

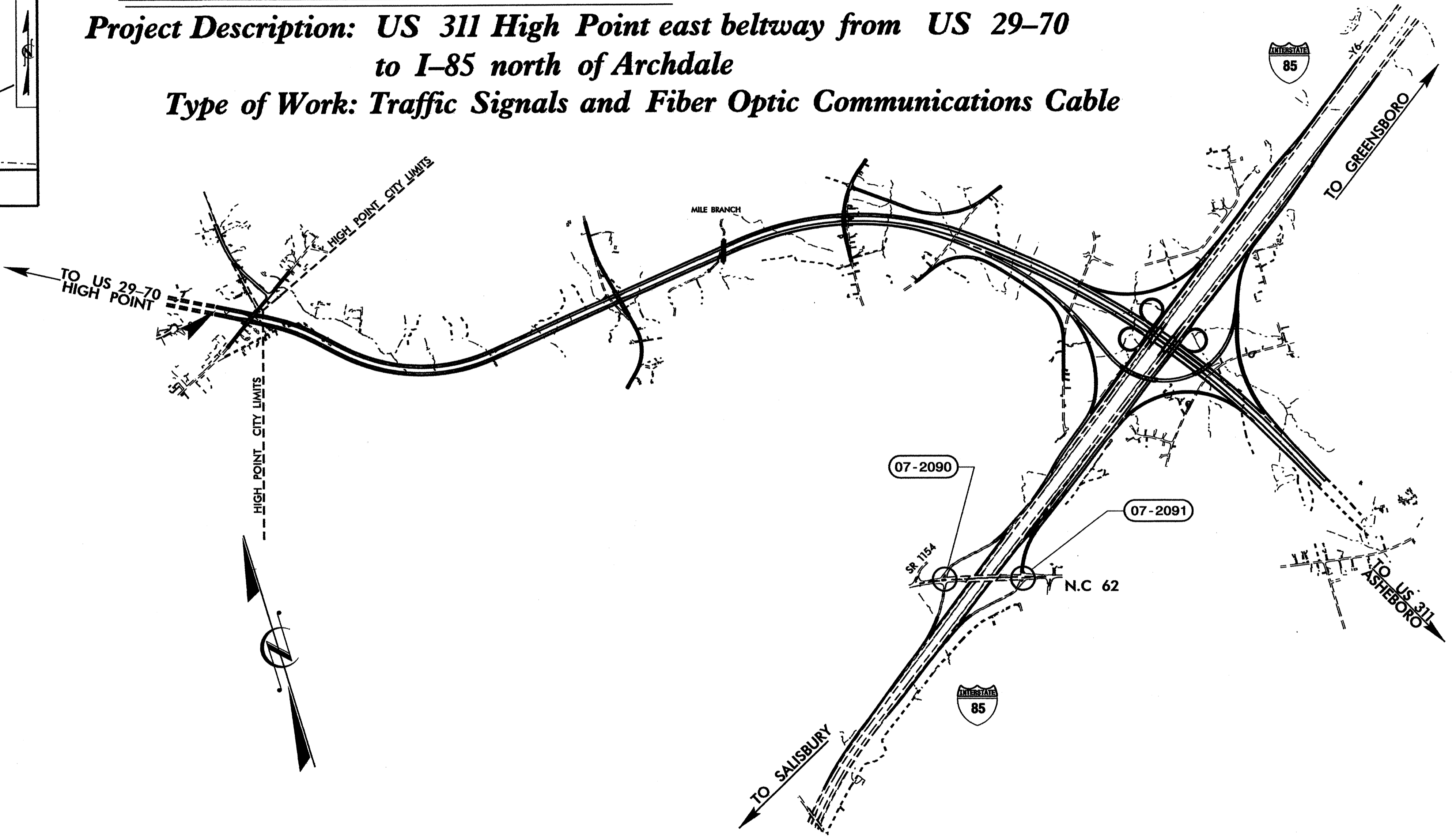
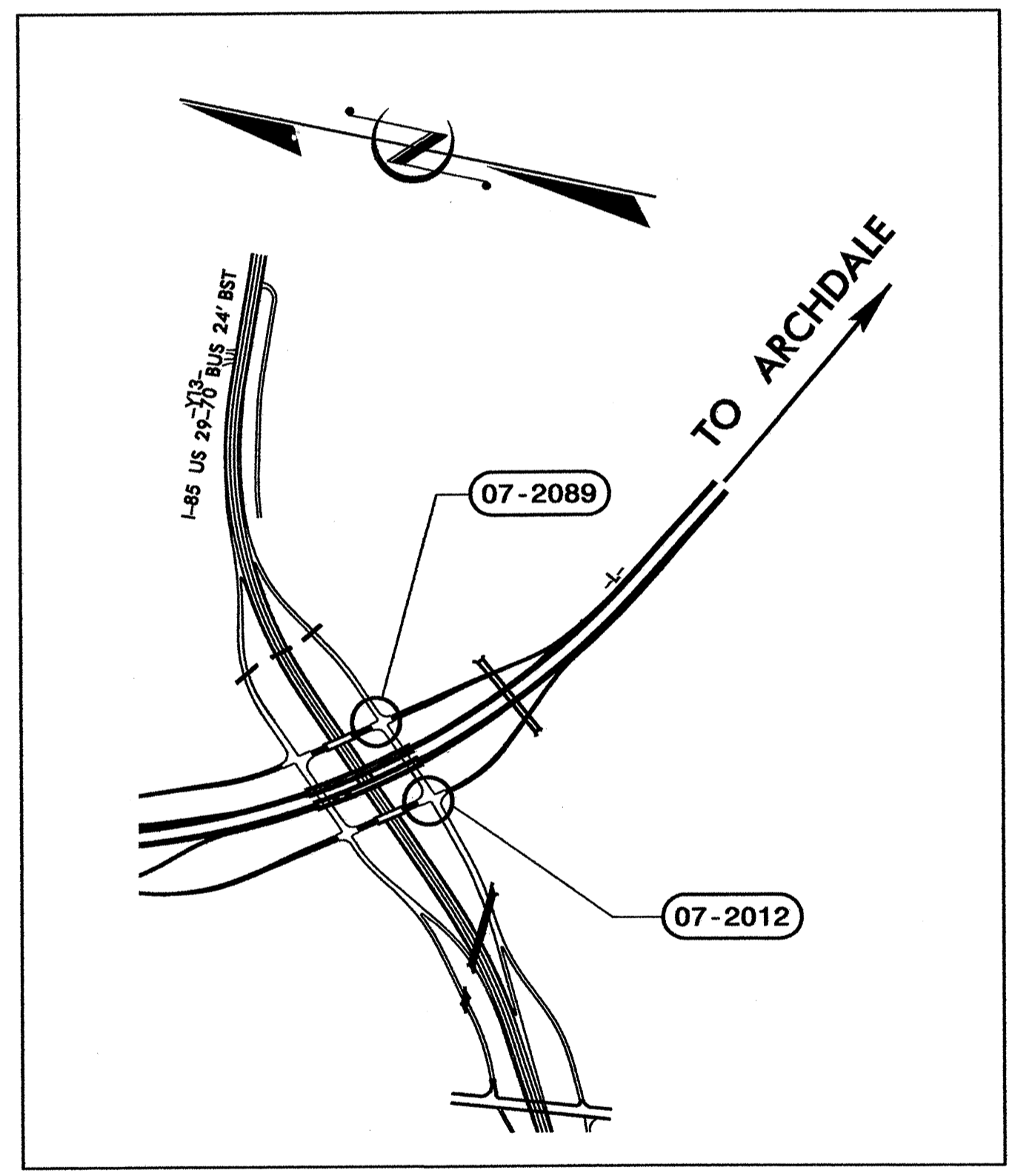
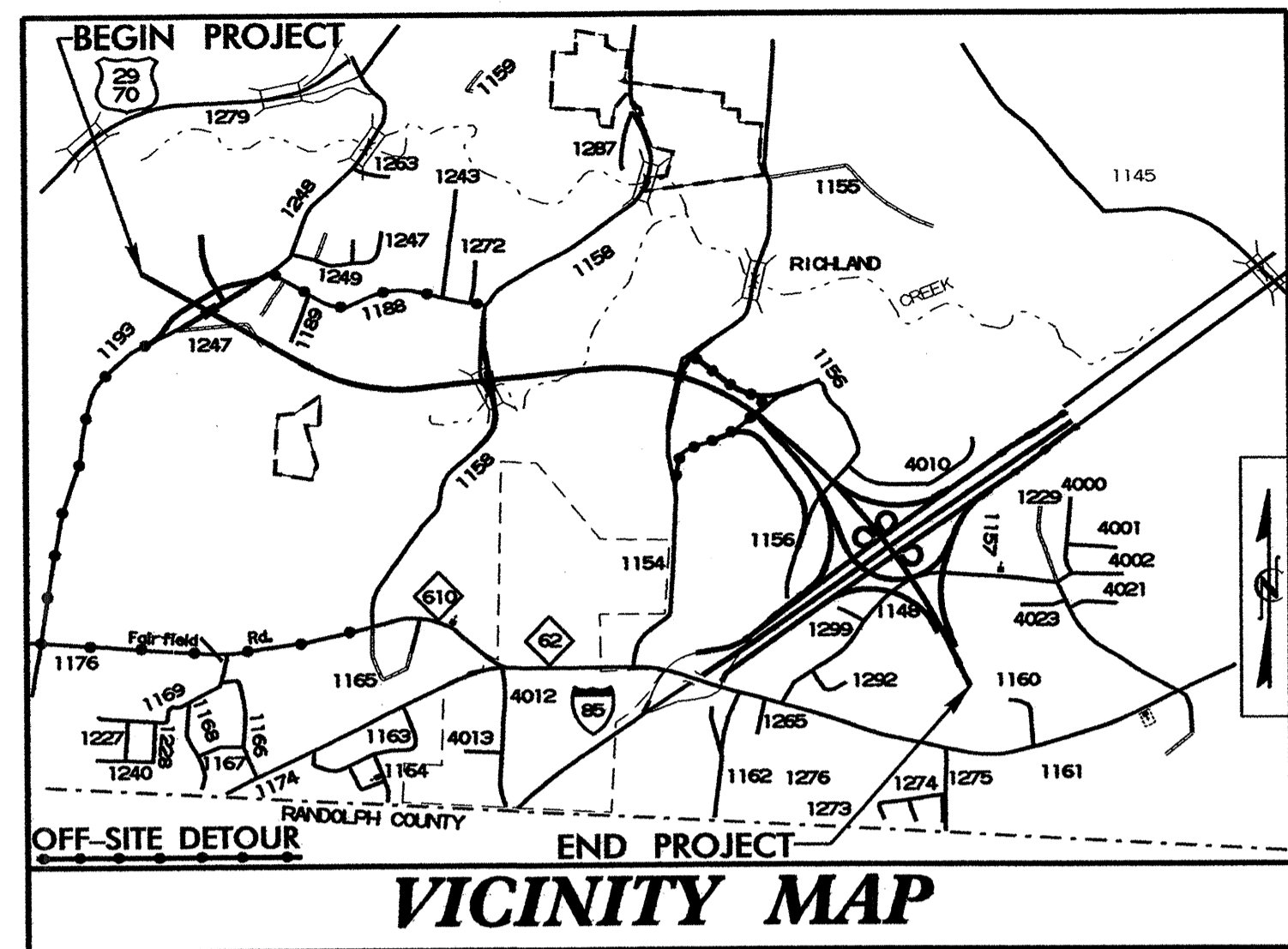
PROJECT: R-06091A

STATE	PROJECT NO.	SHEET NO.
N.C.	R-06091A	Sig.1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

Project Description: US 311 High Point east beltway from US 29-70 to I-85 north of Archdale
Type of Work: Traffic Signals and Fiber Optic Communications Cable



INDEX OF PLANS

SHEET NUMBER	SIGNAL INVENTORY NUMBER	LOCATION /DESCRIPTION
SIG. 1	---	Title Sheet
SIG. 2-3	07-2089	US 311 NB Ramp at I-85 Bus/US 29/US 70/EB Ramp ConnAD/Conn BA
SIG. 4-5	07-2012	US 311 SB Ramp at I-85 Bus/US 29/US 70/EB Ramp ConnAD/Conn CD
SIG. 6-7	07-2090	NC 62 at I-85 Southbound Ramps
SIG. 8-9	07-2091	NC 62 at I-85 Northbound Ramps
SIG. 10	---	Cabinet Component Layout
SIG. 11-15	---	Communications Cable and Conduit Routing Plans

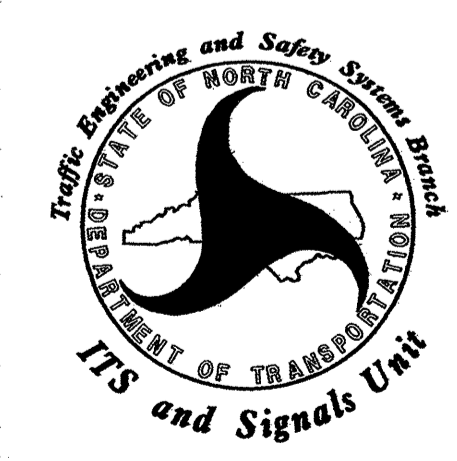
LEGEND

##-#### SIGNAL INVENTORY NUMBER

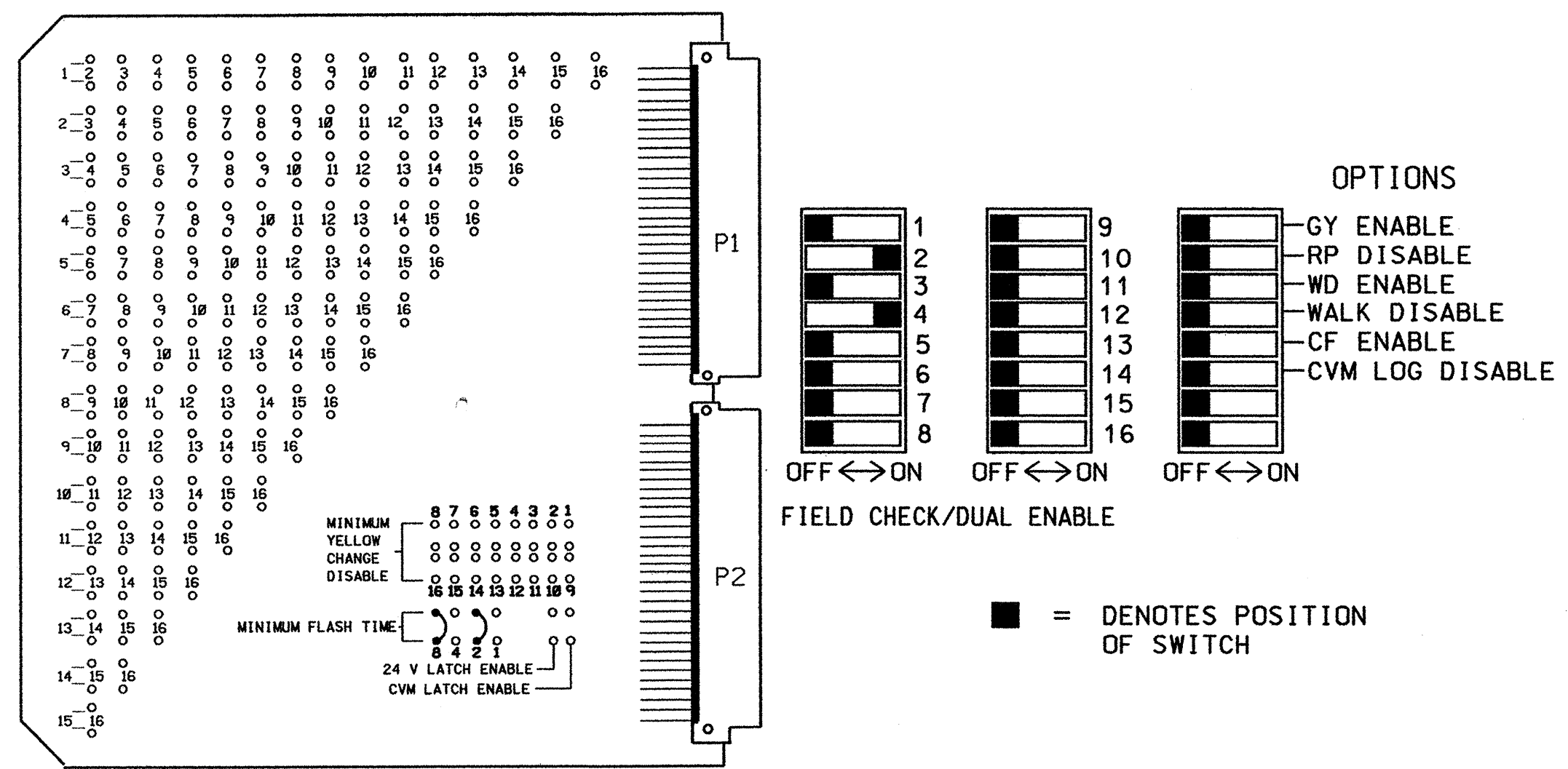
NCDOT CONTACTS:

INTELLIGENT TRANSPORTATION SYSTEMS AND SIGNALS UNIT

TIMOTHY J. WILLIAMS, PE - S & G CONTRACTS & PEF SUPPORT ENGINEER
 GEORGE C. BROWN, PE - SIGNAL EQUIPMENT DESIGN ENGINEER
 G.G. MURR JR., PE - INTELLIGENT TRANSPORTATION SYSTEMS ENGINEER



**EDI MODEL MMU-16E
MALFUNCTION MANAGEMENT UNIT
PROGRAMMING DETAIL**
(set switches as shown below)



MMU PROGRAMMING CARD

NOTES

1. TO PREVENT "FLASH-CONFLICT" PROBLEMS, WIRE ALL UNUSED LOAD SWITCHES TO FLASH RED. VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
2. TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS, TIE UNUSED LOAD SWITCH RED OUTPUTS 1, 3, 5, 6, 7 & 8 TO LOAD SWITCH AC+ BY INSERTING A JUMPER PLUG IN THE UNUSED LOAD SWITCH SOCKET FROM PIN 1 (LS AC+) TO PIN 3 (RED OUT). MAKE SURE ALL FLASH TRANSFER RELAYS ARE IN PLACE.
3. PROGRAM CONTROLLER TO START UP IN PHASE 2 GREEN.
4. SET POWER-UP FLASH TIME TO 10 SECONDS AND IMPLEMENT ON THE MALFUNCTION MANAGEMENT UNIT. SET CONTROLLER POWER-UP FLASH TIME TO 0 SECONDS.
5. ENABLE SIMULTANEOUS GAP-OUT FEATURE, ON CONTROLLER UNIT, FOR ALL PHASES.
6. PROGRAM DETECTORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO ACCOMPLISH THE DETECTION SCHEMES SHOWN ON THE SIGNAL DESIGN PLANS.
7. PROGRAM DETECTOR CALL DELAY AND EXTENSION TIMING ON THE CONTROLLER, UNLESS OTHERWISE SPECIFIED.
8. SET ALL DETECTOR CARD UNIT CHANNELS TO "PRESENCE" MODE.
9. THIS CONTROLLER AND CABINET ARE A PART OF THE HIGH POINT SIGNAL SYSTEM.

SIGNAL HEAD HOOK-UP CHART

PHASE	1	2	3	4	2 PED	4 PED	OLC	OLD
SIGNAL HEAD NO.	NU	21, 22,23	NU	41, 42,43	NU	NU	NU	NU
RED		2R		4R				
YELLOW		2Y		4Y				
GREEN		2G		4G				
RED ARROW								
YELLOW ARROW								
GREEN ARROW								

NU = NOT USED

DETECTOR RACK SET-UP DETAIL

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

BIU	CH3	CH1	CH7	CH5	CH11	CH9	SLOT	SLOT	SLOT	SLOT	SLOT
	L3	L1	L7	L5	L11	L9					
	ø 2	ø 2	ø 4	ø 2	ø 4	ø 4	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY
	CH4	CH2	CH8	CH6	CH12	CH10	SLOT	SLOT	SLOT	SLOT	SLOT
	L4	L2	L8	L6	L12	L10					
	ø 2	ø 2	ø 4	ø 2	ø 4	ø 4	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY

WIRE LOOPS TO TERMINALS ON LOOP PANEL AS SHOWN IN THE CHART BELOW

LOOP NO.	LOOP PANEL TERMINALS
2A	L1A,L1B
2B	L2A,L2B
2C	L3A,L3B
2D	L4A,L4B
2E	L5A,L5B
2F	L6A,L6B
4A	L7A,L7B
4B	L8A,L8B
4C	L9A,L9B
4D	L10A,L10B
4E	L11A,L11B
4F	L12A,L12B
	L13A,L13B
	L14A,L14B
	L15A,L15B
	L16A,L16B

NOTE
BE SURE TO PROGRAM DETECTOR TYPES AND TIMERS (EXTEND AND DELAY) AS SHOWN ON THE SIGNAL PLANS.

PROGRAM CONTROLLER DETECTORS ACCORDING TO THE SCHEDULE SHOWN IN THE CHART BELOW

CONTROLLER DETECTOR NO.	FUNCTION	TIMING	
		FEATURE	TIME(SEC)
1	ø 2	EXTEND	3.0
2	ø 2	EXTEND	3.0
3	ø 2	EXTEND	3.0
4	ø 2		
5	ø 2		
6	ø 2		
7	ø 4	EC/DC	3.5/100
8	ø 4	EC/DC	3.5/100
9	ø 4	EC/DC	3.5/100
10	ø 4		
11	ø 4		
12	ø 4	DELAY	10
13			
14			
15			
16			

EQUIPMENT INFORMATION

CONTROLLER.....PEEK TRAFFIC 3000
 CABINETPEEK TRAFFIC NC-2P [TS2-1]
 CABINET MOUNT.....POLE
 LOADBAY POSITIONS.....8
 LOAD SWITCHES USED.....2, 4
 PHASES USED.....2, 4
 OL/A.....NOT USED
 OL/B.....NOT USED
 OL/C.....NOT USED
 OL/D.....NOT USED

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 07-2089
 DESIGNED: APRIL 2006
 SEALED: 05-01-06
 REVISED: NA

LOAD SWITCH ASSIGNMENT DETAIL

(program controller according to schedule in chart below)

LOAD SWITCH NUMBER	FUNCTION
1	---
2	ø 2
3	---
4	ø 4
5	---
6	---
7	---
8	---

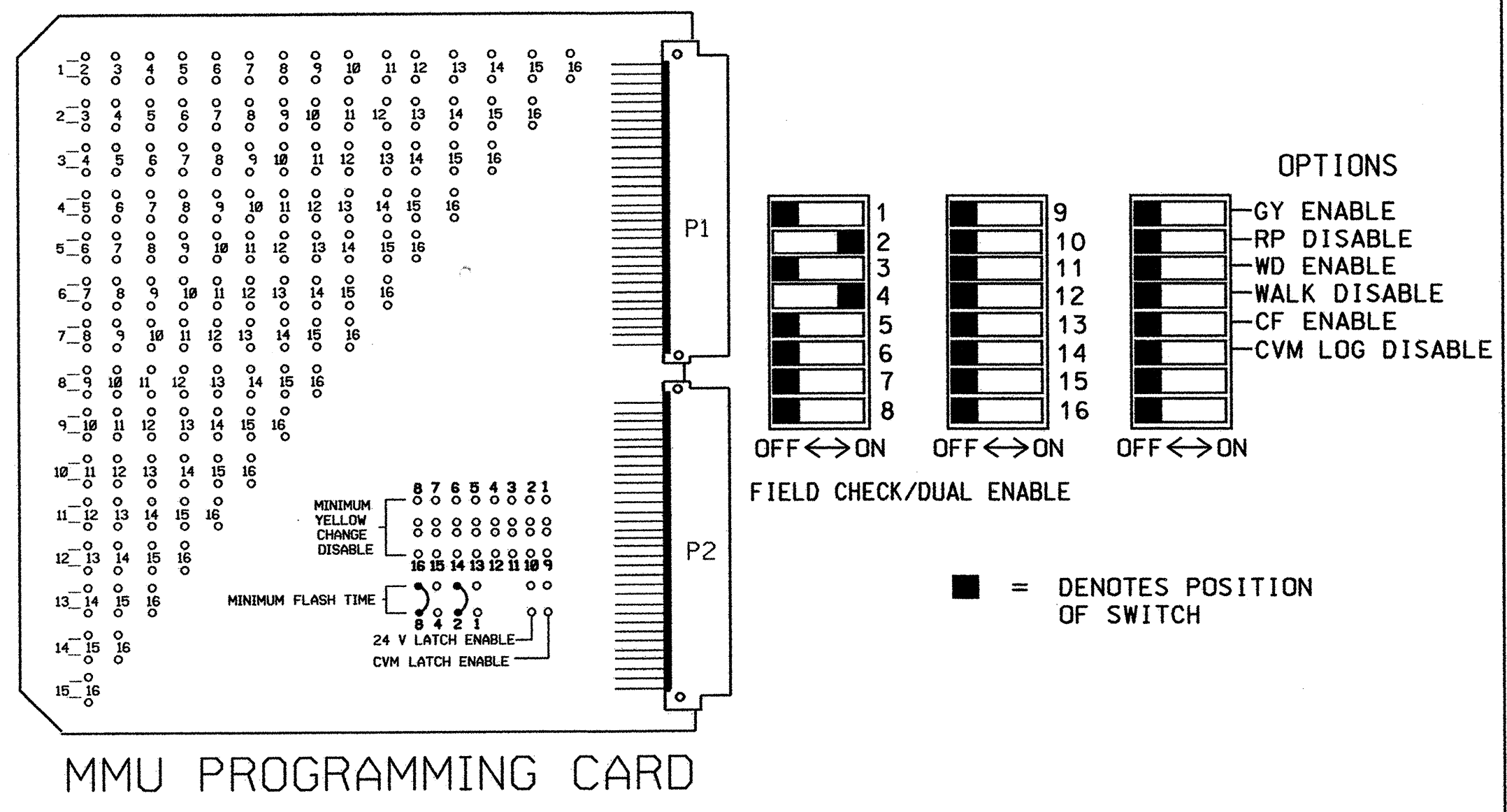
UNUSED LOAD SWITCH CHANNELS SHALL BE DISABLED IN CONTROLLER PROGRAMMING

NEW INSTALLATION

ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared in the Offices of: 122 N. McDowell St., Raleigh, NC 27603	US 311 NB RAMP AT I-85 BUS./US 29/US 70 EB RAMP CONN AD AT CONN BA		SEAL
	DIVISION 7 PLAN DATE: APRIL 2006 PREPARED BY: JAMES PETERSON	GUILFORD COUNTY REVIEWED BY: <i>JHP</i> REVIEWED BY:	HIGH POINT REVISIONS INIT. DATE

04-MAY-2006 08:01
 U:\072089\sm\ele\xxx.dgn
 J.Peterston

**EDI MODEL MMU-16E
MALFUNCTION MANAGEMENT UNIT
PROGRAMMING DETAIL**
(set switches as shown below)



NOTES

1. TO PREVENT "FLASH-CONFLICT" PROBLEMS, ALL UNUSED LOAD SWITCHES SHALL BE WIRED TO FLASH RED. THE INSTALLER SHALL VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
2. TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS, TIE UNUSED LOAD SWITCH RED OUTPUTS: 1, 3, 5, 6, 7 & 8 TO LOAD SWITCH AC+ BY INSERTING A JUMPER PLUG IN THE UNUSED LOAD SWITCH SOCKET FROM PIN 1 (LS AC+) TO PIN 3 (RED OUT). MAKE SURE ALL FLASH TRANSFER RELAYS ARE IN PLACE.
3. THE CONTROLLER SHALL BE PROGRAMMED TO START UP IN PHASE 2 GREEN.
4. POWER-UP FLASH TIME SHALL BE SET TO 10 SECONDS AND IMPLEMENTED ON THE MALFUNCTION MANAGEMENT UNIT. CONTROLLER POWER-UP FLASH TIME SHALL BE SET TO 0 SECONDS.
5. UNLESS OTHERWISE SPECIFIED, SET ALL DETECTOR CARD UNITS TO 'PRESENCE' MODE.
6. UNLESS OTHERWISE SPECIFIED, DETECTOR CALL DELAY AND EXTENSION TIMING SHALL BE PROGRAMMED ON THE CONTROLLER.
7. THIS CONTROLLER AND CABINET IS TO BE PROGRAMMED AND WIRED TO BE A PART OF THE HIGH POINT CITY SIGNAL SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER INTERCONNECTION AND OPERATION OF THIS SIGNAL WITHIN THE SYSTEM.

SIGNAL HEAD HOOK-UP CHART

PHASE	1	2	3	4	2 PED	4 PED	OLC	OLD
SIGNAL HEAD NO.	NU	21, 22, 23	NU	41, 42, 43	NU	NU	NU	NU
RED		2R		4R				
YELLOW		2Y		4Y				
GREEN		2G		4G				
RED ARROW								
YELLOW ARROW								
GREEN ARROW								

NU = NOT USED

DETECTOR RACK SET-UP DETAIL

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

BIU	CH1	CH1	CH1	CH1	CH1	SLOT	SLOT	SLOT	POWER SUPPLY AREA
	L3 ø4	L1 ø2	L7 ø4	L5 ø4		L9 ø2			
	CH2	CH2	CH2	CH2	EMPTY	CH2	EMPTY	EMPTY	
	L4 ø4	L2 ø2	L8 ø4	L6 ø4		L10 ø4			

WIRE LOOPS TO TERMINALS ON LOOP PANEL AS SHOWN IN THE CHART BELOW

LOOP NO.	LOOP PANEL TERMINALS
2A	L1A, L1B
2B	L2A, L2B
4A	L3A, L3B
4B	L4A, L4B
4C	L5A, L5B
4D	L6A, L6B
4E	L7A, L7B
4F	L8A, L8B
2C	L9A, L9B
4G	L10A, L10B
---	L11A, L11B
---	L12A, L12B
---	L13A, L13B
---	L14A, L14B
---	L15A, L15B
---	L16A, L16B

NOTE
BE SURE TO PROGRAM DETECTOR TYPES AND TIMERS (EXTEND AND DELAY) AS SHOWN ON THE SIGNAL PLANS.

PROGRAM CONTROLLER DETECTORS ACCORDING TO THE SCHEDULE SHOWN IN THE CHART BELOW

CONTROLLER DETECTOR NO.	FUNCTION	TIMING	
		FEATURE	TIME (SEC)
1	ø 2	---	---
2	ø 2	---	---
3	ø 4	EC/DC	3.5/100
4	ø 4	EC/DC	3.5/100
5	ø 4	EC/DC	3.5/100
6	ø 4	---	---
7	ø 4	---	---
8	ø 4	---	---
9	ø 2	---	---
10	ø 4	DELAY	20
11	---	---	---
12	---	---	---
13	---	---	---
14	---	---	---
15	---	---	---
16	---	---	---

EQUIPMENT INFORMATION

CONTROLLER.....PEEK TRAFFIC 3000
 CABINETPEEK TRAFFIC NC-2P [TS2-1]
 CABINET MOUNT.....POLE
 LOADBAY POSITIONS.....8
 LOAD SWITCHES USED.....2, 4
 PHASES USED.....2, 4
 OL/A.....NOT USED
 OL/B.....NOT USED
 OL/C.....NOT USED
 OL/D.....NOT USED

LOAD SWITCH ASSIGNMENT DETAIL
(program controller according to schedule in chart below)

LOAD SWITCH NUMBER	FUNCTION
1	---
2	ø 2
3	---
4	ø 4
5	---
6	---
7	---
8	---

UNUSED LOAD SWITCH CHANNELS SHALL BE DISABLED IN CONTROLLER PROGRAMMING

HIGH POINT CITY SIGNAL SYSTEM
INTERSECTION I.D. 644

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 07-2012
 DESIGNED: APRIL 2006
 SEALED: 05-01-06
 REVISED: NA

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
 [Logo: North Carolina Department of Transportation, Division of Traffic Management Section]
 122 N. McDowell St., Raleigh, NC 27603

US 311 SB RAMP AT I-85 BUS./US 29/US 70 EB RAMP CONN AD AT CONN CD

DIVISION 07 GUILFORD COUNTY HIGH POINT

PLAN DATE: JULY 2001 REVIEWED BY: T. JOYCE
 PREPARED BY: F.E. RUSS REVIEWED BY:

REVISIONS:
 ✓ CONSTRUCTION REVISION: ø2 & ø4 SWITCHED; CUT NEW LOOPS ON ø4. FEB. 5-2-05. DJJ 5/10/05
 ✓ ADDED SIGNAL HEAD #23 AND LOOP 20. GP1. JLR 5-4-06

INIT. DATE
 OCB 5/11/05
 JLR 5-4-06

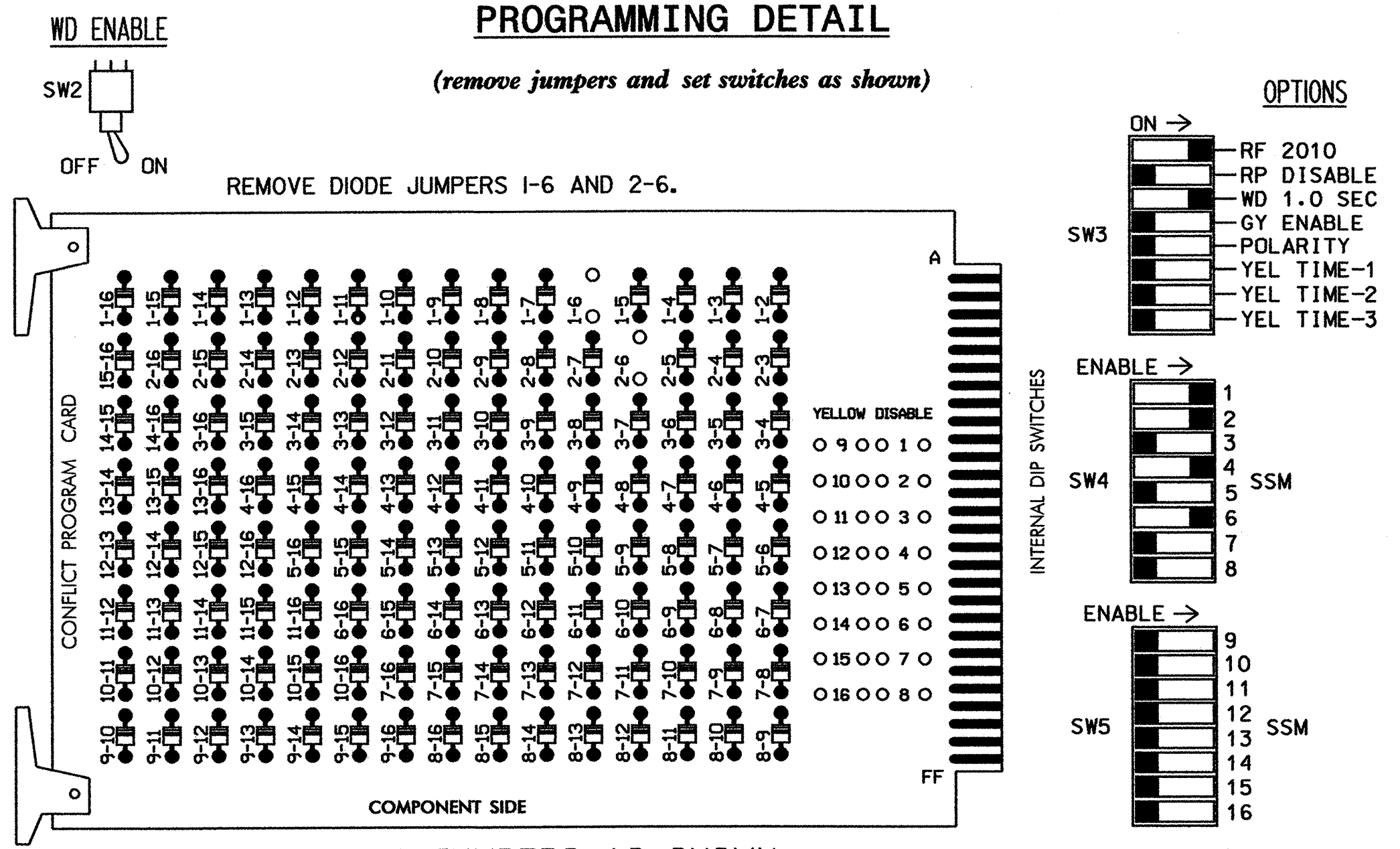
REVISION SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 008453
 JOHN T. ROWE, JR.
 Signature: [Signature] DATE: 5-4-06

SEAL
 Originally Sealed by George C. Brown, #022013 MAY 11, 2005

SIG. INVENTORY NO. 07-2012

EDI MODEL 2010ECL CONFLICT MONITOR

PROGRAMMING DETAIL



NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL1-SEL5 are present on the monitor board.

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 Plans.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 3,5,7, 8,9,10,11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program phases 2 and 6, on the controller unit, for Start Up In Green.
4. Enable Simultaneous Gap-Out, on the controller unit, for all phases.
5. Program phases 2 and 6, on the controller unit, for Variable Initial and Gap Reduction.
6. The cabinet and controller are part of the NC 62 Closed Loop Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....CONTRACTOR SUPPLIED 2070L
 CABINET.....CONTRACTOR SUPPLIED 332
 SOFTWARE.....ECONOLITE OASIS
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...12
 LOAD SWITCHES USED.....S1,S2,S4,S6
 PHASES USED.....1,2,4,6
 OVERLAPS.....NONE

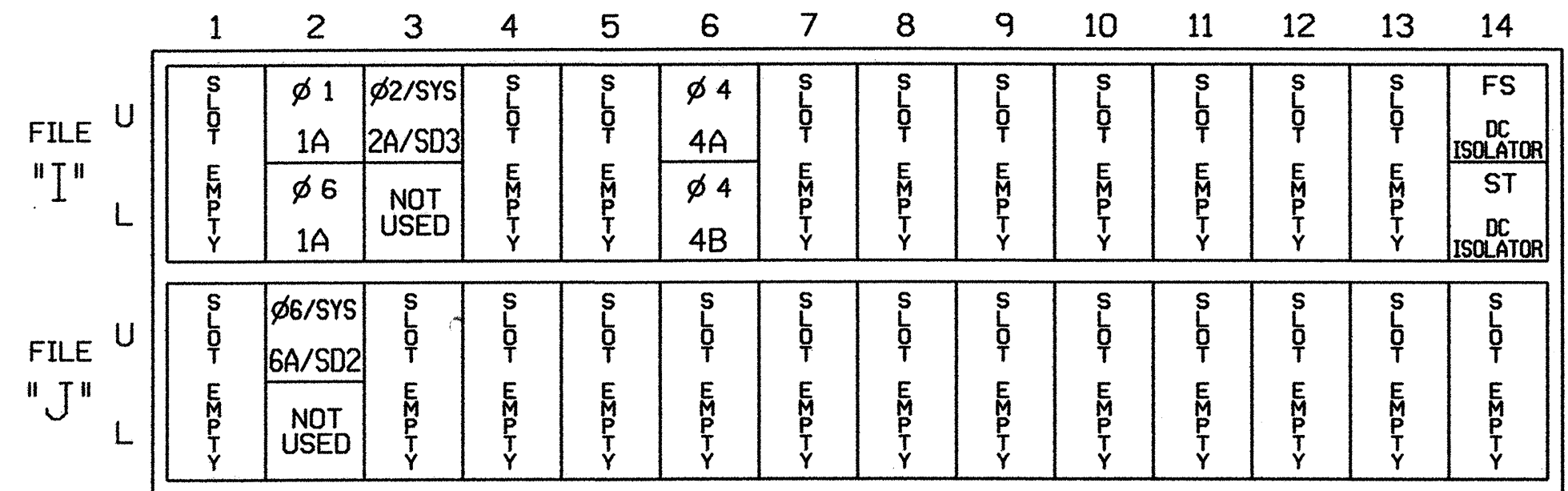
SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	61	21,22	NU	NU	41,42	NU	NU	61,62	NU	NU	NU	NU
RED	*	128			101			134				
YELLOW		129			102			135				
GREEN		130			103			136				
RED ARROW												
YELLOW ARROW	126											
GREEN ARROW	127											

NU = Not Used
 * Denotes install load resistor. See load resistor installation detail this sheet.

INPUT FILE POSITION LAYOUT

(front view)



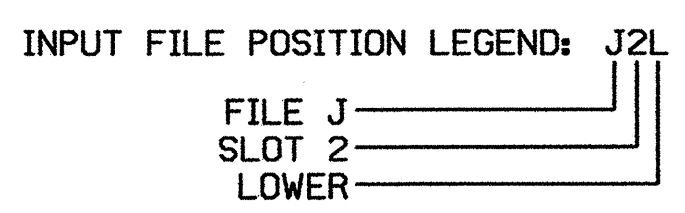
EX. : 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
 ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

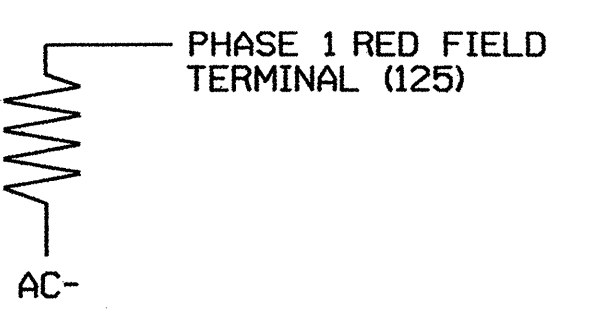
LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A ¹	TB2-5,6	I2U	39	1	2	1	Y	Y			15
	TB2-7,8	I2L	43	5	12	6	Y	Y	Y		3
2A/SD3	TB2-9,10	I3U	63	25	32	2	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			15
6A/SD2	TB3-5,6	J2U	40	2	6	6	Y	Y			

¹Add jumpers from TB2-5 to TB2-7, and from TB2-6 to TB2-8.



LOAD RESISTOR INSTALLATION DETAIL

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



NOTE: The purpose of this resistor is to load the channel red monitor input in order for the Signal Sequence Monitor to use the full signal sequence monitoring capability on channels that do not use the red display in the field.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 07-2090
 DESIGNED: April 2006
 SEALED: 05-01-06
 REVISED: NA

New Installation

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:

 122 N. McDowell St., Raleigh, NC 27603

NC 62 at I-85 Southbound Ramps

Division 7 Guilford County Archdale

PLAN DATE: April 2006 REVIEWED BY: *YMB*

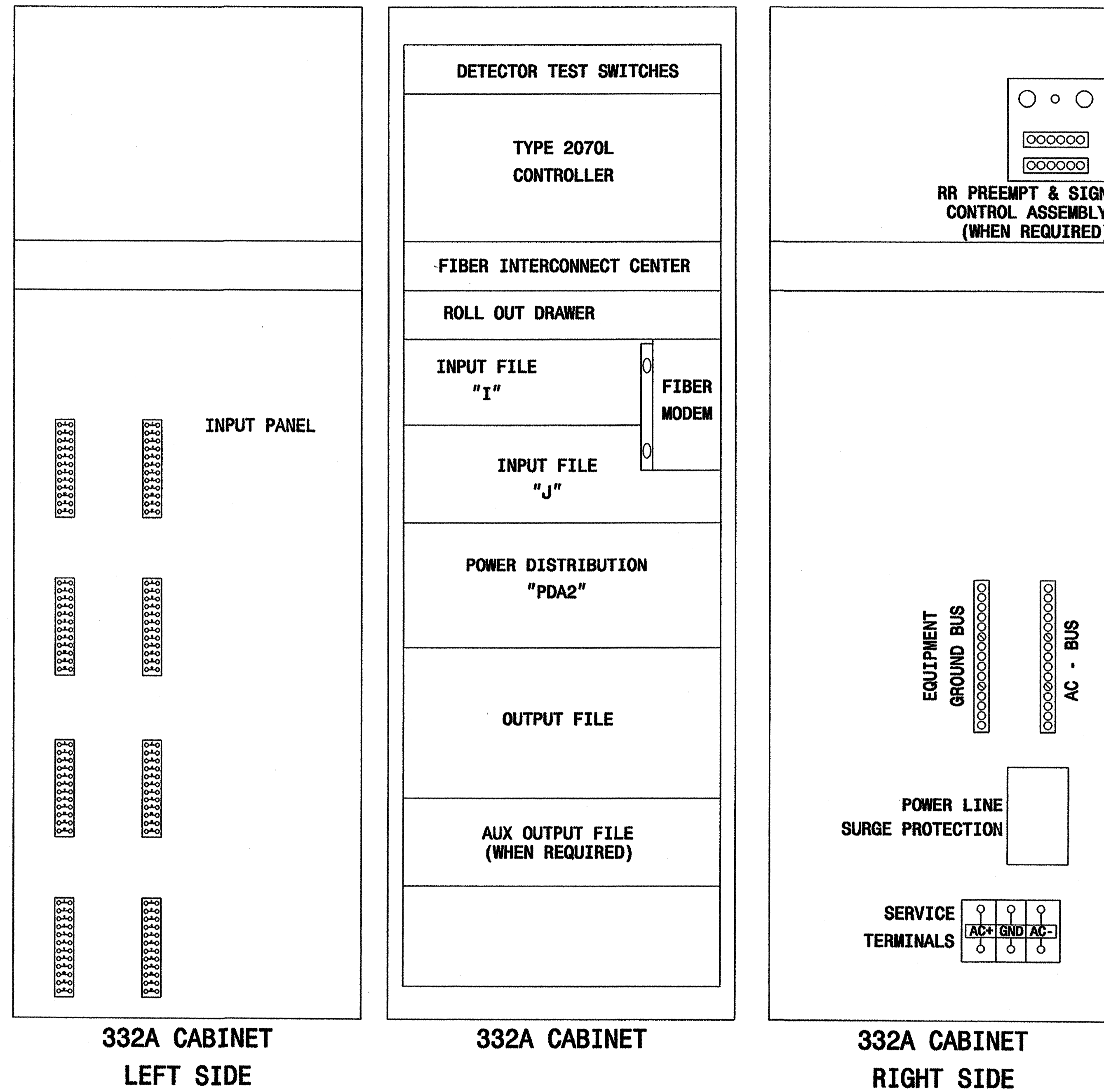
PREPARED BY: James Peterson REVIEWED BY:

REVISIONS: INIT. DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 008453 JOHN T. ROWE, P.E.

SIGNATURE: *John Rowe* DATE: 5-3-06

SIG. INVENTORY NO. 07-2090



NOTE

-PROVIDE A 2 " SPACE BETWEEN THE CONTROLLER AND THE ROLL OUT DRAWER TO ACCOMMODATE A FIBER INTERCONNECT CENTER.

REAR VIEW

Typical Drawing

	Cabinet Component Layout 170 Cabinet Model 332A with 2070L Controller		SEAL
	PLAN DATE: October 2002	REVIEWED BY:	
	PREPARED BY: P. L. Alexander	REVIEWED BY:	
	REVISIONS	INIT.	DATE

222 N. McDowell St., Raleigh, NC 27603

- 1 INSTALL REA, PE - 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 2 INSTALL REA, PE - 38, (FIGURE 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 3 INSTALL REA, PE - 39, (UNDERGROUND) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
- 4 INSTALL SMFO CABLE
- 5 INSTALL MMFO 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
- 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 TERMINATE COMMUNICATIONS CABLE ON EXISTING TELEMTRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET
- 27 INSTALL NEW TELEMTRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET
- 28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET
- 29 INSTALL UNDERGROUND SPLICE ENCLOSURE
- 30 INSTALL AERIAL SPLICE ENCLOSURE
- 31 INSTALL POLE MOUNTED SPLICE CABINET
- 32 INSTALL BASE MOUNTED SPLICE CABINET
- 33 REMOVE EXISTING SPLICE CABINET

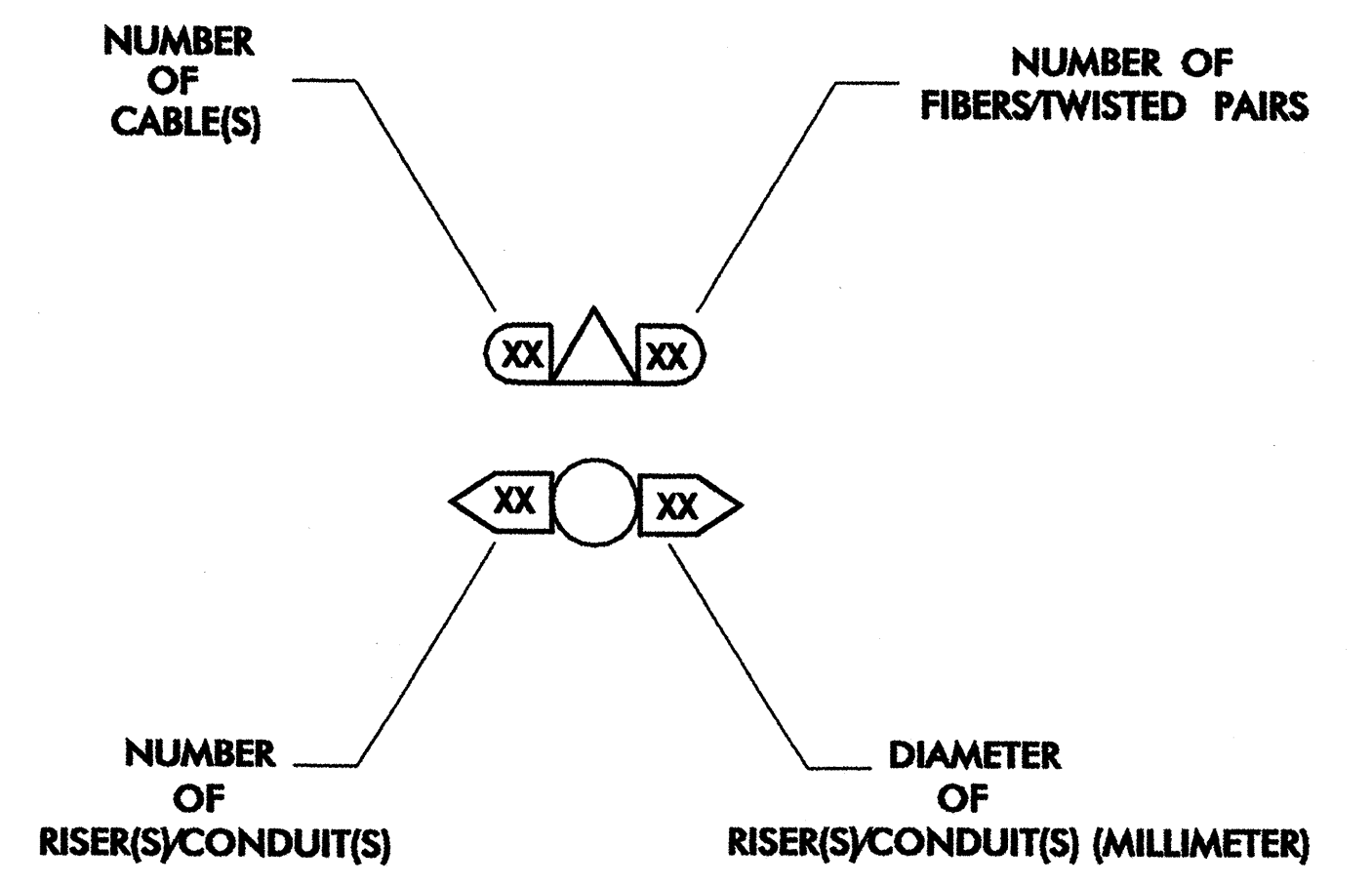
- 34 INSTALL CABINET FOUNDATION
- 35 REMOVE EXISTING CABINET FOUNDATION
- 36 INSTALL CCTV CAMERA ASSEMBLY
- 37 INSTALL CCTV CAMERA WOOD POLE
- 38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION
- 39 INSTALL JUNCTION BOX
- 40 INSTALL OVERSIZED JUNCTION BOX
- 41 REMOVE EXISTING JUNCTION BOX
- 42 INSTALL 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
- 48 REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE
- 49 REMOVE EXISTING MESSENGER CABLE
- 50 INSTALL TELEPHONE SERVICE
- 51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 30 METERS OF CABLE
- 52 INSTALL DELINEATOR MARKER
- 53 STORE 6 METERS OF COMMUNICATIONS CABLE
- 54 LASH CABLE(S) TO EXISTING SIGNAL/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

LEGEND

- FO NEW FIBER OPTIC COMMUNICATIONS CABLE
- TWIST PR NEW TWISTED PAIR COMMUNICATIONS CABLE
- EXI EXISTING COMMUNICATIONS CABLE
- REM EXISTING COMMUNICATIONS CABLE TO BE REMOVED
- NEW AERIAL GUY ASSEMBLY
- NEW CONDUIT
- EXISTING CONDUIT
- DD NEW DIRECTIONAL DRILLED CONDUIT
- B&J NEW BORED AND JACKED CONDUIT
- NEW JUNCTION BOX
- EXISTING JUNCTION BOX
- NEW WOOD POLE
- EXISTING WOOD POLE
- AERIAL SPLICE ENCLOSURE
- NEW METAL POLE
- EXISTING METAL POLE
- NEW CCTV ASSEMBLY
- NEW STANDARD GUY ASSEMBLY
- NEW SIDEWALK GUY ASSEMBLY
- NEW CABLE STORAGE RACKS (SNOW SHOES)
- EXISTING CONTROLLER AND CABINET
- EXISTING SPLICE CABINET
- NEW SPLICE CABINET
- SIGNAL POLE
- XX-XXXX SIGNAL INVENTORY NUMBER

CONSTRUCTION NOTE SYMBOLOGY KEY

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



Prepared in the Office of: **TRAFFIC SIGNAL CONTROLLER SYSTEMS**

222 N. McDowell St., Raleigh, NC 27603

CONSTRUCTION NOTES

PLAN DATE: _____ REVIEWED BY: _____

PREPARED BY: _____ REVIEWED BY: **G. A. FULLER**

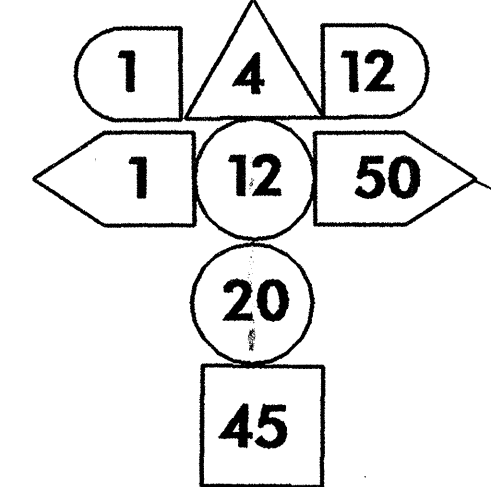
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REVISIONS	INIT.	DATE

SEAL: PROFESSIONAL ENGINEER GREGORY A. FULLER 023919

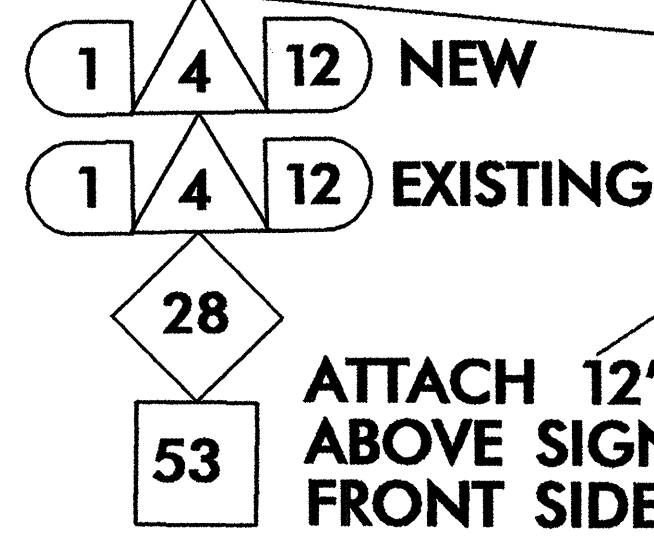
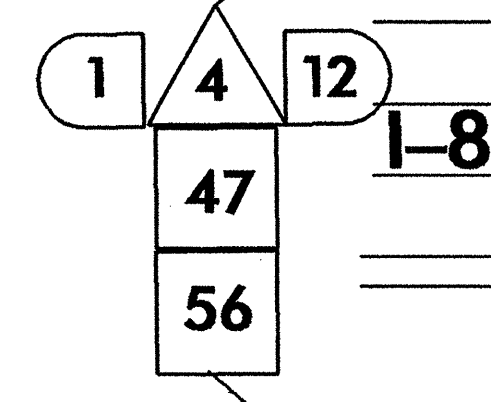
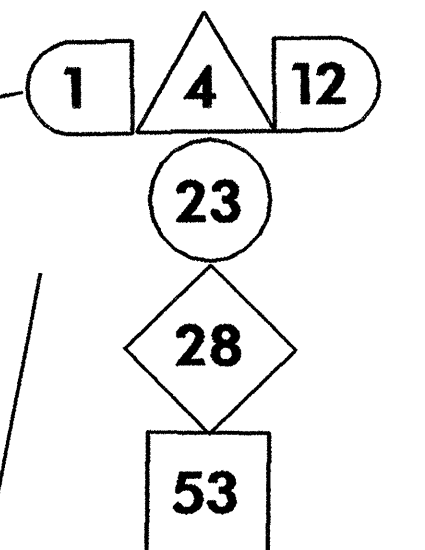
SIGNATURE: *Gregory A. Fuller* DATE: 10/31/02

CADD File name: _____



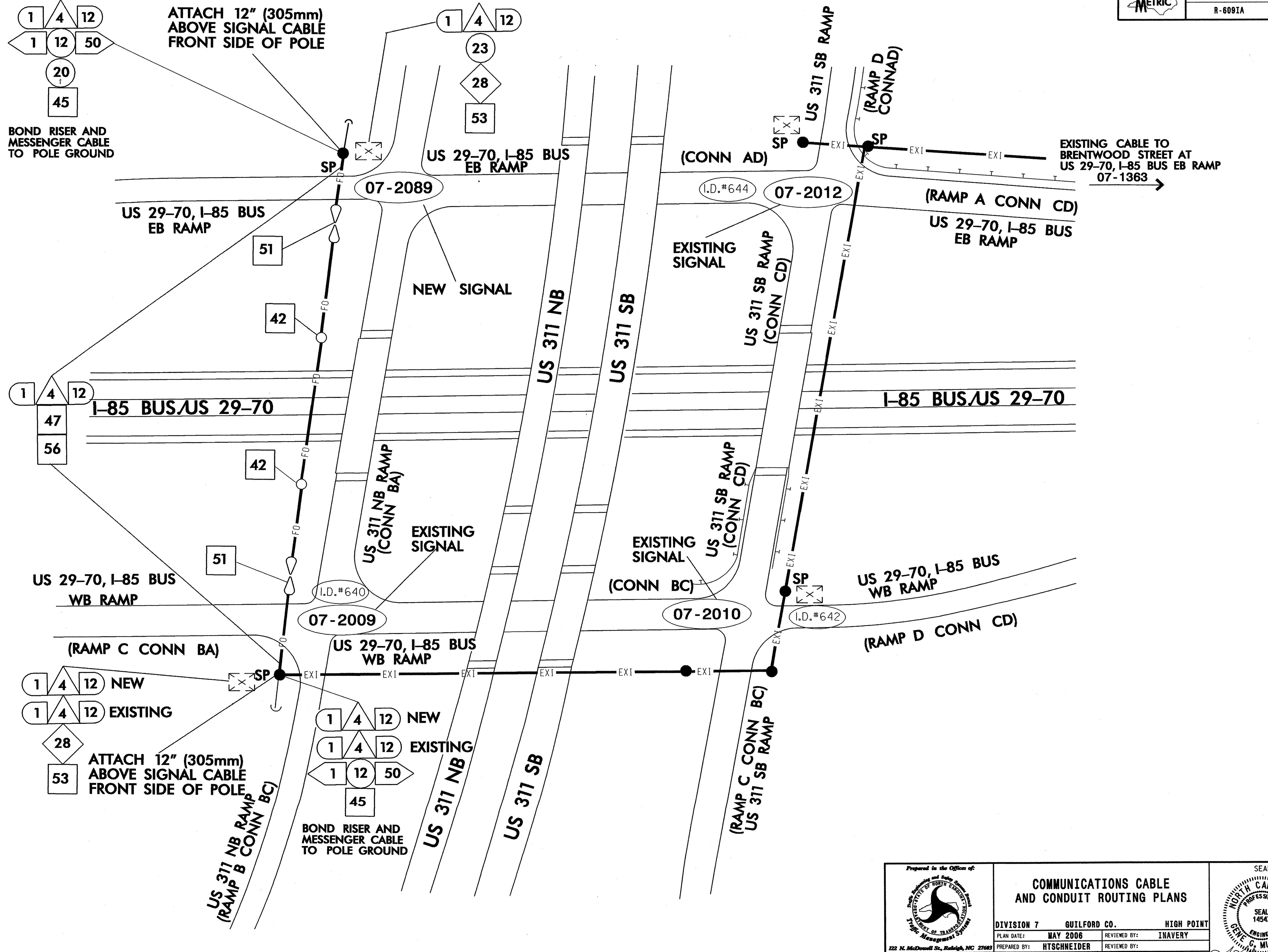
ATTACH 12" (305mm) ABOVE SIGNAL CABLE FRONT SIDE OF POLE

BOND RISER AND MESSENGER CABLE TO POLE GROUND



ATTACH 12" (305mm) ABOVE SIGNAL CABLE FRONT SIDE OF POLE

BOND RISER AND MESSENGER CABLE TO POLE GROUND



Prepared in the Office of:

222 N. McDowell St., Raleigh, NC 27603

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 7 GUILFORD CO. HIGH POINT

PLAN DATE: MAY 2006 REVIEWED BY: INAVERY

PREPARED BY: HTSCHNEIDER REVIEWED BY:

SCALE: NONE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14543 GENE C. MURPHY JR.

SIGNATURE: [Signature] DATE: 5-3-06

CADD Filename:

EXISTING LOCATION

INTERSECTION I.D. #644
US 29,70 I-85 BUS. EB RAMP/
US 311 SB RAMP
07-2012

LEGEND

X = FUSION SPLICE

**COLOR CODE
TIA/EIA 598-A**

- (1) BLUE
- (2) ORANGE
- (3) GREEN
- (4) BROWN
- (5) SLATE
- (6) WHITE
- (7) RED
- (8) BLACK
- (9) YELLOW
- (10) VIOLET
- (11) ROSE
- (12) AQUA

EXISTING

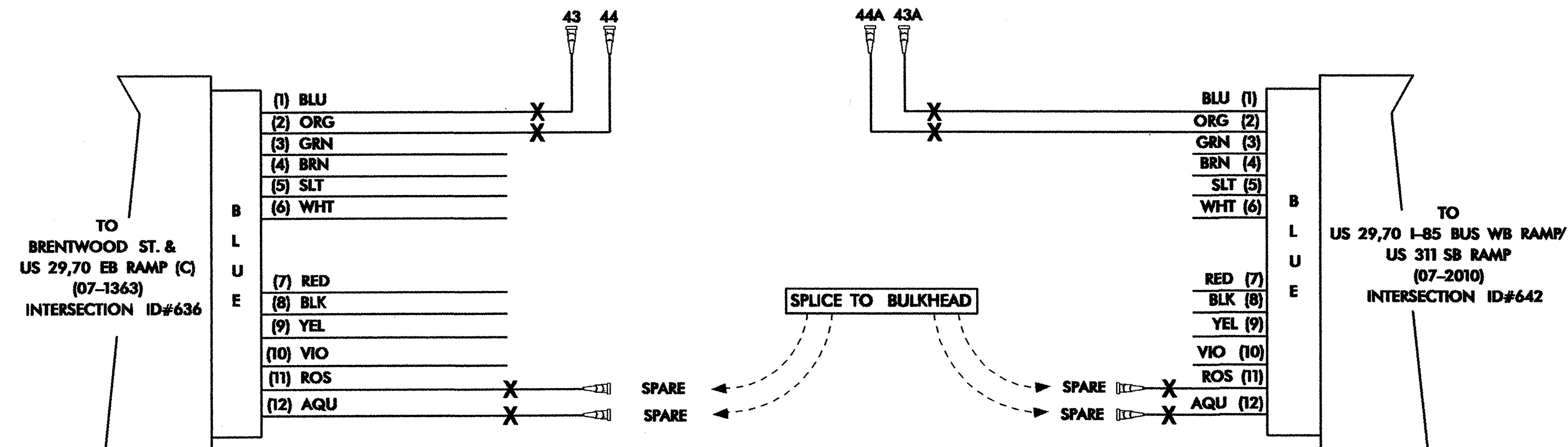
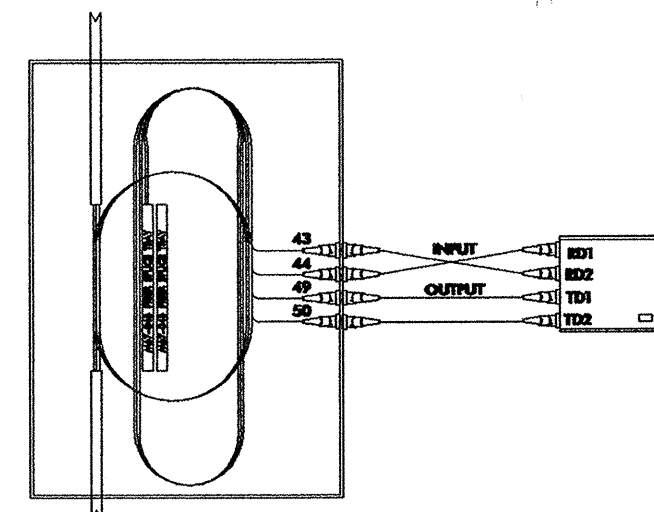


FIGURE 1 OF 4

EXISTING LOCATION

INTERSECTION ID # 642
US 29,70 I-85 BUS WB RAMP/
US 311 SB RAMP
(07-2010)

LEGEND

X = FUSION SPLICE

**COLOR CODE
TIA/EIA 598-A**

- (1) BLUE
- (2) ORANGE
- (3) GREEN
- (4) BROWN
- (5) SLATE
- (6) WHITE
- (7) RED
- (8) BLACK
- (9) YELLOW
- (10) VIOLET
- (11) ROSE
- (12) AQUA

EXISTING

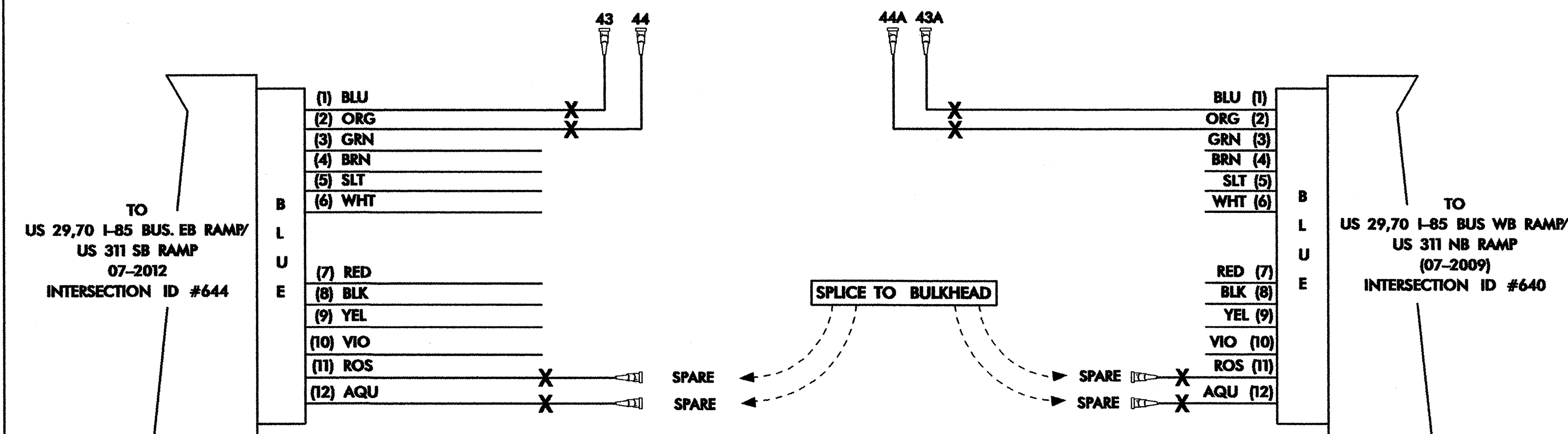
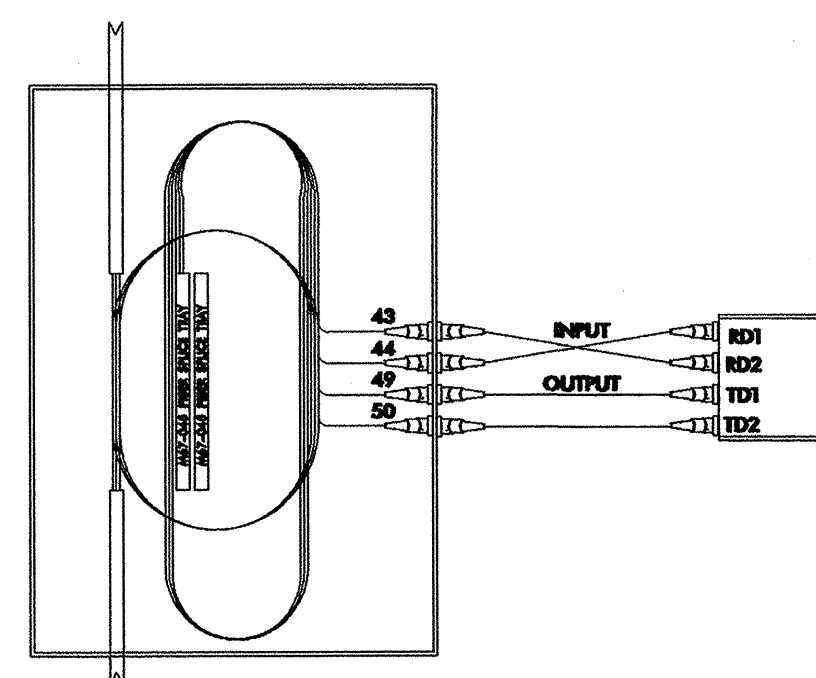


FIGURE 2 OF 4

INTERSECTION ID # 640
US 29,70 I-85 BUS WB RAMP/
US 311 NB RAMP
(07-2009)

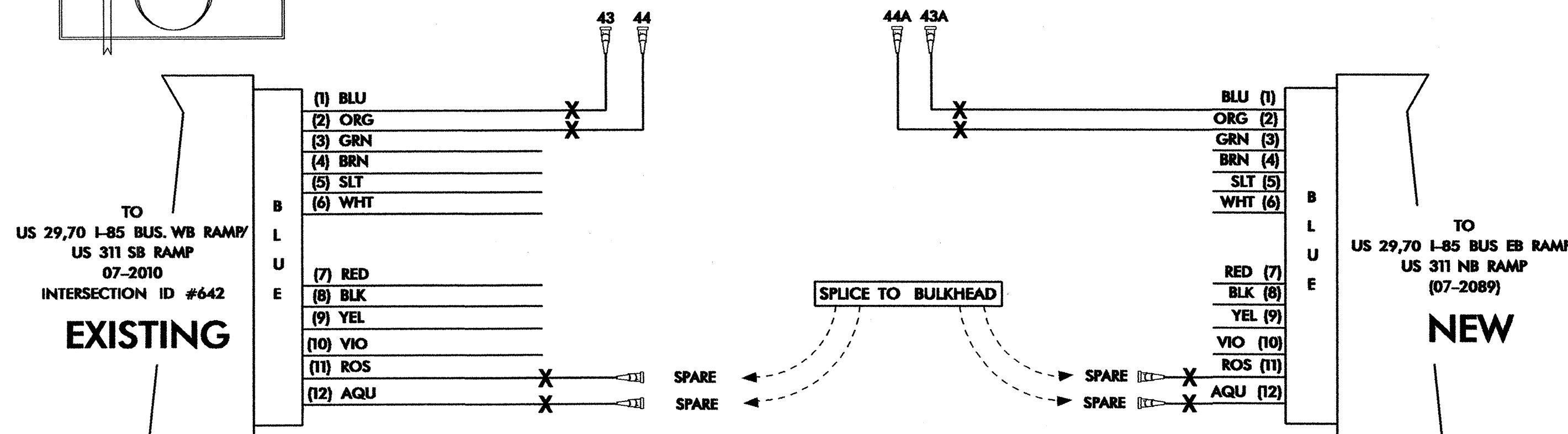
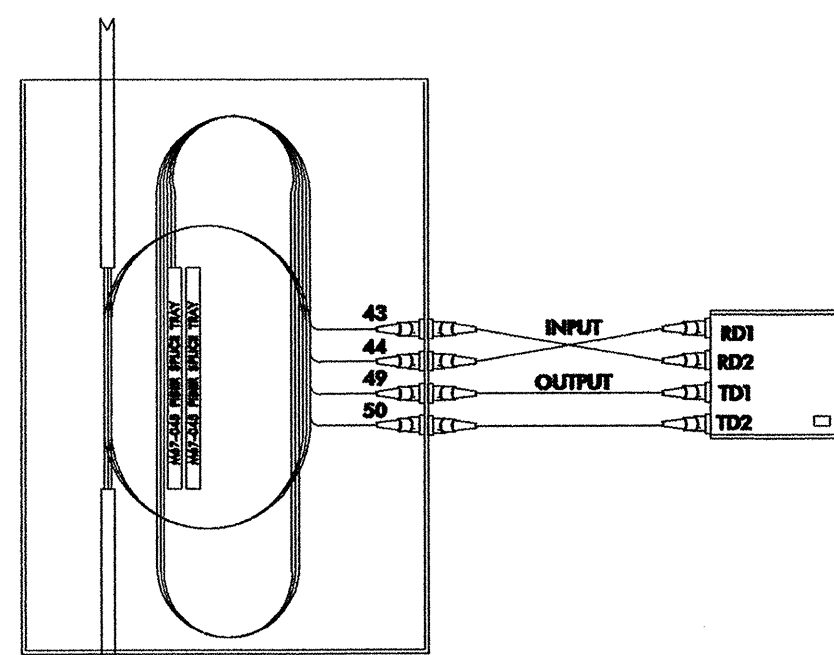
LEGEND

X = FUSION SPLICE

**COLOR CODE
TIA/EIA 598-A**

- (1) BLUE
- (2) ORANGE
- (3) GREEN
- (4) BROWN
- (5) SLATE
- (6) WHITE
- (7) RED
- (8) BLACK
- (9) YELLOW
- (10) VIOLET
- (11) ROSE
- (12) AQUA

REVISED



INSTALL NEW INTERCONNECT CENTER

FIGURE 3 OF 4

NEW LOCATION

US 29,70 I-85 BUS EB RAMP/
US 311 NB RAMP
(07-2089)

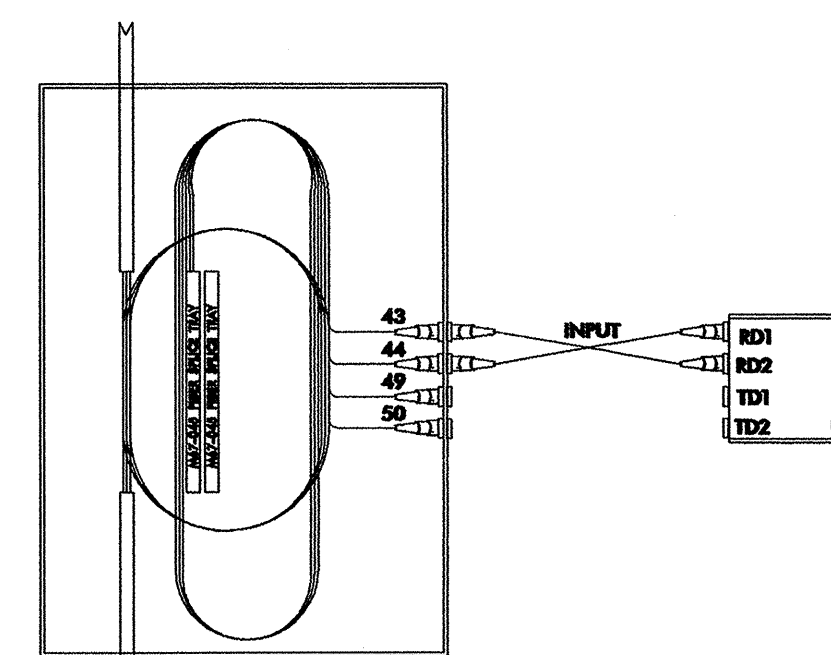
LEGEND

X = FUSION SPLICE

**COLOR CODE
TIA/EIA 598-A**

- (1) BLUE
- (2) ORANGE
- (3) GREEN
- (4) BROWN
- (5) SLATE
- (6) WHITE
- (7) RED
- (8) BLACK
- (9) YELLOW
- (10) VIOLET
- (11) ROSE
- (12) AQUA

NEW



FURNISH NEW INTERCONNECT CENTER AND
OPTELECOM MODEL 9525A-LD-ST TRANCEIVER
AND 3200 PS (POWER SUPPLY) OR AN
APPROVED EQUIVALENT

TO
US 29,70 I-85 BUS WB RAMP/
US 311 NB RAMP
(07-2009)
INTERSECTION ID #640

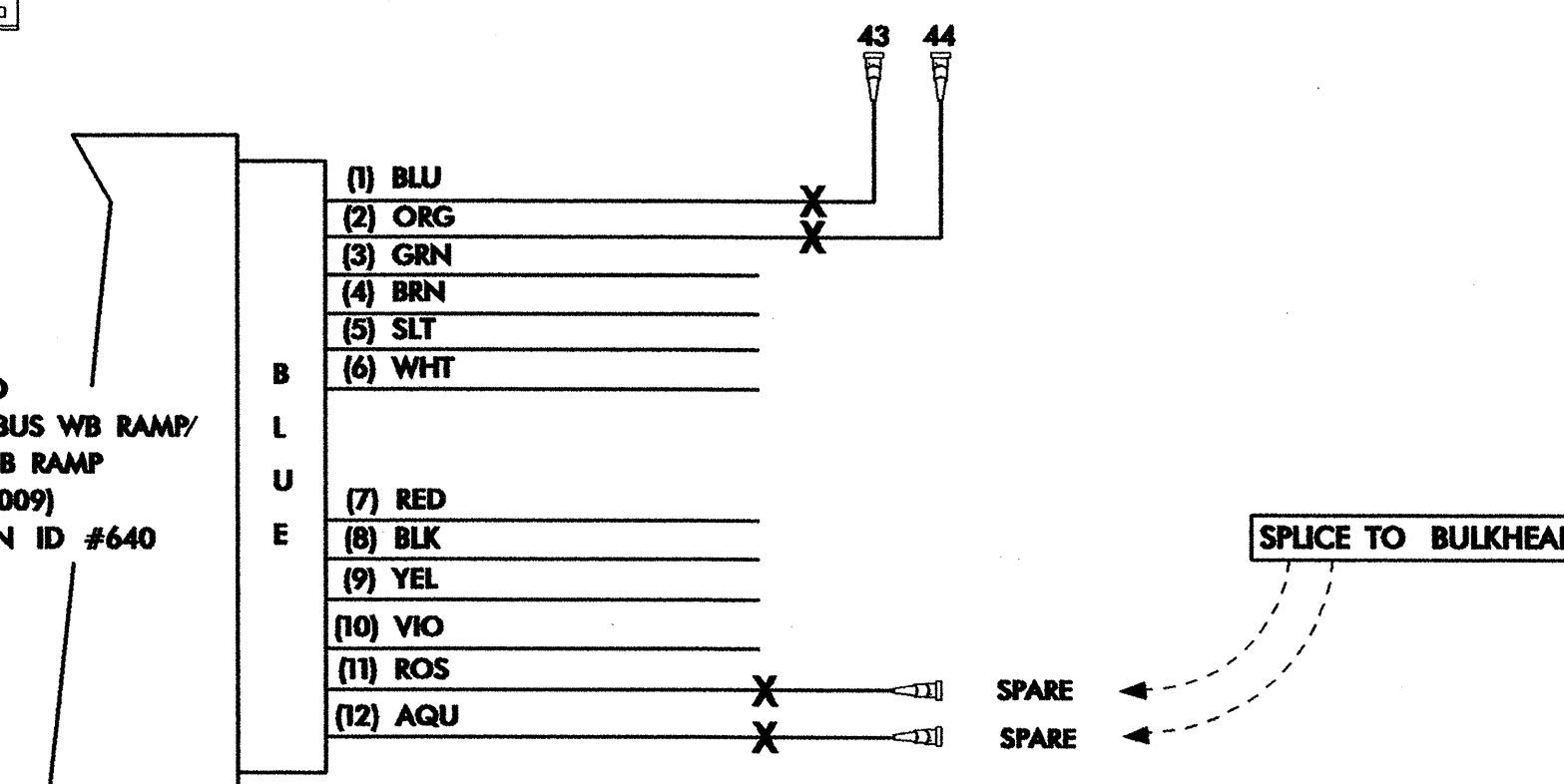
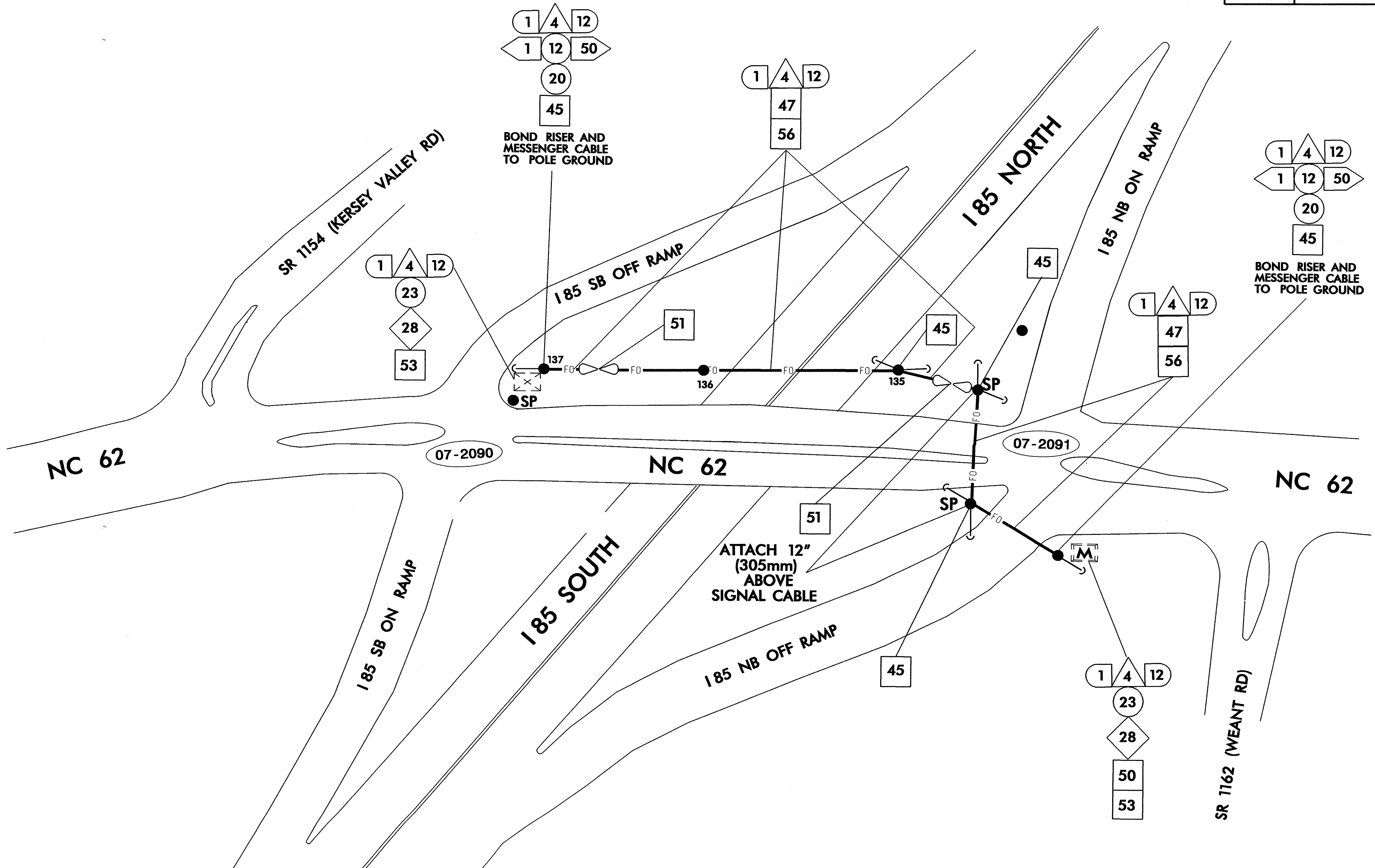


FIGURE 4 OF 4

	SPLICE PLAN	
	DIVISION 07 PLAN DATE: MAY 2006 PREPARED BY: HTSCHNEIDER	GUILFORD COUNTY REVIEWED BY: INAVERY REVIEWED BY:
222 N. McDowell St., Raleigh, NC 27603 SCALE: 0 N/A	REVISIONS:	SIGNATURE: <i>[Signature]</i> 5-3-06 DATE:

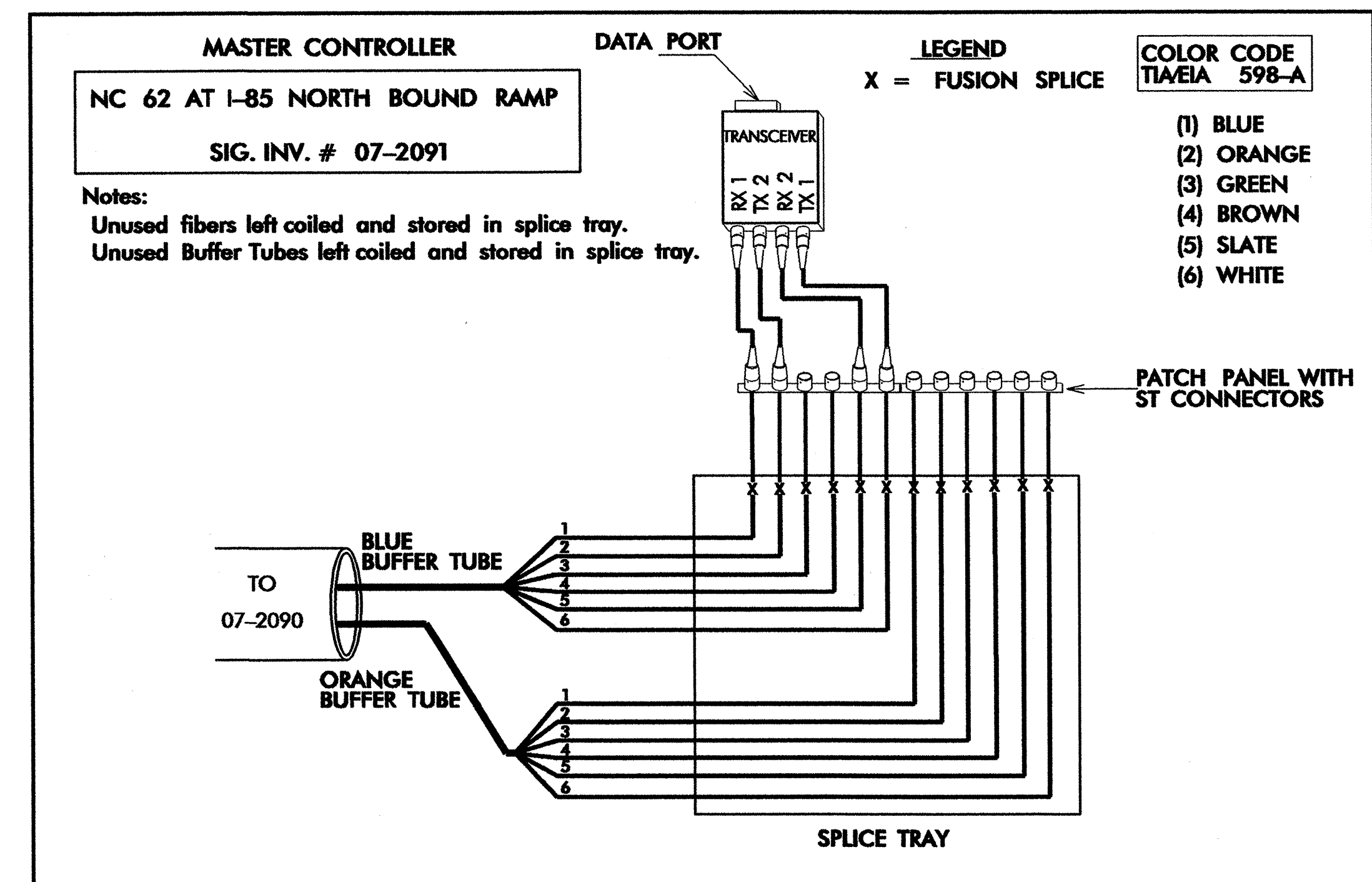
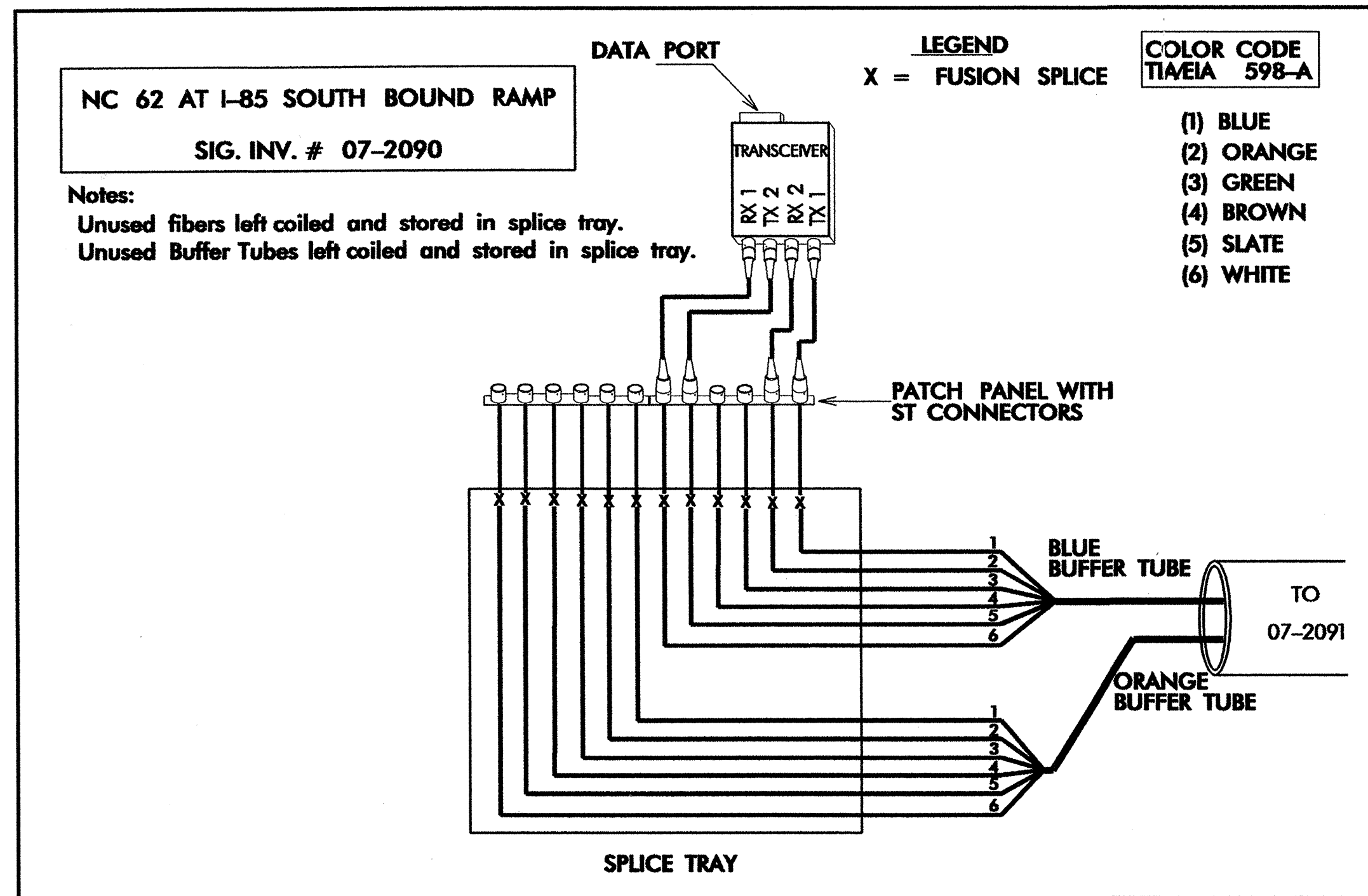


NOTE:
ATTACH 12" (305mm) BELOW CATV UNLESS OTHERWISE NOTED.

<p>Prepared in the Office of: STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Traffic Management Systems 122 N. McDowell St., Raleigh, NC 27603</p>	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		
	DIVISION 7 GUILFORD CO. NEAR ARCHDALE PLAN DATE: MAY 2006 REVIEWED BY: INAVERY PREPARED BY: HTSCHNEIDER REVIEWED BY:	REVISIONS INIT. DATE _____ _____ _____ _____ _____ _____	

SEAL
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 SEAL 14543
 GENE G. MURR, JR.
 SIGNATURE: *Gene G. Murr* DATE: 5-3-06
 CADD File Name:

FIBER OPTIC CABLE



NOTES:
1. FURNISH SELF HEALING-RING TRANSCEIVERS.
2. TRANSCEIVER TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING \ ENSURING PROPER TERMINATIONS

<p>Prepared in the Office of: North Carolina Department of Transportation Traffic Management Systems 122 N. McDowell St., Raleigh, NC 27603</p>	SPLICE PLAN		
	DIVISION 7 PLAN DATE: MAY 2006 PREPARED BY: HTSCHNEIDER	GUILFORD CO. NEAR ARCHDALE REVIEWED BY: INAVERY REVIEWED BY:	

SCALE: 0

CADD File Name: