BellSouth Telecommunications, Inc.
FPSC Dkt No 990649-TP
Staff's 8th Set of Interrogatories
August 16, 2000
Item No. 145
Page 1 of 1
PROPRIETARY

REQUEST: For the purposes of the following request, please refer to page 13, lines 22-23 of BellSouth witness Milner's direct testimony where he states that "...BellSouth is, and has been, providing sub-loop unbundling at technically feasible points of access."

a) Please identify the CLECs (excluding MediaOne) in Florida to which BellSouth has provided sub-loop elements.

b) Please identify the CLECs (excluding MediaOne) throughout its region to which BellSouth has provided sub-loop elements.

RESPONSE: a) **Sprint.**

b) None, other than **Sprint.**

RESPONSE PROVIDED BY: W. Keith Milner
Senior Director

675 W. Peachtree St.
Atlanta, Georgia 30375

appeal

JHB 3/6/07 (entire document)

DECLASSIFIED

CONFIDENTIAL

This notice of intent was filed in a docketed matter by or on behalf of a "telco" for Confidential DN 10917-00. The confidential material is in locked storage pending staff advice on handling.

BELLSOUTH TELECOMMUNICATIONS, INC.

FPSC DKT NO 990649-TP

STAFF'S 9TH REQUEST FOR PRODUCTION OF DOCUMENTS

POD NO. 78

PROPRIETARY

DECLASSIFIED

7. Universal Service Data Request.

Request:

(1) Loops. For the year ending December 31, 1996, indicate how many of each of the following type of loops there are for each wire center in each of your study areas:

(a) Switched working loops
  (i) Residential
  (ii) Single-line business
  (iii) Multi-line business
(b) Non-switched working loops
(c) Non-working loops
(d) Non-revenue loops (please explain why these loops do not generate revenue)

Please note that:
-- Working loops include loops used for all services: message and special, revenue and non-revenue.
-- Non-working loops include defective loops, loops reserved for some future activity, and loops with a pending connect status.
-- Switched loops should only be counted as part of the wire centers in which they are switched.
-- For non-switched services, count the actual number of subscriber loops used to provide the service, not the voice frequency equivalent. For example, DS1 service provided over two copper pairs would be counted as two subscriber loops.
-- Foreign exchange lines or trunks should be counted as non-switched in the wire center where the customer and subscriber loop is located.
-- For switched loops served via a concentrator or carrier system, count the actual number of customer lines served, not the transmission channels at the wire center.

Response: See Section 1, following.

Request:

(2) Loop length studies. Provide the most recent loop length study conducted by or for your company for each of your study areas. List loop lengths, and for each loop length, specify how many loops are that length. Include all statistical studies used to support that loop length study and a glossary defining all terms not commonly used by other LECs. Describe how

the study was performed. Indicate whether the study was performed using a stratified sample, and whether the stratification was based on density cells, study areas, or wire centers. Specifically indicate whether the study includes both working and non-working loops or only working loops. List any other modifications or assumptions made in obtaining your loop sample. (See definition of working and non-working loops provided in Question 1.)

Response: See Section 2, following.

Request:

(3) Subscriber line usage studies. Provide the most recent subscriber line usage study or equivalent performed by or for your company for each of your study areas. Indicate the dates over which the study was performed, the number of lines sampled by service category and the wire centers included in the study. Include a glossary defining all terms not commonly used by other incumbent LECs.

Response: See Section 3, following.

Request:

(4) Basic residential service offerings. For each basic residential service plan that includes a per-minute or per-call charge, provide the number of calls or minutes that are not charged on a per-call or per-minute basis, if any, that are included as part of the service plan.

Response: See Section 4, following.

(5) Apportionment of cable costs. Indicate the percentage attributable to buried cable (Account 2423), underground cable (Account 2422), and aerial cable (Account 2421) for each of the following: (a) gross investment in distribution plant; (b) gross investment in feeder plant; (c) distribution loop length (in miles or kilometers); and (d) feeder loop length (in miles or kilometers). Please provide this information on a wire center basis. If it is not available on a wire center basis, provide the information on a study area basis.

Response: See Section 5, following.

Request:

(6) Installation cost data for cable facilities. Provide all data on the cost of installing cable facilities that have been submitted to a federal or state commission in 1995 or 1996. Include a glossary defining all terms not commonly used by other incumbent LECs.

Response: See Section 6, following.

Request:

(7) Subscriber utilization studies. Provide the most recent subscriber cable utilization study performed by or for your company for each of your study areas and provide the information by wire center. Separately identify utilization by feeder and by distribution. Please define utilization as the ratio of working loops (as defined in Question 1 above) to total loops. Include a glossary defining all terms not commonly used by other LECs.

Response: See Section 7, following.

Request:

(8) Structure-sharing percentages. What percent of the structures that support your outside plant are shared with other companies? Provide the sharing percentage, by study area, for each of the following categories: (a) poles; (b) conduits; and (c) trenches. The sharing percentage is the proportion of investment that is assigned to the telephone company. Provide the information separately for interoffice (trunk) cable and subscriber cable.

Response: See Section 8, following.

Request:

(9) Multi-line residential customers. How many of your residential customers are multi-line customers, where multi-line means multiple communications channels and not multiple telephone numbers? Provide this line count on a study area and a wire center basis. Indicate the number of these channels that are served through a basic-rate ISDN service.

See Section 9, following.

Request:

(10) Poles. Provide the current cost of a 40-foot class 4 treated southern pine pole and the average cost of installing such a pole in 1996.

Response: See Section 10, following.

Request:

(11) Detailed continuing property records.
(a) For the year ending December 31, 1995, provide the detailed continuing property record (DCPR) balance for USOA Account 2212 (digital electronic switching) for each wire center and the number of switched lines (not line numbers) working from the digital switches in that wire center.
(b) For the above account, summarize the material cost and the installed cost by wire center and by all characters of the equipment category code (EQCAT or ECN) used in your DCPR records. Provide translation tables for the EQCAT or ECN codes and for the location codes used in the account 2212 DCPR records. Provide the DCPR summaries in ASCII files on 3 1/2" floppy disks, DC2120 magnetic tape cartridges, Iomega ZIP disks, or Iomega JAZ disks for use on a PC platform.

Response: See Section 11, following.

Request:

(12) Digital switches. For all digital switches purchased in 1995 and 1996, provide the material and installed cost of each switch and the number of lines served by each switch at the end of its first twelve months in service. If a switch has not been in service for twelve months, state the length of service and the number of lines it serves at present.

Response: See Section 12, following.

Request:

(13) Contracts with switching manufacturers. For every switching manufacturer with which you currently have a contract:
(a) Provide a copy of that contract. Indicate if you consider the contract proprietary, and follow the instructions in para. 8 for filing confidential information.
(b) If not clearly defined in the contract, please provide definitions of the following terms as they were used in the contract: (i) new switch; (ii) growth to a new switch; (iii) growth to an embedded switch; (iv) remote switch; and (v) remote switching module.
(c) Does the contract price include the removal of the existing switch(es)?
(d) What time period does the contract cover?
(e) How many lines are you committed to install under the contract, if any?

Response: See Section 13, following.

Request:

(14) Digital line carrier devices. For all digital line carrier devices purchased in 1995 and 1996, provide the following:
(a) The material and installation cost of each device. (Provide the cost of common equipment separately from the cost of per-line equipment.)
(b) The number of lines served by each device at the end of its first twelve months in service.

Response: See Section 14, following.

Request:

(15) Drop lines. With regard to drop lines that you install for residential customers:
(a) Describe the number of copper pairs that you normally install per dwelling unit in both single family and multi-family dwellings.
(b) If multi-family dwelling units are served by fiber, provide the number of DS0 transmission channels per dwelling unit.
(c) If you install a different number of pairs depending on whether the drop is aerial or buried, indicate the difference in number.

Response: See Section 15, following.

Request:

(16) Maintenance expenses. With regard to maintenance expenses for switches, circuit equipment, and cable and wire facilities:
(a) Provide the most recent estimate of these expenses as incorporated into a forward-looking or economic cost study for each of your study areas that was filed with a state commission or the Federal Communications Commission. Indicate the date and docket number of each submission, and the commission(s) to which it was submitted.
(b) Explain the method used to determine these expenses and provide a copy of the calculations that support the expense estimate.
(c) Provide evidence, if possible, of any differences in maintenance expenses between fiber and copper cable.
(d) Provide evidence, if possible, of any differences in maintenance expenses among aerial, underground, and buried cable.

Response: See Section 16, following.

Request:

(17) Riser cable.
(a) Do you currently install riser cable in multi-unit residential housing or commercial buildings?
(b) If so, under what conditions do you consider this installed cable to be part of the regulated total plant in service?
(c) What percentage of the installed riser cable do you include in regulated total plant in service?

Response: See Section 17, following.

Request:

(18) Residential, single-line business, and multi-line business customers. For residential, single-line business, and multi-line business customers for June 1996, provide the following for each study area:
(a) The total local service revenue and the number of customers. Total local service revenue includes flat monthly charges, local usage charges, taxes, extended area service charges (mandatory and optional), local mileage and zone charges, local information charges, federal and state subscriber line charges, other mandatory surcharges, and optional services, such as touch tone, call waiting, and call forwarding.
(b) The sum of taxes and 911 surcharges.
(c) The total of your billings for toll service for which you provided the toll service.

Request (18) (Cont.)

(d) The total of your billings for which you billed for toll services provided by another carrier.
(e) For multi-line residential customers, where multi-line means multiple communications channels and not multiple telephone numbers, provide the revenue generated by the purchase of the additional lines.

Response: See Section 18, following.

Request:

(19) Miles served by wire center. Provide the number of square miles served by each wire center.

Response: See Section 19, following.

Request:

(20) Cost of land and buildings. For each wire center, provide the historical cost of the land and buildings. Indicate the number of switches in each wire center.

Response: See Section 20, following.

Request:

(21) Contracts with digital line carrier manufacturers. For every digital line carrier manufacturer with which you currently have a contract:
(a) Provide a copy of that contract. Indicate if you consider the contract proprietary, and follow the instructions in para. 8 for filing confidential information.
(b) What time period does the contract cover?

Response: See Section 21, following.

Section 1

Loops

The information requested has been provided in Excel workbooks. Summary level data, where appropriate, is contained in file bstr_mn.xls for each study area. Wire center level data is contained in files sbfl_1.xls, sbga_1.xls, sbnc_1.xls, sbsc_1.xls, scal_1.xls, scky_1.xls, scla_1.xls, scms_1.xls, and sctn_1.xls. Wire center level data is considered confidential as noted in the "Designation of Confidential Information" statement. A paper copy of the workbooks is also provided, with the file name appearing in the lower right hand corner of the page.

Section 2

Loop length studies

Following is an explanation of BST loop studies:

A statistically valid random sample of residence and business loops was selected. Then using BellSouth Outside Plant Engineering Records, a circuit layout is determined for each loop in the sample. The layout or make-up includes each item of plant from the central office to the customer premises and represent working loops. The type of information included is cable type (aerial, buried, underground, copper, fiber, etc.), cable size, cable gauge, cable length, bridge tap or end section, cross connect box/terminal size, feeder or distribution, etc.. Bridged tap or end section is any cable length that is not in the resistive path between the customer location and the central office. End section is the cable length beyond the location where a cable pair is served and the location where a cable pair ends.

The loop survey took place in stages beginning April of 1995 with Step 1 and ending in November of 1995 with Step 6 below. Explanations of each step follow:

1) Determine sample size through statistical reference -

	Sample Size		Universe 4/95			
	Residence	**Business**	**Lines**		**% Universe**	
			Res	**Bus**	**Res**	**Bus**
AL	287	293	1,259,227	272,171	82.23%	17.77%
FL	174	175	3,778,718	1,125,982	77.10%	22.90%
GA	200	200	2,237,610	632,422	77.96%	22.04%
KY	250	250	800,217	177,958	81.80%	18.20%
LA	248	249	1,492,912	355,802	80.75%	19.25%
MS	300	298	834,208	186,778	81.71%	18.29%
NC	199	199	1,365,254	382,489	78.00%	22.00%
SC	247	245	896,751	194,158	82.20%	17.80%
TN	246	244	1,685,485	421,676	79.99%	20.01%

2) Identify universe using Customer Record Information System (CRIS) through appropriate USOCs by class of service - The universe includes residence and business lines. The universe of business lines consists of voice grade business access lines (small and large).

3) Randomly select Circuit IDs from universe (CRIS) based on sample size - The CRIS database is ordered by telephone number and was provided prior to the sampling process in that manner. Samples were pulled based on relevant USOC (residence and business) considering every nth working loop with a random start.

Section 2

4) Match Circuit ID with the Loop Maintenance Operations System (LMOS) data (add wire center, cable and pair and serving address) - Prior to accessing field records, additional information such as wire center, cross connect box and terminal address had to be added to the circuit ID information. The LMOS database was used to populate the information.

5) Access field records and manually populate loop make-up form - Loop design drawings were made for each loop in the sample.

6) Load loop make-up data into database - The drawings were entered into a database which became the loop make-up database contained in the loop model. The loop make-up includes class of service, size, gauge, cable length, cross connect box/terminal size, field reporting code, and description. The loop make-up data was again verified by employees knowledgeable in telephone plant engineering and sent back to the Network Planning Organization for verification prior to input into the database.

7) Verification of data -

<u>Prior to input:</u>
Verify that all surveys are received and accounted for
Check for duplicate surveys (paper and mechanized)
Check for and request missing surveys
Develop log for recording survey input data (date, data entered, error report)

<u>During Input to Access Model (built in checks):</u>
Automatic calculation of loop miles checked with hand-calculated mileage
If mileage is off, review each input and cable segment length
Only valid sizes, gauges, descriptions, and field reporting codes are allowed

<u>After Input to Access Model:</u>
Record loop surveys input (date and data entered)
Send questions/errors back to field
Correct questions/errors
Review Access loop makeup tables for item class and description quality

<u>Loop Model Investment Checks and Balances:</u>
Mechanized loops are checked for correct cable size and description
Access database inputs are combined into one large Paradox database
Unfamiliar cable sizes and descriptions are reviewed and edited
Duplicate or odd data is reviewed and checked against original inputs

Section 2

All samples were statistically verified through an independent analysis. The files associated with the most recent statistical analysis are attached and provided on diskette. The files are in EXCEL format and contain the following fields:

State
Loop Number (from Sample)
Class of Service
Circuit ID
Loop Length (including Bridged Tap)
Loop Investment (cable, electronics and cross-box/terminals)

The Excel workbook file bsloop1.xls contains sheets associated with each state and their associated vintage as listed below:

State	Sheet Name	Study Date
Alabama	WAL2W	7/97
Florida	FLSTATS	6/96
Georgia	1GSTAT11	6/97
Kentucky	WKY2W	7/97
Louisiana	WLA2W	7/97
Mississippi	WMS2W	7/97
North Carolina	NCSTAT	9/96
South Carolina	WSC2W	7/97
Tennessee	TSTAT2W	7/97

A paper copy of these files is also being provided, with the file name shown in the lower right hand corner of each page.

Section 3

Subscriber line usage studies

Summary level data is provided in an Excel workbook named bsslus.xls. Individual sheets in this workbook file shows the current data available for study areas in BST. Following is a glossary of terms:

Glossary:

Account Earning account number, usually based in a specific geographic location.

Categories Refers to geographic categories.

Accounts are categorized according to two classifications, (1) Local Calling Area Size and (2) Exchange Size.

Local Calling Areas are specified as follows:

	Number of Access Lines
Rural	< 9000
Large Rural	9000 - 25000
Non-Metro	25000 – 50000
Metro	50000 – 178000
Major Metro	> 178000

Exchanges are specified as follows:

	Number of Access Line
Small	< 5000
Medium	5000 – 25000
Large	25000 – 50000
Extra Large	> 50000

Lines Refers to access lines, PBX trunk, or Network Access Registers depending on SLUS Class

Minutes Refers to conversation minutes

Toll Refers to intraLATA Toll

SLUS Class Refers to groupings of basic class of service, e.g. Residence Flat Rate

A paper copy of these files is also being provided, with the workbook and sheet name in the lower right hand corner of each page.

Section 4

Basic residential service offerings

The number of calls or minutes that are not charged on a per-call or per-minute basis, if any, that are included as part of the basic service plan are as follows:

ALABAMA	
Free Calls (no.)	N/A
Free Minutes (no.)	N/A
FLORIDA (Message Rate Service)	
Free Calls (no.)	30 calls to exchanges in the Extended Area Service (EAS) area
Free Minutes (no.)	N/A
KENTUCKY	
Free Calls (no.)	N/A
Free Minutes (no.)	N/A
GEORGIA (GCC - Georgia Community Calling)	
Free Calls (no.)	30 calls to exchanges in the Basic Service Area
Free Minutes (no.)	N/A
LOUISIANA	
Free Calls (no.)	N/A
Free Minutes (no.)	N/A
MISSISSIPPI	
Free Calls (no.)	N/A
Free Minutes (no.)	N/A
NORTH CAROLINA	
Free Calls (no.)	N/A
Free Minutes (no.)	N/A
SOUTH CAROLINA	
Free Calls (no.)	N/A
Free Minutes (no.)	N/A
TENNESSEE (Message Rate Service)	
Free Calls (no.)	30 calls to exchanges in the Basic Local Calling Area
Free Minutes (no.)	N/A

Assumptions used in response include:
Grandfathered plans were excluded.
Only statewide plans were included.
All measured/message plans typically do not apply usage charges for calls to the Company Business Office, Repair Service, Directory Assistance, 911 or 976.

Section 6

Apportionment of cable costs

Apportionment of cable costs is estimated from BST's loop study data. An Excel workbook file named bsloop2.xls contains the requested information by study area. A paper copy of the file is also being provided, with the file name displayed in the lower right hand corner.

Section 6

Installation cost data for cable facilities

Installation cost for cable facilities is captured in BST in-plant loading factors. Following is a brief explanation:

In Plant Loadings add engineering and installation labor and miscellaneous equipment to the material price and/or vendor installed Price; that is, the In Plant Loading converts the material price to an installed investment. The installed investment is the dollar amount that is recorded in the capital accounts. There are four types of in plant loadings:

1) Material Loading, which is applied to a material price,
2) Telco Loading, which is applied to the vendor installed investment,
3) Plug-In Loading, which is applied to the deferrable plug-in and common plug-in material prices, and
4) Hardwired Loading, which is applied to the hardwired portion of an equipment material price.

An electronic copy of BST's In-Plant Loadings for outside plant is included in an Excel workbook file named bsload.xls, sheet INPLT OSP. A paper copy of this file is also being provided, with the file and sheet name appearing in the lower right hand corner.

Section 7

Subscriber utilization studies

Utilization percentages for feeder and distribution plant will be provided on or before September 24, 1997, pursuant to the FCC's order released August 14, 1997 in this proceeding.

Section 8

Structure sharing percentages

The following information shows data concerning structure sharing. Information is not available for interoffice and subscriber plant structures separately.

POLES

	BST on Power Poles	BST Owned Poles	Assigned to Telco
AL	683,492	405,974	37.26%
FL	667,423	449,979	40.27%
GA	1,035,253	371,811	26.42%
KY	342,172	315,453	47.97%
LA	446,095	296,650	39.94%
MS	709,804	280,897	28.35%
NC	439,000	248,291	36.13%
SC	219,000	144,886	39.82%
TN	802,919	435,078	35.14%
TOTAL	5,345,158	2,949,019	35.56%

Trenching

	Shared	Assigned to Telco
AL	0%	100%
FL	3%	97%
GA	28%	72%
KY	35%	65%
LA	0%	100%
MS	0%	100%
NC	2%	98%
SC	1%	99%
TN	5%	95%

Section 8

Conduit

	Footage Leased	Miles of Duct In-Plant as of Year End 1996	Total Duct Feet In-Plant as of Year End 1996	Shared
AL	-	9508	50,202,240	0.0000%
FL	129,754	35933	189,726,240	0.0684%
GA	34,636	23606	124,639,680	0.0278%
KY	26,004	6578	34,731,840	0.0749%
LA	464	13798	72,853,440	0.0006%
MS	-	3947	20,840,160	0.0000%
NC	105,759	11147	58,856,160	0.1797%
SC	80,375	9227	48,718,560	0.1650%
TN	24,218	12341	65,160,480	0.0372%

Section 9

Multi-line residential customers

The number of multi-line residential customers is shown by wire center in Excel workbook files sbfl_1.xls, sbga_1.xls, sbnc_1.xls, sbsc_1.xls, scal_1.xls, scky_1.xls, scla_1.xls, scms_1.xls, and sctn_1.xls. Summary level data for each study area is shown in file bstr_mn.xls.

Section 10

Poles

Following is the requested information for the cost of installing a 40-foot pole:

	MATERIAL	LABOR	TOTAL
AL	$ 254.75	$ 160.61	$ 415.36
FL	$ 213.82	$ 196.64	$ 410.46
GA	$ 210.05	$ 176.92	$ 386.97
KY	$ 247.82	$ 172.31	$ 420.13
LA	$ 204.35	$ 154.18	$ 358.53
MS	$ 209.56	$ 146.05	$ 355.61
NC	$ 211.10	$ 165.36	$ 376.46
SC	$ 233.68	$ 151.76	$ 385.44
TN	$ 212.73	$ 192.10	$ 404.83

Section 11

Detailed continuing property records

Detailed continuing property records for the items requested is contained in an ASCII formatted file with comma delimiters as file bsdcpr.csv. A translation table of ECNDR codes is being provided as a sheet in Excel workbook bsdcpr.xls. This Excel workbook file also contains the same continuing property records data as provided in file bsdcpr.csv. A paper copy of these files is not being provided since a printout would be approximately 260 pages. This information is considered confidential as noted in the "Designation of Confidential Information" statement.

Section 12

Digital switches

The information regarding digital switches is being provided in an Excel workbook file bsswitch.xls. A paper copy of this file is also being provided, with the file name appearing in the lower right hand corner of each page. This information is considered confidential as noted in the "Designation of Confidential Information" statement.

Section 13

Contracts with switching manufacturers

A paper copy of contracts with switching vendors is being provided. This information is considered confidential as noted in the "Designation of Confidential Information" statement.

Section 14

Digital line carrier devices

Information concerning digital loop electronics equipment is being provided as an Excel spreadsheet named bsdle.xls for 1995 and 1995. The number of lines served after 12 months is not available since the database with this information is dynamic and no historical record is kept of line counts. A paper copy of this information is not being provided because of the extensive length of such a printout.

Section 15

Drop lines

BST has an engineering guideline published to aid Outside Plant Engineers in sizing drop facilities. The following is in response to questions posed.

(a) The copper pairs/living unit criteria can be found in Exhibit E (attached) of RL 92-08-012BT. This exhibit indicates that the average residential area (including multi-family dwelling) should be sized from 1.5 to 1.8 lines per ultimate living unit. Upscale developments may require 2 or more pairs per living unit, however, these represent only a small percentage of the total cable placements.

(b) Fiber DS0 transmission channels per/living unit is based on the same criteria as copper pairs. See Exhibit E of RL 92-08-012BT above for recommended sizing.

(c) The pair design criteria is the same for both aerial and buried plant.

RL: 92-08-012BT
EXHIBIT E

DISTRIBUTION CABLE SIZING

PERCENTAGE OF RESIDENTIAL LINES DISTRIBUTED BY ADDITIONAL LINE PENETRATION

RESIDENTIAL ADDITIONAL LINES PERCENTAGES

	0-5%	5-10%	10-15%	15-20%	20-30%	30-40%	40-60%	60-80%	80-100%
AL	59.6%	30.2%	7.1%	1.9%	1.1%	0.1%	0.0%	0.0%	0.0%
N FL	55.9%	32.4%	8.2%	2.3%	1.1%	0.1%	0.0%	0.0%	0.0%
S FL	28.2%	18.6%	16.5%	13.2%	13.7%	5.4%	3.1%	1.0%	0.2%
SE FL	39.6%	24.8%	15.3%	7.4%	8.2%	2.7%	1.4%	0.1%	0.5%
ATL-GA	25.6%	30.4%	20.0%	11.5%	9.3%	2.4%	0.6%	0.1%	0.0%
OS-GA	53.9%	33.8%	9.1%	2.0%	1.0%	0.1%	0.1%	0.0%	0.0%
KY	81.9%	13.8%	2.7%	1.3%	0.3%	0.1%	0.0%	0.0%	0.0%
LA	29.3%	40.7%	20.0%	6.1%	3.3%	0.5%	0.1%	0.0%	0.0%
MS	72.2%	22.8%	3.8%	0.7%	0.4%	0.1%	0.0%	0.0%	0.0%
NC	64.9%	26.9%	6.3%	1.2%	0.6%	0.0%	0.0%	0.0%	0.0%
SC	48.9%	33.1%	11.1%	3.9%	2.6%	0.3%	0.1%	0.0%	0.0%
TN	44.6%	33.2%	13.0%	5.5%	3.0%	0.5%	0.2%	0.0%	0.0%
BST	46.9%	30.2%	12.3%	5.3%	3.9%	1.0%	0.4%	0.1%	0.0%
EXISTING ADD LINE USAGE	1.2	1.4	1.6	1.6	1.7	1.8	2.3	2.6	2.8
RECOMMENDED SIZING	1.5	1.6	1.8	1.8	2.0	2.0	2.5	2.8	3.0
UNITS PER 25 PAIRS	17	16	14	14	12	12	10	9	8

RECOMMENDED SIZING PROVIDES FOR 2 DEFECTIVE PLUS 1 REMAINING SPARE OVER THE EXISTING ADDITIONAL LINES USAGE.

Section 16

Maintenance expenses

Maintenance expenses are incorporated into BST's cost studies by using expense loading factors developed from accounting records. Following is a brief explanation of how maintenance expense factors are developed.

The Plant Specific Expense Factors are ratios of maintenance-type expenses by plant category to the respective plant investment. The factors are based on three years of projected expense and investment data. Rent expense is excluded from building expense; net rent (rent revenue less rent expense) is included in pole and conduit expenses. Right to use and service order-related expense were excluded since such expenses are recovered in a direct manner rather than through the use of a factor. Power expense loadings are then added to the factors for central office equipment investment. These plant specific expense factor calculations result in a factor for each category of plant representative of the average expense per investment expected in the future for each plant category.

The Excel workbook file bsload.xls contains a sheet labeled PLANT SPEC with the maintenance expenses loading factors used by BST. These loading factors, where applicable, were used in all costs studies submitted to the state commissions during the course of Section 271 proceedings. Since the maintenance loading factors themselves were not presented in state dockets, a list of the dockets is not being provided. If the Commission finds that a list of the Section 271 dockets would somehow aid in decisions being made in this proceeding, a list can be prepared upon request.

A paper copy of the Excel sheet containing the expense loading factors for outside plant is also included, with the name of the sheet and the Excel workbook file name appearing in the lower right hand corner.

Section 17
Riser cable

Following are answers to the riser cable questions:

a.) Riser cable is installed in multi-unit residential housing and commercial buildings when the property owner requests that network demarcation points be established within the leased premises.
b.) When riser cable is installed as noted above, 100% is considered part of the regulated total plant in service.

Section 18

Residential single-line business and multi-line business customers.

The response to this item will be provided on or before September 24, 1997, pursuant to the FCC's order in this proceeding, released August 14, 1997.

Section 19

Miles served by wire center

The number of miles served by wire center is contained in Excel workbook files sbfl_1.xls, sbga_1.xls, sbnc_1.xls, sbsc_1.xls, scal_1.xls, scky_1.xls, scla_1.xls, scms_1.xls, and sctn_1.xls.

Section 20

Cost of land and buildings

The cost of land and building by wire center and the number of switches is contained in Excel workbook files sbfl_1.xls, sbga_1.xls, sbnc_1.xls, sbsc_1.xls, scal_1.xls, scky_1.xls, scla_1.xls, scms_1.xls, and sctn_1.xls. The annual cost factors used in BST cost studies for each study area is contained in the Excel workbook file bsload.xls in a sheet named LAND & BLDG.

A paper copy of these files has been provided, with the file and sheet name displayed in the lower right hand corner.

Section 21

Contracts with digital line carrier manufacturers

A copy of contracts with digital line carrier manufacturers is being provided under confidential cover, as noted in the "Designation of Confidential Information" statement.

August 15, 1997

<u>Confidential Version</u>

Charles Keller
Federal Communications Commission
2100 M Street, N.W.
Room 8918
Washington, D.C. 20554

Re: Federal-State Joint Board on Universal Service, CC Docket No. 96-45
<u>Order</u>, released July, 9, 1997 ("Data Request Order")

Dear Mr. Keller:

Provided herewith is the Data Response-Confidential Version of BellSouth Telecommunications, Inc. ("BellSouth") to the Commission's Data Request in the above-referenced proceeding. With this letter, BellSouth respectfully requests pursuant to the Commission's rules, 47 C.F.R. Section 0.459, that this information be treated as confidential, placed under seal and otherwise protected from public disclosure.

The documents and disc provided under this cover contain confidential business information which would not customarily be released to the public. Specifically, BellSouth is seeking confidential treatment of the information provided in response to Data Request Question Nos. 1, 9, 11, 12, 13, 14 and 21, as is explained in the "Designation of Confidential Information" form which is provided.

Thank you for your assistance. Should you have any questions concerning BellSouth's Data Response-Confidential Version, you may contact me at the number above.

Data Request Responses Designated Confidential

Data Request No. (1). BellSouth requests confidential treatment of the information provided in response to Data Request No. 1 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. The information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. Specifically, the information responsive to this request details our customer base by specifically identifying the geographical distribution of our base at the wire center level, the market segments represented at the wire center level and the line penetration of that base at the wire center level. Disclosure of such confidential information could substantially harm the competitive position of BellSouth by assisting competitors in analyzing market opportunities, and in preparing marketing strategies to use in direct competition with BellSouth.

Data Request No. (9). BellSouth requests confidential treatment of the information provided in response to Data Request No. 9 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. The information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. Specifically, the information responsive to this request details our customer base by specifically identifying the geographical distribution of our base at the wire center level, the market segments represented at the wire center level and the line penetration of that base at the wire center level. Disclosure of such confidential information could substantially harm the competitive position of BellSouth by assisting competitors in analyzing market opportunities, and in preparing marketing strategies to use in direct competition with BellSouth.

Data Request No. (11). BellSouth requests confidential treatment of the information provided in response to Data Request No. 11 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. The information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. Specifically, the information responsive to this request could substantially damage the competitive position of BellSouth as well as the vendors/suppliers who provide BellSouth with equipment and services. BellSouth's cost information can be discerned from the information provided in response to this request. BellSouth's competitors can use this information to develop marketing strategies to use in direct competition with BellSouth and to develop prices for competitive services. In addition, equipment vendors/suppliers generally do not disclose the prices for their equipment outside a confidential negotiating process. *See, Letter Re: Freedom of Information Act Request Control Nos. 94-310, 325, 328,* 9 FCC Rcd 6495 (1994). When products are sold at individually negotiated prices buyers receive a clear competitive advantage if they know the prices that other buyers have been charged. Competitive harm could also ensue if vendors/suppliers obtain information necessary to underprice their competition. Vendors/suppliers may choose to avoid doing business with entities that might subject their prices to public disclosure. If such prices are disclosed, BellSouth could also be handicapped in its ability to negotiate favorable prices in the future.

Data Request No. (12). BellSouth requests confidential treatment of the information provided in response to Data Request No. 12 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. The information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. Specifically, the information responsive to this request could substantially damage the competitive position of BellSouth as well as the vendors/suppliers who provide BellSouth with equipment and services. BellSouth's cost information can be discerned from the information provided in response to this request. BellSouth's competitors can use this information to develop marketing strategies to use in direct competition with BellSouth and to develop prices for competitive services. In addition, equipment vendors/suppliers generally do not disclose the prices for their equipment outside a confidential negotiating process. See, *Letter Re: Freedom of Information Act Request Control Nos. 94-310, 325, 328,* 9 FCC Rcd 6495 (1994). When products are sold at individually negotiated prices buyers receive a clear competitive advantage if they know the prices that other buyers have been charged. Competitive harm could also ensue if vendors/suppliers obtain information necessary to underprice their competition. Vendors/suppliers may choose to avoid doing business with entities that might subject their prices to public disclosure. If such prices are disclosed, BellSouth could also be handicapped in its ability to negotiate favorable prices in the future.

Data Request No. (13). BellSouth requests confidential treatment of the information provided in response to Data Request No. 13 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. Specifically, the information responsive to this request could substantially damage the competitive position of BellSouth. BellSouth's cost information can be discerned from the information provided in response to this request. BellSouth's competitors can use this information to develop marketing strategies to use in direct competition with BellSouth and to develop prices for competitive services. In addition, the information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. The agreements/contracts responsive to this request, made between BellSouth and its network-related suppliers contain terms and conditions setting forth BellSouth's obligation to maintain information, contained in the agreement, in confidence using the same degree of care that BellSouth uses to protect its own information of like sensitivity. Furthermore, the information responsive to this request could substantially damage the competitive position of the equipment vendors/suppliers whose prices can be discerned from the information provided. Equipment vendors/suppliers generally do not disclose the prices for their equipment outside a confidential negotiating process. See, *Letter Re: Freedom of Information Act Request Control Nos. 94-310, 325, 328,* 9 FCC Rcd 6495 (1994). When products are sold at individually negotiated prices, buyers receive a clear competitive advantage if they know the prices that other buyers have been charged. Competitive harm could also ensue if vendors/suppliers obtain information necessary to underprice their competition. Vendors/suppliers may choose to avoid doing business with entities that might subject their prices to public disclosure. If such prices are disclosed, BellSouth could also be handicapped in its ability to negotiate favorable prices in the future.

Data Request No. (14). BellSouth requests confidential treatment of the information provided in response to Data Request No.14 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. The information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. Specifically, the information responsive to this request could substantially damage the competitive position of BellSouth as well as the vendors/suppliers who provide BellSouth with equipment and services. BellSouth's cost information can be discerned from the information provided in response to this request. BellSouth's competitors can use this information to develop marketing strategies to use in direct competition with BellSouth and to develop prices for competitive services. In addition, equipment vendors/suppliers generally do not disclose the prices for their equipment outside a confidential negotiating process. See, *Letter Re: Freedom of Information Act Request Control Nos. 94-310, 325, 328,* 9 FCC Rcd 6495 (1994). When products are sold at individually negotiated prices buyers receive a clear competitive advantage if they know the prices that other buyers have been charged. Competitive harm could also ensue if vendors/suppliers obtain information necessary to underprice their competition. Vendors/suppliers may choose to avoid doing business with entities that might subject their prices to public disclosure. If such prices are disclosed, BellSouth could also be handicapped in its ability to negotiate favorable prices in the future.

Data Request No. (21). BellSouth requests confidential treatment of the information provided in response to Data Request No. 21 pursuant to Section 0.457 of the Commission's rules, 47 CFR Section 0.457. Specifically, the information responsive to this request could substantially damage the competitive position of BellSouth. BellSouth's cost information can be discerned from the information provided in response to this request. BellSouth's competitors can use this information to develop marketing strategies to use in direct competition with BellSouth and to develop prices for competitive services. In addition, the information provided in response to this request is commercially sensitive information which is proprietary and which would not be customarily released to the public. The agreements/contracts responsive to this request, made between BellSouth and its network-related suppliers contain terms and conditions setting forth BellSouth's obligation to maintain information, contained in the agreement, in confidence using the same degree of care that BellSouth uses to protect its own information of like sensitivity. Furthermore, the information responsive to this request could substantially damage the competitive position of the equipment vendors/suppliers whose prices can be discerned from the information provided. Equipment vendors/suppliers generally do not disclose the prices for their equipment outside a confidential negotiating process. See, *Letter Re: Freedom of Information Act Request Control Nos. 94-310, 325, 328,* 9 FCC Rcd 6495 (1994). When products are sold at individually negotiated prices, buyers receive a clear competitive advantage if they know the prices that other buyers have been charged. Competitive harm could also ensue if vendors/suppliers obtain information necessary to underprice their competition. Vendors/suppliers may choose to avoid doing business with entities that might subject their prices to public disclosure. If such prices are disclosed, BellSouth could also be handicapped in its ability to negotiate favorable prices in the future.

DESIGNATION OF CONFIDENTIAL INFORMATION

I hereby certify that the information designated as confidential in the attached response(s) to the Universal Service Data Request is protected by **BellSouth Telecommunications, Inc.** as confidential or financial information:

SIGNATURE: **Original signed by Richard Teel**

TITLE: Vice President - Regulatory

ADDRESS: 4500 BellSouth Center
675 W Peachtree NE
Atlanta, GA 30375

TELEPHONE: (404) 335-0770

FAX: (404) 529-0332

On a separate sheet of paper, please list the responses designated confidential, by question number, a statement of the reasons for withholding the information from the public record, and the facts on which those reasons are based.

Approved by OMB
3060-0781
Expires 1/31/98
Burden hour per respondent: 488 average.

BELLSOUTH TELECOMMUNICATIONS, INC.

FPSC DKT NO 990649-TP

STAFF'S 9TH REQUEST FOR PRODUCTION OF DOCUMENTS

POD NO. 81

PROPRIETARY

DECLASSIFIED

PROPRIETARY

DECLASSIFIED

POD Item No. 81
Attachment No. 1
Installation and Maintenance (I&M)
Special Services Installation & Maintenance (SSIM)

NETWORK INSTALLATION
OUTSIDE WORK GROUP - BUSINESS
(NIOWGB)

This work group installs, removes, rearranges, and reconcentrates access lines for POTS from the local switch to the Network Interface (NI) including residential, business, coin and rural services.

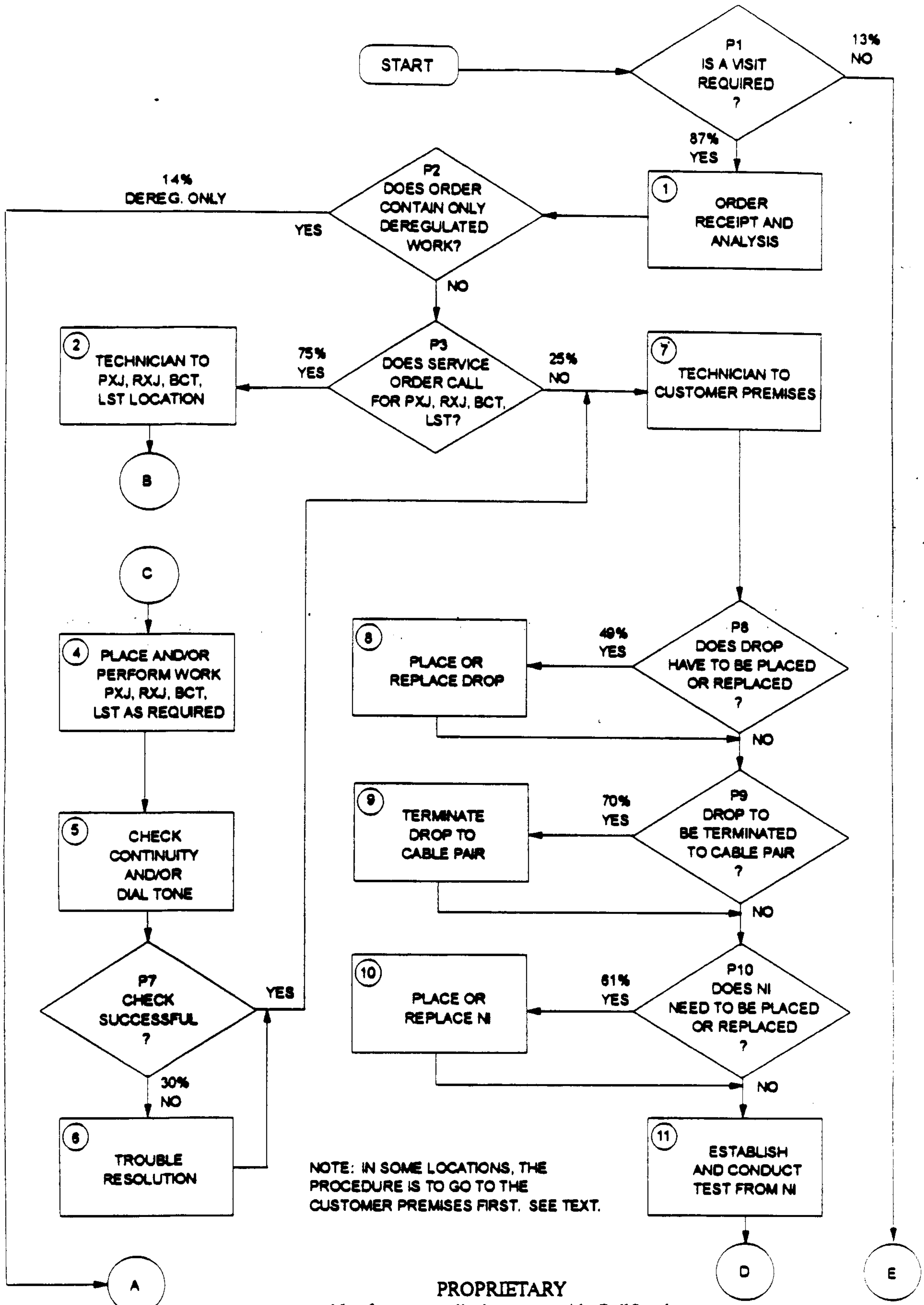
They install, remove and rearrange:

- aerial and buried service wires
- grounds
- protectors
- network terminating wire
- network interface
- cross-connects
- jacks
- connecting blocks
- inside wiring.

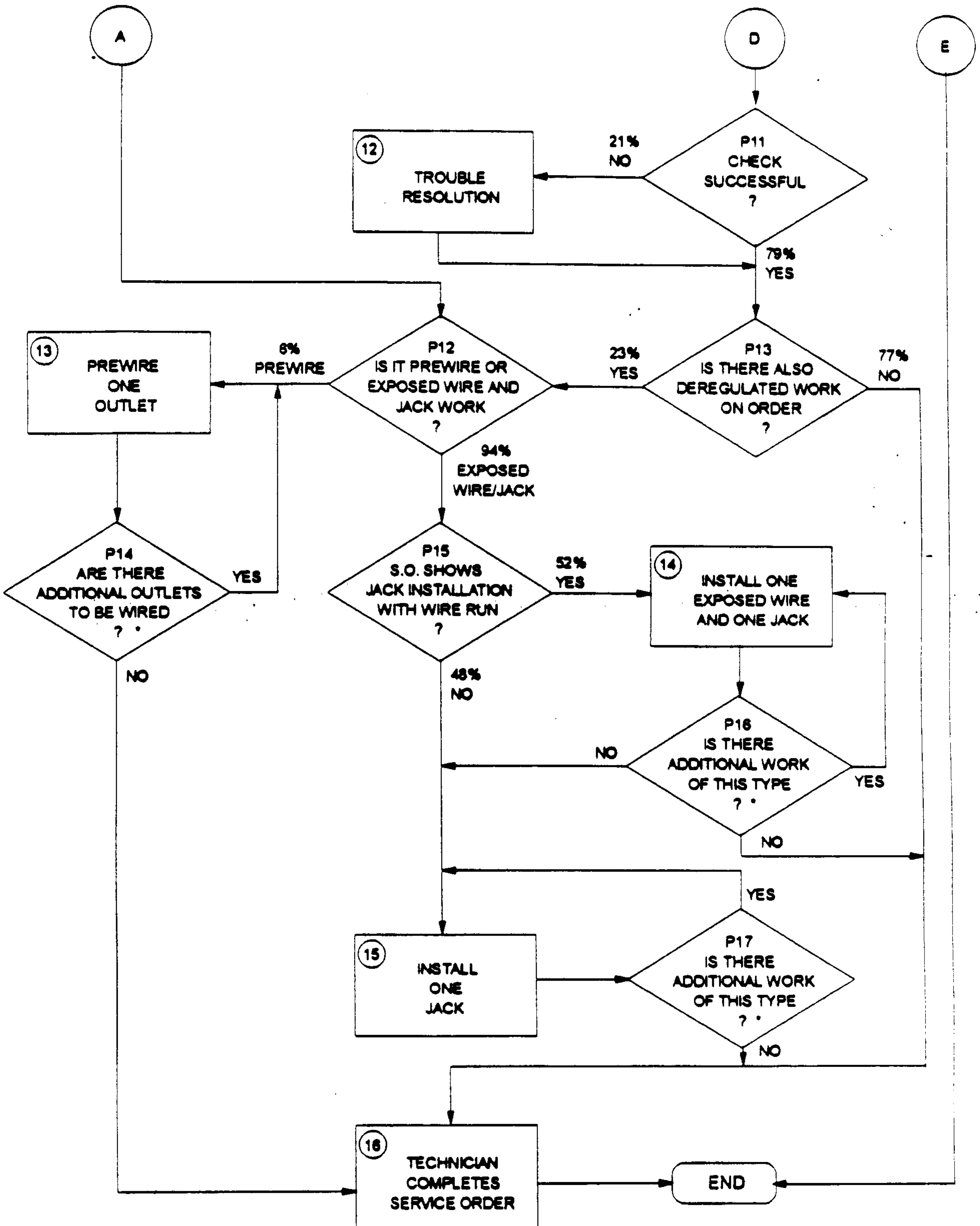
These outside technicians also analyze and test circuitry and outside network equipment and perform installation tests.

The work time data detailed in this section relates to the work performed by the outside technicians to install *business & non-designed* telephone services.

NETWORK INSTALLATION OUTSIDE WORK GROUP BUSINESS & NON-DESIGN SPECIAL SERVICES NIOWGB



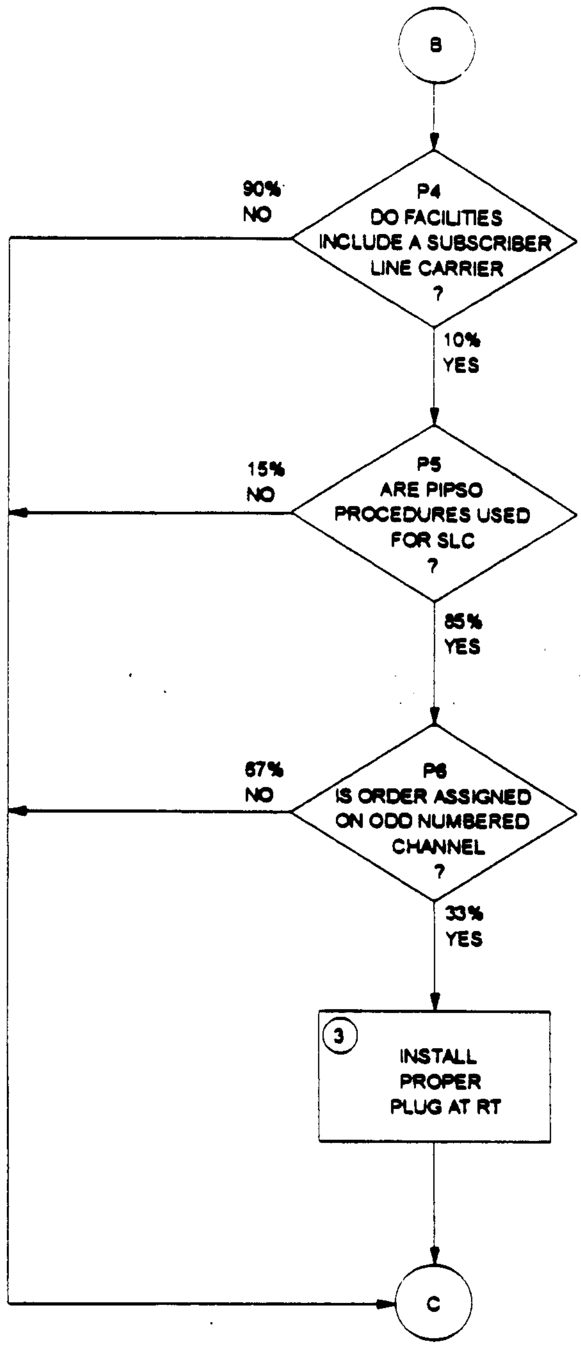
NETWORK INSTALLATION OUTSIDE WORK GROUP
BUSINESS & NON-DESIGN SPECIAL SERVICES
NIOWGB (cont'd)



*SEE NOTE IN TEXT

NETWORK INSTALLATION OUTSIDE WORK GROUP BUSINESS & NON-DESIGN SPECIAL SERVICES

NIOWGB (cont'd)



* SEE NOTE IN TEXT

INTRODUCTION

Subject Matter Experts (SME) have been used to provide the work time data in this document. These SME estimates have been collected from human estimation, work observations, CIMAP, WFA, self-reporting and various sizing models.

The following information is contained herein:

- Study Methodology
- Usage of This Work Time Data
- Selected Acronyms and Abbreviations
- Workflows, Worktimes and Probability Data

Reorganization, restructuring and re-engineering are three words that have become "business as usual" for most of us. The network cost group and its associated systems are also being restructured.

The Activity Based Information Structure (ABIS) is an activity-based costing system being developed to measure the cost and performance of activities and cost objects (products and services). Once this system is implemented, the detailed information provided in this document may no longer be available. However, ABIS will provide consistent and accurate cost information for all users. In the interim, this work time data will continue to reflect the network service provisioning operations in BellSouth.

Portions of this document will be updated as changes occur. Since changes may occur more frequently than resources are available to publish them, please contact the Network Cost Group before using this data in a study.

Any questions concerning this data or its application should be directed to
Eusebia C. Sanderson (205) 977-7210.

Questions related to cost support for a specific product or service should be directed to Carolyn Kendrick, Manager - Network Cost Group. She can be reached at (205) 977-5046.

STUDY METHODOLOGY

Task Oriented Costing (TOC) provides detailed data which allows us to quantify and understand the relationship between operations expenses and technology, services, operating systems and architectures. The network elements are: (1) the work group and the service provisioning functions or steps performed by that group, (2) the average time in minutes it takes to perform each of those functions, (3) the probability that the particular function will be performed and (4) the Job Function Code (JFC) of the person performing the task. The JFC is used in determining the appropriate labor rate which is then used in the cost calculations for each work group. Each of those four network elements are included in this document.

Subject Matter Experts on the BellSouth Telecommunications network staff defined the discrete tasks which comprise the service provisioning functions performed by each network organization. These tasks were used to construct a flowchart that describes the beginning to end work flow of each network operation studied. The work flows were constructed to represent the provisioning processes in the network centers of the entire nine state region which makes up BellSouth Telecommunications, Inc. The Network field personnel have given this data their support and concurrence.

Work times for individual tasks in the flows were established using a mixture of actual time studies, estimations provided by a group of qualified estimators (a qualified estimator is defined as a worker with at least one year of experience on the job to be studied) or a Subject Matter Expert (SME) who is thoroughly familiar with that task. When group estimations were obtained, each worker was asked to give a "minimum" time estimate, a "most likely" time estimate and a "maximum" time estimate. These estimates were input into the Integrated TOC based Cost Analysis Program (ITCAP). Each estimator's three estimates per task were averaged to form a "pert mean" by using the following formula:

(the "minimum" +(4 x the "most likely") + the "maximum")/6

This method of estimating the average work time was also used by many of the SMEs.

STUDY METHODOLOGY (cont'd)

The estimated average work time furnished for each task herein has been rounded to the nearest minute unless otherwise noted.

Probability of occurrence data is necessary whenever tasks branch from a decision diamond of a work flow. This data is used to assign the weight to the times for the tasks on each branch. Any branching point in the work flow must be accounted for in the proper aggregation of the task times and costs.

Much of the probability of occurrence data could not be directly gathered from existing databases because the data needs pertain to aspects of the work process that usually are not directly monitored in the existing databases. This typically includes data related to interactions between work groups and organizations or the probability of test failures.

When the probability data could not be found in existing databases, estimations were provided for some of the decision blocks by a group of qualified estimators or a Subject Matter Expert (SME) who is thoroughly familiar with the work processes related to the probability of occurrence. Others probabilities will be provided by the appropriate SME when work time data is requested for a specific service.

USAGE OF THIS WORK TIME DATA

This work time data is presented as a guide for costing purposes only. These work times do not represent a performance goal or standard and should not be used as such.

Work times for each task in this study include only time from the beginning of the task until its end. WORKERS AND SMEs WERE ASKED SPECIFICALLY TO ESTIMATE HOW LONG IT TAKES TO PERFORM EACH TASK, NOT HOW LONG IT SHOULD TAKE TO PERFORM IT. Such things as interruptions (telephone calls, etc.), stretching, relief time, time between tasks and work time not directly attributable to a specific task are not included in the task work time. Refer to each task's activity profile for complete details.

When using TOC work time data to determine work times:

1. Choose only the task(s) that apply to the operation you wish to model. Read each task description carefully. The tasks have been constructed to allow the modeling of service additions, rearrangements and disconnects.

2. Consult the work flowcharts for the probability of certain tasks occurring and weigh the task's work time accordingly. For example, if an installer only encounters trouble on a circuit 20% of the time and the work time for resolving trouble is 10 minutes, then, on the average circuit you would add 2 minutes (20% of 10 minutes) for resolving trouble. IF you are only modeling situations where trouble is encountered, then you would use the entire 10 minute trouble resolution time.

3. Work group functions rather than center names are used in this study because the center name and the name of a work group performing a specific function may vary in some states within the region. Refer to the table of contents in Section 5 to determine the appropriate work functions to use in your model.

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #1

ORDER RECEIPT AND ANALYSIS

Item Description: Time spent in receiving and analyzing the local service order.

ACTIVITY PROFILE

Begins:	May Include:	Ends:
• With beginning of order receipt process	• Time spent on CAT and/or on phone with IMC obtaining data on next job * • Time spent on analysis • Time spent resolving discrepancies • Time spent ordering equipment in connection with order	• When technician is ready to proceed with field visit

DOES NOT INCLUDE:

- Waiting for call backs
- Breaks or restroom time

* The time the technician spends securing information on his or her next job often occurs in the middle of the time interval associated with closing out the previous job. (See Item #15). However, the actual time spent being dispatched on the next job is to be considered part of this Item.

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
1.00	[redacted]

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #2

TECHNICIAN TO X BOX AND/OR BCT OR LST LOCATION

Item Description: Travel time to Cross box and/or BCT or LST Location.

ACTIVITY PROFILE

Begins:

- When technician is ready to begin travel to cross box, pair change or BCT location

May Include:

- Checking vehicle for materials
- Actual driving time to cross box, pair change or BCT location

DOES NOT INCLUDE:

- Time spent on vehicle breakdowns
- Time spent resolving parts discrepancies
- Break or restroom time

Ends:

- When technician arrives at cross box, pair change or BCT location

NOTE: Often procedures dictate that the technician visit the customer's premises before performing these work operations. However, so that the study will be consistent across the region, please make estimates for this work operation as it is described above.

AVERAGE TIME PER OCCURRENCE
(Minutes)

	Item Number	Work Time
Travel from work ctr to the PXJ, BCT, RXJ, LST location (first order of the day)	2.01	27.00
Travel time from last job to the PXJ, RXJ, BCT, LST location	2.02	20.00

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #3

INSTALL PROPER PLUG AT RT

Item Description: Install or replace plug-in at remote terminal

ACTIVITY PROFILE

Begins:

- When technician arrives at remote terminal *

May Include:

- Verification that proper plug is in place
- Set up time, including that necessary to insure ESD protection
- Placement or replacement of proper plug-in
- Ordering replacement plug

Ends:

- With verification of proper dial tone at remote terminal

DOES NOT INCLUDE:

- Vehicle breakdowns
- Time spent resolving parts discrepancies
- Break or restroom time

* Remote terminal is most often very close to the cross box and this Item should not come up unless it is necessary to visit the cross box.

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
3.00	19.00

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #4

PLACE AND/OR PERFORM WORK PXJ, RXJ, BCT, LST AS REQUIRED

Item Description: Actual placement and/or removal of cross connect jumpers, performance of line and station transfer work, or breaking of connect through.

ACTIVITY PROFILE

Begins:

- On arrival at PXJ, RXJ, BCT or LST location

May Include:

- Set up time at job site preparing for work operation:
  - Tools, equipment
  - Ladder, placing
  - "Suiting up"
  - Opening/closing cross box, ped., terminal, etc.
- Performance of cross connect, LST or BCT work
- Coordination time
- "Dead time" waiting for assignments, frame, etc. while unable to do other work

DOES NOT INCLUDE:

- Vehicle breakdowns
- Initial travel to work location or trip to customer's premises
- Break or restroom time

AVG. TIME FOR THIS TASK = 32.00 Minutes

Ends:

- With PXJ, RXJ, BCT or LST being completed

AVERAGE TIME PER OCCURRENCE

(Minutes)

	Item Number	Work Time
PXJ	4.01	16.00
BCT/RXJ	4.02	28.00
LST	4.03	60.00

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #5

CHECK CONTINUITY AND/OR DIAL TONE

Item Description: Check loop pair(s) for continuity and/or dial tone before leaving cross box, LST, PXJ, RXJ, BCT location

ACTIVITY PROFILE

Begins:

- At completion of PXJ, RXJ, BCT, LST operation

May Include:

- Checking for loop continuity to serving central office
- Checking for dial tone and/or ring back as required

Ends:

- With continuity established and dial tone verified, or with failure to achieve the above results

DOES NOT INCLUDE:

- Trouble resolution time
- Break or restroom time

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
5.00	15.00

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #6

TROUBLE RESOLUTION

Item Description: Attempt to resolve problems with continuity of the loop or lack of dial tone

ACTIVITY PROFILE

Begins:

- With failure to establish circuit continuity or get dial tone

May Include:

- Time spent testing through CAT or using test equipment
- Time spent on line with IMC or Central Office trying to resolve problem
- Time spent by technician to obtain new pair
- "Dead time" spent waiting for new assignments and not doing any other office work
- Time spent making repairs or making changes in facilities to resolve problem

DOES NOT INCLUDE:

- Break or restroom time
- Time spent on other activity while waiting for new pair assignments

Ends:

- With resolution of loop problem or decision to refer resolution of problem to other group and complete the order at another time

---

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
6.00	45.00

3

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #11

ESTABLISH AND CONDUCT TEST FROM THE NI

Item Description: Time spent "hooking up" test equipment and performing operational test from the network interface

ACTIVITY PROFILE

Begins:

- With arrival of technician at customer premises or completion of drop and/or NI work if applicable

May Include:

- Time for "set up"
- Time to perform all necessary tests with CAT or test equipment
- Time spent storing test gear after use

Ends:

- With successful completion of tests or the need for trouble resolution

DOES NOT INCLUDE:

- Time for trouble resolution
- Break or restroom time

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
11.00	20.00

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #12

TROUBLE RESOLUTION

Item Description: Time spent in trouble resolution following failure of test performed at the network interface

ACTIVITY PROFILE

Begins:

- With need to resolve problems which caused tests performed at the network interface to fail

May Include:

- All time spent resolving problems in:
  - Cable facilities
  - Drop, protector and/or NI
  - Network terminating wire
- Time spent testing with, or securing additional information from IMC or other centers in resolving problems or making corrections to records
- Travel time associated with trouble resolution

DOES NOT INCLUDE:

- Break or restroom time

Ends:

- With successful resolution of problem or decision to refer trouble to another group and to complete order later

---

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
12.00	56.00

8/10

NETWORK INSTALLATION OUTSIDE WORK GROUP - BUSINESS (NIOWGB)

Item #16

TECHNICIAN COMPLETES SERVICE ORDER

Item Description: Technician closes out service order on CAT and/or on phone with the IMC

ACTIVITY PROFILE

Begins:

- When technician completes all physical work on order and is ready to begin close out procedure on CAT or with IMC

May Include:

- Placing call on CAT or to the IMC
- Entering close out information into CAT or relating that information to the IMC
- Calling IMC or other centers to correct records in connection with order
- Packing of gear, tools, etc.

DOES NOT INCLUDE:

- Time spent on CAT or on phone with IMC obtaining data on next job *

Ends:

- When the technician returns to truck and is ready to proceed with next job

* While the time the technician spends securing information on the next job is right in the middle of the time interval associated with this Item, it should not be considered part of this interval. It should be considered part of Item #1.

AVERAGE TIME PER OCCURRENCE
(Minutes)

Item Number	Work Time
16.00	19.00

Subject: TOC ADSL SSIM Worktimes [illegible] Contents: [illegible] 55 17
Creator: Pam G. Williams /m3,mail3a

Item 1

TO: James R. Mccracken /m6,mail6a
BCC: Arlene Fredrickson /m3,mail3a; PHONE=205-977-0391

Item 2

Jim, this is my understanding of our phone conversation:

Both ADSL-Compatible Loops and 2-Wire Unbundled Copper Loops (designed circuit) should contain the same worktime for SSIM technician. This worktime is taken from the TOC study as follows:

AT THE CROSS-BOX
Place PXJ - 16 min.
Check continuity and/or dial tone - 15 min.
Trouble resolution/testing - 13.5 (45 min. 30% of the time)
These times total 44.5 minutes

AT CUSTOMER PREM.
Testing from NI - 20 min.
Trouble resolution/testing - 11.76 (56 min 21% of the time)
Service Order completion - 19 min.
These times total 50.76 min.

TOTAL OF TIME AT CROSSBOX AND CUSTOMER PREM: 95.26 minutes.

Do you see anything above that should be modified/changed/added/deleted? No

These times include sending tones when qualifying pairs, checking for load coils and to see if there is bridge tap close to the customer. (Do these functions fall under testing?) Yes

Also, there is no disconnect time for either UNE. (What about equipment recovery?) No

Thanks for all your assistance.

Pam
205/977-5561

Responses provided by J. McCracken
10/7/99

[illegible]

Subject: SSIM Work Times
Creator: Pam D. Williams /m3,mail3a

Date: [illegible]
Contents: 2

Item 1

TO: Gerald E. Potts /m3,mail3a; PHONE=404-529-7567
BCC: Arlene Fredrickson /m3,mail3a; PHONE=205-977-0391

Item 2

Gerald, when gathering concurrences for SSIM worktimes, the subloop elements had not been fully developed. Adjustments were necessary due to the division of labor between feeder and distribution. For SSIM, we had received worktimes from Hulsey, which lumped everything together for Connect & Test.

Using the TOC Study (the only documented reference I had), I came up with the following times. Please review and advise if any corrections are needed or if I have missed something:

FOR FEEDER, First & Addl Install:
Travel to crossbox: 20 min.
Service Order: Order receipt and analysis: 20 min.
Place cross-connect: 16 min.
Check continuity and dial tone: 15 min.
Trouble Resolution: 13.50 min. (45 min. 30% of the time)
Completion of Service Order: 19

First & Addl Disconnect:
Remove cross-connect: ~~16 min.?~~ 5 min.
Completion of Service Order: 19 min.

FOR DISTRIBUTION, First & Addl Install:

Travel to cross-box (beginning of distribution): 20 min.
Travel from cross-box to premises (captured in Drop/NID)
Service Order: Order receipt and analysis: 20 min.
Connect & Test: Test from NID: 20 min.
Trouble Resolution: 11.76 min. (56 min 21% of the time)
Completion of Order: 19 min

Disconnect 1st and Addl: ~~Please advise~~.

For 4-wire elements, I have multiplied by 1.5 to capture the extra time necessary for 4-wire as opposed to 2-wire. Do you agree? Yes

What happens at the crossbox? Another "Place cross-connect" at 16 min? Yes
Where is continuity and dialtone checked?

add

I need a response ASAP.

Thx,
Pam

~~F~~ [illegible] 20
SSIM

Dist.

REPLY Dated: 6/22/2000 at 16:31
Subject: NRC Question Contents: 2
Sender: Gene A. Flynn /m3,mail3a

Item 1

TO: Arlene Fredrickson /m3,mail3a; PHONE=205-977-0391
CC: Gene A. Flynn /m3,mail3a; PHONE=205-977-3096
Christopher Giusti /m3,mail3a
Rick Johnson /m7,mail7a; PHONE=205-977-3099
Pam G. Williams /m3,mail3a; PHONE=205-977-5561

Item 2

Arlene,

I know that in Georgia and North Carolina there have been certain Services Technicians designated to handle the xDSL UNE services. I do not know if this is the way it will be handled across the Region, so [redacted] at this time.

1+M

I also believe that the [redacted] rate for SL1 and SL2 loops [redacted]. The dispatch rate for [redacted] unless the service is "Switch as is". I verified this with Jim McCracken. Jim is one of our SSIM [redacted] the Headquarters Staff.

Presently BST is dispatching for facility purposes on [redacted] service orders for Residence and Small Business [redacted]. Last year 37.7% of all N,T, and C orders for Residence and Small Business inward service required a facility dispatch.

EOY 9.

I will provide you with a copy of the Company results sheets of the Service Order and Visit [redacted] Report for year end 1999. This report is what I used to come up with the above percentages.

I added line 6B (Total Service Orders W/Facility Visits) plus line 6C (Total Service Orders W/Facility and Premises Visits). I then divided that total by Line 1 (Total Service Orders(N,T,C) to get the percentage.

If you have any questions please call me at (205) 977-3096.

Thanks,

Gene

Leave
1+m - ND
SSIM - Des

VP OPERATIONS; COMPANY
STATE:
AREA:

SERVICE ORDER AND VISIT ACTIVITY REPORT
BELLSOUTH TELECOMMUNICATIONS

PROGRAM: RP20B97
RUN DATE: 000108
SITE: HEADQUARTERS
MONTH ENDING: 12/ 99

	RESIDENCE		BUSINESS		TOTAL	
	TOT	YTD	TOT	YTD	TOT	YTD
INWARD SERVICE ORDER ACTIVITY						
1. TOTAL SO (N,T,C)	430,100	5,654,820	51,563	729,705	481,663	6,384,525
A. REINSTALLS (RI)	287,789	3,847,649	29,246	419,717	317,035	4,267,366
B. NEW INSTALLS (NI)	44,961	573,512	5,705	73,470	50,666	646,982
C. ADDIT. LINES (ADL)	97,350	1,253,659	16,612	236,518	113,962	1,470,177
2. TOT SO W/O A VISIT	265,116	3,563,932	12,020	168,951	277,136	3,732,883
%	61.6	63.0	23.3	23.2	57.5	58.5
3. TOT SO W/O A FAC VISIT	265,390	3,567,846	12,090	169,982	277,480	3,737,748
%	61.7	63.1	23.4	23.3	57.6	58.5
4. TOT SO W/O A VISIT (RI)	249,313	3,538,918	7,752	109,239	257,065	3,448,157
%	86.6	86.8	26.5	26.0	81.1	80.8
A. W/O A FAC VISIT (RI)	250,000	3,349,607	8,068	113,619	258,068	3,463,226
%	86.9	87.1	27.6	27.1	81.4	81.2
5. TOT SO W/O A VISIT (NI)	3,988	64,473	655	5,851	4,643	70,324
%	8.9	11.2	11.5	8.0	9.2	10.9
A. W/O A FAC VISIT (NI)	4,365	68,862	722	6,547	5,087	75,409
%	9.7	12.0	12.7	8.9	10.0	11.7
6. TOT SO W/ VISITS	164,904	2,090,888	39,543	560,754	204,527	2,651,642
%	38.4	37.0	76.7	76.8	42.5	41.5
A. PREMISES VISITS	274	3,914	70	951	344	4,865
%	0.2	0.2	0.2	0.2	0.2	0.2
B. FACILITY VISITS	84,603	1,093,806	18,982	272,540	103,585	1,366,346
%	51.3	52.3	48.0	48.6	50.6	51.5
C. PREM & FAC VISITS	64,254	796,972	17,265	242,734	81,519	1,039,706
%	38.9	38.1	43.7	43.3	39.9	39.2
D. MISCODED ORDERS	8,161	101,120	1,830	25,345	9,991	126,465
%	4.9	4.8	4.6	4.5	4.9	4.8
E. UNNECESSARY DISP	7,692	95,076	1,396	19,184	9,088	114,260
%	4.7	4.5	3.5	3.4	4.4	4.3

	RESIDENCE TOT	RESIDENCE YTD	BUSINESS TOT	BUSINESS YTD	TOTAL TOT	TOTAL YTD
7. TOT SO W/ VISITS (RI)	38,476	508,731	21,494	310,478	59,970	819,209
%	25.3	24.3	54.4	55.4	29.3	30.9
A. PREMISES VISITS (RI)	687	10,689	316	4,380	1,003	15,069
%	1.8	2.1	1.5	1.4	1.7	1.8
B. FACILITY VISITS (RI)	27,402	364,052	11,317	165,004	38,719	529,056
%	71.2	71.6	52.7	53.1	64.6	64.6
C. PREM & FAC VISITS (RI)	10,387	133,990	9,861	141,094	20,248	275,084
%	27.0	26.3	45.9	45.4	33.8	33.6
8. TOT SO W/ VISITS (NI)	40,973	509,039	5,050	67,619	46,023	576,658
%	24.8	24.3	12.8	12.1	22.5	21.7
A. PREMISES VISITS (NI)	377	4,389	67	696	444	5,085
%	0.9	0.9	1.3	1.0	1.0	0.9
B. FACILITY VISITS (NI)	27,883	348,045	2,818	37,874	30,701	385,919
%	68.1	68.4	55.8	56.0	66.7	66.9
C. PREM & FAC VISITS (NI)	12,713	156,605	2,165	29,049	14,878	185,654
%	31.0	30.8	42.9	43.0	32.3	32.2
9. TOT SO W/ VISITS (ADL)	85,535	1,073,118	12,999	182,657	98,534	1,255,775
%	51.8	51.3	32.9	32.6	48.2	47.4
10. POTENTIAL SO W/O A VISIT	292,518	3,927,984	23,337	333,955	315,855	4,261,939
%	68.0	69.5	45.3	45.8	66.6	66.8
A. REINSTALLS (RI)	276,715	3,702,970	19,069	274,243	295,784	3,977,213
%	96.2	96.2	65.2	65.3	93.3	93.2
11. DEREGULATED C ORDERS	3,075	49,120	521	9,758	3,596	58,878
%	0.7	0.8	0.9	1.2	0.7	0.9
12. REG, REG/DEREG C ORDERS	19,331	231,374	4,521	61,014	23,852	292,388
%	4.3	4.3	8.0	8.0	4.7	4.7
13. TOT SO (LINES 1,11,12)	452,506	5,935,314	56,605	800,477	509,111	6,735,791

VP OPERATIONS: COMPANY
STATE:
AREA:

SERVICE ORDER AND VISIT ACTIVITY REPORT
BELLSOUTH TELECOMMUNICATIONS

PROGRAM: RP20B97
RUN DATE: 000108
SITE: HEADQUARTERS
MONTH ENDING: 12/ 99
PAGE: 63

		RESIDENCE		BUSINESS		TOTAL	
		TOT	YTD	TOT	YTD	TOT	YTD
14. TOT AUTO COMPLETIONS							
	N	179,588	2,343,742	9,893	146,924	189,481	2,490,666
	%	59.5	60.7	20.7	22.1	54.2	55.0
	T	82,997	1,148,872	2,126	27,954	85,123	1,176,826
	%	63.1	64.4	19.8	18.9	59.8	60.9
	C	1,010,928	17,918,397	99,940	2,310,827	1,110,868	20,229,224
	%	97.6	98.4	26.2	36.7	78.4	82.5
	D	267,248	3,301,874	30,942	402,731	298,190	3,704,605
	%	99.8	99.7	61.9	66.6	93.9	94.6
	F	133,639	1,804,538	10,153	132,146	143,792	1,936,684
	%	99.9	99.8	93.5	92.7	99.4	99.3
	P	0	0	0	0	0	0
	%	0.0	0.0	0.0	0.0	0.0	0.0
	R	7,076	31,855	835	13,762	7,911	45,617
	%	100.0	100.0	0.8	0.9	6.8	2.9
	X	0	1	0	0	0	1
	%	0.0	100.0	0.0	0.0	0.0	100.0
15. TOTAL ALL SVC ORDERS							
	N	301,756	3,862,691	47,891	665,521	349,647	4,528,212
	T	131,553	1,783,867	10,757	147,661	142,310	1,931,528
	C	1,036,314	18,206,364	381,397	6,301,914	1,417,711	24,508,278
	D	267,674	3,310,948	49,983	604,920	317,657	3,915,868
	F	133,820	1,807,915	10,859	142,531	144,679	1,950,446
	P	0	0	0	0	0	0
	R	7,076	31,855	108,443	1,564,608	115,519	1,596,463
	X	0	1	0	0	0	1

*** N O T I C E - NOT FOR USE OR DISCLOSURE OUTSIDE BELLSOUTH EXCEPT UNDER WRITTEN AGREEMENT ***

1a M / 55 / 2 M

	A	B	C	D	E	F	G	H	I	J	K	L
1	[illegible] Work Times	SL1 (A.1.1)	SL2 (A.1.2)	2W ISDN (A.3.1)	2W UDC (A.3.[illegible])	2W ADSL (A.5.1)	2W HDSL (A.7.1)	2W UCL (A.12.1) & (A.13.[illegible])	4W [illegible] (A.4.1)	4W HDSL (A.6.1)	4W [illegible] (A.15.1)	4W UCL (A.14.1 & A.14.[illegible])
2												
3	Process service order	20	20	20	20	20	20	20	20	20	20	20
4	Place cross connect at crossbox	16	16	16	16	16	16	16	16	16	16	16
5	Check continuity/dial tone at NID	15	15	15	15	15	15	15	15	15	15	15
6	Trouble resolution/testing at crossbox	45	45	45	45	45	45	45	45	45	45	45
7	% trouble performed	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
8	Resulting time	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
9	Testing from NID	20	20	20	20	20	20	20	20	20	20	20
10	Trouble resolution/testing at NID	56	56	56	56	56	56	56	56	56	56	56
11	% trouble performed	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
12	Resulting time	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76
13	Service Order Completion	19	19	19	19	19	19	19	19	19	19	19
14												
15	4-wire multiplier	1	1	1	1	1	1	1	1.5	1.5	1.5	1.5
16	% Dispatch	37.7%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
17												
18	Time / Minutes	43.453	115.28	115.28	115.28	115.28	115.28	115.28	162.89	162.89	162.89	162.89
19	Time/Hours	0.7242	1.9210	1.9210	1.9210	1.9210	1.9210	1.9210	2.7148	2.7148	2.7148	2.7148
20												
21												
22	[illegible] Work Times	2W Feeder Subloop SL1 (A.2.[illegible])	2W Dist. Subloop (A.2.[illegible])	4W Dist. Subloop (A.2.[illegible])	Subloop 2W UCL - Dist. (A.2.[illegible])	Subloop 4W UCL - Dist. (A.2.[illegible])	2W SL2 Feeder Subloop (A.2.[illegible])	4W Subloop - Feeder (A.2.[illegible])	2W ISDN Subloop - Feeder (A.2.[illegible])	4W [illegible] Subloop - Feeder (A.2.[illegible])	Subloop 2W UCL - Feeder (A.2.[illegible])	Subloop 4W UCL - Feeder (A.2.[illegible])
23												
24	Process service order	20	20	20	20	20	20	20	20	20	20	20
25	Place cross connect at crossbox	16	16	16	16	16	16	16	16	16	16	16
26	Check continuity/dial tone at NID	15	15	15	15	15	15	15	15	15	15	15
27	Trouble resolution/testing at crossbox	45					45	45	45	45	45	45
28	% trouble performed	0.3					0.3	0.3	0.3	0.3	0.3	0.3
29	Resulting time	13.5					13.5	13.5	13.5	13.5	13.5	13.5
30	Testing from NID		20	20	20	20						
31	Trouble resolution/testing at NID		56	56	56	56						
32	% trouble performed		21%	21%	21%	21%						
33	Resulting time		11.76	11.76	11.76	11.76						
34	Service Order Completion	19	19	19	19	19	19	19	19	19	19	19
35												
36	4-wire multiplier	1	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5
37	% Dispatch	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
38												
39	Time / Minutes	83.5	101.76	142.64	101.76	142.64	83.5	115.25	83.5	115.25	83.5	115.25
40	Time/Hours	1.3917	1.6960	2.3773	1.6960	2.3773	1.3917	1.9208	1.3917	1.9208	1.3917	1.9208
41												
42												
43	[illegible] Work Times	Loading [illegible] (A.[illegible])	NID (A.2.[illegible])	2w [illegible] (A.2.[illegible])	4w [illegible] (A.2.[illegible])	UNTW [illegible] (A.[illegible])						
44												
45	Process service order	20	20	20	20							
46	Place cross connect at crossbox			16	16							
47	Check continuity/dial tone at NID			15	15							
48	Trouble resolution/testing at crossbox			3	3							
49	Testing	25										
50	Customer Access - Check for UNTW/X-Conn.					132						
51	% time					0.2						
52	Resulting time					26.4						
53	Reconnect UNTW to SPOI					30						
54	% trouble performed					0.8						
55	Resulting time					24						
56	Place NID / Equipment (SPOI)		46			120						
57	Service Order Completion			19	19							
58												
59	4-wire multiplier	1	1	1	1.5	1						
60	% Dispatch	100%	100%	100%	100%	100%						
61												
62	Time / Minutes	45	65	73	109.5	170.4						
63	Time/Hours	0.7500	1.0833	1.2167	1.8250	2.8400						
64												

PROPRIETARY
DECLASSIFIED

POD Item No. 81
Attachment No. 2
Supporting Data for Sub-Loop Labor & Material, UNTW Material. NID Material

SPOI TERMINALS BLOCKS AND MISCELLANEOUS REPLACEMENT PARTS

Item		Description (Equipped with)	Quantity 1 - 100	3M Price	Channell Price	Siecor Price	Average Price
1)		Terminal 100 pair NTW SPOI 15 ft - [redacted]		$ 391.87	$ 378.78	$ 353.54	$ 374.73
	a)	100 pair of IDC blocks with terminated 100 pair, 15 foot, [redacted] filled cable stub, installed in NTW field.					
	b)	25 pair of IDC blocks, with terminated 25 pair, 15 foot shielded, filled cable stub, installed in [redacted]					
	c)	Mounting hardware to allow expansion per Attachment A in CO field.					
2)		Terminal 100 pair NTW SPOI 6 ft - [redacted]		$ 325.56	$ 351.69	$ 322.10	$ 333.12
	a)	100 pair of IDC blocks with terminated 100 pair, 6 foot, [redacted]d. air core cable stub, installed in NTW field.					
	b)	25 pair of IDC blocks with terminated 25 pair, 6 foot, non-shielded, air core cable stub, installed [redacted].					
	c)	Mounting hardware to allow expansion per Attachment A in CO field.					
3)		Terminal 100 pair NTW SPOI 15 ft - [redacted]		$ 314.00	$ 318.22	$ 316.03	$ 316.08
	a)	100 pair of IDC blocks [redacted] installed in NTW field.					
	b)	25 pair of IDC blocks, with terminated 25 pair, 15 foot [redacted], filled cable stub, installed [redacted].					
	c)	Mounting hardware to allow expansion per Attachment A in CO field.					
4)		Terminal 100 pair NTW SPOI 6 ft [redacted]		$ 290.46	$ 311.31	$ 288.83	$ 296.87
	a)	100 pair of IDC blocks [redacted] installed in NTW field.					
	b)	25 pair of IDC blocks with terminated 25 pair, 6 foot, [redacted], air core cable stub, installed [redacted].					
	c)	Mounting hardware to allow expansion per Attachment A in CO field.					
5)		Terminal 100 pair NTW SPOI Non-stubbed		$ 274.90	$ 296.44	$ 268.81	$ 280.05
	a)	100 pair of IDC blocks without stub installed in NTW field.					
	b)	[redacted]					
	c)	Mounting hardware to allow expansion per Attachment A in CO field.					
		CO pair directly to SPOI					
6)		Block Terminal SPOI 15 ft. Stubbed		$ 63.22	$ 71.19	$ 53.51	$ 62.64
	a)	25 pair of IDC blocks, with terminated 25 pair, 15 foot shielded, filled cable stub, for installation in CO field.					
7)		Block Terminal SPOI 6 ft. Stubbed		$ 39.50	$ 59.50	$ 47.56	$ 48.85
	a)	25 pair of IDC blocks, with terminated 25 pair, 6 foot non-shielded, air core cable stub, for installation in CO field.					
8)		Block Terminal SPOI 25 pair, Non-stubbed.		$ 23.38	$ 41.44	$ 31.56	$ 32.13
	a)	25 pair of IDC blocks for insallation in NTW or CO field.					
9)		Connector Test					
	a)	Replacement or spare connector required for testing IDC block.		$ 12.48	$ 8.87	$ 11.67	$ 11.01
10)		Miscellaneous Replacement or field repair parts (detail each)					
	***	See Notes at the bottom of REQUIREMENTS FOR SPOI regarding pricing considerations.					

2:1 retrofit

30% 15'

70% 9'

stub

stub

wire pair not use

EC

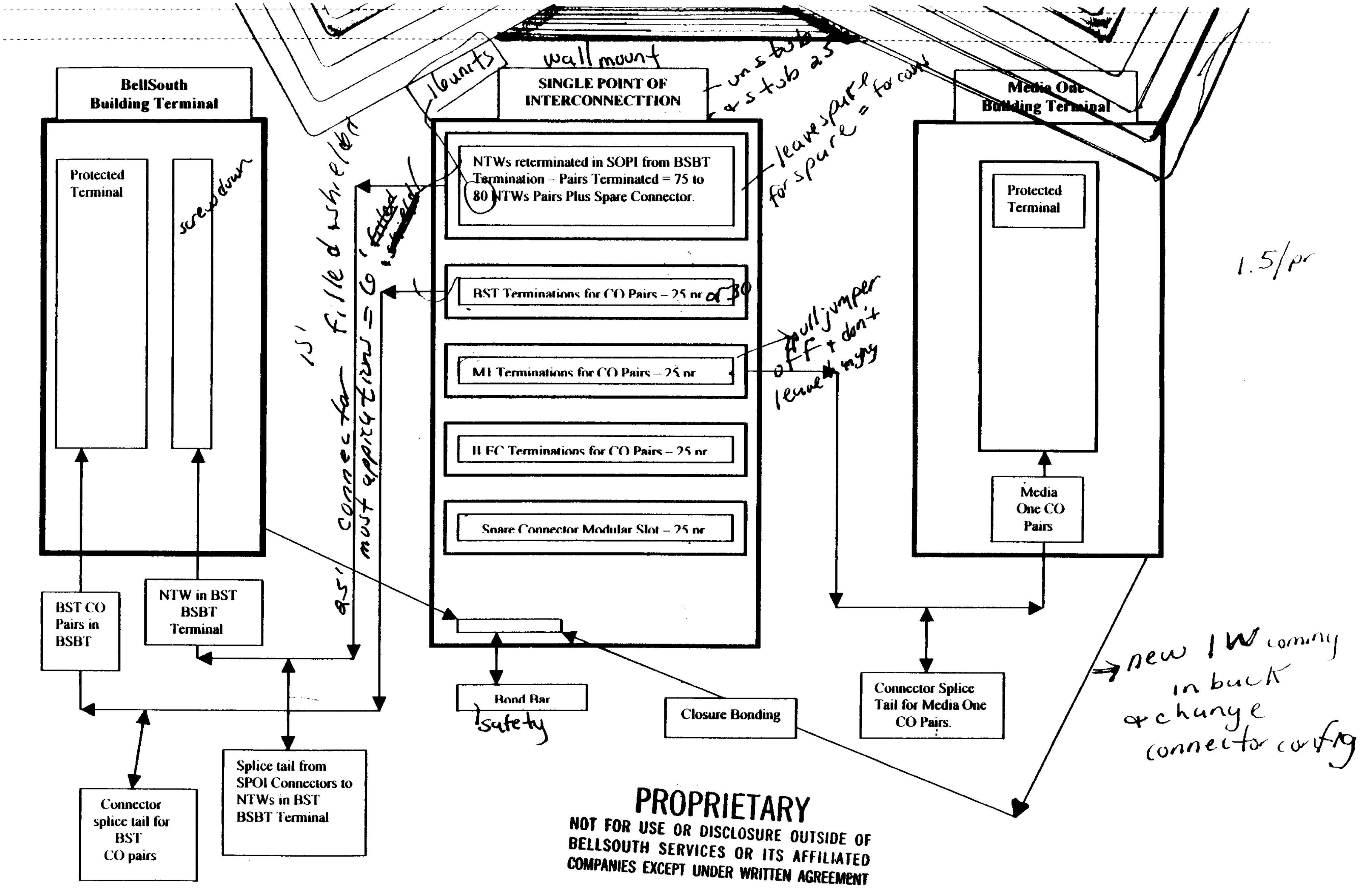
per terminal SPOI

spare included

Spoiwp.xls

PROPRIETARY
NOT FOR USE OR DISCLOSURE OUTSIDE OF BELLSOUTH SERVICES OR ITS AFFILIATED COMPANIES EXCEPT UNDER WRITTEN AGREEMENT

3/16/00 3:30 PM



1. The above diagram reflects a retrofit application. However the installation of the SPOI and Connector Splice Tails would apply for a New Installation.
2. It is anticipated that new construction of MDUs will have six (6) pair NTWs installed. However, in the new SPOI appication only, five pairs may be terminated with the sixth (6th) pair stored as a spare.

MESSAGE
Subject: Notes on SPOI
Creator: Arlene Fredrickson /m3,mail3a

Date: [illegible]
Contents: 3

Item 1

TO: Karen F. Fields /m7,mail7a; PHONE=205-977-1839
CC: W P. Beverly /m2,mail2a
Ray Macolly /m2,mail2a
Gerald E. Potts /m3,mail3a; PHONE=404-529-7567
Jane Raulerson /m3,mail3a; PHONE=205-977-3153

Item 2

Karen,

Had questions for Gerald/Ray/W.P. yesterday that were answered via interactive pager. I thought I would write these down for better access. Here goes:

> A **stubbed terminal** in the SPOI environment could be used for both new and retrofit applications. The stub is actually cable pairs that have been preterminated on the back of a connector field. The cable pairs in the case of a retrofit would go to NTWs that are terminated in the old BSBT closure.
>
> Splicing the NTWs to the stubbed pairs throws the NTWs into the new SPOI. The same thing would apply for the CO pairs. The non-stubbed version would have application for a new job only. This would mean that NTWs would go straight into the SPOI and they would terminate on a pass through connector. You would still have a stubbed connector for the CO pairs.
>
> Shielded cable is cable enclosed in a metal band. It is used in long distance applications between terminals so as not to create electrical interference on the circuits. Most of the time it is buried cable.

Based on discussion with Ray and Gerald yesterday and the equipment information provided by W.P., I prepared the attached equipment cost worksheet. Some concerns/questions are:

- we have the same equipment for both WC and GT (same cost)
- final choice of vendors is not yet made (although leaning toward selection of two)
- cost more than doubled for WC scenario
- % of stubbed and non-stubbed not available (used 90/10 as surrogate)
- don't have rate structure for adding 25 pair blocks in terminals when expansion is necessary; should I load SPOI with more than 100 pr?
- have cost of 200pr housing (not separated by material price) and 100pr insides plus additional 25 pr block
- workpapers I am receiving are NOT marked proprietary/lock as should be for vendor material prices

~~Please call when you get back. I am NOT yet ready for a 3/31 filing. The cost estimates based on all this are found below. They also include changes as discussed on the project team yesterday for provisioning. The construction crew still has not bought into approach.~~

~~Recurring $1.19 (90 months life, 6.8 lines average per SPOI)~~
~~Nonrecurring $1.50 (only svc. order time)~~

Superceded

Item 3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

CABLE,CONNECTOR

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 535 375	**CABLE CONN B 25A 4' DE** GTES STOCK N NON-STOCK	09	1	1	2	5.91 EA

USED AS AN EXTENSION CABLE FOR CONNECTING BETWEEN PLUG-ENDED TELEPHONE SETS AND CONNECTOR OR PLUG-ENDED BRIDGING TERMINALS OR APPARATUS CABINETS.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 017 326 BTOS	**CABLE CONN B 25A 5' DE** GTES STOCK S NON-STOCK	09	1	1	2	5.59 EA

100 017 326 101 117 315 101 535 383 010 008 258
010 008 233 101 619 336 100 017 334 100 017 342
100 017 359 100 017 367

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.
BSP 461-200-101

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 117 315	**CABLE CONN B 25A 6' DE** GTES STOCK N NON-STOCK	09	1	1	10	6.48 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 535 383	**CABLE CONN B 25A 7' DE** GTES STOCK N NON-STOCK	09	1	1	2	6.67 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
010 008 258	**CABLE CONN B 25A 8' DE** GTES STOCK N NON-STOCK	09	1	1	2	6.64 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

If you have complaints about a product, or an item in the Catalog, please use Form RF-1050, Exhibit E, which is located in the front section of the Catalog.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
010 008 233	**CABLE CONN B 25A 9' DE** GTES STOCK N NON-STOCK	09	1	1	2	6.45 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 619 336 BTOS	**CABLE CONN B 25A 10' DE** GTES STOCK S NON-STOCK	09	1	1	2	5.99 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 017 334 BTOS	**CABLE CONN B 25A 15' DE** GTES STOCK S NON-STOCK	09	1	1	2	7.31 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 017 342 BTOS	**CABLE CONN B 25A 30' DE** GTES STOCK S NON-STOCK	09	1	1	2	9.71 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 017 359 BTOS	**CABLE CONN B 25A 60' DE** GTES STOCK S NON-STOCK	09	1	1	2	15.47 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 017 367 BTOS	**CABLE CONN B 25A 100' DE** GTES STOCK S NON-STOCK	09	1	1	2	23.06 EA

GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
102 229 192	**CABLE CONN B 50A 15' DE** GTES STOCK N NON-STOCK	09	1	1	2	34.83 EA

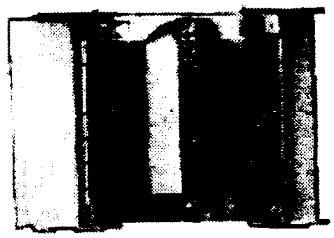
GENERAL USE IN COMMUNICATION SYSTEM WIRING, 24 GAUGE ANNEALED COPPER CONDUCTORS INSULATED WITH COLOR CODED PVC, JACKETED WITH LOW FRICTION PVC. USED AS INSIDE WIRE ONLY. DE DENOTES CABLE THAT HAS TWO CONNECTORS, ONE CONNECTOR ON EACH CABLE END. GENERALLY USED AS AN EXTENSION CABLE.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
233 002 732 BTOS	**INTERFACE BLOCK 25PR W/O BBRD**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	11.83 EA

233 002 732

66 BLOCK, WITH 700 TYPE JACK, 25 PAIR, WITHOUT A BACKBOARD. PROVIDES NETWORK INTERFACE DEMARCATION. TO CHANGE THE TELEPHONE NUMBERS ON THE INSIDE COVER, USE FORM RF412, PID#: 771940905. TO PLACE A WARNING ON THE OUTSIDE COVER, USE FORM RF412A, PID#: 611941543.
THIS ITEM IS SOMETIMES REFERRED TO AS A "RJ21X."

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
334 911 930	**INTERFACE IS 25 PR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	388.81 EA



334 911 930

INSIDE INTERFACE FOR 25 PAIR PROTECTED NETWORK INTERFACE FOR INSIDE APPLICATION EQUIPPED WITH INDIVIDUAL LOCKABLE COVERS USED AS A DEMARCATION POINT FOR MULTIPLE LINE APPLICATIONS.
RL: 91-06-049SV

If you need to know the status of your order, use OrderMaster, or call the GTES Customer Resource Center (CRC) at 1-800-414-8095. Hours of operation are 7:30 A.M. - 6:00 p.m. Monday thru Friday.

INTERFACE NETWORK

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
331 911 933	**INTERFACE IS 50 PR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	844.16 EA

331 911 933

INSIDE INTERFACE FOR 50 PAIR PROTECTED NETWORK INTERFACE FOR INSIDE APPLICATION EQUIPPED WITH INDIVIDUAL LOCKABLE COVERS USED AS A DEMARCATION POINT FOR MULTIPLE LINE APPLICATIONS.
RL: 91-06-049SV

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
363 001 983 BTOS	**INTERFACE IS BLOCK MODULAR 8**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	42.96 EA

363 001 983

INSIDE INTERFACE, 66 QUICK CONNECT BLOCK WITH 8 MODULAR JACKS (RJ11), 6 POSITION, 4 CONTACT. PROVIDES INTERFACE DEMARCATION POINT.

Refer to the NEW PRODUCTS INDEX for an alphabetical listing of new products including the new PID numbers, product names, and the page numbers.

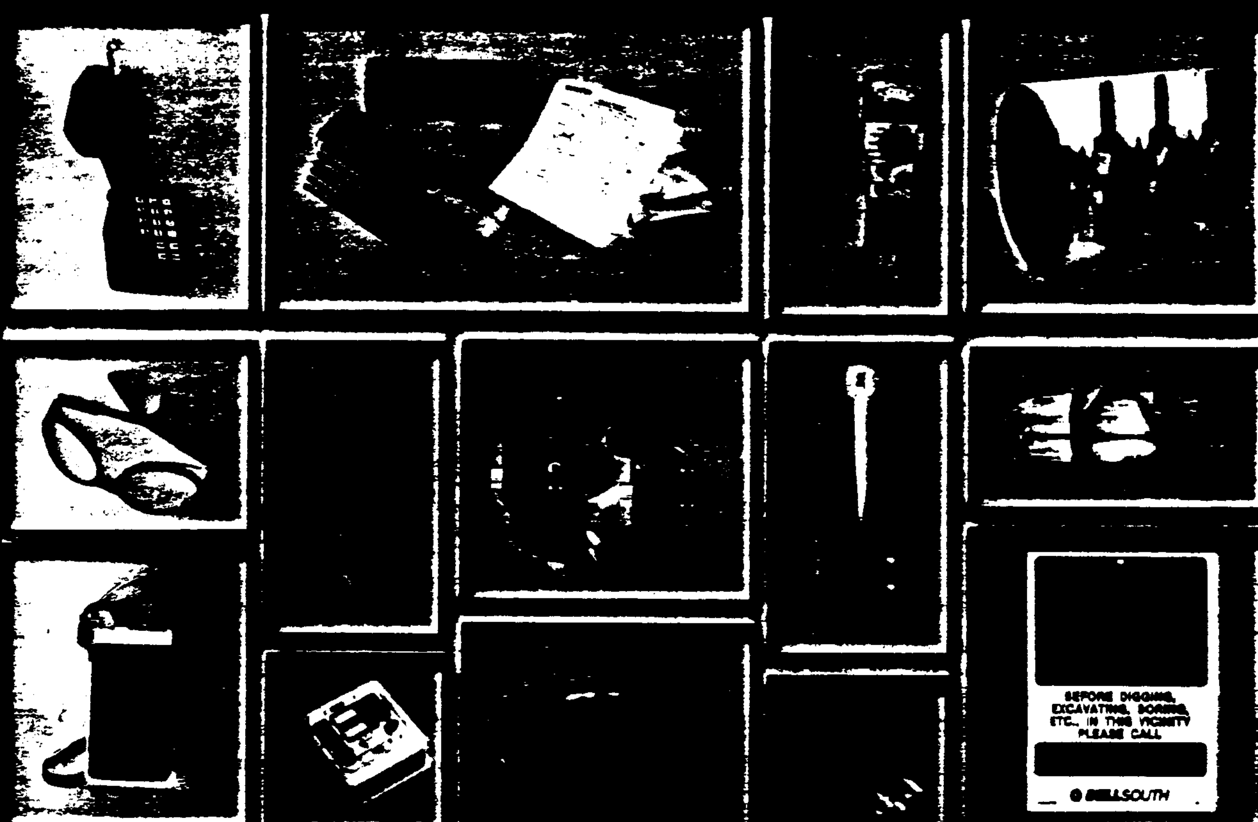
Panel Material Costs

Page	PID	Decription	Price
P399	233-002-732	Interface Block 25 pr	$11.83
P167	402-537-757	50 Bridging Clips $\frac{\$57.50}{100} = \$.58$	50 * $.58 = $29.00
P688	354-000-820	Screw WD HexHD 8 x 3/4 $\frac{\$189.91}{1000} = \$.18991$	2 * $.18991 = $.38
P17	233-002-740	Metal Backboard (400pr capacity)	$3.77
P688	746-[illegible]	Screw WD HexHD 8 x 1 $\frac{\$1.05}{100} = \$.0105$	4 * $.0105 = $.04
P675	100-666-700	Distributing Rings	5 * $1.90 = $9.50
P688	354-000-820	Screw WD HexHD 8 x 3/4 $\frac{\$189.91}{1000} = \$.18991$	10 * $.18991 = $1.90

BELLSOUTH

APPARATUS EQUIPMENT AND TOOLS

Supplying The Needs for Today and the Future



November 1999

item, it will be indicated **underneath the PID** number.

Supply Chain Management is very interested in any feedback you may have on the products in this catalog. Please call Catalog Administration at (404) 420-6499 with any comments or concerns you may have. Each call will be responded to in a timely manner.

UNIT

The Price/Unit represents the price of an item per unit of issue. The unit of issue indicates the unit of measure used in ordering a product.

The letters C or M listed next to a price means that the price quoted is for 100 or 1000 units of issue, respectively.

For example, a Price/Unit listed as $108.54C ea. indicates the price listed is $108.54 per each 100 units or $1.0854 for each unit.

For a listing of all of the unit abbreviations, see Exhibit H following these Instructions.

USAGE DESCRIPTIONS

Usage descriptions may describe the product, its measurements, primary usage, colors, and/or departments most likely to use it.

OSPCM is the acronym for Outside Plant Construction Management. The short description can be up to 15 characters long and will follow the words **MACS MATL DESC** located on the PIDS-1P screen.

For Forms, the first line of the usage description is the actual Form Title.

4 ORDERING PRODUCTS AND MATERIAL

GENERAL INFORMATION

There are three ways to order products. They are each discussed in detail later in the Ordering Methods section.

[1] **On-line via OrderMaster**
[2] **BellSouth Touchtone Ordering System**
[3] **Completing Form RF-2915**

A REGIS Authority/BTOS Number (RAN) is required for all three methods. Details for obtaining a RAN are discussed later in this section. A terminal and log-on access is also required for accessing OrderMaster.

Almost all products with a PID number can be ordered via Touchtone or OrderMaster, with some exceptions. Exceptions must be ordered via RF-2915 (Exhibit B). You also can order non-PIDed products on OrderMaster. Exceptions are products that:

- Require special approval such as computer equipment, furniture, etc.
- Have Pattern Account 98; however, items with PA 98 CAN be ordered through OrderMaster with the use of an FC/FRC, business reason, AND AN MU OF 20.

Stationery and business cards: Use Form RF-7770-LP for standard requests and use RF-7770-LM for non-standard requests.

Forms: Use Form RF-3724 (Exhibit J) to order BellSouth and vendor documentation i.e., BSPs, IPs, TRs and RLs).

Computer Equipment: Computer hardware and software products must be approved by your Internal Provisioning Center (IPC), Desktop Services Division, at 803-733-7007.

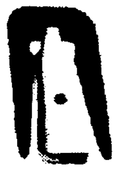
HEADSETS: BellSouth uses Headsets from basically two manufacturers, GN Netcom and Plantronics. Both of these manufacturers provide dedicated product representatives to BellSouth. These product representatives are highly visible throughout BellSouth and provide a high level of product support. They refer their clients to the Headset website that is maintained by the Product Selection staff. The Headset website is kept current; as new items are added or changed, the

)	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

:01 067 CLIP BRANCH XAGA SM

:TOS GTES STOCK S

NON-STOCK	09	1	1	2	2.71	EA



222 001 067 222 001 075 222 001 083

KIT COMPONENT USED TO SEAL BRANCH CABLES ON A SIZE XAGA CLOSURES OR XAGA PRETERM CLOSURES. SMALL.
RL: 85-02-018SV BSP633-500-900SV

001 075 CLIP BRANCH XAGA MED

BTOS GTES STOCK S

NON-STOCK	09	1	1	2	5.32	EA

KIT COMPONENT USED TO SEAL BRANCH CABLES ON B SIZE XAGA CLOSURE INSTALLATIONS. MEDIUM.
RL: 85-02-018SV BSP633-500-900SV

001 083 CLIP BRANCH XAGA LG

BTOS GTES STOCK S

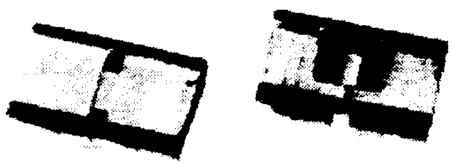
NON-STOCK	09	1	1	2	10.17	EA

KIT COMPONENT USED TO SEAL BRANCH CABLES ON C AND D SIZE XAGA CLOSURE INSTALLATIONS. LARGE.
RL: 85-02-018SV BSP633-500-900SV

: 537 757 CLIP BRIDGING C

BTOS GTES STOCK S

NON-STOCK	09	1	1	2	57.50 C	PK



402 537 757

USED TO INTERCONNECT TERMINAL OF 66B-3-50 AND 66ML-50 BLOCK TERMINALS. REPLACES: CLIP, BRIDGING, B.
BSP 461-604-100

1 960 822 CLIP BRIDGING HUBSNAP BLOCK

GTES STOCK N

NON-STOCK	62	1	1	11	1.86	CT

PROVIDES BRIDIGING CAPABILITY TO A SINGLE PAIR ON THE HUBSNAP IDC TERMINAL BLOCK. THESE BLOCKS ARE FOUND IN THE HUB IDC TERM XCONN CABINETS.
RL: 96-09-014BT

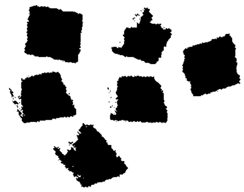
Use the Cross Reference of Common Names and Catalog names, (Exhibit C) for the common name/slang, and the associated PID numbers.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

401 447 644 CLIP CABLE ADH 1/4"X 1 1/2

GTES STOCK N

NON-STOCK	09	100	100	31	138.13 M	EA



401 447 644 401 447 628 401 447 636 900 193 707
401 447 651

THE B ADHESIVE CLIP IS USED TO FASTEN STATION WIRING WHERE IT IS UNDESIRABLE TO MAR SURFACES. HIGH TEMPERATURE MAY DETERIORATE B ADHESIVE CLIPS DURING STORAGE; THEREFORE, THOSE NOT USED BEFORE DATE ON CONTAINER SHOULD BE TESTED FOR TACKINESS.

401 447 628 CLIP CABLE ADH 1/8" X1"

GTES STOCK S

NON-STOCK	09	1	1	2	126.61 M	EA

THE B ADHESIVE CLIP IS USED TO FASTEN STATION WIRING WHERE IT IS UNDESIRABLE TO MAR SURFACES. HIGH TEMPERATURE MAY DETERIORATE B ADHESIVE CLIPS DURING STORAGE; THEREFORE, THOSE NOT USED BEFORE DATE ON CONTAINER SHOULD BE TESTED FOR TACKINESS.

401 447 636 CLIP CABLE ADH 3/8" X 1 1/4"

GTES STOCK S

NON-STOCK	09	100	100	2	126.61 M	EA

THE B ADHESIVE CLIP IS USED TO FASTEN STATION WIRING WHERE IT IS UNDESIRABLE TO MAR SURFACES. HIGH TEMPERATURE MAY DETERIORATE B ADHESIVE CLIPS DURING STORAGE; THEREFORE, THOSE NOT USED BEFORE DATE ON CONTAINER SHOULD BE TESTED FOR TACKINESS.

900 193 707 CLIP CABLE ADH 3/8" X 2"

GTES STOCK S

NON-STOCK	09	1	1	2	20.70 C	EA

THE B ADHESIVE CLIP IS USED TO FASTEN STATION WIRING WHERE IT IS UNDESIRABLE TO MAR SURFACES. HIGH TEMPERATURE MAY DETERIORATE B ADHESIVE CLIPS DURING STORAGE; THEREFORE, THOSE NOT USED BEFORE DATE ON CONTAINER SHOULD BE TESTED FOR TACKINESS.

401 447 651 CLIP CABLE ADH 5/16" X 3/4"

GTES STOCK N

NON-STOCK	09	100	100	23	158.88 M	EA

THE B ADHESIVE CLIP IS USED TO FASTEN STATION WIRING WHERE IT IS UNDESIRABLE TO MAR SURFACES. HIGH TEMPERATURE MAY DETERIORATE B ADHESIVE CLIPS DURING STORAGE; THEREFORE, THOSE NOT USED BEFORE DATE ON CONTAINER SHOULD BE TESTED FOR TACKINESS.

401 004 635 CLIP CONN 284-1 AMPHENOL

GTES STOCK S

NON-STOCK	62	1	1	2	2.39	EA

TAC TEST APPARATUS CONNECTOR PROVIDES ACCESS TO QUICK-CLIP CONTACTS FOR TESTING. TAC IS PUSHED ONTO DESIRED CONTACT PAIR (ON "66 TYPE" CONNECTING BLOCK); TEST EQUIPMENT OR HEADPHONE IS ATTACHED TO TAC'S EXPOSED CONTACTS. DIMENSIONS: 1.375" LONG X 1.437" WIDE X .365" HIGH. BASE DIMENSIONS AT CONTACT: .437" X .365" WITH .098" GAP BETWEEN CONTACTS.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
354 000 820	**SCREW WD HEXHD 8X 3/4**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	139.91 M PK

354 000 820 746 891 811 354 000 838 362 002 248
362 002 255 362 002 263

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
746 891 811	**SCREW WD HEXHD 8X1**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	1.05 BX

WOOD, HEXHEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
354 000 838	**SCREW WD HEXHD 8X1 1/4**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	256.45 M PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
362 002 248	**SCREW WD HEXHD 8X1 1/2**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	17.25 C PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION SUCH AS INSTALLING MISCELLANEOUS HARDWARE DURING CUSTOMER SERVICE INSTALLATION AND REPAIR. 8 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
362 002 255	**SCREW WD HEXHD 8X2**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	48.30 C PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION SUCH AS INSTALLING MISCELLANEOUS HARDWARE DURING CUSTOMER SERVICE INSTALLATION AND REPAIR. 20 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
362 002 263	**SCREW WD HEXHD 14X1 1/2**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	749.08 M PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION SUCH AS INSTALLING DROP WIRE HOOKS ON CUSTOMER DWELLING. 20 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 099	**SCREW WD RDHD 8X 1/2**					
	GTES STOCK N					
	NON-STOCK	09	1	1	18	.17 PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

400 264 099 400 264 115 400 264 123 400 264 149
400 264 131 400 264 180 400 264 206 400 264 248
400 264 263 400 264 297 400 264 321 400 264 354
400 264 362 400 264 412 400 264 438 400 264 479
400 264 453 400 264 511 400 264 529 400 264 552
400 264 594 400 264 610 400 264 636

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 115	**SCREW WD RDHD 8X 3/4**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	147.71 M

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GEN OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 123	**SCREW WD RDHD 8X1**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	17.02 C

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GEN OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 149	**SCREW WD RDHD 8X1 1/2**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	13.80 C

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GEN OUTSIDE PLANT CONSTRUCTION. 12 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 131	**SCREW WD RDHD 8X1 1/4**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	20.24 C

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GEN OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 180	**SCREW WD RDHD 8X2**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	12.45 C

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GEN OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 206	**SCREW WD RDHD 8X2 1/2**					
	GTES STOCK N					
	NON-STOCK	09	1	1	23	157.25

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 248	**SCREW WD RDHD 10X 3/4**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	7.82 C

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 263	**SCREW WD RDHD 10X1**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	89.88

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 264 297	**SCREW WD RDHD 10X1 1/2**					
	GTES STOCK N					
	NON-STOCK	09	1	1	36	106.25

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

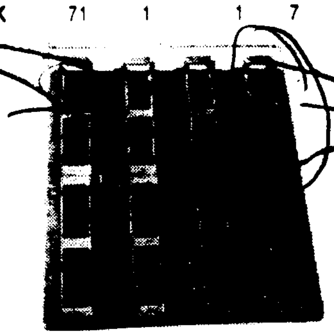
NEED HELP? Refer to the HELP SCREEN located at the front of your catalog.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 412 989	**BACKBOARD MTG METAL 183B1 BL**					
	NON-STOCK	71	1	1	7	13.06 EA

101 412 989

MOUNTING BACKBOARD USED IN TELEPHONE EQUIPMENT CLOSET. IT FUNCTIONS AS A BUILDING BLOCK (MODULE) FOR TERMINAL AND CROSS CONNECTION OF CABLES IN THE TERMINAL ROOMS AND EQUIPMENT CLOSETS. 20" X 17". BLUE.
BSP 631-460-201

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 564 631	**BACKBOARD MTG METAL 183B2 GN**					
	NON-STOCK	71	1	1	7	13.06 EA

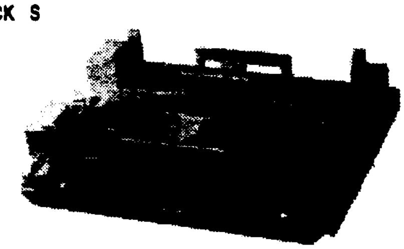


25 pr

101 564 631

METAL MOUNTING BACKBOARD USED FOR BUILDING BLOCKS (MODULES) FOR TERMINATION AND CROSS CONNECTION OF CABLES IN TERMINAL ROOMS AND TELEPHONE EQUIPMENT CLOSETS. 20" X 17". GREEN.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
103 222 790	**BACKBOARD MTG METAL 183C1 BL**					
BTOS	NON-STOCK	71	1	1	2	6.70 EA
	GTES STOCK S					



103 222 790

MOUNTING BACKBOARD CONSISTS OF A METAL PANEL DESIGNED TO ACCOMMODATE TWO NO. 89B BRACKETS FOR MOUNTING TWO NO. 66 M1-50 WIRING BLOCKS. BLUE. 10" X 8.5".

For generic pictures of commonly used screws, nuts, and bolts, please see the last six white pages located at the end of the PID numbers (product listings).

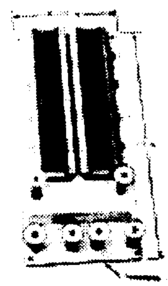
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
233 002 740	**BACKBOARD MTG METAL 183C6 OR**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	3.77 EA

200

233 002 740

METAL BACKBOARD FOR MOUNTING NETWORK INTERFACE DEMARCATION BLOCK OR UP TO 400 PAIRS OF OUTSIDE PLANT ENTRANCE OR RISER CABLE WHEN 66M1-50 CONNECTING BLOCKS ARE PLACED ON BRACKETS. USED IN EQUIPMENT ROOMS OR SATELLITE CLOSETS. ORANGE. 8.5" X 10". THE PID NUMBER FOR THE INTERFACE (RJ21X) IS 233002724 WHICH IS REFERENCED AS INTERFACE BLOCK 25 PAIR.
IT IS SOMETIMES REFERRED TO AS AN "RJ21X."

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 564 649	**BACKBOARD MTG METAL 184A1 RD**					
	GTES STOCK N					
	NON-STOCK	71	1	1	15	50.47 EA



101 564 649

CLOSET WIRING ARRANGEMENT, PERMITS CONNECTIONS OF KEY EQUIPMENT PAIRS TO THE NO. 66B4-25 CONNECTING BLOCK, DISTRIBUTING RINGS ARRANGED TO CROSS CONNECT BACKBOARD TO NO.183 BACKBOARDS. 20" X 8.5". MOUNTING METAL, RED.
BSP 631-420-201

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 412 997	**BACKBOARD MTG METAL 184B1 RD**					
	NON-STOCK	61	1	1	7	55.56 EA

FULL MODULE 17 X 20 INCHES EQUIPPED WITH FOUR 66B4-25 CONNECTING BLOCKS AND TWELVE DISTRIBUTING RINGS. USED TO TERMINATE BASIC KEY TELEPHONE SERVICES. MOUNTING METAL, RED.
BSP 463-130-100 BSP 518-010-101

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
101 937 936	**BACKBOARD MTG METAL 184B2 RD**					
	NON-STOCK	61	1	1	7	55.56 EA

USED AT CENTRALIZED KEY INSTALLATIONS, 13.4" X 20". EQUIPPED WITH FOUR 66B4 CONNECTING BLOCKS. MOUNTING METAL, RED.
BSP 463-130-100 BSP 518-010-101

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

RING

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 260 378	**RING BRIDLE C 7/8**					
BTOS	GTES STOCK S					
	NON-STOCK	09	25	25	2	81.03 M EA

400 260 378 400 260 386 400 260 394

USED TO SUPPORT WIRE AND CABLE ON POLES IN POLE LINE CONSTRUCTION.
CA07912

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 260 386	**RING BRIDLE C 1 1/4**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	112.89 M EA

USED TO SUPPORT WIRE AND CABLE ON POLES IN POLE LINE CONSTRUCTION.
CA07912

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 260 394	**RING BRIDLE C 1 5/8**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	165.01 M EA

USED TO SUPPORT WIRE AND CABLE ON POLES IN POLE LINE CONSTRUCTION.
CA07912

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 497 186	**RING BRIDLE M**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	132.25 M EA

USED WHEN SUPPORTING INSULATED WIRES AND ROUTING CABLE.
BSP 080-720-139

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 666 684	**RING DISTRIBUTING 12C**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	4.90 EA

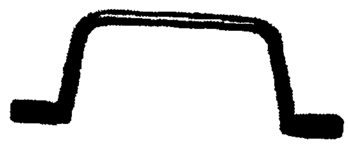
USED FOR INSTALLING UP TO 100 PAIRS OF TEXTILE INSULATED CONDUCTORS FROM LEAD COVERED CABLES ON MAIN DISTRIBUTING FRAME.
RL: 89-02-042SV

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 666 700	**RING DISTRIBUTING 13B**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	1.90 EA

100 666 700

RING IS THE SAME AS THE 13A EXCEPT THE OVERALL WIDTH IS 6 1/8 IN. SPACE FOR 3 1/8 IN. X 3 5/8 IN.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 666 718	**RING DISTRIBUTING 13C**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	1.90 EA



100 666 718

A U-SHAPED RING OF BLACK FINISHED ROUND STEEL. HAS 6-1/8 INCH SPACE FOR WIRE 2-7/8 IN. X 5-5/8 IN.

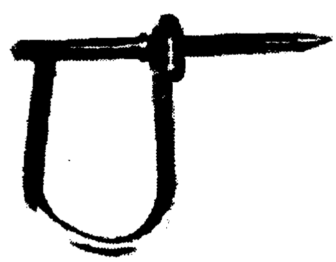
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 666 767	**RING DISTRIBUTING 17B**					
	GTES STOCK S					
	NON-STOCK	09	11	1	2	2.47 EA

DESIGNED TO ACCOMMODATE 200 PAIRS OF INSULATED CONDUCTORS. USED FOR MOUNTING ON BACKBOARDS INSTALLED IN H TYPE CABLE TERMINALS SECTIONS IN READY ACCESS BUILDING TERMINAL APPLICATIONS.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
100 666 775	**RING DISTRIBUTING 17C**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	3.37 EA

DESIGNED TO ACCOMMODATE 400 PAIRS OF INSULATED CONDUCTORS. USED IN BUILDING TERMINALS FOR PIC. CABLE WHERE READY ACCESS PRINCIPLE IS USED. ALSO USED FOR MOUNTING ON BACKBOARDS IN H-TYPE CABLE TERMINAL SECTIONS.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 260 584	**RING DRIVE 1/2"**					
BTOS	GTES STOCK S					
	NON-STOCK	09	50	50	2	31.05 M EA



400 260 584 400 260 592 401 024 609 400 260 626

GALVANIZED STEEL DRIVE RINGS USED IN ATTACHING WIRE TO BUILDING WALLS.
BSP 080-720-142 CA06835

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 260 592	**RING DRIVE 5/8"**					
BTOS	GTES STOCK S					
	NON-STOCK	09	25	25	2	35.65 M EA

GALVANIZED STEEL DRIVE RINGS USED IN ATTACHING WIRE TO BUILDING WALLS.
CA06835

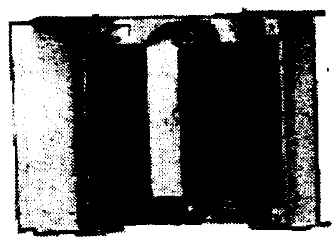
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
401 024 609	**RING DRIVE 7/8"**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	63.83 M EA

GALVANIZED STEEL DRIVE RINGS USED IN ATTACHING WIRE TO BUILDING WALLS.
CA06835

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
33 002 732	**INTERFACE BLOCK 25PR W/O BBRD**					
BTOS	**GTES STOCK S**					
	NON-STOCK	09	1	1	2	11.83 EA

233 002 732
66 BLOCK, WITH 700 TYPE JACK, 25 PAIR, WITHOUT A BACKBOARD. PROVIDES NETWORK INTERFACE DEMARCATION. TO CHANGE THE TELEPHONE NUMBERS ON THE INSIDE COVER, USE FORM RF412, PID#: 771940905. TO PLACE A WARNING ON THE OUTSIDE COVER, USE FORM RF412A, PID#: 611941543.
THIS ITEM IS SOMETIMES REFERRED TO AS A "RJ21X."

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
34 911 930	**INTERFACE IS 25 PR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	388.61 EA



334 911 930
INSIDE INTERFACE FOR 25 PAIR PROTECTED NETWORK INTERFACE FOR INSIDE APPLICATION EQUIPPED WITH INDIVIDUAL LOCKABLE COVERS USED AS A DEMARCATION POINT FOR MULTIPLE LINE APPLICATIONS.
RL: 91-06-049SV

If you need to know the status of your order, use OrderMaster, or call the GTES Customer Resource Center (CRC) at 1-800-414-8095. Hours of operation are 7:30 A.M. - 6:00 p.m. Monday thru Friday.

INTERFACE NETWORK

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
331 911 933	**INTERFACE IS 50 PR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	844.16 EA

331 911 933
INSIDE INTERFACE FOR 50 PAIR PROTECTED NETWORK INTERFACE FOR INSIDE APPLICATION EQUIPPED WITH INDIVIDUAL LOCKABLE COVERS USED AS A DEMARCATION POINT FOR MULTIPLE LINE APPLICATIONS.
RL: 91-06-049SV

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
363 001 983	**INTERFACE IS BLOCK MODULAR 8**					
BTOS	**GTES STOCK S**					
	NON-STOCK	09	1	1	2	42.96 EA

363 001 983
INSIDE INTERFACE, 66 QUICK CONNECT BLOCK WITH 8 MODULAR JACKS (RJ11), 6 POSITION, 4 CONTACT. PROVIDES INTERFACE DEMARCATION POINT.

Refer to the NEW PRODUCTS INDEX for an alphabetical listing of new products including the new PID numbers, product names, and the page numbers.

NID Prices

Misc Equipment

Page #	PID	Description	Price
P891	461-961-641	4 pr inside station wire @ $\frac{\$30.49}{600'} = \$.0508$	$1.5' \times \$.0508 = \$.0762$
P152	400-120-895	C clamps @ $\frac{\$67.85}{100} = \$.6785$	$2 \times \$.6785 = \$1.3570$
P11	400-003-315	Anchors @ $\frac{\$5.75}{100} = \$.0575$	$2 \times \$.0575 = \$.1150$
P688	354-000-838	Screws @ $\frac{\$256.45}{1000} = \$.2565$	$2 \times \$.2565 = \$.5130$
		Total	$2.0612

NID Prices

1-2 Line NID

Page #	PID	Description	Price
P404	399-912-815	Total NID	12.67
P657	325-911-923	(Protector) @ $\frac{16.39}{5}$ = \$3.28	2X3.28= 6.56
P402	909-912-495	Bridge @ \$4.55	2X4.55= 9.10
		Housing \$12.67 - \$3.28 - \$4.55 = \$4.84	1x4.84 = 4.84

Cost of Max Loaded NID \$20.50

NIL Price

1-6 Line NID

Page #	PID	Description	Price
P404	397-912-817	Total Nid	#16.21
P657	325-911-923	Protector @ $\frac{16.39}{5}$ = $3.28	6X3.28 = 19.68
P402	909-912-495	Bridge @ $4.55	6X4.55 = 27.30
		Housing 1X8.38	8.38
		#16.21 - #3.28 - #4.55 = #8.38	
		Cost of MaxLoaded NID	# 55.36

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

251 005 179 **ANCHOR MASONRY N/DR 1/4X1**
GTES STOCK N
NON-STOCK 09 1 1 18 5.91 BX

251 005 179 251 005 187 251 003 325
THIS NAIL DRIVE ANCHOR IS COMPOSED OF A NAIL EMBEDDED IN THE TOP OF THE ANCHOR AND FASTENER BODY. A LIGHT TO MEDIUM DUTY ANCHOR USED IN SOLID CONCRETE AND HOLLOW MASONRY SUCH AS BRICKS AND BLOCKS. ALSO USED FOR CABLE CLAMPS, STRAPS, AND MANHOLES. 100 PCS PER BOX.
BSP081-745-901SB

251 005 187 **ANCHOR MASONRY N/DR 1/4 X1 1/2**
GTES STOCK N
NON-STOCK 09 1 1 18 7.66 BX

THIS NAIL DRIVE ANCHOR IS COMPOSED OF A NAIL EMBEDDED IN THE TOP OF THE ANCHOR AND FASTENER BODY. A LIGHT TO MEDIUM DUTY ANCHOR USED IN SOLID CONCRETE AND HOLLOW MASONRY SUCH AS BRICKS AND BLOCKS. ALSO USED FOR CABLE CLAMPS, STRAPS, AND MANHOLES. 100 PCS PER BOX.
BSP081-745-901SB

251 003 325 **ANCHOR MASONRY N/DR 1/4 X1 1/4**
GTES STOCK N
NON-STOCK 09 1 1 22 8.23 BX

THIS NAIL DRIVE ANCHOR IS COMPOSED OF A NAIL EMBEDDED IN THE TOP OF THE ANCHOR AND FASTENER BODY. A LIGHT TO MEDIUM DUTY ANCHOR USED IN SOLID CONCRETE AND HOLLOW MASONRY SUCH AS BRICKS AND BLOCKS. ALSO USED FOR CABLE CLAMPS, STRAPS, AND MANHOLES. 100 PCS PER BOX.
BSP081-745-901SB

400 003 257 **ANCHOR PLSTC B 1/ 4" X 1 1/2"**
GTES STOCK N
NON-STOCK 09 1 1 15 658.75 M PK

THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND A THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY.
15 PER PACK.

401 902 994 **ANCHOR PLSTC B 1/4" X 2"**
GTES STOCK N
NON-STOCK 09 1 1 23 804.32 M PK

THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY.
15 PER PACK.
CA08037

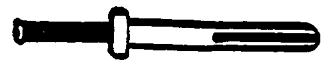
ANCHOR

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

400 003 232 **ANCHOR PLSTC B 3/16" X 1"**
GTES STOCK S
NON-STOCK 09 1 1 2 495.87 M PK

THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND A THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY. 15 PER PACK.

400 003 299 **ANCHOR PLSTC C 1/ 4" X 1"**
GTES STOCK S
NON-STOCK 09 1 1 2 516.97 M PK



Type C

400 003 299 400 003 265 400 003 273 400 003 281
THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND A THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY. 15 PER PACK.

400 003 265 **ANCHOR PLSTC C 3/16" X 3/4"**
GTES STOCK N
NON-STOCK 09 1 1 13 446.85 M PK

THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND A THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY. 15 PER PACK.

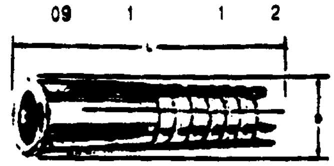
400 003 273 **ANCHOR PLSTC C 3/16" X 1"**
GTES STOCK S
NON-STOCK 09 1 1 2 495.87 M PK

THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND A THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY. 15 PER PACK.

400 003 281 **ANCHOR PLSTC C 3/16" X 1 1/2"**
GTES STOCK S
NON-STOCK 09 1 1 2 .69 PK

THE B AND C PLASTIC ANCHORS ARE USED FOR MAKING ATTACHMENTS TO MASONRY. THEY CONSIST OF A MOLDED WHITE NYLON BODY AND A ZINC-COATED STEEL NAIL WHICH HAS A SLOTTED HEAD AND A THREADED SHANK TO AID IN REMOVAL. THE B ANCHOR HAS A FLAT-HEAD BODY AND THE C ANCHOR HAS A ROUND-HEAD BODY.
15 PER PACK.

400 003 315 BTOS **ANCHOR PLSTC D 10**
GTES STOCK S
NON-STOCK 09 1 1 2 5.75 C PK



400 003 315 400 003 323 400 003 331
THE D PLASTIC ANCHORS EQUIPPED WITH WOOD SCREWS ARE INTENDED FOR MAKING INDOOR OR OUTDOOR ATTACHMENTS TO MASONRY SURFACES. THEY ARE FURNISHED IN THREE SIZES, 10, 12 AND 16. 8 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 488	**CLAMP CABLE ENAMEL 1**					
	GTES STOCK N					
	NON-STOCK	09	70	70	17	21.25 C PK

402 724 488   402 724 496   402 724 504   402 724 512
402 724 520   402 724 538   402 724 546

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. 25 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 496	**CLAMP CABLE ENAMEL 3**					
	GTES STOCK N					
	NON-STOCK	09	1	1	28	46.75 C PK

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. 50 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 504	**CLAMP CABLE ENAMEL 4**					
	GTES STOCK N					
	NON-STOCK	09	1	1	23	616.25 M PK

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. 50 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 512	**CLAMP CABLE ENAMEL 6**					
	GTES STOCK N					
	NON-STOCK	09	20	20	17	754.38 M PK

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. 50 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 520	**CLAMP CABLE ENAMEL 8**					
	GTES STOCK N					
	NON-STOCK	09	1	1	28	1.25 PK

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. REPLACES: CLAMP CABLE, WIRE B8. 50 PER PACK.

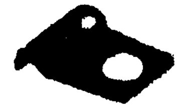
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 538	**CLAMP CABLE ENAMEL 10**					
	GTES STOCK N					
	NON-STOCK	09	1	1	28	.85 PK

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. 25 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 724 546	**CLAMP CABLE ENAMEL 13**					
	GTES STOCK N					
	NON-STOCK	09	16	16	17	93.50 C PK

GALVANIZED STEEL CLAMP USED FOR SUPPORTING CABLES. LIGHT OLIVE GRAY, ENAMEL COATED CLAMP FOR INSIDE USE IN ATTACHING CABLE OR WIRE TO BUILDINGS. REPLACES: CLAMP CABLE, WIRE B12. PACK OF 25.

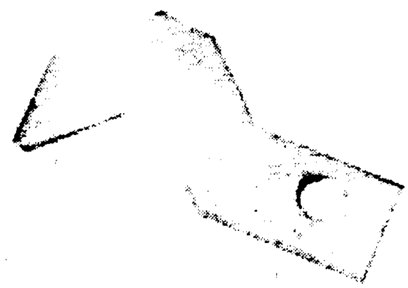
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UN
402 855 183	**CLAMP CABLE GALV SZ 1**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	11.50 C F



402 855 183

ZINC-COATED STEEL CLAMP USED FOR ATTACHING CABLE OR WIRE TO BUILDINGS. GALVANIZED, SIZE 1. 10 PER PACK.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UN
060 982 402	**CLAMP CABLE GALV SZ 2**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	67.85 C P



060 982 402

ZINC-COATED STEEL CLAMP USED FOR ATTACHING CABLE OR WIRE TO BUILDINGS. GALVANIZED, SIZE 2. 50 PER PACK.

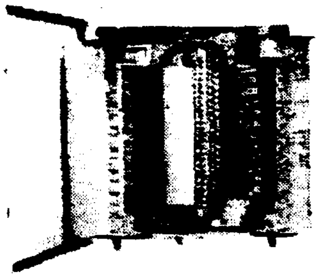
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UN
400 120 895	**CLAMP CABLE GALV SZ 3**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	67.85 C P

400 120 895

ZINC-COATED STEEL CLAMP USED FOR ATTACHING CABLE OR WIRE TO BUILDINGS. GALVANIZED, SIZE 3. 50 PER PACK.

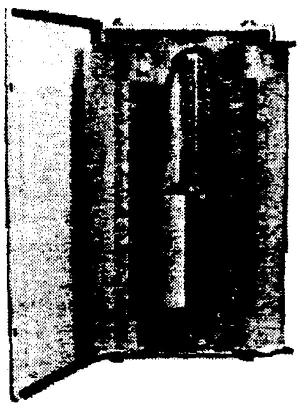
If you have trouble finding an item in the Catalog, use the Alphabetical Index which lists every item and its page number, or use the Numerical Index which lists every PID number and its page number.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
333 911 931	**INTERFACE OS 25 PR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	494.86 EA



333 911 931
OUTSIDE INTERFACE FOR 25 PAIR PROTECTED NETWORK INTERFACE FOR INSIDE APPLICATION EQUIPPED WITH INDIVIDUAL LOCKABLE COVERS. USED AS A DEMARCATION POINT FOR MULTIPLE LINE APPLICATIONS.
RL: 91-06-049SV

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
332 911 932	**INTERFACE OS 50 PR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	976.97 EA



332 911 932
OUTSIDE INTERFACE FOR 50 PAIR PROTECTED NETWORK INTERFACE FOR INSIDE APPLICATION EQUIPPED WITH INDIVIDUAL LOCKABLE COVERS. USED AS A DEMARCATION POINT FOR MULTIPLE LINE APPLICATIONS.
RL: 91-06-049SV

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
909 912 495 BTOS	**INTERFACE OS ADD LINE 2AG/76AG**					
	GTES STOCK S					
	NON-STOCK	09	6	1	2	4.55 EA

909 912 495
SNAP IN BLOCK CONTAINS FOUR SCREW TERMINATION POINTS FOR CUSTOMER INSIDE WIRE, CORD PLUG, AND JACK. USED TO ADD LINES TO INTERFACE OS 1-6L 76A0 AND INTERFACE OS 1-2L 2A0.
RL: 92-03-026BT

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PR
289 940 421	**INTERFACE OS BRACKET MARINE/RV**					
	GTES STOCK N					
	NON-STOCK	09	10	10	22	8

289 940 421
OUTSIDE INTERFACE BRACKET USED AT MARINA AND RV LOCATIONS. CONTAINS: (1) A SINGLE BRACKET USED TO ATTACH A WEATHERPROOF OUTLET BOX PID#: 4012463 AND A 2-PAIR ONI PID#: 399912815 ONTO A PROTECTIVE MOUNTING POST OR OTHER SURFACES. (2) A 3" PIECE OF TUBING USED TO JOIN THE OUTLET BOX AND ONI TOGE AND PROVIDE A RACEWAY FOR STATION WIRE BETWEEN TWO.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PR
400 912 812 BTOS	**INTERFACE OS C GROUND STRAP**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	34.

OUTSIDE INTERFACE REPLACEMENT C GROUND STRAP WITH INTERFACE OS 1-6L 76A0, PID#: 397912817.
RL: 92-03-026BT

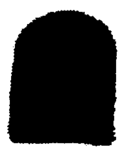
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PR
398 912 816 BTOS	**INTERFACE OS COCOT**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	4.

398 912 816
INCLUDES COIN LOCK ASSEMBLY FOR CUSTOMER OWNE OPERATED TELEPHONE (COCOT) AND A 4 LINE ADD-A-LIN KIT WITH 4 WIRE JACK AND PLUG USED ON INTERFACE OS 1-2L2A0 AND INTERFACE OS 1-6L 76A0.
RL: 92-03-026BT

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PR
120 922 661	**INTERFACE OS GROMMET MLP RP521-**					
	GTES STOCK N					
	NON-STOCK	09	10	10	22	106.2

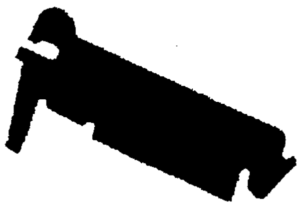
AN OUTSIDE INTERFACE REPLACEMENT TELCO ENTRANC GROMMET FOR INTERFACE OS 25 AND INTERFACE OS 50.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PR
402 912 810	**INTERFACE OS GROMMET 2AG**					
	GTES STOCK N					
	NON-STOCK	09	1	1	22	74.3



402 912 810
AN OUTSIDE INTERFACE REPLACEMENT TELCO ENTRANCE GROMMET FOR INTERFACE OS 1-2L 2A0.
RL: 92-03-026BT

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
396 912 818	**INTERFACE OS LOCK DOOR**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	23 EA

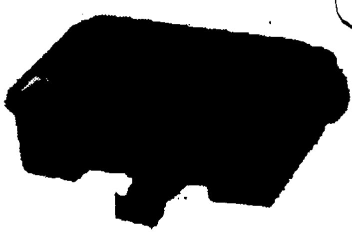


396 912 818
OUTSIDE INTERFACE LOCKABLE COVER FOR INTERFACE OS ADD LINE 76A0, AND 2A0. DOOR ALLOWS CUSTOMER TO PLACE LOCK ON ADD LINE 76A0, PID#: 397912817.
RL: 92-03-026BT

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
948 931 324	**INTERFACE OS RETRO 1-2L 2BGU1A**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	8.07 EA

948 931 324
INTERFACE OS (OUTSIDE) 1-2 LINE USED FOR RETROFIT INSTALLATIONS ON THE AT&T B SERVICE CLOSURE AND THE 400 NIU BASE. EQUIPPED WITH ONE ENTRANCE BRIDGE. FOR NEW 1-2 LINE INSTALLATIONS ORDER PID#: 399912815.

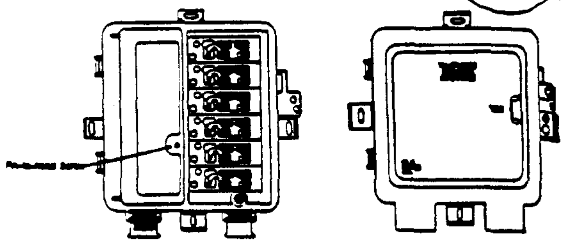
PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
399 912 815	**INTERFACE OS 1-2L 2AG-H1A**					
BTOS	GTES STOCK S					
	NON-STOCK	09	2	1	2	12.87 EA



399 912 815
INTERFACE OS (OUTSIDE) 1-2 LINE. EQUIPPED WITH ONE 350 ADAPTER, ONE ENTRANCE BRIDGE, ONE STATION PROTECTOR AND BASE. TO ADD 2ND LINE, ORDER INTERFACE OS ADD LINE 2A0/76A0, PID#: 909912495. FOR RETROFIT APPLICATIONS, ORDER PID#: 948931324. REPLACES PID#S: 354000747, 354000754, 247009491, 247009517, 332002393, 247010374, AND 491902961. THIS ITEM IS SOMETIMES REFERRED TO AS A "CAC UNIT."
RL: 92-03-026BT

If you need to know the status of your order, use OrderMaster, or call the GTES Customer Resource Center (CRC) at 1-800-414-8095. Hours of operation are 7:30 A.M. - 6:00 p.m. Monday thru Friday.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
397 912 817	**INTERFACE OS 1-6L 76AG-H1A1**					
BTOS	GTES STOCK S					
	NON-STOCK	09	2	1	2	16.21 EA



397 912 817
INTERFACE OS (OUTSIDE) 1-6 LINE. EQUIPPED WITH THREE 350 ADAPTERS, TWO C GROUND STRAPS, ONE ENTRANCE BRIDGE AND ONE STATION PROTECTOR. TO ADD EACH ADDITIONAL LINE UP TO SIX, ORDER PID#: 909912495. REPLACES PID#S: 342002235, 354000762, 354000770, 354000788, AND 332002187.
RL: 92-03-026BT

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
706 913 035	**INTERFACE OS 3L PREASM 150'BSW**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	66.59 EA

706 913 035
1-6 LINE 76A0-E1A1 PREASSEMBLED OUTSIDE INTERFACE. EQUIPPED WITH 3 1-PAIR MODULAR STATION PROTECTORS, 150 FT. OF 5 PAIR BURIED SERVICE WIRE, 3 ADD-A-LINE KITS, 12 FT. OF #10 GROUND WIRE, H-1 CONNECTOR, GROUND TAG, MOUNTED ON 36 INCH PROTECTOR MOUNTING POST.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
273 972 935	**INTERFACE OS 3L PREASM 200'BSW**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	69.44 EA

1-6 LINE 76A0-E1A1 PREASSEMBLED OUTSIDE INTERFACE. EQUIPPED WITH 3 1-PAIR MODULAR STATION PROTECTORS 200 FT. OF 5 PAIR BURIED SERVICE WIRE, 3 ADD-A-LINE KITS, 12 FT. OF #10 GROUND WIRE, H-1 CONNECTOR, GROUND TAG, MOUNTED ON 36 INCH PROTECTOR MOUNTING POST.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
332 002 377	**INTERFACE OS 4000 PCB RP-007**					
	GTES STOCK N					
	NON-STOCK	09	100	10	22	531.25 M EA

PRINTED CIRCUIT BOARD CARD SLOT 4000PB. ADJUSTABLE BRACKET FOR INSTALLATION OF ELECTRONIC CIRCUIT MODULES. USED WITH CAC400IU-1A AND CAC 400IU-2A.

Refer to the NEW PRODUCTS INDEX for an alphabetical listing of new products including the new PID numbers, product names, and the page numbers.

NEED HELP? Refer to the HELP Chart located at the front of your catalog.

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
100 828 276	**PROTECTOR SHORT 5A2D**					
	GTES STOCK N					
	NON-STOCK	62	1	1	22	486.57 M EA

CONTINUITY ONLY - NO PROTECTION, SHORT BASE FOR FRONT-FACING CONNECTORS. DO NOT USE WITH C307 AND C309 CONNECTORS.

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
100 828 292	**PROTECTOR SHORT 5A4D**					
	GTES STOCK N					
	NON-STOCK	62	1	1	22	486.57 M EA

USED WITH C.O. CONNECTORS 302, 303, 305, AND 308 5-TYPE - NO PROTECTION, CONTINUITY ONLY; YELLOW PBX BATTERY.

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
102 234 481	**PROTECTOR SHORT 5A9D**					
	GTES STOCK N					
	NON-STOCK	62	1	1	22	1.60 EA

USED WITH C.O. CONNECTORS 302, 303, 305, AND 308 5-TYPE - NO PROTECTION, CONTINUITY ONLY; WHITE REVERSE TIP AND RING.

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
325 911 923 8TOS	**PROTECTOR STA 1PR MODULAR**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	16.39 BX

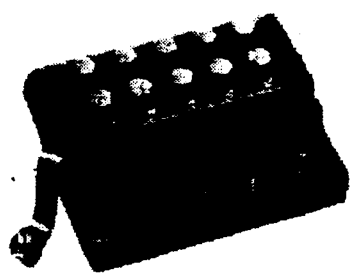
325 911 923

356M2 ONE PAIR STATION PROTECTOR WITHOUT GROUND BRACKET. THREE ELEMENT SEALED GAS TUBE ARRESTER. WORKS WITH A 322 ADAPTER, PID#: 326911922.
PACKAGED 5 PER BOX.
RL: 91-07-016SV

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
634 981 872	**PROTECTOR STA 1PR MOD 356M3**					
	GTES STOCK N					
	NON-STOCK	09	50	50	30	6.11 EA

356M3 ONE PAIR STATION PROTECTOR WITHOUT GROUND BRACKET. INCLUDES A SEALED GAS TUBE ARRESTER, INDUCTORS AND PTCS. USED IN SITUATIONS REQUIRING A HIGHER LEVEL OF STATION PROTECTION.

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
103 213 609	**PROTECTOR STA 5PR**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	54.55 EA



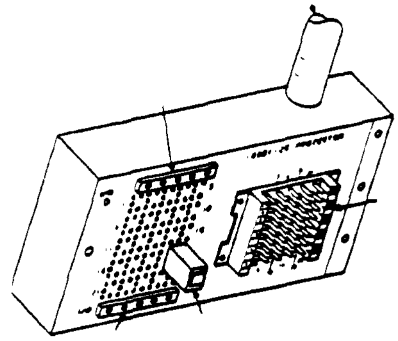
103 213 609

A 5 PAIR GAS TUBE PROTECTOR UNIT FOR USE WHERE THE STATION IS SERVED BY 5 PAIR SERVICE WIRE.
IT MAY BE MOUNTED IN EITHER A, C, OR D CUSTOMER SERVICE CLOSURE. 142E2A IS SAME AS 142E1A.
BSP 460-100-400

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
100 399 922	**PROTECTOR STA 6PR 117B**					
	GTES STOCK N					
	NON-STOCK	09	1	1	23	38.88 EA

SIX PAIR MULTIPLE DROP STATION PROTECTOR FOR INDOOR USE.
BSP-461-610-400

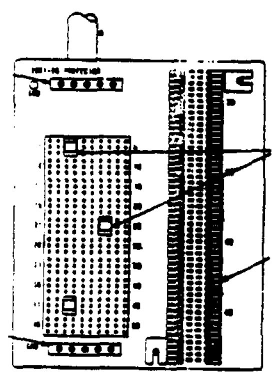
PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
103 623 633	**PROTECTOR STA H189BC1 25 25**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	134.69 EA



103 623 633

25 PAIR BUILDING ENTRANCE TERMINAL WITH COVER EQUIPPED WITH 25 PAIR GRAY PVC INSULATED FUSEABLE STUB CABLE (26 GAUGE) SWIVEL FOR TOP OR BOTTOM ENTRY. OUTPUT 66 TYPE CONNECTORS. 3 AND 4 TYPE PROTECTOR MODULES ORDER SEPARATELY. INDOOR USE ONLY.
MACS MATL DESC: 189BC1-25/25

PID	DESCRIPTION	PA	DOM/MOQ	VOM	INTV	PRICE/UNIT
103 623 641	**PROTECTOR STA H189BC1 50 25**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	181.77 EA



103 623 641 103 623 658

50 PAIR BUILDING ENTRANCE TERMINAL WITH COVER EQUIPPED WITH 50 PAIR GRAY PVC INSULATED FUSEABLE STUB CABLE (26 GAUGE) SWIVEL FOR TOP OR BOTTOM ENTRY. OUTPUT 66 TYPE CONNECTORS. 3 AND 4 TYPE PROTECTOR MODULES ORDER SEPARATELY. INDOOR USE ONLY.
MACS MATL DESC: 189BC1-50/25

For generic pictures of commonly used screws, nuts, and bolts, please see the last six white pages located at the end of the PID numbers (product listings).

NEED HELP? Refer to the HELP Chart located at the front of your catalog.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

~~354 000 820~~ ~~BTOS~~ **SCREW WD HEXHD 8X 3/4**
GTES STOCK S
NON-STOCK 09 1 1 2 189.91 M PK

354 000 820 746 891 811 354 000 838 362 002 248
362 002 255 362 002 263

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.

746 891 811 **SCREW WD HEXHD 8X1** active
GTES STOCK S Stock
NON-STOCK 09 1 1 2 1.05 BX
Same change this

WOOD, HEXHEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION.

354 000 838 BTOS **SCREW WD HEXHD 8X1 1/4**
GTES STOCK S
NON-STOCK 09 1 1 2 256.45 M PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.

362 002 248 BTOS **SCREW WD HEXHD 8X1 1/2**
GTES STOCK S
NON-STOCK 09 1 1 2 17.25 C PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION SUCH AS INSTALLING MISCELLANEOUS HARDWARE DURING CUSTOMER SERVICE INSTALLATION AND REPAIR. 8 PER PACK.

362 002 255 BTOS **SCREW WD HEXHD 8X2**
GTES STOCK S
NON-STOCK 09 1 1 2 48.30 C PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION SUCH AS INSTALLING MISCELLANEOUS HARDWARE DURING CUSTOMER SERVICE INSTALLATION AND REPAIR. 20 PER PACK.

362 002 263 BTOS **SCREW WD HEXHD 14X1 1/2**
GTES STOCK S
NON-STOCK 09 1 1 2 749.08 M PK

WOOD, HEX-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION SUCH AS INSTALLING DROP WIRE HOOKS ON CUSTOMER DWELLING. 20 PER PACK.

400 264 099 **SCREW WD RDHD 8X 1/2**
GTES STOCK N
NON-STOCK 09 1 1 18 .17 PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

400 264 099	400 264 115	400 264 123	400 264 149
400 264 131	400 264 180	400 264 206	400 264 248
400 264 263	400 264 297	400 264 321	400 264 354
400 264 362	400 264 412	400 264 438	400 264 479
400 264 453	400 264 511	400 264 529	400 264 552
400 264 594	400 264 610	400 264 636	

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT

400 264 115 **SCREW WD RDHD 8X 3/4**
GTES STOCK S
NON-STOCK 09 1 1 2 147.71 M PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.
CA03952

400 264 123 **SCREW WD RDHD 8X1**
GTES STOCK S
NON-STOCK 09 1 1 2 17.02 C PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.
CA03952

400 264 149 **SCREW WD RDHD 8X1 1/2**
GTES STOCK S
NON-STOCK 09 1 1 2 13.80 C PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 12 PER PACK.
CA03952

400 264 131 **SCREW WD RDHD 8X1 1/4**
GTES STOCK S
NON-STOCK 09 1 1 2 20.24 C PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 20 PER PACK.
CA03952

400 264 180 **SCREW WD RDHD 8X2**
GTES STOCK S
NON-STOCK 09 1 1 2 12.45 C PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

400 264 206 **SCREW WD RDHD 8X2 1/2**
GTES STOCK N
NON-STOCK 09 1 1 23 157.25 M PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

400 264 248 **SCREW WD RDHD 10X 3/4**
GTES STOCK S
NON-STOCK 09 1 1 2 7.82 C PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

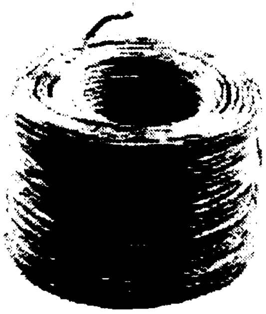
400 264 263 **SCREW WD RDHD 10X1**
GTES STOCK S
NON-STOCK 09 1 1 2 89.68 M PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

400 264 297 **SCREW WD RDHD 10X1 1/2**
GTES STOCK N
NON-STOCK 09 1 1 36 106.25 M PK

WOOD, ROUND-HEAD, GALVANIZED SCREW USED FOR GENERAL OUTSIDE PLANT CONSTRUCTION. 8 PER PACK.
CA03952

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
082 893 496	**WIRE PLENUM 4 PR 24GA CAR**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	69.53 BX



082 893 496
GRAY, FOUR-TWISTED PAIR WIRE FOR USE AS A LOW SMOKE, LOW FLAME SPREAD TELECOMMUNICATIONS CABLE IN AIR RETURN PLENUMS. 1000 FT. = 1 BOX.
REPLACES 402 806 145

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 458 863	**WIRE PLENUM 4 PR 24GA GR**					
	GTES STOCK N					
	NON-STOCK	09	1	1	17	45.16 BX

GRAY, FOUR-TWISTED PAIR WIRE FOR USE AS A LOW SMOKE, LOW FLAME SPREAD TELECOMMUNICATIONS CABLE IN AIR RETURN PLENUMS. 1000 FT. = 1 BOX.
CK22084
REPLACES 402 806 137

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
402 458 871	**WIRE PLENUM 6 PR 24GA GR**					
	GTES STOCK N					
	NON-STOCK	09	1000	1000	22	191.25 M FT

GRAY, SIX-TWISTED PAIR WIRE FOR USE AS A LOW SMOKE, LOW FLAME SPREAD TELECOMMUNICATIONS CABLE IN AIR RETURN PLENUMS. 1000' SPOOL.
CK22084

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
965 991 896	**WIRE RG11 QD SHLD 12PR 1000'RL**					
	GTES STOCK N					
	NON-STOCK	60	1000	1000	21	377.19 M FT

RG-11 QUAD SHIELD AERIAL WIRE. CORROSION RESISTANT, 12 PAIR, 22 GAUGE, 1000' ROLL.
VPN#: F11SS CRD 12/22

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
445 983 034	**WIRE RG11Q OVRSHTH 12PR 1750'**					
	GTES STOCK S					
	NON-STOCK	09	1750	1750	2	411.17 M FT

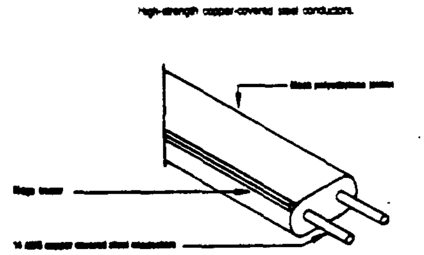
12 PAIR, RG11Q HIGH PERFORMANCE AERIAL WIRE IDENTIFIES THE COAXIAL CABLE USED. THE OVERSHEATH IS REQUIRED FOR THE FIBER AND COAXIAL.

Not all products are in the catalog. Please call the Catalog Hotline at 404-420-6499 if the item you need is not in the catalog.

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 287 975	**WIRE RURAL C LG RL**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	1071.41 RE

400 287 975
SELF-SUPPORTING INSULATED PAIRED WIRE CONSISTS OF TWO PARALLEL 14 AWG, 30 PERCENT CONDUCTIVITY, EXTRA HIGH STRENGTH COPPER-STEEL CONDUCTORS INSULATED WITH HIGH DENSITY BLACK POLYETHYLENE. USED PRINCIPALLY FOR AERIAL DISTRIBUTION IN RURAL EXCHANGE AREAS. LARGE REEL. 19,000 FT. = 1 REEL.
CA07643

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
400 287 967	**WIRE RURAL C SM RL**					
	GTES STOCK S					
	NON-STOCK	09	1	1	2	344.28 RE



400 287 967
SELF-SUPPORTING INSULATED PAIRED WIRE CONSISTS OF TWO PARALLEL 14 AWG, 30 PERCENT CONDUCTIVITY, EXTRA HIGH STRENGTH COPPER-STEEL CONDUCTORS INSULATED WITH HIGH DENSITY BLACK POLYETHYLENE. USED PRINCIPALLY FOR AERIAL DISTRIBUTION IN RURAL EXCHANGE AREAS. SMALL REEL. 6000 FT. = 1 REEL.
MACS MATL DESC: WIRE-RURAL-C
BSP 624-700-200

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
401 809 934	**WIRE RURAL C 1000' CL**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	58.25 CX

SELF SUPPORTING INSULATED PAIRED WIRING CONSISTS OF TWO PARALLEL 14 AWG, 30 PERCENT CONDUCTIVITY, EXTRA HIGH STRENGTH COPPER-STEEL CONDUCTORS INSULATED WITH HIGH DENSITY BLACK POLYETHYLENE. USED PRINCIPALLY FOR AERIAL DISTRIBUTION IN RURAL EXCHANGE AREAS. 1000 FT. = 1 COIL.
MACS MATL DESC: WIRE-RURAL-C-HC

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
461 961 641	**WIRE STA 4PR IV 600FT COIL**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	30.49 CX

IVORY FOUR PAIR STATION 24 GAUGE WIRE, FOR INDOOR/OUTDOOR USE. WIRE MEETS CATEGORY THREE FCC REQUIREMENTS. USED WITH REELSAVER SPOOL OR REELSAVER
BOX. REPLACES 3 PAIR H STATION WIRE, QUAD IVORY 2 PAIR STATION WIRE, QUAD OLIVE 2 PAIR STATION WIRE, AND INSIDE D STATION WIRE 4 PAIR. 600 FT. = 1 COIL.
REPLACES PID#'S: 579900929
REPLACES 578 900 920

PID	DESCRIPTION	PA	DOM/ MOQ	VOM	INTV	PRICE/UNIT
907 982 185	**WIRE STA 4PR IV 1000FT BOX**					
BTOS	GTES STOCK S					
	NON-STOCK	09	1	1	2	48.40 BX

IVORY FOUR PAIR STATION 24 GAUGE WIRE, FOR INDOOR/OUTDOOR USE. WIRE MEETS CATEGORY THREE FCC REQUIREMENTS. PACKED IN A DISPENSER BOX.
1000 FT. = 1 BOX.

MESSAGE | Dated: 6 11 2000 at [illegible]
Subject: panel material for set-up | Contents: 2
Creator: Pam G. Williams /m3,mail3a

Item 1

TO: Leon Armstrong /m6,mail6a; PHONE=205-977-0374
CC: Arlene Fredrickson /m3,mail3a; PHONE=205-977-0391

Item 2

Leon, we will reduce the OSPC time by 1 hour since the CLEC is now bringing their 25 pr cable in and splicing it. This is for TN and LA.

The material will ~~not~~ be changed until we file in KY.

Thx,
Pam

Mat'l updated
in Fl. refiling.

PROPRIETARY

DECLASSIFIED

POD Item No. 81
Attachment No. 9
Complex Resale Support Group (CRSG)

Per CRSG/Account Team SME, 7/28/99:

	Total Worktime (min) Instl 1st	Ea. Addl (50% of 1st)	Disc. 1st (excl SI)	Ea Addl (50% of 1st)
1. CRSG/Acct Team receives LSR & SI in "in-tray" from CLEC	10*	5*	2*	1*
2. CRSG/Acct Team screens LSR (2 min) and SI	5	2.5	5	2.5
3. calls customer to acknowledge receipt & enters start date into BRITE (CRSG tracking system) And completes folder information				
4. Prepares SI transmittal & faxes to OSPE; confirms FAX receipt & updates BRITE folder	10	5	N/A	N/A
5. Receives SI response (2 min), prepares LSCS transmittal and FAX; confirms logged on LON (LCSC service order tracking sys), sends CLEC notification; closes out folder and BRITE	20	10	18	9
TOTAL	45	22.5	25	12.5
*Manual Svc Order (screening LSR):	2	1	2	1

****Assumes perfect flow:**

- "clean" order from CLEC - no clarification
- SI received and processed within commitment time - no follow-up required
- SI response is "Facilities Available"
- LCSC does not reject LSR

Incremental work efforts for order complications

1. SI not processed within commitment - followup required, including telephone calls, re-faxing, add'l documentation (20 min * 33% 1st Instl)	6.6	3.3	0	0
2. SI response is "no facilities) available; but "reason" would	7.2	3.6	0	0

allow for "estimate" for OSPE to perform work to make available, e.g., clear pairs or run new pairs - requires negotiation with OSPE & CLEC (30 min • 24% 1st Instl)					
3. LCSC rejects or doesn't log to LON within 2 hrs - requires followup & add'l time to reformat and/or resend (20 min • 25% 1st Instl)	5	2.5	2.5	1.25	
TOTAL	63.8	31.9	27.5	13.75	
	2.0	1.0	2.0	1.0	(man LSR)
	61.8	30.9	25.5	12.75	(elec. LSR)

- Worktimes reflect a manual process
- CRSG is a dedicated center which volunteered to handle as of 4/99 all UNE orders requiring SI

MESSAGE   Date: [illegible]
Subject: SALARY[illegible].XLS   Contents: [illegible]
Creator: Cindy H. Macry /m6,mail6a

Item 1

TO: Arlene Fredrickson /m3,mail3a; PHONE=[illegible]5-377-0391
Dee Gonzalez /m2,mail2a; PHONE=404-5[illegible]4-5069
Pam G. Williams /m3,mail3a; PHONE=20[illegible]-377-5361

Item 2

Does the attached file help any? Deb T.

Item 3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Effective 1/1/00

2000 BellSouth Customer Markets Division
Interconnection Services
Direct Sales Support
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range			Middle of Range			Top of Range			Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	56	6IA	38,500	-	43,900	43,900	-	53,700	53,700	-	59,100	12,200	9,200	1,000
A	57	7IA	42,700	-	49,100	49,100	-	60,100	60,100	-	66,500	13,700	10,300	1,000
A	58	8IA	48,600	-	55,900	55,900	-	68,300	68,300	-	75,600	15,500	11,600	1,000
A	59	9IA	54,200	-	64,000	64,000	-	78,200	78,200	-	88,000	21,600	16,200	1,000

Effective 1/1/00

BellSouth Customer Markets Division
Interconnection Services
Professional Sales
2000 Salary Structure

Classification	Job Class	Salary Administration Plan	Beginning of Range	Middle of Range	Top of Range	Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	K2	K2A	44,600 - 51,300	51,300 - 62,700	62,700 - 69,400	24,000	18,000	1,000
A	K3	K3A	51,800 - 59,600	59,600 - 72,800	72,800 - 80,600	28,300	21,200	1,000
[illegible]	K4	K4A	57,800 - [illegible]	[illegible] - [illegible]	81,300 - 90,000	31,700	23,800	1,000
[illegible]	K7	[illegible]	[illegible] - 74,100	[illegible] - [illegible]	[illegible] - 101,[illegible]	[illegible]	[illegible]	[illegible]
A	K8	K8A	62,800 - 74,100	74,100 - 90,500	90,500 - 101,800	35,200	26,400	1,000

Effective 1/1/00

BellSouth Customer Markets Division
Interconnection Services
Professional Sales
2000 Salary Structure

Classification	Job Code	Salary Administration Plan	Beginning of Range			Middle of Range			Top of Range			Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	K2	K2A	44,600	-	51,300	51,300	-	62,700	62,700	-	69,400	24,000	18,000	1,000
A	K3	K3A	51,800	-	59,600	59,600	-	72,800	72,800	-	80,600	28,300	21,200	1,000
[illegible]	K4	[illegible]A	[illegible],800	[illegible]	[illegible]500	[illegible],500	-	[illegible]	[illegible]	-	[illegible]	[illegible]	23,600	[illegible]
[illegible]	K7	[illegible]A	[illegible],300	[illegible]	[illegible]	[illegible],100	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
A	K8	K8A	62,800	-	74,100	74,100	-	90,500	90,500	-	101,300	35,200	26,400	1,000

[illegible] [illegible]

Subject: [illegible] Cost Study Input

Creator: [illegible] H. Macry /m6,mail6a

[illegible] Contents: 4

Item 1

TO: Sandra Harris /m7,mail7a; PHONE=[illegible]-5600

CC: Diann Hammond /m7,mail7a; PHONE=[illegible]-7727

Pat A. Rand /m6,mail6a; PHONE=[illegible]-7368

Item 2

Sandra,
Sorry this has taken me so long. I hope it is what you need. Please advise if you require addtional information.

I have also attached a separate Salary File as it seems to confuse some people when we reference "JG56" on compensation. The Sales Titles on compensation are on a different salary structure than the Corporate scale. So for Cost Study purposes, this has seemed important to know.

Thank you,
Debbie Timmons
205.321.4990

Item 3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Item 4

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Cost [illegible]
CRSG Account Team
for
Switched Combo Environment

Switched Combo Headcount Allocation - CRSG

All Management Job Grades are on compensation.

Functions Performed	Performed by
LSR Rcpt & logging & folder preparation	Contractor
Backend folder close out & filing	WS10
See each product	JG56 SD1 on Sales Compensation FDC2210

Contractor Hourly Rate	$42.00

% Allocation Assumption:
The colume headed % Resale Work lists the people doing RESALE work today. I do not know how to forecast how RESALE will diminish & how much Switched Combo will appear. **Have the Prod Mgrs. Provided any forcasts? If so, I guess their factors should be applied.**

Name	JG/Cont	% Resale Work	Type of Work or Comments
Janie Norris	Contractor	100%	Process orders
Barbara Jones	Contractor	100%	Process orders
Kristy Seagle	JG 56	100%	Process orders
Tiffany Dillard	JG 56	100%	Process orders
David Reynolds	JG 56	100%	Process orders
Vivian Smith	JG 56	100%	Process orders
Jonathan Ryer	JG 56	100%	Process orders
Brian Bradley	JG 56	100%	Process orders
Susan Daniel	JG 56	100%	Process orders
Sonja Johnson	Contractor	75%	Data management / admin
Lillie Lawson	Contractor	75%	Data management / admin
Mary McCoy	WS10 Clk	80%	Clerical / admin
Charlotte Donlon	JG 56	75%	Issue resolution / CRSG operational support
Monica Dodge	JG 56	75%	Customer care
Titania Alexander	JG 56	50%	Special construction estimates
Brenda Gibson	JG58	75%	Supervision & information management
Tracey Morant	JG58	85%	Supervision & customer relationship
Mitzi Link	JG59	90%	Supervision & leadership of CRSG

Information prepared by:
Debbie Timmons
205-321-4990

This represents just one Sales AVP (JG61) work group that is a part of Interconnections Sales that would have work time related to the UNE environment in general

There are 2 other Sales AVP groups in Birmingham, 5 in Atlanta
I couldn't begin to predict what % of who works on UNE customers
The total Sales Entity is under Kenneth Ray JG64

It is next to impossible to further divide to the specific product level, e.g. UCL, UNTW, Xdsl
I think that would be driven by the customer sets and their business plans, and what their sales success ratios are and what the ultimate volumes would be. I think that would have to come from the Product Managers.

Name	JG/Cont	% UNE Work	Type of Work or Comments	Unit
Cathey, Marc	61	50%	Sales AVP	Acct. Team
Alvis, Rick	56	50%	Systems Designer I	Acct. Team
Bonner, Denise	58	50%	Systems Designer II	Acct. Team
Burgess, Kelli	58	50%	Systems Designer II	Acct. Team
Callahan, Leslie	K3	50%	Account Manager	Acct. Team
Carmichael, Rita	58	50%	Systems Designer II	Acct. Team
Carnes, Wayne	K3	50%	Account Manager	Acct. Team
Christian, Scott	K3	50%	Account Manager	Acct. Team
Clark, Susan M. (Terri)	58	50%	Systems Designer II	Acct. Team
Corley, Susan	WS10	50%	Clerical	Acct. Team
Davies, Kathy	58	50%	Systems Designer II	Acct. Team
Denham, Sharon	58	50%	Systems Designer II	Acct. Team
Douglas, F.W (Buck)	58	50%	Systems Designer II	Acct. Team
Ferreiro, Gene	K2	50%	Account Manager	Acct. Team
French, Bill	K8	50%	Sales Director	Acct. Team
Griffin, Scott	K2	50%	Account Manager	Acct. Team
Hammond, Diann	58	50%	Systems Designer II	Acct. Team
Hartley, Donna	K3	50%	Account Manager	Acct. Team
Hodges, Cynthia	58	50%	Systems Designer II	Acct. Team
Hogg, Scott	K2	50%	Account Manager	Acct. Team
Johnson, Wade	58	50%	Systems Designer II	Acct. Team
Kizziah, Glenda	WS10	50%	Clerical	Acct. Team
Kunze, Scott	K2	50%	Account Manager	Acct. Team
Laszlo, Joe	58	50%	Systems Designer II	Acct. Team
McElroy, Roger	58	50%	Systems Designer II	Acct. Team
McRae, Bob	58	50%	Systems Designer II	Acct. Team
Moore, Debbie	52	50%	Sales AVP Admin Assist	Acct. Team
Morrison, Bill	K3	50%	Account Manager	Acct. Team
Parker, Paul	K8	50%	Sales Director	Acct. Team
Pierce, Daphne	58	50%	Systems Designer II	Acct. Team
Ratliff, Rick	58	50%	Systems Designer II	Acct. Team
Ratliff, Wayne	58	50%	Systems Designer II	Acct. Team
Ray, John	K3	50%	Account Manager	Acct. Team
Reid, Kim	58	50%	Systems Designer II	Acct. Team
Robbins, Mark	K3	50%	Account Manager	Acct. Team
Ryer, Kurt	56	50%	Systems Designer I	Acct. Team
Temple, Gretchen	58	50%	Systems Designer II	Acct. Team
Timmons, Debbie	59	50%	Sales Support Director	Acct. Team
Washington, Darryl	K3	50%	Account Manager	Acct. Team
Wilburn, Mike	K8	50%	Sales Director	Acct. Team
Wilder, Shamron	56	50%	Systems Designer I	Acct. Team

Information submitted by:
Debbie Timmons
205.321.4990

DID Design - Switch as Is

Description	Function	Job Function Code	Install	Additional	Previous Input	Total	Reconciled	Reconciled By	Total	Difference
LCSC	ISSNG N/D Orderd	2300-SR	1.5 (first)	.1112 / trunk	1.0000		3.5000	Phyllis Rogers		
		WSIO - Clerk	1.0000		0.2500					
AFIG	Assign OSP CA/PR	400X FAS (W320)	0.0035		0.0035					
CO	NA	NA	NA		0.0000					
CPG - TRUNK TRANSLATIONS	NA	NA	NA		0.0000					
CPG - Design	Resolve RMAs from SO process design CKT Word doc	4N4X	0.1200	0.1042	0.1517		0.1517	Dianne Martin		
CTG	NA	NA	NA		NA					
RCMAG	NA	NA	NA		NA					
WMC	NA	NA	NA		NA					
L & N	NA	NA	NA		0.0333		0.0000	Ruby Pitts		
CSI & M	NA	NA	NA		NA					
UNEC	WFA Completion	4AXX-ET	0.2500		0.0000					
Based on SAI goes to LCSC, no CRSG work times included.DDT										

DID - New Cust DN Exist

Description	Function	Job Function Code	Install (hrs.)	Additional	Disconnect	Additional
LCSC	N Order	2300 - SR	4.00000		1.00000	
		WS10 - Clk	1.00000		0.25000	
AFIG	Assign OSP CA/PR	400X FAS	0.00583		0.00223	
CTG	Provision Switch	4N20 - ET (WS32)	0.75000	0.10000	0.50000	0.05000
CO	Wire Place Cards	431X	0.41667	0.16667	0.33333	0.08333
CPG - Trunk Translations	Determine Trunk Translation	4N4X - WS18 (PS)	4667/grp		0.16667/grp	
CPG - Designed	Establish Trunk Group SO RMA - Design CKT	4N4X - WS18 (PS)	0.08000	0.05000	0.04000	0.04000
RCMAG	Translate Numbers to RTZ	4N10	0.01670	0.00830	0.01670/num	
L & N	Service order fallout	2730	2 min	1 min	0.00000	
SSI & M	Install and test	411X - WS32	3.04810	1.00850	0.33330	0.20000
UNEC	Turn up; Test; Complete	4AXX - WS32	0.50000	0.01670	0.5000/ord	
OSPE	SO Fallout	32XX -	0.10000		0.00000	
CRSG	Rcv, log, acknowledge customer & assign	Contractor DDT	20 min			
CRSG	Verify LSR, ordering doc notify CLEC, reserve #s, prepare CSPS, post tracking, prepare & submit to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	45 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			
WMC	Coordinate Word Doc; Dispatch	4WXX -	0.25000		0.00000	

Assumption for L & N - based on 10% fallout

Assumption for CRSG:

FOC & Project Mgt. WILL NOT be handled by CRSG

Assumption for SSIM -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

2W DID Subsequent - Add Trunks

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300	3.00000			
AFIG	Assign OSP CA/PR	400X	.05830/ord	.00223/ord		
CTG	Provision Switch	4N20	.10000/trk	.10000/trk		
CO	Run Jumper	431X	4.2000/ord	.01670/ord		
CPG - Trunk Translations	Update Systems	4N4X	.01670/ord			
CPG - Designed	Design Circuit	4N4X	0.08000/trk	.05000/trk		
RCMAG	NA	NA				
L & N	S.O. Fallout	2730	2 min	1 min		
SSI & M	NA	NA				
UNEC	Turn-up; Test; Connect	4AXX	.25000/ord			
OSPE	S.O.Fallout	32XX	.10000/ord			
CRSG	See below	See below				
WMC	Route Order	4WXX	.25000/ord			

Assumptions for L & N -

Based on 10% fallout

Assumption - CRSG
It is assumed the CRSG will not handle additions to Trunk Group
If this changes; use cost for NEW

2W DID Subseq -Add Grps of TNs

Description	Function	Job Function Code	Add Addl Num. Add Addl Grp.	Additional	Disconnect	Additional
LCSC	Issue Order	2300	2.25000			
AFIG	NA	NA				
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Designed	NA	NA				
RCMAG	Tranlate Num to RTI	4210	0.01670	0.00830		
L & N	NA	NA				
SSI & M	NA	NA				
UNEC	NA	NA				
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumption - CRSG
It is assumed the CRSG will not handle additions to Trunk Group
If this changes; use cost for NEW

2W DID Subsequent -Reserve TNs

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300	3.25000/ord			
AFIG	NA	NA				
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Designed	NA	NA				
RCMAG	NA	NA				
L & N	NA	NA				
SSI & M	NA	NA				
UNEC	NA	NA				
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				
	Assumption - CRSG					
	It is assumed the CRSG will not handle subsequent TN Reservations. **If this changes; use cost this cost:**					
CRSG	Rcv, log, acknowledge customer & assign	Contractor DDT	20 min			
CRSG	Verify LSR, ordering doc, notify CLEC, reserve #s, post tracking, prepare & submit to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	25 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			

PBX Convers Line Side

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	N Order	2300 SR	1.50000	0.16667		
	D Order	WS10 Clk	0.50000			
AFIG	Assign Cable Pair	400X	0.00350/ord			
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	Est Trunk Grp	4N4X	0.15170	0.10420/trk		
RCMAG	Tranlate Num to RTI	4210	0.00175	0.00175/num		
L & N	NA	NA				
SSI & M	NA					
UNEC	Completion	4AXX WS32	0.25000			
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Based on PBX goes to LCSC, no CRSG work times included.DDT

PBX Line Side Subsequent

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	1.08333			
		WS10 Clk	0.50000			
AFIG	HML TE Arrange	400X	0.04160/ord			
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	Design CKT (HML only)	4N4X	0.08000	0.05000		
RCMAG	Rearrange HML	4210	0.00175	0.00175/tn		
L & N	NA	NA				
SSI & M	NA	NA				
UNEC	WFA Completion	4AXX WS32	0.25000			
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Based on PBX goes to LCSC, no CRSG work times included.DDT

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	N Order	2300 SR	1.58333	0.16667		
	D Order	WS10 Clk	0.50000			
AFIG	Assign OSP Cable Pair		0.00583	0.00230	0.00233	
CTG	NA	NA				
CO	Run jumper and test	431X	0.41667	0.16667	0.00833	
CPG - Trunk Translations	NA	NA				
CPG - Design	Design CKT	4N4X	0.08000	0.05000	0.04000	0.04000
RCMAG	Assign Line	4210	0.00175	0.00175	0.00175	
L & N	NA	NA				
SSI & M	Install and test	411X	3.04810	1.00850	0.00000	
UNEC	Turn up, Test, Complete	1AXX WS32	0.50000	0.50000	0.50000	0.25000
OSPE	NA	NA				
CRSG	See below	See below				
WMC	RT Order	?	0.02500		0.02500	

Assumptions for SSIM -	Assumptions for CRSG
Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel	Based on PBX goes to LCSC, no CRSG work times included.DDT

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	1.00000			
		WS10 Clk	0.50000	0.16667		
AFIG	Assign OSP Cable Pair	400X	0.00583		0.00233	
CTG	NA	NA				
CO	Run jumper and test	431X	50 min	20 min	40 min	10 min
CPG - Trunk Translations	NA	NA				
CPG - Design	Design CKT	4N4X	0.08000	0.05000	0.04000	0.04000
RCMAG	Assign Line	4210	0.00175	0.00175	0.00175	
L & N	NA	NA				
SSI & M	Install and Test	411X	3.04810	1.00850	0.33330	0.20000
UNEC	Turn up; Test; Complete	4AXX WS32	0.50000	0.50000	0.50000	0.25000
OSPE	S.O. Fallout	32XX	0.10000			
CRSG	Rcv, log, acknowledge customer & assign	Contractor.ddt	20 min			
CRSG	Verify LSR, ordering doc, notify CLEC,obtain mileage either via Mileage Tool or running quote, post tracking, prepare & submit to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	45 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			
WMC	RT Order	4WXX	0.02500		0.02500	

Assumption for CO -

This service requires work in 2 central offices

Assumptions for CRSG

This product is under consideration to be moved to LCSC

The cost information provided above is in the event it remains with CRSG

FOC & Project Mgt. **WILL NOT** be handled by CRSG

Assumptions for SSIM -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	1.00000			
		WS10 Clk	0.50000	0.16667		
AFIG	Assign OSP Cable Pair	400X	.00350/ord			
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	SO RMA Design CKT	4N4X	0.15170	0.10420/line		
RCMAG	Translate Line	4210	0.00175			
L & N	NA	NA				
SSI & M	NA	NA				
UNEC	Completion	4AXX WS32	0.25000			
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG

Based on SAI goes to LCSC today in Resale environment, no CRSG work times included.DDT

PBX DPA Only OSNC CKT-New

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR WS10 Clk	1.00000 0.50000	0.50000	0.50000	
AFIG	Assign OSP Cable Pair	400X	0.00830		0.00330	
CTG	NA	NA				
CO	run jumper and test	431X	0.41700	0.01670	0.30000	0.08300
CPG - Trunk Translations	NA	NA				
CPG - Design	Design CKT	4N4X	0.08000	0.05000	0.04000	0.04000
RCMAG	NA	NA				
L & N	NA	NA				
SSI & M	install and test	411X	3.04810	1.00850	0.33330	0.20000
UNEC	Turn up; Test; Complete	4AXX WS32	0.50000	0.50000	0.50000	
OSPE	S.O. Fallout	32XX	0.10000	0.00000	0.00000	
CRSG	Rcv, log, acknowledge customer & assign	Contractor.ddt	20 min			
CRSG	Verify LSR, ordering doc, notify CLEC,obtain mileage either via Mileage Tool or running quote, post tracking, prepare & submit to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	45 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			
WMC	Route Order	4WXX	.02500/ord	.02500/ord		

Assumptions for CRSG

This product is under consideration to be moved to LCSC

The cost information provided above is in the event it remains with CRSG

Assumptions for SSIM -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

FOC & Project Mgt. **WILL NOT** be handled by CRSG

PBX DPA Conversion

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	2 "C" Orders	2300 SR	1.00000	0.50000		
		WS10 Clk	0.50000			
AFIG	Assign OSP Cable Pair	400X	0.00500			
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	Design CKT	4N4X	0.15170	0.10420		
RCMAG	NA	NA				
L & N	NA	NA				
SSI & M	NA	NA				
UNEC	Turn up, Test, Complete	4AXX WS32	0.25000			
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG

Based on SAI goes to LCSC today in Resale environment, no CRSG work times included.DDT

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	0.66700	0.25000	0.33300	
		WS10 Clk	0.50000			
AFIG	Assign OSP Cable Pair	400X	0.00583		0.00233	
CTG	NA	NA				
CO	Run Jumper	431X	0.10000	0.10000	0.05000	0.05000
CPG - Trunk Translations	NA	NA				
CPG - Design	NA	NA				
RCMAG	Assign In	4N10	0.00175	0.00175	0.00175	
L & N	NA	NA				
I & M	Install and test	?	3.04810	1.00850	0.33330	0.20000
BRMC	NA	NA				
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG

Based on Resale Ordering Matrix in the CLEC Ordering Guide for RESALE, this goes to LCSC today, no CRSG work times included.DDT

Assumptions for I & M -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	0.50000			
		WS10 Clk	0.50000			
AFIG	Assign OSP Cable Pair		0.00350			
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	NA	NA				
RCMAG	Assign In	4N10	0.00175			
L & N	NA	NA				
I & M	NA	NA				
BRMC	NA	NA				
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG

Based on SAI goes to LCSC today in Resale environment, no CRSG work times included.DDT

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	0.33300	0.16800		
		WS10 Clk	0.50000			
AFIG	Assign OSP CA/PR	400X	0.00116	0.00000	0.00233	0.00000
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	NA	NA				
RCMAG	Assign	4N10	0.00175	0.00175		
L & N	NA	NA				
I & M	NA	NA				
BRMC	NA	NA				
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG

Based on Resale Ordering Matrix in the CLEC Ordering Guide for RESALE, this goes to LCSC today, no CRSG work times included.DDT

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	0.50000	0.25000	0.33300	
		WS10 Clk	0.50000			
AFIG	Assign OSP CA/PR	400X	0.00583		0.00233	
CTG	NA	NA				
CO	Run jumper and test	431X	0.10000	0.10000	0.05000	
CPG - Trunk Translations	NA	NA				
CPG - Design	NA	NA				
RCMAG	NA	NA				
L & N	NA	NA				
I & M	Install and test	?	3.04810	1.00850	0.33300	0.20000
BRMC	NA	NA				
OSPE	S.O. Fallout	32XX	0.10000			
CRSC	See below	See below				
WMC	Route S.O.	4WXX	0.25000			

Assumptions for CRSG

It is assumed this product is handled today by the LCSC.DDT

No knowledge of the CRSG handling this today in the RESALE environment

Assumptions for I & M -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

IFR-IFB DPA Non D-Conversion

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	0.50000			
		WS10 Clk	0.33300			
AFIG	Assign OSP CA/PR	400X	0.00350		0.00350	
CTG	NA	NA				
CO	NA	NA				
CPG - Trunk Translations	NA	NA				
CPG - Design	NA	NA				
RCMAG	NA	NA				
L & N	NA	NA				
SSI & M	NA	NA				
BRMC	NA	NA				
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG

Based on SAI goes to LCSC today in Resale environment, no CRSG work times included.DDT

DDITS 4 Way - New

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	6.00000	2.50000	1.50000	
		WS10 Clk	0.50000		0.50000	
AFIG	DSI	400X	0.15000		.00233/ord	
CTG	Provision Switch	4N2X	75000/trk	.10000/trk	0.25000	
CO	Run jumper file card	431X	25 min	10 min	20 min	5 min
CPG - Trunk Translations	Determine Trunk Trans	4N4X	.46670/grp		0.16700	
CPG - Design	Design Pipe & Trunk	4N4X	1.50000/dsı	1.30000/dsı	0.00600	0.00600
RCMAG	Assign TNs RTI	4N1X	01670/tn	00830/tn	0.01670	
L & N	S.O. Fallout	2730	2 min	1 min	0.00000	0.00000
SSI & M	Install and test	411X	3.04810	1.00850	0.33300	0.20000
UNEC	Turn up; Test; Complete	4AXX	2.00000	1.00000	0.50000	
OSPE	Obtain DI FAC	32XX	3.00000	3.00000		
CRSG	Rcv. log, acknowledge customer & assign	Contractor.DDT	20 min			
CRSG	Verify LSR, ordering doc, notify CLEC, reserve #s, prepare CSPS, post tracking, prepare & submit to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	45 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			
WMC	Route S.Os	4WXX	0.50000		0.25000	

Assumption for CRSG:

FOC & Project Mgt **WILL NOT** be handled by CRSG

IF THE PRI spreadsheet SI process is used, add 60 minutes to the SD1 time

Assumptions for SSIM -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

DDITS 1 & 2 Way Conversion

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	5.20000			
		WS10 Clk	0.50000			
AFIG	DSI	400X	0.00116			
CTG	Provision Switch	4N2X	.50000/grp			
CO	NA	NA	0.00000			
CPG - Trunk Translations	Determine Trunk Trans	4N4X	.25000/grp			
CPG - Design	Design Pipe & Trunk	4N4X	1.85000			
RCMAG	NA	NA				
L & N	NA	NA	0.00000			
SSI & M	NA	NA	0.00000	[redacted]		
UNEC	Turn up; Test; Complete	4AXX	.16670/ord			
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG:
It is assumed a conversion will be handled by the LCSC
IF NOT - Use DDITS 4 Way New

MegaLink Channel Lineside - New

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue Order	2300 SR	6.00000	2.50000	1.50000	
		WS10 Clk	0.50000		0.50000	
AFIG	Assign Facilities	400X	0.15010		0.00230	
CTG	NA	NA				
CO	Run jumper and test	431X	25 min	10 min	20 min	5 min
CPG - Trunk Translations	NA	NA				
CPG - Design	Design Pipe & Trunk	4N4X	1.40000	1.30000	0.00600	0.00600
RCMAG	Assign TNs RTI		0.00350			
L & N	NA	NA				
SSI & M	Install and test	411X	3.04810	1.00850	0.33300	0.20000
UNEC	Turn up; Test; Complete	4AXX	2.00000	1.00000	0.50000	
OSPE	Obtain Facilities	32XX	3.00000	3.00000		
CRSG	Rcv, log, acknowledge customer & assign	Contractor DDT	20 min			
CRSG	Verify LSR, ordering doc, notify CLEC, reserve ckt IDs, prepare CSPS, run price quote, BOCRIS/ORION validation, post tracking, prepare & submit to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	90 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			
WMC	Route S.O.	4WXX	0.50000		0.25000	

Assumption for CRSG:

FOC & Project Mgt. **WILL NOT** be handled by CRSG

Assumptions for SSIM -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

MegaLink Channel Lineside -Conv

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue (2) N and (2) D Orders	2300 SR WS10 Clk	7.50000 0.50000	0.50000		
AFIG	Facility Inventory	400X	0.00700			
CTG	NA	NA				
CO	NA					
CPG - Trunk Translations	NA	NA				
CPG - Design	Design Pipe & Trunk	4N4X	1.40000			
RCMAG	Assign TNs OE		0.00350	0.00350		
L & N	NA	NA				
SSI & M	NA	NA				
UNEC	Completion	4AXX	0.50000			
OSPE	NA	NA				
CRSG	See below	See below				
WMC	NA	NA				

Assumptions for CRSG:
It is assumed a conversion will be handled by the LCSC
IF NOT - Use MegaLink Channel New

MegaLink Channel Service - New

Description	Function	Job Function Code	Install	Additional	Disconnect	Additional
LCSC	Issue 2 N Orders	2300 SR WS10 Clk	6.00000 0.50000	2.50000	1.50000 0.50000	
AFIG	DSI Assign Facilities	400X	0.15010		0.00230	
CTG	Provision Switch	4N2X	.75000/Tgrp .10000/trk			
CO	Run jumper and test	431X	25 min	10 min	20 min	5 min
CPG - Trunk Translations	Determine Trunk Trans	4N4X	.46670/Tgrp .16670/grp			
CPG - Design	Design Pipe & Trunk	4N4X	1.50000/dsi	1.30000/dsi	0.00600	0.00600
RCMAG	Assign TNs RTI		.01670/tn	.00830/tn	0.01670	
L & N	NA	NA				
SSI & M	Install and test	411X	3.04810	1.00850	0.33300	0.20000
UNEC	Turn up; Test; Complete	4AXX	2.00000	1.00000	0.50000	
OSPE	Obtain DSI Facilities	32XX	3.00000	3.00000		
CRSG	Rcv, log, acknowledge customer & assign	Contractor DDT	20 min			
CRSG	Verify LSR, ordering doc, notify CLEC, reserve ckt IDs, prepare CSPS, run price quote, BOCRIS/ORION validation, do DID function if DID is provisioned over the pipe, post tracking, prepare & submit to LCSC.	FDC 2210 SD1-JG56-Sales Compensation.ddt	120 min			
CRSG	Notify CLEC order sent to LCSC	FDC 2210 SD1-JG56-Sales Compensation.ddt	15 min			
CRSG	Back end folder close out	WS10 clerk	15 min			
WMC	Route Service Order	4N2X	0.50000		0.25000	

Assumption for CRSG:

FOC & Project Mgt. WILL NOT be handled by CRSG

Assumptions for SSIM -

Includes processing service order request, placing cross connect at x-box, checks continuaty / dial-tone resolves troubles, performs test from NID and complets order, includes travel

Effective 1/1/00

2000 BellSouth Customer Markets Division
Interconnection Services
Direct Sales Support
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range			Middle of Range			Top of Range			Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	56	6IA	38,500	-	43,900	43,900	-	53,700	53,700	-	59,100	12,200	9,200	1,000
A	57	7IA	42,700	-	49,100	49,100	-	60,100	60,100	-	66,500	13,700	10,300	1,000
A	58	8IA	48,600	-	55,900	55,900	-	68,300	68,300	-	75,600	15,500	11,600	1,000
A	59	9IA	54,200	-	64,000	64,000	-	78,200	78,200	-	88,000	21,600	16,200	1,000

Effective 1/1/00

BellSouth Customer Markets Division
Interconnection Services
Professional Sales
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range			Middle of Range			Top of Range			Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	K2	K2A	44,600	-	51,300	51,300	-	62,700	62,700	-	69,400	24,000	18,000	1,000
A	K3	K3A	51,800	-	59,600	59,600	-	72,800	72,800	-	80,600	28,300	21,200	1,000
A	K4	K4A	57,800	-	66,500	66,500	-	81,300	81,300	-	90,000	31,700	23,800	1,000
A	K7	K7A	62,800		74,100	74,100		90,500	90,500	-	101,800	35,200	26,400	1,000
A	K8	K8A	62,800	-	74,100	74,100	-	90,500	90,500	-	101,800	35,200	26,400	1,000

Effective 1/1/00

BellSouth Customer Markets Division
Interconnection Services
Professional Sales
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range	Middle of Range	Top of Range	Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	K2	K2A	44,600 - 51,300	51,300 - 62,700	62,700 - 69,400	24,000	18,000	1,000
A	K3	K3A	51,800 - 59,600	59,600 - 72,800	72,800 - 80,600	28,300	21,200	1,000
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] - 90,000	[illegible]	23,800	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26,400	[illegible]
A	K8	K8A	62,800 - 74,100	74,100 - 90,500	90,500 - 101,800	35,200	26,400	1,000

[illegible] [illegible]
Subject: Line Sharing: CRSG & Acct. Team [illegible] Input Contents: [illegible]
Creator: Debbie D. Timmons /m7,mail7a

Item 1

TO: Woodson E. Elston /m6,mail6a; PHONE=4[illegible]4-329-6[illegible]47
CC: Arlene Fredrickson /m3,mail3a; PHONE=205-977-0391
Pam G. Williams /m3,mail3a; PHONE=2[illegible]5-[illegible]77-5561

Item 2

Woody,
As promised here is the information I have developed for the Line Sharing Cost Input. Please let me know what additional information you need, and PLEASE FEEL FREE TO CALL ME AT HOME IF WE NEED TO TALK THROUGH ANY OF THE INFO!

This took me MUCH longer to complete than I expected, so if you need to call me tonight, it really is ok. HOME: 205-979-3748 Tomorrow I will be in Account Team Training sessions all day, but you can dial my office number, hit zero, and have my office assistant get me out of the session. Office is 205-321-4990.

Thank you,
Debbie Timmons

Item 3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Item 4

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Effective 1/1/00

2000 BellSouth Customer Markets Division
Interconnection Services
Direct Sales Support
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range	Middle of Range	Top of Range	Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	56	6IA	38,500 - 43,900	43,900 - 53,700	53,700 - 59,100	12,200	9,200	1,000
A	57	7IA	42,700 - 49,100	49,100 - 60,100	60,100 - 66,500	13,700	10,300	1,000
A	58	8IA	48,600 - 55,900	55,900 - 68,300	68,300 - 75,600	15,500	11,600	1,000
A	59	9IA	54,200 - 64,000	64,000 - 78,200	78,200 - 88,000	21,600	16,200	1,000

Effective 1/1/00

BellSouth Customer Markets Division
Interconnection Services
Professional Sales
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range	Middle of Range	Top of Range	Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	K2	K2A	44,600 - 51,300	51,300 - 62,700	62,700 - 69,400	24,000	18,000	1,000
A	K3	K3A	51,800 - 59,600	59,600 - 72,800	72,800 - 80,600	28,300	21,200	1,000
A	K4	K4A	57,800 - 66,500	66,500 - 81,300	81,300 - 90,000	31,700	23,800	1,000
A	K7	K7A	62,800 - 74,100	74,100 - 90,500	90,500 - 101,800	35,200	26,400	1,000
A	K8	K8A	62,800 - 74,100	74,100 - 90,500	90,500 - 101,800	35,200	26,400	1,000

Effective 1/1/00

BellSouth Customer Markets Division
Interconnection Services
Professional Sales
2000 Salary Structure

Gradation	Job Grade	Salary Administration Plan	Beginning of Range			Middle of Range			Top of Range			Base Incentive Compensation	Benefit Incentive Amount	Executive Incentive Fund
A	K2	K2A	44,600	-	51,300	51,300	-	62,700	62,700	-	69,400	24,000	18,000	1,000
A	K3	K3A	51,800	-	59,600	59,600	-	72,800	72,800	-	80,600	28,300	21,200	1,000
A	K4	K4A	57,800	-	66,500	66,500	-	81,300	81,300	-	90,000	31,700	23,800	1,000
A	K7	K7A	62,800	-	74,100	74,100	-	90,500	90,500	-	101,800	35,200	26,400	1,000
A	K8	K8A	62,800	-	74,100	74,100	-	90,500	90,500	-	101,800	35,200	26,400	1,000

CRSG Processing Time per LSOD
for
Line Sharing

SD = Systems Designer LSOD = Line Sharing Order Document					
Cost Element	**Cost Element Component**	**Functions Performed by CRSG**	**Function Performed By**	**INSTALL (Hours)**	**DISC (Hours)**
J.4	Line Sharing Splitter per System	LSOD receivd from CLEC by email; print & email to SD	Contractor	0.17	0.17
	All of the time & steps shown apply on a PER LSOD basis For the CRSG, it doesn't matter what size system, or jumpers or what Quantity, all work steps & times will be the same. Also, after I laid out the steps, it became apparent to me that even for the EU order when Loop Modification applies, the same steps & times will apply. However, the Loop Mod + EU LSR will be simultaneously, therefore, the time **SHOULD NOT** be duplicated in the cost for both Line Sharing AND Loop Modification - so do not include with Line Sharing, but assume it is included in Loop Modification.	Logged to BRITE tracking system	Contractor	0.05	0.05
		Assemble printed documents, prepare folder & hand-off to SD	WS10 Clerical or Contractor	0.12	0.12
		LSOD reviewed & amended, document folder & BRITE	JG56 SD or Contractor	0.25	0.25
		LSOD faxed to CCM	WS10 Clerical or Contractor	0.05	0.05
		LSOD receivd from CCM by fax; acknowledged & delivered to SD	WS10 Clerical or Contractor	0.17	0.17
		LSOD reviewed, document folder & BRITE & prepare LCSC Hand-off	JG56 SD or Contractor	0.25	0.25
		LSOD faxed to LCSC	WS10 Clerical or Contractor	0.05	0.05
		Verify LSOD received in LCSC; close BRITE & folder	JG56 SD or Contractor	0.17	0.17
		Folder verified & filed in archive	WS10 Clerical or Contractor	0.13	0.13
				1hr. 24min.	1hr. 24min.

Submitted by:
Debbie Timmons
205-321-4990

CRSG Cost Input
for
LINE SHARING Environment

Line Sharing Headcount Allocation - CRSG		

All Management Job Grades are on Sales Compensation.

Functions Performed	Performed by
LSR Rcpt & logging & folder preparation	Contractor
Backend folder close out & filing	WS10
See the product specific sheet tab	JG56 SD1 on Compensation FDC2210

Contractor Average Hourly Rate	$42.00

% Allocation Assumption:
The colume headed % UNE Work lists the people doing UNE work **today.** I do not know how to forecast how much Line Sharing will diminish the existing UNE work being done.

Has the Prod Mgr. Provided any forecast? If so, I guess their factors should be applied.

CRSG - UNE Headcount Allocation

Name	JG/Cont	% UNE Work	Type of Work or Comments
Ruby Neely	58	100%	Team Lead
Cheryl Lewis	58	100%	Team Lead
Joanie Mahan	Contractor	100%	Process orders
Cathy Compton	Contractor	100%	Process orders
Barbara Jones	**Contractor**	**100%**	**Process orders**
Leesona Nelms	**Contractor**	**100%**	**Process orders**
Jonathan Ryer	56	100%	Process orders
Kristy Seagle	56	100%	Process orders
Lillie Lawson	Contractor	**100%**	**Process orders**
Rose Morris	**Contractor**	**40%**	**Process orders**
Sonja Johnson	Contractor	**75%**	Data management / admin
Janie Norris	**Contractor**	**75%**	**Data management / admin**
Mary McCoy	WS10 Clk	25%	Clerical / admin
Sandy Lang	Contractor	100%	Clerical / admin
Charlotte Donlon	56	60%	Issue resolution / CRSG operational support
Monica Dodge	56	60%	Customer care
Titania Alexander	56	50%	Special construction estimates
Brenda Gibson	58	25%	Supervision & information management
Tracey Morant	58	10%	Supervision & customer relationship
Mitzi Link	59	90%	Supervision & leadership of CRSG

RED BOLD entries indicate a change since last submitted to Arlene Fredrickson & Pam Williams

Information prepared by:
Debbie Timmons
205-321-4990

LS-CRSG.XLS

This represents just one Sales AVP (JG61) work group that is a part of Interconnections Sales that would have work time related to the UNE environment in general

There are 2 other Sales AVP groups in Birmingham, 5 in Atlanta
I couldn't begin to predict what % of who works on UNE customers
The total Sales Entity is under Kenneth Ray JG64

It is next to impossible to further divide to the specific product level. e.g. UCL, UNTW, Xdsl
I think that would be driven by the customer sets and their business plans, and what their sales success ratios are and what the ultimate volumes would be. I think that would have to come from the Product Managers.

Name	JG/Cont	% UNE Work	Type of Work or Comments	Unit
Cathey, Marc	61	50%	Sales AVP	Acct. Team
Alvis, Rick	56	50%	Systems Designer I	Acct. Team
Bonner, Denise	58	50%	Systems Designer II	Acct. Team
Burgess, Kelli	58	50%	Systems Designer II	Acct. Team
Callahan, Leslie	K3	50%	Account Manager	Acct. Team
Carmichael, Rita	58	50%	Systems Designer II	Acct. Team
Carnes, Wayne	K3	50%	Account Manager	Acct. Team
Christian, Scott	K3	50%	Account Manager	Acct. Team
Clark, Susan M. (Terri)	58	50%	Systems Designer II	Acct. Team
Corley, Susan	WS10	50%	Clerical	Acct. Team
Davies, Kathy	58	50%	Systems Designer II	Acct. Team
Denham, Sharon	58	50%	Systems Designer II	Acct. Team
Douglas, F.W (Buck)	58	50%	Systems Designer II	Acct. Team
Ferreiro, Gene	K2	50%	Account Manager	Acct. Team
French, Bill	K8	50%	Sales Director	Acct. Team
Griffin, Scott	K2	50%	Account Manager	Acct. Team
Hammond, Diann	58	50%	Systems Designer II	Acct. Team
Hartley, Donna	K3	50%	Account Manager	Acct. Team
Hodges, Cynthia	58	50%	Systems Designer II	Acct. Team
Hogg, Scott	K2	50%	Account Manager	Acct. Team
Johnson, Wade	58	50%	Systems Designer II	Acct. Team
Kizziah, Glenda	WS10	50%	Clerical	Acct. Team
Kunze, Scott	K2	50%	Account Manager	Acct. Team
Laszlo, Joe	58	50%	Systems Designer II	Acct. Team
McElroy, Roger	58	50%	Systems Designer II	Acct. Team
McRae, Bob	58	50%	Systems Designer II	Acct. Team
Moore, Debbie	52	50%	Sales AVP Admin Assist	Acct. Team
Morrison, Bill	K3	50%	Account Manager	Acct. Team
Parker, Paul	K8	50%	Sales Director	Acct. Team
Pierce, Daphne	58	50%	Systems Designer II	Acct. Team
Ratliff, Rick	58	50%	Systems Designer II	Acct. Team
Ratliff, Wayne	58	50%	Systems Designer II	Acct. Team
Ray, John	K3	50%	Account Manager	Acct. Team
Reid, Kim	58	50%	Systems Designer II	Acct. Team
Robbins, Mark	K3	50%	Account Manager	Acct. Team
Ryer, Kurt	56	50%	Systems Designer I	Acct. Team
Temple, Gretchen	58	50%	Systems Designer II	Acct. Team
Timmons, Debbie	59	50%	Sales Support Director	Acct. Team
Washington, Darryl	K3	50%	Account Manager	Acct. Team
Wilburn, Mike	K8	50%	Sales Director	Acct. Team
Wilder, Shamron	56	50%	Systems Designer I	Acct. Team

Information submitted by:
Debbie Timmons
205.321.4990

MESSAGE
Subject: CRSG Resale Time Per Task Info
Creator: Debbie D. Timmons /m7,mail7a

Dated: [illegible] at [illegible]
Contents: [illegible]

Item 1

TO: Diann Hammond /m7,mail7a; PHONE=205-321-7727
Sandra Harris /m7,mail7a; PHONE=205-977-5600
Pat A. Rand /m6,mail6a; PHONE=205-402-7368

Item 2

Ladies,
Attatched is an email that has some files attached that get at some early Time Per Task efforts for traditional complex resale products. I hope this is what you need; please advise if it is not.

JUST DON'T USE ANYTHING YOU SEE FOR UNEs, THAT IS IN A SEPARATE DOCUMENT THAT IS MORE CURRENT THAT I WILL SEND YOU IF YOU WANT, BUT I HAVE BEEN WORKING DIRECTLY WITH ARLENE FREDRICKSON ON THOSE COST STUDIES.

Item 3

MESSAGE
Subject: Time Per Task Info
Creator: Debbie D. Timmons /m7,mail7a

Dated: 7/21/99 at 8:53
Contents: 4

Item 3.1

TO: Debby B. Feir /m2,mail2a; PHONE=770-936-3752

Item 3.2

Hope this is what you're looking for. There are 2 messages attached; 1 from March did not have validated UNE infor, the 1 from June provides the UNE component. Also, please pay very special attention to assumptions! We can discuss next week. Debbie Timmons

Item 3.3

MESSAGE
Subject: CRSG Business Case Input
Creator: Debbie D. Timmons /m7,mail7a

Dated: 3/31/99 at 16:49
Contents: 4

Item 3.3.1

TO: Marcus B. Cathey /m6,mail6a; PHONE=205-321-4900
William A. Schneider /m7,mail7a; PHONE=205-321-4904
CC: Brenda T. Gibson /m2,mail2a; PHONE=205-321-7765
Mitzi Link /m2,mail2a; PHONE=205-321-2991
Fred P. Monacelli /m7,mail7a; PHONE=205-321-7700
Tracey L. Morant /m2,mail2a; PHONE=205-321-3192

Item 3.3.2

Marc & William:

Please find attached 2 Excel spreadsheets that provide the results of our interviews & other points for consideration.

The file named **BC MAR`1.xls** contains 3 sheet tabs: Time per Task, Time per LSR, Assumptions & comments.

The file names **BCDETA`1.xls** contains many sheet tabs: They are basically the interview detail per individual interviewed.

William: Please let us know your availability to finalize this information and its incorporation in to the final presentation. Tracey Morant is available to review & discuss when you are ready. Again, we are looking to you to take the raw data and perform the trending analysis. **You will be most interested to know that the final count for March is 583 LSRs! This is the highest LSR count since our beginning.** Please use this amended number in your calculations. Brenda has sent you under a separate message the information for March 99, specifically the break down by Type of Service (TOS).

Please let us know what other information you require.

Thanks, Debbie Timmons
"BRING IT ON!!!"

Item 3.3.3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Item 3.3.4

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Item 3.4

MESSAGE Dated: 6/14/99 at 9:32
Subject: CRSG Headcount Estimate Based on UNE Forecast Contents: 3
Creator: Debbie D. Timmons /m7,mail7a

Item 3.4.1

TO: Marcus B. Cathey /m6,mail6a; PHONE=205-321-4900
Fred P. Monacelli /m7,mail7a; PHONE=205-321-7700

Item 3.4.2

Fred & Marc,
The attached spreadsheet contains some information relative to the subject. There are several sheet tabs so you may want to look at them all.

I think we are probably going to need to discuss it real time. I tried to make my assumpitions & calculations clear, but this kind of thing is usually hard to digest when it is cold. I also realize that it is only part of the picture; I need to do this for the entire load...I'm working on it!

I did want to get this in front of you though; I really don't know what approach we are wanting to take with McDougle.

Just let me know what questions you have or when you would like to discuss it.

Thanks, Deb

Item 3.4.3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

MESSAGE
Subject: Time Per Task Info
Creator: Debbie D. Timmons /m7,mail7a

Dated: [illegible] at [illegible]
Contents: 4

Item 1

TO: Debby B. Feir /m2,mail2a; PHONE=7[illegible]-[illegible]-3752

Item 2

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Item 3

MESSAGE
Subject: CRSG Business Case Input
Creator: Debbie D. Timmons /m7,mail7a

Dated: 3/31/99 at 16:49
Contents: 4

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CC: Brenda T. Gibson /m2,mail2a; PHONE=205-321-7765
Mitzi Link /m2,mail2a; PHONE=205-321-2991
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Item 3.4

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Item 4

MESSAGE
Subject: CRPG Headcount Estimate Based [illegible] Forecast
Creator: Debbie D. Timmons /m7,mail7a

Dated: [illegible]
Contents: [illegible]

Item 4.1

TO: Marcus B. Cathey /m6,mail6a; PHONE=205-321-4900
Fred P. Monacelli /m7,mail7a; PHONE=205-321-7700

Item 4.2

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Creator: Debbie D. Timmons /m7,mail7a

Dated: [illegible] at [illegible]
Contents: 4

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COMPLEX RESALE SUPPORT GROUP
BUSINESS CASE ANALYSIS
TYPE OF SERVICE - "TIME PER TASK"
30-Mar-99

Type of Service	Admin Time via Email	Admin Time via FAX	Prepare Folder/Notify CLEC	Pre-screen Start	SD BRITE Input	BOCRIS/ ORION Validation/ SAP Avail	Prepare Rate Quote/ Contract	Prepare/ Receive CLLI Request	Prepare Assump. AGMT	Service Inquiry	Assign CKT/SO/ TN's	Prepare Transmit Form	Fax to Center and PM	SD BRITE Input	Follow up for FOC w/ Ctr	Receive FOC	Verify Service Order	Prepare to send FOC	BRITE/folder Update	Closeout	Sum Time Total	Convert to Hours
Centrex (New Product)	20	20	10	75	5	5	15	n/a	n/a	n/a	n/a	25	5	10	5	5	5	10	5	5	205	3.42
Channelized Megalink	20	20	20	15	10	15	35	n/a	n/a	20	20	25	10	10	15	5	5	10	5	5	245	4.08
EBRU	20	20	65	30	5	n/a	n/a	n/a	n/a	n/a	n/a	10	n/a	5	5	5	n/a	5	5	5	160	2.67
ESSX/MultiServ	20	20	10	15	5	15	n/a	n/a	n/a	n/a	n/a	15	5	5	5	5	5	10	5	15	135	2.25
Frame Relay	20	20	15	15	5	25	n/a	20	n/a	25	20	20	10	10	20	5	10	5	5	5	235	3.92
ISDN, Basic Rate	20	20	10	15	5	30	n/a	n/a	n/a	n/a	n/a	5	5	5	10	5	5	10	10	15	150	2.50
ISDN, Primary Rate	20	20	10	15	5	10	n/a	20	n/a	65	20	10	5	20	5	5	10	10	10	5	245	4.08
Megalink	20	20	5	15	10	15	35	n/a	n/a	n/a	20	15	n/a	10	15	5	10	5	10	5	195	3.25
Termination Liability	20	20	5	25	5	n/a	n/a	n/a	25	n/a	n/a	n/a	10	5	n/a	n/a	n/a	n/a	5	5	105	1.75
Traffic Study	20	20	5	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25	5	5	5	n/a	5	20	5	5	110	1.83
Trunks*	20	20																				
Synchronet*	20	20																				
Other*	20	20																				

Time is based in minutes.
Administration Time is added to the Sub-Time Total.
*No formal interview conducted to support findings. Time per task based on input from Systems Designer

Interconnection Sales Total
Complex Order Handling
(Top Products 1QTR 1999)
"Time per LSR"

Product *("Complex", Acct. Team required)*	Average Time / Task *(Handling time)*	Frequency *(% tot orders)*	Weighted Avg. *(Hours)*	*LCSC* *Candidate*
Centrex (New Product Offering)*	3.42			
Channelized Megalink	4.08			
DID	2.33			
EBRU	2.67			
ESSX/MultiServ	2.25			X
Frame Relay	3.92			
ISDN, Basic Rate	2.50			
ISDN, Primary Rate	4.08			
MegaLink	3.25			
Termination Liability	1.75			
Traffic Study	1.83			
Trunks	2.33			X
Synchronet	2.33			
Other	1.83			
TOTAL				

*See ESSX/MultiServ
Average "Time per LSR" developed across all Account Teams. "Time per LSR will be revised as order volume increases
"Frequency" of orders was developed across all Account Teams and may vary based on individual account strategies
"LCSC candidates" are potential product/orders that can be moved to the LCSC by EOY 1999
Findings are based on interviews with CRSG Systems Designer representing the general assumption that a "clean order" was provided.

Assumption Set

Original Assumption Set:	
FOC	Rec'd by acct. team from VSC (DCSC or other ordering entity) electronically and forwarded to customer via Fax.
Billing	No billing explanations or clarifications.
Rework	Originally no rework, misdirected orders or account team errors were calculated into the assumptions; however, on May 28, 1997, an error factor of 12% was added to the equivalent headcount.
Personnel	Fully trained personnel.
Proj. Mgt.	No project mgt. or customer status function.

Reality
Electronic FOC's are forwarded to CIS.CRSG mailbox. Sonja Johnson opens, prints, sorts, retrieves from printer; stamps w/ receive date; puts in yellow FOC folder; delivers to SD. Usually 3 - 5 days to receive FOC. We do not receive all electronically.
CRSG is involved in billing explanations involving disputes. Specifically, any disputes resulting from Complex Service requests handled by the CRSG are resolved by the CRSG.
Approximately 30% of all complex orders received in the CRSG are placed into clarification. Thus, additional handling is required. Additionally, roughly 12% of orders received are misdirected.
Takes 6 - 12 mos. To have fully trained personnel capable of handling more detailed specific complex orders. The group is a sourcing pool for Acct. Teams; turned 50% of the group in 1998.
SD's do perform PM tasks by tracking orders to completion. Also, CRSG is continuously statusing CLECs on PON's. Average 2 status calls from CLEC per LSR.

Additional Assumptions:	
Special Assemblies	50% of MegaLink orders require special assemblies.
UNE Orders	The Service Inquiry portion for UNE ADSL/HDSL loops. Generally, this process takes approximately 20 minutes to complete.
Interval Guide / Expedites	CLECs often submit orders with the requested Due Date less than Interval Guide stated criteria. A review of KMC & e.spire LSRs for 1Q99 showed 19% & 11% EXPEDITED, & 63% & 77% Less than Interval Guide, respectively. These conditions add to handling time
Large Sales	The CRSG supports large sale projects involving high volume concentration of certain complex products I.e., Intermedia Communication's State of Georgia Y2K project.
Type of Service	The Type of Service being ordered by TOP 5 CLECs include: Frame Relay, ISDN-BRI, ISDN-PRI, ESSX/MS, and Megalink
ESSX/Centrex Station Line	The average station size per ESSX/Centrex is 25 stations.

Administrative - Receiving LSR's via Fax

Per Sherry Parsons & Sonja Johnson
General Assumption: Order is

Action	Time in Minutes	Assumptions
Sherry receives LSR via FAX.		
Picks up fax, verify # pages, stamp it. Create LSR acknowledgement and faxes to originator. Gets confirmation back and staples to original.	5	Fax is available and not a whole stack of orders.
Sherry puts LSR in Receive Tray on Sonja's desk..	2	
Sonja takes it out of tray. Makes sure you have LSR, EU page.	2	All info provided that is needed.
Sonja starts logging into BRITE and assigns to SD. Sonja stamps w/date & who assigned to.	5	
Sonja turns to manual log and log, giving date, CLEC, PON#, TOS, & SD.	3	
Sonja gets folder, puts project ID # on it, takes that order, places it in folder, if expedite puts in red folder, then delivers to SD's desk to their "in" tray..	3	
	20 min.	

E-mailed LSR"s

Administrative - E-Mail receipt of LSR.

Per Sonja Johnson
General Assumption: BRITE database is accessible and workload is running on the average.

Action	Time in Minutes	Assumptions
First thing in a.m. SJ goes to CIS.CRSG mail box in open mail to see if received any LSR's.		PC already on, already logged on, etc.
SJ opens LSR message & start printing it out. Order usually consists of 3 attachments: LSR, EU, Resale page: Ordering Document: and Diagram.	5	Receipt of 1 order.
Prints it. Has to sort out copies at printer and separate from everyone else's stuff. Makes sure has all pages.	2	
Returns to desk. Stamps w/receipt date stamp.	2	
Then SJ does "reply to message" back to customer via E-mail that it has been received & informs CLEC of assigned SD or informs CLEC that they'll be contacted by the assigned SD..	2	
Sonja starts logging into BRITE and assigns to SD. Sonja stamps w/date & who assigned to.	5	
Sonja turns to manual log and log, giving date, CLEC, PON#, TOS, & SD.	3	
Sonja gets folder, puts project ID # on it, takes that order, places it in folder, if expedite puts in red folder, then delivers to SD's desk to their "in" tray..	3	
	22 min.	

Administrative - Filing/Archival of Completed Folders

Per Sherry Parsons
General Assumptions: Order is completed & placed in SD's "completed" tray.

Action	Time in Minutes	Assumptions
		Folder been handed off to SD. Order has been completed SD has either placed in "completed" tray. or the SD.
Sherry goes around to each SD's desk several times/day to retrieve folders.		
Sherry pulls BRITE SD screen to verify that everything needed in BRITE has been populated. Then verifies CPX date is same as due date.	5	
If everything is verified in BRITE to be completed, Sherry stamps w/"verified" stamp and places in "to be filed" tray at her desk.	1	
If it hasn't, Sherry fills out query sheet indicating missing fields and takes it w/folder back to SD's "in tray".	5	
Sherry files the completed folders by month, by CLEC in alpha order, by PON's in numeric order under CLEC. If CLEC doesn't already have a folder in file cabinet, Sherry has to create one.	30	Sherry usually collects a day's worth of folders and files them all together.
Archiving - After 6 months of filing, Sherry removes the first month's folders and moves to archives. This is done by 5th of ea. mo.	150	
	3 hours; 11 min.	

Detail Process Analysis of ESSX/MultiServ Orders

Ave. Station Size Per Essx = 25 lines.
Per Barbara Jones
General Assumptions: New order to add a line to an existing ESSX.

Actions	Time in Minutes	Assumptions
Receives from Sonja.		
Try to pull up in BRITE via PON #. Assigns Start date. Looks at PON to ensure everything needed is there.	15	
Ensures order is "clean".	5	
Looks up acct. in BOCRIS to do further varification and prints records. Looks up in ORION to verify address.	10	
Calls customer and identifies herself as the SD working on order. Discusses expected DD w/customer. Begins filling out folder while on phone.	5	
SD begins order processing. Assignment of # - may need to call Line & Number (which involves filling out form & faxing). Hopefully customer knows what #'s they have and will provide them to us.	5	
Ensure USOC's/features on the lines are correct.	5	
Proceeds to fill out transmittal sheet, prints it, attaches any other pertinent papers along w/cover sheet and will fax to appropriate center and project manager.	15	
Makes appropriate notes on folder. Indicates wtg. On FOC and places in "waiting on FOC" tray.	5	
In MOST cases, a call has to be made to CRSC to inquire about the FOC. 1 out of 5 times, info has to be resent to center.	5	
When FOC has been faxed back to us, it is delivered by Sherry to SD. SD prints copy of order from BOCRIS to scan for errors.	5	
Gets folder out of "waiting on FOC" tray. Pull up order in BOCRIS, scan over it for errors, print out copy for folder. Updates front of folder w/rec'd date, order #, due date, tel. #, FOC rec'd from center, FOC to PM and other critical date fields...	5	
Updates BRITE w/same information that goes on front of folder.	5	
Type the FOC transmittal sheet.	5	
Send via fax or e-mail the FOC to CLEC and to the PM. Files folder in "waiting on completion" tray	5	
Follow-ups to DD's will begin to ensure order worked.	5	
Once worked, prints another copy of order from BOCRIS for the folder.	5	
Updates CPX date on front of folder, enters completion date in BRITE.	5	
Puts "C" on folder and places folder in "out tray" for Sherry to pick up and file.	5	
	115	
	1 hour, 55 min.	

Detailed Process Analysis of New Centrex Service

Per Judy Woods

General Assumptions: New Centrex Order received from the CLEC utilizing the New Centrex Product offering. Assumption is that CLEC provides a clean order including, matrix of features, ordering document and signed service agreement. CRSG does not assign

Actions	Time in Minutes	Assumptions:
Receive from Sonja.		
Prepare folder.	5	
Screen the LSR, EUI, DLR, Ordering Document and all other necessary documents provided.	75	
Log Start Date in BRITE and notify CLEC of assignment.	5	
Validate address and premise information via BOCRIS/ORION.	5	
Prepare rate quote via Quote Expert.	15	
Prepare the transmittal form, attach other forms including ordering document, LSR, etc. and fax to the CRSC and Project Manager.	25	
Update BRITE and folder with pertinent order information.	5	
Indicate waiting on FOC and place in "Waiting on FOC" tray.	5	
When FOC is received from Center, print a copy of the Service order to scan for errors.	10	
If no errors, then send FOC to CLEC and Project Manager using the FOC form found on the M:\Drive. Type FOC transmittal and forward to customer via fax.	5	
Note FOC information on folder and in BRITE.	5	
Place folder in "Holding for Completion" tray on desk.	5	
Follow up on due dates by checking pending service order in BOCRIS for completion.	5	
Once complete, print another copy of service order from BOCRIS and place in the folder.	5	
Update folder and BRITE with CPX information.	5	
Put "C" on folder and place in out tray for pickup by Sherry Parson's.	5	
	185	
	3 hours; 5 min.	

Meg

Detail Process Analysis for MegaLink

Per Glenda Cook

Steps	Time in Minutes	Assumptions
Received LSR in "in tray".		Assumption is that this is a "clean" order, requiring a contract.
Take out of folder. Screen for obvious necessary fields.Is looking at LSR, EU, & ordering document & other required information.	15	
Call customer to acknowledge receipt & enter start date into Brite.	5	
Go to BOCRIS & pull Q acct & prints. Begin filling out folder	15	
Goes to ORION to verify addresses. Print that, continuing to update folder, placing copy in folder and enters start date into BRITE.	10	
Pulls contract & prepares. Faxes CLEC a copy of blank contract and puts LSR in "clarification" at that time, stating that contract needs to be filled out, signed, and returned.	15	
While waiting for contract to be returned, goes into SOCS, documents order number, go to ATLAS & get circuit ID.	10	
Contract is received back from CLEC. Takes order out of Clarification, updates BRITE that out of clarification and updates PM info and any other necessary info is added. Goes to Quote Expert and completes price quote. Compares quote w/contract and makes	20	
Prepare transmittal form and faxes to appropriate center and project manager. (attaches all necessary pages, usually total of 8 pages).	15	
Updates BRITE & folder, indicating faxing of transmittal forms, etc. Places folder in "pending FOC" tray.	10	
Receives FOC. Pulls folder. Goes into BOCRIS and prints pending service order, goes back over transmittal, checks service order for errors & verifying due date. If due date not what customer requested, advises CLEC of the new due date. If an earlier d	20	
Proactively ensures order is completed. Checks BOCRIS looking for order.	10	
Once order is completed, goes into BRITE & updates CPX date and also notes folder of CPX'd info. Puts 'C' on folder and places in outbasket for filing.	5	
	150	
	2 hours, 30 min.	

Detail Process Analysis of Traffic Studies

Per Randy Ray

Actions	Time in minutes	Assumptions
Receive.		
Review info for all data. Look up Q account. Update folder.	15	
Create fax transmittal where we restate all the basic information on traffic study to NSDC.	15	
Send to Center.	5	
Log into BRITE & update folder.	5	
After 10 days, if haven't received anything, will follow up.	5	
Once info received, transmit info to customer via regular mail.	15	
Complete service transmittal to send to appropriate CRSC for record order to bill.	10	
Upon receipt of FOC from the center for the biling record, send FOC to CLEC.	5	
Check BOCRIS after two days to ensure CPX'd.	5	
Update BRITE & note folder. Make copy of BRITE screen, place in folder, and put folder in "out" tray.	5	
	85	
	1 hour; 25 min.	

Detail Process Analysis for Termination Liability

Per Judy Woods

General Assumptions: CLEC will assume termination liability.

Action	Time in Minutes	Assumptions
Prepare folder, screen the LSR, EU form. Verify info sent on termination liability & compare to the tariff charges. Notify CLEC of assignment.	30	
Log info into BRITE.	5	
Prepare Assumption Agreement and fax to CLEC.	25	
Receivce Assumption Agreement back from CLEC. Prepare transmittal and fax to CRSC.	10	
Update BRITE.	5	
Go to folder and close. Place folder in "to be filed" tray.	5	
	1 hour; 20 min.	

Details Process Analysis on EBRU

Per Judy Woods
General Assumptions: We have received the EBRU disputed charges.

Ave. Station Size Per Essx = 25 lines.

Steps	Time	Assumptions
Prepare folder and put info in BRITE.	15	
Review discrepancy that was sent with the customer service record in BOCRIS. Print and compare to the discrepancy.	30	
Call CLEC and go through each piece of the dispute and explain it - type of credit, overbilling, underbilling, etc. Usually have to give this info to someone other than the decision maker.	60	
Receive follow-up call from CLEC acknowledging receipt of info on dispute and authorizing us to go ahead and process, etc. Fax an authorization to EBRU telling them to go ahead and process order.	10	
Wait for EBRU to do their thing. EBRU forwards FOC to SD. FOC indicates that adjustment has been made to customer's record. Call made to customer notifying them that adjustments have been made. Update BRITE.	10	
	2 hours; 5 min.	

Detail Process Analysis of Frame Relay Orders

Per Janie Norris

General Assumptions: Fractional T-1 in BellSouth Territory.

Actions	Time in Minutes	Assumptions
Receives LSR from Sonja.		
Reviews LSR package to ensure all documents are there. These are LSR, EU, FR Ord. Doc., diagram. Checks for accuracy on these items on billing, speeds, any info on ordering doc or LSR that tells what they are ordering.	15	Assuming good clean order.
Begins folder preparation with PON, EU complete address, start date, etc.	10	
Notify CLEC of receipt and start.	5	
Validate "Q" account. Validate address in ORION. Go into SAP on "m" drive and deterine Cascade SWC and ICO mileage if needed.	25	Assuming BellSouth-served.
Request CLLI code by faxing to CLLI code coordinator. Update folder.	10	
Validate the site code in BOCRIS. Go to ATLAS to assign circuit ID#. Go to SOCS to request a preassigned order number and update folder accordingly.	20	
Make BRITE updates with start date, Project Mgr., RESH code, circuit ID info, # orders being issued, TOS info, Order #, and makes notation in remarks that CLLI code has been requested & date.	20	
Upon receipt of CLLI code, prepare Service Inquiry. Fax to appropriate CCM, SCM, & OSPE, approximately 3 pages each. Note folder & BRITE w/date being sent.	25	
Upon receipt of responses to Service Inquiry, note folder & BRITE.	5	
Prepare package for transittal to DCSC. Includes fax cover sheet, service transmittal form, fast package ordering document - total of 5 pages, plus first page of service inquiry form, the service inquiry responses from each dept., and the diagram, map or	20	
Receives FOC from DCSC via e-mail format. Go to BOCRIS and print pending orders, reviewing for accuracy and matching against previously gathered info. Puts billing # assigned on folder & in BRITE.	5	
Prepare FOC & send to CLEC & project mgr. Update folder & BRITE w/assigned due date, FOC to cust., FOC from center.	5	
One business after due date, go to BOCRIS print CPX'd order. Goes to folder & updates CPX date, marks folder w/"c" and goes to BRITE and update with CPX date. Puts printed copy of order in folder, places folder in tray for Sherry to pick up.	10	
	175	
	2hours; 55 min	

Detail Process Analysis for BRI

Per Randy Ray

Steps	Time	Assumptions
Sonja delivers LSR to SD.		
Ensure "clean order" Check DD, ensure w/in reason w/interval guide, check to see if expedite. Go to EU form, is it legible, is local contact populated. Go to Ordering document . . . Is it complete? Check to ensure DLR form is correct.	15	
Begin filled out top part of file folder w/necessary info. And populates receive date - start date.	5	
Go to BOCRIS, look up "Q" acct., validate the Q acct. & print. Go to ORION to validate address of EU & print out. Go to Netscape intranet for ISDN availability and verify whether or not ANSA is involved and switch type.	30	
Call customer & acknowledge receipt of order, obtain any further info needed, and let the know you are one working on it.	5	
Go to BRITE & complete necessary fields/steps.	5	
Pull up transmittal form from WORD. Complete form. Print out and complete fax cover sheet.	5	
Fax to DCSC & to Proj. Mgr. Typically 8 pages. Wait on confirmation. Go back to file folder & update.	5	
Puts flag on folder indicating date sent and place folder in "waiting on FOC" tray.	5	
Waiting on DCSC to send FOC. Proactive follow-up to DCSC, fax has to be created and follow-up performed by fax.	10	
FOC delivered to SD via Sherry. Look up order in BOCRIS, print order, verify details (order #, the two telephone #'s, & due date, & circuit ID info).	10	
Create an FOC transmittal form from WORD based on information acquired and fax to project mgr. and to CLEC.	10	
Go to BRITE & populate w/appropriate info. gathered.	10	
Update folder w/same.	5	
Put file in "waiting for completion" tray on desk. Three - five days after DD, to check BOCRIS to see if order has been CPX'd. If so, print copy of order, place in file. Update file folder. Update BRITE & print copy of BRITE screen. Place BRITE scre	10	Orders don't always CPX w/in 3-5 day interval. Estimate is 20% do not. This means the 10 minute step has to be repeated.
	130	
	2hours; 10 min.	

Detail Process Analysis for PRI

Per Leslie Earle

General Assumption: Clean order.

Steps	Time in Minutes	Assumptions
Sonja delivers LSR to SD's "in tray".		
Pull folder out of tray and note key info throughout folder.	5	
Review content, looking for LSR, EU, Ordering Document, possibly a directory listing request page, any misc. notes that may be added by CLEC. Looking for DD, if it's an expedite or not. Verify necessary fields are populated on each sheet.	15	
Call CLEC to acknowledge receipt of order.	5	
Go to BRITE and enter start date, PM name & #, Qty, etc.	5	
Go into BOCRIS for that state/site. Use ORION for address validation. Print ORION info & match address against what was on LSR.	10	
Prepare to obtain CLLI code. Go to "m" drive, look under "CLLI" and get state specific to the order. Take CLLI request form specific to that state and copy it to "WORD". Then you begin to make entries into the CLLI request form. Then print CLLI reque	10	
Put CLLI code request in folder, update folder & place folder in " waiting for response" tray.	5	
Receive CLLI code from the coordinator via either fax or call and folder noted that it was received..	5	
Begin SI process. Go to ISDN link screen on intranet & print. This gives SWC that PRI will be working from. Also note the SWC CLLI.	10	
Go into BOCRIS to preassign circuit ID#. Must verify site & prefix. Go to ATLAS in BOCRIS to get circuit ID#. Must go thru 3 different screens to get this. Print screen and place in folder.	5	
Go into BOCRIS to SOCS to get order #. Again must verify site. Print & place in folder.	5	
Jot down circuit ID# & order # on ORION sheet.	5	
Go "m" drive, product info. Go to PRI, SI, select type of CO. Copy to "WORD" and save as EU.	5	
Go into WORD to complete SI form, using previously pulled info from various sources. Review for accuracy. Save & print. Place in folder.	30	
Go to "m" drive to determine contact list for that specific state.	5	
Prepare fax cover pages, & begin faxing SI (6 pages) to 5 different depts. Wait for confirmation on each fax. Staple confirmation to each depts. fax.	20	
Note file folder & update BRITE that SI has been sent to all 5 depts. BRITE will ask for preassigned order number.	10	
Responses to SI begin coming in and folder is noted as they come in.	10	
Begin preparing service transmittal process which includes preparation of service transmittal, the association, the responses on the SI, and any other data necessary to process the request. Type service transmittal, print, proof read.	10	
Fax hand-off package to project mgr. & to appropriate center. Usually 16 - 17 pages each. Fax machines are preprogrammed w/numbers for frequently dialed depts.	5	
Go to BRITE and note that pkg. has gone to center & project mgr. Update folder w/same info.	10	
Put in folder & place folder in "waiting on FOC" tray.	5	
FOC shows up on desk. Pull folder from "wtg. On FOC" tray. Review FOC & print hard copy of service order from BOCRIS. Go to WORD & populate FOC doc w/needed info. Check for accuracy against SO. Fax to CLEC & project mgr.	15	
Update BRITE & folder. Place in "pending file" or "waiting on completion" folder.	5	
Begin follow-up for due date. Go into BOCRIS to check order status. Make appropriate notes in BRITE and on folder.	10	
	225	
	3 hours; 45 min.	

MESSAGE [illegible]
Subject: [illegible] Account Team List Information
Creator: Debbie D. Timmons /m3,mail3a
Contents:

Item 1

TO: Pam G. Williams /m3,mail3a; PHONE=[illegible]-977-5561
CC: Arlene Fredrickson /m3,mail3a; PHONE=[illegible]5-977-0391

Item 2

Please let me know what additional information you require.
Thank you,
Debbie Timmons
205.321.4990

Item 3

This item is of type MS EXCEL (obsolete filetype (4)) and cannot be displayed as TEXT

Cost Input
CRSG / Account Team
for
xDSL UCL UNE Environment

UNE Headcount Allocation			
All Management Job Grades are on compensation.			
Name	JG/Cont	% UNE Work	Type of Work or Comments
Ruby Neely	58	100%	Team Lead
Cheryl Lewis	58	100%	Team Lead
Joanie Mahan	Contractor	100%	Process orders
Cathy Compton	Contractor	100%	Process orders
Cheryl Brown	56	100%	Process orders
Laura Stephens	56	100%	Process orders.
Sonja Johnson	Contractor	20%	Data management / admin
Lillie Lawson	Contractor	20%	Data management / admin
Mary McCoy	WS10 Clk	20%	Clerical / admin
Sandy Lang	Contractor	100%	Clerical / admin
Terri Clark	58	20%	Engineering Interface
Charlotte Donlon	56	60%	Issue resolution / CRSG operational support
Monica Dodge	56	60%	Customer care
Titania Alexander	56	50%	Special construction estimates
Account Manager	K3	100%	Account management
Sales Support - Direct	58	100%	Support: Acct Team, CRSG & customers
Sales Support - Direct	59	35%	Support: Acct Team, CRSG & customers
Sales Support - Dept	58	75%	Support: Acct Team & Interdepartmetal POC
Brenda Gibson	58	25%	Supervision & information management
Account Team SDII	58	100%	Account management
Tracey Morant	58	10%	Supervision & customer relationship
Mitzi Link	59	90%	Supervision & leadership of CRSG

Information prepared by:
Debbie Timmons
205-321-4990

COST-C~1.XLS

Contractor/Temp	Jan. 2000- June 2000
Johnson, Sonja	$ 41.00
Nelms, Leesona	$ 36.50
Norris, Janie	$ 38.00
Jones, Barbara	$ 37.50
Lawson, Lillie	$ 52.00
Mahan, Joanie	$ 49.00
Compton, Cathy	$ 49.00
Lang, Sandy	$ 20.00

UNE Volume 99-00

Month	UCL	xDSL	Total	
Apr-99	0	24	24	
May-99	1	41	42	
Jun-99	0	63	63	
Jul-99	43	91	134	
Aug-99	125	300	425	
Sep-99	78	568	646	
Oct-99	708	476	1184	
Nov-99	1009	529	1538	
Dec-99	1119	700	1819	
Jan-00	1258	502	1760	
Feb-00	75	22	97	As of 12Noon 2/4
	4416	3316	7732	

POD Item No. 81
Attachment No. 15
Supporting Data for CNAM & LNP

CNAM
LNP

Calling Name Database
Local Number Portability

Access to other CNAM Databases:

1999 (data for Jan. thru Nov., from Sharon Parlin)		Adjusted to include BellAtlantic and SBC*	Annualized Costs (incl. BA & SBC)
Total Queries to other dbs	769,087,769	937,895,663	1,022,286,178
Total Charges for Queries	$ 11,196,710.35	$ 13,884,836.65	$ 15,147,094.53
Total Transport Charges	$ 886,368.28	$ 1,255,985.65	$ 1,370,186.16
Total Charges	$ 12,083,078.63	$ 15,140,822.30	$ 16,517,280.69
Total Cost Per Query	$ 0.01571098228	$ 0.0161571789	$ 0.0161571789

* BellAtlantic and SBC assumed to be equal to Ameritech for calculations.

Service Establishment Costs:

Implementation Work (per initial order)			
Implementation Manager's Time:			
Up-front coordination	30 minutes	JFC 0440	
CNARG Update	15 minutes	JFC 0440	
SMS Support Activity:			
Up-front coordination	10 minutes		
INSAC Time:			
Up-front coordination	Per Mary Edwards the numbers used in the last study for initial activities to set up a new customer are still valid.		
Est. initial PCs - Cust. STP			
Est. initial PCs - GTW STP			
Est. initial PCs - [illegible] STP			
Gateway Screening			
RSAG Time:			
~~Setup in SMS~~ per OCN	30 minutes	JFC3D33	
Andersen Time:			
New Connect:Direct	50 hours		
CNAM to existing Connect: Direct	35 hours		
CNAM to existing FTS	35 hours		
Service Order Activity (per order)			
Initial order (<10 point codes)	20 minutes	JFC 2300	(includes reissuing order to correct errors if needed)
Initial order (10-100 point codes)	80 minutes	JFC 2300	(includes reissuing order to correct errors if needed)
Initial order (>100 point codes)	480 minutes	JFC 2300	(includes reissuing order to correct errors if needed)
Subsqt. order (<10 point codes)	20 minutes	JFC 2300	(includes reissuing order to correct errors if needed)
Subsqt. order (10-100 point codes)	80 minutes	JFC 2300	(includes reissuing order to correct errors if needed)
Subsqt. order (>100 point codes)	480 minutes	JFC 2300	(includes reissuing order to correct errors if needed)
Supervisor's time	1%	JFC 4ATA	
(Note: Each rep in this group receives three weeks training on these type orders)			
Initial Billing Activity			
Entering contract into sys.	180 minutes	JFC 1200	
BBI Mgr. (Harold Alexander)	470 hrs/yr	JFC 1200	
Name Insert Activity - Initial Establishment			
CHUI:			
Implementation Mgr.	15 minutes	JFC 0440	
RSAG	30 minutes	JFC3D33	
Trouble Handling/Customer Instruction			
Implementation Mgr.	600 hrs/yr	JFC 0440	(this number is for CLEC accounts only. Avg per call 60 minutes, 50 calls per month.)
RSAG	2000 hrs/yr	JFC3D33	(this number represents total troubles for all types of CNAM customers. CLECs represent approx. 35% of total customers)
SMS Support	900 hrs/yr		(pay grade 58)
INSAC	120 hrs/yr	JFC 4324	
INSAC	380 hrs/yr	JFC 4320	
Billing Service Rep	192 hrs/yr		
Miscellaneous			
CNARG Administration	21 hrs/yr	JFC 0440	
Product Support	120 hrs/yr		(pay grade 58)
CHUI DIALS Charge-Card Renewal	$100 every three years		(this does not include initial setup of DIALS)
GT Changes/Additions	60 hrs/yr	JFC 4324	(this number represents time spent by INSAC making CNARG driven changes to GTTs not associated with new customers - Manager)
GT Changes/Additions	1320 hrs/yr	JFC 4320	(this number represents time spent by INSAC making CNARG driven changes to GTTs not associated with new customers)

Correct

In response to your request for information, I have attempted to define the required work activities and times for implementation of CNAM. All of the work is assigned to a Specialist, JFC 4320. However, all of the Global Title Translations work is currently being done by the Engineering Assistants. They receive a differential for the time spent on this activity.

I am also including some time for my coordination activities, JFC 4324, associated with the implementation of new service. I'm not sure that information has ever been included in previous attempts to define costs for this service. Use your best judgment on including this in your response.

I am splitting the work requirements up according to the interconnection status of the customer. Today we have several different types of CNAM interconnections. The most common are:

- ITCs and CLECs with small networks (small STPs or SSP only interconnection on our LSTPs)
- Large Interconnections with other RBOCs / Independents
- MTP routing for an ITC / CLEC with names in another provider's database*

* Thus far, these have been relatively small customers - 1-10 offices.

Small Networks - BST Database

Activity	Time Required	JFC
Up-front coordination activities	2 hr.	4324
Up-front coordination activities	5 hr.	4320
Establishment of initial point codes) (STP hosting CNAM SCPs)	1 hr.	4320
Establishment of additional point codes (STPs hosting CNAM SCPs)	7 hr. ***	4320
Establishment of initial point code (CNAM SCPs)	4.5 hr.	4320
Establishment of additional point codes (CNAM SCPs)	None (provided cluster is the same)	4320
Global title additions/changes	1.5 hr.**	4320
Gateway screening to allow queries	1 hr.	4320
SMS Changes - NPANXX definitions	30 - 60 min.	4320

*Based on the current # of STPs hosting CNAM SCPs
**Based on the current # of Gateway STPs
***Based on the current # of CNAM SCPs. This number is expected to increase over time.

Large Customers - BST Database (average based on previous interconnections)

Activity	Time Required	JFC
Up-front coordination activities	10 hr.	4324
Up-front coordination activities	10-20 hr.	4320
Establishment of initial point codes (RSTP) including gateway screening	16-24 hrs.	4320
Establishment of additional routing (STPs hosting CNAM SCPs)	28 hrs.*	4320
Establishment of point code (CNAM SCPs)	40 hrs. per SCP pair	4320
Global title additions/changes	40 hrs.	4320
SMS Changes - NPANXX definitions	5 hrs.	4320

*Based on the current # of STPs hosting CNAM SCPs
*Based on the current # of Gateway STPs

**Based on the current # of CNAM SCPs. This number is expected to increase over time.

1

MTP routing for ITC/ CLECs with names in another provider's database

Activity	Time Required	JFC
Up-front coordination activities	5 - 10 hr.	4324
Up-front coordination activities	5 hrs.	4320
Establishment of initial point codes (STP hosting the customers). Gateway screening	1 - 2 hr.	4320
Establishment of additional point codes (STPs hosting CNAM SCPs)	1-2 hrs.*	4320
Establishment of point code(s) (CNAM SCPs)	4.5 hrs.***	4320
Global title additions/changes (chgs. Made at Regional / Gateway STPs)	1.5 - 3 hrs. (depending on the number of GTTs)**	4320
Gateway screening to allow queries (RSTP) to allow response messages	1 hr.	4320
SMS Changes - NPANXX definitions	15-30 min (average).	4320

*Based on the current # of STPs hosting CNAM SCPs
**Based on the current # of Gateway STPs
***Based on the current # of CNAM SCPs. This number is expected to increase over time.

Additional point codes for existing customers:

Although the coordination time is not necessarily as long, the addition of new point codes for existing customers is along the same lines as adding a new point code for a small network. This can turn into a huge work effort all it's own. There have been many difficulties getting these customers working without a major troubleshooting effort. This is especially true with MTP routing arrangements since multiple companies are involved.

Maintenance of GTT Tables:

This is an ongoing effort in INSAC. The GTT tables must be updated monthly to account for new NPA-NXXs. This effort takes about **6-10 hours a month** to keep up with NPA-NXX changes and additions. This work effort will increase as BellSouth interconnects with additional customers and database providers.

As we discussed on the phone, there are several scenarios that might be considered a "disconnect" of CNAM service with BellSouth, but it is doubtful that a customer would actually terminate CNAM service altogether. In most cases, the "disconnect" will actually be a change in routing for a customer. The only circumstances that might warrant the term "disconnect" would be the retirement of a central office. Even in that situation, the NPA-NXXs would continue to exist and require some type of routing treatment.

It is unlikely that large customers, who have their own databases, would initiate changes of this nature, so I will primarily address small ITCs and CLECs. The only situation that comes to mind regarding large customers involves massive routing and screening changes. This could happen if a CNAM provider/customer changes HUB providers or decides to install, or remove, direct links into BellSouth. The scope of this project is impossible too difficult to define. Since it is unlikely, I would suggest that time requirements would need to be calculated on a case by case basis.

Small ITC / CLEC Behind BST's Network Changing CNAM Providers

This would require a coordinated cutover of the customer's existing service to the new CNAM provider. The customer may elect for BST to continue launching their CNAM queries, but direct their NPA-NXXs to the new database. However, it is also a possibility that the customer may choose to have the new CNAM provider launch their queries. Either situation requires changes to the routing and screening of the customer's queries and responses.

If the ITC/CLEC elects to have BST continue to launch their queries, the NPA-NXXs would be directed to the new provider's database. Assuming that BST is already connected to the new provider, this scenario is not a lot of work on our part. It requires that INSAC redirect the global titles to the new provider's database. The coordination required is minimal if the new provider has already been receiving some queries from the ITC/CLEC as part of the current interconnection agreement. This whole process shouldn't take more than **5-6 hours, per office (4-8 NXXs each)** once the paperwork is received from the new provider. That includes some up-front coordination with the customer and the new provider.

Things get more complicated if the ITC/CLEC wants the new CNAM provider to launch all of their queries. Changes would be required in the following locations:

ITC/CLEC switch(es) to start querying the new provider
BST STP pair connecting the customer to our network
Gateway STP pair connecting BST to the new CNAM provider
The new database provider to allow the ITC/CLEC to address their capability code.

The actual cutover would need to be coordinated between the ITC/CLEC, BST and the new CNAM provider. Past experience with arrangements of this type indicates that at least some time would be required for troubleshooting the new arrangement. It would be rare if all the pieces of the puzzle were actually in place at the time of the cutover. Here's my best guess on the time requirements:

Activity	Time Required	JFC
Up-front coordination activities	1 hr.	4324
Up-front coordination activities	2 hr.	4320
Screening and routing changes in associated BST STPs to allow queries to the new provider	1 hr.	4320
Global title changes	1.5 hr.**	4320

Gateway screening to allow queries and responses from the new provider for the customer. (Gateway STPs w/ connection to new provider)	1 hr.	4320
SMS Changes - NPANXX definitions	30 - 60 min.	4320
Cutover and troubleshooting	2 hrs.	4320

****Based on the current # of Gateway STPs**

PROPRIETARY

DECLASSIFIED

POD Item No. 81
Attachment No. 17
Supporting Data for Interoffice Facilities, Local Channel, Loop Concentration, Various Local Loops, and Feature Activation

INPUTS

Interoffice Facility @ OC-3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First isconnec Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqui	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	[illegible]	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =		42				
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

INPUTS

Interoffice Facility @ DS3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnec Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqui	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	✓ 2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =		42				
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

INPUTS

Interoffice Facility @ OC-12

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqui	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1116	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	12.0000	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =		42				
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

INPUTS

Local Channel & Local Loop @ OC-48

I OF

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First isconnec Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqui	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
6	Network	OUTSIDE PLANT ENGINEERING (FG30)	Engineering	32XX	2.0833	0.0000	2.0833	0.0000
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	12.0000	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =		42				
16			For LCSC work times longer than the standard half hour the manual work times below apply					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

UNBUNDLED LOOP CONCENTRATION

INPUTS

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1	Network	CCM (System A)	Engineering	3AXX	12.0000	0.0000	0.0000	0.0000
2	Network	CCM (System B)	Engineering	3AXX	5.0000	0.0000	0.0000	0.0000
3	Network	Network Plug-In Admin (PICS)——(Feat Activation)	Service Order	3A2X	0.0333	0.0167	0.0333	0.0167
4	Network	C.O. Install & Mtce Field - Ckt & Fac——(Feat Activation)	Connect & Test	431X	0.4417	0.1784	0.4392	0.1772
5	Network	Customer Point of Contact (LCSC)	Service Order	2300	1.5000	0.7500	0.0000	0.0000
6	Network	Circuit Provisioning Center (CPG)	Service Order	470X	0.1333	0.0333	0.0000	0.0000
7	Network	Network Engineering (PICS)	Service Order	341X	0.0333	0.0000	0.0000	0.0000
8	Network	Work Management Center (WMC)	Service Order	4WXX	0.7333	0.2500	0.0000	0.0000
9	Network	Access Customer Advocate Center (ACAC)	Service Order	471X	0.0633	0.0633	0.0633	0.0633
10	Network	Circuit Provisioning Center (CPG)	Engineering	470X	0.4917	0.0250	0.4917	0.0250
11	Network	CO Install & Mtce Field Circuit & Fac	Connect & Test	431X	0.4167	0.3330	0.1667	0.0633
12	Network	Access Customer Advocate Center (ACAC)	Connect & Test	471X	1.7900	10.8000	1.5400	1.8000
13								
14								
15								
16								
17								
18								
19								
20								
21								

Maximum of 25 entries per Cost Element #

Nonrecurring Labor

VOICE GRADE - 2 WIRE INTEROFFICE

D2.1 + 2.2

TELRIC INPUT FORM - NONRECURRING LABOR TIMES

Instructions:

1. Use this worksheet to record nonrecurring labor times to be input into the TELRIC calculations.
2. All amounts shown are per unit (e.g., per call, per loop, per MDU).
3. Input data, by Cost Element, leaving no blank lines. On next row after last line of data, type END in Cost Element Column.
4. All data on this form should be cell-referenced to study workpapers.
5. Do NOT change columns, headings, sheet name.
6. Use columns F & G when cost element has a single nonrecurring cost; use columns H, I, J, & K for elements with a first and additional nonrecurring cost; use columns L, M, N & O for elements with an initial and subsequent nonrecurring cost.
7. Study midpoint date is set at 6/00.
8. Input Cost Element Life (in months) on first row of data for each cost element. It is not necessary to repeat on each line.

Study Mid-Point Date (Mos.) Jun-00

State	Cost Element #	Cost Element Life (Mo)	Labor Expense Description (Limited to 25 characters)	JFC/ Regional	(For use w/ one NR) Installation Time (Hours)	Disconnect Time Hours	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours	Initial Installation Time (Hours)	Initial Disconnect Time Hours	Subsequent Installation Time (Hours)
TN	D 2.2	42	Service Order	2300	elec		[illegible]	[illegible]	0.0500	0.0500			
TN	D 2.2	42	Service Order	471X			.06 [illegible]	.18 [illegible]	.06 [illegible]	.18 [illegible]			
TN	D 2.2	42	Service Order	470X			0.1000	0.1200	[illegible]	[illegible]			
TN	D 2.2	42	Service Order	4N0X			0.7330	0.2000	[illegible]	[illegible]			
TN	D 2.2	42	Engineering	341X			0.0330	[illegible]	[illegible]	[illegible]			
TN	D 2.2	42	Connect & Test	431X			0.4100	0.3330	0.1000	0.0830			
TN	D 2.2	42	Connect & Test	471X			1.16 [illegible]	[illegible]	1.16 [illegible]	[illegible]			
TN	D 2.3	42	Service Order	2300	Manual		0.4500	0.2000	0.4500	0.2000			
	END												

Maximum of 25 entries per Cost Element #

1.1

06/21/00 14:35 NO.761 P007 020

D3.2 D3.2

INPUTS

	Source	Work Group	Labor Expense Description (Limited to 28 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1	Network	CUSTOMER POINT OF CONTACT (ICSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	[illegible] ~~0.0000~~	.18 0.0000	.06 ~~0.0000~~	.18 0.0000
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1800	0.1280	0.0000	0.0000
4	Network	WORK MANAGEMENT CENTER (WMC)	Service Order	4WXX	0.7330	0.2500	0.0000	0.0000
5	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0330	0.0000	0.0000	0.0000
6	Network	CO INSTALL & MTCE CKT & FAC (INTEL)	Connect & Test	431X	0.4160	0.3330	0.1860	0.0830
7	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Connect & Test	471X	1.06 ~~0.0000~~	[illegible] 0.0000	1.06 ~~0.0000~~	0.0000 [illegible]
8	Network	CUSTOMER POINT OF CONTACT (ICSC)	Service Order	2300	0.4500	0.2000	0.4600	0.2000

Cost element Life (Months) = 42

For LCSC work times different than the standard half hour the manual work times below apply

.5 - .05 =	0.45
.25 - .05 =	0.20
.5 - .05 =	0.45
.25 - .05 =	0.20

Maximum of 25 entries per Cost Element #

D50

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7/17/98 3:29 PM

D4.2

INPUTS

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1	Network	CUSTOMER POINT OF CONTACT (ICSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Service Order	431X	0.0417	0.0417	0.0000	0.0000
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1333	0.0333	0.0000	0.0000
4	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	.06 ~~0.0000~~ .18	0.0000	.06 ~~0.0000~~ .18	0.0000
5	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.7333	0.0250	0.0000	0.0000
6	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0000	0.0000	0.0000
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	0.5000	0.0000	0.5000	0.0000
8	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	0.4917	0.0250	0.4917	0.0250
9	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Connect & Test	471X	1.9 ~~0.0500~~	~~0.0000~~	1.9 ~~0.0500~~	~~0.0000~~
10	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	0.0333	0.3333	0.0333	0.3333
11	Network	CUSTOMER POINT OF CONTACT (ICSC) (Man-Add)	Service Order	2300	0.4500	0.2000	0.4500	0.2000
12								
13								
14								
15	Network	Cost element Life (Months) =	42					
16				For LCSC work times different than the standard half hour the manual work times below apply				
17								
18				.5 - .05 =	0.45			
19				.25 - .05 =	0.20			
20				.5 - .05 =	0.45			
21				.25 - .05 =	0.20			

Maximum of 25 entries per Cost Element #

DS1

7/17/98 2:18 PM

lo_dsl 3.xls

CO-CP

	A	B	C	D	E	F
99	NONRECURRING LABOR					
100	4-WIRE DS1 DIGITAL LOOP					
101			FIRST		ADDITIONAL	
102		JFC/	WORKTIMES (HRS)		WORKTIMES (HRS)	
103	DESCRIPTION	Payband	INSTALL	DISCONNECT	INSTALL	DISCONNECT
104	SERVICE ORDER					
105	CUSTOMER POINT OF CONTACT (ICSC)	2300	SEE BELOW			
106	CIRCUIT PROVISIONING CENTER (CPG)	470X	0.1333	0.0333	0	0
107	NETWORK PLUG-IN ADMINISTRATION (PICS)	341X	0.0333	0	0	0
108	WORK MANAGEMENT CENTER (WMC)	4WXX	0.7333	0.25	0	0
109	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	471X	.06 ~~[illegible]~~	.18 ~~[illegible]~~	.06 ~~[illegible]~~	.18 ~~[illegible]~~
110	INSTALL & MTCE-SPEC SVCS (SSIM)	411X	0.25	0.1667	0.1667	0.0833
111	WORK MANAGEMENT CENTER (WMC)	4WXX	0.1667	0	0	0
112	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	471X	0.3333	0	0	0
113	CUST PT OF CONT (ICSC)(MANUAL VS ELECT.)	2300				
114	WORK MANAGEMENT CENTER (WMC)*	4WXX	0.1667	0	0	0
115	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)*	471X	0.3333	0	0	0
116	ENGINEERING					
117	ADDRESS & FACILITY INVENTORY (AFIG)	400X	0.0167	0.0167	0.0167	0.0167
118	CIRCUIT PROVISIONING CENTER (CPG)	470X	0.4917	0.025	0.4917	0.025
119	OUTSIDE PLANT ENGINEERING (FG30)	32XX	3	0 ~~[illegible]~~	3	0 ~~[illegible]~~
120	CONNECT & TEST					
121	CO INSTALL & MTCE FIELD-CIRCUIT & FAC	431X	0.4167	0.333	0.1667	0.0833
122	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	471X	1.9 ~~[illegible]~~	0	1.9 ~~[illegible]~~	0
123	INSTALL & MTCE-SPEC SVCS (SSIM)	411X	3.667	0.5	1.25	0.0833
124	TRAVEL					
125	INSTALL & MTCE-SPEC SVCS (SSIM)	411X	0.3	0.3	0	0
126	[redacted]	[redacted]	0.375	0	0	0
127						
128	CUST PT OF CONT (ICSC) TOTAL TIME	2300	0.5	0.3333	0.25	0
129	WORK TIME ELECTRONIC INTERFACE		0.0500	0.0500	0.0500	0.0500
130	MANUAL ADDITIVE		0.4500	0.2833	0.2000	0.0000
131						
132						
133	*Order Coordination - Specified Conversion Time					
134	Assumes incremental manual order coordination required when an OLEC specifies a particular conversion time.					
135	Assumes 75% of central offices are not manned every day and 50% of the time the OLEC will specify conversion					
136	at a time when the central office is not manned.					
137	Loop will be ordered via an electronic interface.					
138						
139	COST ELEMENT LIFE IN MONTHS	42				

co - POP

NONRECURRING LABOR					
LOCAL CHANNEL - DEDICATED 2 WIRE & 4 WIRE VOICE GRADE					
		FIRST		ADDITIONAL	
	JFC/	WORKTIMES (HRS)		WORKTIMES (HRS)	
DESCRIPTION	PAYBAND	INSTALL	DISCONNECT	INSTALL	DISCONNECT
SERVICE ORDER					
CUST PT OF CONT (ICSC)	2300		SEE BELOW		
NTWK PLUG-IN ADMIN (PICS)	341X	0.0333	0.0333	0.0000	0.0000
CUST PT OF CONT (ICSC)(MANUAL VS ELECT.)	2300		SEE BELOW		
ENGINEERING ACAC		.06	.18	.06	.18
CKT PROV GRP (CPG)	470X	0.9666	0.1233	0.0000	0.0000
CONNECT & TEST					
NTWK SVS CLERICAL	2700	0.4605	0.1765	0.0000	0.0000
CO INSTALL & MTCE FIELD	431X	2.4336	0.0980	0.5468	0.0980
CO INSTALL MTC & ADMIN SW	4322	0.3833	0.0000	0.0000	0.0000
NTWK SVS CLERICAL	2700	0.2666 1.06	0.0000	0.0000	0.0000
ACC CUST ADV CTR (ACAC)	471X	~~[illegible]~~	0.0000	~~[illegible]~~ 1.06	0.0000
INST & MTCE-SP SVC (SSIM)	411X	3.1835	0.8930	0.8678	0.0153
TRAVEL					
INST & MTCE-SP SVC (SSIM)	411X	0.3000	0.0000	0.0000	0.0000
CUST PT OF CONT (ICSC) TOTAL TIME	2300	0.5000	0.3330	0.2500	0.0000
WORK TIME ELECTRONIC INTERFACE		0.0500	0.0500	0.0500	0.0500
MANUAL ADDITIVE		0.4500	0.2830	0.2000	0.0000
COST ELEMENT LIFE IN MONTHS	42				

Switched dedicated Traffic

found LTR

CO-POP

NONRECURRING LABOR					
LOCAL CHANNEL - DEDICATED DS1					
		INSTALL		DISCONNECT	
	JFC/	WORKTIMES (HRS)		WORKTIMES (HRS	
DESCRIPTION	PAYBAND	FIRST	ADDTL	FIRST	ADDTL
SERVICE ORDER					
CUST PT OF CONT (ICSC)	2300	SEE BELOW			
CO INSTALL & MTCE FIELD	431X	0.0417	0.0000	0.0417	0.0000
ACC CUST ADV CTR (ACAC)	471X	.06 ~~0.0833~~	.06 ~~0.0000~~	~~0.0000~~	~~0.0000~~ .18/.1
CKT PROV GRP (CPG)	470X	0.1333	0.0000	0.0333	0.0000
WORK MGT CTR (WMC)	4WXX	0.3577	0.1720	0.0000	0.0000
INST & MTCE-SP SVC (SSIM)	411X	0.3072	0.0000	0.1667	0.0000
CUST PT OF CONT (ICSC)(MANUAL VS ELECT.)	2300	SEE BELOW			
ENGINEERING					
OSP ENG (FG30)	32XX	3.0000	3.0000	0.0000	0.0000
CKT PROV GRP (CPG)	470X	0.4917	0.4917	0.0250	0.0250
ADD & FAC INVENT (AFIG)	400X	0.0163	0.0155	0.0000	0.0000
NTWK PLUG-IN ADMIN (PICS)	341X	0.0500	0.0000	0.0000	0.0000
CONNECT & TEST					
CO INSTALL & MTCE FIELD	431X	0.4167	0.4167	0.1667	0.1667
INST & MTCE-SP SVC (SSIM)	411X	2.1333	2.1333	0.3333	0.3333
ACC CUST ADV CTR (ACAC)	471X	~~[illegible]~~	~~[illegible]~~	0.0000	0.0000
		1.1	1.1		
TRAVEL					
INST & MTCE-SP SVC (SSIM)	411X	0.3000	0.0000	0.0000	0.0000
CUST PT OF CONT (ICSC) TOTAL TIME	2300	1.1007	0.0417	0.5333	0.0417
WORK TIME ELECTRONIC INTERFACE		0.0500	0.0500	0.0500	0.0500
MANUAL ADDITIVE		1.0507	0.0000	0.4833	0.0000
COST ELEMENT LIFE IN MONTHS	42				

INPUTS

Local Channel & Local Loop @ DS3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First isconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqu	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC) E	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
6	Network	OUTSIDE PLANT ENGINEERING (FG30)	Engineering	32XX	2.0833	0.0000	2.0833	0.0000
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

IO_DS3A.xls 1/13/99 11:26 AM

INPUTS

Local Channel & Local Loop @ DS3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqu	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
6	Network	OUTSIDE PLANT ENGINEERING (FG30)	Engineering	32XX	2.0833	0.0000	2.0833	0.0000
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				
					Maximum of 25 entries per Cost Element #			

INPUTS

Local Channel & Local Loop @ OC-3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqu	Service Order	2300	4.0000	0.0000	0.0000	0.0800
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0800	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
6	Network	OUTSIDE PLANT ENGINEERING (FG30)	Engineering	32XX	2.0833	0.0000	2.0833	0.0800
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				
					Maximum of 25 entries per Cost Element #			

INPUTS

Local Channel & Local Loop @ OC-12

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First isconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqu	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
6	Network	OUTSIDE PLANT ENGINEERING (FG30)	Engineering	32XX	2.0833	0.0000	2.0833	0.0000
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5866	3.7300	1.5866
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				
					Maximum of 25 entries per Cost Element #			

INPUTS

Local Channel & Local Loop @ OC-48

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1A	Network	CUSTOMER POINT OF CONTACT (LCSC)Service Inqu	Service Order	2300	4.0000	0.0000	0.0000	0.0000
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0800	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
6	Network	OUTSIDE PLANT ENGINEERING (FG30)	Engineering	32XX	2.0833	0.0000	2.0833	0.0000
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

INPUTS

FEATURE ACTIVATION @ DS3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1600	0.0600	0.1600
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				
					Maximum of 25 entries per Cost Element #			

INPUTS

FEATURE ACTIVATION @ OC-3

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Payband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1118	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.0333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				

Maximum of 25 entries per Cost Element #

INPUTS

FEATURE ACTIVATION @ OC-12

	Source	Work Group	Labor Expense Description (Limited to 25 characters)	JFC/ Parband	First Installation Time (Hours)	First Disconnect Time Hours	Additional Installation Time (Hours)	Additional Disconnect Time Hours
1	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	0.0500	0.0500	0.0500	0.0500
2	Network	ACCESS CUSTOMER ADVOCATE CENTER (ACAC)	Service Order	471X	0.0600	0.1800	0.0600	0.1800
3	Network	CIRCUIT PROVISIONING GROUP (CPG)	Service Order	470X	0.1116	0.0412	0.0000	0.0000
4	Network	INSTALLATION & MTCE CENTER (IMC)	Service Order	401X	0.2666	0.2666	0.2666	0.2666
5	Network	CO INSTALL & MTCE-SWITCH EQUIP	Service Order	430X	0.1333	0.1166	0.0833	0.1166
7	Network	NETWORK & ENGINEERING PLANNING (FG20)	Engineering	31XX	2.2500	0.0000	0.0000	0.0000
8	Network	NETWORK PLANNING & ENGINEERING (PICS)	Engineering	341X	0.8333	0.0333	0.0000	0.0000
9	Network	CO INSTALL & MTCE CKT & FAC (NTEL)	Connect & Test	431X	3.7300	1.5966	3.7300	1.5966
10	Network	CIRCUIT PROVISIONING GROUP (CPG)	Connect & Test	470X	1.6640	0.2626	1.6640	0.2626
11	Network	ACCESS CUSTOMER ADVOCATE CENTER (UNE)	Connect & Test	471X	1.9000	0.0000	1.9000	0.0000
12	Network	CUSTOMER POINT OF CONTACT (LCSC)	Service Order	2300	1.1458	0.4775	1.1458	0.4775
13								
14								
15	Network	Cost element Life (Months) =	42					
16			For LCSC work times longer than the standard half hour the manual work times below apply.					
17								
18			1.1958 - .05 =	1.1458				
19			.5275-.05 =	0.4775				
20			1.1958 - .05 =	1.1458				
21			.5275-.05 =	0.4775				
					Maximum of 25 entries per Cost Element #			

BELLSOUTH TELECOMMUNICATIONS, INC.

FPSC DKT NO. 990649-TP

STAFF'S 8^{TH} REQUEST FOR PRODUCTION OF DOCUMENTS

POD NO. 85

PROPRIETARY

DECLASSIFIED

BSP

632-205-215BT

Issue 6, January 1982

700-, 701-, AND 702-TYPE CONNECTORS WIRE JOINING

1. GENERAL

1.01 This section describes the method of joining aluminum or copper conductors, pulp, paper or PIC paired cable of any gauge or combination of gauges without stripping the insulation using the 700-, 701-, and 702-type connectors pressed with the E or H connector presser as outlined in Section 081-852-130. When splicing ten pairs or less, the G longnose pliers may be used as outlined in Section 081-020-133. In addition to paired cable, these connectors may be used to join conductors in the type of wires listed below:

D station wire

SK station wire

D and E inside wiring cable

B service wire

C (2-pair) service wire (BSW-2/22-C)

C (5-pair) service wire (BSW-5/22-C)

E armored service wire (BSW-2/22-GRE)

D underground wire (strip insulation)

D and E rural wire (strip insulation)

E buried wire (strip insulation, BSW-1/19-GRE).

1.02 This section is reissued to include the 700-3BR connector which is a flame resistant unfilled connector for bridging pulp or PIC insulated cable. Revision arrows are used to emphasize the more significant changes.

1.03 The 700-type connectors may be used for joining aluminum to aluminum, aluminum to copper, or copper to copper conductors. The 701- and 702-type connectors are used for joining copper or copper-steel conductors only. The 700-3BR →and 700-3BRT← connectors are not approved for joining aluminum conductors.

NOTE: ***The →700-3BR, 700-3BRT,← 701-2AR, 701-2ART, 702-2AR, and 702-2ART connectors are for wire joining in pulp or paper cable and in building and entrance facilities requiring flame retardant materials.***

1.04 These connectors are used in any of the following wire joining tasks:

1. Straight-splice foldback method described in Section 632-115-101

2. Butt-splice method described in Section 632-055-201
3. Bridge-tap splice method described in this section
4. Bridge-splice foldback method described in Section 632-115-101
5. For other wire joining tasks, refer to the practice covering the enclosure to be used.

1.05 Generally, the 700-, →701-, and 702-type← connectors should not be used to splice cables larger than 25 pairs since modular connectors are more economical.

> **WARNING:** ***These connectors shall not be exposed to solvents or solvent fumes, such as B cleaning fluid, acetone, etc. Such solvents can damage or destroy the plastic connector parts.***

2. DESCRIPTION

700-, 701-, and 702-Type Connectors

2.01 All 700-, 701-, and 702-type connectors (Fig. 1) consist of the following:

1. A plastic body with:
   - **a.** Two or three holes for inserting the conductors; one conductor per hole
   - **b.** Flexible fingers which position the conductors and provide strain relief after pressing.
2. A plastic cap with:
   - **a.** A metallic insert for contacting and joining the conductors.
   - **b.** A filling compound for sealing (except →700-3BR, 700-3BRT,← 701-2AR, 701-2ART, 702-2AR, and 702-2ART).
   - **c.** A test point for contacting the joint without piercing the conductor insulation. This test point is covered with a thin plastic membrane which is punctured with the test pick to make contact with the back side of the metallic insert as shown in Fig. 2.

Important: This puncture must be resealed with B sealant AT-8502 to fully restore the original integrity of the connector (required for filled codes only).

700-3B and 700-3BT Connectors

2.02 The 700-3B connector differs from the general description as follows:

1. A removable side wall to open a through slot to receive the through wire when bridge-tap splicing
2. Plastic parts are clear and untinted.

Fig. 1—700-Type Connector

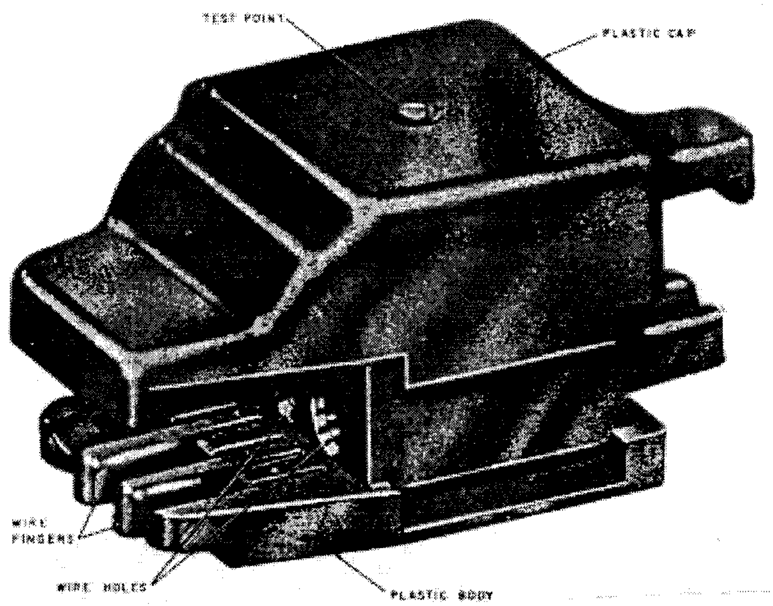
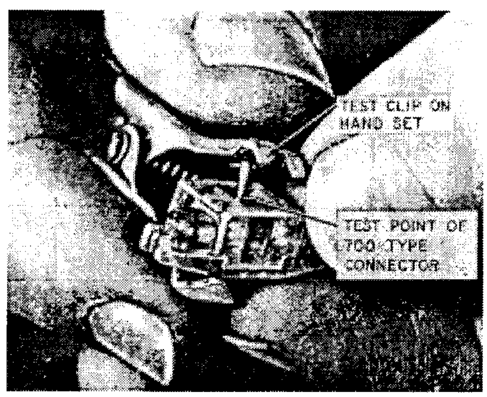


Fig. 2—Contacting Joint



2.03 The 700-3B connectors are provided in boxes of 300 for use with E connector presser.

2.04 The 700-3B connector is used →as listed inTable A ←.

2.05 The 700-3BT connectors are identical to 700-3B except they are mounted on tape strips, 16 connectors to the strip, for use with the H connector presser. They cannot be used for half-tapping when inserted in the H connector pressers.

700-3BR and 700-3BRT Connectors

2.06 →The 700-3BR and 700-3BRT connectors are identical to the 700-3B and 700-3BT connectors except:

1. The plastic parts are yellow tinted.
2. They do not contain sealant.
3. They are fire retardant and are for use in buildings for bridging pulp and PIC cable.
4. They are not approved for use on aluminum conductor cable.←

701-2B and 701-2BT Connectors

2.07 The plastic parts of the 701-2B and 701-2BT connectors are clear with blue tinted caps.

2.08 The 701-2B connectors are provided in boxes of 300 for use with the E connector presser. The 701-2BT connectors are mounted on tape strips, 20 connectors to the strip, for use with the H connector presser.

2.09 The 701-2B and 701-2BT connectors are used →as listed in Table A←.

701-2AR and 701-2ART Connectors

2.10 The 701-2AR and 701-2ART connectors are identical to the 701-2B except:

1. The plastic parts are yellow tinted.
2. They do not contain sealant.
3. They are fire retardant and are for use in buildings and entrance facilities requiring fire retardant materials.
4. They are not for nonpressurized cable use or for use on aluminum conductor cable.
5. The 701-2ART connectors are mounted on tape strips for use in the H connector presser.

→ TABLE A ← APPLICATION OF 700-TYPE CONNECTOR

	CONNECTOR										
ION	700-3B	700-3BT	700-3BR	700-3BRT	701-2B	701-2AR	701-2ART	701-2BT	702-2B	702-2AR	702-2A
per-steel conductors											
	17-26 ga	17-26 ga									
			19-26 ga	19-26 ga	19-26 ga	19-26 ga	19-26 ga	19-26 ga			
	17-26 ga	17-26 ga									
			19-26 ga	19-26 ga							
/OR ru	17-26 ga										
ru			19-26 ga						19-26 ga	19-26 ga	19-26 ga
ru	17-26 ga										
ru er			19-26 ga								
	E	H	E	H	E	E	H	H	E	E	H

	CONNECTOR										
ION	700-3B	700-3BT	700-3BR	700-3BRT	701-2B	701-2AR	701-2ART	701-2BT	702-2B	702-2AR	702-2A
per-steel conductors											
	Universal Connector Sealed	Preferred for 3-wire and 17-ga splicing sealed	Flame retardant — unsealed		Preferred for 2-wire splicing — copper sealed	Flame retardant — unsealed		Preferred for 2 wire splicing — copper sealed	Half tapping of copper sealed	Flame retardant — unsealed	

702-2B and 702-2BT Connectors

2.11 The 702-2B connector differs from the general description as follows:

1. It has one hole for inserting the conductor and one through slot for bridge tap splicing.
2. The plastic parts are clear with blue tinted caps.

2.12 The 702-2B connector is used →as listed inTable A ←.

702-2BT Connector

2.13 The 702-2BT connectors are the same as the 702-2B connectors except that they are taped twenty to a strip for use with the H connector presser***only.***

702-2AR and 702-2ART Connectors

2.14 The 702-2AR connector is identical to 702-2B except:

1. The plastic parts are yellow tinted.
2. It does not contain sealant.
3. It is fire retardant and for use in buildings and entrance facilities requiring fire retardant materials.
4. ***It is not for use on aluminum conductor cables.***
5. The 702-2ART connectors are mounted on tape strips for use in the H connector presser.

E Connector Presser

2.15 The E connector presser (Fig. 3) is specially designed for pressing all 700-, →701-, and 702-type← connectors. Proper use of this tool assures that good joints will be made under ***all*** conditions of conductor size and number, as well as temperature.

2.16 The E connector presser consists of:

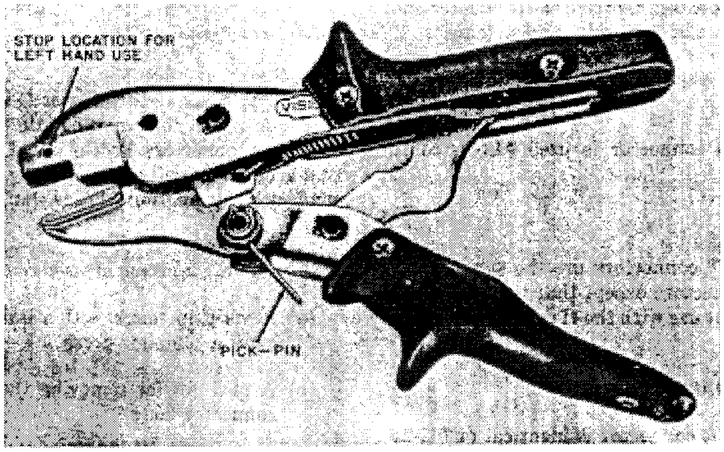
1. A visegrip toggle action linkage which indicates a complete press

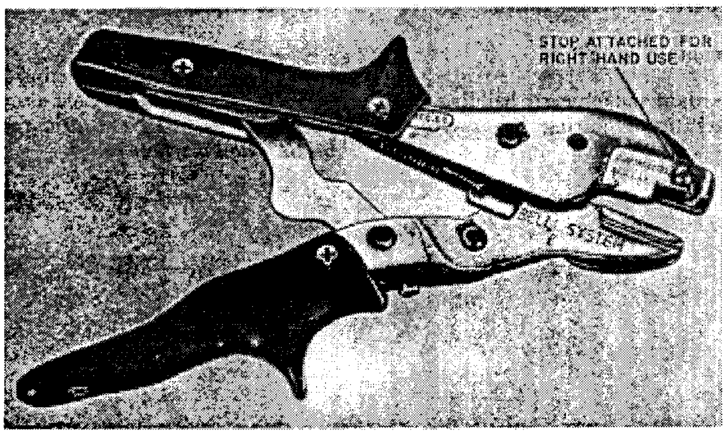
2. A pick-pin for removing the sidewall of the connector body

3. A stop to aid in positioning the connector prior to pressing.

2.17 The presser is factory adjusted to provide long life under normal field usage and wear. ***It is not designed for field adjustment and should be handled with care.***

Fig. 3—E Connector Presser





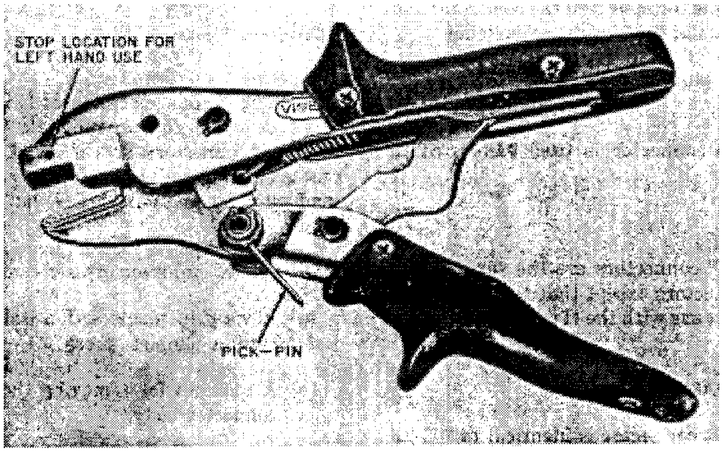
Checking the E Connector Presser

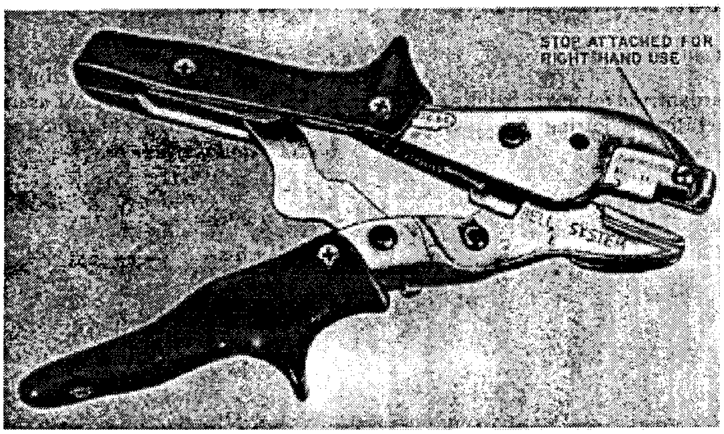
2.18 Check tool as shown in Fig. 4. Press weekly or immediately after being dropped or severely struck by other tools or equipment.

Maintenance

2.19 No maintenance other than cleaning followed by lubricating with light oil is required. KS-7860 petroleum spirits or other equivalent solvents may be used for cleaning.

Fig. 4—Checking E Connector

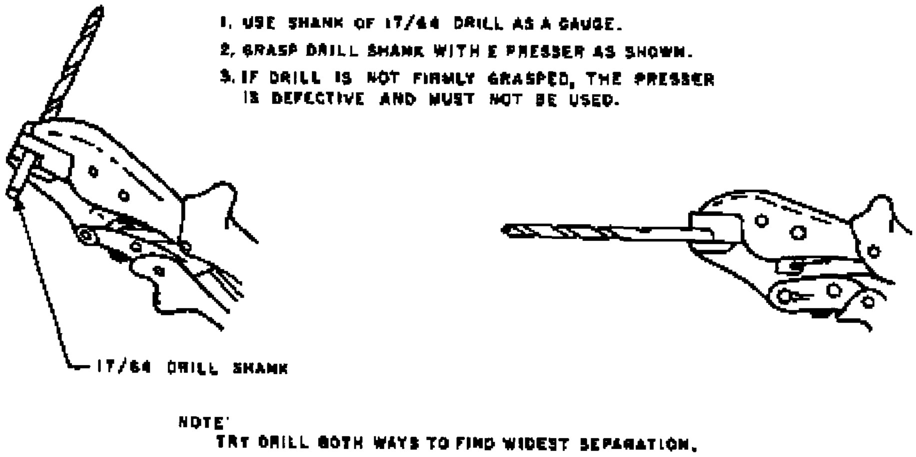




H Connector Presser

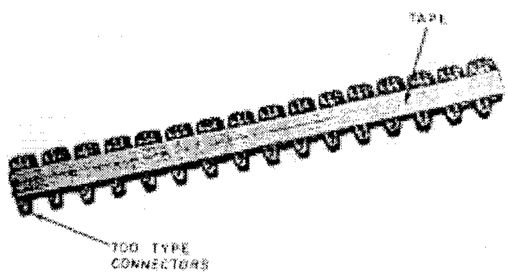
2.20 The H connector presser (Fig. 5) is a magazine-fed tool for hand pressing the 700-3BT, →700-3BRT← 701-2ART, 701-2BT, 702-2ART, and 702-2BT taped connectors.

Fig. 5—H Connector Presser



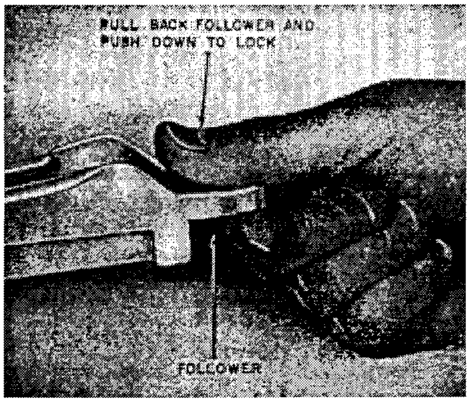
2.21 Connectors on tapes (Fig. 6) are loaded into the magazine as follows:

Fig. 6—Connector on Tapes



1. Pull the follower back and push down to lock (Fig. 7).

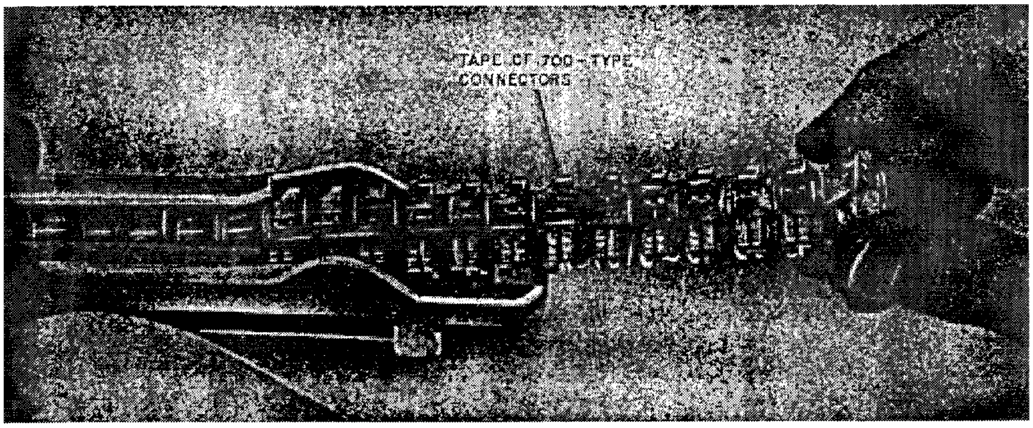
Fig. 7—Pull Back Follower and Lock



2. Load connector as shown in Fig. 8.

3. Release the follower to position behind the connectors.

Fig. 8—Loading H Connector Presser



3. RECOMMENDED APPLICATIONS

3.01 Recommended applications of 700-, 701-, and 702-type connectors and E and H connector pressers are shown in Table A.

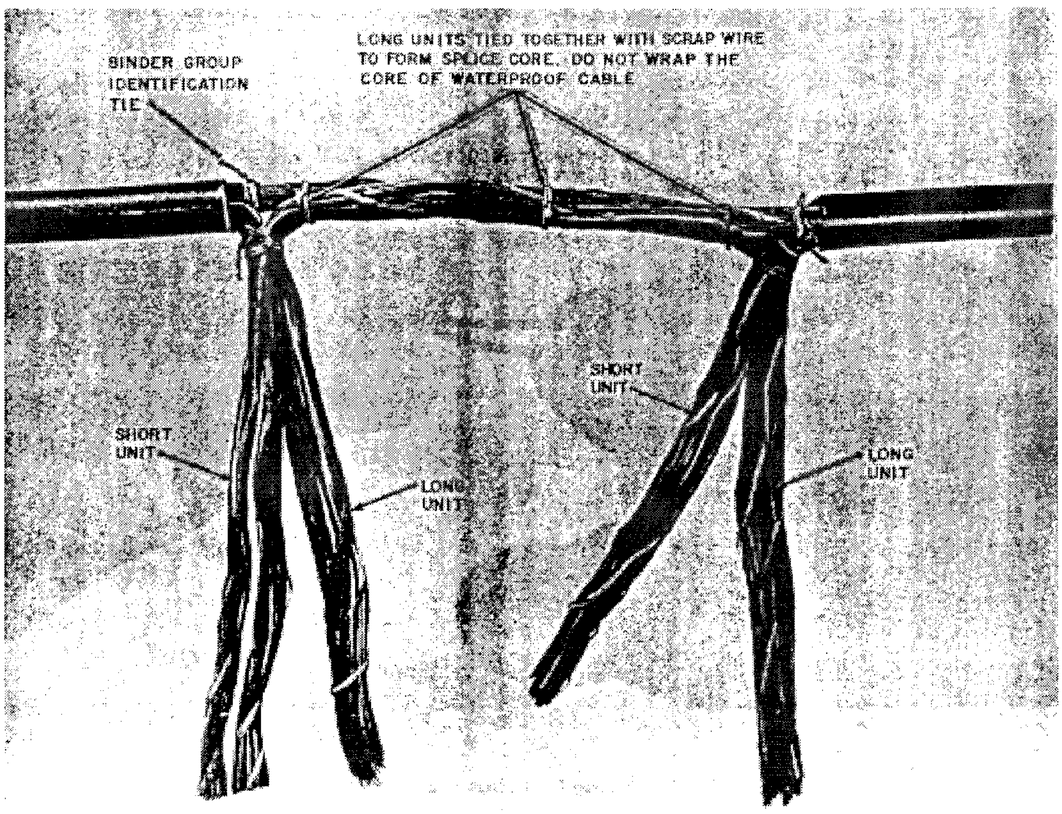
4. FORMING AND JOINING CONDUCTORS

NOTE: The cable sheath opening should be prepared in accordance with the type of closure to be used. This information is covered in the practice that describes the installation of the various closures for aerial, underground, and buried cables.

Straight-Splice Using Foldback Method

4.01 Form the splice core and conductors as outlined in Section 632-115-101 and as shown inFig. 9 . ***Do not wrap the core of waterproof cable.*** Half hitching the group binders is sufficient for binder group identification when splices are made in below ground closures. On closures where reentry is anticipated, such as pedestal closures, etc, binder group identification is accomplished with scrap wire having the same color insulation as the group binders, or by using commercially available color coded ties.

Fig. 9—Splice Core Prepared for Straight Splice—Foldback Method



NOTE:
CABLE SHEATH BONDING ARRANGEMENTS OMITTED FOR CLARITY—REFER TO BSP COVERING CLOSURE TO BE USED FOR DETAILS

4.02 Join the conductors of the matched long and short units using 700- or 701-type connectors and E connector presser as follows. The use of the H connector presser is outlined in paragraph 4.03. A more detailed description is outlined in Section 081-852-130.

A. Select the pairs to be spliced, then separate the tip and ring of the pairs matching ring to ring and tip to tip.

B. ***→Cut the matched wires evenly and visually check the ends to assure that the wire and***

insulation are the same length. This is extremely important due to the insulation on waterproof cable conductors stretching during removal of waterproof compound. Fully insert the wires in the holes of the connector (Fig. 10) and visually check that the wire extends all the way into the connector.←

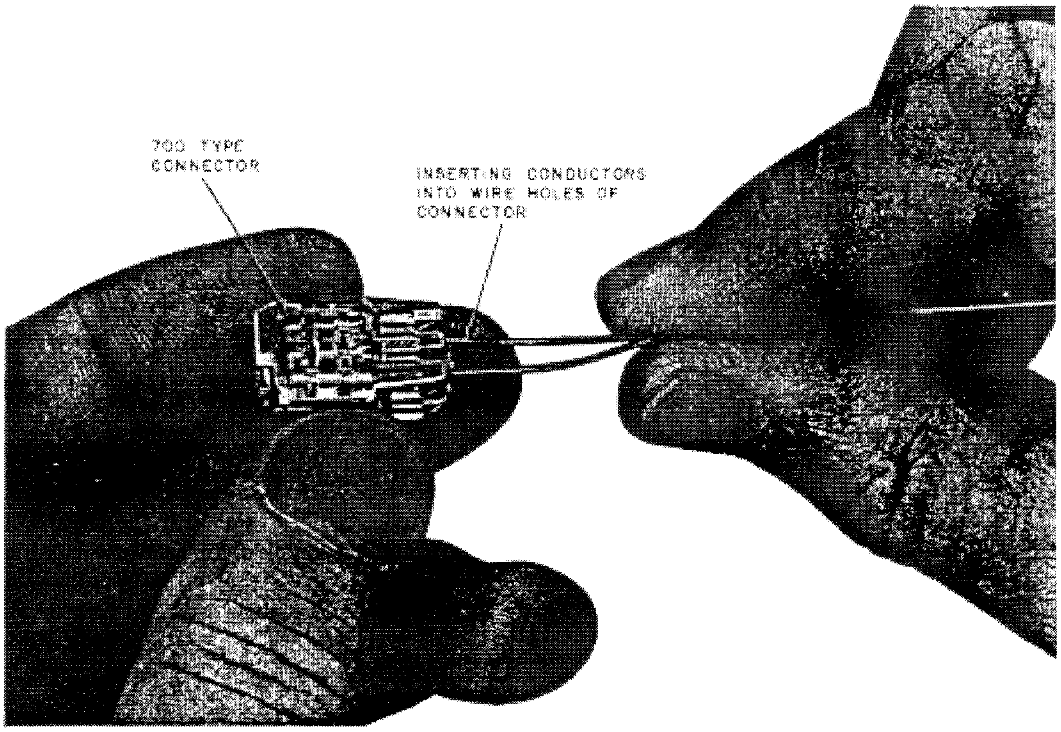


Fig. 10—Placing Conductors Into Connector

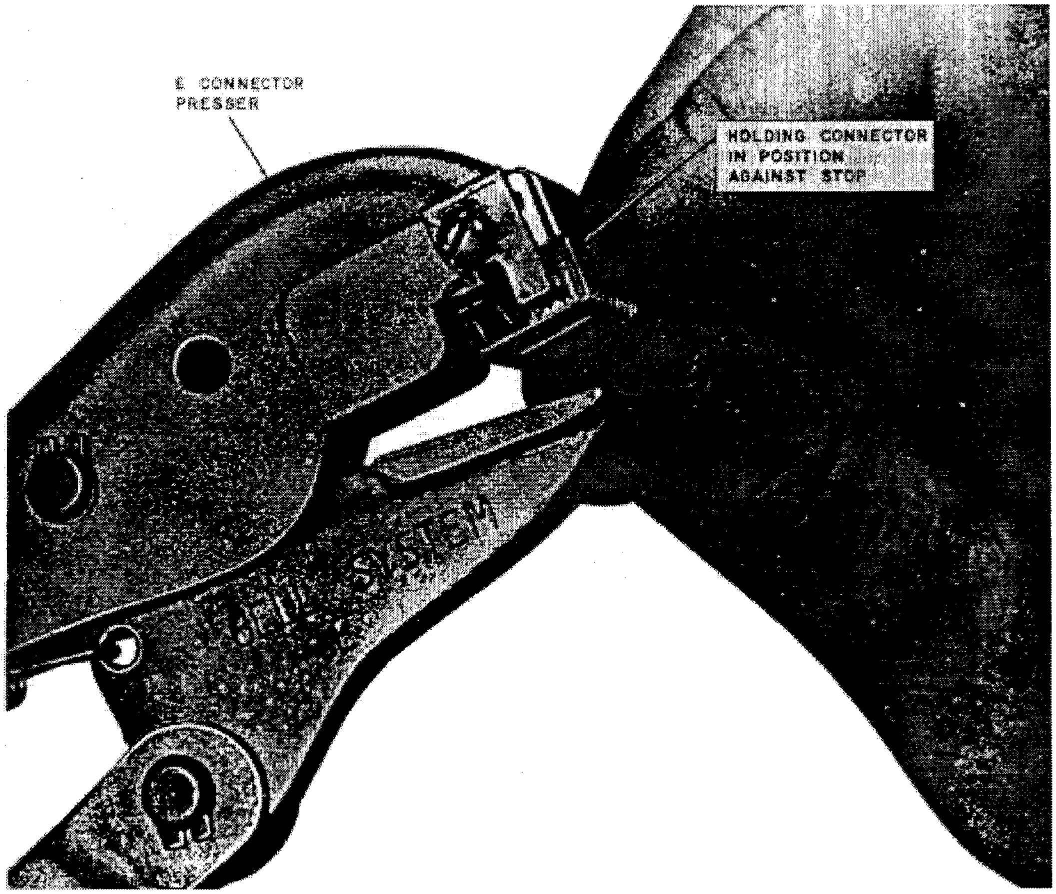
C. Using the E connector presser, press the connector (Fig. 11). If paper insulated, twist the wires together after pressing to prevent unraveling.

4.03 Load the H connector presser with the appropriate connector listed in Table A as outlined in paragraph 2.21.

4.04 If the H connector presser was loaded with connectors for splicing, as listed in Table A, proceed as outlined in (a) through (c). If loaded with half-tapping connector, proceed to paragraph 4.13.

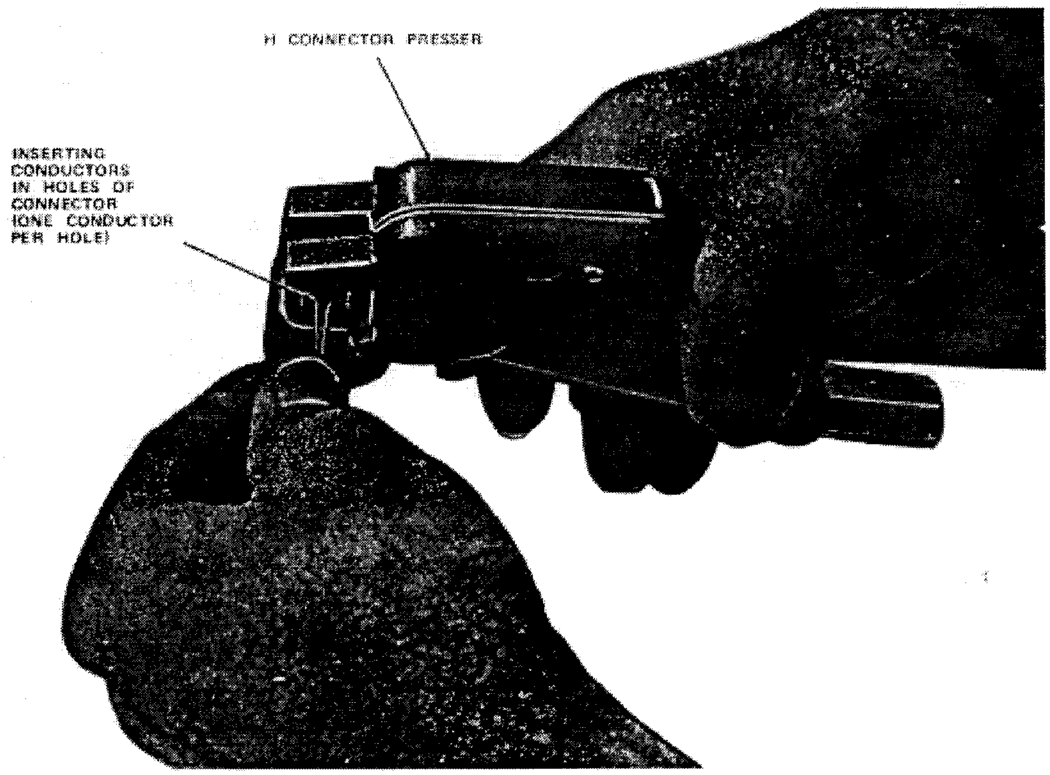
A. Select the pairs to be spliced, then separate the tip and ring of the pairs, matching ring to ring and tip to tip.

Fig. 11—Pressing Connector



B. →*Cut the matched pairs evenly and visually check the ends to assure that the wire and insulation are the same length. This is extremely important due to the insulation on waterproof cable conductor stretching during removal of waterproof compound. Fully insert the wires in the holes of the connector (Fig. 12) and visually check that the wire extends all the way into the connector.*←

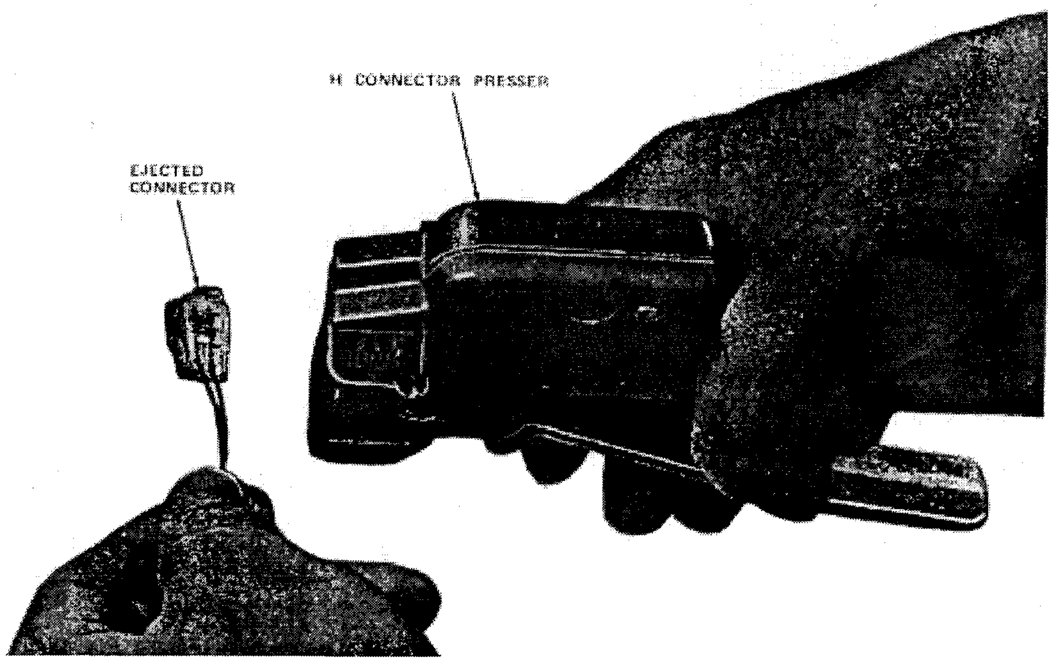
Fig. 12—Inserting Conductors in Holes of Connector



C. Press the handle of the presser to complete the splice.

D. The pressed connector will eject from the tool when the handle is released (Fig. 13). If the connector does not slide out of the tool easily, ***repress the handle.***

Fig. 13—Ejected Pressed Connector



4.05 →Splice the 25-pair unit in 10-, 10-, and 5-pair staggered clusters and tie them to the splice core as shown in Fig. 14. Then splice the other pairs of the cable in 10-, 10-, and 5-pair staggered clusters and tie to splice core as shown in Fig. 15. Test through splice to verify joints.←

4.06 Wrap the completed splice as outlined in the Bell System Practice covering the splice closure to be used.

Fig. 14—Half of Units Spliced and Tied to Core

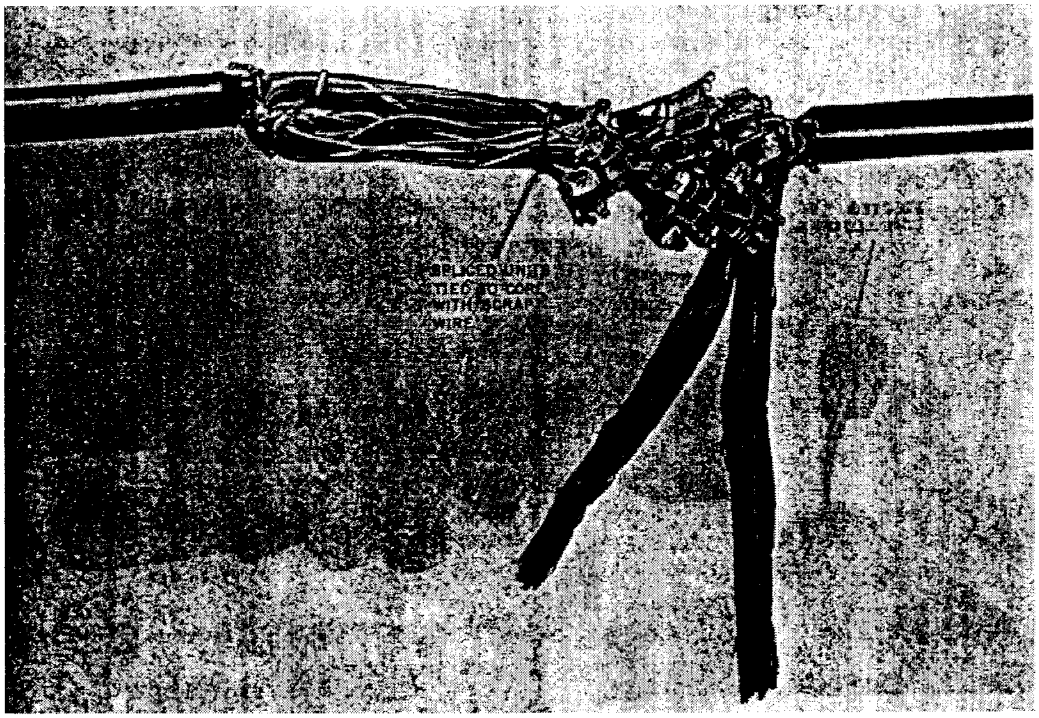
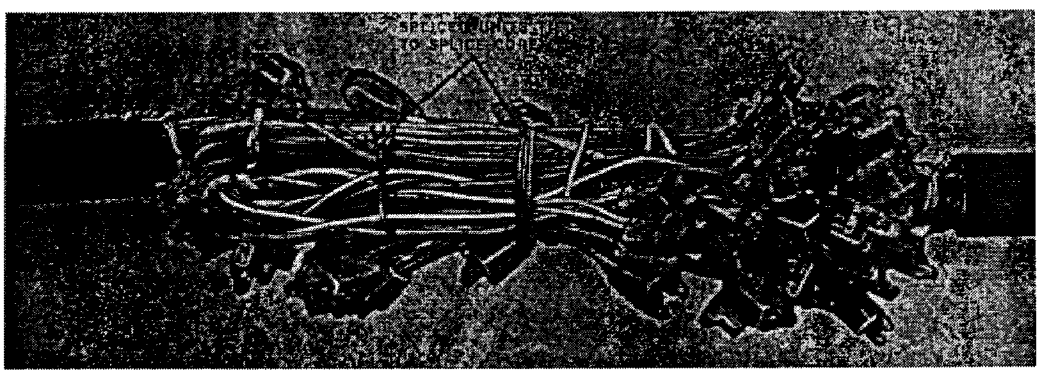


Fig. 15—Completed Splice



Butt-Splice Method

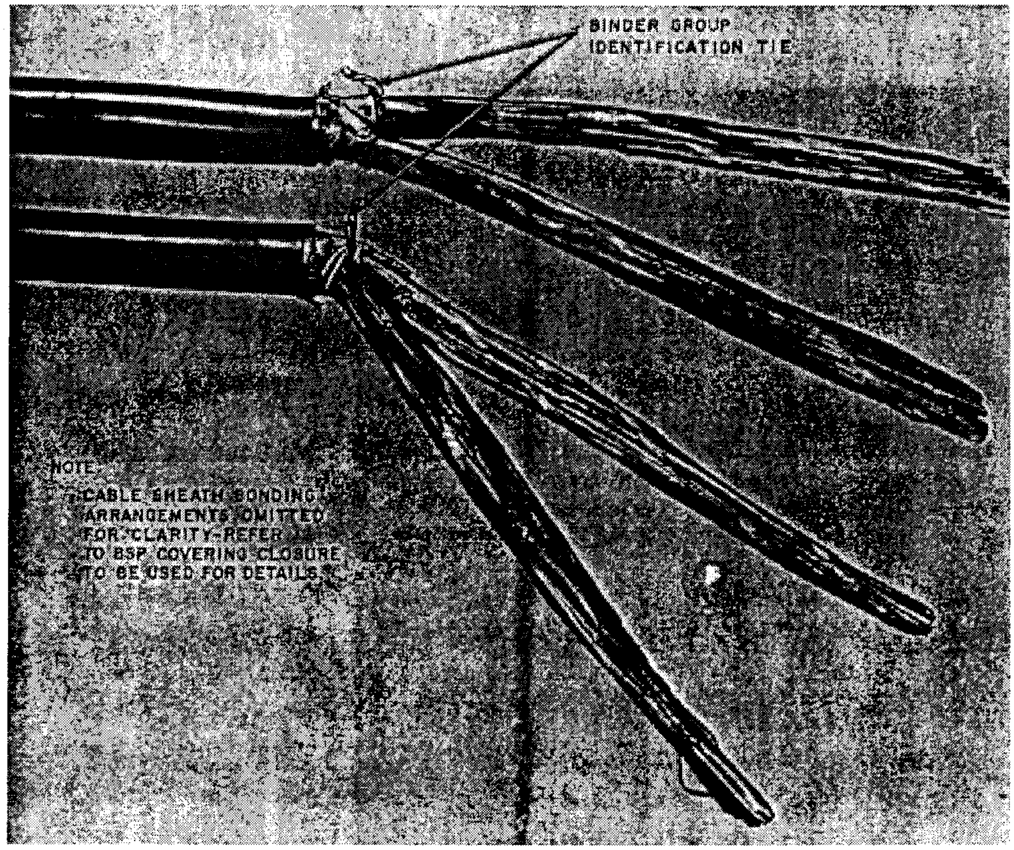
4.07 Form the cable as outlined in Section 632-055-201 and as shown in Fig. 16.

4.08 Use 700- or 701-type connectors as described in paragraph 4.02 or 4.03.

4.09 Splice in staggered clusters to minimize the buildup on the bundle size. Test through the splice to verify joints.

4.10 Wrap the completed splice as outlined in the Bell System Practice covering the splice closure to be used.

Fig. 16—Cable Prepared for Butt Splice

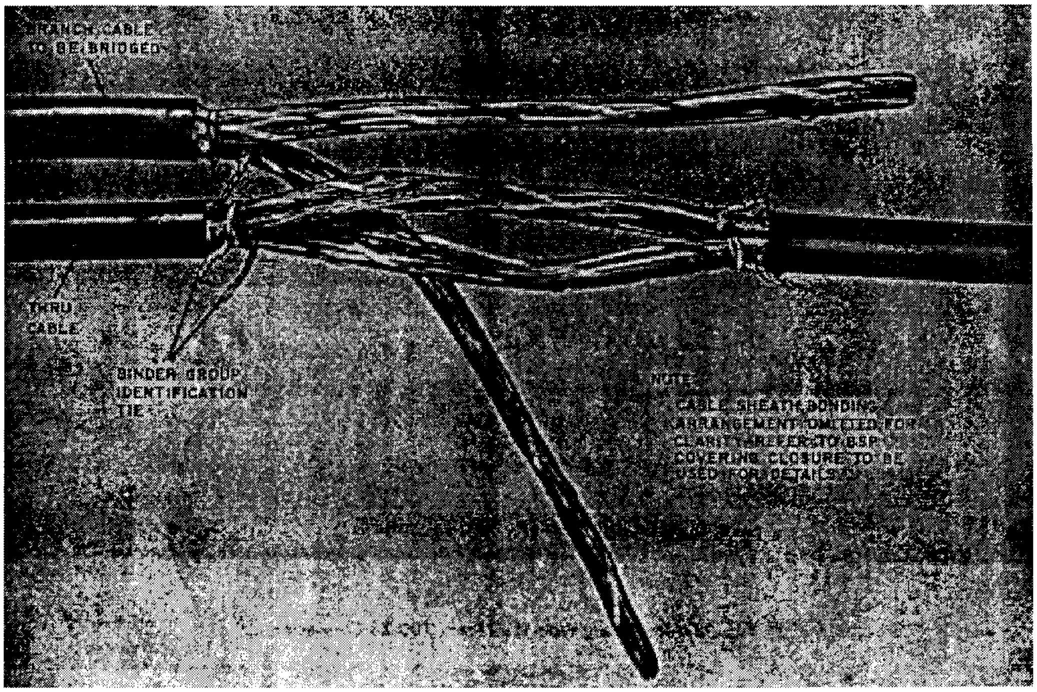


Bridge-Tap/Half-Tap Splice Method

4.11 Form the cable as shown in Fig. 17.

4.12 Join the conductors of the through cable and the branch cable using connectors listed in Table A , and E connector presser as follows. (When using H connector presser, proceed to paragraph 4.13.)

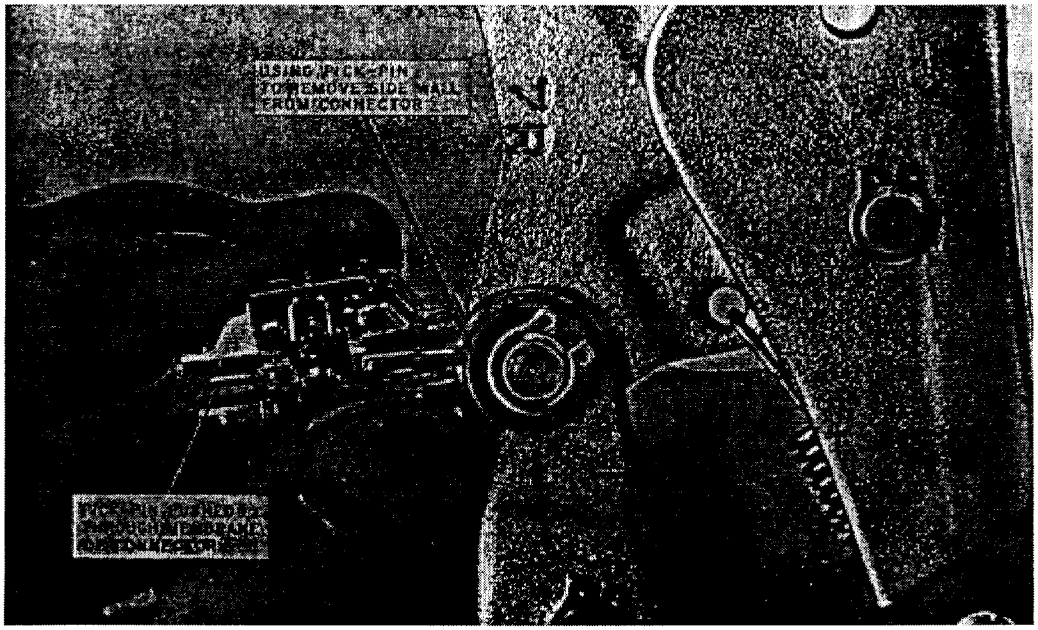
Fig. 17—Cable Prepared for Splice



A. Using the pick-pin on the E connector presser, remove the sidewall from the 700-type connector as shown in Fig. 18. The 702-2B connector has a through slot for the through wire.

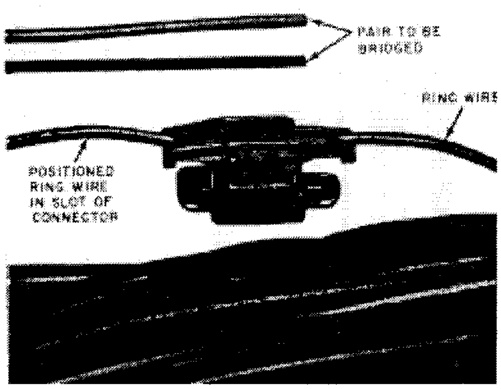
B. Select the pairs to be bridged from the through cable and the branch cable. Separate the tip and ring conductors.

Fig. 18—Removing Side Wall From 700-3B Connector



C. Position the ring wire from through cable in the slot of the connector as shown in Fig. 19.

Fig. 19—Positioning Through Conductors in Slot



D. Trim the tip and ring wires from the selected pair of the branch cable evenly and ***fully insert*** the ring wire in the vacant wire hole of the connector (Fig. 20). Using the E connector presser, press the connector. ***Assure the through wire is properly positioned in the through slot before pressing connector. After pressing, but before releasing the tool, push the bridged ring wire into the slots of the wire fingers.***

E. Bridge the tip wire of through cable and the tip of the branch cable using the same procedure as outlined above. Fig. 21 illustrates a bridged pair.

Fig. 20—Bridged Top Joint

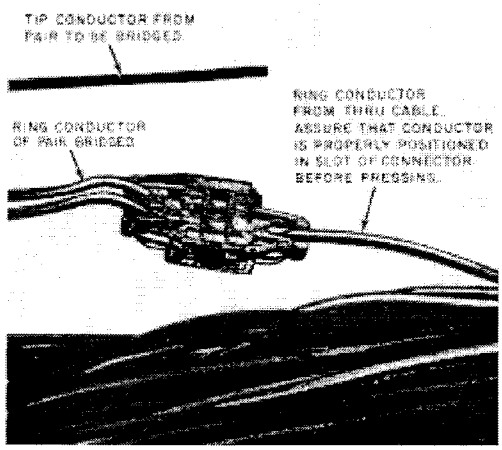
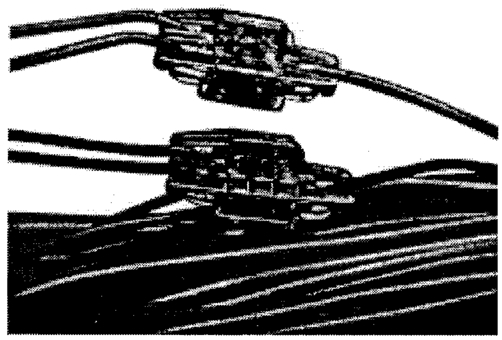


Fig. 21—Bridged Pair

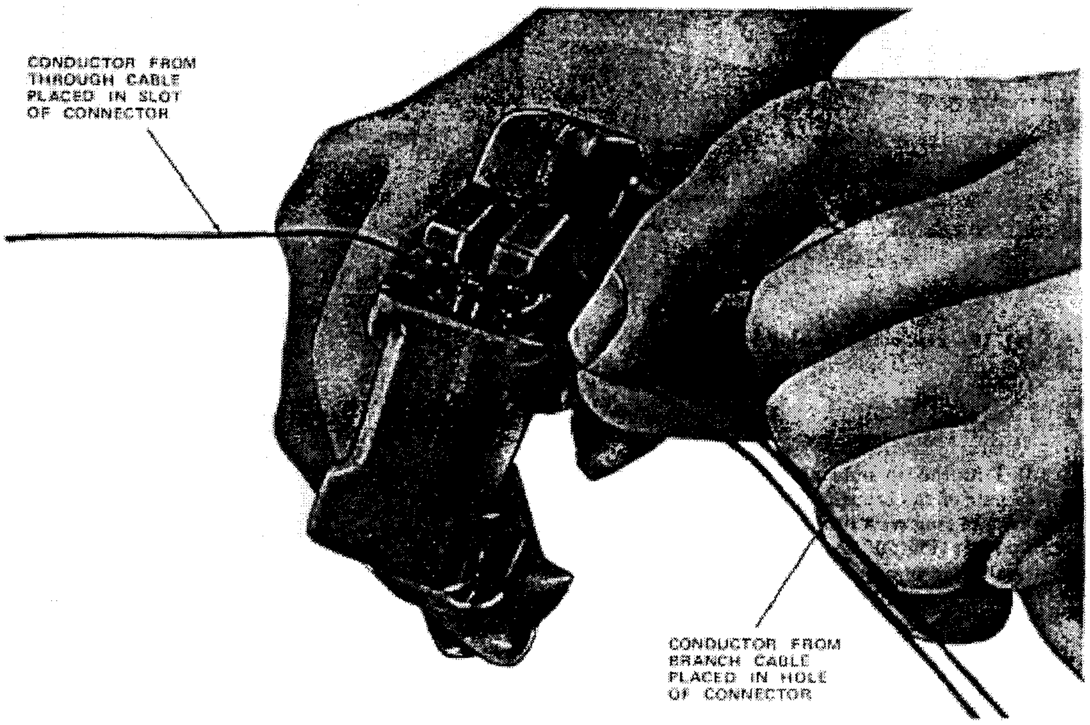


F. →Repeat Steps (a) through (e) for all pairs to be joined.←

4.13 Half-tap the branch cable to the through cable using 702-2BT connector as follows:

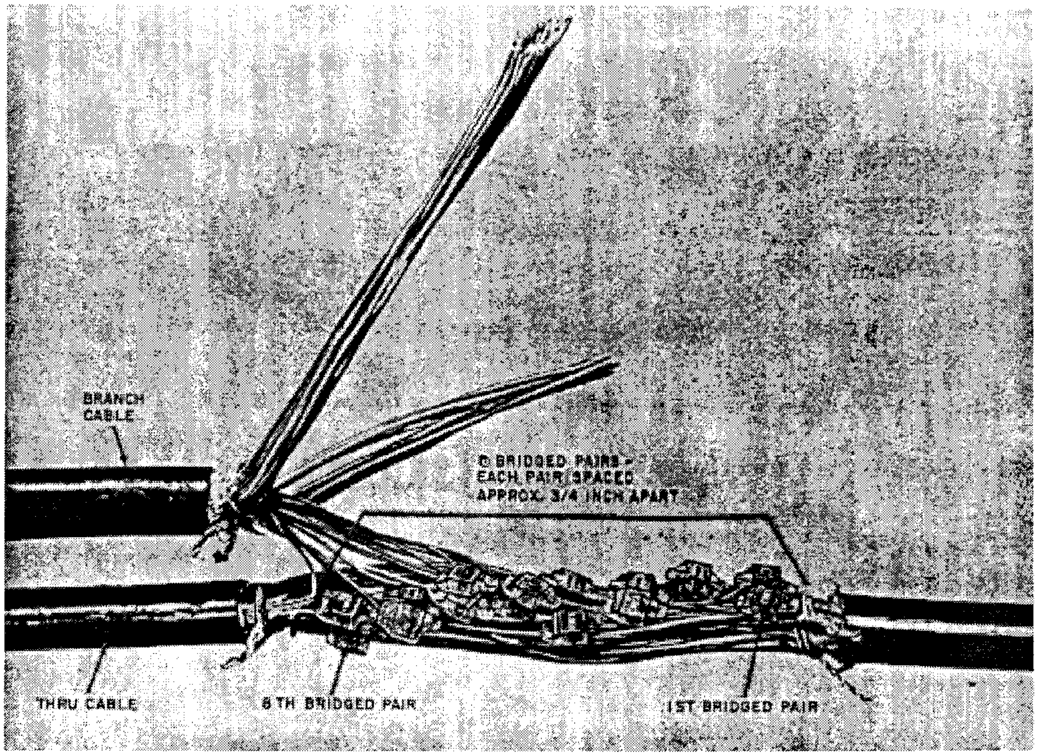
1. Select the pairs to be half-tapped from the through cable and the branch cable. Separate the tip and ring conductors.
2. Position ring wire from the through cable in the slot of the connector as shown in Fig. 22.
3. Position the ring wire from the branch cable into the hole of the connector.
4. Press the handle of the presser to complete the half-tap.
5. Repeat (b), (c), and (d) for the tip wire of the selected pair.
6. Repeat (a), (b), (c), (d), and (e) for each pair of the through cables and branch cable to be half-tapped.

Fig. 22—Half-Tapped Conductors Using H Connector Presser



4.14 Beginning at the opposite end of the sheath opening from which the branch cable enters, stagger the connectors into eight rows approximately 3/4 inch apart in the direction of the bridging cable as shown in Fig. 23.

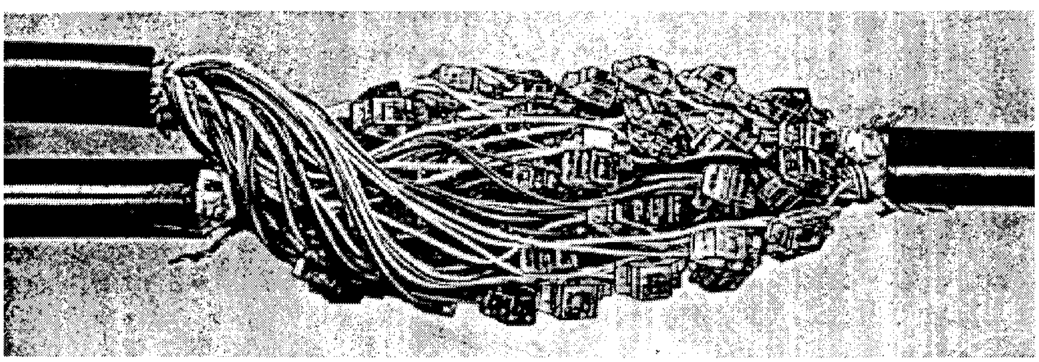
Fig. 23—Row of Bridged Pair



4.15 After the first eight pairs of conductors are bridged, repeat the operation for bridging the next eight pairs in the same manner, and continue until all pairs are bridged. Figure 24 illustrates all pairs bridged in cable. Test splice to verify joints.

4.16 Wrap the completed splice as outlined in the Bell System Practices covering the splice closure to be used.

Fig. 24—Completed Bridge Half-Tap Splice

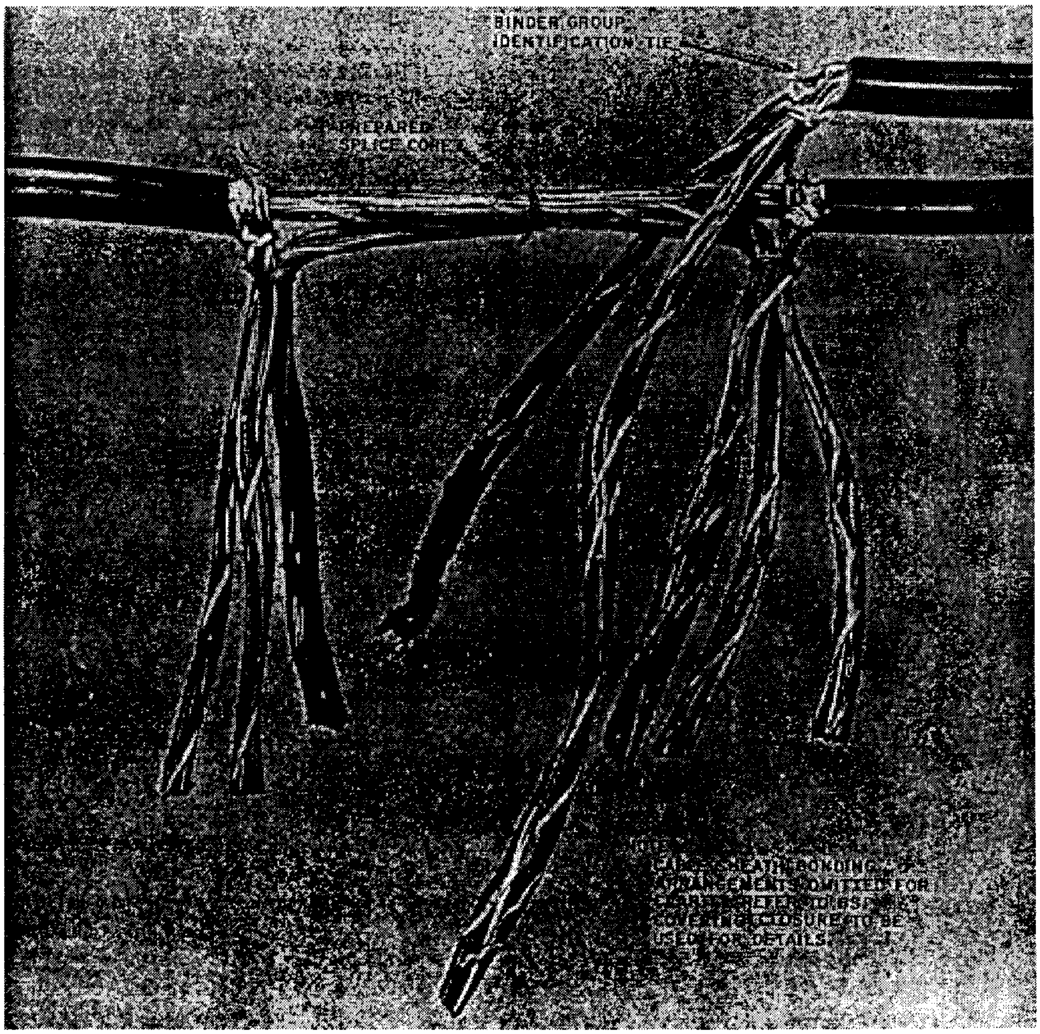


Three-Wire Bridge-Splice Method

4.17 Form the cable as outlined in Section 632-115-101 and as shown in Fig. 25.

4.18 Join the conductors of the main cable and the branch cable, as described in paragraphs 4.02 or 4.04, using 700-type connectors.

Fig. 25—Splice Core Prepared for Three-Wire Bridge Splice—Foldback Method



4.19 Splice the 25-pair unit in 10-, 10-, and 5- pair staggered clusters and tie them to the splice core as shown in Fig. 26. Figure 27 illustrates a completed splice. Test splice to verify joint.

4.20 Wrap the completed splice as outlined in Bell System Practices covering the splice closure to be used.

5. BRIDGE-TAP/HALF-TAP WIRE REMOVAL

5.01 A wire may be removed from the pressed joint by cutting the wire off close to the plastic body and tucking the wire stub deep inside the cavity in the cap of 700-3B. Otherwise protect wire ends as outlined in Section 632-055-205.

NOTE: ***There must be no bare wire end exposed outside of the plastic portion of the body. This wire cavity must be resealed with a dab of B sealant AT-8502 to fully restore the integrity of the connector (required for filled codes only).***

Fig. 26—Spliced Units Tied to Splice Core

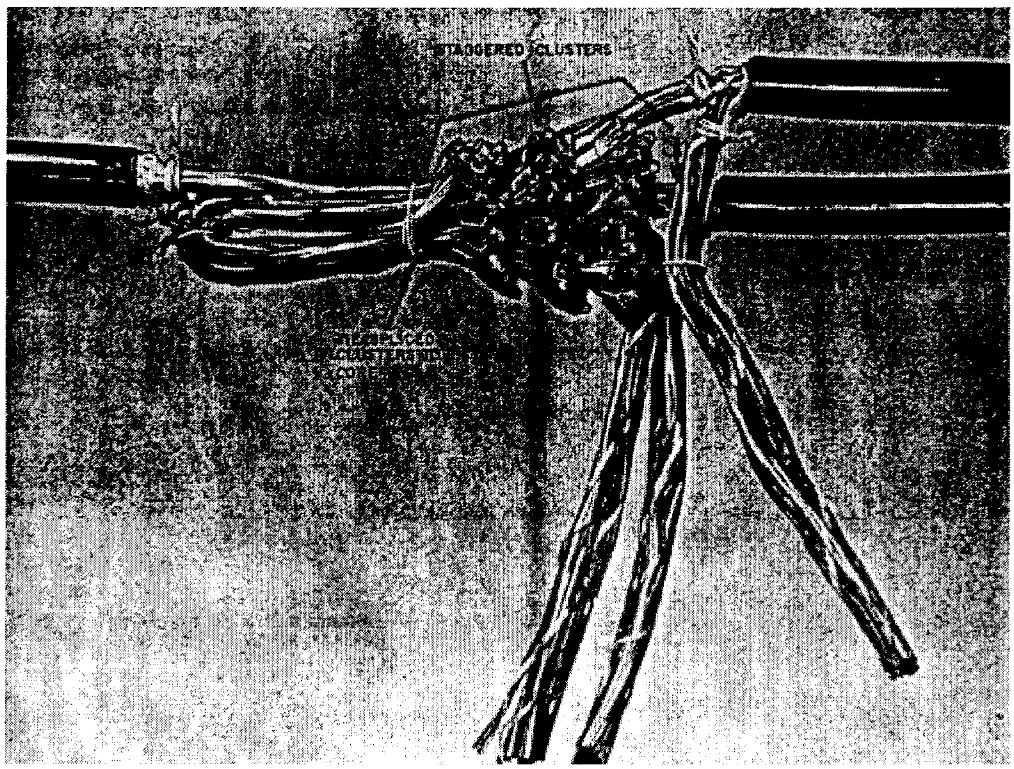
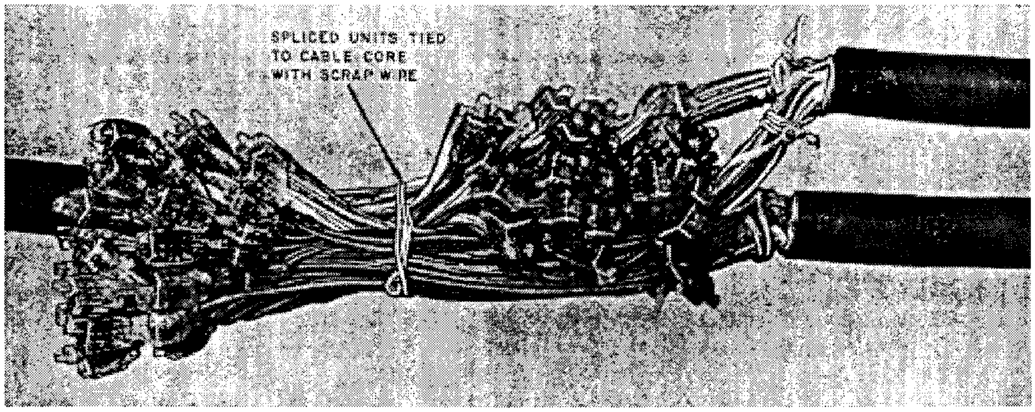


Fig. 27—Completed Bridge Splice


SPLICED UNITS TIED
TO CABLE CORE
WITH SCRAP WIRE

WIRE JOINING 710 CONNECTOR SYSTEM

1. GENERAL

1.01 This practice covers the description and use of the tools and connectors that make up the 710 connector system. The 710 connector system is used to make modular splices in any combination of 19- through 26-gauge copper conductors with PIC, pulp, or paper insulation.

1.02 This practice is reissued to delete reference to items that are rated DA (Discontinued Availability) or manufacture discontinued, to revise the listing of available connectors, and to update illustrations and text throughout the practice. Since the changes constitute a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 This practice provides information necessary for the proper use of the 710 connector system, connectors and tools, and the proper application of splicing configurations. The following areas are covered:

- 710 connector codes and connector application.
- Description, use, and maintenance of the tools, tool mountings, and tool supports.
- Operation of the pair verification test set to verify splices.
- Splice configurations such as foldback and in-line; branch, facility, and junction splices; half-taps, loading and unloading, rearrangement, and reentry.
- Special applications such as building use and setup for vertical splices.

1.04 When preparing to make a splice, any of the following methods can be used for binder group identification:

1. Secure binders in the 710 connectors:
   - Binders from first cable under wires in index strip
   - Binders from second cable over wires and under cap
2. Wire ties

3. Felt marker
4. Plastic color-coded ties
5. Prenumbered tags.

2. 710 CONNECTORS—DESCRIPTION AND USE

2.01 There are three types of 710 connectors—the splicing connectors, the bridge connectors, and the half-tap connectors. Each type is available in 25-pair and 5-pair sizes (**Fig. 1 and 2** Fig. 1 and 2). The splicing connectors consist of an index strip, a splicing module, and a cap. The bridge connectors consist of a bridge module and a cap. The half-tap connectors consist of an index strip, a half-tap module, and a cap.

Fig. 1—710 Connector (25 Pair)

Fig. 2—710 Connector (5 Pair)

2.02 The index strip holds the pairs from the first or through cable. Peaked projections on the index strip separate the conductors when they are placed in the strip. Wire grippers hold the conductors in place and orient the index strip in the tool. Index strips are illustrated in **Fig. 3** Fig. 3.

2.03 The connector module and half-tap module (**Fig. 4** Fig. 4) fit into the index strip. A slotted beam contact element in the bottom of each module slices through the insulation of the conductors in the index strip to make metal-to-metal contact. The top of each module provides conductor separators and wire grippers like the index strip. Slots in the sides of the connector modules and half-tap modules accept the bridge module.

2.04 The bridge module has an exposed slotted beam contact element for metal-to-metal contact in the connector and half-tap modules. Conductor separators and wire grippers on the bridge module are the same as those on the connector and half-tap modules.

Fig. 3—Index Strips

Fig. 4—710 Modules

2.05 The caps (**Fig. 5** Fig. 5), when seated on the modules, provide wire retention for the conductors in the modules. Metal-to-metal contact of the conductors is through the slotted beam contact element in the module. The ACE (accessible contact element) cap provides the means for testing and transferring pairs without service interruption. See MODULAR TRANSFERS — PLUG AND UNPLUG in Part 14 of this practice.

2.06 Connectors are available with modules and caps either filled (with sealant for moisture protection) or dry (without sealant). When splicing PIC cable, filled modules and caps are recommended except in buildings and cable entrance facilities where fire-retardant connectors (which are dry) are required. Dry 710 modular connectors may be used in encapsulated splice applications when using either D encapsulant, AT-8735, or D1000 encapsulant as supplied by AT&T Technologies, Inc.

2.07 Filled connectors provide effective protection against troubles caused by moisture. However, if some unusual condition should cause moisture trouble in a splice, the defective connectors should be cut out and replaced.

2.08 Dry connectors, whether used in an encapsulated splice or not, should be cut out and replaced if they become defective because of moisture in the splice.

2.09 The 710 connectors are coded for identification as shown in **Fig. 6** Fig. 6.

Fig. 5—710 Caps

Fig. 6—710 Connector Coding

3. 710 CONNECTORS—APPLICATIONS

3.01 The available 710 connectors and their applications are given in **Table A** Table A for 25-pair connectors and **Table B** Table B for 5-pair connectors. Guidelines for use of filled or dry connectors are given in**Table C** Table C . Applications for caps and index strips are given in **Table D** Table D.

3.02 A filler strip for the 710 splice and half-tap modules is available to prevent the bridge ports of the modules from being clogged with encapsulant as the splice closure is filled. If bridge ports are clogged and the splice must be reentered to make a transfer, to load or unload, etc., the encapsulant must be removed from each port or connections made

TABLE A 710 CONNECTORS—25 PAIR

CONNECTOR CODES	TYPE SPLICE	COLOR(S)	CONDUCTOR	TYPE OF INSULATION (NOTE 1)	FILLED	GAU
710-BB1-25	Bridge	Green	Copper	Pulp or paper	No	19–2
710-BC1-25	Bridge	Green	Copper	PIC	Yes	19–2
710-BD1-25†	Bridge	Gray	Copper	PIC, PVC, pulp, or paper	No	19–2
710-SB1-25	Straight or Half-Tap	Green	Copper	Paper or pulp	No	22–2
710-SC1-25	Straight	Green	Copper	PIC	Yes	22–2
710-SCL-25	Straight	Green/Blue	Copper	PIC	Yes	19–2
710-SD1-25†	Straight or Half-Tap	Gray	Copper	PIC, PVC, pulp, or paper	No	22–2
710-TCL-25	Half-Tap	Green/Blue	Copper	PIC	Yes	19–2
710-TC1-25	Half-Tap	Green	Copper	PIC	Yes	22–2

NOTE: 1. Excluding 19-gauge solid PP (polypropylene) or HDPE (high densi polyethylene) insulated conductors for WP (waterproof) and LOCAP* cable

* Trademark of AT&T.

† Fire-resistant connectors. For use in all dry and/or fire-resistant applications.

‡ Connector is supplied with 710-CAB-25 cap (Accessible Contact Element).

§ The 19-gauge wires may be placed in the top of the connector module when splicing 19-gauge cable to building cables; however, the 700-3B-type connector is suggested instea

CONNECTOR CODES	TYPE SPLICE	COLOR(S)	CONDUCTOR	TYPE OF INSULATION (NOTE 1)	FILLED	GAU
710-SBA-25‡	Straight or Half-Tap	Green	Copper	Pulp	No	22–2
710-BBA-25‡	Bridge	Green	Copper	Pulp	No	22–2

NOTE: 1. Excluding 19-gauge solid PP (polypropylene) or HDPE (high densi polyethylene) insulated conductors for WP (waterproof) and LOCAP* cable

* Trademark of AT&T.

† Fire-resistant connectors. For use in all dry and/or fire-resistant applications.

‡ Connector is supplied with 710-CAB-25 cap (Accessible Contact Element).

§ The 19-gauge wires may be placed in the top of the connector module when splicing 19-gauge cable to building cables; however, the 700-3B-type connector is suggested instea

TABLE B 710 CONNECTORS—5 PAIR

CONNECTOR CODES	TYPE SPLICE	COLOR(S)	CONDUCTOR	TYPE OF INSULATION (NOTE 1)	FILLED	GAU
710-BAL-5	Bridge	Green	Aluminum or Copper	PIC	Yes	19–
710-BC1-5	Bridge	Green	Copper	PIC	Yes	19–
710-BD1-5†	Bridge	Gray	Copper	PIC, PVC, pulp, or paper	No	19–
710-SAL-5	Straight	Green/Blue	Aluminum or Copper	PIC	Yes	19–
710-SC1-5	Straight	Green	Copper	PIC	Yes	22–
710-SD1-5†	Straight or Half-Tap	Gray	Copper	PIC, PVC, pulp, or paper	No	22–
710-TAL-5	Half-Tap	Green/Blue	Aluminum or Copper	PIC	Yes	19–
710-TC1-5	Half-Tap	Green	Copper	PIC	Yes	22–

NOTE: 1. Excluding 19-gauge solid PP (polypropylene) or HDPE (high densi polythylene) insulated conductors for WP (waterproof) and LOCAP* cable.

* Trademark of AT&T.

† Fire-resistant connectors. For use in all dry and/or fire-resistant applications.

TABLE C GUIDELINES FOR FILLED OR DRY CONNECTOR USE

WHEN SPLICING	USE
PIC to PIC	Filled connectors
PIC to Pulp	Dry connectors
Pulp to Pulp	Dry connectors
PIC or Pulp to	Dry, fire-resistant
PIC or Pulp in Buildings	Connectors

TABLE D 710 CAPS AND INDEX STRIPS

CODE	ITEM	COLOR	FILLED	TYPE OF INSULATION	GAUGE
* CBA cap is ACE (Accessible Contact Element) cap.					
710-CA-25	CAP	White	Yes	PIC	
710-CB-25	CAP	White	No	Pulp	
710-CD-25	CAP	Pink	No	PIC, Pulp, PVC	
710-CAL-25	CAP	Green	Yes	PIC	
710-CB1-25	CAP	Green	No	Pulp	
710-CD1-25	CAP	Gray	No	PIC, Pulp, PVC	
710-CBA-25*	CAP	Green	No	Pulp	
710-CA1-5	CAP	Green	Yes	PIC	
710-CD1-5	CAP	Gray	No	Pulp, PVC, PIC	
710-ISL-25	Index Strip	Blue	No	—	19–24

CODE	ITEM	COLOR	FILLED	TYPE OF INSULATION	GAUGE
* CBA cap is ACE (Accessible Contact Element) cap.					
710-IS1-25	Index Strip	Green	No	—	22–26
710-WD2-25	Index Strip	Gray	No	—	22–26
710-WH2-25	Index Strip	Green	No	—	22–26

will not be reliable. Thoroughly clean the encapsulant from the ports with an orange stick, cotton swab, or by other similar means. An example of how to install a filler strip is given in **Fig. 7** Fig. 7. Filler strips may be ordered in lots of 100 as:

710-FS-25 Filler Strip—Comcode 103671269

3.03 The filler strip is made of very soft plastic and therefore provides a cushion between the hard plastic bridge rails and the insulated wires in the splice bundle. It is recommended that filler strips be used in all splices of 3000 pairs or larger, filled and unfilled, to prevent compression faults by providing a cushion between the bridge rails and the wire insulation.

Fig. 7—Seating a Filler Strip

4. TOOL MOUNTING DEVICES

710A TOOL MOUNTING

4.01 The 710A tool mounting includes the items illustrated in **Fig. 8** Fig. 8. The various items are used to support splicing tools in the correct position for constructing modular splices with 710 connectors. All of the 710A tool mounting items can be ordered separately.

Fig. 8—710A Tool Mounting

4.02 The 710A1 tool mounting and 710A2 tool mounting, when combined, make up the 710B tool mounting (**Fig. 9** Fig. 9). The 710B tool mounting is designated as such for identification purposes only. To get a 710B tool mounting, order it as two parts; the 710A1 and 710A2 tool mountings.

Fig. 9—710B Tool Mounting

4.03 When assembling parts of the 710A tool mounting, start with the 710A5 vise clamp or the 710A1 base. The vise clamp can be attached to any secure object in the work area as shown in **Fig. 10, 11, and 12** Fig. 10, 11, and 12 . The base must be mounted on a flat surface, such as a side of the splicers tool box, as shown in**Fig. 13** Fig. 13 . Other tool mountings are then attached to the base as shown in **Fig. 14 and 15** Fig. 14 and 15 .

Fig. 10—Vise Clamp Secured to Manhole Rack

Fig. 11—Vise Clamp Secured to Closure

Fig. 12 — Vise Clamp Secured to Splicers Box

Fig. 13 — Base Attached to Splicers Box

Fig. 14 — Tool Clamp Attached to Base

Fig. 15 — 90-Degree Mount Attached to Base

4.04 Typical tool setups utilizing the vise clamp are shown in **Fig. 16, 17, 18, and 19** Fig. 16, 17, 18, and 19 .

Fig. 16 — Tool Setup on Splicers Box

Fig. 17 — Tool Setup at Pedestal

Fig. 18 — Tool Setup in Manhole or Splice Pit

Fig. 19 — Method of Setting Up Splicing Tool on Strand

B SUPPORT FRAME ASSEMBLY

4.05 The B support frame assembly (**Fig. 20** Fig. 20) consists of a support tube and two belt-type clamps. The clamps are attached to the cable so the support tube will be positioned at the splice location. A traverse mount assembly, with either a short or long horizontal bar attached, is mounted on the support tube. A cutter-presser can then be mounted on the horizontal bar.

Fig. 20 — B Support Frame Assembly

4.06 The B support frame and traverse mount assembly are installed as shown in **Fig. 21 and 22** Fig. 21 and 22 .

Fig. 21 — Installation of Support Tube on Cable

Fig. 22 — Installing Traverse Mount Assembly on Support Tube

4.07 To improve the stability of the support tube when operating a cutter-presser, a second traverse mount assembly with a long horizontal bar may be mounted near the end of the support tube and a B leg swivel (**Fig. 23** Fig. 23) attached to the horizontal bar. The telescoping tube of the B leg swivel then can be extended to a firm support to provide additional support for the cutter-presser.

4.08 The B support frame assembly also may be mounted on cable hooks as shown in **Fig. 24** Fig. 24 or mounted in a vertical position as shown in **Fig. 25** Fig. 25.

Fig. 23 — B Leg Swivel

Fig. 24 — B Support Frame Installed on Cable Hook

Fig. 25 — B Support Frame Mounted in Vertical Position on Frame

709A TOOL MOUNTING

4.09 The 709A tool mounting (**Fig. 26** Fig. 26) is for aerial use with an E ladder support as shown in**Fig. 27** Fig. 27 .

Fig. 26 — 709A Tool Mounting

Fig. 27 — 709A Tool Mounting on E Ladder Support

5. 890A AND 890B TOOLS

5.01 The 890A tool, **Fig. 28** Fig. 28, is a manually-operated tool used for assembling 25-pair, 710 connectors. The 890B tool is similar to the 890A tool except that the test feature has been omitted. All of the references in the remainder of Part 5 will be to the 890A tool but will also apply to the 890B tool, except for testing. The hand-operated lever actuates a cam/hydraulic system that provides the power for assembling the connectors. The 890A tool is wired for use with a 152A test set, or other pair verification test set, allowing pairs to be tested in the index strip.

Fig. 28 — 890A Tool

SETUP AND USE

5.02 Typical tool setups utilizing the 710A tool mounting are shown in **Fig. 17 through 19** Fig. 17 through 19 . When mounting the 890A tool on a B support frame assembly, a press clamp assembly is required to secure the tool to the horizontal bar. The press clamp assembly is not provided as a part of the 890A tool but may be ordered as a separate item, Comcode No. 842702045.

5.03 A typical setup showing the 890A tool mounted on a B support frame assembly is illustrated in **Fig. 29** Fig. 29. To mount the tool on the horizontal bar:

1. Slide the press clamp assembly, with the knob to the left, onto the horizontal bar.
2. Place the 890A tool into the press clamp and move the clamp and tool to the desired position. Tighten the clamp.

Fig. 29 — 890A Tool Mounted on B Support Frame Assembly

5.04 The use of the 890A tool to assemble 710 connectors is covered in paragraphs 5.05 through 5.20. When in-line splicing two sections of cable, secure the groups in the group slack holder, placing the***shortest*** section of cable in the index strip. This enables testing of the splice using a pair verification test set as covered in Part 12 of this practice.

5.05 Place the index strip as follows (**Fig. 30** Fig. 30):

1. With the arched wire grips facing the T-bar, place index strip into connector holding bracket assembly. Assure ends of index strips are placed into the end key.
2. Push down on index strip. If necessary, push in on button to secure index strip underneath the L-spring located on back of tool. This prevents bowing of index strip during wire dressing.
3. Secure binder groups with the group slack holder, if necessary.

Fig. 30 — Placing Index Strip

5.06 Place conductors into index strip as follows (**Fig. 31** Fig. 31):

1. Using the thumb and forefinger of each hand, grasp a pair from the binder group. Separate the tip and ring conductors on the colored peaked projections of the index strip, tip side to the left and ring side to the right.
2. Dress the conductors into the wire grips leaving approximately 3/8-inch slack behind index strip for 24 through 26 gauge and 1 inch for 17 through 22 gauge. ***When dressing pulp or noncolor-coded PIC conductors, select the pairs at random and place them into the index strip starting at end of tool nearest cable being placed. When dressing PIC, select the pairs at random and place them into the strip in proper color-code sequence using color-code strip and colored peak projections as a guide.***

Fig. 31 — Placing Conductor Into Index Strip

5.07 Check placed conductors as follows (**Fig. 32** Fig. 32):

1. When the 25 pairs have been placed in the index strip, use the error-tector to check for splicing errors such as two conductors in one slot, vacant slots, tip and ring reversals, or transposed pairs.
2. Place the error-tector over the index strip and slide to the left—only the tip conductors should show. Slide the error-tector to the right—only ring conductors should show. If an error is found, make the correction and check the conductors again with error-tector.

Fig. 32—Checking Placed conductors

5.08 Place T-bar over index strip as follows (**Fig. 33** Fig. 33):

1. Gently separate conductors around T-bar and clear of the pressure release valve.
2. Position T-bar over the index strip.

Fig. 33—Placing T-Bar Over Index Strip

5.09 Position tool for cutting operation (**Fig. 34** Fig. 34) by pushing down on T-bar for proper positioning over the index strip.

Fig. 34—Positioning Tool for Cutting Operation

5.10 Seat and cut conductors as follows (**Fig. 35** Fig. 35):

1. With T-bar held in down position, pull lever down until it hits the stop.
2. All conductors should now be cut. Check to be sure.

Fig. 35—Seating and Cutting conductors

5.11 Remove cut conductors as follows (**Fig. 36** Fig. 36):

1. With T-bar in down position, remove cut conductors.
2. If all conductors are not cut, blade may be dull. Refer to paragraphs 5.23 through 5.29.

Fig. 36—Removing Cut Conductors

5.12 Test pairs using the pair verification test set (**Fig. 37** Fig. 37) as outlined in Part 12.

Fig. 37—Testing Pairs With Pair Verification Test Set

5.13 Return T-bar to horizontal position as follows (**Fig. 38** Fig. 38):

1. Push hand lever back to its original latched position.
2. Raise T-bar to its full upright position.
3. Pull T-bar back to horizontal position.

Fig. 38—Returning T-bar to Horizontal Position

5.14 Place connector module as follows (**Fig. 39** Fig. 39):

1. With the arched wire grips of connector module facing T-bar, place connector module into tool keeping it parallel to the index strip.
2. Push connector down until the latches on connector partially engage in slots on index strip.

Fig. 39—Placing Connector Module

5.15

WARNING: ***If the connector module is not lowered parallel into the index strip, the module may be damaged causing opens, shorts, or crosses in end pair positions 1 and 2, or 24 and 25.***

Seat connector module as follows (**Fig. 40** Fig. 40):

1. Position T-bar over the connector module and push down on T-bar to position it on the connector module. Then, while holding down on T-bar, pull the hand lever to seat connector module.

Fig. 40—Seating Connector Module

NOTE: If the connector module is not properly seated, return lever to the latched position, pull T-bar back, then push down on connector module until the latches on connector partially engage slots on index strip. Repeat (1) above. If the module becomes damaged, replace it.

5.16 The seated connector module with the T-bar returned to the horizontal position is illustrated in **Fig. 41** Fig. 41.

Fig. 41—Seated Connector Module

5.17 Place conductors in connector module as follows (**Fig. 42** Fig. 42):

1. Select the 25-pair conductor group that matches the group previously placed in the index strip. Place them into the connector module following the same procedure used for the index strip.
2. Using error-tector, check the placed conductors.
3. Gently separate conductors around T-bar and clear of pressure release valve, then position T-bar over connector module.
4. Pull the lever down to cut the conductors. With the lever in the down position, test the pairs.

Fig. 42—Conductors Placed in Connector Module

5.18 The module with the conductors seated and cut and the T-bar returned to the horizontal position is shown in **Fig. 43** Fig. 43.

Fig. 43—Conductors Seated and Cut

5.19 Place cap on connector module as follows (**Fig. 44** Fig. 44):

1. With latches facing T-bar, place cap on connector module. Then, using fingers, partially seat the cap on connector module by pressing down on cap and running fingers across length of cap.
2. Seat the cap by placing T-bar over the cap and then, while ***pushing forward and down*** on T-bar, pull the hand lever to seat cap on connector module. Return T-bar to horizontal position.

Fig. 44—Placing Cap on Connector Module

5.20 Remove the completed module as follows (**Fig. 45** Fig. 45):

1. Push the button to release completed connector. Remove connector from tool.

Fig. 45—Removing Completed Module

Fig. 46—Releasing T-Bar Lock

2. Using felt marker, mark unit number on***unfilled*** connector. For filled connector, identify unit number with binder group identification tie placed approximately 3 inches from connector.

MAINTENANCE

A. General

5.21 The procedures for cleaning and lubricating the 890A tool are the same as for the F cutter-presser. Refer to paragraphs 7.13 through 7.17.

B. Unlocking T-Bar

5.22 If, when raising the T-bar to the vertical position, it will not clear the end post, return the T-bar to the horizontal position and push the pressure release valve to release the T-bar lock (**Fig. 46** Fig. 46). The T-bar will not clear the end post if the T-bar lock is engaged.

C. Replacing the Knife Blade

5.23

DANGER: ***Exercise care when handling the knife blade. The blade is very sharp.***

The knife blade should be replaced when it becomes dull or damaged. Incomplete or ragged cutting of the conductors indicates a need for blade replacement.

NOTE: A sharp knife blade may not cut through pulp or paper insulation or through 17- or 19-gauge conductors. Unless conductors show ragged cutting, the blade probably does not need to be replaced.

5.24 Procedures for replacing the knife blade in the 890A tool are outlined in the following paragraphs.

5.25 Loosen the screws for the blade holder as follows (**Fig. 47** Fig. 47):

1. Push T-bar to the upright position.
2. Using the allen wrench set, ***loosen*** but ***do not remove*** the four allen-head screws on the back of the T-bar. The screws secure the blade holder and blade in place. If the screws are removed while the T-bar is in the up position, the holder assembly and blade will fall out.

Fig. 47—Loosening Screws

5.26 Remove the blade as follows (**Fig. 48** Fig. 48):

1. Pull the T-bar back to its horizontal position and remove the four allen-head screws.
2. It may be necessary to loosen (do not remove) the screws securing the wire cover to the T-bar to relieve pressure on the blade.
3. Push down the knife blade guard and slide the old blade and the holder out the side of the T-bar. Be careful not to drop any other parts of the T-bar.

Fig. 48—Removing Blade

5.27 Place the knife blade assembly in the holder as shown in **Fig. 49** Fig. 49.

Fig. 49—Placing Blade in Knife Blade Holder

5.28 Replace knife blade and holder in T-bar as follows (**Fig. 50** Fig. 50):

1. Slide holder into space provided until knife blade is centered.

Fig. 50—Replacing Knife Blade and Holder

2. Replace allen-head screws in the T-bar and***finger tighten.*** Blade has to be aligned before tightening with allen wrench.

5.29 Align the blade as follows (**Fig. 51** Fig. 51):

1. Insert an index strip into holder of cutter-presser with arched wire grip facing T-bar. Be sure index strip is secure beneath the L-spring in the center of the holder.
2. Push T-bar to the upright position.
3. Pull lever down until it hits the stop. This brings the blade in contact with the index strip and aligns the blade properly.
4. With the T-bar in the down position, tighten all four allen screws snugly until the lock washers around the screws are fully compressed. ***Do not overtighten. The plastic guide could be damaged.***
5. Push lever back to the latched position, then check index strip. A slight knife cut must be visible.
6. Tighten screws to secure wire cover.

Fig. 51—Aligning Blade

D. Replacing Handle Pin

5.30 If no cutting or seating pressure occurs when pulling the lever to the down position, replace the handle pin as follows (**Fig. 52** Fig. 52):

1. With T-bar in full upright position, use a screwdriver to rotate the cam until slot of cam is in alignment with holes in handle collar.
2. With a hammer and punch, knock the pin out about halfway and then drive in a new pin***flush*** with the collar. The new pin will drive out the broken pieces of the old pin. The tool should now be checked to see if it functions properly. Ordering information for the pin is:

GROOVED PIN: 1/8-inch diameter × 3/4-inch long— Comcode 900523663

Fig. 52—Replacing Handle Pin

6. D, E, AND F CUTTER-PRESSERS—ALTERNATE 710 CONNECTOR ASSEMBLY TOOLS

6.01 The ***D cutter-presser*** (**Fig. 53** Fig. 53) is operated by a pneumatic/hydraulic system that requires an air source (bottled air or a compressor) at 80 to 100 psi.

Fig. 53—D Cutter-Presser

6.02 The ***E cutter-presser*** (**Fig. 54** Fig. 54) is operated by a pneumatic/hydraulic system. The tool is for use with the B modular tool kits. The presure relief setting of the hydraulic pump (ENERPAC

Footnote: Registered trademark of ENERPAC, Butler, Wisc.

unit) must be made at ENERPAC service centers or a preset capsule valve, SPL-1338, available from ENERPAC dealers, must be installed.

6.03 The ***F cutter-presser*** (**Fig. 55** Fig. 55) is hydraulically operated with a hand pump.

Fig. 54—E Cutter-Presser

Fig. 55—F Cutter-Presser

7. SETUP AND USE OF CUTTER-PRESSERS

7.01 The D, E, and F cutter-pressers can be mounted on any of the tool mounting devices described in Part 4 of this practice. A typical setup with a cutter-presser mounted on the B support frame assembly is shown in **Fig. 56** Fig. 56. To mount the tool (D, E, or F cutter-presser) on the B support frame assembly:

1. Slide the press clamp assembly, with the knob to the right, onto the horizontal bar.
2. Place the tool into the press clamp assembly and move the clamp and tool to the desired position. Tighten the clamp.

7.02

DANGER: ***Keep fingers clear of the knife blade when operating the cutter-presser. When handling the T-bar, do not place fingers under the T-bar. When handling the cutter-presser, place hand on front portion only. Refer to Fig. 57 Fig. 57.***

The D, E, and F cutter-pressers are operated the same way. Use of the cutter-pressers to assemble 710 connectors is covered in the following paragraphs. When splicing two lengths of cable, the shortest length of cable must be placed in the index strip. This enables testing of the splice using a 152A test as covered in Part 12.

7.03 Place the index strip in the tool as follows (**Fig. 58** Fig. 58):

1. With the arched wire grips of the index strip facing the T-bar, place the index strip into the connector holding device. Be sure the ends of the index strip are keyed into the end springs.
2. Push down on the index strip to secure it beneath the L-spring on the back of the tool. This prevents bowing of index strip during wire dressing.

Fig. 56—Cutter-Presser Mounted on B Support Frame Assembly

Fig. 57—Handling the Cutter-Presser

Fig. 58—Placing Index Strip

7.04 Place conductors into the index strip (**Fig. 59** Fig. 59) by using the thumb and forefinger of each hand and grasping a pair from the binder group to be spliced. Separate the tip and ring conductors on the colored peaked projection of the index strip, tip side to the left and ring side to the right. Dress the conductors into the wire grips leaving approximately 3/8-inch of slack behind the index strip for 24 to 26 gauge and 1 inch for 19 to 22 gauge (including T2, 22-gauge LOCAP

Footnote: Trademark of AT&T.

cable).

NOTE: When dressing pulp and noncolor-coded PIC conductors, select the pairs at random and place them into the index strip starting at the end of the tool nearest the cable being placed. When dressing PIC, select the pairs at random and place them into the strip in proper color-code sequence using color- code strip and peaked projections as a guide.

7.05 When the 25 pairs have been placed in the index strip (**Fig. 60** Fig. 60), use the error-tector to check for splicing errors such as two conductors in one slot, vacant slots, tip and ring reversals, or transposed pairs. Use the error-tector in the following way:

1. Place the error-tector over the index strip and slide to the left; only the tip conductors should show. Slide the error-tector to the right; only the ring conductors should show.
2. If an error is found, correct it and check the conductors again with the error-tector.

7.06 Seat and cut the conductors in the index strip as follows (**Fig. 61** Fig. 61):

1. Gently separate conductors around the T-bar.
2. Position the T-bar over the index strip. Before operating the cutter-presser, apply slight downward pressure with the hand on the conductors behind the index strip. This will hold the conductors in place and keep the index strip from shifting until the tool engages the index strip. ***Keep fingers clear of the knife blade.***

Fig. 59—Placing Conductor Into Index Strip

Fig. 60—Checking Placed Conductors

Fig. 61—Seating and Cutting the Conductors

3. Operate the hydraulic pump to cut the conductors. Remove cut conductors with the T-bar in the down position. It may be necessary to gently tug the conductors to remove them from the cutter-presser. ***Do not pull on the conductor ends until the pump reaches full pressure. The index strip could be damaged or the conductors could be pulled out of the index strip.*** Release pressure and pull the T-bar back to its original position.

7.07 Place connector module on index strip as follows (**Fig. 62** Fig. 62):

1. With the arched wire grips of the connector module facing the T-bar, place the connector module into the cutter-presser.
2. Keep the module parallel to the index strip.

Fig. 62—Placing Connector Module

7.08

WARNING: ***If the connector module is not positioned parallel to the index strip, the module may be damaged and cause trouble in pair positions 1 and 2 or 24 and 25.***

To seat the connector module (**Fig. 63** Fig. 63), close the T-bar and operate the pump to seat the module. ***Do not release pressure or pull back the T-bar until the conductors have been tested.***

7.09 Test the conductors as follows (**Fig. 64** Fig. 64):

1. Operate the test set to test the conductors.
2. Release pressure and pull the T-bar back to its original position.

Fig. 63—Seating Connector Module

Fig. 64—Testing the Conductors

7.10 Place conductors into the connector module as follows (**Fig. 65** Fig. 65):

1. Select the conductors from the corresponding group of the second cable and dress them into the connector module. Bring each pair across the top of the module and separate the tip and ring conductors on the peaked projections. Tip conductors go to the left and ring conductors to the right. Leave approximately 3/8-inch of slack behind connector module for 24 through 26 gauge and 1 inch for 19 through 22 gauge.
2. Use error-tector to check the conductors. Position the T-bar over the connector module.
3. Gently separate the conductors around T-bar. For 19 through 22 gauge, apply light downward pressure with the hand on conductors behind the connector module to keep conductors from bowing and the module from rocking forward when the T-bar moves down. Operate the hydraulic pump to seat and cut the conductors. ***Do not pull on the conductors while operating the pump. This will pull the connector module under the cutting blade and damage the connector module.*** With the T-bar in the full down position, it may be necessary to tug gently on the cut ends of the conductors to remove them from the cutter-presser.
4. Test the conductors and then release pressure and pull the T-bar back to the original position.

Fig. 65—Placing Conductors

7.11 Place the cap on the connector module as follows (**Fig. 66** Fig. 66):

1. With the latches of the cap facing the T-bar, place the cap on the connector module.

2. Partially seat the cap on the connector module by pressing down and running the finger across the length of the cap.
3. Seat the cap by closing the T-bar over the cap and operating the hydraulic pump. Release the hydraulic pressure and pull the T-bar back to its original position.
4. ***If connector module or cap is damaged during assembly, remove the damaged part and replace with a new one.***

7.12 Remove the spliced unit as follows (**Fig. 67** Fig. 67):

1. Push the button to release completed connector. Remove the connector from the cutter-presser.
2. Using a felt marker, mark the unit identification number on ***unfilled connectors.*** Identify filled connectors by applying a binder group identification tie approximately 3 inches from the connector.

MAINTENANCE OF CUTTER-PRESSERS

7.13

WARNING: ***Disconnect air pressure and release hydraulic pressure from cutter-presser to prevent accidental activation of tool while performing maintenance.***

A. Cleaning

7.14 Clean the cutter-presser after splicing with filled connectors. Check to be sure the tool is clean before splicing with unfilled connectors.

7.15 Clean the end springs as follows (**Fig. 68** Fig. 68):

1.

WARNING: ***Do not use B cleaning fluid or other unapproved fluids to clean the tool as some residue can remain on the tool and cause damage to the connectors and cutting blade.***

Spray the end springs with KS-21446 solvent or KS-7860 petroleum spirits. With the brush, work the solvent behind the end springs to be sure the springs are thoroughly cleaned. Problems can be caused by buildup of compound behind the end springs.

2. Depress the springs several times to loosen the buildup, then wipe clean and dry with a clean cloth.

Fig. 66—Placing Cap

Fig. 67—Removing Spliced Unit

Fig. 68—Cleaning End Spring

7.16 Clean the guide and blade assembly as follows (**Fig. 69** Fig. 69):

1. Pull the T-bar back to the horizontal position.
2. Spray the knife blade and guide area with solvent.
3. Brush the guide and blade thoroughly to clean and remove all wire scraps left in the guide area. False defective pair indications can occur when using the pair verification test set if wire scraps are in the guide area.
4.

> **DANGER:** ***Extreme caution must be taken when cleaning and drying the guide assembly. The blade is very sharp.*** **Wipe the blade and guide area clean and dry with a clean, dry cloth.**

Fig. 69—Cleaning Guide and Blade Assembly

B. Lubricating

7.17 If operation of the T-bar becomes difficult, apply grease to the flat closing spring of the cutter-presser. The grease is provided with the tool kit.

7.18 Lubricate the cutter-presser as follows (**Fig. 70** Fig. 70):

1. Insert a screwdriver between the T-bar and spring to deflect the spring 1/16 inch.
2. Place lubricant into opening.

Fig. 70—Lubricating Cutter-Presser

C. Replacing the Knife Blade

7.19 The knife blade should be replaced when it becomes dull or damaged. Ragged or incomplete***cutting of the conductors*** indicates a need for blade replacement. A sharp blade may not cut through pulp or paper insulation or through 17- or 19-gauge conductors. ***Unless the conductors show ragged cutting,*** the blade probably does not need to be replaced.

7.20 Procedures for replacing the knife blade in the D, E, and F cutter-pressers are outlined in the following paragraphs.

7.21 Loosen the screws as follows (**Fig. 71** Fig. 71):

1. Push the T-bar to the upright position.
2. Using the allen wrench set, ***loosen but do not remove*** the four allen-head screws on the back of the T-bar. The screws secure the blade holder and blade in place. If the screws are removed while the T-bar is in the up position, the holder assembly and blade will fall out.

Fig. 71—Loosening Screws

7.22 Remove the blade and blade holder as follows (**Fig. 72** Fig. 72):

1. Pull the T-bar back to its horizontal position and remove the four allen-head screws.
2. It may be necessary to loosen (do not remove) the screws securing the wire cover to the T-bar to relieve pressure on the blade.
3. Push down the knife blade guard and slide the old blade and the holder out of the side of the T-bar. Be careful not to drop any other parts of the T-bar.

Fig. 72—Removing Blade

7.23 Place the new knife blade in the blade holder as illustrated in **Fig. 73** Fig. 73.

Fig. 73—Placing Blade in Knife Blade Holder

7.24 Replace the knife blade and holder as follows (**Fig. 74** Fig. 74):

1. Slide the holder into the space provided until the blade is centered.
2. Replace the allen-head screws into the T-bar ***finger tight.*** The blade must be aligned before tightening the screws with an allen wrench.

Fig. 74—Replacing Knife Blade and Holder

7.25 The blade is aligned as follows (**Fig. 75** Fig. 75):

1. Insert an index strip into the holder of the cutter-presser with the arched wire grip facing the T-bar. Be sure the index strip is secure beneath the L-spring in the center of the holder.
2. Push the T-bar to the upright position. Connect the air pressure.
3. Operate the hydraulic pump. This brings the blade in contact with the index strip and aligns the blade properly.
4. With the T-bar in the down position, tighten all four allen screws snugly until the lock washers around the screws are fully compressed. ***Do not overtighten. The plastic guide could be damaged.***
5. Release the hydraulic pump and then check the index strip to ensure a slight knife cut is visible. Disconnect the air pressure.
6. Tighten the screws that secure the wire cover.

Fig. 75—Aligning Blades

8. MAINTENANCE OF "ENERPAC" UNIT

A. Checking Oil Level and Lubricating

8.01 Check all hydraulic and air connections to be sure they are tight and are not leaking. Loose or leaking connections may cause erratic operation or loss of operation altogether. Procedures for checking oil level and lubrication are covered in the following paragraphs.

8.02 Check the oil level in the air pump as follows (**Fig. 76** Fig. 76):

1. Disconnect the air and turn the pump upside down.
2. Keeping the hydraulic hose end down, remove the filler plug and check the oil level.
3.

CAUTION: Use only high quality hydraulic fluid. Do not use brake fluid or other types of oil. They can damage the pump. Hydraulic oil should be changed after every 50 hours of use. In dusty areas, change hydraulic oil more frequently. If oil is required, fill the pump with ENERPAC hydraulic fluid (HF-100 series) or equivalent. Be sure pump is completely filled (oil overflows).

8.03 Check the oil level in the hand pump as follows (**Fig. 77** Fig. 77):

1. Place the pump in a vertical position.
2. Remove the dip stick and check the oil level.
3. If oil is required, fill the pump with ENERPAC fluid (HF-100 series) or equivalent. ***Be sure pump is completely filled (oil overflows).***

Fig. 76—Checking Oil Level (Air Pump)

Fig. 77—Checking Oil Level (Hand Pump)

8.04 Fill the filter lubricator as follows (**Fig. 78** Fig. 78).

1. Remove the plug and fill the cylinder with air-motor lube, KS-19519 oil, or equivalent.
2. Check the filter lubricator level weekly and refill as required.

8.05 Lubricate the air motor as follows (**Fig. 79** Fig. 79):

1. Remove F pressure valve fitting. If the fitting is a quick-connect fitting, it is not necessary to remove it.
2. Using air-motor lubricating oil or KS-19519,L1 lubricating oil, lubricate the air motor by placing the oil directly into the quick-connect fitting or into the fitting hole until the motor is flooded.
3. Replace the pressure valve fitting. Connect the air hose and apply air. The air piston should cycle.

NOTE: If the hydraulic hose is disconnected from the pump, be sure the end of the hose is covered with a 1/4 NPT cap. When reconnecting the hose, the hydraulic system must be purged.

Fig. 78—Filling Filter Lubricator

Fig. 79—Lubricating Air Motor

B. Troubleshooting the ENERPAC Unit

8.06 **Table E** Table E identifies some problems that may be experienced with the ENERPAC unit if air or dirt enters the system or if air is not completely purged from the unit.

TABLE E "ENERPAC" TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	CORRECTING PROCEDURE
Air motor operates (putting sound) but no hydraulic pressure	**1.** Release valve may be out of adjustment, or **2.** Air may be in the hydraulic pump	Par. 8.08 Par. 8.09
Hydraulic pressure builds up but will not hold (T-bar creeps open after closing)	Release valve is out of adjustment	Par. 8.08
Air motor fails to operate (no putting sound or operates slowly)	Dirt has entered the air motor and gummed up the air piston ring	Par. 8.05
No movement of T-bar	Air in cutter-presser	Par. 8.08 and 8.10 if necessary

8.07 Purge air from the cutter-presser head as follows (**Fig. 80** Fig. 80):

1.

WARNING: ***Do not operate the hydraulic pump upside down or with the hydraulic hose end down.***

Hold the pump above the cutter-presser and operate the treadle valve several times. This should force any air in the system to the pump reservoir.

2. Check the hydraulic fluid level and add fluid if any is needed.

8.08 Adjust the release valve of the ENERPAC PA131-SP unit as follows (**Fig. 81** Fig. 81) (No adjustment is required for the ENERPAC PA136-SP unit):

1. Use a 5/16-inch wrench to remove the screw that secures the adjustment arm.

2. Rotate the adjustment arm 1/3 turn counterclockwise.

3. Attach the air source to the pump.

4. Depress the treadle. If the release valve was out of adjustment, hydraulic pressure should build up as the treadle is depressed.

5. With pressure built up, rotate the adjustment arm clockwise until the hydraulic pressure releases. Mark the point of release on the pump. Repeat Steps (2) and (4). With pressure built up again, rotate the adjustment arm clockwise to a point of resistance just before reaching the point where pressure releases. Replace the screw and lock washer in the adjustment arm and secure in place.

Fig. 80—Bleeding Air From Head of Cutter-Presser

6. Operate the pump a few times to ensure the setting is correct.

NOTE: **If the pump is badly out of adjustment, it may be necessary to remove the arm and relocate it so the locking screw aligns with one of the tapped holes in the fixed plate.**

Fig. 81—Adjustment of Release Valve

8.09 Purge air from the ENERPAC PA131-SP pump as follows (**Fig. 82** Fig. 82):

1. Use a 5/16-inch wrench to remove the screw that secures the adjustment arm.
2. Rotate the adjustment arm 1/3 turn counter-clockwise.
3. Turn the pump on its side so the adjustment arm is down and the treadle bearing is up.
4. Use a 5/8-inch wrench to loosen the treadle bearing three turns.
5. Attach the air supply and operate the pump. Some air and hydraulic fluid should leak from the base of the treadle bearing. If no fluid is detected, it may be necessary to loosen the treadle bearing in 1/4-turn increments until hydraulic fluid is seen. Continue to operate the pump until hydraulic pressure builds to the point where the T-bar of the cutter-presser closes and only hydraulic fluid, no air, is seen coming from the base of the treadle bearing.
6. Retighten the treadle bearing while the pressure is built up and adjust the release valve as previously outlined.
7. Purge the air from the head of the cutter-presser.

Fig. 82—Purging Air From Pump (ENERPAC PA 131-SP)

8.10 Purge air from the cutter-presser (ENERPAC PA136-SP) as follows (**Fig. 83** Fig. 83):

1. Position the cutter-presser higher than the pump.
2. Remove the setscrew on side of the tool.
3. Attach the air hose to the pump.
4. Depress the treadle. Air and hydraulic fluid should leak from the cutter-presser. Repeat this operation until no air comes from the cutter-presser and then replace the set screw.
5. Check the oil level in the pump and fill, if necessary.

Fig. 83—Purging Air From Cutter-Presser

9. 835A TOOL

9.01 The 835A tool is a manually operated cutter-presser that uses a lever system for power to assemble 25-pair, 710 connectors. The 835A tool is shown in **Fig. 84** Fig. 84.

9.02 The 835A tool is wired for use with a 152A test set for testing pairs as the splice is made. Testing can be done after the module (connector, bridge, or half-tap) is assembled on the index strip. Note that with the 835A tool, testing is done on the module. With the modified 835A tool and the 890A tool, testing is done on the index strip.

SETUP AND USE

9.03

> **DANGER:** ***Exercise care when operating the 835A tool. The knife blade is very sharp.***

The 835A tool can be mounted on the 710-type tool mountings and the B support frame assembly in the same manner as the 890A tool. Refer to Parts 4 and 5 of this practice.

9.04 Use of the 835A tool to assemble 710 connectors is covered in the following paragraphs. When splicing two sections of cable together, the***shortest*** section of cable must be placed in the index strip to enable testing the splice with a 152A test set.

Fig. 84—835A Tool

9.05 Place the index strip in the tool as follows (**Fig. 85** Fig. 85):

1. With the arched wire grips facing the T-bar, place the index strip into the connector holding bracket assembly. Be sure the ends of the index strip are keyed into the end springs.
2. Push down on the index strip. If necessary, push in on the button to secure the index strip under the L-spring located on the back of the tool. This prevents bowing of the index strip during wire dressing.

Fig. 85—Placing Index Strip

9.06 Place conductors into the index strip as follows (**Fig. 86** Fig. 86):

1. Use the thumb and forefinger of each hand to grasp a pair from the binder group. Separate the tip and ring conductor on the colored peaked projections of the index strip, tip side to the left and ring side to the right.
2. Dress the conductors into the wire grips leaving approximately 3/8-inch slack behind the index strip for 24 through 26 gauge and 1 inch for 19 through 22 gauge. ***When dressing pulp and noncolor-coded PIC conductors, select the pairs at random and place them into the index strip starting at the end of the tool nearest the cable being placed. When dressing PIC, select the pairs at random and place them into the strip in proper color-code sequence using color-code strip and and colored peak projections as a guide.***

Fig. 86—Placing Conductor Into Index Strip

9.07 When the 25 pairs have been placed in the index strip (**Fig. 87** Fig. 87), use the error-tector to check for splicing errors such as two conductors in one slot, vacant slots, tip and ring reversals, or transposed pairs. Use the error-tector in the following way:

1. Place the error-tector over the index strip and slide to the left; only the tip conductors should show. Slide the error-tector to the right; only the ring conductors should show.
2. If an error is found, correct it and check the conductors again with the error-tector.

Fig. 87—Checking Placed Conductors

9.08 Place the T-bar over the index strip as follows (**Fig. 88** Fig. 88):

1. Gently separate the conductors around the T-bar.
2. Place the T-bar over the index strip.

Fig. 88—Placing T-Bar Over Index Strip

9.09 Position the tool for proper cutting by pushing down on the T-bar (**Fig. 89** Fig. 89).

Fig. 89—Positioning Tool for Cutting Operation

9.10 Seat and cut the conductors as follows (**Fig. 90** Fig. 90):

1. Hold the T-bar in the down position.
2. Grasp the hand lever and pull it until it hits the stop. All conductors should now be cut.

Fig. 90—Seating and Cutting Conductors

9.11 With the hand lever in the down position, tug gently on the cut conductors to remove them (**Fig. 91** Fig. 91). If all conductors are not cut, the blade may need replacing.

NOTE: The pairs are normally tested after the connector module is installed; however, on modified versions of the 835A tool, pairs may be tested on the index strip.

9.12 Return T-bar to the horizontal position as follows (**Fig. 92** Fig. 92):

1. Push the hand lever back to its original latched position.
2. Pull the T-bar back to the horizontal position.

Fig. 91—Removing Cut Conductors

Fig. 92—Returning T-Bar to Horizontal Position

9.13 Place the connector module as follows (**Fig. 93** Fig. 93):

1\.

> **WARNING:** ***If the connector module is not lowered parallel to the index strip, it may be damaged causing faults in end pair positions 1 and 2 or 24 and 25.***

With the arched wire grips of the conductor module facing the T-bar, place the connector module into the tool. Keep the module parallel to the index strip.

2. Push the connector down until latches on the connector partially engage in slots on the index strip.

Fig. 93—Placing Connector Module

9.14 Seat the connector module as follows (**Fig. 94** Fig. 94):

1. Position the T-bar over the connector module and push down on the T-bar.
2. While holding the T-bar in position over the connector, pull the hand lever to seat the connector module.

NOTE: If the connector module is not properly seated, return the lever to the latched position, pull the T-bar back, and push down on the module until it latches on the index strip. Repeat 1 and 2 above. If the connector module is damaged, discard it and use a new one.

Fig. 94—Seating Connector Module

9.15 With the lever in the down position, test the pairs with a pair verification test set (**Fig. 95** Fig. 95).

Fig. 95—Testing Pairs With Pair Verification Test Set

9.16 Return the T-bar to the horizontal position (**Fig. 96** Fig. 96).

Fig. 96—T-Bar Returned to Horizontal Position

9.17 Place conductors in the connector module as follows (**Fig. 97** Fig. 97):

1. Select the 25-pair group of conductors that match the group placed in the index strip and place the selected group in the connector module. Use the same procedure as used for the index strip.
2. Use the error-tector to check for errors in conductor placement in the connector module.
3. Gently separate the conductors around the T-bar and then position the T-bar over the connector module.
4. Cut the conductors by pulling the lever down. With the lever in the down position, remove the cut conductors. Test the pairs using pair verification test set.

Fig. 97—Conductors Placed in Connector Module

9.18 Return the T-bar to the horizontal position (**Fig. 98** Fig. 98).

Fig. 98—T-Bar in Horizontal Position

9.19 Place and seat the cap on the connector module as follows (**Fig. 99** Fig. 99):

1. With latches facing the T-bar, place a cap on the connector module. Partially seat the cap on the connector module by pressing down on the cap and running the fingers across the length of the cap.
2.

> **WARNING:** ***If resistance is met when pulling the lever down, stop and check to be sure the cap is in the proper position. If the cap is damaged, discard it and use a new one.***

Seat the cap by placing the T-bar over the cap and,***while pushing forward on the T-bar***, pull the hand lever down to seat the cap on the connector module. Return the T-bar to the horizontal position.

Fig. 99—Placing Cap on Connector Module

9.20 Remove the completed module as follows (**Fig. 100** Fig. 100):

1. Push the button to release the completed module. Remove the module from the tool.
2. With a felt marker, mark the unit number on***unfilled*** modules. For filled modules, use a binder group identification tie placed about 3 inches from the connector.

Fig. 100—Removing Completed Module Trouble Shooting Chart for 835A Tool

MAINTENANCE

9.21 Blade replacement and cleaning procedures for the 835A tool are identical to those for the D, E, and F cutter-pressers except that the T-bar is manually operated.

9.22 Adjustments and troubleshooting are out-lined in the troubleshooting chart,

Table F Table F, and in the troubleshooting guide packaged with the tool.

9.23 Adjust the slide mechanism as follows (**Fig. 101** Fig. 101):

1. Unlock the T-bar by inserting a screwdriver through the grommet on the right side of the housing and pushing the slide to the left.
2. Remove the eleven screws from the cover and remove the cover from the housing.
3. Tilt the tool back slightly. Do this to keep the slide from jumping out of its track.
4. Push the T-bar down and pull the handle down to move the slide to the right and gain access to the adjusting screw.
5. Loosen the locking nut on the adjusting screw. Using a trial-and-error method, turn the screw in the required direction to position the left end of the slide to within 0.010/0.030 inch (approximate thickness of 24-gauge wire) of the inside wall of the housing when the handle is in the closed position. Turn screw counterclockwise to move slide to the right. Turn screw clockwise to move slide to the left.
6. After the adjustment has been made, secure the adjusting screw in place with the locking nut. Recheck the clearance. Replace the cover on the housing and install the screws. The four short screws go along the top of the cover.

9.24 Replace the roll pin as follows (**Fig. 102** Fig. 102).

1. Before attempting to remove the roll pin, check to see if the holes in the handle collar and the cam shaft are aligned. Pull the handle down and insert a wire into the roll pin. If the wire does not go through, rotate the handle on the shaft until the wire does go all the way through.

2. If the holes cannot be aligned, remove the cover. Place a screwdriver into the mechanism on the opposite end of the cam shaft to prevent the shaft from rotating when the handle is moved. Now rotate the handle until the hole in the handle collar is lined up with the pin on the opposite end of the shaft.

TABLE F 835-TYPE TOOL TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	REMEDY
NOTE: The T-bar not being properly positioned while seating a cap can c the slide to be out of adjustment, a bent or broken roll pin, or a burred bl knife support.		
A. T-bar will not spring back to upright position after the cutting and pressing operation	Slide out of adjustment	Adjust slide mechanism
Problem persists or there is no more travel left on the adjusting screw	Bent or broken roll pin	Replace roll pin.
B. T-bar will not move up and down freely	Burred knife blade holder	Remove knife blade ho from down freely the T-bar. Lightly file the burrs until the part i able to slide freely in the end p slots. Replace the knife blade holder.
	Slide out of adjustment	Adjust slide mechanism
Problem persists	Bent or broken roll pin	Replace roll pin.
C. Tool will not completely cut through the conductors	Dull knife blade	Replace knife blade.
	Bent or broken roll pin	Replace roll pin.
D. Knife blades breaking on the end of the knife blade assembly	Shim located behind knife blade	Remove shim.
	Connector holding bracket assembly is located too high	Readjust height.
Knife blades breaking in the middle of the knife blade assembly	Connector is bowed during the cutting and pressing operation	Make sure the connecto components are proper seated.

PROBLEM	CAUSE	REMEDY
NOTE: The T-bar not being properly positioned while seating a cap can c the slide to be out of adjustment, a bent or broken roll pin, or a burred bl knife support.		
E. Knife blades cut deep and the handle pressure required to cut the wires seems excessive	Connector holding bracket assembly is located too high	Readjust height.
F. Index strip lift up	**3.** Cutting into cathedral window	Improper placement of strip.
	4. Interference with stuffers	
	5. Deep cutting knife blade	
		Grease stuffer.
		Replace blades.
G. Should other problems be encountered or the tool still not function after attempted re send the tool in for repair in accordance with the local practices. Include a description of the problem.		

Fig. 101—Adjusting Slide Mechanism

Fig. 102—Replacing Roll Pin

6. When the wire can be inserted through the roll pin, remove the screwdriver.

7. Pull the handle down all the way and put a screwdriver underneath it for support. ***Do not remove the pin with the handle in this position because the tool could be damaged.***

8. With a hammer and punch, knock the pin out about halfway and drive in one of the new pins supplied with the tool until it is ***flush*** with the groove in the collar. The new pin will drive out the broken pieces of the old pin. The tool should now be checked to see if it functions properly. If the slide needs adjusting, follow adjusting procedure in preceding paragraphs. Order pin as: Roll Pin, 420 stainless steel, 0.125-inch diameter by 0.75-inch long, Comcode No. 900477514.

NOTE: An alternative to Step (5) is to use an 835 roll pin replacement tool instead of the punch. The tool is used as a punch but also can be used to hold the new pin while driving the old pin out. In most cases, it is not necessary to remove the cover to replace a pin if the roll pin replacement tool is used. The tool, with three roll pins, is available from Muschong Metal and Manufacturing Company, 2056 Happy Lane, St. Louis, MO 63125.

9.25 Remove shims from the knife support pocket as follows (**Fig. 103** Fig. 103):

NOTE: For removal and replacement of the knife support assembly, use the procedures given for the D, E, and F cutter-pressers.

1. Remove the knife support assembly from the tool and take the knife blade out of the support assembly.

2. Remove any brass shims that are in the knife support pocket. Replace the knife blade in the assembly and the assembly in the support. Replace the support in the tool.

Fig. 103—Removing Shim From Knife Support

9.26 Adjust the height of the connector holding bracket as follows (**Fig. 104** Fig. 104):

1. Remove the connector holding bracket assembly from the tool by unscrewing the two attaching screws and lifting it straight up. There should be a thin brass shim and a thick brass shim remaining on top of the tool (if there is only one shim and blade breaking is severe, return the tool for repair). Remove the thin shim and attach the holding bracket to the tool. Assemble a connector module to an index strip. Cut and press 25 pairs of 22-gauge wire on the connector module. If the wires are not completely cut, additional shims must be added. Remember that pulp insulation probably will not be cut all the way through even with a new, properly-adjusted blade.
2. Peel a few layers off of the thinner shim, which is laminated, and reinstall it

with the thick shim. Make a new test cut to check for completeness of cut. Add or remove shims and make test cuts until all wires are cut completely.

Fig. 104—Adjusting Height of Connector Holding Bracket

9.27 Lubricate the stuffers of the pressing tool as follows (**Fig. 105** Fig. 105):

1. Apply petroleum jelly across the length of an index strip and operate the T-bar on and off of the index strip several times to transfer some of the petroleum jelly to the stuffer blades. Remove and discard the index strip.
2. An alternative method for lubricating is to apply KS-21446 solvent to the stuffer blades. ***Do not use any other solvent.***

Fig. 105—Lubricating Stuffers of Pressing Tool

10. 945A TOOL

10.01 The 945A tool (**Fig. 106** Fig. 106) is a manually operated tool used to assemble 25-pair or 5-pair 710 connectors. The tool is equipped with a mounting rod for aerial mounting. The 945A tool can be used with any of the 710A tool mounting setups.

Fig. 106—945A Tool

USE

10.02 Five press/cut positions are provided along the length of a 25-pair module holder to allow positioning of the presser so five pairs at a time can be pressed and cut over the length of the module.

10.03 A 5-pair module holder is provided for assembling 5-pair connectors.

10.04 Installation of a 25-pair and a 5-pair module holder on a strand is illustrated in **Fig. 107 and 108** Fig. 107 and 108 , respectively. The 5-pair module holder also can be hand held as shown in **Fig. 109** Fig. 109. Since the use of the 945A tool is the same for assembling the 25-pair and the 5-pair connectors, except that the 5 pair requires only one press, only the 25-pair connector is illustrated in the instructions that follow. The index strip is placed in the holder as follows (**Fig. 110** Fig. 110):

1. With the arched wire grips of the index strip facing to the front of the module holder, place the index strip into the module holder. Be sure the ends of the index strip are keyed into the side posts.
2. Push down on the center of the index strip to secure the index strip under the spring located on the back of the module holder. Be sure the L-spring has latched over the groove in the index strip.

Fig. 107—25-Pair Module Holder Mounted on Strand

Fig. 108—5-Pair Module Holder Mounted on Strand

Fig. 109—5-Pair Module Holder Held in Hand

Fig. 110—Placing Index Strip

10.05 Place conductors into the index strip as follows (**Fig. 111** Fig. 111):

1. Using the thumb and forefinger of each hand, grasp a pair from the binder group. Separate the tip and ring conductor on the colored peaked projections of the index strip, tip side to the left and ring side to the right.
2. Dress the conductors into the wire grips leaving approximately 3/8-inch slack behind index strip. ***When dressing pulp or noncolor-coded PIC conductors, select the pairs at random and place them into the index strip starting at end of tool nearest cable being placed. When dressing PIC, select the pairs at random and place them into the strip in proper color-code sequence using color-code strip and colored peak projections as a guide.***

10.06 Check placed conductors as follows (**Fig. 112** Fig. 112):

1. When the 25 pairs have been placed in the index strip, use the error-tector to

check for splicing errors such as two conductors in one slot, vacant slots, tip and ring reversals, or transposed pairs.

2. Place the error-tector over the index strip and slide to the left—only the tip conductors should show. Slide the error-tector to the right—only ring conductors should show. If an error is found, make the correction and check the conductors again with error-tector.

10.07 Adjust the tool for seating and cutting the conductors in the index strip by pushing the button down and pulling the adjustment slide forward (**Fig. 113** Fig. 113).

10.08 Cut the conductors in the index strip as follows (**Fig. 114** Fig. 114):

1. Position the tool in the groove underneath the module holder and slide the tool forward until it hits the stop. The tool will key in holes in the module holder.
2. Press handle to seat and cut conductors. Remove the cut conductors by gently pulling them, if necessary.
3. Release handle and remove the tool from the module holder. Repeat Steps (1) and (2) until all conductors are cut.

NOTE: There is no recommended sequence for cutting and pressing conductors.

10.09 After cutting all of the conductors, remove the tool from the module holder (**Fig. 115** Fig. 115).

Fig. 111—Conductors Placed Into Index Strip

Fig. 112—Checking Placed Conductors

Fig. 113—Adjusting Tool for Seating and Cutting Conductors From Index Strip

Fig. 114—Cutting Conductors From Index Strip

Fig. 115—Conductors Cut and Tool Removed

10.10 Place the connector module on the index strip as follows (**Fig. 116** Fig. 116):

1.

> **WARNING:** ***If the connector module is not lowered parallel to the index strip, the module may be damaged and cause trouble in pair positions 1 and 2 or 24 and 25.***

Place the connector module between the end keys of the base with the arched wire grip facing to the front of the module holder. ***Guide the module down on the end springs keeping the module parallel to the index strip.***

Fig. 116—Place Connector Module

2. Pull the slide back to raise the head of the presser.
3. Seat the connector module on the index strip by indexing across for five presses following a procedure similar to that used for cutting the conductors from the index strip.

10.11 Place the conductors into the connector module as follows (**Fig. 117** Fig. 117):

1. Place the conductors from the matching binder group of the second cable into the slots of the connector module.
2. Use the error-tector to check the conductors placed in the connector module.

10.12 Seat and cut the conductors following the same procedures used for the index strip. Keep the height adjustment slide in the rear position (**Fig. 118** Fig. 118).

Fig. 117—Conductors Placed in Connector Module

Fig. 118—Seating and Cutting Conductors

10.13 Place the cap on the connector module as follows (**Fig. 119** Fig. 119):

1. With the latches of the cap facing the tool, place the cap on the connector module. Using the finger, partially seat the cap on the connector module by running the finger along the length of the cap.
2. Seat the cap on the module by pressing five times along the length of the cap. The tool is not required to be inserted fully into the module holder while seating the cap.

NOTE: To keep the cap from rising during the seating, press one end of the cap and then the other end. Make intermediate presses after the ends are seated.

Fig. 119—Placing Cap

10.14 Remove the completed module as follows (**Fig. 120** Fig. 120):

1. Remove the tool. Push the spring to release the module and remove the completed module.
2. Using felt marker, mark unit number on***unfilled*** connector. For filled connector identify unit number with binder group identification tie placed approximately 3 inches from connector.

MAINTENANCE

10.15 Periodic cleaning of the 945A tool is required, especially when splicing with filled connectors. Clean the tool as follows (**Fig. 121** Fig. 121):

1. Spray the knife blade and guide area with KS-21446 solvent and then brush thoroughly. Repeat as required until clean.
2.

> **DANGER:** ***Extreme caution must be taken when cleaning and drying the guide assembly. The blade is very sharp.***

Wipe the guide area and knife blade with a clean, dry cloth.

Fig. 120—Removing Completed Module

10.16 When the knife blade becomes dull, replace the knife blade as follows (**Fig. 122** Fig. 122):

1. Remove the two screws and remove clamp plate, guide, knife blade, and knife blade holder.
2. Remove the old knife blade from holder and replace with new blade. Reassemble.

Fig. 121—Cleaning Knife Blade

Fig. 122—Knife Blade Replacement

11. HAND TOOLS AND ACCESSORIES

11.01 In addition to the cutter-pressers, a number of hand tools and accessories are available as a part of the 710 modular splicing system.

11.02 The following items, some of which are shown in **Fig. 123** Fig. 123, are available for use with the 710 system:

A. ***D Insertion Cutting Tool:*** This tool is used for seating and cutting a single pair of conductors. It can be used with all 710 modules.

B. ***C Bridge Removal Tool:*** This tool is for removing bridge modules from all 710 connectors.

C. ***L Connector Presser:*** This tool is used to join a BSM (bottomless splice module) to an index strip and to other 710 connector combinations (**Fig. 124** Fig. 124). The L connector presser can be used only when 22-, 24-, and 26-gauge conductors are in the index strip. Use the 890A tool or 835A tool to seat a BSM on an index strip that contains 19-gauge conductors.

Fig. 123—Hand Tools and Accessories

Fig. 124—Using the L Connector-Presser

D. ***F Module Support:*** The F module support is used to protect contacts on a 25-pair connector module when preterminating a stub cable.

E. ***710-CM5 Module Support:*** The 710-CM5 module support is used to protect contacts on 5-pair connector modules when preterminating a stub cable.

F. ***E Module Support:*** The E module support is used to protect contacts on bridge modules when preterminating stub cable.

G. ***710-BM5 Module Support:*** The 710-BM5 module support is used to protect the contacts on 5-pair bridge modules when preterminating a stub cable.

H. ***B Tagging Tape:*** This tape is for recording the identification number of pulp-insulated conductors in a connector.

I. ***Male Contact Cover:*** This is a protective cover for preterminated bridge modules—Comcode number 842931271 from Dandee Plastics.

J. ***Connector Module Contact Cover:*** This is a protective cover for preterminated BSMs—Comcode number 842209215 from Dandee Plastics.

K. ***Close Cutting Insulated Pliers:*** These pliers are for cutting out working pairs that have been half-tapped—Proto 453, Ecelite GC-73, or equivalent.

L. ***840A Tool:*** This tool is for cutting out working pairs that have been half-tapped.

M. ***710B1 Cover:*** This cover protects exposed conductors remaining after cutoff in a half-tapped, 25-pair connector module.

N. ***710B5 Cover:*** This cover protects exposed conductors remaining after cutoff in a half-tapped, 5-pair connector module.

O. ***55A Group Slack Holder:*** This tool can be added to the D, E, or F cutter-presser and the 835A tool for securing a binder group in position for in-line splicing. A group slack holder is a component of the 890A and the 890B tools.

P. ***W2HM Cord:*** The W2HM cord is a single pair test probe used with the test set for testing any pair in either 5-pair or 25-pair connectors.

Q. ***710-FS-25 Filler Strip:*** The filler strip is a soft plastic devise that blocks the bridge ports of 25-pair, 710 splice and half-tap modules preventing the ports from being clogged with D encapsulant during the filling of splice closures.

12. SPLICE TESTING WITH THE PAIR VERIFICATION TEST SET

12.01 The pair verification test set can be used with the cutter-pressers and the 835A and the 890A tools covered in this practice. The 152A test set will automatically test 25 cable pairs accessed through the modules. Cable faults such as opens, shorts, crosses, grounds, splits, and splice backs are detected.

SETUP AND USE

12.02 Clear the ends of the cables to be spliced.

12.03 Check the operation of the test set by following the instructions on the decal on the inside of the test set cover.

12.04 Position the test set near the splice (**Fig. 125** Fig. 125) and connect the test set cord to the connector on the T-bar of the cutter-presser. Connect a ground lead from the test set to the cable sheath.

Fig. 125—Setting Up 152A Test Set

12.05 Position the switches as follows (**Fig. 126** Fig. 126):

1. The PIC-PULP switch is set to the type of insulation on the conductors being spliced.
2. The 5-REF-22 switch is set to either 5 or 22.
3. The PAIR ACCESS switch is set to scan.

12.06 Place 25 pairs from the ***shortest section of cable*** into the index strip. Check wire placement with the error-tector before cutting because the test set does not detect reversals or transpositions. Place the connector module over the index strip and press in place ***leaving the T-bar in the down position*** to test the 25 pairs.

NOTE: Do not test on working pairs. Do not test through more than one load coil. Test on the index strip only when using the 890A tool.

12.07 Depress the START/STEP switch. Some diagnostic lights may light momentarily but then go out. The RUN lamp will light and the PAIR NUMBER display readout will indicate which pair is being tested. When a defective pair is encountered, the scan will stop, the PAIR NUMBER readout will display the pair number for 2 seconds, the audible alarm will sound and the appropriate fault indicator lamp will light. To verify defective pairs, reverse the 5-REF-22 switch and repeat the test. ***A pair must test faulty against both reference pairs (5 and 22) to be a true fault.*** (Refer to the troubleshooting chart in **Table G** Table G.) If a voltage in excess of 3.5 volts is on the pair, the NO TEST lamp will light indicating the pair cannot be tested. Clear faults as they are found by using spare pairs to substitute for faulty pairs.

Fig. 126—152A Test Set

TABLE G TROUBLESHOOTING DEFECTIVE PAIRS DETECTED WITH 152A TEST SET

PROBLEM	ACTION IF PAIRS DRESSED INTO INDEX STRIP (NOTE 1)	ACTION IF PAIRS DRESSED INTO CONNECTOR MODULE
NOTE: 1. When using 890A tool and testing on index strip, pairs that are indicated to be defective can be removed for single pair test and spare pair replacement.		
Short or Ground	Access defective pair to determine if short or ground by using ohmmeter at tip/ring/ground terminals. Remove defective pair; select and test spare pairs externally; splice spare pairs with external connectors.	Access defective pair to determine if short or ground by using ohmmeter at tip/ring/ground terminals. Remove defective pair from module. Select and dress spare pair into module. Close T-bar and run the test again.

PROBLEM	ACTION IF PAIRS DRESSED INTO INDEX STRIP (NOTE 1)	ACTION IF PAIRS DRESSED INTO CONNECTOR MODULE
NOTE: 1. When using 890A tool and testing on index strip, pairs that are indicated to be defective can be removed for single pair test and spare pair replacement.		
Cross	Visually check module to determine if spliceback or possible cross. If cross, remove defective pair. Select and test spare pair and splice externally.	

PROBLEM	ACTION IF PAIRS DRESSED INTO INDEX STRIP (NOTE 1)	ACTION IF PAIRS DRESSED INTO CONNECTOR MODULE
NOTE: 1. When using 890A tool and testing on index strip, pairs that are indicated to be defective can be removed for single pair test and spare pair replacement.		
Visually check module to determine if spliceback or possible cross. Remove defective pair, if cross, and replace with spare pair. Close T-bar and		

Close T-bar and run test again.		

PROBLEM	ACTION IF PAIRS DRESSED INTO INDEX STRIP (NOTE 1)	ACTION IF PAIRS DRESSED INTO CONNECTOR MODULE
NOTE: 1. When using 890A tool and testing on index strip, pairs that are indicated to be defective can be removed for single pair test and spare pair replacement.		
Open	Visually check to determine if split, open, or spliceback. If open, remove defective pair, select and test spare pair, and splice externally.	Visually check to determine if split, open, or spliceback. If open, remove defective pair, replace with spare pair, close T-bar, and run the test again.
Split	Visually check to determine if split, open, or spliceback. If split, remove pairs and splice to pairs of other cable externally.	Visually check to determine if split, open, or spliceback. If split, remove pairs and redress in module. Run test again.
Spliceback	Visually check to determine if spliceback. Remove pairs and splice to pairs of other cable externally.	Visually check to determine if spliceback. Remove pairs and redress in module. Run the test again.

PROBLEM	ACTION IF PAIRS DRESSED INTO INDEX STRIP (NOTE 1)	ACTION IF PAIRS DRESSED INTO CONNECTOR MODULE
NOTE: 1. When using 890A tool and testing on index strip, pairs that are indicated to be defective can be removed for single pair test and spare pair replacement.		
	(When removing pairs from the index strip and splicing externally, remember to leave those pair positions vacant in the connector module.)	

NOTE: When the cable being tested is less than 200 feet in length, only the left-hand diagnostic lights will indicate a real fault (short or ground). The right-hand diagnostic lights (split, open, cross, splice back) should be disregarded.

12.08 Select 25 pairs from the corresponding cable group in the other cable and place these pairs into the connector module. Check the placement of the pairs in the connector with the error-tector before cutting the wires. ***Leave the T-bar in the down position.*** Repeat the test procedures and again refer to the troubleshooting chart.

12.09 DEFECTIVE REFERENCE PAIRS

Indication of a SHORT or GROUND on the***selected*** reference pair means that the reference pair is defective and should be changed before using the test results on any other pair. When several pairs test defective, it suggests that the reference pair may be bad, even though the test set does not indicate a fault on the reference pair. If this occurs, change to the alternate reference pair.

12.10 CHANGING REFERENCE PAIRS

To change the reference pair, move the 5-REF-22 switch to its opposite position. If it is believed that both reference pairs (5 and 22) are defective, an external reference pair must be used. The reference pair selected must be the same length as the pair being tested. Position the 5-REF-22 switch to the REF PAIR (center) position. Insert the cord plug into the REF PAIR jack. Connect the cord to a good pair to be tested. The reference pair is now changed and testing may proceed.

12.11 SINGLE PAIR TEST

With the test set grounded to the cable sheath, select a reference pair with the same length as the pair to be tested. The reference pair may be pair 5 or 22 accessed through the cutter-presser head or may be any other pair that has been accessed through the REF PAIR jack. Insert a test cord into the TEST PAIR jack and connect the test cord to the pair to be tested. Depress the START/STEP switch. Some diagnostic lamps may light momentarily but will immediately go out indicating that the pair being tested is good. If the pair is defective, the appropriate diagnostic lamp will light and the audible alarm will sound for approximately 2 seconds and then turn off.

NOTE: Remember that the diagnostic lamps may be incorrect if the reference pair is bad. *The reference pair is not being tested.*

12.12 PAIR ACCESS TO EXTERNAL TEST EQUIPMENT

Ground the test set to the cable sheath. Place the 5-REF-22 switch in the center position. While in the SCAN mode, depress the START/STEP switch. When the defective pair appears in the PAIR NUMBER display, flip the switch from the SCAN position to the ACCESS PR position and press and release the START/STEP switch until the desired pair is displayed in the PAIR NUMBER display. Connect a volt-ohmmeter, a 145A test set, or equivalent set to the TIP and RING terminals on the test set to the pair. The pair is now connected to the external test equipment through the cutter-presser head and the TIP and RING terminals.

NOTE: ***Do not apply breakdown voltage through these terminals.*** **To conserve the battery, remove the test set from the access PR mode as soon as external testing is complete.**

12.13 2-PERSON SPLICING—ONE 152A TEST SET

The test set can be used with two cutter-pressers (**Fig. 127** Fig. 127) using a W-100A cord. However, only one splice can be tested at a time. Both T-bars cannot be in the down position when testing.

NOTE: Refer to the instruction book provided with the test set or to Practice 634-400-530 for detailed testing instructions.

13. CABLE PREPARATION AND SPLICING

NOTE: Requirements for sheath opening, core preparation, and connector location are based on the use of a 2-type closure.

13.01 Place tarpaulins, etc., to protect the proposed splice from dirt and moisture.

Fig. 127—2-Person Setup for Splicing and Testing

IN-LINE CONFIGURATION—STRAIGHT SPLICE

A. General

13.02 Prepare the cable sheath, align the cable groups, and bond as required for the splice closure being used. It is important to determine at this time the number of banks of connectors required for the splice so the proper size closure can be selected.

B. Single-Bank In-Line Splice—Cable Layout

13.03 Mark the outer layer for a single-bank in-line splice as follows (**Fig. 128** Fig. 128):

1. Wrap a length of scrap wire around each cable at a point 8 inches from the butt of the cable.
2. Use the wire wrap as a guide and mark each unit in the outer layer at the wire wrap. Remove the wire wrap.

Fig. 128—Marking Outer Layer for Single-Bank In-Line Splice

13.04 Mark the inner layers for a single-bank in-line splice as follows (**Fig. 129** Fig. 129):

1. Fold the outer layer back over the sheath.
2. Wrap a length of scrap wire around each cable at a point 7 inches from the butt of the cable.
3. Use the wire wrap as a guide and mark each unit in the inner layer(s). Remove the wire wrap.

13.05 A typical setup for making a splice is illustrated in **Fig. 130** Fig. 130.

Fig. 129—Marking Inner Layer(s) for Single-Bank In-Line Splice

Fig. 130—Cutter-Presser Setup for In-Line Single-Bank Splice

13.06 The procedure for making a single-bank in-line splice when the sheath opening is 19 inches or less is as follows (**Fig. 131** Fig. 131):

1. Position the tool in the center of the sheath opening, 1 inch in front of the cable sheath, and 1-1/2 inches above the unit to be spliced. The marks on the cable units should be inside the end posts.
2. Remove and tie off the unit binders. Start at the bottom rear and work to the top, splicing the rear outer units.
3. To splice units in the center of the cable, position the tool away from the sheath approximately the distance of a unit diameter (about 1/2 inch).
4. To splice units in the front outer layer, move the tool out about 1/2 inch and proceed as in Steps (1) and (2).

Fig. 131—Position Tool for Splicing

13.07 Place bags of C desiccant in completed splices in paper- or pulp-insulated cable (**Fig. 132** Fig. 132).

Fig. 132—Placing Bag of Dessicant

13.08 When necessary, rotate the splice to reduce the amount of slack (**Fig. 133** Fig. 133). Tie the splice bundle and enclose the splice using the appropriate technique for the splice case used.

Fig. 133—Rotating Splice

C. 2-Bank In-Line Splice—Cable Layout

13.09 Mark the outer layers for a 2-bank in-line splice as follows (**Fig. 134** Fig. 134):

1. Wrap a length of scrap wire around each cable at positions 5 and 12 inches from the butt of each cable.
2. Use the wire wraps as guides to mark each unit in the outer layer at the 5- and 12-inch positions. Remove the wire wraps from the cable.

NOTE: **On filled cable, wire ties may be used to mark the cable.**

Fig. 134—Marking Outer Layer for 2-Bank In-Line Splice

13.10 Mark the inner layer(s) for a 2-bank in-line splice as follows (**Fig. 135** Fig. 135):

1. Fold the outer layer back over the cable sheath.
2. Wrap a length of scrap wire around each cable at locations 4 and 12 inches from the butt of each cable.
3. Use the wire wraps as guides to mark each unit in the inner layer(s) at the 4-

and 12-inch positions. Remove the wire wraps from the cable.

13.11 Set up the tool for making a 2-bank in-line splice as follows (**Fig. 136** Fig. 136):

1. Set up the tool in a position so the slack length mark on the short cable unit is on the inside of an end post. Secure the unit in the slack group holder.
2. Position the long cable unit so the mark is on the inside of the other end post. Secure this unit in place with a group slack holder or hold it in place until several pairs are dressed into place.
3. Splice a multiunit starting at the lower rear.

13.12 Move the tool to the opposite side of the sheath opening as follows (**Fig. 137** Fig. 137):

1. After a multiunit has been spliced, move the tool to the opposite side of the sheath opening.

Fig. 135—Marking Inner Layer(s) for 2-Bank In-Line Splice

Fig. 136—Positioning Tool for Splicing

2. Position the tool so the marks on the units are on the inside of each end post. Remove the unit binder and tie off primary unit binders at the mark near the end post. Then, splice the units starting at the lower rear unit and working toward the front, keeping the mark on the unit next to the end post.
3. Continue splicing outside rear, inside, and outside front units at opposite ends until all units are spliced.
4. Apply desiccant, tie, wrap, etc., as appropriate for the type of cable and closure.

Fig. 137—Tool Moved to Opposite Side of Sheath Opening

D. 3-Bank In-Line Splice—Cable Layout

13.13 Mark the outer layer for a 3-bank in-line splice as follows (**Fig. 138** Fig. 138):

1. Wrap a length of scrap wire around each cable at 5, 12, and 20 inches from the butt of the cable.
2. Use the wire wraps as guides to mark each unit in the outer layer at the 5-, 12-, and 20-inch positions. Remove the wire wraps.

NOTE: **Wire ties can be used on waterproof cable to mark the cable.**

13.14 Mark the inner layer(s) for a 3-bank in-line splice as follows (**Fig. 139** Fig. 139):

1. fold the outer layer back over the cable sheath.
2. Wrap a length of scrap wire around each cable at positions 4, 12, and 20 inches from the butt of the cable.
3. Use the wire wraps as guides to mark each unit at the 4-, 12-, and 20-inch positions. Remove the wire wraps from the cable.

Fig. 138—Marking Outer Layer(s) for 3-Bank In-line splice

Fig. 139—Marking Inner Layer(s) for 3-Bank In-Line Splice

13.15 Position the tool for making the 3-bank in-line splice as follows (**Fig. 140** Fig. 140):

1. Set up the tool and position it so the marks on the units are on the inside of each end post. Remove the unit binders and tie off primary unit binders at the mark near the end post. Then, splice the units by starting at the lower rear unit and working toward the front, keeping the mark on each unit next to the end post.
2. After a multiunit has been spliced, move the tool to splice the center bank of connectors and repeat the procedure in Step (1) above.
3. After the multiunit in the center bank has been spliced, move the tool to splice the end bank and repeat the procedure in Step (1) above.
4. After all units are spliced, apply desiccant, tie, wrap, etc., as appropriate for the type of cable and closure.

Fig. 140—Positions of Tool for 3-bank Splice

E. 4-Bank In-Line Splice—Cable Layout

13.16 Mark the outer layer for a 4-bank in-line splice as follows (**Fig. 141** Fig. 141):

1. Wrap a length of scrap wire around each cable at 5, 12, 20, and 28 inches from the butt of the cable.
2. Use the wire wraps as guides to mark each unit in the outer layer at the 5-, 12-, 20-, and 28-inch marks. Remove the wire wraps.

NOTE: **On waterproof cable, wire ties may be used to mark the cable.**

Fig. 141—Marking Outer Layer for 4-Bank In-Line Splice

13.17 Mark the inner layer(s) for a 4-bank in-line splice as follows (**Fig. 142** Fig. 142):

1. Fold the outer layer back over the cable sheath.
2. Wrap a length of scrap wire around each cable at 4, 12, 20, and 28 inches from the butt of the cable.
3. Use the wire wraps as guides to mark each unit in the inner layer(s) at the 5-, 12-, 20-, and 28-inch marks. Remove the wire wraps.

13.18 Set up the tool for making a 4-bank in-line splice as follows (**Fig. 143** Fig. 143):

1. Position the tool so marks on the cable are on the inside of each end post. Remove the unit binders and tie off primary unit binders at the mark near the end post. Then, splice the units starting at the lower rear unit and working toward the front. Keep the mark on each unit next to the end post.
2. After a multiunit has been spliced, move the tool to splice the left center bank of connectors. Splice the left center multiunit.
3. After the multiunit has been spliced in the left center bank, move the tool and splice the right center bank.

4. After the multiunit has been spliced in the right center bank, move the tool and splice the right bank.
5. Continue splicing, following the same sequence until all units are spliced.

Fig. 142—Marking Inner Layer(s) for 4-Bank In-Line Splice

Fig. 143—Positions of Tool for 4-Bank Splice

6. Apply desiccant, tie, wrap, etc., as appropriate for the type of cable and closure.

FOLDBACK CONFIGURATION—STRAIGHT SPLICE

A. General

13.19 Prepare the cable sheath and bond as required for the splice closure being used. It is important to determine at this time the number of banks of connectors required for the splice so the proper size closure can be selected.

B. 2-Bank Foldback Splice—Cable Layout

13.20 To prepare the core of the splice, bring the first unit from the right cable across the opening to the left cable. Match this unit with the first unit of the left cable and tie them together where they meet (**Fig. 144** Fig. 144). ***Keep the ties 2 inches or less from the sheath.***

13.21 Take the second unit from the left cable and move it across the opening to the right cable. Match this unit with the second unit of the right cable and tie them together where they meet.

13.22 Repeat the procedure for each unit, tying the odd numbered units on the left side of the sheath opening and the even numbered units on the right, until the core is complete.

13.23 Wrap the core with the same material that will be used for the completed splice. Do not wrap the core of waterproof cable.

13.24 Mark the core for a 2-bank splice as follows (**Fig. 145** Fig. 145):

1. Measure across the sheath opening to find the center of the opening. Mark the center and place a 1-inch wide piece of vinyl tape over the mark. The tape will be used to position each connector.

Fig. 144—Prepared Cable

2. Set up the cutter-presser and position it at the right-hand end of the splice opening.
3. Take the first unit from the left side of the opening and lay it along the core. Then, using a piece of wire, mark the unit at the point that coincides with the right edge of the vinyl tape. ***This is important. It keeps the connectors from overlapping in the center of the splice.***

Fig. 145—Marking Unit To Be Spliced

13.25 Align the tool for splicing as follows (**Fig. 146** Fig. 146):

1. Move the cutter-presser so the wire marker on the unit aligns with the inside edge of the vertical post on the tool. Position the tool so the index strip will be 1-1/2 inches above the level of the unit to be spliced.
2. Secure the unit binders near the end post. Splice the 25-pair unit.
3. Repeat Steps (1) and (2) for each unit from the left-hand cable. Then move the cutter-presser to the left-hand side of the splice and splice the units from the right-hand cable. Begin splicing with the lower rear units and work up and to the front to avoid having to work around completed connectors.

13.26 After all units have been spliced, fold the units to the core (**Fig. 147** Fig. 147).

Fig. 146—Align Tool

Fig. 147—Folding Units Into Core

13.27 Tie the units to the core (**Fig. 148** Fig. 148) and apply desiccant, wrap, etc., as appropriate for the type of cable and closure.

Fig. 148—Splicing Completed

C. 3-Bank Foldback Splice—Cable Layout

13.28 Prepare the core for a 3-bank foldback splice as follows (**Fig. 149** Fig. 149):

1. Make a 27-1/2 inch sheath opening.
2. Tie off the even units on the right side and the odd units on the left side (same as for the 2-bank splice).
3. Wrap the cable core.

13.29 Mark the core for a 3-bank splice at 9-1/2 inches from each end of the sheath opening (**Fig. 150** Fig. 150).

13.30 Place tape markers by placing one turn of 1-inch wide vinyl tape around the core at each mark. The tape should be centered on the marks (**Fig. 151** Fig. 151).

Fig. 149—Cable Prepared for Three Banks of Connectors

Fig. 150—Sheath Prepared for 3-Bank Splice

Fig. 151—Tape Marker Placed on Cable Core

13.31 Mark the cable units for a 3-bank splice as follows (**Fig. 152** Fig. 152):

1. Use a piece of wire to mark each odd numbered unit for the center bank of the splice. Place the wire marker at the right edge of the piece of tape that is to the left of the center of the splice.
2. Use a piece of wire to mark each even numbered unit for the center bank of the splice. Place the wire marker at the left edge of the piece of tape that is to the right of the center of the splice.
3. The pair counts of units for the center bank are given in **Table H** Table H.

Fig. 152—Marking Cable Unit for 3-Bank Splice

TABLE H PAIR COUNTS FOR MULTIUNITS IN CENTER BANK (NOTE 1)

CABLE SIZE	COUNTS FOR EVEN MULTIUNITS	COUNTS FOR ODD MULTIUNITS
NOTE: 1. Pair counts are in 100s.		
2400	2, 8, 22, 24	1, 7, 9, 23
2700	2, 10, 12, 20	1, 3, 7, 15, 25
3000	2, 10, 12, 28, 30	1, 9, 11, 27, 29
3600	2, 4, 14, 16, 34, 36	1, 3, 13, 15, 33, 35
4200	2, 4	1, 3

13.32 Set up the cutter-presser and splice all units for the center bank (**Fig. 153** Fig. 153). When connectors have been installed, lay the center bank units back along the cable on the sides from which they came.

13.33 Mark the outer units (**Fig. 154** Fig. 154). Then, splice the units by completing splicing on one side of the splice before moving the tool to the other side.

Fig. 153—Spliced Center Bank

Fig. 154—Marking Outer Banks

13.34 Position the center bank of connectors and tie them to the cable core (**Fig. 155** Fig. 155). Lay the outer banks of connectors on each side of the center bank and tie them in place.

NOTE: It may be necessary to tie small groups of connectors to the cable core to make the connectors easier to handle.

13.35 Prepare the splice bundle for wrapping (**Fig. 156** Fig. 156) by:

1. Placing outer ties around the splice bundle.
2. Cutting and removing ties from inside the bundle.
3. Cutting and removing ties securing the center bank of connectors.

Fig. 155—Tying Banks to Core of Cable

Fig. 156—Preparing Splice Bundle for Wrapping

13.36 Wrap the splice by starting at the edge of one of the outer ties (**Fig. 157** Fig. 157). As wrapping progresses, remove the ties.

13.37 Enclose the splice using the methods prescribed for the closure being used (**Fig. 158** Fig. 158).

D. 4-Bank Foldback Splice—Cable Layout

13.38 Prepare the cable for a 4-bank foldback splice as follows (**Fig. 159** Fig.

159):

1. Prepare the cable sheath for a sheath opening of 36 inches for a C-length 2-type closure.
2. Tie the units off with the even units on the right and the odd units on the left (the same as for the 2-bank foldback).
3. Wrap the core in the same manner as for the 2-bank foldback.
4. Mark the core as illustrated placing one turn of 1-inch wide vinyl tape around the core at each mark. The tape should be centered on the mark.

Fig. 157—Wrapping Splice

Fig. 158—Completed Splice

Fig. 159—Cable Core Marked for Four Banks of Connectors

13.39 Mark and splice the center units of the 4-bank splice as follows (**Fig. 160** Fig. 160):

1. Use pieces of wire to mark the units for the center banks of connectors at a point that corresponds with the edges of the tape in the center of the splice opening.

   NOTE: The same number of units are to be spliced in each bank and evenly placed around the core. The units in the two center banks should come from the cores of the odd and even numbered units.

2. Set up the cutter-presser so the wire marker on the unit to be spliced is aligned with the inside edge of the vertical post. Splice all units in that position and then set up and splice all the units that will be positioned on the opposite side of the center tape marker. Lay the completed connectors back on the cable on the side from which they came.

Fig. 160—Marking Cable Center Units and Splicing Four Banks of Connectors

13.40 Mark and splice the outer units of the 4-bank splice as follows (**Fig. 161** Fig. 161):

1. Mark the units for the outer banks at a position that corresponds with the outer edges of the tape.
2. Set up the cutter-presser at one end and splice all the units that will be in that outer bank. Move the tool to the other outer bank and complete the splicing in that position.

Fig. 161—Marking Cable Units for Outer Banks of Connectors

13.41 Fold the connectors for the center banks around the core and tie them in place (**Fig. 162** Fig. 162).

13.42 Fold the outer banks of connectors around the core and tie them in place (**Fig. 163** Fig. 163).

NOTE: It may be necessary to tie small groups of connectors to the cable core to make them easier to handle.

Fig. 162—Tying Center Banks of Connectors to Core of Cable

Fig. 163—Tying Outer Banks of Connectors to Core of Cable

13.43 Position the four banks of connectors around the core and tie them in place (**Fig. 164** Fig. 164).

13.44 Wrap the splice by starting at the edge of one of the outer ties (**Fig. 165** Fig. 165). As wrapping progresses, remove the ties.

Fig. 164—Banks of Connectors Tied in Place

Fig. 165—Wrapping Splice

13.45 Enclose the splice using the method prescribed for the closure being used.
BRANCH CABLE IN FOLDBACK SPLICE

13.46 Prepare the cable sheath and bond as required for the type of closure being used.

13.47 To prepare the core of the through cable, bring the first unit from the right end across the opening to the left end. Match this unit with the first unit of the left end and tie them together where they meet. ***Keep the ties 2 inches or less from the sheath.***

13.48 Take the second unit from the left end and move it across the opening to the right end. Match this unit with the second unit of the right end and tie them together where they meet.

13.49 Repeat the procedure for each unit, tying the odd numbered units on the left side of the sheath opening and the even numbered units on the right, until the core is complete.

13.50 Wrap the core with the same material that will be used for the completed splice. Do not wrap the core of waterproof cable.

13.51 Prepare the core for a straight foldback splice with a branch cable as follows (**Fig. 166** Fig. 166):

1. Mark the core with vinyl tape as appropriate for the number of banks to be used. Tie the branch cable units to the matching units of the through cable.
2. Tie a branch cable multiunit to the prepared core of the through cable.

Fig. 166—Cable Prepared for Straight Splice With Multiple Using Foldback Method

A. Adding Branch Cable—Using Cutter-Presser

13.52 Set up the splicing tool and install a connector on a unit of ***through*** cable pairs. Remove the through cable connector from the splicing tool and rotate the connector so the bridge slots are facing upward (**Fig. 167** Fig. 167).

NOTE: A branch cable may be added to an existing splice using a D insertion-cutting tool, a 945A tool, or other tool. It is not necessary to use a cutter-presser.

Fig. 167—Through Cable Spliced Removed From Splicing Tool

13.53 Insert a bridge module into the connector as follows (**Fig. 168** Fig. 168):

1. ***Clear the wires away from the bridge slot area. With the arched wire grips on a bridge module facing the T-bar,*** insert the bridge module into the cutter-presser so the bridge module contacts enter the bridge slots on the connector.
2. Operate the tool to seat the bridge module into the connector.

Fig. 168—Inserting Bridge Module Into Connector Module

13.54 Place conductors into the bridge module as follows (**Fig. 169** Fig. 169):

1. Dress 25 pairs from the branch cable unit into the bridge module.

   - When adding a pulp or noncolor-coded PIC branch to pulp through cables, identify units and dress the pairs randomly starting at the side of the cutter-presser nearest the stub unit.
   - When adding a PIC branch to PIC through cables, identify units and select the pairs at random. Dress them into the module in their proper color-code sequence.
   - If the branch unit is PIC and the through cable is pulp, one of two options can be used. The first one is to place B tagging tape on the connector to identify the pulp pairs before dressing the branch unit. Next, dress the PIC pairs into the bridge module ***not*** in color-code sequence but according to the numbers called for on the tagging tape. Then, place the numbered tagging tape over the color-coded strip or on the connector cap. The second option is to identify the pulp pairs and place them in a tag board before starting to splice. Then as the splice is made, place the pulp pairs in the module in sequence.

2. After each 25-pair unit is placed in the module, check with the error-tector.

13.55 Complete the splice as follows (**Fig. 170** Fig. 170):

1. Gently dress the conductors to the side of the T-bar and then position the T-bar over the bridge module. Operate the tool to seat and cut the conductors. With the T-bar down, test the pairs with a pair identification test set.
2. Place and seat a cap on the bridge module. Remove completed bridge from splicing tool and identify unit with tape or marking pencil.
3. Complete all connectors. Fold the units into the core and tie them in place. Wrap the splice and install the closure in accordance with procedures prescribed for the closure being used.

Fig. 169—Pairs From Cable Placed in Bridge Module

Fig. 170—Completed Straight With Multiple

B. Branch Cable Added to Existing Splice

13.56 Open the splice. If the main cable is pulp and the branch cable is color coded, identify the involved pairs of the main cable on B tagging tape.

13.57 Set up a splicing tool. The tool will be used only for terminating the bridge modules on the stub cable. The bridge modules will be seated by hand in the through connectors. This will eliminate rearranging the existing splice for enough slack to use a cutter-presser. The tool must be set up so the bridge module, when inserted into the connector module, will match up for tip/ring and pair orientation.

13.58 Tie off the branch cable units into a foldback configuration. Position the cutter-presser so the bridge modules, when installed, can be placed in with the first bank of connector modules. This will allow the terminated bridge modules to be inserted into the splice connectors. See paragraphs 13.69 through 13.71 for foldback lengths recommended for 2-, 3-, and 4-bank splices.

13.59 To protect the contacts on the bridge module while the wires are being dressed and seated, install an E module support on the cutter-presser. Be sure the module support is secure under the L-spring.

13.60 Install the E module support in the cutter-presser with the word FRONT facing the T-bar (**Fig. 171** Fig. 171).

Fig. 171—Installing E Module Support Into Cutter-Presser

13.61 Insert the bridge module into the module support. The bridge module is seated by hand into the module support. It is not necessary to seat the bridge module into the module support with the cutter-presser (**Fig. 172** Fig. 172).

Fig. 172—Inserting Bridge Module Into E Module Support

13.62 Dress a 25-pair unit into the bridge module (**Fig. 173** Fig. 173).

- When adding a pulp or noncolor-coded PIC branch to pulp through cables, identify units and dress the pairs randomly starting at the side of the cutter-presser nearest the stub unit.
- When adding a PIC branch to PIC through cables, identify units and select the pairs at random. Dress them into the module in their proper color-code sequence.
- If the branch unit is PIC and the through cable is pulp, one of two options can be used. The first is— before dressing the branch unit, place B tagging tape on the connector to identify the pulp pairs. Second, dress the PIC pairs into the bridge module ***not*** in color-code sequence but according to the numbers called for on the tagging tape. Then place the numbered tagging tape over the color-coded strip or on the connector cap. The second option is to identify the pulp pairs and place them in a tag board before starting to splice. Then as the splice is constructed, place the pulp pairs in the splice connector in the correct pair number sequence. Color-coded pairs can then be dressed into the bridge module in proper color-code sequence.

Fig. 173—Dress Conductors Into Bridge Module

13.63 Use the error-tector to check for placement errors and then seat and cut the conductors.

13.64 Complete the installation of the bridge module as follows (**Fig. 174** Fig. 174):

1. Place and seat a cap on the bridge module and then remove the module from the cutter-presser.
2. When terminating several 25-pair units into bridge modules before installing them into splicing connectors, protect the bridge module contacts with male contact covers.

13.65 Install the completed bridge module into the through cable splice connector as follows (**Fig. 175** Fig. 175):

1. Clear the through cable pairs from the bridge area of the through cable splice connector. Carefully insert the bridge module into the through cable connector. ***The latches of the connector cap should face the cap of the through cable connector. Do not force the bridge module into the through cable connector. If resistance is felt, remove the module and check the contacts. If any contacts are bent or broken, replace the module.***
2. With a D insertion-cutting tool, a 945A tool, or an L connector presser, seat the bridge module. Work across the module from one end to the other pressing in about six places.

Fig. 174—Preterminated Stub Cable Unit

Fig. 175—Inserting Bridge Module Into Through Cable Splice Connector

C. Adding Branch Cable—Using Hand Tool

13.66 Make a branch splice using a D insertion-cutting tool or a 954A tool as follows (**Fig. 176** Fig. 176):

1. Open the splice. If the main cable is pulp and the branch cable is prior coded, identify with B tagging tape the pairs of the through cable that will be involved in the splice.
2. Use a D insertion-cutting tool or 945A tool to seat a bridge module in the through cable connector. Keep the tool perpendicular to the connector and ***bring the peaked projection of the bridge module up to the tool cutting***

head. Press the module from end to end in about 5 or 6 places.

Fig. 176—Branch Splice Using Hand Tool

13.67 Place the branch cable pairs into the bridge module as follows (**Fig. 177** Fig. 177):

1. Dress the branch pairs into the bridge module.
2. Seat and cut the branch pairs with a D insertion-cutting tool or a 945A tool.

13.68 Use a D insertion-cutting tool or a 945A tool to place and seat a cap on the bridge module (**Fig. 178** Fig. 178).

Fig. 177—Dressing Branch Cable Pairs Into Bridge Module

Fig. 178—Placing Cap on Bridge Module

CREATING A JUNCTION SPLICE

13.69 **Figure 179** Figure 179 illustrates positions for installing splice connectors on the CO (central office) side of the splice. When creating a junction splice, make a 2-bank or 4-bank in-line splice.

13.70 **Figure 180** Figure 180 illustrates positions for installing unilength foldback bridge modules on the field side of a junction splice.

Fig. 179—Positions for Installing Connector Modules on CO Cable

Fig. 180—Block Diagram Showing Location of Bridge Connector on Field Cable

13.71 **Figure 181** Figure 181 illustrates routing of unilength preterminated bridge modules to splice modules in a junction splice.

Fig. 181—Routing Unilength Bridge Connector Unit to Splice Connector

CREATING A FACILITY SPLICE (RICS)

13.72 The facility splice (**Fig. 182** Fig. 182) is constructed similarly to the junction splice with line splice connectors on the CO side, and unilength foldback with bridge modules on the field side. ***When a noncolor-coded PIC 12-type stub enters the facility splice, the unit count must be determined and the pairs placed into the index strip in numerical sequence.***

13.73 A 10- or 12-type PIC stub cable is intended to be used between a multiple straight splice and a facility splice. The 12-type stub is a dual sheath stub treated as a single sheath cable.

Fig. 182—Diagram of Facility Splice

LOADING AND UNLOADING USING PLUG AND UNPLUG METHODS

A. Loading Using Two Connectors for Shunt Unloading

13.74 **Figure 183** Figure 183 illustrates the plug and unplug method of loading using two connectors and unloading using a shunt.

Fig. 183—Loading and Unloading Using Connectors

13.75 The procedure for loading with the capability of unloading with the shunt method is as follows (**Fig. 184** Fig. 184):

1. Place an F module support in the holder of the splicing tool.
2. Place a connector module in the F module support.
3. Select the load coil pairs to be spliced to the shortest section of cable and

place these pairs in the connector module.

4. Check the pairs with the error-tector. Seat and cut the pairs and with the T-bar in the down position, operate the test set to test the conductors.
5. Release pressure and pull the T-bar back to its original position. ***Do not place a cap on the connector module at this time.***
6. Remove the connector module and the F module support from the splicing tool.
7. Place an index strip in the holder of the splicing tool.
8. Place the pairs from the ***shortest*** section of cable into the index strip. Check the placed conductors with the error-tector. Seat and cut the conductors.
9. Place the connector module containing the load coil pairs on the index strip and seat with the tool. While the T-bar is down, test the conductors. After testing, release pressure and pull the T-bar back to its original position.
10. Place a cap on the connector module and seat with the tool.
11. Repeat Steps (1) through (10) until all load coil pairs and ***short*** cable section pairs have been spliced.
12. Repeat Steps (1) through (10) for the other load coil pairs and the ***long*** cable section pairs. Remember that load coil pairs are placed in the connector module and cable pairs are placed in the index strip.

Fig. 184—Loading Using Two Connectors

B. Unloading Using a Shunt

13.76 Assemble a shunt when unloading a 25-pair complement. When unloading less than 25 pairs, select the modules containing the pairs to be unloaded and install bridge modules. Shunt the conductors in these modules in the same way branch pairs are added. Assemble a shunt by using two bridge connectors and a length of 25-pair PIC cable (**Fig. 185** Fig. 185).

Fig. 185—Assembling a Shunt

13.77 Install the shunt as follows (**Fig. 186** Fig. 186):

1. Install the shunt between the CO cable and the field cable. Seat the bridge connectors with a D insertion-cutting tool or a 945A tool.
2. With the shunt installed, the load coils are electrically out of the circuit. It is not necessary to remove the conductors from the connector.

Fig. 186—Installed Shunt

13.78 If the load coils and the IN and OUT load coil stub pairs are to be removed, use 8-inch side cutting pliers to remove the caps from the connector modules that contain IN and OUT load coil stub pairs (**Fig. 187** Fig. 187).

Fig. 187—Removing Cap From Connector Module

13.79 Pull the conductors from the connector module (**Fig. 188** Fig. 188).

Fig. 188—Removing Load Coil Conductor From Connector Module

13.80 Install a new cap on the connector module (**Fig. 189** Fig. 189).

Fig. 189—Installing New Cap on Connector Module

C. Loading and Unloading Using Two Splice Connectors and Two Bridge Connectors

13.81 The plug and unplug method of loading and unloading using two splice connectors and two bridge connectors is illustrated in **Fig. 190** Fig. 190. Bridge splices are used on both the CO side and the field side. This method facilitates unloading by making it possible to unplug the load coil module and plug in the field side module.

Fig. 190—Loading and Unloading Using Two Connectors and Two Bridge Connectors

HALF-TAPPING UNIT OR MULTIUNIT CABLE FOR CUTOVER

13.82 Prepare cable and half-tap stub for splicing unit or multiunit cable as follows (**Fig. 191** Fig. 191):

1. Remove cable sheath in accordance with the type of closure to be used and the amount of slack required to permit dressing the through cable groups into the cutter-presser. In general, allow 5 inches for cables with less than 900 pairs, 5 to 7 inches for cables with 900 to 1800 pairs, and 7 to 9 inches for cables with more than 1800 pairs.
2. Pull slack until sheath opening is correct for the closure being used.
3. Install temporary bond to maintain continuity across sheath opening.
4. Identify and tag all cable units. Attach tags loosely so they can be repositioned easily later, if necessary.
5. Prepare the stub cable to be bridged. ***The far end of the cable must be cleared.***

Fig. 191—Cable Prepared for Half-Tap Splicing of Unit or Multiunit Cable

13.83 Install the splicing tool at the back of the cable sheath opening on the stub cable side (**Fig. 192** Fig. 192). Make the splice in the following sequence; when one-fourth of the modules are complete on the stub side, move the tool to the other side and complete an additional one-fourth. When that has been done, move the tool to the front of the splice on the stub side and then to the other side.

NOTE: It may be necessary to install longer cable hooks at the splice location so the cable can be moved forward to provide space for mounting the tool behind the cable.

13.84 Tie the stub cable units to the through cable units as follows (**Fig. 193** Fig. 193):

1. From the through cable, select the top multiunit nearest the splicing tool. Push the remaining units down and away from the working area.
2. Match the stub cable multiunit with the through cable multiunit and loosely tie them together.

Fig. 192—Splicing Tool Installed in Rear of Sheath Opening

Fig. 193—Tying Stub Cable Unit to Through Cable Unit

13.85 Place the through cable unit into the index strip as follows (**Fig. 194** Fig. 194):

1. Place the index strip in the splicing tool ***with the arched wire grips facing the T-bar.***
2. Select 25 pairs from the rear of the group. Push the remaining pairs down next to the tool and pull the selected 25 pairs up over the other pairs and place the 25 pairs into the index strip. Tip conductors go to the right and ring conductors to the left as viewed from the T-bar. Check conductor placement with the error-tector.

NOTE: *Do not seat and cut the conductors at this time.* Once the stub cable is added, one side of the through cable will be cut out. When assembled, this side of the connector is flat and lends itself to easy cutting. The back side of the connector has the bridge rails and does not lend itself to easy cutting.

Fig. 194—Through Cable Unit Placed Into Index Strip

13.86 Place a half-tap module on the index strip with the the arched wire grips facing the T-bar (**Fig. 195** Fig. 195). Seat the half-tap module.

Fig. 195—Placing Half-Tap Module

13.87 Place 25 pairs from stub cable multiunit as follows (**Fig. 196** Fig. 196):

1. Select 25 pairs from the rear of the multiunit of the stub cable and bring them under the rest of the pairs. This will allow a clear working area.
2. Dress the 25 pairs into the top of the connector module. Tip goes to the left and ring to the right as ***viewed from the T-bar.*** Remember, the pairs will be cut off on the T-bar side.
3. Check the placed conductors with the error-tector.
4. Seat and cut the conductors.

13.88 Complete the half-tap as follows (**Fig. 197** Fig. 197):

1. Place a cap over the connector module and seat.
2. Remove the connector from the tool and mark the unit number on the completed connector.
3. Repeat the procedure for each 25-pair unit. Keep in mind which side of the through cable will be cut out. When one-fourth of the modules are completed on the stub side, move the tool to the opposite side. Complete one-fourth of the modules at that position and then move the tool to the front of the splice. Complete one-fourth on the stub side and then on the other side.

Fig. 196—Selecting 25 Pair From Rear of Stub Cable Multiunit

Fig. 197—Completed Half-Tap

13.89 Cut off through conductors that will no longer be used as follows (**Fig. 198** Fig. 198):

1. The preferred method to cut off the through conductors is to use an 840A tool. Place the tool on the connector so the tool will be pulled in a direction opposite to the direction the wires lay. For example, if the wires lay to the right, place the tool on the right end of the connector and pull to the left to cut the conductors.
2. An alternative method is to use close cutting pliers to cut the conductors. Start at one end of the connector and cut from the front side of the half-tap module. Cut one conductor at a time being sure not to short two conductors with the pliers.

Fig. 198—Cutting Conductors From Through Cable That Are No Longer Needed

13.90 Protect the ends of the cut conductors as follows (**Fig. 199** Fig. 199):

1. On filled modules, place B sealant over the exposed conductor ends and then snap a 710B1 cover on the connector. Use a new cover. The 710B1 covers should not be reused.
2. On unfilled (dry) connectors, place the 710B1 cover on the connector without adding B sealant. Use a new cover.

Fig. 199—Protecting Exposed Conductor Ends

HALF-TAPPING LAYERED CABLE FOR CUTOVER

13.91 Prepare layered cable for half-tapping as follows (**Fig. 200** Fig. 200):

1. Remove sheath from the cable. To have enough slack, remove sufficient sheath for the closure plus 1 inch for each 100 pairs within the cable. For example, a 900-pair cable would require that 9 inches of sheath be removed to allow for the number of cable pairs and 19 inches be removed for a standard opening for a total of 28 inches.
2. Pull slack to position the sheath ends the proper distance apart for the closure to be used.

Fig. 200—Preparing Layered Cable for Half-Tapping

13.92 Prepare the cables for splicing as follows (**Fig. 201** Fig. 201):

1. Divide each layer into 25-pair groups toward the side that will not be cut out.
2. Divide the highest count unit of the stub cable into 25-pair groups and position the groups in approximately the same configuration as the layered cable.
3. Work the twist out of the layered cable leaving the twist buildup on the side that will be cut off.
4. Place loose ties around the 25-pair groups in the layered cable.

Fig. 201—Preparing Cables for Splicing

13.93 Set up the splicing tool and make the splice as follows (**Fig. 202** Fig. 202):

1. Set up the tool behind the cable. Center the tool in the opening for a single-bank splice. Complete half of the splice and then move the tool to the front of the splice and complete the other half. Follow the procedures previously outlined for half-tapping unit or multiunit cable.
2. Cut the conductors that will no longer be needed and install 710B1 covers.

Fig. 202—Splicing Tool Setup

SPLICING IN PEDESTALS

13.94 Prepare the cable sheath for splicing as outlined in the practice covering the pedestal being used. Set up the splicing tool. Mark the binder group with a wire marker at the bottom crossmember of the splicing ladder (**Fig. 203** Fig. 203).

NOTE: If the splice requires two banks of connectors, use the middle crossmember of the splice support as a marking guide for the second bank.

13.95 Position the splicing tool as follows (**Fig. 204** Fig. 204):

1. Position the splicing tool so the wire marker lines up with the inside edge of the end post.
2. Splice the groups using the method suitable for the splicing tool being used.

Fig. 203—Marking Cable Unit

Fig. 204—Position Splicing Tool

13.96 When splicing is complete, use cable ties to secure each bundle to a crossmember of the ladder. A completed splice is illustrated in **Fig. 205** Fig. 205.

Fig. 205—Splicing Complete

14. CABLE TRANSFERS

14.01 Cable transfers may be carried out 1 pair at a time or 25 pairs at a time. The cable transfer administration plan outlined in Practice 620-050-020 should be followed.

TRANSFERRING ONE PAIR AT A TIME

14.02 Remove the splice closure and expose the splice.

14.03 Identify the affected connectors as follows (**Fig. 206** Fig. 206):

1. Locate the connector module containing the through cable pairs to be identified (the ***to*** count). Attach a piece of B tagging tape to the front of this connector. Identify the cable pair and mark the pair number on the tagging tape.
2. Locate the connector containing the cable pairs of the stub cable to be identified (the***from*** count). Attach a piece of B tagging tape to the front of this connector. Identify the cable pair and mark the pair number on the tagging tape.

Fig. 206—Tagging Units

14.04 Insert a bridge module into the through cable connector containing the ***to*** count. Seat the bridge module with a D insertion-cutting tool or a 945A tool (**Fig. 207** Fig. 207).

Fig. 207—Seating Bridge Module

14.05 Remove the pair to be transferred as follows (**Fig. 208** Fig. 208):

1. Select the pair from the bridge module containing the ***from*** count. Make a temporary bridge with a B transfer cord or use a cut-close test set.
2. Cut the ***from*** count pair to be transferred from the bridge module. Cut as close to the module as possible to conserve conductor length.

14.06 Seat the transferred pair into the bridge module as follows (**Fig. 209** Fig. 209):

1. Move the ***from*** count pair to the new bridge and place the pair in the proper position according to the pair number on the tagging tape. Use a D insertion-cutting tool or a 945A tool to press and cut the conductor.
2. Remove the transfer cord and repair the conductor insulation. Repeat the procedure for each pair to be transferred.

Fig. 208—Removing Pair To Be Rearranged

Fig. 209—Seating Transferred Pair Into Bridge Module

14.07 When all pairs have been transferred, place a cap on the module. Seat the cap with the 945A tool or a D insertion-cutting tool (**Fig. 210** Fig. 210).

Fig. 210—Placing Cap on Module

14.08 When all pairs of the ***from*** count have been removed, remove the old bridge using the C bridge removal tool (**Fig. 211** Fig. 211).

TRANSFERRING 25 PAIRS AT A TIME

14.09 Where a number of pair units are to be transferred, it may be easier to transfer 25 pairs at a time.

14.10 Begin the transfer procedure for 25 pairs as follows (**Fig. 212** Fig. 212):

1. Find the connectors containing the cable pairs to be transferred (the ***from*** count) and the pairs to which the transfer is to be made (the ***to*** count).
2. Terminate 25 noncolor-coded PIC pairs, that are at least 50 inches long, into a bridge module.

Fig. 211—Removing Old Bridge

3. Plug the bridge module into the connector containing the ***to*** count.

14.11 Identify the 25 noncolor-coded cable pairs and place them in a tag board (**Fig. 213** Fig. 213).

14.12 Place a half-tap module on the 25 pairs of the stub to be transferred. Identify pulp or noncolor-coded PIC pairs with B tagging tape (**Fig. 214** Fig. 214). Position the half-tap module so it will not overlap banks of modules when the splice is closed.

14.13 Place the ***to*** pairs from the tag board into the half-tap module. Seat and cut the conductors and place a cap on the module (**Fig. 215** Fig. 215).

Fig. 212—Locating Connector Module Involved in Transfer

Fig. 213—Noncolor-Coded PIC Pairs Identified and Placed in Tag Board

Fig. 214—Place Half-Tap Module on 25 Pair of Stub Cable

Fig. 215—Placing Pairs From Tag Board Half-Tap Module on Stub Cable

14.14 Complete the transfer as follows (**Fig. 216** Fig. 216):

1. Remove the bridge connector from the old count. Do not let the bridge contacts short out on the cutter-presser, tool mounting, etc.
2. Cut the conductors from the half-tap module with an 840A tool or close cutting pliers. Do not short the conductors while cutting them. Install a 710B1 cover on the half-tap module.

RETRANSFERRING PAIRS

14.15 Locate the connector that contains the pairs to be transferred (the ***from*** count) and the connector to which the transfer will be made (the ***to*** count) (**Fig. 217** Fig. 217).

14.16 Begin the retransfer of 25 pairs as follows (**Fig. 218** Fig. 218):

1. Terminate 25 pairs of noncolor-coded PIC pairs, that are at least 50 inches long, into a bridge module.
2. Plug the bridge module that contains the PIC pairs into the connector with the ***to*** count.

3. Identify the PIC pairs and place them in a tag board.

Fig. 216—Transferred 25 Pairs

Fig. 217—Identify From and To Counts

Fig. 218—Pairs From Stub Cable Preterminated

14.17 Connect the ***to*** pairs to the stub cable as follows (**Fig. 219** Fig. 219):

1. Place a bridge module into the half-tap connector on the stub cable.
2. Place the conductors of the ***to*** cable from the tag board into the top of the bridge module maintaining pair identification. Check with the error-tector and seat and cut the conductors.
3. Place and seat a cap on the bridge module.

14.18 Remove the old bridge from the ***from*** pairs as follows (**Fig. 220** Fig. 220):

1. With a C bridge removal tool, remove the bridge connector from the splicing connector that contains the ***from*** pairs.
2. With a pair of 8-inch side-cutting pliers, remove the cap from the half-tap module that contains the ***from*** pairs. Cut out the old conductors.
3. Place a ***new*** cap on the half-tap module.

Fig. 219—Placing Bridge Module Into Half-Tap Module

Fig. 220—Removing Old Bridge

WORKING CABLE TRANSFER IN FACILITY SPLICE (RICS)

14.19 There is a limited number of transfers that can be made using the following method because of the slack required. If the transfer cannot be made using this method, use the method for transferring 25 pairs at a time.

14.20 To make a transfer in a facility splice, install a splicing connector on the new count in the CO cable (**Fig. 221** Fig. 221). Rotate the connector in the tool and with the bridge rail up, seat an empty bridge module in the splicing connector.

14.21 Place the existing connector about 1 inch in front of the new bridge module. Dress the existing field cable pairs into the new bridge. Press and cut. Use the bridge removal tool to remove the old bridge module (**Fig. 222** Fig. 222).

MODULAR TRANSFERS—PLUG AND UNPLUG

14.22 Practice 632-400-216, Modular Cable Transfers, describes the method of converting existing nonmodular splices to modular facility splices with the cable pairs spliced in sequential order in 710-type connectors. The use of 710-type connectors allows cable transfers to be made 25 pairs at a time by unplugging the transferring cable pairs from the old count ***(from*** count) and plugging them into the new count ***(to*** count).

14.23 Transferring and testing in modular facility splices made with unfilled (dry) 710 connectors can be done without service interruption by using the 710 ACE (accessible contact element) test shoe and an in-service transfer test set equipped with suitable connectors. Before starting transfers in splices where the 710 connectors were not equipped with ACE caps, replace the existing caps with ACE caps.

Fig. 221—Typical Splice Old and New Count

Fig. 222—Placing New Bridge Module

14.24 The 710 ACE test shoe consists of a B test shoe (used with bridge modules), a C test shoe (used with connector modules) (**Fig. 223** Fig. 223), and the following items:

- Spare Probe pins
- Pin setting tool

- Instruction sheet
- Carrying case.

Fig. 223—B and C Test Shoes

14.25 The plug and unplug method is used with the Cable Transfer Administration Plan (Practice 620-050-020) and Modular Splicing Engineering Administration (Practice 935-111-402). Converting existing nonmodular splices to modular splices will mean that cable transfers eventually will be plug and unplug with no wire work.

14.26 To begin a cable transfer using the 710 ACE test shoe and an in-service transfer test set, set up the equipment as illustrated in **Fig. 224** Fig. 224.

14.27 Select the connector/bridge module from the***from*** count. Install the B test shoe on the bridge module as follows (**Fig. 225** Fig. 225):

1. Hold the connector so the guide tabs are aligned with the grooves on the ends of the bridge module and the slot on the bridge module is on the "SLOT SIDE" of the shoe.
2. Push the module into the test shoe with the guide tabs in the grooves in the ends of the module.
3. Firmly press the spring clips (marked "PRESS") on both sides of the test shoe. This raises the clip feet.
4. Push the module into the test shoe and release the spring clips. The clip feet must latch into the slot on the bridge module.
5. Push the slide back (on each side of the test shoe) to its lock position to keep the clips in place.

Fig. 224—Setup for Making Transfer

Fig. 225—Installing B Test Shoe

14.28 Select the connector module from the ***to*** count. Install the C test shoe on the connector module (**Fig. 226** Fig. 226) in the same manner as the B test shoe.

14.29 With the test shoes installed and connected to the test set, the bridge module can now be removed from the connector module. Use a screw-driver with a wide blade to separate the bridge module from the connector module (**Fig. 227** Fig. 227). Work from one end of the bridge module to the other to keep from damaging the module contacts.

Fig. 226—Installing C Test Shoe

Fig. 227—Removing Bridge Module

14.30 Transfer the bridge module, with the B test shoe attached, to the connector module on the ***to*** count. Plug the bridge module into the connector module while engaging the B and C test shoes (**Fig. 228** Fig. 228).

Fig. 228—Connecting Bridge Module to Connector Module With Test Shoes Installed

14.31 Use the 895A tool (**Fig. 229** Fig. 229) to seat the bridge module in the connector module.

Fig. 229—895A Tool

14.32 Position the 895A tool with the moving jaw over the B test shoe and the connector module on the platform of the tool (**Fig. 230** Fig. 230). Firmly press the bridge module along its length until the module is correctly seated. Be sure all of the conductors are out of the way so they will not prevent proper seating of the modules. The setup with the module transferred with the test shoe attached is illustrated in **Fig. 231** Fig. 231.

Fig. 230—Using The 895A Tool

14.33

CAUTION: Remove the B test shoe first.

Push the slide locks on the B test shoe to their unlocked position. Press the spring clips and remove the B test shoe. After the B test shoe has been removed, remove the C test shoe in the same way.

Fig. 231—Transferred Module Setup

15. SPECIAL APPLICATIONS

CLEARING CABLE ENDS

15.01 Ends may be cleared using a cap, an index strip, and a connector module.

15.02 With the sheath removed and the splicing tool set up, the ends may be cleared as follows (**Fig. 232** Fig. 232):

1. Place and secure the index strip in the cutter-presser.
2. Dress the pairs from the binder group to be cleared into the index strip. Separate the tip and ring conductors on the colored peaked projections of the index strip, tip to the left and ring to the right.
3. Use the error-tector to check for placing errors.
4. Position the T-bar over the index strip and cut the conductors. Pull the T-bar back to its original position.
5. Place a connector module into the cutter-presser keeping it parallel to the index strip.
6. Position the T-bar over the connector module and seat the module. Return the T-bar to its original position.
7. Place and seat a cap on the connector module.
8. Remove the assembled connector from the cutter-presser.
9. Repeat the procedure for each 25-pair group to be cleared.

VAULTLESS CENTRAL OFFICE OR BUILDING SPLICES

15.03 Tip to feeder splices may be rack mounted on a wall in vaultless central offices or in other buildings. This type of splice should not be used with pulp or paper insulated cable or with filled cable.

15.04 The following materials are required to construct a tip to feeder splice that will be rack mounted:

- Filler strip, 710-FS-25 (1 required for each splicing connector)
- Fire-retardant splicing connector, 710-SD1-25 (1 required for each 25 pairs)
- Bracket, 710A1 (see **Table I**Table I)
- Cover assembly, 710A2 (see **Table I**Table I)
- Retainer, 710A1 (2 required for each splicing connector)
- C presser support frame assembly, AT-8820.

15.05 The framing channel installation required for mounting the 710A1 brackets is illustrated in **Fig. 233** Fig. 233.

Fig. 232—Cleared Cable End

TABLE I QUANTITY OF BRACKETS AND COVERS REQUIRED FOR CONNECTOR MOUNTING RACK

COMPONENTS CABLE PAIRS	QUANTITY REQUIRED				
	900	1800	2700	3600	4500
710A1 Bracket	2	3	4	5	6
710A2 Cover	1	2	3	4	5

Fig. 233—Installing Frame Channel for Bracket

15.06 Begin the bracket installation as follows (**Fig. 234** Fig. 234):

1. Attach cable ties to the 710A1 bracket.
2. Position the bracket on the back panel with the flange of the bracket under the panel. Secure the bracket with the screws provided.

3. Secure the assembled bracket and panel to the framing channel.

Fig. 234—Installing 710A1 Bracket

15.07 Complete the bracket installation as follows (**Fig. 235** Fig. 235):

1. Attach cable ties to the second bracket.
2. Position the bracket on the back panel with the flange of the bracket under the panel.
3. Install two alignment bars between the two brackets. Be sure the brackets are aligned. Tighten the screws to secure the right side to the framing channel. Be sure the alignment bars move freely from top to bottom.
4. Secure the back panel to the bracket with the screws provided.

15.08 Prepare the tip cables for splicing as follows (**Fig. 236** Fig. 236):

1. Identify and mark the tip cables.
2. Remove the required amount of sheath from the ends of the tip cables. Install D bond clamp and bond strap on the tip cables. Attach the bond strap to frame ground.
3. Fan out the tip cables and secure to the left bracket with cable ties.

15.09 Prepare the main cable as follows (**Fig. 237** Fig. 237):

1. Remove required sheath from the main cable and route the cable up the right side of the bracket. Install a D bond clamp and a bond strap. Connect the bond strap to the frame ground.
2. Tie the tip cable stubs to the matching units of the main cable for splicing.

Fig. 235—Installed Bracket

Fig. 236—Prepared Tip Cables

Fig. 237—Prepared Cables

15.10 Install the C presser support frame assembly as follows (**Fig. 238** Fig. 238):

1. Loosen the knobs on the C presser support frame assembly and install the frame assembly by engaging the the slots on the 710A1 brackets.
2. Tighten the knobs to secure the C presser support frame assembly in place.

Fig. 238—Installed C Presser Support Frame Assembly

15.11 Install the splicing tool on the C presser support frame and center the tool between the 710A1 brackets (**Fig. 239** Fig. 239).

Fig. 239—Installed Splicing Tool

15.12 Splice the conductors with fire-retardant connectors. After each 100 pairs has been spliced, move the splicing tool down to the next position (**Fig. 240** Fig. 240).

Fig. 240—Repositioned Splicing Tool

15.13 Install the completed connectors on the 710A1 brackets as follows (**Fig 241** Fig 241):

1. Remove the completed splicing connector from the tool.
2. Place a 710A1 retainer on each end of the completed connector.
3. Snap the retainers into the slots on the brackets.

Fig. 241—Installing 25-Pair Splice on 710A Bracket

15.14 Complete the splice as follows (**Fig. 242** Fig. 242):

1. Install the top and bottom cover brackets using the screws provided.
2. Fill all voids between the cables and the cover brackets with the sealing putty. This is required for fire protection.

Fig. 242—Completed Splice

3. Install neoprene foam strips across the top and bottom to provide air seals and fire protection.

15.15 Complete the installation by installing the cover (**Fig. 243** Fig. 243).

15.16 Remove the cover by pulling the handle outward to release the latch at the base and then lifting the cover upward to disengage the clips at the top. Be careful not to strike the top connector when removing the cover.

Fig. 243—Enclosed Splice

VERTICAL SPLICES

15.17 To set up for making a vertical splice, install a B support frame or 710A tool mounting in a vertical position. Prepare the cables for splicing using the foldback method.

15.18 Begin by marking the top units to be spliced as follows (**Fig. 244** Fig. 244):

1. Measure across the sheath opening to find the center. Mark this spot and center a 1-inch wide piece of vinyl tape over the mark. The tape will be used to position each module.
2. Install the splicing tool on the horizontal bar so the tool can be moved vertically.
3. Take the first cable unit from the top of the opening and lay it along the core. With a piece of wire, mark the unit at the point that coincides with the edge of the tape toward the ***bottom*** of the splice opening. This is necessary to keep the completed connectors from overlapping in the center of the splice.

Fig. 244—Marking Top Units To Be Spliced

15.19 Splice the top units as follows (**Fig. 245** Fig. 245):

1. Position the cutter-presser so:
    2. The wire marker aligns with the inside edge of the vertical post.
    3. The cutter-presser is aligned with the unit to be spliced.
    4. The index strip is 1-1/2 inches above the sheath opening.

Fig. 245—Align Tool to Splice Top Units

5. Remove the binder units and tie off near the end post of the tool. Install the connector and test the unit.
6. Repeat the procedure for each unit from the top of the splice. Start with the units in the back of the splice to avoid having to work around completed connectors as splicing progresses.

15.20 To mark the bottom units, take the first cable unit from the ***bottom*** side of the opening and lay it along the core (**Fig. 246** Fig. 246). Use a piece of wire to mark the unit at the point that coincides with the ***top*** edge of the vinyl tape. It is important to do this to keep the completed connectors from overlapping in the center of the splice.

Fig. 246—Marking Bottom Units To Be Spliced

15.21 Splice the bottom units as follows (**Fig. 247** Fig. 247):

1. Position the cutter-presser so:
    2. The wire marker aligns with the inside edge of the vertical post.
    3. The cutter-presser is aligned with the unit to be spliced.
    4. The index strip is 1-1/2 inches above the sheath opening.

5. Remove the unit binder and tie off near the end post of the tool. Install the splicing connector and test the unit.

6. Repeat the procedure for each unit from the bottom of the splice. Start with the units in the back of the splice to avoid having to work around completed connectors as splicing progresses.

15.22 After all units have been spliced, fold the units into the core and enclose the splice following procedures previously described.

Fig. 247—Align Tool to Splice Bottom Units

CREATING A BSM (BOTTOMLESS SPLICE MODULE)

15.23 The BSM (bottomless splice module) is created for mating with the WHIS (wire holding index strip). To assemble a BSM, proceed as follows (**Fig. 248** Fig. 248):

1. Set up the splicing tool and the cable for splicing.

2. Place an F module support in the head of the splicing tool.

3. Place a connector module in the F module support. Seat the connector module by hand. ***Do not use the T-bar to seat the connector mod-***F61

15.24 Complete the BSM as follows (**Fig. 249** Fig. 249):

1. Place the conductors into the connector module. Use the error-tector to check for placing errors.

2. Seat and cut the conductors and test. Place and seat a cap on the connector module.

15.25 Protect the contacts as follows (**Fig. 250** Fig. 250):

1. Remove the completed BSM from the F module support.

2. Place a connector male contact cover on the module to protect the contacts on the bottom of the module.

Fig. 248—Place F Module Support and Connector Module

Fig. 249—Completed BSM

Fig. 250—Completed BSM Removed From F Module Support

16. REPLACEMENT PARTS

16.01 Replacement parts and tools are as follows:

COMCODE	PART
401792478	Bar, Alignment, B (AT-8841)
841732373	Book, Instruction, 152A Test Set
102988284	Bracket, 117A
900306903	Brush
842330458	Blade, 1A (5 Pair)
102632668	Cap, dry, 710-CB-25
103257507	Cap, dry, green 710-CB1-25
102632650	Cap, filled, 710-CA-25
103212916	Cap, filled, 710CAL (25)
102632676	Cap, flame retardant, 710-CD-25
103274544	Cap, flame retardant, 710-CD1-25
103748323	Cap, flame retardant, 710-CD1-5
103748315	Cap, filled, 710-CAL-5
10326184	Connector, 710-BAL-5
103257515	Connector, 710-BB1-25
103274569	Connector, 710-BD1-25
103062109	Connector, 710-BC1-25
103262150	Connector, 710-BC1-5
103628418	Connector, 710-SCL-25
103262192	Connector, 710-SAL-5
103257523	Connector, 710-SB1-25
103316964	Connector, 710-BD1-5
103062717	Connector, 710-SC1-25
103262168	Connector, 710-SC1-5
103628418	Connector, 710-SCL-25
103628426	Connector, 710-TCL-25
103274577	Connector, 710-SD1-25
103316972	Connector, 710-SD1-5
103628426	Connector, 710-TCL-25
103262200	Connector, 710-TAL-5
103062725	Connector, 710-TC1-25

103262176	Connector, 710-TC1-5
102604808	Cord, W100A
103067716	Cover, 710B1
103316998	Cover, 710B5
842931271	Cover, Contact, Male
401496328	Cutter-Presser, D
103156261	Tool, 890A
104040555	Tool, 890B
401134291	Error-tector
401117742	Frame, Support, B
401802442	Frame, Support, Presser C
401474523	Guard, Knife, B
842209207	Guard, Index, WHIS
842209215	Guard, Module, Connector
402383467	Head, Cutting, Insertion D
103119178	Index Strip (green) 710-ISI-25
103119194	Index Strip (blue) 710-ISL-25
840376164	Key spring guide, long
401495492	Key spring guide, short
402384390	Knife, C, Assembly
401926803	Leg, B, Swivel
400492971	Lubricant
102988284	Mounting Tool, 709A
102974805	Mounting Tool, 710A, Complete Tool Assy.
103059077	Mounting Tool, 710A1, Base
103059085	Mounting Tool, 710A2, Tool Clamp
103059093	Mounting Tool, 710A3, Swivel Bar
103293893	Mounting Tool, 710A4A, Tube Clamp
103059119	Mounting Tool, 710A5, Vise
103059127	Mounting Tool, 710A6, Swivel Bar & Knob
103239901	Mounting Tool, 710A7A, Tube/ Tool Clamp
103059143	Mounting Tool, 710A8, 90 degree Mount
103059150	Mounting Tool, 710A9, Carrying Case
	Oil, Hydraulic, ENERPAC HF100 Series or equivalent
900477514	Pin, Roll for 835-Type Tool
	Pliers, cutting, flush, Proto Tool # 453 or equivalent
401496211	Press Clamp Assembly (AT-8687)
402490064	Presser, L, Connector
401799143	Pump, B, Hand (AT-8827)
103319471	Slack Group Holder, 55A
401495492	Strip, Color Code
402029367	Support, Module, E (AT-8809)
402398077	Support, Module, F (AT-8917)

103317640	Support, Module 710BM5
103317657	Support, Module 710CM5
401473038	Tape, Insulating, B (AT-8751)
401473046	Tape, Tagging, B (AT-8752)
102478716	Test Set, 152A
402321590	Tool, Bridge Removal, C
402383343	Tool, Insertion-Cutting, D
103176400	Tool, 840A
103289765	Tool, 945A (Complete)
103551511	Tool, 945A1
103551529	Tool, 945A2
103551537	Tool, 945A3
103551545	Tool, 945A4
103551552	Tool, 945A5
103551560	Tool, 945A6
103556015	Tool, 945A7
900582925	Wrench, Set, Allen
103671269	Strip, Filler, 710-FS-25
401548292	Solvent, Cleaning, 1 Gal. (AT-21446)
401548300	Solvent, Cleaning, 5 Gal. (AT-21446)
400823811	Support, Ladder, E
103886529	Kit of Parts, D181186 (Harness Assembly)
103161691	Kit of Parts, D180978 (Pin, Clip, Decal)
103161683	Kit of Parts, D180985 (Blade Holder)
103886531	Kit of Parts, D181231 (Velcro)
104214705	Kit of Parts, D181298 (Double-L Clip)
104214713	Kit of Parts, D181299 (Handle-890A)
103267977	835A Replacement Parts Kit, F79AK8515

BSP

632-205-220BT

Issue 1, June 1988

WIRE JOINING 710 CONNECTOR SYSTEM

1. GENERAL

1.001 This addendum supplements AT&T Practice 632-205-220, Issue 4. Place this pink sheet ahead of Page 1 of the practice.

1.002 This addendum is issued for the following reasons:

1. To move information on testing procedures (text and figure)

2. To delete optional testing information.

2. CHANGES TO PRACTICE

2.001 On Page 30, remove paragraph 5.12 and **Fig. 37** Fig. 37.

2.002 On Page 32, delete subparagraph 5.15(2).

2.003 On Page 32, insert paragraph 5.12 and **Fig. 37** Fig. 37 (removed from Page 30) between paragraphs 5.15 and 5.16.

DECLASSIFIED

RL: 97-10-009BT

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file code:	248.0800
subject:	PSI U710 Connector System
type:	Product Announcement
date:	October 22, 1997
distribution list:	ND0, ND1, ND2, ND3, ND5, TR1
related letters:	None
other:	Vendor Documentation
to:	Managers - BellSouth Network & Technology Group
entities:	BellSouth Telecommunications
from:	Director - I&M/Special Services Support Director - Network Planning & Provisioning Director - Supply Chain Management
description:	Announces Approval of the PSI U710 Universal Connector System as Replacement for the Lucent 710 Connector System.

* * *

Lucent Technologies has notified BellSouth that as of October 1, 1997 they will begin phasing out manufacturing of the 710 Series Splicing Connector. This portion of their business has been sold to PSI Telecom.

A technical review of the PSI U710 Universal Connector System was performed to verify the acceptability of this connector system for use in BellSouth. Verification has shown that the PSI connector meets current specifications for this type connector and is, in fact, an exact clone of the Lucent connectors. The only distinguishing differences between the Lucent connector and PSI connector is the color of the connector. All PSI connectors are gray in color and are made from a fire retardant material.

The PSI U710 is an Insulation Displacement Device for making electrical connections using metallic contact elements that displace the wire insulation thereby creating a contact between the wire conductor and contact element. The connectors are available in 5 & 25-pair configurations. There are versions available for performing straight, half-tap and bridge splicing. The connectors may be used to splice 19 to 26 AWG conductors. All PSI U710 connectors are manufactured from fire retardant material and are available in either dry or filled. A fungicide is added to the waterproof filling compound. The U710 connectors will work with all currently approved splicing tools.

Ordering information for all connectors will remain the same. Existing stock of the Lucent 710 connectors will be depleted before shipment of the PSI connectors is started. As the Lucent stock is depleted, the PSI connector will be substituted to fill the order.

The PSI part numbers carry a U" designation at the beginning of the vendors part number. To distinguish between a dry or filled connector, the vendors part number will carry either an S" or SD" behind the pair size of the connector. A dry connector will carry the SD" designation, and a filled connector will carry an S" designation behind the pair size of the connector.

Attached is a matrix for use in cross referencing the Lucent designation to the new PSI equivalent. Also provided is the assigned PID number which has not changed.

Technical question about this product should be directed to W. P. Beverly, I&M Staff, (205)977-2985 or Keith Gibson, Construction Staff, (770)391-2973 Procurement questions should be directed to Kermit Simerson at (404)420-6016.

J. T. Moore

Director-

I & M/Special Services Support

K. W. Marlin

Director-

Network Planning & Provisioning

S. A. Lindabury

Director-

Supply Chain Management

Attachment

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file code:	245.0814
subject:	AMP Tel-Splice Connectors
type:	Product Announcement
date:	August 1, 1997
distribution list:	ND0, ND1, ND2, ND3, ND4, ND5
related letters:	None
other:	None
to:	Managers - BellSouth Network & Technology Group
entities:	BellSouth Telecommunications
from:	Director - Network Planning & Provisioning Director - FWG/WMC Director - Supply Chain Management
description:	This Region Letter Announces the Approval of the AMP Tel-Splice Connectors as the Replacement for the Lucent 700 Series Splicing Connectors.

*　　*　　*

Recently Lucent Technologies notified BellSouth that they would discontinue manufacturing of the 700 Series Splicing Connectors (discrete connector) as of June 1, 1997. The machinery used to manufacture the 700 type connector is no longer serviceable. Lucent's decision to exit the business was based on the inability to repair the machinery and deliver this product to BellSouth. Therefore it became urgent to select a new connector vendor and bring the new product on-line for BellSouth as soon as possible. After review of several vendor's products, a selection was made focusing on quality, quantity of production, cost and the least amount of field transition problems. The AMP Tel -Splice Connector most closely meet these requirements.

The AMP Tel-Splice incorporates an insulation displacement type connector in a polypropylene housing which offer excellent dielectric characteristics and are highly resistant to chemical attack and moisture. Flame retardant connectors, with clear polycarbonate housings are also available. The Tel-Splice will handle any combination of solid copper wire, 26 - 19 AWG can be terminated in one (2- or 3- wire, Half-Tap, or Clear & Cap) connector. Straight bridge, and half-tap splices can be made with these connectors. The terminals are manufactured from tin-plated phosphor bronze for maximum electrical continuity.

The Tel-Splice Connectors are available in either loose piece or cartridge versions. The connector can be spliced using G" Long Nose Pliers or any parallel jaw presser. Cartridge connectors will require the purchase of the Presser Connector (Vendor Part # 230722-1) , see ordering information provide below.

Attached is a chart that cross references the old Lucent connector and PID to the new AMP Tel-Splice connector and PID. AMP connectors are available from stock and packaged for ordering as follows:

All two wire, three wire, and half-tap **bulk** connectors are packaged 1,000 per case and should be ordered in multiples of 1000 connectors each. All **two wire cartridge** connectors are packaged 72 connectors per cartridge with 25 cartridges per case, and should be ordered in multiples of 1,800 connectors each. All **three wire cartridge** connectors are packaged 56 connectors per cartridge with 25 cartridge per case, and should be ordered in multiples of 1,400 connectors each.

Attached is a chart that cross references the old Lucent connector and PID to the new AMP Tel-Splice connector and PID. AMP connectors are available from stock and packaged for ordering as follows:

NOTE:

Existing stock of 700 Connectors will be depleted before shipment of the AMP Tel-Splice Connector is started.

Ordering Information

PID	ITEM DESCRIPTION	*PRICE	PA	FC/FRC
670-971-423	Presser Connector	$55.00	61	540M

*NOTICE:	**The price quoted for this product is an approximate price at the time this Region Letter was prepared and is not warranted to be accurate beyond that time. It is provided for planning purposes only and is not warranted to be the exact price to be billed for the product. The next issue of the BellSouth Distribution and Outside Plant Approved Products Catalog, following the publication of this RL, should be consulted for the current price of this product.**

Training Information

Training on the AMP Tel-Splice Product Line may be obtain by contacting Del Wilson, AMP Account Representative, at 1-800-331-9858, extension 07886. A training video is also available, at no charge, by calling AMP at 1-800-553-0938 and requesting Video Part # 198145.

Technical question concerning this product should be referred to Keith Gibson, Construction Staff, 770/391-2973, W. P. Beverly, I&M Staff, 205/977-2985. Questions regarding the procurement of this product should be referred to Kermit Simerson on 404/420-6016.

K. W. Marlin	**J. T. Moore**	**S. A. Lindabury**
Director	**Director**	**Director**
Network Planning & Provisioning	**FWG/WMC**	**Supply Chain Management**

Attachment