

ORIGINAL

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November 8, 2001

Mrs. Blanca S. Bayó  
Director, Division of the Commission Clerk  
and Administrative Services  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
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Re: Docket No. 990649A-TP (UNEs)

Dear Ms. Bayó:

Enclosed is an original and fifteen copies of BellSouth Telecommunications, Inc.'s Direct Testimony of Daonne D. Caldwell, Exhibit Nos. DDC1 and DDC2; Jerry Kephart, Exhibit No. JK1; and James Stegeman, which we ask that you file in the captioned docket.

A copy of this letter is enclosed. Please mark it to indicate that the original was filed and return the copy to me. Copies have been served to the parties shown on the attached Certificate of Service.

Sincerely,

*Andrew D. Shore*  
Andrew D. Shore (UA)

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**CERTIFICATE OF SERVICE**  
**Docket No. 990649A-TP**

I HEREBY CERTIFY that a true and correct copy of the foregoing was served via  
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Andrew D. Shore (LA)

**(+) Signed Protective Agreement**

1                   **BELLSOUTH TELECOMMUNICATIONS, INC.**  
2                   **DIRECT TESTIMONY OF D. DAONNE CALDWELL**  
3                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**  
4                   **DOCKET NO. 990649A-TP**  
5                   **(120-DAY ITEMS)**  
6                   **NOVEMBER 8, 2001**

7  
8   **Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

9  
10   A. My name is D. Daonne Caldwell. My business address is 675 W. Peachtree St.,  
11       N.E., Atlanta, Georgia. I am a Director in the Finance Department of BellSouth  
12       Telecommunications, Inc. (hereinafter referred to as "BellSouth"). My area of  
13       responsibility relates to the development of economic costs.

14  
15   **Q. ARE YOU THE SAME D. DAONNE CALDWELL THAT PREVIOUSLY**  
16       **FILED TESTIMONY IN THIS DOCKET?**

17  
18   A. Yes.

19  
20   **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21  
22   A. In its May 25, 2001 Order No. PSC-01-1181-FOF-TP ("Order") in this docket, the  
23       Florida Public Service Commission ("Commission") outlined a number of issues  
24       that required responses by BellSouth within 120 days. The Order listed the  
25       following as 120-day items: (1) Hybrid Copper/Fiber xDSL-capable loop, (2)

1 xDSL nonrecurring costs that exclude the Design Layout Record (“DLR”), test  
2 point, and order coordination, (3) network security and inventory issues, (4)  
3 network interface device (“NID”) costs, (5) explicit modeling of loops, and (6)  
4 inflation. On September 24, 2001, BellSouth filed cost studies in this docket to  
5 address these “120-day” issues. On October 2, 2001, however, the Commission  
6 reversed its ruling on inflation in Order No. PSC-01-2051-FOF-TP; therefore,  
7 revised cost studies were filed on October 8<sup>th</sup> to include the impact of inflation.  
8 Further, on October 23, 2001, the Commission identified a number of issues  
9 precipitating from BellSouth’s filing, with the objective of resolving them during  
10 this phase of the docket. My testimony responds to those issues associated with  
11 cost development. In doing so, I will present and support the revised cost studies  
12 filed on October 8, 2001.

13

14 *Issue 1(a): Are the loop cost studies submitted in BellSouth’s 120-day filing*  
15 *compliant with Order No. PSC-01-1181-FOF-TP?*

16

17 **Q. PLEASE EXPLAIN WHY THE LOOP COST STUDIES BELLSOUTH**  
18 **FILED ON OCTOBER 8, 2001 COMPLY WITH ORDER NO. PSC-01-1181-**  
19 **FOF-TP.**

20

21 A. The Commission outlined a number of modifications that impact both the  
22 recurring and nonrecurring cost results for loops. Some of these adjustments are  
23 relatively easy to implement, while others required BellSouth to not only expend  
24 substantial resources, but also to alter the manner in which costs were developed.  
25 The simpler Commission-ordered modifications reflected in BellSouth’s October

1 8<sup>th</sup> cost studies include:

2

3 Cost of Capital – The Commission set the forward-looking cost of capital for  
4 BellSouth at 10.24% (60/40 equity/debt ratio, debt = 7.3%, equity = 12.2%).

5

6 Depreciation - The Commission adjusted the economic lives for metallic cable  
7 accounts and digital switching equipment. The Commission accepted BellSouth's  
8 salvage values. The chart below compares BellSouth's initially proposed  
9 economic lives and the ones ordered by the Commission. The Commission-  
10 ordered lives are reflected in the studies filed on October 8, 2001.

11

12

	<b>BellSouth</b>	<b>Commission –Ordered</b>
13		
14 Digital Switching	10	13
15 Aerial Metallic Cable	15	18
16 Underground Metallic Cable	14	23
17 Buried Metallic Cable	15	18
18 Submarine Metallic Cable	15	18

19

20 BellSouth asked for reconsideration on two other depreciation modifications  
21 originally reflected in the Commission-ordered rates; i.e., modifications to analog  
22 switching equipment and to submarine fiber cable. In its October 2, 2001 ruling  
23 (Order PSC-01-2051-FOF-TP), the Commission agreed that the analog switching  
24 equipment economic life should be retained as BellSouth's input. In that ruling,  
25 however, the Commission rejected the other request and stated that the Order did



1 alter the submarine fiber cable life and that it should be set at 20 years. The cost  
2 study filed on October 8, 2001 reflects the analog switching equipment life of 1.6  
3 years and the submarine fiber cable life of 20 years.

4

5 Taxes – The Commission ordered Florida-specific tax rates as follows: a combined  
6 state and federal income tax rate of 38.57% and an ad valorem tax rate of .9515%.  
7 Also, the “gross receipts tax” factor was set at .15%. The cost study reflects these  
8 modifications.

9

10 Each of the Commission-ordered adjustments discussed above impact the  
11 development of the shared and common cost factors. Thus, BellSouth  
12 appropriately reflected these modifications in the Shared and Common  
13 Application, which develops the shared and common cost factors.  
14 Additionally, the deaveraging of loops was based upon the methodology adopted  
15 by the Commission and the details provided in Appendix B of the Order, which  
16 listed the wire centers by zone.

17

18 **Q. YOU MENTIONED THAT THERE WERE ADDITIONAL COMMISSION-**  
19 **ORDERED MODIFICATIONS THAT WERE MORE DIFFICULT TO**  
20 **MAKE. WHAT WERE THOSE MODIFICATIONS?**

21

22 A. The first modification that was more difficult to incorporate into the studies was the  
23 nonrecurring work time estimates. The Order detailed the extensive examination  
24 of three representative UNEs; the ADSL loop, CCS7 Signaling and Interoffice  
25 Transport – DS0. Based on the Commission’s analysis of these three UNEs,

1 adjustments to the work time estimates were recommended and outlined as listed  
2 below (Order, page 364):  
3

4	Category	Approved Adjustments for BellSouth's
5		Installation and Disconnect Work Groups
6		and Work Times
7		
8	CRSG Incremental Time	Eliminate work times
9	CRSG	Reduce work times by 55%
10		
11	LCSC	Reduce work times by 75%
12		
13	SAC	Reduce work times by 50%
14		
15	AFIG	Reduce work times by 50%
16		
17	CPG	Reduce work times by 50%
18		
19	UNEC Provisioning Variables	Eliminate work times
20		
21	UNEC	Reduce work times by 45%
22		
23	WMC	Reduce work times by 65%
24		
25	CO I&M	Reduce work time by 20%
	SSI&M	Reduce work times by 35%
	Travel	No Adjustment
	All other work groups	Reduce work times by 45%

1 These are the modifications BellSouth used to develop the nonrecurring costs  
2 contained in the October 8<sup>th</sup> cost studies. In order to implement these reductions,  
3 BellSouth went into each input file and recalculated the originally proposed time  
4 estimates. In fact, in order to allow review of BellSouth's calculations, the input  
5 files show the Commission's modifications in red. The Commission also ordered  
6 a 50/50 sharing of the cost of access to sub-loop elements, which is also reflected  
7 in both BellSouth's input files and cost results.

8  
9 The other Commission-ordered modification that was difficult to implement was  
10 one specifically listed as a "120-day" item – the explicit modeling of "all cable and  
11 associated supporting structure engineering and installation placements." (Order,  
12 Page 242) BellSouth has provided, as ordered by the Commission, a "bottoms-up"  
13 study of outside plant cable and structures using the BellSouth  
14 Telecommunications Loop Model ("BSTLM<sup>®</sup>"). Whenever possible, either actual  
15 data or subject matter experts' estimates have been used in the BSTLM. Execution  
16 of the "bottoms-up" directive required activities such as: code modifications to the  
17 BSTLM, which BellSouth witness Mr. Stegeman addresses, review of outside  
18 contractor contracts, weighting of contractor prices by relative use, development of  
19 structure sharing percentages, estimation of BellSouth placing and splicing hours,  
20 and determination of probabilities by terrain and density.

1 **Q. ARE THERE OTHER MODIFICATIONS THAT HAVE BEEN MADE TO**  
2 **THE NONRECURRING COSTS IN ADDITION TO THOSE CONTAINED**  
3 **IN THE ORDER?**

4  
5 A. Yes. As noted in the cost study there were further changes to nonrecurring cost  
6 development that need to be considered. These modifications reduce the  
7 provisioning time and thus, the nonrecurring cost. These additional input changes  
8 are detailed on pages 25-30 of the cost study. For example, the amount of time a  
9 loop is not found in LFACS was lowered from 58% to 20% and Work  
10 Management Center ("WMC") time was set at 2 minutes (down from 15).

11

12 **Q. PLEASE PROVIDE AN OVERVIEW OF THE INPUTS USED IN**  
13 **BELLSOUTH'S "BOTTOMS-UP" COST DEVELOPMENT.**

14

15 A. BellSouth's "bottoms-up" inputs were obtained from two basic sources. First  
16 Outside Plant Contractor costs for each district in Florida were reviewed. These  
17 contracts provided the individual work item price, e.g. the price to place a pole, to  
18 bore a driveway, or to bury a cable. BellSouth then used the amount of usage that  
19 occurred during 2000 to develop an average contractor cost for each type of activity.  
20 Attachment 3 in Appendix B of the cost study details the calculations performed to  
21 develop the contractor cost input associated with pole placement, conduit, manhole,  
22 and their placements, buried cable placement, etc.

23

24 The second input source was the Outside Plant Construction Management  
25 ("OSPCM") system. The OSPCM is the same system used by BellSouth's Network

1 organization to estimate job costs. Attachment 4 in Appendix B of the cost study  
2 provides the source code data and assumptions taken from the OSPCM system for  
3 the development of splicing and placing time inputs.

4  
5 **Q. CAN YOU PROVIDE A DESCRIPTION OF THE SOURCES AND**  
6 **ASSUMPTIONS USED IN THE DETERMINATION OF EACH**  
7 **CATEGORY OF INPUT IN THE “BOTTOMS-UP” ANALYSIS?**

8  
9 A. Yes. The following discussion will describe how each category of input, as they  
10 correspond to the BSTLM input tables, was derived. Attachment 1 in Appendix B  
11 of the cost study displays the resulting input.

12  
13 **Aerial Structure Contract Labor**

14 Contract labor costs for placing poles were obtained from actual outside contractor  
15 contracts in each district in Florida. Each district contractor's price was weighted  
16 by the amount of usage in the district in 2000 to arrive at a weighted average price  
17 for an average size pole placement in the state. Contract labor associated with  
18 placement of anchors was also obtained from the outside contractor contracts in  
19 each district in Florida. Guys are placed by BellSouth personnel, and the time  
20 required to install a guy was obtained from the OSPCM system.

21  
22 **Aerial Structure (Material)**

23 Pole material prices were also obtained from actual outside contractor contracts in  
24 each district in Florida. Each district contractor's price was weighted by the  
25 amount of usage in the district in 2000 to determine a weighted average material

1 price for an average size pole in the state. The material costs of anchors and guys  
2 are exempt material and are captured in the exempt material loading for poles.

3  
4 **Buried Excavation Contract Labor**

5 While the BSTLM input tables were modified to allow contractors' buried  
6 excavation prices to vary dependent on the terrain type, agreements between  
7 BellSouth and its outside contractors do not differentiate prices by terrain type.  
8 Therefore, all excavation cost values are the same, regardless of terrain type.  
9 Excavation costs were determined in the same manner as the aerial structure  
10 contract labor costs. Contract labor costs for buried excavation activities were  
11 obtained from actual outside contractor contracts in each district in Florida. Each  
12 district contractor's price was weighted by the amount of usage in the district in  
13 2000 to arrive at a weighted average price per foot for buried excavation in the  
14 state.

15  
16 **Underground Excavation Contract Labor**

17 While the BSTLM input tables were modified to allow contractors' underground  
18 excavation prices to vary dependent on the terrain type, the agreements between  
19 BellSouth and its outside contractors do not differentiate prices by terrain type.  
20 Therefore, all underground excavation cost input is the same regardless of terrain  
21 type. Underground excavation costs were determined in the same manner as the  
22 buried excavation contract labor costs. Contract labor costs for underground  
23 excavation activities were obtained from actual outside contractor contracts in each  
24 district in Florida. Each district contractor's price was weighted by the amount of  
25 usage in the district in 2000 to calculate a weighted average price per foot for

1 underground excavation in the state.

2 **Structure Sharing**

3 BellSouth only expects to share in the cost of buried structure approximately 6% of  
4 the time in Florida. When sharing occurs, BellSouth has assumed that BellSouth  
5 and two other parties will share in the cost of buried placement. Therefore, buried  
6 sharing is calculated as follows:

7

8  $94\% \times 100\% = 94\%$

9  $6\% \times 33.33\% = 2\%$

10 Total 96%

11 The 96% reflects the amount of buried structure cost assigned to BellSouth.

12

13 For aerial plant sharing, BellSouth owns approximately 40% of the poles in its  
14 territory in Florida. Therefore, BellSouth has used 40% as the amount of pole  
15 costs assigned in its cost studies.

16

17 For underground sharing, BellSouth rarely, if ever, shares conduit placement costs  
18 with another party. BellSouth does lease a small amount of its conduit space to  
19 others and has included that amount in the underground sharing percentage as  
20 follows:

21

22	Duct feet in Florida	192,128,640
23	Leased to others	129,754
24	Assigned to BellSouth	99.93%

25

1     **Facility Sharing (between feeder and distribution)**

2     The BSTLM provides the ability for sharing of structure between feeder and  
3     distribution cables when both are located along the same path; however, this type  
4     of sharing of structure rarely occurs according to Network subject matter experts.  
5     This lack of sharing between feeder and distribution occurs for many reasons  
6     including the fact that placement of feeder and distribution cables do not always  
7     coincide in timing, often access to distribution cables is needed more frequently  
8     than manhole spacing for feeder cable would allow, etc. Based on the fact that  
9     experts predict very little sharing of structure between distribution and feeder,  
10    BellSouth has assumed that when both are found on the same path that sharing of  
11    structures occurs 25% of the time in a forward-looking environment. While  
12    BellSouth believes the actual sharing will be less, the 25% reflects the expected  
13    upper limit.

14

15    **Media Sharing**

16    In BellSouth's previous filing, the Media Sharing table was populated with input  
17    values that resulted in a 50%/50% sharing of structure between copper and fiber  
18    when both copper and fiber cables were placed on, or in, the same structure. These  
19    values were not used in previous filings since all structure costs resulted from  
20    either in-plant factors or pole/conduit factors in the BellSouth Cost Calculator  
21    rather than from the BSTLM, itself. However, since the BSTLM is calculating  
22    structure costs in this filing, the BSTLM approach was changed to improve the  
23    logic previously provided through this table. Now, instead of using the Media  
24    Sharing table, the logic of the updated BSTLM apportionments, on both distribution  
25    and feeder routes that have both copper and fiber cables, the costs of structure



(poles, trenching, etc.) between the media based on the number of DS0 equivalents on each cable. This is consistent with how DLC common equipment, fiber, and the structure for fiber are apportioned in the model. Additionally, in its Order in this docket, the Commission found with respect to the use of DS0 equivalents: "Of the two factors, competitive impact or causal linkage, we believe that where possible, cost causal connections should get the nod when designing cost models. Thus, based on the evidence, we find that the BSTLM method of allocating shared investments based on DS0 equivalents is reasonable." (Order, Page 134)

#### **Feeder Distribution Interface (FDI) Placing Hours**

The BSTLM is designed to assume that FDIs are placed by telephone company personnel (i.e., placement hours X labor rate), however, FDIs are typically placed by outside contractors in BellSouth. This inconsistency in the BSTLM approach and BellSouth input was not discovered in time to correct the model. Therefore, BellSouth has taken contractor costs and converted them to hours by dividing the contractor costs by the BellSouth installation labor rate. Further, the outside plant contracts have a fixed placement cost for FDIs weighing between 101 and 800 pounds, another cost for 801 to 1700 pounds, and a third price for 1701 to 4000 pounds. These contractor costs for various weights have been used for each applicable FDI size in the BSTLM after being converted to labor hours to fit the format of the BSTLM input table.

#### **Aerial Structure Placing Hours (Telco)**

Since outside contractors place poles for BellSouth, this table is only used for the time to place a guy, which is handled by BellSouth personnel.

1     **DTBT Splicing and Placing Hours**

2     Times for closure and setup, cross connects and splicing were obtained from the  
3     OSPCM system used by BellSouth to estimate job costs for internal purposes.  
4     While the material prices for terminals of sizes 100 pairs or less are exempt  
5     material, the labor to install these terminals is not. Therefore, the times are  
6     populated for all sizes of terminals.

7

8     **Media Splicing and Placing Hours**

9     Times for placing and splicing aerial, buried and underground copper and fiber  
10    cables were obtained from the OSPCM system used by BellSouth to estimate job  
11    costs for internal purposes. Since outside contractors place buried cable, buried  
12    placing costs are zero in this table.

13

14    **FDI Splicing**

15    Times for FDI splicing were obtained from the OSPCM system used by BellSouth  
16    to estimate job costs for internal purposes.

17

18    **Percent Activities**

19    Similar to other proxy-type cost models, the BSTLM requires knowledge of not  
20    only the cost of various activities associated with placing the structure for cable,  
21    but also the likelihood that each of those activities will occur in various density  
22    zones and various terrain types. Actual data regarding these probabilities by  
23    density and terrain type does not exist. However, BellSouth's subject matter  
24    experts previously reviewed the default percentages used in the BenchMark Cost  
25    Proxy Model ("BCPM") and found them to be a reasonable reflection of BellSouth

1 experience in various terrain and density combinations. Additionally the  
2 Commission approved the use of these “percent activities” in the Universal Service  
3 Fund (“USF”) Docket No. 980696-TP. BellSouth used those same percentages in  
4 this filing. Modifications were required, however, since the BCPM included nine  
5 density zones and separated feeder from distribution. The BSTLM, on the other  
6 hand, includes a breakdown into three density groups (which are groupings of the  
7 density zones) – urban, suburban and rural – and combines feeder and distribution  
8 into one table. Thus, BellSouth combined the feeder percent activities previously  
9 approved by the Commission such that areas with fewer than 200 lines per square  
10 mile are classified as rural, areas with between 201 and 5000 lines per square mile  
11 are treated as suburban, and areas with more than 5000 lines per square mile are  
12 considered urban.

#### 13 14 **Other Material Loadings**

15 While BellSouth has used the capabilities of the BSTLM to develop a “bottoms-  
16 up” approach to determining installation and engineering costs, there remain  
17 certain items of investment that are calculated via factors. Those items include  
18 sales tax, exempt material, supply expense, and other items such as indirect labor  
19 costs, right of way and tree trimming associated with initial cable placements, and  
20 interest during construction. These items are included in this filing in the Material  
21 Loading table. Attachments 5 and 5A in Appendix B to the cost study provide a  
22 description and explain the development of these factors.

#### 23 24 **Pole, Guy and Anchor, and Manhole Spacing**

25 Pole spacing was determined by examining 12/31/00 ARMIS Report 43-08 for

1 Florida to determine the number of poles in the state relative to the sheath distance  
2 of aerial cable in the state. Worksheets displaying the development of the pole  
3 spacing input are shown in Attachment 1 of Appendix B to the cost study. The  
4 number of poles owned by BellSouth in Florida were adjusted by the percentage of  
5 poles owned by BellSouth to arrive at the total number of poles to which BellSouth  
6 cable is attached in Florida. Then, this adjusted number of poles was divided into  
7 the aerial sheath feet in Florida. The result was 112 feet of aerial sheath per pole.  
8 BellSouth rounded this up to an even 120 feet. This result is extremely  
9 conservative given the fact that this methodology assumes only one existing  
10 BellSouth sheath on each pole line route, when in reality there are often two or  
11 more sheaths on a given pole line. If one were to assume 1.5 sheaths, on average,  
12 per pole line, the spacing interval would drop to approximately 75 feet.

13  
14 Anchor and guy spacing is estimated to be every 500 feet (roughly every 4 poles)  
15 and manhole spacing is assumed to be every 625 feet based on subject matter  
16 expert estimates.

17  
18 **Underground Conduit and Manhole Contractor Costs**

19 Conduit duct costs and manhole costs, like the underground excavation contract  
20 labor costs, were also obtained from actual outside contractor contracts in each  
21 district in Florida. Each district contractor's price was weighted by the amount of  
22 usage in the district in 2000 to determine a weighted average price for furnishing  
23 and installing conduit and manholes in the state. As specified in the contracts,  
24 contractors charge to place manholes on a per cubic foot basis. Therefore, the  
25 BSTLM inputs for manhole costs were based upon the total cubic feet of the

1 different sizes.

2

3 **Engineering**

4 Engineering costs were obtained from the OSPCM system. While previous filings  
5 treated engineering as a linear factor of non-exempt material, the engineering input  
6 from OSPCM is applied as a factor of total non-engineering investments (i.e., as a  
7 loading on non-exempt material, exempt material, labor, contractor costs, sales tax,  
8 and other loadings). The BSTLM logic in the previous filing calculated  
9 engineering as a loading on material. For this filing, the BSTLM logic has been  
10 modified to now calculate engineering in the same manner as the OSPCM by  
11 applying the factor to the total of non-engineering investments.

12

13 **Outside Contractor Use (Engineering Rules)**

14 This input table was not used in the previous filing by BellSouth since all  
15 contractor and BellSouth labor was calculated via in-plant factors in the Cost  
16 Calculator. This table directs the BSTLM to use either contractor installation or  
17 BellSouth personnel installation (“Y” indicates contractor while “N” indicates  
18 BellSouth personnel). Since poles are placed by contractors and guys are placed  
19 by BellSouth personnel, the table was modified to include a third option for Poles  
20 (“B” indicates that both contractor and BellSouth installation is required).  
21 Additionally, even though not used, this table was populated in the previous filing  
22 and two entries required correction. The indicators for DTBT and FDI were  
23 changed from “Y” to “N” to reflect the fact that BellSouth personnel placed FDI  
24 (see discussion of FDI placing hours above) and terminals.

25

1       **Q. HOW DO THE RECURRING COSTS OBTAINED FROM USE OF THE**  
2       **“BOTTOMS-UP” APPROACH COMPARE TO COSTS USING IN-**  
3       **PLANT FACTORS?**

4  
5    A. Some of the element costs have increased, while others have decreased, even  
6       though all costs are based on the same “bottoms-up” input values and BSTLM  
7       algorithms. For example, the Service Level 1 (“SL1”), SL2, ISDN, and 4 wire  
8       DS1 loops have increased in every zone as compared with the current  
9       Commission-ordered rates. On the other hand, 2 wire and 4 wire UCL-Long loops  
10       have decreased in every zone. Additionally, for a given element, one deaveraged  
11       zone cost may have increased while another zone cost has decreased. For  
12       example, the 2 wire UCL-Short loop’s zone 1 cost increased while zones 2 and 3  
13       decreased. Exhibit DDC-1\_120 compares BellSouth’s “bottoms-up” cost study to  
14       the revised Commission-ordered rates contained in Appendix A of Order PSC-01-  
15       2051-FOF-TP. (The Commission-ordered rates are those that reflect the impact of  
16       inflation.) As one can see from reviewing this exhibit, the differences do not seem  
17       to follow any pattern.

18  
19       *Issue 1(b): Should BellSouth’s loop rates or rate structure previously approved*  
20       *in Order No. PSC-01-1181-FOF-TP be modified? If so, to what*  
21       *extent, if any, should the rates or rate structure be modified?*  
22

23       **Q. FROM A COST PERSPECTIVE, WHAT IS YOUR OPINION ON THIS**  
24       **ISSUE?**

1 A. First, the Commission must also consider Order PSC-01-2051-FOF-TP, which re-  
2 instated the impact of inflation. Once the decisions contained in that ruling are  
3 considered, there is no reason to modify the loop rates or the rate structure. From  
4 the discussion I have presented on the input development, one can see that the  
5 “bottoms-up” approach taken by BellSouth is a much more complex study of loop  
6 costs than the previously filed study based upon the use of in-plant factors and  
7 structure loading factors. BellSouth continues to believe, however, that the use of  
8 in-plant factors and structure loading factors produces reasonable, accurate results  
9 and that the ordered rates should remain as is. Cost studies produce estimates of  
10 cost, not absolute results. While the “bottoms-up” approach produces very specific  
11 results, these results are a combination of a much larger number of influencing  
12 variables and inputs than was present under the factor approach. Under the  
13 “bottoms-up” method, depending upon the customer location, the type and size of  
14 facilities, and number of services, the costs can vary substantially, as Exhibit  
15 DDC-1\_120 illustrates. In contrast, in-plant and loading factors reflect  
16 experienced cost relationships between material prices and labor/engineering costs.  
17  
18 Furthermore, the “bottoms-up” approach introduces an extensive set of new inputs  
19 that can be questioned, criticized and manipulated by intervening parties. While  
20 BellSouth is not afraid of this scrutiny, it does not believe that the end-result of  
21 such an effort will produce either a better quality result or a more “TELRIC-  
22 compliant” result.

23  
24 ***Issue 2(a): Are the ADUF and ODUF cost studies submitted in BellSouth’s***  
25 ***120-day filing compliance filing appropriate?***

1 **Q. WHY DID BELL SOUTH FILE ADUF AND ODUF COSTS IN THIS PHASE**  
2 **OF THE DOCKET?**

3  
4 A. Even though the Commission's Order did not specifically include these elements  
5 in the 120-day requirement, substantial changes to the study inputs necessitated  
6 that BellSouth advise the Commission. The costs for the DUF elements BellSouth  
7 filed on October 8, 2001 reflect the applicable Commission-ordered modifications  
8 I discussed previously. As I explain below, BellSouth is revising the DUF element  
9 costs further and is filing a revised cost study simultaneously with this testimony  
10 (Cost Study - Revision 2).

11

12 **Q. PLEASE BRIEFLY EXPLAIN WHAT THE ADUF AND ODUF**  
13 **ELEMENTS ARE AND HOW THE COSTS WERE DEVELOPED.**

14

15 A. In fact, there are three different daily usage offerings; Access Daily Usage Files  
16 ("ADUF"), Optional Daily Usage Files ("ODUF"), and Enhanced Optional Daily  
17 Usage Files ("EODUF"). Each of the offerings provides electronic billing data to  
18 the ALECs:

19

20 ADUF – information of end user's daily originating and terminating access carrier  
21 messages. BellSouth extracts and distributes call detail on these access messages.

22

23 ODUF – call detail information for billable messages transported through  
24 BellSouth's network and processed in BellSouth's CRIS (Customer Records  
25 Information System) billing system. BellSouth extracts and distributes call detail



1 on messages such as, Measured Local, IntraLATA Toll, and operator-handled calls  
2 if the ALEC purchases Operator Services from BellSouth. This element is  
3 applicable to both UNEs and resale.

4  
5 EODUF – usage data for local calls that originate from resold, flat-rated business  
6 and residential lines. BellSouth extracts and distributes call detail on these  
7 messages.

8  
9 BellSouth has developed unique programs at the ALEC's request in order to  
10 extract the billing data they requested, in a format such that they can bill their end-  
11 users. The costs associated with this on-going process and the computer resources  
12 required to implement and support the programs are reflected in BellSouth's cost  
13 study. These costs are incremental to BellSouth's normal billing process.

14  
15 **Q. WHY WERE THESE COST STUDIES FOR THE DAILY USAGE FILE**  
16 **(“DUF”) ELEMENTS REVISED?**

17  
18 A. When BellSouth developed the cost study inputs in the original filing (August  
19 2000), the actual number of records was low and rather stagnant. The projected  
20 demand reflected this trend. Since the time the original cost study was filed in this  
21 docket, however, BellSouth experienced a dramatic increase in the number of  
22 message records. The increase in the number of resale to UNE-P (combination)  
23 conversions may have caused this upswing. Since the cost results for the DUF  
24 elements are demand-dependent, BellSouth included the DUF elements as part of  
25 the 120-day items. In fact, in gathering cost input for the most recently initiated

1 generic cost docket in BellSouth's region (Georgia Docket No. 14361-U),  
2 projected demand for ADUF and ODUF has increased over what was filed on  
3 October 8<sup>th</sup> in Florida. (The EODUF demand has decreased, increasing the costs  
4 slightly.) Exhibit DDC-1\_120 displays the results of updating this demand. As I  
5 mentioned previously, concurrent with the filing of this testimony, BellSouth is  
6 filing its revised cost study to incorporate this change in demand to the DUF  
7 elements. Only the DUF results changed from the study filed on October 8, 2001.

8  
9 ***Issue 2(b): Should BellSouth's ADUF and ODUF rates or rate structure***  
10 ***previously approved in Order No. PSC-01-1181-FOF-TP be***  
11 ***modified? If so, to what extent, if any, should the rates or rate***  
12 ***structure be modified?***

13  
14 **Q. WHAT IS YOUR OPINION ON THIS ISSUE?**

15  
16 A. The Commission should consider the updated information on DUF costs filed here.  
17 BellSouth, in good faith, has advised this Commission of a supportable change to a  
18 cost study input. Since the change results in a reduction of ADUF and ODUF  
19 rates, the intervening parties would not be adversely affected by a decision to  
20 consider the revised cost study. Let me clarify one point, the issue here is whether  
21 or not the rates should be revised. It is NOT a question of whether or not DUF  
22 rates are appropriate. This issue has already been litigated in the first phase of this  
23 proceeding and the Commission established rates in both Order No. PSC-01-1181-  
24 FOF-TP and in Order No. PSC-01-2051-FOF-TP, which considered inflation.

1      *Issue 3(a): Are the UCL-ND loop cost studies submitted in BellSouth's 120-day*  
2      *filing compliant with Order No. PSC-01-1181-FOF-TP?*

4 Q. WHY DID BELLSOUTH FILE A COST STUDY FOR UCL-ND IN THIS  
5 PHASE OF THIS DOCKET?

A. One of the “120-day” requirements identified by this Commission was to determine xDSL nonrecurring costs that exclude the Design Layout Record (“DLR”), test point, and order coordination. The Unbundled Copper Loop – Non-Designed (“UCL-ND”) fulfills that obligation. In addition, this all copper loop offering satisfies the Commission’s requirement that BellSouth provision SL1 loops and guarantee not to roll them onto another facility or convert them to another technology. The UCL-ND gives the ALECs what they need to provide xDSL service, but does not unduly restrict BellSouth in providing voice grade service over the most efficient technology.

17 **Q. HOW DOES THE UNBUNDLED COPPER LOOP – NON-DESIGNED**  
18 **DIFFER FROM THE UNBUNDLED COPPER LOOPS PREVIOUSLY**  
19 **FILED BY BELL SOUTH IN THIS DOCKET?**

21 A. As the name implies, these loops do not go through the design process BellSouth  
22 utilizes to provision UCL-Short and UCL-Long loops. Thus, they are not  
23 provisioned with a test point and a DLR will not be provided. Additionally, the  
24 UCL-ND loop will not have a specific length limitation. Since its resistance is  
25 restricted to 1300 ohms, however, the UCL-ND loop generally will be 18,000 feet

1 or less. However, in some cases, the length may be longer based on gauge.

2

3 Even though the DLR is not provided with the UCL-ND loop, ALECs may request  
4 an Engineering Information document from BellSouth (element A.1.8). This  
5 document provides loop make-up information, similar to a DLR. The October 8<sup>th</sup>  
6 cost study also includes the cost development for this optional element.

7

8 **Q. HOW DOES THE RECURRING COST OF UCL-ND LOOPS COMPARE**  
9 **TO OTHER TYPES OF LOOPS?**

10

11 A. The table below compares the statewide average recurring cost of an SL1, SL2,  
12 ADSL, HDSL, UCL-Short and UCL-Long to the UCL-ND loop based on the  
13 “bottoms-up” approach.

14

15	A.1.1	2-Wire Analog Voice Grade Loop - Service Level 1	\$19.52
16	A.1.2	2-Wire Analog Voice Grade Loop - Service Level 2	\$21.72
17	A.6.1	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop	\$15.66
18	A.7.1	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop	\$13.60
19	A.13.1	2-Wire Copper Loop – short	\$15.66
20	A.13.7	2-Wire Copper Loop – long	\$32.19
21	A.13.12	2-Wire Copper Loop – ND	\$15.21

22

23 Note that the UCL-ND loop is less than both an UCL-Short loop and an SL1 loop,  
24 and significantly less than the UCL-Long loop. This is consistent with the fact that  
25 test points have been removed and that the UCL-ND has no length restriction, but

1 is generally less than 18,000 feet because of the 1300-ohm resistance limit. In  
2 running the Copper-Only scenario in the BSTLM, the loop limit was set at 24,000  
3 feet in order to capture those loops that potentially would still meet the 1300-ohm  
4 restriction, but exceed the 18,000 feet limit. In fact, the average loop length for the  
5 UCL-ND generated by the BSTLM is 13,258 feet.

6 **Q. HOW DOES THE NONRECURRING COST OF UCL-ND LOOPS**  
7 **COMPARE TO OTHER TYPES OF LOOPS?**

8  
9 A. The nonrecurring cost of an UCL-ND is less than the nonrecurring costs associated  
10 with designed loops. Additionally, it is less than the SL1 because it is an all-  
11 copper loop and thus, a plug-in does not have to be provisioned in the digital loop  
12 carrier system.

13

14 **Q. ARE THERE OTHER ADJUSTMENTS TO THE COST STUDY THAT**  
15 **ARE REQUIRED DUE TO THE UCL-ND OFFERING?**

16

17 A. Yes. As I mentioned previously, this type of loop is non-designed. Thus, no test  
18 point is provisioned. ALECs, however, may desire a joint acceptance test to  
19 benchmark the transmission quality of the loop and to ensure compatibility with  
20 the xDSL service they wish to provide. These testing parameters include, but are  
21 not limited to, testing for non-loading, balance of pair, and continuity from the  
22 main distribution frame ("MDF") to the network interface device ("NID").  
23 BellSouth filed Testing Beyond Voice (A.19 elements) previously in this docket.  
24 These costs, however, only considered testing a designed loop that had been  
25 conditioned. The adjusted loop testing elements also consider testing parameters

1 for non-designed loops (SL1 or UCL-ND). Exhibit DDC-1\_120 illustrates the  
2 difference in the A.19 costs between the current Commission-ordered rates and the  
3 latest cost study.

4

5

6 *Issue 3(b): What modifications, if any, are appropriate and what should the*  
7 *rates be?*

8

9 **Q. SHOULD THIS COMMISSION USE THE COSTS FILED HERE TO SET**  
10 **RATES FOR UCL-ND ELEMENTS?**

11

12 A. No. As discussed in response to Issue 1(b), BellSouth does not believe that the  
13 “bottoms-up” approach develops a more representative result than the use of  
14 factors. Let me note that BellSouth has also filed the UCL-ND elements in Docket  
15 No. 960786-TP (271 docket) based on the use of in-plants and loading factors.  
16 Those cost studies reflect the Commission-ordered adjustments except for the re-  
17 instatement of inflation. BellSouth requests that the Commission establish rates  
18 for the UCL-ND related elements in Docket No. 960786-TP once inflation is  
19 considered.

20

21 *Issue 4(a): What revisions, if any, should be made to NIDs in both the BSTLM*  
22 *and the stand-alone NID cost study?*

23 *Issue 4(b): To what extent, if any, should the rates or rate structure be modified?*

24

25 **Q. ARE REVISIONS REQUIRED TO THE CALCULATION OF BOTH**

1       **TYPES OF NID COSTS?**

2  
3    A. No. Adjustments are not required to both the NID cost considered in the BSTLM  
4       and to the stand-alone NID costs. The stand-alone NID costs, however, do require  
5       revision. Let me explain.

6       At pages 192-93 of Order No. PSC-01-1181-FOF-TP, the Commission noted an  
7       inconsistency in the treatment of exempt/miscellaneous material for the stand-  
8       alone NID and the exempt/miscellaneous material associated with the NID when it  
9       is provisioned with the loop (via the BSTLM).

10  
11      Typically, the NID is provisioned with the loop at the time the residence or  
12      business is constructed and the drop wire is placed and treated as capitalized  
13      investment. For most cable placements in BellSouth's studies, exempt material is  
14      recovered through an In-Plant factor; however, a different approach is taken for the  
15      NID and drop. BellSouth, in the BSTLM, directly identifies items normally  
16      captured in an In-Plant factor (labor, exempt materials, sales tax, etc.) for the  
17      capitalized drop and NID.

18  
19      Thus, because the NID investment generated by the BSTLM already considers  
20      exempt material, taxes, labor, etc., the BellSouth Cost Calculator does not need to  
21      apply the In-Plant factors to drop and NID investments. BellSouth reflected this by  
22      assigning special "sub-FRCs" to the drop and NID. These special sub-FRC codes  
23      are 22C-01 or 45C-01. The "01" sub-FRCs instruct the BellSouth Cost Calculator  
24      not to apply In-Plant factors to those items of plant. Therefore, BellSouth's NID

25

1 costs associated with unbundled loops are correct and no “double-counting” of In-  
2 Plant costs associated with the NID or drop occurs.

3

4 On the other hand, Stand-Alone NID/NID Access is a separate UNE offering  
5 designed for situations where the existing NID is not suitable for ALEC connection  
6 and where BellSouth terminates its loop directly to the inside wire, or at the  
7 ALEC’s request. BellSouth charges a nonrecurring fee for the installation of,  
8 material for, and cross connect (if appropriate) to the stand-alone NID. The stand-  
9 alone NID material (housing, interface, and protectors) is exactly the same as the  
10 NID placed with the loop. As found by the Commission in its Order, BellSouth  
11 did not apply exempt materials in the stand-alone NID study. In fact, BellSouth  
12 should indeed have included exempt material in its stand-alone NID costs.  
13 BellSouth has included this adjustment in this filing. Further, these are the  
14 appropriate costs to be used to establish rates for Stand-Alone NID/NID Access  
15 elements.

16

17 ***Issue5 (a): What is a “hybrid copper/fiber xDSL-capable loop” offering and***  
18 ***is it technically feasible for BellSouth to provide it?***

19

20 ***(b) Is BellSouth’s cost study contained in the 120-day compliance***  
21 ***filing for the “hybrid copper/fiber xDSL-capable loop” offering***  
22 ***appropriate?***

23

24 ***(c) What should the rate structure and rates be?***

25



1 Q. THE COMMISSION'S ORDER STATED "WE BELIEVE BELL SOUTH IS  
2 OBLIGATED, IF TECHNICALLY FEASIBLE, TO PROVIDE HYBRID  
3 COPPER/FIBER xDSL-CAPABLE LOOPS TO DATA ALECS." WHAT  
4 COST SUPPORT HAS BELL SOUTH FILED IN SUPPORT OF THE  
5 HYBRID COPPER/FIBER LOOP?  
6

7 A. BellSouth filed the recurring and nonrecurring costs associated with providing data  
8 ALECs the ability to utilize a loop served by fiber-fed digital loop carrier ("DLC")  
9 systems (i.e., loops comprised of fiber feeder and copper distribution) to offer  
10 digital subscriber line ("DSL") services to their end-users, without unbundling  
11 packet switching. The distribution portion of the loop is comprised of a dedicated  
12 2-wire physical transmission facility which is connected to a dedicated 16-port  
13 Digital Subscriber Line Access Multiplexer ("DSLAM"). From the DSLAM, a  
14 dedicated DS1 is required through the DLC remote terminal ("RT") to the central  
15 office terminal ("COT") to the ALEC's collocated space in the central office.  
16 Exhibit DDC-2\_120 depicts the components of the Hybrid Copper/Fiber loop.  
17 BellSouth witness Mr. Jerry Kephart addresses the feasibility issue and discusses  
18 why this configuration fulfills the Commission's directive. I address how the costs  
19 were developed.  
20

21 The BSTLM developed the investments associated with the DS1 component of the  
22 Hybrid Copper/Fiber Loop. Let me note that this sub-loop feeder DS1 is not the  
23 same as the unbundled sub-loop feeder – 4-wire DS1 (element A.9.2) also filed in  
24 this docket. The sub-loop feeder DS1 (A.9.2) includes the feeder portion of all  
25 DS1 loops. These include DS1 loops served by both copper feeder and those

1 served by fiber feeder facilities to a remote DLC terminal. The Hybrid  
2 Copper/Fiber DS1 (element A.20.1), on the other hand, only considers locations  
3 served via a remote DLC terminal served by fiber. Thus, all of the locations used  
4 in the calculation of the sub-loop feeder – 4-wire DS1 are not included in the cost  
5 calculation of the Hybrid Copper/Fiber DS1. The material prices for the 16-port  
6 DSLAM were obtained from vendor contracts.  
7 The nonrecurring costs reflect the work activities required to connect and turn-up  
8 the DS1 and the 2-wire transmission facility onto the DSLAM. In order to make  
9 this a functional loop and to reflect the manner in which the loop will be  
10 provisioned, the individual network components must be summed into (1) System,  
11 (2) DS1, and (3) Activation elements.

12

13 **Q. PLEASE DESCRIBE WHICH COMPONENTS ARE CONSIDERED IN**  
14 **THE SYSTEM, DS1, AND ACTIVATION COSTS.**

15

16 A. The System element represents the cost of the DSLAM (element A.20.3) with an  
17 administrative DS1 (A.20.1), which is used for BellSouth's management of the  
18 DSLAM. This administrative DS1 does not terminate at the ALEC's collocation  
19 space. Instead, it terminates into a DSL hub bay in order to allow BellSouth to  
20 control the provisioning, maintenance, and repair of the xDSL Hybrid  
21 Copper/Fiber loop. The cost of the administrative DS1 does not differ from the  
22 DS1 that terminates into the ALEC's collocation space.

23

24 The DS1 element accounts for the cost of the fiber DS1 that essentially connects  
25 the DSLAM at the RT to the ALEC's collocated space in the central office. The

1 recurring cost is equal to the Hybrid Copper/Fiber DS1 (element A.20.1). The  
2 nonrecurring cost is the sum of the DS1 establishment element (A.20.2) and the  
3 nonrecurring cost associated with the Sub-loop Feeder per 4-wire DS1 element  
4 (A.9.2). Let me note that the nonrecurring cost for A.9.2 was not restudied since  
5 the Commission has set a rate for this element. Rather, the rate (\$133.77) was  
6 hard-coded into the Final Cost Summary.

7 The Activation nonrecurring cost is the sum of the channel activation cost (element  
8 A.20.4) and the nonrecurring cost associated with the 2-wire distribution sub-loop  
9 (element A.2.2). As with element A.9.2, the nonrecurring cost for A.2.2 was not  
10 restudied since the Commission has set a rate for this element. Rather, the rate  
11 (\$60.19) was hard-coded into the Final Cost Summary.

12

13 ***Issue 6: In BellSouth's 120-day filing, has BellSouth accounted for the impact***  
14 ***of inflation consistent with Order No. PSC-01-2051-FOF-TP?***

15

16 **Q. WHAT IS YOUR RESPONSE TO THIS ISSUE?**

17

18 A. BellSouth's cost studies are in compliance with the Commission's directive on  
19 inflation. Order No. PSC-01-2051-FOF-TP states: "we hereby reconsider our  
20 decision to reject BellSouth's proposed inflation factor, because it was based upon  
21 a misinterpretation and misrepresentation of the facts presented." (Page 5) Thus,  
22 the Commission found that the application of inflation factors to both the  
23 investment and to labor rates is appropriate. The cost study filed on October 8,  
24 2001 reflects the impact of inflation based on factors originally filed in this docket.

25

1 *Issue 7: Apart from issues 1-6, is BellSouth's 120-day filing consistent with*  
2 *the orders in this docket?*

3

4 **Q. WHAT IS YOUR RESPONSE TO THIS ISSUE?**

5

6 A. The cost studies filed by BellSouth incorporate all of the adjustments ordered by  
7 this Commission. I have described the modifications as part of this testimony.  
8 Further, the cost study contains a detailed discussion of the adjustments made by  
9 BellSouth in order to comply with the Commission's directive.

10

11 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

12

13 A. Yes.

14

15 419843

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		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
<b>A.1</b>	<b>2-WIRE ANALOG VOICE GRADE LOOP</b>					
A.1.1	2-Wire Analog Voice Grade Loop - Service Level 1	1	\$14.72	\$12.79	\$1.93	15%
		2	\$19.87	\$17.27	\$2.60	15%
		3	\$50.27	\$33.36	\$16.91	51%
A.1.2	2-Wire Analog Voice Grade Loop - Service Level 2	1	\$16.93	\$14.50	\$2.43	17%
		2	\$22.07	\$19.57	\$2.50	13%
		3	\$52.48	\$37.82	\$14.66	39%
<b>A.2</b>	<b>SUB-LOOP</b>					
A.2.1	Sub-Loop Feeder Per 2-Wire Analog Voice Grade Loop	1	\$8.07	\$8.05	\$0.02	0%
		2	\$9.92	\$10.87	-\$0.95	-9%
		3	\$20.56	\$21.00	-\$0.44	-2%
A.2.2	Sub-Loop Distribution Per 2-Wire Analog Voice Grade Loop	1	\$10.56	\$7.61	\$2.95	39%
		2	\$13.46	\$10.27	\$3.19	31%
		3	\$33.55	\$19.85	\$13.70	69%
A.2.11	Sub-Loop Distribution Per 4-Wire Analog Voice Grade Loop	1	\$14.97	\$8.12	\$6.85	84%
		2	\$31.84	\$10.96	\$20.88	191%
		3	\$43.16	\$21.18	\$21.98	104%
A.2.14	2-Wire Intrabuilding Network Cable (INC)		\$3.96	\$3.50	\$0.46	13%
A.2.15	4-Wire Intrabuilding Network Cable (INC)		\$9.37	\$6.68	\$2.69	40%
A.2.24	Sub-Loop - Per 4-Wire Analog Voice Grade Loop / Feeder Only	1	\$17.97	\$17.26	\$0.71	4%
		2	\$29.42	\$23.29	\$6.13	26%
		3	\$55.72	\$45.00	\$10.72	24%
A.2.25	Sub-Loop - Per 2-Wire ISDN Digital Grade Loop / Feeder Only	1	\$18.92	\$17.04	\$1.88	11%
		2	\$24.13	\$23.00	\$1.13	5%
		3	\$47.43	\$44.43	\$3.00	7%
A.2.29	Sub-Loop - Per 4-Wire 56 or 64 Kbps Digital Grade Loop / Feeder Only	1	\$18.96	\$18.68	\$0.28	1%
		2	\$27.12	\$25.12	\$2.00	8%
		3	\$29.76	\$48.71	-\$18.95	-39%
A.2.30	Sub-Loop - Per 2-Wire Copper Loop / Feeder Only	1	\$6.64	\$7.25	-\$0.61	-8%
		2	\$5.82	\$9.79	-\$3.97	-41%
		3	\$4.41	\$18.92	-\$14.51	-77%
A.2.32	Sub-Loop - Per 4-Wire Copper Loop / Feeder Only	1	\$12.85	\$14.22	-\$1.37	-10%
		2	\$10.29	\$19.20	-\$8.91	-46%
		3	\$9.44	\$37.09	-\$27.65	-75%
A.2.40	Sub-Loop - Per 2-Wire Copper Loop / Distribution Only	1	\$9.17	\$6.25	\$2.92	47%
		2	\$11.10	\$8.44	\$2.66	32%
		3	\$16.35	\$16.30	\$0.05	0%
A.2.42	Sub-Loop - Per 4-Wire Copper Loop / Distribution Only	1	\$12.44	\$5.20	\$7.24	139%
		2	\$17.59	\$7.02	\$10.57	151%
		3	\$25.21	\$13.55	\$11.66	86%
<b>A.4</b>	<b>4-WIRE ANALOG VOICE GRADE LOOP</b>					
A.4.1	4-Wire Analog Voice Grade Loop	1	\$29.92	\$23.02	\$6.90	30%
		2	\$58.93	\$31.07	\$27.86	90%
		3	\$97.33	\$60.02	\$37.31	62%
<b>A.5</b>	<b>2-WIRE ISDN DIGITAL GRADE LOOP</b>					
A.5.1	2-Wire ISDN Digital Grade Loop	1	\$25.17	\$21.76	\$3.41	16%
		2	\$35.23	\$29.38	\$5.85	20%
		3	\$67.25	\$56.76	\$10.49	18%
A.5.6	Universal Digital Channel	1	\$25.17	\$21.76	\$3.41	16%
		2	\$35.23	\$29.38	\$5.85	20%
		3	\$67.25	\$56.76	\$10.49	18%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec (9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
<b>A.6</b>	<b>2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP</b>	1	\$14.88	\$12.65	\$2.23	18%
		2	\$15.99	\$17.08	-\$1.09	-6%
		3	\$19.82	\$33.00	-\$13.18	-40%
<b>A.7</b>	<b>2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP</b>	1	\$13.07	\$9.97	\$3.10	31%
		2	\$13.80	\$13.46	\$0.34	3%
		3	\$16.56	\$26.00	-\$9.44	-36%
<b>A.8</b>	<b>4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP</b>	1	\$21.66	\$15.69	\$5.97	38%
		2	\$21.11	\$21.17	-\$0.06	0%
		3	\$20.95	\$40.90	-\$19.95	-49%
<b>A.9</b>	<b>4-WIRE DS1 DIGITAL LOOP</b>					
	A.9.1 4-Wire DS1 Digital Loop	1	\$102.30	\$73.44	\$28.86	39%
		2	\$143.91	\$99.13	\$44.78	45%
		3	\$332.43	\$191.51	\$140.92	74%
	A.9.2 Sub-Loop Feeder Per 4-Wire DS1 Digital Loop	1	\$51.92	\$46.27	\$5.65	12%
		2	\$89.14	\$62.45	\$26.69	43%
		3	\$291.32	\$120.65	\$170.67	141%
<b>A.10</b>	<b>4-WIRE 19, 56 OR 64 KBPS DIGITAL GRADE LOOP</b>					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop	1	\$31.79	\$26.39	\$5.40	20%
		2	\$49.17	\$35.62	\$13.55	38%
		3	\$61.71	\$68.82	-\$7.11	-10%
<b>A.12</b>	<b>CONCENTRATION PER SYSTEM PER FEATURE ACTIVATED (OUTSIDE CENTRAL OFFICE)</b>					
	A.12.5 Unbundled Sub-loop Concentration - USLC Feeder Interface	1	\$70.44	\$45.17	\$25.27	56%
		2	\$82.63	\$60.97	\$21.66	36%
		3	\$240.80	\$117.79	\$123.01	104%
<b>A.13</b>	<b>2-WIRE COPPER LOOP</b>					
	A.13.1 2-Wire Copper Loop - short	1	\$14.88	\$12.65	\$2.23	18%
		2	\$15.99	\$17.08	-\$1.09	-6%
		3	\$19.82	\$33.00	-\$13.18	-40%
	A.13.7 2-Wire Copper Loop - long	1	\$25.86	\$37.07	-\$11.21	-30%
		2	\$31.88	\$50.04	-\$18.16	-36%
		3	\$73.13	\$96.67	-\$23.54	-24%
	A.13.12 2-Wire Unbundled Copper Loop - Non Design	1	\$14.17	New		
		2	\$15.59	New		
		3	\$20.83	New		
<b>A.14</b>	<b>4-WIRE COPPER LOOP</b>					
	A.14.1 4-Wire Copper Loop - short	1	\$23.96	\$18.03	\$5.93	33%
		2	\$26.48	\$24.34	\$2.14	9%
		3	\$33.27	\$47.02	-\$13.75	-29%
	A.14.7 4-Wire Copper Loop - long	1	\$48.63	\$64.52	-\$15.89	-25%
		2	\$81.94	\$87.09	-\$5.15	-6%
		3	\$112.91	\$168.25	-\$55.34	-33%
<b>A.15</b>	<b>UNBUNDLED NETWORK TERMINATING WIRE (NTW)</b>					
	A.15.1 Unbundled Network Terminating Wire (NTW) per Pair		\$4572	\$0.2286	\$0.23	100%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec (9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
<b>A.16</b>	<b>HIGH CAPACITY UNBUNDLED LOCAL LOOP</b>					
A.16.1	High Capacity Unbundled Local Loop - DS3 - Facility Termination		\$386.88	\$386.88	\$0.00	0%
A.16.2	High Capacity Unbundled Local Loop - DS3 - Per Mile		\$10.92	\$10.92	\$0.00	0%
A.16.15	High Capacity Unbundled Local Loop - STS-1 - Facility Termination		\$426.60	\$426.60	\$0.00	0%
A.16.16	High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$10.92	\$10.92	\$0.00	0%
<b>A.18</b>	<b>MULTIPLEXERS</b>					
A.18.1	Channelization - Channel System DS1 to DS0		\$146.77	\$146.77	\$0.00	0%
A.18.2	Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$2.10	\$2.10	\$0.00	0%
A.18.3	Interface Unit - Interface DS1 to DS0 - BRITE Card		\$3.66	\$3.66	\$0.00	0%
A.18.4	Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$0.00	0%
A.18.5	Channelization - Channel System DS3 to DS1		\$211.19	\$211.19	\$0.00	0%
A.18.6	Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$0.00	0%
<b>A.20</b>	<b>HYBRID COPPER/FIBER xDSL - CAPABLE LOOP</b>					
A.20.	System DSLAM with Administrative DS1					
A.20.1	Hybrid Copper/Fiber xDSL - Capable Loop		\$149.48			
A.20.3	16 - Port DSLAM, per DSLAM		\$374.90			
		1	\$524.37	New		
			\$173.40			
			\$374.90			
		2	\$548.30	New		
			\$419.71			
			\$374.90			
		3	\$794.60	New		
A.20.DS1	Copper/Fiber DS1 into DSLAM					
A.20.1	Hybrid Copper/Fiber xDSL - Capable Loop	1	\$149.48	New		
		2	\$173.40	New		
		3	\$419.71	New		
A.20.2	Hybrid Copper/Fiber DS1, per DS1					
A.20.Active	End User Activation					
A.2.2	Sub-Loop Distribution Per 2-Wire Analog Voice Grade Loop	1	\$10.56	New		
		2	\$13.46	New		
		3	\$33.55	New		
<b>B.0</b>	<b>UNBUNDLED LOCAL EXCHANGE PORTS AND FEATURES</b>					
<b>B.1</b>	<b>EXCHANGE PORTS</b>					
B.1.1	Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)		\$1.40	\$1.40	\$0.00	0%
B.1.3	Exchange Ports - 2-Wire DID Port		\$8.73	\$8.73	\$0.00	0%
B.1.4	Exchange Ports - DDITS Port		\$54.95	\$54.95	\$0.00	0%
B.1.5	Exchange Ports - 2-Wire ISDN Port		\$8.83	\$8.83	\$0.00	0%
B.1.6	Exchange Ports - 4-Wire ISDN DS1 Port		\$82.74	\$82.74	\$0.00	0%
<b>D.0</b>	<b>UNBUNDLED TRANSPORT AND LOCAL INTEROFFICE TRANSPORT</b>					
<b>D.2</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - VOICE GRADE</b>					
D.2.1	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0091	\$0.0091	\$0.00	0%
D.2.2	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination		\$25.32	\$25.32	\$0.00	0%
<b>D.3</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - DS0 - 56/64 KBPS</b>					
D.3.1	Interoffice Transport - Dedicated - DS0 - Per Mile		\$0.0091	\$0.0091	\$0.00	0%
D.3.2	Interoffice Transport - Dedicated - DS0 - Facility Termination		\$18.44	\$18.44	\$0.00	0%
<b>D.4</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - DS1</b>					
D.4.1	Interoffice Transport - Dedicated - DS1 - Per Mile		\$185.6	\$0.1856	\$0.00	0%
D.4.2	Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44	\$88.44	\$0.00	0%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
<b>D.5</b>	<b>LOCAL CHANNEL - DEDICATED</b>					
D.5.1	Local Channel - Dedicated - 2-Wire Voice Grade	1	\$48.73	\$21.94	\$26.79	122%
		2	\$119.26	\$29.62	\$89.64	303%
		3		\$57.22	-\$57.22	-100%
D.5.2	Local Channel - Dedicated - 4-Wire Voice Grade	1	\$49.84	\$22.81	\$27.03	119%
		2	\$120.37	\$30.79	\$89.58	291%
		3		\$59.48	-\$59.48	-100%
D.5.24	Local Channel - Dedicated - DS1	1	\$66.48	\$35.28	\$31.20	88%
		2	\$85.03	\$47.63	\$37.40	79%
		3	\$318.60	\$92.01	\$226.59	246%
<b>D.6</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - DS3</b>					
D.6.1	Interoffice Transport - Dedicated - DS3 - Per Mile		\$3.87	\$3.87	\$0.00	0%
D.6.2	Interoffice Transport - Dedicated - DS3 - Facility Termination		\$1,071.31	\$1,071.00	\$0.31	0%
<b>D.10</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - STS-1</b>					
D.10.1	Interoffice Transport - Dedicated - STS-1 - Per Mile		\$3.87	\$3.87	\$0.00	0%
D.10.2	Interoffice Transport - Dedicated - STS-1 - Facility Termination		\$1,056.07	\$1,056.00	\$0.07	0%
<b>D.12</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - 4-WIRE VOICE GRADE</b>					
D.12.1	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile		\$0.0091	\$0.0091	\$0.00	0%
D.12.2	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination		\$22.58	\$22.58	\$0.00	0%
<b>L.1</b>	<b>ACCESS DAILY USAGE FILE (ADUF)</b>					
L.1.1	ADUF, Message Processing, per message		\$0.001858	\$0.014391	-\$0.012533	-87%
L.1.3	ADUF, Data Transmission (CONNECT:DIRECT), per message		\$0.00012450	\$0.0001297	-\$0.0000052	-4%
<b>M.1</b>	<b>ENHANCED OPTIONAL DAILY USAGE FILE</b>					
M.1.1	Enhanced Optional Daily usage File: Message Processing, Per Message		\$0.235115	\$0.229109	\$0.006006	3%
<b>M.2</b>	<b>OPTIONAL DAILY USAGE FILE</b>					
M.2.1	Optional Daily Usage File: Recording, per Message		\$0.00000071	\$0.00000071	\$0.00000000	0%
M.2.2	Optional Daily Usage File: Message Processing, Per Message		\$0.002505	\$0.00684	-0.00433	-63%
M.2.3	Optional Daily Usage File: Message Processing, Per Magnetic Tape Provisioned		\$35.91	\$48.96	-\$13.05	-27%
M.2.4	Optional Daily Usage File: Data Transmission (CONNECT:DIRECT), Per Message		\$0.00010375	\$0.0001081	-\$0.0000044	-4%
<b>P.0</b>	<b>UNBUNDLED LOOP COMBINATIONS</b>					
<b>P.1</b>	<b>2-WIRE VOICE GRADE LOOP WITH 2-WIRE LINE PORT (RES, BUS, COIN, CENTREX, PBX)</b>					
P.1.RESBL	2-Wire VG Loop/Port Combo (Res, Bus, Coin)					
P.1.1	2-Wire Voice Grade Loop		\$13.89	\$12.94		
P.1.2	Exchange Port - 2-Wire Line Port		\$1.17	\$1.17		
		1	\$15.06	\$14.11	\$0.95	7%
			\$18.33	\$17.06		
			\$1.17	\$1.17		
		2	\$19.50	\$18.23	\$1.27	7%
			\$49.18	\$31.87		
			\$1.17	\$1.17		
		3	\$50.35	\$33.04	\$17.31	52%
P.1.PBX	2-Wire VG Loop/Port Combo (PBX)					
P.1.1	2-Wire Voice Grade Loop		\$13.89	\$12.94		
P.1.2	Exchange Port - 2-Wire Line Port		\$1.17	\$1.17		
		1	\$15.06	\$14.11	\$0.95	7%
			\$18.33	\$17.06		
			\$1.17	\$1.17		
		2	\$19.50	\$18.23	\$1.27	7%
			\$49.18	\$31.87		
			\$1.17	\$1.17		
		3	\$50.35	\$33.04	\$17.31	52%



P.1.CENTF 2-Wire VG Loop/Port Combo (Centrex)  
 P.1.1 2-Wire Voice Grade Loop  
 P.1.2 Exchange Port - 2-Wire Line Port

Zone	Recurring	Staff Rec (9/11/01)	Difference	% Difference
1	\$13.89	\$12.94		
	\$1.17	\$1.17		
	\$15.06	\$14.11	\$0.95	7%
2	\$18.33	\$17.06		
	\$1.17	\$1.17		
	\$19.50	\$18.23	\$1.27	7%
3	\$49.18	\$31.87		
	\$1.17	\$1.17		
	\$50.35	\$33.04	\$17.31	52%

**P.3 2-WIRE VOICE GRADE LOOP WITH 2-WIRE DID TRUNK PORT**

P.3 2-Wire VG Loop/2-Wire DID Trunk Port  
 A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2  
 P.3.2 Exchange Ports - 2-Wire DID Port for Combinations

1	\$16.93	\$23.21		
	\$8.71	\$8.71		
	\$25.64	\$31.92	-\$6.28	-20%
2	\$22.07	\$28.28		
	\$8.71	\$8.71		
	\$30.78	\$36.99	-\$6.21	-17%
3	\$52.48	\$46.53		
	\$8.71	\$8.71		
	\$61.19	\$55.24	\$5.95	11%

**P.4 2-WIRE ISDN DIGITAL GRADE LOOP WITH 2-WIRE ISDN DIGITAL LINE SIDE PORT**

P.4 2W ISDN Digital Grade Loop/2W ISDN Digital Line Side Port  
 P.4.1 2-Wire ISDN Digital Grade Loop  
 P.4.2 Exchange Port - 2-Wire ISDN Line Side Port

1	\$19.91	\$24.71		
	\$7.38	\$7.38		
	\$27.28	\$32.09	-\$4.81	-15%
2	\$29.15	\$30.77		
	\$7.38	\$7.38		
	\$36.52	\$38.15	-\$1.63	-4%
3	\$62.25	\$52.56		
	\$7.38	\$7.38		
	\$69.63	\$59.94	\$9.69	16%

**P.5 4-WIRE DS1 DIGITAL LOOP WITH 4-WIRE ISDN DS1 DIGITAL TRUNK PORT**

P.5 4W DS1 Digital Loop/4W ISDN DS1 Digital Trunk Port  
 A.9.1 4-Wire DS1 Digital Loop  
 B.1.6 Exchange Ports - 4-Wire ISDN DS1 Port

1	\$102.30	\$156.18		
	\$82.74	\$82.74		
	\$185.04	\$238.92	-\$53.88	-23%
2	\$143.91	\$181.87		
	\$82.74	\$82.74		
	\$226.65	\$264.61	-\$37.96	-14%
3	\$332.43	\$274.25		
	\$82.74	\$82.74		
	\$415.17	\$356.99	\$58.18	16%

**P.6 EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT**

P.6-1 First 2W VG in DS1

A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2  
 D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination  
 A.18.1 Channelization - Channel System DS1 to DS0  
 A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card

Zone	Recurring	Staff Rec (9/11/01)	Difference	% Difference
	\$16.93			
	\$88.44			
	\$146.77			
	\$1.38			
1	\$253.52	\$251.09	\$2.43	1%

\$22.07  
 \$88.44  
 \$146.77  
 \$1.38

2	\$258.66	\$256.16	\$2.50	1%
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\$52.48  
 \$88.44  
 \$146.77  
 \$1.38

3	\$289.07	\$274.41	\$14.66	5%
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P.6-2 Per Mile

D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile

	\$1.1856	\$0.1856	\$0.00	0%
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P.6-3 Additional 2W VG in same DS1

A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2  
 A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card

	\$16.93			
	\$1.38			
1	\$18.31	\$15.88	\$2.43	15%

\$22.07  
 \$1.38

2	\$23.45	\$20.95	\$2.50	12%
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\$52.48  
 \$1.38

3	\$53.86	\$39.20	\$14.66	37%
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**P.7 EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT**

P.7-1 First 4W VG in DS1

A.4.1 4-Wire Analog Voice Grade Loop  
 D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination  
 A.18.1 Channelization - Channel System DS1 to DS0  
 A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card

	\$29.92			
	\$88.44			
	\$146.77			
	\$1.38			
1	\$266.51	\$259.61	\$6.90	3%

\$58.93  
 \$88.44  
 \$146.77  
 \$1.38

2	\$295.52	\$267.66	\$27.86	10%
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\$97.33  
 \$88.44  
 \$146.77  
 \$1.38

3	\$333.92	\$296.61	\$37.31	13%
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P.7-2 Per Mile

D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile

	\$1.1856	\$0.1856	\$0.00	0%
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		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
P.7-3	Additional 4W VG in same DS1 A.4.1 4-Wire Analog Voice Grade Loop A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$29.92 \$1.38 \$31.30			
		1	\$58.93 \$1.38 \$60.31	\$24.40	\$6.90	28%
		2	\$97.33 \$1.38 \$98.71	\$32.45	\$27.86	86%
		3		\$61.40	\$37.31	61%
<b>P.8</b>	<b>EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT</b>					
P.8-1	First 4W 56 / 64 in DS1 A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination A.18.1 Channelization - Channel System DS1 to DS0 A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$31.79 \$88.44 \$146.77 \$2.10 \$269.10			
		1	\$49.17 \$88.44 \$146.77 \$2.10 \$286.48	\$263.70	\$5.40	2%
		2	\$61.71 \$88.44 \$146.77 \$2.10 \$299.02	\$272.93	\$13.55	5%
		3		\$306.13	-\$7.11	-2%
P.8-2	Per Mile D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.1856	\$0.1856	\$0.00	0%
P.8-3	Additional 4W 56 / 64 in same DS1 A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$31.79 \$2.10 \$33.89			
		1	\$49.17 \$2.10 \$51.27	\$28.49	\$5.40	19%
		2	\$61.71 \$2.10 \$63.81	\$37.72	\$13.55	36%
		3		\$70.92	-\$7.11	-10%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
<b>P.11</b>	<b>EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT</b>					
P.11-1	Fixed					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		<u>\$88.44</u>			
		1	\$190.74	\$161.88	\$28.86	18%
			\$143.91			
			<u>\$88.44</u>			
		2	\$232.35	\$187.57	\$44.78	24%
			\$332.43			
			<u>\$88.44</u>			
		3	\$420.87	\$279.95	\$140.92	50%
P.11-2	Per Mile					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.856	\$0.1856	\$0.00	0%
<b>P.13</b>	<b>EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT</b>					
P.13-1	First DS1 in DS3					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	D.6.2 Interoffice Transport - Dedicated - DS3 - Facility Termination		\$1,071.31			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		<u>\$13.76</u>			
		1	\$1,398.56	\$1,369.39	\$29.17	2%
			\$143.91			
			\$1,071.31			
			\$211.19			
			<u>\$13.76</u>			
		2	\$1,440.17	\$1,395.08	\$45.09	3%
			\$332.43			
			\$1,071.31			
			\$211.19			
			<u>\$13.76</u>			
		3	\$1,628.69	\$1,487.46	\$141.23	9%
P.13-2	Per Mile					
	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$3.87	\$3.87	\$0.00	0%
P.13-3	Additional DS1 in same DS3					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	A.18.6 Interface Unit - Interface DS3 to DS1		<u>\$13.76</u>			
		1	\$116.06	\$87.20	\$28.86	33%
			\$143.91			
			<u>\$13.76</u>			
		2	\$157.67	\$112.89	\$44.78	40%
			\$332.43			
			<u>\$13.76</u>			
		3	\$346.20	\$205.27	\$140.93	69%
<b>P.15</b>	<b>4-WIRE DS1 DIGITAL LOOP WITH DDITS PORT</b>					
P.15	4-Wire DS1 Digital Loop with DDITS Port					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	B.1.4 Exchange Ports - DDITS Port		<u>\$54.95</u>			
		1	\$157.25	\$128.39	\$28.86	22%
			\$143.91			
			<u>\$54.95</u>			
		2	\$198.86	\$154.08	\$44.78	29%
			\$332.43			
			<u>\$54.95</u>			
		3	\$387.38	\$246.46	\$140.92	57%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> (9/11/01)	<u>Difference</u>	<u>% Difference</u>
<b>P.16</b>	<b>2-WIRE LOOP/ 2 WIRE VOICE GRADE IO TRANSPORT/ 2 WIRE PORT</b>					
P.16-1	Fixed					
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$16.93			
	D.2.2 Interoffice Transport - Dedicated - 2- Wire Voice Grade - Facility Termination		\$25.32			
	B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)		\$1.40			
		1	<u>\$43.66</u>	\$41.22	\$2.44	6%
			\$22.07			
			\$25.32			
			\$1.40			
		2	<u>\$48.80</u>	\$46.29	\$2.51	5%
			\$52.48			
			\$25.32			
			\$1.40			
		3	<u>\$79.21</u>	\$64.54	\$14.67	23%
P.16-2	Per Mile					
	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$ .0091	\$0.0091	\$0.00	0%
<b>P.23</b>	<b>EXTENDED 2-WIRE VOICE GRADE LOOP/ 2 WIRE VOICE GRADE INTEROFFICE TRANSPORT</b>					
P.23-1	Fixed					
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$16.93			
	D.2.2 Interoffice Transport - Dedicated - 2- Wire Voice Grade - Facility Termination		\$25.32			
		1	<u>\$42.25</u>	\$39.82	\$2.43	6%
			\$22.07			
			\$25.32			
		2	<u>\$47.40</u>	\$44.89	\$2.51	6%
			\$52.48			
			\$25.32			
		3	<u>\$77.80</u>	\$63.14	\$14.66	23%
P.23-2	Per Mile					
	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$ .0091	\$0.0091	\$0.00	0%
<b>P.24</b>	<b>EXTENDED 4-WIRE VOICE GRADE LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT</b>					
P.24-1	Fixed					
	A.4.1 4-Wire Analog Voice Grade Loop		\$29.92			
	D.12.2 Interoffice Transport - Dedicated - 4- Wire Voice Grade - Facility Termination		\$22.58			
		1	<u>\$52.49</u>	\$45.60	\$6.89	15%
			\$58.93			
			\$22.58			
		2	<u>\$81.51</u>	\$53.65	\$27.86	52%
			\$97.33			
			\$22.58			
		3	<u>\$119.91</u>	\$82.60	\$37.31	45%
P.24-2	Per Mile					
	D.12.1 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile		\$ .0091	\$0.0091	\$0.00	0%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> (9/11/01)	<u>Difference</u>	<u>% Difference</u>
<b>P.25</b>	<b>EXTENDED DS3 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT</b>					
P.25-1	Fixed					
	A.16.1 High Capacity Unbundled Local Loop - DS3 - Facility Termination		\$386.88			
	D.6.2 Interoffice Transport - Dedicated - DS3 - Facility Termination		\$1,071.31			
			<u>\$1,458.19</u>	\$1,457.88	\$0.31	0%
P.25-2	Per Mile - Interoffice					
	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$3.87	\$3.87	\$0.00	0%
P.25-3	Per Mile - DS3 Loop					
	A.16.2 High Capacity Unbundled Local Loop - DS3 - Per Mile		\$10.92	\$10.92	\$0.00	0%
<b>P.26</b>	<b>EXTENDED STS1 DIGITAL LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT</b>					
P.26-1	Fixed					
	A.16.15 High Capacity Unbundled Local Loop - STS-1 - Facility Termination		\$426.60			
	D.10.2 Interoffice Transport - Dedicated - STS-1 - Facility Termination		\$1,056.07			
			<u>\$1,482.67</u>	\$1,482.60	\$0.07	0%
P.26-2	Per Mile - Interoffice					
	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile		\$3.87	\$3.87	\$0.00	0%
P.26-3	Per Mile - Loop					
	A.16.16 High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$10.92	\$10.92	\$0.00	0%
<b>P.50</b>	<b>4-WIRE DS1 LOOP WITH CHANNELIZATION WITH PORT</b>					
P.50.VG-1	First Voice Grade in DS1					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)		\$1.40			
	Q.1.1 D4 Channel Bank Inside CO - System		\$118.06			
	Q.1.4 Unbundled Loop Concentration - POTS Card		<u>\$,6402</u>			
		1	<u>\$222.40</u>	\$193.54	\$28.86	15%
			\$143.91			
			\$1.40			
			\$118.06			
			<u>\$,6402</u>			
		2	<u>\$264.01</u>	\$219.23	\$44.78	20%
			\$332.43			
			\$1.40			
			\$118.06			
			<u>\$,6402</u>			
		3	<u>\$452.53</u>	\$311.61	\$140.92	45%
P.50.VG-2	Additional Voice Grade in same DS1					
	B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)		\$1.40			
	Q.1.4 Unbundled Loop Concentration - POTS Card		<u>\$,6402</u>			
			<u>\$2.04</u>	\$2.04	\$0.00	0%
P.50.DID-1	First 2-Wire DID in DS1					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	B.1.3 Exchange Ports - 2-Wire DID Port		\$8.73			
	Q.1.1 D4 Channel Bank Inside CO - System		\$118.06			
	Q.1.4 Unbundled Loop Concentration - POTS Card		<u>\$,6402</u>			
		1	<u>\$229.73</u>	\$200.87	\$28.86	14%
			\$143.91			
			\$8.73			
			\$118.06			
			<u>\$,6402</u>			
		2	<u>\$271.34</u>	\$226.56	\$44.78	20%
			\$332.43			
			\$8.73			
			\$118.06			
			<u>\$,6402</u>			
		3	<u>\$459.86</u>	\$318.94	\$140.92	44%

	<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
P.50.DID-2 Additional 2-Wire DID in same DS1					
B.1.3 Exchange Ports - 2-Wire DID Port		\$8.73			
Q.1.4 Unbundled Loop Concentration - POTS Card		<u>\$6.402</u>			
		\$9.37	\$9.37	\$0.00	0%
P.50.ISDN- First ISDN in DS1					
A.9.1 4-Wire DS1 Digital Loop		\$102.30			
B.1.5 Exchange Ports - 2-Wire ISDN Port		\$8.83			
Q.1.1 D4 Channel Bank Inside CO - System		\$118.06			
Q.1.3 Unbundled Loop Concentration - ISDN (Brite Card)		<u>\$2.92</u>			
	1	\$232.11	\$203.25	\$28.86	14%
		\$143.91			
		\$8.83			
		\$118.06			
		<u>\$2.92</u>			
	2	\$273.72	\$228.94	\$44.78	20%
		\$332.43			
		\$8.83			
		\$118.06			
		<u>\$2.92</u>			
	3	\$462.24	\$321.32	\$140.92	44%
P.50.ISDN- Additional ISDN in same DS1					
B.1.5 Exchange Ports - 2-Wire ISDN Port		\$8.83			
Q.1.3 Unbundled Loop Concentration - ISDN (Brite Card)		<u>\$2.92</u>			
		\$11.75	\$11.75	\$0.00	0%
<b>P.51 EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT</b>					
P.51-1 First 2-Wire ISDN in DS1					
A.5.1 2-Wire ISDN Digital Grade Loop		\$25.17			
D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card		<u>\$3.66</u>			
	1	\$264.05	\$260.63	\$3.42	1%
		\$35.23			
		\$88.44			
		\$146.77			
		<u>\$3.66</u>			
	2	\$274.10	\$268.25	\$5.85	2%
		\$67.25			
		\$88.44			
		\$146.77			
		<u>\$3.66</u>			
	3	\$306.12	\$295.63	\$10.49	4%
P.51-2 Per Mile					
D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.856	\$0.1856	\$0.00	0%
P.51-3 Additional 2-wire ISDN in same DS1					
A.5.1 2-Wire ISDN Digital Grade Loop		\$25.17			
A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card		<u>\$3.66</u>			
	1	\$28.84	\$25.42	\$3.42	13%
		\$35.23			
		<u>\$3.66</u>			
	2	\$38.89	\$32.04	\$6.85	21%
		\$67.25			
		<u>\$3.66</u>			
	3	\$70.91	\$60.42	\$10.49	17%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
<b>P.52</b>	<b>EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED STS-1 INTEROFFICE TRANSPORT</b>					
P.52-1	First in DS1 in STS1					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	D.10.2 Interoffice Transport - Dedicated - STS-1 - Facility Termination		\$1,056.07			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
		1	\$1,383.33	\$1,354.39	\$28.94	2%
			\$143.91			
			\$1,056.07			
			\$211.19			
			\$13.76			
		2	\$1,424.94	\$1,380.08	\$44.86	3%
			\$332.43			
			\$1,056.07			
			\$211.19			
			\$13.76			
		3	\$1,613.46	\$1,472.46	\$141.00	10%
P.52-2	Per Mile					
	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile		\$3.87	\$3.87	\$0.00	0%
P.52-3	Additional DS1 in same STS1					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
		1	\$116.06	\$87.20	\$28.86	33%
			\$143.91			
			\$13.76			
		2	\$157.67	\$112.89	\$44.78	40%
			\$332.43			
			\$13.76			
		3	\$346.20	\$205.27	\$140.93	69%
<b>P.53</b>	<b>EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX</b>					
P.53-1	First 2-Wire VG in First DS1 in DS3					
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$16.93			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38			
		1	\$478.48	\$476.04	\$2.44	1%
			\$22.07			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
			\$1.38			
		2	\$483.62	\$481.11	\$2.51	1%
			\$52.48			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
			\$1.38			
		3	\$514.02	\$499.36	\$14.66	3%

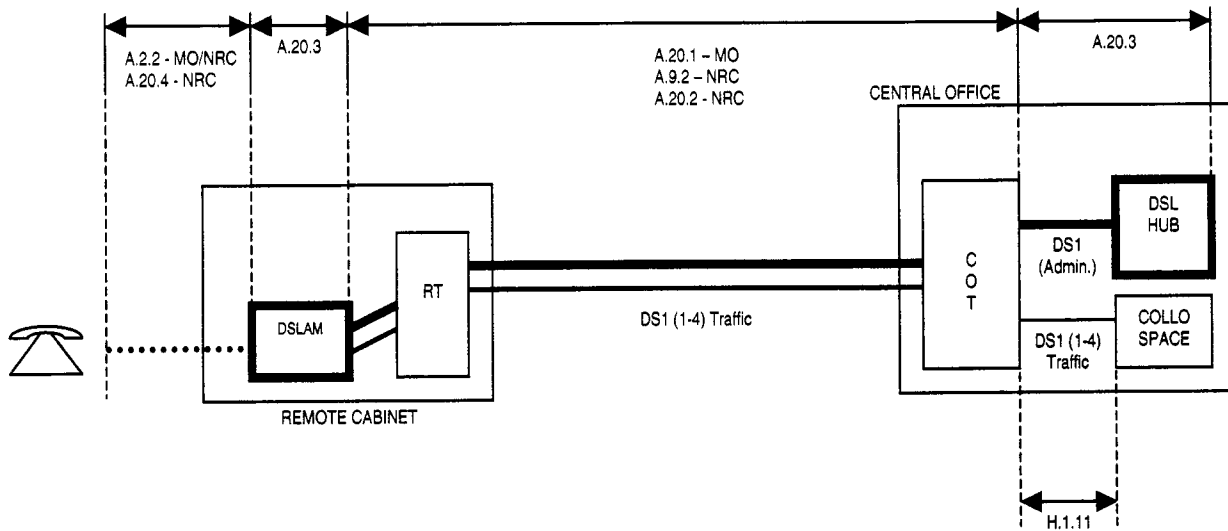


		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> <u>(9/11/01)</u>	<u>Difference</u>	<u>% Difference</u>
P.53-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.856	\$0.1856	\$0.00	0%
P.53-3	Additional 2-Wire VG in same DS1		\$16.93			
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$1.38			
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	1	\$18.31	\$15.88	\$2.43	15%
			\$22.07			
		2	\$1.38	\$20.95	\$2.50	12%
			\$23.45			
			\$52.48			
		3	\$1.38	\$39.20	\$14.66	37%
			\$53.86			
P.53-4	Additional DS1 in same DS3					
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
			\$248.97	\$248.97	\$0.00	0%
<b>P.54</b>	<b>EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX</b>					
P.54-1	First 4-Wire VG in First DS1 in DS3					
	A.4.1 4-Wire Analog Voice Grade Loop		\$29.92			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	1	\$1.38	\$484.56	\$6.90	1%
			\$491.46			
			\$58.93			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
		2	\$1.38	\$492.61	\$27.87	6%
			\$520.48			
			\$97.33			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
		3	\$1.38	\$521.56	\$37.32	7%
			\$558.88			
P.54-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.856	\$0.1856	\$0.00	0%
P.54-3	Additional 4-Wire VG in same DS1					
	A.4.1 4-Wire Analog Voice Grade Loop		\$29.92			
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	1	\$1.38	\$24.40	\$6.90	28%
			\$31.30			
			\$58.93			
		2	\$1.38	\$32.45	\$27.86	86%
			\$60.31			
			\$97.33			
		3	\$1.38	\$61.40	\$37.31	61%
			\$98.71			

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> (9/11/01)	<u>Difference</u>	<u>% Difference</u>
P.54-4	Additional DS1 in same DS3					
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
			<u>\$248.97</u>	\$248.97	\$0.00	0%
<b>P.55</b>	<b>EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX</b>					
P.55-1	First 4-Wire in First DS1 in DS3					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop		\$31.79			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$2.10			
		1	<u>\$494.05</u>	\$488.65	\$5.40	1%
			\$49.17			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
			\$2.10			
		2	<u>\$511.44</u>	\$497.88	\$13.56	3%
			\$61.71			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
			\$2.10			
		3	<u>\$523.98</u>	\$531.08	-\$7.10	-1%
P.55-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.1856	\$0.1856	\$0.00	0%
P.55-3	Additional 4-Wire in same DS1					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop		\$31.79			
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$2.10			
		1	<u>\$33.89</u>	\$28.49	\$5.40	19%
			\$49.17			
			\$2.10			
		2	<u>\$51.27</u>	\$37.72	\$13.55	36%
			\$61.71			
			\$2.10			
		3	<u>\$63.81</u>	\$70.92	-\$7.11	-10%
P.55-4	Additional DS1 in same DS3					
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
			<u>\$248.97</u>	\$248.97	\$0.00	0%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> (9/11/01)	<u>Difference</u>	<u>% Difference</u>
<b>P.56</b>	<b>EXTENDED LOOP 2-WIRE ISDN WITH DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX</b>					
P.56-1	First 2-Wire in First DS1 in DS3					
	A.5.1 2-Wire ISDN Digital Grade Loop		\$25.17			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card		\$3.66			
		1	\$489.00	\$485.58	\$3.42	1%
			\$35.23			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
			\$3.66			
		2	\$499.05	\$493.20	\$5.85	1%
			\$67.25			
			\$88.44			
			\$211.19			
			\$13.76			
			\$146.77			
			\$3.66			
		3	\$531.08	\$520.58	\$10.50	2%
P.56-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.856	\$0.1856	\$0.00	0%
P.56-3	Additional 2-Wire in same DS1					
	A.5.1 2-Wire ISDN Digital Grade Loop		\$25.17			
	A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card		\$3.66			
		1	\$28.84	\$25.42	\$3.42	13%
			\$35.23			
			\$3.66			
		2	\$38.89	\$33.04	\$5.85	18%
			\$67.25			
			\$3.66			
		3	\$70.91	\$60.42	\$10.49	17%
P.56-4	Additional DS1 in same DS3					
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
			\$248.97	\$248.97	\$0.00	0%

		<u>Zone</u>	<u>Recurring</u>	<u>Staff Rec</u> (9/11/01)	<u>Difference</u>	<u>% Difference</u>
<b>P.57</b>	<b>EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX</b>					
P.57-1	First 4-Wire DS1 in DS3					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
		1	\$415.69	\$386.83	\$28.86	7%
			\$143.91			
			\$88.44			
			\$211.19			
		2	\$457.30	\$412.52	\$44.78	11%
			\$332.43			
			\$88.44			
			\$211.19			
			\$13.76			
		3	\$645.83	\$504.90	\$140.93	28%
P.57-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$1.856	\$0.1856	\$0.00	0%
P.57-3	Additional 4-Wire DS1 in same DS3					
	A.9.1 4-Wire DS1 Digital Loop		\$102.30			
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76			
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44			
		1	\$204.50	\$175.64	\$28.86	16%
			\$143.91			
			\$13.76			
			\$88.44			
		2	\$246.11	\$201.33	\$44.78	22%
			\$332.43			
			\$13.76			
			\$88.44			
		3	\$434.64	\$293.71	\$140.93	48%
<b>P.58</b>	<b>EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DS0 INTEROFFICE TRANSPORT</b>					
P.58-1	Fixed					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop		\$31.79			
	D.3.2 Interoffice Transport - Dedicated - DS0 - Facility Termination		\$18.44			
		1	\$50.23	\$44.83	\$5.40	12%
			\$49.17			
			\$18.44			
		2	\$67.61	\$54.06	\$13.55	25%
			\$61.71			
			\$18.44			
		3	\$80.15	\$87.26	-\$7.11	-8%
P.58-2	Per Mile					
	D.3.1 Interoffice Transport - Dedicated - DS0 - Per Mile		\$0.0091	\$0.0091	\$0.00	0%



**Notes/Legend:**

### A.2.2 = Subloop Distribution per 2-Wire Analog Voice Grade Loop

**A.9.2 = Subloop Feeder per 4-Wire DS1 Digital Loop**

A.20.1 = Hybrid Copper/Fiber DS1, per DS1

A.20.2 = Hybrid Copper/Fiber DS1 Establishment, per DS1

A.20.3 = 16-Port DSLAM, per DSLAM

**A.20.4 = End User Channels, per Channel Activated**

**H.1.11 = Physical Collocation DS1 Cross Connect**

A.20. System	DSLAM with Administration DS1	=====
A.20. DS1	Copper/Fiber DS1 into DSLAM	=====
A.20. Activation	End User Activation	.....

MO = Monthly  
NRC = Nonrecurring