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STATE OF ALASKA

THE REGULATORY COMMISSION OF ALASKA

Before Commissioners:

Mark K. Johnson, Chair
Kate Giard
Dave Harbour
James S. Strandberg
G. Nanette Thompson

In the Matter of the Petition by GCI COMMUNICATIONS CORP. d/b/a GENERAL COMMUNICATION, INC., and d/b/a GCI for Arbitration under Section 252 of the Telecommunications Act of 1996 with the MUNICIPALITY OF ANCHORAGE d/b/a ANCHORAGE TELEPHONE UTILITY a/k/a ATU TELECOMMUNICATIONS for the Purpose of Instituting Local Exchange Competition

U-96-89

ORDER NO. 42

ORDER SETTING PRICES FOR ACCESS TO UNBUNDLED NETWORK ELEMENTS, RESALE AND TERMS AND CONDITIONS OF INTERCONNECTION

BY THE COMMISSION:

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I. Summary

This order sets the prices that ACS-AN[1] may charge GCI[2] for access to unbundled network elements and resale and sets the terms and conditions of their interconnection.

II. Background

This is a proceeding to set unbundled network element and resale prices in Anchorage.[3] The Alaska Public Utilities Commission (APUC), our predecessor agency,[4] set interconnection prices in 1997.[5] The Federal Communications Commission (FCC) adopted its total element long run incremental cost (TELRIC) methodology while the arbitration was pending, however TELRIC models that could be used to calculate loop and other unbundled network element (UNE) prices in Alaska were not then available.[6] In that order, the APUC stated "all prices in the arbitrated interconnection agreement are temporary in nature and will require a full study based

[1]Municipality of Anchorage d/b/a Anchorage Telephone Utility a/k/a ATU Telecommunications (ATU) is now known as ACS of Anchorage, Inc. d/b/a Alaska Communications Systems, ACS Local Service, and ACS (ACS-AN). For purposes of this proceeding, the original case caption will be used.

[2]GCI Communications Corp. d/b/a General Communication, Inc., and d/b/a GCI.

[3]Telecommunications Act of 1996 (the Act), Pub. L. No. 104-104, 110 Stat. 56 (1996) amending the Communications Act of 1934, at 47 U.S.C. § 252. The Act's specific time constraints do not apply to this proceeding because it is not an initial pricing proceeding. Order U-96-89(15), dated January 8, 2001; Tr. at 67 (December 6, 2000).

[4]We assumed the responsibilities of the APUC on July 1, 1999 under ch. 25, SLA 1999.

[5]Order U-96-89(9), dated January 14, 1997.

[6]*In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* CC Docket No. 96-98, 11 FCCRcd 15499 (1996).

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upon a cost methodology to be determined by this Commission at a later date."[7] On January 24, 2000, ACS-AN filed a motion to have the Commission establish, by hearing, a forward-looking economic cost model and methodology to price unbundled network elements in this docket.[8]

We appointed an arbitrator, and began to address the myriad of motions filed by the parties designed to resolve the issues of model choice. When, despite the arbitrator's and parties' diligent efforts, many issues remained unresolved after two years, we decided to discontinue the arbitration process and to employ our traditional hearing process to build a record to resolve the remaining issues. We directed the parties to file testimony and supporting documentation of their proposals for interconnection prices for Anchorage.[9]

The parties filed direct, responsive and reply testimony in written form on August 29, 2003, September 29, 2003 and October 13, 2003. A hearing was conducted November 3-13, 2003, to allow cross-examination and commissioner inquiry. Over two hundred exhibits were admitted into evidence. We base our decision on this extensive record.

The legal framework for our decision is more richly developed than the last time we set interconnection prices for Anchorage. The United States Supreme Court affirmed the FCC's adoption of TELRIC pricing methodology in *Verizon Communications Inc. v. Federal Communications Commission.*[10] The FCC released the

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[7]*Id.* at 3.

[8]*Motion to Establish Forward Looking Economic Cost Models and Methodologies,* filed January 24, 2000.

[9]Order U-96-89(35), dated July 14, 2003.

[10]*Verizon Communications Inc. v. Fed. Communications Comm'n*, 533 U.S. 467, 122 S.Ct. 1646 (May 13, 2002) (*Verizon*).

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results of its Triennial Review of interconnection pricing policy[11] and that decision was reviewed by the District of Columbia Circuit Court of Appeals.[12] That decision became effective June 16, 2004. It may be further appealed. The FCC also adopted its staff's recommendation on interconnection pricing in a Virginia case.[13] Finally, the FCC has an open proceeding to consider changes to the TELRIC pricing methodology.[14] We render our decision within this evolving legal framework. It is our goal to stabilize the Anchorage market so that customers can purchase desired services from the company of their choice and the companies can make reasoned investment decisions.

To determine the cost of reconstructing a telephone network in Anchorage, we examined each of the components of that network and determined its

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[11]*Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338 *et al.,* 18 FCCRcd 16978 (2003) (Triennial Review Order).

[12]In an order issued on April 13, 2004, the District of Columbia Circuit Court stayed the effective date of its reversal of parts of the FCC's Triennial Review Order until June 15, 2004, to allow industry the opportunity to reach commercial agreements on these complex issues. *United States Telecom Ass'n v.* FCC, No. 00-1012. On May 19, 2004, the United States Supreme Court granted the Solicitor General's request giving the government additional time to decide whether to appeal the circuit court's ruling. On June 9, 2004, the Office of the Solicitor General informed the FCC that the government would not appeal the District of Columbia Circuit Court's decision.

[13]*In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration,* CC Docket No. 00-218, DA 03-2738 18 FCCRcd 17722 (Aug. 29, 2003) (*Verizon Virginia*). The FCC stood in the role assigned to states under the Act because the Virginia State Corporation Commission declined to hear the case. A full discussion of the events leading to preemption of the Virginia Commission can be found in the *Non-Cost Arbitration Order*, CC Docket No. 00-218, DA 02-1731 17 FCC Rcd 27039 paras. 1-10, 12-13 (July 17, 2002).

[14]*Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers,* WC Docket No. 03-173, FCC 03-224, 18 FCCRcd 18945 (Sep. 15, 2003).

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forward-looking cost. Determining loop prices was the most complex task, because it required analysis of the details of how the network would be built if it was constructed anew today. Our task was not to rebuild the existing network, but rather to determine the price of building it if was to be redesigned and constructed today.[15]

To reach a decision on loop prices in this case, we used one of the loop models submitted by the parties with inputs modified based on the record. We devoted considerable time and effort to this task because of the importance of the loop rate to local competition in the Anchorage market. The loop rate has long been a major point of contention between ACS-AN and GCI. Although both parties proposed different models, they also ran the same model (ACS v7.2-G) using a common set of network design assumptions.

The parties used different models to calculate proposed non-loop prices. The parties frequently disagreed on which rate elements should be produced by the models. As a result, for most of the non-loop decisions, we chose one model or the other and all or most of the proposed inputs. With a few minor exceptions, we adopted this approach for switching and transport, non-recurring costs, and collocation (and orphan elements). For wholesale prices we found neither of the parties' proposals entirely acceptable and developed our own model using elements of each of the competing proposals. Finally, we examine the Operational Support Systems (OSS) and contract issues that remain after the parties' April 28, 2004 stipulation.[16]

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[15]*Southwestern Bell*, 262 U.S. 276, 312; 43 S.Ct. 544 (1923).

[16]*Joint Motion Seeking RCA Approval Pursuant to Section 252 of Voluntarily Negotiated Amendment to Interconnection Agreement,* filed April 28, 2004.

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III. Loop Prices

In the months before the hearing, one of the most vigorously litigated issues was which model we should use to calculate loop prices. At the hearing, this debate was essentially resolved. Models are developed and used to set interconnection prices because the task of determining the actual costs of each network element would be so tedious and time consuming as to make the accuracy of the results not justified by the time and effort required to develop them. Instead, the parties choose representative pieces of a network, determine their price with reasonable accuracy, and apply that knowledge to determine a loop price that fairly represents loop costs in that network.

ACS-AN presented a model it developed, the UNE Loop Cost v7.2 Model (ACS v7.2 model), that was revised several times before the hearing. GCI presented its case using the FCC-ANC model.[17] GCI also developed an alternate loop rate based upon its modified version of the ACS v7.2 model (ACS v7.2-G)[18] using a network design different than that proposed by ACS-AN. ACS-AN asserts that the model we use to determine prices is not as significant as the inputs.[19] ACS-AN verified this assertion by using ACS v7.2-G with different price inputs to show that it would produce outputs that closely replicate the results produced by its own model, ACS v7.2.[20]

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[17]The FCC-ANC model "is based on the version of the FCC Synthesis Model adopted by the Commission for use in setting UNE rates during the Fairbanks-Juneau arbitration. GCI has made appropriate modifications to the model for use in anchorage." T-40 (RAM) 6.

[18]In this order we refer to GCI's modified version of the ACS v7.2 model as ACS v7.2-G.

[19]Tr. 166; Tr. 239-40 (DCB)

[20]T-10 (WJW) 2-3; Tr. 239 (DCB); Tr. 352 (WJW).

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The ACS v7.2 model and GCI's version of that model (ACS v7.2-G) are fundamentally different than most other UNE models. As explained by GCI witness Mercer, the FCC-ANC is a proxy cost model that:

> constructs a hypothetical network to serve known customer locations. In doing so, it does not specifically account for geographic and manmade attributes of the area being modeled. It does, however, take account of such attributes in a statistical way, for instance, by increasing the amount of cable routing distances compared to straight line routing in order to account for the need to route around obstacles.[21]

In contrast, ACS v7.2 and ACS v7.2-G utilize the results of an engineering design of a portion of the Anchorage network taking into account specific geographic and manmade features within the sample areas.[22] The ACS v7.2 model was created with data collected by surveying all of the existing routes within the sample census block groups (CBGs). GCI's consultants verified the ACS-AN data and made some modifications. Because this was a model created with local data to determine Anchorage prices, and both parties have verified its underlying assumptions, we conclude that it can be used to determine the cost of rebuilding the network in Anchorage with reasonable accuracy.[23]

A. Structural Changes -- Demand and Network Design

GCI made several structural changes to the ACS v7.2 model. One of the most fundamental was to change the underlying assumption about customer demand. GCI adjusted the ACS v7.2 model to reflect current demand. Witness Mercer explained

[21]T-40 (RAM) 27-28.

[22]T-40 (RAM) 13-14, 27.

[23]The use of this model in this proceeding should not be considered precedent for determining UNE prices in other competitive markets. Both parties made significant investments to develop, understand and use this model, however the ACS v7.2 model is specific to Anchorage and cannot be used elsewhere.

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that GCI designed the feeder network from scratch and applied a distribution network cable "resizer" to enable the model to produce results based on current rather than projected (or ultimate) demand.[24] These adjustments were consistent with the arbitrator's decision[25] and our order affirming that ruling.[26] Without this adjustment the model designed a network to meet ultimate demand but set prices based on current demand. We find that GCI's "resizer" adjustment, using a consistent demand figure in both the numerator and the denominator, produced more accurate results.[27]

The ACS v7.2 model, with GCI's network and demand adjustments (ACS v7.2-G) includes a factor for future growth. We find that it is reasonable to plan for future increases in customer demand to the existing network, but not to develop current prices based on construction of a network to serve every possible subdivided lot in Anchorage, regardless of whether there are current plans to construct any facilities there. The reasonable growth factor included in the adjusted model assumes that demand will continue to grow at a rate consistent with historical trends and builds a network adequate to serve projected demand for the next five years.[28]

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[24]RAM-2.

[25]Arbitration Order A-3, dated April 16, 2003.

[26]In an electronic ruling issued October 29, 2003, we supported the arbitrator's decision that the demand factors must be consistent. That ruling was affirmed by Order U-96-89(39), dated April 16, 2004.

[27]With respect to the ultimate/current demand issue, we believe the changes made to the feeder system were less significant than the changes made to the distribution system. Cinelli stated the changes made by GCI to feeder design were "insignificant." T-15 (SDC) 2.

[28]RAM-2.

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GCI also modified the model to enable it to generate common and general support costs that relate to the level of investment used by the model.[29] The ACS version of the v7.2 model calculates these indirect costs using largely embedded costs (either its own or based upon an FCC universal service proxy model) that do not vary significantly with the level of investment produced by the model.[30] We find that GCI's modification results in a more accurate calculation of common and general support costs.

B. Loop Model Inputs

The ACS v7.2-G model begins with an engineering process that designs and maps a sample of Anchorage census block groups (CBGs).[31] The model then calculates a final UNE-loop rate and sub-loop rates using a set of integrated spreadsheets. GCI describes the spreadsheet portions of the model as follows:

- The component compiler records the results of the design process and allocates the amounts of various network components leading to the final network component list.
- The integrator acquires the network component list and uses a set of user-adjustable network component unit investments to convert the list into network investments in various categories of plant.
- The cost calculator uses a set of user-adjustable expense inputs to convert the investments into the monthly loop costs.

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[29]*See* electronic exhibit RAM-9. ACS 7.2-G and HAI-SWT Model Runs/Anc expense/GCIexpense.xls, E-General and E-Common worksheets.

[30]*See* Cost Models and Support Documentation, _1_UNE/ACS v7.2 UNE Model/Cost Calculator ACS Financial Input Defaults.xls, E-General and E-Common worksheets, filed by ACS-AN on August 29, 2003.

[31]T-40 (RAM) 15.

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Because the ACS-AN and GCI versions of ACS v7.2-G both use the same network design, the network component list for both companies is identical. The parties present different cost proposals for each network component unit.[32] In the paragraphs that follow, we describe our input findings.

1. Depreciation

We recently compiled an extensive record on depreciation rates for ACS-AN in that company's pending proceeding to set retail rates.[33] The parties presented the same witnesses to support their depreciation positions in this case.[34]

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[32]To better understand the mechanics of ACS v7.2-G, we prepared graphic representations of the spreadsheets that compose ACS v7.2-G: Appendix A (simplified) and Appendix B (expanded). Appendix A shows the worksheets that compose the model and how calculations generally flow from one spreadsheet to the next. The model process begins at the upper left with network components compiled from design maps and individual CBG spreadsheets. (There are no network component inputs per se. The type and quantity of network components is determined by the engineering design process, *i.e.*, the design and mapping process.) The Materials Database contains "user adjustable unit investment" inputs. These inputs include items such as the cost of variously sized cables (per foot), trenching and excavation cost (per foot), installation of manholes (per manhole). The MaterialList calculates investment by component. The Inputs worksheet contains input cells for depreciation factors, cost of equity, cost of debt, debt ratio and a few other inputs. The cost calculator worksheets use data from MaterialList and Input worksheets, as well as maintenance factor inputs, to calculate direct costs for each subloop element (feeder, distribution, concentrator, and network interface device (NID)). The E-Common and E-General worksheets calculate common and general support. The E-Summary worksheet combines direct expense with common and general support costs and other miscellaneous costs to produce the final loop rate and sub-loop rates.

[33]Order U-01-34(24), dated August 22, 2003. Docket U-01-34 is titled *In the Matter of the Investigation of the Local Exchange Revenue-Requirement, Depreciation, Cost-of-Service, Rate Design Studies, and Tariff Rate Revisions Designated as TA429-120 and TA431-120 Filed by ACS OF ANCHORAGE, INC. d/b/a ALASKA COMMUNICATIONS SYSTEMS, ACS LOCAL SERVICE, and ACS.*

[34]In Docket U-01-34 and in this docket, Terance J. Cooney and Jerome C. Weinert presented depreciation testimony on behalf of ACS-AN and Michael J. Majoros, Jr. presented depreciation testimony on behalf of GCI.

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Although TELRIC pricing principles may require some adjustments, we believe that it is reasonable to use the rates established in that case as a starting point for our analysis here.

The FCC's recent *Verizon Virginia* order provides some guidance for our decision on appropriate depreciation rates. In that case, the FCC interpreted the Triennial Review Order as declining to set particular rates. Instead, the FCC acknowledged that the states were to apply their expertise and knowledge of local market conditions to set fair rates and consider adjustments to reflect the declining value of assets in competitive markets.[35] Both parties agreed that this was the appropriate standard, but they disagreed on how it should be applied in this case.

Depreciation rates are set to allow a company to recover the cost of its investment over the useful life of the equipment. As the FCC suggested, that useful life may be different in markets with facilities-based competition than it would be in a traditional monopoly market. The FCC explained that we should assume that in the long run the incumbent will be forced to respond to competition by eventually replacing its network with current technology.[36] Timing is the key to resolving the differences in the parties' positions. We must assume that ACS-AN will be forced to replace its network over time if it is to continue as a viable competitor in the Anchorage market.

ACS-AN argued that we should consider GCI's announced plans to begin serving its customers with its own network, and thus to depreciate its existing network

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[35]*In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration,* CC Docket No. 00-218, DA 03-2738 18 FCCRcd 17722 (Aug. 29, 2003) (*Verizon Virginia*) at 18.

[36]*Verizon Virginia* at 19.

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rapidly based on the assumption that its remaining useful life was short.[37] ACS-AN witness Cooney argued that these downward adjustments were necessary to reflect the dramatic share of the market captured by ACS-AN's competitors. During the hearing he argued for an additional adjustment to rates to compensate ACS-AN for its market share loss.[38] ACS-AN witness Weinert argued that ACS-AN's depreciation lives should be shortened because changes in technology and increasing customer demand for broadband require ACS-AN to install a packet-switched network to replace its existing network.[39]

We are not persuaded by the testimony of Sprain that ACS-AN lacks the capital to make necessary network maintenance and improvements.[40] His testimony was inconsistent with the testimony of witness Meade that local service revenues have increased.[41] ACS-AN's publicly filed financial statements also support our understanding that the local service portion of ACS-AN's operations is profitable.[42]

We are also not persuaded that the depreciation rates need to be adjusted further now based on speculation that ACS-AN will lose a significant portion of its customer base when GCI offers local service via cable telephony. The FCC has directed us to reflect the declining asset value of the incumbent's plant that may result from the introduction of competition into the market.[43] The value of ACS-AN's plant may

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[37]Tr. 451-61 (TJC); T-25 (TJC) 10; T-26 (TJC) 7-8.

[38]Tr. 454-56 (TJC). On cross-examination, Mr. Cooney confirmed ACS-AN was proposing a $28.65 loop rate. Tr. 466 (TJC).

[39]Tr. 553-56, 566-67 (JCW); T-28 (JCW) 4-5

[40]Tr. 486-87 (KLS); T-33 (KLS) 7.

[41]TRM-24 at 2.

[42]T-47 (GFC) 1-7.

[43]Triennial Review Order, ¶ 685; *Verizon Virginia* at 49-50.

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decline if a facilities-based competitive service becomes available in the market and ACS-AN experiences a significant decline in use of its network as a result. However, the record in this proceeding suggests that ACS-AN has continued to experience steady growth in use of its network.[44] In constructing its model, ACS-AN planned for continued steady growth of its network, rather than decline.[45] Thus, ACS-AN's pricing proposal for its network that is based on the assumption of continued expansion of its network to meet increasing demand is inconsistent with its argument that it should be allowed higher rates of depreciation because of the prospect of future network declines.

GCI argued that the rates at the high end of the FCC ranges are most appropriate.[46] Majoros argued that ACS-AN's prospective loss of use of its network when GCI began using cable telephony to serve its customers was too speculative. He suggested that, if we determined it was necessary to adjust prices to reflect the loss of use of the network, adjustment should be made to fill factors or cost of capital, but not to depreciation.[47] We concur and reflect the impact of the competitive market in the cost of capital calculation.

We therefore apply the depreciation schedules used in the recent rate proceeding.[48] There was nothing presented in this record that has persuaded us that the asset value of ACS-AN's network will decline any more quickly than we then believed. In that proceeding, we considered the prospective impact of facilities-based

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[44]Tr. 339-40 (WJW); TRM-2 by Shoup at Tr. 167.

[45]Tr. 339-340.

[46]Tr. 1364-76 (MJM); MJM-4.

[47]Tr. 1374 (MJM).

[48]We set depreciation lives in Order U-01-34(15) and required ACS-AN to file revised depreciation schedules. We later learned that our decision was based, in part, on incorrect information and reopened the record to allow ACS-AN to correct the record and set final depreciation lives. Order U-01-34(24), dated August 22, 2003.

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competition.[49] Depreciation rates for those elements of ACS-AN's network likely to be affected by competition were set in that proceeding at the low end of the FCC range to reflect the impact of competition faced by the incumbent.[50]

2. Cost of Capital

Embedded in the TELRIC price of each UNE is a profit component which the FCC states equals a company's cost of capital. Capital is the blend of equity and debt used to fund an organization's corporate purpose (called Capital Structure). Both have associated costs. The use of equity requires a return to the stockholder, (Cost of Equity) while the use of debt has an associated interest cost (Cost of Debt). These factors, capital structure, costs of equity and debt comprise the traditional rate of return calculation for regulated enterprises.

A TELRIC compliant cost of capital also reflects the impact of highly competitive markets on capital structure, cost of equity and cost of debt. TELRIC assumes that markets may develop with multiple carriers providing local exchange services over their own facilities rather than over the lines leased from the incumbent local exchange carrier. The FCC requires states to establish a cost of capital that "reflects the competitive risks associated with participating in the type of market that

[49]Order U-01-34(15)/U-01-66(5)/U-01-82(11)/U-01-83(11)/U-01-84(11)/U-01-85(11)/U-01-86(11)/U-01-87(11), dated June 6, 2002 (Order U-01-34); Order U-01-34(24), dated August 22, 2003.

[50]We conclude that the best remaining option is to select a service life for each of the Metallic Cable Accounts at the low end of the FCC range (20 years for aerial, 25 years for underground, and 20 years for buried plant). We select from the low end of the FCC range because ACS-AN faces a high level of retail competition in much of its market. Using the low end of the FCC range provides for a reasonable depreciation rate as it reflects a national standard adopted by a regulatory body with knowledge and experience with the telecommunications industry

Order U-01-34(24), dated August 22, 2003, at 11-12.

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TELRIC assumes"[51] and therefore, the TELRIC model "must reflect the risks of a market . . . which . . . faces facilities-based competition."[52]

The FCC stated "the currently authorized rate of return at the federal or state level is a reasonable starting point for TELRIC calculations."[53] The most recent cost of capital for ACS-AN was in a stipulation[54] accepted by the Commission[55] and summarized below.

Stipulated Cost of Capital Accepted in Order U-01-34(15)	Percent
Capital Structure is comprised of:	
Equity Portion	55.0
Debt Portion	45.0
Total	100.0
Cost of Debt	8.60
Cost of Equity	13.25
Weighted Average Cost of Capital	11.16

[51]*Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338 *et al.,* 18 FCCRcd 16978 (2003) ¶ 681.

[52]*In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration,* CC Docket No. 00-218, DA 03-2738 18 FCCRcd 17722 (Aug. 29, 2003) (*Verizon Virginia*) ¶ 63.

[53]*In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* CC Docket No. 96-98, 11 FCCRcd 15499, 15846 (1996).

[54]*Stipulation of the Parties Concerning Cost of Capital and Pro Forma Adjustments to the ACS LECs Revenue Requirements,* filed March 1, 2002 (Stipulation). The parties consisted of the ACS LECs, GCI, Alascom, Inc. d/b/a AT&T Alascom and Public Advocacy Section of the RCA.

[55]Order U-01-34(15), dated June 6, 2002.

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The FCC allowed that "[s]tates may adjust the cost of capital if a party demonstrates to a state commission that either a higher or lower cost of capital is warranted."[56] We consider the 11.16 percent stipulated rate as traditional cost of capital without the impact of TELRIC-style competition. GCI witness Murray argued that the TELRIC cost of capital should be at 8.02 percent.[57] ACS-AN witness Blessing argued that the TELRIC cost of capital should be 12.26 percent.[58] After weighing the individual cost of capital components, we adopt a 14.28 percent TELRIC cost of capital for this proceeding.

Several factors cause us to increase the TELRIC cost of capital above the 11.16 percent starting point in the Docket U-01-34 rate case stipulation. First, we adopt the capital structure stipulated in Docket U-01-34 to reflect a TELRIC capital structure based on market values. Second, we apply ACS-AN's actual overall cost of debt at 10.33 percent[59] to the TELRIC cost of capital model. Third, we calculate the TELRIC cost of equity at 17.51 percent. We find the resulting weighted average cost of capital of 14.28 percent reflects the higher cost of debt and investor returns required to operate in a TELRIC environment.

We compare the 14.28 percent overall weighted average cost of capital with the 12.95 percent resulting from *Verizon Virginia.* The FCC found that "the cost of capital calculation is intended to reflect the cost of capital of a telecommunications carrier that operates in a market with facilities-based competition."[60] In the Anchorage

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[56] *Verizon Virginia*, ¶ 58.

[57] T-43 (TLM) 20.

[58] T-3 (DCB) 47.

[59] T-3 (DCB) 48.

[60] *Verizon Virginia,* ¶ 67.

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retail market, ACS-AN, as an incumbent LEC, retains approximately 50 percent of the market share it held as a monopoly carrier.[61] The record also indicates facilities-based competition is likely to occur in ACS-AN's market in the near term.[62]

Here we find an important distinction in the theoretical market structures that form the basis for determination of competitive risk in *Verizon Virginia* and the market conditions that now exist and may soon exist in Anchorage. In *Verizon Virginia*, AT&T/WorldCom assumed that Verizon would remain the dominant carrier in the market for the foreseeable future.[63] Verizon argues that TELRIC assumes more competition than exists today, and it would be inappropriate to assume Verizon will remain the dominant company in the local market.[64] Both parties agree that Verizon is currently the dominant company. This is not the case in Anchorage. The Anchorage retail market is highly competitive under a UNE pricing mechanism and stands poised to enter a facilities-based competition. We find these dramatically different market conditions reasonably justify the award of a 14.28 percent cost of capital in this proceeding.

a) Capital Structure

ACS-AN proposes the hypothetical capital structure accepted in Docket U-01-34 comprised of 55 percent equity and 45 percent debt.[65] GCI proposes a hypothetical capital structure comprised of 49.79 percent common equity and 50.21 percent debt.[66] GCI derived its hypothetical capital structure by averaging the book and

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[61]T-3 (DCB) 30; T-46 (DLT) 9.

[62]T-46 (DLT) 4-5.

[63]*Verizon Virginia*, ¶ 62.

[64]*Verizon Virginia*, ¶ 61.

[65]T-3 (DCB) 47.

[66]T-43 (TLM) 26.

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market values of common equity over equity plus debt of ACS-AN together with six comparable companies.[67]

GCI Cost of Capital Proposal[68] Common Equity/ Equity Plus Debt	Percent Common Equity	Percent Debt	Total
Average Book Value of ACS plus six Comparable Companies[69]	42.22	57.78	100
Average Market Value of ACS plus six Comparable Companies	57.36	42.64	100
Average Book Value to Market Value	49.79	50.21	100

The FCC stated in its *Virginia Verizon* order, "[i]n calculating TELRIC prices, the theoretically correct capital structure is based on market values of debt and equity, not on book values" and that "use of a capital structure based on market values, rather than book values . . . is entirely appropriate under the Act."[70] Therefore, we give no weight to the book value data provided by GCI and instead compare the capital structure proposed by ACS-AN with the market value proxy provided by GCI.

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[67]Six comparable companies presented are: ALLTEL Corporation (AllTel), Cincinnati Bell, Inc. (Cincinnati Bell), CenturyTel, Inc. (CenturyTel), Citizens Communications Company (Century Communications), Commonwealth Telephone Enterprises, Inc., and Surewest Communications (SureWest). T-43 (TLM) 22, 23.

[68]Electronic Exhibit TLM-2, Murray Cost of Capital Workpapers.xls, Capital Structure

[69]*See* Electronic Exhibit TLM-2, Murray Cost of Capital Workpapers.xls, Capital Structure.

[70]Investors would not earn the return that they require if a cost of capital that is based on book value is applied to the economic value of their assets, given that rational investors value these assets at market value. Thus, the use of a capital structure based on market values, rather than book values, represents a departure from traditional ratemaking, but one that is entirely appropriate under the Act.

Verizon Virginia, ¶ 102.

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We find that the market value analysis performed by GCI using six comparable companies and ACS-AN results in a substantially similar hypothetical capital structure to what we approved in the Stipulation.[71] We therefore use the market value data provided by GCI as a benchmark to determine that ACS-AN's proposed capital structure is within the TELRIC zone of reasonableness.

b) Cost of Debt

ACS-AN proposes a cost of debt of 8.60 percent based on the Stipulation.[72] GCI proposes a blended cost of debt of 5.84% resulting from a weighting of 93.97 percent long term debt cost at 6.0 percent and a 6.03 percent short term debt cost at 3.37 percent.[73] We adopt ACS-AN's actual cost of debt of 10.33 percent. We follow the practice of the FCC in *Verizon Virginia* wherein it stated, "the cost of capital calculation is intended to reflect the cost of capital of a telecommunications carrier that operates in a market with facilities-based competition."[74] We find because ACS-AN operates in a sufficiently competitive environment and will operate in a true facilities-based competitive market in the near future, that the actual cost of debt more closely approximates the costs associated with operating in TELRIC markets.

GCI witness Murray's computation of the cost of debt is a based, in part, on the assumption that a hypothetical efficient carrier in a facilities-based competitive market should be able to maintain an A3/A- bond rating. GCI then derives an interest

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[71]Order U-01-34(15), dated June 6, 2002.

[72]T-3 (DCB) 47.

[73]T-43 (TLS) 46.

[74]*Verizon Virginia*, ¶ 67. In that proceeding, AT&T/Worldcom stated, "that the best estimate of the cost of debt is the weighted average cost over all of the subject company's outstanding issues, including the debt of the holding company and any subsidiaries." *Id.* at 66.

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rate spread of 1.09 percent between utility bonds with an A3/A- bond rating and the yield to maturity on a 10-year Treasury bond. The spread is then added to the interest rate on a 10-year Treasury bond and forecasted 10 years into the future[75] to arrive at the future cost of long-term debt financing for a hypothetical efficient carrier. This future cost is then averaged with the current cost of debt, which is the sum of the current spread plus the current 10-year Treasury bond, resulting in a long term debt cost of 6.0 percent. This same procedure is applied to short-term debt, using Treasury bonds of 1-year maturities, resulting in a short term debt estimate of 3.37%.[76] These rates are then weighed according to the proportion of long term debt (93.97 percent) versus short term debt (6.03 percent) in the average capital structures of ACS-AN plus six comparable companies.[77] The final outcome is a blended debt cost of 5.84%.

We find GCI's analysis unpersuasive for several reasons. Using generic utility bonds as the initial assumption does not adequately assure a fair comparison to the competitive markets that TELRIC assumes. Generic utility bonds can include the whole population of utility industries, some of which may be competitive, some of which may remain regulated monopolies but very few, if any, operate in an environment of facilities-based competition. Further, the computation rests on the difference in interest rates (spread) between utility bonds with a bond rating of A3/A- and the yield-to-maturity of a 10-year Treasury bond.

[75]The forecast came from the Philadelphia Federal Reserve Bank's *Survey of Professional Forecasters*. T-43 (TLM) 45.

[76]T-43 (TLM) 45.

[77]T-43 (TLM) n.58.

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We have no record by which to evaluate whether the spread of 1.09 percent that GCI proposes would likely be larger or smaller in the highly competitive facilities-based markets envisioned by TELRIC.

In *Verizon Virginia*, the FCC rejected Verizon's use of generic industrial bonds as a proxy for determining cost of debt. Instead, the FCC selected AT&T/WorldCom's cost of debt stating,

> AT&T/WorldCom's proposal to use the cost of debt for Bell Atlantic and GTE is the better of the two proposals because it at least reflects the cost of companies in the relevant industry. In contrast, Verizon has not demonstrated that the debt costs faced by S&P companies generally are at all related to the costs telecommunications carriers would face in a market with facilities-based competition"[78]

ACS-AN proposed using a cost of debt of 8.6 percent in its initial prefiled testimony but in his opposition testimony, witness Blessing notes "[i]f we followed the Verizon-Virginia example and used the actual yield-to-maturity of ACS' debt in the calculation of the stipulated WACC, the resulting cost of debt would increase to 10.33%."[79] We concur and apply ACS-AN's actual cost of debt in our cost of capital calculation.

<u>c) Cost of Equity</u>

ACS-AN proposes a cost of equity of 15.25 percent, which uses the stipulated cost of equity of Docket U-01-34, adjusted upward by 200 basis points to reflect increased risk.[80]

GCI proposes a cost of equity of 10.22 percent based on averaging estimates of a cost of equity calculated under a three-stage discounted cash flow (DCF)

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[78]*Verizon Virginia,* ¶ 67 *(footnote omitted)*.

[79]T-4 (DCB) 29.

[80]T-3 (TCM) 49.

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model of 10.11 percent with the cost of equity of 10.33 percent calculated under a Capital Asset Pricing Model (CAPM).[81] Both methods result in substantially similar outcomes. We use the CAPM model and find the TELRIC cost of equity for ACS-AN at 17.51%.

The three-stage DCF model relies on current dividend yields, combined with short term (5 years) and long term growth (15 years) projections based on three comparable companies.[82] The CAPM model calculates the cost of equity based on the earning opportunity embodied in a risk-free investment option (Treasury bonds), adjusted by the product of beta, which measures the market volatility of a company's stock and a risk premium, which is the difference between the rate of return an investor expects to earn and the return available in the risk-free investment.

We find the CAPM model is better suited to the calculation of cost of equity in this preceding. The DCF model is less suited to a TELRIC cost of capital because it uses assumptions about the current dividend yield and forecasts of company growth patterns. In traditional rate of return regulation, where growth patterns are modeled based on actual historical performance of relevant companies, the DCF method produces reliable outcomes.[83] However, a TELRIC environment is purely theoretical and lacks the benchmarks of average life cycles or historical growth patterns. In the early years of facilities-based competition there may be negative growth patterns while the incumbent adjusts to the new competitive regime.

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[81]T-43 (TLM) 42.

[82]The companies are AllTel, CenturyTel and SureWest. *Id.* at 32.

[83]GCI witness Murray quotes Ibbotson Associates, a recognized industry source for regulatory analysis of cost of capital, "[o]ne of the advantages of a three-stage discounted cash flow model is that it fits with the life cycle theories in regards to company growth. . . . Typically, the potential for extraordinary growth in the near term eases over time and eventually growth slows to a more stable level." *Id.* at 30.

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Both parties presented CAPM cost of equity estimates, although ACS-AN did not offer its CAPM analysis in its presentation of its case, but rather adjusted the stipulated cost of capital of 13.25% in Docket U-01-34 upward by 200 basis points. The stipulated cost of capital in that proceeding resulted, in part, from a CAPM analysis performed by the Public Advocacy Section.

We compare the details of the CAPM estimates prepared by each party and select the subcomponent which is best supported. We then calculate cost of equity and compare it with the results in *Verizon Virginia*.

CAPM Subcomponent	ACS-AN[84]	GCI	RCA
Risk Free Rate	5.34%	4.91%	5.34%
Beta	2.730%	1.133%	1.133%
Risk Premium	7.00%	4.78%	7.00%
Size Premium	3.53%	0.00%	3.53%
Flotation Cost	0.10%	0.00%	0.00%
Cost of Equity	28.08%	10.33%	17.51%

<u>(i) Risk Free Rate</u>

We select the Risk Free Rate of 5.34 percent offered by ACS-AN. Both parties use Treasury bonds as the basis for the risk-free rate of return. ACS-AN selects the 30-year Treasury bond rate while GCI offers an average of a 10-year forecasted rate and the current rate on 10-year Treasury bonds. The resulting difference between

[84]ACS-AN witness Blessing provides several different CAPM scenarios which vary based on the application of beta which ranges between 2.730 percent using an derived ACS-specific beta and a leveraged beta of .98 based on an average of comparable companies. As is shown at DCB-2, Exhibit 2.3, the result of this analysis produces costs of equity ranging from 28.08 percent using ACS-AN specific beta to 15.82 percent using the peer capital structure.

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the methods is 43 basis points and not significant. While this is true, we prefer the more straightforward use of the 30-year Treasury bond because it more closely matches the long-term time horizons used by industry experts Ibbotson & Associates to determine market risk premiums.

(ii) Beta

ACS-AN offers two calculations of beta, an ACS-AN specific beta of 2.730 and a beta based on a peer group of 0.98. GCI offers a beta of 1.133 based on an analysis of forecasted betas of comparable companies, leveled for the differences in tax rates and leverage.[85] We select the beta offered by GCI because it is more fully supported in the record and uses methods common in the industry.

The ACS-AN specific beta calculation applies an unleveraged beta of comparable companies to ACS-AN's capital structure, after adjusting for ACS-specific corporate tax rate.[86] As has been noted before, ACS-AN's capital structure is highly leveraged and unusual in the telecommunications industry. We find no justification to shift from a hypothetical capital structure to an ACS-AN specific capital structure to determine beta. GCI's beta analysis, on the other hand, relies on generally accepted methods recommended by industry experts to isolate business risk. Further, GCI presented supporting documentation in the record for the companies it selected for its comparable analysis. We consequently find GCI's presentation more persuasive.

[85]T-43 (TLM) 35-36.

[86]DCB-2, Exhibit 2.3 at 2

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(iii) Risk Premium

ACS-AN offers a risk premium of 7.0 percent.[87] GCI offers a risk premium of 4.78 percent.[88] We select the risk premium of 7.0 percent based on the reasoning in *Verizon Virginia*. ACS-AN uses the market risk premium from Ibbotson Associate's SBBI 2002 Yearbook – Valuation Edition. GCI also uses the same market risk premium from Ibbotson, calling it the "most widely cited historical equity premium"[89] but questions whether Ibbotson's premium accurately reflects expected returns of stocks relative to bonds. To address its concern, GCI averages the Ibbotson market premium with the market premiums cited in several studies[90] published in current industry literature. The FCC selected the Ibbotson Associates risk premium for its CAPM analysis. GCI's calculation provides equal weight to the Ibbotson index as to studies published in current literature. We do not equate studies, which may or may not be subsequently proven and accepted by industry, with a widely cited industry standard such as Ibbotson. Therefore, based on guidance from the FCC and our concerns about GCI's methods, we find the 7.0 percent market risk premium used by ACS-AN more persuasive.

(iv) Size Premium Adjustment

ACS-AN offers a size premium adjustment to the CAPM of 3.53 percent to account for the differences in returns between smaller and larger firms. ACS-AN's size premium adjustment comes from Ibbotson's SBBI 2003 Yearbook. ACS-AN states Ibbotson's found a relationship exists between firm size and return wherein return

[87]DCB-2, Exhibit 2.3.

[88]T-43 (TLM) 41.

[89]*Id.* at 40.

[90]*Id.* at 37-38.

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increases as the firm size decreases.[91] ACS-AN states that its current market capitalization of $126.3 million falls into the Ibbotson's smallest decile which has a CAPM of 353 basis points.[92]

GCI does not offer a size premium adjustment and argues against a size premium adjustment to ACS-AN's CAPM calculation. GCI witness Murray states that TELRIC required an estimated cost of equity for a hypothetical efficient carrier subject to facilities-based competition and that there is no reason to assume that this carrier would be a firm as small as ACS-AN.[93] GCI further argues that ACS-AN misapplied the size premium adjustment to its calculated CAPM. Witness Murray explains that Ibbotson Associates describes the size premium as an adjustment to the CAPM to reflect the tendency of the calculated betas for small companies to understate the risk associated with those companies.[94] GCI states that in using a beta of 2.73 percent, ACS-AN already overcompensated for any incremental risk associated with ACS-AN's small size.[95] GCI states that if ACS-AN had applied the size premium adjustment to a CAPM using the ACS-AN specific beta of 0.6 reporting in Value Line, there would be some plausibility to the assertion that the 0.6 beta understates ACS-AN's risk.[96] GCI also questions whether a size premium still exists as a valid concept.[97] Finally, GCI argues

[91]Ibbotson divides the equity returns of his study companies into ten deciles and calculates a portion of return that is specifically related to size.

[92]T-3 (DCB), Appendix DCB-2 at 11.

[93]T-44 (TLM) at 41.

[94]*Id.* at 42.

[95]*Id.*

[96]*Id.*

[97]*Id.* at 43.

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that Ibbotson Associates acknowledges that large cap stocks have outperformed small cap stocks over six of the last ten years.[98]

The essential point of a size premium adjustment is, as GCI notes, to correct an acknowledged flaw in the application of beta to smaller firms. In compiling its calculated beta, GCI selected six companies it stated were comparable to ACS-AN. ACS-AN witness Meade argues that four out of six of GCI's comparable companies are substantially larger than ACS-AN, as shown below.[99] Meade further illustrates the size difference by stating that one of GCI's comparable companies, AllTel, serves approximately six times as many lines as exist throughout all of Alaska.[100] ACS has 240,000 access lines statewide.[101]

Comparable Company	Access Lines
AllTel	3,200,000
Cincinnati Bell	1,012,000
CenturyTel	2,400,000
Citizens Communications	2,444,400

[98]*Id.*

[99]T-7 (TRM) at 8.

[100]*Id.*

[101]We examine the total access lines of the four ACS companies in this analysis because it is the combined companies that seek financing in the markets. *Annual Report of ACS Alaska, Inc. to the Regulatory Commission of Alaska*, Form M Schedule S-3, filed May 28, 2004; *Annual Report of ACS of Anchorage, Inc. to the Regulatory Commission of Alaska*, Form M Schedule S-3, filed May 28, 2004; *Annual Report of ACS of Fairbanks, Inc. to the Regulatory Commission of Alaska,* Form M Schedule S-3, filed May 28, 2004; *Annual Report of ACS of the Northland, Inc. to the Regulatory Commission of Alaska*, Form M Schedule S-3, filed May 28, 2004.

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We find that ACS-AN is the type of smaller firm for which the size premium adjustment was developed.

GCI argues that ACS-AN erred in applying the size premium adjustment to an overstated beta of 2.73 percent. We selected the 1.133 percent beta calculation offered by GCI for the CAPM analysis. In arguing its case, GCI states that it would have been plausible to apply a size premium adjustment to the CAPM if ACS-AN had offered the use of its own Value Line beta of 0.6 percent.

We find that using a 1.133 percent beta as opposed to ACS-AN's Value Line beta of 0.6 percent does not address the difference in risk for size. The FCC selected the 1.0 beta developed by Verizon which was based on a S&P 500 proxy group of companies.[102] The FCC compared it to the betas of IXCs AT&T and WorldCOM[103] and concluded that a beta of 1.0 appears to represent a reasonable estimate of the risk faced by a company such as Verizon in a market with facilities-based competition.[104] The beta of 1.0 to which GCI favorably compares its 1.133 beta is appropriate for an S&P 500 company, multinational IXCs, and an ILEC the size of Verizon. ACS-AN is significantly smaller and the size premium adjustment is thus warranted in the calculation of its CAPM. We find that a size premium adjustment of 3.53 percent an appropriate adjustment to the CAPM.

3. Materials Database

The parties proposed prices for the materials required to build the Anchorage network. In the model, the materials database spreadsheet contains many unit price inputs. The parties' support for these inputs is contained in their testimony

[102]*Verizon Virginia,* ¶ 90.

[103]*Id.* at ¶ 91.

[104]*Id.*

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and attached workpapers. We reviewed this record, compiled the parties' positions and selected the inputs shown in Appendix C (ACS 7.2 GCI Version w RCA revisions.xls.).[105] In some cases we adopted the input suggested by a party; in other cases we adjusted the parties' proposals to determine input prices. Each Materials Database input or group of inputs is discussed below.

a) Cable

The cable unit price is the cost per installed foot of cable. Two gauges of copper cable are used in ACS v7.2-G: 24 gauge and 26 gauge. Cable also comes in a variety of pair sizes (e.g., 25, 50, 50, 100, and 200). Because the installation costs vary depending on whether the cable is used for aerial, underground and buried plant, there is a set of prices for each type of use. The primary cost factors that determine the final unit prices include raw material price, splice rate, engineering charge, handling charge, percentage of straight versus bridge splice, and metallic splice case.

Both parties generally started with the same raw material cable price. We find that GCI's splice rates, based upon an average splice rate of 300 splices per hour, are not supported by the record. Under cross examination,[106] Fassett acknowledged that GCI's maximum splice rate exceeded even the highest splice rate reported in his contractor survey which varied between 100 and 250 per hour for a straight splice and between 65 and 175 for a branch splice.[107] We adopt ACS-AN's splice rates.

ACS-AN proposed a 10 percent surcharge on investment to cover the cost of engineering expense. ACS-AN witness Cinelli testified that engineering fees are most often expressed as a percentage of construction cost, generally between 7

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[105]Appendix C, MaterialDB worksheet.

[106]Tr. 1109-1115.

[107]T-16 (SDC), SDC-6.

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percent and 15 percent. He referenced PSMJ Resources, Inc's annual *Architectural/Engineering Fees and Pricing Survey*.[108] GCI argued that a percentage-based charge would not accurately capture engineering costs because "[i]n today's competitive marketplace, ILECs and other service providers competitively bid engineering work either on a unit basis or lump sum contract basis."[109] GCI offered no data to support its position. Based on this record, we find that it is reasonable to include a 10 percent surcharge to cover the cost of engineering expense.

ACS-AN proposed a flat 13.5 percent handling rate but did not justify this proposal in its direct testimony. In his opposition testimony, ACS-AN witness Dassow critiques GCI witness Fassett's proposed 5 percent handling fee, noting that Fassett does not account for start-up costs or incorrect forecasting. Dassow states that he has discussed a just-in-time (JIT) agreement with a representative of Graybar but does not indicate what percentage Graybar charges for JIT.[110] Dassow does not attempt to further justify ACS-AN's 13.5 percent handling charge. However, GCI witness Fassett states that a JIT agreement between one vendor (either Anixter or Graybar) and an unnamed Alaska telecommunications utility results in a material cost increase of 2 percent to 2.5 percent,[111] an amount that is not disputed by Dassow. Further, Fassett recommends increasing this percentage in the model to 5 percent.[112] We find based on this record that a 5 percent handling charge is reasonable.

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[108]T-15 (SDC), Appendix E to Prefiled Opposition Testimony of Steven D. Cinelli at 7-8.

[109]T-52 (DRF) 31.

[110]T-13 (TCD) 8.

[111]T-52 (DRF) 34.

[112]T-53 (DRF) 4.

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ACS-AN assumes 58 percent of splices will be straight and 42 percent will be bridged.[113] This proposal is based upon existing percentages in its embedded network.[114] We are directed to determine the price of a forward-looking network.[115] We find that GCI's assumed ratio of 80 percent straight and 20 percent bridged is more consistent with a forward-looking network.

We adopt ACS-AN's metallic splice case numbers because GCI provides no support for its numbers.

Our decisions on cost of fiber cable are consistent with our decision on copper cable. Our calculations are shown in Appendix D (RCA Modifications to Cable Spreadsheet.xls).

b) Drop and SAI Terminals

We modified the ACS-AN drop terminal calculations and ACS-AN Service Area Interface (SAI) terminal calculations consistent with the changes we made to engineering, handling, and splicing in Appendix E (Copy of SAI.xls) and Appendix F (Copy of Drop Terminals.xls).

c) Poles

ACS-AN and GCI used essentially the same method for calculating pole costs. The major difference was that ACS-AN based its labor hours for pole placement on an ATU engineering "Broadgauge" estimate.[116] GCI, relying on its expert's opinion, assumed considerably fewer hours of labor time per pole than ACS-AN. ACS-AN's

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[113] Cost Models and Support Documentation, _1_UNE/Cost Inputs/Cable.xls, Br. vs Str. Spl Ratio worksheet, filed by ACS-AN on August 29, 2003.

[114] *Id.*

[115] 47 U.S.C. § 252(d).

[116] Cost Models and Support Documentation, _1_UNE/Cost Inputs/Poles.xls, Installation worksheet, filed by ACS-AN on August 29, 2003.

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proposed rate was more consistent with the range of quotes included in GCI's contractor survey. We note that GCI's estimate for pole placement costs ($315.77)[117] was below the lowest contractor estimate from GCI's survey ($495).[118] We adopt ACS-AN's pole input of $1,041.91 because it is better supported by this record.

d) Road Prism Construction

The parties included different costs in their road prism construction (RPC) input. ACS-AN included all of the costs of construction within the road prism except trenching and backfill.[119] GCI included only permitting costs in their RPC input.

They also defined the road prism differently. GCI included both the area of road pavement and the area on either side of the road pavement above the actual road bed sloping away from the pavement at an angle in its definition of road prism. As a result, for GCI, RPC construction included trenching in dirt or grass if it lay above the road bed (that is, within the road prism as defined by GCI). ACS-AN, on the other hand, limited its definition of RPC to construction in asphalt or concrete. According to ACS-AN witness Cinelli, trenching in dirt is not RPC even if the construction lies directly above the sloping portion of the road bed.

We find GCI's definition more reasonable because it is consistent with the Municipality of Anchorage's (MOA) Right of Way Department's definition of road prism. The MOA assesses various charges for road construction permits based upon whether they are in the road prism as it has been defined to include the road surface and the area sloping downward on either side. We adopt GCI's estimate of the RPC input ($.84 per foot) which is limited to permitting costs rather than ACS-AN's proposed input of

[117]DRF-11.

[118]SDC-6.

[119]ACS-AN included trenching and backfill costs in their feeder trenching input.

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$86.09 per foot which includes both permitting and other construction costs. We include all non-permit construction costs (i.e. removal and replacement of roadbed, as well as trenching and backfill) in the feeder excavation input.

e) Feeder Trenching

Feeder plant begins at the wire center and ends at either a digital loop carrier or service area interface.[120] ACS-AN explained the design criteria employed in the ACS-AN design, including criteria for placing of Service Area Interfaces (SAIs) and the interaction between distribution and feeder design.[121] ACS-AN did not present a witness to discuss the design of the existing network. ACS-AN used a combination of outside engineering design consultants and in-house engineers to create a new design.[122] ACS-AN witness Cinelli, a registered professional engineer, then reviewed and verified that the ACS-AN v7.2 model determined forward-looking costs. He focused on the feeder design portion of the network and inspected parts of the network.[123] His analysis reflects assumptions for trench cross sections and placement in rights of way. ACS-AN argued that it used best design practices, integrated the design between distribution and feeder and used fiber where it lessened costs.[124]

ACS-AN included permitting costs, saw cutting pavement, leveling course, asphalt pavement, painting, traffic control and density testing in its RPC costs. Trenching and backfilling all areas under the leveling course are a separate cost

[120]T-14 (SDC) 6.

[121]T-17 (GLS) 5, Tr. 431 (GLS).

[122]Tr. 390 (SDC).

[123]T-14 (SDC) 5, 17.

[124]Tr. 431-32 (GLS); Tr. 439 (GLS).

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element.[125] GCI included only permitting costs in its RPC analysis. GCI accounts for the actual removal and replacement of pavement and sub-grade above the trench as a part of the feeder trenching cost element.[126]

GCI witnesses reviewed all of the feeder routes in the field and created a GCI-sponsored feeder plant design tailored to demand in each CBG.[127] GCI criticized the ACS design and proposed some redesign; rerouting feeders at several locations.[128] GCI assembled an extensive and informative record of surface conditions and routing possibilities.

Neither party's documentation shows the physical limit of the rights of way, nor any information on existing buried utilities along the route.[129] GCI witness Fassett stated that he conferred with the Municipality's Right of Way Department to determine where the feeder plant he designed could be built. [130]

ACS-AN asserted that 89.7 percent[131] of the feeder construction would be in paved roadway areas arguing that there are practical constraints that limit construction outside of the road prism. Cinelli testified that there are often existing buried utilities within the unpaved areas that would conflict with feeder installation and

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[125]T-15 (SDC) Appendix C to Prefiled Opposition Testimony of Steven D. Cinelli at 2.

[126]T-52 (DRF) 38; DRF-11 p. 30 "Feeder Trench/Excav Cost Analysis" table.

[127]T-52 (DRF) 15.

[128]T-52 (DRF) 14-15, 24, 26.

[129]Tr. 424 (GLS). ACS-AN witness Schmid testified:

> In a road prism you've got a lot more to contend with. And, you know, I -- I don't see very many grassy areas in a road prism. You usually have other utilities. You've got storm drain, gas, power, cable TV, they're all strung out all over the place. It makes it difficult.

[130]Tr. 1223-24 (DRF).

[131]T-52 (DRF) 15; DRF-6, ACS/GCI Feeder Route Summary.

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short segments out of the road prism would result in additional costs,[132] however his documentation did not show the relationship of the existing utilities to his proposed design. ACS-AN proposed unit costs for different trench conditions, with RPC costs at $86.09/linear feet (LF) and Trench and backfill at $43.34/LF.[133] GCI proposed that 53 percent of the feeder construction be inside of road prism areas.[134] This proposal was based on route analyses with photos of the proposed alignment, and a table of assumed routing conditions.[135] GCI proposed a cost of $21.68 for placement of feeder plant in roadway prism and $11.18 outside of roadways. GCI then developed a weighted cost of $17.89 for all feeder route construction for excavation/trenching/restoration.[136]

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[132]T-14 (SDC) 9-10.

[133]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Civil Inputs.xls, Road Prism Construction worksheet and Trench and Backfill worksheet, respectively, filed by ACS-AN on August 29, 2003.

[134]T-52 (DRF) 38. GCI employed a definition for road prism used by the Municipality of Anchorage. This definition considers the distance from the traffic area and the depths from the roadbed as determining factors of whether a buried utility is in or out of the prism. T-52 (DRF) 16. ACS-AN defines roadway prism construction as feeder plant under paved surface. T-15 (SDC) Appendix C to Prefiled Opposition Testimony of Steven D. Cinelli at 2.

[135]DRF-6.

[136]T-52 (DRF) 38-39; DRF-11 p. 31, “Blended cost per foot as input to model” table.

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ACS-AN proposed a rate of $43.34 for all feeder excavation.[137] However, if we add back ACS-AN's estimate of RPC costs, then ACS-AN's cost input would be $120.00.[138]

GCI's blended feeder construction rate of $17.89 is based on only 53 percent of feeder routes involving RPC. GCI also assumes that not all trenching in the road prism area requires trenching in asphalt or concrete. GCI's approach assumes that there are a variety of construction techniques that can be used in the road prism and that each technique has its own unique cost characteristics. Based upon a detailed visual inspection of each feeder route, GCI identified the type and percentage of each construction method that will be used in the 22 sample CBGs used in the ACS v7.2-G model.[139] GCI also proposed the use of boring as a construction method for placing conduit underground. Testimony in support of boring costs varied widely and appears to be a function of number and type of conduit, depth of bore, and type of soil conditions. In theory at least, it should be less than trenching in pavement since it avoids the removal and replacement of the pavement. However, we generally found estimates of boring unreliable. We will assume therefore that boring costs the same as trenching.

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[137]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Civil Inputs.xls, Road Prism Construction worksheet and Trench and Backfill worksheet, respectively, filed by ACS-AN on August 29, 2003. This amount does not include ACS-AN's additional proposed costs for RPC of $86.09. Because we include only permitting charges in the RPC input, we consider ACS-AN's actual RPC construction costs in the feeder excavation input.

[138]*See* Appendix G, modified Civil Inputs 6-10-04.xls, for calculation (Road Prism Construction worksheet, cell G21). The revised calculation does not include permit fees.

[139]DRF-11, pp. 30-31.

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One of the biggest differences between GCI's estimates and ACS-AN's is the width of trenching in pavement (asphalt or concrete). GCI proposed trenches that are 2 feet wide.[140] ACS-AN proposed trenches that are 13 feet wide.[141] We do not believe that trenches are always 13 feet wide or always 2 feet wide. Neither party provided completely reliable or convincing testimony on this issue; but rather relied primarily on the opinions of their experts. We believe that the most appropriate solution is to rely on GCI's analysis of the percentage of the various road and terrain conditions within the road prism and ACS-AN's basic engineering design for feeder trench. GCI's analysis shows that within the road prism 47 percent of construction was in dirt and grass. The rest, 53 percent, was in various types of asphalt and concrete.[142] We therefore assume that 53 percent of road prism construction had wider trenching requirements (i.e., 12.67 foot wide pavement cuts and 10.67 foot wide trenches, along the lines described by ACS-AN, and that 47 percent of road prism construction had narrow trenching requirements (i.e., 4 foot wide pavement cuts and 2 foot wide trenches along the lines described by GCI. Based upon our calculations we adopt a composite rate for feeder trenching within the road prism area of $84.06.[143]

For areas outside the road prism, we find that a combination of the parties' proposals also produces the most reasonable result. We adopt ACS-AN's contract rate of $6.07 for trench and backfill, and as noted earlier, adopt the composite feeder

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[140]Tr. 1119 (DRF); DRF-14.

[141]T-14 (SDC) 11. Although Cinelli and others refer to trenches 13 feet wide in testimony, in his calculation Cinelli assumes a 12.57 foot pavement cut and a 10.57 foot trench width.

[142]Appendix C, MaterialDB Adjments worksheet, column J.

[143]Our calculations are shown in Appendix C, MaterialDB Adjments worksheet, as a modification of GCI's feeder trenching calculations, cell I11.

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trenching rate of $84.06 per foot as a proxy for boring costs. We also adopt GCI's assumptions that non-RPC construction is 60 percent trench and backfill and 40 percent bore.[144] Our calculations yield a composite rate of $37.65 per foot for construction outside the road prism.

Feeder Trenching	
Road Prism Cost per foot	Non-Road Prism Cost per foot
$84.06	$37.65

The ACS v7.2-G model does not include separate inputs for these road prism and non-road prism construction costs. Therefore, to determine the final composite rate for the feeder trenching input we must first establish what percentage of feeder constituted road prism construction (i.e., at $84.06 per foot) and what percentage of feeder constituted non-road prism construction (i.e., at $37.65 per foot). ACS-AN argued that 89.7 percent of the feeder would be constructed within the road prism. GCI argued that only 53 percent of the feeder system would be constructed within the road prism. In part this difference results from their varying definitions of road prism. We find that 53 percent of the feeder will be placed within the road prism. We are persuaded that GCI's estimate is more accurate because their experts conducted a visual field inspection of each feeder route. ACS-AN witness Cinelli's estimate was based on a review of plans.[145] We find that the visual field inspection is more likely to be accurate.

Based upon these calculations we adopt a feeder trenching input cost of $63.50 per foot.[146]

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[144]DRF-12.

[145]T-14 (SDC)14.

[146]Appendix C, MaterialDB Adjments worksheet.

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f) Road Crossing

ACS-AN has proposed $112.71 per foot for road crossings.[147] This price includes ACS-AN's estimate of permitting fees ($300) but does not include ACS-AN's estimate of trenching and backfill ($43.34). If ACS-AN's permit costs are deducted and trenching and backfill is added, the ACS-AN price becomes $133.29.[148] GCI has proposed a rate of $49.06.[149] Consistent with our feeder trenching decision, we adjusted ACS-AN's road crossing calculation to use a 6.6 foot wide trench rather than 13 foot wide trench. We also find that the record does not support ACS-AN's assertion that each road crossing has two sets of sidewalk with curb and gutter. We cannot accurately determine from this record the number of road crossings with curb, gutter and sidewalk. Therefore, we find that assuming that each road crossing has one sidewalk with curb and gutter is reasonable and we adopt the rate of $105.56.[150]

g) Driveway Crossing

For driveway crossings, we perform a similar analysis and make a similar adjustment. ACS-AN proposed $60.20 per foot for driveway crossing.[151] However, ACS-AN's' full price, when adjusted for our decision to include only permit costs in the RPC input, is $103.53.[152] GCI has proposed a rate of $27.04.[153] We adopt a rate of

[147] Cost Models and Support Documentation, _1_UNE/Cost Inputs/Civil Inputs.xls, Road Crossing worksheet, filed by ACS-AN on August 29, 2003.

[148] Appendix G, Adj'd Road Crossing worksheet, cell E33.

[149] DRF-11 p. 27, "40 Foot Road Crossing – Open Cut" table.

[150] Appendix G, Modified Road Crossing at 8.6 worksheet, cell G29.

[151] Cost Models and Support Documentation, _1_UNE/Cost Inputs/Civil Inputs.xls, Driveway Crossing - Paved worksheet, filed by ACS-AN on August 29, 2003.

[152] Appendix G, Adj Driveway Crossing - Paved worksheet, cell G19.

[153] DRF-11 p. 28; "12 FT Asphalt Driveway – Cut" table.

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$70.34.[154] Our rate is based upon a revision of ACS-AN's driveway crossing calculation that assumes a 6.6 foot wide trench rather than a 13 foot wide trench.

h) Manholes

ACS-AN proposed an installed rate of $31,004.45[155] for manholes and GCI proposed a rate of $7,490.[156] ACS-AN included a rate of $11,952 in a previous version of ACS v7.2.[157] The ACS-AN rate of $31,004.45 is not close to any baseline costs (i.e., proxy models, contractor surveys, or even its own previous proposals). We find that GCI understates realistic excavation, placement and restoration costs. We believe that the rate in the earlier version of ACS' model is reasonably within the range of the FCC proxy model default and GCI contractor survey costs as reported by ACS-AN witness Fassett.[158]

i) Vaults

ACS-AN proposed an installed rate of $10,377.68 for vaults.[159] GCI proposed a rate of $4,549.[160] We adopt the rate of $5,317.58, which ACS-AN included in a previous version of ACS v7.2.[161] The ACS-AN rate is not close to any baseline

[154] Appendix G, Mod. Drv-way Crossing-Pave 8.6 worksheet, cell G18.

[155] Cost Models and Support Documentation, _1_UNE/Cost Inputs/Civil Inputs.xls, Manhole worksheet, filed by ACS-AN on August 29, 2003.

[156] DRF-11 p. 32; "Total Installed MH Investment" table.

[157] *Id.*

[158] DRF-11 p. 32; "Manhole Material Cost" and "Total Installed MH Investment" tables.

[159] Cost Models and Support Documentation, _1_UNE/Cost Inputs/Civil Inputs.xls, Vaults worksheet, filed by ACS-AN on August 29, 2003.

[160] DRF-11 p. 33; "Total Install Vault Investment" table.

[161] *Id.*

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costs. We believe that a rate of $5,318 is reasonably within the range of GCI contractor survey costs as reported by GCI witness Fassett.[162]

j) Handholes

GCI proposed rate of $723.24 for handholes is a blend of costs for different soil types. GCI uses the lowest of three contractor survey estimates in developing this rate.[163] ACS-AN's proposed a rate of $1,120.05. Although ACS-AN did not provide cost support, we believe that ACS-AN's proposal is more consistent with the mid-range of installation costs in GCI's contractor survey. We adopt ACS-AN's proposed rate of $1,120.05.

k) Drop Feet

The parties also included prices for drop feet. This task involves running a 79-foot line (on average) from a pole or terminal to a customer's network interface device (NID). ACS-AN has proposed a rate of $3.90 per foot.[164] GCI has proposed a rate of $.80 per foot.[165] ACS-AN's rate is equivalent to about four or five labor hours. GCI's calculation is based upon one-half hour of labor.[166] We believe that ACS-AN's implicit labor rate is unreasonably excessive for this task. We believe that GCI's estimate is somewhat optimistic but closer to reality. We adopt a rate of $1.60 which is approximately twice the labor time that GCI has used.

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[162]DRF-11; p. 33. .

[163]DRF-11 p. 33 "Handhole Material Cost" table.

[164]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Drop.xls, filed by ACS-AN on August 29, 2003.

[165]DRF-11 p. 55; "GCI Drop Calculations for 79 foot drop" table.

[166]DRF-11 p. 54 , "Aerial Drop Installation Labor Cost table.

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l) Underground Conduit

GCI has proposed a rate of $1.52 per foot for 4-inch, installed underground conduit.[167] This appears to be based upon the low-end vendor material survey price.[168] The FCC default rate is $.72.[169] ACS-AN's proposed rate of $5.26 is based upon its Piggyback contract rate ($3.92) with additional markup for engineering and material cost.[170] We find GCI's survey results less persuasive than ACS-AN's existing contract rate, because GCI relied on the low-end estimate rather than the mid-range. However, ACS-AN did not provide sufficient support for us to determine whether the Piggyback contract rate already included material and engineering cost. We therefore adopt the Piggyback contract rate of $3.92 without ACS-AN's additional markup.

m) Other Inputs

There were several other material database inputs. We use ACS-AN's proposed rates for the following inputs: NIDS ($73.68),[171] Ground Rods ($56.67),[172]

[167]Electronic exhibit RAM-9, ACS 7.2-G and HAI-SWT Model Runs/Anc expense/GCIexpense.xls, MaterialDatabase worksheet, cell C322.

[168]DRF-11 p. 37; "Installed Conduit & Innerduct" table; SDC-6 p. 2; "Install 4" conduit including stabilization and gluing" rows 16-18.

[169]DRF-11 p. 35, "Conduit Placement and Stabilization Cost" table.

[170]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Ducts.xls and _1_UNE/Cost Inputs/Contracts/Piggyback.xls, filed by ACS-AN on August 29, 2003.

[171]Cost Models and Support Documentation, _1_UNE/Cost Inputs/NID.xls, filed by ACS-AN on August 29, 2003.

[172]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Ground Rods.xls, filed by ACS-AN on August 29, 2003.

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Aerial – Guys and Anchors ($860.93),[173] DLC Line Cards ($189.54).[174] In each case we believe that the price difference is not significant or the input is not a major cost driver in the model. We also adopt these ACS-AN rates because of the general difficulty in verifying GCI's calculations, of which these four inputs are typical examples. For most ACS-AN inputs there is an associated spreadsheet that documented ACS-AN's calculations and included references to sources. In contrast, GCI provided a single paper attachment for the vast majority of the Material Database cost support (DRF-11).[175] GCI did a better job in its direct testimony of explaining the processes it had used, but verifying and reviewing its calculations and workpapers were cumbersome.

GCI allocates 35 percent of distribution trenching costs to other utilities;[176] ACS-AN assigns 50.9 percent.[177] Neither party provided support for these percentages. We adopt the lower number 35 percent. ACS-AN and GCI both proposed 65 percent of aerial utilities would be shared. We adopt this factor.

GCI proposes that 35 percent of the costs of constructing the feeder network will be shared with other utilities. ACS-AN proposes that none of the costs would be shared. For the purposes of this loop model, we found that trenches should

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[173]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Guys and Anchors.xls, filed by ACS-AN on August 29, 2003.

[174]Cost Models and Support Documentation, _1_UNE/Cost Inputs/Digital Loop Carriers.xls, DLC Summary worksheet, filed by ACS-AN on August 29, 2003.

[175]Although DRF-11 is approximately 70 pages long, it contains many pages with multiple tables and neither an index or page numbers. If provided, documentation to source numbers was often confusing. In some cases GCI calculations were understandable only because we were able to trace the calculations back to actual ACS-AN spreadsheets that GCI had modified

[176]Electronic exhibit RAM-9, ACS 7.2-G and HAI-SWT Model Runs/Anc expense/GCIexpense.xls, MaterialDatabase worksheet.

[177]*Id.*

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be designed 6.6 feet wide at the top and 42 inches deep. They are therefore two feet wide at the bottom, leaving little room for the placement of other equipment. We therefore assume that none of the construction costs of this network will be shared with other utilities.

4. Loop Inputs – Maintenance Factors

The cost calculators in the ACS v7.2-G model use expense factors (also know as maintenance factors) to determine the expenses associated with various categories of plant investment. For example, copper underground cable is one of thirteen plant investment categories that comprise feeder plant. In the model a maintenance factor for copper underground cable is multiplied by the investment for this account to determine the annual expense associated with copper underground cable used in the feeder potion of the network.

The first step in determining maintenance factor is to a develop ratio of current expense to investment for each category of plant.[178] The parties disagreed about what financial information should be used to make the calculation. ACS-AN used its own data. GCI proposed using "best in class" data. That is, GCI proposed to calculate the E/I ratios for all LECs (for which this data is available) and use the very lowest (i.e. best) ratios for each category in its model. GCI's rationale was that, because we are modeling a hypothetical LEC using efficient forward-looking technology, it is appropriate to only use ratios from the upper tier (i.e., top 20 percent) companies.

We do not adopt GCI's best in class analysis because we find that it is flawed in two respects. First the data GCI relied on is available only for companies that

[178]In addition, based upon FCC precedent, the parties did not dispute that investment should be adjusted from (historical) booked values to current values using replacement costs. GCI adopted ACS-AN's calculation of replacement cost for the development of ACS-AN specific E/I ratios.

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report ARMIS data to the FCC; this group includes RBOCs and other LECs significantly larger than ACS-AN in most respects (lines, revenues, etc.). We do not find that these LECs represent ACS-AN or its cost structure. Second, GCI did not determine the most efficient LECs overall and use the E/I ratios from just those LECs. Instead, GCI selectively chose only the top E/I ratios from all LECs. As a result we are left comparing ACS-AN to a hypothetical, super efficient, composite LEC, a perfected LEC built with E/I ratios taken only from the cream of the crop. We reject this approach because GCI failed to explain why selective benchmarking is reasonable.

GCI also performed an alternative E/I ratio that was similar to ACS-AN's analysis. ACS-AN's and GCI's calculation of Anchorage specific E/I ratios differed in four respects. First, GCI trended 2002 data in order to estimate 2003 E/I ratios. We do not accept this change. We are not convinced that GCI's use of an compound annual growth rate is likely to produce results that accurately estimate 2003 expense ratios or that it is necessarily a good proxy for estimating the efficiency of a forward-looking company. Second, GCI adjusted ACS-AN pole expense to remove pole rental costs. This adjustment is reasonable and we adopt it. Because ACS-AN leases many of its poles, inclusion of rental costs overstates this maintenance factor. Third, GCI developed separate factors for buried fiber cable and buried metallic cable. However, ACS-AN's Form M account data does not separate out buried cable in this way. We do not adopt this modification because it is not clear to us how the separate ratios were derived. Fourth, ACS-AN removed non-recurring cost (NRC) expense from expense categories before computing E/I ratios. We approve of this adjustment. Because NRCs are calculated separately (NRC Model) it is appropriate to exclude them here.

Therefore, we adopt all of ACS-AN's maintenance factors except for Poles. In the case of Poles, we adopt GCI's calculation of Anchorage specific Pole

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maintenance factor but back out GCI's trending analysis (i.e., we back out GCI's application of a compound annual growth rate to 2002 data).

5. Loop Inputs – Common Support

GCI and ACS-AN take two very different approaches to calculating common support. ACS-AN does not start with its own costs but rather with an average common support per line computed by the FCC in its Universal Service proceeding for non-rural LECs.[179] In doing so it relies on data and averages from many of the same companies that report ARMIS data to the FCC, a data source similar to that which we found inappropriate to use in computing maintenance factors.

GCI's approach was to conduct a regression analysis to see what categories of cost most closely correlate with the two components of Common Cost: Network Operations and Corporate Operations. GCI found that Network operations are highly correlated with total plant in service and that Corporate Operations is correlated with total operating revenues minus corporate operations expense. GCI then calculated

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[179]ACS Common Support Calculation:

- Starts with $7.32/line common support computed by FCC in Universal Service Docket for non-rural LECs;
- Subtracts estimate of retail costs to get $3.19 per line;
- Multiplies $3.19 times 262,115 voice grade equivalent_lines to get $10,020,100 common cost;
- Adds taxes for new total: $10,427,720;
- Applies loop factor of 65.47 percent to get $6,826,643;
- Divides by 188,355 physical lines to get $3.02 common support per physical loop.

See Cost Models and Support Documentation, _1_UNE/ACS v7.2 UNE Model/Cost Calculator ACS Financial Input Defaults.xls, E-Common worksheet, filed by ACS-AN on August 29, 2003.

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factors for network operations and corporate operations using both its best in class approach and its Anchorage-specific cost approach.

Of the two proposals we find GCI's to be more theoretically sound because it permits us to use Anchorage specific data to calculate common cost. Generally, we believe that in developing model inputs it is preferable to use Anchorage specific factors rather than national data unless we have reason to question use of the former. We also note that while ACS-AN's common cost calculation varies with the total number of access lines it does not otherwise vary with the level of model investment.[180] This is inconsistent with the GCI regression analysis that shows that Common Support has a direct correlation to total plant in service.

Consistent with our discussion of maintenance factors we do not adopt GCI's best in class analysis but will rather use the Anchorage specific factors developed by GCI with an adjustment to remove GCI's trending:

Common Cost Factor Description	Common Cost Factor	Source
Network Operations Expense Factor	0.0153/year	TLB-AM-11; Tab: Summary with 2003 Est; cell E8
Corporate Operations Expense Factor	10.45 percent of total cost	TLB-AM-13; Anch 2002 without CAGR; cell E3

The table below shows that despite our use of GCI's common cost calculator, the common cost per line in our run of the ACS v7.2-G model produces a common cost per line amount (approximately $2.96) that is much closer to ACS-AN's static cost per line of ($3.02) than to GCI's version using Anchorage specific inputs

[180]Except to the extent that changes in loop investment causes a change in the ratio of loop investment to switching investment.

($1.05). This is because the common cost calculation in ACS v7.2-G is a function of model investment, and our choice of model inputs overall has produced a level of loop investment that is significantly greater than that produced by GCI.

Common Support Estimate	CS/loop/month	Comment
GCI ACS v7.2-G (ACS-AN specific E/I factors)	$1.05	based upon $10M in loop investment; increases directly with model loop investment
ACS v7.2	$3.02	Based upon USF proxy with various deductions for retail and non-loop costs
RCA ACS 7.2-G	$2.96	

6. Loop Inputs – General Support Facilities (GSF)

GCI's approach to developing GSF was similar the approach it took in developing common support. In this case, however, its regression analysis showed that GSF investment and expense correlated very closely with total plant in service minus general support, which GCI refers to as adjusted total plant in service. GCI also developed two sets of factors, one based upon best-in-class assumptions and one based upon ACS-AN specific expenses and investment. In both cases 2002 data is trended using a compound annual growth rate to estimate factors for 2003.

Unlike GCI, ACS-AN did not use model investment to determine General Support. Rather ACS-AN used embedded expense and embedded investment (adjusted to replacement cost) to determine General Support. As a result, ACS-AN's General Support costs are largely unrelated to model investment.

We adopt GCI's method of calculating GSF using ACS-AN specific factors rather than best-in-class. We do not accept GCI's best in class approach for the same reasons we did not accept it for maintenance factors and common support. We also modify GCI's ACS-AN specific numbers to back out GCI's compound annual growth rate adjustment used to estimate factors for 2003. Finally, we modify GCI's estimate of

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General support associated with retail (52 percent) to a percentage consistent with our wholesale rate discount which is based upon avoided retail cost (24.62 percent). Our revised factors are shown in the table below:

General Support	GSF Investment / Adj. TPIS	GSF Expense / Adj. TPIS / Yr	1 - Retail percent
Furniture	0.00085	0.00034	75.38%
Office equipment	0.00005	0.00502	75.38%
General purpose computers	0.08517	0.00495	75.38%
Motor vehicles	0.01019	0.00026	100.00%
Buildings	0.10266	0.00531	75.38%
All network work equipment	0.00716	0.00008	100.00%

Our GSF calculation is expressed on a per loop per month basis in the comparison table below.

GSF Estimate	GSF/loop/month	Comment
GCI ACS v7.2-G	$0.68	based upon $10M in loop investment; increases directly with model loop investment
ACS v7.2	$6.11	Based upon embedded costs; does not vary with loop model investment;
RCA ACS 7.2-G	$3.32	

At $3.32 per loop per month, our calculation is roughly midway between the GCI and ACS-AN model estimates.

When all of these factors are used in the model, we calculate a loop price of $ 19.15.[181]

[181]Appendix C, E-Summary worksheet, cell G19.

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IV. Switching, Transport and Signaling

Both GCI and ACS-AN have submitted switching and transport models. Both are spreadsheet models that tie to their corresponding loop models. Of the two, the ACS-AN model is much more streamlined with worksheets and calculations that are relatively easy to track. Although we appreciate the relative simplicity of the ACS-AN model compared to the GCI model we believe that the ACS-AN proposal is faulty in several respects that undermine its adoption for rate setting. The first deficiency is the scarcity of direct testimony to support the model inputs and mechanics.[182] The second is the lack of documentation in support of ACS-AN's DMS100 switch prices.[183] It is unclear whether ACS-AN prices include any discount whatsoever, which we believe are generally available to telephone companies, particularly when multiple units are being purchased. Third, is the lack of reply testimony responding to specific criticism of the ACS-AN model by GCI, which included:

- No explanation or diagram of transmission equipment, making it impossible to determine fiber ring configuration;[184]

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[182]Little more than a page of Wilks' direct testimony is devoted to explanation of the ACS-AN switching model.

[183]*See* Cost Models and Support Documentation, _2_Switching and Transport.xls, Inputs worksheet and EO-Inv worksheet, filed by ACS-AN on August 29, 2003.

[184]T-41 (RAM) 30.

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- Not possible to determine whether remote switch locations are equipped with remote switches or digital loop carriers (DLCs);[185]
- No explanation for multiple redundant fiber optic transmission terminals at switch locations;[186]
- No explanation for fiber optic transmission terminals at GCI and AT&T switch locations;[187]
- Switch and other equipment prices appear to be significantly in excess of FCC defaults;[188]
- Switch price inputs are 2.5 times higher than FCC estimates and GCI experienced costs;[189]
- ACS allocates 70 percent of the land, building, general and common costs of the switch to the usage based rate element;[190]
- Port and minute demand data is inconsistent with other data that ACS-AN has provided.[191] (*Id.* at 7.)

In contrast, GCI provided testimony from three different witnesses,[192] a technical operating manual,[193] extensive cost support,[194] and a point by point rebuttal by

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[185]*Id.* at 30-31. At hearing Cellupica was unable to confirm whether ACS-AN used remote switches or DLCs in its model. Tr. 511-12 (RPC).

[186]*Id.*

[187]*Id.* at 31.

[188]*Id.* at 32.

[189]T-59 (CEP) 4.

[190]*Id.* at 6.

[191]*Id.* at 7.

[192]T-40 (RAM) 23-27; T-43 (TLM) 46-53; T-58 (CEP).

[193]RAM-4.

[194]CEP-2; CEP-SRB-1 through 6.

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GCI experts to each criticism of the GCI model raised by ACS-AN experts.[195] Although GCI relied on comparisons to FCC default prices to a greater extent than we prefer, GCI's proposal was, overall, sound and clearly superior to ACS-AN's. We adopt the GCI switch, transport, and signaling model subject to two modifications.

The first change involves modification of the GCI model to reflect the purchase of a new switch rather than a switch with refurbished components.[196] We agree with ACS-AN that it is only reasonable to expect that a newly constructed TELRIC compliant network would be built using new rather than refurbished switching components.

The second modification involves the correction to three miscellaneous errors identified by ACS-AN witness Cellupica and acknowledged by GCI witness Pitts.[197]

We direct the parties to run the GCI switching, transport, and signaling model with the changes we have described and include the recomputed rates in the interconnection agreement.

V. Collocation and Orphan Elements

Collocation costs include the costs of using the physical space required for GCI to place equipment in ACS-AN's plant to facilitate interconnection. Both parties submitted models. ACS-AN witness Wilks presented a well-documented and well

[195] T-60 (CEP).

[196] T-60 (CEP) 8.

[197] Computational error in the additional costs of the STS-1s (T-23 (RPC) 15); incorrect adjustments to account for declines in real price of switches over time (*Id.* at 17); and absence of a main distributing frame cost (*Id.* at 15). T-60 (CEP) 10-11.

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explained model. In contrast, GCI's model was not well documented.[198] It assumed that lease rates for improved floor space in a central office switching facility are the same as lease rates in commercial and industrial buildings.[199] However there was no explanation of why that assumption was reasonable. We therefore find that the ACS-AN collocation model produces more reasonable results.

VI. Non-Recurring Charges

Non-recurring costs are one-time expenses incurred by ACS-AN for specific work activities that are required to process orders for products and services and to install and configure network elements for the benefit of GCI. They are often the cost of the labor associated with initiating and interconnection or providing a network element. These costs are assessed to cover specific activities.

The parties agreed that we should use TELRIC principles to set prices for non-recurring costs and that whatever model we use should be consistent with the model used to set loop, and other recurring costs. It should allow the recovery of only those costs not covered in the recurring cost models.

Both parties submitted models. ACS-AN created a menu of specific costs from which GCI could select, and assigned a cost to each task.[200] ACS-AN witness Eldred documented and described ACS-AN's model. She rebutted the criticisms of GCI witness Weiss who argued that ACS-AN's model would result in charges being

[198]For example, Weiss testified that the lease rates he proposed were based on a survey prepared by an Anchorage real estate appraiser. He did not provide a copy of the report in support of his testimony and under cross examination he could not recall the name of the appraiser. Tr. 1523-24 (THW).

[199]Tr. 1524-26 (THW).

[200]T-19 (HME) 3.

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assessed for services that were not performed.[201] She supported her allegation that certain costs should be expensed by citing 47 C.F.R. § 32,6623 and 47 C.F.R. § 32,6410-6441.

In contrast, GCI's model was not well documented or supported by an explanation in the record. As noted by Eldred, it contained an assumption of 100 percent dedicated outside plant that could not be modified. That assumption means that every needed cross connect was in place at the frame and a technician would never have to go into the field.[202] This assumption does not reflect the reality of ACS-AN's network. It is inconsistent with the testimony of ACS-AN witness Cellupica who said that only the first feeder pair assigned to a living unit is permanently connected to the distribution pair. The unassigned pair is made available for assignment at three terminals serving a dozen customer addresses.[203] At hearing ACS-AN witness Weiss affirmed that DIP/DOP assumes that lines remain hooked up regardless of whether they really are.[204]

The other significant difference between the two models is in how much automation of the processes is assumed. GCI's model assumed an automated OSS system, which is inconsistent with the later filed Agreement. GCI argues that a forward-looking network will be more automated, but we find that ACS-AN's model more accurately describes the way the network would be built if recreated today. For these reasons, we find that ACS-AN's model produces more reasonable and accurate non-recurring costs.

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[201]T-21 (HME) 6-8.

[202]T-20 (HME) at 11.

[203]T-23 (RPC) 10.

[204]Tr. 1519 (THW).

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VII. Wholesale Rates

The legal standard for us to use in setting wholesale rates is found in the Act:

> A State commission shall determine wholesale rates on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier.[205]

The Eighth Circuit Court has further clarified this standard with its decision that the costs to be excluded are not costs that are potentially avoidable but are the costs that the ILEC "will actually avoid incurring in the future."[206] Neither party to this proceeding disputes the Eighth Circuit interpretation. Both maintain that their wholesale rate development methodologies are consistent with the "to be avoided" standard.

Both parties used a similar process to develop wholesale rates. Each used five steps: (1) determine categories of direct expense and their amounts; (2) establish the percentage of the cost that "will be avoided in the future;" (3) divide the total direct expenses that will be avoided by the total direct expenses to derive an average direct avoided expense; (4) multiply this average by total indirect expenses to determine total indirect expenses that will be avoided, and then add to avoided direct expenses to get Total Avoided Expenses; and (5) divide total direct and indirect expenses to be avoided by retail revenues to determine the discount rate. We followed this same series of steps in our computation of the wholesale discount.[207]

To calculate the wholesale discount we had to choose between specific methodological differences used in the three wholesale models. The first was whether

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[205] 47 U.S.C. § 252(d)(3).

[206] *Iowa Utilities Board v. F.C.C.*, 219 F.3d 744, 755 (8th Cir. 2000).

[207] *See* Appendix H (RCA Wholesale Decision W-2.xls).

the calculation should be based upon total company expenses or just the portion allocated to the local jurisdiction. GCI and the ACS-AN DCB-3 model both used total company expenses. ACS-AN's Appendix 3 uses (local) separated costs.[208] Because the wholesale discount only applies to local retail service, the use of separated costs is appropriate. This methodology is consistent with our decisions in the Fairbanks and Juneau arbitrations.

Second, we had to determine which expense categories to include in direct costs. With one exception there was no significant difference between the expenses included by ACS-AN and those included by GCI. The exception was account 6560 depreciation and amortization. GCI excludes this account from its direct expense calculation. Because of its size, $21 million (local separated depreciation expense), this represents close to half of ACS-AN's total (local) direct expenses. Witness Cabe explains GCI's rationale:

> Depreciation doesn't represent an actual outlay, but an attribution to the current year of the inevitable "using up" and "wearing out" of historically acquired assets. As such it is not pertinent as a measure of activity that places demands on indirect costs.[209]

While we agree with Cabe that depreciation expense is different qualitatively than other direct costs, we are not convinced that it is reasonable to exclude it from the avoided cost calculation. We include depreciation in our wholesale cost analysis.

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[208]*See* Cost Models and Support Documentation, _3_Wholesale/Appendix 3 Anc Avoided Cost.xls, Wholesale Discount worksheet, Column I, filed by ACS-AN on August 29, 2003.

[209]T-49 (RAC) 40.

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GCI also advocated greater account disaggregation than what is available from public Form M data. GCI specifically noted the level of analysis used by Verizon in the FCC's Verizon Virginia arbitration. GCI stated that it requested account information at a comparable level of detail from ACS-AN, but that ACS-AN was unable or unwilling to provide it. We agree that a greater level of detail would have enabled a more precise determination of avoided costs. We cannot determine based on this record why ACS-AN failed to provide the information to GCI or use it in its own analysis.

Third, we had to determine what percentage of avoided cost to apply to direct expenses. The record shows a closer correspondence between the ACS-AN model in DCB-3 and the GCI model than between the two ACS-AN models, as shown below:

Summary of Direct Cost Avoided Percentages				
		ACS Appendix DCB-3 (Blessing)	ACS Appendix 3[210]	GCI (Cabe)
6110	Network Support			
6210	Central Office Switching			
6220	Operator Systems	100%		90%
6230	Central Office Transmission			
6310	IOT Expense			
6410	Cable & Wire Facilities			

[210] Cost Models and Support Documentation, _3_Wholesale/Appendix 3 Anc Avoided Cost.xls, Wholesale Discount worksheet, Column K, filed by ACS-AN on August 29, 2003.

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6510	Other Property, Plant & Equip.			
6530	Network Operations			
6533	Testing			20.6%
6540	Access			
6560	Depr. and Amortization			
6611	Product Management	90%	100%	90%
6612	Sales	90%		90%
6613	Advertising	90%		90%
6621	Call Completion Services			90%
6622	Number Services			
6623	Customer Services	90%	26.87%	92.4%

We find the ACS-AN methodology for wholesale cost development problematic for several reasons. First, although ACS-AN devotes a paragraph to discussing the 8th Circuit standard, it devotes only two sentences to describing its actual wholesale cost calculation:

> To determine what percentage of cost actually will be avoided, not what can be avoided, the analysis is based on ACS's direct and indirect expense account data. The analysis then divides the avoided expense estimate by revenues subject to the discount to determine the Wholesale Discount Percentage.[211]

This brief description is so general that it is of little value in understanding ACS-AN's actual rate development.

[211] T-3 (DCB) 50.

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ACS-AN also submitted two completely different wholesale rate studies, one attached to David Blessing's testimony identified as DCB-3, and a second included with ACS-AN's electronic filing identified as Appendix 3 Anc Avoided Cost.[212] Although Blessing identifies DCB-3 as his cost study, the rate he proposes in his testimony (8.91 percent) corresponds to the wholesale discount included in the electronic filing. The wholesale rate in DCB-3 is 9.17 percent. GCI identified the conflict between the two studies in its rebuttal testimony,[213] but Blessing did nothing to reconcile this discrepancy in his reply testimony. ACS-AN never explained why it submitted two different models, which one is the official ACS-AN version, or the rationale for the computations used in either model.

Finally, we note that although the two ACS-AN studies appear to produce somewhat similar results, the study in DCB-3 contains a significant entry error that, when corrected, yields a rate of 27.24 percent.[214] The Appendix 3 study also includes an entry error, identified by GCI, which when corrected has the effect of reducing the ACS-AN proposed wholesale rate from 8.91 percent to 6.24 percent.[215] We therefore find that ACS-AN's model is not reliable enough to be used to produce reasonable wholesale rates.

GCI's wholesale model produced a rate of 33.3 percent. Cabe's testimony in support of the GCI model is thorough, articulates the model's theoretical underpinnings, and explains GCI's choice of inputs. However, we do not find that all aspects of Cabe's methodology are reasonable.

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[212]Cost Models and Support Documentation, _3_Wholesale/Appendix 3 Anc Avoided Cost.xls, Wholesale Discount worksheet, filed by ACS-AN on August 29, 2003.

[213]T-50 (RAC) 1-2.

[214]Appendix I (RCA Appendix W-1.xls).

[215]T-50 (RAC) at 2.

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We adopt GCI's proposed avoided cost percentages. GCI provided direct prefiled testimony supporting these percentages. The correlation between GCI percentages and the ACS-AN DCB-3 percentages supports our finding that the GCI percentages are reasonable. We are also persuaded by Cabe's extensive discussion and analysis of evidence suggesting that a reduction in scale of retail activity results in a proportional reduction in retailing costs. We do not find ACS-AN's apparent[216] assumption that avoided cost should be further limited by the actual wholesale penetration rate reasonable. This adjustment did not appear in both of ACS-AN's models, and was not supported by testimony.

Finally, we determined the retail revenue base to use in our final calculation in which we divide total avoided cost by local retail revenue. When ACS-AN calculations are corrected for entry errors the only difference between GCI's and ACS-AN's numbers comes from local service revenue from resellers. GCI excluded this revenue; ACS-AN did not. We agree with GCI. Revenue from wholesale customers is not from end-users and by definition is wholesale rather than retail revenue and should be excluded.

Analyzing these decisions we calculate a wholesale discount rate of 24.62 percent.[217]

VIII. Contract Issues

Each of the parties filed proposed contracts: GCI used the existing interconnection agreements between ACS and GCI for the Juneau and Fairbanks

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[216] We say "apparent" based upon our review of the two ACS-AN wholesale models. ACS-AN did not provide direct testimony to explain its wholesale rationale.

[217] *See* Appendix H, Calculation worksheet, cell F45.

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service areas as templates for its proposed contract;[218] ACS-AN used its interconnection agreement with Level III as a template for its proposed contract.[219] Both parties supported their proposed contracts with testimony. We use the contract negotiated in the Fairbanks/Juneau arbitration, and modify it to accommodate testimony in the record where the existing contract provisions are not adequate to resolve issues between the parties. Our goal is a contract that addresses the issues that have arisen or will arise between the parties and sets clear rules for resolving them. It is in the public interest to minimize the conflicts between these parties because our experience has shown that customers suffer when these companies disagree.[220]

We have reviewed the contract proposals submitted by the Parties on April 28, 2004.[221] We decide disputed issues and require the parties to submit a single revised version of the contract that complies with the decisions described in the paragraphs below for our approval. We will review the final contract language for compliance with this order. If, during the process of producing a final agreement, the parties concur that additional terms are necessary, they should include them in the final document.

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[218]T-77 (MSK) 2.

[219]T-35 (SAP) 7.

[220]*See* Docket U-02-97. That proceeding is titled *In the Matter of the Investigation into Disparities in Service Provided to Customers of a Competitive Local Exchange Carrier and an Incumbent Local Exchange Carrier*.

[221]Contract sections herein refer to the contract proposals filed April 28, 2004: *Interconnection Agreement Between ACS of Anchorage, Inc. and GCI Communication Corp.* filed by ACS-AN (Interconnection Agreement); *Interconnection and Resale Agreement Between ACS of Anchorage, Inc ("ACS") and GCI Communication Corp. ("GCI")* filed by GCI (Interconnection and Resale Agreement).

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A. Term of Agreement

The parties disputed the term of the agreement. ACS-AN proposed a two-year agreement and GCI proposed a five-year agreement. We find a five-year contract is reasonable. We want to provide stability in the market for consumers and enable the parties to avoid the expense of renegotiating this contract two years hence. We can accommodate changes to the contract that may become necessary to adapt to technological changes, operational changes or changes in law. Part A section 2.2 in the GCI proposed contract is a "change in law" provision such that the parties will commence negotiations to amend the contract should a change in law make this agreement or any of its provisions therein inconsistent with current law. We find the GCI provision reasonable. We reject the ACS-AN language in Part A section 2.2 describing ISP traffic because it would make changes to the contract automatic rather than subject to negotiation and agreement.

One of the standards for implementation of unbundling obligations required the Act is parity. The ILEC must make its network available and resell its services to a requesting carrier in the same manner it provides service to itself. Both contract proposals contain language which the Parties claim prevent employees from participating in behaviors which disrupt service or "disparage" the competitive carrier, its products or services when interfacing with a competitor's subscribers.[222] We expect the parties to adhere to the standards of ethical behavior without the need for specific provisions to that effect. All contracts have an implied covenant of good faith and fair

[222] *See* Interconnection and Resale Agreement, Part C Attachment IV, Sections 1, 20.5, 20.6; Part C Attachment VIII, Section 2; Interconnection Agreement, Attachment IV, Section 7.

dealing. We find these ethical and legal obligations adequate and require that the provisions addressing these behaviors be omitted from the final contract version.

B. Reciprocity of Obligations

ACS-AN proposed contract language to make obligations under the contract reciprocal for ACS-AN and GCI. Reciprocal obligations to provide unbundled network elements to ACS-AN are not germane to this docket. The purpose of this proceeding is to address the obligations of the incumbent local exchange carrier, ACS-AN, under Section 251(c) of the Act. This docket is not the forum for consideration of GCI's status as a CLEC or an ILEC and its obligations in the market. We require the Parties to remove language related to reciprocal GCI obligations to ACS-AN.

C. Rates and Charges

Rates for services rendered under the contract are listed in Part C Attachment II. Charges for services not included in Attachment II must be negotiated by the parties and incorporated into the contract. The contract should not contain provisions that allow ACS-AN to default to use of retail tariff rates when an unanticipated service is required by GCI. We reject ACS-AN's proposed provision in Part A section 1.1 as inconsistent with TELRIC standards that require a forward-looking cost analysis. Retail tariff rates are set using embedded costs. Disputes regarding the services included for particular charges should be resolved using the dispute resolution procedures in the contract.

Work orders for overtime hours worked should be scheduled anonymously so that overtime charges are not incurred by one party or the other in a discriminatory manner. We adopted ACS-AN's model for nonrecurring charges; accordingly, any contract language regarding cost elements included in these charges must be consistent with that model. ACS-AN suggests that billing procedures have been

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established by the parties as part of their "Back Office Procedures."[223] ACS-AN stated that it receives GCI's authorization before completing work involving overtime charges.[224] The parties should continue this practice and, if disputes arise, the parties should invoke the billing dispute procedures in the contract.

The parties also had a number of disputes involving time and materials billing (T&M). We find it reasonable to allow GCI the opportunity to review and dispute T&M charges.[225] The parties apparently resolved in testimony the issue of T&M billing related to No Trouble Found (NTF) conditions. ACS-AN agreed that it would not assess charges for an NTF condition provided GCI agreed to proper tagging of the NID by both Parties.[226] The contract language should be amended to be consistent with this agreement for NTF conditions. For other disputes about T&M billing or other billing matters, the Parties should invoke the Dispute Resolution procedures in this agreement.

D. Dispute Resolution Procedures

Dispute resolution procedures were proposed by both parties. We believe that these provisions are essential to insuring that the parties continue to work together for the benefit of their customers. The lack of fast and fair dispute resolution procedures will enable whichever party benefits from the status quo in a particular situation to prolong the dispute.

ACS-AN and GCI proposed different dispute resolution processes in Part A Section 21 of the contract. The GCI proposal addressing billing and operational

[223]T-38 (JH) 6.

[224]T-38 (JH) 6-7.

[225]*See* Interconnection and Resale Agreement, Part C Attachment IV Section 20.1.9.7.

[226]T-36 (SAP) 16.

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disputes describes a more efficient process than the ACS-AN proposal.[227] We adopt the GCI dispute resolution process that requires negotiation by company representatives or officers for up to 20 days before either party requests arbitration. The parties shall retain an arbitrator who shall specify the rules[228] governing the dispute proceedings. The arbitration shall conclude with a written decision within 60 days of the request for arbitration. We find this proposal is reasonable and direct that Part A sections 21.4, 21.5, 21.6, and 21.7 of the Interconnection and Resale Agreement should be incorporated into the contract.[229]

We decline to adopt dispute resolution procedures designed to address development of an operations manual and electronic interface. We leave development of an operations manual and electronic interface to the parties; and any disputes may be addressed using the contract dispute resolution procedure.

E. Notice of Changes to the Network, Procedures and Resold Services

The parties proposed different provisions addressing the amount and type of notice required for changes to the network, changes to methods and practices for providing network elements and resold services, and changes to the electronic interface. The contract should indicate that notice of network changes must be provided in accordance with 47 C.F.R. §§ 51.325 through 51.335. GCI proposed a provision requiring ACS-AN to provide interface and technical information needed to plan

[227]Interconnection and Resale Agreement, Part A, Section 21.4, 21.5, 21.6, and 21.7; Interconnection Agreement, Part A, Section 21.

[228]ACS-AN proposed Judicial Arbitration and Mediation Services Comprehensive Arbitration Rules and Procedures and GCI proposed AS 09.43.050-070 Uniform Arbitration Act.

[229]*See* n.221.

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interconnection within 14 days of the notice.[230] We find this proposal that mirrors the federal law reasonable. We adopt Part A Section 1.2 of the Interconnection Agreement[231] over Part A section 1.2 of the Interconnection and Resale Agreement because the ACS-AN version directly cites the governing regulations rather than paraphrasing them. Use of the exact language in the regulations affords the parties the benefit of other parties' experiences if they later disagree about how the language should be interpreted.

Regarding routine changes to methods and procedures used to provide service and network elements,[232] we adopt a combination of the proposed provisions. ACS-AN shall provide GCI at least 30 days written notice of changes to routine methods and practices. The notice should include the proposed effective date for the change and the information GCI needs to accommodate the change. If GCI believes a change will have a material and adverse impact on its ability to exercise its rights under this agreement, GCI may invoke the Dispute Resolution Procedures in the contract.

ACS-AN must provide thirty days written notice to GCI of any changes to the operational support system (OSS). The notice shall include the information GCI needs to train employees and accommodate the change as well as point of contact personnel for communications needed to complete the change.

We recognize that different types of resold services require different levels of notification. We find that the Parties' provisions addressing notification of change are ambiguous. We reject Part C Attachment II, Section 3.2 of the Interconnection

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[230]Interconnection and Resale Agreement, Part C Attachment III, Section 3.2.2, applicable to deployment of GR-303 DLC systems.

[231]*See* n.221.

[232]Interconnection Agreement, Part C Attachment IV, Section 13 and Interconnection and Resale Agreement, Part C Attachment IV, Section 8.

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Agreement because the language is vague as to intent and allows undue discretion for discontinuance and modification of resale services. For addition and modification of resold retail services, ACS-AN is required to give notice equivalent to that required for any tariff revision. Part C Attachment II, Section 7 of the Interconnection Agreement reasonably reflects this requirement. ACS-AN must provide at least thirty days written notice to GCI before it discontinues a resold service. Thirty days notice provides GCI time to file objections to the proposed discontinuance. Part C Attachment IV, Section 11 of the Interconnection and Resale Agreement, with a revised time period of thirty days, reasonably reflects this requirement.

F. Operational Support Systems (OSS)

In its contract proposal, GCI describes the OSS system currently in use by the Parties.[233] ACS-AN included its OSS proposal in Exhibit A. ACS-AN proposes an OSS deployment cost of $234,140 plus licensing fees and monthly recurring charges for technical support and user fees. ACS-AN does not provide sufficient detail about the proposed system and how it would be implemented to warrant adoption. ACS-AN has not provided enough detail about the proposed system for GCI or us to evaluate it.[234] We therefore adopt the language in Part C Attachment IV, Section 18 of GCI's proposed contract. We direct the Parties to evaluate the options for developing an efficient, cost-effective electronic support system and bring any negotiated settlement to us in another docket. ACS-AN should make available to GCI the data described in GCI's proposed Part C Attachment IV, Section 18. ACS-AN is required to notify GCI of changes to the system and to supply any alternative means for exchange of information on a parity basis.

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[233]Interconnection and Resale Agreement, Part C Attachment IV, Section 18.

[234]T-84 (CRE).

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We also determine that ACS-AN should provide certain preordering and ordering information to GCI in the same manner it provides this information to itself. The parties resolved a number of ordering and provisioning procedural issues in the Processing and Provisioning Interval Metrics Agreement (Metrics Agreement) incorporated into the proposed contracts.[235] The parties disagree about how rejected orders should be handled and GCI's access to status of due dates, trouble tickets, and held orders. ACS-AN should provide procedures and methods comparable to its handling of its own customer orders. The record does not describe ACS-AN's procedures. We find it reasonable to require ACS-AN to return a rejected order to GCI with an explanation within one hour of the electronic order submission. GCI should then either correct the order or contact ACS-AN to resolve the problem. This record does not tell us what information GCI now has for viewing due dates, order status and trouble ticket status. For purposes of this final contract, we require the parties to describe the current system and, if this current system does not reflect parity of service, the parties must work to implement an adequate system as soon as possible and amend this contract accordingly.

G. Performance Standards

Whether the contract should include performance standards was debated during the hearing. ACS-AN testified that they do not operate under performance standards when serving their own customers therefore they should not be required to

[235] *See Joint Stipulation Resolving Order Processing and Provisioning Terms of the Contract*, filed March 12, 2004.

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operate under such standards when serving GCI's customers.[236] GCI witnesses proposed specific performance standards and financial penalties if they were not met.[237]

Incumbents must provide services to competitors that are comparable to what they offer their own customers. Although we find it remarkable that ACS-AN has no performance standards to guide its customer service representatives, the testimony of Ms. Hume is persuasive. GCI can expect no better from ACS-AN than ACS-AN offers to its other customers. If ACS-AN later adopts performance standards for its customer service representatives, they should be applied to GCI's customers as well as its own.

On May 10, 2004, we issued Order U-96-89(41) accepting the parties' stipulation to incorporate the Metrics Agreement into the proposed interconnection agreements in this docket. This Metrics Agreement resolves many of the performance measurement and reporting disputes between the parties. We therefore decline to adopt further performance standards and reports comparable to those listed in GCI's proposed Part C Attachment IX. Rather, if necessary, the parties should include standards and remedies similar to those included in the proposed GCI and ACS-F[238] Interconnection Agreement, Part C Attachment IX[239] to the extent these standards are not already included in the Metrics Agreement.

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[236]Tr. 599 (JH); T-38 (JH) 13.

[237]T-77 (MSK) 7, 11-14.

[238]ACS of Fairbanks, Inc. d/b/a Alaska Communications Systems, ACS Local Service, and ACS (ACS-F).

[239]Filed May 18, 204, into Docket U-03-63. Docket U-03-63 is titled *In the Matter of the Petition filed by ACS OF FAIRBANKS, INC. d/b/a ALASKA COMMUNICATIONS SYSTEMS, ACS LOCAL SERVICE and ACS for Arbitration with GCI COMMUNICATIONS CORP. d/b/a GENERAL COMMUNICATION, INC. and d/b/a GCI, under 47 U.S.C. §§ 251 and 252 for the Purpose of Local Exchange Competition*.

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H. Resale Part C Attachment II

The resale provisions proposed by GCI are the same as those now in effect in the Fairbanks service area. GCI prefiled testimony indicates there have been few problems related to the resale between the two companies.[240] GCI's proposed provisions should be included in the final contract. The ACS-AN proposal includes a number of sections that reiterate provisions found elsewhere in the contract and restate or paraphrase state and federal regulations related to resold services. We find that citations to specific rules and regulations are more clear and accurate than paraphrasing of those same regulations. Therefore, we require omission of paraphrased material in ACS-AN proposed sections 2.1, 2.2, and 2.7.

We find that ACS-AN's proposed Sections 6 and 9 are reasonable procedural provisions and should be included in the contract. Provisions in ACS-AN's proposed Section 5.1 address operational matters and should also be included in the contract. In testimony, GCI claimed it did not want branding from ACS-AN so Section 5.2 is unnecessary and should be omitted from the contract.[241]

Finally, we reject ACS-AN Section 2.6 as it imposes restrictions on resale of services that are inconsistent with federal law.[242]

I. Unbundled Network Elements Part C Attachment III

Under Section 251(c) of the Act, ACS-AN, as the incumbent local exchange carrier (ILEC), is required to make unbundled network elements available to

[240] T-72 (FWH) 13.

[241] T-72 (FWH) 16.

[242] 47 U.S.C. § 251(b)(1)).

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requesting carriers at just and reasonable rates. In the Triennial Review Order,[243] the FCC revised ILEC obligations regarding network elements. The FCC required state commissions to review the “necessary” and “impair” standards to determine which UNEs should be retained in each state.[244] ACS-AN’s obligations as an ILEC were lent further uncertainty when the United States District Court of Appeals for the District of Columbia Circuit (D.C. Circuit Court) issued an order vacating portions of the Triennial Review Order and then stayed its decision. We stayed our own review of UNE obligations in Docket R-03-7 in response to the uncertainty surrounding the ultimate status of the Triennial Review Order mandates. The District Court stay is no longer effective and the role assigned to the states by the FCC in setting UNE prices for different network elements is uncertain. We base this decision on the authority delegated to us as a state commission under the Telecommunications Act of 1996 because that is the controlling law.

The parties have recently negotiated a comprehensive agreement which may resolve some of these issues. We commend the parties’ efforts to create certainty for their customers in this uncertain legal environment. Our goal is the same, that customers not suffer harm as the parties’ commercial relationships and the legal landscape shift. They have not filed the complete agreement with us, therefore we do not know whether its terms modify the elements ACS-AN will continue to provide. It is not our intent to supersede any agreement parties may have on this issue.

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[243]*Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338 *et al.,* 18 FCCRcd 16978 (2003) (Triennial Review Order).

[244]We opened docket R-03-7 in response to the Triennial Review Order mandates. Docket R-03-7 is titled *In the Matter of the New Requirements of 47 C.F.R. § 51 Related to Federal Communications Commission Triennial Review Order Interconnection Provisions and Policies* .

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In addition to the network elements listed in its proposed contract,[245] ACS-AN is obligated to make available unbundled network elements for local switching, local tandem switching, interoffice transport, signaling networks and call-related databases. Since ACS-AN did not propose provisions governing these unbundled network elements, we determine that the final version of the agreement should include the provisions proposed by GCI in Part C Attachment III, Sections 4 thought 13 of the Interconnection and Resale Agreement. Further, since we have adopted GCI's model for switching, transport and signaling, the parties must conform the final contract language to that model.

The parties each listed the loops they agreed would be offered through this contract in Attachment III. GCI listed a 4-wire analog loop in addition to those listed by ACS-AN. In prefiled testimony, ACS-AN indicated it did not object to providing this type of loop although it did object to conditioning it.[246] The ACS-AN proposed definition for the 4-wire analog loop should be included in the contract.[247]

The loop rates were determined using forward-looking TELRIC standards. The TELRIC methodology prices the incumbent's network as if it was rebuilt today. Parts of ACS-AN's current network are capable of delivering service at forward-looking design standards.[248] We find that ACS-AN is not required to bear the cost of upgrading its existing network beyond the ability to provide basic telephone service to serve GCI's

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[245]Local loop and subloops; transmission facilities; rights-of-way, ducts, conduits, poles; collocation; operations support systems.

[246]T-37 (SAP) 21-22.

[247]"A 4-Wire analog loop is a transmission facility that provides a non-signaling voice band frequency spectrum of approximately 300 Hz to 3000 Hz. The 4-Wire analog loop provides separate transmit and receive paths." T-37 (SAP) 21.

[248]T-37 (SAP) 2.

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customers. The loop price covers ordering of a basic POTS line and any conditioning required to provide additional or advanced services should be billed in accordance with rates in Part C Attachment I. The parties must revise the contract language to reflect this decision.

We are persuaded by ACS-AN's testimony against including a table of loop specifications that ACS-AN loops must meet.[249] We will not require inclusion of GCI's proposed table 3.1, in Part C Attachment III, provided that ACS-AN operates each type of loop within industry-accepted technical descriptions and parameters and each loop meets the minimum requirements for POTS. ACS-AN must also provide GCI with all its loop qualification information so that GCI can determine whether the loop it orders will support intended services. Provisions to this effect must be included in the final contract version.

We find that ACS-AN's language in Section 3.13 governing access to the Network Interface Device (NID) more accurately reflects requirements of the Act. We require that this language be used in the final contract version.

The parties proposed conflicting provisions addressing the EML studies[250] needed to assess whether a given loop can support DSL service. In Section 3.15.10, ACS-AN proposes to limit EML study orders to one per day per serving area. In testimony, ACS-AN claims it applies this limit to its own operations.[251] We find this limit reasonable as it reflects parity of service. The parties should also include timelines for

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[249]T-37 (SAP) 2-3.

[250]Estimated Measured Loss transmission study to determine feasibility for a loop to support DSL service.

[251]T-36 (SAP) 26.

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completion of EML studies and subsequent line conditioning in the final contract version.

J. Interconnection and Operational Requirements Part C Attachment IV

The Point of Interconnection (POI) language in the Parties' contract proposals contains subtle differences. We find GCI's provision 19.3 and 19.4 in this section to be more precise than ACS-AN's Sections 1.2.3, 1.2.4 and 1.2.5, and therefore more reasonable. We are also persuaded by GCI's prefiled testimony[252] indicating that definition of the POI should be the financial demarcation point for each Party's network and should be identified as the central office of the terminating switch. The GCI provisions should be included in the final contract version.

We find that the parties' language regarding access to toll trunking, toll traffic and recorded usage data is unclear.[253] We reject ACS-AN proposed Sections 1.2.1.2, 2.2.5a, 3, 4.2 and 5.2 for lack of clarity; ACS-AN failed to explain the provisions in response to GCI's objections.[254] We note there are no provisions in the proposed interconnection agreement between ACS-F and GCI[255] regarding toll trunking. We direct the parties to review the need for provisions addressing toll trunks and, if needed, to include clearly written provisions in the final contract version.

We direct the Parties to revise their proposed provisions regarding recorded usage data to clearly articulate toll call reporting and billing requirements.[256]

[252] T-75 (ET) 2.

[253] Interconnection Agreement, Part C Attachment IV, Sections 2.2.5, 3, 4.2, 5.2 and Part C Attachment VIII, Sections 3 and 4.1; Interconnection and Resale Agreement, Part C Attachment IV, Section 19.9 and Part C Attachment VIII, Sections 5 and 6.1.

[254] T-75 (ET).

[255] *See* n.239.

[256] Interconnection and Resale Agreement, Part C Attachment IV, Section 19.9; Interconnection Agreement, Part C Attachment VIII, Sections 3 and 4.1.

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We note that recorded usage data provisions in the proposed interconnection agreement between ACS-F and GCI do not contain references to toll call records. The parties should review the procedures and requirements for this information and submit provisions that accurately reflect practice and comply with Access Charge regulations. Where necessary, these provisions should be consistent with the switching, transport and signaling model we adopted.

GCI proposed a number of provisions addressing testing procedures which ACS-AN did not oppose in its testimony. We find the following provisions to be reasonable and consistent with parity of service principles. GCI proposed Sections 20.2.1 Access to Line Test System (where technically feasible), 20.2.2 Cooperative Maintenance Meetings, 20.2.4 Testing Resold Services, 20.2.5 Testing UNE Loops, 20.2.7 Joint Field Problem Resolution and 20.2.9 Resale Feature Verification should be included in the final contract version. We omit GCI's Section 20.2.6 because it allows GCI access to the network side of the NID.

K. Collocation Part C Attachment V

There are several minor discrepancies in the Collocation provisions proposed by the Parties. In Sections 3.8.1, 3.16.1 and 3.24, we find GCI should be responsible for actual costs for collocation projects provided the costs do not exceed the estimated cost for a job by 12.5 percent.[257] We are confused by the proposed rate categories in ACS-AN Sections 8.8 and 8.9. Both categories of Cable Space and Cable Rack Space refer to the Cable Rack Space Charge in Part C Attachment I. This may be a typographical error which should be corrected in the final contract version.

We decline to adopt the Collocation Implementation Fee proposed by GCI in Section 8.11. From testimony, it is clear that the parties have not agreed on the

[257]GCI proposed 10 percent and ACS-AN proposed 15 percent.

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services that would be included in such a fee.[258] If the parties agree to an implementation fee at a later date, they may incorporate it into this agreement through an amendment.

GCI's proposed Section 8.10 requires ACS-AN to provide a count of total working analog lines served by the premise point to a collocation request. GCI states it requires this information to provide estimated floor space and frame space in its application for collocation.[259] ACS-AN objected to this requirement stating GCI wanted this information for marketing purposes and to evaluate its potential investment.[260] We are persuaded by GCI testimony that the total number of analog lines is too aggregated to allow determination of specific revenue information. ACS-AN should provide the total number of working analog lines at a requested collocation site. In general, the GCI proposed language for Attachment V Collocation should be used in the final contract version along with the ACS-AN proposed Section 8.7 regarding cross connections.

L. Rights of Way Part C Attachment VII

In this section of the contract, the Parties had minor disagreements regarding unauthorized attachments and related fees.[261] We find that the proposed unauthorized attachment fee and notice fee are more appropriately negotiated in the Parties' pole attachment agreements and should not be included in this agreement.

[258]T-36 (SAP) 4-5; T-82 (DMC) 3-4.

[259]T-80 (DMC) 3.

[260]T-36 (SAP) 3-4.

[261]Interconnection Agreement, Part C Attachment VI, Section 2.11.1; T-80 (DMC) 6-7; T-82 (DMC) 4-5; T-36 (SAP) 5-7.

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M. Miscellaneous Provisions

ACS-AN's proposed contract contains provisions pertaining to waivers of legal rights.[262] We find these provisions unnecessary as the final interconnection agreement will be subject to applicable federal and state law. By agreement to the terms of this contract, neither party would waive its rights to due process.

The parties disagreed on the confidential treatment of audit information under Part A Section 5.4 of the proposed contracts. ACS-AN proposes that audit information be confidential and subject to Part A Section 12 of the contract. Section 12 provides for confidential treatment of information disclosed to another party under this agreement. We find that Section 12 covers audit information and that Part A, Section 5.4 of the Interconnection and Resale Agreement should be used rather than Part A, Section 5.4 of the Interconnection Agreement.

The parties have left a significant number of contract issues unresolved. We have ruled on a number of the disputed provisions based on applicable regulations, federal law, and the testimony of the Parties. We require ACS-AN and GCI, by July 26, 2004, to submit, for our final approval, one interconnection agreement incorporating our determinations in this order.

IX. Conclusion

This order sets interconnection rates for GCI to pay ACS-AN in the Anchorage market. We find that $19.15 is a fair loop rate. We also determined prices for other unbundled network elements. Finally we gave the parties guidance on appropriate contract terms and required them to cooperate to produce a final contract. The process to reach these decisions has been laborious for the parties and the Commission. Courts and the Federal Communications Commission have interpreted

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[262] Interconnection Agreement, Part A, Sections 2.3, 32.

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our responsibility under the Act in various ways while this case was pending. We relied principally on the words of section 252 of the Act. We find that the prices and terms of interconnection described in detail in this order set just and reasonable rates consistent with our responsibility under that statute.

X. ORDER

THE COMMISSION FURTHER ORDERS that by 4:00 p.m., July 26, 2004, ACS of Anchorage, Inc. d/b/a Alaska Communications Systems, ACS Local Service, and ACS and GCI Communications Corp. d/b/a General Communication, Inc., and d/b/a GCI jointly file an interconnection agreement consistent with our determinations in this Order.

DATED AND EFFECTIVE at Anchorage, Alaska, this 25th day of June, 2004.

BY DIRECTION OF THE COMMISSION
(Commissioners Mark K. Johnson and Dave Harbour, not participating.)

(S E A L)

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U-96-089(42)

APPENDICES A – I

ARE NOT AVAILABLE IN .PDF FORMAT.

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STATE OF ALASKA

THE REGULATORY COMMISSION OF ALASKA

Before Commissioners: Mark K. Johnson, Chair
Kate Giard
Dave Harbour
James S. Strandberg
G. Nanette Thompson

In the Matter of the Petition by GCI COMMUNICATIONS CORP. d/b/a GENERAL COMMUNICATION, INC., and d/b/a GCI for Arbitration under Section 252 of the Telecommunications Act of 1996 with the MUNICIPALITY OF ANCHORAGE d/b/a ANCHORAGE TELEPHONE UTILITY a/k/a ATU TELECOMMUNICATIONS for the Purpose of Instituting Local Exchange Competition	))))))))))	U-96-89 ORDER NO. 42

DISSENTING STATEMENT OF

COMMISSIONER JAMES S. STRANDBERG

TO ORDER NO. 42 entitled:

ORDER SETTING PRICES FOR ACCESS TO UNBUNDLED NETWORK ELEMENTS, RESALE AND TERMS AND CONDITIONS OF INTERCONNECTION
(Issued June 25, 2004)

I dissent from the majority opinion in Section III.B.4.e, specifically on the model input of percent of feeders that would be constructed in the road prism. I first review the record before us on this specific input, consider the majority's reasoning, and then recommend a different monthly rate, based on my proposed percent road prism construction model input.

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Feeder Routing – A review of the record

ACS-AN proposed 89.7 percent of the feeder construction in paved roadway areas.[1] It proposed unit costs for different trench conditions, with Road Prism construction at $86.09/LF and Trench and backfill at $43.34/LF.[2] ACS-AN proposed a unit cost of $6.09/LF for trenching and backfilling outside of roadways.

To justify this routing largely within paved streets, ACS-AN reasoned there are practical constraints that limit construction outside of the road prism. First there may not be enough space.[3] Also, there are often existing buried utilities within the unpaved areas, which would conflict with the feeder installation.[4] ACS-AN asserted that short segments outside of the road prism will require L-turns, and additional difficulties with manhole and vault installations.[5]

GCI proposed that 47 percent of the feeder construction be outside of road prisms,[6] as a means to reduce costs of construction. This proposal was based on a route analysis that was provided with photos of the proposed alignment, and a table of assumed routing conditions.[7]

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[1]DRF-6 ACS/GCI Feeder Route Summary

[2]ACS Civil Input workbook; Road Prism Construction worksheet and Trench and Backfill worksheet, respectively.

[3]T-14 (SDC) 8.

[4]*Id.* at 9.

[5]*Id.* at 10.

[6]GCI employed a definition for road prism used by the Municipality of Anchorage. This definition considers the distance from the traffic area and the depths from the roadbed as determining factors of whether a buried utility is in or out of the prism. This definition is used in assessing permit costs. T-52 (DRF) 16. ACS-AN defines roadway prism construction as feeder plant under paved surface. T-15(SDC) Appendix C at 2.

[7]DRF-6

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While informative, GCI does not in my judgment provide enough data to conclude that the feeders can actually be placed outside of the road prism. Notably, GCI does not show the physical limit of the right of way, nor information on existing buried utilities along the route to confirm the feasibility of off-street placement.[8] I find inadequate record to conclude that the GCI alignments are workable and will actually result in cost savings.

<u>The majority's reasoning</u>

The majority was impressed that GCI did a visual field inspection, and found that this was more likely to be accurate than the ACS-AN plan review. However, the surface visual inspection without specific assessment of the presence of buried utilities or realistic viewing of the utility routing are in my opinion inadequate to establish that GCI's proposal is credible. I am therefore unwilling to accept GCI's road prism percentages that reduce cost of construction. In my opinion, routing savings on design and construction of utilities in existing metropolitan rights of way must be confirmed with valid preliminary layouts before realistically being used in a cost study.

<u>Conclusion</u>

I therefore find in favor of ACS-AN, that construction will be 89.7 percent in the paved areas of roadways. Attachment 1 provides a model output summary, using

[8]ACS-AN testified "In a road prism you've got a lot more to contend with. And, you know, I – I don't see very many grassy areas in a road prism. You usually have other utilities. You've got storm drain, gas, power, cable TV, they're all strung out all over the place. It makes it difficult." Tr. 424 (GLS).

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an ACS-AN-sponsored road prism construction input of 89.7 percent. This results in a unit cost per month of $20.32/loop-month.

DATED at Anchorage, Alaska, this 25th day of June, 2004.

James S. Strandberg, Commissioner

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Final Loop Calculation

Model Version: ACS 7.2-G v. 1.0

Run: ACS-Anchorage Expense Factors

Description	NID	Distribution	Concentrator	Feeder	Total
Direct Expense per year	$ 154,535	$ 2,120,467	$ 639,751	$ 1,615,996	$ 4,530,750
General Support + Other Taxes	40,482	555,473	167,588	423,323	$ 1,186,865
Carrier-to-Carrier	1,417	19,450	5,868	14,823	$ 41,558
Subtotal	$ 196,434	$ 2,695,390	$ 813,207	$ 2,054,142	$ 5,759,173
Common Support	$ 36,129	$ 495,748	$ 149,568	$ 377,807	$ 1,059,252
Subtotal	$ 232,563	$ 3,191,138	$ 962,775	$ 2,431,948	$ 6,818,425
Uncollectible Wholesale	0.43%	0.43%	0.43%	0.43%	0.43%
Total Annual Cost	$ 233,576	$ 3,205,033	$ 966,967	$ 2,442,538	**$ 6,848,113**
Physical Loops	28,082	28,082	28,082	28,082	28,082
Unit Cost per Month	**$ 0.69**	**$ 9.51**	**$ 2.87**	**$ 7.25**	**$ 20.32**

3.14