

ACCESS TARIFF

REGULATIONS, RATES AND CHARGES

Applying to the provision of access services
for connection to intrastate communications facilities
for intrastate customers within the
operating territory of

MERRIMACK COUNTY TELEPHONE COMPANY

SUCCESSOR BY MERGER OF MERRIMACK COUNTY TELEPHONE COMPANY
AND CONTOOCCOOK VALLEY TELEPHONE COMPANY, INC.

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↓

in the state of

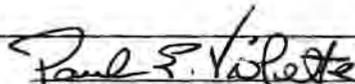
New Hampshire

as provided herein.

Access services are provided by means of wire, fiber optics,
radio or a combination thereof.

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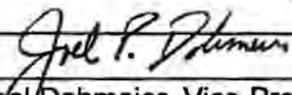
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President and CEO

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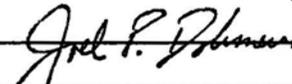
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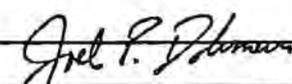
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CONCURRING CARRIERS

NONE

CONNECTING CARRIERS

NONE

OTHER PARTICIPATING CARRIERS

NONE

REGISTERED SERVICE MARKS AND TRADEMARKS

NONE

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Paul E. Violette
President

ACCESS TARIFF

TARIFF INFORMATION AND USE

INTRODUCTION

The Tariff Information and Use section is meant to assist both experienced and inexperienced users of this tariff in understanding the following:

- tariff content, structure, format and organization,
- effective dates and numbering schemes,
- tariff maintenance procedures,
- symbols and abbreviations, and
- references to other documents/tariffs.

GENERAL

This tariff contains rates and regulations applicable to Access Services.

Tariff Page Format

Page Numbering. Page numbers are located in the upper right corner of each tariff page. Pages are numbered sequentially. When a new page must be added between existing pages, a decimal and number is added to the previous page number, to sequentially number the new page. For example a new page between existing pages 20 and 21 would be numbered 20.1. A new page added between pages 18.1 and 18.2 would be numbered 18.1.1.

Page Revision Numbering. Page Revision Numbers are located in the upper right-hand corner of each tariff page. This number is the most recent page revision on file with the NHPUC. Due to Notice Periods, and changed Effective Dates, the most recent page on file with the NHPUC may not be in effect. Consult the Effective Date on a specific page and Tariff Supplements to determine if that page is in effect (see Tariff Supplements following).

Issue Date. The Issue Date in the lower left corner of each tariff page is the date that page was filed with the NHPUC.

Effective Date. The Effective Date in the lower left-hand corner is the date the page is scheduled to go into effect (at 12:01 a.m. on that date).

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TARIFF INFORMATION AND USE (CONT'D)

GENERAL (CONT'D)

Tariff Section Numbering

An alpha-numeric numbering plan is used to number tariff regulations and rates. Each level is subordinate to and dependent on its next higher level. An example of the numbering sequence follows:

- 6.
- 6.2
- 6.2.1
- 6.2.1(B)
- 6.2.1(B)(2)
- 6.2.1(B)(2)(a)

TARIFF REVISION CODING

Revisions to this tariff are reflected as outlined in Puc 1601.05 (b) (3).

TARIFF STRUCTURE AND ORGANIZATION

Title Page

Title Page 1 provides information regarding the NHPUC number of the tariff, the class of service provided, the geographical application of the tariff, and the type of facilities used to provide service. This page also provides information related to the origination of the tariff.

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TARIFF INFORMATION AND USE (CONT'D)

TARIFF STRUCTURE AND ORGANIZATION (CONT'D)

Check Sheets (Page 1)

When new or revised tariff pages are filed with the NHPUC, revised and updated Check Sheets are also filed with the NHPUC.

The Check Sheets list all pages in the tariff as well as the most recent revision number of each page. When pages are changed, or added, the Check Sheets are changed to reflect the change or addition. An asterisk (*) is placed next to revised or added pages to highlight the pages changed.

The Check Sheets list the most recent page revision filed with the NHPUC. It does not indicate that the latest revision is effective. The effective date on the page itself must be examined to determine page effectiveness.

Table of Contents (Page 2)

The Table of Contents lists the Sections and paragraphs of the Tariff and provides a page number at which that Section or paragraph begins.

Symbols and Abbreviations (Page 9)

A listing and explanation of tariff coding symbols and abbreviations used in the tariff is provided.

Section 1 - Application of Tariff

States the application and scope of the Access Service tariff.

Section 2 - General Regulations

States the general regulations that apply to the access services offered by this tariff.

Section 3 - Carrier Common Line Access Service

States the regulations concerning Carrier Common Line.

Section 4 - Reserved for Future Use

Section 5 - Access Ordering

States the requirements of and regulations governing access orders and also the regulations concerning access orders when service is provided by multiple exchange carriers. States options available for the ordering of switched and special access services.

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President

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ACCESS TARIFF

TARIFF INFORMATION AND USE (CONT'D)

TARIFF STRUCTURE AND ORGANIZATION (CONT'D)

Section 6 - Switched Access Service

States the regulations governing the provision of Switched Access Service. This section is subdivided into General, Undertaking of the Telephone Company, Obligations of the Customer and Rate Regulations which relate to all Switched Access Services. In addition, this section contains subdivisions for the Description and Provision of each Switched Access Feature Group Service (e.g., FGA, FGB, FGC, and FGD).

Section 7 - Special Access Service

States the regulations for Special Access Service. This section is subdivided into General, Rate Regulations and Surcharge for Special Access Service which relate to Special Access Services. In addition, there are subdivisions describing each of the Special Access classes of service (e.g., Voice Grade, Program Audio, Digital Data, and High Capacity).

Section 8 - Reserved for Future Use

Section 9 - Reserved for Future Use

Section 10 - Reserved for Future Use

Section 11 - Special Facilities Routing of Access Services

This section covers Special Facilities Routing which involves access services which may be routed (1) via diverse routes in order to effect an added margin of protection and reliability in the event of facility outages, (2) via routes avoiding specified geographical locations or (3) via cable only facilities.

Section 12 - Reserved for Future Use

Section 13 - Additional Engineering, Additional Labor and Miscellaneous Services

This section covers the regulation governing Additional Engineering, Additional Labor and Miscellaneous Services.

Section 14 - Reserved for Future Use

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President

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Section 15 - Access Service Interfaces and Transmission Specifications

This section covers the technical specifications and service parameters of Access Services. Explains and lists Network Channel (NC) codes, Network Channel Interface (NCI) codes and Service Designator (SD) codes. Displays the technical specifications packages available with Special Access Service.

Section 16 - Reserved for Future Use

Section 17 - Rates and Charges

This section provides all the rates and charges for the Access Services contained in this tariff. It is organized by Common Line Access Service, Switched Access Service, Special Access Service and Other Services.

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President

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EXPLANATION OF ABBREVIATIONS

ac	-	alternating current	
AML	-	Actual Measured Loss	
ANI	-	Automatic Number Identification	
AP	-	Program Audio	
AT&T	-	American Telephone and Telegraph Company	
CN	-	Charge Number	(N)
CNCC	-	Customer Network Control Center	
COCTX	-	Central Office Centrex	
Cont'd	-	Continued	
CPN	-	Calling Party Number	(N)
CSACC	-	Customer Service Administration Control Center	
Ctx	-	Centrex	
DA	-	Digital Data Access	
db	-	decibel	
dBrnC0	-	Decibel Reference Noise C- Message Weighted 0	
dc	-	direct current	
EML	-	Expected Measured Loss	
ESS	-	Electronic Switching System	
ESSX	-	Electronic Switching System Exchange	
f	-	frequency	
FCC	-	Federal Communications Commission	
FX	-	Foreign Exchange	
HC	-	High Capacity	
Hz	-	Hertz	
IC	-	Interexchange Carrier	
ICB	-	Individual Case Basis	
IP	-	Internet Protocol	(N)
kbits	-	kilobits per second	
kHz	-	kilohertz	

ISSUED: March 26, 2012
EFFECTIVE: April 25, 2012

ISSUED BY: 
Joe Dohmeier, Vice-President

ACCESS TARIFF

EXPLANATION OF ABBREVIATIONS (CONT'D)

LATA	-	Local Access and Transport Area	
LDMTS	-	Long Distance Message Telecommunications Service(s)	
Ma	-	milliamperes	
Mbps	-	Megabits per second	
MF	-	Multi-Frequency	(N)
MHz	-	Megahertz	
MOU	-	Minutes of Use	
MRC	-	Monthly Recurring Charge	
NB	-	Narrowband	
NECA	-	National Exchange Carrier Association, Inc.	
NHPUC	-	New Hampshire Public Utilities Commission	
NPA	-	Numbering Plan Area	
NRC	-	Nonrecurring Charge	
NTS	-	Non-Traffic Sensitive	
NXX	-	Three Digit Central Office Code	
PBX	-	Private Branch Exchange	
PCM	-	Pulse Code Modulation	
PLR	-	Private Line Ringdown	
POT	-	Point of Termination	
rms	-	root-mean-square	
SSN	-	Switched Service Network	
SWC	-	Serving Wire Center	
TDM	-	Time Division Multiplexing	(N)
TES	-	Telephone Exchange Service(s)	
TLP	-	Transmissional Level Point	
TSPS	-	Traffic Service Position System	
TV	-	Television	
USOC	-	Uniform Service Order Code	
VG	-	Voice Grade	
V & H	-	Vertical & Horizontal	
WATS	-	Wide Area Telecommunications Service(s)	

REFERENCE TO OTHER TARIFFS

Whenever reference is made in this Tariff to other intrastate tariffs of the Telephone Company, the reference is to the tariffs in force as of the effective date of this Tariff, and to amendments thereto and successive issues thereof. Whenever reference is made in this Tariff to interstate tariffs of the Telephone Company, the reference is to the tariffs in force as of October 1, 1993.

ISSUED: March 26, 2012
EFFECTIVE: April 25, 2012

ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

1. Application of Tariff

1.1 This tariff contains regulations, rates and charges applicable to the provision of Carrier Common Line, Switched Access, Special Access, and other miscellaneous services, hereinafter referred to collectively as service(s). These services are provided to Customers by the Issuing Carrier of this tariff, Merrimack County Telephone Company, Successor by merger of Merrimack County Telephone Company and Contoocook Valley Telephone Co., Inc., hereinafter the Telephone Company. This tariff also contains Access Ordering regulations and charges that are applicable when these services are ordered or modified by the Customer.

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1.2 The provision of such services by Merrimack County Telephone Company as set forth in this tariff does not constitute a joint undertaking with the Customer for the furnishing of any service.

Issued: September 1, 1999

Issued By:

Effective: October 1, 1999

Title:

Paul E. Violette
President and CEO

ACCESS TARIFF

2. General Regulations

2.1. Undertaking of the Telephone Company

2.1.1. Scope

- (A) The Telephone Company does not undertake to transmit messages under this tariff.
- (B) The Telephone Company shall be responsible only for the installation, operation and maintenance of the services it provides.
- (C) The Telephone Company will, for maintenance purposes, test its service only to the extent necessary to detect and/or clear troubles.
- (D) Services are provided 24 hours daily, seven days per week, except as set forth in other applicable sections of this tariff.
- (E) The Telephone Company does not warrant that its facilities and services meet standards other than those set forth in this tariff.
- (F) Service furnished pursuant to this Tariff is subject futher to the Commission's rules as now and hereafter in effect.

2.1.2. Limitations

(A) Assignment or Transfer of Services

The Customer may assign or transfer the use of services provided under this tariff only where there is no interruption of use or relocation of the services. Such assignment or transfer may be made to:

- (1) another Customer, whether an individual, partnership, association or corporation, provided the assignee or transferee assumes all outstanding indebtedness for such services, and the unexpired portion of the minimum period and the termination liability applicable to such services, if any; or
- (2) a court-appointed receiver, trustee or other person acting pursuant to law in bankruptcy, receivership, reorganization, insolvency, liquidation or other similar proceedings, provided the assignee or transferee assumes the unexpired portion of the minimum period and the termination liability applicable to such services, if any.

Issued: September 3, 1993

Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.2 Limitations (Cont'd)

(A) Assignment or Transfer of Services (Cont'd)

In all cases of assignment or transfer, the written acknowledgment of the Telephone Company is required prior to such assignment or transfer. This acknowledgment shall be made within 15 days from the receipt of notification. All regulations and conditions contained in this tariff shall apply to such assignee or transferee.

The assignment or transfer of services does not relieve or discharge the assignor or transferor from remaining jointly or severally liable with the assignee or transferee for any obligations existing at the time of the assignment or transfer.

(B) Use and Restoration of Services

The use and restoration of services shall be in accordance with Part 64, Subpart D, Appendix A, of the Federal Communications Commission's Rules and Regulations, which specifies the priority system for such activities.

(C) Sequence of Provisioning

Subject to compliance with the rules mentioned in (B) preceding, the services offered herein will be provided to Customers on a first-come, first-served basis.

The first-come, first-served sequence shall be based upon the received time and date recorded, by stamp or other notation, by the Telephone Company on Customer access orders. These orders must contain all the information as required for each respective service as delineated in other sections of this tariff. Customer orders shall not be deemed to have been received until such information is provided. Should questions arise which preclude order issuance due to missing information or the need for clarification, the Telephone Company will attempt to seek such missing information or clarification on a verbal basis.

Issued: September 3, 1993

Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.3 Liability

(A) Limits of Liability

The Telephone Company's liability, if any, for its willful misconduct is not limited by this tariff. With respect to any other claim or suit, by a Customer or by any others, for damages associated with the installation, provision, termination, maintenance, repair or restoration of service, and subject to the provisions of (B) through (G) following, the Telephone Company's liability if any, shall not exceed an amount equal to the proportionate charge for the service for the period during which the service was affected. This liability for damages shall be in addition to any amounts that may otherwise be due the Customer under this tariff as a Credit Allowance for a Service Interruption.

(B) Acts or Omissions

The Telephone Company shall not be liable for any act or omission of any other carrier or Customer providing a portion of a service, nor shall the Telephone Company for its own act or omission hold liable any other carrier or Customer providing a portion of a service.

(C) Damages to Customer Premises

The Telephone Company is not liable for damages to the Customer premises resulting from the furnishing of a service, including the installation and removal of equipment and associated wiring, unless the damage is caused by the Telephone Company's negligence.

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Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.3 Liability (Cont'd)

(D) Indemnification of Telephone Company

(1) By the End User

The Telephone Company shall be indemnified, defended and held harmless by the End User against any claim, loss or damage arising from the End User's use of services offered under this tariff, involving:

- (A) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from the End User's own communications;
- (B) Claims for patent infringement arising from the End User's acts combining or using the service furnished by the Telephone Company in connection with facilities or equipment furnished by the End Users or Customer or;
- (C) All other claims arising out of any act or omission of the End User in the course of using services provided pursuant to this tariff.

(2) By the Customer

The Telephone Company shall be indemnified, defended and held harmless by the Customer against any claim, loss or damage arising from the Customer's use of services offered under this tariff, involving:

- (A) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from the Customer's own communications;
- (B) Claims for patent infringement arising from the Customer's acts combining or using the service furnished by the Telephone Company in connection with facilities or equipment furnished by the End User or Customer or;

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Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.3 Liability (Cont'd)

(D) Indemnification of Telephone Company (Cont'd)

(2) By the Customer (Cont'd)

(C) All other claims arising out of any act or omission of the Customer in the course of using services provided pursuant to this tariff.

(E) Explosive Atmospheres

The Telephone Company does not guarantee or make any warranty with respect to its services when used in an explosive atmosphere. The Telephone Company shall be indemnified, defended and held harmless by the Customer from any and all claims by any person relating to such Customer's use of services so provided.

(F) No License Granted

No license under patents (other than the limited license to use) is granted by the Telephone Company or shall be implied or arise by estoppel, with respect to any service offered under this tariff. The Telephone Company will defend the Customer against claims of patent infringement arising solely from the use by the Customer of services offered under this tariff and will indemnify such Customer for any damages awarded based solely on such claims.

(G) Circumstances Beyond the Telephone Company's Control

The Telephone Company's failure to provide or maintain services under this tariff shall be excused by governmental orders, civil commotions, criminal actions taken against the Telephone Company, acts of God and other circumstances beyond the Telephone Company's reasonable control, subject to the Credit Allowance for a Service Interruption as set forth in 2.4.4 following.

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Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.4 Provision of Services

The Telephone Company will provide to the Customer, upon reasonable notice, services offered in other applicable sections of this tariff at rates and charges specified therein. Services will be made available to the extent that such services are or can be made available with reasonable effort, and after provision has been made for the Telephone Company's telephone exchange services.

2.1.5 Installation and Termination of Services

The Access Services provided under this tariff (A) include Telephone Company communication facilities up to the Point of Termination as defined in Section 2.6 which denotes the demarcation point and (B) will be installed by the Telephone Company to such Point of Termination. If the Point of Termination is moved subsequent to the original installation, the charges as set forth in Section 6 for Switched Access Services apply as appropriate. Any additional terminations at the Customer's premises beyond such Point of Termination are the sole responsibility of the Customer.

2.1.6 Service Maintenance

The services provided under this tariff shall be maintained by the Telephone Company. The Customer or others may not rearrange, move, disconnect, remove or attempt to repair any facilities provided by the Telephone Company, other than by connection or disconnection to any interface means used, except with the written consent of the Telephone Company.

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Paul E. Violette
President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.7 Changes and Substitutions

Except as provided for equipment and systems subject to FCC Part 68 Regulations at 47 C.F.R. Section 68.110(b), the Telephone Company may, where such action is reasonably required in the operation of its business, substitute, change or rearrange any facilities used in providing service under this tariff. Such actions may include, without limitation:

- substitution of different metallic facilities,
- substitution of carrier or derived facilities for metallic facilities used to provide other than metallic facilities,
- substitution of metallic facilities for carrier or derived facilities used to provide other than metallic facilities,
- change of minimum protection criteria,
- change of operating or maintenance characteristics of facilities, or
- change of operations or procedures of the Telephone Company.

In case of any such substitution, change or rearrangement, the transmission parameters will be within the range as set forth in Section 15. following. The Telephone Company shall not be responsible if any such substitution, change or rearrangement renders any Customer furnished services obsolete or requires modification or alteration thereof or otherwise affects their use or performance. If such substitution, change or rearrangement materially affects the operating characteristics of the facility, the Telephone Company will provide reasonable notification to the Customer in writing. Reasonable time will be allowed for any redesign and implementation required by the change in operating characteristics. The Telephone Company will work cooperatively with the Customer to determine reasonable notification procedures.

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Paul E. Violette
President

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.8 Refusal and Discontinuance of Service

(A) If a Customer fails to comply with 2.1.6 preceding (Service Maintenance) or 2.3.1, 2.3.4, 2.3.6, 2.4.1 or 2.5 following (respectively, Damages, Availability for Testing, Balance, Payment Arrangements, Connections) including any Customers failure to make payments on the date and times therein specified, the Telephone Company may, on thirty (30) days written notice to the Customer by Certified U.S. Mail, take the following actions:

- refuse additional applications for service and/or refuse to complete any pending orders for service, and/or
- discontinue the provision of service to the Customer.

In the case of discontinuance all applicable charges, including termination charges, shall become due.

(B) If a Customer fails to comply with 2.2.2 following (Unlawful and Abusive Use), the Telephone Company may, upon written request from a Customer, or another exchange carrier, terminate service to any subscriber or Customer identified as having utilized service provided under this tariff in the completion of abusive or unlawful telephone calls. Service shall be terminated by the Telephone Company as provided for in its general and/or local exchange service tariffs.

In such instances when termination occurs the Telephone Company shall be indemnified, defended and held harmless by any Customer or Exchange Carrier requesting termination of service against any claim, loss or damage arising from the Telephone Company's actions in terminating such service, unless caused by the Telephone Company's negligence.

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Paul E. Violette
President

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.8 Refusal and Discontinuance of Service (Cont'd)

(C) Except as provided for equipment or systems subject to the NHPUC Part Puc 403 Rules in Section Puc 403.06, if the Customer fails to comply with 2.2.1 following (Interference or Impairment), the Telephone Company will, where practicable, notify the Customer that temporary discontinuance of the use of a service may be required; however, where prior notice is not practicable, the Telephone Company may temporarily discontinue service forthwith if such action is reasonable in the circumstances. In case of such temporary discontinuance, the Customer will be notified promptly and afforded the opportunity to correct the condition which gave rise to the temporary discontinuance. During such period of temporary discontinuance, credit allowance for service interruptions as set forth in 2.4.4 following is not applicable.

(D) When access service is provided by more than one Telephone Company, the companies involved in providing the joint service may individually or collectively deny service to a Customer for nonpayment. Where the Telephone Company(s) affected by the nonpayment is incapable of effecting discontinuance of service without cooperation from the other joint providers of Switched Access Service, such other Telephone Company(s) will, if technically feasible, assist in denying the joint service to the Customer. Service denial for such joint service will only include calls originating or terminating within, or transiting, the operating territory of the Telephone Companies initiating the service denial for nonpayment. When more than one of the joint providers must deny service to effectuate termination for nonpayment, in cases where a conflict exists in the applicable tariff provisions, the tariff regulations of the end office Telephone Company shall apply for joint service discontinuance.

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Issued by: _____

Paul E. Violette
President

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.1 Undertaking of the Telephone Company (Cont'd)

2.1.8 Refusal and Discontinuance of Service (Cont'd)

(E) If the Telephone Company does not refuse additional applications for service and/or does not discontinue the provision of the services as specified for herein, and the Customer's noncompliance continues, nothing contained herein shall preclude the Telephone Company's right to refuse additional applications for service and/or to discontinue the provision of the services to the non-complying Customer without further notice.

2.1.9 Notification of Service-Affecting Activities

The Telephone Company will provide the Customer timely notification of service-affecting activities that may occur in normal operation of its business. Such activities may include, but are not limited to, facility additions, removals or rearrangements, routine maintenance and switching machine change-out. No specific advance notification period is applicable to all service activities. The Telephone Company will work cooperatively with the Customer to determine reasonable notification requirements. With some emergency or unplanned service-affecting condition, notification of the Customer may not be possible.

2.1.10 Coordination with Respect to Network Contingencies

The Telephone Company intends to work cooperatively with the Customer to develop network contingency plans in order to maintain maximum network capability following natural or man-made disasters which affect telecommunications services.

2.1.11 Provision and Ownership of Telephone Numbers

The Telephone Company reserves the reasonable right to assign, designate or change telephone numbers, any other call number designations associated with Access Services, or the Telephone Company serving central office prefixes associated with such numbers, when necessary in the conduct of its business. Should it become necessary to make a change in such number(s), the Telephone Company will furnish to the Customer six months notice, by Certified U.S. Mail, of the effective date and an explanation of the reasons for such change(s). In the case of emergency conditions however, e.g., a fire in a wire center, it may be necessary to change a telephone number without six months notice in order to provide service to the Customer.

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Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.2 Use

2.2.1 Interference or Impairment

The characteristics and methods of operation of any circuits, facilities or equipment provided by other than the Telephone Company and associated with the facilities utilized to provide services under this tariff shall not:

- interfere with or impair service over any facilities of the Telephone Company, its affiliated companies, or its connecting and concurring carriers involved in its services,
- cause damage to their plant,
- impair the privacy of any communications carried over their facilities, or
- create hazards to the employees of any of them or the public.

2.2.2 Unlawful and Abusive Use

The service provided under this tariff shall not be used for an unlawful purpose or used in an abusive manner.

Abusive use includes:

- (A) The use of the service of the Telephone Company for a call or calls, anonymous or otherwise, in a manner reasonably expected to frighten, abuse, torment, or harass another;
- (B) The use of the service in such a manner as to interfere unreasonably with the use of the service by one or more other Customers.

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Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.3 Obligations of the Customer

2.3.1 Damages

The Customer shall reimburse the Telephone Company for damages to Telephone Company facilities caused by the negligence or willful act of the Customer or resulting from the Customer's improper use of the Telephone Company facilities, or due to malfunction of any facilities or equipment provided by other than the Telephone Company. Nothing in the foregoing provision shall be interpreted to hold one Customer liable for another Customer's actions. The Telephone Company will, upon reimbursement for damages, cooperate with the Customer in prosecuting a claim against the person causing such damage and the Customer shall be subrogated to the right of recovery by the Telephone Company to the extent of such payment.

2.3.2 Ownership of Facilities and Theft

Telephone Company facilities utilized to provide service under the provisions of this tariff shall remain the property of the Telephone Company. Such facilities shall be returned to the Telephone Company by the Customer, whenever requested, within a reasonable period. The equipment shall be returned in as good condition as reasonable wear will permit.

2.3.3 Equipment Space and Power

The Customer shall furnish or arrange to have furnished to the Telephone Company, at no charge, equipment space and electrical power required by the Telephone Company to provide services under this tariff at the points of termination of such services. The selection of ac or dc power shall be mutually agreed to by the Customer and the Telephone Company. The Customer shall also make necessary arrangements in order that the Telephone Company will have access to such spaces at reasonable times for installing, testing, repairing or removing Telephone Company facilities used to provide services.

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Paul E. Violette
President

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.4 Availability for Testing

Access to facilities used to provide services under this tariff shall be available to the Telephone Company at times mutually agreed upon in order to permit the Telephone Company to make tests and adjustments appropriate for maintaining the services in satisfactory operating condition. Such tests and adjustments shall be completed within a reasonable time. As set forth in 2.4.4(C)(4) following, no credit will be allowed for any interruptions involved during such tests and adjustments.

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Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.5 Limitation of Use of Metallic Facilities

Signals applied to a metallic facility shall conform to the limitations set forth in Technical Reference Publication AS No. 1.

2.3.6 Balance

All signals for transmission over the facilities used to provide services under this tariff shall be delivered by the Customer balanced to ground except for ground start, duplex (DX) and McCulloch-Loop (Alarm System) type signaling.

2.3.7 Design of Customer Services

Subject to the provisions of 2.1.7 preceding (Changes and Substitutions), the Customer shall be solely responsible, at its own expense, for the overall design of its services and for any redesigning or rearrangement of its services which may be required because of changes in facilities, operations or procedures of the Telephone Company, minimum protection criteria or operating or maintenance characteristics of the facilities.

2.3.8 References to the Telephone Company

The Customer may advise End Users that certain services are provided by the Telephone Company in connection with the service the Customer furnishes to End Users; however, the Customer shall not represent that the Telephone Company jointly participates in the Customer's services.

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Paul E. Violette
President

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.9 Claims and Demands for Damages

- (A) With respect to claims of patent infringement made by third persons, the Customer shall defend, indemnify, protect and save harmless the Telephone Company from and against all claims arising out of the combining with, or use in connection with, the services provided under this tariff, any circuit, apparatus, system or method provided by the Customer.
- (B) The Customer shall defend, indemnify and save harmless the Telephone Company from and against any suits, claims, losses and damages, including punitive damages, attorney fees and court costs by third persons arising out of the construction, installation, operation, maintenance, or removal of the Customer's circuits, facilities, or equipment connected to the Telephone Company's services provided under this tariff including, without limitation, Worker's Compensation claims, actions for infringement of copyright and/or unauthorized use of program material, libel and slander actions based on the content of communications transmitted over the Customer's circuits, facilities or equipment, and proceedings to recover taxes, fines, or penalties for failure of the Customer to obtain or maintain in effect any necessary certificates, permits, licenses, or other authority to acquire or operate the services provided under this tariff; provided, however, the foregoing indemnification shall not apply to suits, claims, and demands to recover damages for damage to property, death, or personal injury unless such suits, claims or demands are based on the tortious conduct of the Customer, its officers, agents or employees.
- (C) The Customer shall defend, indemnify and save harmless the Telephone Company from and against any suits, claims, losses or damages, including punitive damages, attorney fees and court costs by the Customer or third parties arising out of any act of omission of the Customer in the course of using services provided under this tariff.

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Issued by: _____

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Paul E. Violette
President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.10 **Coordination with Respect to Network Contingencies**

The Customer shall, in cooperation with the Telephone Company, coordinate in planning the actions to be taken to maintain maximum network capability following natural or man-made disasters which affect telecommunications services.

2.3.11 **Jurisdictional Report and Certification Requirements**

(A) **Jurisdictional Reporting - Switched Access**

(1) **General**

The following regulations govern jurisdictional reporting by the customer and cases where the Telephone Company will develop jurisdictional percentages.

(a) **Sufficient Call Detail Billing**

When the Telephone Company receives sufficient call detail to determine the jurisdiction of the originating and terminating access minutes of use, the Telephone Company shall use that call detail to render bills for those minutes of use, and shall not apply the jurisdictional factor(s) to those minutes of use.

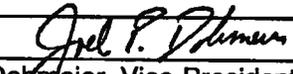
(b) **Insufficient Call Detail Billing**

When the Telephone Company receives insufficient call detail to determine the jurisdiction of the originating and terminating access minutes of use, the Telephone Company will apply the jurisdictional factor(s) provided by the customer or developed by the Telephone Company as set forth below, only to those minutes of use for which the Telephone Company does not have sufficient call detail. Such jurisdictional factor(s) will be used until the customer provides an update to its jurisdictional factor(s) as set forth below.

For all flat rated Switched Access Services, the Telephone Company will apply the jurisdictional factor(s) as provided by the customer or developed by the Telephone Company as set forth below, each month until the customer provides an update to its factor(s) as described below.

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EFFECTIVE: October 1, 2010

ISSUED BY: _____


Joel Dohmeier, Vice-President

Authorized by NH PUC Docket No. DT-10-227

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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report and Certification Requirements** (Continued)

(A) **Jurisdictional Reporting - Switched Access** (Continued)

(2) **Initial Order**

When the customer submits an initial service order to the Telephone Company, the customer is required to provide the percentage of interstate and intrastate use for originating and/or terminating minutes for each service arranged for interstate and intrastate use.

If the Telephone Company receives usage for which no order for service has been received, the Telephone Company may develop the jurisdictional factors as needed.

(3) **Quarterly Reports**

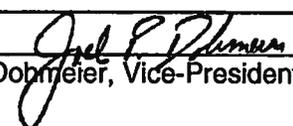
Effective on the first of January, April, July, and October of each year, the customer shall update its interstate and intrastate jurisdictional report. The customer shall forward to the Telephone Company, to be received by the Telephone Company no later than fifteen days after the first of each such month, a revised report showing the interstate and intrastate percentage of use for the past three months ending the last day of December, March, June, and September, respectively, for each service arranged. Such revised report will serve as the basis for the next three months billing for determining the jurisdiction for Switched Access Services in cases where the Telephone Company does not have sufficient call detail to do so, and will be applied to the customer's usage on a prospective basis only. No prorating or back billing will be done based on the report.

For each service, the customer may only provide jurisdictional factors that are in a whole number format, i.e., a number from 0 to 100.

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Joel Dohmeier, Vice-President

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ACCESS TARIFF

2. GENERAL REGULATIONS (Continued)

2.3 Obligations of the Customer (Continued)

2.3.11 Jurisdictional Report and Certification Requirements (Continued)

(A) Jurisdictional Reporting - Switched Access (Continued)

(3) Quarterly Reports (Continued)

If the customer does not supply a quarterly report, the Telephone Company will assume the percentages to be the same as those provided in the last quarterly report received. In the instance the customer has failed to update the percentages after six months either as set by the previous quarterly report or a service order, the Telephone Company may develop a jurisdictional percentage based on either actual usage, or a weighted average using billed access minutes of all other customers' usage.

(4) Subsequent Orders

When the customer adds Busy Hour Minutes of Capacity (BHMC), lines or trunks to an existing end office group, the customer shall furnish revised projected interstate and intrastate percentages that apply to the total BHMC, lines or trunks. When the customer discontinues BHMC, lines or trunks from an existing group, the customer shall furnish revised projected interstate and intrastate percentages for the remaining BHMC, lines or trunks in the end office group. The revised report will serve as the basis for future billing, and will be applied to the customer's usage on a prospective basis only. No prorating or back billing will be done based on the report.

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ISSUED BY: Joel P. Dohmeier
Joel Dohmeier, Vice-President

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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report and Certification Requirements** (Continued)

(B) Disputes Involving Jurisdictional Reports

For Switched Access, if a jurisdictional dispute arises concerning the projected interstate or intrastate percentages, the Telephone Company will notify the customer to provide the data the customer used to determine the projected interstate or intrastate percentages. The Telephone Company will not request such data more than once a year provided that the customer complies with the initial request. The customer shall supply the data within thirty (30) days of the request.

If the customer fails to provide the requested data to the Telephone Company within thirty (30) days of the receipt of the notice, the customer will be in violation of the Tariff. In such event, the Telephone Company may develop percentages for originating and terminating usage based on either actual usage, or a weighted average using billed access minutes of all other customers' usage. This factor will be applied to the customer's usage on a prospective basis only and will be utilized until the customer provides supporting data that substantiates the requested percentages.

ISSUED: May 26, 2016
EFFECTIVE: July 1, 2016

ISSUED BY: Joel P. Dohmeier
Joel Dohmeier, Vice-President

(D)

(D)

ACCESS TARIFF

2. GENERAL REGULATIONS (Continued)

2.3 Obligations of the Customer (Continued)

2.3.11 Jurisdictional Report and Certification Requirements (Continued)

(B) Disputes Involving Jurisdictional Reports (Continued)

If the Telephone Company finds that the data submitted by the customer does not adequately support the reported percentages, the Telephone Company may develop percentages for originating and terminating usage based on either actual usage, or a weighted average using billed access minutes of all other customers' usage. Upon assigning an intrastate percentage of use, the Telephone Company will notify the customer of the change and when it will go into effect. The Telephone Company's designated methodology used to develop the jurisdictional percentage will remain in effect for twelve (12) months.

If the Telephone Company and the customer cannot informally resolve the dispute, the customer may contest the designated intrastate percentage by requesting an audit be conducted by a mutually agreed upon independent auditor.

- (1) The cost of an independent audit will be borne by the customer.
- (2) During the audit, if the customer fails to provide the requested data to the auditor within thirty (30) days of the receipt of the notice, the customer will be in violation of the Tariff.
- (3) The audit results will be furnished to both the customer and Telephone Company.

(C)

(C)

ISSUED: September 1, 2010
EFFECTIVE: October 1, 2010

ISSUED BY: Joel P. Dohmeier
Joel Dohmeier, Vice-President

Authorized by NH PUC Docket No. DT-10-227

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report and Certification Requirements** (Continued)

(B) **Disputes Involving Jurisdictional Reports** (Continued)

If the Telephone Company and the customer cannot informally resolve the dispute, the customer may contest the designated intrastate percentage by requesting an audit be conducted by a mutually agreed upon independent auditor. (Continued)

- (4) The Telephone Company will adjust the customer's jurisdictional percentage based upon the audit results. The jurisdictional percentage resulting from the audit shall be applied to the customer's usage on a prospective basis only and will remain in effect for the two (2) quarters following the completion of the audit. After that time, the customer may report revised jurisdictional percentage pursuant to (A.3) above.

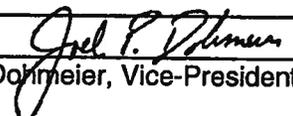
The Telephone Company may also request an independent audit to resolve a jurisdictional dispute. If, as a result of the audit conducted by an independent auditor, a customer is found to have over-stated its jurisdictional percentage by 5 percentage points or more, the Telephone Company shall require reimbursement from the customer for the cost of the audit. Such bill(s) shall be due and paid in immediately available funds within 30 days from receipt, and shall carry a late payment penalty as set forth in Section 2.4.1(C)(2)(b), Payment of Rates, Charges and Deposits following, if not paid within the 30 days. The jurisdictional percentage resulting from the audit shall be applied to the usage for the quarter the audit was completed, the usage for the quarter prior to the completion of the audit, and to the usage for the two quarters following the completion of the audit. After that time, the customer may report revised jurisdictional percentage pursuant to (A.3) above.

(C)

(C)

ISSUED: September 1, 2010
EFFECTIVE: October 1, 2010

ISSUED BY:


Joel Dohmeier, Vice-President

Authorized by NH PUC Docket No. DT-10-227

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report and Certification Requirements** (Continued)

(C) **Identification and Rating of Toll VoIP – PSTN Traffic**

(1) Scope

VoIP-PSTN Traffic is defined as traffic exchanged between the Telephone Company end user and the Customer in time division multiplexing (“TDM”) format that originates and/or terminates in Internet protocol (“IP”) format. This section governs the identification of Toll VoIP-PSTN Traffic that is required to be compensated at interstate access rates (unless the parties have agreed otherwise) as mandated by the Federal Communications Commission in its Report and Order in WC Docket Nos. 10-90, etc., FCC Release No. 11-161 on November 18, 2011 (“FCC Order”) and the FCC’s Second Order of Reconsideration (12-47) released April 25, 2012. Specifically, this section establishes the method of separating Toll VoIP-PSTN Traffic from the Customer’s traditional intrastate access traffic, so that such traffic can be billed in accordance with the FCC Order.

(T)
(T)

(2) Rating of Toll VoIP-PSTN Traffic

The Toll VoIP-PSTN Traffic identified in accordance with this tariff section will be billed at rates equal to the Telephone Company’s applicable tariffed interstate switched access rates as specified in the Telephone Company’s applicable federal access tariff.

(3) Calculation and Application of Percent-VoIP-Usage Factor

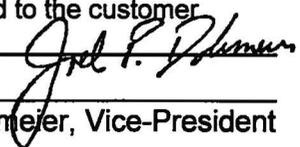
(a) The Telephone Company will determine the number of terminating intrastate Toll VoIP-PSTN Traffic minutes of use (MOU) to which interstate rates will be applied under (2), preceding, by applying a terminating PVU factor to the total intrastate access MOU terminated by a Customer to the Telephone Company’s end user.

(b) The Telephone Company will determine the portion of dedicated facilities to which interstate rates will be applied under (2), preceding, by applying a PVU factor for dedicated switched access facilities to the dedicated facilities between the Telephone Company and the Customer.

(c) The Telephone Company will determine the number of originating intrastate Toll VoIP-PSTN Traffic minutes of use (MOU) to which interstate rates will be applied under (2), preceding, by applying an originating Percent VoIP Usage (PVU) factor to the total intrastate access MOU originated by a Telephone Company end user and delivered to the customer

(N)
|
(N)

ISSUED: February 13, 2014
EFFECTIVE: March 17, 2014

ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report Requirements** (Continued)

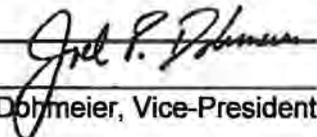
(C) **Identification and Rating of VoIP – PSTN Traffic** (Continued)

(3) **Calculation and Application of Percent-VoIP-Usage Factor** (Continued)

- (d) The Customer will calculate and furnish to the Telephone Company a terminating PVUC factor (along with the supporting documentation as specified in (C)(3)(g) below) representing the whole number percentage of the Customer's total terminating intrastate access MOU that the Customer sent to Telephone Company and which originated in IP format and that would be billed by the Telephone Company as intrastate terminating access MOU. (T)
- (e) If applicable, the Telephone Company will calculate and periodically update a terminating PVUT factor representing the percentage (as a whole number) of total intrastate terminating access MOU that the Company receives from the Customer that terminates in IP format at the end user's premises. (T)
- (f) The customer will calculate and furnish to the Telephone Company an originating PVUC factor (along with the supporting documentation as specified in (C)(3)(h) below) representing the whole number percentage of the customer's total originating intrastate access MOU that the customer receives from the Telephone Company and that is terminated in IP format and that would be billed by the Telephone Company as intrastate originating access MOU. (N)
- (g) If applicable, the Telephone Company will calculate and periodically update an originating PVUT factor representing the percentage (as a whole number) of total originating access MOU that the telephone company originated in IP format at the end user's premises, and that is sent to the customer. (N)
- (h) The Company will develop a total originating and a total terminating Percent VoIP Usage ("PVU") factor combining the Customer's applicable originating or terminating PVUC factor with the Company's applicable originating or terminating PVUT factor. (T)
 - 1) The PVU calculation below is applied when the Company does not bill based on actual call detail records for the Company's intrastate IP traffic at interstate rates. (T)
$$PVU = PVUC + [PVUT \times (1 - PVUC)]$$
 applied to the Company's end user's total intrastate originating or terminating MOU.
Example (applicable to terminating MOU): The Customer reported that their PVUC as 40%. The Company's PVUT is 10%. This results in the following:
$$PVU = 40\% \text{ plus } (10\% \text{ times } (1 - 40\%)) = 46\%$$

This means that 46% of the Intrastate terminating MOU exchanged between the Customer and the Company's end users will be rated at Interstate rates. (T)

ISSUED: February 13, 2014
EFFECTIVE: March 17, 2014

ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report Requirements** (Continued)

(C) **Identification and Rating of VoIP – PSTN Traffic** (Continued)

(3) Calculation and Application of Percent-VoIP-Usage Factor (Continued)

(h) (Continued)

(T)

- 2) The PVU calculation below is applied when the Company bills are based on the actual call detail records for the Company's intrastate IP traffic at interstate rates.

The formula for usage will be as follows:

$PVU = PVUC \times (1 - PVUT)$ applied to the Company's TDM end user's total intrastate originating or terminating MOU.

(T)

Example (applicable to terminating MOU): The Company has identified that there was 10,500 intrastate terminating MOU that were identified and exchanged between the Customer and the Company's IP end users. The Customer reported that their PVUC as 40%. The Company's PVUT is 10%.

(T)

This results in the following:

$PVU = 40\% \text{ times } (1 - 10\%) = 36\%$

This means that 36% of the Intrastate terminating MOU exchanged between the Customer and the Company's TDM end users will be rated at interstate rates and the intrastate 10,500 MOU will also be rated at interstate rates.

- (i) The Customer shall not modify their reported PIU factors to account for VoIP - PSTN Traffic.

(T)

- (j) The Customer provided terminating and originating PVUC factors shall be based on information such as the number of the customer's retail VoIP subscriptions in the state (e.g. as reported on F.C.C. Form 477), traffic studies, actual call detail or other relevant and verifiable information.

(T)

- (k) The Customer shall retain the call detail, work papers, and information used to develop the PVUC factors for a minimum of two years.

(T)

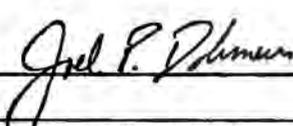
(T)

- (l) If the Customer does not furnish the Telephone Company with the above PVUC factors, the Telephone Company will utilize a PVU factor equal to the Telephone Company supplied PVUT.

(T)

(T)

ISSUED: February 13, 2014
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ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report Requirements** (Continued)

(C) **Identification and Rating of VoIP – PSTN Traffic** (Continued)

(4) Initial PVU Factor

(a) If the Customer provides the terminating PVUC factor to the Telephone Company by May 25, 2012, the Telephone Company will retroactively adjust the Customer's bills to reflect the PVUC factor as of December 29, 2011. If the Customer does not provide PVUC factor by May 25, 2012, the Telephone Company will set the calculated PVU factor equal to the Telephone Company supplied PVUT.

(b) If the terminating PVU factor cannot be implemented in the Telephone Company's billing system by December 29, 2011, once the factor can be implemented, the Telephone Company will adjust the Customer's bills retroactively to reflect the calculated terminating PVU factor that includes the terminating PVUC factor provided by the customer to the Telephone Company prior to May 25, 2012. (T)

(c) The Telephone Company may choose to provide credits based on the calculated terminating PVU factor on a Quarterly basis until such time as billing system modifications can be implemented. (T)

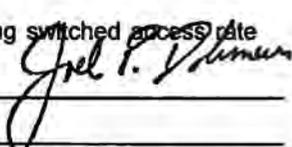
(d) The initial originating PVUC factor must be submitted to the Telephone Company by April 15, 2014. If the Customer does not provide the originating PVUC factor by that date, the Telephone Company will set the calculated originating PVU factor equal to the Telephone Company supplied originating PVUT. (N)

(5) PVU Factor Updates – Originating¹ (T)

The Customer may update the PVUC factor quarterly using the method set forth in subsection (3)(c), preceding. Any updated PVUC factor shall be forwarded to the Telephone Company no later than 15 days after the first day of January, April, July and/or October of each year. The revised PVUC factor shall be based on data for the prior three months, ending the last day of December, March, June and September, respectively. The revised calculated PVU factor will serve as the basis for future billing, and will be effective on the bill date of each such month, and shall serve as the basis for subsequent monthly billing until superseded by a new PVU factor. No prorating or back billing will be done based on the updated PVU factor.

¹ The terminating PVU factor is no longer being accepted due to intrastate terminating switched access rate parity with interstate rates beginning July 2, 2013. (N)

ISSUED: February 13, 2014
EFFECTIVE: March 17, 2014

ISSUED BY: 
Joel Dohmeier, Vice-President (N)

ACCESS TARIFF

2. GENERAL REGULATIONS (Continued)

2.3 Obligations of the Customer (Continued)

2.3.11 Jurisdictional Report Requirements (Continued)

(C) Identification and Rating of VoIP – PSTN Traffic (Continued)

(6) PVUC Factor Verification – Originating¹

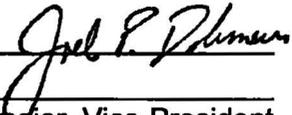
(T)

- (a) Not more than four times in any year, the Telephone Company may request from the Customer an overview of the process used to determine the PVUC factor, the call detail records, description of the method for determining how the end user originates calls in IP format, and other information used to determine the Customer's PVUC factor-furnished to the Telephone Company in order to validate the PVUC factor supplied. The Customer shall comply, and shall reasonably supply the requested data and information within 15 days of the Telephone Company's request.
- (b) The Telephone Company may dispute a Customer's PVUC factor in writing based upon:
- A review of the requested data and information provided by the Customer,
 - The Telephone Company's reasonable review of other market information, F.C.C. reports on VoIP lines, such as F.C.C. Form 477 or state level results based on the F.C.C. Local Competition Report or other relevant data.
 - A change in a reported PVUC factor by more than five percentage points from the preceding submitted factor.
- (c) If after review of the data and information, the Customer and the Telephone Company establish a revised PVU factor, the Telephone Company may apply the revised PVU factor retroactively to the beginning of the quarter.

¹ PVU Factor Verification is no longer applicable due to intrastate terminating switched access rate parity with interstate rates beginning July 2, 2013.

(N)
(N)

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ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.3 **Obligations of the Customer** (Continued)

2.3.11 **Jurisdictional Report Requirements** (Continued)

(C) **Identification and Rating of VoIP – PSTN Traffic** (Continued)

(6) **PVUC Factor Verification – Originating¹** (Continued) (T)

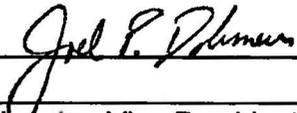
(d) If the dispute is unresolved, the Telephone Company may initiate an audit. The Telephone Company shall limit audits of the Customer's PVUC factor to no more than twice per year. The Customer may request that the audit be conducted by an independent auditor. In such cases the associated auditing expenses will be paid by the Customer. The Customer shall respond to the audit request within 15 days of the request.

- In the event that the Customer fails to provide adequate records to enable the Telephone Company or an independent auditor to conduct an audit verifying the Customer's PVUC factor, the Telephone Company will bill the usage for all contested periods using the most recent undisputed PVUC factor reported by the Customer to be used in the calculated PVU factor. The calculated PVU factor will remain in effect until the audit can be completed.
- The Telephone Company will adjust the Customer's PVUC factor based on the results of the audit and implement the newly calculated PVU factor in the next billing period or quarterly report date, whichever is first. The newly calculated PVU factor will apply for the next two quarters before new PVUC factor can be submitted by the Customer.
- If the audit supports the Customer's PVUC factor, the usage for the contested periods will be retroactively adjusted to reflect the Customer's audited PVUC factor in the calculation of the PVU factor.

¹ PVU Factor Verification is no longer applicable due to intrastate terminating switched access rate parity with interstate rates beginning July 2, 2013.

(N)
(N)

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ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.3 Obligations of the Customer (Cont'd)

2.3.12 Determination of Intrastate Charges for Mixed Interstate and Intrastate Access Service

When mixed interstate and intrastate Switched Access Service is provided, all charges (i.e., nonrecurring, monthly and/or usage) including optional features charges, will be prorated between interstate and intrastate. The percentage determined as set forth in 2.3.11 preceding will serve as the basis for prorating the charges unless the Telephone Company is billing according to actuals by jurisdiction. The percentage of an Access Service to be charged as intrastate is applied in the following manner:

(A) Monthly and Nonrecurring Charges

For monthly and nonrecurring chargeable rate elements, multiply the percent intrastate use times the quantity of chargeable elements times the stated tariff rate.

(B) Usage Sensitive Charges

For usage sensitive chargeable rate elements, multiply the percent intrastate use times actual use (i.e., measured or Telephone Company assumed average use) times the stated tariff rate.

The intrastate percentage may change as revised usage reports are submitted as set forth in 2.3.11 preceding.

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Paul E. Violette
President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances

2.4.1 Payment of Rates, Charges and Deposits

(A) Deposits

The Telephone Company will only require a Customer which has a proven history of late payments to the Telephone Company or does not have established credit, to make a deposit prior to or at any time after the provision of a service to the Customer. No such deposit will be required of a Customer which is a successor of a company which has established credit and has no history of late payments to the Telephone Company. The billing periods used for calculation of the maximum deposit amount will be two high-use periods; however, the highest use billing period will not be used. The fact that a deposit has been made in no way relieves the Customer from complying with the Telephone Company's regulations as to the prompt payment of bills. At such time as the provision of the service to the Customer is terminated, the amount of the deposit will be credited to the Customer's account and any credit balance which may remain will be refunded.

Interest shall be payable by the Telephone Company on all deposits held six months or longer at a rate equal to the base rate on corporate loans at large U.S. money center commercial banks (Prime Rate). Said Prime Rate is to be fixed on a quarterly basis for periods ending March, June, September and December of any given year. The Prime Rate is to be established as reported in The Wall Street Journal on the first business day of the month preceding the calendar quarter. If more than one prime rate is reported in The Wall Street Journal, the average of the reported rates will be used. Customer accounts shall be credited with simple annual interest, and such interest will be paid upon the refund of the deposit.

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Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances

2.4.1 Payment of Rates, Charges and Deposits

(A) Deposits (Cont'd)

Deposits, plus accrued interest thereon, less any amount due the Telephone Company, shall be refunded (a) within 30 days following termination of service, or (b) when all bills have been paid without delinquency for 36 consecutive months; provided, however, with the agreement of the Customer, deposits on continuing accounts may be applied against an account until the balance of the deposit is exhausted. When a deposit is applied against an account which has been terminated, interest shall cease to be accumulated on the balance at the date of termination, and the balance shall be returned promptly to the Customer.

In lieu of a deposit, the Telephone Company will accept the irrevocable written guarantee of a responsible party as a surety for an access service account, provided that such guarantee conforms to NHPUC Rule 403.04 (c), as from time to time amended.

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Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(B) Bill Dates

The Telephone Company shall bill on a current basis all charges incurred by and credits due to the Customer under this tariff attributable to services established or discontinued during the preceding billing period. In addition, the Telephone Company shall bill in advance charges for all services to be provided during the ensuing billing period except for charges associated with service usage and for the Federal Government which will be billed in arrears. The bill day (i.e., the billing date of a bill for a Customer for Access Service under this tariff), the period of service each bill covers and the payment date will be as follows for access services:

The Telephone Company will establish a bill day each month for each Customer account or advise the Customer in writing of an alternate billing schedule. Alternate billing schedules shall not be established on less than 60 days notice or initiated by the Telephone Company more than twice in any consecutive 12 month period.

The bill will cover nonusage sensitive service charges for the ensuing billing period for which the bill is rendered, any known unbilled nonusage sensitive charges for prior periods and unbilled usage charges for the period after the last bill day through the current bill day. Any known unbilled usage charges for prior periods and any known unbilled adjustments will be applied to this bill. Payment for such bills is due in immediately available funds by the payment date, as set forth in (C) following. If payment is not received by the payment date, a late payment penalty will apply as set forth in (C) following.

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Issued by: _____

Paul E. Violette
President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(C) Payment Dates and Late Payment Penalties

- (1) All bills dated as set forth in (B)(1) preceding for service provided to the Customer by the Telephone Company are due 31 days (payment date) after the bill day or by the next bill date (i.e., same date in the following month as the bill date), whichever is the shortest interval, except as provided herein, and are payable in immediately available funds. If the Customer does not receive a bill at least 20 days prior to the 31 day payment due date, then the bill shall be considered delayed. When the bill has been delayed, upon request of the Customer the due date will be extended by the number of days the bill was delayed. Such request of the Customer must be accompanied with proof of late bill receipt.

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Paul E. Violette
President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

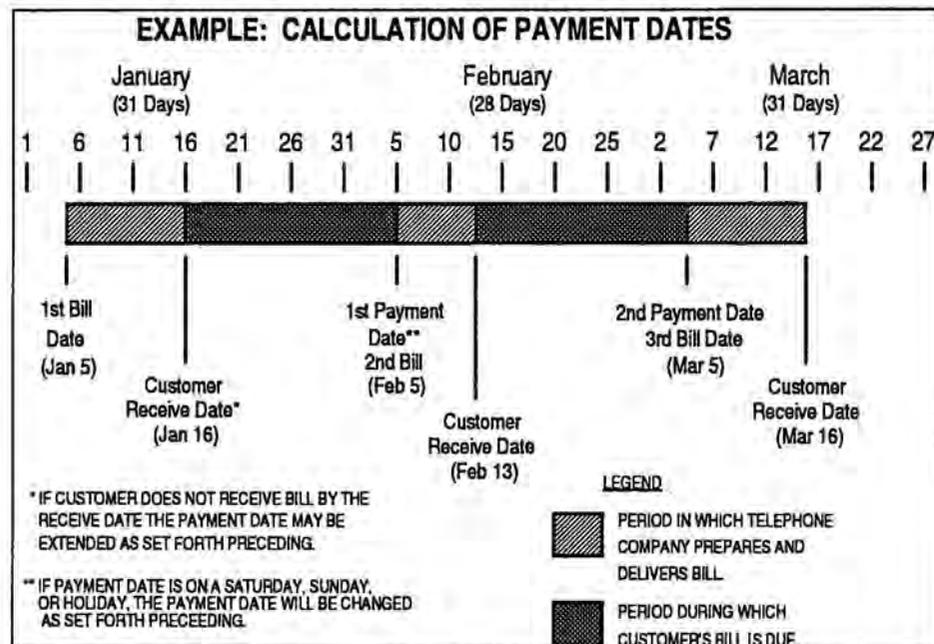
2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(C) Payment Dates and Late Payment Penalties (Cont'd)

(1) (Cont'd)

If such payment date would cause payment to be due on a Saturday, Sunday or Legal Holiday, payment for such bills will be due from the Customer as follows:

- If the payment date falls on a Sunday or on a Legal Holiday which is observed on a Monday, the payment date shall be the first non-Holiday day following such Sunday or Legal Holiday.
- If the payment date falls on a Saturday or on a Legal Holiday which is observed on Tuesday, Wednesday, Thursday or Friday, the payment date shall be the last non-Holiday day preceding such Saturday or Legal Holiday.



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Issued by:

Paul E. Violette
 President

Effective: October 1, 1993

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(C) Payment Dates and Late Payment Penalties (Cont'd)

A one and one-half percent (1-1/2%) per month late payment charge will be applied to all bills which remain unpaid over thirty (30) days from the postmarked date of the bill.

(D) Billing Disputes Resolved in Favor of the Telephone Company

Late payment charges will apply to amounts withheld pending settlement of the dispute. Late payment charges are calculated as set forth in (C) (2) preceding except that when the Customer disputes the bill on or before the payment date and pays the undisputed amount on or before the payment date, the penalty interest period shall not begin until 10 days following the payment date.

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Effective: October 1, 1993

Paul E. Violette
President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(E) Billing Disputes Resolved in Favor of the Customer

If the Customer pays the total billed amount and disputes all or part of the amount, the Telephone Company will refund the overpayment. In addition, the Telephone Company will pay to the Customer penalty interest on the overpayment. When a claim is filed within 90 days of the due date, the penalty interest period shall begin on the payment date. When a claim is filed more than 90 days after the due date, the penalty interest period shall begin from the date of the claim or the date of overpayment, whichever is later.

The penalty interest period shall end on the date that the Telephone Company actually refunds the overpayment to the Customer. The penalty interest rate shall be the lesser of:

- (1) the highest interest rate (in decimal value) which may be levied by law for commercial transactions, compounded daily for the number of days from the first date to and including the last date of the period involved, or
- (2) 0.0005 per day, compounded daily for the

number of days from the first date to and including the last date of the period involved.

(F) Proration of Charges

Adjustments for the quantities of services established or discontinued in any billing period beyond the minimum period set forth for services in other sections of this tariff will be prorated to the number of days based on a 30 day month. The Telephone Company will, upon request, furnish within 30 days of a request and at no charge to the Customer such detailed information as may reasonably be required for verification of any bill.

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Issued by: _____

Paul E. Violette
President

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.1 Payment of Rates, Charges and Deposits (Cont'd)

(G) Rounding of Charges

When a rate as set forth in this tariff is shown to more than two decimal places, the charges will be determined using the rate shown. The resulting amount will then be rounded to the nearest penny (i.e., rounded to two decimal places).

2.4.2 Minimum Periods

The minimum period for which services are provided and for which rates and charges are applicable is one month.

When a service is discontinued prior to the expiration of the minimum period, charges are applicable, whether the service is used or not. The applicable charge will be the total monthly charges, at the rate level in effect at the time service is discontinued, for the remainder of the minimum period plus all applicable nonrecurring charges.

2.4.3 Cancellation of an Order for Service

Provisions for the cancellation of an order for service are set forth in other applicable sections of this tariff.

2.4.4 Credit Allowance for Service Interruptions

(A) General

A service is interrupted when it becomes unusable to the Customer because of a failure of a facility component used to furnish service under this tariff or in the event that the protective controls applied by the Telephone Company result in the complete loss of service by the Customer as set forth in Section 6.2. An interruption period starts when an inoperative service is reported to the Telephone Company and ends when the service is operative.

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Credit Allowance for Service Interruptions (Cont'd)

(B) When A Credit Allowance Applies

In case of an interruption to any service, allowance for the period of interruption, if not due to the negligence of the Customer, shall be as follows:

- (1) For Switched Access Service no credit shall be allowed for an interruption of less than 24 hours. The Customer shall be credited for an interruption of 24 hours or more at the rate of 1/30 of the sum of (a) any applicable monthly rates or (b) the assumed minutes of use charge, when applicable for the service involved, for each period of 24 hours or major fraction thereof that the interruption continues.
- (2) The credit allowance(s) for an interruption or for a series of interruptions shall not exceed the sum of (a) any applicable monthly rate or (b) the assumed minutes of use charge, whichever is applicable for the service involved, for the service interrupted in any one monthly billing period.

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2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Credit Allowance for Service Interruptions (Cont'd)

(C) When a Credit Allowance Does Not Apply

No credit allowance will be made for:

- (1) Interruptions caused by the negligence of the Customer.
- (2) Interruptions of a service due to the failure of equipment or systems provided by the Customer or others.
- (3) Interruptions of a service during any period in which the Telephone Company is not afforded access to the premises where the service is terminated.
- (4) Interruptions of a service when the Customer has released that service to the Telephone Company for maintenance purposes, to make rearrangements, or for the implementation of an order for a change in the service during the time that was negotiated with the Customer prior to the release of that service. Thereafter, a credit allowance as set forth in (B) preceding applies.
- (5) Interruptions of a service which continue because of the failure of the Customer to authorize replacement of any element of special construction. The period for which no credit allowance is made begins on the seventh day after the Customer receives the Telephone Company's written notification of the need for such replacement and ends on the day after receipt by the Telephone Company of the Customer's written authorization for such replacement.
- (6) Periods when the Customer elects not to release the service for testing and/or repair and continues to use it on an impaired basis.
- (7) An interruption or a group of interruptions, resulting from a common cause, that would result in credit in an amount less than one dollar.

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2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.4 Credit Allowance for Service Interruptions (Cont'd)

(D) Use of an Alternative Service Provided by the Telephone Company

Should the Customer elect to use an alternative service provided by the Telephone Company during the period that a service is interrupted, the Customer must pay the tariffed rates and charges for the alternative service used.

(E) Temporary Surrender of a Service

In certain instances, the Customer may be requested by the Telephone Company to surrender a service for purposes other than maintenance, testing or activity relating to a service order. If the Customer consents, a credit allowance will be granted. The credit allowance will be 1/1440 of the monthly rate for each period of 30 minutes or fraction thereof that the service is surrendered. In no case will the credit allowance exceed the monthly rate for the service surrendered in any one monthly billing period.

2.4.5 Re-establishment of Service Following Fire, Flood or Other Occurrence

(A) Nonrecurring Charges Do Not Apply

Charges do not apply for the re-establishment of service following a fire, flood or other occurrence attributed to an Act of God provided that:

- (1) The service is of the same type as was provided prior to the fire, flood or other occurrence.
- (2) The service is for the same Customer.
- (3) The service is at the same location on the same premises.
- (4) The re-establishment of service begins within 60 days after Telephone Company service is available. (The 60 day period may be extended a reasonable period if the renovation of the original location on the premises affected is not practical within the allotted time period).

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2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.5 Re-establishment of Service Following Fire, Flood or Other Occurrence (Cont'd)

(B) Nonrecurring Charges Apply

Nonrecurring Charges apply for establishing service at a different location on the same premises or at a different premises pending re-establishment of service at the original location.

2.4.6 Title or Ownership Rights

The payment of rates and charges by Customers for the services offered under the provisions of this tariff does not assign, confer or transfer title or ownership rights to proposals or facilities developed or utilized, respectively, by the Telephone Company in the provision of such services.

2.4.7 Ordering, Rating and Billing of Access Services Where More Than One Exchange Telephone Company is Involved

The Telephone Company will handle ordering, rating and billing of Access Services under this tariff where more than one Exchange Telephone Company is involved in the provision of Access Service as follows:

(A)

- (1) When a Feature Group A Switched Access Service is ordered by a Customer where one end of the Local Transport element is in the Telephone Company operating territory and the other end is in another Exchange Telephone Company operating territory, the Exchange Telephone Company in whose territory the first point of switching is located will accept the order. In addition the Exchange Telephone Company in whose territory the Customer point of termination is located must also receive a copy of the order from the Customer. The Exchange Telephone Company that accepts the order will then determine the charges involved, arrange to provide the Access Service ordered and bill the charges in accordance with its Access Service tariff.

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.7 Ordering, Rating and Billing of Access Services Where
More Than One Exchange Telephone Company is Involved
(Cont'd)

- (2) When a Feature Group B Switched Access Service is ordered by a Customer where one end of the Local Transport element is in the Telephone Company operating territory and the other end is in another Exchange Telephone Company operating territory, and when notified by the Telephone Company which accepts the order that the involved Exchange Telephone Companies cannot implement multi-company billing (meet point billing), ordering, provisioning, rating, and billing regulations, as set forth in (1) preceding for Feature Group A, will also apply to Feature Group B.
- (B) Except as set forth in (A)(2) preceding, when Feature Group B, C and/or D Switched Access Service is ordered by a Customer where one end of the Local Transport element is in the Telephone Company operating territory and the other end is in another Exchange Telephone Company operating territory, the orders shall be received as follows:
 - (1) For FGC Service the Exchange Telephone Company in whose operating territory the end office is located must receive the order from the Customer.
 - (2) For Feature Group B and/or D Switched Access Service ordered to an end office, the Exchange Telephone Company in whose operating territory the end office is located must receive the order from the Customer.
 - (3) For Feature Group B and/or D Switched Access Service ordered to an access tandem, the Exchange Telephone Company in whose territory the access tandem is located must receive the order from the Customer.

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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.4 **Payment Arrangements and Credit Allowances** (Continued)

2.4.7 **Ordering, Rating and Billing of Access Services Where More Than One Exchange Telephone Company is Involved** (Continued)

(B) (Continued)

- (4) For the Service ordered set forth in (1), (2) and (3) preceding, the Exchange Telephone Company in whose territory the Customer premises is located must also receive a copy of the order from the Customer.

Each Exchange Telephone Company will provide the portion of the Local Transport element in the operating territory to an interconnection point (IP) with another Exchange Telephone Company and will bill the charges in accordance with its Access Service tariff. The charges for the Local Transport element will be determined as set forth in (D) following. The Local Transport Facility and Termination rates* are set forth in Section 17. All other appropriate charges in each Exchange Telephone Company tariff are applicable.

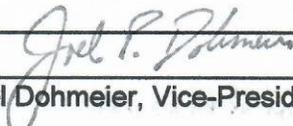
(C)

- (C) When a WATS Access Line Service is ordered and Channel Mileage applies (i.e., the WATS Serving Office and the End User end office are not coterminous) and one end of the Channel Mileage element is in the Telephone Company operating territory, the Exchange Telephone Company in whose operating territory the end office is located must receive the order from the Customer. In addition, the Exchange Telephone Company in whose territory the WATS Serving Office is located must also receive a copy of the order from the Customer. Each Exchange Telephone Company will provide the portion of the Channel Mileage element in its operating territory to an interconnection point (IP) with another Exchange Telephone Company and will bill the charges in accordance with its Access Service tariff. The rate for the Channel Mileage element will be determined as set forth in (D) following. All other appropriate charges in each Exchange Telephone Company tariff are applicable.

* As of July 1, 2021, the Joint Tandem Switched Transport rate element is applied per tandem to originating toll free minutes only, as set forth in Section 17.2.2 following, in lieu of the Tandem Switched Facility, Tandem Switching Termination and Tandem Switching rate elements.

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(N)

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.7 Ordering, Rating and Billing of Access Services Where
More Than One Exchange Telephone Company is Involved
(Cont'd)

(D) The charges for the Local Transport element and the rate for the Channel Mileage element for services provided as set forth in (B) and (C) preceding are determined as follows:

(1) Determine the appropriate Local Transport Facility or Channel Mileage by computing the airline mileage between the two ends of the Local Transport Facility or Channel Mileage element. Determine the airline mileage for the Local Transport Facility Charge using the V & H Coordinate method as set forth in NECA Tariff FCC No. 4. Determine the airline mileage for the Channel Mileage element using the V & H Coordinate method.

(2) For Feature Groups B, C and D Switched Access Services, the Local Transport charges are determined as set forth in (a) through (e) following.

(a) Multiply:

The number of access minutes by the number of airline miles as determined in (1) preceding the Telephone Company's appropriate Local Transport Facility per mile per access minute rate by the Telephone Company's billing percentage factor.

(b) Divide:

The product of (a) by 100:

The resulting amount is the total Local Transport Facility charge.

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.4 Payment Arrangements and Credit Allowances (Cont'd)

2.4.7 Ordering, Rating and Billing of Access Services Where
More Than One Exchange Telephone Company is Involved
(Cont'd)

(c) Multiply:

The number of access minutes by the
Telephone Company's appropriate Local
Transport Termination per minute rate.

(d) Divide:

The product of (c) by two (2). The
resulting amount is the total Local
Transport Termination charge.

(e) Add:

The product of (b) and (d) for the total
Local Transport charge.

(E) The interconnection points will be determined by the
Exchange Telephone Companies involved. The billing
percentage (BP) factor for the Telephone Company for
the service between the two involved offices is
listed in NECA Tariff FCC No. 4.

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ACCESS TARIFF

2. General Regulations (Cont'd)

2.5 Connections

Equipment and Systems (i.e., terminal equipment, multiline terminating systems and communications systems) may be connected with Switched Access Service furnished by the Telephone Company where such connection is made in accordance with the provisions specified in Technical Publication PUB AS No. 1 and in Section 2.1.

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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions**

Certain terms used herein are defined as follows:

Access Code

The term "Access Code" denotes a uniform five or seven digit code assigned by the Telephone Company to an individual Customer. The five digit code has the form IOXXX, and the seven digit code has the form 950-OXXX or 950-IXXX.

Access Minutes

The term "Access Minutes" denotes that usage of exchange facilities in intrastate service for the purpose of calculating chargeable usage. On the originating end of an intrastate call, usage is measured from the time the originating End User's call is delivered by the Telephone Company to and acknowledged as received by the Customer's facilities connected with the originating exchange. On the terminating end of an intrastate call, usage is measured from the time the call is received by the End User in the terminating exchange. Timing of usage at both originating and terminating ends of an intrastate call shall terminate when the calling or called party disconnects, whichever event is recognized first in the originating and terminating exchanges, as applicable.

Access Tandem

The term "Access Tandem" denotes a Telephone Company switching system that provides a concentration and distribution function for originating or terminating traffic between end offices and a Customer's premises.

Answer/Disconnect Supervision

The term "Answer Disconnect Supervision" denotes the transmission of the switch trunk equipment supervisory signal (off-hook or on-hook) to the Customer's point of termination as an indication that the called party has answered or disconnected.

Attenuation Distortion

The term "Attenuation Distortion" denotes the difference in loss at specified frequencies relative to the loss at 1004 Hz, unless otherwise specified.

Automatic Number Identification

The term "Automatic Number Identification" denotes the Multi-Frequency (MF) signaling parameter that identifies the billing number of the calling party.

Bit

The term "Bit" denotes the smallest unit of information in the binary system of notation.

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ISSUED BY: 
Joel Dohmeier, Vice-President

(N)
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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions** (Continued)

Business Day

The term "Business Day" denotes the time of day that a company is open for business. Generally, in the business community, these are 8:00 or 9:00 A.M. to 5:00 or 6:00 P.M., respectively, with an hour for lunch, Monday through Friday, resulting in a standard forty (40) hour work week. However, Business Day hours for the Telephone Company may vary based on company policy, union contract and location. To determine such hours for an individual company, or company location, that company should be contacted.

Busy Hour Minutes of Capacity (BHMC)

The term "Busy Hour Minutes of Capacity (BHMC)" denotes the Customer specified maximum amount of Switched Access Service access minutes the Customer expects to be handled in an end office switch during any hour in an 8:00 A.M. to 11:00 P.M. period for the Feature Group ordered. This Customer furnished BHMC quantity is the input data the Telephone Company uses to determine the number of transmission paths for the Feature Group ordered.

Call

The term "Call" denotes a Customer attempt for which the complete address code (e.g., O-, 911, or 10 digits) is provided to the serving dial tone office.

Calling Party Number

The term "Calling Party Number" denotes the SS7 out of band signaling parameter and the MF or other in band signaling parameters that identifies the subscriber line number or directory number of the calling party.

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(N)

Carrier or Common Carrier

See Interexchange Carrier.

CCS

The term "CCS" denotes a hundred call seconds, which is a standard unit of traffic load that is equal to 100 seconds of usage or capacity of a group of servers (e.g., trunks).

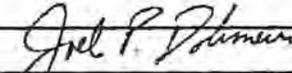
Central Office

The term "Central Office" denotes a local Telephone Company switching system where Telephone Exchange Service Customer station loops are terminated for purposes of interconnection to each other and to trunks.

Central Office Prefix

The term "Central Office Prefix" denotes the first three digits (NXX) of the seven digit telephone number assigned to a Customer's Telephone Exchange Service when dialed on a local basis.

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Joel Dohmeier, Vice-President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions** (Continued)

Channel(s)

The term "Channel(s)" denotes an electrical or photonic, in the case of fiber optic-based transmission systems, communications path between two or more points of termination.

Channelize

The term "Channelize" denotes the process of multiplexing/demultiplexing wider bandwidth or higher speed channels into narrower band-width or lower speed channels.

Charge Number (CN)

The term "Charge Number" denotes the SS7 out band signaling parameter and the MF or other in band signaling parameters that identifies the billing telephone number of the calling party.

Coin Station

The term "Coin Station" denotes a location where Telephone Company equipment is provided in a public or semipublic place where Telephone Company Customers can originate telephonic communications and pay the applicable charges by inserting coins into the equipment.

Common Line

The term "Common Line" denotes a line, trunk, pay telephone line or other facility provided under the general and/or local exchange service tariffs of the Telephone Company, terminated on a central office switch. A common line-residence is a line or trunk provided under the residence regulations of the general and/or local exchange service tariffs. A common line-business is a line provided under the business regulations of the general and/or local exchange service tariffs.

Communications System

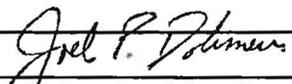
The term "Communications System" denotes channels and other facilities which are capable of communications between terminal equipment provided by other than the Telephone Company.

Conversation Minutes

The term "Conversation Minutes" denotes the measurement of minutes beginning when either answer supervision or an off-hook supervisory signal is received from the terminating End User's end office and ending when either disconnect supervision or an on-hook supervisory signal is received from the terminating End User's end office, indicating the called party has disconnected.

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Joel Dohmeier, Vice-President

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions** (Continued)

Customer(s)

The term "Customer(s)" denotes any individual, partnership, association, joint-stock company, trust, corporation, or governmental entity or other entity which subscribes to the services offered under this tariff, including but not limited to End Users, Interexchange Carriers (IC's), Toll Providers, local exchange providers, and other telecommunications carriers or providers of originating or terminating toll VoIP-PSTN traffic.

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Decibel

The term "Decibel" denotes a unit used to express relative difference in power, usually between acoustic or electric signals, equal to ten (10) times the common logarithm of the ratio of two signal powers.

Decibel Reference Noise C-Message Weighting

The term "Decibel Reference Noise C-Message Weighting" denotes noise power measurements with C-Message weighting in decibels relative to a reference 1000 Hz tone of 90 dB below 1 milliwatt.

Decibel Reference Noise C-Message Referenced to O

The term "Decibel Reference Noise C-Message Referenced to O" denotes noise power in "Decibel Reference Noise C-Message Weighting" referred to or measured at a zero transmission level point.

Detail Billing

The term "Detail Billing" denotes the listing of each message and/or rate element for which charges to a Customer are due on a bill prepared by the Telephone Company.

Directory Assistance

The term "Directory Assistance" denotes the provision of telephone numbers by a Telephone Company operator when the operator location is accessed by a Customer by dialing (NPA) 555-1212.

Echo Path Loss

The term "Echo Path Loss" denotes the measure of reflected signal at a 4-wire point of termination without regard to the send and receive Transmission Level Point.

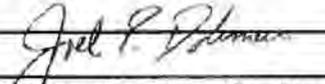
Echo Return Loss

The term "Echo Return Loss" denotes a frequency weighted measure of return loss over the middle of the voiceband (approximately 500 to 2500 Hz), where talker echo is most annoying.

Effective 2-Wire

The term "Effective 2-Wire" denotes a condition which permits the simultaneous transmission in both directions over a channel, but it is not possible to insure independent information transmission in both

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2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Echo Return Loss

The term "Echo Return Loss" denotes a frequency weighted measure of return loss over the middle of the voiceband (approximately 500 to 2500 Hz), where talker echo is most annoying.

Effective 2-Wire

The term "Effective 2-Wire" denotes a condition which permits the simultaneous transmission in both directions over a channel, but it is not possible to insure independent information transmission in both directions. Effective 2-wire channels may be terminated with 2-wire or 4-wire interfaces.

Effective 4-Wire

The term "Effective 4-Wire" denotes a condition which permits the simultaneous independent transmission of information in both directions over a channel. The method of implementing effective 4-wire transmission is at the discretion of the Telephone Company (physical, time domain, frequency-domain separation or echo cancellation techniques). Effective 4-wire channels may be terminated with a 2-wire interface at the Customer's premises. However, when terminated 2-wire, simultaneous independent transmission cannot be supported because the two wire interface combines the transmission paths into a single path.

End Office Switch

The term "End Office Switch" denotes a local Telephone Company switching system where Telephone Exchange Service Customer station loops are terminated for purposes of interconnection to trunks. Included are Remote Switching Modules and Remote Switching Systems served by a host office in a different wire center.

End User

The term "End User" denotes any Customer of an intrastate telecommunications service that is not a carrier, except that a carrier other than a telephone company shall be deemed to be an "End User" when such carrier uses a telecommunications service for administrative purposes.

Entry Switch

See First Point of Switching

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President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Equal Level Echo Path Loss

The term "Equal Level Echo Path Loss" (ELEPL) denotes the measure of Echo Path Loss (EPL) at a 4-wire interface which is corrected by the difference between the send and receive Transmission Level Point (TLP) [ELEPL = EPL - TLP (send) + TLP (receive)].

Expected Measured Loss

The term "Expected Measured Loss" denotes a calculated loss which specifies the end-to-end 1004-Hz loss on a terminated test connection between two readily accessible manual or remote test points. It is the sum of the inserted connection loss and test access loss including any test pads.

Exchange

The term "Exchange" denotes a unit generally smaller than a Local Access and Transport Area, established by the Telephone Company for the administration of communications service in a specified area which usually embraces a city, town or village and its environs. It consists of one or more central offices together with the associated facilities used in furnishing communications service within that area. One or more designated exchanges comprise a given Local Access and Transport Area.

Field Identifier

The term "Field Identifier" denotes two to four characters that are used on service orders to convey specific instructions. Field Identifiers may or may not have associated data. Selected Field Identifiers are used in Telephone Company billing systems to generate nonrecurring charges.

First Come - First Served

The term "First Come - First Served" denotes a procedure followed when a shortage of facilities or equipment occurs, such that an Access Service ordered cannot be installed. The orders delayed by the shortage of facilities will be prioritized according to the sequence in which they were received. That is, when facilities or equipment become available, the first order received will be the first order processed.

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President

ACCESS TARIFF

2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

First Point of Switching

The term "First Point of Switching" denotes the first Telephone Company location at which switching occurs on the terminating path of a call proceeding from the Customer's premises to the terminating end office and, at the same time, the last Telephone Company location at which switching occurs on the originating path of a call proceeding from the originating end office to the Customer's premises.

Frequency Shift

The term "Frequency Shift" denotes the change in the frequency of a tone as it is transmitted over a channel.

Grandfathered

The term "Grandfathered" denotes Terminal Equipment, Multiline Terminating Systems and Protective Circuitry directly connected to the facilities utilized to provide services under the provisions of this tariff, and which are considered grandfathered under Part 68 of the FCC's Rules and Regulations.

Host Office

The term "Host Office" denotes an electronic switching system which provides call processing capabilities for one or more Remote switching Modules or Remote Switching Systems.

Immediately Available Funds

The term "Immediately Available Fund" denotes a corporate or personal check drawn on a bank account and funds which are available for use by the receiving party on the same day on which they are received and include U.S. Federal Reserve bank wire transfer, Federal Reserve notes (paper cash), U.S. coin, U.S. Postal Money Order, and New York Certificates of Deposit.

Impedance Balance

The term "Impedance Balance" denotes the method of expressing Echo Return Loss and Singing Return Loss at a 4-wire interface whereby the gains and/or loss of the 4-wire portion of the transmission path, including the hybrid, are not included in the specification.

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President

ACCESS TARIFF

2. GENERAL REGULATIONS (Continued)

2.6 Definitions (Continued)

Individual Case Basis

The term "Individual Case Basis" denotes a condition in which the regulations, if applicable, rates and charges for an offering under the provisions of this tariff are developed based on the circumstances in each case.

Inserted Connection Loss

The term "Inserted Connection Loss" denotes the 1004 Hz power difference (in dB) between the maximum power available at the originating end and the actual power reaching the terminating end through the inserted connection.

Interexchange Carrier (IC) or Interexchange Common Carrier

The terms "Interexchange Carrier" (IC) or "Interexchange Common Carrier" denotes any individual, partnership, association, joint-stock company, trust, governmental entity or corporation, other than the Telephone Company, authorized by the New Hampshire Public Utilities Commission, and engaged for hire in intrastate communications by wire or radio, between two or more exchanges.

Internet Protocol (IP) Signaling

The term "Internet (IP) Signaling" denotes a packet data-oriented protocol used for communicating call signaling information.

Interstate Communications

The term "Interstate Communications" denotes both interstate and foreign communications.

Intrastate Communications

The term "Intrastate Communications" denotes any communications within a state subject to oversight by a state regulatory commission as provided by the laws of the state involved.

Joint Tandem Switched Transport

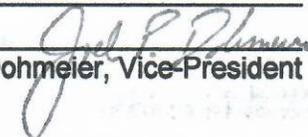
The term "Joint Tandem Switched Transport" denotes the rate element assessable for the transmission of originating toll free minutes. The rate element includes both the transport between the end office and the tandem switch and the tandem switching. It does not include transport of traffic over dedicated transport facilities between the serving wire center and the tandem switching office.

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Legal Holiday

The term "Legal Holiday" denotes days other than Saturday or Sunday on which the Telephone Company is normally closed. These include New Year's Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day and a day when Washington's Birthday, Memorial Day or Columbus Day is legally observed and other locally observed holidays when the Telephone Company is closed.

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EFFECTIVE: July 1, 2021

ISSUED BY: 
Joel Dohmeier, Vice-President

Authorized by NH PUC Docket No.

ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions** (Continued)

Line Side Connection

The term "Line Side Connection" denotes a connection of a transmission path to the line side of a local exchange switching system.

Local Access and Transport Area

The term "Local Access and Transport Area" denotes a geographic area established for the provision and administration of communications service. It encompasses one or more designated exchanges, which are grouped to serve common social, economic and other purposes.

Local Calling Area

The term "Local Calling Area" denotes a geographical area in which an End User (Telephone Exchange Service subscriber) may complete a call without incurring MTS charges.

Local Tandem Switch

The term "Local Tandem Switch" denotes a local Telephone Company switching unit by which local or access telephonic communications are switched to and from an End Office Switch.

Loss Deviation

The term "Loss Deviation" denotes the variation of the actual loss from the designed value.

Major Fraction Thereof

The term "Major Fraction Thereof" is any period of time in excess of 1/2 of the stated amount of time. As an example, in considering a period of 24 hours, a major fraction thereof would be any period of time in excess of 12 hours exactly. Therefore, if a given service is interrupted for a period of thirty-six hours and fifteen minutes, the Customer would be given a credit allowance for two twenty-four hour periods for a total of forty-eight hours.

Message

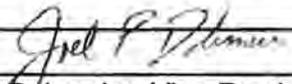
The term "Message" denotes a Call as defined preceding.

Multi-Frequency (MF Signaling)

The term "Multi-Frequency (MF) Signaling" denotes an in-band signaling method in which call signaling information is transmitted between network switches using the same voice band channel used for voice.

(N)
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(N)

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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions** (Continued)

Network Control Signaling

The term "Network Control Signaling" denotes the transmission of signals used in the telecommunications system which perform functions such as supervision (control, status, and charge signals), address signaling (e.g., dialing), calling and called number identifications, rate of flow, service selection error control and audible tone signals (call progress signals indicating re-order or busy conditions, alerting, coin denominations, coin collect and coin return tones) to control the operation of the telecommunications system.

North American Numbering Plan

The term "North American Numbering Plan" denotes a three-digit area (Numbering Plan Area) code and a seven-digit telephone number made up of a three-digit Central Office code plus a four-digit station number.

Off-hook

The term "Off-hook" denotes the active condition of Switched Access or a Telephone Exchange Service line.

On-hook

The term "On-hook" denotes the idle condition of Switched Access or a Telephone Exchange Service line.

Originating Direction

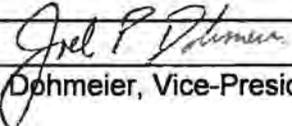
The term "Originating Direction" denotes the use of Switched Access Service for the origination of calls from an End User premises to a customer's premises.

(C)
(C)

Pay Telephone

The term "Pay Telephone" denotes Telephone Company provided instruments and related facilities that are available to the general public for public convenience and necessity, including public and semipublic telephones, and coinless telephones.

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2. GENERAL REGULATIONS (Continued)

2.6 Definitions (Continued)

Point of Termination

The term "Point of Termination" denotes the demarcation point or network interface, at which the Telephone Company's responsibility for the provision of Access Service ends. The point of demarcation or network interface is the point of interconnection between Telephone Company communications facilities and Customer provided facilities as defined in Section 68.3 of the FCC's Rules and Regulations.

Premises

The term "Premises" denotes a building or buildings on continuous property (except Railroad Right-of Way, etc.) not separated by a public highway.

Remote Switching Modules/Systems

The term "Remote Switching Modules/Systems" denotes small, remotely controlled electronic end office switches which obtain their call processing capability from an electronic Host Central Office. The Remote Switching Modules/Systems cannot accommodate direct trunks to a customer's premises.

(C)
(C)

Return Loss

The term "Return Loss" denotes a measure of the similarity between the two impedances at the junction of two transmission paths. The higher the return loss, the higher the similarity.

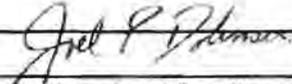
Registered Equipment

The term "Registered Equipment" denotes the customer's premises equipment which complies with and has been approved within the Registration Provisions of Part 68 of the F.C.C.'s Rules and Regulations.

Service Access Code

The term "Service Access Code" denotes a 3 digit code in the NPA format which is used as the first three digits of a 10 digit address and which is assigned for special network uses. Whereas NPA codes are normally used for identifying specific geographical areas, certain Service Access Codes have been allocated in the North American Numbering Plan to identify generic services or to provide access capability. Examples of Service Access Codes include the 800 and 900 codes.

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2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Serving Wire Center

The term "Serving Wire Center" denotes the wire center from which the customer designated premises would normally obtain dial tone from the Telephone Company.

Seven Digit Manual Test Line

The term "Seven Digit Manual Test Line" denotes an arrangement which allows the Customer to select balance, milliwatt and synchronous test lines manually dialing a seven digit number over the associated access connection.

Shortage of Facilities or Equipment

The term "Shortage of Facilities or Equipment" denotes a condition which occurs when the Telephone Company does not have appropriate cable, switching capacity, bridging or multiplexing equipment, etc. necessary to provide the access service requested by the Customer.

Short Circuit Test Line

The term "Short Circuit Test Line" denotes an arrangement in an end office which provides for an ac short circuit termination of a trunk or line by means of a capacitor of at least four microfarads.

Signal-to-C-Notched Noise Ratio

The term "Signal-to-C-Notched Noise Ratio" denotes the ratio in dB of a test signal to the corresponding C-Notched Noise.

Singing Return Loss

The term "Singing Return Loss" denotes the frequency weighted measure of return loss at the edges of the voiceband (200 to 500 Hz and 2500 to 3200 Hz), where singing (instability) problems are most likely to occur.

Subtending End Office of an Access Tandem

The term "Subtending End Office of an Access Tandem" denotes an end office that has final trunk group routing through that tandem.

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ACCESS TARIFF

2. **GENERAL REGULATIONS** (Continued)

2.6 **Definitions** (Continued)

Super Intermediate Hub

A wire center at which bridging or multiplexing functions are performed for Customers served by all wire centers in the LATA. A Super Intermediate Hub can be restricted to one or more designated NPAs within a LATA and/or to wire centers that are owned by the same telephone company as the hub. Super Intermediate Hubs and the wire centers they serve are identified in National Exchange Carrier Association, Inc. Tariff F.C.C. No. 4.

Synchronous Test Line

The term "Synchronous Test Line" denotes an arrangement in an end office which performs marginal operational tests of supervisory and ring-tripping functions.

Terminating Direction

The term "Terminating Direction" denotes the use of access service for the completion of calls from a customer's premises to an End User. (C)

Terminus Hub

A wire center at which bridging or multiplexing functions are performed only for Customers served directly by the same wire center.

Toll VoIP-PSTN Traffic

The term "Toll VoIP-PSTN Traffic" denotes a customer's interexchange voice traffic exchanged with the Telephone Company in Time Division Multiplexing (TDM) format over PSTN facilities, which originates and or terminates in Internet Protocol (IP) format. "Toll VoIP-PSTN Traffic" originates and/or terminates in IP format when it originates from and/or terminates to an end user customer of a service that requires IP-compatible customer premise equipment. (N)

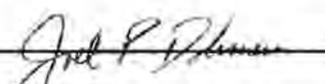
Traffic Type

The term "Traffic Type" denotes three major types of traffic identified as: Originating, Terminating and Directory Assistance. Originating Traffic type represents access capacity within a LATA for carrying traffic from the End User to the Customer. Terminating Traffic type represents access capacity within a LATA for carrying traffic from the Customer to the End User. Directory Assistance Traffic type represents access within a LATA for carrying Directory Assistance traffic from the Customer to a Directory Assistance location. (N)

Transmission Measuring (105 Type) Test Line/Responder

The term "Transmission Measuring (105 Type) Test Line/Responder" denotes an arrangement in an end office which provides far-end access to a responder and permits two-way loss and noise measurements to be made on trunks from a near end office.

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2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

Transmission Path

The term "Transmission Path" denotes an electrical path capable of transmitting signals within the range of service offering, e.g., a voice-grade transmission path is capable of transmitting voice frequencies within the approximate range of 300 to 3000 Hz. A transmission path is comprised of physical or derived facilities consisting of any form or configuration of plant typically used in the telecommunications industry.

Trunk

The term "Trunk" denotes a communications path connecting two switching systems in a network, used in the establishment of an end-to-end connection.

Trunk Group

The term "Trunk Group" denotes a set of trunks which are traffic engineered as a unit for the establishment of connections between switching systems in which all communications paths are interchangeable.

Trunk-Side Connection

The term "Trunk-Side Connection" denotes the connection of a transmission path to the trunk side of a local exchange switching system.

Two-Wire to Four-Wire Conversion

The term "Two-Wire to Four-Wire Conversion" denotes an arrangement which converts a four-wire transmission path to a two-wire transmission path to allow a four-wire facility to terminate in a two-wire entity (e.g., a central office switch).

Uniform Service Order Code

The term "Uniform Service Order Code" denotes a three or five character alphabetic, numeric, or an alphanumeric code that identifies a specific item of service or equipment. Uniform Service Order Codes are used in the Telephone Company billing system to generate recurring rates and nonrecurring charges.

V and H Coordinates Method

The term "V and H Coordinates Method" denotes a method of computing airline miles between two points by utilizing an established formula which is based on the vertical and horizontal coordinates of the two points.

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2. General Regulations (Cont'd)

2.6 Definitions (Cont'd)

WATS Serving Office

The term "WATS Serving Office" denotes a telephone company designated serving wire center where switching, screening and/or recording functions are performed in connection with the closed end of WATS or WATS-type services.

Wire Center

The term "Wire Center" denotes a building in which one or more central offices, used for the provision of Telephone Exchange Services, are located.

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ACCESS TARIFF

3. Carrier Common Line Access Service

The Telephone Company will provide Carrier Common Line Access Service (Carrier Common Line Access) to Customers in conjunction with Switched Access Service provided in Section 6 of this tariff.

3.1 General Description

Carrier Common Line Access provides for the use of End Users' Telephone Company provided common lines by Customers for access to such End Users to furnish Intrastate Communications.

A Special Access Surcharge, as set forth in 17.3.1, will apply to intrastate special access service provided by the Telephone Company to a Customer, in accordance with regulations as set forth in 7.3.

3.2 Limitations

3.2.1 Exclusions

Neither a telephone number nor detail billing are provided with Carrier Common Line Access. Additionally, directory listings and intercept arrangements are not included in the rates and charges for Carrier Common Line Access.

3.2.2 Access Groups

All line side connections provided in the same access group will be limited to the same features and operating characteristics.

All trunk side connections provided in the same access group will be limited to the same features and operating characteristics.

3.2.3 WATS Access Lines

Where Switched Access Services are connected with Special Access Services at Telephone Company Designated WATS Serving Offices for the provision of WATS or WATS-type Services, Switched Access Service minutes which are carried on that end of the service (i.e., originating minutes for outward WATS and WATS-type services and terminating minutes for inward WATS and WATS-type services) shall not be assessed Carrier Common Line Access per minute charges with the following exception. Carrier Common Line Access per minute charges shall apply when Feature Group A or Feature Group B switched access is ordered from a non equal access telephone company office that does not have measurement capabilities and the assumed average access minutes, as set forth in the exchange carrier's access tariff are used.

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ACCESS TARIFF

3. Carrier Common Line Access Service (Cont'd)

3.3 Undertaking of the Telephone Company

3.3.1 Provision of Service

Where the Customer is provided Switched Access Service under other sections of this Tariff, the Telephone Company will provide the use of Telephone Company common lines by a Customer for access to End Users at rates and charges as set forth in 17.1.1 following.

3.3.2 Interstate and Intrastate Use

The Switched Access Service provided by the Telephone Company includes the Switched Access Service provided for both interstate and intrastate communications. The Carrier Common Line Access rates and charges as set forth in 17.1.1 following apply to intrastate Switched Access Service access minutes in accordance with the rate regulations as set forth in 3.7.4 following.

3.4 Obligations of the Customer

3.4.1 Switched Access Service Requirement

The Switched Access Service associated with Carrier Common Line Access shall be ordered by the Customer under other sections of this tariff.

3.4.2 Supervision

The Customer facilities at the premises of the ordering Customer shall provide the necessary on-hook and off-hook supervision.

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3. Carrier Common Line Access Service (Cont'd)

3.5 Determination of Usage Subject to Carrier Common Line Access Charges

Except as set forth herein, all Switched Access Service provided to the Customer will be subject to Carrier Common Line Access charges.

3.5.1 Determination of Jurisdiction

When the Customer reports interstate and intrastate use of Switched Access Service, the associated Carrier Common Line Access used by the Customer for intrastate will be determined as set forth in 3.7.4 following.

3.5.2 Cases Involving Usage Recording By the Customer

Where Feature Group C end office switching is provided without Telephone Company recording and the Customer records minutes of use used to determine Carrier Common Line Access charges (i.e., Feature Group C operator and calls such as pay telephone sent-paid, operator-DDD, operator-person, collect, credit-card, third number and/or other like calls), the Customer shall furnish such minutes of use detail to the Telephone Company in a timely manner. If the Customer does not furnish the data, the Customer shall identify all Switched Access Services which could carry such calls in order for the Telephone Company to accumulate the minutes of use through the use of special Telephone Company measuring and recording equipment.

3.5.3 Local Exchange Access and Enhanced Services Exemption

When access to the local exchange is required to provide a Customer service (e.g., MTS/WATS-type, telex, Data, etc.) that uses a resold Special Access service, Switched Access Service Rates and Regulations, as set forth in Section 6 will apply, except when such access to the local exchange is required for the provision of an enhanced service.

3.6 Resold Services

Where the Customer is reselling MTS and/or MTS-type service(s) on which the Carrier Common Line and Switched Access charges have been assessed, the Customer will obtain Feature Group A, Feature Group B or Feature Group D Switched Access Service as set forth in Section 6 for originating and/or terminating access in the local exchange. Such access group arrangements whether single lines or trunks or trunk groups will have Carrier Common Line Access Charges applied as set forth in 17.1.1.

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3. Carrier Common Line Access Service (Cont'd)

3.7 Rate Regulations

3.7.1 Billing of Charges

Carrier Common Line charges will be billed to each Switched Access Service provided under this tariff.

3.7.2 Measuring and Recording of Call Detail

When access minutes are used to determine Carrier Common Line charges, they will be accumulated using call detail recorded by Telephone Company equipment except as set forth in 3.7.3 following (Unmeasured FGA and B Usage) and Feature Group C operator and automated operator services systems call detail such as pay telephone sent-paid, operator-DDD, operator-person, collect, credit-card, third number and/or other like calls recorded by the Customer. The Telephone Company measuring and recording equipment, except as set forth in 3.7.3 following (Unmeasured FGA and B Usage), will be associated with end office or local tandem switching equipment and will record each originating and terminating access minute where answer supervision is received. The accumulated access minutes will be summed on a line by line basis, by line group or by end office, whichever type of account is used by the Telephone Company, for each Customer and then rounded to the nearest minute.

3.7.3 Unmeasured Feature Group A and B Usage

When Carrier Common Line Access is provided in association with Feature Group A or Feature Group B Switched Access Service in Telephone Company offices that are not equipped for measurement capabilities, an assumed average intrastate access minutes will be used to determine Carrier Common Line Access charges. These assumed access minutes are as set forth in the exchange carriers' access tariffs.

3.7.4 Percent Interstate Use (PIU)

When the Customer reports interstate and intrastate use of in-service Switched Access Service, Carrier Common Line charges will be billed only to intrastate Switched Access Service access minutes based on the data reported by the Customer as set forth in 2.3.11 preceding (Jurisdictional Reports), except where the Telephone Company is billing according to actuals by jurisdiction.

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4. RESERVED FOR FUTURE USE

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ACCESS TARIFF

5. Access Ordering

5.1 General

This section sets forth the regulations and order related charges for services set forth in other sections of this tariff. Order related charges are in addition to other applicable charges for the services provided.

An Access Order is an order to provide the Customer with Switched or Special Access or Access Related Service or to provide changes to existing services.

A Customer may order any number of services of the same type and between the same premises on a single Access Order. All details for services for a particular order must be identical except for those for multipoint service.

The Customer shall provide to the Telephone Company the order information required in 5.2 , and in addition the Customer must also provide:

- Customer name and premises address(es) .
- Billing name and address (when different from Customer name and address) .
- Customer contact name(s) and telephone number(s) for the following provisioning activities: order negotiation, order confirmation, interactive design, installation and billing.

5.1.1 Expedited Orders

When placing an Access Order, a Customer may request a service date that is prior to the applicable service date. Additionally, a Customer may also request an earlier service date on a pending Access Order. In this case, an access order modification as set forth in 5.4 would be required. If the Telephone Company determines that the service can be provided on the requested date and that additional labor cost or extraordinary costs are required to meet the requested service date, the Customer will be notified and will be provided with an estimate of the additional charges involved. Charges will be billed at actual cost, not to exceed ten percent over estimated charges. Such additional charges will be determined and billed to the Customer as explained following.

To calculate the additional labor charges, the Telephone Company will, upon authorization from the Customer to incur the additional labor charges, keep track of the additional labor hours used to meet the request of the Customer and will bill the Customer at the applicable Additional Labor charges as set forth in 17.4.3(A) .

When the request for expediting occurs subsequent to the issuance of the Access Order, a Service Date Change Charge as set forth in 17.4.1(B) also applies.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.1 General (Cont'd)

5.1.2 Selection of Facilities for Access Orders

The option to request a specific transmission path or channel is not provided except for High Capacity Facilities Special Access, or as provided for under Special Facilities Routing as set forth in Section 11.

When there are high capacity facilities to a hub on order or in service for the Customer's use, the Customer may request a specific channel or transmission path be used to provide the Switched or Special Access Service requested in an Access Order. The Telephone Company will make a reasonable effort to accommodate the Customer request.

5.2 Ordering Requirements

5.2.1 Switched Access Service

(A) Feature Group A

Orders for Feature Group A Switched Access Service shall be in lines.

When placing an order for Feature Group A Switched Access Service, the Customer shall provide the following information in addition to that set forth in 5.1 preceding:

- The number of lines and the first point of switching (i.e., Dial Tone Office)
- Optional Features
- Whether the Off-hook Supervisory Signaling is provided by the Customer's equipment before the called party answers, or is forwarded by the Customer's equipment when the called party answers
- Lines to be provided as single lines
- Lines to be arranged in multiline hunt group arrangements
- Directionality (1-way, 2-way, etc.)
- A projected percentage of intrastate use as set forth in 2.3.11 preceding
- The Interexchange Carrier to which the service is connected or, in the alternative, specify the means by which the FGA access communications are transported.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.2 Ordering Requirements (Cont'd)

5.2.1 Switched Access Service (Cont'd)

(B) Feature Group B

Orders for Feature Group B Switched Access Service shall be in trunks.

When placing an order for Feature Group B Service, the Customer shall provide, the following information in addition to that set forth in 5.1 preceding:

- The number of trunks
- The end office, except when FGB is provided through a centralized equal access arrangement, when direct routing is desired
- The access tandem office when tandem routing is desired
- Optional Features
- Trunks to be provided as single trunks
- Trunks to be arranged in trunk group arrangements
- Directionality (1-way, 2-way, etc.)
- A projected percentage of intrastate use as set forth in 2.3.11 preceding
- The Interexchange Carrier to which the service is connected or, in the alternative, specify the means by which the FGB access communications are transported.
- The access code dialing arrangement (i.e., a uniform access code of 950-XXXX)
- For Feature Group B switched access service to a Mobile Telephone Switching Office (MTSO) directly interconnected to a Telephone Company access tandem office, the Customer shall provide information to the Telephone Company indicating the NXX code(s) to be accessed.

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5. Access Ordering (Cont'd)

5.2 Order Requirements (Cont'd)

5.2.1 Switched Access Service (Cont'd)

(C) Feature Group Cand Feature Group D

When placing an order for Feature Group C and D Switched Access Service, the Customer shall provide:

- The number of BHMC from the customer designated premises to the end office by Feature Group and by type of BHMC, or
- For Customers other than providers of MTS/WATS, the number of trunks desired between customer designated premises and an entry switch.
- Optional Features
- A projected percentage of intrastate use as set forth in 2.3.11 preceding.
- For Feature Group D switched access service to a Mobile Telephone Switching Office (MTSO) directly interconnected to a Telephone Company access tandem office, the Customer shall provide information to the Telephone Company indicating the NXX code(s) to be accessed.

When BHMC information is provided it is used to determine the number of transmission paths as set forth in 6.2.5.

The BHMC may be determined by the Customer in the following manner. For each day (8 am to 11 pm, Monday through Friday, excluding national holidays), the Customer shall determine the highest number of minutes of use for a single hour (e.g., 55 minutes in the 10-11 AM hour). The Customer shall, for the same hour period (i.e., busy hour) for each of twenty consecutive business days, pick the twenty consecutive business days in a calendar year which add up to the largest number of minutes of use. Both originating and terminating minutes shall be included. The Customer shall then determine the average busy hour minutes of capacity (i.e., BHMC) by dividing the largest number of minutes of use figure for the same hour period for the consecutive twenty business day period by 20. This computation shall be performed for each end office the Customer wishes to serve. These determinations thus establish the forecasted BHMC for each end office.

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5. Access Ordering (Cont'd)

5.2 Ordering Requirements (Cont'd)

5.2.1 Switched Access Service (Cont'd)

(C) Feature Group C and Feature Group D (Cont'd)

Customers other than MTS/WATS providers may, at their option, order FGD by specifying the number of trunks desired between customer designated premises and an end office, access tandem or operator services location. When ordering by trunk quantities rather than BHMC quantities to an access tandem, the Customer must also provide the Telephone Company an estimate of the amount of traffic it will generate to and/or from each end office subtending the access tandem to assist the Telephone Company in its own efforts to project further facility requirements.

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5. Access Ordering (Cont'd)

5.2 Ordering Requirements (Cont'd)

5.2.2 Special Access Service

When placing an order for Special Access Service the Customer must specify:

- the customer designated premises or hubs involved
- type of service (e.g., Voice Grade, High Capacity, etc.)
- the channel interface(s)
- technical specification package
- options desired
- for multipoint services, the channel interface at each customer designated premises may, at the request of the Customer, be different but all such interfaces shall be compatible.

All Program Audio services are subject to a service inquiry. A service inquiry is a request to the Telephone Company to determine if facilities exist to provide the service ordered and to determine the service date on which service can be provided to the Customer.

Where the Special Access Service is exempt from the Special Access Surcharge, as set forth in 7.3 the Customer shall furnish written certification to that effect as set forth in 7.3.3 .

When ordering bridging and/or multiplexing, the Customer must specify the telephone company hub(s) from which they desire service. The Customer must specify only those hubs that provide the type of service ordered and interconnect with the wire center(s) from which the Customer requires service. The Wire Center section of NECA Tariff FCC No. 4 identifies hub types (e.g., Digital Data, High Capacity Multiplexing, etc.) and hub levels (i.e., Hub, Terminus Hub, Intermediate Hub and Super-Intermediate Hub). Additionally, the Subtending section of NECA Tariff FCC No. 4 identifies wire centers and the Intermediate and/or Super-Intermediate Hubs with which they interconnect.

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5. Access Ordering (Cont'd)

5.2 Ordering Requirements (Cont'd)

5.2.3 WATS or WATS-Type Services

Special Access Service may be ordered for connection with FGA, FGB, FGC or FGD Switched Access Service at Telephone Company designated WATS Serving Offices (WSOs) for the provision of WATS or WATS-type Services and may be ordered separately by a Customer other than the Customer which orders the FGA, FGB, FGC or FGD Switched Access Service. For the Special Access Service the Customer shall specify:

- the customer designated premises at which the Special Access service terminates
- the type of line (i.e., two-wire or four-wire)
- the type of calling (i.e., originating, terminating or two-way)
- type of Supervisory Signaling.

When the optional screening, switching and/or recording functions are not provided at the Customer serving wire center, Channel Mileage, as set forth in 7.2.1, must be ordered between that wire center and the nearest WSO where the screening, switching and/or recording functions can be provided.

5.2.4 Mixed Use Facilities - Switched and Special Access

Mixed use is the provision of both Switched and Special Access Services over the same High Capacity facilities. Mixed use facilities to a hub will be ordered and provided as Special Access Service. Where mixed use is employed, individual services utilizing these facilities must be ordered either as Switched Access Service or Special Access Service as further elaborated and set forth in 6.4.6 and 7.2.7. When placing the order for the individual service(s), the Customer must specify a channel assignment for each service ordered.

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5. Access Ordering (Cont'd)

5.2 Ordering Requirements (Cont'd)

5.2.5 Miscellaneous Services

Testing Service, Additional Labor, Telecommunications Service Priority and Special Facilities Routing shall be ordered with an Access Order or may subsequently be added to a pending order at any time up to and including the service date for the access service. When miscellaneous services are added to a pending order a service date change may be required. When a service date change is required, the service date change charge as set forth in 17.4.1(B) will apply. When miscellaneous services are added to a pending order, charges for a design change as set forth in 17.4.1(C) will apply when an engineering review is required. If both a service date change and an engineering review are required, both the Service Date Change Charge and the Design Change Charge will apply as set forth in 5.4.3(B) .

The rates and charges for these services, as set forth in Section 17 of this tariff, will apply in addition to the ordering charges set forth in Section 17 and the rates and charges for the Access Service with which they are associated.

Additional Engineering is not an ordering option, but will be applied to an Access Order when the Telephone Company determines that Additional Engineering is necessary to accommodate a Customer request. Additional Engineering will only be required as set forth in 13.1 . When it is required, the Customer will be so notified and will be furnished with a written statement setting forth the justification for the Additional Engineering as well as an estimate of the charges. If the Customer agrees to the Additional Engineering, a firm order will be established. If the Customer does not want the service or facilities after being notified that Additional Engineering of Telephone Company facilities is required, the order will be withdrawn and no charges will apply. Once a firm order has been established, the total charge to the Customer for the Additional Engineering may not exceed the estimated amount by more than 10%.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.3 Access Orders For Services Provided By More Than One Telephone Company

Access Services provided by more than one Telephone Company are services where one end of the Local Transport, Directory Transport or Channel Mileage element is in the operating territory of one Telephone Company and the other end of the element is in the operating territory of a different Telephone Company or where the Interim NXX Translation service and the end office are not provided by the same Telephone Company.

The ordering procedure for this service is dependent upon the billing arrangement, as set forth in 2.4.7 preceding, to be used by the Telephone Companies involved in providing the Access Service. The Telephone Company will notify the Customer which of the ordering procedures will apply.

5.3.1 Non Meet Point Billing Ordering - FGA

The Telephone Company receiving the order from the Customer will arrange to provide the service and bill the Customer as set forth in 2.4.7(A)(1). The Customer will place the order with the Telephone Company as follows:

For FGA Switched Access Service the Customer will place the order with the Telephone Company in whose territory the first point of switching is located. The first point of switching is the dial tone office.

When the first point of switching is not in the same Telephone Company's territory as the Interexchange Carrier premises, the Customer must supply a copy of the order to the Telephone Company in whose territory the Interexchange Carrier premises is located and any other Telephone Company(s) involved in providing the service. When service is provided through a centralized equal access provider, the Customer must supply a copy of the order to that provider.

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Paul E. Violette
President

ACCESS TARIFF

5. Access Ordering (Cont'd)

5.3 Access Orders For Services Provided By More Than One Telephone Company (Cont'd)

5.3.2 Meet Point Billing Ordering

Each Telephone Company will provide its portion of the Access Service within its operating territory to an interconnection point(s) with the other Telephone Company(s). Billing Percentages will be determined by the Telephone Companies involved in providing the Access Service and listed in NECA Tariff FCC No. 4. Each Telephone Company will bill the Customer for its portion of the service as set forth in 2.4.7(A)(2). All other appropriate charges in each Telephone Company tariff are applicable.

For the service(s) ordered as set forth following, the Customer must also supply a copy of the order to the Telephone Company in whose operating territory a customer designated premises is located and any other Telephone Company(s) involved in providing the service. Additionally, when service is provided through a centralized equal access provider, the Customer must supply a copy of the order to that provider.

(A) For Feature Group A and B Switched Access Services, the Customer must place an order with the Telephone Company in whose territory the first point of switching is located, (i.e., FGA - dial tone office, FGB - access tandem or end office). The Telephone Company will designate the first point(s) of switching for FGB Services where the Telephone Company elects to provide equal access through a centralized equal access arrangement. Those Telephone Company offices providing equal access through centralized arrangements are identified in NECA Tariff FCC No. 4.

(B) For Feature Group C and D Switched Access Services, the Customer must place an order with the Telephone Company in whose territory the end office is located. Customers other than MTS/WATS providers may, at their option, order FGD to the access tandem. When ordered to the access tandem, and the access tandem and the end office are not in the same Telephone Company operating territory, the Customer must also supply a copy of the order to each additional Telephone Company subtending the access tandem.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.3 Access Orders For Services Provided By More Than One Telephone Company (Cont'd)

5.3.2 Meet Point Billing Ordering (Cont'd)

- (C) Customers ordering Special Access Service to be interconnected with Switched Access Services at Telephone Company designated WATS Serving Offices for the provision of WATS or WATS-type Services must place an order with each Telephone Company in whose territory the end office and the WATS Serving Office are located, if they are not collocated.
- (D) Except for Special Access Service as set forth in (C) above or as set forth in (E) below, the Customer may place the order for a Special Access Service with either Exchange Telephone Company.
- (E) For Special Access Service involving a hub(s) the Customer must place the order with the Telephone Company(s) in whose territory the hub(s) is located.

5.4 Charges Associated with Access Ordering

5.4.1 Access Order Charge

The Access Order Charge is applied to all Customer requests for new Special and Switched Access Service. In addition, the Access Order Charge is applicable to Customer requests for additions, changes or rearrangements to existing Special and Switched Access Service with the following exceptions:

The Access Order Charge does not apply:

- When a Service Date Change Charge is applicable.
- When a Design Change Charge is applicable.
- To administrative changes as set forth in 6.4.1 (B) (2) and 7.2.2(B) (3) .
- When a change to a pending order does not result in the cancellation of the pending order and the issuance of a new order.
- When a Miscellaneous Service Order Charge is applicable.
- When a Telephone Company initiated network reconfiguration requires a Customer's existing access service to be reconfigured.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.4 Charges Associated with Access Ordering (Cont'd)

5.4.1 Access Order Charge (Cont'd)

The Access Order Charge will be applied on a per order basis to each order received by the Telephone Company or copy of an order received by the Telephone Company pursuant to 5.3.1 preceding and 5.3.2 preceding and is in addition to other applicable charges as set forth in this and other sections of this tariff.

The Access Order Charge will be applied on a per order basis for any change, rearrangement or addition to the delivery of signaling to an existing STP Port.

5.4.2 Miscellaneous Service Order Charge

A Miscellaneous Service Order Charge, as set forth in 17.4.1(D) , applies to any service, or combination of services ordered simultaneously from Section 13. of the Tariff for which a service order is not already pending. The Miscellaneous Service Order Charge is an administrative charge designed to compensate for the expenses associated with service order issuance.

The charge always applies to the following services since a pending service order would not exist:

- Overtime Repair (13.2.2),
- Standby Repair (13.2.3),
- Testing and Maintenance with Other Telephone Companies (13.2.4),
- Other Labor (13.2.5),
- Maintenance of Service (13.3.2).

The Miscellaneous Service Order Charge will also apply to the following services if they are ordered subsequent to the initial installation of the associated access service, thereby necessitating the issuance of another service order:

- Telecommunications Service Priority (13.3.3),

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Paul E. Violette
President

ACCESS TARIFF

5. Access Ordering (Cont'd)

5.4 Charges Associated with Access Ordering (Cont'd)

5.4.2 Miscellaneous Service Order Charge (Cont'd)

The charge does not apply to the following services since there would exist a pending service order:

- Additional Engineering (13.1),
- Overtime Installation (13.2.1),
- Standby Acceptance Testing (13.2.3),
- Testing and Maintenance with Other Telephone Companies when in conjunction with Acceptance Testing (13.2.4),
- Additional Cooperative Acceptance Testing [13.3.1(A)(1) and 13.3.1(B)(1)].

5.4.3 Access Order Change Charges

Access Order changes involve service data changes and design changes. The Customer may request a change of its Access Order prior to the service date. The Telephone Company will make every effort to accommodate a requested change when it is able to do so with the normal work force assigned to complete such an order within normal business hours. If the change cannot be made with the normal work force during normal business hours, the Telephone Company will notify the Customer. If the Customer still desires the Access Order change, the Telephone Company will schedule a new service date as set forth in 5.1.1 preceding. All charges for Access Order changes as set forth in 17.4.1(B) and (C) will apply on a per occurrence basis.

Any increase in the number of Special Access Service channels or Switched Access Service lines, trunks, busy hour minutes of capacity will be treated as a new Access Order (for the increased amount only).

If order changes are necessary to satisfy the transmission performance for a Special Access Service ordered by a Customer, these changes will be made without order change charges being incurred by the Customer.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.4 Charges Associated with Access Ordering (Cont'd)

5.4.3 Access Order Change Charges (Cont'd)

(A) Service Date Change

The Customer may request a change of service date on a pending Access Order prior to the service date. A change of service date is a change of the scheduled service date by the Customer to either an earlier date or a later date which does not exceed 30 calendar days from the original service date.

If the Telephone Company determines that the Customer's request can be accommodated without delaying the service dates for orders of other Customers, the service date will be changed and the Service Date Change Charge, as set forth in 17.4.1(B), will be applied to the order.

If the service date is change to an earlier date, and the Telephone Company determines additional labor or extraordinary costs are necessary to meet the earlier service date requested by the Customer, the Customer will be notified by the Telephone Company that Expedited Order Charges as set forth in 5.1.1 preceding apply. Such charges will apply in addition to the Service Date Change Charge.

If the requested service date exceeds 30 calendar days following the original service date, and the Telephone Company determines that the Customer's request can be accommodated, the Telephone Company will cancel the original order and apply the Cancellation Charges as set forth in 5.5.3. A new Access Order with a new service date will be issued. The Service Date Change Charge will not apply, however, the Access Order Charge will apply to the new order.

If the service date is changed due to a design change as set forth in (B), the Service Date Change Charge will apply.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.4 Charges Associated with Access Ordering (Cont'd)

5.4.3 Access Order Change Charges (Cont'd)

(B) Design Change

The Customer may request a design change to the service ordered prior to the requested service date. A design change is any change to an Access Order which requires engineering review. An engineering review is a review by Telephone Company personnel, of the service ordered and the requested changes to determine what changes in the design, if any, are necessary to meet the changes requested by the Customer. Design changes include such things as the addition or deletion of optional features or functions or a change in the type of Transport Termination (Switched Access only), type of channel interface, type of Interface Group or technical specification package. Design changes do not include a change of customer designated premises, first point of switching, Feature Group type or Special Access Service channel type. Changes of this nature will require the issuance of a new order and the cancellation of the original order with appropriate cancellation charges applied.

The Telephone Company will review the requested change, notify the Customer whether the change is a design change, if the change can be accommodated and if a new service date is required. If the Customer authorized the Telephone Company to proceed with the design change, a Design Change Charge as set forth in 17.4.1(C) will apply in addition to the charge for Additional Engineering as set forth in 17.4.2 . If a change of service date is required, the Service Date Change Charge as set forth in 17.4.1(B) will also apply. The Access Order Charge as specified in 17.4.1(A) does not apply.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.5 Minimum Periods and Cancellations

5.5.1 Minimum Periods

Switched Access Service has no minimum period. The minimum period for which all other Access Service is provided and for which charges are applicable, is one month.

5.5.2 Development of Minimum Period Charges

When Access Service is disconnected after commencement of service but prior to the expiration of the minimum period, charges are applicable for the balance of the minimum period. A disconnect constitutes facilities being returned to available inventory.

The Minimum Period Charge for monthly billed services will be determined as follows:

- (A) For Switched Access Service, the charge for a month or fraction thereof is equal to the applicable recurring charges plus any nonrecurring and/or special construction charge(s) that may be due.
- (B) For Special Access Service, the charge for a month or fraction thereof is the applicable monthly rates for the appropriate channel type plus any optional features, nonrecurring and/or special construction charge(s) that may apply.

5.5.3 Cancellation of an Access Order

- (A) A Customer may cancel an Access Order for the installation of service on any date prior to the service date. The cancellation date is the date the Telephone Company receives written or verbal notice from the Customer that the order is to be canceled. The verbal notice must be followed by written confirmation within 10 days. If a Customer or a Customer's end user is unable to accept Access Service within 30 calendar days after the original service date, the Customer has the choice of the following options:

- The Access Order shall be canceled and charges set forth in (B) will apply or,
- Billing for the service will commence.

In such instances, the cancellation date or the billing date, depending on which option is selected by the Customer, shall be the 31st day beyond the original service date of the Access Order.

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Paul E. Violette
President

ACCESS TARIFF

5. Access Ordering (Cont'd)

5.5 Minimum Period and Cancellations (Cont'd)

5.5.3 Cancellation of an Access Order (Cont'd)

(B) When a Customer cancels an Access Order for the installation of service, a Cancellation Charge will apply as follows:

(1) Installation of Switched or Special Access Service facilities is considered to have started when the Telephone Company incurs any cost in connection therewith or in preparation thereof which would not otherwise have been incurred.

(2) Where the Customer cancels an Access Order prior to the start of installation of access facilities, no charges shall apply.

(3) Where installation of access facilities has been started prior to the cancellation, the charges specified in (a) or (b), whichever is lower, shall apply.

(a) A charge equal to the costs incurred in such installation, less estimated net salvage. Such costs include the nonrecoverable cost of equipment and material ordered, provided or used, plus the nonrecoverable cost of installation and removal including the costs of engineering, labor, supervision, transportation, rights-of-way and other associated costs;

(b) The minimum period charges for Switched or Special Access Service ordered by the Customer, as set forth in 5.5.2 preceding.

(C) When a Customer cancels an order for the discontinuance of service, no charges apply for the cancellation.

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ACCESS TARIFF

5. Access Ordering (Cont'd)

5.5 Minimum Period and Cancellations (Cont'd)

5.5.3 Cancellation of an Access Order (Cont'd)

(D) If the Telephone Company misses a service date by more than 30 days and such delay is not requested or caused by the Customer (excluding those circumstances where the date is missed due to acts of God, governmental requirements, work stoppages and civil commotions), the Customer may cancel the Access Order without incurring cancellation charges.

5.5.4 Partial Cancellation Charge

Any decrease in the number of ordered Special Access Service channels or Switched Access Service lines, trunks or busy hour minutes of capacity will be treated as a partial cancellation and charges will be determined as set forth in 5.5.3(B) preceding.

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President

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ACCESS TARIFF

6. SWITCHED ACCESS SERVICE

6.1 General

Switched Access Service, which is available to Customers for their use in furnishing their services to End Users, provides a two-point communications path between a customer designated premises and an End User's premises. It provides for the use of common terminating, switching, and trunking facilities and for the use of common subscriber plant of the Telephone Company. Switched Access Service provides for the ability to originate calls from an End User's premises to a customer designated premises, and to terminate calls from a customer designated premises to an End User's premises in the LATA where it is provided. Specific references to material describing the elements of Switched Access Service are provided in 6.1.3 and 6.5 through 6.9.

Rates and charges for Switched Access Service depend generally on the specific Feature Group ordered by the Customer, e.g., for MTS or WATS services or MTS/WATS equivalent services, and whether it is provided in a Telephone Company end office that is equipped to provide equal or non equal access. Rates and charges for Switched Access Service are set forth in 17.2. The application of rates for Switched Access Service is described in 6.4. Rates and charges for services other than Switched Access Service, e.g., a Customer's intraLATA toll message service, may also be applicable when Switched Access Service is used in conjunction with these other services.

The following provision applies to the treatment of Toll VoIP-PSTN Traffic pursuant to the F.C.C.'s Part 51 Interconnection Rules and in compliance with the F.C.C.'s Report and Order and Further Notice of Proposed Rulemaking in CC Docket Nos. 96-45 and 01-92; GN Docket No. 09-51; WC Docket Nos. 03-109, 05-337, 07-135 and 10-90, and WT Docket No. 10-208, adopted October 27, 2011 and released November 18, 2011 (FCC 11-161). In the absence of an interconnection agreement between the Telephone Company and the customer specifying the treatment of Toll VoIP-PSTN Traffic, the Telephone Company will bill the customer the applicable Interstate switched access rates on all jurisdictionally Intrastate voice traffic identified as Toll VoIP-PSTN Traffic.

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ISSUED BY: 
Joel Dohmeier, Vice-President

ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.1 Description and Provision of Switched Access Service Arrangements

(A) Description

Switched Access Service is provided in four different Feature Group arrangements which are service categories of standard and optional features. These are differentiated by their technical characteristics, e.g., line side vs. trunk side connection at the Telephone Company first point of switching. They are also differentiated by optional feature availability and the manner in which the End User accesses them in originating calling, e.g., with or without access codes of various lengths and digits.

The provision of each Feature Group requires Local Transport facilities and the appropriate End Office functions. In addition, Special Access Service may, at the option of the Customer, be connected with Feature Groups A, B, C, or D at Telephone Company designated WATS Serving Offices.

There are three specific transmission specifications (i.e., Types A, B and C) that have been identified for the provision of Feature Groups. The specifications provided are dependent on the Interface Group and the routing of the service, i.e., whether the service is routed directly to the end office or via an access tandem. The parameters for the transmission specifications are set forth in 15.1.2 .

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President

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6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.1 Description and Provision of Switched Access Service Arrangements (Cont'd)

(A) Description (Cont'd)

Feature Groups are arranged for either originating, terminating or two-way calling, based on the Customer end office switching capacity ordered. Originating calling permits the delivery of calls from Telephone Exchange Service locations to the customer designated premises. Terminating calling permits the delivery of calls from the customer designated premises to Telephone Exchange Service locations. Two-way calling permits the delivery of calls in both directions, but not simultaneously. The Telephone Company will determine the type of calling to be provided unless the Customer requests that a different type of directional calling is to be provided. In such cases, the Telephone Company will work cooperatively with the Customer to determine the directionality.

There are various optional features associated with Local Transport, Common Switching and Transport Termination available with the Feature Groups.

Detailed descriptions of each of the available Feature Groups are set forth in 6.5 through 6.8 . Each Feature Group is described in terms of its specific physical characteristics and calling capabilities, the optional features available for use with it and the standard testing capabilities.

The Common Switching and Transport Termination optional features, which are described in 6.9 , unless specifically stated otherwise, are available at all Telephone Company end office switches.

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6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.1 Description and Provision of Switched Access Service Arrangements (Cont'd)

(B) Manner of Provision

Switched Access is furnished in either quantities of lines or trunks, or in busy hour minutes of capacity (BHMCs). FGA Access and FGB Access are furnished on a per-line or per-trunk basis respectively. FGC Access and FGD Access are furnished on a BHMC basis. FGD may also be provided to Customers other than MTS/WATS providers on a per trunk basis as set forth in 5.2 .

BHMCs are differentiated by type and directionality of traffic carried over a Switched Access Service arrangement. Differentiation of traffic among BHMC types is necessary for the Telephone Company to properly design Switched Access Service to meet the traffic carrying capacity requirement of the Customer.

There are two major BHMC categories identified as: Originating and Terminating. Originating BHMCs represent access capacity within a LATA for carrying traffic from the End User to the Customer; Terminating BHMCs represent access capacity within a LATA for carrying traffic from the Customer to the End User. When ordering capacity for FGC Access or FGD Access in BHMCs, the Customer must at a minimum specify such access capacity in terms of Originating BHMCs and/or Terminating BHMCs.

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6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.1 Description and Provision of Switched Access Service Arrangements (Cont'd)

(B) Manner of Provision (Cont'd)

Because some Customers will wish to further segregate their originating traffic into separate trunk groups, or because segregation may be required by network considerations, originating BHCs are further categorized into Domestic, 700, 800, 900 and Operator Services. Domestic BHCs represent access capacity for carrying only domestic traffic other than 700, 800, 900 and Operator Services traffic; and 700, 800, 900 and Operator Services BHCs represent access capacity for carrying, respectively, only 700, 800, 900 or Operator Services traffic. When ordering such types of access capacity, the Customer must specify Domestic, 700, 800, 900 or Operator Services BHCs.

6.1.2 Ordering Options and Conditions

Switched Access Service is ordered under the Access Order provisions set forth in 5.2 . Also, included in that section are regulations concerning miscellaneous service order charges which may be associated with Switched Access Service ordering (e.g., Service Date Changes, Cancellations, etc.).

6.1.3 Rate Categories

There are four rate categories which apply to Switched Access Service:

- Local Transport (described in 6.1.3(A))
- End Office (described in 6.1.3(B))
- Chargeable Optional Features (described in 6.1.3(C)
- Common Line (described in Section 3.)

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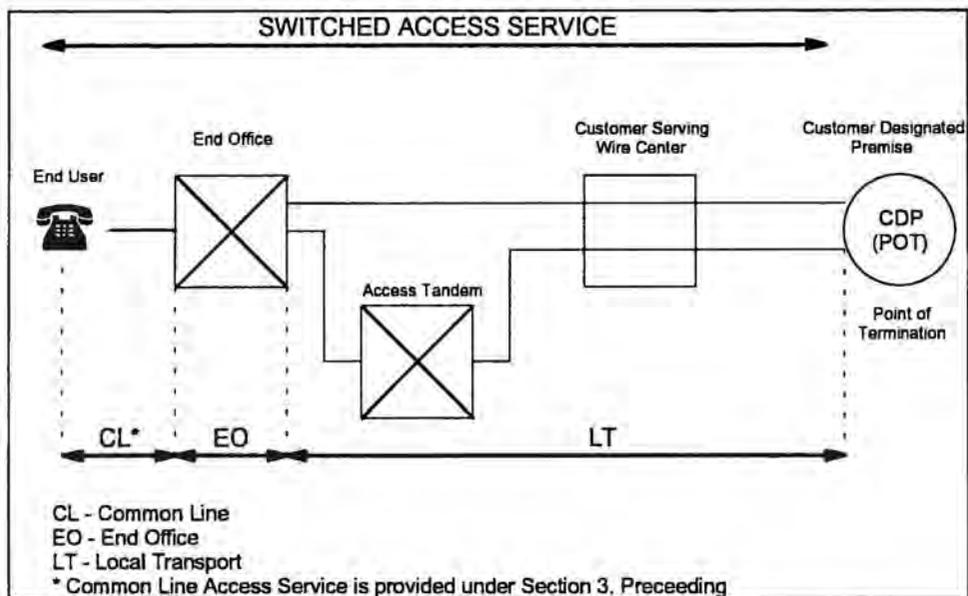
ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.3 Rate Categories (Cont'd)

The following diagram depicts a generic view of the components of Switched Access Service and the manner in which the components are combined to provide a complete Access Service.



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6. SWITCHED ACCESS SERVICE (Continued)

6.1 General (Continued)

6.1.3 Rate Categories (Continued)

(A) Local Transport

The Local Transport rate category provides the transmission and tandem switching facilities between the customer's premises and the end office switch(es) where the customer's traffic is switched to originate or terminate the customer's communications. For purposes of determining Local Transport mileage, distance will be measured from the wire center that normally serves the customer's premises to the end office switch(es). Local Transport mileage measurement rules are set forth in 6.4.5 following and in this section.

Local Transport is a two-way voice frequency transmission path composed of facilities determined by the Telephone Company. The two-way voice frequency transmission path permits the transport of calls in the originating direction (from the end user end office switch to the customer's premises) and in the terminating direction (from the customer's premises to the end office switch), but not simultaneously. The voice frequency transmission path may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

Local Transport is comprised of an Entrance Facility, Direct-Trunked Transport, Tandem-Switched Transport, and Multiplexing. Descriptions of the Local Transport components are provided in (1) through (4) following.

The Telephone Company will work cooperatively with the customer in determining (1) whether the service is to be routed directly to an end office switch or through an access tandem switch, and (2) the directionality of the service.

Local Transport is provided at the rates and charges as set forth in 17.2.2 following. The application of these rates with respect to individual Local Access Service arrangements is set forth in 6.4.1 (C) following.

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ACCESS TARIFF

6. SWITCHED ACCESS SERVICE (Continued)

6.1 General (Continued)

6.1.3 Rate Categories (Continued)

(A) Local Transport (Continued)

The number of Switched Transport transmission paths and terminations provided is based on the customer's order and is determined by the Telephone Company as set forth in 6.2.5 following.

(1) Entrance Facility

An Entrance Facility provides the communication path between a customer's premises and the Telephone Company's serving wire center for that premises. The Entrance Facility is dedicated to the use of a single customer and is available for use with all line side and trunk side Switched Access services. An Entrance Facility is provided even if the customer's premises and the serving wire center are located in the same building. The Entrance Facility rate element includes the transmission medium of the facility as well as certain circuit equipment that is used at the ends of the facility and employed to provision the channels on the transmission medium. The Entrance Facility rate element also includes an Interface Group, which defines the technical characteristics and types of signaling capability associated with the connection (i.e., voice grade, DS1 or DS3) that comprises the Entrance Facility. The following types of Entrance Facility are available:

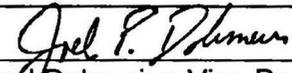
(a) Voice Grade Entrance Facility

Voice Grade Entrance Facility is provided in quantities of channels. Each Voice Grade channel provides voice frequency transmission capability in the nominal frequency range of 300 to 3000 Hz and may be terminated two-wire or four-wire. When a single Voice Grade channel is ordered to be terminated at a customer's premises where the premises is all-digital and requires a minimum digital interface level of 1.544 Mbps, the Telephone Company will provide the required interface where facilities are available.

(b) DS1 Entrance Facility

DS1 Entrance Facility provides 24 channels for the transmission of nominal 56 kbps or 1.544 Mbps isochronous serial data. The actual bit rate and framing format is a function of the channel interface selected by the customer.

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EFFECTIVE: July 3, 2012

ISSUED BY: 
BY: Joel Dohmeier, Vice-President

Authorized by NH PUC Docket No. DT-12-150

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ACCESS TARIFF

6. SWITCHED ACCESS SERVICE (Continued)

6.1 General (Continued)

6.1.3 Rate Categories (Continued)

(A) Local Transport (Continued)

(1) Entrance Facility (Continued)

(c) DS3 Entrance Facility

DS3 Entrance Facility provides 28 DS1s or 672 channels for the transmission of nominal 44.736 Mbps isochronous serial data. With DS3, an electrical interface will be installed at the customer's premises which provides an electrical signal with a transmission speed of 44.736 Mbps per channel. The minimum period for which a DS3 Entrance Facility is provided is twelve months.

(2) Direct-Trunked Transport

Direct-Trunked Transport provides the communication path between the serving wire center of a customer's premises and an end office. Direct-Trunked Transport is dedicated to the use of a single customer and does not require switching at an access tandem. Direct-Trunked Transport is available for use with all line side and trunk side Switched Access services.

Direct-Trunked Transport is not available to end offices that lack recording and measuring capabilities needed to provide Direct-Trunked Transport.

Direct-Trunked Transport provides for the transmission facilities between the Telephone Company's serving wire center and an end office when such facilities are not switched through an access tandem. This includes the transmission medium itself as well as certain circuit equipment that is used at the ends of the interoffice links and employed to provision the channels on the transitional medium and circuit equipment used within the network to manage the circuits at intermediate locations.

Direct-Trunked Transport also provides for the transmission facilities between the Telephone Company's serving wire center and a hub that interconnects facilities for both Tandem-Switched Transmission and Direct-Trunked Transport.

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ACCESS TARIFF

6. **SWITCHED ACCESS SERVICE** (Continued)

6.1 **General** (Continued)

6.1.3 **Rate Categories** (Continued)

(A) **Local Transport** (Continued)

(2) **Direct-Trunked Transport** (Continued)

Direct-Trunked Transport rates consist of a Direct-Trunked Facility rate specified in 17.2.2 following which is applied on a per mile basis and a Direct-Trunked Termination rate which is applied at each end of each measured segment of the Direct-Trunked Facility (e.g., at the end office, hub, tandem, and the serving wire center). The minimum period for which a High Capacity DS3 Direct Transport is provided is twelve months.

(3) **Tandem-Switched Transport**

Tandem-Switched Transport provides the communication path between the serving wire center of a customer's premises and an end office, and includes tandem switching functions. Tandem-Switched Transport also includes circuits dedicated to the use of a single customer (from the serving wire center to the access tandem) and circuits provided for the common use of all customers who have requested tandem switching (from the access tandem to the end office). Tandem-Switched Transport is available for use with all trunk side Switched Access services. Tandem-Switched Transport is not available for use with line side Switched Access services.

Tandem-Switched Transport provides for the transmission facilities between the Telephone Company's serving wire center and an end office that is switched through a tandem. Tandem-Switched Transport is composed of three sub elements:

- (a) Tandem-Switched Transmission, which provides for the transmission facilities from the Telephone company's serving wire center to an access tandem switch and from the Telephone Company's access tandem switch to an end office. This includes the transmission medium itself as well as certain circuit equipment that is used at the ends of the interoffice links and employed to derive the channels on the transmission medium, and circuit equipment used within the network to manage the circuits at intermediate locations.

The Tandem-Switched Facility rate specified in 17.2.2 following is applied on a per access minute per mile basis for all originating and terminating minutes of use routed over the facility. The Tandem-Switched Termination rate specified in 17.2.2 following is applied on a per access minute basis (for all originating and terminating minutes of use routed over the facility) at each end of each measured segment of Tandem-Switched Facility.

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ACCESS TARIFF

6. SWITCHED ACCESS SERVICE (Continued)

6.1 General (Continued)

6.1.3 Rate Categories (Continued)

(A) Local Transport (Continued)

(3) Tandem-Switched Transport (Continued)

- (b) Tandem Switching, which provides for use of the Telephone Company's access tandem.**

Local Transport is provided at the rates and charges as set forth in 17.2.2 following. The application of these rates with respect to individual Switched Access Service Arrangements is set forth in 6.4.1 (C) following.

The number of Switched Transport transmission paths and terminations provided is based on the customer's order and is determined by the Telephone Company as set forth in 6.2.5 following.

- (c) For originating toll free minutes only, a Joint Tandem Switched Transport rate applies in lieu of the Tandem Switching, Tandem Switched Facility, and Tandem Switched Termination rates and is only billed by the tandem company that performs the tandem switching function.**

(N)
|
(N)

(4) Multiplexing

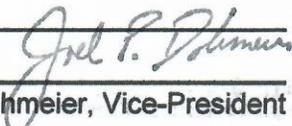
Multiplexing provides for arrangements to convert a single higher capacity or bandwidth circuit for bulk transport to several lower capacity or bandwidth circuits. Multiplexing is only available at Telephone Company designated Hubs arranged for multiplexing or at the access tandem trunk on the serving wire center side of the access tandem. All types of multiplexing may not be available at each Hub location.

Listed below are the multiplexing arrangements offered with switched access.

- DS1 to Voice

An arrangement that multiplexes twenty-four voice grade circuits to single DS1 digital circuit at a rate of 1.544 Mbps, or multiplexes a single DS1 digital circuit at a rate of 1.544 Mbps to twenty-four voice grade circuits.

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ISSUED BY: 
BY: Joel Dohmeier, Vice-President

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ACCESS TARIFF

6. **SWITCHED ACCESS SERVICE** (Continued)

(N)

6.1 **General** (Continued)

6.1.3 **Rate Categories** (Continued)

(A) **Local Transport** (Continued)

(4) **Multiplexing** (continued)

- **DS3 to DS1**

An arrangement that multiplexes twenty-eight DS1 digital circuits to a single DS3 digital circuit at a rate of 44.736 Mbps, or multiplexes a single DS3 digital circuit at a rate of 44.736 Mbps to twenty-eight DS1 digital circuits.

(5) **Interface Groups**

Ten Interface Groups are provided for terminating the Local Transport at the customer's designated premises. Technical specifications concerning the available interface groups are set forth in 15.1.1 following.

(6) **Nonchargeable Optional Features**

Where transmission facilities permit, the Telephone Company will, at the option of the customer, provide the following optional features in association with Local Transport.

(a) **Supervisory Signaling**

Where transmission parameters permit, and where signaling conversion is required by the customer to meet its signaling capability, the customer may order an optional supervisory signaling arrangement for each transmission path provided as set forth in 15.1.1 (E) following.

(b) **Customer Specified Entry Switch Receive Level**

This option allows the customer to specify the receive transmission level at the first point of switching. The range of transmission levels which may be specified is described in Technical Reference PUB 62500. The feature is available with interface Groups 2 through 10 for Feature Groups A and B.

(c) **Customer Specified of Local Transport Termination**

This option allows the customer to specify, for Feature Group B routed directly to an end office or access tandem, a four-wire termination of the Local Transport at the entry switch in lieu of a Telephone Company selected two-wire.

(N)

ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.3 Rate Categories (Cont'd)

(A) Local Transport (Cont'd)

Reserved for Future Use

(B) End Office

The End Office rate category establishes the charges related to the local end office switching and End User termination functions necessary to complete the transmission of Switched Access communications to and from the End Users served by the local end office. The End Office rate category includes the Local Switching rate elements.

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6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.3 Rate Categories (Cont'd)

(B) End Office (Cont'd)

(1) Local Switching

The Local Switching rate element establishes the charges related to the use of end office switching equipment, the terminations in the end office of End User lines, and the terminations of calls at Telephone Company Intercept Operators or recordings.

Local Switching is applicable to:

- Feature Groups A, B, C and D

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ACCESS TARIFF

6. SWITCHED ACCESS SERVICE (Continued)

6.1 General

6.1.1 Rate Categories (Continued)

(B) End Office (Continued)

Local Switching does not apply to Feature Groups B and D Switched Access Services associated with Mobile Telephone Switching Offices (MTSOs) directly interconnected to a Telephone Company access tandem office.

Rates for Local Switching are as set forth in 17.2.3. For originating toll free minutes only, a different Local Switching rate is specified in Section 17.2.3 following. The application of these rates with respect to individual Feature Groups is as set forth in 6.4.1(C).

(C)
|
(C)

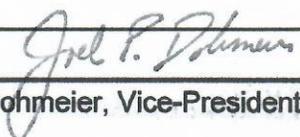
There are four types of functions included in the Local Switching rate element: Common Switching, Transport Termination, Line Termination and Intercept. These are described in (a) through (d) following:

(a) Common Switching

Common Switching provides the local end office switching functions associated with the various access (i.e., Feature Group) switching arrangements. The Common Switching arrangements provided for the various Feature Group arrangements are described in 6.5 through 6.8.

Included as part of Common Switching are various nonchargeable optional features which the Customer can order to meet the Customer's specific communications requirements. These optional features are described in 6.9.1.

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BY: Joel Dohmeier, Vice-President

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.3 Rate Categories (Cont'd)

(B) End Office (Cont'd)

(1) Local Switching (Cont'd)

(b) Transport Termination

Transport Termination functions provide for the line or trunk side arrangements which terminate the Local Transport facilities. Included as part of these functions are various nonchargeable optional termination arrangements. These optional terminating arrangements are described in 6.9.1.

The number of Transport Terminations provided will be determined by the Telephone Company as set forth in 6.2.5

(c) Line Termination

Line Termination provides for the terminations of End User lines in the local end office. There are two types of Line Terminations, i.e., Common Line Terminations and Special Access Service Terminations utilized in the provision of WATS or WATS-type services at Telephone Company designated WATS Serving Offices.

The above Special Access Service Terminations are differentiated by line side vs. trunk side terminations. In addition, there are various types of originating and terminating line side terminations depending on the type of signaling associated with the Special Access Service. Line side terminations are available with either dial pulse or dual tone multifrequency address signaling.

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6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.3 Rate Categories (Cont'd)

(B) End Office (Cont'd)

(1) Local Switching (Cont'd)

(d) Intercept

The Intercept function provides for the termination of a call at a Telephone Company Intercept operator or recording. The operator or recording tells a caller why a call, as dialed, could not be completed, and if possible, provides the correct number.

(C) Reserved for Future Use

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President

ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.1 General (Cont'd)

6.1.4 Special Facilities Routing

Any Customer may request that the facilities used to provide Switched Access Service be specially routed. The regulations for Special Facilities Routing (i.e., Avoidance, Diversity and Cable-Only) are set forth in Section 11. .

6.2 Undertaking of the Telephone Company

In addition to the obligations of the Telephone Company set forth in Section 2. , the Telephone Company has certain other obligations concerning only the provision of Switched Access Service. These obligations are as follows:

6.2.1 Network Management

The Telephone Company will administer its network to insure the provision of acceptable service levels to all telecommunications users of the Telephone Company's network services. Generally, service levels are considered acceptable only when both End Users and Customers are able to establish connections with little or no delay encountered within the Telephone Company network. The Telephone Company maintains the right to apply protective controls, i.e., those actions, such as call gapping, which selectively cancel the completion of traffic, over any traffic carried over its network, including that associated with a Customer's Switched Access Service. Generally, such protective measures would only be taken as a result of occurrences such as failure or overload of Telephone Company or Customer facilities, natural disasters, mass calling or national security demands. In the event that the protective controls applied by the Telephone Company result in the complete loss of service by the Customer, the Customer will be granted a Credit Allowance for Service Interruption as set forth in 2.4.4(B).

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.2 Undertaking of the Telephone Company (Cont'd)

6.2.2 Transmission Specifications

Each Switched Access Service transmission path is provided with standard transmission specifications. There are three different standard specifications

(Types A, B and C). The standard for a particular transmission path is dependent on the Feature Group, the Interface Group and whether the service is directly routed or via an access tandem. The available transmission specifications are set forth in 15.1.2. Data Transmission Parameters are also provided with each Switched Access Service transmission path. The Telephone Company will, upon notification by the Customer that the data parameters set forth in 15.1.3 are not being met, conduct tests independently or in cooperation with the Customer, and take any necessary action to insure that the data parameters are met.

The Telephone Company will maintain existing transmission specifications on functioning service configurations installed prior to September 3, 1993, except that service configurations having performance specifications exceeding the standards set forth in 15.1.2 will be maintained at the performance levels specified.

The transmission specifications concerning Switched Access Service are limits which, when exceeded, may require the immediate corrective action of the Telephone Company. The transmission specifications are set forth in 15.1.2. Acceptance limits are set forth in

Technical Reference TR-NPL-000334. This Technical Reference also provides the basis for determining Switched Access Service maintenance limits.

Feature Group C and Feature Group D trunks equipped for Operator Transfer Service are subject to Feature Group C and Feature Group D transmission specifications, respectively, unless otherwise specified.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.2 Undertaking of the Telephone Company (Cont'd)

6.2.3 Provision of Service Performance Data

Subject to availability, end-to-end service performance data available to the Telephone Company through its own service evaluation routines, may also be made available to the Customer based on previously arranged intervals and format. These data provide information on overall end-to-end call completion and non-completion performance, e.g., Customer equipment blockage, failure results and transmission performance. These data do not include service performance data which are provided under other tariff sections, e.g., testing service results. If data are to be provided in other than paper format, the charges for such exchange will be determined on an individual case basis.

6.2.4 Testing

(A) Acceptance Testing

At no additional charge the Telephone Company will, at the Customer's request, cooperatively test at the time of installation, the following parameters: loss, C-notched noise, C-message noise, 3-tone slope, d.c. continuity and operational signaling. When the Local Transport is provided with Interface Groups 2 through 10, and the Transport Termination is two-wire (i.e., there is a four-wire to two-wire conversion in Local Transport), balance parameters (equal level echo path loss) may also be tested.

(B) Routine Testing

At no additional charge, the Telephone Company will, at the Customer's request, test after installation on an automatic or manual basis, 1004 Hz loss, C-message noise and Balance (Improved Return loss).

In the case of automatic testing, the Customer shall provide remote office test lines and 105 test lines with associated responders or their functional equivalent.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.2 Undertaking of the Telephone Company (Cont'd)

6.2.4 Testing (Cont'd)

(B) Routine Testing(Cont'd)

The frequency of these tests will be that which is mutually agreed upon by the Customer and the Telephone Company, but shall consist of not less than quarterly 1004 Hz Loss and C-message noise tests and an annual Balance test. Trunk test failures requiring Customer participation for trouble resolution will be provided to the Customer on an as-occurs basis.

Additional tests may be ordered as set forth in 13.3.1. Charges for these additional tests are set forth in 17.4.4 .

6.2.5 Determination of Number of Transmission Paths

For Feature Groups A and B, which are ordered on a per line or per trunk basis respectively, and Feature Group D when ordered on a per trunk basis by Customers other than MTS/WATS providers, the Customer specifics the number of transmission paths in the order for service.

The Telephone Company will determine the number of Switched Access Service transmission paths to be provided for the Switched Access Feature Group C and D busy hour minutes of capacity ordered. The number of transmission paths will be developed using the total busy hour minutes of capacity by type (as described in 6.1.1(B)) for the end offices for each Feature Group ordered from a Customer's designated premises. The total busy hour minutes of capacity by type (e.g., originating, terminating) for the end office will be converted to transmission paths using standard Telephone Company traffic engineering methods. The number of transmission paths provided shall be the number required based on (1) the use of access tandem switches and end office switches, (2) the use of the end office switches only, or (3) the use of the tandem switches only.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.2 Undertaking of the Telephone Company (Cont'd)

6.2.6 Trunk Group Measurement Reports

Subject to availability, the Telephone Company will make available trunk group data in the form of usage in CCS, peg count and overflow, to the Customer based on previously agreed to intervals.

6.3 Obligations of the Customer

In addition to the obligations of the Customer set forth in Section 2. , the Customer has certain specific obligations pertaining to the use of Switched Access Service. These obligations are as follows:

6.3.1 Report Requirements

Customers are responsible for providing the following reports to the Telephone Company, when applicable.

(A) Jurisdictional Reports

When a Customer orders Switched Access Service for both interstate and intrastate use, the Customer is responsible for providing reports as set forth in 2.3.11 . Charges will be apportioned in accordance with those reports. The method to be used for determining the intrastate charges is set forth in 2.3.12 .

(B) Code Screening Reports

When a Customer orders service class routing, trunk access limitation or call gapping arrangements, it must report the number of trunks and/or the appropriate codes to be instituted in each end office or access tandem switch, for each of the arrangements ordered.

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ACCESS TARIFF

6. SWITCHED ACCESS SERVICE

6.3 Obligations of the Customer (Continued)

6.3.2 Trunk Group Measurement Reports

With the agreement of the Customer, trunk group data in the form of usage in CCS, peg count and overflow for its end of all access trunk groups, where technologically feasible, will be made available to the Telephone Company. These data will be used to monitor trunk group utilization and service performance and will be based on previously arranged intervals and format.

6.3.3 Supervisory Signaling

The Customer's facilities shall provide the necessary on-hook, off-hook, answer and disconnect supervision.

6.3.4 Short Duration Mass Calling Requirements

When a Customer offers service for which a substantial call volume is expected during a short period of time (e.g., 900 service media stimulated events), the Customer must notify the Telephone Company at least 48 hours in advance of each peak period. Notification should include the nature, time, duration, and frequency of the event, an estimated call volume, and the telephone number(s) to be used.

On the basis of the information provided, the Telephone Company may invoke network management controls, (e.g., call gapping and code blocking) to reduce the probability of excessive network congestion. The Telephone Company will work cooperatively with the Customer to determine the appropriate level of such control.

6.3.5 Call Signaling

Depending on the signaling system used by the customer in its network, the customer's facilities shall transmit the following call signaling information to the Telephone Company on traffic the customer's end users originate which is handed off for termination on the Telephone Company's network.

(A) Signaling System 7 (SS7) Signaling

When the customer uses SS7 signaling, it will transmit the Calling Party Number (CPN) or, if different from the CPN, the Charge Number (CN) information in the SS7 signaling stream.

(B) Multi-Frequency (MF) Signaling

When the customer uses MF signaling, it will transmit the number of the calling party or, if different from the number of the calling party, the Charge Number (CN) information in the MF Automatic Number Identification (ANI) field.

(C) Internet Protocol (IP) Signaling

When the customer uses IP signaling, it will transmit the telephone number of the calling party or, if different from the telephone number, the billing number of the calling party.

(N)

(N)

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Joel Dohmeier, Vice-President

ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.4 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Switched Access Service.

6.4.1 Description and Application of Rate

There are two types of rates and charges that apply to Switched Access Service; recurring (usage and flat rates) and nonrecurring charges. These rates and charges are applied differently to the various rate elements as set forth in (C) .

(A) Recurring Rates

- (1) Usage rates for Switched Access Service are rates that apply on a per access minute or a per call basis. Access minute charges and per call charges are accumulated over a monthly period.
- (2) Flat Rates for Switched Access Service are rates that apply on a per month per rate element basis.

(B) Nonrecurring Charges

Nonrecurring charges are one-time charges that apply for a specific work activity (i.e., installation or change to an existing service). The types of nonrecurring charges that apply for Switched Access Service are: installation of service, and service rearrangements. These charges are in addition to the Access Order Charge as specified in 17.4.1(A) .

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6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.1 Description and Application of Rates and Charges (Cont'd)

(B) Nonrecurring Charges (Cont'd)

(1) Installation of Service

Nonrecurring charges apply to each Switched Access Service installed. For FGA, which is ordered on a per line basis, and for FGB, FGC and FGD, which is ordered on a per trunk basis, the charge is applied on a per line or trunk basis respectively. For FGC and FGD, which are ordered on a busy hour minutes of capacity basis, the charge is also applied on a per trunk basis. The charge applies only when the capacity ordered for FGA, FGB, FGC or FGD services, requires the installation or activation of an additional trunk(s) or lines which are uniquely identified for the sole use of the ordering Customer.

(2) Service Rearrangements

All changes to existing services other than changes involving administrative activities and the off-hook supervisory signaling of FGA Access Services, will be treated as a discontinuance of the existing service and an installation of a new service. The nonrecurring charge described in (1) will apply for this work activity. Moves that change the physical location of the point of termination are described and charged for as set forth in 6.4.4 .

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6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.1 Description and Application of Rates and Charges (Cont'd)

(B) Nonrecurring Charges (Cont'd)

(2) Service Rearrangements (Cont'd)

Administrative changes will be made without charge(s) to the Customer. Administrative changes are as follows:

- Change of Customer name,
- Change of Customer or Customer's End User premises address when the change of address is not a result of a physical relocation of equipment,
- Change in billing data (name, address, or contact name or telephone number),
- Change of agency authorization,
- Change of Customer circuit identification,
- Change of billing account number,
- Change of Customer test line number,
- Change of Customer or Customer's End User contact name or telephone number, and
- Change of jurisdiction.

Other changes made without charge to the Customer are as follows:

- Changes and additions to existing Switched Access Services which are necessary due to Telephone Company initiated network reconfigurations, and required to provide the same grade of service to the Customer that existed prior to the reconfiguration. Charges will apply to those changes and additions which are in excess of those required to provide the same grade of service and/or capacity. Grade of service will be as determined by industry standard engineering tables.

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President

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6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.1 Description and Application of Rates and Charges (Cont'd)

(B) Nonrecurring Charges (Cont'd)

(2) Service Rearrangements (Cont'd)

Changes to the point in time when the off-hook supervisory signal is provided in the originating call sequence i.e., when the off-hook supervisory signal is changed from being provided by the Customer's equipment before the called party answers to being forwarded by the Customer's equipment when the called party answers or vice versa, are subject to the Access Order Charge as set forth in 17.4.1(A) .

For additions, changes or modifications to an optional feature which has a separate nonrecurring charge, that nonrecurring charge will apply.

For additions, changes, or modifications to optional features that do not have their own separate nonrecurring charges, an Access Order Charge as set forth in 17.4.1(A) will apply. When an optional feature is not required on each transmission path, but rather for an entire transmission path group, an end office or an access tandem switch, only one such charge will apply (i.e., it will not apply per transmission path) .

(C) Application of Rates

The specific application of these rates for a specific Customer is dependent upon the Feature Group.

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6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.1 Description and Application of Rates and Charges (Cont'd)

(C) Application of Rates (Cont'd)

(1) Unmeasured FGA and FGB Access Services

Where originating and/or terminating measurement capability does not exist for Feature Group A or Feature Group B Switched Access Services provided to the first point of switching, the number of access minutes that will be assumed are as set forth following in 6.5.4 and 6.6.4 respectively.

(2) Reserved for Future Use

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6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.1 Description and Application of Rates and Charges (Cont'd)

(C) Application of Rates (Cont'd)

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.2 Minimum Monthly Charge

Switched Access Service is subject to a minimum monthly charge. The minimum charge applies for the total capacity provided. The minimum monthly charge is calculated as follows.

For the Local Transport, Local Switching and Information Surcharge rate elements, the minimum monthly charge is the sum of the recurring charges set forth in 17.2.2 and 17.2.3 for either the actual measured usage or the assumed usage prorated to the number of days or major fraction of days based on a 30 day month.

6.4.3 Change of Switched Access Service Arrangements

Changes from one type of Feature Group to another will be treated as a discontinuance of one type of service and a start of another. Nonrecurring charges will apply, with one exception. When a Customer upgrades a Feature Group A or B service to a Feature Group D service and when Feature Group C is upgraded to Feature Group D coincident with the availability of Feature Group D in an end office, the nonrecurring charges will not apply and minimum period obligations will not change, i.e., the time elapsed in the existing minimum period obligation will be credited to the minimum period obligations for FGD service, subject to the following limitations.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.4 Moves

A move involves a change in the physical location of one of the following:

- The point of termination at the customer designated premises
- The customer designated premises

The charges for the move are dependent on whether the move is to a new location within the same building or to a different building.

(A) Moves Within the Same Building

When the move is to a new location within the same building, the charge for the move will be an amount equal to one half of the installation nonrecurring charge for the capacity affected. This charge is in addition to the Access Order Charge as specified in 17.4.1(A). There will be no change in the minimum period requirements.

(B) Moves to a Different Building

Moves to a different building will be treated as a discontinuance and start of service and all associated nonrecurring charges will apply. New minimum period requirements will be established for the new service. The Customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued services.

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ACCESS TARIFF

6. **SWITCHED ACCESS SERVICE** (Continued)

6.4 Rate Regulations (Continued)

6.4.5 Mileage Measurement

The mileage to be used to determine the rate for Direct-Trunked Transport and Tandem-Switched Transport is calculated based on the airline distance between the end office switch, which may be a Remote Switching Location, where the call carried by Local Transport service originates or terminates and the customer's serving wire center, except as set forth following. Where applicable, The V&H coordinates method is used to determine mileage. This method is set forth in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. NO. 4 for Wire Center Information (V&H coordinates).

If the calculation results in a fraction of a mile, always round up to the next whole mile before applying the rates.

Exceptions to the mileage measurement rules are as follows:

(A) Feature Group A - Originating Usage

Direct-Trunked Transport Mileage for premium and non-premium rated access minutes in the originating direction over Feature Group A Switched Access Service will be calculated on an airline basis using the V&H coordinates method. The mileage measurement will be between the first point of switching (end office switch where the Feature Group A switched dial tone is provided) and the customer's serving wire center for the Switched Access Service provided.

(B) Feature Group A - Terminating Usage

The Local Transport mileage for terminating Feature Group A Switched Access Service will be measured in two segments. Direct-Trunked Transport Mileage will be measured between the customer's serving wire center and the first point of switching (i.e., the end office switch where the Feature Group A switching dial tone is provided). Tandem-Switched Transport mileage will be measured between the first point of switching and the terminating end office.

ACCESS TARIFF

6. **SWITCHED ACCESS SERVICE** (Continued)

6.4 **Rate Regulations** (Continued)

6.4.5 **Mileage Measurement** (Continued)

(C) **Feature Group B, C, and D - Alternate Traffic Routing**

When the Alternate Traffic Routing optional feature is provided with Feature Groups B, C and D, the Local Transport access minutes will be apportioned between the two transmission routes used to provide this feature. Such apportionment will be made using: (1) actual minutes of use if available, (2) standard Telephone Company traffic engineering methodology and will be based on the last trunk CCS desired for the high usage group, as described in 6.9.1 (L) preceding, and the total busy hour of capacity ordered to the end office, when the feature is provided at an end office switch, or to the subtending end offices when the feature is provided at an access tandem switch, or (3) an apportionment mutually agreed to by the Telephone Company and the customer. This apportionment will serve as the basis for Local transport mileage calculation.

(D) **Feature Group C - Multiple CDPs**

When terminating Feature Group C Switched Access Service is provided from multiple customer premises to an end office not equipped with measurement capabilities, the total Local Transport access minutes for that end office will be apportioned among the trunk groups accessing the end office on the basis of the capacity ordered for each FGC trunk group. This apportionment will serve as the basis for Local Transport mileage calculation and the customer will be billed accordingly.

(E) **Feature Groups A, B, C and D - WATS**

Where Feature Groups A, B, C, and D Switched Access Services are connected with Special Access Service at a WATS Serving office, the Telephone Company will measure mileage on an airline mileage basis between:

- (1) The WATS Serving Office and the Serving Wire Center for the customer designated premises, or
- (2) The Feature Group A or B entry switch and the Serving Wire Center for the customer designated premises.

(T)

(T)

ACCESS TARIFF

6. SWITCHED ACCESS SERVICE (Continued)

6.4 Rate Regulations (Continued)

6.4.5 Mileage Measurement (Continued)

(F) Feature Groups B, C, and D - Remote Offices

The Local Transport mileage for Feature Group B, C, and D Switched Access Service provided to a Remote Office will be measured in multiple segments.

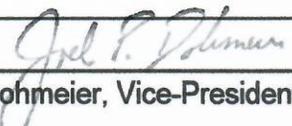
When the facility is directly trunked to the Host Office, Direct-Trunked Facility mileage will be measured between the customer's serving wire center and the Host Office, and Tandem-Switched Facility mileage will be measured between the Host Office and the Remote Office. The Tandem Switching charge will not apply.

When the facility is directly trunked to a tandem, Direct-Trunked Facility will be measured from the Serving Wire Center to the tandem, Tandem-Switched Facility mileage will be measured from the tandem to the host, and another segment of Tandem-Switched facility will be measured from the host to the remote. The Tandem Switching charge* will be applicable at the tandem. (C)

When service to the remote is ordered as only Tandem-Switched Facility, mileage will be separately measured between the serving wire center and the host and between the host and the end office. The Tandem Switching charge* will be applicable at the Tandem. (C)

* As of July 1, 2021, the Joint Tandem Switched Transport rate element is applied per tandem to originating toll free minutes only, as set forth in 6.6.2 following, in lieu of the Tandem Switched Facility, Tandem Switched Termination and Tandem Switching rate elements. (N)
|
(N)

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ISSUED BY: 
BY: Joel Dohmeier, Vice-President

Authorized by NH PUC Docket No.

ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.4 Rate Regulations (Cont'd)

6.4.6 Mixed Use

Mixed use occurs when Switched Access Service and Special Access Service are provided over the same High Capacity service through a common interface. The regulations governing the provision of Mixed Use Facilities are set forth in 5.2.4 and 7.2.7 .

The Telephone Company will designate the first point(s) of switching and routing to be used where equal access traffic is provided through a centralized equal access arrangement. Those Telephone Company offices providing equal access through centralized arrangements are identified in NECA Tariff FCC No. 4.

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President

ACCESS TARIFF

- 6. Switched Access Service (Cont'd)
- 6.4 Rate Regulations (Cont'd)
- 6.4.7 Reserved for Future Use

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Paul E. Violette
President

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA)

6.5.1 Description

- (A) FGA Access, which is available to all Customers, provides line side access to Telephone Company end office switches with an associated seven digit local telephone number for the Customer's use in originating communications from and terminating communications to an Interexchange Carrier's Interstate Service or a Customer - provided interstate communications capability. The Customer must specify the Interexchange Carrier to which the FGA service is connected or, in the alternative, specify the means by which the FGA access communications is transported to another state. Special Access Services utilized for connection with FGA at Telephone Company designated WATS Serving Offices as set forth in Section 7. may be ordered separately by a Customer other than the Customer which orders the FGA Switched Access Service for the provision of WATS-type services. Special Access Services are ordered as set forth in 5.2 .
- (B) FGA Switching is provided at all end office switches. At the option of the Customer, FGA is provided on a single or multiple line group basis and is arranged for originating calling only, terminating calling only, or two-way calling which are specified by the Customer's order for service.
- (C) FGA provides a line side termination at the first point of switching (dial tone office). The line side termination will be provided with either ground start supervisory signaling or loop start supervisory signaling. The type of signaling is at the option of the Customer.
- (D) The Telephone Company shall select the first point of switching, within the selected LATA, at which the line side termination is to be provided unless the Customer requests a different first point of switching and Telephone Company facilities and measurement capabilities, where necessary, are available to accommodate such a request.

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President

ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.1 Description (Cont'd)

- (E) A seven digit local telephone number assigned by the Telephone Company is provided for access to FGA switching in the originating direction. The seven digit local telephone number will be associated with the selected end office switch and is of the form NXX-XXXX.

If the Customer requests a specific seven digit telephone number that is not currently assigned, and the Telephone Company can, with reasonable effort, comply with that request, the requested number will be assigned to the Customer.

- (F) FGA switching, when used in the terminating direction, is arranged with dial tone start-dial signaling. When used in the terminating direction FGA switching may, at the option of the Customer, be arranged for dial pulse or dual tone multifrequency address signaling, subject to availability of equipment at the first point of switching. When FGA switching is provided in a hunt group or uniform call distribution arrangement, all FGA switching will be arranged for the same type of address signaling.
- (G) No address signaling is provided by the Telephone Company when FGA switching is used in the originating direction. Address signaling in such cases, if required by the Customer, must be provided by the Customer's End User using inband tone signaling techniques. Such inband tone address signals will not be regenerated by the Telephone Company and will be subject to the ordinary transmission capabilities of the Local Transport provided.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.1 Description (Cont'd)

- (H) FGA switching, when used in the terminating direction, may be used to access valid NXXs in the LATA, local operator service (0- and 0+), Directory Assistance (411 where available and 555-1212), emergency reporting service (911 where available), exchange telephone repair (611 where available), time or weather announcement services of the Telephone Company, community information services of an information service provider, and other Customers' services (by dialing the appropriate digits).

Charges for FGA terminating calls requiring operator assistance or calls to 611 or 911 will only apply where sufficient call details are available. Additional non-access charges will also be billed on a separate account for (1) an operator surcharge, as set forth in the local exchange tariffs, for local operator assistance (0- and 0+) calls, (2) calls to certain community information services, for which rates are applicable under Telephone Company exchange service tariffs, e.g., 976 (DIAL IT) Network Services, and, (3) calls from a FGA line to another Customer's service in accordance with that Customer's applicable service rates when the Telephone Company performs the billing function for that Customer.

- (I) When a FGA switching arrangement for an individual Customer (a single line or entire hunt group) is discontinued at an end office, an intercept announcement is provided. This arrangement provides, for a limited period of time, an announcement that the service associated with the number dialed has been disconnected.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.2 Optional Features

Following are the various nonchargeable optional features that are available in lieu of, or in addition to, the standard features provided with Feature Group A. They are provided as Common Switching, Transport Termination or Local Transport options.

(A) Common Switching Options

Descriptions of the common switching optional features are set forth in 6.9 .

- (1) Call Denial on Line or Hunt Group
- (2) Service Code Denial on Line or Hunt Group
- (3) Hunt Group Arrangement
- (4) Uniform Call Distribution Arrangement
- (5) Nonhunting Number for Use with Hunt Group or Uniform Call Distribution Arrangement
- (6) Band Advance Arrangement for Use with Special Access Service Utilized in the Provision of WATS-Type Services
- (7) Hunt Group Arrangement for Use with Special Access Service Utilized in the Provision of WATS-Type Services
- (8) Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS-Type Services
- (9) Nonhunting Number Associated with a Hunt Group Arrangement or Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS-Type Services

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.2 Optional Features (Cont'd)

(B) Transport Termination

- (1) Two-way operation with dial pulse address signaling and loop start supervisory signaling
- (2) Two-way operation with dial pulse address signaling and ground start supervisory signaling
- (3) Two-way operation with dial tone multifrequency address signaling and loop start supervisory signaling
- (4) Two-way operation with dial tone multifrequency address signaling and ground start supervisory signaling
- (5) Terminating operation with dial pulse address signaling and loop start supervisory signaling
- (6) Terminating operation with dial pulse address signaling and ground start supervisory signaling
- (7) Terminating operation with dual tone multifrequency address signaling and loop start supervisory signaling
- (8) Terminating operation with dual tone multifrequency address signaling and ground start supervisory signaling
- (9) Originating operation with loop start supervisory signaling
- (10) Originating operation with ground start supervisory signaling

(C) Local Transport Options

- (1) Supervisory Signaling (as set forth in 15.1.1(E))
- (2) Customer Specified Entry Switch Receive Level (as set forth in 15.1.1(E))

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.3 Optional Features Provided In Local Tariffs

Certain other features which may be available in connection with Feature Group A (e.g., Speed Calling, Remote Call Forwarding, Bill Number Screening, IntraLATA extensions) are provided under the Telephone Company's local and/or general exchange service tariffs.

6.5.4 Measuring Access Minutes

Customer Feature Group A traffic to end offices will be measured (i.e., recorded) or assumed by the Telephone Company at end office switches. Originating and terminating calls will be measured (i.e., recorded) or assumed by the Telephone Company to determine the basis for computing chargeable access minutes. In the event the Customer message detail is not available because the Telephone Company lost or damaged tapes or incurred recording system outages, the Telephone Company will estimate the volume of lost Customer access minutes of use based on previously known values.

For terminating calls over FGA and for originating calls over FGA (when the off-hook supervisory signal is provided by the Customer's equipment before the called party answers), the measured minutes are the chargeable access minutes. For originating calls over FGA (when the off-hook supervisory signal is forwarded by the Customer's equipment when the called party answers), chargeable originating access minutes are derived from recorded minutes using the same formula as set forth in 6.7.4 for Feature Group C.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.4 Measuring Access Minutes (Cont'd)

For originating calls over FGA, usage measurement begins when the originating FGA first point of switching receives an off-hook supervisory signal forwarded from the Customer's point of termination. This off-hook signal may be provided by the Customer's equipment before the called party answers, or forwarded by the Customer's equipment when the called party answers.

The measurement of originating call usage over FGA ends when the originating FGA first point of switching receives an on-hook supervisory signal from either the originating End User's end office, indicating the originating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

For terminating calls over FGA, usage measurement begins when the terminating FGA first point of switching receives an off-hook supervisory signal from the terminating End User's end office, indicating the terminating End User has answered. The measurement of terminating call usage over FGA ends when the terminating FGA first point of switching receives an on-hook supervisory signal from either the terminating End User's end office, indicating the terminating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

FGA access minutes or fractions thereof, the exact value of the fraction being a function of the switch technology where the measurement is made, are accumulated over the billing period for each line or hunt group, and are then rounded up to the nearest access minute for each line or hunt group.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.4 Measuring Access Minutes (Cont'd)

Assumed minutes are used for FGA services which originate or terminate in end offices not equipped with measurement capabilities and in such cases are the chargeable access minutes.

Where originating and terminating measurement capability does not exist for Feature Group A provided to the first point of switching, the number of access minutes will be assumed as set forth in 17.2.4 .

Where measurement capability exists for either originating or terminating usage, but not both, on a line arranged for two way calling, the number of access minutes per line per month will be assumed usage, as set forth in 17.2.4 , or the measured usage, whichever is greater. If the usage in the measured direction exceeds the assumed access minutes per line per month, no usage will be assigned in the unmeasured direction. If the measured usage is less than the assumed access minutes per line per month, the usage in the unmeasured direction will be the assumed usage, as set forth in 17.2.4 , for that unmeasured direction except that the total of measured and assumed minutes in such instances will not exceed the total assumed usage designated for two way calling set forth in 17.2.4 . If the total exceeds the assumed minutes set forth in 17.2.4 . , the assigned minutes shall be reduced so that the total of measured and unmeasured minutes equals the assumed minutes for two way calling set forth in 17.2.4 .

Additionally, when the line is arranged for one way calling and there is no measurement capability for that direction, assumed originating access minutes, as set forth in 17.2.4(B) , will be assigned for originating calling only lines and assumed terminating access minutes, as set forth in 17.2.4(C) , will be assigned for terminating calling only lines.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.4 Measuring Access Minutes (Cont'd)

The following matrix illustrates the application of assumed access minutes for FGA as set forth in 17.2.4(A), (B) and (C) .

<u>Service Ordered As</u>	<u>Can Measure Originating</u>	<u>Can't Measure Originating</u>	<u>Can Measure Terminating</u>	<u>Can't Measure Terminating</u>
Originating Only	Actual	1,510	N/A	N/A
Terminating Only	N/A	N/A	Actual	2,685
Both Originating and Terminating (originating measurement greater than 4195)	Actual	N/A	N/A	0
Both Originating and Terminating (originating measurement equal or less than 4195)	Actual	N/A	N/A	0 to 2685*
Both Originating and Terminating (terminating measurement greater than 4195)	N/A	0	Actual	N/A
Both Originating and Terminating (terminating measurement equal or less than 4195)	N/A	0 to 1510*	Actual	N/A

* Sum of actual and assumed cannot exceed 4195. Reduce assumed minutes of use if necessary.

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6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group A (FGA) (Cont'd)

6.5.4 Measuring Access Minutes (Cont'd)

Notwithstanding the preceding, when Feature Group A is used for the provision of WATS-type service where measurement capability exists at the WATS Serving Office but not at the Feature Group A first point of switching, the measured WATS-type originating and/or terminating minutes of use shall be separately summed and compared to their respective total assumed originating and/or terminating minutes of use. The number of access minutes per line per month will be the assumed or the measured usage, whichever is greater.

6.5.5 Testing Capabilities

FGA is provided, in the terminating direction where equipment is available, with seven digit access to balance (100 type) test line and milliwatt (102 type) test line. In addition to the tests described in 6.2.4 which are included with the installation of service (Acceptance Testing) and as ongoing routine testing, Additional Cooperative Acceptance Testing and Additional Manual Testing are available as set forth in 13.3.1 .

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6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB)

6.6.1 Description

- (A) FGB Access, which is available to all Customers, provides trunk side access to Telephone Company end office switches with an associated uniform 950-XXXX access code. FGB trunk side access is provided for the Customer's use in originating communications from and terminating communications to an Interexchange Carrier's Intrastate Service or a Customer provided intrastate communications capability. The Customer must specify the Interexchange Carrier to which the FGB service is connected or, in the alternative, specify the means by which the FGB access communications is transported to another state. Special Access Services utilized for connection with FGB at Telephone Company designated WATS Serving Offices as set forth in Section 7. may be ordered separately by a Customer other than the Customer which orders the FGB Switched Access Service for the provision of WATS or WATS-type services. Special Access Services are ordered as set forth in 5.2 .
- (B) FGB, when directly routed to an end office (i.e., provided without the use of an access tandem switch), is provided at appropriately equipped Telephone Company electronic end office switches. When provided via Telephone Company designated electronic access tandem switches, FGB switching is provided at Telephone Company electronic end office switches.
- (C) FGB is provided as trunk side switching through the use of end office or access tandem switch trunk equipment. The switch trunk equipment is provided with wink start start-pulsing signals and answer and disconnect supervisory signaling.

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6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.1 Description (Cont'd)

- (D) FGB switching is provided with multifrequency address signaling in both the originating and terminating directions. Except for FGB switching provided with the automatic number identification (ANI) as set forth in 6.9.1(F) and other address signaling in the originating direction, if required by the Customer, must be provided by the Customer's End User using inband tone signaling techniques. Such inband tone address signals will not be regenerated by the Telephone Company and will be subject to the ordinary transmission capabilities of the Local Transport provided.
- (E) The access code for FGB switching is a uniform access code. The form of the uniform access code is 950-XXXX. A uniform access code(s) will be assigned to the Customer for the Customer's domestic communications. These access codes will be the assigned access numbers of all FGB switched access service provided to the Customer by the Telephone Company.
- (F) The Telephone Company will establish a trunk group or groups for the Customer at end office switches or access tandem switches where FGB switching is ordered. When required by technical limitations, a separate trunk group will be established for each type of FGB switching arrangement provided. Different types of FGB or other switching arrangements may be combined in a single trunk group at the option of the Telephone Company.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.1 Description (Cont'd)

- (G) FGB switching, when used in the terminating direction, may be used to access valid NXXs in the LATA, time or weather announcement services of the Telephone Company, community information services of an information service provider and other Customers' services (by dialing the appropriate digits). When directly routed to an end office, only those valid NXX codes served by that end office may be accessed. When routed through an access tandem, only those valid NXX codes served by end offices subtending the access tandem may be accessed.

Calls in the terminating direction will not be completed to the 950-XXXX access codes, local operator assistance (0- and 0+), Directory Assistance (411 and 555-1212), service codes 611 and 911 or 10XXX access codes. FGB may not be switched, in the terminating direction, to Switched Access Service Feature Groups B, C and D.

- (H) When all FGB switching arrangements are discontinued at an end office and/or in a LATA, an intercept announcement is provided. This arrangement provides, for a limited period of time, an announcement that the service associated with the number dialed has been disconnected.
- (I) For FGB switched access service to a Mobile Telephone Switching Office (MTSO) directly interconnected to a Telephone Company access tandem office, the Customer will be billed only the Local Transport premium rate element for the FGB usage. The mileage used to determine the monthly rate for the local transport rate element is as set forth in 6.4.6(D).

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6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.2 Optional Features

Following are descriptions of the various nonchargeable optional features that are available in lieu of, or in addition to, the standard features provided with Feature Group B. They are set forth in (A), (B) and (C) and are provided as Common Switching, Transport Termination and Local Transport options. Additionally, other optional features provided in local tariffs are set forth in (D) .

(A) Common Switching Options

Descriptions of the common switching optional features are set forth in 6.9 .

- (1) Automatic Number Identification (ANI)
- (2) Up to 7 Digit Outpulsing of Access Digits to Customer
- (3) Band Advance Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (4) Hunt Group Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (5) Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (6) Nonhunting Number Associated with Hunt Group Arrangement or Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.2 Optional Features (Cont'd)

(B) Local Transport Options

- (1) Customer Specification of Local Transport Termination
- (2) Optional Supervisory Signaling
- (3) Customer Specified Entry Switch Receive Level

Inasmuch as these options concern transmission levels and signaling they are set forth in 15.1.1 .

(C) Optional Features Provided in Local Tariffs

Another feature, Bill Number Screening, which may be available in connection with FGB, is provided under the Telephone Company's local and/or general exchange service tariffs.

6.6.3 Design and Traffic Routing

For Feature Group B, the trunk directionality and traffic routing of the Switched Access Service between the customer designated premises and the entry switch are determined by the Customer's order for service; except the Telephone Company will designate the first point(s) of switching and routing to be used where equal access is provided through a centralized equal access arrangement. Those Telephone Company offices providing equal access through centralized arrangements are identified in NECA Tariff FCC No. 4. Additionally, the Customer may order the optional feature Customer Specification of Local Transport Termination as set forth in 15.1.1 .

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6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.4 Measuring Access Minutes

Customer traffic to end offices will be measured (i.e., recorded) or assumed by the Telephone Company at end office switches or access tandem switches. Originating and terminating calls will be measured (i.e., recorded) or assumed by the Telephone Company to determine the basis for computing chargeable access minutes. In the event the Customer message detail is not available because the Telephone Company lost or damaged tapes or incurred recording system outages, the Telephone Company will estimate the volume of lost Customer access minutes of use based on previously known values.

For both originating and terminating calls over FGB the measured minutes are the chargeable access minutes.

For originating calls over FGB, usage measurement begins when the originating FGB first point of switching receives answer supervision forwarded from the Customer's point of termination, indicating the Customer's equipment has answered.

The measurement of originating call usage over FGB ends when the originating FGB first point of switching receives disconnect supervision from either the originating End User's end office, indicating the originating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

For terminating calls over FGB, usage measurement begins when the terminating FGB first point of switching receives answer supervision from the terminating End User's end office, indicating the terminating End User has answered.

The measurement of terminating call usage over FGB ends when the terminating FGB first point of switching receives disconnect supervision from either the terminating End User's end office, indicating the terminating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.4 Measuring Access Minutes (Cont'd)

FGB access minutes or fractions thereof, the exact value of the fraction being a function of the switch technology where the measurement is made, are accumulated over the billing period for each end office, and are then rounded up to the nearest access minute for each end office.

Assumed minutes are used for FGB services which originate or terminate in end offices not equipped with measurement capabilities and in such cases are the chargeable access minutes.

Where originating and terminating measurement capability does not exist for Feature Group B provided to the first point of switching, the number of access minutes will be assumed, as set forth in 17.2.4(D), when the trunk is arranged for two way calling.

Where measurement capability exists for either originating or terminating usage, but not both, on a trunk arranged for two way calling, the number of access minutes per trunk per month will be assumed usage, as set forth in 17.2.4(D), or the measured usage, whichever is greater. If the usage in the measured direction exceeds the assumed access minutes per trunk per month, no usage will be assigned in the unmeasured direction. If the measured usage is less than the assumed access minutes per trunk per month, the usage in the unmeasured direction will be the assumed usage, as set forth in 17.2.4, for that unmeasured direction except that the total of measured and assumed minutes in such instances will not exceed the total assumed usage designated for two way calling set forth in 17.2.4(D). If the total exceeds the assumed minutes set forth in 17.2.4, the assigned minutes shall be reduced so that the total of measured and unmeasured minutes equals the assumed minutes for two way calling set forth in 17.2.4(D).

Additionally, when the trunk is arranged for one way calling and there is no measurement capability for that direction, assumed originating access minutes, as set forth in 17.2.4(E), will be assigned for originating calling only lines and assumed terminating access minutes, as set forth in 17.2.4(F), will be assigned for terminating calling only lines.

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6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.4 Measuring Access Minutes (Cont'd)

The following matrix illustrates the application of assumed access minutes for FGB as set forth in 17.2.4(D), (E) and (F) .

<u>Service Ordered As</u>	<u>Can Measure Originating</u>	<u>Can't Measure Originating</u>	<u>Can Measure Terminating</u>	<u>Can't Measure Terminating</u>
Originating Only	Actual	3,132	N/A	N/A
Terminating Only	N/A	N/A	Actual	5,568
Both Originating and Terminating (originating measurement greater than 8700)	Actual	N/A	N/A	0
Both Originating and Terminating (originating measurement equal or less than 8700)	Actual	N/A	Actual	0 to 5568*
Both Originating and Terminating (terminating measurement greater than 8700)	N/A	0	Actual	N/A
Both Originating and Terminating (terminating measurement equal or less than 8700)	N/A	0 to 3132*	Actual	N/A

* Sum of actual and assumed cannot exceed 8700. Reduce assumed minutes of use if necessary.

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6. Switched Access Service (Cont'd)

6.5 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.4 Measuring Access Minutes (Cont'd)

Notwithstanding the preceding, when Feature Group B is used for the provision of WATS or WATS-type service where measurement capability exists at the WATS Serving Office but not at the Feature Group B first point of switching, the measured WATS or WATS-type originating and/or terminating minutes of use shall be separately summed and compared to their respective total assumed originating and/or terminating minutes of use. The number of minutes per trunk per month will be the assumed or the measured usage, whichever is greater.

When Feature Group B is ordered at an access tandem and end office specific usage measurement is not available, the actual or assumed originating and/or terminating minutes of use as determined by the exchange carrier providing the access tandem will be apportioned among all subtending end offices. For each end office, such apportionment shall be based on the ratio of the total number of subscriber lines in each end office subtending the access tandem to the total number of subscriber lines associated with all end offices subtending the access tandem. For purposes of administering this regulation, subscriber lines are defined as exchange service lines, Centrex lines and Centrex-type lines provided by the telephone companies under local and/or general exchange service tariffs. The resulting ratio for each end office is then applied to the total access area originating and/or terminating minutes of use to determine originating and/or terminating minutes of use to be assigned for billing purposes to each subtending end office in the access area.

The ratio used to calculate the access minutes will be determined by the Telephone Company and provided to the Customer upon his request within 15 days of the receipt of such request.

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ACCESS TARIFF

6. Switched Access Service (Cont'd)

6.6 Description and Provision of Feature Group B (FGB) (Cont'd)

6.6.5 Testing Capabilities

FGB is provided, in the terminating direction where equipment is available, with seven digit access to balance (100 type) test line, milliwatt (102 type) test line, nonsynchronous or synchronous test line, automatic transmission measuring (105 type) test line, data transmission (107 type) test line, loop around test line, short circuit test line and open circuit test line. In addition to the tests described in 6.2.4 which are included with the installation of service (Acceptance Testing) and as ongoing routine testing, Additional Cooperative Acceptance Testing, Additional Automatic Testing, and Additional Manual Testing are available as set forth in 13.3.1 .

6.7 Description and Provision of Feature Group C (FGC)

6.7.1 Description

- (A) FGC Access provides trunk side access to Telephone Company end office switches for the Customer's use in originating and terminating communications. Originating and terminating FGC Access is available to providers of MTS and WATS. Originating FGC Access is available to all Customers when used to provide 800 Data Base service. Terminating FGC access is available to all Customers other than providers of MTS and WATS when such access is used in conjunction with the provision of 800 Data Base service, but only for purposes of testing. Existing FGC Access will be converted to Feature Group D Access when Feature Group D Access becomes available in an end office. Special Access Services utilized for connection with FGC at Telephone Company designated WATS Serving Offices as set forth in Section 7. may be ordered separately by a Customer other than the Customer which orders the FGC Switched Access Service (i.e., a provider of MTS and WATS) for the provision of WATS Services. Special Access Services are ordered as set forth in 5.2 .

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.1 Description (Cont'd)

- (B) Feature Group C switching is provided at all end office switches unless Feature Group D end office switching is provided in the same office. When FGD switching is available, FGC switching will not be provided. FGC is provided at Telephone Company end office switches on a direct trunk basis or via Telephone Company designated access tandem switches. Feature Group C switching is furnished to providers of MTS and WATS. Additionally, originating Feature Group C switching is available to all Customers when used to provide 800 Data Base service. Terminating Feature Group C switching is available to all Customers who are not MTS and WATS providers only when such terminating access is for purposes of testing Feature Group C facilities provided in conjunction with 800 Data Base service.
- (C) FGC is provided as trunk side switching through the use of end office or access tandem switch trunk equipment. The switch trunk equipment is provided with answer and disconnect supervisory signaling. Wink start start-pulsing signals are provided in all offices where available. In those offices where wink start start-pulsing signals are not available, delay dial start-pulsing signals will be provided, unless immediate dial pulse signaling is provided, in which case no start-pulsing signals are provided.
- (D) FGC is provided with multifrequency address signaling. In such switches, the address signaling will be dial pulse or immediate dial pulse signaling, whichever is available. Up to 12 digits of the called party number dialed by the Customer's End User using dual tone multifrequency or dial pulse address signals will be provided by Telephone Company equipment to the Customer's premises where the Switched Access Service terminates. Such called party number signals will be subject to the ordinary transmission capabilities of the Local Transport provided.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.1 Description (Cont'd)

- (E) No access code is required for FGC switching. The telephone number dialed by the Customer's End User shall be a seven or ten digit number for calls in the North American Numbering Plan (NANP).
- (F) FGC switching, when used in the terminating direction, may be used to access valid NXXs in the LATA, time or weather announcement services of the Telephone Company, community information services of an information provider, and other Customer's services (by dialing the appropriate codes) when the services can be reached using valid NXX codes. When directly routed to an end office, only those valid NXX codes served by that office may be accessed. When routed through an access tandem, only those valid NXX codes served by offices subtending the access tandem may be accessed. Calls in the terminating direction will not be completed to 950-XXXX access codes, local operator assistance (0- and 0+), Directory Assistance (411 and 555-1212), service codes 611 and 911 and 10XXX access codes. FGC may not be switched, in the terminating direction, to Switched Access Service Feature Groups B, C or D.
- (G) The Telephone Company will establish a trunk group or groups for the Customer at end office switches or access tandem switches where FGC switching is provided. When required by technical limitations, a separate trunk group will be established for each type of FGC switching arrangement provided. Different types of FGC or other switching arrangements may be combined in a single trunk group at the option of the Telephone Company.
- (H) FGC switching is provided with multifrequency address signaling. With multifrequency address signaling, up to 12 digits of the called party number dialed by the Customer's End User using dual tone multifrequency or dial pulse address signals will be provided by Telephone Company equipment to the Customer's premises where the Switched Access Service terminates. Such address signals will be subject to the ordinary transmission capabilities of the Local Transport provided.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.2 Optional Features

Following are descriptions of the various nonchargeable and chargeable optional features that are available in lieu of, or in addition to, the standard features provided with Feature Group C. Nonchargeable optional features are provided as Common Switching, Transport Termination and Local Transport options as set forth in (A) through (C). Chargeable optional features are set forth in (D).

(A) Common Switching Options

Descriptions of the common switching optional features are set forth in 6.9.

- (1) Automatic Number Identification (ANI)
- (2) Signaling Options
 - (a) Delay Dial Start-Pulsing Signaling
 - (b) Immediate Dial Pulse Address Signaling
 - (c) Dial Pulse Address Signaling
- (3) Service Class Routing
- (4) Alternate Traffic Routing
- (5) Trunk Access Limitation
- (6) Band Advance Arrangement Associated with Special Access Service Utilized in the Provision of WATS Service
- (7) End Office End User Line Service Screening for Use with Special Access Service Utilized in the Provision of WATS Service
- (8) Hunt Group Arrangement for Use with Special Access Service Utilized in the Provision of WATS Service

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.2 Optional Features (Cont'd)

(A) Common Switching Options (Cont'd)

- (9) Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS Services
- (10) Nonhunting Number Associated with a Hunt Group Arrangement or Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS Services

(B) Local Transport Options

(1) Supervisory Signaling

The Supervisory Signaling optional feature, due to its technical nature, is set forth in 15.1.1 .

(2) Reserved for Future Use

(3) Multifrequency Address Signaling

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.2 Optional Features (Cont'd)

(C) Reserved for Future Use

6.7.3 Design and Traffic Routing

For Feature Group C, the Telephone Company shall design and determine the routing of Switched Access Service, including the selection of the first point of switching and the selection of facilities from the interface to any switching point and to the end offices where busy hour minutes of capacity are ordered. The Telephone Company shall also decide if capacity is to be provided by originating only, terminating only, or two-way trunk groups. Finally, the Telephone Company will decide whether trunk side access will be provided through the use of two-wire or four-wire trunk terminating equipment.

Selection of facilities and equipment and traffic routing of the service are based on standard engineering methods, available facilities and equipment, and the Telephone Company traffic routing plans. If the Customer desires routing or directionality different from that determined by the Telephone Company, the Telephone Company will work cooperatively with the Customer in determining (1) whether the service is to be routed directly to an end office or through an access tandem switch and (2) the directionality of the service.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.4 Measuring Access Minutes

Customer traffic to end offices will be measured (i.e., recorded) by the Telephone Company at end office switches or access tandem switches. Originating and terminating calls will be measured or imputed by the Telephone Company to determine the basis for computing chargeable access minutes. In the event the Customer message detail is not available because the Telephone Company lost or damaged tapes or incurred recording system outages, the Telephone Company will estimate the volume of lost Customer access minutes of use based on previously known values.

For terminating calls over FGC when measurement capability exists, the measured minutes are the chargeable access minutes. For originating calls over FGC, chargeable originating access minutes are derived from recorded minutes in the following manner:

Step 1: Obtain recorded originating minutes and messages from the appropriate recording data.

Step 2: Obtain the total attempts by dividing the originating measured messages by the completion ratio. Completion ratios (CR) are obtained separately for the major call categories such as DDD, operator, 800 and 900 from a sample study which analyzes the ultimate completion status of the total attempts which receive acknowledgment from the Customer. That is, Measured Messages divided by Completion Ratio equals Total Attempts.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.4 Measuring Access Minutes (Cont'd)

Step 3: Obtain the total non-conversation time additive (NCTA) by multiplying the total attempts (Step 2) by the NCTA per attempt ratio. The NCTA per attempt ratio is obtained from the sample study identified in Step 2 by measuring the non-conversation time associated with both completed and incompletd attempts. The total NCTA is the time on a completed attempt from Customer acknowledgment of receipt of call to called party answer (set up and ringing) plus the time on an incompletd attempt from Customer acknowledgment of call until the access tandem or end office receives a disconnect signal (ring - no answer, busy or network blockage). That is, Total Attempts times Non-Conversation Time per Attempt Ratio equals Total NCTA.

Step 4: Obtain total chargeable originating access minutes by adding the total NCTA (Step 3) to the recorded originating measured minutes. That is, Measured Minutes plus NCTA equals Chargeable Originating Access Minutes.

Following is an example which illustrates how the chargeable originating access minutes are derived from the measured originating minutes using this formula.

Where: Measured Minutes (M. Min.) = 7,000
Measured Messages (M. Mes.) = 1,000
Completion Ratio (CR) = .75
NCTA per Attempt = .4

$$(1) \text{ Total Attempts} = \frac{1,000 (\text{m. Mes.})}{.75 (\text{CR})} = 1,333.3$$

$$(2) \text{ Total NCTA} = .4 (\text{NCTA per Attempt}) \times 1,333.33 = 533.33$$

$$(3) \text{ Total Chargeable Originating Access Minutes} = 7,000 (\text{M. Min.}) + 533.33 (\text{NCTA}) = 7,533.33$$

FGC access minutes or fractions thereof, the exact value of the fraction being a function of the switch technology where the measurement is made, are accumulated over the billing period for each end office, and are then rounded up to the nearest access minute for each end office.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.4 Measuring Access Minutes (Cont'd)

Originating Usage

For originating calls over FGC, provided with Multi-Frequency Signaling, usage measurement begins when the originating FGC first point of switching receives answer supervision from the Customer's point of termination, indicating the called party has answered.

The measurement of originating call usage over FGC provided with Multi-Frequency Signaling ends when the originating FGC first point of switching receives disconnect supervision from either the originating End User's end office, indicating the originating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

Terminating Usage

For terminating calls over FGC the chargeable access minutes are either measured to derived. For terminating calls over FGC where measurement capability does not exist, terminating FGC usage is derived from originating usage, excluding usage from calls to closed end services.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.4 Measuring Access Minutes (Cont'd)

Terminating Usage (Cont'd)

For terminating calls over FGC provided with Multi-Frequency Signaling, where measurement capability exists, the measurement of chargeable access minutes begins when the terminating FGC first point of switching receives answer supervision from the terminating End User's end office, indicating the terminating End User has answered. This measurement ends when the terminating FGC first point of switching receives an on-hook supervisory signal from the terminating End User's end office, indicating the terminating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.5 Design Blocking Probability

The Telephone Company will design the facilities used in the provision of Switched Access Service FGC to meet the blocking probability criteria as set forth in (A) and (B) .

- (A) For Feature Group C, the design blocking objective will be no greater than one percent (.01) between the point of termination at the Customer's designated premises and the first point of switching when traffic is directly routed without an alternate route. Standard traffic engineering methods will be used by the Telephone Company to determine the number of transmission paths required to achieve this level of blocking.
- (B) The Telephone Company will perform routine measurement functions to assure that an adequate number of transmission paths are in service. The Telephone Company will recommend that additional capacity (i.e., busy hour minutes of capacity) be ordered by the Customer when additional paths are required to reduce the measured blocking to the designed blocking level. For the capacity ordered, the design blocking objective is assumed to have been met if the routine measurements show that the measured blocking does not exceed the threshold listed in the following tables.

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.5 Design Blocking Probability (Cont'd)

(B) (Cont'd)

- (1) For transmission paths carrying only first routed traffic direct between an end office and Customer's designated premises without an alternate route, and for paths carrying only overflow traffic, the measured blocking thresholds are as follows:

Number of Transmission paths Per Trunk Group	Measured Blocking Thresholds in the Time Consistent Busy Hour for the Number of Measurements Taken Between 8:00 a.m. and 11:00 p.m. <u>Per Trunk Group</u>			
	15-20	11-14	7-10	3-6
	Measurements	Measurements	Measurements	Measurements
2	7%	8%	9%	14%
3	5%	6%	7%	9%
4	5%	6%	7%	8%
5-6	4%	5%	6%	7%
7 or more	3%	3.5%	4%	6%

- (2) For transmission paths carrying first routed traffic between an end office and Customer's premises via an access tandem, the measured blocking thresholds are as follows:

Number of Transmission Paths Per <u>Trunk Group</u>	Measured Blocking Thresholds in the Time Consistent Busy Hour for the Number of Measurements Taken Between 8:00 a.m. and 11:00 p.m. <u>Per Trunk Group</u>			
	15-20	11-14	7-10	3-6
	Measurements	Measurements	Measurements	Measurements
2	4.5%	5.5%	6.0%	9.5%
3	3.5%	4.0%	4.5%	6.0%
4	3.5%	4.0%	4.5%	5.5%
5-6	2.5%	3.5%	4.0%	4.5%
7 or more	2.0%	2.5%	3.0%	4.0%

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6. Switched Access Service (Cont'd)

6.7 Description and Provision of Feature Group C (FGC) (Cont'd)

6.7.6 Testing Capabilities

FGC is provided, in the terminating direction where equipment is available, with seven digit access to balance (100 type) test line, milliwatt (102 type) test line, nonsynchronous or synchronous test line, automatic transmission measuring (105 type) test line, data transmission (107 type) test line, loop around test line, short circuit test line and open circuit test line. In addition to the tests described in 6.2.4 which are included with the installation of service (Acceptance Testing) and as ongoing routine testing, Additional Cooperative Acceptance Testing, Additional Automatic Testing and Additional Manual Testing are available as set forth in 13.3.1 .

6.8 Description and Provision of Feature Group D (FGD)

6.8.1 Description

- (A) FGD Access, which is available to all Customers, provides trunk side access to Telephone Company end office switches. Special Access Services utilized for connection with FGD at Telephone Company designated WATS Serving offices as set forth in Section 7. may be ordered separately by a Customer other than the Customer which orders the FGD Switched Access Service for the provision of WATS or WATS-type services. Special Access Services are ordered as set forth in 5.2 .
- (B) FGD is provided at Telephone Company designated end office switches whether routed directly or via Telephone Company designated electronic access tandem switches. The Telephone Company will designate the first point(s) of switching for FGD services where the Telephone Company elects to provide equal access through a centralized equal access arrangement. Those Telephone Company offices providing equal access through centralized arrangements are identified in NECA Tariff FCC No. 4.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.1 Description (Cont'd)

- (C) FGD is provided as trunk side switching through the use of end office or access tandem switch trunk equipment. The switch trunk equipment is provided with wink start start-pulsing signals and answer and disconnect supervisory signaling.
- (D) Reserved for Future Use
- (E) FGD switching, when used in the terminating direction, may be used to access valid NXXs in the LATA, time or weather announcement services of the Telephone Company, community information services of an information service provider, and other Customers' services (by dialing the appropriate codes) when such services can be reached using valid NXX codes. When directly routed to an end office, only those valid NXX codes served by that office may be accessed. When routed through an access tandem, only those valid NXX codes served by end offices subtending the access tandem may be accessed. Calls in the terminating direction will not be completed to 950-XXXX access codes, local operator assistance (0- and 0+), Directory Assistance (411 and 555-1212), service codes 611 and 911 and 10XXX access codes. FGD may not be switched, in the terminating direction, to Switched Access Service Feature Groups B, C or D.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.1 Description (Cont'd)

- (F) The Telephone Company will establish a trunk group or groups for the Customer at end office switches or access tandem switches where FGD switching is provided. When required by technical limitations, a separate trunk group will be established for each type of FGD switching arrangement provided. Different types of FGD or other switching arrangements may be combined in a single trunk group at the option of the Telephone Company.
- (G) The access code for FGD switching is a uniform access code of the form 10XXX. A uniform access code(s) will be the assigned number of all FGD access provided to the Customer by the Telephone Company. No access code is required for calls to a Customer over FGD Switched Access Service if the End User's telephone exchange service is arranged for presubscription to that Customer.

Where no access code is required, the number dialed by the Customer's End User shall be a seven or ten digit number for calls in the North American Numbering Plan (NANP). When the 10XXX access code is used, FGD switching also provides for dialing the digit 0 for access to the Customer's operator, 911 for access to the Telephone Company's emergency reporting service, or the end-of-dialing digit (#) for cut-through access to the customer designated premises.

Unless otherwise ordered by the NHPUC, when equal access is provided through a centralized equal access arrangement the 10XXX access code may not be available in certain equal access offices. Those offices which provide FGD Switched Access Service without the 10XXX access code are identified in NECA Tariff FCC No. 4.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.1 Description (Cont'd)

- (H) FGD switching will be arranged to accept calls from telephone exchange service locations without the need for dialing the 10XXX uniform access code. Each telephone exchange service line may be marked with a code to identify which 10XXX code its calls will be directed to for intraLATA service.
- (I) When a Customer has had FGB access in an end office and subsequently replaces the FGB access with FGD access, at the mutual agreement of the Customer and the Telephone Company, the Telephone Company will direct calls dialed by the Customer's End Users using the Customer's previous FGB access code to the Customer's FGD access service. The Customer must be prepared to handle normally dialed FGD calls, as well as calls dialed with the FGB access code which requires the Customer to receive additional address signaling from the End User. Such calls will be rated as FGD. The Telephone Company may, with 90 days' written notice to the Customer, discontinue this arrangement.
- (J) For FGD switched access service to a Mobile Telephone Switching Office (MTSO) directly interconnected to a Telephone Company access tandem office, the Customer will be billed only the Local Transport rate element for the FGD usage. The mileage used to determine the monthly rate for the local transport rate element is as set forth in 6.4.5(D).

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.2 Optional Features

Following are the various nonchargeable and chargeable optional features that are available in lieu of, or in addition to, the standard features provided with Feature Group D. Nonchargeable Optional Features are provided as Common Switching, Transport Termination and Local Transport options as set forth in (A) through (C). Chargeable optional features are set forth in (D).

(A) Common Switching Options

Descriptions are set forth in 6.9 .

- (1) Automatic Number Identification (ANI)
- (2) Service Class Routing
- (3) Alternate Traffic Routing
- (4) Trunk Access Limitation
- (5) Call Gapping Arrangement
- (6) International Carrier Option
- (7) Band Advance Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (8) End Office End User Line Service Screening for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (9) Hunt Group Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (10) Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services
- (11) Nonhunting Number Associated with Hunt Group Arrangement or Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.2 Optional Features (Cont'd)

(B) Local Transport Options

(1) Supervisory Signaling

The Supervisory Signaling optional feature, due to its technical nature, is set forth in 15.1.1 .

(2) Reserved for Future Use

(3) Multifrequency Address Signaling

(4) Reserved for Future Use

(5) Reserved for Future Use

(6) Reserved for Future Use

(C) Reserved for Future Use

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.3 Design and Traffic Routing

For Feature Group D, the Telephone Company shall design and determine the routing of Switched Access Service, including the selection of the first point of switching and the selection of facilities from the interface to any switching point and to the end offices where busy hour minutes of capacity are ordered. The Telephone Company shall also decide if capacity is to be provided by originating only, terminating only, or two-way trunk groups. Finally, the Telephone Company will decide whether trunk side access will be provided through the use of two-wire or four-wire trunk terminating equipment.

Selection of facilities and equipment and traffic routing of the service are based on standard engineering methods, available facilities and equipment, and the Telephone Company traffic routing plans. If the Customer desires routing or directionality different from that determined by the Telephone Company, the Telephone Company will work cooperatively with the Customer in determining (1) whether the service is to be routed directly to an end office or through an access tandem switch and (2) the directionality of the service; except the Telephone Company will designate the first point(s) of switching and routing to be used where equal access is provided through a centralized equal access arrangement. Those Telephone Company offices providing equal access through centralized arrangements are identified in NECA Tariff FCC No. 4.

6.8.4 Measuring Access Minutes

Customer traffic to end offices will be recorded at end office switches or access tandem switches. Originating and terminating calls will be measured or derived to determine the basis for computing chargeable access minutes. In the event the Customer message detail is not available because the Telephone Company lost or damaged tapes or incurred recording system outages, the Telephone Company will estimate the volume of lost Customer access minutes of use based on previously known values.

FGD access minutes or fractions thereof, the exact value of the fraction being a function of the switch technology where the measurement is made, are accumulated over the billing period for each end office, and are then rounded up to the nearest access minute for each end office.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.4 Measuring Access Minutes (Cont'd)

Originating Usage

For originating calls over FGD the measured minutes are the chargeable access minutes.

For originating calls over FGD, provided with Multi-Frequency Signaling, usage measurement begins when the originating FGD first point of switching receives the first wink supervisory signal forwarded from the Customer's point of termination.

The measurement of originating call usage over FGD provided with Multi-Frequency Signaling ends when the originating FGD first point of switching receives disconnect supervision from either the originating End User's end office, indicating the originating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.4 Measuring Access Minutes (Cont'd)

Terminating Usage

For terminating calls over FGD the chargeable access minutes are either measured or derived.

For terminating calls over FGD provided with Multi-Frequency Signaling, where measurement capability exists, the measurement of chargeable access minutes begins when the terminating FGD first point of switching receives answer supervision from the terminating End User's end office, indicating the terminating End User has answered. This measurement ends when the terminating FGD first point of switching receives disconnect supervision from either the terminating End User's end office, indicating the terminating End User has disconnected, or the Customer's point of termination, whichever is recognized first by the first point of switching.

For terminating calls over FGD, where measurement capability does not exist, terminating FGD usage is derived from originating usage, excluding usage from calls to closed end services.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.5 Design Blocking Probability

- (1) For transmission paths carrying only first routed traffic direct between an end office and Customer's designated premises without an alternate route, and for paths carrying only overflow traffic, the measured blocking thresholds are as follows:

Number of Transmission paths Per Trunk Group	Measured Blocking Thresholds in the Time Consistent Busy Hour for the Number of Measurements Taken Between 8:00 a.m. and 11:00 p.m.			
	<u>Per Trunk Group</u>			
	15-20 Measurements	11-14 Measurements	7-10 Measurements	3-6 Measurements
2	7%	8%	9%	14%
3	5%	6%	7%	9%
4	5%	6%	7%	8%
5-6	4%	5%	6%	7%
7 or more	3%	3.5%	4%	6%

- (2) For transmission paths carrying first routed traffic between an end office and Customer's premises via an access tandem, the measured blocking thresholds are as follows:

Number of Transmission paths Per Trunk Group	Measured Blocking Thresholds in the Time Consistent Busy Hour for the Number of Measurements Taken Between 8:00 a.m. and 11:00 p.m.			
	<u>Per Trunk Group</u>			
	15-20 Measurements	11-14 Measurements	7-10 Measurements	3-6 Measurements
2	4.5%	5.5%	6.0%	9.5%
3	3.5%	4.0%	4.5%	6.0%
4	3.5%	4.0%	4.5%	5.5%
5-6	2.5%	3.5%	4.0%	4.5%
7 or more	2.0%	2.5%	4.0%	4.0%

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.6 Network Blocking Charge

The Customer will be notified by the Telephone Company to increase its capacity (busy hour minutes of capacity or quantities of trunks) when excessive trunk group blocking occurs on groups carrying Feature Group D traffic and the measured access minutes for that hour exceed the capacity purchased. Excessive trunk group blocking occurs when the blocking thresholds stated below are exceeded. They are predicated on time consistent, hourly measurements over a 30 day period excluding Saturdays, Sundays and national holidays. If the order for additional capacity has not been received by the Telephone Company within 15 days of the notification, the Telephone Company will bill the Customer, at the rate set forth in 17.2.2, for each overflow in excess of the blocking threshold when (1) the average "30 day period" overflow exceeds the threshold level for any particular hour and (2) the "30 day period" measured average originating or two-way usage for the same clock hour exceeds the capacity purchased.

Trunks in Service	<u>Blocking Thresholds</u>	
	1%	1/2%
1-2	7.0%	4.5%
3-4	5.0%	3.5%
5-6	4.0%	2.5%
7 or greater	3.0%	2.0%

The 1% blocking threshold is for transmission paths carrying traffic direct (without an alternate route) between an end office and a Customer's premises. The 1/2% blocking threshold is for transmission paths carrying first routed traffic between an end office and a Customer's premises via an access tandem.

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6. Switched Access Service (Cont'd)

6.8 Description and Provision of Feature Group D (FGD) (Cont'd)

6.8.7 Testing Capabilities

FGD is provided, in the terminating direction where equipment is available, with seven digit access to balance (100 type) test line, milliwatt (102 type) test line, nonsynchronous or synchronous test line, automatic transmission measuring (105 type) test line, data transmission (107 type) test line, loop around test line, short circuit test line and open circuit test line. In addition to the tests described in 6.2.4 , which are included with the installation of service (Acceptance Testing) and as ongoing routine testing, Additional Cooperative Acceptance Testing, Additional Automatic Testing and Additional Manual Testing, are available as set forth in 13.3.1 .

6.9 Chargeable and Nonchargeable Optional Features

Following are descriptions of the various optional features that are available in lieu of, or in addition to, the standard features provided with the Feature Groups. They are provided as Common Switching and Transport Termination.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features

The following table shows the Feature Groups with which the optional features are available.

<u>Option</u>	<u>Available Feature Groups</u>			
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
A) Call Denial on Line or Hunt Group	X			
B) Service Code Denial on Line or Hunt Group	X			
C) Hunt Group Arrangement	X			
D) Uniform Call Distribution Arrangement	X			
E) Nonhunting Number for Use with Hunt Group or Uniform Call Distribution Arrangement	X			
F) Automatic Number Identification (ANI)		X	X	X
G) Up to 7 Digit Outpulsing of Access Digits to Customer		X		
H) Delay Dial Start-Pulsing Signaling			X	
I) Immediate Dial Pulse Address Signaling			X	
J) Dial Pulse Address Signaling			X	
K) Service Class Routing			X	X
L) Alternate Traffic Routing			X	X
M) Trunk Access Limitation			X	X
N) Call Gapping Arrangement				X
O) Reserved for Future Use				
P) Band Advance Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services	X	X	X	X
Q) End Office End User Line Service Screening for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services			X	X
R) Hunt Group Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services	X	X	X	X
S) Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services	X	X	X	X
T) Nonhunting Number Associated with Hunt Group Arrangement or Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services	X	X	X	X
U) Reserved for Future Use				
V) Multifrequency Address Signaling			X	X
W) Reserved for Future Use				
X) Reserved for Future Use				
Y) Reserved for Future Use				
Z) Reserved for Future Use				

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(A) Call Denial on Line or Hunt Group

This option allows for the screening of terminating Feature Group A calls. There are two screening arrangements available with this option as follows: 1) limiting terminating calls for completion to only 411 or 555-1212 whichever is available, 611, 911, 800 and a Telephone Company specified set of NXXs within the Telephone Company local exchange calling area of the dial tone office in which the arrangement is provided or, 2) limiting terminating calls to completion to only the NXXs associated with all end offices in the LATA, i.e., the call cannot be further switched or routed out of the LATA nor will calls be completed to 411 or 555-1212 whichever is available, 611, 911 or 800. All other calls are routed to a reorder tone or recorded announcement. Arrangement 1 is provided in all Telephone Company electronic end offices. Arrangement 2 is provided where available. This feature is available with Feature Group A.

(B) Service Code Denial on Line or Hunt Group

This option allows for the screening of terminating calls within the LATA, and for disallowing completion of calls to 0-, 555 and N11 (e.g., 411, 611, and 911). This feature is provided where available in all Telephone Company end offices. It is available with Feature Group A.

(C) Hunt Group Arrangement

This option provides the ability to sequentially access one of two or more line side connections in the originating direction, when the access code of the line group is dialed. This feature is provided in all Telephone Company end offices. It is available with Feature Group A. All Feature Group A access services in the same hunt group must provide off-hook supervisory signaling from the same point in time in the call sequence i.e., all off-hook supervisory signals must either be provided by the Customer's equipment before the called party answers or all must be forwarded by the Customer's equipment when the called party answers.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(D) Uniform Call Distribution Arrangement

This option provides a type of multiline hunting arrangement which provides for an even distribution of calls among the available lines in a hunt group. Where available, this feature is provided in Telephone Company electronic end offices only. It is available with Feature Group A.

(E) Nonhunting Number for Use with Hunt Group or Uniform Call Distribution Arrangement

This option provides access to an individual line within a multiline hunt or uniform call distribution group. When the nonhunting number is dialed, access is provided when it is idle, or busy tone is provided when it is busy. Where available, this feature is provided in Telephone Company electronic end offices only. It is available with Feature Group A.

(F) Automatic Number Identification (ANI)

(1) This option provides the automatic transmission of a seven digit or ten digit number and information digits to the customer designated premises for calls originating in the LATA, to identify the calling station. The ANI feature is an end office software function which is associated on a call-by-call basis with:

- (a) all individual transmission paths in a trunk group routed directly between an end office and a customer designated premises or, where technically feasible, with
- (b) all individual transmission paths in a trunk group between an end office and an access tandem, and a trunk group between an access tandem and a customer designated premises.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(F) Automatic Number Identification (ANI) (Cont'd)

- (2) The seven digit ANI telephone number is generally available with Feature Groups B and C. With these Feature Groups, technical limitations may exist in Telephone Company switching facilities which require ANI to be provided only on a directly trunked basis. ANI will be transmitted on all calls except those originating from multiparty lines, coin stations and coinless pay telephones using Feature Group B, or when an ANI failure has occurred.
- (3) The ten digit ANI telephone number is only available with Feature Group D. The ten digit ANI telephone number consists of the Number Plan Area (NPA) plus the seven digit ANI telephone number. The ten digit ANI telephone number will be transmitted on all calls except those identified as multiparty line or ANI failure, in which case only the NPA will be transmitted (in addition to the information digit described below). Ten Digit ANI is provided with multifrequency address signaling.
- (4) With Feature Group C, at the option of the Customer, ANI may be ordered from end offices where Telephone Company recording for End User billing is not provided. Additionally, ANI is provided from end offices where message detail recording is not required by the Telephone Company; as with 800 service. ANI is not provided from end offices where the Telephone Company forwards ANI to its recording equipment.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(F) Automatic Number Identification (ANI) (Cont'd)

- (5) Where complete ANI detail cannot be provided, e.g., on calls from 4 and 8 party services, information digits will be provided to the Customer.

The information digits identify:

- (a) telephone number is the station billing number - no special treatment required,
- (b) multiparty line - telephone number is a 4- or 8- party line and cannot be identified - number must be obtained via an operator or in some other manner,
- (c) ANI failure has occurred in the end office switch which prevents identification of calling telephone number - must be obtained by operator or in some other manner,
- (d) hotel/motel originated call which requires room number identification,
- (e) coinless station, hospital, inmate, etc. call which requires special screening or handling by the Customer, and
- (f) call is an Automatic Identified Outward Dialed (AIOD) call from Customer premises equipment. The AIOD ANI telephone number is the listed telephone number of the Customer and is not the telephone number of the calling party.

These ANI information digits are generally available with Feature Groups B, C, and D.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(F) Automatic Number Identification (ANI) (Cont'd)

(6) Additional ANI information digits are available with Feature Group D also. They include:

- (a) IntraLATA restricted - telephone number is identified line
- (b) IntraLATA restricted - hotel/motel line
- (c) IntraLATA restricted - coinless, hospital, inmate, etc., line

These information digits will be transmitted as agreed to by the Customer and the Telephone Company.

(G) Up to 7 Digit Outpulsing of Access Digits to Customer

This option provides for the end office capability of providing up to 7 digits of the uniform access code (950-XXXX) to the customer designated premises.

The Customer can request that only some of the digits in the access code be forwarded. The access code digits would be provided to the customer designated premises using multifrequency signaling, and transmission of the digits would precede the forwarding of ANI if that feature were provided. This feature is available with Feature Group B.

(H) Delay Dial Start-Pulsing Signaling

Where available, this option provides a method of indicating to the near end trunk circuit readiness to accept address signaling information by the far end trunk circuit. Delay dial is often referred to as an off-hook, on-hook signaling sequence. The delay dial signal is the off-hook interval and the start-pulsing signal is the on-hook interval. With integrity check, the calling office will not outpulse until a delay dial (off-hook) signal followed by a start-pulsing (on-hook) signal has been identified at the calling office. This option is available with Feature Group C.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(I) Immediate Dial Pulse Address Signaling

Where available, this option provides for the forwarding of dial pulses from the Telephone Company end office to the Customer without the need of a start-pulsing signal from the Customer. It is available with Feature Group C.

(J) Dial Pulse Address Signaling

Where available, this trunk side option provides for the transmission of number information, e.g., called number, between the end office switching system and the customer designated premises (in either direction) by means of direct current pulses. It is available with Feature Group C.

(K) Service Class Routing

This option provides the capability of directing originating traffic from an end office to a trunk group to a customer designated premises, based on the line class of service (e.g., coin, multiparty or hotel/model), service prefix indicator (e.g., 0-, 0+, 01+ or 011+) or Service Access Code (e.g., 900). It is provided in suitably equipped end office or access tandem switches. It is available with Feature Groups C and D.

(L) Alternate Traffic Routing

This option provides the capability of directing originating traffic from an end office (or appropriately equipped access tandem) to a trunk group (the "high usage" group) to a customer designated premises until that group is fully loaded, and then delivering additional originating traffic (the "overflowing" traffic) from the same end office or access tandem to a different trunk group (the "final" group) to a second customer designated premises. The Customer shall specify the last trunk CCS desired for the high usage group. It is provided in suitably equipped end office or access tandem switches. It is available with Feature Groups C and D.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(M) Trunk Access Limitation

This option provides for the routing of originating 900 service calls to a specified number of transmission paths in a trunk group, in order to limit (choke) the completion of such traffic to the Customer. Calls to the designated service which could not be completed over the subset of transmission paths in the trunk group, i.e., the choked calls, would be routed to reorder tone. It is provided in all Telephone Company electronic end offices. It is available with Feature Groups C and D.

(N) Call Gapping Arrangement

This option, provided in suitably equipped end office switches, provides for the routing of originating calls to 900 service to be switched in the end office to all transmission paths in a trunk group at a prescribed rate of flow, e.g., one call every five seconds, in order to limit (choke) the completion of such traffic to the Customer. Calls to the designated service which are denied access by this feature, i.e., the choked calls, would be routed to a no-circuit announcement. It is provided in selected Feature Group D equipped end offices and is available only with Feature Group D.

(O) Reserved for Future Use

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(P) Band Advance Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

This option, which is provided in association with two or more Special Access Service groups, provides for the automatic overflow of terminating calls to a second Special Access Service group, when the first group has exceeded its call capacity. This option is available with Feature Groups A, B, C and D.

(Q) End Office End User Line Service Screening for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

This option provides the ability to verify that an End User has dialed a called party address (by screening the called NPA and/or NXX on the basis of geographical bands selected by the Telephone Company) which is in accordance with that End User's service agreement with the Customer, e.g., WATS. This option is provided in all Telephone Company electronic end offices. It is available with Feature Groups C and D.

(R) Hunt Group Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

This option provides the ability to sequentially access one of two or more Special Access Services utilized in the provision of WATS services (e.g., 800 Service Special Access services) in the terminating direction, when the hunting number of the Special Access Service group is forwarded from the Customer to the Telephone Company. This feature is provided in all Telephone Company designated WATS Serving Offices. It is available with Feature Groups A, B, C and D.

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(S) Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

This option provides a type of multiline hunting arrangement which provides for an even distribution of terminating calls among the available Special Access Services utilized in the provision of WATS or WATS-type Services in the hunt group. Where available, this feature is only provided in Telephone Company designated WATS Serving Offices. It is available with Feature Groups A, B, C and D.

(T) Nonhunting Number Associated with Hunt Group Arrangement or Uniform Call Distribution Arrangement for Use with Special Access Service Utilized in the Provision of WATS or WATS-Type Services

This option provides an arrangement, for an individual Special Access Service utilized in the provision of WATS or WATS-type Services within a multiline hunt or uniform call distribution group, that provides access to that Special Access Service within the hunt or uniform call distribution group when it is idle or provides busy tone when it is busy, when the nonhunting number is dialed, without hunting to the next idle number. Where available, this feature is only provided in Telephone Company designated WATS Serving Offices. It is available with Feature Groups A, B, C and D.

(U) Reserved for Future Use

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(V) Multifrequency Address Signaling

Multifrequency Address Signaling is available as an optional feature with FGC and FGD. This feature provides for the transmission of number information and control signals (e.g., number address signals, automatic number identification) between the end office switch and the Customer's premises (in either direction). Multifrequency signaling arrangements make use of pairs of frequencies out of a group of six frequencies. Specific information transmitted is dependent upon feature group and call type (i.e., POTS, coin or operator).

(W) Reserved for Future Use

(X) Reserved for Future Use

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6. Switched Access Service (Cont'd)

6.9 Chargeable and Nonchargeable Optional Features (Cont'd)

6.9.1 Common Switching Nonchargeable Optional Features (Cont'd)

(Y) Reserved for Future Use

(Z) Reserved for Future Use

6.9.2 Reserved for Future Use

6.9.3 Reserved for Future Use

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17. Rates and Charges

17.1 Common Line Access Service

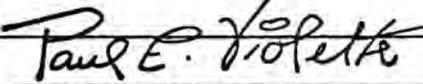
17.1.1 Carrier Common Line Access Service Rate

Regulations concerning Carrier Common
Line Access are set forth in Section 3.
preceding

- Originating Per Access Minute	\$0.008257	(R)
- Terminating Per Access Minute	\$0.022093	(R)

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.1 Channel Types (Cont'd)

Following is a brief description of each type of channel:

Voice Grade - a channel for the transmission of analog signals within an approximate bandwidth of 300 to 3000 Hz.

Program Audio - a channel for the transmission of audio signals. The nominal frequency bandwidth is 50 to 15000 Hz.

Digital Data - a channel for the digital transmission of synchronous serial data at rates of 2.4, 4.8, 9.6 or 56.0 Kpbs.

High Capacity - a channel for the transmission of isochronous serial digital data at a rate of 1.544Mbps.

Detailed descriptions of each of the channel types are provided in 7.4 through 7.7 .

The customer also has the option of ordering Voice Grade and High Capacity facilities (i.e., 1.544 Mbps) to Telephone Company hubs for multiplexing to individual channels of a lower capacity or bandwidth. Descriptions of the types of multiplexing available at the hubs, as well as the number of individual channels which may be derived from each type of facility are set forth in 7.4 and 7.7 . Additionally, the customer may specify optional features for the individual channels derived from the facility to further tailor the channel to meet specific communications requirements. Descriptions of the optional features and functions available are set forth in 7.2.1(C).

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.2 Service Descriptions

For the purposes of ordering, there are seven categories of Special Access Service. These are:

Service Designator Codes

Voice	VG
Program Audio	AP
Digital Data	DA
High Capacity	HC

Each service consists of a basic channel to which a technical specifications package (customized or predefined), channel interface(s) and, when desired, optional features and functions are added to construct the service desired by the customer. Technical specifications packages are described in Section 15. , optional features and functions are described in this section. Channel interfaces are described in 15.2 .

Customized technical specifications packages will be provided where technically feasible. If the Telephone Company determines that the requested parameter specifications are not compatible, the customer will be advised and given the opportunity to change the order.

When a customized channel is ordered the customer will be notified whether Additional Engineering Charges apply. In such cases, the customer will be advised and given the opportunity to change the order.

The channel descriptions provided in 7.4 through 7.7 , specify the characteristics of the basic channel and indicate whether the channel is provided between customer designated premises, between a customer designated premises and a Telephone Company hub where bridging or multiplexing functions are performed, between hubs, or between a customer designated premises and a WATS Serving Office.

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.2 Service Descriptions (Cont'd)

- (A) Information pertaining to the technical specifications packages indicates the transmission parameters that are available with each package. This information is displayed in matrices set forth in 15.2 .
- (B) Channel interfaces at each Point of Termination on a two-point service may be symmetrical or asymmetrical. On a multipoint service they may also be symmetrical or asymmetrical, but communications can only be provided between compatible channel interfaces. Only certain channel interfaces are compatible. These are set forth in 15.2 , in a combination format.
- (C) Only certain channel interface combinations are available with the predefined technical specifications packages. These are delineated in the Technical References set forth in (F) . When a customized channel is requested, all channel interface combinations available with the specified type of service are available with the customized channel.
- (D) The optional features and functions available with each type of Special Access Service are described in this section. The optional features and functions information also indicates with which technical specifications packages they are available. Such information is displayed in matrices set forth in 15.2 with the optional feature or function listed down the left side and the technical specifications package listed across the top.

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.2 Service Descriptions (Cont'd)

- (E) The Telephone Company will maintain services installed prior to September 3, 1993, at their existing transmission specifications provided such performance specifications do not exceed the standards listed in this provision. Those services exceeding the standards listed will be maintained at the performance levels specified in this tariff.
- (F) All services installed after September 3, 1993 will conform to the transmission specifications standards contained in this tariff or in the following Technical References for each category of service:

Voice Grade	TR-TSY-000335 PUB 41004, Table 4
Program Audio	TR-NPL-000337 and associated Addendum
Digital Data	TR-NPL-000341 and associated Addendum
High Capacity	TR-INS-000342 PUB 62411

7.1.3 Service Configurations

There are two types of service configurations over which Special Access Services are provided: two-point service and multipoint service.

(A) Two-Point Service

A two-point service connects two customer designated premises, either on a directly connected basis or through a hub where multiplexing functions are performed, or a customer designated premises and a WATS Serving Office (WSO).

Applicable rate elements are:

- Channel Terminations
- Channel Mileage (as applicable)
- Optional Features and Functions (when applicable)

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7. Special Access Service (Cont'd)

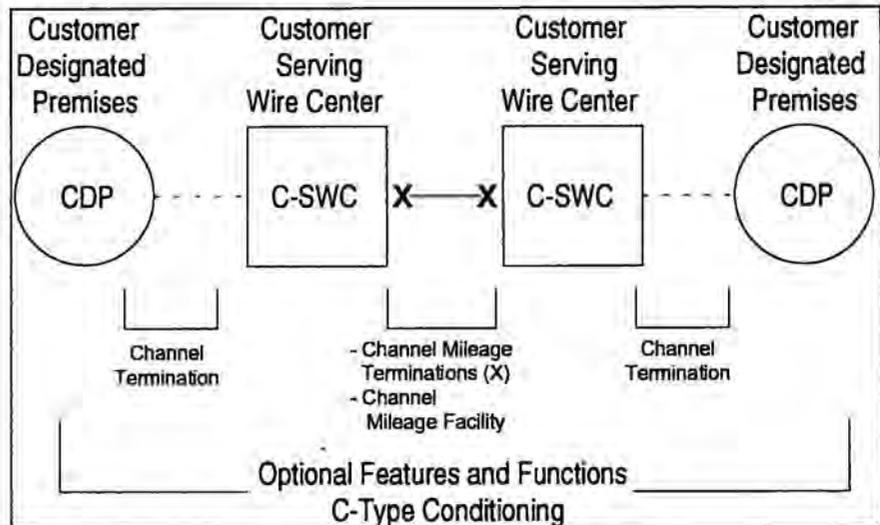
7.1 General (Cont'd)

7.1.3 Service Configurations (Cont'd)

(A) Two-Point Service

A Special Access Surcharge, as set forth in 7.3 , may be applicable.

The following diagram depicts a two-point Voice Grade service connecting two Customer Designated Premises (CDP). The service is provided with C-Type conditioning.



Applicable rate elements are:

- Channel Terminations (applicable one (1) per CDP)
- Channel Mileage
 - . 2 Channel Mileage Terminations plus
 - . 1 section, Channel Mileage Facility per mile
- C-Type Conditioning Optional Feature

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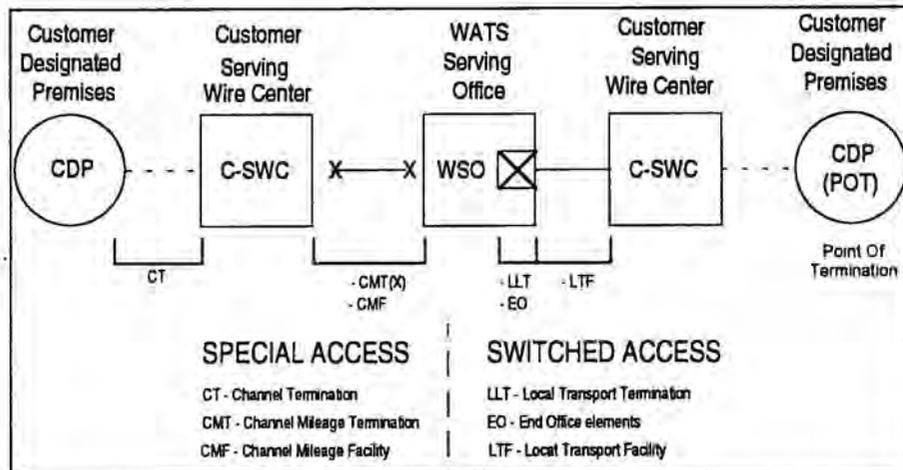
7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.3 Service Configurations (Cont'd)

(A) Two-Point Service (Cont'd)

The following diagram depicts a two-point Voice Grade service connecting a customer designated premises to a WATS serving office.



Applicable rate elements for Special Access are:

- Channel Termination
- Channel Mileage
 - . 2 Channel Mileage Terminations plus
 - . 1 section, Channel Mileage Facility per mile
- Special Access Surcharge*

* May not apply if exemption certification is provided.

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.3 Service Configurations (Cont'd)

(B) Multipoint Service

Multipoint service connects three or more customer designated premises through one or more Telephone Company hubs. Only certain types of Special Access Service are provided as multipoint service. These are so designated in the descriptions for the appropriate channel.

The channel between hubs (i.e., bridging locations) on a multipoint service is a mid-link. There is no limitation on the number of mid-links available with a multipoint service. However, when more than three mid-links in tandem are provided the quality of the overall service may be degraded.

Multipoint service utilizing a customized technical specifications package, as set forth in 7.1.2 and 15.2, will be provided when technically possible. If the Telephone Company determines that the requested characteristics for a multipoint service are not compatible, the customer will be advised and given the opportunity to change the order.

When ordering, the customer will specify the desired bridging hub(s). NECA TARIFF FCC NO. 4 identifies serving wire centers, hub locations and the type of bridging functions available.

Applicable Rate Elements are:

- Channel Terminations (one per customer designated premises)
- Channel Mileage (as applicable between the serving wire center for each customer designated premises and the hub and between hubs).
- Bridging
- Additional Optional Features and Functions (when applicable).

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7. Special Access Service (Cont'd)

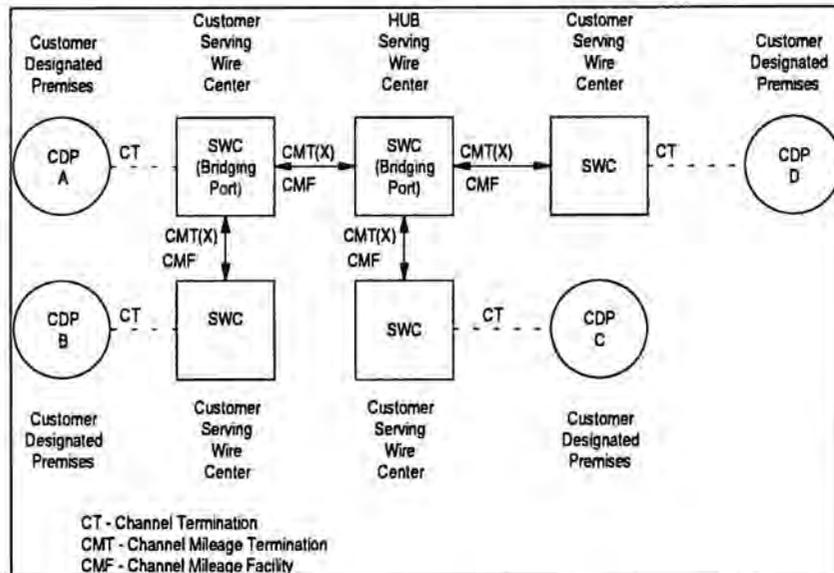
7.1 General (Cont'd)

7.1.3 Service Configurations (Cont'd)

(B) Multipoint Service (Cont'd)

The Special Access Surcharge, as set forth in 7.3 , may be applicable.

Example: Voice Grade multipoint service connecting four customer designated premises (CDP) via two customer specified bridging hubs.



Applicable rate elements are:

- Channel Terminations (4 applicable)
- Channel Mileage
 - o 2 Channel Mileage Terminations per Channel Mileage Facility section for a total of 8 plus
 - o 4 sections, Channel Mileage Facility per mile
- Bridging Optional Feature (6 applicable, i.e., each bridge port)

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.4 Alternate Use

Alternate Use occurs when a service is arranged by the Telephone Company so that the customer can select different types of transmission at different times. A customer may use a service in any privately beneficial manner. However, where technical or engineering changes are required to effectuate an alternate use, the Telephone Company will make such special arrangements available on an individual case basis.

The arrangement required to transfer the service from one operation to the other (i.e., the transfer relay and control leads) will be rated and provided on an individual case basis and filed in Section 12. , Specialized Service or Arrangements. The customer will pay the stated tariff rates for the Access Service rate elements for the service ordered [i.e., Channel Terminations, Channel Mileage (as applicable) and Optional Features and Functions (if any)].

7.1.5 Special Facilities Routing

A customer may request that the facilities used to provide Special Access Service be specially routed. The regulations, rates and charges for Special Facilities Routing (i.e., Avoidance, Diversity and Cable-Only) are set forth in Section 11. .

7.1.6 Acceptance Testing

At no additional charge, the Telephone Company will, at the customer's request, cooperatively test the following at the time of installation:

- (A) For Voice Grade analog services, the acceptance test will include tests for loss, 3-tone slope, DC continuity, operational signaling, C-notched noise, and C-message noise when these parameters are applicable and specified in the order of service. Additionally, for Voice Grade services, a balance (improved loss) test will be made if the customer has ordered the improved loss optional feature.
- (B) For other analog services and for digital services (i.e., Digital Data and High Capacity), acceptance tests will include tests applicable to the service as specified by the customer in the order for service.

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7. Special Access Service (Cont'd)

7.1 General (Cont'd)

7.1.6 Acceptance Testing (Cont'd)

In addition to the above tests, Additional Cooperative Acceptance Testing for Voice Grade service to test other parameters, as described in 13.3.1(B)(1), is available at the customer's request. All test results will be made available to the customer upon request.

7.1.7 Ordering Options and Conditions

Special Access Service is ordered under the Access Order provisions set forth in Section 5. Also included in that section are other charges which may be associated with ordering Special Access Service (e.g., Service Date Change Charges, Cancellation Charges, etc.).

7.2 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Special Access.

7.2.1 Rate Categories

There are three basic rate categories which apply to Special Access Service:

- Channel Terminations (7.2.1(A))
- Channel Mileage (7.2.1(B))
- Optional Features and Functions (7.2.1(C)).

(A) Channel Termination

The Channel Termination rate category recovers the costs associated with the communications path between a customer designated premises and the serving wire center of that premises. Included as part of the Channel Termination is a standard channel interface arrangement which defines the technical characteristics associated with the type of facilities to which the access service is to be connected at the Point of Termination (POT) and the type of signaling capability, if any. The signaling capability is provided as an optional feature as set forth in (C) . One Channel Termination charge applies per customer designated premises at which the channel is terminated. This charge will apply even if the customer designated premises and the serving wire center are collocated in a Telephone Company building.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.1 Rate Categories (Cont'd)

(B) Channel Mileage

The Channel Mileage rate category recovers the costs associated with the end office equipment and the transmission facilities between the serving wire centers associated with two customer designated premises, between a serving wire center associated with a customer designated premises and a Telephone Company hub or between two Telephone Company hubs. Channel Mileage rates are made up of the Channel Mileage Facility rate and the Channel Mileage Termination rate.

(1) Channel Mileage Facility

The Channel Mileage Facility rate recovers the per mile cost for the transmission path which extends between the Telephone Company serving wire centers and/or hubs(s).

(2) Channel Mileage Termination

The Channel Mileage Termination rate recovers the cost for end office equipment associated with terminating the facility (i.e., basic circuit equipment and terminations at serving wire centers and hubs). The Channel Mileage Termination rate will apply at the serving wire center(s) for each customer designated premises and Telephone Company hub where the channel is terminated. If the Channel Mileage is between Telephone Company bridging hubs, the Channel Mileage Termination rate will apply per Telephone Company designated hub. If the Channel Mileage is between the serving wire center for a customer designated premises and a WATS Serving Office, the Channel Mileage Termination rate will apply at both the serving wire center associated with the customer designated premises and the WATS Serving Office. When the Channel Mileage Facility is zero (i.e., collocated serving wire centers), neither the Channel Mileage Facility rate nor the Channel Mileage Termination rate will apply.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.1 Rate Categories (Cont'd)

(C) Optional Features and Functions

The Optional Features and Functions rate category recovers the costs associated with optional features and functions which may be added to a Special Access Service to improve its quality or utility to meet specific communications requirements. These are not necessarily identifiable with specific equipment, but rather represent the end result in terms of performance characteristics which may be obtained. These characteristics may be obtained by using various combinations of equipment. Although the equipment necessary to perform a specified function may be installed at various locations along the path of the service, they will be charged for as a single rate element.

Examples of Optional Features and Functions that are available include, but are not limited to, the following:

- Signaling Capability
- Hubbing Functions
- Conditioning
- Transfer Arrangements

Descriptions for each of the available Optional Features and Functions are set forth in 7.4 through 7.7 .

A hub is a Telephone Company designated serving wire center at which bridging or multiplexing functions are performed. The bridging functions performed are to connect three or more customer designated premises in a multipoint arrangement. The multiplexing functions are to channelize analog or digital facilities to individual services requiring a lower capacity or bandwidth.

NECA TARIFF FCC NO. 4 identifies serving wire centers, hub locations, hub level (i.e., Hub, Terminus Hub, Intermediate Hub, or Super-Intermediate Hub) and the type of bridging or multiplexing functions available. Additionally, subtending wire centers are identified for Intermediate and Super-Intermediate Hubs.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.2 Types of Rates and Charges

There are two types of rates and charges. These are monthly rates and nonrecurring charges. The rates and charges are described as follows:

(A) Monthly Rates

Monthly rates are recurring rates that apply each month or fraction thereof that a Special Access Service is provided. For billing purposes, each month is considered to have 30 days.

(B) Nonrecurring Charges

Nonrecurring charges are one-time charges that apply for specific work activity (i.e., installation or change to an existing service). The types of nonrecurring charges that apply for Special Access Service are: installation of service, installation of optional features and functions, and service rearrangements. These charges are in addition to the Access Order Charge as specified in 17.4.1 .

(1) Installation of Service

Nonrecurring charges apply to each service installed. The nonrecurring charges for the installation of service are set for each channel type as a nonrecurring charge for the Channel Termination.

(2) Installation of Optional Features and Functions

When optional features and functions are installed coincident with the initial installation of service, no separate nonrecurring charge is applicable. When optional features and functions are installed or changed subsequent to the installation of service, an Access Order Charge as specified in 17.4.1 will apply per order.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.2 Types of Rates and Charges (Cont'd)

(B) Nonrecurring Charges (Cont'd)

(3) Service Rearrangements

Service rearrangements are changes to existing (installed) services which may be administrative only in nature, as set forth following, or that involve actual physical change to the service. Changes to pending orders are set forth in 5.4 .

Changes in the physical location of the point of termination or customer designated premises are moves as set forth in 7.2.3 .

Changes in the type of Service or Channel Termination which result in a change of the minimum period requirement will be treated as a discontinuance of the service and an installation of a new service.

Changes in ownership or transfer of responsibility from one customer to another will be treated as a discontinuance of the service and an installation of a new service. In the event the change in ownership or transfer of responsibility is as set forth in 2.1.2(A) where there is no change in facilities or arrangements, the change will be treated as an administrative change.

Administrative changes will be made without charge(s) to the customer. Administrative changes are as follows:

- Change of customer name,
- Change of customer or customer's end user premises address when the change of address is not a result of physical relocation of equipment,
- Change in billing data (name, address, or contact name or telephone number),
- Change of agency authorization
- Change of customer circuit identification,
- Change of billing account number,
- Change of customer test line number,
- Change of customer or customer's end user contact name or telephone number, and
- Change of jurisdiction.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.2 Types of Rates and Charges (Cont'd)

(B) Nonrecurring Charges (Cont'd)

(3) Service Rearrangements (Cont'd)

All other service rearrangements will be charged for as follows:

- If the change involves the addition of other customer designated premises to an existing service, the nonrecurring charge for the channel termination rate element will apply. The charge(s) will apply only for the charge(s) will be in addition to an Access Order Charge as set forth in 17.4.1
- If the change involves the addition of an optional feature or function, or if the change involves changing the type of signaling on a Voice Grade service, and for all other changes, the Access Order Charge as set forth in 17.4.1 will apply.

7.2.3 Moves

A move involves a change in the physical location of one of the following:

- The Point of Termination at the customer's premises
- The customer's premises

The charges for the move are dependent on whether the move is to a new location within the same building or to a different building.

(A) Moves Within the Same Building

When the move is to a new location within the same building, the charge for the move will be an amount equal to one half of the nonrecurring (i.e., installation) charge for the service termination affected. There will be no change in the minimum period requirements. This charge is in addition to the Access Order Charge as specified in 17.4.1 .

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.3 Moves (Cont'd)

(B) Moves To a Different Building

Moves to a different building will be treated as a discontinuance and start of service and all associated nonrecurring charges will apply. New minimum period requirements will be established for the new services. The customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued service.

7.2.4 Minimum Periods

The minimum service period for all services is one month and the full monthly rate will apply to the first month. Adjustments for the quantities of services established or discontinued in any billing period beyond the minimum period are as set forth in 2.4.1(F) .

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.5 Mileage Measurement

The mileage to be used to determine the monthly rate for the Channel Mileage Facility is calculated on the airline distance between the locations involved, i.e.,

- the serving wire centers associated with two customer designated premises,
- a serving wire center associated with a customer designated premises and a Telephone Company hub,
- two Telephone Company hubs
- or between the serving wire center associated with a customer designated premises and a WATS Serving Office.

The serving wire center associated with a customer designated premises is the serving wire center from which this customer designated premises would normally obtain dial tone.

Mileage charges are shown with each channel type. To determine the rate to be billed, first compute the mileage using the V&H coordinates method, as set forth in the NECA TARIFF FCC NO. 4, then multiply the resulting number of miles times the Channel Mileage Facility per mile rate, and add the Channel Mileage Termination rate for each termination. When the calculation results in a fraction of a mile, always round up to the next whole mile before determining the mileage and applying the rates. When more than one Telephone Company is involved in the provision of service, billing will be accomplished as set forth in 2.4.7 .

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.5 Mileage Measurement (Cont'd)

When hubs are involved, mileage is computed and rates applied separately for each section of the Channel Mileage, i.e.,

- customer designated premises serving wire center to hub,
- hub to hub and/or
- hub to customer designated premises serving wire center.

However, when any service is routed through a hub for purposes other than customer specified bridging or multiplexing (e.g., the Telephone Company chooses to so route for test access purposes), rates will be applied only to the distance calculated between the serving wire centers associated with the customer designated premises.

See the service configuration example for multipoint service as set forth in 7.1.3(B) .

7.2.6 Facility Hubs

A customer has the option of ordering Voice Grade service or High Capacity services to a facility hub for channelizing to individual services requiring lower capacity facilities.

Different locations may be designated as hubs for different facility capacities, e.g., multiplexing from digital to digital may occur at one location while multiplexing from digital to analog may occur at a different location. When placing an Access Order the customer will specify the desired hub.

NECA Tariff FCC No. 4 identifies serving wire centers, hub locations, hub level (i.e., Hub, Terminus Hub, Intermediate Hub, or Super-Intermediate Hub) and the type of multiplexing functions available. Additionally, subtending wire centers are identified for Intermediate and Super-Intermediate Hubs.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.6 Facility Hubs (Cont'd)

Some of the types of multiplexing available include:

- from higher to lower bit rate
- from higher to lower bandwidth
- from high capacity to voice frequency channels.

Point to point services may be provided on channels of these services to a hub. The transmission performance for the point to point service provided between customer designated premises will be that of the lower capacity or bit rate. For example, when a 1.544 Mbps channel is multiplexed to voice frequency channels, the transmission performance of the channelized services will be Voice Grade, not High Capacity.

The Telephone Company will commence billing the monthly rate for the service to the hub on the date specified by the customer on the Access Order. Individual channels utilizing these services may be installed coincident with the installation of the service to the hub or may be ordered and/or installed at a later date, at the option of the customer. The customer will be billed for a Voice Grade or a High Capacity Channel Termination, Channel Mileage (when applicable), and the multiplexer at the time the service is installed. Individual service rates (by service type) will apply for a Channel Termination and additional Channel Mileage (as required) for each channelized service. These will be billed to the customer as each individual service is installed.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.7 Mixed Use Analog and Digital High Capacity Services

Mixed use refers to a rate application applicable only when the customer orders High Capacity facilities between a customer designated premises and a Telephone Company hub where the Telephone Company performs multiplexing/de-multiplexing functions and the same customer then orders the derived channels as Special and Switched Access Services.

The High Capacity facility will be ordered, provided and rated as Special Access Service (i.e., Channel Termination, Channel Mileage, as appropriate, and Multiplexing Arrangement). The nonrecurring charge that applies when the mixed use facility is installed will be the nonrecurring charge associated with the appropriate Special Access High Capacity Channel Termination. Rating as Special Access will continue until such time as the customer chooses to use a portion of the available capacity for Switched Access Service. Individual service (i.e., Switched or Special Access) nonrecurring charges will not apply to the individual channels of the mixed use facility.

When Special Access Service is provided utilizing a channel of the mixed use facility to a hub, High Capacity rates and charges will apply for the facility to the hub, as set forth preceding, and individual service rates and charges will apply from the hub to the customer designated premises. The rates and charges that will apply to the portion from the hub to the customer designated premises will be dependent on the specific type of Special Access Service that is provided. The applicable rates and charges will include a Channel Termination and Channel Mileage, if applicable. Rates and charges for optional features and functions associated with the service, if any, will apply for the appropriate channel type.

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7. Special Access Service (Cont'd)

7.2 Rate Regulations (Cont'd)

7.2.7 Mixed Use Analog and Digital High Capacity Services (Cont'd)

As each individual channel is activated for Switched Access Service, the High Capacity Special Access Channel Termination and Channel Mileage rates will be reduced accordingly (e.g., 1/24th for a DS1 service, etc.). Switched Access Service rates and charges, as set forth in 17.2, will apply for each channel of the standard use facility that is used to provide a Switched Access Service.

The customer must place an order for each individual Switched or Special Access Service utilizing the Mixed Use Facilities and specify the channel assignment for each such service.

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7. Special Access Service (Cont'd)

7.3 Surcharge for Special Access Service

7.3.1 General

Special access services provided under this tariff may be subject to the monthly Special Access Surcharge.

7.3.2 Application

- (A) The Special Access Surcharge will apply to each intrastate Special Access Service that terminates on an end user's PBX or other device, where through a function of the device, the Special Access Service interconnects to the local exchange network. Interconnection functions include, but are not limited to, wiring and software functions, bridging, switching or patching of calls or stations. The Surcharge will apply irrespective of whether the interconnection function is performed in equipment located at the customer's premises or in a Centrex CO-type switch.
- (B) Special Access Service will be exempted from the Surcharge by the Telephone Company upon receipt of the customer's written certification for the following Special Access Service terminations:
- (1) an open-end termination in a Telephone Company switch of an FX line, including CCSA and CCSA-equivalent ONALs; or
 - (2) an analog channel termination that is used for radio or television program transmission; or
 - (3) a termination used for TELEX service; or
 - (4) a termination that by the nature of its operating characteristics could not make use of Telephone Company common lines such as, terminations which are restricted through hardware or software; or

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7. Special Access Service (Cont'd)

7.3 Surcharge for Special Access Service (Cont'd)

7.3.2 Application (Cont'd)

- (5) a termination that interconnects either directly or indirectly to the local exchange network where the usage is subject to Carrier Common Line charges such as, where the Special Access Service accesses only FGA and no local exchange lines, or Special Access Service between customer points of termination, or Special Access Service connecting CCSA or CCSA-type equipment (inter-machine trunks); or
- (6) a termination that the customer certifies to the Telephone Company is not connected to a PBX or other device which interconnects the Special Access Service to a local exchange subscriber line.

7.3.3 Exemption of Special Access Service

- (A) Special Access Services which are terminated as set forth in 7.3.2(B) will be exempted from the Special Access Surcharge if the customer provides the Telephone Company with written exemption certification. The certification may be provided to the Telephone Company as follows:
 - at the time the Special Access Service is ordered or installed;
 - at such time as the service is reterminated to a device which does not interconnect the service to local exchange facilities; or
 - at such time as the service becomes associated with a Switched Access Service that is subject to Carrier Common Line Charges.

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7. Special Access Service (Cont'd)

7.3 Surcharge for Special Access Service (Cont'd)

7.3.3 Exemption of Special Access Service (Cont'd)

- (B) The exemption certification is to be provided by the customer ordering the service. The certification must be signed by the customer or authorized representative and include the category of exemption, as set forth in 7.3.2(B) , for each termination, and the date which the exemption is effective.
- (C) The customer shall also notify the Telephone Company when an exempted Special Access Service is changed or reterminated such that the exemption is no longer applicable.
- (D) The Telephone Company will work cooperatively with the customer to resolve any questions regarding the exemption certification. In addition, the Telephone Company may withhold exemption of the service until the questions are resolved.

7.3.4 Rate Regulations

- (A) The surcharge will apply as set forth in 7.3.2(A) , except that a surcharge will be assessed on a per voice grade equivalent basis for Special Access Services derived from High Capacity Special Access Services as illustrated in the following example:

<u>Special Access Service</u>	<u>Voice Grade Equivalent</u>	<u>Surcharge</u>	<u>Monthly Charge</u>
DS1	24	x \$25	= \$600.00

The preceding example illustrates the maximum number of surcharges applicable to a DS1. If the customer claims exemption(s) as set forth in 7.3.3 or, is not utilizing all available voice grade equivalents and has spare capacity, the number of surcharges would be reduced accordingly.

In the case of multipoint Special Access Services, one Special Access Surcharge will apply for each termination of a Special Access Channel at an end user's premises.

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7. Special Access Service (Cont'd)

7.3 Surcharge for Special Access Service

7.3.4 Rate Regulations (Cont'd)

- (B) The Telephone Company will bill the appropriate Special Access Surcharge to the ordering customer for each interstate Special Access Service installed unless exemption certification is provided as set forth in 7.3.3 .
- (C) If a written certification is not received at the time the Special Access Service is obtained, the Surcharge will be applied. Exempt status will become effective on the certification date indicated by the customer, subject to the regulations set forth in (D) .
- (D) Crediting the Surcharge

The Telephone Company will cease billing the Special Access Surcharge when certification, as set forth in 7.3.3. , is received. If the status of the Special Access Service was changed prior to receipt of the exemption certification, the Telephone Company will credit the customer's account, not to exceed ninety (90) days, based on the effective date of the change as specified by the customer in the letter of certification.

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7. Special Access Service (Cont'd)

7.4 Voice Grade Service

7.4.1 Basic Channel Description

A Voice Grade channel is a channel which provides voice frequency transmission capability in the nominal frequency range of 300 to 3000 Hz and may be terminated two-wire or four-wire. Voice Grade channels are provided between customer designated premises, between a customer designated premises and a Telephone Company hub or hubs, or between a customer designated premises and a WATS Serving Office (WSO).

Voice Grade Special Access services are typically used for voice and voiceband data applications. Typical examples of voice grade circuits are Foreign Exchange lines (station end only), multipoint private line, voice trunk type, two-point voice grade data (one-way or simultaneous two-way), multipoint voice grade data, and voice grade telephoto or facsimile. These examples of applications are not intended to limit a customer's use of the channel nor to imply that the channel is limited to a particular use.

Rates and charges for Special Access Voice Grade Service are as set forth in 17.3.2 .

7.4.2 Technical Specifications Packages and Network Channel Interfaces

Technical Specifications Packages are set forth in 15.2.1(A), Compatible network channel interfaces are set forth in 15.2.2(C)(1).

7.4.3 Optional Features and Functions

(A) Conditioning

Conditioning provides more specific transmission characteristics for Voice Grade services. The rates for these options are set forth in 17.3.2(C).

For two-point services, the parameters apply to each service as measured end-to-end. For multipoint services, the parameters apply as measured on each mid-link or as measured on each end link. C-Type conditioning and Data Capability may be combined on the same service.

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7. Special Access Service (Cont'd)

7.4 Voice Grade Service (Cont'd)

7.4.3 Optional Features and Functions (Cont'd)

(A) Conditioning (Cont'd)

(1) C-Type Conditioning

C-Type Conditioning is provided for the additional control of attenuation distortion and envelope delay distortion on data services. The attenuation distortion and envelope delay distortion specifications for C-Type Conditioning are delineated in Technical Reference TR-TSY-000335.

(2) Data Capability (D Conditioning)

Data Capability provides transmission characteristics suitable for data communications. Specifically, Data Capability provides for the control of Signal to C-Notched Noise Ratio and intermodulation distortion. It is available for two-point services or three-point multipoint services.

The Signal to C-Notched Noise Ratio and intermodulation distortion parameter for Data Capability are delineated in Technical Reference TR-NPL-000335. The rate for this option is set forth in 17.3.2(C)(2) .

When a service equipped with Data Capability is used for voice communications, the quality of the voice transmission may not be satisfactory.

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7. Special Access Service (Cont'd)

7.4 Voice Grade Service (Cont'd)

7.4.3 Optional Features and Functions (Cont'd)

(B) Improved Return Loss

- (1) On Effective Four-Wire Transmission at Four-Wire Point of Termination (applicable to each two-wire port): Provides for a fixed 600 ohm impedance, variable level range and simplex reversal. Telephone Company equipment is required at the customer's premises where this option is ordered. The Improved Return Loss parameters are delineated in Technical Reference TR-TSY-000335. The rate for this option is set forth in 17.3.2(C)(3) .
- (2) On Effective Two-Wire Transmission at Two-Wire Point of Termination: Provides for more stringent Echo Control specifications. In order for this option to be applicable, the transmission path must be four-wire at one POT and two-wire at the other POT. Placement of Telephone Company equipment may be required at the customer's premises with the two-wire POT. The Improved Return Loss parameters are delineated in Technical Reference TR-TSY-000335. The rate for this option is set forth in 17.3.2(C)(3) .

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7. Special Access Service (Cont'd)

7.4 Voice Grade Service (Cont'd)

7.4.3 Optional Features and Functions (Cont'd)

(C) Improved Two-Wire Voice Transmission

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is -4.0 dB to +4.0 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 280 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +6.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than:

<u>Route Miles</u>	<u>C-Message Noise</u>
less than 50	35 dBrnc0
51 to 100	37 dBrnc0
101 to 200	40 dBrnc0
201 to 400	43 dBrnc0
401 to 1000	45 dBrnc0

(4) Return Loss

The Return Loss, expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is equal to or greater than:

ERL	13.0 dB
SRL	6.0 dB

The rate for the provision of Improved Two-Wire Voice Transmission is included as part of the basic Channel Termination rate.

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7. Special Access Service (Cont'd)

7.5 Program Audio Service

7.5.1 Basic Channel Description

A Program Audio channel is a channel with bandwidth measured in Hz for the transmission of a complex signal voltage. The actual bandwidth is a function of the channel interface selected by the customer. Only one-way transmission is provided. Program Audio channels are provided between customer designated premises or between a customer designated premises and a Telephone Company hub or hubs.

Program Audio Special Access services are typically used in full-time and part-time applications for radio broadcasting, noncommercial educational audio, and wired music. These examples of applications are not intended to limit a customer's use of the channel nor to imply that the channel is limited to a particular use.

Rates and charges for Special Access Program Audio Service are as set forth in 17.3.3.

7.5.2 Technical Specifications Packages and Network Channel Interfaces

Technical Specifications Packages are set forth in 15.2.1(B). Compatible network channel interfaces are set forth in 15.2.2(C) (2).

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7. Special Access Service (Cont'd)

7.6 Digital Data Service

7.6.1 Basic Channel Description

A Digital Data channel is a channel for duplex four-wire transmission of synchronous serial data at the rate of 2.4, 4.8, 9.6, or 56 Kbps. The actual bit rate is a function of the channel interface selected by the customer. The channel provides a synchronous service with timing provided by the Telephone Company through the Telephone Company's facilities to the customer in the received bit stream. Digital Data channels are provided as either hubbed or non-hubbed services between customer designated premises or between a customer designated premises and a Telephone Company hub or hubs. The hubs providing hubbed digital service and the wire centers providing non-hubbed digital service are identified in NECA Tariff FCC No. 4.

The customer may provide the Channel Service Unit-type equipment or other Network Channel Terminating Equipment associated with the Digital Data channel at the customer premises.

The Telephone Company will provide a channel capable of meeting a monthly average performance equal to or greater than 99.875% error-free seconds (if provided through a Digital Data hub) while the channel is in service, if it is measured through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference PUB 62310.

Rates and charges for Special Access Digital Data Service are as set forth in 17.3.4.

7.6.2 Technical Specifications Packages and Network Channel Interfaces

Technical Specifications Packages are set forth in 15.2.1(C). Compatible channel interfaces are set forth in 15.2.2(C)(3).

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7. Special Access Service (Cont'd)

7.6 Digital Data Service (Cont'd)

7.6.2 Technical Specifications Packages and Network Channel Interfaces (Cont'd)

The following network channel interfaces (NCIs) define the bit rates that are available for a Digital Data channel:

<u>NCI</u>	<u>Bit Rate</u>
DU-24	2.4 Kbps
DU-48	4.8 Kbps
DU-96	9.6 Kbps
DU-56	56.0 Kbps

7.6.3 Optional Features and Functions

The Optional Features and Functions described in (A), (B), and (C) are only available where Digital Data Service is provided via a hub.

(A) Central Office Bridging Capability

(B) Transfer Arrangement

An arrangement that affords the customer an additional measure of protection and/or flexibility in the use of their access channel(s) on a 1xN basis. The arrangement can be utilized to transfer a leg of a Special Access Service to either a spare or working channel that terminates in either the same or a different customer designated premises. This arrangement is only available at a Telephone Company designated hub. A key activated or dial-up control service is required to operate the transfer arrangement. A spare channel, if required, is not included as a part of the option.

(C) Public Packet Switching Network (PPSN) Interface Arrangement

An arrangement that provides the interface requirements that permit a Digital Data Service to interface with a Public Packet Switching Network packet switch located in a Telephone Company premises. The interface is compatible with X.25 and X.75 packet switching protocols as defined by the CCITT.

The table set forth in 15.2.1(C) shows the technical specifications packages with which the optional features and functions are available.

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7. Special Access Service (Cont'd)

7.7 High Capacity Service

7.7.1 Basic Channel Description

A High Capacity channel is a channel for the transmission of 1.544 Mbps isochronous serial data. The actual bit rate is a function of the channel interface selected by the customer. High Capacity channels are provided between customer designated premises or between a customer designated premises and a Telephone Company hub or hubs.

The customer may provide the Network Channel Terminating Equipment associated with the High Capacity channel at the customer's premises. A channel with technical specifications package HC1 will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the 1.544 Mbps rate through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference PUB 62411.

Rates and charges for Special Access High Capacity Service are as set forth in 17.3.5.

7.7.2 Technical Specifications Packages and Network Channel Interfaces

Technical Specifications Packages are set forth in 15.2.1(D). Compatible channel interfaces are set forth in 15.2.2(C)(4).

The following network channel interfaces (NCIs) define the bit rates that are available for a High Capacity channel:

<u>NCI</u>	<u>Bit Rate</u>
DS-15	1.544 Mbps (DS1)

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7. Special Access Service (Cont'd)

7.7 High Capacity Service (Cont'd)

7.7.3 Optional Features and Functions

Central Office Multiplexing

DS1 to Voice

An arrangement that converts a 1.544 Mbps channel to 24 channels for use with Voice Grade Services. A channel(s) of this DS1 to the Hub can also be used for a Digital Data Service.

The table set forth in 15.2.1(D) shows the technical specifications packages with which the optional features and functions are available.

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11. Special Facilities Routing of Access Services

11.1 Description

The services provided under this tariff are provided over such routes and facilities as the Telephone Company may elect. Special Facilities Routing is involved when, in order to comply with requirements specified by the customer, the Telephone Company provides Switched Access Service, Special Access Service or Special in a manner which includes one or more of the following conditions:

11.1.1 Diversity

Two or more circuits must be provided over not more than two different physical routes.

11.1.2 Avoidance

A circuit(s) must be provided on a route which avoids specified geographical locations.

11.1.3 Diversity and Avoidance Combined

11.1.4 Cable-Only Facilities

Certain Voice Grade services are provided on Cable-Only Facilities to meet the particular needs of a customer.

Service is provided subject to the availability of Cable-Only facilities. In the event of service failure, restoration will be made through the use of any available facilities as selected by the Telephone Company.

Avoidance and Diversity are available on Switched Access Service as set forth in Section 6. preceding; Voice Grade Special Access Services as set forth in 7.4 preceding. Cable-Only Facilities are available for Switched Access Service as set forth in Section 6. preceding; Voice Grade Special Access Services as set forth in 7.4 preceding.

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11. Special Facilities Routing of Access Services (Cont'd)

11.1 Description (Cont'd)

In order to avoid the compromise of special routing information, the Telephone Company will provide the required routing information for each specially routed service to only the ordering customer. If requested by the customer, this information will be provided when service is installed and prior to any subsequent changes in routing.

The rates and charges for Special Facilities Routing of Access Services are developed on an individual case basis.

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13. Additional Engineering, Additional Labor and Miscellaneous Services

13.1 addresses Additional Engineering. 13.2 addresses Additional Labor (which is comprised of Overtime Installation, Overtime Repair, Stand by, Testing and Maintenance with Other Telephone Companies, and Other Labor). 13.3 addresses Miscellaneous Services (which are comprised of Testing Services, Maintenance of Service and Telecommunications Service Restoration Priority).

In this section, normally scheduled working hours are an employee's scheduled work period in any given calendar day (e.g., 8:00 a.m. to 5:00 p.m.) for the application of rates based on working hours.

A Miscellaneous Service Order charge as described in 5.4.2 may be applicable to services ordered from this section.

13.1 Additional Engineering

Additional Engineering, including engineering reviews as set forth in 5.4.3, will be undertaken only after the Telephone Company has notified the customer that additional engineering charges apply as set forth in 17.4.2, and the customer agrees to such charges.

Additional Engineering will be provided by the Telephone Company at the request of the customer only when:

- (A) Additional engineering time is incurred by the Telephone Company to engineer a customer's request for a customized service as set forth in 7.1.2.
- (B) A customer requested Design Change requires the expenditure of additional engineering time. Such additional engineering time is incurred by the Telephone Company for the engineering review as set forth in 5.4.3. The charge for additional engineering time relating to the engineering review, which is undertaken to determine if a design change is indeed required, will apply whether or not the customer authorizes the Telephone Company to proceed with the Design Change. In this case the Design Change charge, as set forth in 17.4.1(C), does not apply unless the customer authorizes the Telephone Company to proceed with the Design Change.

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.2 Additional Labor

Additional Labor is that labor requested by the customer on a given service and agreed to by the Telephone Company as set forth in 13.2.1 through 13.2.5 . The Telephone Company will notify the customer that additional labor charges as set forth in 17.4.3 will apply before any additional labor is undertaken. A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours. When provisioning or restoring Telecommunications Service Priority services, the Telephone Company will, when possible, notify the customer of the applicability of these Additional Labor charges.

13.2.1 Overtime Installation

Overtime installation is that Telephone Company installation effort outside of normally scheduled working hours.

13.2.2 Overtime Repair

Overtime repair is that Telephone Company effort performed outside of normally scheduled working hours.

13.2.3 Stand by

Stand by includes all time in excess of one-half (1/2) hour during which Telephone Company personnel stand by to make installation acceptance tests or cooperative tests with a customer to verify facility repair on a given service.

13.2.4 Testing and Maintenance with Other Telephone Companies

Additional testing, maintenance or repair of facilities which connect other telephone companies is that which is in addition to the normal effort required to test, maintain or repair facilities provided solely by the Telephone Company.

13.2.5 Other Labor

Other labor is that additional labor not included in 13.2.1 through 13.2.4 and labor incurred to accommodate a specific customer request that involves only labor which is not covered by any other section of this tariff.

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services

13.3.1 Testing Services

Testing Services offered under this section of the tariff are optional and subject to rates and charges as set forth in 17.4.4 . A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours. Other testing services, as described in 6.2.4 and 7.1.7 , are provided by the Telephone Company in association with Access Services and are furnished at no additional charge.

Testing services are normally provided by Telephone Company personnel at Telephone Company locations. However, provisions are made in (B)(2) for a customer to request Telephone Company personnel to perform testing services at the customer designated premises.

The offering of Testing Services under this section of the tariff is made subject to the availability of the necessary qualified personnel and test equipment at the various test locations mentioned in (A) and (B) .

(A) Switched Access Service

Testing Services for Switched Access are comprised of (a) tests which are performed during the installation of a Switched Access Service, i.e., Acceptance Tests, (b) tests which are performed after customer acceptance of such access services and which are without charge, i.e., routine testing and (c) additional tests which are performed during or after customer acceptance of such access services and for which additional charges apply, i.e., Additional Cooperative Acceptance Tests and in-service tests.

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.1 Testing Services (Cont'd)

(A) Switched Access Service (Cont'd)

Routine tests are those tests performed by the Telephone Company on a regular basis, as set forth in 6.2.4 which are required to maintain Switched Access Service. Additional in-service tests may be done on an automatic basis (no Telephone Company or customer technicians involved), on a manual basis [Telephone Company technician(s) involved at Telephone Company office(s) and Telephone Company or customer technician(s) involved at the customer designated premises].

Testing services are ordered to the Dial Tone Office for FGA, to the access tandem or end office for FGB (wherever the FGB service is ordered) and to the end office for Feature Groups C and D.

(1) Additional Cooperative Acceptance Testing

Additional Cooperative Acceptance Testing of Switched Access Service involves the Telephone Company provision of a technician at its office(s) and the customer provision of a technician at its premises, with suitable test equipment to perform the required tests.

Additional Cooperative Acceptance Tests may, for example, consist of the following tests:

- Impulse Noise
- Phase Jitter
- Signal to C-Notched Noise Ratio
- Intermodulation (Nonlinear) Distortion
- Frequency Shift (Offset)
- Envelope Delay Distortion
- Dial Pulse Percent Break

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.1 Testing Services (Cont'd)

(A) Switched Access Service (Cont'd)

(2) Additional Automatic Testing

Additional Automatic Testing (AAT) of Switched Access Services (Feature Groups B, C and D), is a service where the customer provides remote office test lines and 105 test lines with associated responders or their functional equivalent. The customer may order, at additional charges, gain-slope and C-notched noise testing and may order the routine tests (1004 Hz loss, C-Message Noise and Balance) on an as needed or more than routine schedule.

The Telephone Company will provide an AAT report that lists the test results for each trunk tested. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on an as-occurs basis.

The Additional Tests (i.e., gain slope, C-notched noise, 1004 Hz loss, C-message noise and balance) may be ordered by the customer at additional charges, 60 days prior to the start of the customer prescribed schedule. The rates for Additional Automatic Tests are as set forth in 17.4.4(B) .

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.1 Testing Services (Cont'd)

(A) Switched Access Service (Cont'd)

(3) Additional Manual Testing

Additional Manual Testing (AMT) of Switched Access Services (Feature Groups A, B, C, and D not routed through an access tandem), is a service where the Telephone Company provides a technician at its office(s) and the Telephone Company or customer provides a technician at the customer designated premises, with suitable test equipment to perform the required tests. Such additional tests will normally consist of gain-slope and C-notched noise testing. However, the Telephone Company will conduct any additional tests which the IC may request.

The Telephone Company will provide an AMT report listing the test results for each trunk tested. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on a per occurrence basis.

The Additional Manual Tests may be ordered by the customer at additional charges, 60 days prior to the start of the testing schedule as mutually agreed to by the customer and the Telephone Company.

The rates for Additional Manual Testing are as set forth in 17.4.4(C) .

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.1 Testing Services (Cont'd)

(A) Switched Access Service (Cont'd)

(4) Obligations of the Customer

(A) The customer shall provide the Remote Office Test Line priming data to the Telephone Company, as appropriate, to support routine testing as set forth in 6.2.4(B) or AAT as set forth in 13.3.1(A)(2) .

(B) The customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

(B) Special Access Service

The Telephone Company will provide assistance in performing specific tests requested by the customer.

(1) Additional Cooperative Acceptance Testing

When a customer provides a technician at its premises or at an end user's premises, with suitable test equipment to perform the requested tests, the Telephone Company will provide a technician at its office for the purpose of conducting Additional Cooperative Acceptance Testing on Voice Grade Services. At the customer's request, the Telephone Company will provide a technician at the customer's premises or at the end user premises. These tests may, for example, consist of the following:

- Attenuation Distortion (i.e., frequency response)
- Intermodulation Distortion (i.e., harmonic distortion)
- Phase Jitter
- Impulse Noise
- Envelope Delay Distortion
- Echo Control
- Frequency Shift

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.1 Testing Services (Cont'd)

(B) Special Access Service (Cont'd)

(2) Additional Manual Testing

The Telephone Company will provide a technician at its premises, and the Telephone Company or customer will provide a technician at the customer's designated premises with suitable test equipment to perform the requested tests.

(3) Obligation of the Customer

When the customer subscribes to Testing Service as set forth in this section, the customer shall make the facilities to be tested available to the Telephone Company at time mutually agreed upon.

13.3.2 Maintenance of Service

- (A) When a customer reports a trouble to the Telephone Company for clearance and no trouble is found in the Telephone Company's facilities, the customer shall be responsible for payment of a Maintenance of Service charge as set forth in 17.4.4(F) for the period of time from when Telephone Company personnel are dispatched, at the request of the customer, to the customer designated premises to when the work is completed. Failure of Telephone Company personnel to find trouble in Telephone Company facilities will result in no charge if the trouble is actually in those facilities, but not discovered at the time.

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.2 Maintenance of Service (Cont'd)

- (B) The customer shall be responsible for payment of a Maintenance of Service charge when the Telephone Company dispatches personnel to the customer designated premises, and the trouble is in equipment or communications systems provided by other than the Telephone Company or in detariffed CPE provided by the Telephone Company.

In either (A) or (B) , no credit allowance will be applicable for the interruption involved if the Maintenance of Service Charge applies.

13.3.3 Telecommunications Service Priority - TSP

- (A) Priority installation and/or restoration of National Security Emergency Preparedness (NSEP) telecommunications services shall be provided in accordance with Part 64.401, Appendix A, of the FCC's Rules and Regulations

In addition, TSP System service shall be provided in accordance with the guidelines set forth in "Telecommunications Service Priority (TSP) System for National Security Emergency Preparedness (NSEP)

Service Vendor Handbook" (NCSH 3-1-2) dated July 9, 1990, and "Telecommunications Service Priority System for National Security Emergency Preparedness Service User Manual" (NCSM 3-1-1).

The TSP System is a service, developed to meet the requirements of the Federal Government, as specified in the Service Vendor's Handbook and Service User's Manual which provides the regulatory, administrative and operational framework for the priority installation and/or restoration of NSEP telecommunications services. These include both Switched and Special Access Services. The TSP System applies only to NSEP telecommunications services, and requires and authorizes priority action by the Telephone Company providing such services.

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13. Additional Engineering, Additional Labor and Miscellaneous Services
(Cont'd)

13.3 Miscellaneous Services (Cont'd)

13.3.3 Telecommunications Service Priority - TSP (Cont'd)

(A) (Cont'd)

For Switched Access Service, the TSP System's applicability is limited to those services which the Telephone Company can discreetly identify for priority provisioning and/or restoration.

(B) A Telecommunications Service Priority charge applies as set forth in 17.4.4 when a request to provide or change a Telecommunications Service Priority is received subsequent to the issuance of an Access Order to install the service.

Additionally, a Miscellaneous Service Order Charge as set forth in 17.4.1(D) will apply to Telecommunications Service Priority requests that are ordered subsequent to the initial installation of the associated access service.

A Telecommunications Service Priority charge does not apply when a Telecommunications Service Priority is discontinued or when ordered coincident with an Access Order to install or change service.

In addition, Additional Labor rates as set forth in 17.4.3 may be applicable when provisioning or restoring Switched or Special Access Services with Telecommunications Service Priority.

When the customer requests an audit or a reconciliation of the Telephone Company's Telecommunications Service Priority records, a Miscellaneous Service Order Charge as set forth in 17.4.1 (D) and Additional Labor rates as set forth in 17.4.3 are applicable.

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13.3 Miscellaneous Services (Cont'd)

(N)

13.3.4 IntraLATA Presubscription

(A) General

IntraLATA Presubscription is a procedure whereby a customer designates to the Telephone Company the carrier which the customer wishes to be the carrier of choice for intraLATA toll calls. Such calls are automatically directed to the designated carrier, without the need to use carrier access codes or additional dialing to direct the call to the designated carrier. IntraLATA presubscription does not prevent a customer, who has presubscribed to an intraLATA toll carrier, from using carrier access codes or additional dialing to direct calls to an alternative intraLATA toll carrier on a per call basis.

All intraLATA toll message calls are subject to IntraLATA Presubscription. An intraLATA toll message call is a completed call on the public switched network between the originating location and a terminating location within a given LATA, but outside the local service area of the originating location.

All 0- calls, calls to 1-HNPA-555-1212 or 555-1212, 411, 611, 911, Public Announcement Service calls (976-XXXX), and all local calls, including Extended Area Service (EAS) and Expanded Local Calling calls, are specifically excluded from IntraLATA Presubscription. Calls using the 500, 700, 800 series, or 900 service access codes shall be routed in accordance with the North American Numbering Plan.

(B) Rules and Regulations

Customers of record on the effective date of this tariff will retain their current dialing arrangements until they request that their dialing arrangements be changed. All customers of record will be initially presubscribed to the Telephone Company's intraLATA carrier.

Customers may change their Option and/or their presubscribed intraLATA toll carrier at any time subject to charges specified in Paragraph D below.

(N)

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13.3 Miscellaneous Services (Cont'd)

(N)

13.3.4 IntraLATA Presubscription (Cont'd)

(C) IntraLATA Presubscription Customer Notices

The Telephone Company will notify customers that IntraLATA Presubscription is available no longer than thirty (30) days following the effective date of this tariff. The notice will contain a description of intraLATA toll presubscription, how to make an intraLATA toll presubscription carrier selection, a description of when and what charges apply related to the selection of an intraLATA toll carrier.

(D) IntraLATA Presubscription Charges

There will be no charge for a customer's initial intraLATA toll presubscription selection for a period beginning on the effective date of this tariff and ending no sooner than ninety (90) days following the mailing date of customer notification of intraLATA presubscription availability.

New local service customers will be asked to select a carrier(s) for their intraLATA toll and interLATA calls subject to presubscription at the time they place on order with the Telephone Company for local exchange service. If the new customer is unable to make a selection, at that time, the new customer will be read a random listing of all available intraLATA toll carriers to aid their selection. If the new customer is still unable to make a selection, at that time, the Telephone Company will inform the new customer that their intraLATA calling arrangements will be defaulted to their interLATA carrier.

After a customer's initial selection for a presubscribed intraLATA toll carrier, for any change thereafter, an IntraLATA Presubscription Change Charge (PIC), as set forth in Section 17.4.4. will apply.

(N)

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ACCESS TARIFF

15. Access Service Interfaces and Transmission Specifications

15.1 contains Switched Access Service Options (which are comprised of Interface Groups, Supervisory Signaling, Entry Switch Receive Level and Local Transport Termination) and Transmission Specifications. 15.2 describes Special Access Service Network Channel (NC) codes and Network Channel Interface (NCI) codes.

15.1 Switched Access Service

Ten Interface Groups are provided for terminating the Local Transport at the customer's designated premises. Each Interface Group provides a specified premises interface. Where transmission facilities permit, the individual transmission path between the customer's designated premises and the first point of switching may, at the option of the customer, be provided with optional features per in 15.1.1(E).

As a result of the customer's access order and the type of Telephone Company transport facilities serving the customer designated premises, the need for signaling conversions or two-wire to four-wire conversions, or the need to terminate digital or high frequency facilities in channel bank equipment may require that Telephone Company equipment be placed at the customer designated premises. For example, if a voice frequency interface is ordered by the customer and the Telephone Company facilities serving the customer designated premises are digital, then Telephone Company channel bank equipment must be placed at the customer designated premises in order to provide the voice frequency interface ordered by the customer.

15.1.1 Local Transport Interface Groups

Interface Groups are combinations of technical parameters which describe the Telephone Company hand-off at the point of termination at the customer designated premises. The technical specifications concerning the available interface groups are set forth in (A) through (D) .

Interface Group 1 is provided with Type C Transmission Specifications, as set forth in 15.1.2(C) , and Interface Groups 2 through 10 are provided with Type A or B Transmission Specifications, as set forth respectively in 15.1.2(E) and (F) , depending on the Feature Group and whether the Access Service is routed directly or through an access tandem. All Interface Groups are provided with Data Transmission Parameters.

Only certain premises interfaces are available at the customer designated premises. The premises interfaces associated with the Interface Groups may vary among Feature Groups.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(A) Interface Group 1

Interface Group 1, except as set forth in the following, provides two-wire voice frequency transmission at the point of termination at the customer designated premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

Interface Group 1 is not provided in association with FGC and FGD when the first point of switching is an access tandem. In addition, Interface Group 1 is not provided in association with FGB, FGC or FGD when the first point of switching provides only four-wire terminations.

The transmission path between the point of termination at the customer designated premises and the first point of switching may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

(B) Interface Group 2

Interface Group 2 provides four-wire voice frequency transmission at the point of termination at the customer designated premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(B) Interface Group 2 (Cont'd)

The transmission path between the point of termination at the customer designated premises and the first point of switching may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

(C) Interface Groups 3 through 5

Interface Groups 3 through 5 provide analog transmission at the point of termination at the customer designated premises. The various interfaces are capable of transmitting electrical signals at the frequencies illustrated following, with the capability to channelize voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Groups are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex equipment to derive the transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interfaces are provided with individual transmission path SF supervisory signaling.

<u>Interface Group Identification No.</u>	<u>Transmission Frequency Bandwidth</u>	<u>Analog Hierarchy Level</u>	<u>Maximum No. of Channelized Voice Freq. Trans. Paths</u>
3	60 - 108 kHz	Group	12
4	312 - 552 kHz	Supergroup	60
5	564 - 3084 kHz	Mastergroup	600

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(D) Interface Group 6 through 10

Interface Groups 6 through 10 provide digital transmission at the point of termination at the customer designated premises. The various interfaces are capable of transmitting electrical signals at the nominal bit rates illustrated following, with the capability to channelize voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, a DS1 signal(s) in D3/D4 format.

The interfaces are provided with individual transmission path bit stream supervisory signaling.

<u>Interface Group Identification No.</u>	<u>Normal Bit Rate (Mbps)</u>	<u>Digital Hierarchy Level</u>	<u>Maximum No. of Channelized Voice Freq. Trans. Paths</u>
6	1.544	DS1	24
7	3.152	DS1C	48
8	6.312	DS2	96
9	44.736	DS3	672
10	274.176	DS4	4032

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(E) Local Transport Optional Features

Where transmission facilities permit, the Telephone Company will, at the option of the customer, provide the following features in association with Local Transport. An Access Order Charge as specified in 17.4.1(A) is applicable on a per order basis when nonchargeable optional features are added subsequent to the installation of service.

- Customer Specified Entry Switch Receive Level

Customer Specified Entry Switch Receive Level allows the customer to specify the receive transmission level at the first point of switching. The range of transmission levels which may be specified is described in Technical Reference TR-NPL-000334. This feature is available with Interface Groups 2 through 10 for Feature Groups A and B.

- Customer Specification of Local Transport Termination

Customer Specification of Local Transport Termination allows the customer to specify, for Feature Group B routed directly to an end office or access tandem, a four-wire termination of the Local Transport at the first point of switching in lieu of a Telephone Company selected two-wire termination. This option is available only when the Feature Group B arrangement is provided with Type B Transmission Specifications.

- Supervisory Signaling

Supervisory Signaling allows the customer to order an optional supervisory signaling arrangement for each transmission path provided where the transmission parameters permit, and where signaling conversion is required by the customer to meet its signaling capability.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(E) Local Transport Optional Features (Cont'd)

The Interface Groups, as described in (A) through (D) , represent industry standard arrangements. Where transmission parameters permit, the customer may select the following optional signaling arrangements in place of the signaling arrangements usually associated with the Interface Groups.

- For Interface Groups 1 and 2 associated with FGB, FGC or FGD
DX Supervisory Signaling,
E&M Type I Supervisory Signaling,
E&M Type II Supervisory Signaling, or
E&M Type III Supervisory Signaling
- For Interface Group 2 associated with FGB, FGC or FGD and in addition to the preceding
SF Supervisory Signaling, or
Tandem Supervisory Signaling
- For Interface Groups 3 through 5
Optional Supervisory Signaling Not Available
- For Interface Groups 6 through 10

These Interface Groups may, at the option of the customer, be provided with individual transmission path SF supervisory signaling where such signaling is available in Telephone Company central offices. Generally such signaling is available only where the first point of switching provides an analog (i.e., non digital) interface to the transport termination.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes

Following is a matrix showing premises interface codes which are available for each Interface Group. Their availability is a function of the Telephone Company switch supervisory signaling and Feature Group. For explanations of these codes, see the Parameter Codes and Options as set forth in 15.2.2(A) .

Interface Group	Telephone Company				Premises Interface Code	Feature Group				
	Switch	Supervisory	Signaling			A	B	C	D	
1	LO				2LS2	X				
	LO				2LS3	X				
	GO				2GS2	X				
	GO				2GS3	X				
	LO, GO,				2DX3	X				
	LO, GO,				4EA3-E	X				
	LO, GO				4EA3-M	X				
	LO, GO				6EB3-E	X				
	LO, GO				6EB3-M	X				
	RV, EA, EB, EC				2DX3		X	X	X	
	RV, EA, EB, EC				4EA3-E		X	X	X	
	RV, EA, EB, EC				4EA3-M		X	X	X	
	RV, EA, EB, EC				6EB3-E		X	X	X	
	RV, EA, EB, EC				6EB3-M		X	X	X	
	EA, EB, EC				6EC3			X	X	
	RV				2RV3-0		X	X	X	
	RV				2RV3-T		X	X	X	
	2	LO, GO				4SF2	X			
		LO, GO				4SF3	X			
		LO				4LS2	X			
LO					4LS3	X				
LO					6LS2	X				

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes (Cont'd)

Interface Group	Telephone Company				Premises Interface Code	Feature Group				
	Switch	Supervisory	Signaling			A	B	C	D	
2 (Cont'd)	GO				4GS2	X				
	GO				4GS3	X				
	GO				6GS2	X				
	LO, GO				4DX2	X				
	LO, GO				4DX3	X				
	LO, GO				6EA2-E	X				
	LO, GO				6EA2-M	X				
	LO, GO				8EB2-E	X				
	LO, GO				8EB2-M	X				
	LO, GO				6EX2-B	X				
	RV, EA, EB, EC				4SF2		X	X	X	
	RV, EA, EB, EC				4SF3		X			
	RV, EA, EB, EC				4DX2		X	X	X	
	RV, EA, EB, EC				4DX3		X			
	RV, EA, EB, EC				6DX2			X		
	RV, EA, EB, EC				6EA2-E		X	X	X	
	RV, EA, EB, EC				6EA2-M		X	X	X	
	RV, EA, EB, EC				8EB2-E		X	X	X	
	RV, EA, EB, EC				8EB2-M		X	X	X	
	EA, EB, EC				8EC2-M			X	X	
	RV				4RV2-O		X	X	X	
	RV				4RV2-T		X	X	X	
	RV				4RV3-O		X	X		
	RV				4RV3-T		X	X		
	3	LO, GO				4AH5-B	X			
		RV, EA, EB, EC				4AH5-B		X	X	X
	4	LO, GO				4AH6-C	X			
		RV, EA, EB, EC				4AH6-C		X	X	X
	5	LO, GO				4AH6-D	X			
		RV, EA, EB, EC				4AH6-D		X	X	X

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes (Cont'd)

Interface Group	Telephone Company				Premises Interface Code	Feature Group			
	Switch	Supervisory	Signaling			A	B	C	D
6	LO,	GO			4DS9-15	X			
	LO,	GO			4DS9-15L	X			
	RV,	EA,	EB,	EC	4DS9-15		X	X	X
	RV,	EA,	EB,	EC	4DS9-15L		X	X	X
7	LO,	GO			4DS9-31	X			
	LO,	GO			4DS9-31L	X			
	RV,	EA,	EB,	EC	4DS9-31		X	X	X
	RV,	EA,	EB,	EC	4DS9-31L		X	X	X
8	LO,	GO			4DS0-63	X			
	LO,	GO			4DS0-63L	X			
	RV,	EA,	EB,	EC	4DS0-63		X	X	X
	RV,	EA,	EB,	EC	4DS0-63L		X	X	X
9	LO,	GO			4DS6-44	X			
	LO,	GO			4DS6-44L	X			
	RV,	EA,	EB,	EC	4DS6-44		X	X	X
	RV,	EA,	EB,	EC	4DS6-44L		X	X	X
10	LO,	GO			4DS6-27	X			
	LO,	GO			4DS6-27L	X			
	RV,	EA,	EB,	EC	4DS6-27		X	X	X
	RV,	EA,	EB,	EC	4DS6-27L		X	X	X

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications

Descriptions of the transmission specifications available with each Feature Group as a function of the Interface Group selected by the customer, are set forth in (A) through (D). Descriptions of each of these Standard Transmission Specifications and the two Data Transmission Parameters mentioned are set forth respectively in (E) through (G) and 15.1.3(A) and (B) :

(A) Feature Group A

FGA is provided with either Type B or Type C Transmission Specifications. The specifications for the associated parameters are guaranteed to the first point of switching. Type C Transmission Specifications are provided with Interface Group 1 and Type B is provided with Interface Groups 2 through 10. Type DB Data Transmission Parameters are provided with FGA to the first point of switching.

(B) Feature Group B

FGB is provided with either Type B or Type C Transmission Specifications. The specifications for the associated parameters are guaranteed to the end office when routed directly or to the first point of switching when routed via an access tandem. Type C Transmission Specifications are provided with Interface Group 1 and Type B is provided with Interface Groups 2 through 10. Type DB Data Transmission Parameters are provided with FGB to the first point of switching.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(C) Feature Group C

FGC is provided with either Type B or Type C Transmission Specifications as follows:

- When routed directly to the end office either Type B or Type C is provided.
- When routed to an access tandem only Type B is provided.
- Type B or Type C is provided on the transmission path from the access tandem to the end office.

Type C Transmission Specifications are provided with Interface Group 1 when routed directly to an end office. Type B is provided with Interface Groups 2 through 10, whether routed directly to an end office or to an access tandem.

Type DB Data Transmission Parameters are provided with FGC for the transmission path between the customer designated premises and the end office when directly routed to the end office, and between the customer designated premises and the access tandem and between the access tandem and the end office when routed via an access tandem.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(D) Feature Group D

FGD is provided with either Type A, Type B or Type C Transmission Specifications as follows:

- When routed to the end office either Type B or C is provided.
- When routed to an access tandem only Type A is provided.
- Type A is provided on the transmission path from the access tandem to the end office.

Type C Transmission Specifications are provided with Interface Group 1. Type A and Type B Transmission Specifications are provided with Interface Groups 2 through 10.

Type DB Data Transmission Parameters are provided with FGD for the transmission path between the customer designated premises and the end office when directly routed to the end office. Type DA Data Transmission Parameters are provided for the transmission path between the customer designated premises and the access tandem and between the access tandem and the end office when routed via an access tandem.

(E) Type A Transmission Specifications

Type A Transmission Specifications is provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is \pm 2.0 dB

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(E) Type A Transmission Specifications (Cont'd)

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -1.0 dB to +3.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

<u>Route Miles</u>	<u>C-Message Noise</u>
less than 50	32 dBrnCO
51 to 100	34 dBrnCO
101 to 200	37 dBrnCO
201 to 400	40 dBrnCO
401 to 1000	42 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBm0 holding tone, is less than or equal to 45 dBrnCO.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(E) Type A Transmission Specifications (Cont'd)

(5) Echo Control

Echo Control, identified as Equal Level Echo Path Loss, and expressed as Echo Return Loss and Singing Return Loss, is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
POT to Access Tandem	21 dB	14 dB
POT to End Office		
- Direct	N/A	N/A
- Via Access Tandem	16 dB	11 dB

(6) Standard Return Loss

Standard Return Loss expressed as Echo Return Loss and Singing Return Loss on two-wire ports of a four-wire point of termination shall be equal to or greater than:

<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
5 dB	2.5 dB

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(F) Type B Transmission Specifications

Type B Transmission Specifications are provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is \pm 2.5 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +4.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

<u>Route Miles</u>	<u>C-Message Noise*</u>	
	<u>Type B1</u>	<u>Type B2</u>
less than 50	32 dBrnC0	35 dBrnC0
51 to 100	33 dBrnC0	37 dBrnC0
101 to 200	35 dBrnC0	40 dBrnC0
201 to 400	37 dBrnC0	43 dBrnC0
401 to 1000	39 dBrnC0	45 dBrnC0

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBm0 holding tone is less than or equal to 47 dBrnC0.

* For Feature Groups C and D only Type B2 will be provided. For Feature Groups A and B, Type B1 or B2 will be provided as set forth in Technical Reference TR-NPL-000334.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(F) Type B Transmission Specifications (Cont'd)

(5) Echo Control

Echo Control, identified as Impedance Balance for FGA and FGB and Equal Level Echo Path Loss for FGC and FGD, and expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. The ERL and SRL also differ by Feature Group, type of termination, and type of transmission path. They are greater than or equal to the following:

	<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
POT to Access Tandem		
- Terminated in 4-Wire trunk	21 dB	14 dB
- Terminated in 2-Wire trunk	16 dB	11 dB
POT to End Office		
- Direct	16 dB	11 dB
- Via Access Tandem		
• For FGB access	8 dB	4 dB
• For FGC access (Effective 4- Wire trans- mission path at end office)	16 dB	11 dB
• For FGD access (Effective 2-Wire trans- mission path at end office)	13 dB	6 dB

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(F) Type B Transmission Specifications (Cont'd)

(6) Standard Return Loss

Standard Return Loss, expressed as Echo Return Loss and Singing Return Loss, on two-wire ports of a four-wire point of termination shall be equal to or greater than:

<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
5 dB	2.5 dB

(G) Type C Transmission Specifications

Type C Transmission Specifications are provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is ± 3.0 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +5.5 dB.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(G) Type C Transmission Specifications (Cont'd)

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

<u>Route Miles</u>	<u>C-Message Noise*</u>	
	<u>Type C1</u>	<u>Type C2</u>
less than 50	32 dBrnCO	38 dBrnCO
51 to 100	33 dBrnCO	39 dBrnCO
101 to 200	35 dBrnCO	41 dBrnCO
201 to 400	37 dBrnCO	43 dBrnCO
401 to 1000	39 dBrnCO	45 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBm0 holding tone is less than or equal to 47 dBrnCO.

- * For Feature Groups C and D only Type C2 will be provided. For Feature Groups A and B, Type C1 or C2 will be provided as set forth in Technical Reference TR-NPL-000334.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.2 Standard Transmission Specifications (Cont'd)

(G) Type C Transmission Specifications (Cont'd)

(5) Echo Control

Echo Control, identified as Return Loss and expressed as Echo Return Loss and Singing Return Loss is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
POT to Access Tandem	13 dB	6 dB
POT to End Office		
- Direct	13 dB	6 dB
- Via Access Tandem (for FGB only)	8 dB	4 dB

15.1.3 Data Transmission Parameters

Two types of Data Transmission Parameters, i.e., Type DA and Type DB, are provided for the Feature Group arrangements. Type DB is provided with Feature Groups A, B and C and also with Feature Group D when Feature Group D is directly routed to the end office. Type DA is only provided with Feature Group D and only when routed via an access tandem. Following are descriptions of each.

(A) Data Transmission Parameters Type DA

(1) Signal to C-Notched Noise Ratio

The Signal to C-Notched Noise Ratio is equal to or greater than 33 dB.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.3 Data Transmission Parameters (Cont'd)

(A) Data Transmission Parameters Type DA (Cont'd)

(2) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is:

604 to 2804 Hz

less than 50 route miles	500 microseconds
equal to or greater than 50 route miles	900 microseconds

1004 to 2404 Hz

less than 50 route miles	200 microseconds
equal to or greater than 50 route miles	400 microseconds

(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 65 dBnC0 threshold in 15 minutes is no more than 15 counts.

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2) 33 dB

Third Order (R3) 37 dB

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.3 Data Transmission Parameters (Cont'd)

(A) Data Transmission Parameters Type DA (Cont'd)

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 5° peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

(B) Data Transmission Parameters Type DB

(1) Signal to C-Notched Noise Ratio

The signal to C-Notched Noise Ratio is equal to or greater than 30 dB.

(2) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is:

604 to 2804 Hz

less than 50 route miles	800 microseconds
equal to or greater than 50 route miles	1000 microseconds

1004 to 2404 Hz

less than 50 route miles	320 microseconds
equal to or greater than 50 route miles	500 microseconds

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.1 Switched Access Service (Cont'd)

15.1.3 Data Transmission Parameters (Cont'd)

(B) Data Transmission Parameters Type DB (Cont'd)

(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 67 dBrnC0 threshold in 15 minutes is no more than 15 counts.

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

- Second Order (R2) 31 dB
- Third Order (R3) 34 dB

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 7° peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service

This section explains and lists the codes that the customer must specify when ordering Special Access Service. These codes provide a standardized means to relate the services being ordered to Special Access Service offerings contained in Section 7. .

When ordering, the type of Special Access Service is described by two code sets, the Network Channel (NC) code and the Network Channel Interface (NCI) codes.

The Network Channel (NC) code consists of two elements. Element one is a Channel Service Code (character positions 1 and 2) that describes the channel service type in an abbreviated form. Element two is an Optional Feature Code (character positions 3 and 4) that identifies option codes available for each channel service code, such as C-conditioning or Improved Return Loss.

The Network Channel Interface (NCI) is used to identify interface specifications associated with a particular channel. This code describes the total wires, protocol, impedance, protocol options and transmission level point(s) reflecting physical and electrical characteristics between the Telephone Company and the customer.

On the following 3 pages are examples which explain the specific characters of the codes and which reference matrices and charts used in developing the codes. Included in the matrices are Service Designator (SD) codes which are used to identify variations of service within service types. The SD and NC codes are displayed as components of the matrices designated as Technical Specifications packages in (A) through (G) . Through the use of these matrices, SD codes may be converted to NC codes for service ordering purposes.

A chart is also provided in 15.2.2(A) which contains information necessary to develop NCI codes.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

Comprehensive lists of allowed Network Channel (NC) and Network Channel Interface (NCI) codes are contained in Special Report SR-ISD-000307. However, not all services contained in this Special Report may be offered by the Telephone Company at this time.

Lastly, 15.2.2(C) provides a list of compatible Network Channel Interfaces inasmuch as the Network Channel Interfaces associated with a given service need not always be the same, but all must be compatible.

Example No. 1: If the customer wishes to order a 4-wire voice grade circuit with 600 Ohms impedance, capable of data transmission, and with improved return loss, the customer might specify the following:

<u>NC</u>	<u>NCI</u>	<u>SECNCI</u>
LG-R	04DB2	04DA2-S

NC Code:

LG = Voice Grade Channel Service, VG6
-R = Improved Return Loss

NCI Code:

04 = Number of physical wires at CDP
DB = Data stream in VF frequency band at the customer designated main terminal location
2 = 600 Ohms impedance

SECNCI (Secondary NCI Code):

D4 = Number of physical wires at CDP
DA = Data stream in VG frequency at the customer designated secondary terminal location
2 = 600 Ohms impedance
S = Sealing current option for 4-wire transmission

In the above example the NCI (Network Channel Interface) code is the interface requested at the customer's POT (Point of Termination) and the SECNCI (Secondary Network Channel Interface) code represents the interface at the end office serving the End User.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

Example No. 2: If the customer wishes to order a FX circuit to a station, with 600 Ohms impedance, loop start signaling, which is 4-wire at the CDP and 2-wire at the end-user, the customer might specify:

<u>NC</u>	<u>NCI</u>	<u>SECNCI</u>
LC--	04LO2	02LS2

NC Code:

LC = Voice Grade Channel Service, VG2
-- = No Optional Features

NCI Code:

04 = Number of physical wires at CDP
LO = Loop start, loop signaling - open end
2 = 600 Ohms impedance

SECNCI (Secondary NCI Code):

D2 = Number of physical wires at CDP
LS = Loop start signaling - closed end
2 = 600 Ohms impedance

Example No. 3: If the customer wishes to order a 1.544 Mbps Hi-cap facility with no channel options such as CO multiplexing, the customer might specify the following:

<u>NC</u>	<u>NCI</u>	<u>SECNCI</u>
HC--	04DS9- 15	04DS9-15

NC Code:

HC = High Capacity Channel Service, HC1
-- = No Optional Features

NCI, SECNCI Code:

04 = Number of physical wires at CDP
DS = Digital hierarchy interface
9 = 100 Ohms impedance
15 = 1.544 Mbps (DSI) format

The preceding three examples use information contained in Special Report SR-ISD-000307.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.1 Network Channel (NC) Codes

In order to determine the NC code appropriate for the service to be ordered, the type of Special Access Service the customer wishes must be identified. This identification is accomplished by a Service Designator (SD) code. The broad categories of Service Designator codes are set forth in Section 7. . Variations within service type are described in the various Technical Publications cited in (A) through (G) .

Having determined the specific service type to be ordered and its SD code, and having used the appropriate Technical Publication, the customer should match the SD code to the NC code using the following matrices. Once the NC code has been determined the Network Channel Interface (NCI) code may be developed using the information set forth in 15.2.2 and the guidelines concerning specific parameters available for each service type as set forth in the specified Technical Publication.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.1 Network Channel (NC) Codes (Cont'd)

(A) Technical Specifications Packages Voice Grade Service

SD Code NC Code	Package VG-													W SE
	C*	1	2	3	4	5	6	7	8	9	10	11	12	
	LQ	LB	LC	LD	LE	LF	LG	LH	LJ	LK	LN	LP	LR	
<u>Parameter</u>														
Attenuation														
Distortion	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C-Message Noise	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Echo Control	X	X	X	X		X		X	X			X	X	X
Envelope Delay														
Distortion	X					X	X	X	X	X	X	X	X	X
Frequency Shift	X					X	X	X	X	X	X	X	X	X
Impulse Noise	X				X	X	X	X	X	X	X	X	X	X
Intermodulation														
Distortion	X						X	X	X	X	X	X		X
Loss Deviation	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Phase Hits, Gain														
Hits, and Dropouts	X													
Phase Jitter	X						X	X	X	X	X	X		X
Signal-to-C														
Message Noise					X									
Signal-to-C														
Notch Noise	X					X	X	X	X	X	X	X	X	X

The technical specifications for these parameters (except for dropouts, phase hits, and gain hits) are described in Technical References TR-NPL-000334 and TR-TSY-000335. The technical specifications for dropouts, phase hits, and gain hits are described in Technical Reference PUB 41004, Table 4.

* The desired parameters are selected by the customer from the list of available parameters.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.1 Network Channel (NC) Codes (Cont'd)

(A) Technical Specifications Packages Voice Grade Service
(Cont'd)

SD Code NC Code	Package VG-														W SE
	C*	1	2	3	4	5	6	7	8	9	10	11	12		
	LQ	LB	LC	LD	LE	LF	LG	LH	LJ	LK	LN	LP	LR		
<u>Optional Features and Functions</u>															
Central Office Bridging Capability	X		X			X	X				X	X	X		
Central Office Multiplexing	X						X								
Conditioning:	X					X	X	X	X	X	X				
. C-Type	X					X	X	X	X	X	X				
. Improved Attenuation Distortion	X					X	X	X	X	X	X				
. Improved Envelope Delay Distortion	X					X	X	X	X	X	X				
. Sealing Current	X						X								
. Data Capability	X						X	X			X				
. Telephoto Capability	X											X			
Customer Specified Premises Receive Level	X		X	X				X	X	X					
Improved Return Loss For Effective Four-Wire Transmission	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
For Effective Two-Wire Transmission	X		X	X				X							
Improved Two-Wire Voice Transmission														X	
PPSN Interface Arrangement	X									X					
Selective Signaling Arrangement	X		X			X	X				X	X	X		
Signaling Capability	X	X	X	X				X	X	X					
Transfer Arrangement	X	X	X	X	X	X	X	X	X	X	X	X	X		

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.1 Network Channel (NC) Codes (Cont'd)

(B) Technical Specifications Packages Program Audio Service

SD Code NC Code	Package				
	<u>APC*</u>	<u>AP1</u>	<u>AP2</u>	<u>AP3</u>	<u>AP4</u>
	<u>PQ</u>	<u>PE</u>	<u>PF</u>	<u>PJ</u>	<u>PK</u>
<u>Parameter</u>					
Actual Measured Loss	X	X	X	X	X
Amplitude Tracking	X				
Crosstalk	X	X	X	X	X
Distortion Tracking	X				
Gain/Frequency Distortion	X	X	X	X	X
Group Delay	X				
Noise	X	X	X	X	X
Phrase Tracking	X				
Short-Term Gain	X				
Stability					
Short-Term Loss	X				
Total Distortion	X	X	X	X	X
<u>Optional Features and Functions</u>					
Central Office Bridging Capability	X	X	X	X	X
Gain Conditioning	X	X	X	X	X
Stereo	X				X

The technical specifications are described in
Technical Reference TR-NPL-000337 and associated
Addendum.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.1 Network Channel (NC) Codes (Cont'd)

(C) Technical Specifications Packages Digital Data Service

	Package			
	D1	D2	D3	D4
SD Code	<u>XA</u>	<u>XB</u>	<u>XG</u>	<u>XH</u>
NC Code				
<u>Parameter</u>				
Error-Free Seconds	X	X	X	X
<u>Optional Features and Functions</u>				
Central Office Bridging Capability	X	X	X	X
PPSN Interface Transfer Arrangement	X	X	X	X
Transfer Arrangement	X	X	X	X

The Telephone Company will provide a channel capable of meeting a monthly average performance equal to or greater than 99.875% error-free seconds (if provided through a Digital Data hub) while the channel is in service, if it is measured through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference PUB 62310.

Voltages which are compatible with Digital Data Service are delineated in Technical Reference TR-NPL-000341.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

Technical Specifications Packages High Capacity Service

SD Code NC Code	Package					
	HCO HS	HC1 HC	HC1C HD	HC2 HE	HC3 HF	HC4 HG
<u>Parameters</u>						
Error-Free Seconds		X				
<u>Optional Features and Functions</u>						
Automatic Loop Transfer		X				
Central Office Multiplexing:						
DS4 to DS1						X
DS3 to DS1					X	
DS2 to DS1				X		
DS1C to DS1			X			
DS1 to Voice		X				
DS1 to DS0		X				
DS0 to Subrate*	X					
Transfer Arrangement		X				

A channel with technical specifications package HC1 will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the 1.544 Mbps rate through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference PUB 62411.

* Available only on a channel of 1.544 Mbps facility to a Telephone Company hub.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

The electrical interface with the Telephone Company for Special Access Services, is defined by an interface code. There are interface codes for both the customer designated premises and the point of termination. Three examples of NCI codes are found in 15.2 .

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(A) Parameter Codes and Options

Parameter

<u>Code</u>	<u>Option</u>	<u>Definition</u>
AB	-	accepts 20 Hz ringing signal at customer's point of termination
AC	-	accepts 20 Hz ringing signal at customer's end user's point of termination
AH	-	analog high capacity interface
	- B	60 kHz to 108 kHz (12 channels)
	- C	312 kHz to 552 kHz (60 channels)
	- D	564 kHz to 3084 kHz (600 channels)
CT	-	Centrex Tie Trunk Termination
DA	-	data stream in VF frequency band at customer's end user's point of termination
DB	-	data stream in VF frequency band at customer's point of termination
	- 10	VF for TG1 and TG2
	- 43	VF for 43 Telegraph Carrier type signals, TG1 and TG2
DC	-	direct current or voltage
	- 1	monitoring interface with series RC combination (McCulloh format)
	- 2	Telephone Company energized alarm channel
	- 3	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)
DD	-	DATAPHONE Select-A-Station (and TABS) interface at customer's point of termination
DE	-	DATAPHONE Select-A-Station (and TABS) interface at the customer's end user's point of termination

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(A) Parameter Codes and Options (Cont'd)

Parameter (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
DS	-	digital hierarchy interface
	- 15	1.544 Mbps (DS1) format per PUB 62411 plus D4
	- 15E	8-bit PCM encoded in one 64 kbps of the DS1 signal
	- 15F	8-bit PCM encoded in two 64 kbps of the DS1 signal
	- 15G	8-bit PCM encoded in three 64 kbps of the DS1 signal
	- 15H	14/11-bit PCM encoded in six 64 kbps of the DS1 signal
	- 15J	1.544 Mbps format per PUB 62411
	- 15K	1.544 Mbps format per PUB 62411 plus extended framing format
	- 15L	1.544 Mbps (DS1) with SF signaling
	- 27	274.176 Mbps (DS4)
	- 27L	274.176 Mbps (DS4) with SF signaling
	- 31	3.152 Mbps (DS1C)
	- 31L	3.152 Mbps (DS1C) with SF signaling
	- 44	44.736 Mbps (DS3)
	- 44L	44.736 Mbps (DS3) with SF signaling
	- 63	6.312 Mbps (DS2)
	- 63L	6.312 Mbps (DS2) with SF signaling
DU	-	digital access interface
	- 24	2.4 kbps
	- 48	4.8 kbps
	- 56	56.0 kbps
	- 96	9.6 kbps
	- A	1.544 Mbps format per PUB 62411
	- B	1.544 Mbps format per PUB 62411 plus D4
	- C	1.544 Mbps format per PUB 62411 plus extended framing format
DX	-	duplex signaling interface at customer's point of termination
DY	-	duplex signaling interface at customer's end user's point of termination

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(A) Parameter Codes and Options (Cont'd)

Parameter (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
EA	- E	Type I E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EA	- M	Type I E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EB	- E	Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EB	- M	Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EC	-	Type III E&M signaling at customer POT
EX	- A	tandem channel unit signaling for loop start or ground start and customer supplies open end (dial tone, etc.) functions.
EX	- B	tandem channel unit signaling for loop start or ground start and customer supplies closed end (dial pulsing, etc.) functions.
GO	-	ground start loop signaling - open end function by customer or customer's end user
GS	-	ground start loop signaling - closed end function by customer or customer's end user
IA	-	E.I.A. (25 pin RS-232)
LA	-	end user loop start loop signaling - Type A OPS registered port open end
LB	-	end user loop start loop signaling - Type B OPS registered port open end
LC	-	end user loop start loop signaling - Type C OPS registered port open end
LO	-	loop start loop signaling - open end function by customer or customer's end user
LR	-	20 Hz automatic ringdown interface at customer with Telephone Company provided PLAR
LS	-	loop start loop signaling - closed end function by customer or customer's end user
NO	-	no signaling interface, transmission only

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(A) Parameter Codes and Options (Cont'd)

Parameter (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
PG -		program transmission - no dc signaling
-	1	nominal frequency from 50 to 15000 Hz
-	3	nominal frequency from 200 to 3500 Hz
-	5	nominal frequency from 100 to 5000 Hz
-	8	nominal frequency from 50 to 8000 Hz
PR		protective relaying*
RV -	0	reverse battery signaling, one way operation, originate by customer
-	T	reverse battery signaling, one way operation, terminate function by customer or customer's end user
SF -		single frequency signaling with VF band at either customer POT or customer's end user POT
TF -		telephotograph interface
TT -		telegraph/teletypewriter interface at either customer POT or customer's end user POT
-	2	20.0 milliamperes
-	3	3.0 milliamperes
-	6	62.5 milliamperes
TV -		television interface
-	1	combined (diplexed) video and one audio signal
-	2	combined (diplexed) video and two audio signals
-	5	video plus one (or two) audio 5 kHz signal(s) or one (or two) two wire
-	15	video plus one (or two) audio 15 kHz signal(s)

* Available only for the transmission of audio tone protective relaying signals used in the protection of electric power systems during fault conditions.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(B) Impedance

The nominal reference impedance with which the channel will be terminated for the purpose of evaluating transmission performance:

<u>Value (ohms)</u>	<u>Code(s)</u>
110	0
150	1
600	2
900	3+
135	5
75	6
124	7
Variable	8
100	9

* For those interface codes with a 4-wire transmission path at the customer designated POT, rather than a standard 900 ohm impedance the code (3) denotes a customer provided transmission equipment termination. Such terminations were provided to customers in accordance with the FCC Docket No. 20099 Settlement Agreement.

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces

(1) Voice Grade

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
2AB2	2AC2	2DB2	2DA2	2LR2	2LR2
2AB3	2AC2	2DB3	2DA2	2LR3	2LR2
2CT3	2DY2	2DX3	2LA2	2LS	2GS
	4DS8		2LB2		2LS
	4DX2		2LC2		4GS
	4DX3		2LO3		4LS
	4DY2		2LS2		
	4EA2-E		2LS3	2LS2	2LA2
	4EA2-M				2LB2
	4SF2	2GO2	2GS2		2LC2
	4SF3		2GS3		
	6DX2			2LS3	2LA2
	6DY2	2GO3	2GS2		2LB2
	6DY3		2GS3		2LC2
	6EA2-E				
	6EA2-M	2GS	2GS	2NO2	2DA2
	6EB2-E		2LS		2NO2
	6EB2-M		4GS		
	6EB3-M		4LS	2NO3	2NO2
	8EB2-E				2PR2
	8EB2-M	2LO2	2LS2		
	8EC2		2LS3	2TF3	2TF2
	9DY2				
	9DY3	2LO3	2LS2		
	9EA2		2LS3		
	9EA3				

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4AB2	2AC2 4AB2 4AC2 4SF2				
4AB3	2AC2 4AC2 4SF2				
4AC2	2AC2 4AC2				
		4DS8-	2AC2 4DA2 2DY2 2GO2 2GO3 2GS2 2GS3 2LA2 2LB2 2LC2 2LO2 2LO3 2LR2 2LS2 2LS3	4DS8-	4DG2 4LR2 4LS2 4NO2 4PR2 4RV2-T 4SF2 4SF3 4TF2 6DA2 6DY2 6DY3 6EA2-E 6EA2-M 6EB2-E 6EB2-M
4DA2	4DA2				
4DB2	2DA2 2NO2 2PR2 4DA2 4DB2 4NO2 4PR2 6DA2				
4DD3	2DE2 4DE2		2NO2 2PR2 2RV2-T 2TF2 4AC2 2RV2-T 2TF2 4AC2 4DA2 4DE2 4DX2 4DX3 4DY2 4EA2-E 4EA2-M		6GS2 6LS2 8EB2-E 8EB2-M 6LS2 8EB2-E 8EB2-M 9DY2 9DY3 9EA2 9EA3

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DX2	2DY2	4DX2	8EB2-E	4DX3	6DY2
	2LA2		8EB2-M		6DY3
	2LB2		9DY2		6EA2-E
	2LC2		9DY3		6EA2-M
	2LO3		9EA2		6EB2-E
	2LS2		9EA3		6EB2-M
	2LS3				6LS2
	2RV2-T	4DX3	2DY2		8EB2-E
	4DX2		2LA2		8EB2-M
	4DY2		2LB2		9DY2
	4EA2-E		2LC2		9DY3
	4EA2-M		2LO3		9EA2
	4LS2		2LS2		9EA3
	4RV2-T		2LS3		
	4SF2		2RV2-T	4DY2	2DY2
	4SF3		4DX2		4DY2
	6DY2		4DX3		
	6DY3		4DY2		
	6EA2-E		4EA2-E		
	6EA2-M		4EA2-M		
	6EB2-E		4LS2		
	6EB2-M		4RV2-T		
	6LS2		4SF2		
			4SF3		

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4EA2-E	2DY2	4EA3-E	2DY2	4G02	2G02
	4DY2		4DY2		2G03
	4EA2-E		4EA2-E		2GS2
	4EA2-M		4EA2-M		2GS3
	4SF2		4SF2		4GS2
	6DY2		6DY2		4SF2
	6DY3		6DY3		6GS2
	6EB2-E		6EA2-E		
	6EB2-M		6EA2-M	4G03	2G02
	8EB2-E		6EB2-E		2GS2
	8EB2-M		6EB2-M		2GS3
	9DY2		8EB2-E		4GS2
	9DY3		8EB2-M		4SF2
			9DY2		6GS2
			9DY3		
4EA2-M	2DY2		9EA2		
	4DY2		9EA3	4GS	2GS
	4EA2-M				2LS
	4SF2				4GS
	6DY2				4LS
	6DY3				
	6EB2-E				
	6EB2-M				
	8EB2-E				
	8EB2-M				
	9DY2				
	9DY3				

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4LO2	2LS2	4LS3	2LA2	4SF2	2LO3
	2LS3		2LB2		2LR2
	4LS2		2LC2		2LS2
	4SF2		2LO2		2LS3
	6LS2		2LO3		2RV2-T
			4SF2		4AC2
4LO3	2LS2				4DY2
	2LS3	4NO2	2DA2		4LS2
	4LS2		2DE2		4RV2-T
	4SF2		2NO2		4SF2
	6LS2		4DA2		6DY2
			4DE2		6DY3
4LR2	2LR2		4NO2		6GS2
	4LR2		6DA2		9DY2
	4SF2				9DY3
		4RV2-0	2RV2-T		
4LR3	2LR2		4RV2-T	4SF3	2DY2
	4LR2		4SF2		2GO3
	4SF2				2GS2
					2GS3
4LS	2GS	4SF2	2AC2		2LA2
	2LS		2DY2		2LB2
	4GS		2GS2		2LC2
	4LS		2GS3		2LO3
			2LA2		2LR2
4LS2	2LA2		2LB2		
	2LB2		2LC2		
	2LC2				
	2LO2				
	2LO3				

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4SF3	2LS2	6DA	4DA2	6DY3	2DY2
	2LS3		6DA2		4DY2
	2RV2-T				6DY2
	4DY2	6DX2	2DY2		6DY3
	4EA2-E		4DY2		
	4EA2-M		4EA2-E	6EA2-E	2AC2
	4GS2				
	4LR2		4EA2-M		2DY2
	4LS2		4SF2		2LA2
	4RV2-T		6DY2		2LB2
	4SF2		6DY3		2LC2
	4SF3		6EA2-E		2LO3
	6DY2		6EA2-M		2LS2
	6DY3		6EB2-E		2LS3
	6EB2-E		6EB2-M		2RV2-T
	6EB2-M		8EB2-E		4AC2
	6GS2		8EB2-M		4DY2
	6LS2		9DY2		4EA2-E
	9DY2		9DY3		4EA2-M
	9DY3		9EA2		4LS2
	9EA2		9EA3		4RV2-T
	9EA3				4SF2
		6DY2	2DY2		4SF3
4TF2	2TF2		4DY2		6DY2
	4TF2		6DY2		6DY3
					6EA2-E
					6EA2-M

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ACCESS TARIFF

15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6EA2-E	6EB2-E	6EA2-M	6DY2	6EB3-E	2DY2
	6EB2-M		6DY3		4DY2
	6LS2		6EA2-M		4EA2-E
	8EB2-E		6EB2-E		4EA2-M
	8EB2-M		6EB2-M		4SF2
	9DY2		6LS2		6DY2
	9DY3		8EB2-E		6DY3
			8EB2-M		6EA2-E
6EA2-M	2AC2		9DY2		6EA2-M
	2DY2		9DY3		8EB2-E
	2LA2				8EB2-M
	2LB2	6EB2-E	2DY2		9DY2
	2LC2		4DY2		9DY3
	2LO3		4SF2		9EA2
	2LS2		6DY2		9EA3
	2LS3		6DY3		
	2RV2-T		6EB2-E	6EX2-A	2GS2
	4AC2		6EB2-M		2GS3
	4DY2		9DY2		2LS2
	4EA2-E		9DY3		2LS3
	4EA2-M				4GS2
	4LS2	6EB2-M	2DY2		4LS2
	4RV2-T		4DY2		4SF2
	4SF2		4SF2		6GS2
	4SF3		6DY2		6SL2
			6DY3		
			6EB2-M		
			9DY2		
			9DY3		

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6EX2-B	2G03	8EB2-E	2AC2	8EB2-M	2AC2
	2LA2		2DY2		2DY2
	2LB2		2LA2		2LA2
	2LC2		2LB2		2LB2
	2LO2		2LC2		2LC2
	2LO3		2LO3		2LO3
	2LR2		2LS2		2LS2
	4LR2		2LS3		2LS3
	4SF2		2RV2-T		2RV2-T
			4AC2		4AC2
			4DY2		4DY2
			4LS2		4SL2
6G02	2G02	4RV2-T	4RV2-T		
	2GS2	4SF2	4SF2		
	2GS3	4SF3	4SF3		
	4GS2	6DY2	6DY2		
	4SF2	6DY3	6DY3		
	6GS2	6EB2-E	6EB2-E		
6LO2	2LS2	6EB2-M	6EB2-M		
	2LS3	6LS2	6LS2		
	4LS2	8EB2-E	8EB2-M		
	4SF2	8EB2-M	9DY2		
	6LS2	9DY2	9DY3		
6LS2	2LA2	9DY3			
	2LB2				
	2LC2				
	2LO2				
	2LO3				
	4SF2				

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15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
8EC2	2DY2	9DY2	2DY2	9EA3	2DY2
	4DY2		4DY2		4DY2
	4EA2-E		6DY2		4EA2-E
	4EA2-M		6DY3		4EA2-M
	4SF2		9DY2		6DY2
	6DY2				6DY3
	6DY3	9DY3	2DY2		6EA2-E
	6EA2-E		4DY2		6EA2-M
	6EA2-M		6DY2		6EB2-E
	6EB2-E		6DY3		6EB2-M
	6EB2-M		9DY2		8EB2-E
	8EB2-E		9DY3		8EB2-M
	8EB2-M				9DY2
	9DY2	9EA2	2DY2		9DY3
	9DY3		4DY2		9EA3
	9EA2		4EA2-E		
	9EA3		4EA2-M		
			6DY2		
			6DY3		
			6EA2-E		
			6EA2-M		
			6EB2-E		
			6EB2-M		
			8EB2-E		
			8EB2-M		
			9DY2		
			9DY3		
			9EA2		
			9EA3		

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ACCESS TARIFF

15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(2) Program Audio

Compatible CIs		Compatible CIs	
2PG2-1	2PG1-1 2PG2-1	4DS8-15E	2PG1-3 2PG2-3
2PG2-3	2PG1-3 2PG2-3	4DS8-15F	2PG1-5 2PG2-5
2PG2-5	2PG1-5 2PG2-5	4DS8-15G	2PG1-8 2PG2-8
2PG2-8	2PG1-8 2PG2-8	4DA8-15H	2PG1-1 2PG2-1

(3) Digital Data

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS8-15	4DS8-15+ 4DU5-24 4DU5-48 4DU5-56 4DU5-96 6DU5-24 6DU5-48 6DU5-96	4DU5-24	4DU5-24 4DU5-48 4DU5-48 4DU5-96 4DU5-96	6DU5-24	6DU5-24 6DU5-48 6DU5-48 6DU5-56 6DU5-56 6DU5-96 6DU5-96

* Available only as a cross-connect of two digital channels at appropriate digital speeds at a Telephone Company hub.

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ACCESS TARIFF

15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(4) High Capacity

<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS0-63	4DS0-63 4DU8-A, B or C 6DU8-A, B or C	4DS8-15J	4DU8-A 6DU8-A
4DS6-27	4DS6-27 4DU8-A, B or C 6DU8-A, B or C	4DS8-15K	4DU8-B 4DU8-C 6DU8-B 6DU8-C
4DS6-44	4DS6-44 4DU8-A, B or C 6DU8-A, B or C	4DS8-31	4DS8-31 4DU8-A, B or C 6DU8-A, B or C
4DS8-15	4DS8-15+ 4DU8-B 6DU8-8	4DU8-A, B or C	4DU8-A, B or C

* Available only as a cross connect of two individual channels of 1.544 Mbps facilities at a Telephone Company hub.

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ACCESS TARIFF

16. RESERVED FOR FUTURE USE

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ACCESS SERVICE

17. RATES AND CHARGES

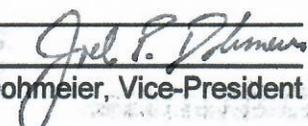
17.1 Common Line Access Service

17.1.1 Carrier Common Line Access Service

Regulations concerning Carrier Common Line Access are set forth in Section 3 preceding.

	<u>Rate</u>	
(a) Merrimack County		
(Non-Toll Free)		(T)
- Originating	\$0.006029	
- Terminating	\$0.000000	
(Toll Free)		(N)
- Originating	\$0.000000	(N)(R)
(b) Merrimack County (d/b/a Contoocook Valley)		
(Non-Toll Free)		(T)
- Originating	\$0.006029	
- Terminating	\$0.000000	
(Toll Free)		(N)
- Originating	\$0.000000	(N)(R)

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ACCESS SERVICE

17. **RATES AND CHARGES** (Continued)

17.2 **Switched Access Service**

17.2.1 **Nonrecurring Charges**

Rate

(A) **Local Transport - Installation**
Per Entrance Facility

-	Voice Grade Two-Wire	\$474.14	
-	Voice Grade Four-Wire	\$474.14	
-	High Capacity DS1	\$347.70	
-	High Capacity DS3	\$468.87	
-	Synchronous Optical Channel OC3	N/A	(T)
-	Synchronous Optical Channel OC12	N/A	(T)

(B) **Interim NXX Translation Per Order**

Per LATA or Market Area	\$231.80
-------------------------	----------

(C) **Trunk Activation**
Per Order

-	Per 24 Trunks Activated or Fraction thereof, on a Per Order Basis	\$483.61
---	---	----------

17.2.2 **Local Transport**

(A) **Merrimack County**

(T)

Entrance Facility
Per Termination

-	Voice Grade Two-Wire	\$16.91	
-	Voice Grade Four-Wire	\$27.07	
-	High Capacity DS1	\$82.45	
-	High Capacity DS3	\$752.80	
-	Synchronous Optical Channel OC3	N/A	(T)
-	Synchronous Optical Channel OC12	N/A	(T)

ACCESS SERVICE

17 RATES AND CHARGES (Continued)

17.2 Switched Access Service (Continued)

17.2.2 Local Transport (Continued)

Rate

(A) Merrimack County (Continued)

Direct Trunked Transport

- Direct Trunked Facility
Per Mile

- Voice Grade \$1.20
- High Capacity DS1 \$5.64
- High Capacity DS3 \$49.20
- Synchronous Optical Channel OC3 N/A
- Synchronous Optical Channel OC12 N/A

- Direct Trunked Transport Termination
Per Termination

- Voice Grade \$12.10
- High Capacity DS1 \$29.30
- High Capacity DS3 \$188.20
- Synchronous Optical Channel OC3 N/A
- Synchronous Optical Channel OC12 N/A

Multiplexing

Per Arrangement

- DS3 to DS1 \$171.71
- DS1 to Voice \$66.30

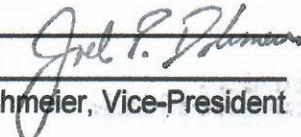
(M)

(M)-Material now appears on Sheet 2.2 of this Section.

(M)

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ACCESS SERVICE

17 RATES AND CHARGES (Continued)

17.2 Switched Access Service (Continued)

17.2.2 Local Transport (Continued)

Rate

(A) Merrimack County (Continued)

(M)

Tandem Switched Transport

- Tandem Switched Facility*

Per Access Minute Per Mile

- Terminating

\$0.000113

- Originating

\$0.000188

(C)

- Tandem Switched Termination*

Per Access Minute Per Termination

- Terminating

\$0.000589

- Originating

\$0.000979

(C)

(M1)

- Tandem Switching*

Per Access Minute Per Tandem

- Terminating

\$0.001484

- Originating

\$0.002468

(C)

(M)

- Joint Tandem Switched Transport*

Per Originating Toll Free Only

Access Minute, Per Tandem

\$0.001

(N)

(N)

(B) Merrimack County (d/b/a Contoocook Valley)

Entrance Facility

Per Termination

- Voice Grade Two-Wire

\$17.90

- Voice Grade Four-Wire

\$28.65

- High Capacity DS1

\$87.28

- High Capacity DS3

\$796.91

- Synchronous Optical Channel OC3

N/A

- Synchronous Optical Channel OC12

N/A

(M1)

* The Joint Tandem Switched Transport rate element applies per tandem to originating toll free minutes only in lieu of the Tandem Switched Facility, Tandem Switched Termination and Tandem Switching rate elements as of July 1, 2021. (N)

(M) Material previously appeared on Sheet 2.1 of this Section.

(M1) Material now appears on Sheet 2.3 of this Section.

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ACCESS SERVICE

17 **RATES AND CHARGES** (Continued)

17.2 **Switched Access Service** (Continued)

17.2.2 **Local Transport** (Continued) Rate
 (B) Merrimack County (d/b/a Contoocook Valley) (Continued)

Direct Trunked Transport

- Direct Trunked Facility

Per Mile

- Voice Grade \$1.27
- High Capacity DS1 \$5.97
- High Capacity DS3 \$52.08
- Synchronous Optical Channel OC3 N/A
- Synchronous Optical Channel OC12 N/A

- Direct Trunked Transport Termination

Per Termination

- Voice Grade \$12.81
- High Capacity DS1 \$31.02
- High Capacity DS3 \$199.23
- Synchronous Optical Channel OC3 N/A
- Synchronous Optical Channel OC12 N/A

Multiplexing

Per Arrangement

- DS3 to DS1 \$181.77
- DS1 to Voice \$70.18

Tandem Switched Transport

- Tandem Switched Facility*

Per Access Minute Per Mile

- Terminating \$0.000120
- Originating \$0.000188

- Tandem Switched Termination*

Per Access Minute Per Termination

- Terminating \$0.000623
- Originating \$0.000979

- Tandem Switching*

Per Access Minute Per Tandem

- Terminating \$0.001571
- Originating \$0.002468

- Joint Tandem Switched Transport*

Per Originating Toll Free Only

- Access Minute, Per Tandem \$0.001

* The Joint Tandem Switched Transport rate element applies per tandem to originating toll free minutes only in lieu of the Tandem Switched Facility, Tandem Switched Termination and Tandem Switching rate elements as of July 1, 2021. (N)

(M) Material previously appeared on Sheet 2.2 of this Section.

(M1) Material now appears on Sheet 2.4 of this Section.

ACCESS SERVICE

17 **RATES AND CHARGES** (Continued)

17.2 Switched Access Service (Continued)

17.2.2 Local Transport (Continued)

Rate

(C) Merrimack County & Merrimack County (d/b/a Contoocook Valley)

Network Blocking Per Blocked Call

Applies to FGD only

-Merrimack County	\$0.009188	(C)(R)
-Merrimack County (d/b/a Contoocook Valley)	\$0.009726	(C)(R)

Residual Interconnection Charge

Per Originating Minute

(Non-Toll Free)

-Merrimack County	\$0.010767
-Merrimack County (d/b/a Contoocook Valley)	\$0.004024

(Toll Free)

-Merrimack County	\$0.000000
-Merrimack County (d/b/a Contoocook Valley)	\$0.000000

800 Data Base Access Service Queries

Per Query

- Basic	\$N/A
- Feature	\$N/A

ACCESS SERVICE

17 **RATES AND CHARGES** (Continued)

17.2 **Switched Access Service** (Continued)

17.2.3 **End Office**

Rate

(A) **Local Switching, Per Access Minute**

(1) Merrimack County

(Non-Toll Free)

- Terminating \$0.000000

- Originating \$0.025127

(Toll Free)

- Originating \$0.005400

(R)

(2) Merrimack County
(d/b/a Contoocook Valley)

(Non-Toll Free)

- Terminating \$0.000000

- Originating \$0.025127

(Toll Free)

- Originating \$0.004287

(R)

(B) **Information Surcharge, Per 100 Access Minutes**

- Terminating *

- Originating (Non-Toll Free & Toll Free) \$N/A

(C) **Transitional End Office Access Service**
Per Terminating Minute

-Merrimack County \$0.000000

-Merrimack County (d/b/a Contoocook Valley) \$0.000000

* The terminating Information Surcharge is included in the terminating Local Switching rate.

ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.2 Switched Access Service (Cont'd)

17.2.4 Assumed Minutes of Use

	Assumed Minutes Per Month Per Line or Trunk	Tariff Section Reference
(A) Feature Group A, Two Way Calling (1510 Originating, 2685 Terminating)	4195	6.5.4
(B) Feature Group A, Originating Only	1510	6.5.4
(C) Feature Group A, Terminating Only	2685	6.5.4
(D) (3132 Originating, 5568 Terminating)	8700	6.6.4
(E) Feature Group B, Originating Only	3132	6.6.4
(F) Feature Group B, Terminating Only	5568	6.6.4

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President

ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.3 Special Access Service

17.3.1 Surcharge for Special Access Service

	Monthly <u>Rate</u>	Tariff Section <u>Reference</u>
- Per Voice Grade Equivalent	\$25.00	7.3

17.3.2 Metallic Service

(N)

	Monthly <u>Rate</u>	Nonrecurring <u>Charge</u>
(A) Channel Termination Per Termination	\$19.88	\$158.00
(B) Channel Mileage		
(1) Channel Mileage Facility Per Mile	\$30.94	
(2) Channel Mileage Termination Per Termination	\$2.16	

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ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.3 Special Access Service (Cont'd)

17.3.3 Voice Grade Service

Regulations concerning Voice Grade Service are set forth in 7.4 preceding.

(T)

	Monthly <u>Rate</u>	Nonrecurring <u>Charge</u>	
(A) Channel Termination Per Termination			
- Two-Wire	\$36.74	\$192.00	(R,I)
- Four-Wire	\$58.78	\$192.00	(R,I)
(B) Channel Mileage			
(1) Channel Mileage Facility Per Mile	\$2.55		(I)
(2) Channel Mileage Termination Per Termination	\$23.87		(I)
(C) Optional Features and Functions			
(1) Conditioning Per Termination			
- C Type	\$7.90		
- Data Capability	\$4.99		(I)
(2) Improved Return Loss for Effective Two-Wire or Four-Wire Transmission Per Termination			
- Two-Wire	13.35		
- Four-Wire	13.35		

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ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.3 Special Access Service (Cont'd)

17.3.4 Program Audio Service

Regulations concerning Program Audio Service are set forth in 7.5 preceding.

(T)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
(A) Channel Termination Per Termination			
- 200 to 3500 Hz	\$ 35.41	\$164.00	(N)
- 100 to 5000 Hz	\$ 38.91	\$164.00	⋮
- 50 to 8000 Hz	\$ 38.91	\$164.00	⋮
- 50 to 15000 Hz	\$ 38.91	\$164.00	(D)
 (B) Channel Mileage			
(1) Channel Mileage Facility Per Mile			
- 200 to 3500 Hz	\$ 2.57		(N)
- 100 to 5000 Hz	\$ 5.16		⋮
- 50 to 8000 Hz	\$ 7.73		⋮
- 50 to 15000 Hz	\$ 10.34		(D)
(2) Channel Mileage Termination Per Termination			
- 200 to 3500 Hz	\$ 25.85		(N)
- 100 to 5000 Hz	\$ 51.71		⋮
- 50 to 8000 Hz	\$ 77.55		⋮
- 50 to 15000 Hz	\$103.72		(D)

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ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.3 Special Access Service (Cont'd)

17.3.5 Digital Data Service

(T)

Regulations concerning Digital Data Service are set forth in 7.6 preceding.

(A) Channel Termination Per termination

	Monthly Rate	Nonrecurring Charge	
- 2.4 kbps	\$63.30	\$229.00	(I,D)
- 4.8 kbps	\$63.30	\$229.00	(I,D)
- 9.6 kbps	\$63.30	\$229.00	(I,D)
- 19.2 kbps	\$63.30	\$229.00	(N)
- 56.0 kbps	\$63.30	\$229.00	(I)
- 64.0 kbps	\$63.30	\$229.00	(N)

(B) Channel Mileage

(1) Channel Mileage Facility Per Mile

	Monthly Rate	
- 2.4 kbps	\$2.55	(I)
- 4.8 kbps	\$2.55	(I)
- 9.6 kbps	\$2.55	(I)
- 19.2 kbps	\$2.55	(N)
- 56.0 kbps	\$5.10	(I)
- 64.0 kbps	\$5.10	(N)

(2) Channel Mileage Termination Per Termination

	Monthly Rate	
- 2.4 kbps	\$23.87	(I)
- 4.8 kbps	\$23.87	(I)
- 9.6 kbps	\$23.87	(I)
- 19.2 kbps	\$23.87	(N)
- 56.0 kbps	\$47.74	(I)
- 64.0 kbps	\$47.74	(N)

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ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.3 Special Access Service (Cont'd)

17.3.6 High Capacity Service (T)
 Regulations concerning High Capacity Service are set forth in 7.7 preceding.

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
(A) Channel Termination Per Termination			
- DS1 1.544 Mbps	\$278.76	\$247.00	(D)
(B) Channel Mileage			
(1) Channel Mileage Facility Per Mile			
- 1.544 Mbps	\$20.10		(I)
(2) Channel Mileage Termination			
- 1.544 Mbps	\$123.81		(D)
(C) Optional Features and Functions			
Multiplexing, per arrangement			
DS1 to Voice	\$267.49		(D)
(D) Term Discounts			(N)
DS1 and DS3 Service			⋮
- 36 Months	10%		⋮
- 60 Months	20%		⋮

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ACCESS SERVICE

17 **RATES AND CHARGES** (Continued)

17.4 Other Services

17.4.1 Access Ordering

	<u>Charge</u>		<u>Tariff</u>	(T)
	<u>Special</u>	<u>Switched</u>	<u>Section</u>	
	<u>Access</u>	<u>Access</u>	<u>Reference</u>	
(A) Access Order Charge Per Order	\$73.00	\$86.00	5.4.1	(I)
(B) Service Date Change Charge				
<p>A service Date Change Charge will apply, on a per order per occurrence basis, for each service date changed. The Access Order Charge as specified in 17.4.1 (A) preceding does not apply. The applicable charge is:</p>				
Service Date Change Charge, per order	\$27.00	\$60.00	5.4.3	(I)
(C) Design Change Charge				
<p>The Design Change Charge will apply on a per order per occurrence basis, for each order requiring design change. The applicable charge is:</p>				
Design Change Charge, per order	\$27.00	\$84.00	5.4.3	(I)
(D) Miscellaneous Service Order Charge				
Per Occurrence	\$27.00	\$123.00	5.4.2	(T) (I)

ACCESS SERVICE

17 **RATES AND CHARGES** (Continued)

17.4 **Other Services** (Continued)

17.4.2 Additional Engineering

	Each Half Hour or Fraction Thereof		Tariff Section Reference	(T)
	<u>Special Access</u>	<u>Switched Access</u>		
<u>Additional Engineering Periods</u>				
(1) Basic Time per engineer normally scheduled working hours	\$15.74	\$31.03	13.1	(I)
(2) Overtime per engineer outside of normally scheduled working hours	\$23.61	\$46.55	13.1	(I)
(3) Premium Time outside of scheduled work day, per engineer	\$31.48	\$62.06	13.1	(T) (I)

ACCESS SERVICE

17 RATES AND CHARGES (Continued)

17.4 Other Services (Continued)

17.4.3 Additional Labor

<u>Additional Labor Periods</u>	<u>Special Access</u>	<u>Each Half Hour or Fraction Thereof Switched Access</u>	<u>Tariff Section Reference</u>	(T)
(A) Installation or Repair				
- Overtime, per technician outside of normally scheduled working hours on a scheduled work day	\$23.51*	\$47.57*	13.2.1 & 13.2.2	(I)
- Premium Time, per technician Outside of scheduled work Day	\$31.34*	\$63.42*	13.2.1 & 13.2.2	(I)
(B) Standby				
- Basic time, per technician normally scheduled working hours	\$16.14	\$21.18	13.2.3	(I)
- Overtime, per technician outside of normally scheduled working hours on a scheduled work day	\$24.21*	\$31.77*	13.2.3	(I)
- Premium Time, per technician Outside of scheduled work day	\$32.28*	\$42.36*	13.2.3	(T) (I)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

17 **RATES AND CHARGES** (Continued)

17.4 **Other Services** (Continued)

17.4.3 Additional Labor (Continued)

	<u>Each Half Hour or Fraction Thereof</u>				<u>Tariff Section Reference</u>	(T)
	<u>Installation And Repair Technician</u>		<u>Central Office Maintenance Technician</u>			
<u>Additional Labor Periods</u>	<u>Special Access</u>	<u>Switched Access</u>	<u>Special Access</u>	<u>Switched Access</u>		
(C) Testing and Maintenance With other Telephone Companies, or Other Labor						
- Basic time, per technician normally scheduled working hours	\$15.67	\$31.71	\$15.85	\$34.66	13.2.4 & 13.2.5	(I)
- Overtime, per technician outside of normally scheduled working hours on a scheduled work day	\$23.51*	\$47.57*	\$23.78*	\$51.99*	13.2.4 & 13.2.5	(I)
- Premium Time, per technician outside of scheduled work day	\$31.34*	\$63.42*	\$31.70*	\$69.32*	13.2.4 & 13.2.5	(T) (I)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.4 Other Services (Cont'd)

17.4.4 Miscellaneous Services

(A) Additional Cooperative Acceptance Testing - Switched Access

<u>Testing Periods</u>	<u>Each Half Hour or Fraction Thereof</u>	<u>Tariff Section Reference</u>
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 17.4.3(C) preceding.	13.3.1(A)(1)

(B) Additional Automatic Testing - Switched Access

To First Point
of Switching

Additional Tests

	<u>Per Test Per Transmission Path</u>	<u>Tariff Section Reference</u>
Gain-Slope Tests	\$2.89	13.3.1(A)(2)
C-Notched Noise Tests	\$2.89	13.3.1(A)(2)
1004 Hz Loss**	\$2.89	13.3.1(A)(2)
C-Message Noise**	\$2.89	13.3.1(A)(2)
Balance (return loss)**	\$2.89	13.3.1(A)(2)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

** 1004 Hz Loss, C-Message Noise and Balance are non-chargeable routine tests, however, they may be requested on an needed or more than routine scheduled basis, in which case the charges herein apply.

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Paul E. Violette
President

ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.4 Other Services (Cont'd)

17.4.4 Miscellaneous Services (Cont'd)

(C) Additional Manual Testing - Switched Access

To First Point
of Switching

Additional Tests

	Each Half Hour or <u>Fraction Thereof</u>	Tariff Section <u>Reference</u>
Gain-Slope, C-Notched Noise and any other agreed to tests, per technician	See the rates for Additional Labor as set forth in 17.4.3(C) preceding	13.3.1(A)(3)

(D) Additional Cooperative Acceptance Testing - Special
Access

<u>Testing Periods</u>	Each Half Hour or Fraction <u>Thereof</u>	Tariff Section <u>Reference</u>
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 17.4.3(C) preceding	13.3.1(B)(1)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

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Paul E. Violette
President

ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.4 Other Services (Cont'd)

17.4.4 Miscellaneous Services (Cont'd)

(E) Additional Manual Testing - Special Access

<u>Testing Periods</u>	Each Half Hour or Fraction <u>Thereof</u>	<u>Tariff Section Reference</u>
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 17.4.3(C) preceding	13.3.1(B)(2)

(F) Maintenance of Service

<u>Maintenance of Service Periods</u>	Each Half Hour or Fraction <u>Thereof</u>	<u>Tariff Section Reference</u>
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 17.4.3(C) preceding	13.3.2

(G) Telecommunications Service Priority

	<u>Nonrecurring Charge</u>	<u>Tariff Section Reference</u>
Per service arranged	\$54.63	13.3.3

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

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Paul E. Violette
President

ACCESS TARIFF

17. Rates and Charges (Cont'd)

17.4 Other Services (Cont'd)

17.4.4 Miscellaneous Services (Cont'd)

(H) IntraLATA Presubscription

(1) IntraLATA Presubscription Change Charge

Per business or residence line, trunk, or port
--Initial line, trunk, or port \$1.25

(2) Simultaneous IntraLATA and InterLATA Change Charge

Per business or residence line, trunk, or port
--Initial line, trunk, or port \$0.62

(C)

(C)

*This charge is billed to the customer of the local exchange company. At the discretion of the requesting ILP carrier, this charge may be billed to and paid for by the requesting ILP carrier. During the 90 days immediately following June 2, 1997, customers may make one PIC change without charge. After the 90-day grace period, and for additional PIC changes during the 90-day grace period, the charge for a PIC change applies.

(D)

(D)

Issued: October 21, 2005

Issued by:



Paul E. Pederson
Vice-President

Effective: December 1, 2005