

DMS-1* DIGITAL MULTIPLEX SYSTEM INSTALLATION WIRING GUIDES

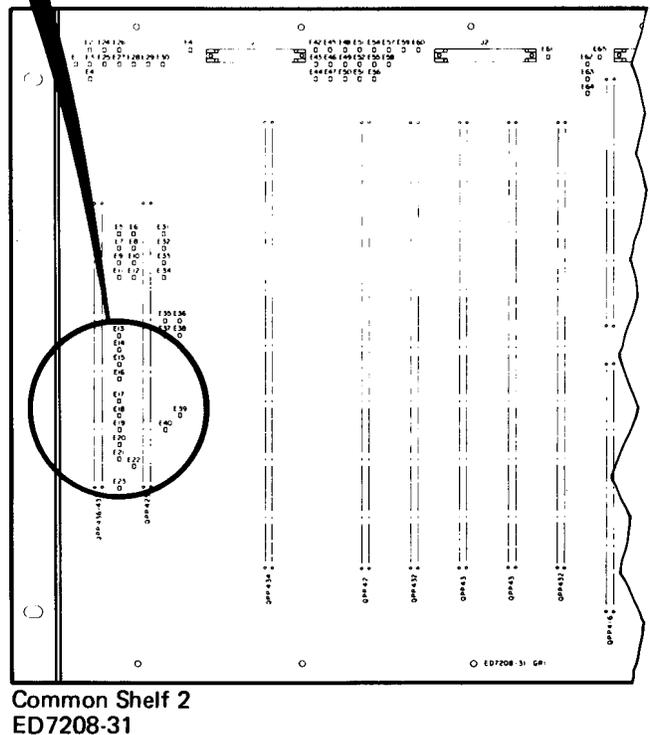
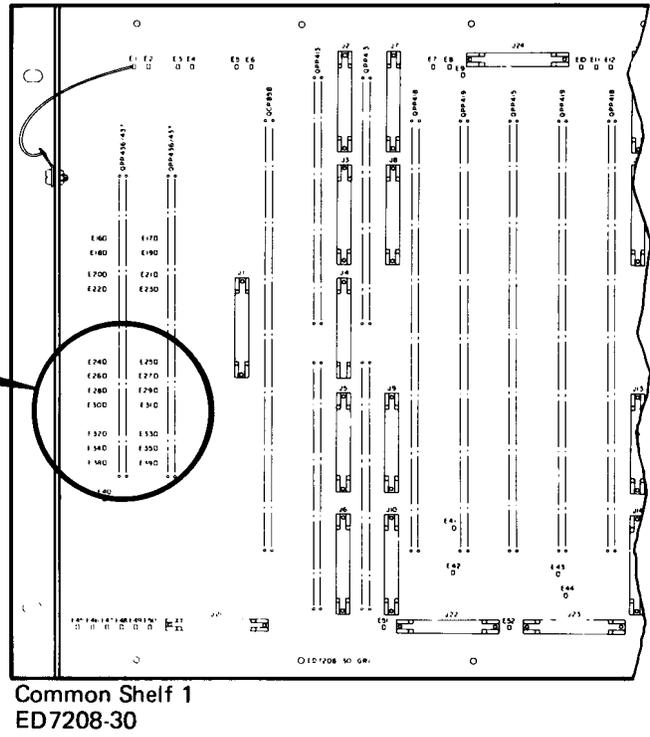
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3. PCM (DS1) LINE WIRING AT A RCT	5	2.02 Wiring for the options available on the PCM lines are shown in Fig. 2 through 4 as follows:
4. FAULT-LOCATE LINE WIRING AT A CCT	10	<ul style="list-style-type: none"> ● <i>Option Z (Fig. 2):</i> Use Option Z when DMS-1 repeaters (QPP436 or QPP437) are installed in the CCT for lines A or B, or both, but with no protection line. ● <i>Option Y (Fig. 3):</i> Use Option Y when DMS-1 repeaters (QPP436 or QPP437) are not installed in the CCT for lines A or B, or both, and there is no protection line. ● <i>Option T (Fig. 4):</i> Use Option T when protection switching is provided, and use of a QAH19A attenuator is required (Note). ● <i>Option S (Fig. 4):</i> Use Option S when protection switching is not provided, and use of a QAH19A attenuator is required (Note).
5. FAULT-LOCATE LINE WIRING AT AN INTERMEDIATE RCT	14	<i>Note:</i> A QAH19A, mounted on the back of common shelf 2 is required when the first repeater on a DS1 line (either a line or an office repeater) is less than 1500 feet (457.2 metres) from the QPP436 or QPP437 repeaters mounted in the CCT bay.
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1. GENERAL		
1.01 This section contains information for wiring PCM (DS1) lines, fault-locate lines, and order-wire lines on the backplanes of CCT and office or hut-mounted RCT, and at RCT cabinets. The information provided includes guides for wiring the various options available at each location.		
1.02 This section does not include detailed descriptive, engineering, or installation data related to the features and options covered in Parts 2 through 8. Such details are available in other DMS-1 practices listed in the DMS-1 Product Index, 363-2011-001.		

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SECTION 363-2011-202

Connect PCM (DS1) Line Pairs			
From		To	
Office Distribution Frame		Common Shelf 1 Pin	Common Shelf 2 Pin
Line A			
RCV	T R	E33 E35	
TRMT	T R	E25 E27	
Line B			
RCV	T R	E32 E34	
TRMT	T R	E24 E26	
Line P			
RCV	T R		E20 E21
TRMT	T R		E15 E16

Ref: SD7208-01, CAD 5



Notes:

1. PCM Lines from the office distribution frame should be shielded pairs.
2. The IN pairs and OUT pairs should be in separate cables.
3. Connections to the common shelf backplane are on wire-wrap terminals.
4. Lines A and B are working lines; line P is the protection line.
5. Also wire options Z (Fig. 2) or Y (Fig. 3) as required.
6. If QAH19A attenuators are required, use Fig. 4 (Options T and S).

Fig. 1 – Wiring Connections at a CCT for PCM (DS1) Lines – Without QAH19A Digital Line Signal Attenuator

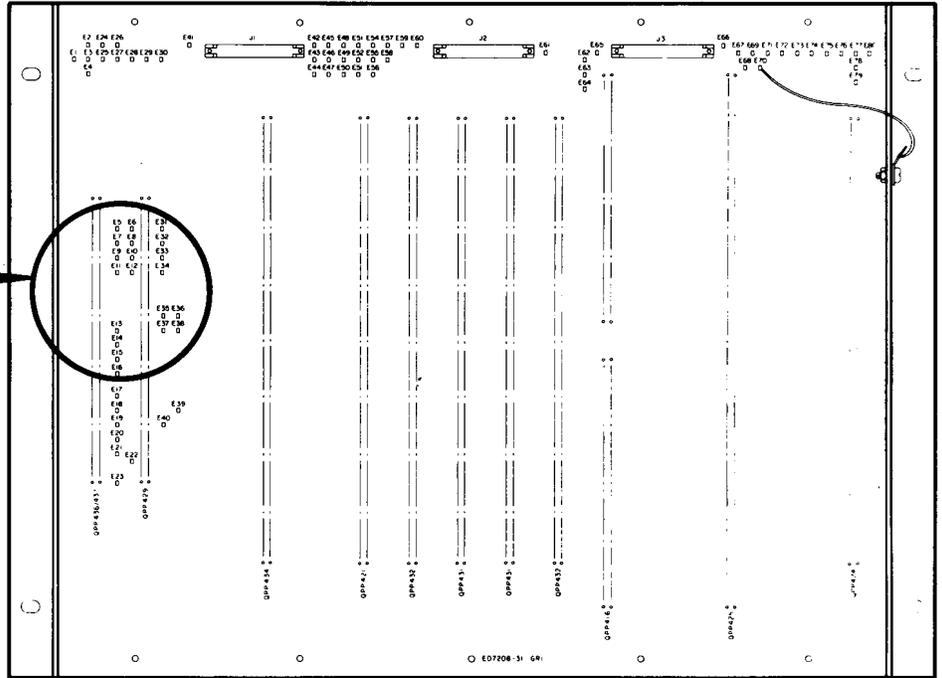
Option Z Wiring	
Connect Jumpers	
From Pin	To Pin
E5	E6
E7	E31
E9	E32
E11	E8
E35	E10
E36	E33
E37	E12
E38	E34

Ref. J7208, Table E

Note:

Wire Option Z when:

- (a) DMS-1 Repeaters (QPP436 or QPP437) are installed;
- (b) Protection switching is not used (Line P not equipped).



Common Shelf 2
ED7208-31

Fig. 2 – Wiring for Option Z at a CCT

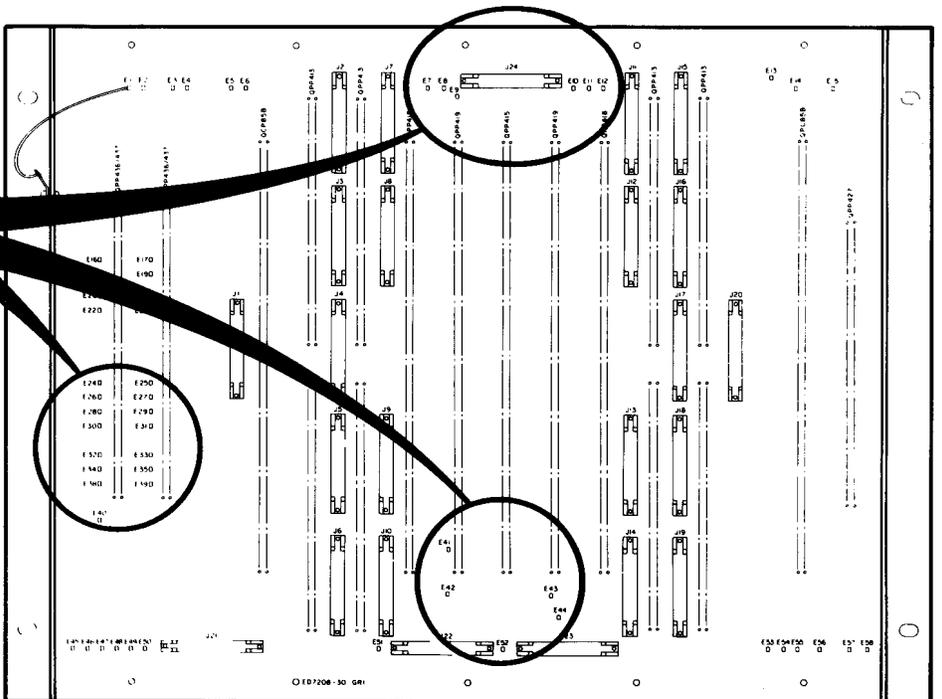
Option Y Wiring	
Connect Jumpers	
From Pins	To Pins
E7	E32
E9	E34
E11	E35
E12	E33
E41	E26
E42	E24
E43	E25
E44	E27

Ref: J7208A-1 Table E

Note:

Wire Option Y when:

- (a) DMS-1 Repeaters (QPP436 or QPP437) are not used;
- (b) Protection switching is not used (Line P not equipped).



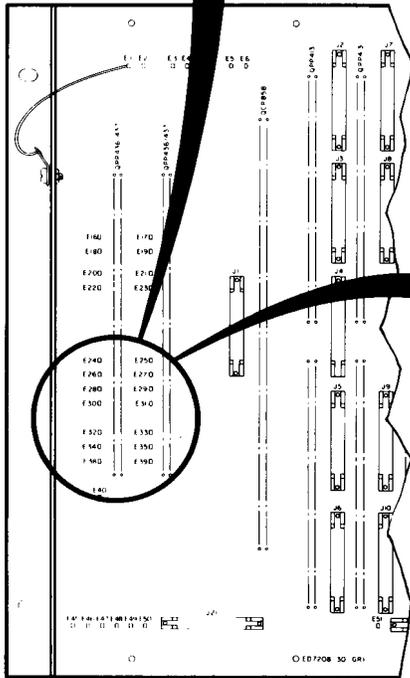
Common Shelf 1
ED7208-30

Fig. 3 – Wiring for Option Y at a CCT

PCM (DS1) Line Connections					
Use With Both Options T And S					
Wire PCM Line Pairs					
From			To		
Office Distribution Frame			QAH19 Pin	Common Shelf 1 Pin	Common Shelf 2 Pin
Line A	RCV	Tip Ring	135 134	E25 E27	
	TRMT	Tip Ring			
Line B	RCV	Tip Ring	139 137	E24 E26	
	TRMT	Tip Ring			
Line P	RCV	Tip Ring	138 136		E15 E16
	TRMT	Tip Ring			

Ref: SD7208-01 CAD 20

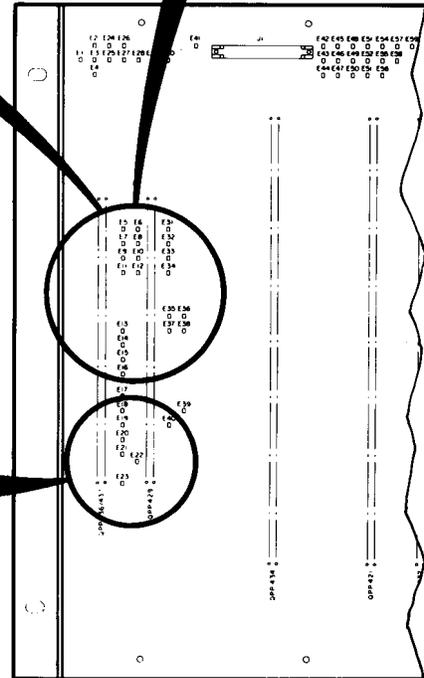
Option S	
1. Wire jumpers as shown for Option T.	
2. Wire additional Jumpers on Common Shelf 2 as follows:	
From	To
E5	E6
E7	E31
E9	E32
E11	E8
E35	E10
E36	E33
E37	E12
E38	E34
Ref: J7208-1, Table E	



Common Shelf 1
ED7208-30

QAH19A					
0134	140 0				
0135	141 0				
0136	142 0				
0137	143 0				
0138	144 0				
0139	145 0				

Option T		
Wire Jumpers Between		
QAH19 Pin	Common Shelf 1	Common Shelf 2
140	E35	
141	E33	
142		E21
143		E20
144	E34	
145	E32	
Ref: J7208-1 Table E		



Common Shelf 2
ED7208-31

Notes:

1. Use Option T or S when QAH19A attenuators are required (DS1 line or office repeaters within 1500 ft of CCT).
2. Use Option T when protection switching and a non-DMS-1 span rack are used.
3. Use Option S when protection switching is not used (Line P not equipped).

Fig. 4 – Wiring for Option T and S at a CCT

3. PCM (DS1) LINE WIRING AT A RCT

3.01 This part applies only to RCT installed in offices or huts. For RCT mounted in RCT cabinets, see Part 8.

3.02 Up to three PCM (DS1) lines may be wired to a RCT bay; that is, either one or two working lines (referred to in the illustrations as lines A and B, or A[R], B[R]), and one optional protection line (line P, or line P[R]). If installed line P/P(R) provides either 1-for-1 or 1-for-2 protection for the working lines on a single DMS-1 system, or 1-for-n protection when line P/P(R) is shared by two or more DMS-1 systems with colocated RCT. Wiring connections for the PCM lines are shown in Fig. 5.

3.03 Wiring for the options available on the PCM lines are shown in Fig. 6 through 8 as follows:

- **Option Z (Fig. 6):** Use Option Z when DMS-1 repeaters (QPP436 or QPP437) are installed in the RCT for the working lines, but with no protection switching.
- **Option Y (Fig. 6):** Use Option Y when DMS-1 repeater (QPP436 or QPP437) are not installed in the RCT for the working lines, and there is no protection switching.

- **Option T (Fig. 7):** Use Option T when protection switching is provided, *and* use of a QAH19A attenuator is required (Note).
- **Option S (Fig. 7):** Use Option S when protection switching is not provided, but use of a QAH19A attenuator is required (Note).
- **Option ZA (Fig. 8):** Use Option ZA at an "end" RCT to provide DS1 line powering; and at an intermediate RCT to provide through-powering for the DS1 lines.
- **Option ZB (Fig. 8):** Use Option ZB at an intermediate RCT only to provide loop-powering for the DS1 lines.

Note: A QAH19A, mounted on the back of the RCT power shelf is required when the first repeater (line or office repeater) on a DS1 line is less than 1500 feet (457.2 metres) from the QPP436 or QPP437 repeaters mounted in the RCT.

SECTION 363-2011-202

PCM Line Connections At All RCT					
Connect Lines From The CCT Or The Preceding RCT As Follows:					
From Distribution Frame	When Option T Or S Is Used:		When Option T Or S Is Not Used:		
	QAH19	To Power Shelf	To Power Shelf		
Line A	RCV	Tip	135		E65
		Ring			
	TRMT	Tip	E35	E35	
		Ring			E41
Line B	RCV	Tip	139		
		Ring			137
	TRMT	Tip	E34	E34	
		Ring			E40
Line P	RCV	Tip	138		
		Ring			136
	TRMT	Tip	E33	E33	
		Ring			E39

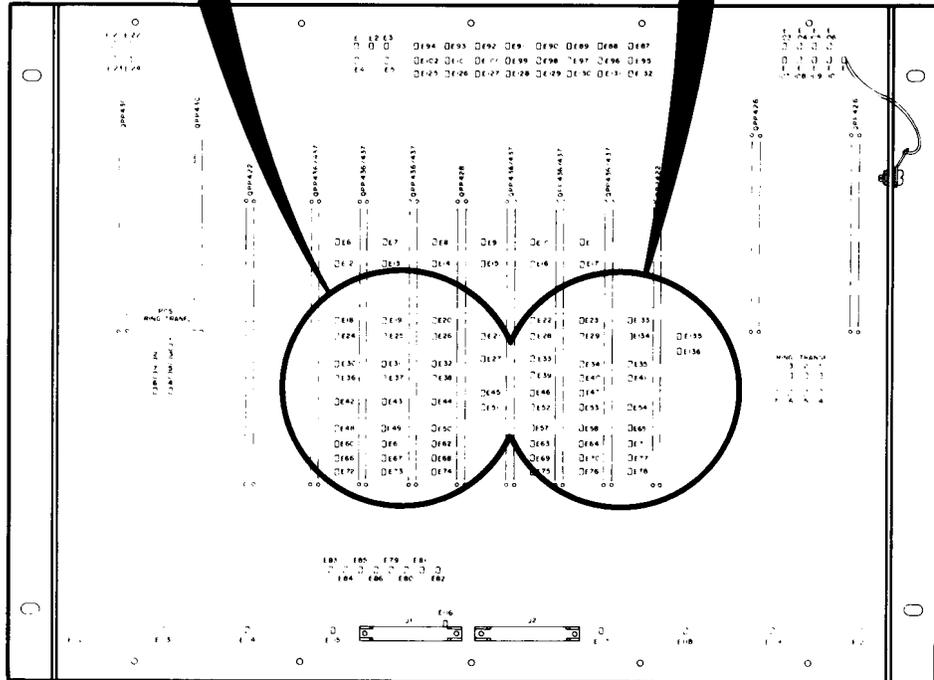
Ref: SD7209-01, CAD 5, 17

Additional PCM Line Connections At Intermediate RCT			
Connect Lines To The Next RCT As Follows:			
From Distribution Frame		To Power Shelf	
Line A(S)	RCV	Tip	E62
		Ring	
	TRMT	Tip	E32
		Ring	
Line B(R)	RCV	Tip	E61
		Ring	
	TRMT	Tip	E31
		Ring	
Line P(R)	RCV	Tip	E60
		Ring	
	TRMT	Tip	E30
		Ring	

Ref: SD7209-01, CAD 5

0134	1400
0135	1410
0136	1420
0137	1430
0138	1440
0139	1450

QAH19A



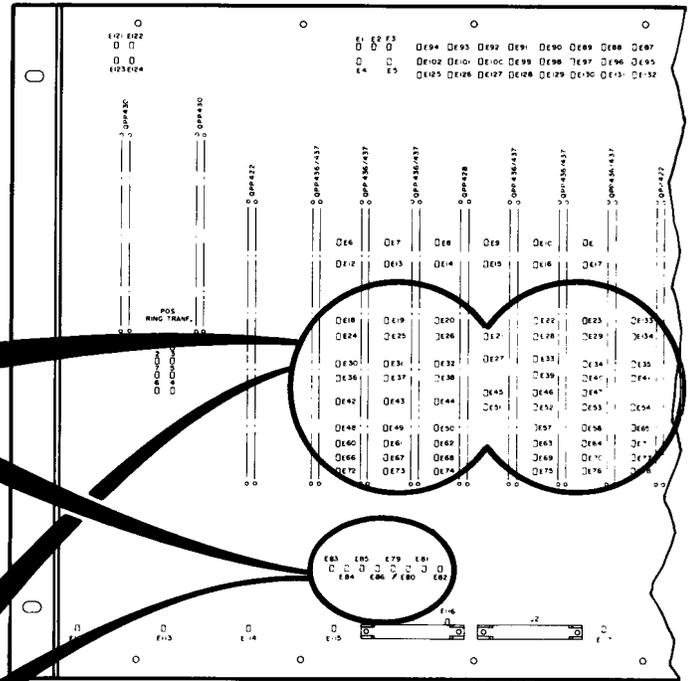
RCT Power Shelf
ED7209-33

Fig. 5 — Wiring at a RCT for PCM (DS1) Lines

Note:
Wire options Z, Y, T, S, ZA, or ZB as required (Fig. 6 through 8).

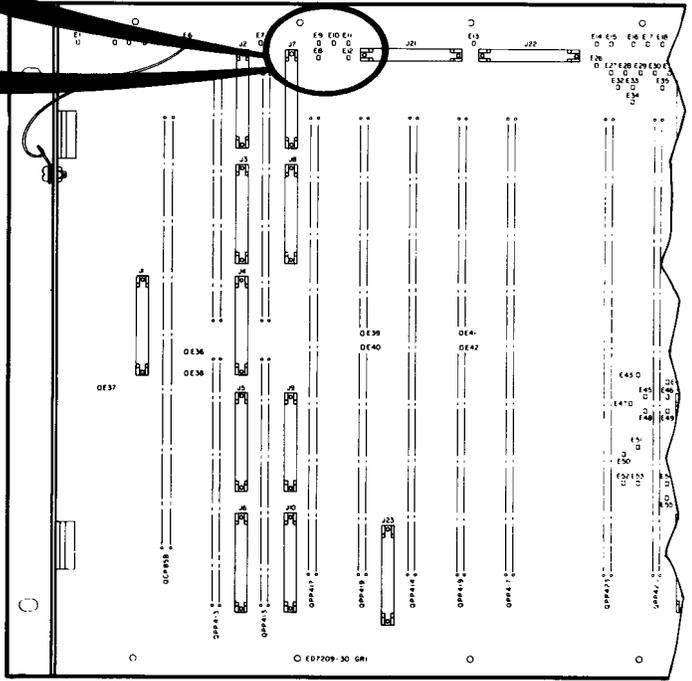
Option Z			
Use when DMS-1 repeaters, (QPP436 or QPP437) are installed in the Power Shelf			
Wire Jumpers			
On Power Shelf		On Common Shelf	
From	To	From	To
E43	E19	E9	E11
E44	E20	E8	E12
E49	E25		
E50	E26		
E79	E53		
E80	E47		
E81	E29		
E82	E23		
E83	E46		
E84	E52		
E85	E28		
E86	E22		

Ref. J7209A-1, Table E



Option Y			
Use when DMS-1 repeaters, (QPP436 or QPP437) are not installed in the Power Shelf			
Wire Jumpers			
On Power Shelf		On Common Shelf	
From	To	From	To
E79	E71	E9	E1
E80	E65	E8	E12
E81	E41		
E82	E35		
E83	E64		
E84	E70		
E85	E40		
E86	E34		

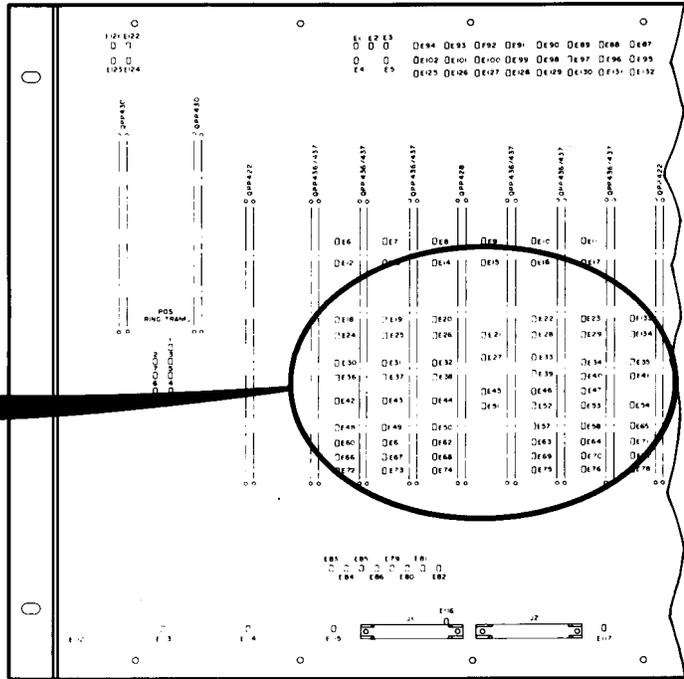
Ref. J7209A-1, Table E



- Notes:
1. Use Option Z or Y when protection switching is not used.
 2. See Fig. 5 for PCM Line connectors.

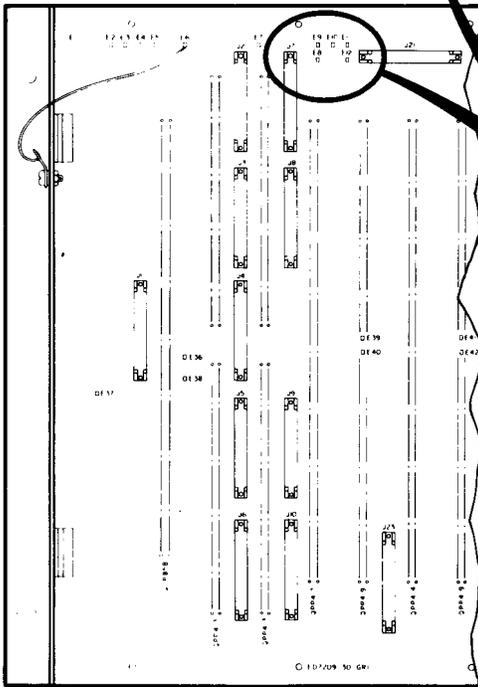
Fig. 6 – Wiring at a RCT for Options Z and Y

Option T	
Note: Use Option T when protection switching is used.	
Wire Jumpers	
From QAH19A	To Power Shelf
140	E71
141	E65
142	E69
143	E63
144	E70
145	E64
Ref: SD7209-01, CAD 17 J7209A-1, Table E	



RCT Power Shelf
ED7209-33

QAH19A	Terminal
140	0134
141	0135
142	0136
143	0137
144	0138
145	0139



RCT Common Shelf
ED7209-30

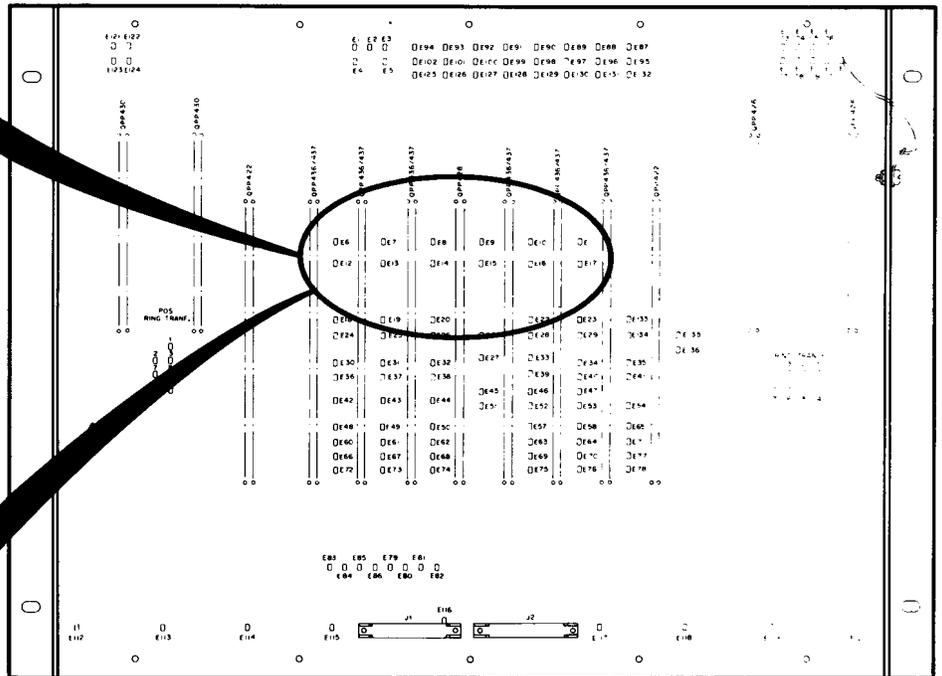
- Notes:
1. Use Option T or S when a QAH19A attenuator is required.
 2. See Fig. 5 for the PCM line connections to the RCT.

Option S			
Note: Use Option S when protection switching is not used;			
1. Wire jumpers as shown for Option T.			
2. Wire additional jumpers as follows:			
On Power Shelf		On Common Shelf	
From	To	From	To
E43	E19	E8	E12
E44	E20	E9	E11
E49	E25		
E50	E26		
E79	E53		
E80	E47		
E81	E29		
E82	E23		
E83	E45		
E84	E52		
E85	E28		
E86	E22		
Ref: SD7209-01, CAD 17 J7209-A-1, Table E			

Fig. 7 – Wiring at a RCT for Options T and S

Option ZA	
Use Option ZA:	
(a) At an END RCT to provide line powering;	
(b) At an INTERMEDIATE RCT to provide through-powering.	
Wire Jumpers On The Power Shelf	
From	To
E6	E12
E7	E13
E8	E14
E9	E15
E10	E16
E11	E17
Ref: J7209A-1 Table E	

Option ZB	
Use Option ZB at an INTERMEDIATE RCT to provide loop powering for the line	
Wire Jumpers On The Power Shelf	
From	To
E6	E15
E7	E16
E8	E17
E9	E12
E10	E13
E11	E14
Ref: J7209A-1 Table E	



RCT Power Shelf
ED7209-33

Fig. 8 – Wiring at a RCT for Options ZA and ZB

4. FAULT-LOCATE LINE WIRING AT A CCT

4.01 The wiring information provided in this part assumes that a standard DMS-1 Order-Wire and Fault-Locate (OW&FL) shelf (ED7208-33) is installed in the CCT bay.

4.02 The fault-locate system may comprise a single fault-locate line; or two fault-locate lines in a cable diversity arrangement. In addition, the fault-locate system may be shared by two or more (maximum of eight) DMS-1 systems with colocated CCT and RCT.

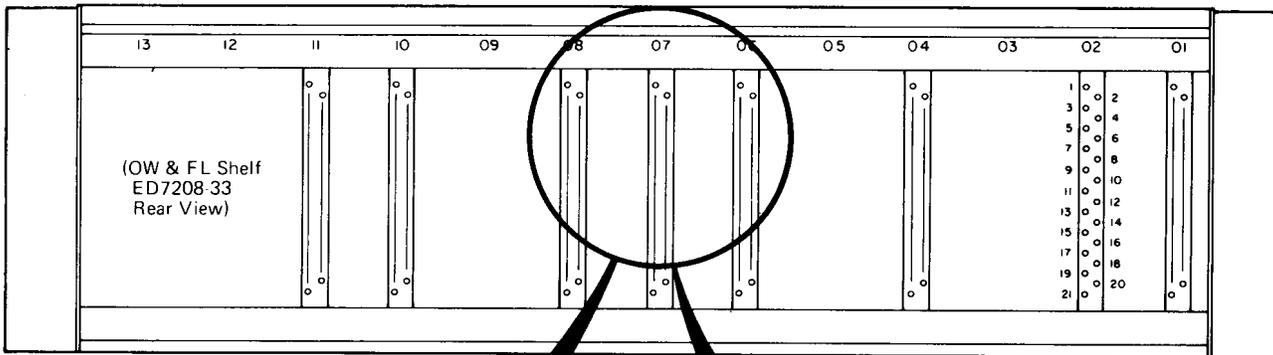
4.03 Guides for wiring the fault-locate lines at a CCT are given in Fig.9 through 12 as follows:

● **Figure 9.** Wiring at a CCT for a Single Fault-Locate Line.

● **Figure 10.** Wiring at a CCT for Two Fault-Locate Lines – Cable Diversity System.

● **Figure 11.** Wiring at a CCT for a Fault-Locate Access Unit (QPP301) shared by more than one DMS-1 System, or by the arms of a single, Star-Configured DMS-1 System.

● **Figure 12.** CCT Common Shelf Wiring when Fault-Locate Access shared by two or more DMS-1 Systems.



When RCT Is "East" Of CCT				
Connect				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
FL Pair	06	1	08	1
	06	2	08	2

Ref: SD7208-01, CAD 7

When RCT Is "West" Of CCT				
Connect				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
FL Pair	06	1	08	3
	06	2	08	4

Ref: SD7208, CAD 8

Fig. 9 – Wiring at a CCT for a Single Fault-Locate Pair

When Fault Locate Access Shared By Two DMS-1 Systems				
Connect Wiring				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf		OW & FL Shelf	
	CONN	Pin	CONN	Pin
System 1	08	1	06	1
F/L Circuit 1		2		2
System 1	08	11	07	1
F/L Circuit 2		12		2
System 2	08	3	10	1
F/L Circuit 1		4		2
System 2	08	13	11	1
F/L Circuit 2		14		2

Ref: SD7208-01, CAD 6

IMPORTANT: Also Wire Common Shelves per Fig. 12

When A DMS-1 System is in A Star Configuration				
Connect Wiring				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf		OW & FL Shelf	
	CONN	Pin	CONN	Pin
Arm 1	08	1	06	1
F/L Pair		2		2
Arm 2	08	11	07	1
F/L Pair		12		2
Arm 3	08	3	10	1
F/L Pair		4		2
Arm 4	08	13	11	1
F/L Pair		14		2

Ref: SD7208-01, CAD 6

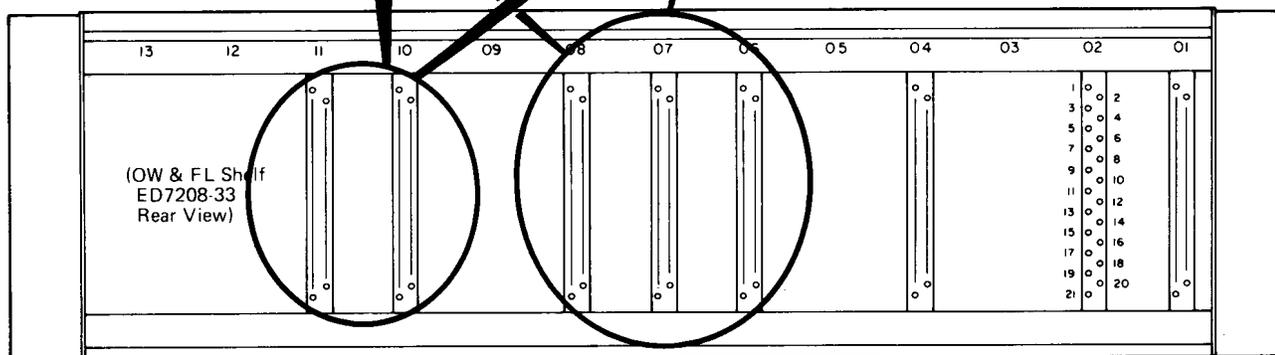


Fig. 11 – Wiring at the CCT for a Fault-Locate Access Unit (QPP301) Shared by more than one DMS-1 System or by the Arms of a Single Star-Configured DMS-1 System

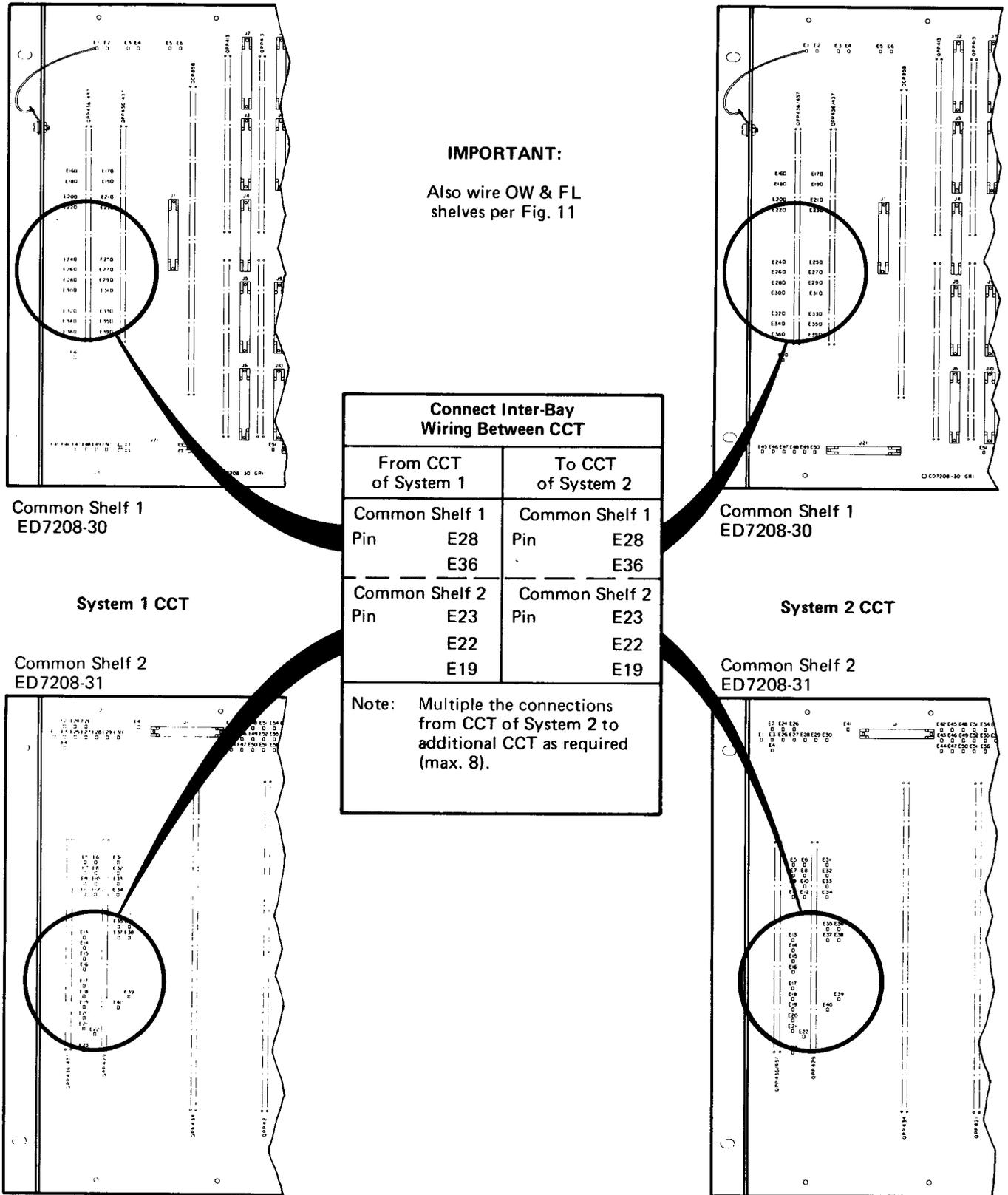


Fig. 12 — Common Shelf Wiring at a CCT for Fault-Locate Access Shared by two or more DMS-1 Systems

5. FAULT-LOCATE LINE WIRING AT AN INTERMEDIATE RCT

5.01 This part applies only to RCT installed in offices or huts. For RCT mounted in RCT cabinets, refer to Part 8.

5.02 The information provided in this part assumes that a standard DMS-1 Order-Wire and Fault-Locate (OW&FL) shelf (ED7208-33) is installed in the RCT bay.

5.03 The fault-locate system may comprise a single fault-locate line; or two fault-locate lines in a cable diversity arrangement. In addition, the fault-locate system may be shared by two or more (maximum of eight) DMS-1 systems with colocated RCT.

5.04 Guides for wiring the fault-locate lines at an intermediate RCT are given in Fig. 13 through 14 as follows:

- **Figure 13.** Wiring at an Intermediate RCT for a Single Fault-Locate Line.
- **Figure 14.** Wiring at an Intermediate RCT Two Fault-Locate Lines – Cable Diversity System.
- **Figure 15.** RCT Power Shelf Wiring when a Fault-Locate Access Unit (QPP301) is shared by two or more RCT.

When RCT Is "East" Of CCT				
Connect Wiring				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
			(Note)	
F/L Pair From CCT	06	1	08	3
	06	2	08	4
F/L Pair To Next RCT	10	1	08	1
	10	2	08	2
Note: Wire jumpers only if a QPP301C is installed for Fault-locate access.				
Ref: SD7209-01, CAD 7, 8, 22, 24				

When RCT is "West" Of CCT				
Connect Wiring				
From	To		Jumper To	
Office Distribution Office	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
			(Note)	
F/L Pair From CCT	06	1	08	1
	06	2	08	2
F/L Pair To Next RCT	10	1	08	3
	10	2	08	4
Note: Wire jumpers only if a QPP301C is installed for Fault-locate access.				
Ref: SD7209-01, CAD 7, 8, 20, 26				

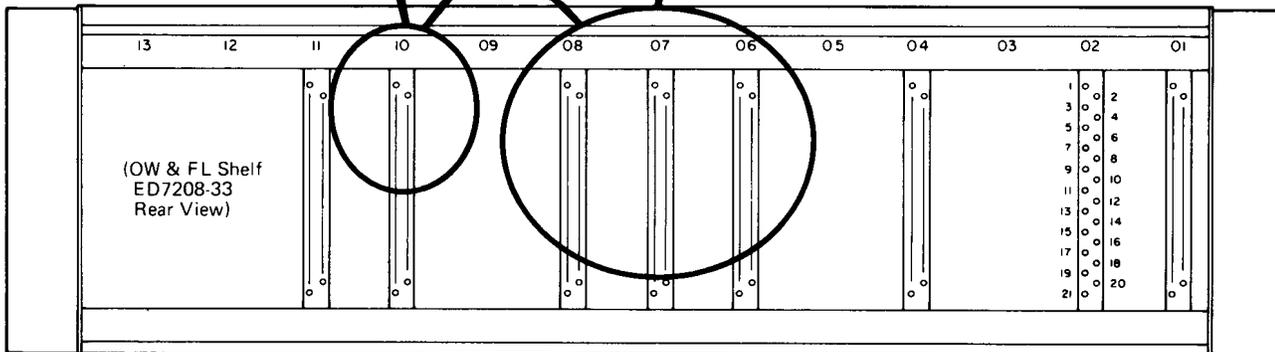


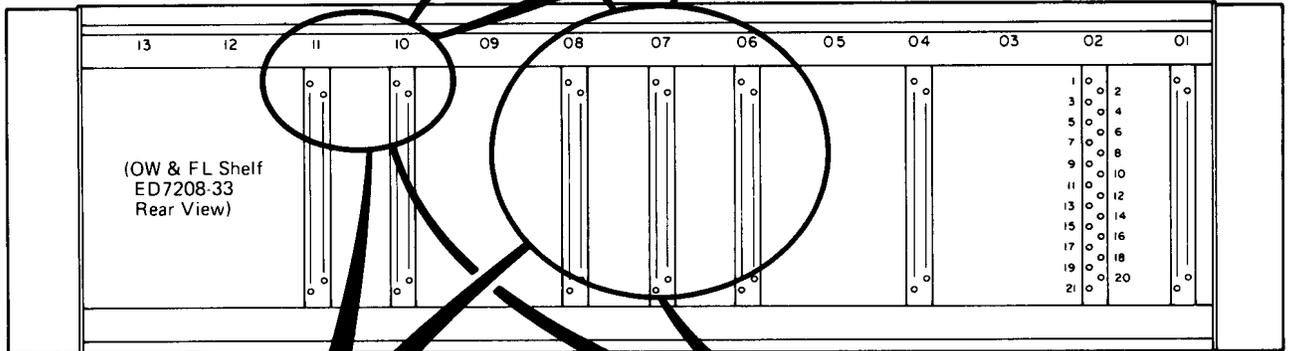
Fig. 13 – Wiring at an Intermediate RCT for a Single Fault-Locate Line

When RCT Is "East" Of CCT				
Connect Wiring				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
F/L Pairs From CCT Line 1	06	1	08	3
		2		4
Line 2	07	1	08	13
		2		14
Next RCT Line 1	10	1	08	1
		2		2
Line 2	11	1	08	11
		2		12

Note: Wire jumpers only if a QPP301 is installed in the shelf.
Ref: SD7209-01, CAD 7, 8, 22, 23, 24, 25

When RCT Is "West" Of CCT				
Connect Wiring				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
F/L Pairs From CCT Line 1	06	1	08	1
		2		2
Line 2	07	1	08	11
		2		12
Next RCT Line 1	10	1	08	3
		2		4
Line 2	11	1	08	13
		2		14

Note: Wire jumpers only if a QPP301 is installed in the shelf.
Ref: SD7209-01, CAD 7, 8, 20, 21, 26, 27



For Cable Diversity Operation			
Cut Or Remove Jumpers Between			
CONN	Pin	CONN	Pin
06	05	07	05
06	20	07	20
10	5	11	5
10	20	11	20

Ref: SD7209-01, CAD 18

IMPORTANT

When a fault-locate access unit (QPP301C) is shared by two or more RCT, install additional wiring on the RCT Power Shelf (Fig. 15).

When A QPP301C Is Installed In The Shelf			
Cut Or Remove Jumpers Between			
CONN	Pin	CONN	Pin
06	1	10	1
06	2	10	2
06	16	06	19
07	1	11	1
07	2	11	2

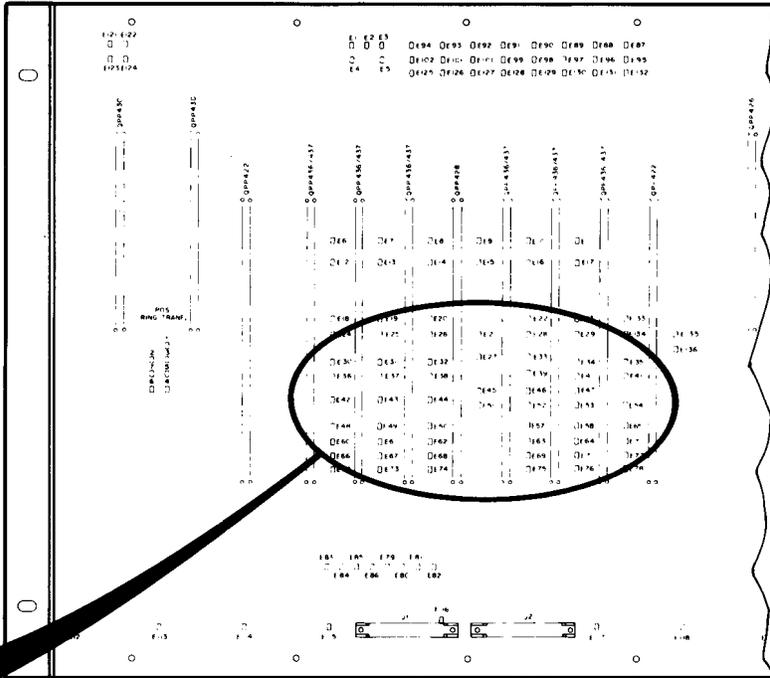
Ref: SD7209-01, CAD 19

Fig. 14 – Wiring at an Intermediate RCT for two Fault-Locate Lines – Cable Diversity

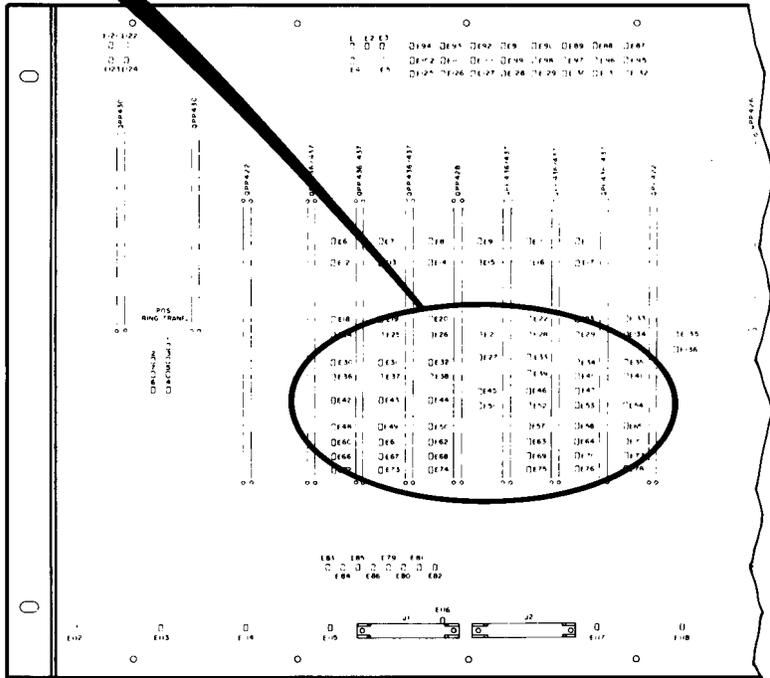
Connect Interbay Wiring Between The Backplanes Of The RCT Sharing FL ACCESS	
From RCT System 1 Pin	To (Note) RCT System 2 Pin
E78	E78
E77	E77
E76	E76
E74	E74
E73	E73
E59	E59
E58	E58

Note: If other RCT are to share the FL access, multiple the connections on the System 2 backplane to the corresponding pins on the other RCT.

Ref: SD7209-01 CAD 6



Power Shelf On RCT Of System 1
ED7209-31 Or ED7209-33



Power Shelf On RCT Of System 2
ED7209-31 Or ED7209-33

IMPORTANT

Also wire OW & FL shelf using Fig. 13 or Fig. 14 as required.

Fig. 15 — RCT Power Shelf Wiring when a Fault-Locate Access Unit (QPP301) is Shared by two or more RCT

6. FAULT-LOCATE LINE WIRING AT AN END RCT

6.01 This part applies only to RCT installed in offices or huts. For RCT mounted in RCT cabinets, see Part 8.

6.02 The information provided in this part assumes that a standard DMS-1 Order-Wire and Fault-Locate (OW&FL) shelf is installed in the RCT bay.

6.03 The fault-locate system may comprise a single fault-locate line; or two fault-locate lines in a cable diversity arrangement. In addition, the fault-locate lines may be shared by two or more DMS-1 systems (maximum of eight) with colocated RCT.

6.04 Guides for wiring the fault-locate lines at an end RCT are given in Fig. 16, 17, and 15 as follows:

- *Figure 16.* Wiring at an End RCT for a Single Fault-Locate Line.
- *Figure 17.* Wiring at an End RCT for Two Fault-Locate Lines – Cable Diversity System.
- *Figure 15.* RCT Power Shelf Wiring when a Fault-Locate Access Unit (QPP301) is shared by two or more DMS-1 Systems.

When RCT Is "East" Of CCT				
Connect F/L Line Pairs				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
Last RCT	06	1	08	3
	06	2	08	4
(Note)				
Note: Wire jumpers only if QPP301C is installed in the shelf.				
Ref: SD7209-01, CAD 7, 24				

When RCT Is "West" Of CCT				
Connect F/L Line Pairs				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf CONN	Pin	OW & FL Shelf CONN	Pin
Last RCT	06	1	08	1
	06	2	08	2
(Note)				
Note: Wire jumpers only if a QPP301C is installed in the shelf.				
Ref: SD7209-01, CAD 7, 20				

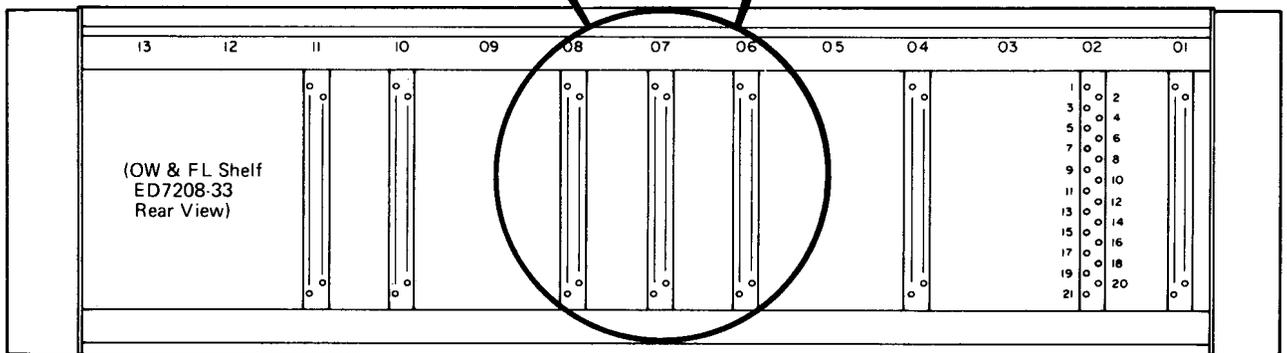
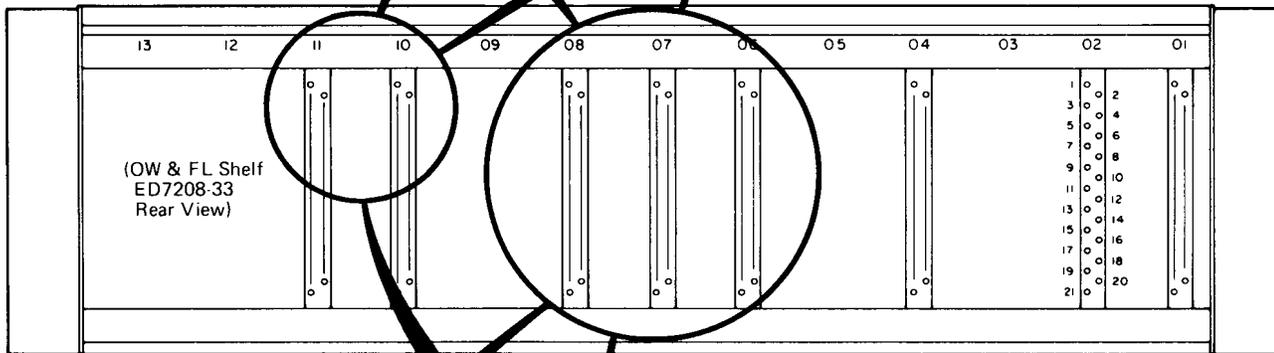


Fig. 16 — Wiring at an End RCT for a Single Fault-Locate Line

When RCT Is "East" Of CCT				
Connect F/L Pairs				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf		OW & FL Shelf	
	CONN	Pin	CONN	Pin
To Last RCT	(Note)			
Line 1	06	1	08	3
	06	2	08	4
Line 2	07	1	08	13
	07	2	08	14
Note: Wire jumpers only if a QPP301 is installed in the shelf.				
Ref: SD7209-01, CAD 7, 24, 25				

When RCT Is "West" Of CCT				
Connect F/L Pairs				
From	To		Jumper To	
Office Distribution Frame	OW & FL Shelf		OW & FL Shelf	
	CONN	Pin	CONN	Pin
To Last RCT	(Note)			
Line 1	06	1	08	1
	06	2	08	2
Line 2	07	1	08	11
	07	2	08	12
Note: Wire jumpers only if a QPP301 is installed in the shelf.				
Ref: SD7209-01, CAD 7, 20, 21				



For Cable Diversity Operation			
Cut Or Remove Jumpers Between			
CONN	Pin	CONN	Pin
06	5	07	5
06	20	07	20
10	5	11	5
10	20	11	20
Ref: SD7209-01, CAD 18			

When A QPP301 Is Installed In The Shelf			
Cut Or Remove Jumpers Between			
CONN	Pin	CONN	Pin
06	1	10	1
06	2	10	2
06	16	06	19
07	1	11	1
07	2	11	2
Ref: SD7209-01, CAD 19			

IMPORTANT

When the fault-locate access unit (QPP301) is shared by two or more RCT, install additional wiring on the RCT Power Shelves (Fig. 15).

Fig. 17 – Wiring at an End RCT for two Fault-Locate Lines – Cable Diversity

7. ORDER-WIRE LINE WIRING AT CCT AND RCT

7.01 This part applies only to CCT and to RCT installed in offices or huts. For RCT mounted in RCT cabinets, refer to Part 8.

7.02 The information in this part assumes the use of QPP302 order-wire terminal or QPP304 bridging units installed in the Order-Wire and Fault-Locate (OW&FL) shelves at the CCT and RCT. The

information includes guides for connecting the order-wire line pairs, and for subscriber line pairs to provide order-wire access to the telephone switching network.

7.03 Guides for wiring the order-wire lines are as follows:

- *Figure 18.* Wiring for Order-Wire Circuits at a CCT.
- *Figure 19.* Wiring for Order-Wire Circuits at a RCT.

Order-Wire Circuit 2		
Connect Order-Wire And Subscriber Line Pairs		
From	To	
Office Distribution Frame	OW & FL Shelf	
	CONN	Pin
Order-Wire		
Tip	04	2
Ring	04	1
Subscriber Line		
Tip	04	3
Ring	04	4
Ref: SD7208-01, CAD 10		

Order-Wire Circuit 1		
Connect Order-Wire And Subscriber Line Pairs		
From	To	
Office Distribution Frame	OW & FL Shelf	
	CONN	Pin
Order-Wire		
Tip	02	2
Ring	02	1
Subscriber Line		
Tip	02	3
Ring	02	4
Ref: SD7208-01, CAD 10		

Note:

This wiring guide assumes QPP302 OW terminal units are installed in shelf positions 2 and 4.

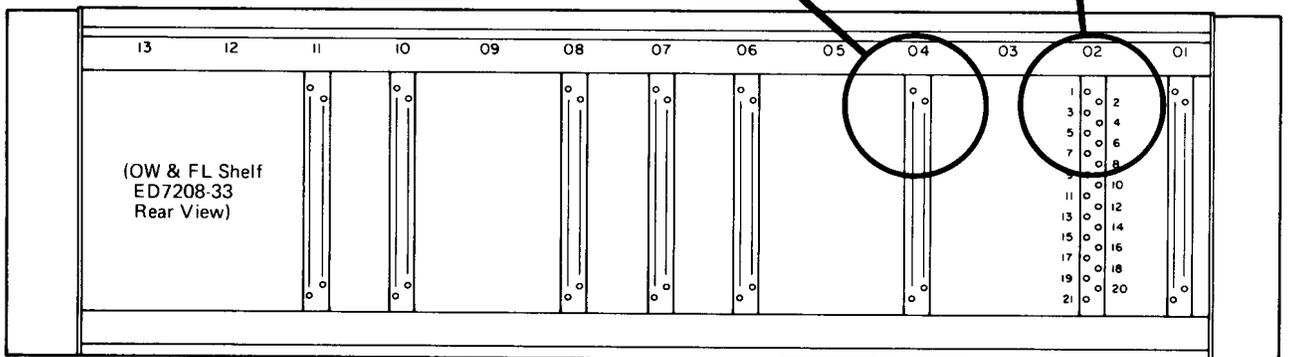
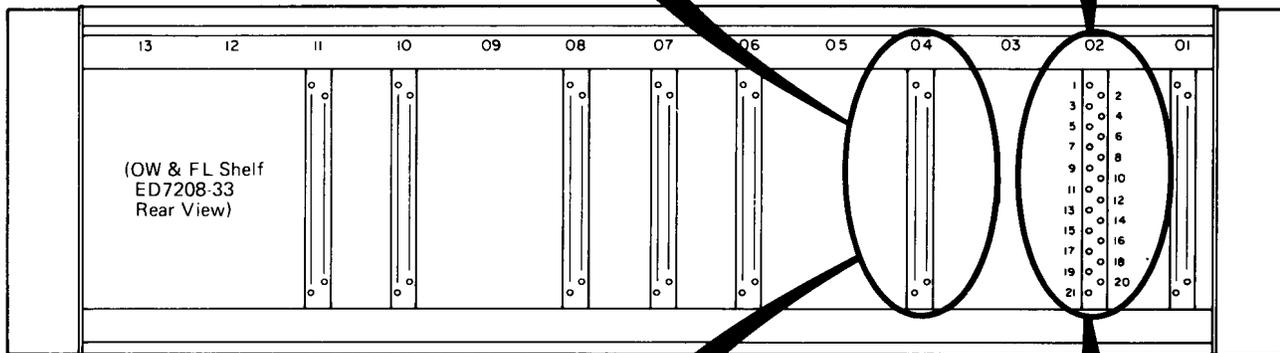


Fig. 18 — Wiring for Order-Wire Circuits at a CCT

Wiring Required
With QPP302
OW Terminal Units
Installed in
the Shelf

Order-Wire Circuit 2 With QPP302 OW Terminal In Use		
Connect Order-Wire And Subscriber Line Pairs		
From Office Distribution Frame	To OW & FL Shelf	
	CONN	Pin
Order Wire Tip {	04	2
	04	1
Subscriber Line Tip {	04	3
	04	4
Ref: SD7209-01, CAD 10		

Order-Wire Circuit 1 With QPP302 OW Terminal In Use		
Connect Order-Wire And Subscriber Line Pairs		
From Office Distribution Frame	To OW & FL Shelf	
	CONN	Pin
Order-Wire Tip {	02	2
	02	1
Subscriber Line Tip {	02	3
	02	4
Ref: SD7209-01, CAD 10		



Wiring Required
With QPP304
Bridging Units
Installed in
the Shelf

Order-Wire Circuits 3 And 4 With QPP304 Units Installed		
Connect Order-Wire Pairs		
From Office Distribution Frame	To OW & FL Shelf	
	CONN	Pin
Circuit 3 RCV Tip {	04	2
	04	1
TRMT Tip {	04	3
	04	4
Circuit 4 Tip {	04	20
	04	14
Ring {	04	18
	04	15
Ref: SD7209-01, CAD 9		

Order-Wire Circuits 1 And 2 With QPP304 Units Installed		
Connect Order-Wire Pairs		
From Office Distribution Frame	To OW & FL Shelf	
	CONN	Pin
Circuit 1 RCV Tip {	02	2
	02	1
TRMT Tip {	02	3
	02	4
Circuit 2 Tip {	02	20
	02	14
Ring {	02	18
	02	15
Ref: SD7209-01, CAD 9		

Fig. 19 – Wiring for Order-Wire Circuits at a RCT

8. PCM (DS1), ORDER-WIRE, AND FAULT-LOCATE LINE WIRING AT A RCT CABINET

8.01 At a RCT, all external line connections, except power and ground, are made by splicing the external cable pairs to the stub cables of the protector blocks in the right-hand compartment of the cabinet (Fig. 22[a], 22[b], 23[a], and 23[b]). Cable-pair and protector assignments are engineered and specified for each installation.

8.02 Within the cabinet the protector blocks E1 and E2 are factory-wired to four protector-connector blocks, TB9 through TB12, as illustrated in Fig. 22(a), 22(b), 23(a), and 23(b). Four other cross-connect blocks are provided for connecting the external line pairs to the appropriate RCT shelves as follows:

- **TB16**: for cross-connecting PCM (DS1), order-wire, and fault-locate lines (Fig. 20).

- **TB13, TB14, and TB15**: for cross-connecting the 2-wire subscriber lines to the RCT line shelves (Fig. 21[a], 21[b], and 21[c]).

8.03 To complete the installation of a RCT cabinet, the following wiring tasks are required.

- (1) Splicing of the external cables to the protector block stubs as illustrated in Fig. 22(a), 22(b), 23(a), and 23(b).
- (2) Installing cross-connect wiring between the subscriber line connector blocks (TB13, TB14, TB15) and the protector-connector blocks (TB9 through TB12), as specified for the installation.
- (3) Installing cross-connect wiring for PCM, order-wire, and fault-locate lines between TB16 (Fig. 20) and the protector-connector blocks, as specified for the installation.

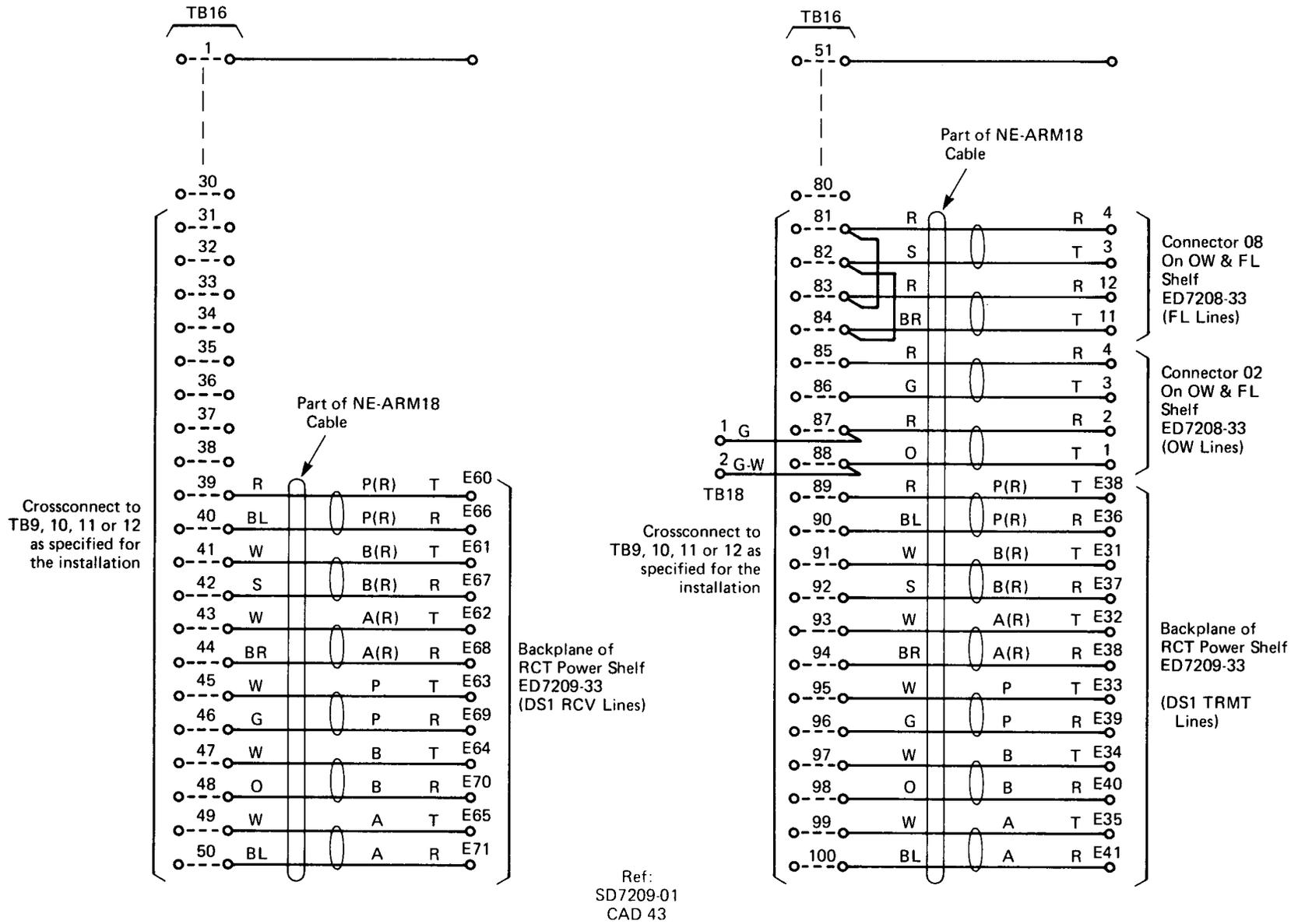
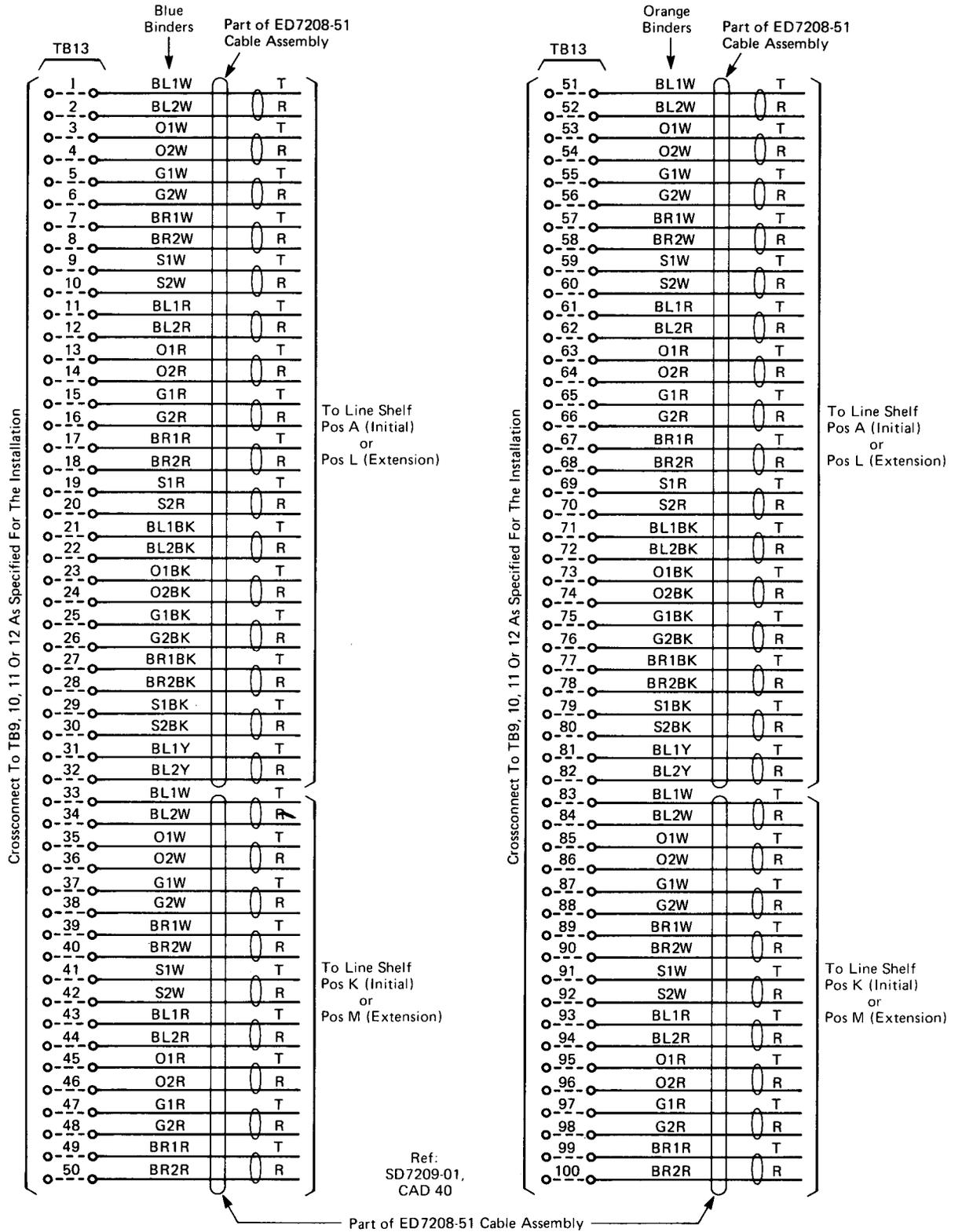
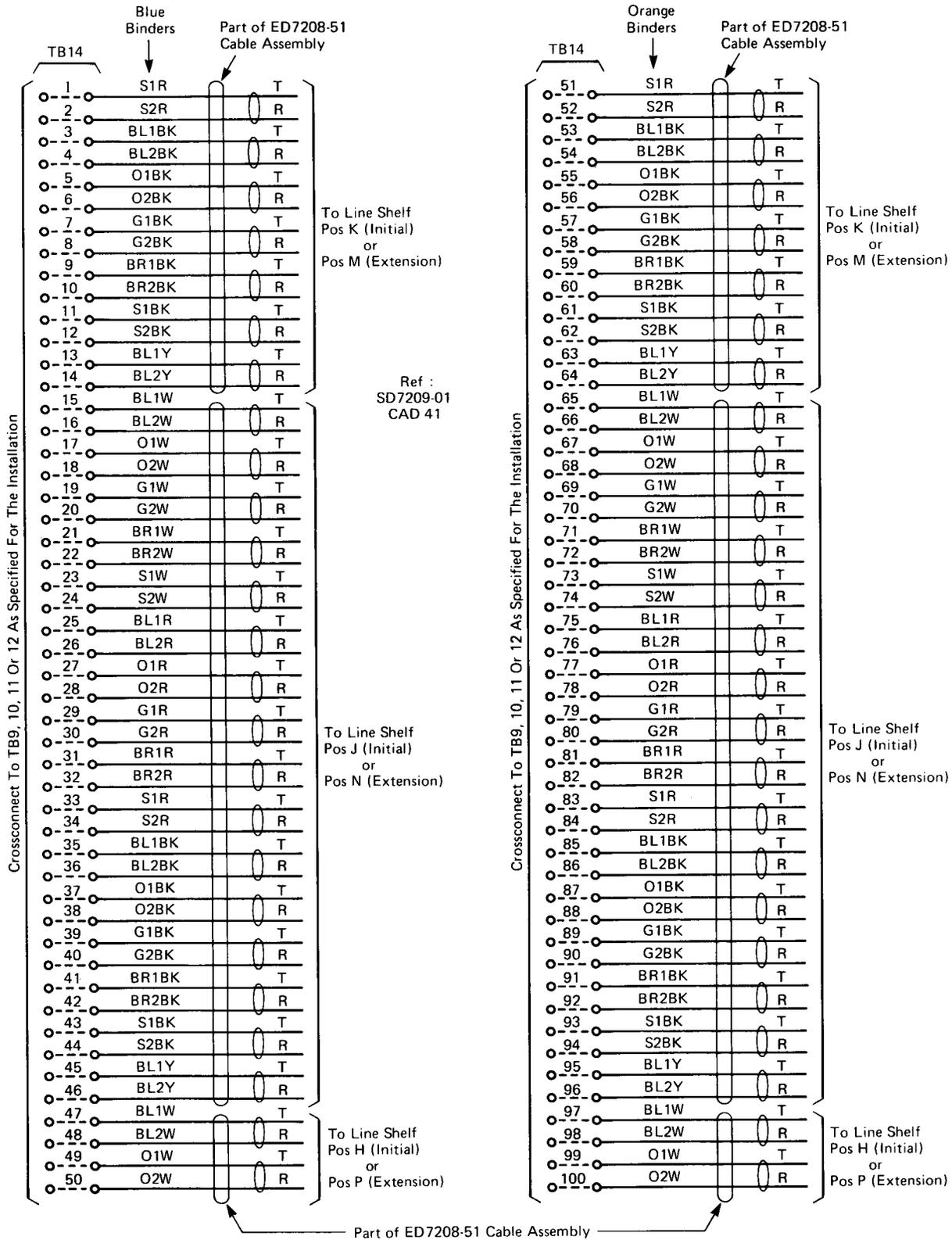


Fig. 20 – Wiring for DS1, OW, ad FL Lines at an RCT Cabinet



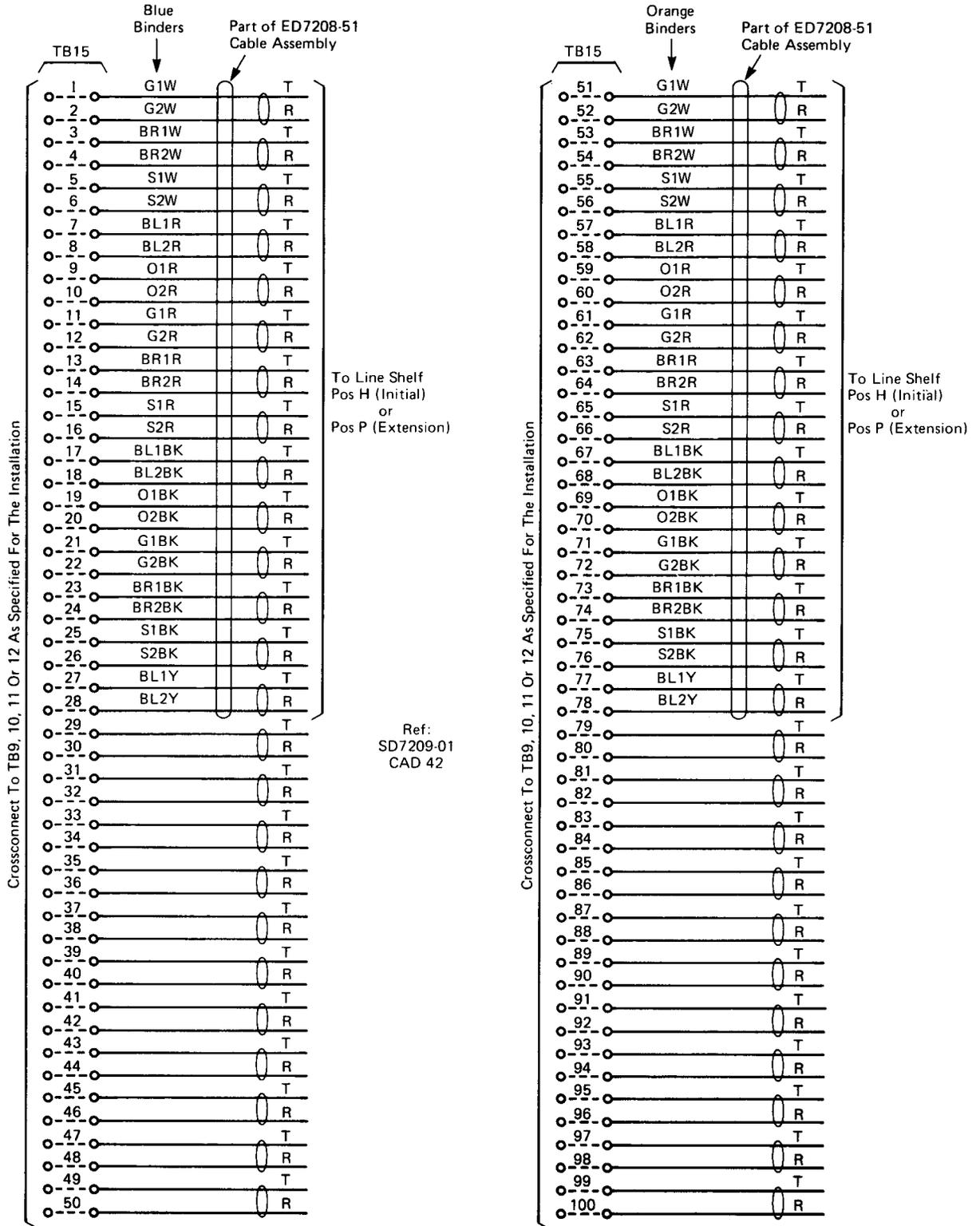
Refer also to Fig. 21B, 21C.

Fig. 21(a) – Wiring for VF Lines at a RCT Cabinet



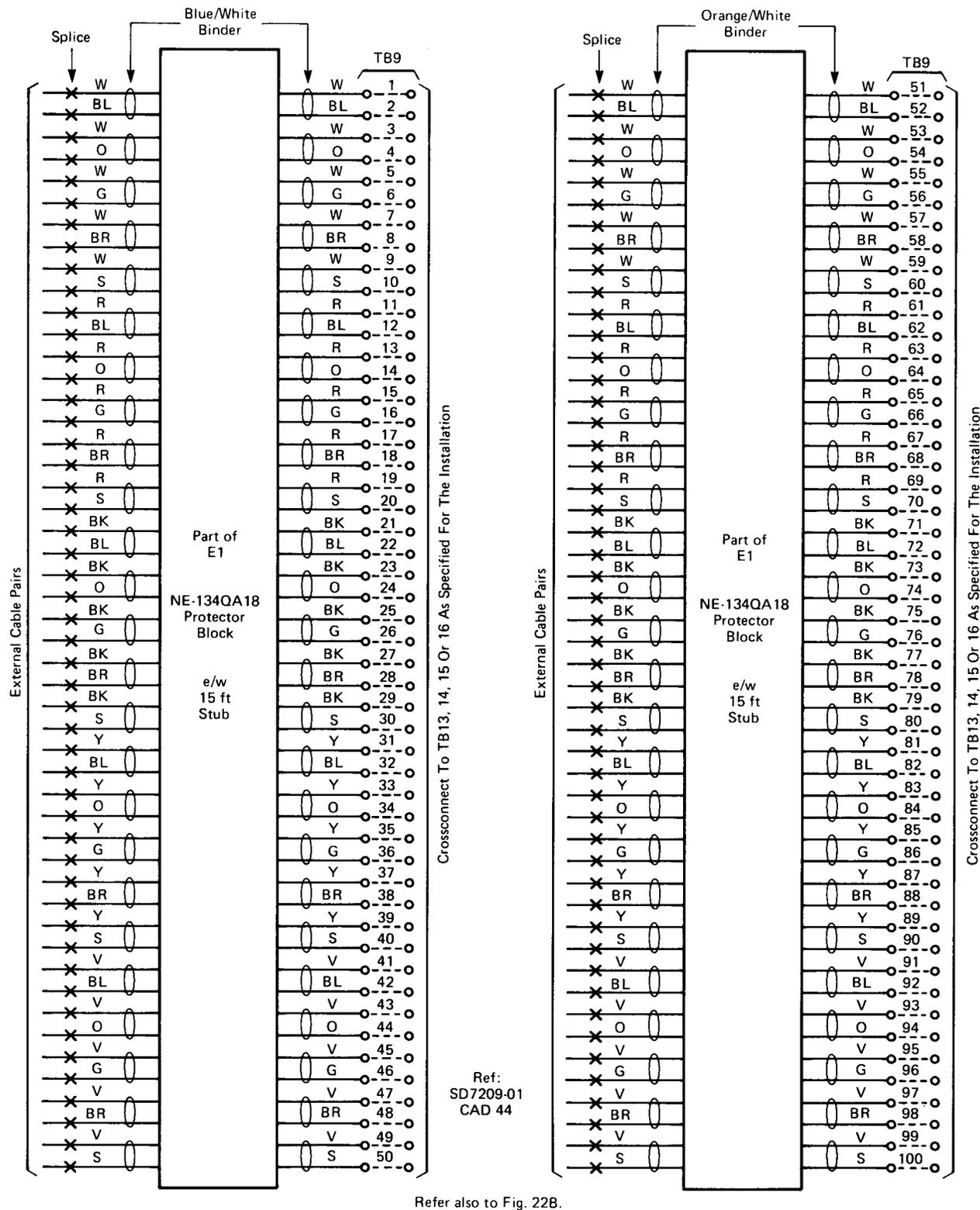
Refer also to Fig. 21A, 21C.

Fig. 21(b) – Wiring for VF Lines



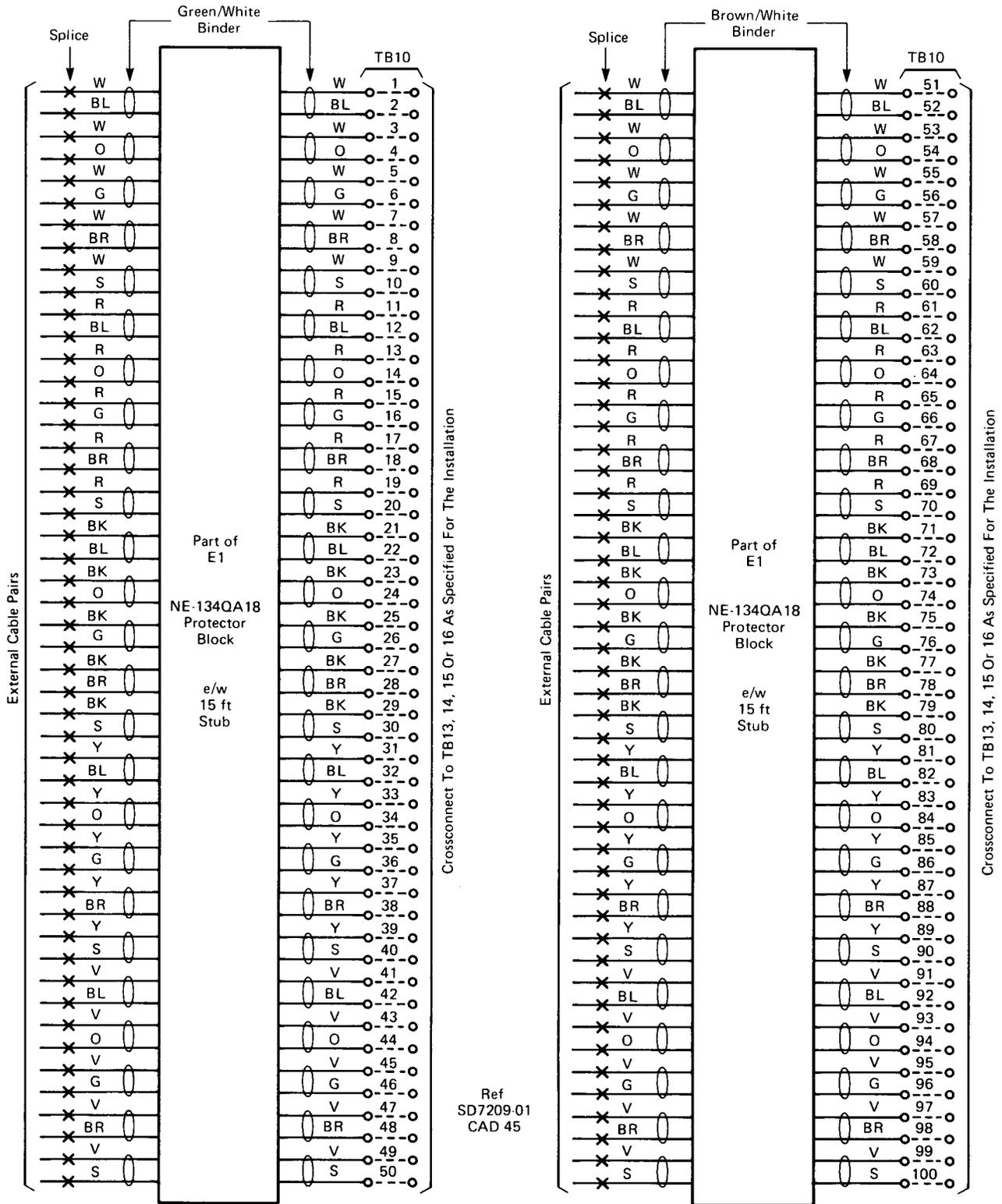
Refer also to Fig. 21A, 21B.

Fig. 21(c) – Wiring for VF Lines



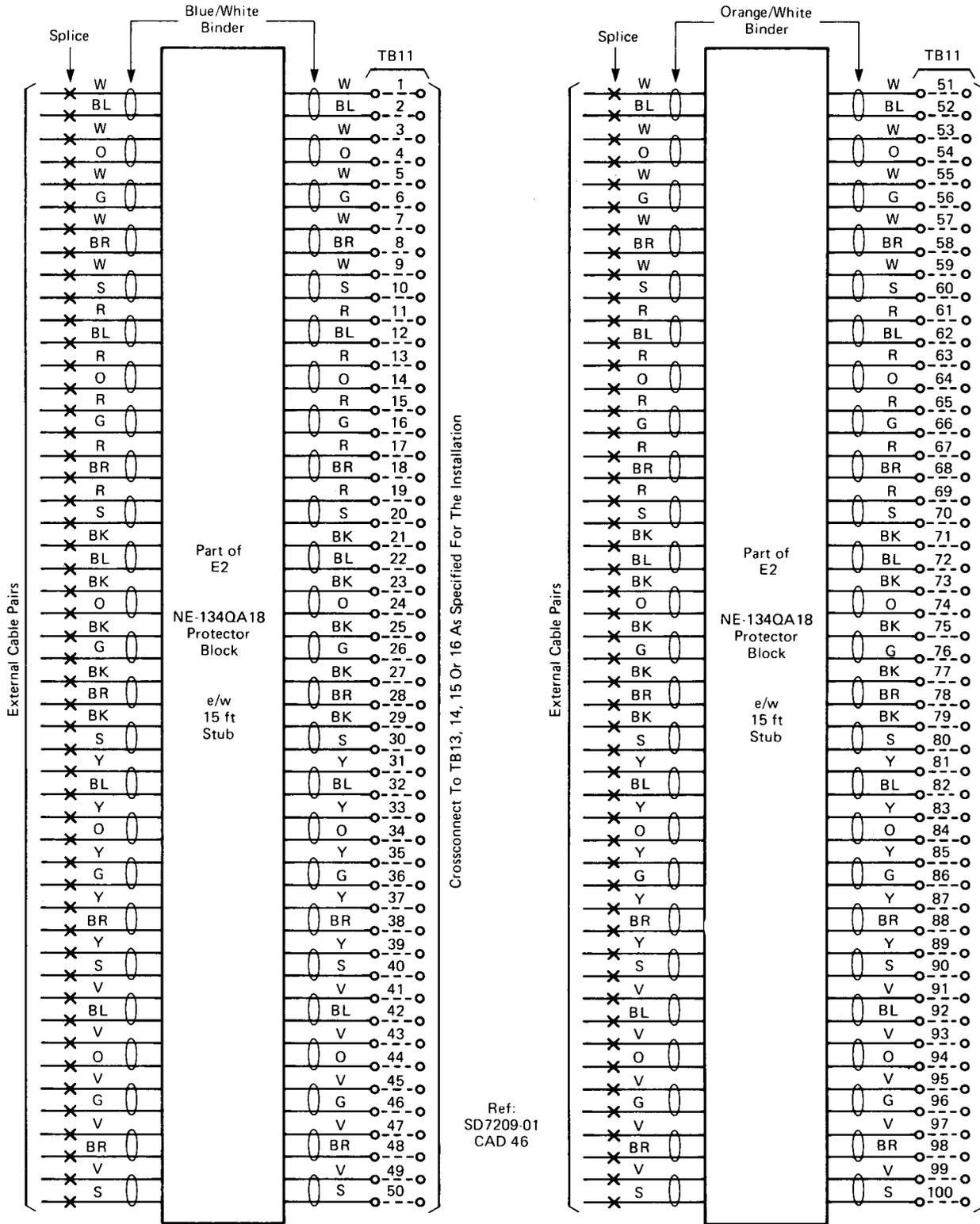
Refer also to Fig. 22B.

Fig. 22(a) – Wiring at an RCT for External Cable Connections on Protector Block E1



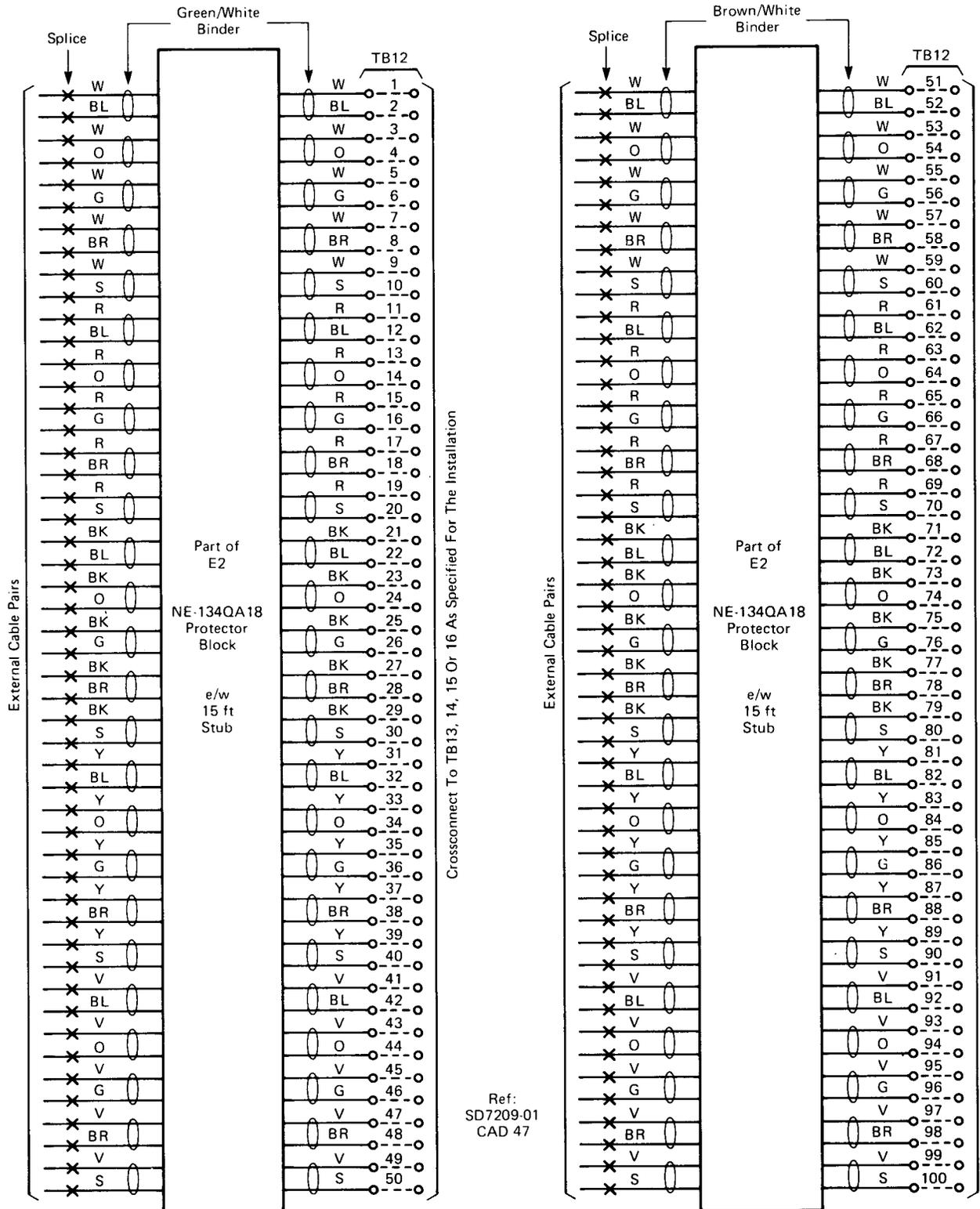
Refer also to Fig. 22A.

Fig. 22(b) – Wiring at an RCT for External Cable Connections on Protector Block E1



Refer also to Fig. 23B.

Fig. 23(a) – Wiring at an RCT for External Cable Connections on Protector Block E2



Refer also to Fig. 23A.

Fig. 23(b) – Wiring at an RCT for External Cable Connections on Protector Block E2