

1                   **BELLSOUTH TELECOMMUNICATIONS, INC.**  
 2                   **DIRECT TESTIMONY OF D. DAONNE CALDWELL**  
 3                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**  
 4                   **DOCKET NO. 990649-TP**  
 5                   **MAY 1, 2000**

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

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

14 **Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL  
 15 BACKGROUND AND WORK EXPERIENCE.**

17 A. I attended the University of Mississippi, graduating with a Master of Science  
 18 Degree in mathematics. I have attended numerous Bell Communications Research,  
 19 Inc. ("Bellcore") courses and outside seminars relating to service cost studies and  
 20 economic principles.

22 My initial employment was with South Central Bell in 1976 in the Tupelo,  
 23 Mississippi, Engineering Department where I was responsible for Outside Plant  
 24 Planning. In 1983, I transferred to BellSouth Services, Inc. in Birmingham,  
 25 Alabama, and was responsible for the Centralized Results System Database. I

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1 moved to the Pricing and Economics Department in 1984 where I developed  
2 methodology for service cost studies until 1986 when I accepted a rotational  
3 assignment with Bellcore. While at Bellcore, I was responsible for development  
4 and instruction of the Service Cost Studies Curriculum including courses, such as,  
5 "Concepts of Service Cost Studies", "Network Service Costs", "Nonrecurring  
6 Costs", and "Cost Studies for New Technologies". In 1990, I returned to  
7 BellSouth and was appointed to a position in the cost organization, now a part of  
8 the Finance Department, with the responsibility of managing the development of  
9 cost studies for transport facilities, both loop and interoffice. My current  
10 responsibilities encompass testifying in cost-related dockets, cost methodology  
11 development, and the coordination of cost study filings.

12

13 **Q. HAVE YOU HAD ANY PREVIOUS EXPERIENCE IN TESTIFYING?**

14

15 A. Yes. I have participated in arbitration hearings, generic cost dockets, and Universal  
16 Service Fund proceedings, providing evidence on cost-related issues. Thus, I have  
17 testified before the state public service commissions in Alabama, Florida, Georgia,  
18 Kentucky, Louisiana, Mississippi, and South Carolina, the Tennessee Regulatory  
19 Authority, and the Utilities Commission in North Carolina.

20

21 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

22

23 A. The purpose of my testimony is to respond to the issues released March 16, 2000  
24 by the Florida Public Service Commission ("Commission"), that concern cost  
25 development. Specifically, I discuss the requirements that should be imposed on

1 recurring and nonrecurring cost preparation for unbundled network elements  
2 (“UNEs”), combinations of network elements, and deaveraged offerings. In doing  
3 so, I will address the underlying cost methodology, the models, and the major  
4 inputs BellSouth utilized in the cost studies filed with this Commission on April 17,  
5 2000.

6

7 **Q. HOW IS YOUR TESTIMONY STRUCTURED?**

8

9 A. In the first section of my testimony, I discuss the cost development process in  
10 general. This section is organized as follows:

11

12 ▶ **Cost Methodology**

13 ▶ **Models**

14 ▪ **Loop Model**

15 ▪ **Switch-related Cost Models**

16 ▪ **BellSouth Cost Calculator**©

17 ▪ **Capital Cost Calculator**

18 ▪ **Price Calculators**

19 ▪ **Nonrecurring Cost Model**

20 ▶ **Inputs**

21 ▪ **General**

22 ▪ **Factors and Loadings**

23 ▪ **Element Specific Inputs**

24

25 In the second section of my testimony, I respond to the specific cost-related issues

1 raised by the Commission.

2

3 **SECTION 1**

4 **COST METHODOLOGY**

5 **Q. HAS THIS COMMISSION PREVIOUSLY ADDRESSED COST**  
6 **METHODOLOGY?**

7

8 A. Yes. This Commission previously conducted an exhaustive investigation into cost  
9 methodology to be used by Incumbent Local Exchange Companies in Docket No.  
10 900633-TL. Its findings established Total Service Long Run Incremental Cost  
11 ("TSLRIC") as the appropriate methodology to be used for cost support for tariff  
12 filings. More recently, the Commission addressed the cost methodology, i.e., the  
13 underlying economic principles, for unbundled network elements in Docket Nos.  
14 960833-TP, 960846-TP, and 960916-TP. The Commission released Order No.  
15 PSC-96-1579-FOF-TP ("Order"), on December 31, 1996, in which it first  
16 discussed the Federal Communications Commission's ("FCC's") rules and then  
17 outlined its interpretation of those cost methodology directives. In fact, the  
18 Commission recognized the similarities between the two methodologies, TSLRIC  
19 plus shared and common and Total Element Long Run Incremental Cost  
20 ("TELRIC") economic cost. On page 24 of the Order this Commission stated,  
21 "...we do not believe there is a substantial difference between the TSLRIC cost of  
22 a network element and the TELRIC cost of a network element."

23

24 **Q. WHAT ARE THE ECONOMIC PRINCIPLES UNDERLYING TSLRIC**  
25 **PLUS SHARED AND COMMON AND TELRIC ECONOMIC COSTS?**

1

2 A. Both methodologies embrace the following principles:

3

4 (1) **Efficient network configuration** – the cost should be based on the use of  
5 the most current telecommunications technology presently available and the  
6 economically efficient configuration, given the existing wire center  
7 locations.

8 (2) **Long run** – the studies should consider a timeframe long enough to reflect  
9 the variability of the cost components.

10 (3) **Volume sensitive and volume insensitive costs are considered** – these  
11 are the costs that will be avoided by discontinuing, or incurred by offering,  
12 an entire product or service, holding all other products or services offered  
13 by the firm constant. A corollary to this directive is the principle of cost  
14 causation, i.e., the costs included in the study are those that are caused  
15 because BellSouth offers an unbundled element or a combination of  
16 network elements.

17 (4) **Forward-looking** – both methodologies demand a forward-looking  
18 perspective. Thus, embedded costs are excluded from consideration.

19 (5) **Shared and common costs** – a reasonable allocation of shared and  
20 common costs are allowed.

21

22 BellSouth agrees that the above-mentioned principles should be incorporated into  
23 any study that determines the cost of UNEs and for UNE combinations. (By  
24 necessity, TELRIC economic costs that are deaveraged also reflect these  
25 principles.)

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However, implementation of these principles has often been open to dispute. In the past, the main areas of contention with respect to cost development were: network design, work time estimates and the provisioning process, and economic parameters, e.g., cost of money and depreciation.

The overall debate can be distilled into one overriding issue, "What constitutes 'forward-looking'?" Past experience has proven that opposing parties tend to ignore the FCC's statement that the "benchmark of forward-looking cost and existing network design most closely represents the incremental costs incumbents actually expect to incur in making network elements available to new entrants." (FCC Order paragraph 685) Instead they advocate network architectures, provisioning processes, and expense reductions that are unattainable within the foreseeable future.

BellSouth does not support an embedded perspective with respect to cost development. However, BellSouth recognizes that past results may be judged as an indication of future trends and thus, should provide some input into the cost analysis, at least as a starting point. For example, year-end expense and investment data are utilized as starting points in developing some cost factors.

**Q. YOU MENTIONED THAT SHARED AND COMMON COSTS ARE COMPONENTS OF ECONOMIC COSTS. WHAT ARE SHARED AND COMMON COSTS?**

1 A. Shared costs are those costs that are unaffected by a change in demand (volume) of  
2 any one service or the deletion or addition of a service. Another way to define  
3 shared costs is as the portion of incremental cost joint to two or more services  
4 offered by a firm, but not by all services offered by the firm. Common costs are  
5 costs that are incurred for the benefit of a firm as a whole, but not for the benefit of  
6 any individual product or family of products. Such costs do not change with  
7 changes in the firm's product mix or volume of output. The FCC and this  
8 Commission both recognize that shared and common costs should be considered  
9 when setting rates for UNEs and combinations of UNEs. In fact, the Commission  
10 in Order No. PSC-96-1579-FOF-TP states, "In addition, the FCC states that prices  
11 should be based on the TSLRIC of the network element, which is called the Total  
12 Element Long Run Incremental Cost (TELRIC), and includes a reasonable  
13 allocation of forward-looking joint and common costs." (Order at page 24)

14

15 **Q. HOW DID BELLSOUTH CALCULATE SHARED AND COMMON**  
16 **COSTS?**

17

18 A. BellSouth used an internally developed shared and common model. BellSouth  
19 witness, Mr. Walter Reid, provides testimony detailing the development of the  
20 shared and common costs within this model.

21

22 **Q. WHAT COST METHODOLOGY DID BELLSOUTH UTILIZE IN THIS**  
23 **FILING FOR UNES?**

24

25 A. Whether termed TELRIC economic costs or TSLRIC plus shared and common

1 costs, BellSouth utilized a methodology that reflects the costs BellSouth expects to  
2 incur in providing unbundled network elements to competitors on a going-forward  
3 basis in the state of Florida. These costs are based on an efficient network,  
4 designed to incorporate currently available forward-looking technology, but  
5 recognize BellSouth's provisioning practices and network guidelines, as well.  
6 Additionally, shared and common costs were considered. The shared and common  
7 costs are based on a projection of BellSouth's anticipated expenses, partitioned  
8 based on the allocation method presented in Mr. Reid's testimony.

9  
10 **Q. WHAT METHODOLOGY DID BELLSOUTH USE TO DEVELOP THE**  
11 **COSTS OF COMBINATIONS?**

12  
13 A. The cost methodology for combinations does not differ from the cost methodology  
14 used for unbundled elements since they will both be used to support rates for items  
15 offered to competitors. However, some of the inputs into a combination study may  
16 differ from individual UNE inputs. For example, for a combined loop and port,  
17 integrated digital loop carrier is considered in the mix of technologies providing  
18 that existing combination. In the UNE study, integration is not an option since  
19 each element is unbundled and provided separately. Thus, integrated digital loop  
20 carrier technology is not appropriate for developing the cost of individual UNEs.  
21 This distinction results from the cost object being studied rather than the underlying  
22 methodology. Additionally, depending on how a "combination" is defined,  
23 nonrecurring inputs may differ. For example, a combination of UNEs on a "switch-  
24 as-is" basis, i.e., one that currently exists in BellSouth's network, basically involves  
25 a billing change and thus has substantially shorter work times than the work times

1 required either to provide individual UNEs or to combine two UNEs.

2

3 **Q. WHAT COST METHODOLOGY DID BELL SOUTH USE FOR**  
4 **GEOGRAPHIC DEAVERAGING?**

5

6 A. The same cost methodology is applicable for geographic deaveraging as was used  
7 for UNEs and combinations. Geographic deaveraging is merely a finer breakdown  
8 of costs into separate subsets based on geographic differences. Some examples of  
9 these geographic differences may include distance from serving wire center and  
10 customer dispersion. BellSouth developed loop and switch-related costs on a wire  
11 center level as required by this Commission. I will discuss how BellSouth calculated  
12 the zone costs BellSouth included as part of its April 17, 2000 filing later in my  
13 testimony. However, the reasoning behind the proposed zones is discussed in Mr.  
14 Varner's testimony.

15

16 **MODELS**

17 **Q. PLEASE EXPLAIN BELL SOUTH'S COST MODELS.**

18

19 A. Modeling is an important step in developing both recurring and nonrecurring costs  
20 for unbundled network elements and combinations, and BellSouth has utilized  
21 several in developing UNE costs. There are different levels of complexity in the  
22 models depending on the component of the network being studied.

23

24 Following is a discussion of each of the models BellSouth utilizes in determining  
25 the cost of UNEs, combinations, and deaveraged costs.

1

2 **LOOP MODEL**

3 **Q. IN ITS PREVIOUS FILINGS, BELLSOUTH UTILIZED A SAMPLE TO**  
4 **DETERMINE THE COST OF A LOOP. DID BELLSOUTH CONTINUE**  
5 **THIS PRACTICE?**

6

7 A. No. BellSouth, in conjunction with INDETEC International, Inc., CostQuest  
8 Associates, and Stopwatch Maps, has developed a new BellSouth model for loop  
9 investment calculations that replaces the old loop sample approach. This new  
10 model is called the BellSouth Telecommunications Loop Model<sup>®</sup> ("BSTLM"). The  
11 new model is designed to support the cost development for both unbundled loop  
12 elements and service-specific loops. Furthermore, the BSTLM is the only model  
13 currently available that distinguishes between the different types of loops, 2-wire, 4-  
14 wire, Integrated Services Digital Network ("ISDN"), Asymmetrical Digital  
15 Subscriber Line ("ADSL")-compatible, High Bit Rate Digital Subscriber Line  
16 ("HDSL")-compatible, etc. Other proxy models are only capable of producing  
17 costs for a 2-wire local loop. Even though the model has the capability to develop  
18 costs for high capacity loops, BellSouth has currently confined the use of the  
19 BSTLM to loops with transmission rates up to DS1. BellSouth felt the limited  
20 customer demand for high capacity loops and high capacity local channels would  
21 create unrealistic results. Thus, BellSouth developed the costs for high capacity  
22 (DS3 and higher) facilities on spreadsheets outside the BSTLM.

23

24

25 <sup>®</sup> 1999 INDETEC International and BellSouth Corporation All Rights  
Reserved (BSTLM)

1 BellSouth's introduction of a new model should not cast doubt on the accuracy of  
2 the previous sample methodology. In fact, this Commission stated, "BellSouth's  
3 loop sample construction is appropriate." (Order at Page 75) However, the sample  
4 approach does have inherent limitations. First, the original sample was statistically  
5 valid only for the services tested, i.e., only for single line residential and single line  
6 business loops and only on a statewide average basis. Any attempt to stratify the  
7 sample into geographic areas for geographic deaveraging could not be statistically  
8 supported. Additionally, sampling is extremely labor intensive, requiring many  
9 hours to obtain, validate, input and process the data.

10

11 The BSTLM has overcome these limitations and has the ability to geographically  
12 deaverage costs for UNEs. The new model incorporates geocoded BellSouth  
13 customer serving addresses and the types and quantities of services at each  
14 location. When combined with BellSouth-specific input values, the model produces  
15 loop investments that accurately reflect the forward-looking, most efficient costs of  
16 providing service in BellSouth's territory in Florida at a more detailed level than a  
17 statewide average.

18

19 **Q. PLEASE PROVIDE AN OVERVIEW OF THE BSTLM.**

20

21 A. BellSouth witness, Mr. Jim Stegeman, will explain in detail the methodology  
22 underlying the model's calculations. However, I wish to discuss the fundamental  
23 process the BSTLM utilizes in developing material prices associated with the  
24 various loop offerings. The foundation of the model is customer service records,  
25 addresses, as well as services purchased. The BSTLM determines where customers

1 are located and "lays" cable along the roads of the wire center. A cable path can  
2 literally be traced from each customer's premises to the serving central office; a  
3 path that follows actual roads in the wire center. The model then determines  
4 serving areas for a wire center based on a Minimum Spanning Road Tree  
5 ("MSRT") algorithm. The MSRT is the shortest path that connects customer  
6 locations assuming that cables follow roads. Appropriate components, such as,  
7 digital loop carrier ("DLC") and Feeder Distribution Interfaces ("FDIs") are then  
8 located within each serving area.

9  
10 Once the layout of the network is determined, the BSTLM's configuration process  
11 connects the network components. This procedure entails the determination of  
12 cable sizes, cable types (*copper/fiber, aerial/buried/underground*), and selection of  
13 DLC type. Once the network is configured, the BSTLM calculates the material  
14 price of each network component, not only by component type, but also by  
15 component location. Thus, the granularity required to deaverage costs is available  
16 through the model.

17  
18 In order to run the BSTLM, one must establish the defining attributes of the loops  
19 and local channels under study. Exhibit DDC-1 displays the matrix used by  
20 BellSouth to accomplish this task. If we take the 2-wire analog loop (SL1) as an  
21 example, Column A contains the element number used to reference the element  
22 throughout the study, in this case A.1.1. Column B provides a description of the  
23 element, 2Wire Analog Voice Grade Loop – SL1. The next column defines the  
24 scenario run to support the loop. Three different scenarios were established by  
25 BellSouth; BST2000, Combo, and Copper. For the SL1 loop, BST2000 was used.

1 This scenario assumed all switched services were converted to non-switched  
2 unbundled network elements. Combo was used for loops offered in combination  
3 with other unbundled network elements (P.1.1 and P.4.1). This scenario is identical  
4 to BST2000 except that switched services remain switched. The Copper scenario  
5 was used to develop costs for those loops served on copper only. In this run, the  
6 copper to fiber crossover point was changed from the standard 12 kilofeet (kft) to  
7 1,000,000 feet. This extreme input ensures that all loops are served by copper.

8  
9 Incorporated into the customer location data utilized by the model is the type of  
10 service currently delivered by the loop. (Page 3 of Exhibit DDC-1 displays the  
11 services used in the model.) This information is used to determine which loops  
12 should be considered in the universe of loops used in the cost calculation of that  
13 loop. This is necessary since the type of loop makes certain services incompatible.  
14 For example, a digital loop, e.g., an ISDN service loop, would not be considered in  
15 the cost calculation of an analog loop, e.g., a 2-wire SL1 loop. Column D cross-  
16 references the service types applicable to each loop. For the calculation of the SL1  
17 loop, the services considered were; Residence, Business, PBX, Centrex, Smartline,  
18 Public, 2 Wire Private Line, and 2 Wire Special Access loops provisioned to an end  
19 user's premises.

20  
21 Columns E and F further define the loop. Column E should always be set to  
22 distribution and feeder (Both). If the user wants to include only certain sections of  
23 the loops, the user may do so by selecting certain Cost elements of the loop  
24 referenced in Column I. Column F merely states whether the element includes loop  
25 (end user) or local channel (carrier Point of Presence ("POP")) customer locations.

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Column G outlines which medium is appropriate for the type of loop, i.e., copper, fiber, or a combination of copper and fiber (All). For an SL1 loop, both fiber and copper are appropriate. Any length limitation is contained in Column H. For an SL1 loop, there is no length limitation, thus it is set to All. The Cost Elements, i.e., the network components, considered for each loop type is shown in Column I. For example, a 2-Wire Analog Loop (SL1) would contain "All" of the network elements from the central office terminal to the Network Interface Device ("NID"). On the other hand, the Sub-loop Feeder associated with that type of loop would only reflect the network elements from the Feeder Distribution Interface ("FDI") to the Central Office Terminal ("COT").

Columns J-M detail which type of main Distributing Frame ("MDF") is applicable. For an SL1 loop, the MDF-Melded selection is appropriate. This reflects an MDF meld of copper and loop fiber non-switched loop terminations. If the loop is designed, a test point is required. Columns N-P shows the type of test point included in the cost calculation. Since an SL1 loop is not designed, no test point is chosen. Columns Q-W identify additional "Adders" applicable to certain loops/local channels. No additional adders, beyond the MDF, are required for an SL1 loop.

I will discuss the major input values entered into the BSTLM later in my testimony (in particular in response to Issue # 7), but let me mention here that it is critical that the inputs used in any model reflect the costs BellSouth will incur on a going-forward basis. Thus, the BSTLM inputs are BellSouth-specific and reflect

1 BellSouth's operations in the state of Florida. Exhibit DDC-2 contains the inputs  
2 BellSouth utilized in running the BSTLM.

3

4 BellSouth witness, Mr. Jim Stegeman, explains why the BSTLM is superior to the  
5 existing proxy models, provides an overview of the model, discusses the model's  
6 method of locating customers, and expands on how the inputs are utilized by the  
7 model.

8

9 **SWITCH-RELATED MODELS**

10 **Q. BELLSOUTH UTILIZED TELECORDIA'S (FORMERLY KNOWN AS**  
11 **BELLCORE) SWITCHING COST INFORMATION SYSTEM ("SCIS")**  
12 **MODEL IN PAST UNE FILINGS. DID BELLSOUTH CONTINUE TO USE**  
13 **SCIS IN THIS FILING?**

14

15 A. Yes. BellSouth used the model office module out of the SCIS program,  
16 ("SCIS/MO"), in order to determine the fundamental investments. The switch is a  
17 multi-faceted entity that performs a number of functions, from establishing a call to  
18 providing vertical features, such as, three-way calling. To accurately identify the  
19 fundamental unit switch investments necessary for these individual functions, a  
20 sophisticated model, like SCIS/MO, is required. BellSouth witness, Mr. Joe Page,  
21 describes the SCIS/MO inputs and outputs and its underlying methodology. Also,  
22 Appendix I of the cost study filed on April 17, 2000 provides an overview of the  
23 SCIS/MO model.

24

25 **Q. WHAT MODELS DID BELLSOUTH USE TO DETERMINE SWITCH-**

1       **RELATED COSTS?**

2

3    A. In past UNE filings in Florida, BellSouth utilized the Telcordia Network Cost  
4       Analysis Tool ("NCAT") to develop usage costs and Switching Cost Information  
5       System/Intelligent Network ("SCIS/IN") to determine some port and all feature  
6       costs. BellSouth no longer supports NCAT. SCIS/IN is another module of  
7       Telecordia's SCIS program. Both models were plagued by the proprietary label,  
8       making portions of the models inaccessible. To overcome the problem of  
9       proprietary models, in this proceeding BellSouth introduces its Simplified  
10      Switching Tool ("SST")<sup>©</sup> Model in this proceeding. The SST model incorporates  
11      cost development for all switch-related elements; ports, usage, and vertical features.  
12      BellSouth witness, Mr. Joe Page, discusses the scope of the SST model, required  
13      inputs, fundamental algorithms, and underlying assumptions. Mr. Page further  
14      explains why BellSouth moved to a new model for switch-related cost  
15      development.

16

17    **BELLSOUTH COST CALCULATOR<sup>©</sup>**

18    **Q. IN DOCKET NOS. 960757-TP, 960833-TP AND 960846-TP, BELLSOUTH**  
19       **INTRODUCED THE TELRIC CALCULATOR<sup>©</sup>. WILL THIS MODEL**  
20       **CONTINUE TO BE USED?**

21

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24    <sup>©</sup> 2000 BellSouth Corporation All Rights Reserved (the SST model)

25    <sup>©</sup> 1999 BellSouth Corporation All Rights Reserved (BellSouth Cost  
Calculator)

<sup>©</sup> 1997 BellSouth Corporation All Rights Reserved (TELRIC Calculator)

1 A. The functions of the TELRIC Calculator have been incorporated into the BellSouth  
2 Cost Calculator. It was decided to enhance and rename the model to eliminate any  
3 preconceived notion that the model could only produce TELRIC level costs. The  
4 BellSouth Cost Calculator converts input data (material prices/investments by field  
5 reporting code ("FRC"), recurring additives, nonrecurring additives, and work  
6 times by job function code ("JFC")) into cost. The type of cost (i.e., Long Run  
7 Incremental Cost ("LRIC"), TSLRIC, or TELRIC) developed is dependent upon  
8 the inputs and the selections made by the user. (LRIC cost methodology considers  
9 only the volume sensitive direct costs.)

10

11 This Commission accepted the TELRIC Calculator as a viable model in its Order  
12 No.PSC-96-1579-FOF-TP. The BellSouth Cost Calculator, the modified version  
13 of the TELRIC Calculator, adheres to the same underlying methodology as the  
14 model previously reviewed by this Commission. However, the BellSouth Cost  
15 Calculator has been revised to enhance the user interface and to allow further user  
16 flexibility.

17

18 Exhibit DDC-3 pictorially displays the interrelationships between the BellSouth  
19 Cost Calculator and the other models and price calculators BellSouth used to  
20 determine costs. The BellSouth Cost Calculator is the mechanism that performs the  
21 mathematical exercise that appropriately applies the correct inflation factors,  
22 support loadings, annual cost factors, labor rates, tax factors, and shared and  
23 common factors to the inputs. Additionally, to ensure consistency between studies,  
24 the BellSouth Cost Calculator serves as the warehouse for annual cost factors,  
25 labor rates, loading factors, and inflation factors.

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**CAPITAL COST CALCULATOR**<sup>®</sup>

**Q. HOW DID BELLSOUTH DETERMINE THE CAPITAL COST FACTORS THAT ARE UTILIZED IN THE BELLSOUTH COST CALCULATOR?**

A. BellSouth used the Capital Cost Calculator, an internal model designed by BellSouth. BellSouth utilized the Benchmark Cost Proxy Model's ("BCPM's") capital cost module as the foundation for its development of the Capital Cost Calculator. The model produces depreciation, cost of money, and income tax factors that are applied to investments to calculate capital costs.

The user has the ability to modify a set of variables: debt ratio, cost of money, debt interest rate, net salvage ratio and economic life of assets. BellSouth is filing the testimony of Mr. David Cunningham who discusses the appropriate depreciation inputs. Additionally, BellSouth witness, Dr. Randall Billingsley, discusses the appropriate inputs for the cost of money calculation.

**Q. IS THE CAPITAL COST CALCULATOR THE SAME VERSION AS WAS FILED IN DOCKET NOS. 960757-TP, 960833-TP, AND 960846-TP?**

A. No. Several enhancements have been incorporated into this version of the Capital Cost Calculator. These revisions include the incorporation of survivor curves into

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1 the development of the depreciation factors and adjustments for differences in book  
2 and tax depreciation. In calculating annual depreciation amounts, the Capital Cost  
3 Calculator methodology now uses the standard Midyear Equal Life Group ("ELG")  
4 approach, which employs a midyear convention. Previously, a straight-line method  
5 was used to calculate depreciation.

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**PRICE CALCULATORS**

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**Q. EXHIBIT DDC-3 ALSO SHOWS SEVERAL "PRICE CALCULATORS".  
WERE THESE THE SAME PRICE CALCULATORS PREVIOUSLY  
PRESENTED TO THIS COMMISSION?**

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A. Not entirely. The four price calculators that BellSouth used in the past are the Loop Multiplexer, Digital Loop Carrier, SONET, and DS1 price calculators. These price calculators develop the material price of specialized components used in the provisioning of various network capabilities. These calculators take vendor prices for various pieces of equipment and express the prices on a per circuit level. In essence, the process involves (1) determining the appropriate types and quantities of equipment required, (2) utilizing vendor-furnished price lists, (3) applying a discount rate (if applicable), and (4) dividing by the capacity of the equipment. The price calculators reflect the latest prices, discount rates, and technology applicable to BellSouth. A vendor-provided "configuration" file that details the manner in

1       which the equipment is assembled may aid the first step. With the completion of  
2       BellSouth's New Loop Model, the Multiplexer and Digital Loop Carrier calculators  
3       are incorporated into that model, i.e., they will not be separate entities. Yet, the  
4       same type of calculation takes place within the BSTLM's equations.

5

6       **NONRECURRING COSTS**

7       **Q. YOU MENTIONED THAT THE DEVELOPMENT OF NONRECURRING**  
8       **COSTS INVOLVES MODELING. DOES BELL SOUTH HAVE A**  
9       **NONRECURRING COST MODEL?**

10

11      A. Not in the formal sense. Each analyst is responsible for obtaining estimates of the  
12      activities required to provision the element under study. BellSouth personnel  
13      familiar with the provisioning process identify the work groups involved and the  
14      amount of time it takes to complete the necessary tasks. Consideration is given to  
15      anticipated productivity improvements and potential technological advances that  
16      may impact the amount of time required. Thus, the projections are forward-  
17      looking, yet attainable. These estimates are entered into the BellSouth Cost  
18      Calculator on the Nonrecurring Input sheet by element.

19

20      **INPUTS**

21      **GENERAL INPUTS**

22      **Q. PLEASE DISCUSS INPUTS IN GENERAL.**

23

24      A. There are several overriding considerations that must be taken into account when  
25      developing inputs. First, the inputs should be forward-looking, realistic, and

1        achievable. Second, since the objective is to determine the costs BellSouth will  
2        incur on a going-forward basis, it is imperative that BellSouth-specific inputs be  
3        utilized in the calculations. The use of BellSouth-specific inputs does not violate  
4        any of the cost characteristics I listed previously. BellSouth has been a large,  
5        efficient provider of telecommunications services in Florida for many years. Thus,  
6        economies of scale, negotiated volume discounts, and experience obtained from  
7        designing and provisioning an advanced telecommunications network are reflected  
8        in values based on BellSouth results.

9

10 **Q. PLEASE COMMENT ON THE INPUTS COMMON TO ANY UNE COST**  
11 **STUDY.**

12

13 A. Exhibit DDC-3 outlines the general types of inputs BellSouth utilized in the studies  
14 for UNEs and combinations presented in this filing. I will describe each class of  
15 input and the process BellSouth used to determine the appropriate value.

16

17 **INFLATION ADJUSTMENT FACTOR**

18 **Q. PLEASE DESCRIBE THE INFLATION ADJUSTMENT FACTOR AND**  
19 **DESCRIBE HOW IT IS DEVELOPED.**

20

21 A. Over the life of an investment, inflation causes fluctuations in the forward-looking  
22 investment amount. Thus, the investment must be averaged over the study period.  
23 Investment inflation factors, by FRC, are used to trend plant investment in base  
24 year dollars to a levelized amount that is valid for a three year planning period, i.e.,  
25 the study period (in this case 2000-2002). The investment inflation factors are the

1 cumulative average of three years' projected inflation rates based on BellSouth  
2 telephone plant indices ("TPIs").

3  
4 The TPIs are price indices that measure the relative changes in prices BellSouth  
5 pays for the construction of telephone plant between specific periods of time. The  
6 development of TPIs uses econometric techniques to establish mathematical  
7 relationships between the historical movement in each of the labor and material  
8 components that make up the TPIs and the historical movement in explanatory  
9 variables. Explanatory variables are usually aggregate measures of the U. S.  
10 economy, e.g., price deflators from the national income and product accounts,  
11 union wage rates, copper prices, and other macroeconomic variables. Joel Popkin  
12 and Company, a BellSouth consultant, assists BellSouth with the calculation of  
13 TPIs.

14

15 **LOADINGS**

16 **Q. WHAT IS MEANT BY THE TERM "LOADINGS"?**

17

18 A. These factors are designed to augment calculated material prices to account for  
19 additional costs that are difficult to ascertain on an individual, element-specific  
20 basis. Thus, BellSouth develops mathematical relationships between the material  
21 prices and the additional labor expense, miscellaneous material, and support  
22 structures to capture the total cost BellSouth will incur on a going-forward basis.

23

24 **Q. PLEASE DESCRIBE THE DIFFERENT TYPES OF LOADING FACTORS**  
25 **AND THEIR DEVELOPMENT.**

1

2 A. One type of loadings are In-Plant loadings ("In-Plants"). In-Plants add engineering  
3 and installation labor and miscellaneous equipment to the material price, i.e., In-  
4 Plants convert a material price to an installed investment. The installed investment  
5 is the dollar amount recorded in capital accounts.

6

7 In-Plants are account specific and are developed on the state level. There are four  
8 types of In-Plant loadings: (1) Material Loading, (2) Telco Loading, (3) Plug-in  
9 Loading, and (4) Hardwire Loading. The Material Loading is applied to a material  
10 price, the Telco Loading to the vendor-installed investment, the Plug-in Loading to  
11 the deferrable plug-in and common plug-in material prices, and the Hardwire  
12 Loading to the hardwire portion of an equipment material price.

13

14 In order to reflect the costs BellSouth will incur, the In-Plant factors are based on  
15 information that is specific to BellSouth. BellSouth used year-end reports  
16 developed from extracts of BellSouth's financial systems to develop these factors.

17

18 **Q. WHAT OTHER TYPE OF LOADINGS WERE INCLUDED IN**  
19 **BELLSOUTH'S COST STUDIES?**

20

21 A. Supporting Equipment and Power ("SE&P") Loadings were used to calculate the  
22 incremental investment required to support an additional dollar of central office and  
23 circuit investment. The SE&P Loadings were developed for the digital switch  
24 account (FRC 377C), digital subscriber pair gain account (FRC 257C), and other  
25 digital circuit equipment account (FRC 357C). Examples of the support and power

1 equipment included in the 377C factor include power equipment, distribution  
2 frames, ladders, tools, and test sets.

3

4 The source of the data used to develop the SE&P Loading factors is the Central  
5 Office Monthly Allocation Process ("COMAP"), a year-end report extract that  
6 identifies total investment and supporting investments for FRCs 377C, 257C, and  
7 357C. As with the In-Plant Loading factors, this is BellSouth-specific data.

8

9 In addition to the SE&P Loading factors, central office and circuit investments  
10 require loadings for land and buildings. Ratios are developed by comparing central  
11 office land and building investments to central office and circuit investments. Base  
12 year investment amounts are developed from extracts of BellSouth's financial  
13 systems and projected plant additions are furnished by Network.

14

15 **Q. ARE THERE LOADING FACTORS UNIQUE TO CABLE ACCOUNTS?**

16

17 A. Yes. Poles and conduit are related only to cable placements. As in the past,  
18 BellSouth developed translators to determine the amount of investment in poles and  
19 conduit associated with aerial and underground cable investment. The Pole  
20 Loading factor was developed by comparing the investment in poles to the  
21 investment in aerial cable. Similarly, the Conduit Loading factor was determined  
22 based on the relationship between investment in conduit and investment in  
23 underground cable.

24

25 Base year investment amounts are developed from extracts of BellSouth's financial

1 systems and projected plant additions are furnished by Network.

2

3 **Q. IS THERE A LOADING FACTOR UNIQUE TO THE DIGITAL**  
4 **SWITCHING (377C) ACCOUNT?**

5

6 A. Yes. BellSouth developed a loading factor that accounts for the Right-to-Use  
7 ("RTU") investment related to central office switching equipment. As I mentioned  
8 previously, an accounting change reclassified RTU fees from expense to capital.  
9 Thus, it became necessary to develop a method of identifying this investment. The  
10 switch vendors' practice of packaging RTU fees together, the preponderance of  
11 buy-outs in effect, and the discounting schemes offered to BellSouth made the  
12 direct allocation of switching RTU investment impossible. Alternatively, BellSouth  
13 calculated a ratio that reflects the relationship between RTU capitalized investment  
14 to digital switch investment over the study period. Budget forecasts from Network  
15 were used in this calculation.

16

17 **ANNUAL COST FACTORS**

18 **Q. WHAT ARE ANNUAL COST FACTORS AND HOW DID BELLSOUTH**  
19 **DEVELOP THEM?**

20

21 A. Annual cost factors are translators used to determine the annual recurring cost  
22 associated with acquiring and using equipment. When an investment is multiplied  
23 by an annual cost factor, the product reflects the annual recurring cost incurred by  
24 the company. There are basically two types of cost associated with an investment,  
25 capital-related costs and operating-related costs.

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An investment includes the initial purchase price of the item of plant and all engineering and installation costs required to make that item of plant ready to provide service. Capital costs associated with the investment consist of three major categories: depreciation, cost of money, and income tax. As I mentioned previously, BellSouth uses an internally developed model to calculate the capital-related annual cost factors based on user changeable inputs.

Plant must also be maintained to provide continuing operations. Ordinary repairs and maintenance, as well as rearrangements and changes, are necessary for all categories of plant (except land) in order to maintain quality service.

Maintenance-type expenses are reflected in the Plant Specific Expense factor. The following types of operations are included:

- (1) Inspecting and reporting on the condition of plant investment to determine the need for repairs, replacements, rearrangements, and changes
- (2) Performing routine work to prevent trouble
- (3) Replacing items of plant other than retirement units
- (4) Repairing materials for reuse
- (5) Restoring the condition of plant damaged by storms, floods, fire, and other casualties
- (6) Inspecting after repairs have been made
- (7) Salaries, wages, and expenses associated with plant craft and work reporting engineers, as well as their immediate supervision and office support.

1  
2 The Plant Specific Expense factor is developed, by FRC, based on three years of  
3 projected expense and investment data. Base year expenses are pulled from the  
4 Cost Separations System ("CSS"). Projected view data is obtained from  
5 BellSouth's Finance Regulatory Group for the study period. Base year investments  
6 are determined from extracts from BellSouth's financial systems. Investment  
7 projections are obtained from BellSouth Network for the study period. A  
8 relationship between the expenses and the investments is established by dividing the  
9 cumulative expenses by the cumulative investments for the study period.  
10 Adjustments are made for subsequent right-to-use fees, service order expense and  
11 rents. Since Plant Specific Expense factors are based on actual and projected  
12 BellSouth data, they reflect expenses BellSouth will incur in providing unbundled  
13 elements to competitors on a going-forward basis. Additionally, they reflect  
14 BellSouth's network practices, quality of service commitments, budget constraints,  
15 and process efficiencies.  
16  
17 Finally, BellSouth pays taxes. BellSouth's Tax Department provides the  
18 appropriate tax information, by jurisdiction, to be used in the development of the  
19 tax-related factors.  
20

21 **UNBUNDLED ELEMENT SPECIFIC INPUTS**

22 **LOOP**

23 **Q. THE LOOP ELEMENT IS A MAJOR COMPONENT OF THE NETWORK.**  
24 **WHAT INPUTS ARE THE MAIN COST DRIVERS OF LOOP COSTS AND**  
25 **HOW DID BELL SOUTH DETERMINE THESE INPUTS?**

1

2 A. As I mentioned previously, Exhibit DDC-2 outlines the inputs BellSouth utilized in  
3 the running of the BSTLM. One group of inputs that significantly impacts the loop  
4 cost results is the investment (material plus engineering and installation) for feeder,  
5 distribution, and digital loop carrier. The per unit material prices (for example,  
6 material price per sheath foot of cable) are displayed in Exhibit DDC-2. As  
7 explained earlier, investment includes the material price as well as the cost to  
8 engineer and install (E&I) the item of plant. BellSouth In-Plant factors are used to  
9 calculate the engineering costs along with BellSouth-specific placing costs. The  
10 material prices are obtained from procurement records that reflect actual BellSouth  
11 purchase prices and contractual agreements. Inherent in the material prices are  
12 discounts BellSouth enjoys due to its negotiated contracts. In its Order No.PSC-  
13 96-1579-FOF-TP, this Commission ruled, "it is appropriate to accept the cable  
14 costs proposed by BellSouth." (Order at Page 88)

15

16 The loop model design determines the amount of each facility required, i.e., the  
17 BSTLM determines the length of the loops based on customer location and  
18 network design. Obviously, loop length is a major cost driver. The MSRT routines  
19 built into the model ensure the most efficient routes are considered in determining  
20 the loop lengths.

21

22 Utilization or fill factors also play an important role in the calculation of loop costs.  
23 The FCC's TELRIC methodology allows for a reasonable projection of actual  
24 utilization to be incorporated into the equation. (§682) Similar to other models,  
25 such as, the HAI model, the FCC Synthesis Model, and the Benchmark Cost Proxy

1 Model ("BCPM"), utilization is not entered as a percentage in the BSTLM.  
2 Rather, the distribution cables are sized based on the appropriate standard size  
3 cable and the number of pairs provisioned to each living unit. Still the effective  
4 distribution utilization can be calculated from the BSTLM. The average  
5 distribution cable effective fill in BellSouth's study for Florida is 47%. For feeder  
6 cable, the model uses the cable sizing factor and standard size cables to determine  
7 the required cables to be placed. The average effective fill of the copper feeder  
8 cables in this filing is 74%. These results are reflective of BellSouth's anticipated  
9 future fill in the distribution and feeder routes.

10

11 The amount of structure sharing is also a major cost driver. The structure sharing  
12 percentages should be BellSouth-specific and representative of BellSouth's  
13 achievable sharing arrangements in Florida. Structure sharing is reflected in the  
14 loading factors for poles and conduit and in the in-plant factor associated with  
15 buried cable.

16

17 Additional inputs related to loops will be discussed further in my response to Issue  
18 #7.

19

20 **SWITCHING**

21 **Q. WHAT INPUTS ARE CRITICAL TO THE DEVELOPMENT OF**  
22 **SWITCHING-RELATED COSTS?**

23

24 A. The first step in developing switching costs is the population of the SCIS/MO  
25 database. Information is entered for each digital office in BellSouth's territory. For

1 existing analog offices, digital technology, based on Network's replacement  
2 forecasts, has been assumed. (By year-end 1999, less than 15% of BellSouth's  
3 lines in Florida were served by analog offices.)  
4

5 The SCIS/MO data reflects the investment drivers, i.e., what will cause exhaust of  
6 the switch. The investment drivers are inputs such as O+T (originating plus  
7 terminating) usage, CCS, quantity of analog lines, quantity of digital lines,  
8 processor utilization, etc. Another important input in the model is the discount  
9 rate. BellSouth utilized a discount that is indicative of the way switching  
10 equipment will be purchased in the future. BellSouth buys a limited number of new  
11 central office switches, however, BellSouth grows capacity in its existing central  
12 offices on a regular basis. Thus, the discount rate should reflect this combination of  
13 new/growth purchasing activity.  
14

15 In determining the investment related to vertical features busy hour usage is an  
16 important component. Switches are engineered to handle the busy hour load.  
17 Thus, in order to develop flat-rated feature costs, the usage in the busy hour is the  
18 only relevant factor. Inputs need to reflect the anticipated demand that is going to  
19 be placed on the switch due to the request for feature-enhanced call processing.  
20 Consideration must be given to the number of feature-related calls, holding times,  
21 and activations/deactivations that occur.  
22

23 Usage costs are driven by such items as distribution of calls (intra-office/interoffice  
24 split), percent local tandem occurrence, busy hour-full day ratio, average number of  
25 facility terminations per call, minutes per call, airline miles per call. The outputs

1 from SCIS/MO also are important contributors to the development of the usage  
2 costs.

3

4 As with the inputs to the loop model, only BellSouth-specific data will  
5 appropriately reflect the costs BellSouth will incur in the provisioning of switch-  
6 related UNEs to competitors in Florida. Mr. Page, in his testimony, expands on the  
7 inputs required by the SST model in order to determine switch-related costs.

8

9 **NONRECURRING COST INPUTS**

10 **Q. WHAT INPUTS ARE IMPORTANT TO THE DEVELOPMENT OF**  
11 **NONRECURRING COSTS?**

12

13 A. I have previously discussed the manner in which time estimates are obtained. These  
14 inputs drive the nonrecurring costs. However, in addition to the work times, the  
15 labor rates are critical in determining the costs to provision unbundled elements.  
16 This Commission accepted BellSouth's methodology for developing the direct  
17 labor rates in the previously filed UNE studies. It did, however, eliminate the  
18 shared component from the labor rate. (Order No.PSC-96-1579-FOF-TP at Page  
19 63) Additionally, this Commission established a rate structure such that disconnect  
20 costs are assessed at the time of disconnect. (Order No.PSC-96-1579-FOF-TP at  
21 Page 69) BellSouth followed the same process in developing labor rates in this  
22 filing and presented the disconnect costs as separate elements.

23

24 **SECTION 2 - RESPONSES TO ISSUES**

25

1 **Issue 2(b): “For which of the following UNEs should the Commission set**  
2 **deaveraged rates?**

3 **(1) loops (all);**

4 **(2) local switching;**

5 **(3) interoffice transport (dedicated and shared);**

6 **(4) other (including combinations).”**

7

8 **Q. WHICH OF THE UNES OUTLINED IN THIS ISSUE SHOULD BE**  
9 **DEAVERAGED?**

10

11 A. It is BellSouth’s contention that only loops and local channels possess attributes that  
12 reflect geographic cost differences and thus, only loops and local channels below  
13 DS3 speeds should be deaveraged. Costs for loops and local channels above DS1  
14 are developed on a per mile basis and, therefore, do not require further  
15 deaveraging. Other UNEs either do not display the same level of cost variation by  
16 geographic location or have price structures that already account for geographic  
17 cost differences. Additionally, sub-loops and combinations that have a loop as a  
18 component should also be deaveraged since they also reflect cost variations by  
19 geographic area.

20

21 Switching does not vary significantly by geographic location. None of the factors  
22 that make the loop cost vary are present with respect to switching cost calculations.  
23 The physical characteristics of the loop and the placing costs associated with that  
24 loop vary by geographic location due to cable type (aerial, buried or underground)  
25 and distance (length). However, these factors do not impact switching costs to any

1 great degree. Another factor that influences loop costs, customer density, also has  
2 little impact on switching costs since the modularity of digital switching equipment  
3 allows BellSouth to grow switches as demand dictates. Also, remote switch  
4 entities can be deployed to serve pockets of customers.

5

6 Additionally, switching cannot be viewed in the same manner as local loops because  
7 logically one cannot isolate one switch from the network. The switch is a part of a  
8 total integrated network designed to handle a call from the originating switch entity  
9 to the terminating switch entity. To segment individual switches based on  
10 individual cost differences ignores the interdependencies between switch  
11 entities. This is clearly a problem for remote switches that are dependent on a host  
12 switch for interoffice call processing. The insignificant variation in switching costs  
13 between wire centers does not warrant the deaveraging of switch-based elements.

14

15 The cost of other unbundled network elements may vary by geographic location,  
16 but these cost differences are reflected in the rate structure, thus, eliminating the  
17 need for deaveraging. An example is interoffice transport. The rate structure for  
18 interoffice transport is on a per mile basis. This rate structure already accounts for  
19 geographic differences by eliminating length from the equation. Thus, there is no  
20 reason to include interoffice transport in the deaveraging scheme. Of course, some  
21 of the physical attributes of the interoffice route will impact the costs just as they do  
22 in the loop, e.g., the type of placement. However, because the cost is expressed on  
23 a per unit (mile) basis, these differences are negligible.

24

25 **Q. HOW DID BELLSOUTH AGGREGATE THE WIRE CENTER LEVEL**

1 **COSTS DEVELOPED BY THE BSTLM INTO ZONES?**

2

3 A. The first step is to partition the wire centers in Florida into rate groups based upon  
4 the General Subscriber Tariff. Next, the rate groups were classified into one of  
5 three zone designations. The final step in calculating the average monthly cost for a  
6 specific loop or local channel in each zone is to weight the wire-center level costs  
7 produced by the BSTLM by wire center line counts for that specific loop or  
8 channel. Mr. Varner supports the methodology used to develop the definition of  
9 the three zones in his testimony

10

11 Exhibit DDC-4 displays the recurring costs by the three zones and the statewide  
12 average. (If an element only had nonrecurring costs, it is not shown since  
13 nonrecurring costs are not subject to deaveraging. Additionally, if a particular zone  
14 does not have a cost, no loops or channels of that type were found in that zone.)

15

16 Mr. Varner includes the rates BellSouth is proposing for each zone. BellSouth's  
17 cost study displays costs for extended loops not currently combined in BellSouth's  
18 network, i.e., "new" combinations, in Zones 2 and 3. However, as explained by  
19 Mr. Varner, BellSouth is only obligated to offer this combination in Zone 1. This  
20 is also reflected in Mr. Varner's rate sheet.

21

22 **Issue 3(b): "Should a cost study for xDSL-capable loops make distinctions based**  
23 **on loop length and/or the particular DSL technology to be deployed?"**

24

25 **Q. WHAT COST SUPPORT HAS BELL SOUTH PREPARED IN RESPONSE**

1       **TO THIS ISSUE?**

2

3    A. BellSouth previously submitted costs for ADSL and HDSL compatible loops in  
4       Docket Nos. 960833-TP, 960846-TP, and 960916-TP. This Commission  
5       established rates based upon BellSouth's proposal, essentially validating  
6       BellSouth's definition of these xDSL types of loops. These loops meet the  
7       transmission requirements set for ADSL and HDSL service.

8

9       Additionally, for this proceeding, BellSouth has developed recurring and  
10       nonrecurring costs for 2-wire unbundled copper loops ("UCLs") and 4-wire  
11       unbundled copper loops. The costs are segmented between loops less than 18,000  
12       feet ("UCL-Short") and loops greater than 18,000 feet ("UCL-Long"). The UCLs  
13       are commonly referred to as "dry copper" loops because they have no intervening  
14       equipment such as, load coils, bridged tap, repeaters, etc., between the end user  
15       premises and the serving wire center. The UCL-Short will be designed to  
16       Resistance Design on a non-loaded metallic facility up to 18,000 feet in length. The  
17       UCL-Long will be any copper loop longer than 18,000 feet in length. BellSouth  
18       does not guarantee the transmission quality beyond the resistance design standards.  
19       BellSouth used the BSTLM to calculate the material costs associated with the  
20       xDSL loops.

21

22    **Issue 4(b): "How should access to such subloop elements be provided, and how**  
23       **should prices be set?"**

24

25    **Q. WHAT COST SUPPORT HAS BELL SOUTH PREPARED IN RESPONSE**

1 **TO THIS ISSUE?**

2

3 A. BellSouth has developed costs for Unbundled Sub-Loops that are 2-wire or 4-wire  
4 components of a loop that can be technically unbundled. Sub-Loops consist of  
5 Sub-Loop Feeder ("USL-F"), Sub-Loop Distribution ("USL-D"), Intra-building  
6 Network Cable ("INC"), and Network Terminating Wire ("NTW"). USL-F is also  
7 provided for the DS1 digital loop.

8

9 Sub-loop feeder is the physical transmission facility (or channel or group of  
10 channels on such facility) which extends from the main distributing frame  
11 connection in the end office to the cross-connect box. If the loop is served by  
12 digital loop carrier, a central office digital loop carrier terminal is required to  
13 convert the digital signal to voice grade analog. A test point is provisioned with the  
14 sub-loop feeder for remote test access.

15

16 Sub-loop distribution is the physical transmission facility from a BellSouth cross-  
17 connect device to the customer's premises (i.e., the Network Interface Device  
18 ("NID")). This facility will allow an end user to send and receive  
19 telecommunications traffic when it is properly connected to other required  
20 network elements, such as, loop feeder facility. This facility includes a NID  
21 (where applicable) at the customer's location in the loop.

22

23 BellSouth will also provide sub-loop interconnection to the Intra-building Network  
24 Cable ("INC") (riser cable). INC is the distribution facility inside a subscriber's  
25 building or between buildings on one customer's premises (continuous property

1 not separated by a public street or road). USL-INC (riser cable) will include the  
2 facility from the cross-connect device in the building equipment room up to and  
3 including the end-user's point of demarcation.

4  
5 Network Terminating Wire ("NTW") is unshielded twisted copper wiring that is  
6 used to extend circuits from an INC terminal or from a building entrance terminal  
7 to an individual customer's point of demarcation. It is the last segment of the field-  
8 side loop distribution facilities. In multi-subscriber configurations, NTW  
9 represents the point at which the network branches out to serve individual  
10 subscribers.

11  
12 NTW will be provided in Multi-Dwelling Units ("MDUs") and/or Multi-Tenants  
13 Units ("MTUs") where BellSouth provides wiring all the way to the end-users  
14 premises. BellSouth will not provide this element in those locations where the  
15 property owner provides the wiring to the end user's premises or where the  
16 property owner will not allow BellSouth to place its facilities to the end user.

17  
18 Another group of elements that can be classified as "sub-loop" is unbundled sub-  
19 loop concentration ("USLC"). These elements allow an ALEC to concentrate  
20 loop distribution elements, provided by the ALEC, on to multiple DS1s. This  
21 arrangement allows the ALEC to connect the loop distribution elements (at a  
22 concentrated level) to BellSouth's feeder facilities. BellSouth will then transport  
23 the DS1s carrying the distribution circuits back to the serving wire center for  
24 termination on a BellSouth DSX1 block and ultimately to the ALEC's collocation  
25 space.

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Mr. Varner addresses the rates BellSouth is proposing for these sub-loop elements in his testimony, while Mr. Milner discusses sub-loop access.

**Issue 5: "For which signaling networks and call-related databases should rates be set?"**

**Q. WHAT COST SUPPORT HAS BELLSOUTH PREPARED IN RESPONSE TO THIS ISSUE?**

A. BellSouth previously submitted costs for 800 Access, Line Information Database ("LIDB") Access, and CCS7 Signaling Transport in Docket Nos. 960833-TP, 960846-TP, and 960916-TP. This Commission established rates based upon BellSouth's costs for these items. In this docket, BellSouth has revised these elements to reflect the 2000-2002 study period (i.e., factors, labor rates, and material prices were updated). BellSouth is augmenting its list of database access items to include Calling Name ("CNAM"), Local Number Portability ("LNP"), and E911.

**Issue 6: "Under what circumstances, if any, is it appropriate to recover non-recurring costs through recurring rates?"**

**Q. IN ITS COST STUDY, DID BELLSOUTH CONVERT ANY OF ITS NONRECURRING COSTS TO RECURRING?**

1 A. No. The nonrecurring costs, as contained in the April 17, 2000 study reflect the  
2 way in which the costs are incurred. In other words, if the costs result from a one-  
3 time provisioning process, they are displayed as a nonrecurring cost. The process  
4 of converting nonrecurring cost to recurring is sometimes employed in order to  
5 reduce the up-front fees charged. However, this is a pricing decision, not generally  
6 a part of cost development.

7

8 **Issue 7: "What are the appropriate assumptions and inputs for the following**  
9 **items to be used in the forward-looking recurring UNE cost study?**

10

11 **(a) network design (including customer location assumptions);**

12 **(b) depreciation;**

13 **(c) cost of capital;**

14 **(d) tax rates;**

15 **(e) structure sharing;**

16 **(f) structure costs;**

17 **(g) fill factors;**

18 **(h) manholes;**

19 **(i) fiber cable (material and placement costs);**

20 **(j) copper cable (material and placement costs);**

21 **(k) drops;**

22 **(l) network interface devices;**

23 **(m) digital loop carrier costs;**

24 **(n) terminal costs;**

25 **(o) switching costs and associated variables;**

- 1 (p) traffic data;  
2 (q) signaling system costs;  
3 (r) transport system costs and associated variables;  
4 (s) loadings;  
5 (t) expenses;  
6 (u) common costs;  
7 (v) other.”  
8

9 **Q. TO WHICH OF THE ITEMS ARE YOU RESPONDING?**  
10

11 A. I will discuss (a), (d) – (n), and (q) – (t). Mr. Stegeman will also respond to  
12 several of these items in regard to the BSTLM. Mr. Cunningham supports  
13 BellSouth’s depreciation inputs in his testimony, item (b). Dr. Billingsley  
14 discusses the appropriate cost of capital (c) in his testimony. Items related to  
15 switching and network usage (items (o) and (p)) will be contained in Mr. Page’s  
16 testimony and Mr. Reid explains shared and common cost ((t) - (u)) development  
17 in his testimony.  
18

19 **Q. WHAT ARE THE APPROPRIATE ASSUMPTIONS FOR NETWORK**  
20 **DESIGN (ITEM (a))?**  
21

22 A. As I have mentioned previously, the network design or architecture must reflect not  
23 only a forward-looking perspective, but must also be based upon BellSouth’s  
24 practices and guidelines. In this manner, the resulting costs will reflect costs  
25 BellSouth will incur in providing UNEs and combinations on a going-forward

1 basis. The network design not only impacts the recurring cost development, but  
2 also provides a foundation for the development of nonrecurring costs since  
3 provisioning practices are based on the type and the design of the equipment being  
4 installed. In general, the network design should:

- 5 (1) Be forward-looking, yet attainable.  
6 (2) Reflect equipment utilized in BellSouth's network on a going-forward basis.  
7 (3) Reflect BellSouth's Network Guidelines.  
8 (4) Incorporate efficiencies projected to improve provisioning practices.

9  
10 **Q. HOW DID BELLSOUTH DEVELOP THE TAX FACTORS UTILIZED IN**  
11 **ITS COST STUDY FILED ON APRIL 17, 2000 (ITEM (d))?**

12  
13 A. The ad valorem and other tax factor is an effective tax factor furnished by the  
14 BellSouth Tax Department. The BellSouth Tax Department develops the factor  
15 by calculating the ratio of certain tax expenses to the telephone plant in service, as  
16 follows:

17  
18 
$$\frac{\text{Accounts 7240.1000} + \text{7240.3000} + \text{7240.9000}}{\text{Telephone Plant In Service (Account 2001)}} =$$

19  
20  
21 
$$107,585,824/11,306,437,040 = .009515$$

22  
23 Account 7240.1000 includes taxes levied upon the assessed value of property.

24 Account 7240.3000 includes taxes levied upon the value or number of shares of  
25 outstanding capital stock, upon invested capital, upon rate of dividends paid, etc.

1 Account 7240.9000 includes other non-income, non-revenue taxes such as  
2 municipal license taxes, state privilege taxes, state self-insurer's tax, etc.

3

4 Some states and municipalities tax the revenues that a company receives from  
5 services provided within the state/municipality. The taxes may be designed to fund  
6 such things as Public Service Commission fees, franchise taxes, license taxes, or  
7 other similar items, but because the taxes are levied on the basis of revenues, they  
8 are commonly referred to as a gross receipts tax. Unlike some taxes that are billed  
9 to the customer and flowed through to the taxing authority, a gross receipts tax is  
10 a cost of doing business to BellSouth.

11

12 The BellSouth Tax Department provides the effective tax rate at which BellSouth  
13 is charged by the taxing authority and that rate is "grossed up" to reflect the  
14 following formula:

15

16 
$$\frac{\text{GROSS RECEIPTS TAX RATE}}{(1 - \text{GROSS RECEIPTS TAX RATE})} = .0096$$

17

18

19 **Q. HOW DID BELLSOUTH REFLECT STRUCTURE SHARING IN ITS**  
20 **STUDIES (ITEM (e))? HOW WERE THE ASSOCIATED STRUCTURE**  
21 **COSTS DEVELOPED (ITEM (f))?**

22

23 **A.** As I explained earlier, BellSouth utilizes loading factors to identify the amount of  
24 pole and conduit investment required to support the associated aerial and  
25 underground cable. During the development of these factors, anticipated net rents

1 (expenses paid to other parties for attaching to their structures less revenues  
2 received from others for attaching to BellSouth's structures) from sharing  
3 arrangements are considered. Thus, implicitly structure sharing is reflected in the  
4 calculation. Past information supports the fact that sharing of poles is a relatively  
5 common occurrence. In fact, in Florida BellSouth only owns approximately 40%  
6 of the poles to which it attaches cable. However, the sharing of conduit space is  
7 not as extensive, as reflected in the relatively low amount of rent BellSouth receives  
8 from these structures. Sharing of trenching is reflected in the in-plant factor  
9 associated with buried cable. Since this factor is developed by analyzing the  
10 relationship between total installed investments and material prices, any savings  
11 gleaned from sharing of placement costs has been considered. As with the sharing  
12 of conduit, joint trenching occurs on a very limited basis.

13

14 BellSouth does not anticipate any major changes to the amount of structure sharing  
15 in the future. Arguments have been made in past proceedings alleging dramatic  
16 increases in the percent of structure sharing due to competition. BellSouth's  
17 experience suggests otherwise. Structure sharing is dependent on timing, location  
18 of facilities, and technical considerations. It is difficult for all the factors to  
19 coincide. In fact, this Commission agreed with this declaration in its Order  
20 No.PSC-96-1579-FOF-TP stating: "We are not persuaded by AT&T/MCI's  
21 argument that a competitive environment will encourage more structure sharing."  
22 (Order No.PSC-96-1579-FOF-TP at Page 78)

23

24 BellSouth utilized loading factors to determine the cost of the poles and conduit.  
25 Even though the BSTLM has the flexibility to "place" structures, BellSouth felt the

1 use of loading factors more accurately portrays the costs BellSouth is expected to  
2 incur in provisioning loops on a going-forward basis.

3  
4 **Q. HOW DID BELLSOUTH DETERMINE THE FILL FACTORS THAT**  
5 **WERE UTILIZED IN THE COST STUDY (Item (g))?**  
6

7 A. BellSouth's fill factors were based upon the FCC's directive that "[p]er unit costs  
8 shall be derived from total costs using reasonably accurate 'fill factors.'" (¶682) In  
9 many cases, BellSouth Network provided the anticipated utilization of the  
10 equipment based on projected demand and quality of service considerations.

11  
12 For unbundled loops (and sub-loops), the fill factors were developed within the  
13 BSTLM. As I explained earlier, the BSTLM builds facilities to meet existing  
14 customer demand. Cables are then sized to appropriately serve that demand in an  
15 efficient manner. Thus, the utilization is a product of this exercise. Even though  
16 the model allows for growth to be considered in the sizing of cables, BellSouth set  
17 the growth component to zero. Thus, spare capacity for growth was not reserved.  
18 As I mentioned previously, the model produced the reasonable utilizations of 47%  
19 for distribution and 74% for copper feeder.

20  
21 **Q. HOW DOES BELLSOUTH ACCOUNT FOR THE COST OF MANHOLES**  
22 **IN ITS STUDIES (ITEM (h))?**  
23

24 A. Manhole costs are not developed individually, i.e., BellSouth does not develop the  
25 cost of a 4X6X7 manhole or a 12X6X7 manhole and enter those values into the

1       BSTLM. Instead, manhole costs are incorporated into the study through the  
2       conduit loading factor. The manhole placement costs are considered in the in-plant  
3       factors associated with underground cable.

4

5       **Q. WHAT ARE THE APPROPRIATE MATERIAL AND PLACEMENT**  
6       **COSTS FOR CABLE (ITEMS (i) and (j))?**

7

8       A. BellSouth used BellSouth-specific costs for both copper and fiber cable. Material  
9       prices for copper and fiber cable were obtained from procurement records that  
10      reflect actual BellSouth purchase prices and contractual agreements. As previously  
11      explained, future inflation trends ("TPIs") were also taken into consideration in  
12      order to reflect forward-looking costs. Telephone company engineering and labor  
13      costs were derived from BellSouth's Florida in-plant loading factors. In-plant  
14      factors convert material prices to a Florida-specific installed investment.  
15      BellSouth-specific cable costs reflect economies of scale and vendor prices that an  
16      efficient provider would be able to expect to achieve on a going forward basis.  
17      Exhibit DDC-2 (inputs to the BSTLM) contains material prices for both copper and  
18      fiber cable.

19

20      **Q. HOW WERE THE COSTS FOR DROPS AND NETWORK INTERFACE**  
21      **DEVICES CALCULATED IN BELL SOUTH'S COST STUDY (ITEMS (k)**  
22      **and (l))?**

23

24      A. BellSouth used BellSouth-specific costs for the material, travel, and installation  
25      labor associated with the NID and the drop in the BSTLM. These costs are based

1 on material prices for equipment/material and BellSouth's expertise and experience  
2 in placing the equipment/material. The BSTLM, through internal calculations  
3 determines drop length, which for Florida averaged 116 feet for a 2-wire analog  
4 loop.

5  
6 **Q. HOW ARE DIGITAL LOOP CARRIER ("DLC") COSTS DEVELOPED IN**  
7 **THE BSTLM (ITEM (m)) ?**

8  
9 A. The BSTLM determines the size, type, and placement of digital loop carrier system  
10 required to serve the designated customer locations. Internal algorithms determine  
11 the required number of commons and working plug-ins and supporting equipment  
12 necessary based upon vendor capacities and equipment configurations. User  
13 populated tables contain BellSouth-specific material prices, reflecting negotiated  
14 discount rates, for the individual pieces of digital loop carrier equipment and the  
15 vendor capacities.

16  
17 **Q. IN PAST PROCEEDINGS, DIGITAL LOOP CARRIER ("DLC")**  
18 **DEPLOYMENT HAS GENERATED SIGNIFICANT CONTROVERSY. IN**  
19 **PARTICULAR, THE ISSUES OF (1) UNIVERSAL DLC ("UDLC")**  
20 **VERSUS INTEGRATED DLC ("IDLC") AND (2) TR008 SYSTEMS**  
21 **VERSUS GR303 SYSTEMS HAVE BEEN DEBATED. HOW DOES THE**  
22 **BSTLM ADDRESS THESE TWO AREAS OF PAST CONCERN?**

23  
24 A. First, let me discuss the issue of universal versus integrated. It is still BellSouth's  
25 contention that for an unbundled offering, only universal digital loop carrier is

1 appropriate. The only way in which BellSouth can "hand-off" a loop, i.e., unbundle  
2 the loop, is to terminate the central office end of the loop on a MDF. Thus, only  
3 UDLC (non-integrated) is appropriate for this scenario. However, in the  
4 combination studies, IDLC is applicable since the loop and the port are combined  
5 and no "hand-off" of the loop is needed. In the BSTLM, Scenarios BST2000 and  
6 Copper reflect the unbundled configuration, where each loop is not switched.  
7 Thus, in these instances, the loop is not integrated in the switch. However in the  
8 Combo Scenario, switched loops are considered. Because these loops are  
9 switched, they can be directly integrated into the switch and thus, IDLC is  
10 appropriate.

11

12 In the past, BellSouth's cost studies did not reflect any GR303-based digital loop  
13 carrier systems. This assumption resulted from the extremely limited number of  
14 GR303 systems deployed in BellSouth's network and guidelines that restricted  
15 consideration of GR303 for future systems until a demand threshold was met.  
16 However, BellSouth has reconsidered this directive and now considers GR303  
17 systems in its loop cost modeling. The BSTLM places GR303 systems for all DLC  
18 systems with greater than 150 DS0s. For consistency, BellSouth also populated the  
19 SCIS/MO database such that GR303 terminations are considered in the switch.  
20 BellSouth witness, Mr. Keith Milner, explains why this reflects the most economic  
21 architecture.

22

23 **Q. PLEASE EXPLAIN BELLSOUTH'S BSTLM INPUT VALUES FOR DROP**  
24 **TERMINALS (ITEM (n))?**

25

1 A. Drop terminal costs for line sizes below 100 pairs are included as exempt material  
2 in the in-plant factors used to develop the installed investments of cable.  
3 Therefore, terminal costs for these sizes are not included. The material prices for  
4 larger sized terminals were obtained from procurement records and were adjusted  
5 for inflation. The engineering and labor costs were developed from Florida-  
6 specific in-plant factors. As previously explained, the in-plant factor converts  
7 material prices to installed investments.

8  
9 **Q. HOW ARE SIGNALING COSTS REFLECTED IN BELL SOUTH'S COST**  
10 **STUDIES (ITEM (q))?**

11  
12 A. One of BellSouth's fundamental studies, the Signaling System 7 ("SS7") Price  
13 Calculator, determines the unit costs associated with BellSouth's SS7 network.  
14 This price calculator calculates the vendor prices for the equipment and facilities  
15 deployed in the BellSouth's regional SS7 signaling network. Studies that require  
16 SS7 network resources are linked to the results of this study.  
17  
18 Common channel signaling, using the SS7 signaling protocol, provides the  
19 capability of transporting signaling messages used to establish calls and query  
20 databases separately from the voice network. The study components are comprised  
21 of the six mated Gateway Signal Transfer Point ("STP", packet switch) pairs, the  
22 thirteen mated Local STP pairs, the BellSouth signaling links, the Link Monitoring  
23 System ("LMS") and the Integrated Digital Service Terminals ("IDSTs") that make  
24 up the SS7 infrastructure.

25

1 Access Links connect end offices or Service Switching Points to STPs. Bridge  
2 Links and Diagonal Links connect STPs that are at the same or different switching  
3 hierarchies in the system respectively. Cross Links are administrative links mating  
4 paired STPs.

5

6 The material prices for the SS7-related equipment are divided by the total annual  
7 octets to develop the per unit material prices.

8

9 **Q. HOW ARE TRANSPORT SYSTEM COSTS DETERMINED (ITEM (r))?**

10

11 A. Transport costs incorporate the forward-looking Synchronous Optical Network  
12 ("SONET") architecture in determining network design and subsequent costs.

13 Inputs to this calculation reflect BellSouth-specific costs for Florida. They include  
14 fill factors, SONET material prices, number of nodes on a ring, air-to-route factor,  
15 and the mix of aerial, underground and buried fiber in the interoffice transport.

16

17 **Q. WHAT ARE THE APPROPRIATE LOADINGS TO BE USED (ITEM (s))?**

18

19 A. I have discussed loading factors and their development earlier. BellSouth uses  
20 loading factors for land, buildings, poles, conduit, and the capitalized RTU fees  
21 associated with switching. Additionally, loading factors were used to augment  
22 material prices to account for supporting equipment and power and for capitalized  
23 labor (in-plants). To summarize, since these factors are calculated from  
24 BellSouth's accounting records and the projected view of BellSouth's future  
25 additions in the various accounts, these values reflect costs that an efficient

1 provider would be able to expect to achieve on a going forward basis.

2

3 **Q. HOW ARE EXPENSES REFLECTED IN BELLSOUTH'S COST STUDY**

4 **(ITEM (t))?**

5

6 A. Expenses are found in three areas of the study, in the shared cost component, in the

7 common cost component and in the plant specific costs. BellSouth witness, Mr.

8 Reid, discusses the types of expenses captured in the shared and common factors.

9 The development of Plant Specific factors has been discussed previously.

10

11 **Issue 8: "What are the appropriate assumptions and inputs for the following**

12 **items to be used in the forward-looking nonrecurring UNE cost**

13 **study?**

14

15 **(a) Network design;**

16 **(b) OSS design;**

17 **(c) Labor rates;**

18 **(d) Required activities;**

19 **(e) Mix of manual versus electronic activities;**

20 **(f) Other.**

21

22 **Q. WHAT NETWORK DESIGN SHOULD BE ASSUMED TO DEVELOP**

23 **NONRECURRING COSTS (ITEM (a))?**

24

25 A. The same network design assumptions that provide the foundation for recurring

1 costs should be utilized when developing nonrecurring costs. Thus, the network  
2 should be forward-looking, reflect BellSouth's guidelines and practices, should  
3 consider potential process improvements, and should be attainable.

4

5 **Q. WHAT OSS DESIGN WAS ASSUMED IN THE COST DEVELOPMENT**  
6 **(ITEM (b))? WHAT IS THE PROPER MIX OF ELECTRONIC AND**  
7 **MANUAL ACTIVITIES (ITEM (e))?**

8

9 A. BellSouth developed interfaces that allow Alternative Local Exchange Carriers  
10 ("ALECs") access to BellSouth's existing legacy systems, as directed by the FCC.  
11 Paragraph 523 of the FCC's First Report and Order states:

12

13 "We thus conclude that an incumbent LEC must provide nondiscriminatory access  
14 to their operations support systems functions for pre-ordering, ordering,  
15 provisioning, maintenance and repair, and billing available to the LEC itself."

16

17 BellSouth provides ALECs access via mechanized interfaces to certain operational  
18 support systems ("OSSs"). The interactive pre-order activities revolve around  
19 telephone number reservation, address validation, switch feature and service  
20 verification, and due date calculation. ALEC access to Customer Service Records  
21 allows ALECs to increase the accuracy of orders by using existing name, address,  
22 directory, and line features and service options information.

23

24 The ordering processes facilitate interactive order entry, order status inquiry, and  
25 supplemental order entry. The ALECs are allowed to access the BellSouth's

1 internal network legacy systems with a single log-on. The ALEC is then authorized  
2 to access the electronic interfaces to perform interactive pre-ordering and ordering  
3 functions. The electronic interfaces manage the sending and receiving of data to  
4 and from the BellSouth OSSs.

5  
6 BellSouth also provides the ALECs the option of submitting LSRs manually. LSRs  
7 not submitted through a BellSouth Electronic Interface, as described earlier, will be  
8 considered a manual LSR. A service representative in the Local Carrier Service  
9 Center ("LCSC") manually enters the LSR information into BellSouth's legacy  
10 (existing) service order systems. Once the Firm Order Confirmation ("FOC") status  
11 is returned from the systems, this notification is faxed to the ALEC.

12  
13 In this filing, BellSouth did not include the cost of the OSS interfaces developed to  
14 allow competitors access to BellSouth's provisioning systems. This Commission in  
15 its order in Docket Nos. 960757-TP, 960833-TP, and 960846-TP stated "we  
16 strongly encourage the parties to negotiate in good faith to establish rates for OSS  
17 functions." (Order at Page 165) However, a resolution has never occurred and  
18 BellSouth has not recovered either the cost it incurred to develop the interfaces or  
19 the ongoing costs associated with these interfaces that are utilized by the ALECs in  
20 Florida.

21  
22 However, BellSouth did reflect the labor costs associated with the tasks required to  
23 fill an order. Two cost elements encompass these costs; Electronic Service Order  
24 per local service request and Manual Service Order per local service request. The  
25 Electronic Service Order costs were developed based upon projected fall-out rates

1 for orders placed electronically and include fall-out generated by ALEC errors and  
2 "by design." Experts familiar with ALEC order processing provided the  
3 distribution of the different types of UNE orders, e.g., individual unbundled  
4 network elements, combinations, and complex orders, the time required to handle  
5 the different types of orders, and the amount of fall-out that occurs for electronic  
6 orders.

7

8 **Q. HOW DID BELLSOUTH DEVELOP ITS LABOR RATES (ITEM (c))?**

9

10 A. Labor rates for specific work groups are developed based on extracts of previous  
11 year's data from the Financial Front End System. This extract accumulates labor  
12 expense and hours. A PC application processes this information to produce labor  
13 rates. During processing, the actual costs for a given work group are accumulated  
14 by expenditure type (e.g., direct labor productive, premium, other employee, etc.).  
15 These actual costs are divided by the actual hours (classified productive hours for  
16 plant and engineering work groups and total productive hours for cost groups)  
17 reported by work group to determine the basic rates. The base year of labor rate  
18 data collection was the 1998 calendar year. A labor inflation factor is developed  
19 from the BellSouth Region TPIs and is applied to inflate these rates to the study  
20 period 2000-2002.

21

22 **Q. HOW WERE THE REQUIRED ACTIVITIES DETERMINED BY**

23 **BELLSOUTH (ITEM (d))?**

24

25 A. As I have discussed previously, personnel familiar with the provisioning process

1 provided input into the nonrecurring cost development. They provide the process  
2 flow, the work centers involved, any probabilities that may be required, and the  
3 time required by work center. Provisioning activities can be desegregated into five  
4 basic categories: Service Inquiry, Service Order Processing, Engineering, Connect  
5 & Test, and Travel. (Every category is not applicable to every unbundled network  
6 element.) Service Inquiry reflects an up-front process by which the  
7 availability/suitability of facilities is determined. Service Order Processing  
8 considers activities incremental to the Electronic and Manual Service Order rate  
9 elements previously described. Let me note that the only work center considered in  
10 the two Service Order elements is the LCSC. However, other work centers may be  
11 involved in service processing for certain elements. Engineering times reflect  
12 activities such as, the work required to construct design lay-out records, review of  
13 pending jobs, and confirmation of network design standards. Connect & Test  
14 considers the physical activities required to provision the requested element and to  
15 ensure the transmission quality of the element. Forces involved with Connect &  
16 Test include such groups as Installation and Maintenance, Special Services  
17 Installation and Maintenance, Circuit Provisioning Group, and Recent Change  
18 Memory Administration Group. The Travel category reflects the amount of time  
19 needed by technicians to get to the work location. Travel times consider  
20 accomplishing more than one task per trip.

21

22 **Q. ARE THERE OTHER TOPICS RELATED TO NONRECURRING COST**  
23 **DEVELOPMENT THAT SHOULD BE DISCUSSED (ITEM (f))?**

24

25 A. Yes. In this proceeding, there are really three different types of nonrecurring

1 categories; nonrecurring costs for unbundled network elements, nonrecurring costs  
2 for combinations that currently exist in BellSouth's network ("switch-as-is"  
3 combinations), and nonrecurring costs for combinations that do not currently exist  
4 in BellSouth's network ("new" combinations). Thus, the required activities vary  
5 based on whether the ALEC is ordering an unbundled element, an existing  
6 combination or a new combination.

7

8 **Issue 9: "What are the appropriate recurring rates (average or deaveraged as the**  
9 **case may be) and non-recurring charges for each of the following**  
10 **UNEs?**

11

- 12 (1) **2-wire voice grade loop;**
- 13 (2) **4-wire analog loop;**
- 14 (3) **ISDN/DSL loop;**
- 15 (4) **2-wire xDSL-capable loop;**
- 16 (5) **4-wire xDSL-capable loop;**
- 17 (6) **4-wire 56 kbps loop;**
- 18 (7) **4-wire 64 kbps loop;**
- 19 (8) **DS1 loop;**
- 20 (9) **High capacity loops (DS3 and above);**
- 21 (10) **Dark fiber loop;**
- 22 (11) **Subloop elements (to the extent required by the Commission in Issue**  
23 **4)**
- 24 (12) **Network interface device;**
- 25 (13) **Circuit switching (where required);**

- 1     **(14) Packet switching (where required);**  
2     **(15) Shared interoffice transmission;**  
3     **(16) Dedicated interoffice transmission;**  
4     **(17) Dark fiber interoffice facilities;**  
5     **(18) Signaling networks and call-related databases;**  
6     **(19) OS/DA (where required)."**

7

8 **Issue 10: "What is the appropriate rate, if any, for customized routing?"**

9

10 **Q. WHAT COST SUPPORT HAS BELL SOUTH DEVELOPED IN RESPONSE**  
11 **TO THESE ISSUES?**

12

13 **A. BellSouth has developed recurring and nonrecurring costs, as appropriate, for all of**  
14 **the requested items in Issue #9 except for packet switching and operator call**  
15 **processing and directory assistance services ("OS/DA"). The FCC in its UNE**  
16 **Remand Order recognized that incumbent providers do not have an advantage in**  
17 **deploying packet switching. Paragraph 306 states: "The record demonstrates that**  
18 **competitors [ALECs] are actively deploying facilities used to provide advanced**  
19 **services to serve certain segments of the market – namely medium and large**  
20 **business – and hence they cannot be said to be impaired in their ability to offer**  
21 **service." Thus, the FCC released incumbents from the obligation of unbundling**  
22 **packet switching with one caveat. "Incumbent LECs must provide requesting**  
23 **carriers with access to unbundled packet switching in situations in which the**  
24 **incumbent has placed its DSLAM in a remote terminal. The incumbent will be**  
25 **relieved of this unbundling obligation only if it permits a requesting carrier to**

1 collocate its DSLAM in the incumbents remote terminal.” (§313, FCC Docket CC  
2 96-98 UNE Remand Order) BellSouth has developed the cost associated with  
3 allowing an ALEC to collocate in the remote terminal and has filed those costs in  
4 this proceeding.

5  
6 The FCC’s UNE Remand Order also states “where incumbent LECs provide  
7 customized routing, lack of access to the incumbents’ OS/DA service on an  
8 unbundled basis does not materially diminish a requesting carrier’s ability to offer  
9 telecommunications service.” (§441, FCC Docket CC 96-98 UNE Remand Order)  
10 Since BellSouth deploys customized routing, it is not obligated to provide operator  
11 call processing and directory assistance services. This Commission has established  
12 permanent rates for customized routing based on the use of Line Class Codes in  
13 Docket Nos. 960757-TP, 960833-TP, and 960846-TP. In this docket, BellSouth is  
14 revising those costs and also submitting costs for the AIN-based solution to  
15 customized routing (response to Issue #10).

16  
17 **Issue #11: “What is the appropriate rate, if any, for line conditioning, and in**  
18 **what situations should the rate apply?”**

19  
20 **Q. WHAT COST SUPPORT HAS BELL SOUTH DEVELOPED IN RESPONSE**  
21 **TO THIS ISSUE?**

22  
23 A. BellSouth has structured the Loop Conditioning (Loop Modification) costs to  
24 appropriately reflect the way in which the costs to provide this service will occur.  
25 Costs were developed for loops less than 18,000 feet and for loops greater than

1 18,000 feet. In its study, BellSouth assumed for loops less than 18,000 feet that 10  
2 pairs will be conditioned at the same time. This is based on projected demand for  
3 the conditioned loops. Additionally, for loops less than 18,000 feet the impact of  
4 this procedure on voice grade service will be minimal since load coils neither  
5 enhance nor impair the quality of voice transmission for loops of that length.  
6 However, for loops greater than 18,000 feet, the removal of intermediary  
7 electronics would likely degrade the voice grade transmission quality, rendering it  
8 unusable for voice grade transmission. Thus, to minimize the quantity of voice  
9 grade circuits that will be unavailable for transmission of voice grade level service,  
10 BellSouth practices assume only one circuit will be conditioned initially.

11  
12 One may argue that intermediary devices are not required for loops less than  
13 18,000 feet and thus, BellSouth is not entitled to recover costs to remove those  
14 devices. However, the FCC responded to such arguments and states: "We agree  
15 that networks built today normally should not require voice-transmission enhancing  
16 devices on loops of 18,000 feet or shorter. Nevertheless, the devices are  
17 sometimes present on such loops, and the incumbent LEC may incur costs in  
18 removing them. Thus, under our rules, the incumbent should be able to charge for  
19 conditioning such loops." (§193, FCC CC Docket 96-98 UNE Remand Order)

20  
21 **Issue #12: "Without deciding the situations in which such combinations are**  
22 **required, what are the appropriate recurring and non-recurring rates**  
23 **for the following UNE combinations:**

24  
25 **(a) "UNE platform" consisting of : loop (all), local (including packet, where**

1       **required) switching (with signaling), and dedicated and shared transport**  
2       **(through and including local termination);**

3

4       **(b) "extended links" consisting of:**

5       **(1) loop, DS0/1 multiplexing, DS1 interoffice transport;**

6       **(2) DS1 loop, DS1 interoffice transport;**

7       **(3) DS1 loop, DS1/3 multiplexing, DS3 interoffice transport."**

8

9       **Q. WHAT COST SUPPORT HAS BELLSOUTH DEVELOPED IN RESPONSE**  
10       **TO THIS ISSUE?**

11

12       **A. BellSouth has developed recurring costs for the following UNE Platforms: 2-wire**  
13       **voice grade loop with 2-wire voice grade port and 2-wire ISDN digital loop with 2-**  
14       **wire ISDN port. Recurring costs for other platform combinations, e.g., 4-wire DS1**  
15       **digital loop with 4-wire ISDN trunk port, 4-wire DS1 loop with DDITS port, or a**  
16       **2-wire loop/2-wire voice grade transport/2-wire port combination, can be**  
17       **determined by adding the individual UNE recurring costs. The associated**  
18       **nonrecurring costs are displayed on the summary sheets. For example the**  
19       **nonrecurring cost to switch a res/bus 2-wire voice grade loop with 2-wire voice**  
20       **grade port to an ALEC is \$ .198. The additional cost of \$2.77 for electronic**  
21       **ordering would also apply.**

22

23       **BellSouth developed "extended link" costs for combinations, e.g., 2-wire voice**  
24       **grade loop with dedicated DS1 interoffice transport, 2-wire ISDN loop with DS1**  
25       **interoffice transport, 4-wire DS1 digital loop with dedicated STS-1 interoffice**

1 transport, and 2-wire voice grade loop with dedicated DS1 interoffice transport  
2 with 3/1 mux.

3

4 Refer to BellSouth's Final Cost Summary contained in Section 2 of the study filed  
5 on April 17, 2000. Elements P.1 through P.58 are the combinations BellSouth has  
6 studied. These combinations reflect the most common configurations.

7

8 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

9

10 A. This Commission has ruled on the appropriate methodology for developing costs  
11 for unbundled network elements, TSLRIC plus shared and common or the  
12 equivalent TELRIC economic costs. BellSouth utilized the principles inherent in  
13 this methodology for its cost studies filed April 17, 2000. Thus, the incremental  
14 recurring and nonrecurring costs are long-run and reflect an efficient, forward-  
15 looking, yet attainable, network.

16

17 BellSouth employed several models to develop the cost support. These models  
18 incorporated the TSLRIC/TELIC principles and to the greatest extent possible  
19 are open for inspection. With this proceeding, BellSouth has introduced two new  
20 models, the BSTLM (for loops) and the SST model (for switching). Additionally,  
21 BellSouth has made enhancements to the BellSouth Cost Calculator (AKA the  
22 TELRIC Calculator) and the Capital Cost Calculator to increase user flexibility and  
23 to ease processing.

24

25 *Since the results of the cost study must replicate the incremental costs BellSouth*

1 will incur in providing unbundled elements and combinations to competitors,  
2 BellSouth-specific values are the only relevant source for inputs. Thus, the inputs  
3 utilized in BellSouth's cost studies reflect BellSouth network guidelines,  
4 provisioning practices, vendor discounts, labor rates, and factors.

5

6 Costs have appropriately been deaveraged into three zones that reflect geographic  
7 differences. BellSouth contends that only loops and local channels (below DS3  
8 level), sub-loops and combinations that are comprised of loops should be  
9 deaveraged.

10

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

12

13 A. Yes.

14

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**BSTLM REPORT GUIDE**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Name	Description	Services	Addrs Column J through U																			
Cost Element #	UNE Description	Scenario	Service Types to Include in Rservice	Feeder / Distribution	Loop / Channel	Copper / Fiber	Length	Cost Elements	MDF - Mated	MDF - Combo	MDF - Copper	MDF - DS1	Test Point - Common	Test Point - Hardwired	Test Point - Plug-In	2W Local Channel Addrs	4W Local Channel Addrs	DS1 Local Channel Addrs	DS1 Subloop Feeder Addrs	DS1 Plug In @ RT	DSX1 A.12.5	DSX1
<b>UNE LOOPS</b>																						
A.1.1	2Wire Analog Voice Grade Loop - SL1	BST2000	A,a,b,c,d,e,i	Both	Loop	ALL	ALL	ALL	2w													
A.1.2	2Wire Analog Voice Grade Loop - SL2	BST2000	A,a,b,c,d,e,i	Both	Loop	ALL	ALL	ALL	2w				2w	2w	2w							
A.2.1	Analog VG Loop - SL1	BST2000	E,A,a,b,c,d,e,i	Both	Loop	ALL	ALL	FDI thru COT	2w				2w	2w	2w							
A.2.2	Subloop Distribution Per 2W Analog VG Loop	BST2000	F,A,a,b,c,d,e,i	Both	Loop	ALL	ALL	NID thru FDI														
A.2.11	4W Analog VG Loop	BST2000	M,o	Both	Loop	ALL	ALL	NID thru FDI														
A.2.23	Subloop Feeder Per 2W Analog VG Loop - SL2	BST2000	E,A,a,b,c,d,e,i,Q	Both	Loop	ALL	ALL	FDI thru COT	2w				2w	2w	2w							
A.2.24	Subloop Feeder Per 4W Analog VG Loop	BST2000	M,o,R	Both	Loop	ALL	ALL	FDI thru COT	4w				4w	4w	4w							
A.2.25	ISDN Loop	BST2000	D,f,g	Both	Loop	ALL	ALL	FDI thru COT	2w				2w	2w	2w							
A.2.29	Subloop Feeder Per 4W 56/64 Kbps Loop	BST2000	i,l	Both	Loop	ALL	ALL	FDI thru COT	4w				4w	4w	4w							
A.2.30	Subloop Feeder Per 2W Untethered Copper Loop	Copper Only	a,b,c,d,e,i,A,Q	Both	Loop	Copper	<18,000	FDI thru COT			2w		2w	2w	2w							
A.2.32	Subloop Feeder Per 4W Untethered Copper Loop	Copper Only	M,o,R	Both	Loop	Copper	<18,000	FDI thru COT			4w		4w	4w	4w							
A.2.40	Subloop Distribution Per 2W Untethered Copper Loop	Copper Only	a,b,c,d,e,i,A,Q	Both	Loop	Copper	<18,000	NID thru FDI														
A.2.42	Subloop Distribution Per 4W Untethered Copper Loop	Copper Only	M,o,R	Both	Loop	Copper	<18,000	NID thru FDI														
A.4.1	4WVG Loop	BST2000	M,o	Both	Loop	ALL	ALL	ALL	4w				4w	4w	4w							
A.5.1	2w UDL ISDN	BST2000	D,f,g	Both	Loop	ALL	ALL	ALL	2w				2w	2w	2w							
A.8.1	2w UDL ADSL-capable	Copper Only	a,b,c,d,e,i,A,B	Both	Loop	Copper	<18,000	NID Drop,DTB T,FDI,Cable			2w		2w	2w	2w							
A.7.1	2w UDL HDSL-capable	Copper Only	a,b,c,d,e,i,A,C	Both	Loop	Copper	<12,000	NID Drop,DTB T,FDI,Cable			2w		2w	2w	2w							
A.8.1	4w UDL HDSL-capable	Copper Only	i,j,l	Both	Loop	Copper	<12,000	NID Drop,DTB T,FDI,Cable			4w		4w	4w	4w							
A.9.1	4W DS1 Digital Loop	BST2000	k,t,p,K	Both	Loop	ALL	ALL	ALL				DS1										DSX1
A.9.2	4W DS1 Digital Loop - Subloop Feeder	BST2000	k,t,p,K	Both	Loop	ALL	ALL	FDI thru COT, omit SONET-PREM				DS1							DS1 Feeder Addrs			DSX1
A.10.1	4W 19.56, or 64 Kbps Loop	BST2000	i,j	Both	Loop	ALL	ALL	ALL	4w				4w	4w	4w							
A.12.5	Unbundled Loop Concentration - USLC Feeder Interface	BST2000	k,t,p,K	Both	Loop	Fiber Feeder Only, Non-Wideband	ALL	DLC to COT, DLC-CO				DS1								DS1 Plug In @ RT	DSX1 A.12.5	
A.13.1	2W Copper Loop - Short	Copper Only	a,b,c,d,e,i,A,Q	Both	Loop	Copper	<18,000	NID Drop,DTB T,FDI,Cable			2w		2w	2w	2w							
A.13.7	2W Copper Loop - Long	Copper Only	a,b,c,d,e,i,A,Q	Both	Loop	Copper	>18,000	NID Drop,DTB T,FDI,Cable			2w		2w	2w	2w							
A.14.1	4W Copper Loop - Short	Copper Only	o,M,R	Both	Loop	Copper	<18,000	NID Drop,DTB T,FDI,Cable			4w		4w	4w	4w							
A.14.7	4W Copper Loop - Long	Copper Only	o,M,R	Both	Loop	Copper	>18,000	NID Drop,DTB T,FDI,Cable			4w		4w	4w	4w							
<b>LOCAL CHANNELS:</b>																						
D.5.1	Local Channel - Dedicated - 2W Voice Grade	BST2000	j,H	Both	Local Channel	Fiber Only	ALL	Fiber Cable only - DT to FDI, FDI to RT, RT to COT (Note 1)								2W LC Addrs						

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BSTLM REPORT GUIDE																						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Name	Description	Services	Address Columns J through U																			
Cost Element #	UNE Description	Scenario	Service Types to Include in Rservice	Feeder / Distribution	Loop / Channel	Copper / Fiber	Length	Cost Elements	MDF - Mkd	MDF - Combo	MDF - Copper	MDF - DS1	Test Point - Common	Test Point - Hardwired	Test Point - Plug-in	2W Local Channel Adders	4W Local Channel Adders	DS1 Local Channel Adders	DS1 Subloop Feeder Adders	DS1 Plus In @ RT	DSX1 A-12,5	DSX1
D.5.2	Local Channel - Dedicated - 4W Voice Grade	BST2000	O,o, l, H	Both	Local Channel	Fiber Only	ALL	Fiber Cable only - DT to FDI, FDI to RT, RT to COT (Note 1)									4WLC Adders					
D.5.24	Local Channel - DS1	BST2000	p, P	Both	Local Channel	Fiber Only; Non-Wideband	ALL	Fiber Cable only - DT to FDI, FDI to RT, RT to COT (Note 1)										DS1 LC Adders				
LOOPS FOR COMBOS:																						
P.1.1	Combo - 2W VG Analog Loop	Combo	a,b,c,d,e	Both	Loop	All	All	ALL		2w												
P.4.1	Combo - 2W ISDN Loop	Combo	f,g	Both	Loop	All	All	ALL		2w												
Notes:																						
1. To get Local Channels on Fiber Cable only, the user must specify so prior to running the GIS step of the model. Electronics for Local Channels included as "adders"																						

002522

**SERVICE / UNE CODES USED IN BSTLM**

<u>Service Code</u>	<u>ServiceDescription</u>	<u>UNE Svc Code</u>	<u>UNE Loop Description</u>
aa	Residence Primary Foreign		
ab	Residence Primary Home		
ac	Residence - Add'l Foreign	AA	2wVG Analog SL1
ad	Residence - Add'l Home	AB	2wVG Analog SL2
ae	Business Single Foreign	B	2wVG ADSL Compatible
af	Business - Single Home	C	2wVG HDSL Compatible
ag	Business - Multi Foreign	D	2wVG ISDN
ah	Business - Multi Home Residence - Centrex	E	2wVG SubLoop Feeder
ai	Dorm	F	2wVG SubLoop Distribution
ba	PBX - Foreign	H	2wVG U Local Channel
bb	PBX - Home	I	4w Digital Loop 56/64 Kbps
ca	Centrex - FX Station	J	4w HDSL Compatible
cb	Centrex Station	K	4w DS1 Digital Loop
da	Smartline	L	4wVG USLC DS1
db	Smartline	M	4wVG Loop
ea	Public - Multiline	N	4wVG Subloop Distribution
eb	Public - Single Line Residence Primary ISDN	Q	2W Unbundled Copper Loop
fa	Foreign Residence Primary ISDN	R	4W Unbundled Copper Loop
fb	Home Residence Add'l ISDN	S	DS3 Loop
fc	Foreign Residence Add'l ISDN	T	OC3 Loop
fd	Home Business Single ISDN	U	OC12 Loop
fe	Foreign Business Single ISDN	V	OC48 Loop
ff	Home Business Multi ISDN	W	U Local Channel DS3
fg	Foreign Business Multi ISDN	X	U Local Channel OC3
fh	Home	Y	U Local Channel OC12
g	ISDN PBX Home	Z	U Local Channel OC48
ha	DS0 2w Special Access POP	O	4wVG Local Channel
hb	DS0 2w Special Access - Premises	P	Local Channel DS1
hc	DS0 2w Private Line DS0 4w Special Access		
ia	POP DS0 4w Special Access		
ib	Premises DS0 4w Private Line		
ic	Analog 2w Private Line		
ja	Analog 2w Special Access POP		
jb	SL Analog 2w Special Access Premises		
jc	Megalink ISDN		
k	Residence		
oa	Analog 4w Private Line Analog 4w Special		
ob	Access POP Analog 4w Special		
oc	Access Premises DS1 Digital Special		
pa	Access Premises DS1 Digital SP Access		
pb	POP		
pc	DS1 Digital Private Line DS3 Digital Special		
ra	Access Premises DS3 Digital Special		
rb	Access POP DS3 Digital		
s	LightGate/Video		
t	DS1 Digital Switch Area Commitment Plan		

002523

**OC48 - Line Cards (SONET Terminals-SONET Cards)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	Service Capacity	Total Placing Hours
DS1			4	0
DS3			3	0
STS1			3	0
OC1			3	0
OC3			1	0
OC12			1	0

002524

**OC3 - Line Cards (SONET Terminals-SONET Cards)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	Service Capacity	Total Placing Hours
DS1			4	0
DS3			1	0
STS1			1	0
OC1			1	0

002525

**OC12 - Line Cards (SONET Terminals-SONET Cards)**

<b>Item</b>	<b>Vend "A" Material Cost</b>	<b>Vend "B" Material Cost</b>	<b>Service Capacity</b>	<b>Total Placing Hours</b>
DS1			4	0
DS3			3	0
STS1			3	0
OC1			3	0
OC3			1	0

002526

**OC1 - Line Cards (SONET Terminals-SONET Cards)**

<b>Item</b>	<b>Vend "A" Material Cost</b>	<b>Vend "B" Material Cost</b>	<b>Service Capacity</b>	<b>Total Placing Hours</b>
DS1			4	0

002527

**Information - Line Cards (SONET Terminals-SONET Cards)**

<b>Item</b>	<b>Equipment Category</b>	<b>Channel Unit Investment</b>	<b>Driver</b>
DS1	Plug-in		DS1
DS3	Plug-in		DS3
STS1	Plug-in		STS1
OC1	Plug-in		OC1
OC3	Plug-in		OC3
OC12	Plug-in		OC12

002528

**Vendor Mix (SONET Terminals-Other)**

<b>Terminal</b>	<b>Vendor "A"</b>	<b>Vendor "B"</b>
OC-1	0.6	0.4
OC-3	0.6	0.4
OC-12	0.6	0.4
OC-48	0.6	0.4

002529

**OC48 - SONET Term (SONET Terminals-SONET COT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low)			672	0
Optical shelf - Hardwire (High)			1344	0
Optical Common Equip (Low)			672	0
Optical Common Equip (High)			1344	0
Interface MUX Working Card (28 DS1 Capacity)			28	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			0	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			84	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			0	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			84	0
Interface MUX Equipment (336 DS1 Capacity)			336	0
Interface MUX Equipment (1344 DS1 Capacity)			1344	0
OC12 Interface MUX Commons			0	0
OC48 Interface MUX Commons			84	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			56	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			84	0
Batt. Backup			0	0
Data communications Link			1344	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			672	0
LGX			1344	0

002530

**OC3 - SONET Term (SONET Terminals-SONET COT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low)			84	0
Optical shelf - Hardwire (High)			0	0
Optical Common Equip (Low)			84	0
Optical Common Equip (High)			0	0
Interface MUX Working Card (28 DS1 Capacity)			0	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			0	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			0	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			0	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			0	0
Interface MUX Equipment (336 DS1 Capacity)			0	0
Interface MUX Equipment (1344 DS1 Capacity)			0	0
OC12 Interface MUX Commons			0	0
OC48 Interface MUX Commons			0	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			0	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
Batt. Backup			0	0
Data communications Link			84	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			672	0
LGX			0	0

002531

**OC12 - SONET Term (SONET Terminals-SONET COT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low)			336	0
Optical shelf - Hardwire (High)			0	0
Optical Common Equip (Low)			336	0
Optical Common Equip (High)			0	0
Interface MUX Working Card (28 DS1 Capacity)			0	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			84	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			0	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			84	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			0	0
Interface MUX Equipment (336 DS1 Capacity)			0	0
Interface MUX Equipment (1344 DS1 Capacity)			0	0
OC12 Interface MUX Commons			84	0
OC48 Interface MUX Commons			0	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			0	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			84	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
Batt. Backup			0	0
Data communications Link			336	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			672	0
LGX			1344	0

002532

**OC1 - SONET Term (SONET Terminals-SONET COT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low)			28	0
Optical shelf - Hardwire (High)			0	0
Optical Common Equip (Low)			28	0
Optical Common Equip (High)			0	0
Interface MUX Working Card (28 DS1 Capacity)			0	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			0	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			0	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			0	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			0	0
Interface MUX Equipment (336 DS1 Capacity)			0	0
Interface MUX Equipment (1344 DS1 Capacity)			0	0
OC12 Interface MUX Commons			0	0
OC48 Interface MUX Commons			0	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			0	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
Batt. Backup			0	0
Data communications Link			84	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			0	0
LGX			0	0

002533

**Information - SONET Term (SONET Terminals-SONET COT)**

<b>Item</b>	<b>Equipment Category</b>	<b>Channel Unit Investment Driver</b>
Optical shelf - Hardwire (Low)	Hardwired	ALL
Optical shelf - Hardwire (High)	Hardwired	ALL
Optical Common Equip (Low)	Common	ALL
Optical Common Equip (High)	Common	ALL
Interface MUX Working Card (28 DS1 Capacity)	Common	DS1
OC12 Interface MUX Working Card (84 DS1 Capacity)	Common	DS1
OC48 Interface MUX Working Card (84 DS1 Capacity)	Common	DS1
Interface MUX Equipment (28 DS1 Capacity)	Common	DS1
OC12 Interface MUX Equipment (84 DS1 Capacity)	Common	DS1
OC48 Interface MUX Equipment (84 DS1 Capacity)	Common	DS1
Interface MUX Equipment (336 DS1 Capacity)	Common	DS3-OC1
Interface MUX Equipment (1344 DS1 Capacity)	Common	DS3-OC1
OC12 Interface MUX Commons	Common	DS1
OC48 Interface MUX Commons	Common	DS1
Interface MUX - Hardwire (28-56 DS1 Capacity)	Hardwired	DS1
OC12 Interface MUX - Hardwire (84 DS1 Capacity)	Hardwired	DS1
OC48 Interface MUX - Hardwire (84 DS1 Capacity)	Hardwired	DS1
Batt. Backup	Hardwired	ALL
Data communications Link	Common	ALL
Fiber Splicing Terminal	Hardwired	DS1-OC3
DSX-1 Panel	Hardwired	DS1
DSX-3 Panel	Hardwired	DS3-OC1
LGX	Hardwired	OC3-OC48

002534

**OC48 - SONET Term (SONET Terminals-SONET RT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low Capacity)			672	0
Optical shelf - Hardwire (High Capacity)			1344	0
Optical Common Equip (Low Capacity)			672	0
Optical Common Equip (High Capacity)			1344	0
Interface MUX Working Card (28 DS1 Capacity)			28	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			0	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			84	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			0	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			84	0
Interface MUX Equipment (336 DS1 Capacity)			336	0
Interface MUX Equipment (1344 DS1 Capacity)			1344	0
OC12 Interface MUX Commons			0	0
OC48 Interface MUX Commons			84	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			56	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			84	0
Batt. Backup (Hard)			1344	0
Batt. Backup (Common)			1344	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			672	0
Ltie			1344	0

002535

**OC3 - SONET Term (SONET Terminals-SONET RT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low Capacity)			84	0
Optical shelf - Hardwire (High Capacity)			0	0
Optical Common Equip (Low Capacity)			84	0
Optical Common Equip (High Capacity)			0	0
Interface MUX Working Card (28 DS1 Capacity)			0	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			0	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			0	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			0	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			0	0
Interface MUX Equipment (336 DS1 Capacity)			0	0
Interface MUX Equipment (1344 DS1 Capacity)			0	0
OC12 Interface MUX Commons			0	0
OC48 Interface MUX Commons			0	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			0	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
Batt. Backup (Hard)			84	0
Batt. Backup (Common)			84	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			672	0
Ltie			0	0

002536

**OC12 - SONET Term (SONET Terminals-SONET RT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardware (Low Capacity)			336	0
Optical shelf - Hardware (High Capacity)			0	0
Optical Common Equip (Low Capacity)			336	0
Optical Common Equip (High Capacity)			0	0
Interface MUX Working Card (28 DS1 Capacity)			0	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			84	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			0	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			84	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			0	0
Interface MUX Equipment (336 DS1 Capacity)			0	0
Interface MUX Equipment (1344 DS1 Capacity)			0	0
OC12 Interface MUX Commons			84	0
OC48 Interface MUX Commons			0	0
Interface MUX - Hardware (28-56 DS1 Capacity)			0	0
OC12 Interface MUX - Hardware (84 DS1 Capacity)			84	0
OC48 Interface MUX - Hardware (84 DS1 Capacity)			0	0
Batt. Backup (Hard)			336	0
Batt. Backup (Common)			336	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			672	0
Ltie			1344	0

002537

**OC1 - SONET Term (SONET Terminals-SONET RT)**

Item	Vend "A" Material Cost	Vend "B" Material Cost	DS1 Capacity	Total Placing Hours
Optical shelf - Hardwire (Low Capacity)			28	0
Optical shelf - Hardwire (High Capacity)			0	0
Optical Common Equip (Low Capacity)			28	0
Optical Common Equip (High Capacity)			0	0
Interface MUX Working Card (28 DS1 Capacity)			0	0
OC12 Interface MUX Working Card (84 DS1 Capacity)			0	0
OC48 Interface MUX Working Card (84 DS1 Capacity)			0	0
Interface MUX Equipment (28 DS1 Capacity)			28	0
OC12 Interface MUX Equipment (84 DS1 Capacity)			0	0
OC48 Interface MUX Equipment (84 DS1 Capacity)			0	0
Interface MUX Equipment (336 DS1 Capacity)			0	0
Interface MUX Equipment (1344 DS1 Capacity)			0	0
OC12 Interface MUX Commons			0	0
OC48 Interface MUX Commons			0	0
Interface MUX - Hardwire (28-56 DS1 Capacity)			0	0
OC12 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
OC48 Interface MUX - Hardwire (84 DS1 Capacity)			0	0
Batt. Backup (Hard)			28	0
Batt. Backup (Common)			28	0
Fiber Splicing Terminal			1344	0
DSX-1 Panel			56	0
DSX-3 Panel			0	0
Ltie			0	0

002538

**Information - SONET Term (SONET Terminals-SONET RT)**

<b>Item</b>	<b>Equipment Category</b>	<b>Channel Unit Investment Driver</b>
Optical shelf - Hardwire (Low Capacity)	Hardwired	ALL
Optical shelf - Hardwire (High Capacity)	Hardwired	ALL
Optical Common Equip (Low Capacity)	Common	ALL
Optical Common Equip (High Capacity)	Common	ALL
Interface MUX Working Card (28 DS1 Capacity)	Common	DS1
OC12 Interface MUX Working Card (84 DS1 Capacity)	Common	DS1
OC48 Interface MUX Working Card (84 DS1 Capacity)	Common	DS1
Interface MUX Equipment (28 DS1 Capacity)	Common	DS1
OC12 Interface MUX Equipment (84 DS1 Capacity)	Common	DS1
OC48 Interface MUX Equipment (84 DS1 Capacity)	Common	DS1
Interface MUX Equipment (336 DS1 Capacity)	Common	DS3-OC1
Interface MUX Equipment (1344 DS1 Capacity)	Common	DS3-OC1
OC12 Interface MUX Commons	Common	DS1
OC48 Interface MUX Commons	Common	DS1
Interface MUX - Hardwire (28-56 DS1 Capacity)	Hardwired	DS1
OC12 Interface MUX - Hardwire (84 DS1 Capacity)	Hardwired	DS1
OC48 Interface MUX - Hardwire (84 DS1 Capacity)	Hardwired	DS1
Batt. Backup (Hard)	Hardwired	ALL
Batt. Backup (Common)	Common	ALL
Fiber Splicing Terminal	Hardwired	DS1-OC3
DSX-1 Panel	Hardwired	DS1
DSX-3 Panel	Hardwired	DS3-OC1
Ltie	Hardwired	OC3-OC48

002539

**Vendor "B" DLC - Channel (DLC/ONU-COT)**

<b>Item</b>	<b>Material Cost</b>	<b>Service Capacity</b>	<b>Total Placing Hours</b>
POTS		2	0
COIN		1	0
BRI-ISDN		1	0
CENTREX		2	0
SW-VGSS		2	0
NSW-VGSS		1	0
4-WIRE		1	0
DS1		4	0
HDSL		1	0
ADSL		1	0
PBX		2	0

002540

**Vendor "B" DLC - CE (DLC/ONU-COT)**

Item	Material Cost	DSO Capacity	Total Placing Hours
CO CE Optical Bank/Shelf		2016	0
CE Bank/Shelf Common Equip.		672	0
TSI Integrated		NA	0
TSI Universal		NA	0
TSI Protect		2016	0
CO channel bank/metallic shelf SW		96	0
SW Channel Bank/Shelf CE		NA	0
CO channel bank/metallic shelf NSW		96	0
NSW Channel Bank/Shelf CE		NA	0
CO DS1 channel units for integration		24	0
Optical ONU Bank/Shelf		8	0
Optical Line Units		1	0
HDSL Common Equipment		24	0
ADSL Common Equipment		1	0
DSX Panel		2016	0
Bay		672	0
D4 Bay		48	0
D4 Shelf		48	0
D4 Channel Unit		2	0

002541

**Vendor "A" DLC - Channel (DLC/ONU-COT)**

<b>Item</b>	<b>Material Cost</b>	<b>Service Capacity</b>	<b>Total Placing Hours</b>
POTS		4	0
COIN		4	0
BRI-ISDN		4	0
CENTREX		4	0
SW-VGSS		4	0
NSW-VGSS		4	0
4-WIRE		2	0
DS1		1	0
HDSL		1	0
ADSL		1	0
PBX		4	0

002542

**Vendor "A" DLC - CE (DLC/ONU-COT)**

Item	Material Cost	DSO Capacity	Total Placing Hours
CO CE Optical Bank/Shelf		2016	0
CE Bank/Shelf Common Equip.		2016	0
TSI Integrated		672	0
TSI Universal		672	0
TSI Protect		672	0
CO channel bank/metallic shelf SW		224	0
SW Channel Bank/Shelf CE		224	0
CO channel bank/metallic shelf NSW		224	0
NSW Channel Bank/Shelf CE		224	0
CO DS1 channel units for integration		1	0
Optical ONU Bank/Shelf		8	0
Optical Line Units		1	0
HDSL Common Equipment		24	0
ADSL Common Equipment		1	0
DSX Panel		2016	0
Bay		672	0
D4 Bay		48	0
D4 Shelf		48	0
D4 Channel Unit		2	0

002543

**Information - Channel (DLC/ONU-COT)**

<b>Item</b>	<b>Equipment Category</b>	<b>UOM</b>
POTS	Plug-in	Item
COIN	Plug-in	Item
BRI-ISDN	Plug-in	Item
CENTREX	Plug-in	Item
SW-VGSS	Plug-in	Item
NSW-VGSS	Plug-in	Item
4-WIRE	Plug-in	Item
DS1	Plug-in	Item
HDSL	Plug-in	Item
ADSL	Plug-in	Item
PBX	Plug-in	Item

002544

**Information - CE (DLC/ONU-COT)**

<b>Item</b>	<b>Equipment Category</b>	<b>UOM</b>
CO CE Optical Bank/Shelf	Hardwired	All
CE Bank/Shelf Common Equip.	Common	All
TSI Integrated	Common	Integrated
TSI Universal	Common	Universal
TSI Protect	Common	All
CO channel bank/metallic shelf SW	Hardwired	Integrated
SW Channel Bank/Shelf CE	Common	Integrated
CO channel bank/metallic shelf NSW	Hardwired	NSW
NSW Channel Bank/Shelf CE	Common	NSW
CO DS1 channel units for integration	Plug-in	Integrated
Optical ONU Bank/Shelf	Hardwired	ONU
Optical Line Units	Common	ONU
HDSL Common Equipment	Common	HDSL
ADSL Common Equipment	Common	ADSL
DSX Panel	Hardwired	All
Bay	Hardwired	All
D4 Bay	Hardwired	NSW
D4 Shelf	Hardwired	NSW
D4 Channel Unit	Plug-in	NSW

002545

**Vendor "B" DLC - Channel (DLC/ONU-DLCRT)**

<b>Item</b>	<b>Material Cost</b>	<b>Service Capacity</b>	<b>Total Placing Hours</b>
POTS		2	0
POTSX		2	0
COIN		1	0
COINX		1	0
BRI-ISDN		1	0
BRI-ISDNX		1	0
CENTREX		2	0
CENTREXX		2	0
SW-VGSS		2	0
SW-VGSSX		2	0
NSW-VGSS		1	0
NSW-VGSSX		1	0
4-WIRE		1	0
4-WIREX		1	0
DS1		4	0
DS1X		4	0
HDSL		1	0
HDSLX		1	0
ADSL		1	0
ADSLX		1	0
PBX		2	0
PBXX		2	0

002546

**Vendor "B" DLC - CE (DLC/ONU-DLCRT)**

Item	Material Cost	DSO Capacity	Total Placing Hours
RT CE Optical Bank/Shelf		2016	0
CE Bank/Shelf Common Equip. (Integrated)		672	0
CE Bank/Shelf Common Equip. (Universal)		672	0
TSI		NA	
TSI Protect		2016	
RT channel bank /Shelf (Metallic)		96	0
Channel Bank/Shelf CE		NA	0
ADSL Common Equipment		NA	0
HDSL Common Equipment		NA	0
Optical ONU Bank/Shelf		8	0
Optical Shelf CE		8	0
Optical Line Units		1	0
DSX Panel		2016	0
Batteries, Environ. Equip., Etc.		672	0
Bay		672	0
ONU Cabinet (e.g. CAD-12)		NA	NA
Cabinet Small (includes Batt. Etc.)		NA	0
Cabinet Medium (includes Batt. Etc.)		480	0
Cabinet Large (includes Batt. Etc.)		1344	0
Cabinet Xtra Large (includes Batt. Etc.)		2016	0
Mini-Hut		7257	0
Maxi -Hut		9792	0
CEV 16		8064	0
CEV 24		12096	0

002547

**Vendor "A" DLC - Channel (DLC/ONU-DLCRT)**

Item	Material Cost	Service Capacity	Total Placing Hours
POTS		4	0
POTSX		4	0
COIN		4	0
COINX		4	0
BRI-ISDN		4	0
BRI-ISDNX		4	0
CENTREX		4	0
CENTREXX		4	0
SW-VGSS		4	0
SW-VGSSX		4	0
NSW-VGSS		4	0
NSW-VGSSX		4	0
4-WIRE		2	0
4-WIREX		2	0
DS1		1	0
DS1X		1	0
HDSL		1	0
HDSLX		1	0
ADSL		1	0
ADSLX		1	0
PBX		4	0
PBXX		4	0

002548

**Vendor "A" DLC - CE (DLC/ONU-DLCRT)**

Item	Material Cost	DSO Capacity	Total Placing Hours
RT CE Optical Bank/Shelf		2016	0
CE Bank/Shelf Common Equip. (Integrated)		2016	0
CE Bank/Shelf Common Equip. (Universal)		2016	0
TSI		672	0
TSI Protect		672	0
RT channel bank /Shelf (Metallic)		224	0
Channel Bank/Shelf CE		224	0
ADSL Common Equipment		1	0
HDSL Common Equipment		1	0
Optical ONU Bank/Shelf		8	0
Optical Shelf CE		8	0
Optical Line Units		1	0
DSX Panel		56	0
Batteries, Environ. Equip., Etc.		672	0
Bay		672	0
ONU Cabinet (e.g. CAD-12)		NA	NA
Cabinet Small (includes Batt. Etc.)		448	0
Cabinet Medium (includes Batt. Etc.)		672	0
Cabinet Large (includes Batt. Etc.)		1344	0
Cabinet Xtra Large (includes Batt. Etc.)		2240	0
Mini-Hut		7257	0
Maxi -Hut		9792	0
CEV 16		8064	0
CEV 16		12096	0

002549

**ONU 24 - Channel (DLC/ONU-DLCRT)**

<b>Item</b>	<b>Material Cost</b>	<b>Service Capacity</b>	<b>Total Placing Hours</b>
POTS		4	0
POTSX		4	0
COIN		1	0
COINX		1	0
BRI-ISDN		1	0
BRI-ISDNX		1	0
CENTREX		4	0
CENTREXX		4	0
SW-VGSS		1	0
SW-VGSSX		1	0
NSW-VGSS		1	0
NSW-VGSSX		1	0
4-WIRE		1	0
4-WIREX		1	0
DS1		4	0
DS1X		4	0
HDSL		1	0
HDSLX		1	0
ADSL		1	0
ADSLX		1	0
PBX		1	0
PBXX		1	0

002550

**ONU 24 - CE (DLC/ONU-DLCRT)**

Item	Material Cost	DSO Capacity	Total Placing Hours
RT CE Optical Bank/Shelf		24	0
CE Bank/Shelf Common Equip. (Integrated)		24	0
CE Bank/Shelf Common Equip. (Universal)		24	0
TSI	NA	NA	NA
TSI Protect	NA	NA	NA
RT channel bank /Shelf (Metallic)	NA	NA	NA
Channel Bank/Shelf CE	NA	NA	NA
ADSL Common Equipment	NA	1	0
HDSL Common Equipment	NA	1	0
Optical ONU Bank/Shelf	NA	NA	NA
Optical Shelf CE	NA	NA	NA
Optical Line Units	NA	NA	NA
DSX Panel	NA	NA	NA
Batteries, Environ. Equip., Etc.	NA	NA	NA
Bay	NA	NA	NA
ONU Cabinet (e.g. CAD-12)		24	0
Cabinet Small (includes Batt. Etc.)	NA	NA	NA
Cabinet Medium (includes Batt. Etc.)	NA	NA	NA
Cabinet Large (includes Batt. Etc.)	NA	NA	NA
Cabinet Xtra Large (includes Batt. Etc.)	NA	NA	NA
Mini-Hut	NA	NA	NA
Maxi -Hut	NA	NA	NA
CEV 16	NA	NA	NA
CEV 24	NA	NA	NA

002551

**Information - Channel (DLC/ONU-DLCRT)**

<b>Item</b>	<b>Equipment Category</b>	<b>UOM</b>
POTS	Plug-in	POTS
POTSX	Plug-in	POTSX
COIN	Plug-in	COIN
COINX	Plug-in	COINX
BRI-ISDN	Plug-in	BRI-ISDN
BRI-ISDNX	Plug-in	BRI-ISDNX
CENTREX	Plug-in	CENTREX
CENTREXX	Plug-in	CENTREXX
SW-VGSS	Plug-in	SW-VGSS
SW-VGSSX	Plug-in	SW-VGSSX
NSW-VGSS	Plug-in	NSW-VGSS
NSW-VGSSX	Plug-in	NSW-VGSSX
4-WIRE	Plug-in	4-WIRE
4-WIREX	Plug-in	4-WIREX
DS1	Plug-in	DS1
DS1X	Plug-in	DS1X
HDSL	Plug-in	HDSL
HDSLX	Plug-in	HDSLX
ADSL	Plug-in	ADSL
ADSLX	Plug-in	ADSLX
PBX	Plug-in	PBX
PBXX	Plug-in	PBXX

002552

**Information - CE (DLC/ONU-DLCRT)**

<b>Item</b>	<b>Equipment Category</b>	<b>UOM</b>
RT CE Optical Bank/Shelf	Hardwired	All
CE Bank/Shelf Common Equip. (Integrated)	Common	All
CE Bank/Shelf Common Equip. (Universal)	Common	All
TSI	Common	All
TSI Protect	Common	All
RT channel bank /Shelf (Metallic)	Hardwired	All
Channel Bank/Shelf CE	Common	All
ADSL Common Equipment	Common	ADSL
HDSL Common Equipment	Common	HDSL
Optical ONU Bank/Shelf	Hardwired	All
Optical Shelf CE	Common	ONU
Optical Line Units	Common	ONU
DSX Panel	Hardwired	All
Batteries, Environ. Equip., Etc.	Hardwired	All
Bay	Hardwired	All
ONU Cabinet (e.g. CAD-12)	Hardwired	All
Cabinet Small (includes Batt. Etc.)	Hardwired	All
Cabinet Medium (includes Batt. Etc.)	Hardwired	All
Cabinet Large (includes Batt. Etc.)	Hardwired	All
Cabinet Xtra Large (includes Batt. Etc.)	Hardwired	All
Mini-Hut	Hut	All
Maxi -Hut	Hut	All
CEV 16	CEV	All
CEV 24	CEV	All

002553

**DLC/SONET SubFRC (DLC/ONU-Other)**

<b>Item</b>	<b>COT SubFRC</b>	<b>RT SubFRC</b>	<b>Customer Premise SubFRC</b>
CEV	0	0	0
Combined	15	0	0
Common	6	40	22
Hardwired	3	37	19
Hut	0	0	0
Plug-in	12	46	28

002554

**DLC/SONET FRC (DLC/ONU-Other)**

<b>Item</b>	<b>FRC</b>
CEV	4C
COT	257C
Hut	10C
POP	357C
RT	257C

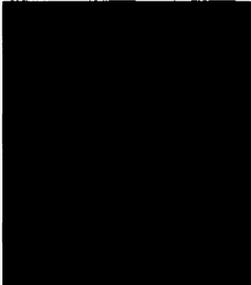
002555

**DLC Vendor Mix (DLC/ONU-Other)**

<b>DLC Type</b>	<b>Vendor "A"</b>	<b>Vendor "B"</b>
Integrated	0.42	0.58
ONU	0	1
Universal	0.42	0.58

002556

**COT Fiber Termination (DLC/ONU-Other)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Fiber Terminating Frame	6	
Fiber Terminating Frame	12	
Fiber Terminating Frame	24	
Fiber Terminating Frame	48	
Fiber Terminating Frame	72	
Fiber Terminating Frame	96	
Fiber Terminating Frame	144	
Fiber Terminating Frame	216	

002557

Plant Mix (Engineering Rules)

Density Lower Range	Density Upper Range	Density Group	Cost Family	Water Table	Bedrock Depth	Terrain Difficulty	CLLI	Percent Aerial	Percent Buried	Percent Underground	Order of Processing	Source
0	100000000	*	*	1000	1000	*	*	0.33	0.33	0.34	1	NOT USED
0	100000000	Rural	Dist	1000	1000	*	*	0.25	0.75	0	2	NOT USED
0	100000000	Suburban	Dist	1000	1000	*	*	0.15	0.85	0	3	NOT USED
0	100000000	Urban	Dist	1000	1000	*	*	0.05	0.95	0	4	NOT USED
0	100000000	Rural	Fdr	1000	1000	*	*	0.25	0.75	0	5	NOT USED
0	100000000	Suburban	Fdr	1000	1000	*	*	0.15	0.5	0.35	6	NOT USED
0	100000000	Urban	Fdr	1000	1000	*	*	0	0.25	0.75	7	NOT USED
0	100000000	*	*	15	15	*	*	1	0	0	8	
5000	10000	*	*	1000	1000	*	*	0	0	1	9	
0	100000000	*	*	1000	1000	*	ARCHFLMARS0	8.86E-02	0.904902028	6.54E-03	10	MR7 Report
0	100000000	*	*	1000	1000	*	BCRTFLBTDSD	6.09E-02	0.718852491	0.220241703	11	MR7 Report
0	100000000	*	*	1000	1000	*	BCRTFLMADS1	0.165080488	0.588953345	0.245966167	12	MR7 Report
0	100000000	*	*	1000	1000	*	BCRTFLSADS0	4.82E-02	0.792619083	0.161221659	13	MR7 Report
0	100000000	*	*	1000	1000	*	BGPFLMARS0	0.805222256	7.86E-02	0.116184197	14	MR7 Report
0	100000000	*	*	1000	1000	*	BKVLFLJFDS0	0.118980587	0.847648724	3.34E-02	15	MR7 Report
0	100000000	*	*	1000	1000	*	BLDWFLMARS0	0.243326631	0.749097328	7.57E-03	16	MR7 Report
0	100000000	*	*	1000	1000	*	BLGLFLMADS0	0.296757233	0.659722902	4.15E-02	17	MR7 Report
0	100000000	*	*	1000	1000	*	BNNFLMARS0	5.17E-02	0.941812048	6.50E-03	18	MR7 Report
0	100000000	*	*	1000	1000	*	BRSHFLMARS0	0.096320073	0.897400598	6.29E-03	19	MR7 Report
0	100000000	*	*	1000	1000	*	BYBHFLMADS0	0.167860064	0.680267818	0.151872118	20	MR7 Report
0	100000000	*	*	1000	1000	*	CBHFFLMADS0	0.133174083	0.469333162	0.397492754	21	MR7 Report
0	100000000	*	*	1000	1000	*	CDKYFLMARS0	7.96E-02	0.911160141	1.02E-02	22	MR7 Report
0	100000000	*	*	1000	1000	*	CFDLFLMARS0	0.117577975	0.872433591	9.99E-03	23	MR7 Report
0	100000000	*	*	1000	1000	*	CHPLFLJADS0	0.185305242	0.797861165	3.68E-02	24	MR7 Report
0	100000000	*	*	1000	1000	*	CNTMFLLEDS1	0.385208686	0.608297471	2.85E-02	25	MR7 Report
0	100000000	*	*	1000	1000	*	COCOFMADS0	0.275183596	0.605868509	0.119129895	26	MR7 Report
0	100000000	*	*	1000	1000	*	COCOFLMEDS0	0.273240534	0.817521239	0.109238227	27	MR7 Report
0	100000000	*	*	1000	1000	*	CSCYFLBARS0	0.124294437	0.867974586	7.73E-03	28	MR7 Report
0	100000000	*	*	1000	1000	*	DBRYFLDLDS0	5.55E-02	0.904787577	3.97E-02	29	MR7 Report
0	100000000	*	*	1000	1000	*	DBRYFLMARS1	0.101283603	0.848603594	0.050112833	30	MR7 Report
0	100000000	*	*	1000	1000	*	DELDFLMADS0	0.143367354	0.760240435	9.64E-02	31	MR7 Report
0	100000000	*	*	1000	1000	*	DLBHFLKPS0	0.1493345	0.719583744	0.131061758	32	MR7 Report
0	100000000	*	*	1000	1000	*	DLBHFLMADS0	0.240112275	0.473271062	0.286616663	33	MR7 Report
0	100000000	*	*	1000	1000	*	DLSPFLMARS0	0.113924004	0.885078878	9.97E-04	34	MR7 Report
0	100000000	*	*	1000	1000	*	DNLNFLMARS0	3.19E-02	0.954027888	1.40E-02	35	MR7 Report
0	100000000	*	*	1000	1000	*	DRBHFLMADS0	0.157336854	0.623341585	0.21932156	36	MR7 Report
0	100000000	*	*	1000	1000	*	DYBHFLMARS0	0.142405994	0.65382591	0.203788096	37	MR7 Report
0	100000000	*	*	1000	1000	*	DYBHFLMADS0	0.204282193	0.564490786	0.231227041	38	MR7 Report
0	100000000	*	*	1000	1000	*	DYBHFLBDS0	0.120488906	0.7781859	0.101345192	39	MR7 Report
0	100000000	*	*	1000	1000	*	DYBHFLSOS0	0.307441118	0.474863051	0.217695831	40	MR7 Report
0	100000000	*	*	1000	1000	*	DYBHFLPODS0	8.89E-02	0.758167643	0.154914905	41	MR7 Report
0	100000000	*	*	1000	1000	*	EGLLFLBGDS0	0.166070032	0.698228864	0.135701104	42	MR7 Report
0	100000000	*	*	1000	1000	*	EGLLFLIHDS0	0.212617714	0.584092242	0.203290044	43	MR7 Report
0	100000000	*	*	1000	1000	*	EORNFLMARS0	0.357836173	0.823186162	1.92E-02	44	MR7 Report
0	100000000	*	*	1000	1000	*	FLBHFLMARS0	8.48E-02	0.88864421	2.65E-02	45	MR7 Report
0	100000000	*	*	1000	1000	*	FRBHFLPDS0	0.174904626	0.742606536	0.082488638	46	MR7 Report
0	100000000	*	*	1000	1000	*	FTGRFLMARS0	3.24E-02	0.9636834	3.76E-03	47	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDFLAPRS0	7.65E-02	0.328584664	0.594937958	48	MR7 Report

002558

Plant Mix (Engineering Rules)

Density Lower Range	Density Upper Range	Density Group	Cost Family	Water Table	Bedrock Depth	Terrain Difficulty	CLLI	Percent Aerial	Percent Buried	Percent Underground	Order of Processing	Source
0	100000000	*	*	1000	1000	*	FTLDLFCRDS0	0.401337057	0.194668393	0.403994549	49	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFCYDS0	0.335384185	0.236786789	0.427849086	50	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFIADS0	0.124152144	0.646160427	0.229667429	51	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDFLMRDS0	0.315023125	0.237897817	0.447079058	52	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFLADS0	0.197070204	0.539018358	0.263813438	53	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFLPLDS0	0.357551123	0.355810194	0.286638682	54	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFLSGDS0	5.32E-02	0.515759118	0.431079696	55	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFLSUDS0	7.93E-02	0.760699694	0.159994059	56	MR7 Report
0	100000000	*	*	1000	1000	*	FTLDLFLWDS0	4.92E-02	0.742362253	0.208434268	57	MR7 Report
0	100000000	*	*	1000	1000	*	FTPRFLMADS0	0.306825225	0.547511481	0.145863294	58	MR7 Report
0	100000000	*	*	1000	1000	*	GCSPLFCNDS0	0.18871028	0.762418676	3.89E-02	59	MR7 Report
0	100000000	*	*	1000	1000	*	GCVLFLMARS0	0.127741402	0.862887825	9.37E-03	60	MR7 Report
0	100000000	*	*	1000	1000	*	GENVFLMARS0	0.199755438	0.798099995	2.14E-03	61	MR7 Report
0	100000000	*	*	1000	1000	*	GLBRFLMADS0	0.157536747	0.703843083	0.13862017	62	MR7 Report
0	100000000	*	*	1000	1000	*	GSVLFLMADS0	0.125370449	0.659178186	0.215453365	63	MR7 Report
0	100000000	*	*	1000	1000	*	GSVLFLW33E	5.44E-02	0.814855498	1.52E-02	64	MR7 Report
0	100000000	*	*	1000	1000	*	HAVNFLMADS0	0.185113771	0.799896585	1.52E-02	65	MR7 Report
0	100000000	*	*	1000	1000	*	HBSDFLMADS0	0.189796563	0.695814903	0.114588534	66	MR7 Report
0	100000000	*	*	1000	1000	*	HLNVFLMADS1	0.328986259	0.664047072	6.09E-03	67	MR7 Report
0	100000000	*	*	1000	1000	*	HLWDFLHADS0	0.258024853	0.352356765	0.389618382	68	MR7 Report
0	100000000	*	*	1000	1000	*	HLWDFLHADS0	0.330191032	0.288424846	0.401384122	69	MR7 Report
0	100000000	*	*	1000	1000	*	HLWDFLPEDS0	0.151465511	0.705851058	0.142863431	70	MR7 Report
0	100000000	*	*	1000	1000	*	HLWDFLWADS0	0.32379695	0.324889532	0.351313518	71	MR7 Report
0	100000000	*	*	1000	1000	*	HMSTFLAFRS0	0.150576462	0.666262258	0.18318128	72	MR7 Report
0	100000000	*	*	1000	1000	*	HMSTFLARS0	0.419278866	0.412081694	0.16863944	73	MR7 Report
0	100000000	*	*	1000	1000	*	HMSTFLHADS0	0.318165103	0.450128287	0.23170561	74	MR7 Report
0	100000000	*	*	1000	1000	*	HTSFLMADS0	9.79E-02	0.71483396	0.187296215	75	MR7 Report
0	100000000	*	*	1000	1000	*	HWTHFLMARS0	0.215850825	0.773182134	1.09E-02	76	MR7 Report
0	100000000	*	*	1000	1000	*	ISLWFLMARS0	0.727771615	0.167289239	0.104939146	77	MR7 Report
0	100000000	*	*	1000	1000	*	JAY-FLMARS0	0.108344936	0.872393033	1.93E-02	78	MR7 Report
0	100000000	*	*	1000	1000	*	JCBHFLABRS0	2.49E-02	0.978201037	-3.14E-03	79	MR7 Report
0	100000000	*	*	1000	1000	*	JCBHFLMADS0	5.18E-02	0.745512716	0.202895054	80	MR7 Report
0	100000000	*	*	1000	1000	*	JCBHFLSPRS0	0.061981514	0.900952888	3.71E-02	81	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLARDS0	0.158700314	0.626491281	0.214808405	82	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLBADS0	7.54E-02	0.714880646	0.209696533	83	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLCLDS0	0.240469904	0.355123421	0.404406676	84	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLCDS0	0.148254453	0.726906251	0.124837296	85	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLIARS0	0.12171818	0.545550581	0.332733239	86	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLIARS0	1.92E-02	0.318120088	0.662637535	87	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLIFDS0	0.353839636	0.464993219	0.181367145	88	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLIADS0	0.233028786	0.823782352	0.143188862	89	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLIADS0	0.274777114	0.587856764	0.137586121	90	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLRADS0	0.324977841	0.405640874	0.269381285	91	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLRADS0	0.108658743	0.585132954	0.308208302	92	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLS73E	0.154807247	0.419385225	0.425807528	93	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLSADS0	0.144677609	0.840064936	0.215257255	94	MR7 Report
0	100000000	*	*	1000	1000	*	JCVLFLWADS0	0.363888486	0.540515549	9.50E-02	95	MR7 Report
0	100000000	*	*	1000	1000	*	JYTRFLMADS0	0.250092591	0.740442196	9.47E-03	96	MR7 Report
0	100000000	*	*	1000	1000	*	KYHGLMARS0	0.250092591	0.740442196	9.47E-03	97	MR7 Report
0	100000000	*	*	1000	1000	*	KYRFLLSRS0	0.672799985	0.189897924	0.137302111	97	MR7 Report

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Plant Mix (Engineering Rules)

Density Lower Range	Density Upper Range	Density Group	Cost Family	Water Table	Bedrock Depth	Terrain Difficulty	CLLI	Percent Aerial	Percent Buried	Percent Underground	Order of Processing	Source
0	100000000	*	*	1000	1000	*	KYLRFLMARS0	0.580567002	0.169928735	0.249484264	98	MR7 Report
0	100000000	*	*	1000	1000	*	KYWSFLMADS0	0.564620592	0.110926732	0.324452676	99	MR7 Report
0	100000000	*	*	1000	1000	*	LKCYFLMADS0	7.74E-02	0.874565145	4.81E-02	100	MR7 Report
0	100000000	*	*	1000	1000	*	LKMRFLMADS0	3.96E-02	0.7482876	0.215088757	101	MR7 Report
0	100000000	*	*	1000	1000	*	LYHNFLCHDS0	0.215364796	0.759437524	2.52E-02	102	MR7 Report
0	100000000	*	*	1000	1000	*	MCPFLMARS0	0.17074892	0.818732419	1.25E-02	103	MR7 Report
0	100000000	*	*	1000	1000	*	MDBGFLPMDS0	0.322980387	0.850981208	2.80E-02	104	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLAEDS0	0.467371939	0.129937381	0.40289068	105	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLALDS0	0.472077122	0.108912842	0.419010036	106	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLAPDS0	9.96E-02	0.171055189	0.729374353	107	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLBADS0	0.439676854	0.170021284	0.390301862	108	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLBCDS0	0.373511655	0.146403986	0.490094359	109	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLBRDS0	0.207743846	0.142178909	0.650077245	110	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLCADS0	0.178446815	0.464807748	0.356745437	111	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLDBRS1	0.116565073	0.155919153	0.727515774	112	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLFLDS0	0.502017098	0.123609333	0.374373569	113	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLGRDS0	9.79E-02	0.21E-02	0.840059557	114	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLHILDS0	0.248385805	0.498821396	0.252792799	115	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLCDS0	0.259152111	0.204084025	0.536783064	116	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLKEDS0	0.250550987	0.460987371	0.288451842	117	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLMEDS0	0.337837411	0.135711462	0.526451126	118	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLNMDSD	0.35422884	0.271517553	0.374253807	119	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLNSDS0	0.501798519	0.205577052	0.292854429	120	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLOLDS0	0.456253229	0.221823593	0.321923178	121	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLPBDS0	0.458535479	0.191230191	0.35023433	122	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLPLDS0	0.180773374	0.385470968	0.433759659	123	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLRRDS0	0.406989013	0.306995672	0.286015315	124	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLSHDS0	0.426746238	0.159162374	0.414091388	125	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLSODS0	0.240413565	0.497538873	0.262049542	126	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLWDDS0	1.90E-02	0.749658598	0.230548999	127	MR7 Report
0	100000000	*	*	1000	1000	*	MIAMFLWMDSD	0.345338944	0.199426354	0.455234703	128	MR7 Report
0	100000000	*	*	1000	1000	*	MICCFLLBRS0	0.150888504	0.79818539	0.050626106	129	MR7 Report
0	100000000	*	*	1000	1000	*	MLBRFLMADS0	0.113645467	0.764695619	0.121856814	130	MR7 Report
0	100000000	*	*	1000	1000	*	MLTNFLRADS0	0.228589507	0.725419425	4.80E-02	131	MR7 Report
0	100000000	*	*	1000	1000	*	MNDRFLAVDS0	2.42E-02	0.601234475	0.374577548	132	MR7 Report
0	100000000	*	*	1000	1000	*	MNDRFLLODS0	0.073967601	0.828398155	0.097734244	133	MR7 Report
0	100000000	*	*	1000	1000	*	MNDRFLWRS0	0.170614211	0.796361707	8.30E-02	134	MR7 Report
0	100000000	*	*	1000	1000	*	MNSHFLMARS0	0.02077857	0.977607274	1.42E-03	135	MR7 Report
0	100000000	*	*	1000	1000	*	MRTHFLVERS0	0.807191727	0.123575927	0.289232346	136	MR7 Report
0	100000000	*	*	1000	1000	*	MXVLFLMARS0	0.22672588	0.765232627	8.04E-03	137	MR7 Report
0	100000000	*	*	1000	1000	*	NDADFLACDS0	0.294976649	0.227331921	0.47789143	138	MR7 Report
0	100000000	*	*	1000	1000	*	NDADFLBRDS0	0.300410091	0.483534426	0.236055483	139	MR7 Report
0	100000000	*	*	1000	1000	*	NDADFLGGDS0	0.311692557	0.337179554	0.351127889	140	MR7 Report
0	100000000	*	*	1000	1000	*	NDADFLLODS0	0.217031293	0.250473379	0.532495327	141	MR7 Report
0	100000000	*	*	1000	1000	*	NKLRFLMARS0	0.370053086	0.462803284	0.167143649	142	MR7 Report
0	100000000	*	*	1000	1000	*	NSBHFLMADS0	0.124722083	0.736859838	0.136418078	143	MR7 Report
0	100000000	*	*	1000	1000	*	NVBYFLMARS0	8.27E-02	0.906408018	1.09E-02	144	MR7 Report
0	100000000	*	*	1000	1000	*	OKHLFLMARS0	0.118410862	0.865840468	1.57E-02	145	MR7 Report
0	100000000	*	*	1000	1000	*	OLTWFLNRS0	8.90E-02	0.907665577	3.30E-03	146	MR7 Report
0	100000000	*	*	1000	1000	*	ORLDFLAPDS0	0.12016405	0.709362048	0.170473902	147	MR7 Report
0	100000000	*	*	1000	1000	*	ORLDFLCLDS0	0.146341163	0.599098128	0.252560709	148	MR7 Report

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Plant Mix (Engineering Rules)

Density Lower Range	Density Upper Range	Density Group	Cost Family	Water Table	Bedrock Depth	Terrain Difficulty	CLLI	Percent Aerial	Percent Buried	Percent Underground	Order of Processing	Source
0	100000000	*	*	1000	1000	*	ORLDLFLMADS1	0.114284283	0.570383739	0.315331978	149	MR7 Report
0	100000000	*	*	1000	1000	*	ORLDLFLPCDS0	6.72E-02	0.732867917	0.199971532	150	MR7 Report
0	100000000	*	*	1000	1000	*	ORLDLFLPHDS0	6.24E-02	0.799115791	0.138449041	151	MR7 Report
0	100000000	*	*	1000	1000	*	ORLDLFLSADS0	6.32E-02	0.879288433	0.2575727	152	MR7 Report
0	100000000	*	*	1000	1000	*	ORPKFLMADS0	9.87E-02	0.732551792	0.170724014	153	MR7 Report
0	100000000	*	*	1000	1000	*	ORPKFLRWDS0	0.080677553	0.758762248	0.180560199	154	MR7 Report
0	100000000	*	*	1000	1000	*	OVIDFLCADS0	9.00E-02	0.851712152	5.83E-02	155	MR7 Report
0	100000000	*	*	1000	1000	*	FACEFLPV99E	0.20499149	0.736728828	5.83E-02	156	MR7 Report
0	100000000	*	*	1000	1000	*	PAHKFLMARS0	0.14739423	0.81411933	0.03848644	157	MR7 Report
0	100000000	*	*	1000	1000	*	PCBHFLNTDS0	0.10383111	0.775438556	0.120930334	158	MR7 Report
0	100000000	*	*	1000	1000	*	PLCSFLMADS0	7.83E-03	0.958286098	3.29E-02	159	MR7 Report
0	100000000	*	*	1000	1000	*	PLTKFLMADS0	0.135220848	0.795879372	8.81E-02	160	MR7 Report
0	100000000	*	*	1000	1000	*	PMBHFLCSDS0	6.42E-02	0.792827506	0.14316147	161	MR7 Report
0	100000000	*	*	1000	1000	*	PMBHFLFEDS0	0.348740113	0.316186327	0.33509356	162	MR7 Report
0	100000000	*	*	1000	1000	*	PMBHFLMADS0	0.155337627	0.543470116	0.301192257	163	MR7 Report
0	100000000	*	*	1000	1000	*	PMBHFLTADS0	3.76E-02	0.811218472	0.151187898	164	MR7 Report
0	100000000	*	*	1000	1000	*	PMPKFLMARS0	8.48E-02	0.914017996	1.15E-03	165	MR7 Report
0	100000000	*	*	1000	1000	*	PNCYFLCA87E	0.17138653	0.782398561	4.82E-02	166	MR7 Report
0	100000000	*	*	1000	1000	*	PNCYFLMADS0	0.23719854	0.59870173	0.16409973	167	MR7 Report
0	100000000	*	*	1000	1000	*	PNSCFBLDSD0	0.305332101	0.482140264	0.212527636	168	MR7 Report
0	100000000	*	*	1000	1000	*	PNSCFLFPDS0	0.192119815	0.631380281	0.176499904	170	MR7 Report
0	100000000	*	*	1000	1000	*	PNSCFLHCDSD0	0.316390257	0.802289465	8.13E-02	171	MR7 Report
0	100000000	*	*	1000	1000	*	PNSCFLPBDS0	0.148736464	0.843934238	7.33E-03	172	MR7 Report
0	100000000	*	*	1000	1000	*	PNSCFLWADS0	0.181641826	0.649000538	0.167457636	173	MR7 Report
0	100000000	*	*	1000	1000	*	PNDVFLMADS0	1.72E-02	0.948710078	3.41E-02	174	MR7 Report
0	100000000	*	*	1000	1000	*	PRRNFLMADS0	0.241277479	0.553162817	0.205559704	175	MR7 Report
0	100000000	*	*	1000	1000	*	PRSNFLPDRS0	0.128524308	0.867858004	3.62E-03	176	MR7 Report
0	100000000	*	*	1000	1000	*	PTSLFLMADS0	0.327912894	0.808742425	6.53E-02	177	MR7 Report
0	100000000	*	*	1000	1000	*	PTSLFLSOGG0	0.145804158	0.727077708	0.127118783	178	MR7 Report
0	100000000	*	*	1000	1000	*	SBSTFLFRS0	0.577040371	0.419877194	0.003082435	179	MR7 Report
0	100000000	*	*	1000	1000	*	SBSTFLMADS0	0.270109873	0.845473051	0.084417076	180	MR7 Report
0	100000000	*	*	1000	1000	*	SGKYFLMARS0	0.71682655	0.131224304	0.151949146	181	MR7 Report
0	100000000	*	*	1000	1000	*	SNFRFLMADS0	0.128823266	0.758022597	0.115154137	182	MR7 Report
0	100000000	*	*	1000	1000	*	STAGFLBRSR0	3.14E-02	0.787262272	0.181384733	183	MR7 Report
0	100000000	*	*	1000	1000	*	STAGFLMADS0	0.207243667	0.859559676	0.133098657	184	MR7 Report
0	100000000	*	*	1000	1000	*	STAGFLSHRS0	0.102857454	0.83799833	5.91E-02	185	MR7 Report
0	100000000	*	*	1000	1000	*	STAGFLWGRS0	0.151	0.7242	0.1248	186	MR7 Report
0	100000000	*	*	1000	1000	*	STRFLMADS0	0.169997841	0.6632038	0.166798359	187	MR7 Report
0	100000000	*	*	1000	1000	*	SYHSFLCCRS0	0.132024084	0.859674978	8.30E-03	188	MR7 Report
0	100000000	*	*	1000	1000	*	TRENFLMARS0	7.59E-02	0.91476262	9.35E-03	189	MR7 Report
0	100000000	*	*	1000	1000	*	TTVLFLMADS0	0.239211829	0.842723423	0.118064747	190	MR7 Report
0	100000000	*	*	1000	1000	*	VERNFLMARS0	0.144987866	0.849918313	0.00509582	191	MR7 Report
0	100000000	*	*	1000	1000	*	VRBFLBERS0	8.72E-02	0.753489075	0.158285364	192	MR7 Report
0	100000000	*	*	1000	1000	*	VRBFLMADS0	0.281911764	0.837598896	0.100491339	193	MR7 Report
0	100000000	*	*	1000	1000	*	WELKFLMARS0	0.13361593	0.865240778	1.14E-03	194	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLANDS0	0.347012565	0.252097681	0.400889754	195	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLGADS0	0.222822199	0.815812847	0.161564954	196	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLGRDS0	0.206329583	0.649873941	0.143796476	197	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLHDS0	0.197201878	0.57289235	0.230105772	198	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLLEDSD0	0.27021839	0.405182587	0.324621042	199	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLRBDSD0	0.313468558	0.410266562	0.27826888	200	MR7 Report
0	100000000	*	*	1000	1000	*	WPBHFLRPDS0	0.510264145	0.452972405	3.86E-02	201	MR7 Report
0	100000000	*	*	1000	1000	*	WWSPLFHDS0	9.92E-02	0.874287361	2.86E-02	202	MR7 Report
0	100000000	*	*	1000	1000	*	WWSPLSHDS0	0.036532827	0.930309988	3.32E-02	203	MR7 Report
0	100000000	*	*	1000	1000	*	YNFNFLMARS0	0.189451052	0.809784287	7.85E-04	204	MR7 Report
0	100000000	*	*	1000	1000	*	YNTWFLMARS0	0.231111178	0.760293685	8.80E-03	205	MR7 Report
0	100000000	*	*	1000	1000	*	YULEFLMARS0	0.323990114	0.687805354	8.20E-03	206	MR7 Report

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**Network Rules (Engineering Rules)**

<b>Rule</b>	<b>Value</b>	<b>UOM</b>	
AA24/26GaugeXover	12000	Feet	
BuildToWhat	HouseholdsOnLotsWithWorkingLines	Text	
CSA24/26GaugeXover	9000	Feet	
CustomerGrowthFactor	0	Percent	
DesignPairsPerHU	2	Pairs	
DistributionSizingRoutine	PairsPerHouse	Text	
DS1XoverToFOatLot	5	DS1s	
FDICableDesignPairsPerHU	1.5	Factor	
HiCapNodesPerSONETRing	5	Nodes	
MaximumCUCableSize	4200	Pairs	
MaximumFOSize	216	Strands	
MinFDIToDLCAANDistance	8	Feet	
MinFOStrandsPerONU	1.2	Strands	
MinFOStrandsPerRing	6	Strands	
MinimumCUCableSize	25	Pairs	
MinimumFOSize	12	Strands	
MinimumPairsPerBusiness	6	Pairs	<b>NOT USED</b>
PoleSizeWithoutSharing	40	Feet	<b>NOT USED</b>
PoleSizeWithSharing	40	Feet	<b>NOT USED</b>
TR008BusConcentrationRatio	1		
TR008ResConcentrationRatio	2		
TR303BusConcentrationRatio	3		
TR303ResConcentrationRatio	4		
WaterDepthCev/HutXover		0 Feet	<b>NOT USED</b>

002562

**GIS Rules (Engineering Rules)**

<b>Rule</b>	<b>Value</b>	<b>UOM</b>	
AALineDesignLimit	1800	Lines	
AALineMinimumLimit	10	Lines	
BTDTToFDIXover	100	Lines	<b>NOT USED</b>
CopperLengthDesignLimit	12000	Feet	
CopperLengthHardLimit	13000	Feet	
DCLengthDesignLimit	12000	Feet	
DCLengthHardLimit	18000	Feet	
DLCLineDesignLimit	1800	Lines	
DLCLineMinimumLimit	10	Lines	
DTBTHHDesignLimit	6	HH	
FDILineDesignLimit	900	Lines	
FDIToDLCXoverBus	400	DS0	
FDIToDLCXoverTotal	1000	DS0	
MaxDropLen	700	Feet	
MinimizeTotDistFDICost	Yes	Text	<b>NOT USED</b>
NIDToBTDTXover	5	Lines	
NumberNodesPerRing	4	Nodes	
UseActualCustomerLocations	Yes	Text	
UseActualNetworkLocations	No	Text	

002563

### FDI and BT Engineering (Engineering Rules)

Rule Name	Rule	Value
CrossOverfrom66to303	Cross-over from 66 type to 303 type (In Pairs)	7200
BTOutInRatio	Indoor building terminal In/Out Ratio	2
FDIOutInRatioIndoor	Indoor SAI In/Out Ratio	3
FDIOutInRatioOutdoor	Outdoor SAI In/Out Ratio	3

002564

### Electronic and Fiber Sizing (Engineering Rules)

Equipment	Engineering Fill	
DistCUFill	1	
DistFOFill	0.75	NOT USED
DLCCOTFill	0.8	
DLCRTFill	0.7	
DTFill	0.85	
ElectronicFill	0.85	NOT USED
FDIFill	0.9	
FdrCUFill	0.75	
FdrFOFill	0.75	NOT USED
SonetRTFill	0.85	

**DLC Technology (Engineering Rules)**

<b>Integrated/Universal</b>	<b>Lower Limit on DSO's</b>	<b>Upper Limit on DSO's</b>	<b>Density Lower Range</b>	<b>Density Upper Range</b>	<b>Order Of Processing</b>	<b>NOT USED</b>
Universal	0	0	0	100000000	1	
ONU	0	24	0	100000000	2	
Integrated008	24	150	0	100000000	3	
Integrated303	150	100000	0	100000000	4	

002566

### Copper Cable Sizing (Engineering Rules)

Density	Feeder	Distribution*
0	0.700	0.500
5	0.775	0.500
100	0.800	0.500
200	0.825	0.500
650	0.825	0.500
850	0.825	0.500
2550	0.825	0.500
5000	0.825	0.500
10000	0.825	0.500

\* NOT USED

**Building Cable Rules (Engineering Rules)**

<b>Rule</b>	<b>Value</b>
AvgLengthEntranceCable	10
AvgLengthFloortoFloor	25
AvgLinesPerFloor	25
PctTelcoCabledBuildings	0.75

002568

**Drop Placing Hours (Splicing And Placing Hours)**

<b>Item</b>	<b>Placing (Hrs/100 Ft)</b>	<b>Placing (Hrs)</b>
AerialCU	0	1.0392
BuriedCU	0	1.4216
NIDCU	0	0.25

002569

**Service Local Channel (Lookup Tables)**

**Service Code**

ha

ia

jb

ob

pb

rb

002570

Service Description (Lookup Tables)

Service Code	Service	Service Category	Preferred Media*	Extended Range Cutover	Pair Equivalence	DSO Equivalence	Service Class	Channel Unit / Plug-in type	Clustered
A	2WG UV	NSW	CU	14800	1	1	Bus	POTS	Yes
a	LOCAL POTS/POTS-LIKE	NSW	CU	14800	1	1	?	POTS	Yes
B	2WVG UDL ADSL	NSW	CU	1000000	1	32	Bus	NA	Yes
b	PBX	NSW	CU	14800	1	1	Bus	PBX	Yes
c	2WVG UDL HDSL	NSW	CU	1000000	1	24	Bus	NA	Yes
c	CENTREX	NSW	CU	14800	1	1	Bus	CENTREX	Yes
D	2WVG UDL ISDN	NSW	CU	18000	1	3	Bus	BRI-ISDN	Yes
d	COIN SMART LINE	NSW	CU	14800	1	1	Bus	COIN	Yes
E	2WVG USL FEEDER	NSW	CU	14800	1	1	Bus	POTS	Yes
e	COIN REGULAR	NSW	CU	14800	1	1	Bus	COIN	Yes
f	ISDN LOC	NSW	CU	18000	1	3	?	BRI-ISDN	Yes
F	2WVG USL DISTRIBUTION	NSW	CU	1000000	1	1	Bus	NA	Yes
G	2WVG USL RISER	NSW	CU	1000000	1	1	Bus	NA	Yes
g	ISDN PBX	NSW	CU	18000	1	3	Bus	BRI-ISDN	Yes
H	2WVG U LOCAL CHANNEL(357C)	NSW	CU	14800	1	1	Bus	POTS	No
h	DSO 2W	NSW	CU	18000	1	1	Bus	NSW-VGSS	Yes
I	4WVG UD	NSW	CU	18000	2	2	Bus	4-WIRE	Yes
i	DSO 4W	NSW	CU	18000	2	2	Bus	4-WIRE	Yes
J	4WVG UDL (257C) HDSL	NSW	CU	18000	2	24	Bus	HDSL	Yes
j	SLV ANALOG 2W	NSW	CU	14800	1	1	Bus	POTS	Yes
k	DS1 DIGITAL MEGALINK ISDN	NSW	CU	18000	2	24	Bus	HDSL	Yes
K	4WVG UDL (257C) DS1	Wideband	CU	18000	2	24	Bus	HDSL	Yes
L	4WVG USLC DS1	NSW	CU	18000	2	24	Bus	HDSL	Yes
M	4WVG LOOP	NSW	CU	18000	2	2	Bus	4-WIRE	Yes
N	4WVG USL DISTRIBUTION	NSW	CU	1000000	2	2	Bus	NA	Yes
o	SLV ANALOG 4W	NSW	CU	18000	2	2	Bus	4-WIRE	Yes
O	4WVG LOCAL CHANNEL(357C)	NSW	CU	18000	2	2	Bus	4-WIRE	No
p	DS1 DIGITAL ACCESS	Wideband	CU	18000	2	24	Bus	HDSL	Yes
P	UCL (357C) LOCAL CHANNEL DS1 DIGITAL	Wideband	CU	1000000	2	24	Bus	HDSL	No
Q	UCL 2W	NSW	CU	14800	1	1	Bus	NSW-VGSS	Yes
r	DS3 DIGITAL ACCESS	Wideband	FO	1000000	0	672	Bus	DS3	No
R	UCL 4W	NSW	CU	18000	2	2	Bus	4W	Yes
s	DS3 DIGITAL LIGHTGATE/VIDEO	Wideband	FO	1000000	0	672	Bus	DS3	No
S	ULL (257C) DS3	Wideband	FO	1000000	0	672	Bus	DS3	No
T	ULL (257C) OC3	Wideband	FO	1000000	0	2016	Bus	OC3	No
t	DS1 DIGITAL SWITCHED AREA COMM. PLAN	Wideband	CU	18000	2	24	Bus	HDSL	Yes
u	OTHER DSO/ANALOG 2W/4W	NSW	CU	18000	1	1	Bus	NSW-VGSS	Yes
U	ULL (257C) OC12	Wideband	FO	1000000	0	8064	Bus	OC12	No
v	DS3 DIGITAL SWITCHED AREA COMM PLAN, BST TRK SVC	Wideband	FO	1000000	0	672	Bus	DS3	No
V	ULL (257C) OC48	Wideband	FO	1000000	0	32256	Bus	OC48	No
W	U LOCAL CHANNEL (357C) DS3	Wideband	FO	1000000	0	672	Bus	OC1	No
X	U LOCAL CHANNEL (357C) OC3	Wideband	FO	1000000	0	2016	Bus	OC3	No
Y	U LOCAL CHANNEL (357C) OC12	Wideband	FO	1000000	0	8064	Bus	OC12	No
Z	U LOCAL CHANNEL (357C) OC48	Wideband	FO	1000000	0	32256	Bus	OC48	No

\* NOT USED

002571

**Cost Family (Lookup Tables)**

<b>Cost Element</b>	<b>Cost Family</b>
BLDGCABLE	Dist
CO	Fdr
DLC-COT	Fdr
DLC-RT	Fdr
Drop	Dist
DT-FDI	Dist
DTBT	Dist
FDI	Fdr
FDI-DLC	Fdr
NID	Dist
ONU	Dist

002572

**Component (Lookup Tables)**

<b>Component Code</b>	<b>FRC</b>	<b>SubFRC</b>	<b>Cost Type</b>	
AerialCU	22C		VS	
AerialCU24G	22C4		VS	
AerialFO	822C		VS	
BuildingCU	12C		VS	
BuildingCU24G	12C4		VS	
BuildingFO	812C		VS	
Buried Suburban Excavation Act	12C		VS	
BuriedCU	45C		VS	
BuriedCU24G	45C4		VS	
BuriedFO	845C		VS	
BuriedTrenchCU	45C		VS	
BuriedTrenchCU24G	45C4		VS	
BuriedTrenchFO	845C		VS	
Conduit	4C		VS	
DLCCOT	257C		VS	<b>NOT USED</b>
DLCRT	257C		VS	<b>NOT USED</b>
IntrabuildingCU	52C		VS	
IntrabuildingCU24G	52C4		VS	
IntrabuildingFO	852C		VS	
NIDCU	22C	1	VS	
NIUCU	257C	19	VS	
Pole	1C		VS	
UndergroundCU	5C		VS	
UndergroundCU24G	5C4		VS	
UndergroundFO	85C		VS	

002573

**Labor Rate (Labor Rates And Loadings)**

<b>Type</b>	<b>Rate/Hour</b>	<b>Labor Rate</b>
Engineering	0	Engineering Plant or Test Direct Labor Costs/ Hour
Estimators	0	Estimators/Posting
Inspectors	0	Inspectors (Contract Administration-46)
LAC	0	Assignment (LAC)
Placing	29.05	Placing (44) Plant Direct Labor Costs per Hour
Splicing	0	Splicing (43) Plant Direct Labor Costs per Hour

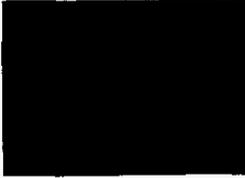
002574

**NID/NIU (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
HDSL Modem	1	
NID	2	
NID	6	
NIDIntandProt	1	
NIU	1	

002575

**Indoor FDI Terminals Primitives (Material)**

Plant Type	Type	Item	Capacity	Material Cost		
Indoor FDI Terminals	FDI66Connector	66 -type Punch-Down Connector Blocks (50 pair)	50			
Indoor FDI Terminals	FDIBackboard	Backboard (In) (200 pair )	200			
Indoor FDI Terminals	FDI189Protector	189 type Protector (100 pair)	100			
Indoor FDI Terminals	FDI303Connector	303 type connector (100 pair includes coils)	100			<b>NOT USED</b>
Indoor FDI Terminals	FDI303Rack	Iron Racks for 303 (per 100 pair)	100			<b>NOT USED</b>

Fiber Cable (Material)	Type or Size	Material Cost
Aerial	6	
Aerial	12	
Aerial	18	
Aerial	24	
Aerial	30	
Aerial	32	
Aerial	36	
Aerial	44	
Aerial	48	
Aerial	60	
Aerial	72	
Aerial	84	
Aerial	96	
Aerial	108	
Aerial	120	
Aerial	132	
Aerial	144	
Aerial	156	
Aerial	168	
Aerial	216	
Buried	6	
Buried	12	
Buried	18	
Buried	24	
Buried	30	
Buried	32	
Buried	36	
Buried	44	
Buried	48	
Buried	60	
Buried	72	
Buried	84	
Buried	96	
Buried	108	
Buried	120	
Buried	132	
Buried	144	
Buried	156	
Buried	168	
Buried	216	

002577

Fiber Cable (Material)		
Plant Type	Type or Size	Material Cost
Riser/Intrabuilding	6	
Riser/Intrabuilding	12	
Riser/Intrabuilding	18	
Riser/Intrabuilding	24	
Riser/Intrabuilding	30	
Riser/Intrabuilding	32	
Riser/Intrabuilding	36	
Riser/Intrabuilding	44	
Riser/Intrabuilding	48	
Riser/Intrabuilding	60	
Riser/Intrabuilding	72	
Riser/Intrabuilding	84	
Riser/Intrabuilding	96	
Riser/Intrabuilding	108	
Riser/Intrabuilding	120	
Riser/Intrabuilding	132	
Riser/Intrabuilding	144	
Riser/Intrabuilding	156	
Riser/Intrabuilding	168	
Riser/Intrabuilding	216	
Underground	6	
Underground	12	
Underground	18	
Underground	24	
Underground	30	
Underground	32	
Underground	36	
Underground	44	
Underground	48	
Underground	60	
Underground	72	
Underground	84	
Underground	96	
Underground	108	
Underground	120	
Underground	132	
Underground	144	
Underground	156	
Underground	168	
Underground	216	

002578

**FDI Terminals (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Aerial	50	
Aerial	100	
Aerial	200	
Aerial	300	
Aerial	400	
Aerial	600	
Aerial	900	
Aerial	1000	
Aerial	1200	
Aerial	1400	
Aerial	1500	
Aerial	1800	
Aerial	2100	
Aerial	2400	
Aerial	2700	
Aerial	3000	
Aerial	3300	
Aerial	3600	
Aerial	4200	
Aerial	4800	
Aerial	5400	
Aerial	7200	
Buried	50	
Buried	100	
Buried	200	
Buried	300	
Buried	400	
Buried	600	
Buried	900	
Buried	1000	
Buried	1200	
Buried	1400	
Buried	1500	
Buried	1800	
Buried	2100	
Buried	2400	
Buried	2700	
Buried	3000	
Buried	3300	
Buried	3600	
Buried	4200	
Buried	4800	
Buried	5400	
Buried	7200	
Indoor	1	

002579

**FDI Terminals (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Underground	50	
Underground	100	
Underground	200	
Underground	300	
Underground	400	
Underground	600	
Underground	900	
Underground	1000	
Underground	1200	
Underground	1400	
Underground	1500	
Underground	1800	
Underground	2100	
Underground	2400	
Underground	2700	
Underground	3000	
Underground	3300	
Underground	3600	
Underground	4200	
Underground	4800	
Underground	5400	
Underground	7200	

002580

**DTBT Material (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Aerial	25	
Aerial	50	
Aerial	100	
Aerial	200	
Aerial	300	
Aerial	400	
Aerial	600	
Aerial	900	
Buried	25	
Buried	50	
Buried	100	
Buried	200	
Buried	300	
Buried	400	
Buried	600	
Buried	900	

002581

**Drop (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Aerial	2	
Aerial	6	
Buried	2	
Buried	5	

002582

**Copper Cable 26 gauge (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Aerial	25	0.31
Aerial	50	0.39
Aerial	100	0.61
Aerial	200	0.98
Aerial	300	1.38
Aerial	400	1.72
Aerial	600	2.53
Aerial	900	3.81
Aerial	1200	4.99
Aerial	1500	6.41
Aerial	1800	7.83
Aerial	2100	9.59
Aerial	2400	10.8
Aerial	2700	12.42
Aerial	3000	13.5
Aerial	3600	16.2
Aerial	4200	18.9
Buried	25	0.18
Buried	50	0.31
Buried	100	0.51
Buried	200	0.87
Buried	300	1.28
Buried	400	1.74
Buried	600	2.54
Buried	900	3.68
Buried	1200	4.77
Buried	1500	6.12
Buried	1800	7.28
Buried	2100	8.94
Buried	2400	10.21
Buried	2700	11.42
Buried	3000	12.69
Buried	3600	15.12
Buried	4200	17.64

002583

**Copper Cable 26 gauge (Material)**

Plant Type	Type or Size	Material Cost
Riser/Intrabuilding	25	0.31
Riser/Intrabuilding	50	0.39
Riser/Intrabuilding	100	0.61
Riser/Intrabuilding	200	0.98
Riser/Intrabuilding	300	1.38
Riser/Intrabuilding	400	1.72
Riser/Intrabuilding	600	3.64
Riser/Intrabuilding	900	3.81
Riser/Intrabuilding	1200	4.99
Riser/Intrabuilding	1500	6.41
Riser/Intrabuilding	1800	10.19
Riser/Intrabuilding	2100	9.59
Riser/Intrabuilding	2400	13.78
Riser/Intrabuilding	2700	15.94
Riser/Intrabuilding	3000	16.98
Riser/Intrabuilding	3600	20.38
Riser/Intrabuilding	4200	23.1
Underground	25	0.1
Underground	50	0.2
Underground	100	0.4
Underground	200	0.8
Underground	300	1.2
Underground	400	1.6
Underground	600	2.59
Underground	900	3.9
Underground	1200	4.54
Underground	1500	6
Underground	1800	7.09
Underground	2100	8.49
Underground	2400	8.97
Underground	2700	10.06
Underground	3000	11.34
Underground	3600	13.49
Underground	4200	18.74

002584

**Copper Cable 24 gauge (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Aerial	25	0.32
Aerial	50	0.57
Aerial	100	0.74
Aerial	200	1.25
Aerial	300	1.68
Aerial	400	2.26
Aerial	600	3.38
Aerial	900	4.84
Aerial	1200	6.58
Aerial	1500	8.6
Aerial	1800	10.66
Aerial	2100	11.97
Aerial	2400	13.68
Aerial	2700	15.39
Aerial	3000	17.1
Aerial	3600	20.52
Aerial	4200	23.94
Buried	25	0.23
Buried	50	0.38
Buried	100	0.67
Buried	200	1.24
Buried	300	1.91
Buried	400	2.37
Buried	600	3.42
Buried	900	5.04
Buried	1200	6.74
Buried	1500	8.44
Buried	1800	10.04
Buried	2100	11.76
Buried	2400	13.44
Buried	2700	15.12
Buried	3000	16.8
Buried	3600	20.16
Buried	4200	23.52

002585

**Copper Cable 24 gauge (Material)**

<b>Plant Type</b>	<b>Type or Size</b>	<b>Material Cost</b>
Riser/Intrabuilding	25	0.31
Riser/Intrabuilding	50	0.39
Riser/Intrabuilding	100	0.61
Riser/Intrabuilding	200	0.98
Riser/Intrabuilding	300	1.38
Riser/Intrabuilding	400	1.72
Riser/Intrabuilding	600	3.64
Riser/Intrabuilding	900	3.81
Riser/Intrabuilding	1200	4.99
Riser/Intrabuilding	1500	6.41
Riser/Intrabuilding	1800	10.19
Riser/Intrabuilding	2100	9.59
Riser/Intrabuilding	2400	13.78
Riser/Intrabuilding	2700	15.94
Riser/Intrabuilding	3000	16.98
Riser/Intrabuilding	3600	20.38
Riser/Intrabuilding	4200	23.1
Underground	25	0.13
Underground	50	0.27
Underground	100	0.53
Underground	200	1.06
Underground	300	1.59
Underground	400	2.12
Underground	600	3.33
Underground	900	4.82
Underground	1200	6.45
Underground	1500	8
Underground	1800	9.79
Underground	2100	11.16
Underground	2400	12.75
Underground	2700	14.31
Underground	3000	15.9
Underground	3600	19.08
Underground	4200	22.26

002586

**CO Investment Adder (Material)**

Cost Family	Cost Element	Cost Component	FRC	Sub FRC	Material Investment per Service	Applicable UNE's
CO	CO-Adder	2WLC-CO-Combined	357C	15	1.13	D.5.1
CO	CO-Adder	2WLC-CO-Common Plugs	357C	6	44.71	D.5.1
CO	CO-Adder	2WLC-CO-Def Plugs	357C	9	90.15	D.5.1
CO	CO-Adder	2WLC-CO-Hardwired	357C	3	61.41	D.5.1
CO	CO-Adder	2WLC-Prem- Def Plugs	357C	25	90.15	D.5.1
CO	CO-Adder	2WLC-Prem-Corn Plugs	357C	22	46.78	D.5.1
CO	CO-Adder	2WLC-Prem-Hardwired	357C	19	64.14	D.5.1
CO	CO-Adder	4WLC-CO-Combined	357C	15	1.13	D.5.2
CO	CO-Adder	4WLC-CO-Common Plugs	357C	6	44.72	D.5.2
CO	CO-Adder	4WLC-CO-Def Plugs	357C	9	112.39	D.5.2
CO	CO-Adder	4WLC-CO-Hardwired	357C	3	61.41	D.5.2
CO	CO-Adder	4WLC-Prem-Corn Plugs	357C	22	46.78	D.5.2
CO	CO-Adder	4WLC-Prem-Def Plugs	357C	25	112.39	D.5.2
CO	CO-Adder	4WLC-Prem-Hardwired	357C	19	64.14	D.5.2
CO	CO-Adder	A.12.5 DSX1	257C	0	6.03	A.12.5
CO	CO-Adder	CO Repeater	257C	0	189.28	NOT USED
CO	CO-Adder	CO Repeater Shelf	257C	0	115	NOT USED
CO	CO-Adder	DS1 Line Card - RT	257C	25	230	A.12.5
CO	CO-Adder	DS1LC-CO-Combined	357C	15	22.95	D.5.24
CO	CO-Adder	DS1LC-CO-Common Plug	357C	6	326.95	D.5.24
CO	CO-Adder	DS1LC-CO-Def Plugs	357C	9	145.9	D.5.24
CO	CO-Adder	DS1LC-CO-Hardwired	357C	3	29.3706	D.5.24
CO	CO-Adder	DS1LC-Prem-Corn Plug	357C	22	368.84	D.5.24
CO	CO-Adder	DS1LC-Prem-Def Plugs	357C	25	145.9	D.5.24
CO	CO-Adder	DS1LC-Prem-Hardwired	357C	19	84.96	D.5.24
CO	CO-Adder	DS1Loop Feeder-HDSL	257C	46	38.15	A.9.2
CO	CO-Adder	DSX1	257C	0	4.13	A.9.1, A.9.2
CO	CO-Adder	MDF-2Wire Combo	377C	5	3.3812	P.1.1, P.4.1
CO	CO-Adder	MDF-2Wire Melded	377C	5	6.6616	A.1.1, A.1.2, A.2.1, A.5.1, A.2.25, A.2.23
CO	CO-Adder	MDF-2Wire-Copper	377C	5	7.3442	A.6.1, A.7.1, A.13.1, A.13.7, A.2.30
CO	CO-Adder	MDF-4Wire Combo	377C	5	6.6724	NOT USED
CO	CO-Adder	MDF-4Wire Melded	377C	5	13.3231	A.4.1, A.10.1, A.2.24, A.2.29
CO	CO-Adder	MDF-4Wire-Copper	377C	5	14.6883	A.8.1, A.14.1, A.14.7, A.2.32
CO	CO-Adder	MDF-DS1	377C	3	4.63	A.9.1, A.9.2
CO	CO-Adder	T-P-2Wire-Common	357C	6	0.66	A.1.2, A.2.1, A.5.1, A.6.1, A.7.1, A.13.1, A.13.7, A.2.23, A.2.25, A.2.30
CO	CO-Adder	T-P-2Wire-Hardwire	357C	3	11.78	A.1.2, A.2.1, A.5.1, A.6.1, A.7.1, A.13.1, A.13.7, A.2.23, A.2.25, A.2.30
CO	CO-Adder	T-P-2Wire-Plugin	357C	9	45.36	A.1.2, A.2.1, A.5.1, A.6.1, A.7.1, A.13.1, A.13.7, A.2.23, A.2.25, A.2.30
CO	CO-Adder	T-P-4Wire-Common	357C	6	1.32	A.4.1, A.8.1, A.14.1, A.14.7, A.2.24, A.2.29, A.10.1, A.2.32
CO	CO-Adder	T-P-4Wire-Hardwire	357C	3	23.56	A.4.1, A.8.1, A.14.1, A.14.7, A.2.24, A.2.29, A.10.1, A.2.32
CO	CO-Adder	T-P-4Wire-Plugin	357C	9	90.71	A.4.1, A.8.1, A.14.1, A.14.7, A.2.24, A.2.29, A.10.1, A.2.32

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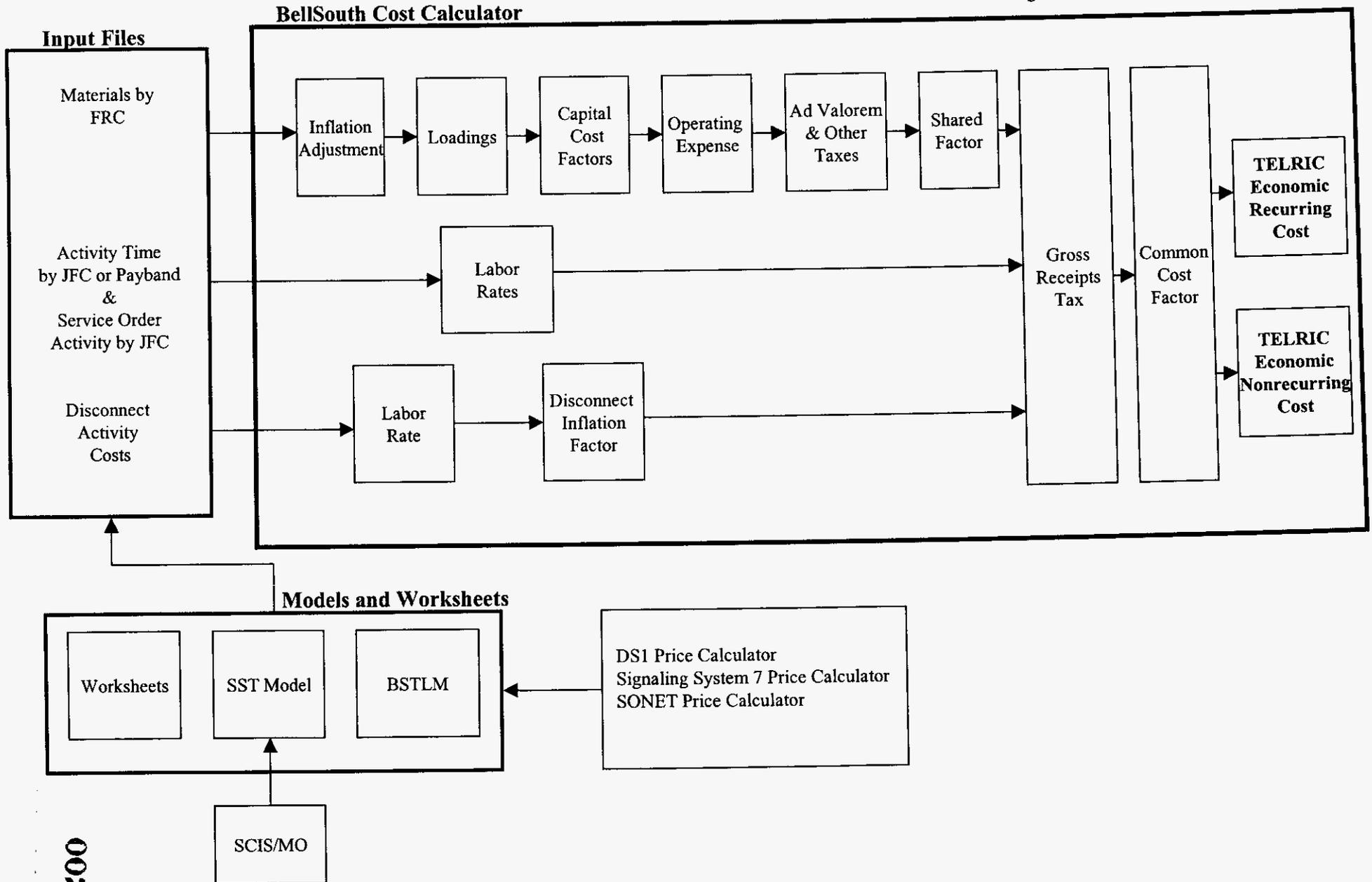
# TELRIC Calculation

BellSouth Telecommunications, Inc.

FPSC Docket No. 990649-TP

Exhibit DDC-3

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Unbundled Network Elements Cost Summary

Study Name: Florida Docket No 994609-TP  
 State: Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>A.0</b>	<b>UNBUNDLED LOCAL LOOP</b>				
<b>A.1</b>	<b>2-WIRE ANALOG VOICE GRADE LOOP</b>				
A.1.1	2-Wire Analog Voice Grade Loop - Service Level 1	\$15.95	\$20.01	\$25.64	\$17.88
A.1.2	2-Wire Analog Voice Grade Loop - Service Level 2	\$18.28	\$22.34	\$27.97	\$20.20
A.1.8	Engineering Information Per 2-Wire Analog Voice Grade Loop - Service Level 1				
<b>A.2</b>	<b>SUB-LOOP</b>				
A.2.1	Sub-Loop Feeder Per 2-Wire Analog Voice Grade Loop	\$8.17	\$8.90	\$10.93	\$8.57
A.2.2	Sub-Loop Distribution Per 2-Wire Analog Voice Grade Loop	\$9.26	\$12.55	\$16.31	\$10.84
A.2.11	Sub-Loop Distribution Per 4-Wire Analog Voice Grade Loop	\$8.35	\$17.01	\$27.59	\$9.76
A.2.13	Network Interface Device Cross Connect				
A.2.14	2-Wire Intrabuilding Network Cable (INC)	\$3.90	\$3.90	\$3.90	\$3.90
A.2.15	4-Wire Intrabuilding Network Cable (INC)	\$7.38	\$7.38	\$7.38	\$7.38
A.2.23	Sub-Loop - Per 2-Wire Analog Voice Grade Loop SL2 / Feeder Only	\$10.50	\$11.23	\$13.26	\$10.90
A.2.24	Sub-Loop - Per 4-Wire Analog Voice Grade Loop / Feeder Only	\$22.49	\$26.16	\$43.58	\$23.29
A.2.25	Sub-Loop - Per 2-Wire ISDN Digital Grade Loop / Feeder Only	\$22.29	\$25.23	\$28.71	\$23.13
A.2.25	Sub-Loop - Per 2-Wire ISDN Digital Grade Loop / Feeder Only	\$25.34	\$29.48	\$30.50	\$26.47
A.2.29	Sub-Loop - Per 4-Wire 56 or 64 Kbps Digital Grade Loop / Feeder Only	\$10.91	\$9.68	\$7.75	\$10.31
A.2.30	Sub-Loop - Per 2-Wire Copper Loop Short / Feeder Only	\$22.68	\$20.36	\$18.58	\$22.40
A.2.32	Sub-Loop - Per 4-Wire Copper Loop Short / Feeder Only	\$7.95	\$10.38	\$12.55	\$9.03
A.2.40	Sub-Loop - Per 2-Wire Copper Loop Short / Distribution Only	\$6.39	\$10.99	\$18.70	\$6.97
A.2.42	Sub-Loop - Per 4-Wire Copper Loop Short / Distribution Only				
<b>A.3</b>	<b>LOOP CHANNELIZATION AND CO INTERFACE (INSIDE CO)</b>				
A.3.12	Unbundled Loop Concentration - System A (TR008)	\$474.24	\$474.24	\$474.24	\$474.24
A.3.13	Unbundled Loop Concentration - System B (TR008)	\$56.38	\$56.38	\$56.38	\$56.38
A.3.14	Unbundled Loop Concentration - System A (TR303)	\$514.16	\$514.16	\$514.16	\$514.16
A.3.15	Unbundled Loop Concentration - System B (TR303)	\$95.01	\$95.01	\$95.01	\$95.01
A.3.16	Unbundled Loop Concentration - DS1 Line Interface Card	\$5.32	\$5.32	\$5.32	\$5.32
A.3.17	Unbundled Loop Concentration - POTS Card	\$2.11	\$2.11	\$2.11	\$2.11
A.3.18	Unbundled Loop Concentration - ISDN (Brite Card)	\$8.44	\$8.44	\$8.44	\$8.44
A.3.19	Unbundled Loop Concentration - SPOTS Card	\$12.55	\$12.55	\$12.55	\$12.55
A.3.20	Unbundled Loop Concentration - Specials Card	\$7.49	\$7.49	\$7.49	\$7.49
A.3.21	Unbundled Loop Concentration - TEST CIRCUIT Card	\$36.59	\$36.59	\$36.59	\$36.59
A.3.22	Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data	\$11.09	\$11.09	\$11.09	\$11.09
<b>A.4</b>	<b>4-WIRE ANALOG VOICE GRADE LOOP</b>				
A.4.1	4-Wire Analog Voice Grade Loop	\$28.95	\$40.11	\$68.90	\$31.02
<b>A.5</b>	<b>2-WIRE ISDN DIGITAL GRADE LOOP</b>				
A.5.1	2-Wire ISDN Digital Grade Loop	\$28.07	\$34.28	\$37.46	\$29.80
<b>A.6</b>	<b>2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP</b>				
A.6	2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP	\$17.66	\$18.87	\$19.08	\$18.13
<b>A.7</b>	<b>2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP</b>				
A.7	2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP	\$13.84	\$14.57	\$15.05	\$14.17

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Unbundled Network Elements Cost Summary

<b>Study Name:</b>	<b>Florida Docket No 994609-TP</b>
<b>State:</b>	<b>Florida</b>

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>A.8</b>	<b>4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP</b>				
A.8	4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP	\$23.02	\$22.57	\$23.41	\$22.96
<b>A.9</b>	<b>4-WIRE DS1 DIGITAL LOOP</b>				
A.9.1	4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
A.9.2	Sub-Loop Feeder Per 4-Wire DS1 Digital Loop	\$54.06	\$73.36	\$155.69	\$59.97
<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	\$33.72	\$45.25	\$52.44	\$36.98
<b>A.12</b>	<b>CONCENTRATION PER SYSTEM PER FEATURE ACTIVATED (OUTSIDE CENTRAL OFFICE)</b>				
A.12.1	Unbundled Loop Concentration - System A (TR008)	\$480.87	\$480.87	\$480.87	\$480.87
A.12.2	Unbundled Loop Concentration - System B (TR008)	\$85.30	\$85.30	\$85.30	\$85.30
A.12.3	Unbundled Loop Concentration - System A (TR303)	\$516.23	\$516.23	\$516.23	\$516.23
A.12.4	Unbundled Loop Concentration - System B (TR303)	\$120.66	\$120.66	\$120.66	\$120.66
A.12.5	Unbundled Sub-loop Concentration - USLC Feeder Interface	\$56.65	\$66.12	\$104.31	\$61.16
A.12.6	Unbundled Loop Concentration - POTS Card	\$2.14	\$2.14	\$2.14	\$2.14
A.12.7	Unbundled Loop Concentration - ISDN (Brite Card)	\$8.55	\$8.55	\$8.55	\$8.55
A.12.8	Unbundled Loop Concentration - SPOTS Card	\$12.70	\$12.70	\$12.70	\$12.70
A.12.9	Unbundled Loop Concentration - Specials Card	\$7.58	\$7.58	\$7.58	\$7.58
A.12.10	Unbundled Loop Concentration - TEST CIRCUIT Card	\$37.03	\$37.03	\$37.03	\$37.03
A.12.11	Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data	\$11.22	\$11.22	\$11.22	\$11.22
<b>A.13</b>	<b>2-WIRE COPPER LOOP</b>				
A.13.1	2-Wire Copper Loop - short	\$17.66	\$18.87	\$19.08	\$18.13
A.13.7	2-Wire Copper Loop - long	\$48.24	\$57.24	\$72.33	\$52.66
<b>A.14</b>	<b>4-WIRE COPPER LOOP</b>				
A.14.1	4-Wire Copper Loop - short	\$27.12	\$29.35	\$35.11	\$27.41
A.14.7	4-Wire Copper Loop - long	\$77.45	\$128.11	\$150.72	\$90.39
<b>A.15</b>	<b>UNBUNDLED NETWORK TERMINATING WIRE (NTW)</b>				
A.15.1	Unbundled Network Terminating Wire (NTW) per Pair	\$ 4591	\$ 4591	\$ 4591	\$0 4591
<b>A.16</b>	<b>HIGH CAPACITY UNBUNDLED LOCAL LOOP</b>				
A.16.1	High Capacity Unbundled Local Loop - DS3 - Facility Termination	\$407.58	\$407.58	\$407.58	\$407.58
A.16.2	High Capacity Unbundled Local Loop - DS3 - Per Mile	\$11.97	\$11.97	\$11.97	\$11.97
A.16.4	High Capacity Unbundled Local Loop - OC3 - Facility Termination	\$651.40	\$651.40	\$651.40	\$651.40
A.16.5	High Capacity Unbundled Local Loop - OC3 - Per Mile	\$9.08	\$9.08	\$9.08	\$9.08
A.16.7	High Capacity Unbundled Local Loop - OC12 - Facility Termination	\$2,068	\$2,068	\$2,068	\$2,068
A.16.8	High Capacity Unbundled Local Loop - OC12 - Per Mile	\$11.18	\$11.18	\$11.18	\$11.18
A.16.10	High Capacity Unbundled Local Loop - OC48 - Facility Termination	\$1,699	\$1,699	\$1,699	\$1,699
A.16.11	High Capacity Unbundled Local Loop - OC48 - Per Mile	\$36.67	\$36.67	\$36.67	\$36.67
A.16.13	High Capacity Unbundled Local Loop - OC48 - Interface OC12 on OC48	\$592.09	\$592.09	\$592.09	\$592.09
A.16.15	High Capacity Unbundled Local Loop - STS-1 - Facility Termination	\$449.40	\$449.40	\$449.40	\$449.40
A.16.16	High Capacity Unbundled Local Loop - STS-1 - Per Mile	\$11.97	\$11.97	\$11.97	\$11.97

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>A.18</b>	<b>MULTIPLEXERS</b>				
A.18.1	Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
A.18.2	Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$2.22	\$2.22	\$2.22	\$2.22
A.18.3	Interface Unit - Interface DS1 to DS0 - BRITE Card	\$3.86	\$3.86	\$3.86	\$3.86
A.18.4	Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
A.18.5	Channelization - Channel System DS3 to DS1	\$222.61	\$222.61	\$222.61	\$222.61
A.18.6	Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
<b>B.8</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)	\$1.63	\$1.63	\$1.63	\$1.63
B.1.2	Exchange Ports - 4-Wire Analog Voice Grade Port	\$8.81	\$8.81	\$8.81	\$8.81
B.1.3	Exchange Ports - 2-Wire DID Port	\$9.60	\$9.60	\$9.60	\$9.60
B.1.4	Exchange Ports - DDITS Port	\$63.85	\$63.85	\$63.85	\$63.85
B.1.5	Exchange Ports - 2-Wire ISDN Port	\$9.54	\$9.54	\$9.54	\$9.54
B.1.6	Exchange Ports - 4-Wire ISDN DS1 Port	\$96.34	\$96.34	\$96.34	\$96.34
B.1.7	Exchange Ports - 2-Wire Analog Line Port (PBX)	\$1.63	\$1.63	\$1.63	\$1.63
<b>B.4</b>	<b>FEATURES</b>				
B.4.10	Centrex Functionality	\$ 9007	\$ 9007	\$ 9007	\$0.9007
B.4.13	Features per port	\$3.64	\$3.64	\$3.64	\$3.64
<b>C.8</b>	<b>UNBUNDLED SWITCHING AND LOCAL INTERCONNECTION</b>				
<b>C.1</b>	<b>END OFFICE SWITCHING</b>				
C.1.1	End Office Switching Function, Per MOU	\$ 0008941	\$ 0008941	\$ 0008941	\$0.0008941
C.1.2	End Office Trunk Port - Shared, Per MOU	\$ 000191	\$ 000191	\$ 000191	\$0.0001910
<b>C.2</b>	<b>TANDEM SWITCHING</b>				
C.2.1	Tandem Switching Function Per MOU	\$ 0001545	\$ 0001545	\$ 0001545	\$0.0001545
C.2.2	Tandem Trunk Port - Shared, Per MOU	\$ 0002737	\$ 0002737	\$ 0002737	\$0.0002737
<b>D.8</b>	<b>UNBUNDLED TRANSPORT AND LOCAL INTEROFFICE TRANSPORT</b>				
<b>D.1</b>	<b>COMMON TRANSPORT</b>				
D.1.1	Common Transport - Per Mile, Per MOU	\$ 0000039	\$ 0000039	\$ 0000039	\$0.0000039
D.1.2	Common Transport - Facilities Termination Per MOU	\$ 0004615	\$ 0004615	\$ 0004615	\$0.0004615
<b>D.2</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - VOICE GRADE</b>				
D.2.1	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile	\$ 01	\$ 01	\$ 01	\$0.01
D.2.2	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination	\$26.72	\$26.72	\$26.72	\$26.72
	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination - Disconnect				
<b>D.3</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - DS0 - 56/64 KBPS</b>				
D.3.1	Interoffice Transport - Dedicated - DS0 - Per Mile	\$ 01	\$ 01	\$ 01	\$0.01
D.3.2	Interoffice Transport - Dedicated - DS0 - Facility Termination	\$19.46	\$19.46	\$19.46	\$19.46
	Interoffice Transport - Dedicated - DS0 - Facility Termination - Disconnect				

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Unbundled Network Elements Cost Summary

Study Name: Florida Docket No 994609-TP					
State: Florida					
		Zone 1	Zone 2	Zone 3	Statewide Average
<b>D.4</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - DS1</b>				
D.4.1	Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$0 2035
D.4.2	Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
	Interoffice Transport - Dedicated - DS1 - Facility Termination - Disconnect				
<b>D.5</b>	<b>LOCAL CHANNEL - DEDICATED</b>				
D.5.1	Local Channel - Dedicated - 2-Wire Voice Grade	\$24.75	\$38.52		\$26.31
D.5.2	Local Channel - Dedicated - 4-Wire Voice Grade	\$25.92	\$39.69		\$27.48
D.5.7	Local Channel - Dedicated - DS3 - Per Mile	\$9.32	\$9.32	\$9.32	\$9.32
D.5.8	Local Channel - Dedicated - DS3 - Facility Termination	\$560.39	\$560.39	\$560.39	\$560.39
D.5.10	Local Channel - Dedicated - OC3 - Per Mile	\$7.83	\$7.83	\$7.83	\$7.83
D.5.11	Local Channel - Dedicated - OC3 - Facility Termination	\$940.35	\$940.35	\$940.35	\$940.35
D.5.13	Local Channel - Dedicated - OC12 - Per Mile	\$11.18	\$11.18	\$11.18	\$11.18
D.5.14	Local Channel - Dedicated - OC12 - Facility Termination	\$2,753	\$2,753	\$2,753	\$2,753
D.5.16	Local Channel - Dedicated - OC48 - Per Mile	\$36.67	\$36.67	\$36.67	\$36.67
D.5.17	Local Channel - Dedicated - OC48 - Facility Termination	\$1,944	\$1,944	\$1,944	\$1,944
D.5.19	Local Channel - Dedicated - OC48 - Interface OC12 on OC48	\$586.28	\$586.28	\$586.28	\$586.28
D.5.21	Local Channel - Dedicated - STS-1 - Facility Termination	\$569.67	\$569.67	\$569.67	\$569.67
D.5.23	Local Channel - Dedicated - STS-1 - Per Mile	\$9.32	\$9.32	\$9.32	\$9.32
D.5.24	Local Channel - Dedicated - DS1	\$39.39	\$51.18	\$91.98	\$42.98
<b>D.6</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - DS3</b>				
D.6.1	Interoffice Transport - Dedicated - DS3 - Per Mile	\$4.25	\$4.25	\$4.25	\$4.25
D.6.2	Interoffice Transport - Dedicated - DS3 - Facility Termination	\$1,130	\$1,130	\$1,130	\$1,130
<b>D.7</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - OC3</b>				
D.7.1	Interoffice Transport - Dedicated - OC3 - Per Mile	\$8.38	\$8.38	\$8.38	\$8.38
D.7.2	Interoffice Transport - Dedicated - OC3 - Facility Termination	\$3,043	\$3,043	\$3,043	\$3,043
<b>D.8</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - OC12</b>				
D.8.1	Interoffice Transport - Dedicated - OC12 - Per Mile	\$26.91	\$26.91	\$26.91	\$26.91
D.8.2	Interoffice Transport - Dedicated - OC12 - Facility Termination	\$11,685	\$11,685	\$11,685	\$11,685
<b>D.9</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - OC48</b>				
D.9.1	Interoffice Transport - Dedicated - OC48 - Per Mile	\$34.66	\$34.66	\$34.66	\$34.66
D.9.2	Interoffice Transport - Dedicated - OC48 - Facility Termination	\$12,554	\$12,554	\$12,554	\$12,554
D.9.4	Interoffice Transport - Dedicated - OC48 - Interface OC12 on OC48	\$1,208	\$1,208	\$1,208	\$1,208
<b>D.10</b>	<b>INTEROFFICE TRANSPORT - DEDICATED - STS-1</b>				
D.10.1	Interoffice Transport - Dedicated - STS-1 - Per Mile	\$4.25	\$4.25	\$4.25	\$4.25
D.10.2	Interoffice Transport - Dedicated - STS-1 - Facility Termination	\$1,114	\$1,114	\$1,114	\$1,114
<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	\$ 01	\$ 01	\$ 01	\$0 01
D.12.2	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination	\$23.82	\$23.82	\$23.82	\$23.82
<b>E.0</b>	<b>SIGNALING NETWORK, DATA BASES, &amp; SERVICE MANAGEMENT SYSTEMS</b>				

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>E.1</b>	<b>800 ACCESS TEN DIGIT SCREENING</b>				
E.1.1	800 Access Ten Digit Screening, Per Call	\$0.006583	\$0.006583	\$0.006583	\$0.006583
E.1.9	800 Access Ten Digit Screening, w/ 8FL No. Delivery	\$0.006583	\$0.006583	\$0.006583	\$0.006583
E.1.10	800 Access Ten Digit Screening, w/ POTS No. Delivery	\$0.006583	\$0.006583	\$0.006583	\$0.006583
<b>E.2</b>	<b>LINE INFORMATION DATA BASE ACCESS (LIDB)</b>				
E.2.1	LIDB Common Transport Per Query	\$0.000236	\$0.000236	\$0.000236	\$0.000236
E.2.2	LIDB Validation Per Query	\$0.138539	\$0.138539	\$0.138539	\$0.138539
<b>E.3</b>	<b>CCS7 SIGNALING TRANSPORT</b>				
E.3.1	CCS7 Signaling Connection, Per 56Kbps Facility	\$18.93	\$18.93	\$18.93	\$18.93
E.3.2	CCS7 Signaling Termination, Per STP Port	\$155.83	\$155.83	\$155.83	\$155.83
E.3.3	CCS7 Signaling Usage, Per Call Setup Message	\$0.000168	\$0.000168	\$0.000168	\$0.000168
E.3.4	CCS7 Signaling Usage, Per TCAP Message	\$0.000671	\$0.000671	\$0.000671	\$0.000671
E.3.7	CCS7 Signaling Connection, Per link (A link)	\$18.93	\$18.93	\$18.93	\$18.93
E.3.8	CCS7 Signaling Connection, Per link (B link) (also known as D link)	\$18.93	\$18.93	\$18.93	\$18.93
E.3.9	CCS7 Signaling Usage, Per ISUP Message	\$0.000168	\$0.000168	\$0.000168	\$0.000168
E.3.10	CCS7 Signaling Usage Surrogate, per link	\$768.11	\$768.11	\$768.11	\$768.11
<b>E.4</b>	<b>BELLSOUTH CALLING NAME (CNAM) DATABASE (DB) SERVICE</b>				
E.4.5	CNAM for DB and Non DB Owners, Per Query	\$0.010435	\$0.010435	\$0.010435	\$0.010435
<b>E.5</b>	<b>BELLSOUTH ACCESS TO E911 SERVICE</b>				
E.5.1	BellSouth E911 Access - Local Channel - Dedicated - 2-wire Voice Grade (Same as D.5.1)	\$24.75	\$38.52		\$26.31
E.5.2	BellSouth E911 Access - Interoffice Transport - Dedicated - 2-wire Voice Grade Per Mile (Same as D.2.1)	\$0.01	\$0.01	\$0.01	\$0.01
E.5.3	BellSouth E911 Access - Interoffice Transport - Dedicated - 2-wire Voice Grade Per Facility Termination (Same as D.2.2)	\$26.72	\$26.72	\$26.72	\$26.72
E.5.4	BellSouth E911 Access - Local Channel - Dedicated - DS1 (Same as D.5.24)	\$39.39	\$51.18	\$91.98	\$42.98
E.5.5	BellSouth E911 Access - Interoffice Transport - Dedicated - DS1 Per Mile (Same as D.4.1)	\$2035	\$2035	\$2035	\$0.20
E.5.6	BellSouth E911 Access - Interoffice Transport - Dedicated - DS1 Per Facility Termination (Same as D.4.2)	\$93.31	\$93.31	\$93.31	\$93.31
<b>E.6</b>	<b>LNP QUERY SERVICE</b>				
E.6.1	LNP Cost Per query	\$0.000879	\$0.000879	\$0.000879	\$0.000879
<b>G.11</b>	<b>SELECTIVE CARRIER ROUTING (AIN SOLUTION)</b>				
G.11.4	Query Cost	\$0.0034348	\$0.0034348	\$0.0034348	\$0.0034348
<b>I.0</b>	<b>INTERIM SERVICE PROVIDER NUMBER PORTABILITY</b>				
<b>I.1</b>	<b>INTERIM SERVICE PROVIDER NUMBER PORTABILITY - RCF</b>				
I.1.1	Service Provider Number Portability - RCF, Per Number Ported	\$2.31	\$2.31	\$2.31	\$2.31
I.1.2	Service Provider Number Portability - RCF, Per Additional Path	\$8371	\$8371	\$8371	\$0.8371
<b>I.2</b>	<b>SERVICE PROVIDER NUMBER PORTABILITY - DID</b>				
I.2.4	Service Provider Number Portability - DID, Per Trunk Termination, Initial	\$63.85	\$63.85	\$63.85	\$63.85
I.2.5	Service Provider Number Portability - DID, Per Trunk Termination, Subsequent	\$63.85	\$63.85	\$63.85	\$63.85

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>I.4</b>	<b>SERVICE PROVIDER NUMBER PORTABILITY RIPH</b>				
I.4.3	Service Provider Number Portability - RI-PH, Per Number Ported	\$3.00	\$3.00	\$3.00	\$3.00
<b>J.0</b>	<b>OTHER</b>				
<b>J.1</b>	<b>DARK FIBER</b>				
J.1.2	Dark Fiber, Per Four Fiber Strands, Per Route Mile or Fraction Thereof - Local Channel/Loop	\$59.03	\$59.03	\$59.03	\$59.03
J.1.3	Dark Fiber, Per Four Fiber Strands, Per Route Mile or Fraction Thereof - Interoffice	\$29.28	\$29.28	\$29.28	\$29.28
<b>J.3</b>	<b>LOOP QUALIFICATION</b>				
J.3.1	Loop Qualification Database	\$1.08	\$1.08	\$1.08	\$1.08
<b>J.4</b>	<b>LINE SHARING SPLITTER - DATA</b>				
J.4.1	Line Sharing Splitter, per System 96 Line Capacity	\$172.02	\$172.02	\$172.02	\$172.02
	Line Sharing Splitter, per System 96 Line Capacity - Disconnect				
J.4.2	Line Sharing Splitter, per System 24 Line Capacity	\$43.01	\$43.01	\$43.01	\$43.01
	Line Sharing Splitter, per System 24 Line Capacity - Disconnect				
J.4.3	Line Sharing Splitter - per Line Activation	\$6.96	\$6.96	\$6.96	\$6.96
	Line Sharing Splitter - per Line Activation - Disconnect				
J.4.4	Line Sharing Splitter - per Subsequent Activity per Line Rearrangement				
<b>J.5</b>	<b>ACCESS TO THE DCS</b>				
J.5.2	DS1 DCS Termination with DS0 Switching	\$28.72	\$28.72	\$28.72	\$28.72
J.5.3	DS1 DCS Termination with DS1 Switching	\$12.23	\$12.23	\$12.23	\$12.23
J.5.4	DS3 DCS Termination with DS1 Switching	\$154.31	\$154.31	\$154.31	\$154.31
<b>K.0</b>	<b>ADVANCED INTELLIGENT NETWORK (AIN) SERVICES</b>				
<b>K.1</b>	<b>BELLSOUTH AIN SMS ACCESS SERVICE</b>				
K.1.6	AIN SMS Access Service - Storage, Per Unit (100 Kilobytes)	\$ .003	\$ .003	\$ .003	\$0.003
K.1.7	AIN SMS Access Service - Session, Per Minute	\$ .8165	\$ .8165	\$ .8165	\$0.8165
K.1.8	AIN SMS Access Service - Company Performed Session, Per Minute	\$ .8413	\$ .8413	\$ .8413	\$0.8413
<b>K.2</b>	<b>BELLSOUTH AIN TOOLKIT SERVICE</b>				
K.2.9	AIN Toolkit Service - Query Charge, Per Query	\$ .0543938	\$ .0543938	\$ .0543938	\$0.0543938
K.2.10	AIN Toolkit Service - Type 1 Node Charge, Per AIN Toolkit Subscription, Per Node, Per Query	\$ .0067699	\$ .0067699	\$ .0067699	\$0.0067699
K.2.11	AIN Toolkit Service - SCP Storage Charge, Per SMS Access Account, Per 100 Kilobytes	\$ .07	\$ .07	\$ .07	\$0.07
K.2.12	AIN Toolkit Service - Monthly report - Per AIN Toolkit Service Subscription	\$12.33	\$12.33	\$12.33	\$12.33
K.2.13	AIN Toolkit Service - Special Study - Per AIN Toolkit Service Subscription	\$3.92	\$3.92	\$3.92	\$3.92
K.2.14	AIN Toolkit Service - Call Event Report - Per AIN Toolkit Service Subscription	\$8.54	\$8.54	\$8.54	\$8.54
K.2.15	AIN Toolkit Service - Call Event Special Study - Per AIN Toolkit Service Subscription	\$ .13	\$ .13	\$ .13	\$0.13
<b>L.0</b>	<b>ACCESS DAILY USAGE FILE (ADUF)</b>				
<b>L.1</b>	<b>ACCESS DAILY USAGE FILE (ADUF)</b>				
L.1.1	ADUF, Message Processing, per message	\$ .01448	\$ .01448	\$ .01448	\$0.01448
L.1.3	ADUF, Data Transmission (CONNECT:DIRECT), per message	\$ .00013076	\$ .00013076	\$ .00013076	\$0.00013076

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>M.0</b>	<b>DAILY USAGE FILES</b>				
<b>M.1</b>	<b>ENHANCED OPTIONAL DAILY USAGE FILE</b>				
M.1.1	Enhanced Optional Daily usage File: Message Processing, Per Message	\$ 230552	\$ 230552	\$ 230552	\$0 230552
<b>M.2</b>	<b>OPTIONAL DAILY USAGE FILE</b>				
M.2.1	Optional Daily Usage File: Recording, per Message	\$ 0000083	\$ 0000083	\$ 0000083	\$0.0000083
M.2.2	Optional Daily Usage File: Message Processing, Per Message	\$ 006868	\$ 006868	\$ 006868	\$0.006868
M.2.3	Optional Daily Usage File: Message Processing, Per Magnetic Tape Provisioned	\$49.16	\$49.16	\$49.16	\$49.16
M.2.4	Optional Daily Usage File: Data Transmission (CONNECT:DIRECT), Per Message	\$ 00010897	\$ 00010897	\$ 00010897	\$0.00010897
<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.RESBUS	2-Wire VG Loop/Port Combo (Res, Bus, Coin)				
	P.1.1 2-Wire Voice Grade Loop	\$14.65	\$18.38	\$24.32	\$16.46
	P.1.2 Exchange Port - 2-Wire Line Port	\$1.43	\$1.43	\$1.43	\$1.43
		<u>\$16.08</u>	<u>\$19.81</u>	<u>\$25.75</u>	<u>\$17.89</u>
P.1.PBX	2-Wire VG Loop/Port Combo (PBX)				
	P.1.1 2-Wire Voice Grade Loop	\$14.65	\$18.38	\$24.32	\$23.75
	P.1.2 Exchange Port - 2-Wire Line Port	\$1.43	\$1.43	\$1.43	\$1.43
		<u>\$16.08</u>	<u>\$19.81</u>	<u>\$25.75</u>	<u>\$25.18</u>
P.1.CENTREX	2-Wire VG Loop/Port Combo (Centrex)				
	P.1.1 2-Wire Voice Grade Loop	\$14.65	\$18.38	\$24.32	\$16.46
	P.1.2 Exchange Port - 2-Wire Line Port	\$1.43	\$1.43	\$1.43	\$1.43
	B.4.10 Centrex Functionality	\$ 9007	\$ 9007	\$ 9007	\$ 9007
		<u>\$16.98</u>	<u>\$20.71</u>	<u>\$26.65</u>	<u>\$18.79</u>
<b>P.3</b>	<b>2-WIRE VOICE GRADE LOOP WITH 2-WIRE DID TRUNK PORT</b>				
P.3	2-Wire VG Loop/2-Wire DID Trunk Port				
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$18.28	\$22.34	\$27.97	\$20.20
	B.1.3 Exchange Parts - 2-Wire DID Port	\$9.60	\$9.60	\$9.60	\$9.60
		<u>\$27.87</u>	<u>\$31.94</u>	<u>\$37.57</u>	<u>\$29.80</u>
<b>P.4</b>	<b>2-WIRE ISDN DIGITAL GRADE LOOP WITH 2-WIRE ISDN DIGITAL LINE SIDE PORT</b>				
P.4	2W ISDN Digital Grade Loop/2W ISDN Digital Line Side Port				
	P.4.1 2-Wire ISDN Digital Grade Loop	\$22.15	\$27.82	\$32.24	\$23.75
	P.4.2 Exchange Port - 2-Wire ISDN Line Side Port	\$7.89	\$7.89	\$7.89	\$7.89
		<u>\$30.04</u>	<u>\$35.72</u>	<u>\$40.14</u>	<u>\$31.64</u>
<b>P.5</b>	<b>4-WIRE DS1 DIGITAL LOOP WITH 4-WIRE ISDN DS1 DIGITAL TRUNK PORT</b>				
P.5	4W DS1 Digital Loop/4W ISDN DS1 Digital Trunk Port				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
	B.1.6 Exchange Parts - 4-Wire ISDN DS1 Port	\$96.34	\$96.34	\$96.34	\$96.34
		<u>\$185.71</u>	<u>\$209.83</u>	<u>\$290.69</u>	<u>\$192.80</u>

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
<b>P.6</b>	<b>2-WIRE VOICE GRADE EXTENDED LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT</b>				
P.6-1	First 2W VG in DS1				
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$18.28	\$22.34	\$27.97	\$20.20
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
	A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
		<u>\$267.78</u>	<u>\$271.84</u>	<u>\$277.47</u>	<u>\$269.71</u>
P.6-2	Per Mile				
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.6-3	Additional 2W VG in same DS1				
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$18.28	\$22.34	\$27.97	\$20.20
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
		<u>\$19.73</u>	<u>\$23.80</u>	<u>\$29.43</u>	<u>\$21.66</u>
<b>P.7</b>	<b>4-WIRE VOICE GRADE EXTENDED LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT</b>				
P.7-1	First 4W VG in DS1				
	A.4.1 4-Wire Analog Voice Grade Loop	\$28.95	\$40.11	\$68.90	\$31.02
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
	A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
		<u>\$278.45</u>	<u>\$289.62</u>	<u>\$318.41</u>	<u>\$280.53</u>
P.7-2	Per Mile				
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.7-3	Additional 4W VG in same DS1				
	A.4.1 4-Wire Analog Voice Grade Loop	\$28.95	\$40.11	\$68.90	\$31.02
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
		<u>\$30.40</u>	<u>\$41.57</u>	<u>\$70.36</u>	<u>\$32.48</u>
<b>P.8</b>	<b>4-WIRE 56 OR 64 KBPS EXTENDED 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	\$33.72	\$45.25	\$52.44	\$36.98
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
	A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$2.22	\$2.22	\$2.22	\$2.22
		<u>\$283.98</u>	<u>\$295.51</u>	<u>\$302.70</u>	<u>\$287.25</u>
P.8-2	Per Mile				
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.8-3	Additional 4W 56 / 64 in same DS1				
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop	\$33.72	\$45.25	\$52.44	\$36.98
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$2.22	\$2.22	\$2.22	\$2.22
		<u>\$35.94</u>	<u>\$47.47</u>	<u>\$54.65</u>	<u>\$39.20</u>
<b>P.11</b>	<b>4-WIRE DS1 DIGITAL EXTENDED LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT</b>				
P.11-1	Fixed				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
		\$182.68	\$206.80	\$287.66	\$189.77
P.11-2	Per Mile				
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ .2035	\$ .2035	\$ .2035	\$ .2035
<b>P.13</b>	<b>4-WIRE DS1 DIGITAL EXTENDED LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT</b>				
P.13-1	First DS1 in DS3				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
	D.6.2 Interoffice Transport - Dedicated - DS3 - Facility Termination	\$1,130	\$1,130	\$1,130	\$1,130
	A.18.5 Channelization - Channel System DS3 to DS1	\$222.61	\$222.61	\$222.61	\$222.61
	A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
		\$1,456.78	\$1,480.90	\$1,561.75	\$1,463.58
P.13-2	Per Mile				
	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile	\$4.25	\$4.25	\$4.25	\$4.25
P.13-3	Additional DS1 in same DS3				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
	A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
		\$103.88	\$128.00	\$208.86	\$110.97
<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	\$89.37	\$113.49	\$194.35	\$96.46
	B.1.4 Exchange Ports - DDITS Port	\$63.85	\$63.85	\$63.85	\$63.85
		\$153.22	\$177.35	\$258.20	\$160.31
<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	\$18.28	\$22.34	\$27.97	\$20.20
	D.2.2 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination	\$26.72	\$26.72	\$26.72	\$26.72
	B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)	\$1.63	\$1.63	\$1.63	\$1.63
		\$46.63	\$50.69	\$56.32	\$48.55
P.16-2	Per Mile				
	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile	\$ .01	\$ .01	\$ .01	\$ .01
<b>P.23</b>	<b>2-WIRE VOICE GRADE EXTENDED LOOP/ 2 WIRE VOICE GRADE INTEROFFICE TRANSPORT</b>				
P.23-1	Fixed				
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$18.28	\$22.34	\$27.97	\$20.20
	D.2.2 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination	\$26.72	\$26.72	\$26.72	\$26.72
		\$44.99	\$49.06	\$54.69	\$46.92
P.23-2	Per Mile				
	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile	\$ .01	\$ .01	\$ .01	\$ .01
<b>P.24</b>	<b>4-WIRE VOICE GRADE EXTENDED LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT</b>				
P.24-1	Fixed				
	A.4.1 4-Wire Analog Voice Grade Loop	\$28.95	\$40.11	\$68.90	\$31.02
	D.12.2 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination	\$23.82	\$23.82	\$23.82	\$23.82

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
		\$52.77	\$63.93	\$92.72	\$54.84
P.24-2	Per Mile D.12.1 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile	\$0.01	\$0.01	\$0.01	\$0.01
<b>P.25</b>	<b>DS3 DIGITAL EXTENDED LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT</b>				
P.25-1	Fixed A.16.1 High Capacity Unbundled Local Loop - DS3 - Facility Termination D.6.2 Interoffice Transport - Dedicated - DS3 - Facility Termination	\$407.58 \$1,130	\$407.58 \$1,130	\$407.58 \$1,130	\$407.58 \$1,130
		<u>\$1,537.86</u>	<u>\$1,537.86</u>	<u>\$1,537.86</u>	<u>\$1,537.86</u>
P.25-2	Per Mile - Interoffice D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile	\$4.25	\$4.25	\$4.25	\$4.25
P.25-3	Per Mile - DS3 Loop A.16.2 High Capacity Unbundled Local Loop - DS3 - Per Mile	\$11.97	\$11.97	\$11.97	\$11.97
<b>P.26</b>	<b>STS1 DIGITAL EXTENDED LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT</b>				
P.26-1	Fixed A.16.15 High Capacity Unbundled Local Loop - STS-1 - Facility Termination D.10.2 Interoffice Transport - Dedicated - STS-1 - Facility Termination	\$449.40 \$1,114	\$449.40 \$1,114	\$449.40 \$1,114	\$449.40 \$1,114
		<u>\$1,563.61</u>	<u>\$1,563.61</u>	<u>\$1,563.61</u>	<u>\$1,563.61</u>
P.26-2	Per Mile - Interoffice D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile	\$4.25	\$4.25	\$4.25	\$4.25
P.26-3	Per Mile - Loop A.16.16 High Capacity Unbundled Local Loop - STS-1 - Per Mile	\$11.97	\$11.97	\$11.97	\$11.97
<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 B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin) Q.1.1 D4 Channel Bank Inside CO - System Q.1.4 Unbundled Loop Concentration - POTS Card	\$89.37 \$1.63 \$124.56 \$6754	\$113.49 \$1.63 \$124.56 \$6754	\$194.35 \$1.63 \$124.56 \$6754	\$96.46 \$1.63 \$124.56 \$6754
		<u>\$216.24</u>	<u>\$240.36</u>	<u>\$321.21</u>	<u>\$223.32</u>
P.50.VG-2	Additional Voice Grade in same DS1 B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin) Q.1.4 Unbundled Loop Concentration - POTS Card	\$1.63 \$6754	\$1.63 \$6754	\$1.63 \$6754	\$1.63 \$6754
		<u>\$2.31</u>	<u>\$2.31</u>	<u>\$2.31</u>	<u>\$2.31</u>

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Unbundled Network Elements Cost Summary

Study Name: Florida Docket No 994609-TP					
State: Florida					
		Zone 1	Zone 2	Zone 3	Statewide Average
P.50.DID-1	First 2-Wire DID in DS1				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
	B.1.3 Exchange Ports - 2-Wire DID Port	\$9.60	\$9.60	\$9.60	\$9.60
	Q.1.1 D4 Channel Bank Inside CO - System	\$124.56	\$124.56	\$124.56	\$124.56
	Q.1.4 Unbundled Loop Concentration - POTS Card	\$6754	\$6754	\$6754	\$6754
		\$224.20	\$248.33	\$329.18	\$231.29
P.50.DID-2	Additional 2-Wire DID in same DS1				
	B.1.3 Exchange Ports - 2-Wire DID Port	\$9.60	\$9.60	\$9.60	\$9.60
	Q.1.4 Unbundled Loop Concentration - POTS Card	\$6754	\$6754	\$6754	\$6754
		\$10.28	\$10.28	\$10.28	\$10.28
P.50.ISDN-1	First ISDN in DS1				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
	B.1.5 Exchange Ports - 2-Wire ISDN Port	\$9.54	\$9.54	\$9.54	\$9.54
	Q.1.1 D4 Channel Bank Inside CO - System	\$124.56	\$124.56	\$124.56	\$124.56
	Q.1.3 Unbundled Loop Concentration - ISDN (Brite Card)	\$3.08	\$3.08	\$3.08	\$3.08
		\$226.56	\$250.68	\$331.53	\$233.64
P.50.ISDN-2	Additional ISDN in same DS1				
	B.1.5 Exchange Ports - 2-Wire ISDN Port	\$9.54	\$9.54	\$9.54	\$9.54
	Q.1.3 Unbundled Loop Concentration - ISDN (Brite Card)	\$3.08	\$3.08	\$3.08	\$3.08
		\$12.63	\$12.63	\$12.63	\$12.63
<b>P.51</b>	<b>2-WIRE ISDN EXTENDED LOOP WITH DS1 INTEROFFICE TRANSPORT</b>				
P.51-1	First 2-Wire ISDN in DS1				
	A.5.1 2-Wire ISDN Digital Grade Loop	\$28.07	\$34.28	\$37.46	\$29.80
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
	A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
	A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$3.86	\$3.86	\$3.86	\$3.86
			\$279.98	\$286.19	\$289.37
P.51-2	Per Mile				
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$2035	\$2035	\$2035	\$2035
P.51-3	Additional 2-wire ISDN in same DS1				
	A.5.1 2-Wire ISDN Digital Grade Loop	\$28.07	\$34.28	\$37.46	\$29.80
	A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$3.86	\$3.86	\$3.86	\$3.86
		\$31.93	\$38.14	\$41.32	\$33.66
<b>P.52</b>	<b>4-WIRE DS1 DIGITAL EXTENDED LOOP WITH DEDICATED STS-1 INTEROFFICE TRANSPORT</b>				
P.52-1	First in DS1 in STS1				
	A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
	D.10.2 Interoffice Transport - Dedicated - STS-1 - Facility Termination	\$1,114	\$1,114	\$1,114	\$1,114
	A.18.5 Channelization - Channel System DS3 to DS1	\$222.61	\$222.61	\$222.61	\$222.61
	A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
			\$1,440.71	\$1,464.83	\$1,545.68
P.52-2	Per Mile				
	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile	\$4.25	\$4.25	\$4.25	\$4.25
P.52-3	Additional DS1 in same STS1				

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

	Zone 1	Zone 2	Zone 3	Statewide Average
A.9.1 4-Wire DS1 Digital Loop	\$89.37	\$113.49	\$194.35	\$96.46
A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
	\$103.88	\$128.00	\$208.86	\$110.97
<b>P.53 2-WIRE VOICE GRADE EXTENDED 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	\$18.28	\$22.34	\$27.97	\$20.20
D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
A.18.5 Channelization - Channel System DS3 to DS1	\$222.61	\$222.61	\$222.61	\$222.61
A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
	\$504.90	\$508.96	\$514.60	\$506.82
P.53-2 Per Mile per DS1				
D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.53-3 Additional 2-Wire VG in same DS1				
A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$18.28	\$22.34	\$27.97	\$20.20
A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
	\$19.73	\$23.80	\$29.43	\$21.66
P.53-4 Additional DS1 in same DS3				
D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
	\$262.56	\$262.56	\$262.56	\$262.56
<b>P.54 4-WIRE VOICE GRADE EXTENDED 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	\$28.95	\$40.11	\$68.90	\$31.02
D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$93.31	\$93.31	\$93.31	\$93.31
A.18.5 Channelization - Channel System DS3 to DS1	\$222.61	\$222.61	\$222.61	\$222.61
A.18.6 Interface Unit - Interface DS3 to DS1	\$14.51	\$14.51	\$14.51	\$14.51
A.18.1 Channelization - Channel System DS1 to DS0	\$154.74	\$154.74	\$154.74	\$154.74
A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
	\$515.57	\$526.74	\$555.53	\$517.64
P.54-2 Per Mile per DS1				
D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.54-3 Additional 4-Wire VG in same DS1				
A.4.1 4-Wire Analog Voice Grade Loop	\$28.95	\$40.11	\$68.90	\$31.02
A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.46	\$1.46	\$1.46	\$1.46
	\$30.40	\$41.57	\$70.36	\$32.48

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Unbundled Network Elements Cost Summary

Study Name:	Florida Docket No 994609-TP
State:	Florida

		Zone 1	Zone 2	Zone 3	Statewide Average
P.54-4	Additional DS1 in same DS3 D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination A.18.1 Channelization - Channel System DS1 to DS0 A.18.6 Interface Unit - Interface DS3 to DS1	\$93.31 \$154.74 \$14.51	\$93.31 \$154.74 \$14.51	\$93.31 \$154.74 \$14.51	\$93.31 \$154.74 \$14.51
		<u>\$262.56</u>	<u>\$262.56</u>	<u>\$262.56</u>	<u>\$262.56</u>
<b>P.55</b>	<b>4-WIRE 56 OR 64 KBPS EXTENDED 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 D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination A.18.5 Channelization - Channel System DS3 to DS1 A.18.6 Interface Unit - Interface DS3 to DS1 A.18.1 Channelization - Channel System DS1 to DS0 A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$33.72 \$93.31 \$222.61 \$14.51 \$154.74 \$2.22	\$45.25 \$93.31 \$222.61 \$14.51 \$154.74 \$2.22	\$52.44 \$93.31 \$222.61 \$14.51 \$154.74 \$2.22	\$36.98 \$93.31 \$222.61 \$14.51 \$154.74 \$2.22
		<u>\$521.11</u>	<u>\$532.64</u>	<u>\$539.82</u>	<u>\$524.36</u>
P.55-2	Per Mile per DS1 D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.55-3	Additional 4-Wire 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	\$33.72 \$2.22	\$45.25 \$2.22	\$52.44 \$2.22	\$36.98 \$2.22
		<u>\$35.94</u>	<u>\$47.47</u>	<u>\$54.65</u>	<u>\$39.20</u>
P.55-4	Additional DS1 in same DS3 D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination A.18.1 Channelization - Channel System DS1 to DS0 A.18.6 Interface Unit - Interface DS3 to DS1	\$93.31 \$154.74 \$14.51	\$93.31 \$154.74 \$14.51	\$93.31 \$154.74 \$14.51	\$93.31 \$154.74 \$14.51
		<u>\$262.56</u>	<u>\$262.56</u>	<u>\$262.56</u>	<u>\$262.56</u>
<b>P.56</b>	<b>2-WIRE ISDN EXTENDED LOOP 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 D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination A.18.5 Channelization - Channel System DS3 to DS1 A.18.6 Interface Unit - Interface DS3 to DS1 A.18.1 Channelization - Channel System DS1 to DS0 A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$28.07 \$93.31 \$222.61 \$14.51 \$154.74 \$3.86	\$34.28 \$93.31 \$222.61 \$14.51 \$154.74 \$3.86	\$37.46 \$93.31 \$222.61 \$14.51 \$154.74 \$3.86	\$29.80 \$93.31 \$222.61 \$14.51 \$154.74 \$3.86
		<u>\$517.10</u>	<u>\$523.31</u>	<u>\$526.49</u>	<u>\$518.83</u>
P.56-2	Per Mile per DS1 D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.56-3	Additional 2-Wire in same DS1 A.5.1 2-Wire ISDN Digital Grade Loop A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$28.07 \$3.86	\$34.28 \$3.86	\$37.46 \$3.86	\$29.80 \$3.86
		<u>\$31.93</u>	<u>\$38.14</u>	<u>\$41.32</u>	<u>\$33.66</u>

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Unbundled Network Elements Cost Summary

<b>Study Name:</b>	<b>Florida Docket No 994609-TP</b>
<b>State:</b>	<b>Florida</b>

		Zone 1	Zone 2	Zone 3	Statewide Average
P.56-4	Additional DS1 in same DS3				
	<i>D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination</i>	\$93.31	\$93.31	\$93.31	\$93.31
	<i>A.18.1 Channelization - Channel System DS1 to DS0</i>	\$154.74	\$154.74	\$154.74	\$154.74
	<i>A.18.6 Interface Unit - Interface DS3 to DS1</i>	\$14.51	\$14.51	\$14.51	\$14.51
		<b>\$262.56</b>	<b>\$262.56</b>	<b>\$262.56</b>	<b>\$262.56</b>
<b>P.57</b>	<b>4-WIRE DS1 DIGITAL EXTENDED LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX</b>				
P.57-1	First 4-Wire DS1 in DS3				
	<i>A.9.1 4-Wire DS1 Digital Loop</i>	\$89.37	\$113.49	\$194.35	\$96.46
	<i>D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination</i>	\$93.31	\$93.31	\$93.31	\$93.31
	<i>A.18.5 Channelization - Channel System DS3 to DS1</i>	\$222.61	\$222.61	\$222.61	\$222.61
	<i>A.18.6 Interface Unit - Interface DS3 to DS1</i>	\$14.51	\$14.51	\$14.51	\$14.51
		<b>\$419.80</b>	<b>\$443.93</b>	<b>\$524.78</b>	<b>\$426.89</b>
P.57-2	Per Mile per DS1				
	<i>D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile</i>	\$ 2035	\$ 2035	\$ 2035	\$ 2035
P.57-3	Additional 4-Wire DS1 in same DS3				
	<i>A.9.1 4-Wire DS1 Digital Loop</i>	\$89.37	\$113.49	\$194.35	\$96.46
	<i>A.18.6 Interface Unit - Interface DS3 to DS1</i>	\$14.51	\$14.51	\$14.51	\$14.51
	<i>D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination</i>	\$93.31	\$93.31	\$93.31	\$93.31
		<b>\$197.19</b>	<b>\$221.31</b>	<b>\$302.16</b>	<b>\$204.28</b>
<b>P.58</b>	<b>4-WIRE 56 OR 64 KBPS DIGITAL EXTENDED LOOP WITH DS0 INTEROFFICE TRANSPORT</b>				
P.58-1	Fixed				
	<i>A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop</i>	\$33.72	\$45.25	\$52.44	\$36.98
	<i>D.3.2 Interoffice Transport - Dedicated - DS0 - Facility Termination</i>	\$19.46	\$19.46	\$19.46	\$19.46
		<b>\$53.18</b>	<b>\$64.71</b>	<b>\$71.89</b>	<b>\$56.44</b>
P.58-2	Per Mile				
	<i>D.3.1 Interoffice Transport - Dedicated - DS0 - Per Mile</i>	\$ .01	\$ .01	\$ .01	\$ .01

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