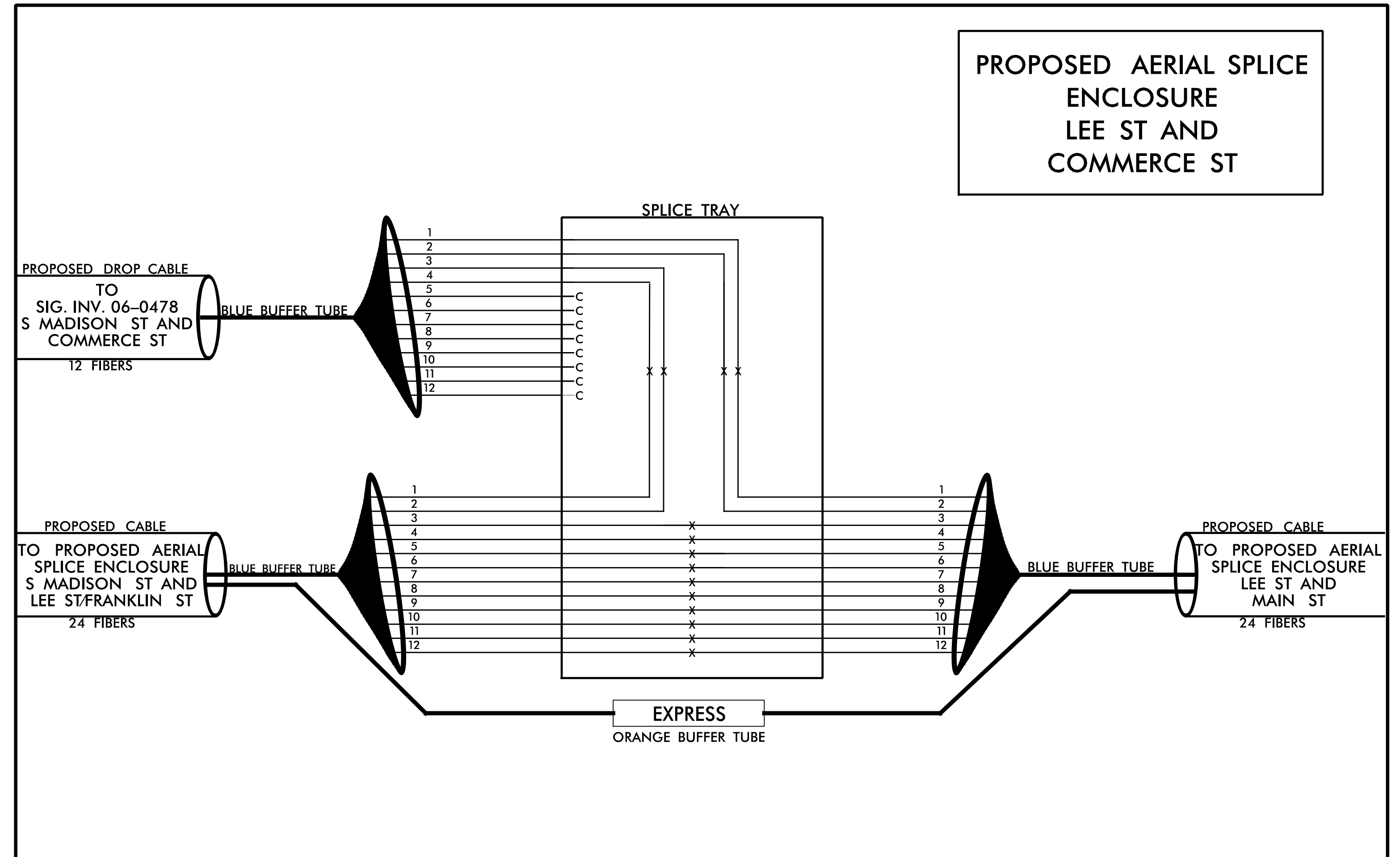
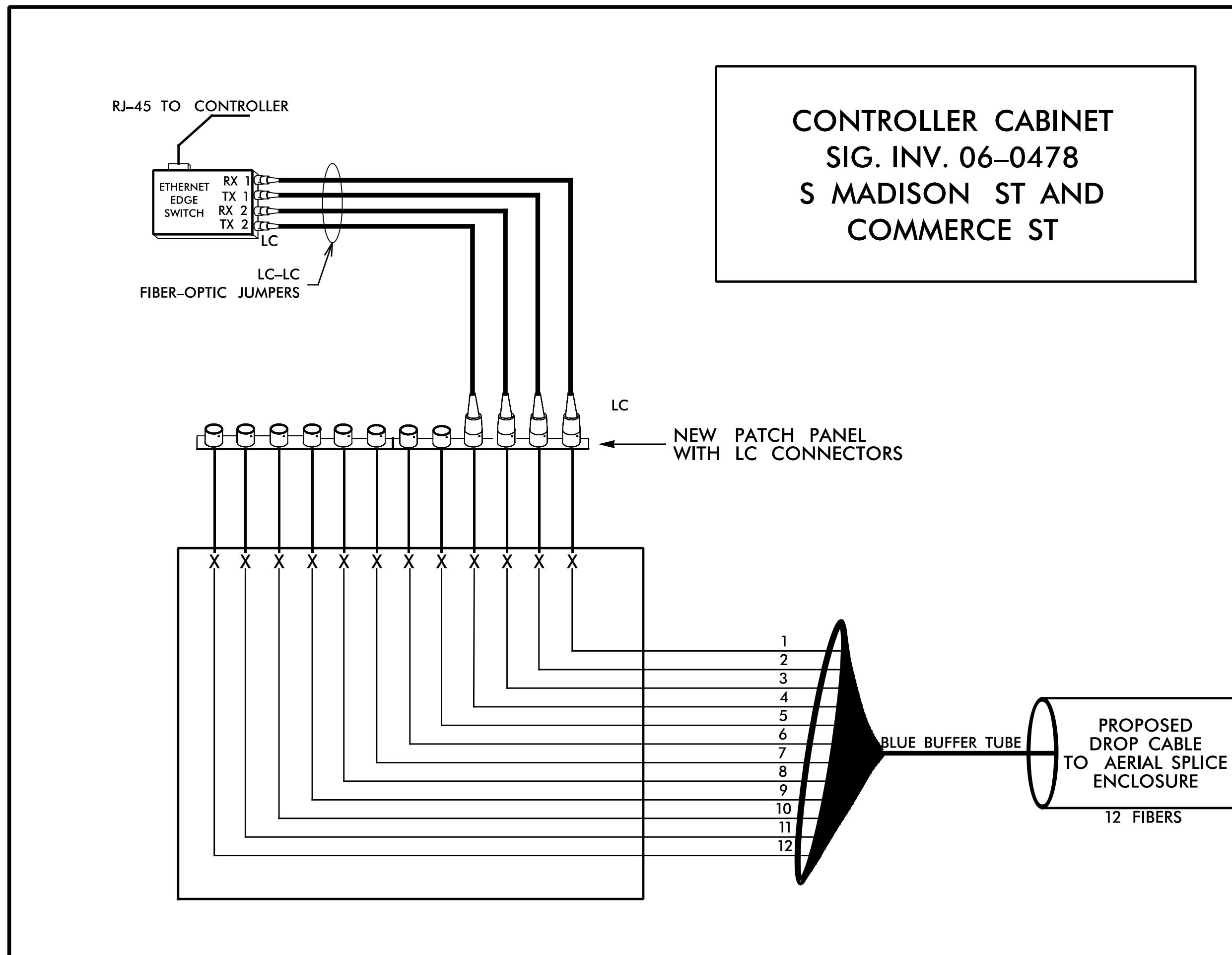


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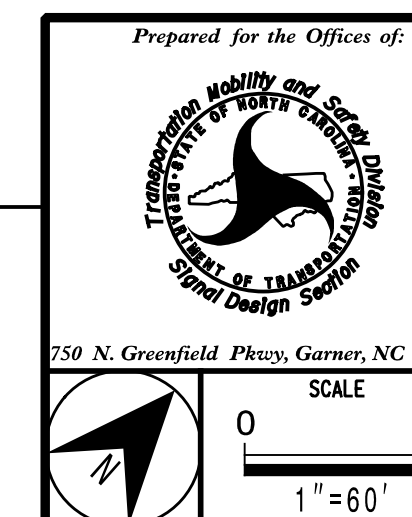
**LEGEND**

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(3) GREEN	(9) YELLOW	<b>EXPRESS</b> = EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING
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NC Dept of Transportation  
Division of Highways  
Final Drawing Date: \_\_\_\_\_  
ITS & Signals Unit

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Engineering & Construction, Inc.  
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**SPLICE DETAILS**

DIVISION 6		COLOMBUS COUNTY		WHITEVILLE
PLAN DATE: March 2020	REVIEWED BY: G. G. Murr, Jr.	PREPARED BY: M. Ishak	REVIEWED BY:	
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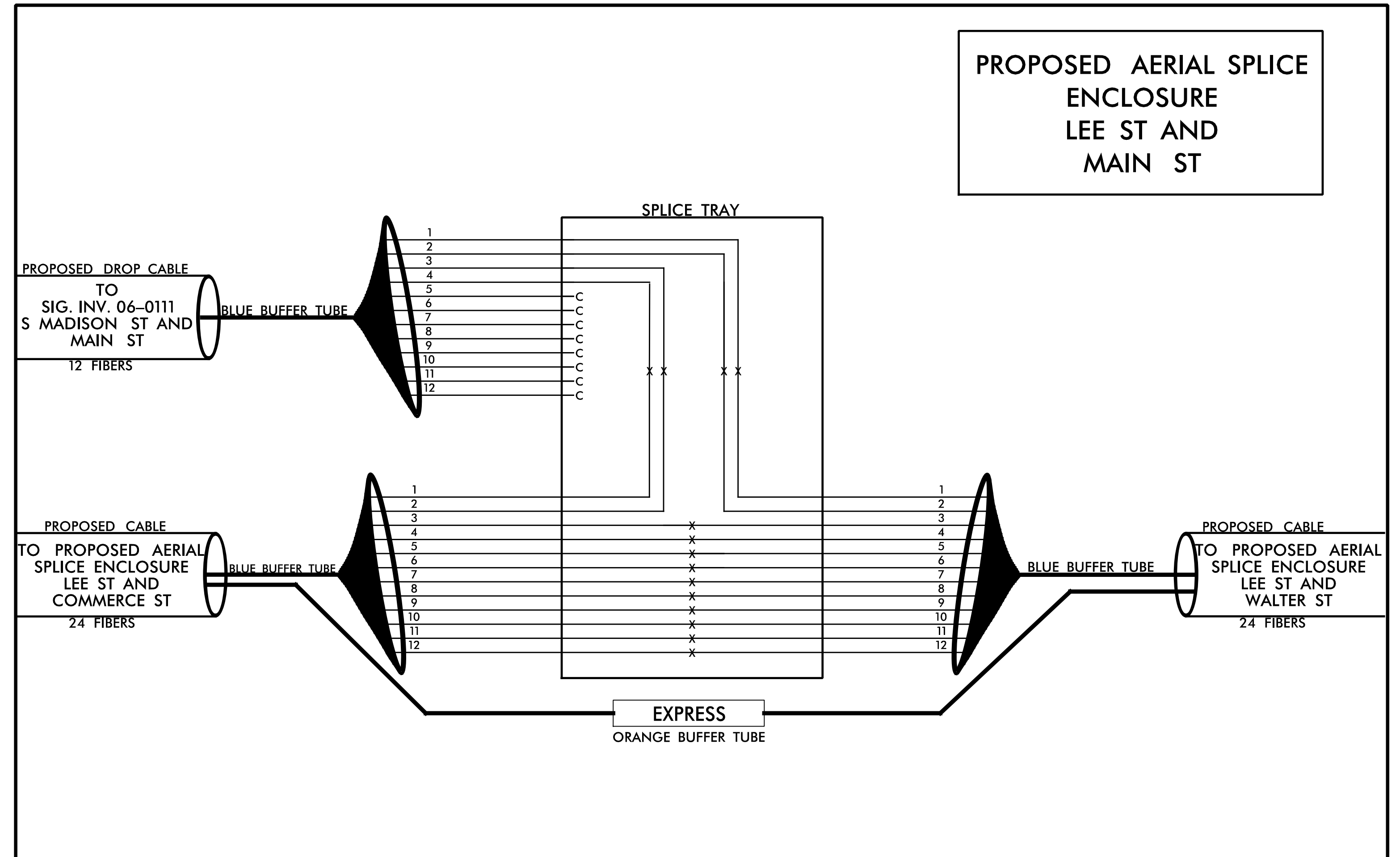
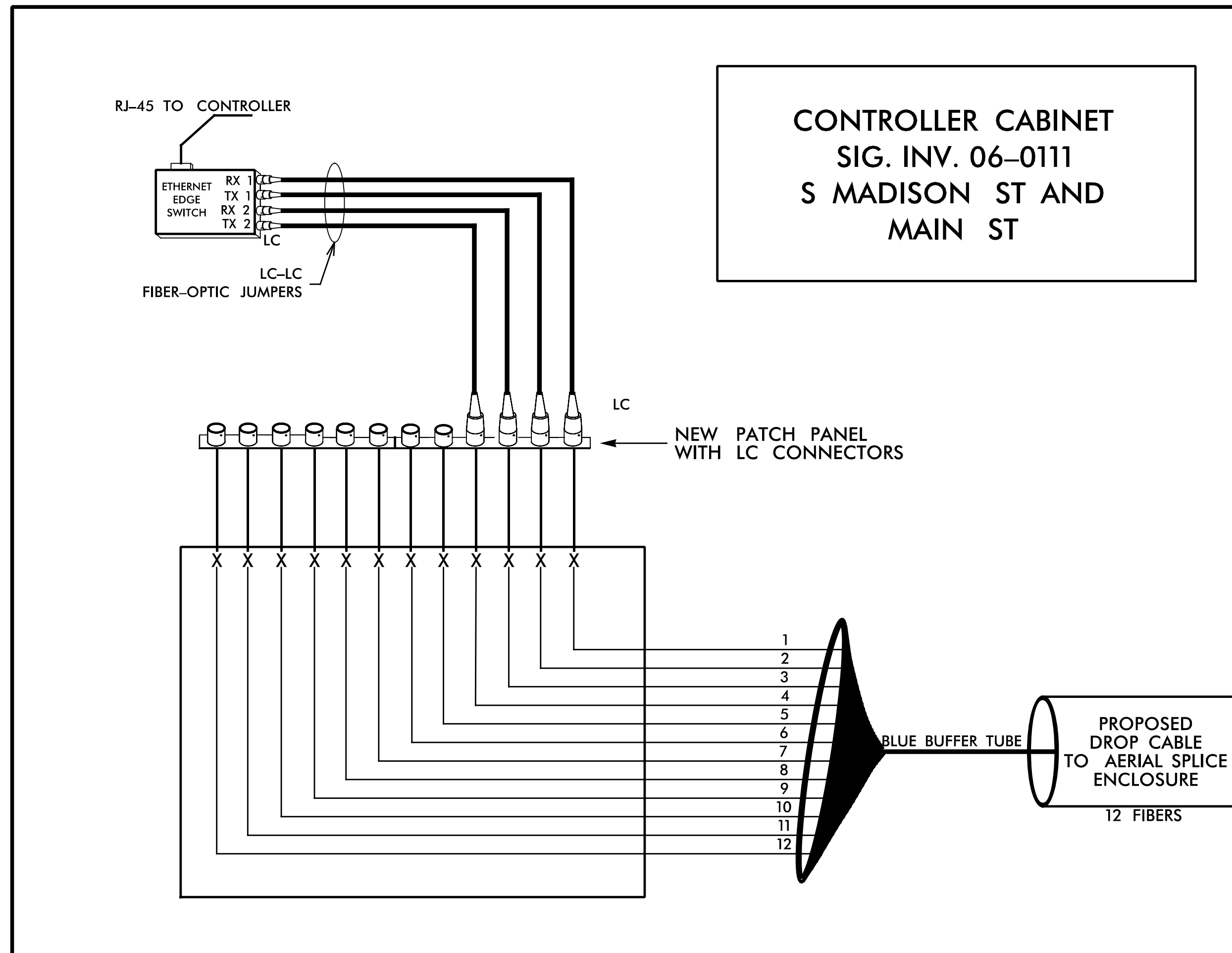
SEAL  
STATE OF NORTH CAROLINA  
PROFESSIONAL ENGINEER  
SEAL 14543  
G. G. MURR, JR.  
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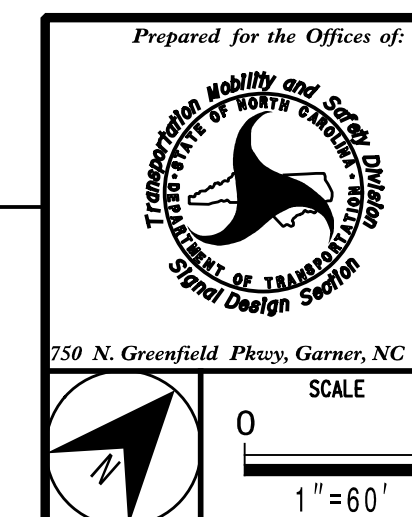
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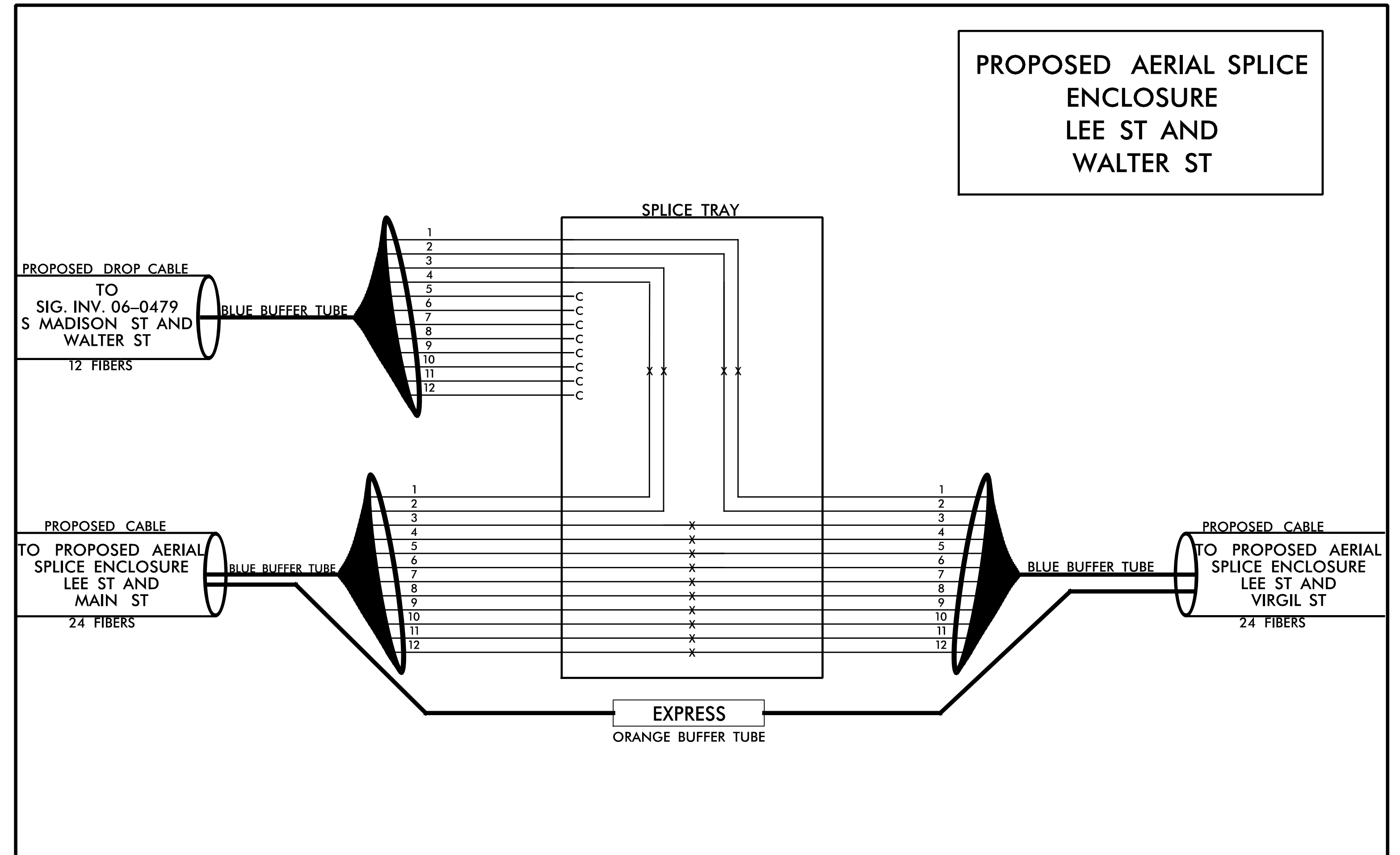
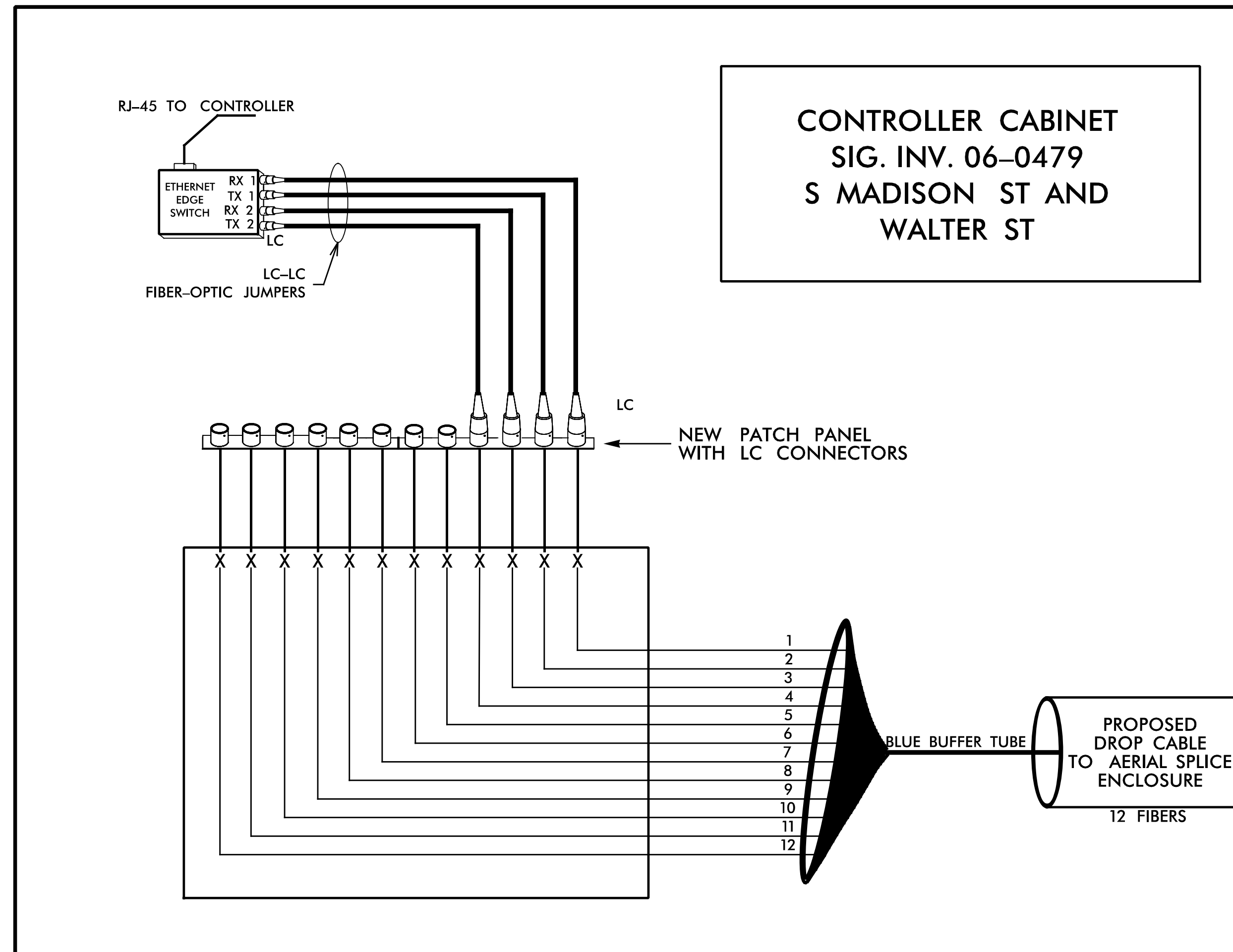
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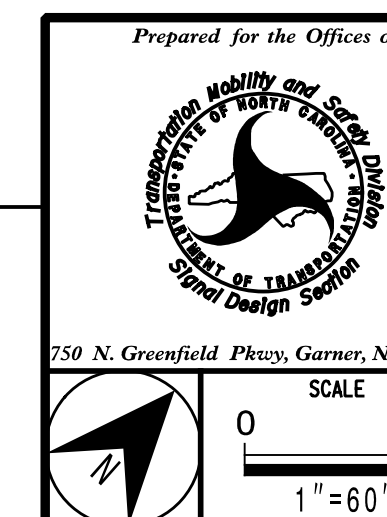
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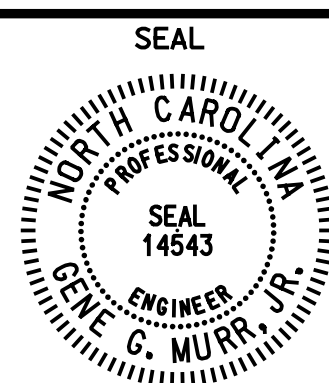
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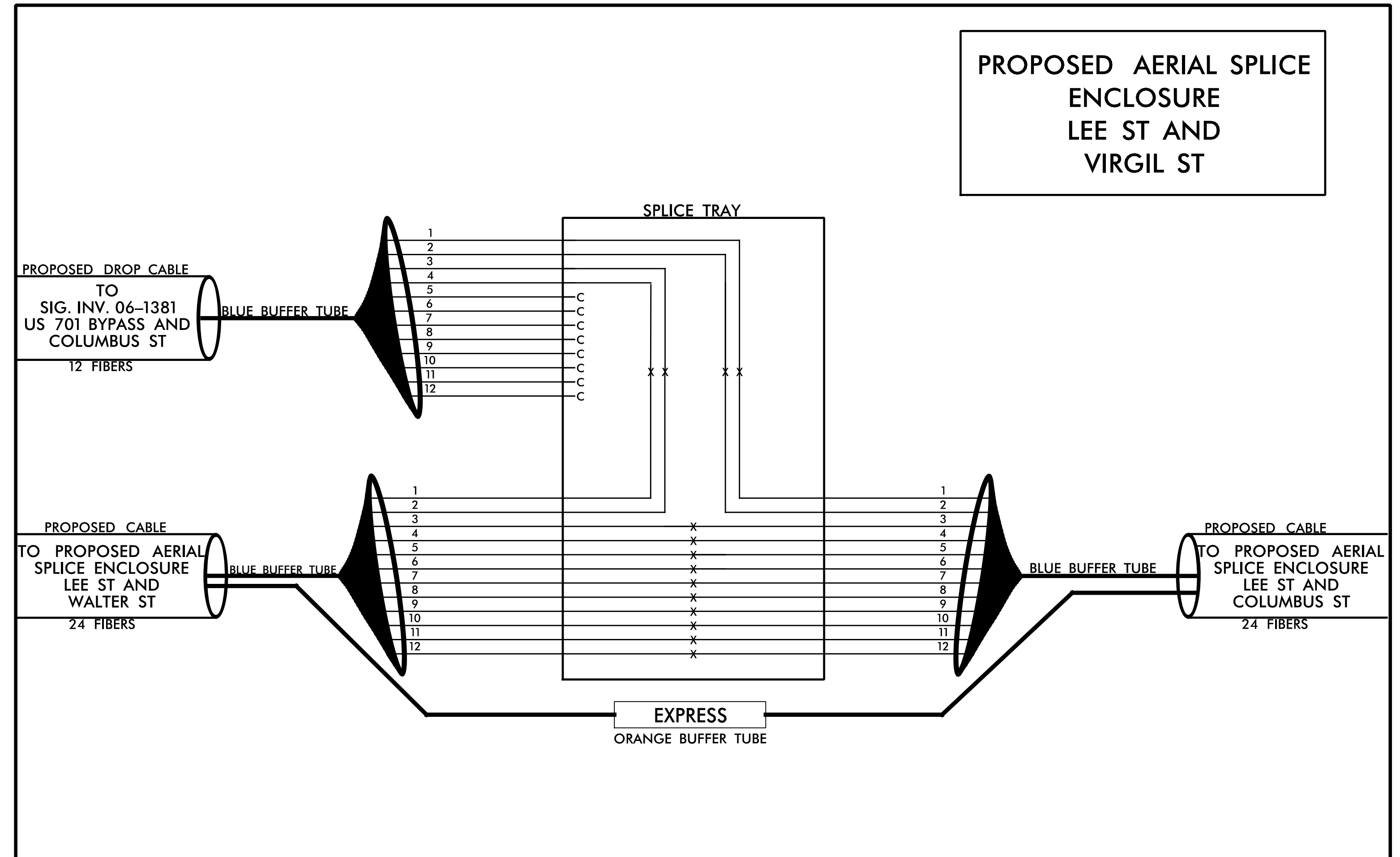
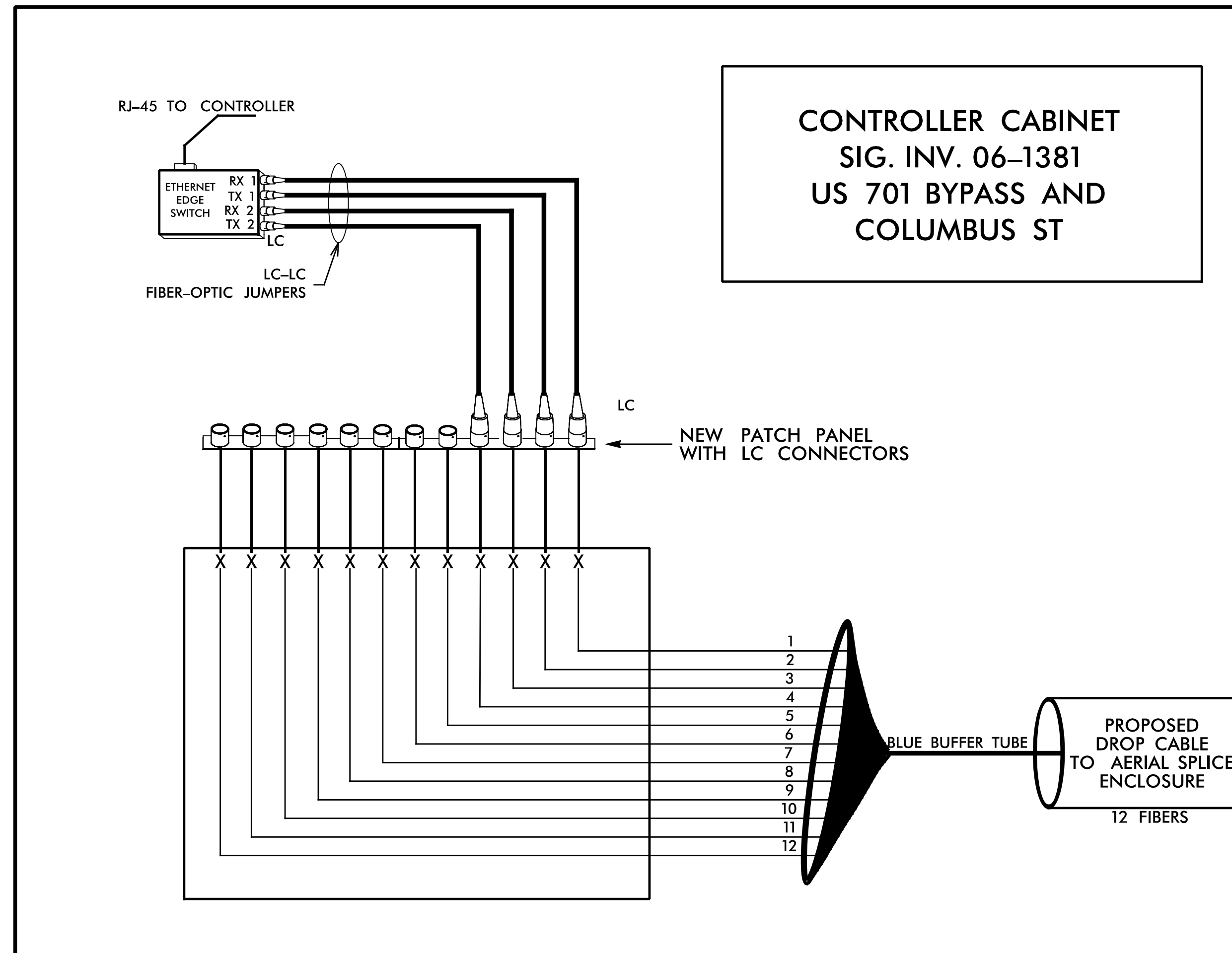


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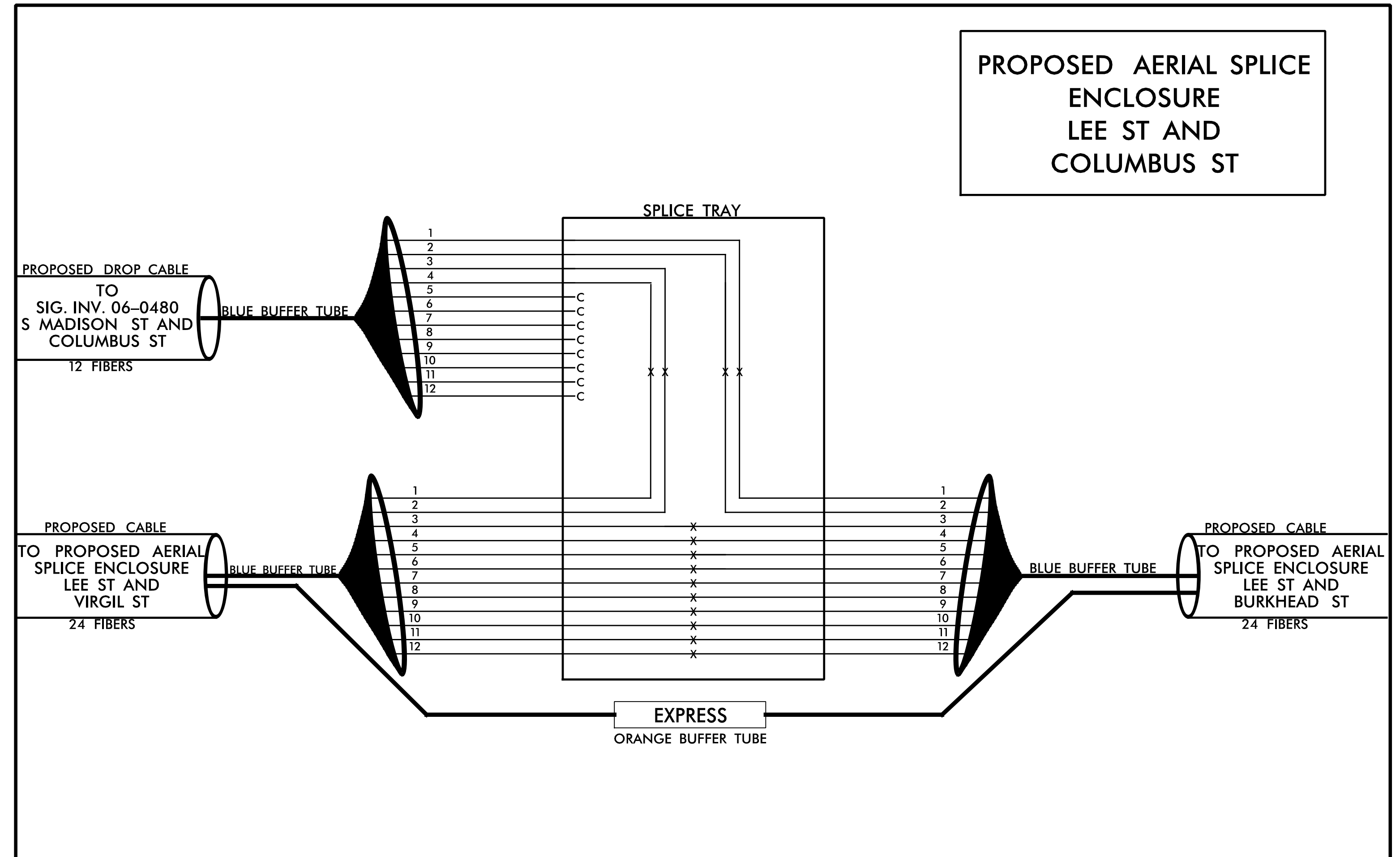
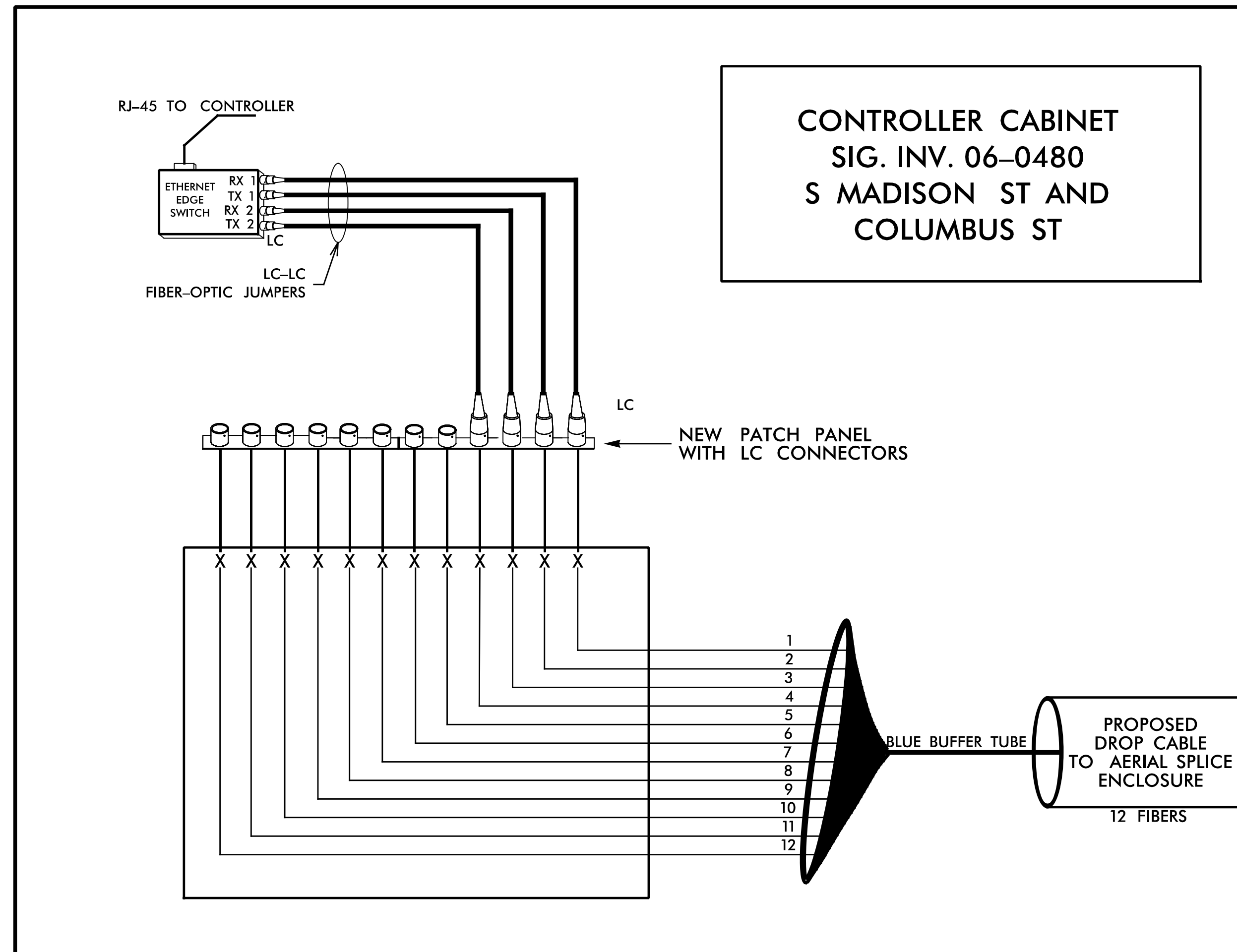
SEAL  
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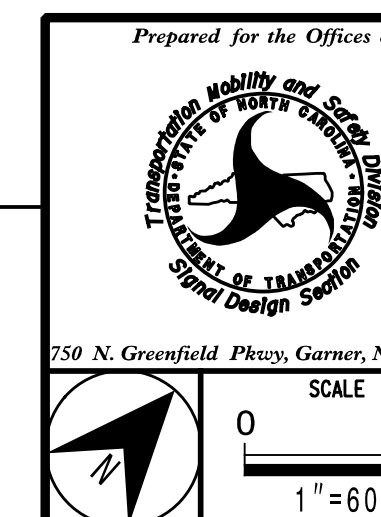
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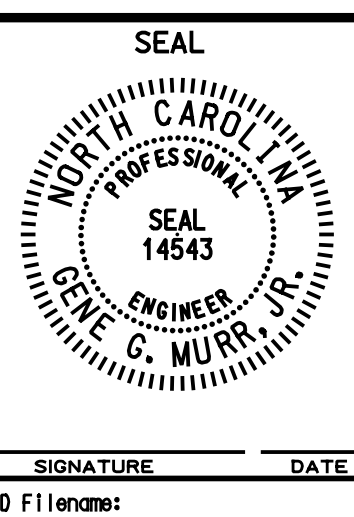
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SCALE	
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1" = 60'	



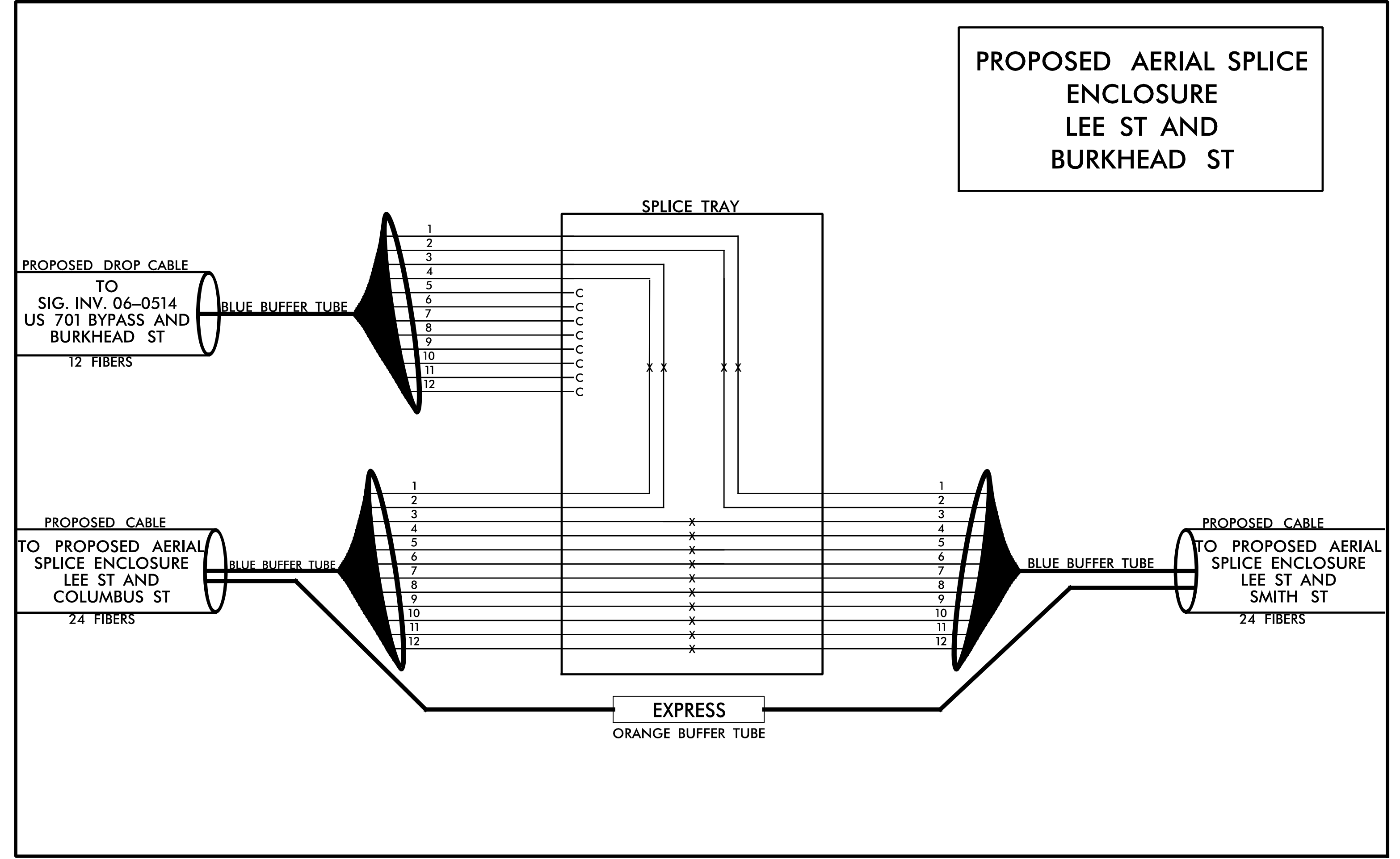
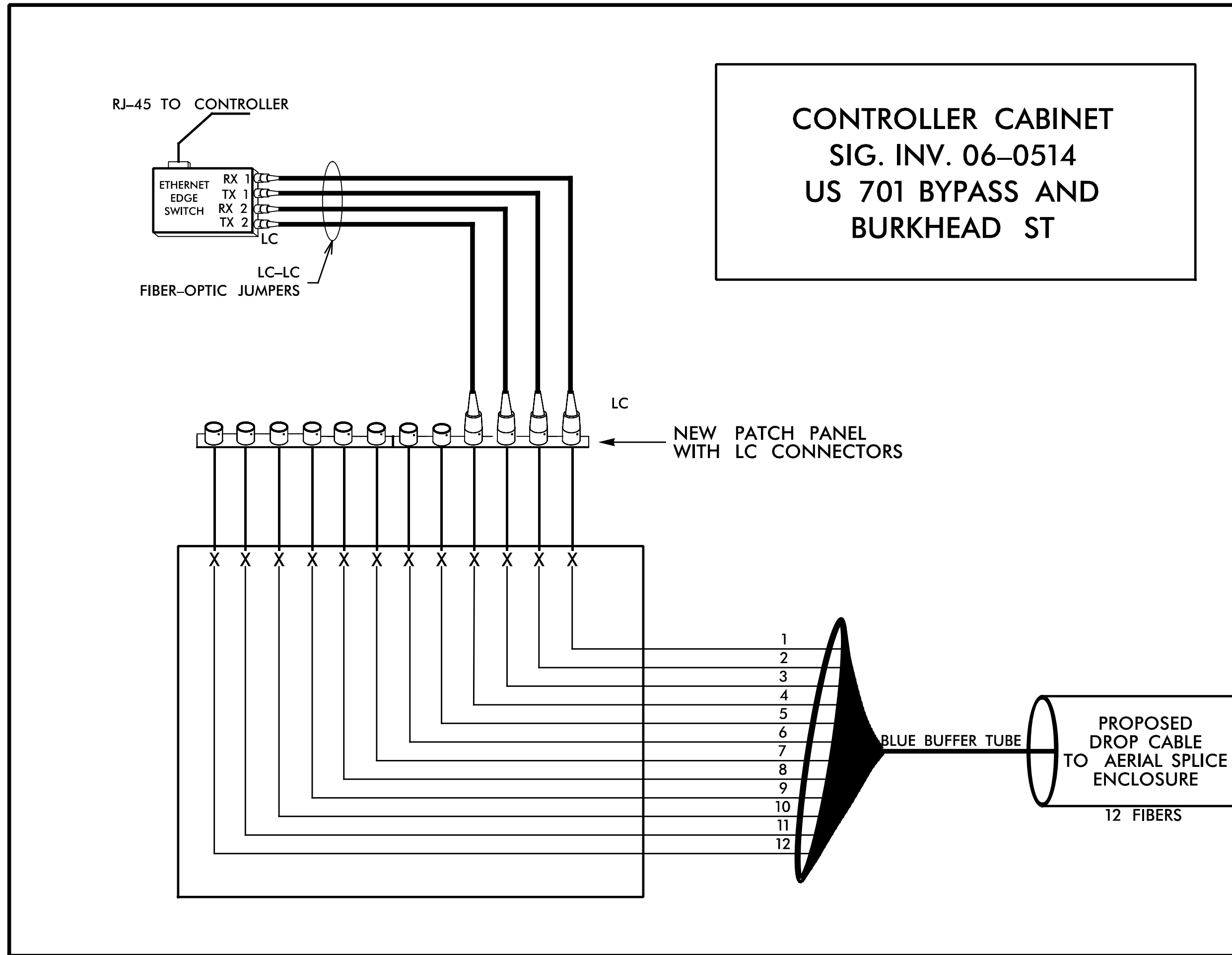


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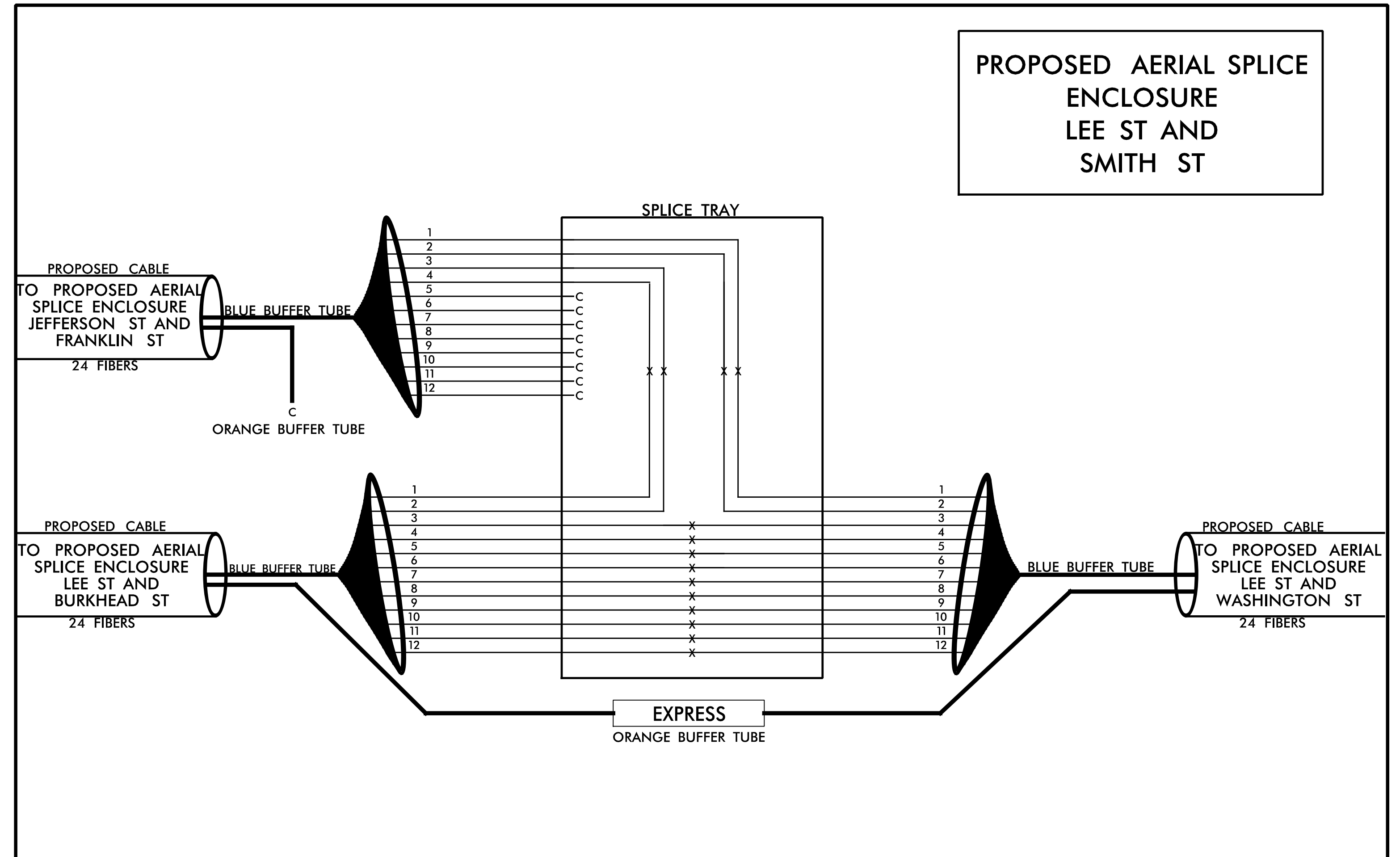


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**PROPOSED AERIAL SPLICE ENCLOSURE  
LEE ST AND  
SMITH ST**

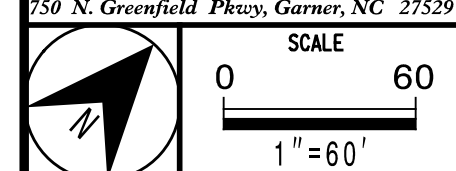
NC Dept of Transportation  
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Final Drawing Date: \_\_\_\_\_  
ITS & Signals Unit

**SEPI**  
Engineering & Construction, Inc.  
1 Glenwood Avenue  
Raleigh, NC 27603  
Tel: 919.789.9977  
Fax: 919.789.9591  
License: C-2197



SPLICE DETAILS	
DIVISION 6	COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020	REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL  
STATE OF NORTH CAROLINA  
PROFESSIONAL ENGINEER  
SEAL 14543  
G. G. MURR, JR.  
SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
CADD File name: \_\_\_\_\_

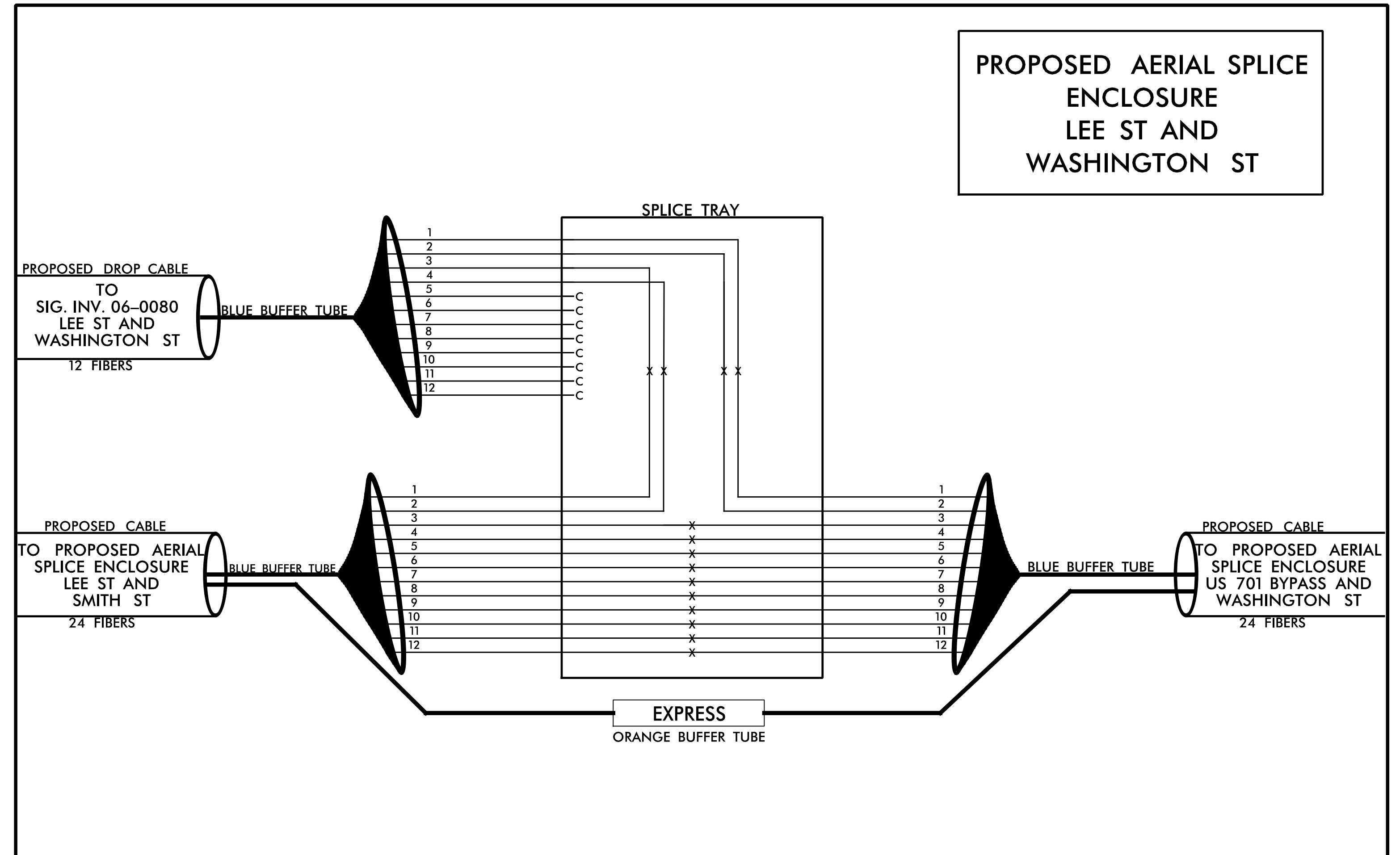
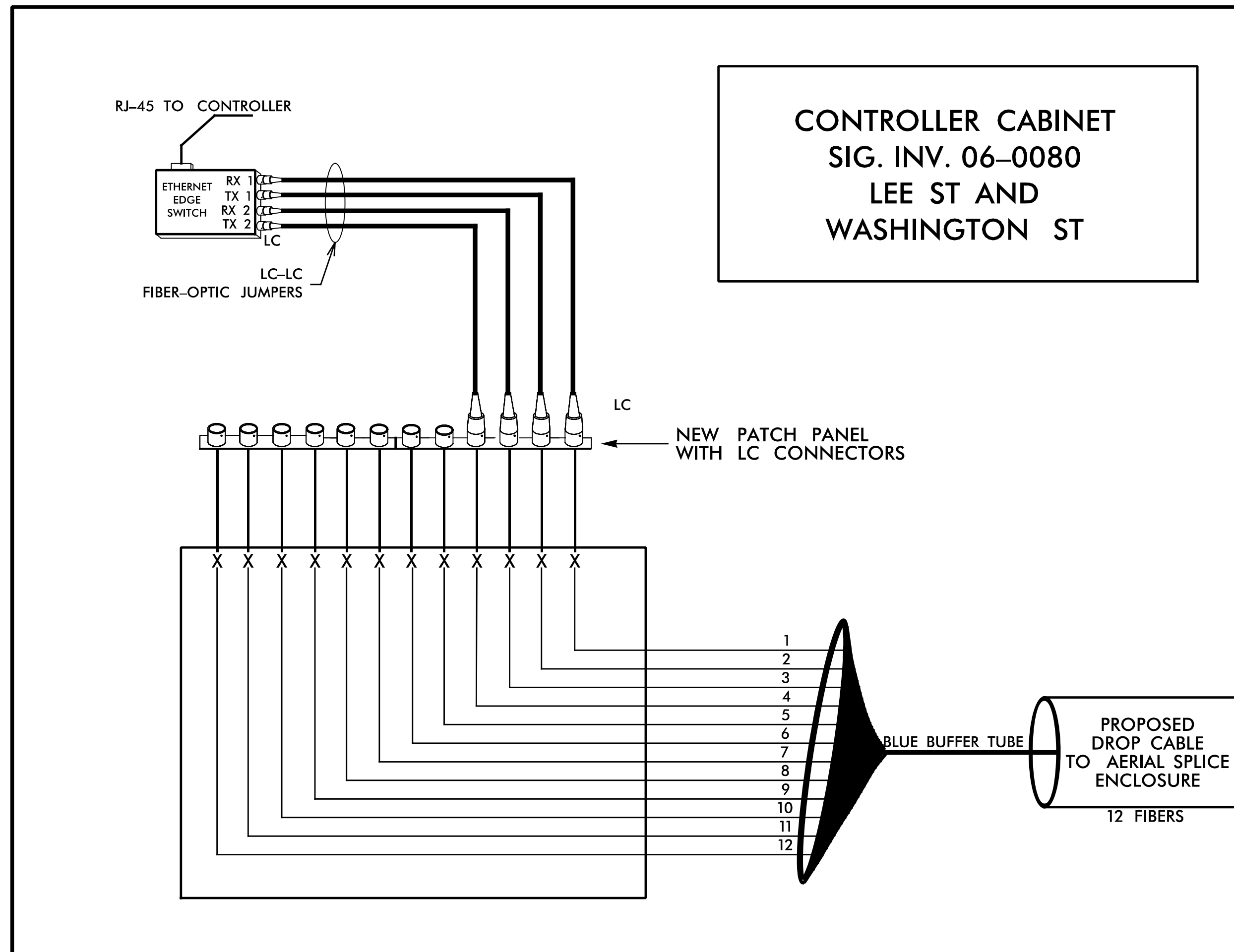


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  - b) DATE
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  - d) NAME OF INDIVIDUAL PERFORMING THE SPLICING
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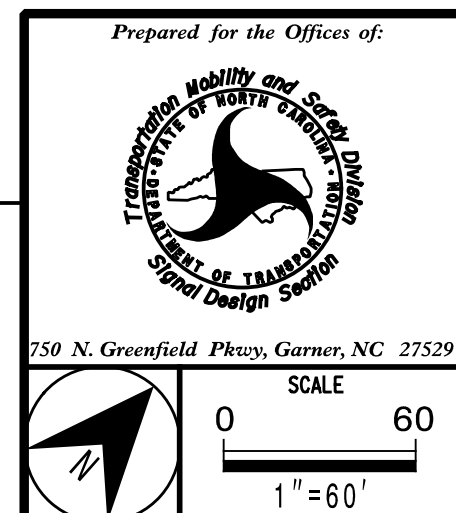
- |                                    |             |   |
|------------------------------------|-------------|---|
| <b>COLOR CODE</b><br>TIA/EIA 598-A |             | X = FUSION SPLICE INDIVIDUAL FIBER  |
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| (2) ORANGE                         | (8) BLACK   |   |
| (3) GREEN                          | (9) YELLOW  | <b>EXPRESS</b> = EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING |
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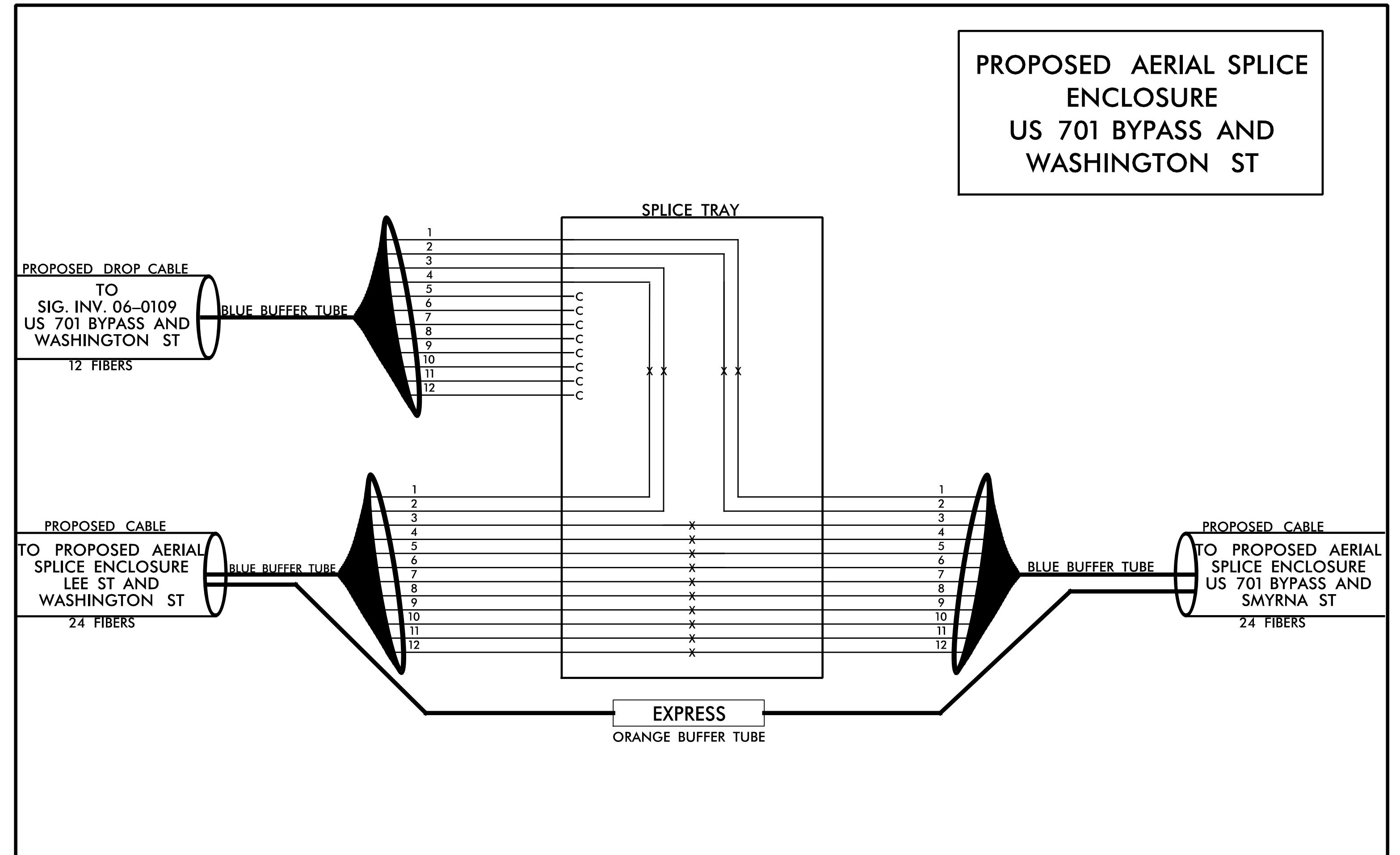
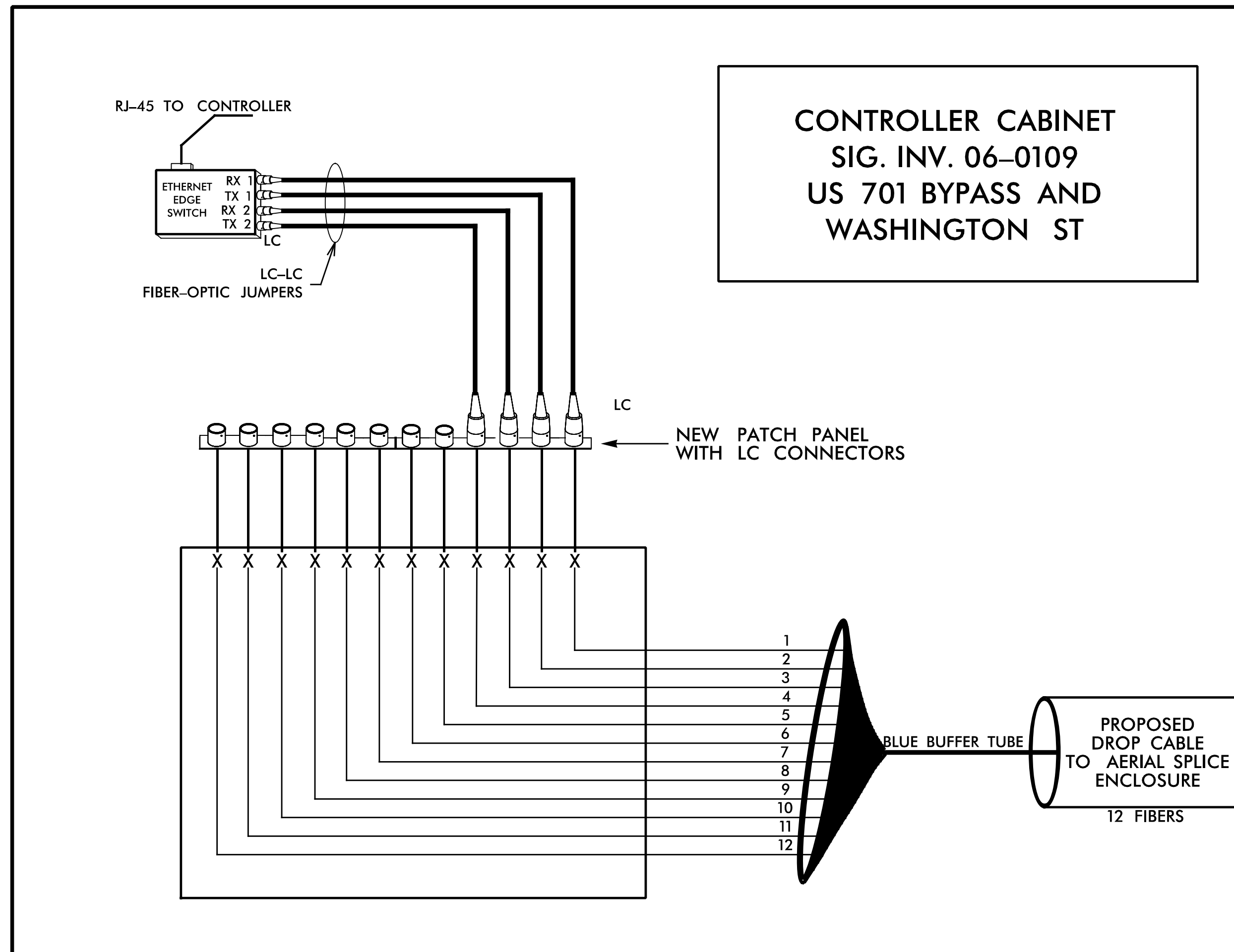
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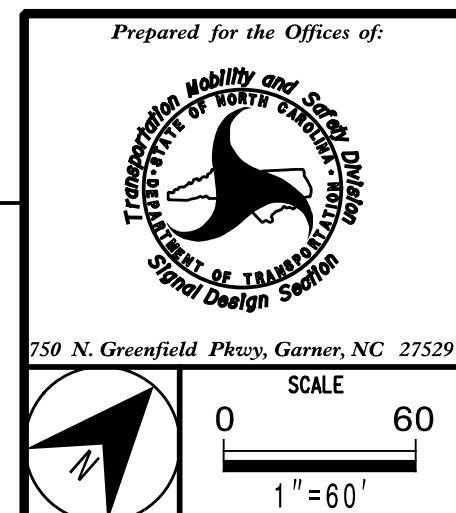
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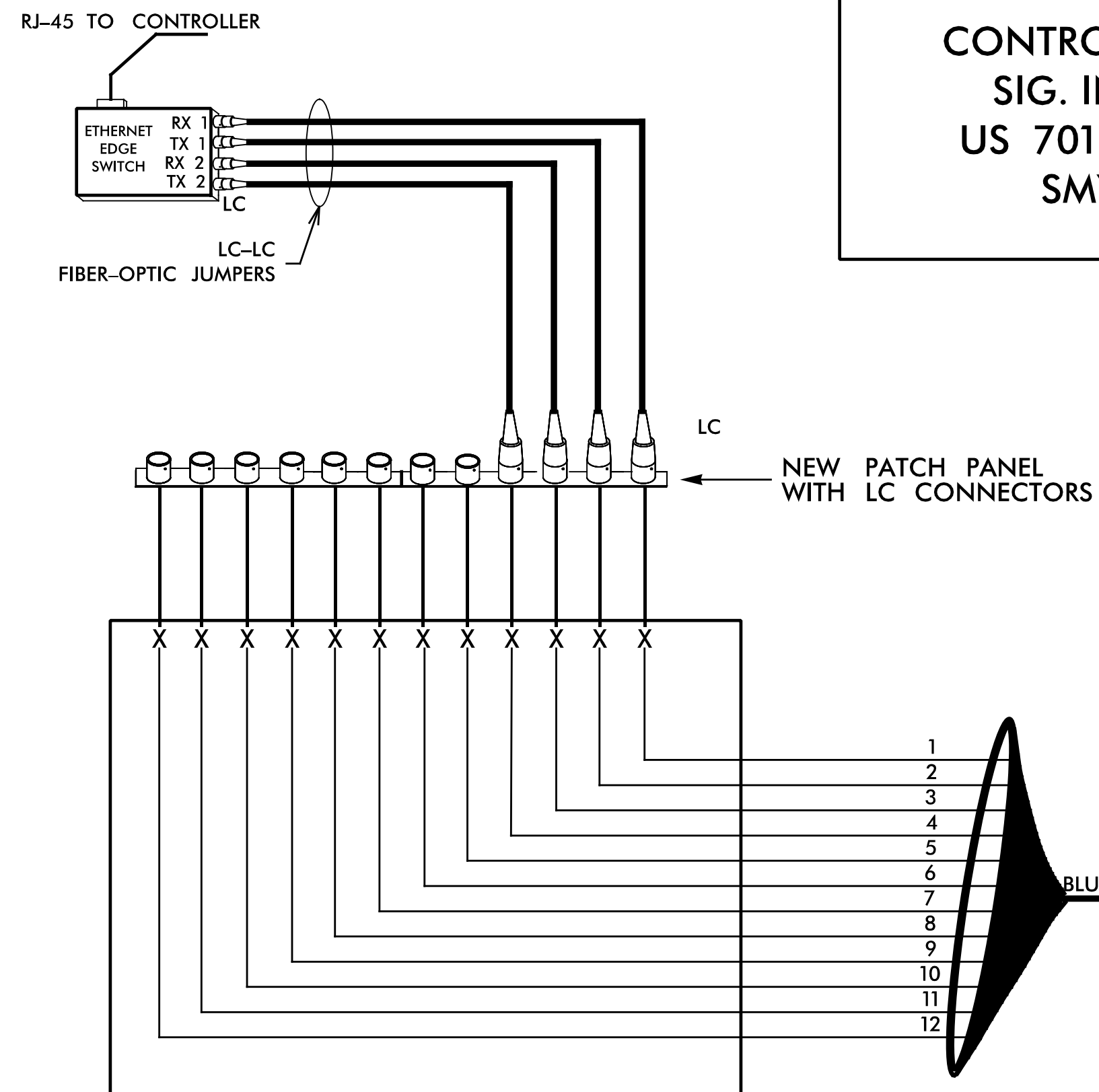
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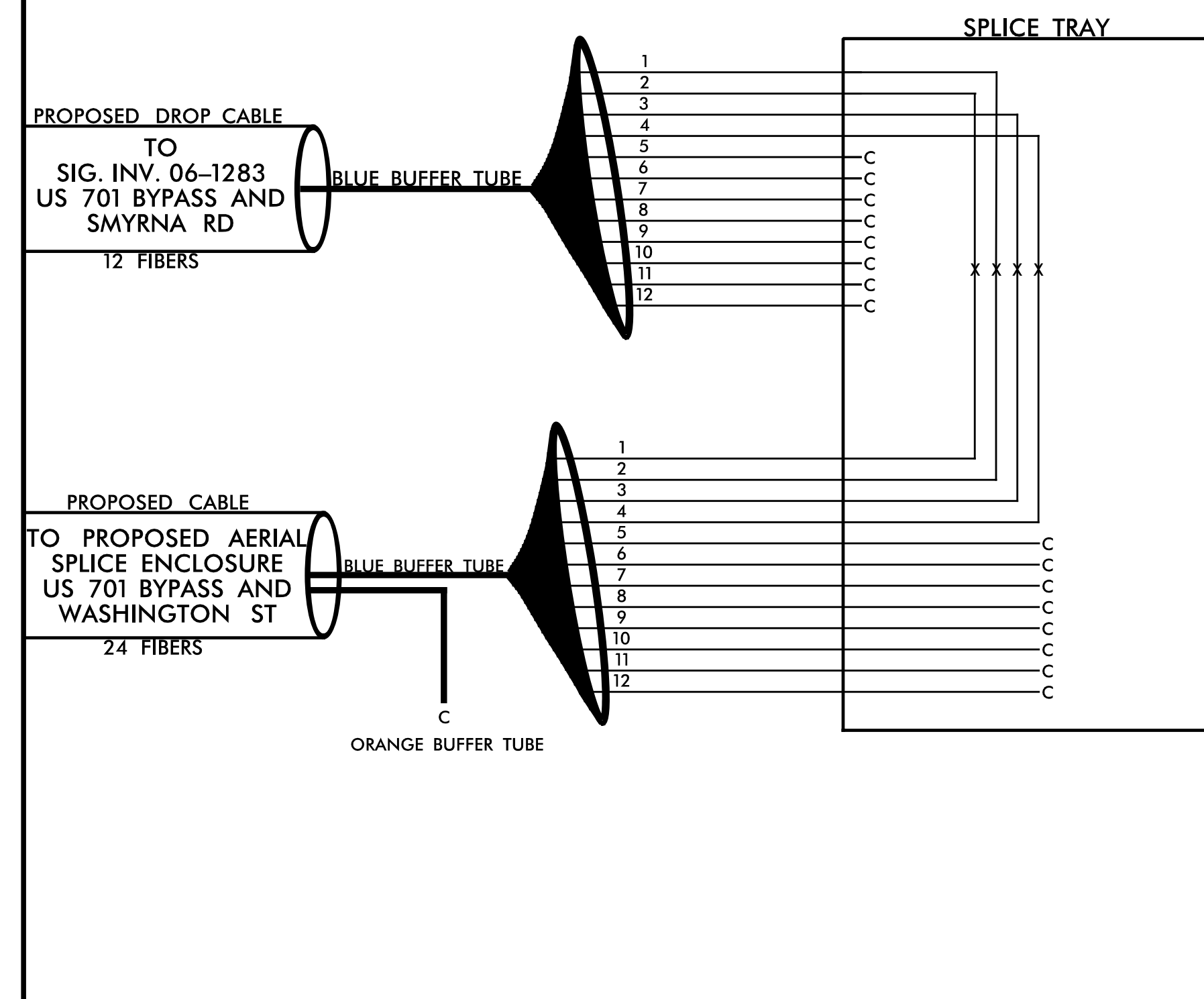
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### CONTROLLER CABINET SIG. INV. 06-1283 US 701 BYPASS AND SMYRNA RD



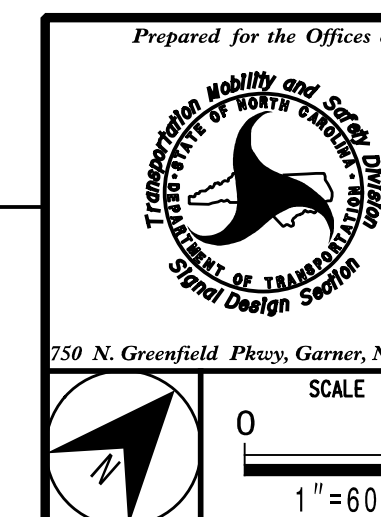
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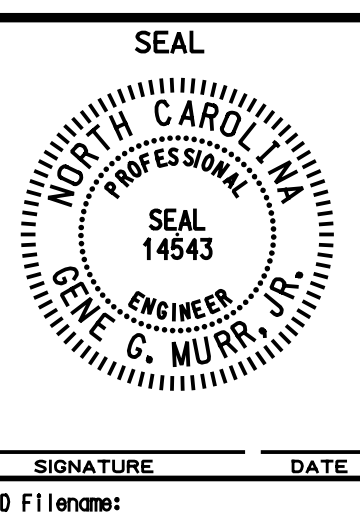
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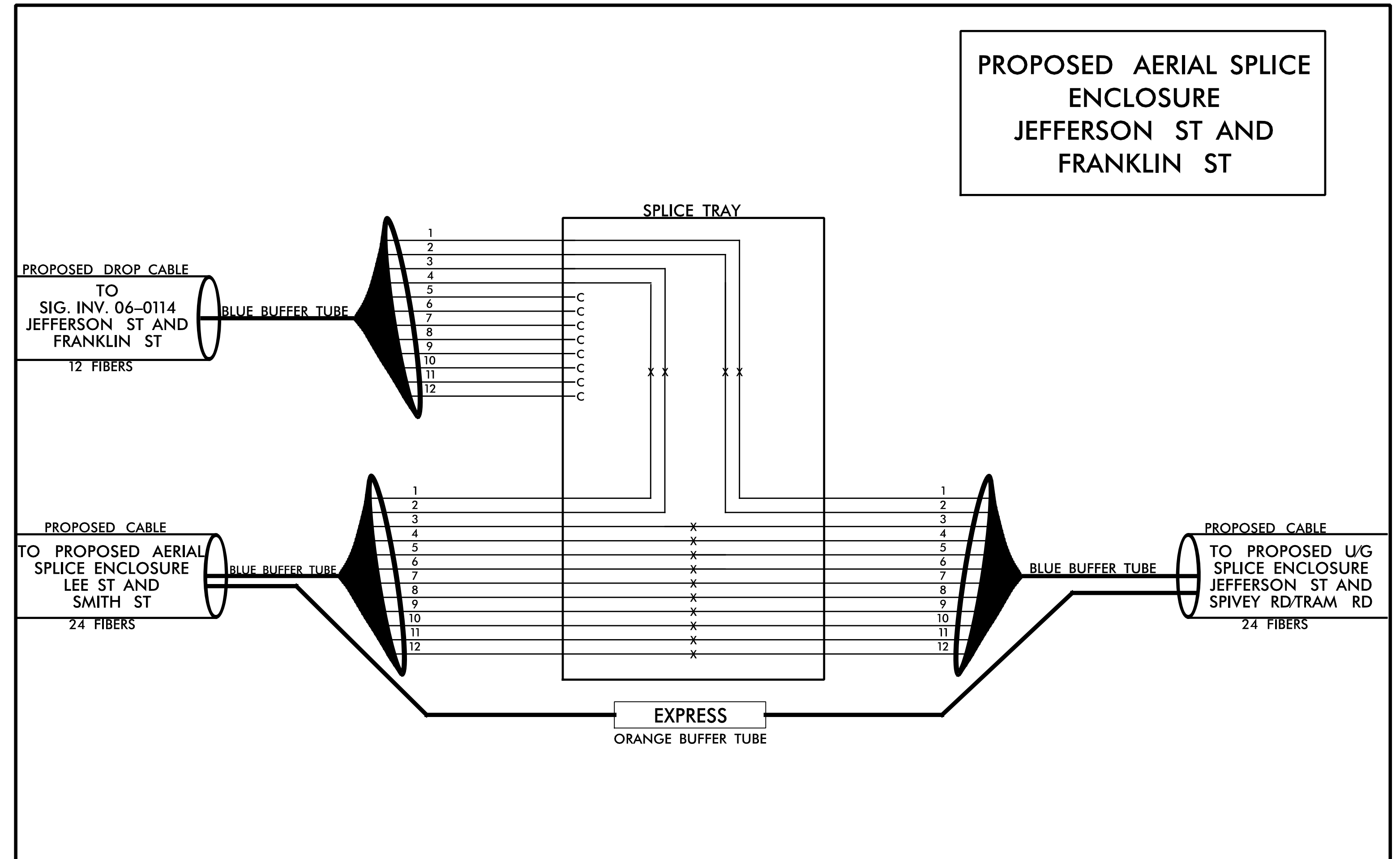
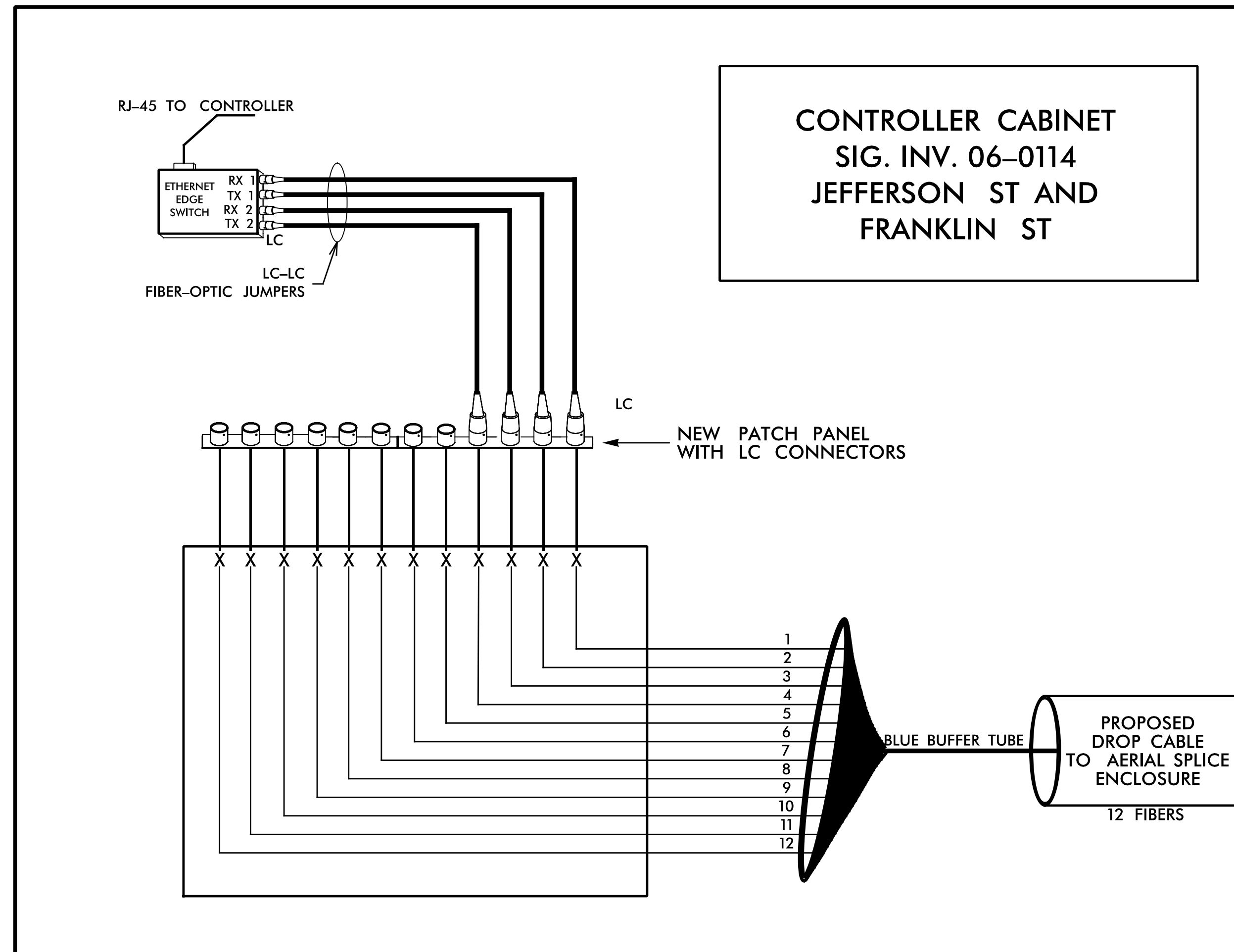
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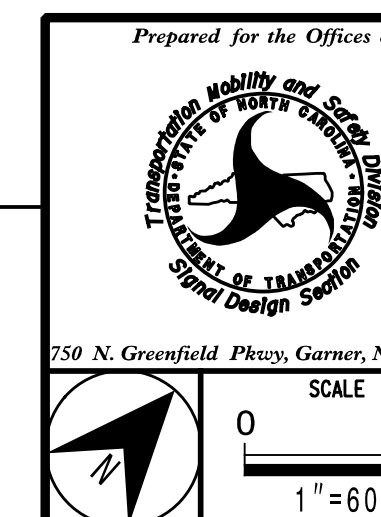
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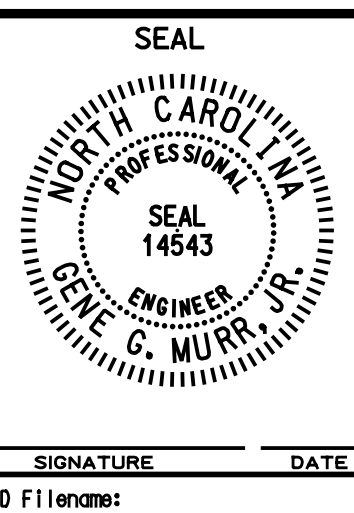
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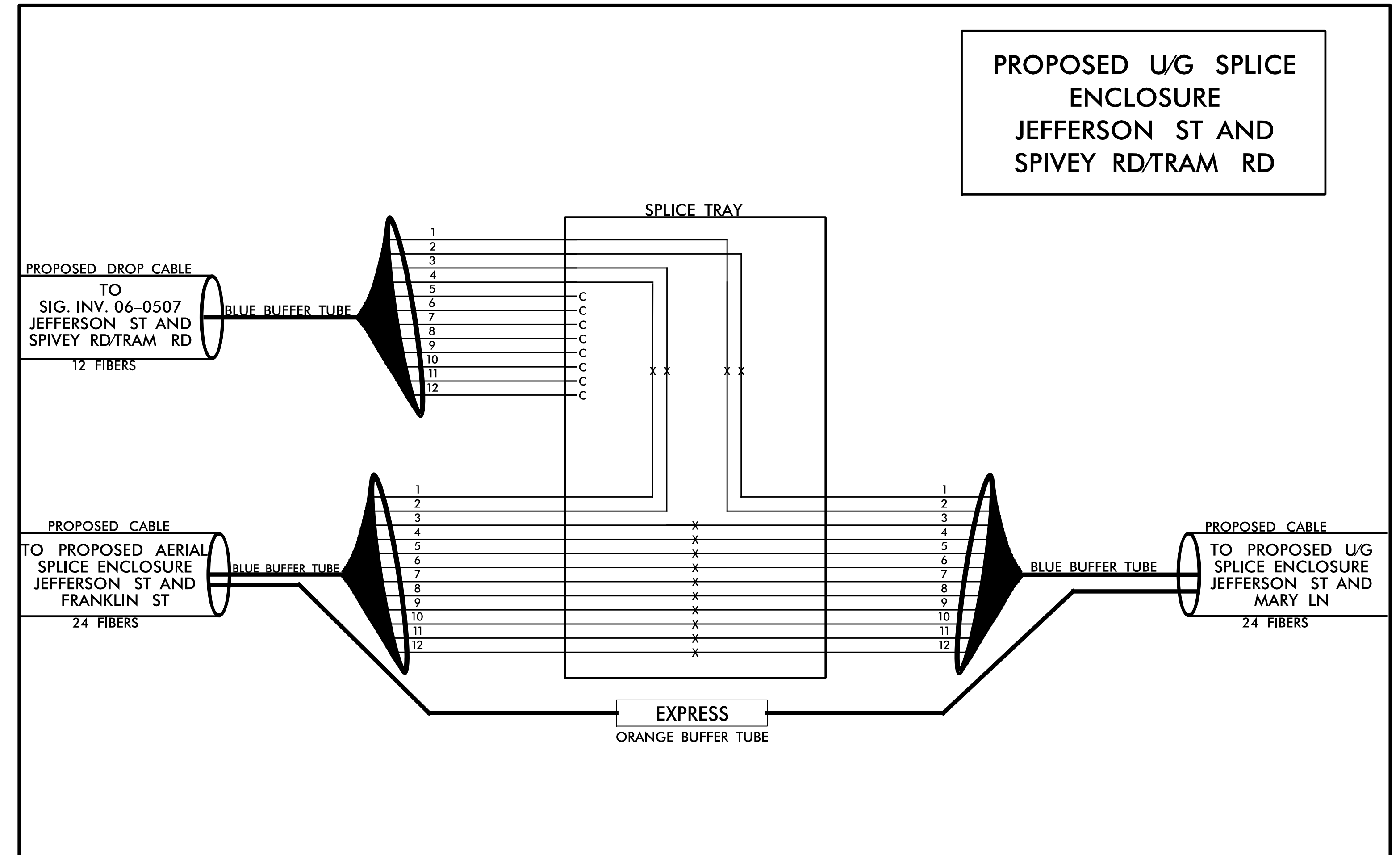
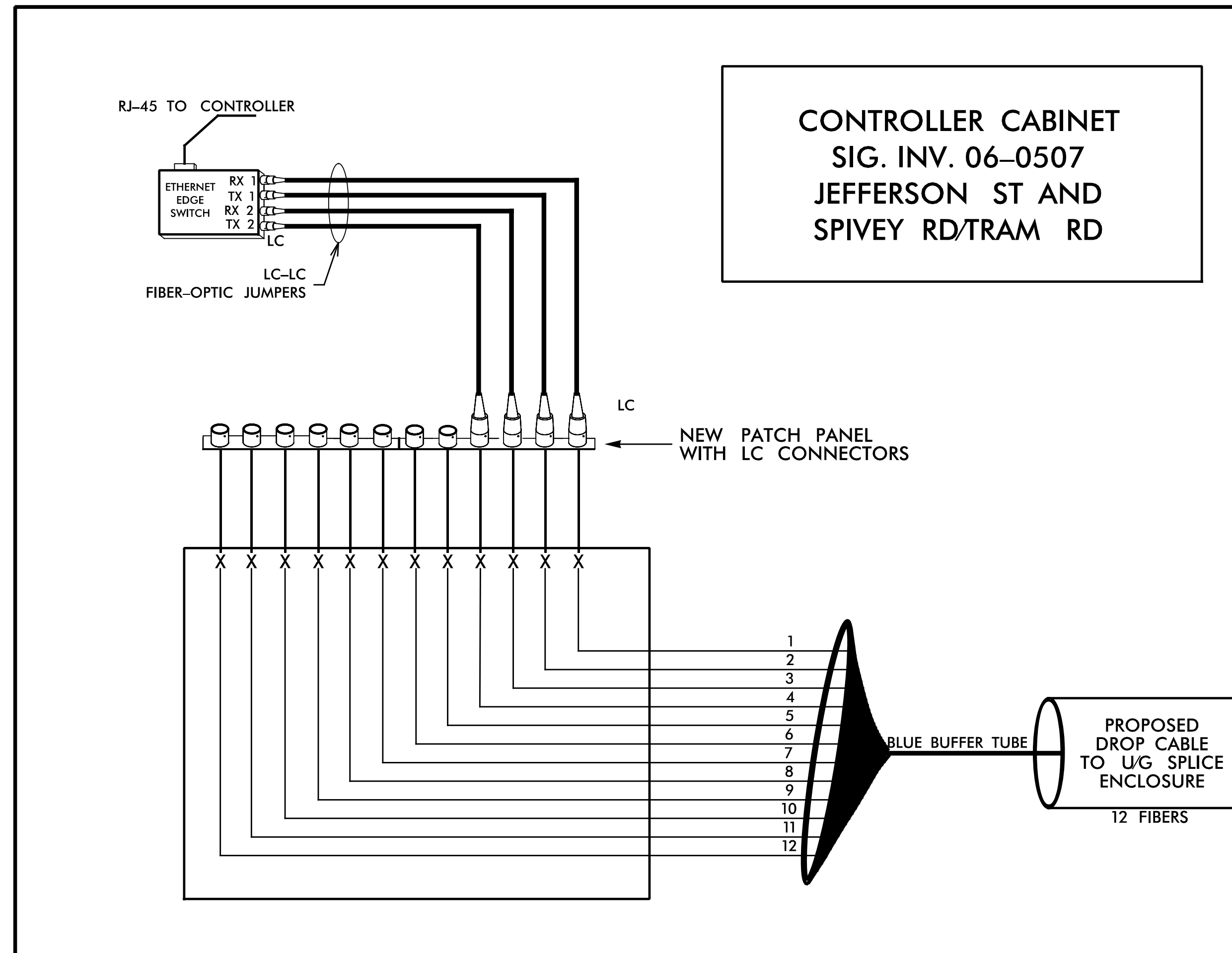


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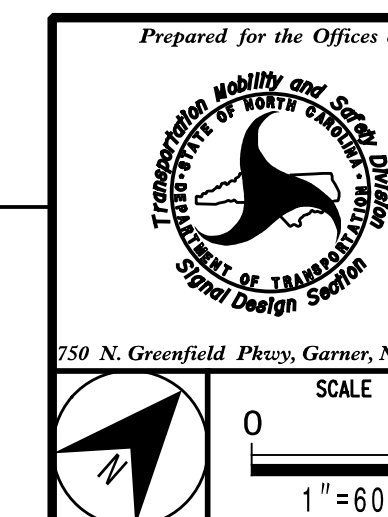
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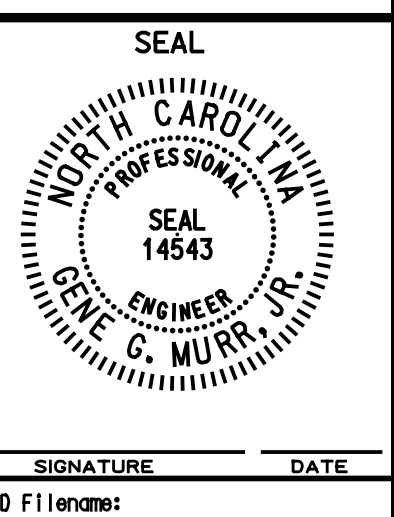
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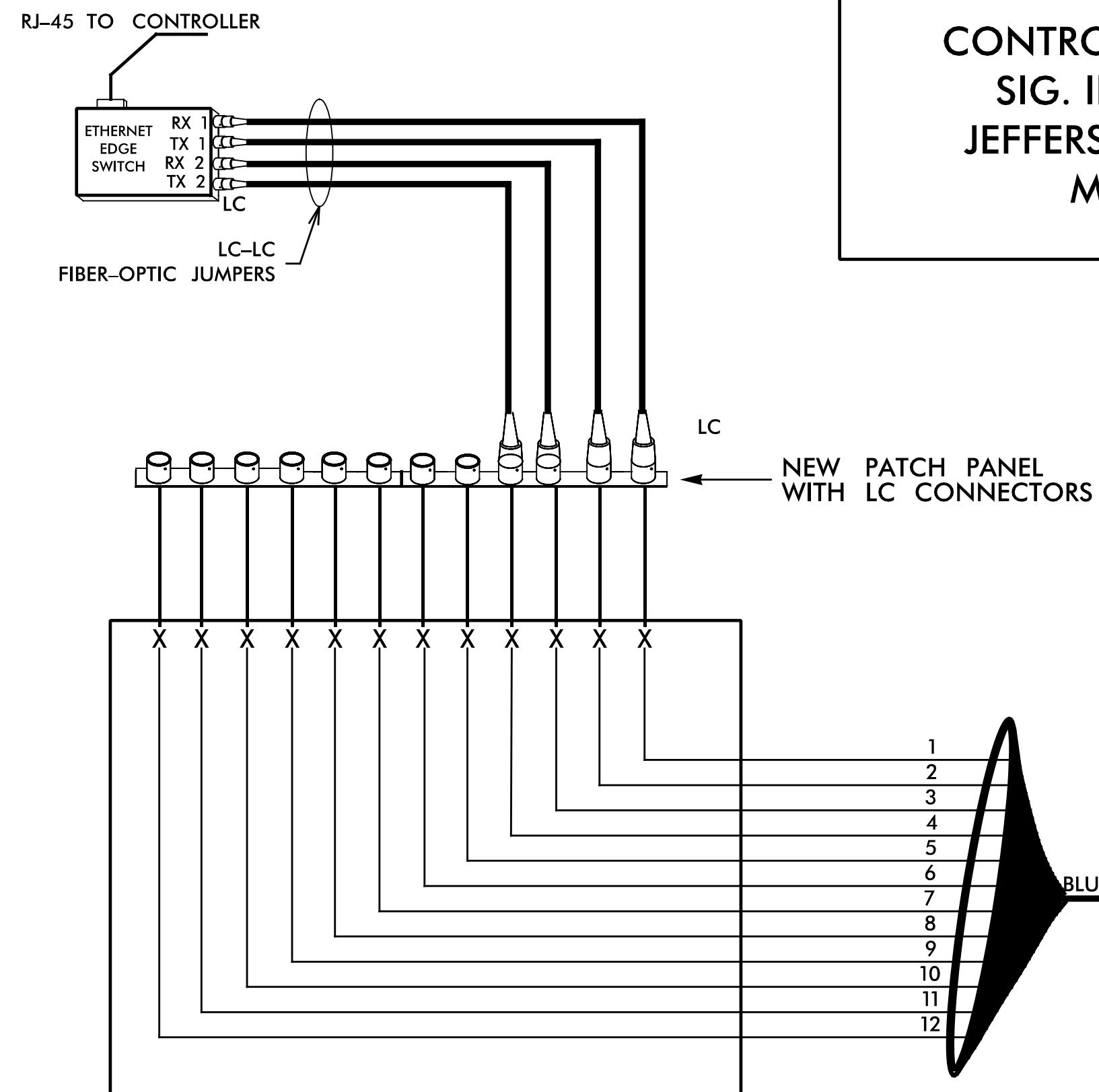
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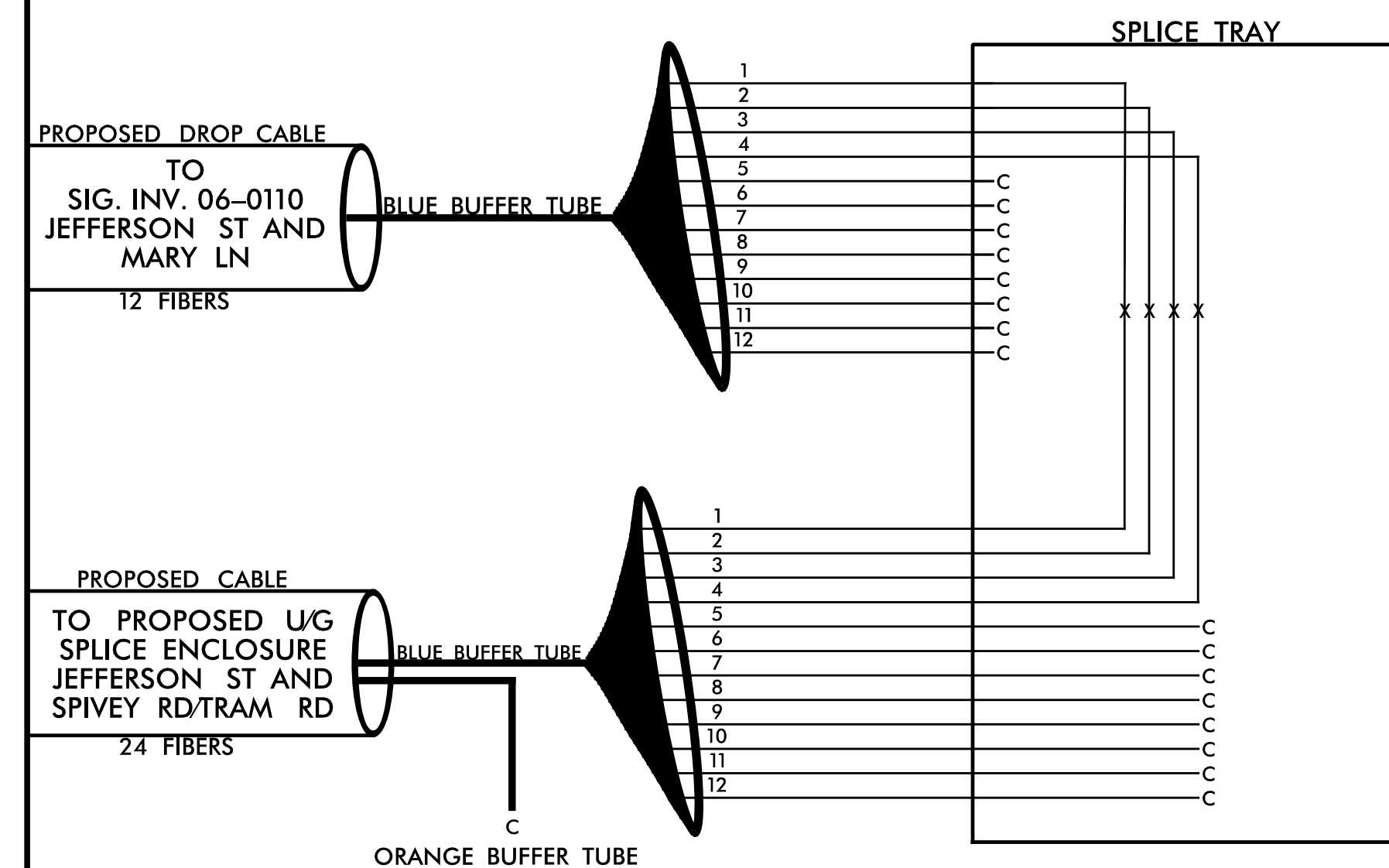
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**CONTROLLER CABINET  
SIG. INV. 06-0110  
JEFFERSON ST AND  
MARY LN**



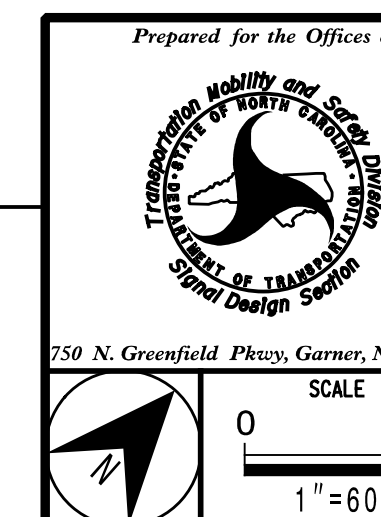
**PROPOSED U/G SPLICE  
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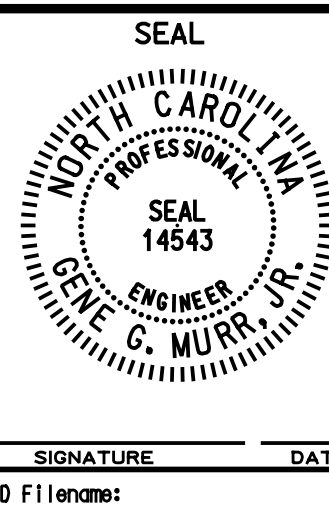
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**COMMUNICATIONS CABLE AND  
CONDUIT ROUTING PLANS**

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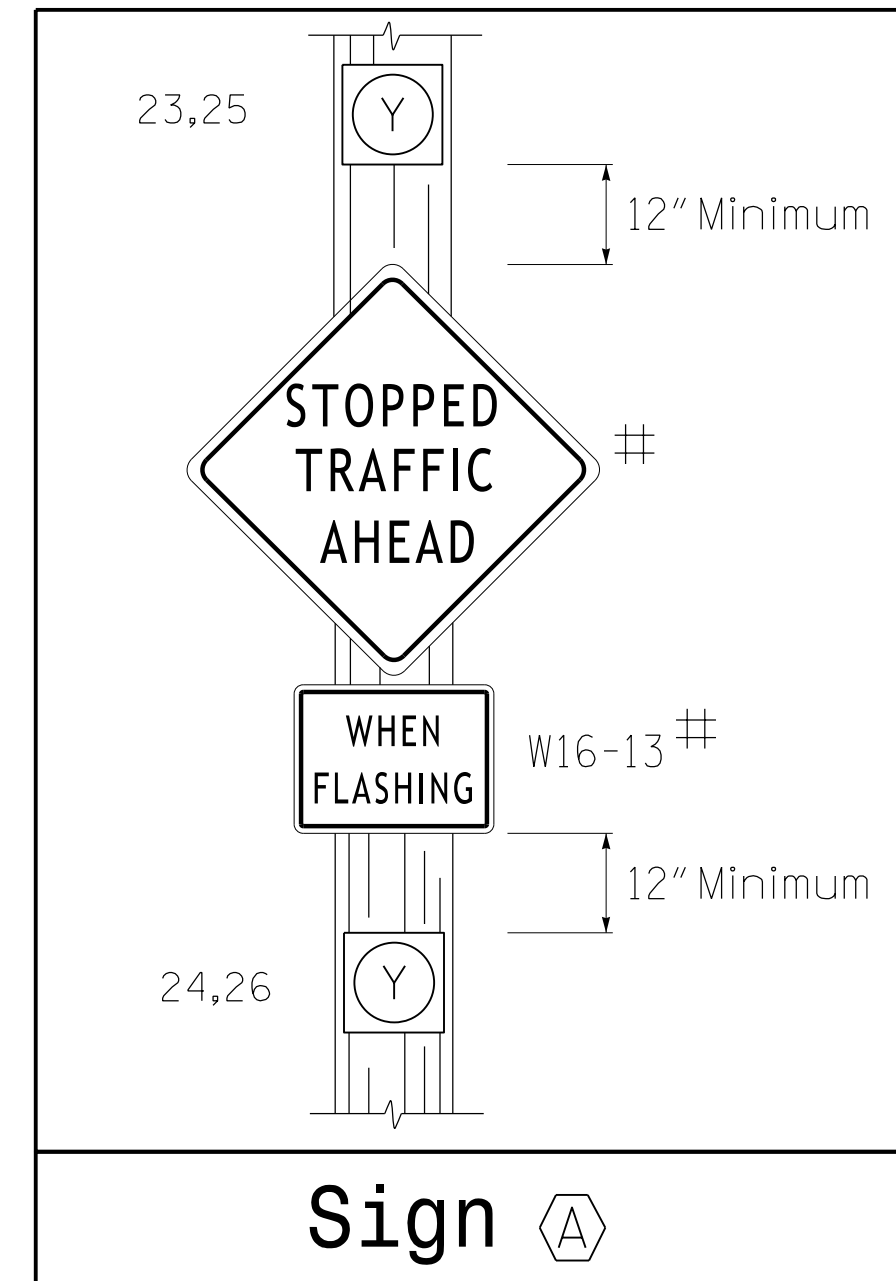
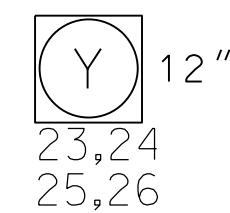


SIGNATURE DATE  
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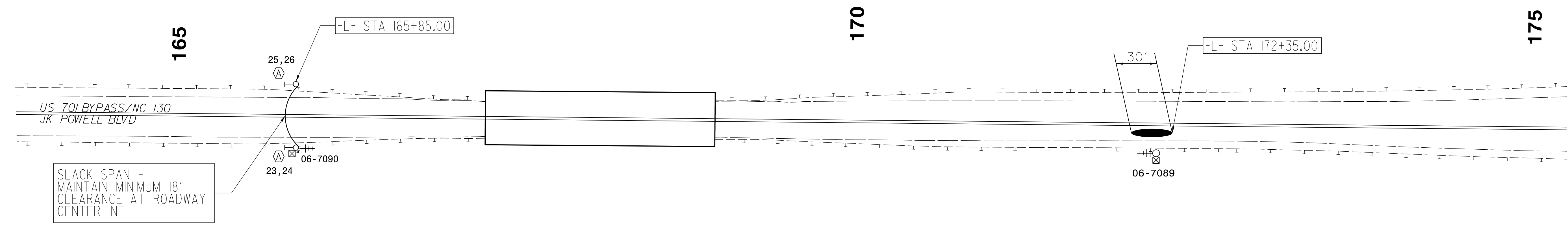
NOTES

- 1) Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- 2) Install new wood pole. Install a 2-inch rigid galvanized steel riser with weatherhead on the wood pole to route coaxial cable to the antenna.
- 3) Reference RDWY STANDARD DRAWINGS "1736 - SPREAD SPECTRUM RADIO" FOR INSTALLATION DETAILS.
- 4) Maintain proper clearance from all utilities per the National Electric Safety Code (NESC).
- 5) Install a beacon controller assembly and cabinet (type f3) with the following modifications:
  - a) equipment shelf;
  - b) convenience outlet;
  - c) NEMA TS-2 power supply, shelf mount;
  - d) exterior disconnect switch on cabinet.
- 6) Set power meter and disconnect on pole.
- 7) Connect and make operational the wireless magnetic vehicle detection system and integrate with the contact closure radio.
- 8) Install lightning arrester, coaxial cable shield grounding and weatherproofing kit.
- 9) The queue detection zone is being provided by embedded wireless magnetic vehicle sensors. Follow manufacturer's instructions to achieve the optimum detection zone as shown on this plan.
- 10) When the Temporary Queue Backup Warning System is removed, return all equipment to the Division 6 Traffic Services Office, 450 Transportation Drive, Fayetteville, NC.

WARNING BEACON TABLE OF OPERATION		
SIGNAL FACE	INTERVAL	
	1	2
23,25	ON	OFF
24,26	OFF	ON



#SIGN (48" X 48") SHOULD BE BLACK LETTERS ON ORANGE BACKGROUND



MAGNETIC VEHICLE DETECTION ZONE PLACEMENT & TIMING PARAMETERS			
SIZE (FT)	STATION	DELAY (S)	EXTEND (S)
6'X30'	-L- STA 172+35.00	15	10

**LEGEND**

- ++ WIRELESS ANTENNA
- ☒ NEW CABINET (TYPE F3) WITH WIRELESS MAGNETIC VEHICLE DETECTION SYSTEM AND CONTACT CLOSURE RADIO
- ☒\* NEW CABINET (TYPE F3) WITH BEACON CONTROLLER ASSEMBLY AND RADIO RECEIVER EQUIPMENT
- NEW CLASS 3, 40' WOOD POLE
- WIRELESS MAGNETIC SENSOR VEHICLE DETECTION ZONE

TEMPORARY QUEUE BACKUP WARNING SYSTEM

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

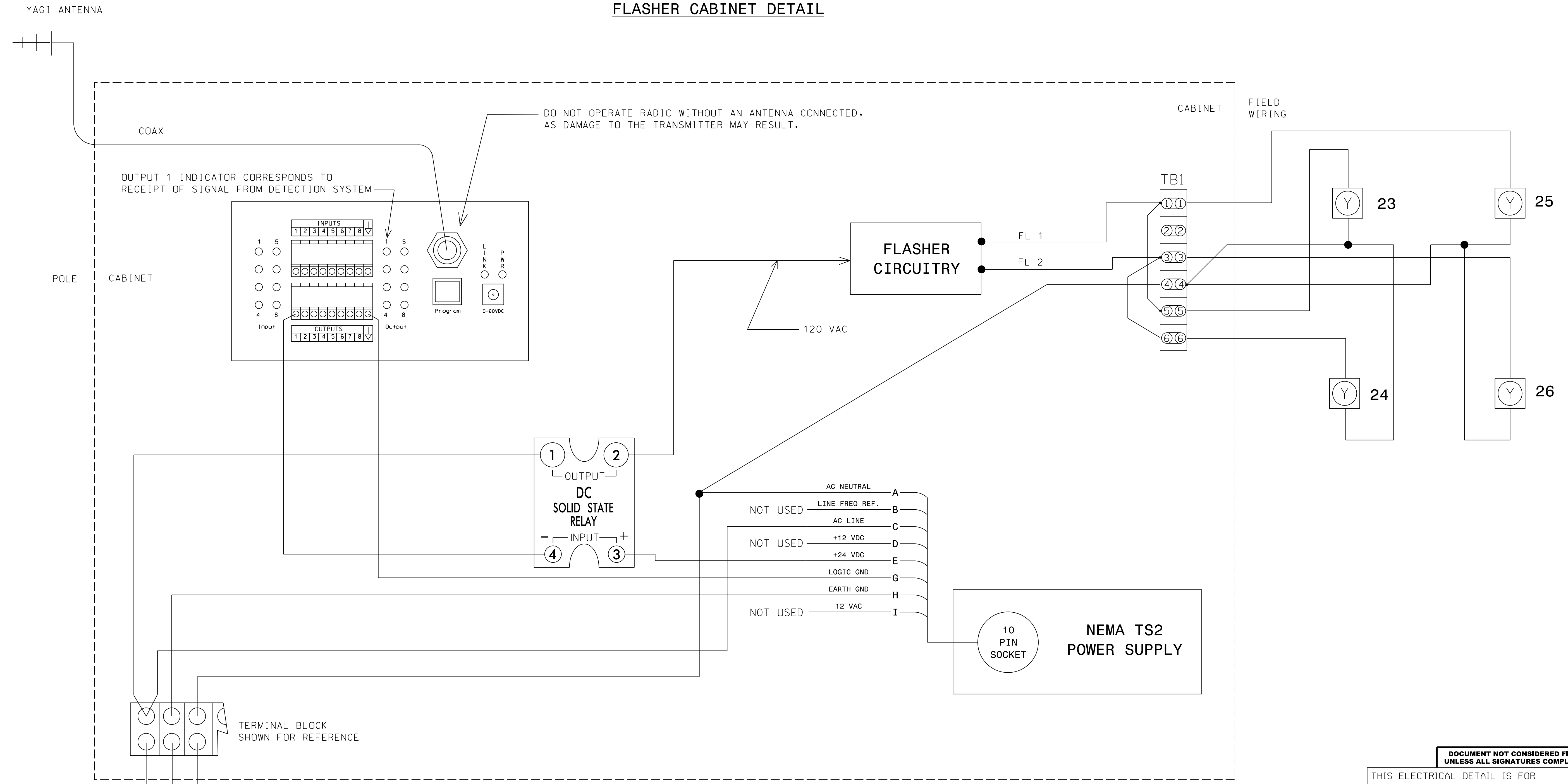
		<p><b>Advanced Queue Detection System</b> on <b>US 701/NC 130 (S.J.K. Powell Blvd)</b></p> <p>Division 6 Columbus County Whiteville</p> <p>PLAN DATE: April 2020 REVIEWED BY: G.G. Murr, Jr.</p> <p>PREPARED BY: M. Ishak REVIEWED BY:</p>		<p>SEAL</p>					
<p>750 N. Greenfield Pkwy, Garner, NC 27529</p> <p>SCALE: 0 40 1" = 40'</p>		<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS	INIT.	DATE				<p>SIGNATURE _____ DATE _____</p> <p>SIG. INVENTORY NO. N/A</p>
REVISIONS	INIT.	DATE							

**SEPI**  
Engineering & Construction, Inc.

1 Glenwood Avenue  
Raleigh, NC 27603  
Tel: 919.789.9977  
Fax: 919.789.9591  
License: C-2197

5/14/2020  
 R-5020B\_Queue Backup\_Sht ITS 1.dgn  
 USER: MCPPLE

FLASHER CABINET DETAIL



OUTPUT 1 INDICATOR CORRESPONDS TO RECEIPT OF SIGNAL FROM DETECTION SYSTEM

DO NOT OPERATE RADIO WITHOUT AN ANTENNA CONNECTED, AS DAMAGE TO THE TRANSMITTER MAY RESULT.

AC NEUTRAL A  
 LINE FREQ REF. B  
 AC LINE C  
 +12 VDC D  
 +24 VDC E  
 LOGIC GND G  
 EARTH GND H  
 12 VAC I

NOTES

1. Install a wireless contact closure radio modem in a Type F3 Beacon Controller Cabinet.
2. Install DC solid state relay (25 Amp AC output) in Type F3 cabinet that will take a DC contact closure from the radio and switch the utility 120 VAC to the flasher circuitry. This new relay will require rewiring the normal input power to the flasher circuit, as shown above. Recommended way to re-wire input power: 1) remove the 120 VAC wire going to the flasher from the input power terminal block and reattach it to pin 2 of the solid state relay. 2) Connect a new wire between the AC+ terminal on the input power block and pin 1 on the solid state relay.
3. Integrate the flasher circuitry and the wireless contact closure radio modem such that when a radio signal is received, the flasher circuitry will flash the signs as shown on Sheet ITS-1.
4. Install a 15A non-GFCI duplex receptacle in the F3 cabinet.
5. Plug 120 VAC wall cube supplied with radio into radio and then into the duplex receptacle.
6. Install a TS-2 Power Supply as shown above.
7. Program the wireless contact closure radio modem in this location as a slave.
8. Install flasher circuitry such that heads 23 and 25 flash together and heads 24 and 26 flash together, in a wig/wag manner.
9. Perform installation according to manufacturer's directions and NCDOT engineer approved mounting locations to accomplish the flashing schemes shown on Sheet ITS-1.

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 UNLESS ALL SIGNATURES COMPLETED

THIS ELECTRICAL DETAIL IS FOR  
 TEMPORARY QUEUE BACKUP WARNING SYSTEM  
 DESIGNED: April 2020  
 SEALED: 5/15/20  
 REVISED: N/A

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ELECTRICAL DETAIL SHEET 2 OF 2

ELECTRICAL AND PROGRAMMING DETAILS FOR: **Advanced Queue Detection System on US 701/NC 130 (S.J.K. Powell Blvd)**

Division 6 Columbus County Whiteville

PLAN DATE: April 2020 REVIEWED BY:

PREPARED BY: J T Rowe REVIEWED BY:

REVISIONS	INIT.	DATE

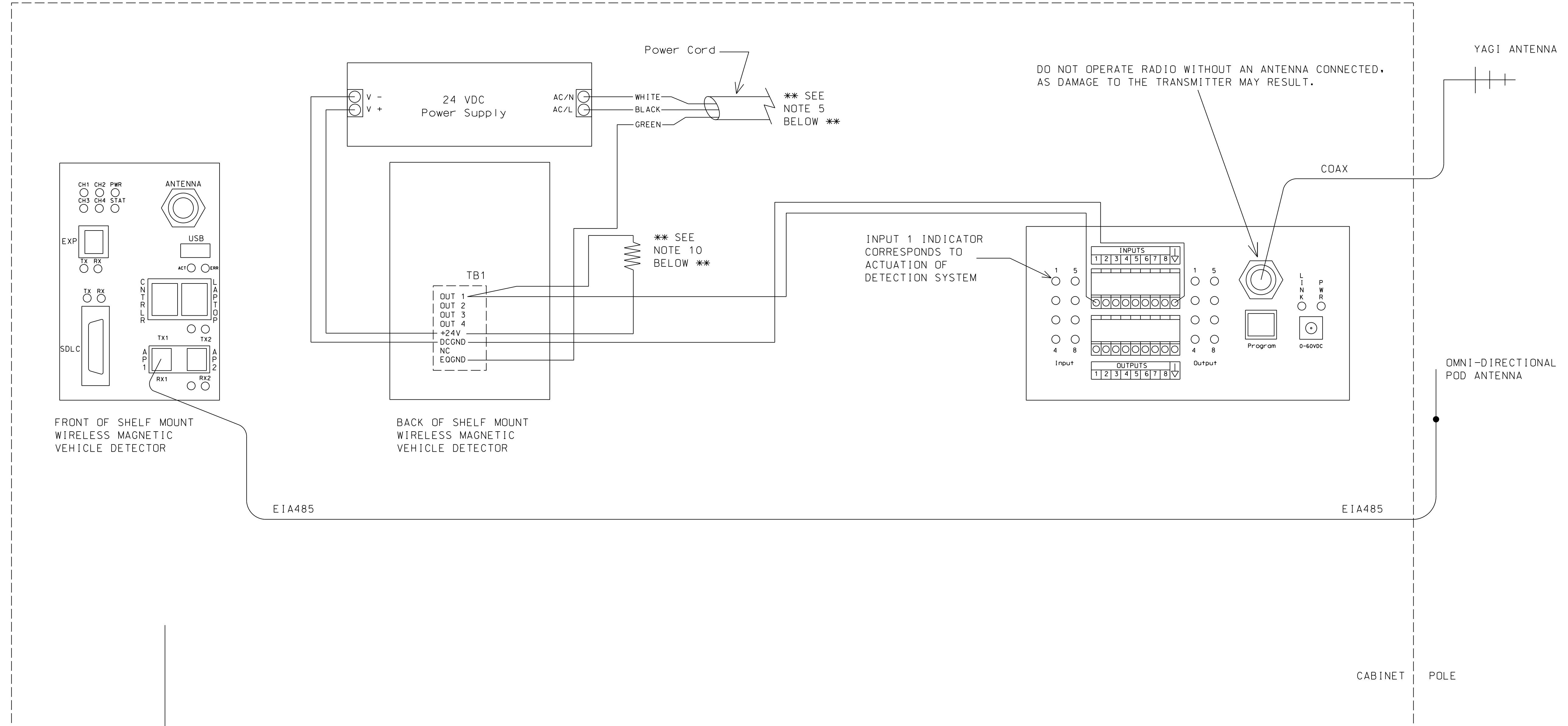
SIGNATURE DATE

SIG. INVENTORY NO. N/A

SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 J. T. ROWE  
 008453

5/15/2020  
 ...:MagNetic Sensors and Flashers.electr:local\_20200xyz.dgn  
 USER:MCapple

WIRELESS MAGNETIC SENSOR VEHICLE DETECTION CABINET DETAIL



WIRELESS MAGNETIC SENSOR VEHICLE DETECTION CABINET

NOTES

1. Install a wireless magnetic sensor vehicle detection system for vehicle detection as shown on Sheet ITS-1 according to the manufacturer's instructions. Install a wireless contact closure radio to communicate to the flasher location as shown on Sheet ITS-1 according to the manufacturer's instructions. Integrate the detection system and the wireless contact closure radio modem such that an output radio signal is transmitted to the remote flasher cabinet as required by Sheet ITS-1.
2. Detection system and radio are located in a Type F3 Beacon Controller, with the flasher unit being unused. The unused flasher unit may be removed.
3. Install a 15 A non-GFCI duplex receptacle in the F3 cabinet.
4. Terminal block designations shown are for an RGA, INC. dual circuit NEMA flasher cabinet, RGA DWG. NO. GC-NCF3-TYPICAL. (DOT NO. 609024300).
5. Plug 120 VAC wall cube supplied with radio into radio and then into the duplex receptacle.
6. Attach detector's power cable on the power supply as shown above, and insert the plug end into the duplex receptacle.
7. Program the wireless contact closure radio modem in this location as a master.
8. Program call delay time and extend time in the detection system as specified on Sheet ITS-1.
9. Perform installation according to manufacturers' directions and NCDOT engineer approved mounting locations to accomplish the detection schemes shown on Sheet ITS-1.
10. Install 4.7 Kohm resistor (0.25 W min) as shown above. This resistor is required to pull up the open collector output of the vehicle detector.

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THIS ELECTRICAL DETAIL IS FOR TEMPORARY QUEUE BACKUP WARNING SYSTEM  
 DESIGNED: April 2020  
 SEALED: 5/15/20  
 REVISED: N/A

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 License: C-2197

ELECTRICAL DETAIL SHEET 1 OF 2

	<b>Advanced Queue Detection System</b> ON US 701/NC 130 (S.J.K. Powell Blvd)		SEAL 
	Division 6 PLAN DATE: April 2020 PREPARED BY: J T Rowe	Columbus County REVIEWED BY: REVIEWED BY:	
REVISIONS			SIGNATURE DATE N/A

5/15/2020  
 Wireless Magnetic Sensors and Flasher Cabinet Detail.dgn  
 USER: JCR/epi