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SPECIAL SERVICES

1. Application of Guide

- 1.1 This Guide contains regulations, rates and charges applicable to the provision of LATA access channels, intraLATA channels and other miscellaneous services, hereinafter referred to collectively as service(s), provided by Verizon Pennsylvania Inc., hereinafter referred to as the Telephone Company, to Intrastate Customers, hereinafter referred to as customer(s).
- 1.2 LATA access service for purposes of this Guide is service provided between locations within the LATA which require interactive engineering and where the customer is responsible for the overall design parameters of the service. This service is usually ordered for the purpose of extending the service and thereby constitutes a portion of an end-to-end interLATA service. Those services transferred from Pa. P.U.C.-No. 302, Part 7, will be referred to as LATA access services.
- 1.3 IntraLATA service for purposes of this Guide is service provided between locations within the LATA where the Telephone Company is responsible for the overall design parameters of the service. Those services transferred from Pa. P.U.C.-No. 1, Section 12, Channels, Section 12B, 1.544 Megabits Per Second (Mbps) High Capacity Channels, Section 12C, High Capacity/Lightwave Service, Section 26, Supplemental Services and Section 29A, Digital Data Service will be referred to as IntraLATA services.
- 1.4 The provision of such services by the Telephone Company as set forth in this Guide does not constitute a joint undertaking with the customer for the furnishing of any service.
- 1.5 The regulations, rates and charges contained herein are in addition to the applicable regulations, rates and charges specified in other Tariffs or Guides of the Telephone Company which are referenced herein.
- 1.6 Rates and regulations pertaining to LATA access services provided for use by agencies or branches of the Federal Government, users authorized by the Federal Government and state emergency operations centers are set forth in Pa. P.U.C.-No. 302, Part 10.
- 1.7 General Regulations pertaining to LATA access services are contained in Pa. P.U.C.-No. 302, Part 2. General Regulations pertaining to intraLATA services are contained in Pa. P.U.C.-No. 1, Section 1, General Regulations.

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SPECIAL SERVICES

1. Application of Guide (Cont'd)

- 1.8 If a portion of an intraLATA channel is provided by another Exchange Telephone Company, any established charges applied by that company are in addition to the charges of this Company and any established regulations of that company apply to the use of the channel between points in its operating territory and points outside of that territory.
- 1.9 Regulations pertaining to the provision of LATA access channels where more than one Exchange Telephone Company is involved can be found in Pa. P.U.C.-No. 302, Part 2.

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SPECIAL SERVICES

2. General

Special Services are communications channels which connect customer premises, serving wire centers or combinations thereof. Channels may be provided in the same wire center or in different wire centers on a two-point or multipoint basis. Connections will be made directly through a serving wire center or through a Telephone Company Hub. Special Services include all LATA access channels and all intraLATA channels not utilizing Telephone Company end office switches.

The connections provided by Special Services can be either analog or digital. Analog connections are differentiated by spectrum and bandwidth. Digital connections are differentiated by bit rate. The specific types of services (e.g., Metallic*, Voice Grade) provided under Special Services are described in 2.1 following.

2.1. Channel Types

Each type of channel used to provide Special Services has its own characteristics. All are subdivided by one or more of the following:

- Transmission specifications,
- Bandwidth,
- Speed (i.e., bit rate),
- Spectrum

Customers can order a basic channel and select, from a list of available transmission parameters and channel interfaces, those that they desire to meet specific communications requirements.

For purposes of ordering channels, each has been identified as a type of Special Service. However, such identification is not intended to limit a customer's use of the channel nor to imply that the channel is limited to a particular use. For example, if a customer's equipment is capable of transmitting voice over a channel that is identified as data transmission in this Guide, there is no restriction against doing so.

* As of October 31, 2014, all Metallic Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

2. General (Cont'd)

2.1 Channel Types (Cont'd)

Following is a brief description of each type of channel:

Metallic and Metallic Equivalent* - a channel for the transmission of low speed varying signals at rates up to 30 band.

Metallic Data* - a channel utilizing non-loaded facilities normally suitable for the transmission of digital data signals.

Telegraph Grade* - a channel for the transmission of binary signals at rates of 0 to 75 baud or 0 to 150 baud.

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

Program Audio* - a channel for the transmission of audio signals. The nominal frequency bandwidths are from 50 to 15000 Hz, from 200 to 3500 Hz, from 100 to 5000 Hz or from 50 to 8000 Hz.

Digital Service - a channel for the digital transmission of synchronous serial data at rates of 2.4, 4.8, 9.6 or 56.0 kbps.

A cross reference list of channels by series and types as previously listed in Pa. P.U.C.-No. 1, Section 12, Channels, can be found in 2.2 following.

Detailed descriptions of each of the channel types are provided in 3. following.

The customer also has the option of ordering Digital High Capacity facilities (available in Section 6 of this Guide) to a Telephone Company Hub 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 Section 6 of this Guide. 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 available are also set forth in 3. following.

* As of October 31, 2014, all Metallic, Metallic Data, Metallic Equivalent, Telegraph Grade Service and Program Audio Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

2. General (Cont'd)

2.1 Channel Types (Cont'd)

For example, a customer may order a 1.544 Mbps channel and multiplex it at the same or a different Hub to Voice Grade channels or it may be extended to other customer designated premises. Optional features may be added to either the 1.544 Mbps or the Voice Grade Channels.

2.2 Cross Reference Guide

OLD TERMINOLOGY

Type

1005 *A half-duplex or full-duplex interface operation engineered for a signal speed up to 75 baud; for two-point or multipoint service; normally suitable for:

*low-speed data transmission, remote operation of radiotelephone, teletypewriter, teletypesetter and data

*supervisory control and miscellaneous signaling purposes

1006 A half-duplex or full-duplex interface operation engineered for a signal speed up to 150 baud; for two-point service; normally suitable for:

*low-speed data transmission used for teletypewriter and data

*supervisory control and miscellaneous signaling purposes

1011 *A two-wire interface with two-wire facilities suitable for direct current transmission (metallic continuity) with signaling speeds not to exceed 30 baud; for two-point or three-point service within the same exchange only; normally suitable for special signaling purposes.

1012 *A two-wire interface with two-wire facilities suitable for low speed unidirectional series-operated signaling not to exceed 30 baud; for intraexchange multipoint service and interexchange two-point or multipoint service; normally suitable for special signaling purposes.

The Telephone Company will notify the customer of

NEW TERMINOLOGY

TELEGRAPH*
GRADE

METALLIC*

TELEGRAPH*
GRADE

METALLIC*

METALLIC*

METALLIC*
EQUIVALENT

* As of October 31, 2014, all Metallic, Metallic Equivalent Service, Telegraph Grade Service and Program Audio Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

2. General (Cont'd)

2.2 Cross Reference Guide (Cont'd)

<u>OLD TERMINOLOGY</u>	<u>NEW TERMINOLOGY</u>
<u>Type</u>	
1012 the type of facility arrangement (metallic* channels or by other means, where available and at the descretion of the Telephone Company) to be supplied prior to initial installation or subsequent change in facility arrangements.	
2001 A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz loss objective of 0 to 10 dB; or a four-wire interface with four-wire facilities engineered for a 1000 Hz loss objective of 0 to 16 dB; for two-point or multi-point service, normally suitable for use for <u>private line telephone service</u> .	VOICE GRADE
2002 A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities or a four-wire interface with four-wire facilities designed for <u>remote operation of mobile radiotelephone systems</u> ; for two-point or multipoint service.	VOICE GRADE
2012 Furnished for <u>Centrex off-premises main and bridged station</u> uses.	VOICE GRADE
2014 A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities furnished for <u>PBX</u> (or similar) <u>off-premises main and extension service</u> used with PBX's; for two-point service, with signaling arrangements.	VOICE GRADE
2021 A two-wire or four-wire interface with four-wire facilities furnished for <u>tie line use between PBX's</u> ; for two-point service, with signaling arrangements.	VOICE GRADE
2025 A two-wire or four-wire interface with four-wire facilities furnished for <u>tie line use between a PBX and a C.O. Centrex</u> ; for two-point service, with signaling arrangements.	VOICE GRADE

* As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

SPECIAL SERVICES

2. General (Cont'd)

2.2 Cross Reference Guide (Cont'd)

<u>OLD TERMINOLOGY</u>		<u>NEW TERMINOLOGY</u>
<u>Type</u>		
2026	Furnished for <u>tie line use between C.O. Centrexes</u> ; for two-point service.	VOICE GRADE
2043	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz loss objective of 0 to 4 dB; normally suitable for Telephone Answering Service <u>concentrator-identifier</u> use between a concentrator unit located at either the Telephone Company or the Telephone Answering Service premises and an identifier unit located at the Telephone Answering Service premises.	VOICE GRADE
3001	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities or a four-wire interface with four-wire facilities engineered for a 1000 Hz loss objective of 16 dB; for two-point or multipoint service; normally suitable for half-duplex or full-duplex operation, for <u>remote metering</u> , <u>supervisory control</u> and <u>miscellaneous signaling</u> .	VOICE GRADE
3002	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities or a four-wire interface with four-wire facilities engineered for 1000 Hz loss objective of 16dB; for two-point or multipoint service; normally suitable for <u>half or full-duplex data transmission</u> .	VOICE GRADE
3040	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities between a Telephone Company Central Office and a customer service location, presenting a nominal -30 dBm station receive level and accepting a 0 dBm station transmit level; normally suitable for <u>Select-A-Station</u> use between the Data Station Selector and remote premises.	VOICE GRADE

SPECIAL SERVICES

2. General (Cont'd)

2.2 Cross Reference Guide (Cont'd)

<u>OLD TERMINOLOGY</u>		<u>NEW TERMINOLOGY</u>
<u>Type</u>		
3041	A four-wire interface with four-wire facilities between a station location and a Telephone Company Central Office, presenting a nominal -16 dBm station receive level and accepting a 0 dBm station transmit level; normally suitable for <u>Select-A-Station</u> use; access lines between the Master Station and the Data Station Selector or between Data System Selectors.	VOICE GRADE
6005	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss of 32 dB and <u>equalized</u> to +3 dB of the 1000 Hz loss <u>from 100 to 5000 Hz</u> , arranged for unidirectional operation; normally suitable for <u>audio transmission</u> .	PROGRAM AUDIO
6007	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss of 32 dB and <u>equalized</u> to +3 dB of the 1000 Hz loss of approximately <u>50 to 8000 Hz</u> , arranged for unidirectional operation; normally suitable for <u>audio transmission</u> .	PROGRAM AUDIO
6009	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss of 32 dB and <u>equalized</u> to +3 dB of the 1000 Hz loss of approximately <u>50 to 15000 Hz</u> , arranged for unidirectional operation; normally suitable for <u>audio transmission</u> .	PROGRAM AUDIO
6011	A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss of 12 dB <u>without equalization</u> , arranged for unidirectional operation; normally suitable for <u>audio transmission</u> .	PROGRAM AUDIO

Verizon Pennsylvania LLC

SPECIAL SERVICES

2. General (Cont'd)

2.2 Cross Reference Guide (Cont'd)

OLD TERMINOLOGY

NEW TERMINOLOGY

Type

6020	*A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss of 14 dB <u>without equalization</u> ; arranged for unidirectional operation; normally suitable for <u>wired music distribution</u> .	PROGRAM* AUDIO
6021	*A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss objective of 34 dB and <u>equalized</u> to +4 dB of the 1000 Hz loss from approximately <u>100 to 5000 Hz</u> , arranged for unidirectional operation; normally suitable for <u>wired music distribution</u> .	PROGRAM* AUDIO
6022	*A two-wire interface with EFFECTIVE DECEMBER 1, 1999 two-wire facilities engineered for a 1000 Hz maximum loss of 34 dB and <u>equalized</u> to +4 dB of the 1000 Hz loss from approximately <u>50 to 8000 Hz</u> , arranged for unidirectional operation; normally suitable for <u>wired music distribution</u> .	PROGRAM* AUDIO
9001	*A two-wire interface with two-wire non-loaded facilities with insertion loss objectives dependent upon facility length and frequency as specified in the table following; for two-point service within the same central office district only; normally suitable for the transmission of digital data signals. Furnished for <u>two-wire Local Area Data Service</u> .	METALLIC*
9002	*A four-wire interface with four-wire non-loaded facilities with insertion loss objectives dependent upon facility length and frequency as specified in the table following; for two-point service within the same central office district only; normally suitable for the transmission of digital data signals. Furnished for <u>four-wire Local Area Data Service</u> .	METALLIC*
1.544	Megabits Per Second (Mbps) High Capacity Channels	HIGH CAPACITY
	Digital Data Service	DIGITAL SERVICE
	Digital Connect Service	DIGITAL SERVICE

* As of October 31, 2014, all Metallic and Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

2. General (Cont'd)

2.3 Rate Element Classifications

Rates for Special Services are based on combinations of the following four basic rate element classifications:

- Local Channels
- Channel Mileage
- Transmission Functions
- Optional Features

(A) Local Channel

The Local Channel rate classification provides a communications path between a customer premises and the wire center serving that premises. The local channel rates will vary according to the cell assigned to the central office district in which the local channel resides. The cells are the same as those developed for Business Dial Tone Lines.

The cell designation is identified in the following sections of the Local Exchange Tariffs:

<u>Tariff</u>	<u>Coverage Area</u>	<u>Cell Density Designation</u>
Pa. P.U.C.-No. 180A	All Pennsylvania Exchange Areas except as noted below	Paragraph B.4
Pa. P.U.C.-No. 182	Philadelphia Exchange Area	Paragraph E.2
Pa. P.U.C.-No. 182A	Philadelphia Suburban Exchange Area	Paragraph E.2
Pa. P.U.C.-No. 185B	Pittsburgh Exchange Area	Paragraph E.2
Pa. P.U.C.-No. 185C	Pittsburgh Suburban Exchange Area	Paragraph E.2

Local channel rates are provided in 6. following.

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SPECIAL SERVICES

2. General (Cont'd)

2.3 Rate Element Classifications (Cont'd)

(B) Channel Mileage

The Channel Mileage rate classification provides for the transmission facilities between the serving wire centers associated with customers' premises, between a serving wire center associated with a customer premises and a Telephone Company Hub, between two Telephone Company Hubs or any combination thereof. Channel Mileage is portrayed in mileage bands. There are two rates that apply for each band, i.e., a fixed rate per band and a rate per mile.

(C) Transmission Function

The transmission function rate classification is a standard channel interface arrangement which defines the technical characteristics associated with the type of facilities to which the service is to be connected, and the type of signaling capability, if any. Transmission Functions will be applied as follows:

- one per termination at a customer premises for services provided via High Capacity or through a Telephone Company bridging, multiplexing or Digital Data Service Hub. Select-A Station and Telemetry and Alarm Bridging Services are provided via bridging Hubs.
- one per termination at a customer premises for connection to the Public Data Network (PDN) Service.
- two per Special Services channel not provided as above when the channel terminates at:
 - two customer premises
 - one customer premises and one wire center
 - two wire centers

This charge will apply even if the customer premises and the serving wire center are collocated in a Telephone Company building.

SPECIAL SERVICES

2. General (Cont'd)

2.3 Rate Element Classifications (Cont'd)

(D) Optional Features

The Optional Features rate classification provides for optional features which may be added to a Special 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 features that are available include, but are not limited to, the following:

- Hubbing Functions
- Conditioning
- Transfer Arrangement

Descriptions and rates for each of the available features are set forth in 5. and 6. following.

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SPECIAL SERVICES

2. General (Cont'd)

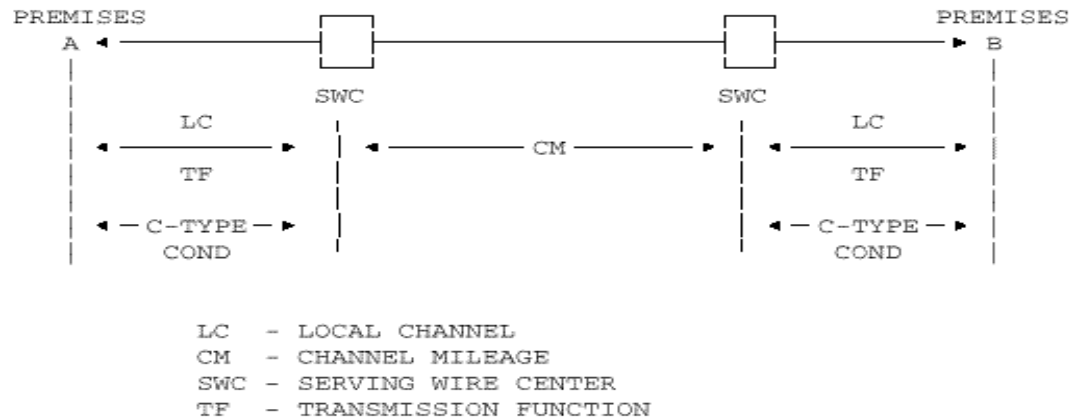
2.4 Service Configurations

There are two types of configurations over which services are provided in the same or different wire centers: two-point service and multipoint service.

(A) Two-Point Service

A two-point service connects two customer premises, two serving wire centers or any combination thereof, either on a directly connected basis through a serving wire center(s) or through a Hub where multiplexing functions are performed.

- (1) The following diagram depicts a two-point Voice Grade service connecting two customer premises located in different serving wire centers. The service is provided with C-Type Conditioning.



Applicable rate elements are:

- Local Channels (2 applicable)
- Transmission Functions (2 applicable)
- Channel Mileage (fixed rate + rate per mile)
- Optional Features C-Type Conditioning (2 applicable)

Note: Local Channels are not applicable for the portion(s) of a service which terminates in a wire center(s) and does not extend to a customer's premises. All other rate elements are applicable.

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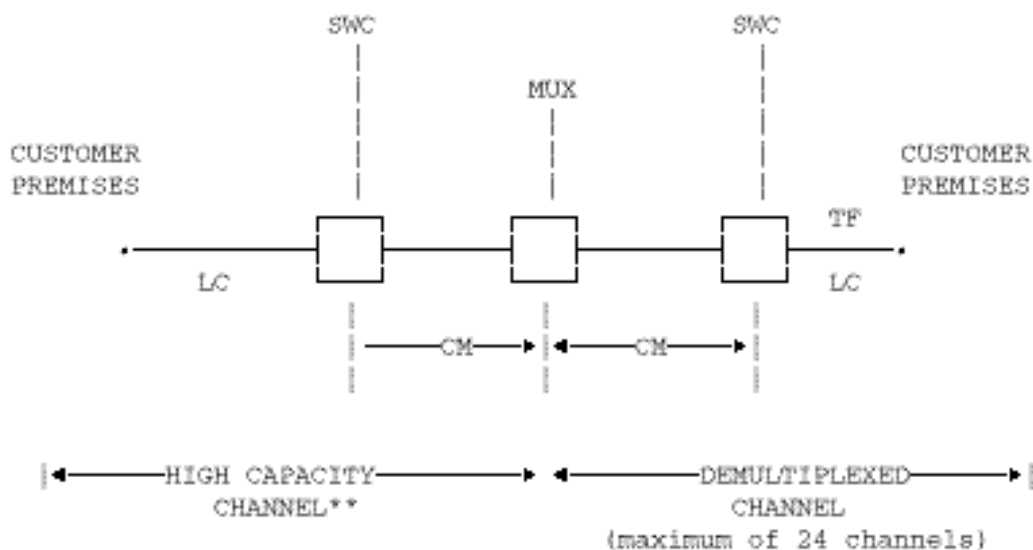
SPECIAL SERVICES

2. General (Cont'd)

2.4 Service Configurations (Cont'd)

(A) Two-Point Service (Cont'd)

- (2) The following diagram depicts a two-point service connecting two customer premises through a Hub where multiplexing functions are performed.



LC - LOCAL CHANNEL
CM - CHANNEL MILEAGE
TF - TRANSMISSION FUNCTION
SWC - SERVING WIRE CENTER
MUX - MULTIPLEXOR HUB

Applicable rate elements are:

High Capacity Channel**

- Local Channel (1 applicable)
- Channel Mileage (rate per mile)
- Multiplexing Arrangement (1 applicable)

Demultiplexed Channel -

- Local Channel (1 applicable)
- Multiplexing Arrangement (1 applicable)
- Channel Mileage (fixed rate + rate per mile)

** High Capacity Services are available in Section 6 of this Guide.

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SPECIAL SERVICES

2. General (Cont'd)

2.4 Service Configurations (Cont'd)

(B) Multipoint Service

Multipoint service connects three or more customer premises through a Telephone Company Hub. Only certain types of service are provided as multipoint service. These are so designated in the Service Descriptions set forth in 3. following. When ordering multipoint service, the customer is responsible for selecting the bridging Hub(s) from the list of available Hub locations which is set forth in the National Exchange Carrier Association Tariff. F.C.C. No 4.

The number of stations that may be connected and the distance over which satisfactory transmission is possible may be limited by operating and transmission factors.

Multipoint LATA access service utilizing a customized technical specifications package as set forth in 3. following 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 multipoint service is furnished, bridging equipment or arrangements are required. Additional rates and charges for such equipment or arrangements are specified in 6. following where applicable.

Rates for multipoint service are based on combinations of the following rate elements:

- Local Channels (one per customer premises)
- Transmission Functions (one per customer premises)
- Channel Mileage (as applicable)
- Bridging (as applicable)
- Optional Features (as applicable)

(C) Other Configurations

Channels which have special configurations are described in the regulations applicable to the specific services.

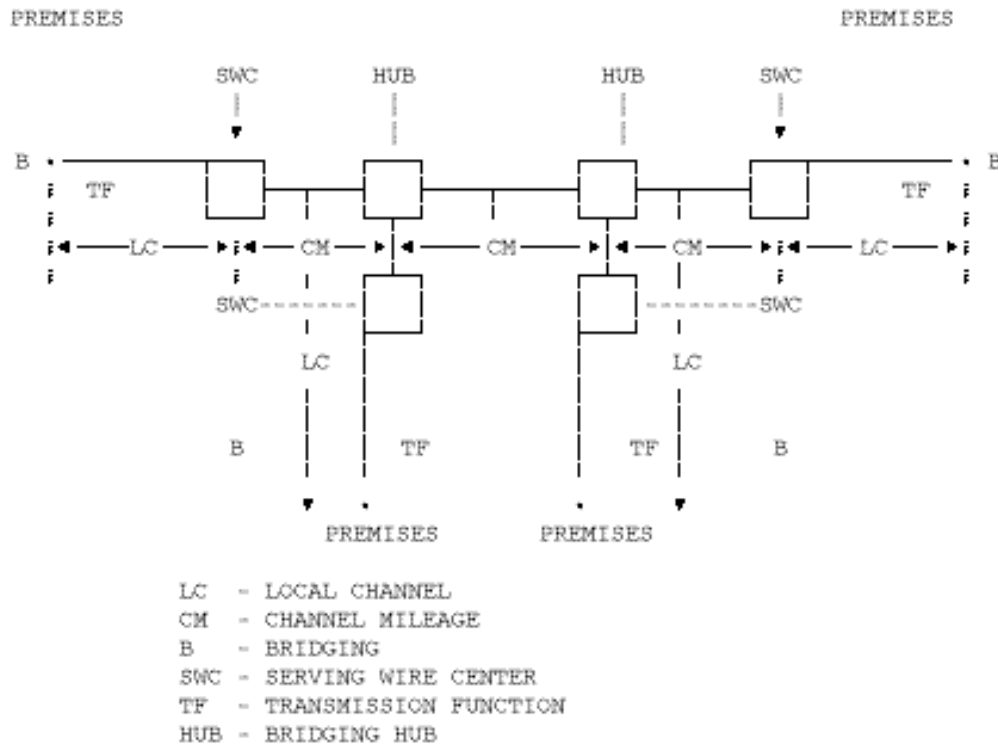
SPECIAL SERVICES

2. General (Cont'd)

2.4 Service Configurations (Cont'd)

(B) Multipoint Service (Cont'd)

Example: Voice Grade multipoint service connecting four customer premises via two customer specified bridging Hubs.



Applicable rate elements are:

- Local Channel (4 applicable)
- Transmission Functions (4 applicable)
- Channel Mileage (5 sections, each from appropriate mileage band) See Mileage Measurements in 5.5 following.
- Bridging (4 applicable, i.e., each premises)

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SPECIAL SERVICES

2. General (Cont'd)

2.5 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.

Voice grade channels may be arranged for different types of transmission on an alternate use basis, i.e., as telegraph grade* channels or as different types of voice grade channels.

The monthly charge applicable to a channel used alternately for another purpose is the higher of the channel charges applicable to the uses involved. In addition to the established channel charges, the charges shown in 6.4(D)(2)(c) following apply at each of two service points for the alternate use.

If a change, addition, deletion or rearrangement of the channel and/or the equipment necessary to provide suitable transmission and signaling is required, charges based on costs apply in addition to the monthly charges shown following.

If automatic switching or alternate use involving more than two service points is desired, it will be furnished where feasible at additional charges based on the costs involved.

2.6 Special Facilities Routing

Services furnished under this Guide are provided over such routes as the Telephone Company may elect.

A customer may request that the facilities used to provide Special Service be specially routed. The regulations, rates and charges for Special Facilities Routing are based on costs and are in addition to all other rates and charges which may be applicable under this Guide.

2.7 Special Construction

When the components required to provide service are not available, and when mutually agreeable to the customer and Telephone Company, special construction may be undertaken to provide the required service. The customer requesting channel services requiring special construction of facilities is liable for the costs incurred for that portion of the facilities not deemed to be reusable by another customer in the manner or quantity furnished. Tariff or Guide rates for the type of service provided are applicable in addition to the charges for the special construction. Additional regulations pertaining to Special Construction for LATA access services are set forth in Pa. P.U.C.-No. 302, Part 14, and in Pa. P.U.C.-No. 1, Section 1, General Regulations, for intraLATA services.

* As of October 31, 2014, all Telegraph Grade Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

2. General (Cont'd)

2.8 Design Layout Report For LATA Access Services

At the request of the customer, the Telephone Company will provide to the customer the make-up of the facilities and services provided under this Guide as LATA access service to aid the customer in designing its overall service. This information will be provided in the form of a Design Layout Report. The Design Layout Report will be provided to the customer at no charge, and will be reISSUED NOVEMBER 30, 1999 or updated whenever these facilities are materially changed.

2.9 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:

- (A) For Voice Grade analog services, acceptance tests 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 for 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 (i.e., Metallic*, Telegraph* and Program Audio*) and for digital services, acceptance tests will include tests for the parameters applicable to the service as specified in the order for service.

In addition to the above tests, Additional Cooperative Acceptance Testing for Voice Grade Service to test other parameters, as described in Part 13 of Pa. P.U.C.-No. 302, is available at the customer's request. All test results will be made available to the customer upon request.

2.10 Ordering Options and Conditions

LATA access service is ordered under the Access Order provisions set forth in Pa. P.U.C.-No. 302, Part 5. Also included in that section are other charges which may be associated with ordering LATA access service (e.g., Service Date Change Charges, Cancellation Charges, etc.).

Regulations pertaining to cancellation or special handling of service requests for intraLATA channels requiring Engineering design are set forth in Pa. P.U.C.-No. 1, Section 1, General Regulations.

* As of October 31, 2014, all Metallic Service, Telegraph Grade Service and Program Audio Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions

For the purposes of ordering, the categories of Special Services are:

- Metallic*
- Telegraph Grade*
- Voice Grade
- Program Audio*
- Digital Service
- High Capacity
- High Capacity/Lightwave

Each service consists of a basic channel to which a technical specifications package (customized or predefined), channel interface(s) and, when desired, optional features are added to construct the service desired by the customer. Each of the components of the service are described in this section.

Customized technical specifications packages will be provided for LATA access service 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 for LATA access service the customer will be notified whether Additional Engineering Charges as described in Pa. P.U.C.-No. 302, Part 13 apply. In such cases, the customer will be given an estimate of the hours to be billed before any further action is taken on the order.

The channel description specifies the characteristics of the basic channel and indicates where the channel is provided, i.e., between customer premises or between a customer premises and a Telephone Company Hub where multiplexing functions are performed.

Information pertaining to the technical specifications packages for LATA access services indicates the transmission parameters that are available with each package. This information is displayed in a matrix with the transmission parameters listed down the left side and the packages listed across the top. Each package is identified by a code, e.g., VGC. The first two letters of the code indicate the category of Special Service to which the parameters are applicable. The letter "C" following the two letter code indicates the technical specifications package for a customized service. A numeric or alpha-numeric designation following the two letter code indicates the specific predefined package. For a customized service, the customer may select any parameters available with that category of service as long as the parameters are compatible. When appropriate, the Technical Reference which contains detailed specifications for the parameters is shown following the matrix.

* As of October 31, 2014, all Metallic Service, Telegraph Grade Service and Program Audio Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

3. Service Descriptions (Cont'd)

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 all must be compatible with a common channel interface at one of the customer premises. Only certain channel interfaces are compatible. These are set forth in 4.5 following in a combination format for LATA access services.

Only certain channel interface combinations are available with the predefined technical specifications packages. These are delineated in the Technical References set forth below. When a customized channel is requested, all channel interface combinations available with the specified type of LATA access service are available with the customized channel.

The optional features available with each type of Special Service are described in this section. The optional features information also indicates with which technical specifications packages they are available. Such information is displayed in a matrix with the optional feature listed down the left side and the technical specifications package listed across the top.

The Telephone Company will maintain existing transmission specifications on services installed prior to the EFFECTIVE DECEMBER 1, 1999 date of this Guide except that the existing services with performance specifications exceeding the standard listed in this provision will be maintained at the performance levels specified in this Guide. All services installed after the EFFECTIVE DECEMBER 1, 1999 date of this Guide will conform to the transmission specifications standards contained in this Guide or in the following Technical References for each category of service:

Metallic*	TR-NPL-000336
Telegraph Grade*	TR-NPL-000336
Voice Grade	TR-TSY-000335
	PUB41004, Table 4
Program Audio*	TR-NPL-000337
Digital Service	TR-NPL-000341
	PUB62310

The Telephone Company reserves the right to revise technical parameters described herein for any reason but not limited to utilization of new advances in the state of the technical arts or to reflect changes in the design of equipment or services.

* As of October 31, 2014, all Metallic Service, Telegraph Grade Service and Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.1 Metallic (MT) Service*

(A) Basic Channel Description

It is expressly declared that metallic facilities for these services are in decreasing supply and the Telephone Company is not obligated to continue to make available or construct such metallic facilities.

In addition, if modernization programs, growth or maintenance dictate the replacement of existing metallic facilities with non-metallic facilities such as fiber optics, the Company will not be required to continue this service over metallic facilities.

Further, the Telephone Company will not be responsible to the customer or otherwise if changes in any of the facilities of the Telephone Company render any equipment or system of the customer obsolete, affect its use or performance or require the customer to incur any expenses such as but not limited to alterations of such equipment or system or charges associated with changes required in services provided by the Telephone Company.

The following types of Metallic channels will be provided where appropriate metallic or metallic equivalent facilities are available.

(1) Metallic/Metallic Equivalent

Unconditioned two-wire channels capable of transmitting low speed varying signals at rates up to 30 baud. This channel will be provided by metallic or equivalent facilities between customer premises, between serving wire centers or a combination thereof in the same or different wire center.

These channels will be provided on a two-point and multipoint service basis. Multipoint service is provided with a maximum of 26 points and restricted to a maximum of 3 wire centers.

The Telephone Company will notify the customer if other than metallic facilities are utilized to provide this service prior to installation.

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.1 Metallic (MT) Service*

(A) Basic Channel Description

It is expressly declared that metallic facilities for these services are in decreasing supply and the Telephone Company is not obligated to continue to make available or construct such metallic facilities.

In addition, if modernization programs, growth or maintenance dictate the replacement of existing metallic facilities with non-metallic facilities such as fiber optics, the Company will not be required to continue this service over metallic facilities.

Further, the Telephone Company will not be responsible to the customer or otherwise if changes in any of the facilities of the Telephone Company render any equipment or system of the customer obsolete, affect its use or performance or require the customer to incur any expenses such as but not limited to alterations of such equipment or system or charges associated with changes required in services provided by the Telephone Company.

The following types of Metallic channels will be provided where appropriate metallic or metallic equivalent facilities are available.

(1) Metallic/Metallic Equivalent

Unconditioned two-wire channels capable of transmitting low speed varying signals at rates up to 30 baud. This channel will be provided by metallic or equivalent facilities between customer premises, between serving wire centers or a combination thereof in the same or different wire center.

These channels will be provided on a two-point and multipoint service basis. Multipoint service is provided with a maximum of 26 points and restricted to a maximum of 3 wire centers.

The Telephone Company will notify the customer if other than metallic facilities are utilized to provide this service prior to installation.

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.1 Metallic (MT) Service* (Cont'd)

(A) Basic Channel Description (Cont'd)

(2) Metallic Data Signaling

Non-loaded two-wire and four-wire facilities will be provided between two points in the same wire center that are not more than six route miles apart as determined by the Telephone Company. These channels are normally suitable for the transmission of digital data signals.

In the event that only loaded facilities are available and the customer desires service, the Telephone Company will de-load the facilities at rates commensurate with costs incurred.

The Telephone Company guarantees that the transmission parameters as shown following will be provided between the points to be served using normal cable routing.

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.1 Metallic (MT) Service* (Cont'd)

A. Basic Channel Description (Cont'd)

(2) Metallic Data Signaling (Cont'd)

INSERTION LOSS OBJECTIVES (dB) WITH
135 OHM TERMINATIONS

Maximum End-to-End Channel Length In Route Miles	Frequency					
	<u>1000 Hz</u>	<u>2400 Hz</u>	<u>4800 Hz</u>	<u>9600 Hz</u>	<u>19200 Hz</u>	<u>38400 Hz</u>
1	10.5	12.0	15.0	19.0	22.5	26.5
2	14.5	16.5	20.5	27.5	35.5	46.0
3	18.0	21.0	27.0	36.5	50.0	67.0
4	21.0	26.0	34.0	46.0	62.5	*
5	23.5	30.5	39.5	53.5	*	*
6	26.5	33.0	43.5	58.5	*	*

* not specified

- (a) The insertion loss objectives specified preceding refer to the total channel offering (end-to-end) and indicate that the engineered objective loss will fall within that objective. These specifications do not include gains or losses present in customer-provided equipment.

The Telephone Company reserves the right to revise these objectives and other technical parameters as described herein.

- (3) In offering to provide this service, the Telephone Company assumes no obligation to specially select, alter, rearrange or construct facilities and does not represent that a facility provided under this offering is suitable for the intended customer application. Further, in providing this service where existing facilities permit, the Telephone Company assumes no obligation to continue such provision where rearrangements necessitate the elimination of such facilities or render such facilities unsuitable for the customer application.

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)
 - 3.1 Metallic (MT) Service** (Cont'd)
 - (A) Basic Channel Description (Cont'd)
 - (4) Illustrative Applications

Metallic Service is suitable for use as part of the facilities used to provide such service as:

<u>Guide Description</u>	<u>Service</u>
Metallic	Protective Alarm (DC) Protective Alarm (McCulloh) Channel Service Bell and Lights Siren Control Protective Relay - Signal Grade
Metallic Equivalent	Protective Alarm (McCulloh) Channel Service
Metallic Data Signaling	Local Area Data

- (B) Technical Specifications Packages

<u>Parameter</u>	<u>Package MT-</u>			
	<u>C*</u>	<u>1</u>	<u>2</u>	<u>3</u>
DC Resistance				
Between Conductors	X	X	X	
Loop Resistance	X			X
Shunt Capacitance	X			X

The technical specifications are delineated in Technical Reference PUB 62502.

- (C) Channel Interfaces

Compatible channel interfaces are set forth in 4.5(A) following.

- (D) Optional Features

- (1) Central Office Bridging Capability

- (a) Three Premises Bridging - Provision of tip-to-tip and ring-to-ring connection in a central office of a metallic pair to a third customer premises.
- (b) Series Bridging of up to 26 customer premises.

* All parameters are available within the ranges selected by the customer where technically feasible.

** Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

3. Service Descriptions (Cont'd)
 - 3.1 Metallic (MT) Service* (Cont'd)
 - (D) Optional Features (Cont'd)

The following table shows the technical specifications packages with which the optional features are available.

	<u>Available with Technical Specifications Package MT-</u>			
	<u>C</u>	<u>1</u>	<u>2</u>	<u>3</u>
Three Premises				
Bridging	X	X		X
Series Bridging	X		X	

3.2 Telegraph Grade (TG) Service*

(A) Basic Channel Description

A Telegraph Grade channel is an unconditioned channel capable of transmitting binary signals at rates of 0-75 baud or 0-150 baud. This channel is furnished for two-wire or four-wire operation. Telegraph Grade channels are provided between customer premises, between serving wire centers or a combination thereof in the same or different wire centers on a two-point or multipoint basis.

In connection with 0-75 baud channels, where the Telephone Company provides transmission equipment at the interface, the customer must provide a source of continuous 117 volt, 60Hz AC power by means of a nonswitched outlet.

The customer must in all cases provide a source of continuous 117 volt, 60Hz AC power by means of a nonswitched outlet for 0-150 baud channels.

(1) Illustrative Applications

Telegraph Grade Service is suitable for use as part of the facilities used to provide such services as:

<u>Guide Description</u>	<u>Service</u>
Telegraph Grade 0-75 Baud	Control/Remote Metering - Telegraph Grade Teletypewriter Channel
Telegraph Grade 0-150 Baud	Control/Remote Metering - Telegraph Grade Teletypewriter Channel

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic and Telegraph Grade Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.2 Telegraph Grade (TG) Service** (Cont'd)

(B) Technical Specifications Packages

<u>Parameter</u>	<u>Package TG-</u>		
	<u>C*</u>	<u>1</u>	<u>2</u>
Telegraph Distortion	X	X	X

The technical specifications are delineated in Technical Reference PUB 62502.

(C) Channel Interfaces

Compatible channel interfaces are set forth in 4.5(B) following.

(D) Optional Features

(1) Telegraph Bridging (two-wire and four-wire)

The following table shows the technical specifications packages with which the optional features are available.

	<u>Available with Technical Specifications Package TG-</u>		
	<u>C</u>	<u>1</u>	<u>2</u>
Telegraph Bridging	X	X	X

3.3 Voice Grade (VG) Service**

(A) Basic Channel Description

- (1) 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 premises, serving wire centers, Telephone Company Hubs or combinations thereof within the same or in different wire centers.

* All parameters are available within the ranges selected by the customer where technically feasible.

** Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Telegraph Grade Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(A) Basic Channel Description (Cont'd)

- (2) Channels are provided on a two-point or multipoint basis. The number of stations that may be connected and the distance over which satisfactory transmission is possible may be limited by operating and transmission factors.
- (3) When multipoint voice grade service is furnished, bridging charges apply for each premises bridged on the same channel in addition to all other applicable charges for the channel.
- (4) Signaling arrangements are furnished on channels used as off-premises stations with grandfathered and registered PBX (or similar) equipment in accordance with Part 68 of the Federal Communications Commission's Rules and Regulations.

Type A - Furnished for use with Class A PBX (or similar) station ports capable of operation over loops with resistance in the range of 0-199 ohms.

Type B - Furnished for use with Class B PBX (or similar) station ports capable of operation over loops with resistance in the range of 200-899 ohms.

Type C - Furnished for use with Class C PBX (or similar) station ports capable of operation over loops with resistance in the range of 900 ohms or more.

- (a) For channel connections to registered PBX (or similar) equipment, customers must specify their requirements for Type A, B, or C signaling arrangements.
- (b) For new channel connections to grandfathered customer-provided equipment, customers may at their option either:
 - (1) Continue to provide their own off-premises service signaling capability; or
 - (2) Specify their requirements for Type A, B, or C signaling arrangements to be furnished by the Telephone Company.

Type A, B, or C signaling arrangements will be furnished in accordance with the specifications provided by the customer; if the customer subsequently requests a change to a different type of signaling arrangement, the request will be treated as a new order for service.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)
 - 3.3 Voice Grade (VG) Service* (Cont'd)
 - (A) Basic Channel Description (Cont'd)
 - (5) A Signaling Arrangement is provided on channels used as tie lines connected to grandfathered PBXs in accordance with Part 68 of the F.C.C. Rules and Regulations under the following conditions:
 - (a) An E & M Signaling Arrangement is required for each tie line termination, operating in a Dial Repeating mode, at a customer premises with a Registered PBX.
 - (b) An E & M Signaling Arrangement is required for each tie line termination at a customer premises with customer-provided PBXs when the tie line is arranged with an E & M signaling interface.
 - (c) An E & M Signaling Arrangement is not required with channels for additions to or for new installations of customer-provided PBX equipment when not arranged with an E & M signaling interface.
 - (6) Voice grade channels are furnished between specified locations for remote operation and control of private land radiotelephone stations established for communications with mobile units. Channels are furnished for voice only and for combined voice and control purposes as follows.
 - (a) For Combined Voice Transmission and Control Purposes
 - (a.1.) Channels furnished for combined voice transmission and control purposes may be used by the customer, in accordance with the normal transmission characteristics of such channels, for voice transmission purposes and to transmit more than one tone or signal in sequence or simultaneously or to create additional channels for remote control and indication purposes only.
 - (a.2.) On two-point services, voice channels may be used alternately for control at no additional charge, where the control function is derived through the use of standard one-way, two-state Direct Current signaling over the voice channel.
 - (a.3.) On multipoint services, two-state, Direct Current signaling for control purposes is provided by means of a separate Metallic channel*. Appropriate monthly and non-recurring charges apply separately for the Metallic* and the Voice Grade channel.

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Metallic Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(A) Basic Channel Description (Cont'd)

(6) (Cont'd)

(a) (Cont'd)

(a.4.)

On two-point and multipoint services, voice channels may be used for the remote operation and control of private land radiotelephone stations, at no additional charge when the control functions are provided via tone signals.

(b) Additional Equipment and Facilities

Repeaters, amplifiers, special loading, equalization or special types of plant, required in connection with the provision of these channels are furnished at charges based upon the costs incurred.

- (7) When Voice Grade Service without signaling is provided for full duplex operation, rates for four-wire local channels apply.

(8) Illustrative Applications

Voice Grade service is suitable for use as part of the facilities used to provide such services as:

Guide Description

Voice Grade - Without signaling

Service

Private Line
Mobile Radio
Remote Metering
Select-A-Station

Voice Grade With basic
signaling

Private Line
Centrex Off-Premises Station
*PBX Off-Premises Station
Concentrator-Identifier Line

Voice Grade - With A, B, or
C signaling

PBX Off-Premises Station

Voice Grade - Without E & M
signaling at the customer's
premises

*PBX-PBX Tie Line
*PBX-CTX Tie Line
CTX-CTX Tie Line

Voice Grade - With E & M
signaling at the customer's
premises

*PBX-PBX Tie Line
*PBX-CTX Tie Line

Voice Grade Data
Transmission
* Pre Registration

Private Line Data
Select-A-Station

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(B) Technical Specifications Packages

		Package VG-											
Parameter	C*	1	2	3	4	5	6	7	8	9	10	11	12
Attenuation													
Distortion	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
Echo Control	X	X	X	X		X		X	X			X	X
Envelope Delay													
Distortion	X						X	X	X	X	X	X	X
Frequency Shift	X						X	X	X	X	X	X	X
Impulse Noise	X					X	X	X	X	X	X	X	X
Intermodulation													
Distortion	X						X	X	X	X	X	X	
Loss Deviation	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	
Signal-to-C													
Message Noise					X								
Signal-to-C													
Notch Noise	X					X	X	X	X	X	X	X	X

* The desired parameters are selected by the customer from the list of available parameters.

The technical specifications for these parameters (except for dropouts, gain hits and phase hits) are delineated in Technical Reference PUB 62501 and associated Addendum. The technical specifications for dropouts, phase hits and gain hits are delineated in Technical Reference PUB 41004, Table 4.

(C) Channel Interfaces

The following channel interfaces for Voice Grade service do not provide signaling capability: AH, DA, DB, DD, DE, DS, NO, PR and TF.

The following channel interfaces for Voice Grade service do provide signaling capability: AB, AC, CT, DX, DY, EA, EB, EC, EX, GO, GS, LA, LB, LC, LO, LR, LS, RV and SF.

Compatible channel interfaces are set forth in 4.5(C) following.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(D) Optional Features

(1) Central Office Bridging Capability

- (a) Voice Bridging (two-wire and four-wire)
- (b) Data Bridging (two-wire and four-wire)
- (c) Telephoto Bridging (two-wire and four-wire)
- (d) Select-A-Station Bridging with sequential arrangement ports or addressable arrangement ports
- (e) Telemetry and Alarm Bridging
 - Split Band, Active Bridging
 - Passive Bridging

(2) Conditioning

Conditioning provides more specific transmission characteristics for Voice Grade services used as data, mobile radio or telephoto channels.

For two-point services, the parameters apply to each service. For multipoint services, the parameters apply to each mid link or end link. C-Type Conditioning and DA-Conditioning may be combined on the same service.

C-Type Conditioning, DA-Conditioning and Telephoto Conditioning are provided for LATA access services.

C1, C2, C4 and D1 Conditioning are provided for intraLATA services.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

- 3. Service Descriptions (Cont'd)
 - 3.3 Voice Grade (VG) Service* (Cont'd)
 - (D) Optional Features (Cont'd)
 - (2) Conditioning (Cont'd)
 - (a) LATA Access Services
 - (a.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:

Attenuation Distortion (Frequency Response) Relative to 1004 Hz	
Frequency Range(Hz)	Variation (dB)
400-2800	-1.0 to +2.0
300-3000	-1.0 to +3.0
3000-3200	-2.0 to +6.0

Envelope Delay Distortion	
Frequency Range(Hz)	Variation (micro-seconds)
1000-2600	100
800-2600	200
600-2600	300
500-2800	600
500-3000	3000

(a.2.) DA-Conditioning

DA-Conditioning provides transmission characteristics suitable for data communications. Specifically, DA-Conditioning 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 parameters for DA-Conditioning are:

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(D) Optional Features (Cont'd)

(2) Conditioning (Cont'd)

(a) LATA Access Services (Cont'd)

(a.2.) DA-Conditioning (Cont'd)

- Signal to C-Notched Noise Ratio is equal to or greater than 32dB
- Intermodulation distortion:
 - Signal to second order modulation products (R2) is equal to or greater than 38dB
 - Signal to third order modulation products (R3) is equal to or greater than 42dB

When a service equipped with DA-Conditioning is used for voice communications, the quality of the voice transmission may not be satisfactory.

(a.3.) Telephoto Conditioning

Telephoto Conditioning provides transmission characteristics suitable for telephotographic communications. Specifically, Telephoto Conditioning is provided for the control of attenuation distortion and envelope delay distortion on telephotographic services. The attenuation distortion and envelope delay distortion parameters for Telephoto Conditioning are:

Attenuation Distortion (1004 Hz Reference)

<u>Frequency Range (Hz)</u>	<u>Variation (dB)</u>
500-3000	-0.5 to +1.5
300-3200	-1.0 to +2.5

Envelope Delay Distortion

<u>Frequency Range (Hz)</u>	<u>Variation (mcs)</u>
1000-2600	110
800-2800	180

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(D) Optional Features (Cont'd)

(2) Conditioning (Cont'd)

(b) IntraLATA Services

(b.1.) C1 Conditioning

For a two-point or multipoint channel

- the envelope delay distortion shall not exceed:
between 1000 and 2400 Hertz, a maximum difference
of 1000 microseconds
- the loss deviation with frequency (from 1000
Hertz reference) shall not exceed:
between 1000 and 2400 Hertz, -1db to +3db
between 300 and 2700 Hertz, -2db to +6db
between 2700 and 3000 Hertz, -3db to +12db
(+ means more loss)

(b.2.) C2 Conditioning

For a two-point or multipoint channel

- the envelope delay distortion shall not exceed:
between 1000 and 2600 Hertz, a maximum
difference of 500 microseconds
between 600 and 2600 Hertz, a maximum
difference of 1500 microseconds
between 500 and 2800 Hertz, a maximum
difference of 3000 microseconds
- the loss deviation with frequency (from 1000
Hertz reference) shall not exceed:
between 500 and 2800 Hertz, -1db to +3db
between 300 and 3000 Hertz, -2db to +6db
(+ means more loss)

Note: On a multipoint channel arranged for switching, conditioning in accordance with the above specifications is applicable only when in the unswitched mode.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(D) Optional Features (Cont'd)

(2) Conditioning (Cont'd)

(b) IntraLATA Services (Cont'd)

(b.3.) C4 Conditioning

- For a two-point, three point or four-point channel
- the envelope delay distortion shall not exceed:
 - between 1000 and 2600 Hertz, a maximum difference of 300 microseconds
 - between 800 and 2800 Hertz, a maximum difference of 500 microseconds
 - between 600 and 3000 Hertz, a maximum difference of 1500 microseconds
 - between 500 and 3000 Hertz, a maximum difference of 3000 microseconds
 - the loss deviation with frequency (from 1000 Hertz reference) shall not exceed:
 - between 500 and 3000 Hertz, -2db to +3db
 - between 300 and 3200 Hertz, -2db to +6db
- (+ means more loss)

Note: On a three-point or four-point channel, conditioning in accordance with the above specifications is applicable only between one exchange (that designated by the customer as the control point) and each of the other two or three exchanges.

(b.4.) D1 Conditioning

For a two point channel not arranged for switching

- Certain data transmission characteristics necessary for high performance data transmission cannot be assured on all channels generally available for data transmission. However, voice grade data transmission two point channels may be specially arranged to provide for the following technical parameters at the request of the customer:

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service* (Cont'd)

(D) Optional Features (Cont'd)

(2) Conditioning (Cont'd)

(b) IntraLATA Services (Cont'd)

(b.4.) D1 Conditioning (Cont'd)

For a two-point channel not arranged for switching
(Cont'd)

- Signal to C-Notched Noise Ratio	28db
- Nonlinear distortion:	
(1) signal to second order distortion	35db
(2) signal to third order distortion	40db

When the channel equipped with this conditioning is utilized for voice communications, the Telephone Company does not undertake to represent that channel will be suitable for such voice transmission.

(3) Improved Termination

On EFFECTIVE DECEMBER 1, 1999 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 PUB 62501.

(4) Improved Return Loss

On EFFECTIVE DECEMBER 1, 1999 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 PUB 62501.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.3 Voice Grade (VG) Service** (Cont'd)

(D) Optional Feature (Cont'd)

(5) Transfer Arrangement

This arrangement can be utilized to transfer a leg of a Special Service to another channel that terminates in either the same or a different customer premises. A key activated or dial-up control service is required to operate the transfer arrangement. A spare line, if required, is not included as part of the option.

(E) Technical Specifications Packages

The following table shows the technical specifications packages with which the optional features are available.

		Available with Technical Specifications Package VG-												
		<u>C</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
C-Type Conditioning		X					X	X	X	X	X	X		
Central Office														
Bridging														
Capability		X		X			X	X				X	X	X
Central Office														
Multiplexing		X						X						
DA-Conditioning		X						X	X			X		
*Improved Return Loss														
For EFFECTIVE														
DECEMBER 1, 1999														
Four-Wire														
Transmission		X	X	X	X	X	X	X	X	X	X	X	X	X
For EFFECTIVE														
DECEMBER 1, 1999														
Two-Wire														
Transmission		X		X	X				X					
Telephoto Conditioning		X											X	
Transfer Arrangement		X	X	X	X	X	X	X	X	X	X	X	X	X

* EFFECTIVE DECEMBER 1, 1999 Four-Wire Transmission with Two-Wire Interface

When a customer requests that an EFFECTIVE DECEMBER 1, 1999 Four-Wire channel be terminated with a Two-Wire interface at the customer designated premises, then this optional feature applies. Placement of Telephone Company equipment (hybrid) is required at the customers premises to convert the four-wire channel to a two-wire POT. When this option is ordered, a four-wire channel termination charge applies. Per the Voice Grade Technical References, certain Voice Grade services are always provisioned as EFFECTIVE DECEMBER 1, 1999 four-wire and will be billed as a Four-Wire channel termination.

** Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)
3.4 Program Audio (AP) Service**
(A) Basic Channel Description

A Program Audio channel is a channel 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. This service includes audio and wired music channels specially equipped for the closed circuit (non-broadcast) transmission of voice and music signals in one direction only.

Program Audio channels are provided between customer premises, between serving wire centers or combinations thereof on a two-point and multipoint basis. When Program Audio Channels are furnished for multipoint service, a bridging charge applies for each premises bridged on the same channel in addition to all other applicable charges for the channel.

These channels may require the use of non-loaded cable facilities. In the event that only loaded facilities are available, the Telephone Company will, at the customer's request, de-load the facilities at charges commensurate with the costs incurred.

(1) Illustrative Applications

Program Audio service is suitable for use as part of the facilities used to provide such service as:

<u>Guide Description</u>	<u>Service</u>
Program Audio - Non equalized 200 - 3500 Hz	Audio Transmission Paging - One Way Wired Music Distribution
Program Audio - Equalized 100 - 5000 Hz	Audio Transmission Wired Music Distribution
50 - 8000 Hz	Audio Transmission Wired Music Distribution
50 - 15000 Hz	Audio Transmission Wired Music Distribution

* Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.4 Program Audio (AP) Service** (Cont'd)

(B) Technical Specifications Packages

<u>Parameter</u>	<u>Package AP-</u>				
	<u>C*</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</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
Phase Tracking	X				
Short-Term Gain					
Stability	X				
Short-Term Loss	X				
Total Distortion	X	X	X	X	X

The technical specifications are delineated in Technical Reference PUB 62503 and associated Addendum.

(C) Channel Interfaces

The following channel interfaces (CIs) define the bandwidths that are available for a Program Audio channel:

<u>CI</u>	<u>Bandwidth</u>
PG-1	Nominal frequency from 50 to 15000 Hz
PG-3	Nominal frequency from 200 to 3500 Hz
PG-5	Nominal frequency from 100 to 5000 Hz
PG-8	Nominal frequency from 50 to 8000 Hz

Compatible channel interfaces are set forth in 4.5(D) following.

* The desired parameters are selected by the customer from the list of available parameters.

** Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible..

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)
- 3.4 Program Audio (AP) Service** (Cont'd)
- (D) Optional Features
- (1) Gain Conditioning

Control of 1004 Hz AML at initiation of service to 0dB $\pm$ 0.5 dB.

The following table shows the technical specifications packages with which the optional features are available.

	Available with Technical Specifications Package AP-				
	<u>C</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Gain Conditioning	X	X	X	X	X

** Effective February 13, 2026, moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.5 Digital Service*

(A) Digital Data (DA)

(1) Basic Channel Description

Digital Data Service provides for the duplex four-wire transmission of digital signals at synchronous speeds of 2.4, 4.8, 9.6 or 56 kilobits per second (kbps) between and within Digital Serving Areas. The actual bit rate is a function of the channel interface selected by the customer.

The service is furnished for duplex operation on a twenty-four hour per day, seven day per week basis, for a minimum period of one month. The service will provide a standard interface to the customer's interface.

Customer-provided terminal equipment, customer-provided derivation equipment and customer-provided communications systems may be connected with facilities furnished for Digital Data Service subject to the regulations set forth in Section 31 of Pa. P.U.C.-No. 1.

(a) Digital Serving Areas

Digital Data Service is available only to locations served from specially equipped Telephone Company hubs which serve locations between and within Digital Serving Areas.

Digital Data channels are only available via Telephone Company designated hubs and are provided between customer Rate Demarcation Points (RDP's) or between a customer Rate Demarcation Point (RDP) and a Telephone Company hub.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

- 3. Service Descriptions (Cont'd)
 - 3.5 Digital Service* (Cont'd)
 - (A) Digital Data (DA) (Cont'd)
 - (1) Basic Channel Description (Cont'd)

- (b) Determination of Mileage

The interoffice mileage of channels furnished within a Digital Serving Area is based on the airline distances between the wire center serving each customer location.

The interoffice mileage for channels furnished between Digital Serving Areas is based on the airline distances between the wire centers associated with the customer's local serving wire center in each Digital Serving Area.

- (c) Service Components

The components of Digital Data Service offered for transmission between and within Digital Serving Areas are set forth below.

Local Digital Channel (connecting the customer's premises to the customer's local serving wire center.)

Transmission function (one applicable per termination).

Interoffice mileage, as appropriate, of channels connecting the customer's local serving wire centers.

Multi-Station Arrangement - required when providing Digital Data Service between three or more digital stations.

Channel Service Unit type equipment is required at all times at each station on the customer's side of the Rate Demarcation Point (RDP) to perform such functions as proper termination of the service, amplification, signal shaping and remote loopback testing.

Channel Service Unit type equipment or other Network Channel Terminating Equipment associated with the Digital Data Channel on the customer's side of the Rate Demarcation Point (RDP) must be provided by the customer and must comply with the requirements of the Bell Technical Reference Publication 62310 and Section 31 of Pa. P.U.C.-No. 1.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.5 Digital Service* (Cont'd)

(A) Digital Data (DA) (Cont'd)

(2) Technical Specifications Packages

	<u>Package DA-</u>			
<u>Parameter</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Error-Free Seconds*	X	X	X	X
Central Office Bridging				
Capability	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 PUB 62507.

(3) Channel Interfaces

The following channel interfaces (CIs) define the bit rates that are available for a Digital Data channel:

<u>CI</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

Compatible channel interfaces are set forth in 4.5(E) following.

(4) Optional Features

a) 1 x N Transfer Arrangement

This arrangement can be utilized to transfer a leg of a Digital Data Service to either a spare or working channel that terminates in either the same or a different customer premises. This arrangement is only available where facilities permit as determined by the Telephone Company. A key activated or dial up control service is required to operate the transfer arrangement. A spare line, if required, is not included as a part of the option.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.5 Digital Service* (Cont'd)

(A) Digital Data (DA) (Cont'd)

(4) Optional Features (Cont'd)

(b) Digital Data Bridging

A Digital Data Bridging arrangement is required to provide for Digital Data Service between three or more digital stations.

The wire centers listed in 3.5 (A)(4)(d) preceding are equipped to provide bridging capability for Digital Data Service.

(c) Secondary Channel

(a) Secondary Channel is an Optional Feature associated with a primary Digital Data Service channel(s). Secondary Channel is a second, totally independent, lower speed channel operating in parallel with the primary channel of a Digital Data Service circuit. This service is not available on multipoint channels.

(b) The types of Secondary Channels offered to provide for the simultaneous, independent two-way transmission of digital signals between two or more customer premises each having Secondary Channels are as follows:

- Secondary Channel furnished for digital transmission at a synchronous rate of 133 bits per second (bps), operating in parallel with a primary 2.4 kbps channel (per termination).
- Secondary Channel furnished for digital transmission at a synchronous rate of 266 bps, operating in parallel with a primary 4.8 kbps channel (per termination).
- Secondary Channel furnished for digital transmission at a synchronous rate of 533 bps, operating in parallel with a primary 9.6 kbps channel (per termination).
- Secondary Channel furnished for digital transmission at a synchronous rate of 2,666 bps, operating in parallel with a primary 56 kbps channel (per termination).

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.6 High Capacity Digital Hand-Off Service¹

(A) Digital Hand-Off Service Description

Digital Hand-Off Service provides a high capacity digital facility that carries voice grade services between the customer's serving central office and the customer's compatible premises equipment. The service is available as either a dedicated or multiplexed facility.

1. Dedicated Hand-Off Facility

The Dedicated Hand-Off Facility is a digital wideband channel operating at a transmission speed of 1.544 Mbps and is used only to provide DID Service from a digital switch. It is a simultaneous two-way transmission medium using serial, bipolar, return-to-zero, isochronous, alternating mark inversion format. It extends from a customer's high capacity interface to the serving central office where it is connected directly into the digital switch. A maximum of 24 local exchange Direct Inward Dialing Service lines can be provided by each Dedicated Hand-Off Facility.

Clear Channel Capability (B8ZS) will be provided where available.

¹ Effective November 3, 2012, High Capacity Digital Hand-Off Service is grandfathered and no longer available to new customers. Moves, additions or changes to subscribers' existing service are not permitted. High Capacity Digital Hand-Off Service is still available for resale until February 16, 2013, on which date the foregoing terms shall be effective for resale.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.6 High Capacity Digital Hand-Off Service¹ (Cont'd)

(A) Digital Hand-Off Service Description (Cont'd)

2. Multiplexed Hand-Off Facility

The Multiplexed Hand-Off Facility is a digital wideband channel operating at a transmission speed of 1.544 Mbps. It is a simultaneous two-way transmission medium using serial, bipolar, return-to-zero, isochronous, alternating mark inversion format. It extends from the customer's high capacity interface to the serving central office where it is multiplexed for connection to a maximum of 24 voice grade services.

Clear Channel Capability (B8ZS) will be provided where available.

- (B) The customer must specify at the time of ordering which channels of the facility connect with which voice grade service requested. Any future additions and changes to channel assignments must also be coordinated with the Telephone Company.
- (C) In addition to the charges for High Capacity Digital Hand-Off Service in this Guide, all nonrecurring and recurring charges for the voice grade services provided will be charged in accordance with the applicable tariffs or Guides governing those services.
- (D) Customer-requested switched voice grade services must emanate from either the customer's normal serving central office or a customer-specified foreign office. Voice Grade Special Services may extend beyond the serving central office and will be provided via whatever facilities the Telephone Company chooses, subject to applicable rates and charges.
- (E) Digital Data Service and Metallic* Special Services may not be transported over High Capacity Digital Hand-Off Service facilities.
- (F) The interface at the customer's premises must conform with Verizon Technical Publication TR000054 at the Digital Signal-1, DS-1, level.
- (G) Dedicated Digital Hand-Off Service is available only in central offices equipped with a digital switch.

¹ Effective November 3, 2012, High Capacity Digital Hand-Off Service is grandfathered and no longer available to new customers. Moves, additions or changes to subscribers' existing service are not permitted. High Capacity Digital Hand-Off Service is still available for resale until February 16, 2013, on which date the foregoing terms shall be effective for resale.

* As of October 31, 2014, all Metallic Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.6 High Capacity Digital Hand-Off Service¹ (Cont'd)

- (H) PRI Alternative Digital Arrangement - PRI Alternative Digital Arrangement is provisioned with 1.544 megabit per second (Mbps) bandwidth using "inband" signaling and provides the customer with 24 channels having the capabilities of simultaneous access, transmission and switching of voice and data services. It extends from a customer's high capacity interface to the serving central office where it is connected directly into the digital switch. This arrangement is not normally suitable for the transmission of digital data signals and the speed of transmission is not guaranteed. PRI Alternative Digital Arrangement is available where facilities permit.

PRI Alternative Digital Arrangement will be converted to **IntelliLinQ**® PRI, at no additional charge, when mutually agreed to by the customer and the Telephone Company. The customer must provide compatible Customer Premises Equipment and agree to modify/change this equipment when converting to **IntelliLinQ** PRI.

The following **IntelliLinQ** PRI optional features are not available with this service arrangement; Calling Line Identification, Call-by-Call, Circuit-Switched Data and "D" channel signaling. In addition, WATS, 800 Lines, and Automatic Number Identification are not available under this service arrangement.

¹ Effective November 3, 2012, High Capacity Digital Hand-Off Service - PRI Alternative Digital Arrangement is grandfathered and no longer available to new customers. Moves, additions or changes to subscribers' existing service are not permitted. High Capacity Digital Hand-Off Service - PRI Alternative Digital Arrangement is still available for resale until February 16, 2013, on which date the foregoing terms shall be effective for resale.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.7 Direct Inter-Premises Channel Option

A. Basic Service Description

Direct Inter-Premises Channel service is an arrangement whereby service may be furnished by placing facilities directly between two non-adjacent premises of the same customer in lieu of routing them via a wire center, within the same or contiguous central office serving areas when in the judgment of the Telephone Company it is practical and feasible to do so. The customer may elect to pay charges based on the costs of providing direct facilities between the two locations, in lieu of the charges for Voice Grade channels with A, B or C signaling.

B. Regulations

- (1) The customer must have a minimum requirement of 25 channels between the two non-adjacent premises.
- (2) The type and route of the facilities and requirement for transmission equipment are determined by the Telephone Company.
- (3) The capacity of the facilities provided is based upon the customer's estimate of his total channel requirement for a five year period.
- (4) The customer is responsible for payment of the charges for the entire capacity provided regardless of the extent of utilization.
- (5) One of two payment plans is available during the five year contract period:
 - (a) The customer may elect to pay a nonrecurring charge which covers the charge for providing the channel facilities, with a monthly recurring charge for maintaining the facilities over the five year period.
 - or
 - (b) The customer may elect to have the applicable charges spread equally over the contract period (60 months) subject to a five year termination liability.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.7 Direct Inter-Premises Channel Option (Cont'd)

B. Regulations (Cont'd)

- (6) A nonrecurring charge of \$39.00 applies for each channel activated after the initial placement of the Direct Inter-Premises Channel Option facility.
- (7) The Telephone Company retains ownership of the facilities provided.
- (8) The customer is liable for the nonrecurring costs incurred in computing the optional charges, whether or not he/she elects to take the option.

3.8 Multiple Channel Service Pricing Option

A. Basic Channel Description

The Multiple Channel Service Pricing Option is an arrangement that provides reduced recurring charges to customers having 24 or more interoffice channels (in groups of 24) between the same two customer switching or premises locations of the same customer. This arrangement may include Telegraph*, Voice Grade and Audio Program* channels as offered in this Guide.

EFFECTIVE DECEMBER 1, 1999 with the date of this Guide, Multiple Channel Service Pricing Option is available for new arrangements as described following. Those existing arrangements with two-year, three-year or five-year contract periods may continue in force until the expiration of the contract. At that time, the customer will have the option to contract for the service as presently offered in the Guide or revert to the EFFECTIVE DECEMBER 1, 1999 individual channel rates.

B. Regulations

- (1) The customer must have a minimum of 24 channels between the same two customer switching or premises locations.
- (2) Channels are provided only under contract for a period of two years. The customer is responsible for payment of all charges for the entire contract period selected.

* As of October 31, 2014, all Telegraph Grade Service and Program Audio Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.8 Multiple Channel Service Pricing Option (Cont'd)

B. Regulations (Cont'd)

- (3) Each group of 24 channels will require a separate contract and is considered independent of all other groups of 24 channels.
- (4) Each group of 24 channels may consist of either a single channel type, e.g., 24 Voice Grade channels, or any combination of channel types available under this arrangement, e.g., 8 Voice Grade, 8 Telegraph Grade* and 8 Audio Program* channels.
- (5) The customer is responsible for identifying the specific channels to be included in each group of 24 channels.
- (6) The amount by which the monthly rates will be reduced is determined by applying the factor shown following to the total monthly rates in effect for the 24 selected channels at the start of the contract. Once established, the amount of the reduction will remain fixed for the entire contract period.

<u>Channel Groups</u>	<u>Contract Factor</u>	<u>Contract Period</u>
Each Group of 24:	.20	2 years

- (7) Changes, such as adding optional features to a channel, will be permitted. Any change which results in the removal of one of the 24 specified channels from the group is considered to be a termination of the contract.

If a customer chooses to terminate the contract prior to the expiration of the contract period, the company will back-bill the total amount discounted for each cancelled group. All remaining channels in a cancelled group will then be billed at the existing tariff or Guide rate at the time of cancellation.
- (8) At the end of the contract period the customer has the option to renew the contract at the then existing rates for the Multiple Channel Service Pricing Option or reverting to the individual channel Tariff or Guide rates in effect at that time.
- (10) Failure to exercise the option to renew the contract will result in all channels reverting to the individual channel Tariff or Guide rates in effect at that time.

* As of October 31, 2014, all Telegraph Grade Service and Program Audio Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.9 Select A-Station Service

(A) Basic Service Description

This service is a multi-station service, designed to establish point-to-point connections rapidly between a customer-provided master station and a number of remote stations, one at a time. This service requires voice grade channel facilities as specified in the following paragraphs.

A Selector Control Unit will be provided by the customer, at the customer master station location. The Selector Control Unit is used by the customer to transmit control signals to a Data Station Selector and/or to receive supervisory signals from the Data Station Selector.

Data Station Selectors are located in Telephone Company wire centers and will be designated as either Primary or Secondary Data Station Selectors.

A Primary Data Station Selector is a Data Station Selector which is connected to a Selector Control Unit. The connection must be by means of a four-wire voice grade data transmission channel.

A Secondary Data Station Selector is any Data Station Selector connected to a Primary Data Station Selector which is arranged with the proper options.

A Primary Data Station Selector arranged for automatic step or automatic step with reset type operation may not be connected to a Secondary Data Station Selector. When arranged for this type of operation a Primary Data Station Selector may have a maximum capacity of 128 output ports. These ports may serve a maximum of 128 remote stations by means of two-wire or four-wire voice grade channels without signaling.

When arranged for controlled step type operation a Primary Data Station Selector may have a maximum capacity of 128 output ports. These ports may serve a maximum of 128 remote stations by means of two-wire or four-wire voice grade channels without signaling or the Primary Data Station Selector output ports may serve a combination of remote stations and Secondary Data Station Selectors, the combined total of which cannot exceed 128.

SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.9 Select-A-Station Service (Cont'd)

(A) Basic Service Description (Cont'd)

A Secondary Data Station Selector must be connected to a Primary Data Station Selector output port by means of a four-wire voice grade data transmission channel.

A Secondary Data Station Selector may have a maximum capacity of 128 four-wire or two-wire output ports. These ports may serve a maximum of 128 Remote stations by means of four-wire or two-wire voice grade channels without signaling.

The customer must specify, prior to installation, the appropriate Data Station Selector options and the order of connections from the Data Station Selector to the remote stations when utilizing the sequential mode of operation.

Each channel between the Data Station Selector and a customer's premises or between Data Station Selectors will be treated as an independent two-point channel for determining applicable rates. Standard multipoint bridging charges as provided for voice grade service are not applicable to Select-A-Station service.

This service is not designed to provide alternate voice data transmission. Direct current continuity between the customer provided master station and remote stations is not provided. Direct transmission between remote stations is not possible, nor is simultaneous communications from the customer-provided master station to more than one remote station possible.

Not available for new installations. Additions and maintenance replacements furnished only to the extent of available stock.

3.10 Telemetry and Alarm Bridging Service

(A) Split Band, Active Bridging Service

(1) Basic Service Description

Split Band, Active Bridging Service is a wire center telemetry alarm service designed for use with large multipoint, voice grade Special Services networks. This service is designed to provide connections between a master station and a number of remote stations simultaneously. Split Band, Active Bridging Service has applications in voice frequency, data and tone signaling arrangements with transmission rates up to 400 bauds.

SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.10 Telemetry and Alarm Bridging Service (Cont'd)

(A) Split Band, Active Bridging Service (Cont'd)

(2) Components

- (a) The Split Band, Active Bridging Service consists of three components: the bridge(s), access lines and channel connections.

- (a.1.) Bridge - the bridge used for the provision of this service is the Split Band, Active Bridge. This bridge includes one or more bridging shelves and is equipped with amplifiers, splitters, filters and ports. The first bridging shelf in a wire center will accommodate one four-wire master station or mid-link port and forty-eight two-wire ports. Additional bridging shelves may be added to the first, not to exceed a maximum capacity of 128 remote stations. Two-way communication (polling) between the master station and each remote station is intended; direct communication between remote stations is not permitted.

(a.2.) Access Lines and Channel Connections

Four-wire voice grade data transmission channels are required to connect the Master Station to its primary bridge and for the mid-link channel to connect primary and secondary bridges in different wire centers.

In addition, mid-link channel connections are required.

Two-wire voice grade channels without signaling are required to connect each remote station to its bridge port.

In addition, remote station channel connections are required.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.10 Telemetry and Alarm Bridging Service (Cont'd)

(A) Split Band, Active Bridging Service (Cont'd)

(3) Regulations

The regulations contained herein are in addition to all other applicable regulations as set forth in other sections of this Guide.

- (a) Terminal equipment, provided and maintained by the customer for use with Split Band, Active Bridging Service must meet specifications for such customer-provided equipment as set forth in Section 31 of Pa. P.U.C.-No. 1.
- (b) No more than 128 remote stations may be connected to a master station over an individual Split Band, Active Bridge.
- (c) Secondary bridges reduce the two-wire remote station capacity of the primary bridge. The initial secondary bridge reduces the primary bridge capacity by twelve additional two-wire remote station connections. Each subsequent secondary bridge reduces the primary bridge capacity by four additional two-wire remote station connections.
- (d) Standard multipoint bridging charges as provided for voice grade services are not applicable to Split Band, Active Bridging Service.
- (e) Each channel between the bridge and a customer's premises or between bridges will be treated as an independent channel for determining the application of same wire center or different wire center rates.

SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.11 Verizon® IntelliMuxSM Service

(A) General

Verizon IntelliMux Service enables customers, through the use of the **IntelliMux** host computer, to reconfigure, in real-time, specific Special Services voice grade, DDS, and/or individual channels within a 1.544 Mbps High Capacity Service connected at digital cross connect systems. Customers gain access to the **IntelliMux** host computer through the use of a CPE terminal at their premises without going through normal service order procedures.

(B) Service Description

IntelliMux Service allows customers management and network reconfiguration capability of their voice grade, DDS, and/or individual channels within a 1.544 Mbps High Capacity Special Service. The reconfiguration is accomplished by either Telephone Company-performed or customer-performed access. Access is gained by a customer from a dial-up line from a customer-provided terminal at their premises to access the intelligent controller - the **IntelliMux** host computer. The **IntelliMux** host computer assures that the services to be connected together for a given customer application have compatible characteristics to ensure proper operations and functions. Once the host computer validates the customer's commands, the instructions are communicated to the digital cross-connect system(s) (DCSs) associated with the customer's services to effect the reconfiguration. The DCSs interface at a DS1 signal level and switch internally at a DSO level regardless of the type of access connection.

IntelliMux Service is available at those Hubs identified in National Exchange Carrier Association (NECA) Tariff F.C.C. No. 4. **IntelliMux** Service configurations may utilize multiple Hubs within a LATA. However, they must be interconnected using 1.544 Mbps High Capacity DS1 interoffice facilities. **IntelliMux** Service utilizing DDS can only be provisioned from Hubs which provide both **IntelliMux** and DDS.

Customers can reconfigure their special services networks from their premises or they can have the Telephone Company perform the reconfiguration.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.11 Verizon® IntelliMuxSM Service (Cont'd)

(C) IntelliMux Reconfiguration Options

Two network reconfiguration options are available to **IntelliMux** Service customers:

- Real Time
- Reservation

The real time option will make immediate changes to the network, while the reservation option will be executed at a specified time designated by the customer. Both types of reconfigurations are available whether the customer performs the reconfigurations or requests the Telephone Company to perform them.

(D) Technical Specifications

Access to **IntelliMux** Service is through the use of dial-up services. The customer's dial-up access must conform to the guidelines for PDN as set forth in Verizon Technical Reference TR 72211 relating to the arrangement.

Services capable of being cross-connected by **IntelliMux** Service must have identical technical characteristics to ensure compatibility and proper operation, e.g., data to data, voice to voice. **IntelliMux** Service specifications are delineated in Technical Reference TR-TSY-000366.

If the Telephone Company determines that the requested technical specifications are not compatible, the customer will be advised and given the opportunity to change the order.

IntelliMux Service is available twenty-four hours a day except during the performance of routine maintenance of Telephone Company facilities and equipment used to provide **IntelliMux** Service. The following is the schedule for routine maintenance:

Scheduled Maintenance

Sunday	12:00 a.m. - 6:00 a.m.
Monday	12:00 a.m. - 3:00 a.m.
First Sat./Month	12:00 a.m. - 2:00 a.m.

In addition to the routine downtime, unscheduled or emergency circumstances may limit availability.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.11 **Verizon® IntelliMuxSM** Service (Cont'd)

(D) Technical Specifications (Cont'd)

Service Exclusions

The following types of service terminations and options are not supported with the **IntelliMuxSM** offering:

1. Centrex
2. Switched Access Services
3. Shared Use High Capacity Services
4. Secondary legs of a multi-point bridging arrangement
5. DDS Secondary Channel Capability
6. Integrated Channel Service

(E) **IntelliMux** Service Options

End Link and Interoffice Facility Compatibility Verification

Each end link is verified to ensure technical compatibility for directionality, signalling type, bandwidth and service group.

DS0 Circuit Reconfiguration

The system allows point-to-point rerouting of customer DS0 facilities.

DS1 Circuit Reconfiguration

The system allows point-to-point rerouting of customer DS1 facilities at the DS0 level.

Real Time Capability

The customer, using demand service requests, can reconfigure his/her network on a real-time basis.

Reservation Capability

The customer, using reservation service requests, can schedule reconfiguration for a future time on a confirmed basis. Reservations can be scheduled on a continuous or cyclical basis.

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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.11 Verizon® IntelliMuxSM Service (Cont'd)

(E) IntelliMux Service Options (Cont'd)

Network Model Capability

Customers can define a predetermined network configuration of multiple two point cross-connects and initiate the large scale network reconfiguration with one command. The capability supports daytime/nighttime or weekday/weekend networks.

Basic Routing Capabilities

The customer can define facility routes or paths to be used by the system to connect access facilities in prespecified, user-defined tables.

(F) IntelliMux Service Configuration

IntelliMux provides the customer with management capability of Special Services Networks as specified in (A) preceding. **IntelliMux** is provided from **IntelliMux** Hubs which are identified in the NECA Tariff No. 4.

Applicable rate elements are:

- **IntelliMux** VG/DDS Port*
- **IntelliMux** DS1 Port
- VG/DDS Local Channel/Transmission Function (Per Termination)
- VG/DDS Channel Mileage (as applicable)
- DS1 Local Channel (Per Termination)
- DS1 Channel Mileage (as applicable between the customer's serving wire center and **IntelliMux** Hub and between **IntelliMux** Hubs)

* **IntelliMux** Service and DDS Service can only be provided in Hub offices which support both services.

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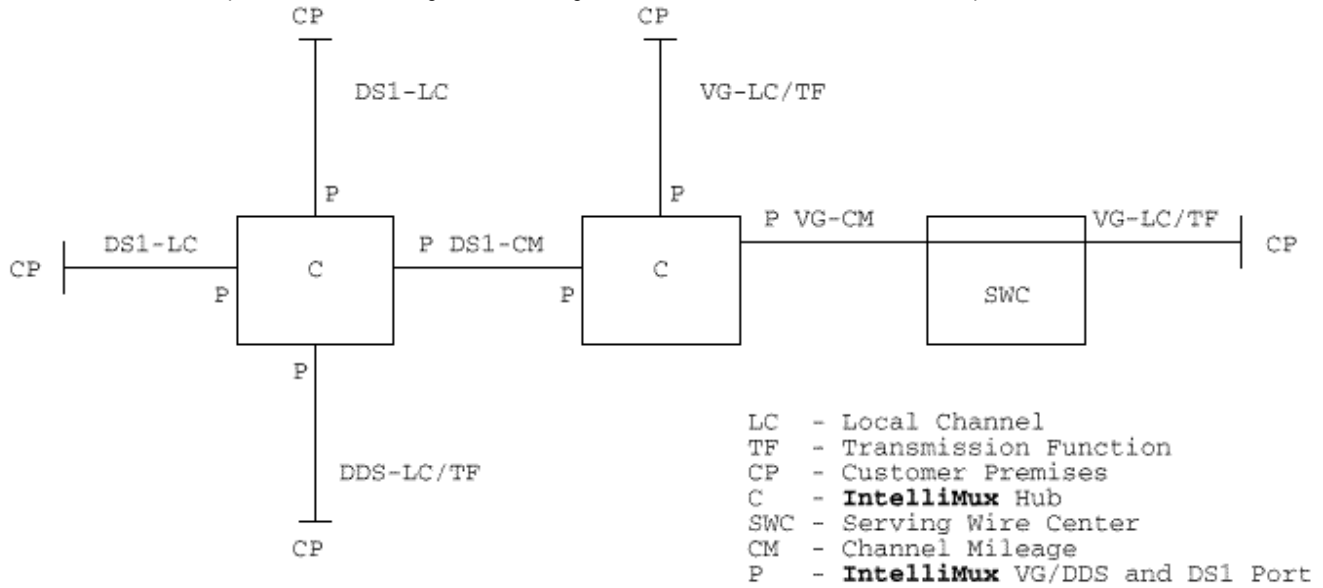
SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.11 Verizon® IntelliMuxSM Service (Cont'd)

(F) IntelliMux Service Configuration (Cont'd)

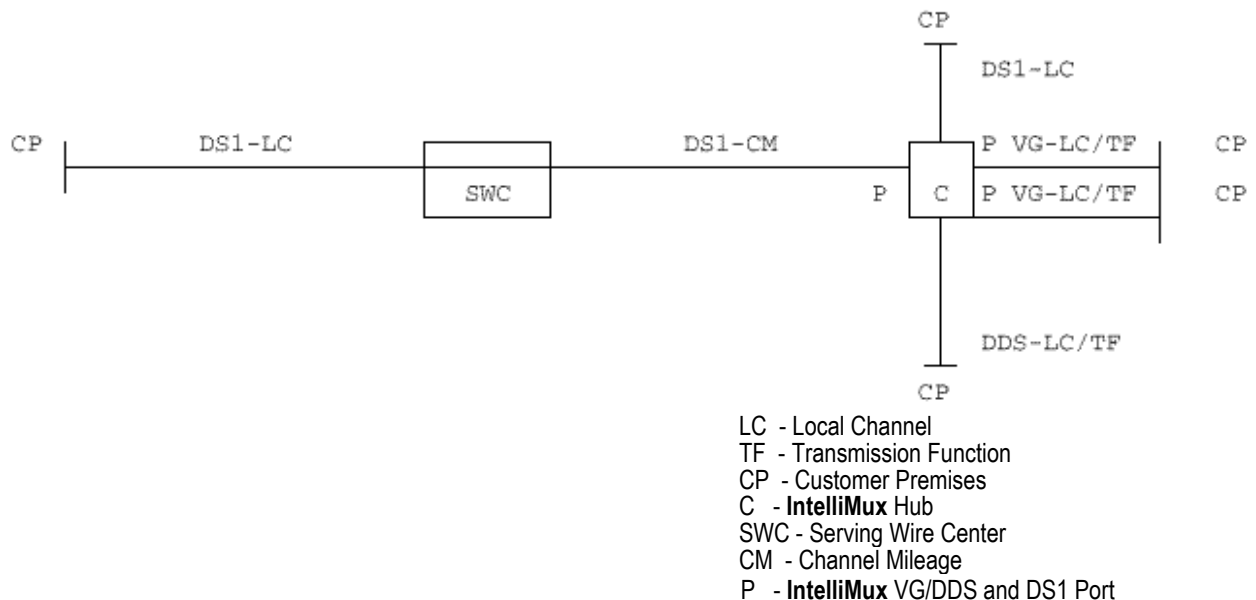
Example: **IntelliMux** configuration utilizing two **IntelliMux** Hubs and five customer premises locations:



Rate elements are:

- Local Channel (2 DS1, 2 VG and 1 DDS applicable)
- Transmission Function (2 VG and 1 DDS applicable)
- Channel Mileage (1 section of DS1 and 1 section of VG applicable)
- **IntelliMux** Port Charges (7 applicable - 4 DS1 and 3 VG/DDS for services terminated in the **IntelliMux** Hubs.

Example: **IntelliMux** configuration utilizing one **IntelliMux** Hub and five customer premises locations:



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SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.11 Verizon® IntelliMuxSM Service (Cont'd)

(G) Rate Element Description

(1) Service Establishment

The Nonrecurring Service Establishment charge applies per initial customer database setup. Included in this charge are the activities associated with installing the customer's network information in the **IntelliMux** Database, training the customer's personnel and providing training materials.

(2) Database Modification

This nonrecurring charge applies whenever the customer requests the Telephone Company to make a subsequent modification in his/her **IntelliMux** Database. A modification can be a change in security requirements or a change in administrative information, e.g., customer contact names and numbers, addition/deletion of authorized users.

(3) Telephone Company-Performed Reconfiguration

This nonrecurring charge is applicable when the customer chooses to have Telephone Company personnel perform the reconfiguration activities. The Telephone Company reconfigures the customer's network based upon customer-provided instructions.

This service is charged in increments of thirty (30) minutes for each occasion.

(4) Port Charges

Nonrecurring and monthly port charges apply per port termination of the DCS at the **IntelliMux** Hub office. There are two types of charges:

- Voice Grade/DDS Port Charge - Channel Port Termination for all voice grade and DDS service
- DS1 Port Charge - 1.544 Mbps Channel Port Termination

SPECIAL SERVICES

3. Service Descriptions (Cont'd)

3.12 Statistical Multiplexer Service

- (A) Statistical Multiplexer Service provides the customer access to a more efficient form of time division multiplexers that work by a dynamic allocation of time slots. Multiple data streams can be combined into a single high speed data stream on a single channel. This service requires compatible customer-provided equipment (CPE). Such multiplexing must be transparent to the speed, code and protocol of the user's data signal; protocol conversion is not provided by such equipment.

This service is associated with the Dedicated Digital (< 64 kbps) Basic Serving Arrangement (BSA).

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes

This section explains the Channel Interface codes and Network Channel codes that the customer must specify when ordering LATA Access Service. Included is an example which explains the specific characters of the code, a glossary of Channel Interface codes, impedance levels, Network Channel codes and compatible Channel Interfaces.

Example: If the customer specifies a NT Network Channel Code and a 2DC8-3 Channel Interface at the customer's premises, the following is being requested:

MT = Metallic** Channel with a Predefined Technical Specification Package
2 = Number of physical wires at customer premises
DC = Facility interface for direct current or voltage
8 = Variable impedance level
3 = Metallic** facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)

4.1 Glossary of Channel Interface Codes and Options

<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
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)

* Service will be provided only where analog facilities are available.

** As of October 31, 2014, all Metallic Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.1 Glossary of Channel Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
DD -		Select-A-Station (and TABS) interface at customer's point of termination
DE -		Select-A-Station (and TABS) interface at the customer's point of termination
DS -		digital hierarchy interface
-		A plus D4 with B8ZS clear channel capability
-	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
DU -		digital access interface
-	24	2.4 kbps
-	48	4.8 kbps
-	56	56.0 kbps
-	96	9.6 kbps
DX -		duplex signaling interface at customer's point of termination
DY -		duplex signaling interface at customer's point of termination
EA -	E	Type I E&M Lead Signaling. Customer originates on E Lead.
EA -	M	Type I E&M Lead Signaling. Customer originates on M Lead.
EB -	E	Type II E&M Lead Signaling. Customer originates on E Lead.
EB -	M	Type II E&M Lead Signaling. Customer 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.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.1 Glossary of Channel Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
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
GS -		ground start loop signaling - closed end function by customer
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
LR -		20 Hz automatic ringdown interface at customer with Telephone Company provided PLAR
LS -		loop start loop signaling - closed end function by customer
NO -		no signaling interface, transmission only
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
RV -	0	reverse battery signaling, one way operation originate by customer
-	T	reverse battery signaling, one way operation
SF -		single frequency signaling with VF band
TF -		Telephotograph* interface
TT -		Telegraph*/teletypewriter interface
-	2	20.0 milliamperes
-	3	3.0 milliamperes
-	6	62.5 milliamperes

* As of October 31, 2014, all Telegraph Grade Service and Program Transmission are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.2 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 four-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.

4.3 Digital Hierarchy Channel Interface Codes (4DSX-*)

This interface is available to customers that select the multiplexed four-wire DSX-1 or higher facility interface option at the customer premises and provide subsequent system and channel assignment data. The various digital bit rates in the digital hierarchy employ the channel interface code 4DS9, 4DS0 or 4DS6 plus the speed options indicated below:

<u>Interface Code and Speed Option</u>	<u>Nominal Bit Rate (Mbps)</u>	<u>Digital Hierarchy Level</u>
4DS9-15	1.544	DS1
4DS9-15L	1.544	DS1

* See Section 6 of this Guide for High Capacity Channel Service.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.4 Service Designator/Network Channel Code Conversion Table

The purpose of this table is to show the relationship between the service designator codes (e.g. VGC, MT2, etc.) and the network channel codes.

<u>Service Designator Code</u>	<u>Network Channel Code</u>
MTC	MQ
MT1	NT
MT2	NU
MT3	NV
TGC	NQ
TG1	NW
TG2	NY
VGC	LQ
VG1	LB
VG2	LC
VG3	LD
VG4	LE
VG5	LF
VG6	LG
VG7	LH
VG8	LJ
VG9	LK
VG10	LN
VG11	LP
VG12	LR
APC	PQ
AP1	PE
AP2	PF
AP3	PJ
AP4	PK
DA1	XA
DA2	XB
DA3	XG
DA4	XH

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces

The following tables show the channel interface codes (CIs) which are compatible:

(A) Metallic**

Compatible CIs

2DC8-1	2DC8-2
2DC8-3	2DC8-3
4DS9-*	2DC8-1
4DS9-*	2DC8-2

(B) Telegraph Grade**

Compatible CIs

2DB2-10	10IA8
2DB2-10	2TT2-2
2DB2-10	4TT2-2
4DB2-10	10IA8
4DB2-10	2TT2-2
4DB2-10	4TT2-2

Compatible CIs

2TT2-2	2TT2-2
2TT2-3	2TT2-2
2TT2-3	4TT2-2
2TT2-6	2TT2-6
2TT2-6	4TT2-2
4TT2-2	4TT2-2
4TT2-6	2TT2-6

* See 4.3 preceding for explanation.

* As of October 31, 2014, all Metallic Service and Telegraph Grade Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade

Compatible CIs

4AB2	4AC2
4AB3	4AC2
4AB2	2AC2
4AB3	2AC2
2AB2	2AC2
2AB3	2AC2
4AH5-B+	6LS2
4AH5-B+	4LS2
4AH5-B+	2LS2
4AH5-B+	2LS3
4AH5-B+	2LA2
4AH5-B+	2LC2
4AH5-B+	6DA2
4AH5-B+	4DA2
4AH5-B+	2DA2

- + Available only to customers selecting the multiplexed four-wire High Capacity analog facility interface option at the customer terminal location and providing subsequent system and channel assignment data. Service will be provided only where analog features are available.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs

2CT3 4DS9-*

2CT3 6DX2

2CT3 4DX2

2CT3 4DX3

2CT3 9DY3

2CT3 6DY3

2CT3 9DY2

2CT3 6DY2

2CT3 4DY2

2CT3 2DY2

2CT3 9EA3

2CT3 9EA2

2CT3 6EA2-E

2CT3 6EA2-M

2CT3 4EA2-E

2CT3 4EA2-M

* See 4.3 preceding for explanation.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>	
2CT3	4SF2	4DS9-*	4AC2
2CT3	4SF3	4DS9-*	2AC2
2CT3	6EB2-E	4DS9-*	6DA2
2CT3	6EB2-M	4DS9-*	4DA2
2CT3	6EB3-E	4DS9-*	2DA2
2CT3	8EB2-E		
2CT3	8EB2-M	4DS9-*	4DE2
		4DS9-*	2DE2
2CT3	8EC2		
		4DS9-*	4DX3
6DA2	6DA2	4DS9-*	4DX2
6DA2	4DA2		
4DA2	4DA2	4DS9-*	9DY3
2DA2	2DA2	4DS9-*	9DY2
		4DS9-*	6DY3
4DB2	6DA2	4DS9-*	6DY2
4DB2	4DA2	4DS9-*	4DY2
4DB2	2DA2	4DS9-*	2DY2
2DB3	2DA2		
2DB2	2DA2	4DS9-*	9EA2
		4DS9-*	9EA3
4DB2	4DB2	4DS9-*	6EA2-E
		4DS9-*	6EA2-M
4DB2	4PR2	4DS9-*	4EA2-E
4DB2	2PR2	4DS9-*	4EA2-M
2DB2	2PR2		
4DD3	4DE2		
4DD3	2DE2		

* See 4.3 preceding for explanation.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS9-*	8EB2-E	4DS9-*	4NO2	4DX3	9DY2
4DS9-*	8EB2-M	4DS9-*	2NO2	4DX2	6DY3
4DS9-*	6EB2-E			4DX3	6DY3
4DS9-*	6EB2-M	4DS9-*	4SF2	4DX2	6DY2
		4DS9-*	4SF3	4DX3	6DY2
4DS9-*	2GO2			4DX2	4DY2
4DS9-*	2GO3	4DS9-*	4TF2	4DX3	4DY2
		4DS9-*	2TF2	4DX2	2DY2
4DS9-*	6GS2			4DX3	2DY2
4DS9-*	4GS2	4DX2	4DX2		
4DS9-*	2GS2	4DX3	4DX2	6DX2	9EA3
4DS9-*	2GS3	4DX3	4DX3	6DX2	9EA2
				6DX2	6EA2-E
4DS9-*	2LA2	6DX2	9DY3	6DX2	6EA2-M
		6DX2	9DY2	6DX2	4EA2-E
4DS9-*	2LB2	6DX2	6DY3	6DX2	4EA2-M
		6DX2	6DY2	4DX2	9EA2
4DS9-*	2LC2	6DX2	4DY2	4DX3	9EA2
		6DX2	2DY2	4DX2	9EA3
4DS9-*	2LO2	4DX2	9DY3	4DX3	9EA3
4DS9-*	2LO3	4DX3	9DY3	4DX2	6EA2-E
		4DX2	9DY2	4DX3	6EA2-E
4DS9-*	4LR2			4DX2	6EA2-M
4DS9-*	2LR2			4DX3	6EA2-M
				4DX2	4EA2-E
4DS9-*	6LS2			4DX3	4EA2-E
4DS9-*	4LS2			4DX2	4EA2-M
4DS9-*	2LS2			4DX3	4EA2-M
4DS9-*	2LS3				

* See 4.3 preceding for explanation.

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs

6DX2	8EB2-E
6DX2	8EB2-M
6DX2	6EB2-E
6DX2	6EB2-M
4DX2	8EB2-E
4DX2	8EB2-M
4DX3	8EB2-E
4DX3	8EB2-M
4DX2	6EB2-E
4DX2	6EB2-M
4DX3	6EB2-E
4DX3	6EB2-M
4DX2	2LC2
4DX3	2LC2
2DX3	2LC2

Compatible CIs

4DX2	6LS2
4DX3	6LS2
4DX3	4LS2
4DX2	4LS2
4DX3	2LS3
4DX2	2LS3
4DX3	2LS2
4DX2	2LS2
2DX3	2LS2
2DX3	2LS3
6DX2	4SF2
4DX2	4SF2
4DX3	4SF2
4DX2	4SF3
4DX3	4SF3

Compatible CIs

6EA2-E	4AC2
6EA2-M	4AC2
6EA2-E	2AC2
6EA2-M	2AC2
9EA2	9DY3
9EA2	9DY2
9EA2	6DY3
9EA2	6DY2
9EA2	4DY2
9EA2	2DY2
9EA3	9DY3

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
9EA3	9DY2	4EA2-M	9DY2	4EA3-E	9EA2
9EA3	6DY3	4EA2-M	6DY3	4EA3-E	9EA3
9EA3	6DY2	4EA2-M	6DY2	4EA2-M	4EA2-M
9EA3	4DY2	4EA2-M	4DY2		
9EA3	2DY2	4EA2-M	2DY2		
6EA2-E	9DY3			9EA2	8EB2-E
6EA2-E	9DY2	9EA2	9EA2	9EA2	8EB2-M
6EA2-E	6DY3	9EA2	9EA3	9EA2	6EB2-E
6EA2-E	6DY2	9EA2	6EA2-E	9EA2	6EB2-M
6EA2-E	4DY2	9EA2	6EA2-M	9EA3	8EB2-E
6EA2-E	2DY2	9EA2	4EA2-E	9EA3	8EB2-M
6EA2-M	9DY3	9EA2	4EA2-M	9EA3	6EB2-E
6EA2-M	9DY2	9EA3	9EA3	9EA3	6EB2-M
6EA2-M	6DY3	9EA3	6EA2-E	6EA2-E	8EB2-E
6EA2-M	6DY2	9EA3	6EA2-M	6EA2-E	8EB2-
6EA2-M	4DY2	9EA3	4EA2-E	6EA2-E	6EB2-E
6EA2-M	2DY2	9EA3	4EA2-M	6EA2-E	6EB2-M
4EA2-E	9DY3	6EA2-E	6EA2-E	6EA2-M	8EB2-E
4EA2-E	9DY2	6EA2-E	6EA2-M	6EA2-M	8EB2-M
4EA3-E	9DY3	6EA2-M	6EA2-M	6EA2-M	6EB2-E
4EA3-E	9DY2	6EA2-E	4EA2-E	6EA2-M	6EB2-M
4EA3-E	6DY3	6EA2-E	4EA2-M	4EA2-E	8EB2-E
4EA3-E	6DY2	6EA2-M	4EA2-E	4EA2-E	8EB2-M
4EA3-E	4DY2	6EA2-M	4EA2-M	4EA3-E	8EB2-E
4EA3-E	2DY2	4EA2-E	4EA2-E	4EA2-E	8EB2-M
4EA2-E	6DY3	4EA3-E	6EA2-E	4EA2-E	6EB2-E
4EA2-E	6DY2	4EA3-E	6EA2-M	4EA2-E	6EB2-M
4EA2-E	4DY2	4EA3-E	4EA2-E	4EA3-E	6EB2-E
4EA2-E	2DY2	4EA3-E	4EA2-M	4EA3-E	6EB2-M
4EA2-M	9DY3	4EA2-E	4EA2-M	4EA2-M	8EB2-E

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs

4EA2-M	8EB2-M
4EA2-M	6EB2-E
4EA2-M	6EB2-M
6EA2-E	2LA2
6EA2-M	2LA2
6EA2-E	2LB2
6EA2-M	2LB2
6EA2-E	2LC2
6EA2-M	2LC2
6EA2-E	2LO3
6EA2-M	2LO3
6EA2-E	6LS2
6EA2-M	6LS2
6EA2-E	4LS2
6EA2-M	4LS2
6EA2-E	2LS2
6EA2-M	2LS2
6EA2-E	2LS3
6EA2-M	2LS3

Compatible CIs

9EA3	4SF2
9EA2	4SF2
6EA2-E	4SF3
6EA2-M	4SF3
6EA2-E	4SF2
6EA2-M	4SF2
4EA3-E	4SF2
4EA2-E	4SF2
4EA2-M	4SF2
8EB2-E	9DY3
8EB2-E	9DY2
8EB2-E	6DY3
8EB2-E	6DY2
8EB2-E	4DY2
8EB2-E	2DY2
8EB2-M	9DY3
8EB2-M	9DY2
8EB2-M	6DY3
8EB2-M	6DY2
8EB2-M	4DY2
8EB2-M	2DY2
6EB3-E	9DY2
6EB3-E	9DY3
6EB3-E	6DY2
6EB3-E	6DY3
6EB3-E	2DY2
6EB3-E	4DY2

Compatible CIs

6EB3-E	9EA2
6EB3-E	9EA3
6EB3-E	6EA2-E
6EB3-E	6EA2-M
6EB3-E	4EA2-E
6EB3-E	4EA2-M
8EB2-E	8EB2-E
8EB2-E	8EB2-M
8EB2-M	8EB2-M
8EB2-E	6EB2-E
8EB2-E	6EB2-M

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
8EB2-M	6EB2-E	8EB2-E	4SF2	8EC2	8EB2-M
8EB2-M	6EB2-M	8EB2-M	4SF2	8EC2	6EB2-E
6EB2-E	6EB2-E	8EB2-E	4SF3	8EC2	6EB2-M
6EB2-E	6EB2-M	8EB2-M	4SF3		
6EB3-E	8EB2-E	6EB3-E	4SF2	8EC2	4SF2
6EB3-E	8EB2-M	6EB2-E	4SF2		
6EB2-M	6EB2-M	6EB2-M	4SF2	6EX2-A	6GS2
				6EX2-A	4GS2
8EB2-E	2LA2	8EC2	9DY2	6EX2-A	2GS2
8EB2-M	2LA2	8EC2	9DY3	6EX2-A	2GS3
		8EC2	6DY2		
8EB2-E	2LB2	8EC2	6DY3	6EX2-B	2LA2
8EB2-M	2LB2	8EC2	4DY2		
		8EC2	2DY2	6EX2-B	2LC2
8EB2-E	2LC2				
8EB2-M	2LC2	8EC2	9EA2	6EX2-B	2LO2
		8EC2	9EA3	6EX2-B	2LO3
8EB2-E	2LO3	8EC2	6EA2-E		
8EB2-M	2LO3	8EC2	6EA2-M	6EX2-B	4LR2
		8EC2	4EA2-E	6EX2-B	2LR2
8EB2-E	6LS2	8EC2	4EA2-M		
8EB2-M	6LS2			6EX2-A	6LS2
8EB2-E	4LS2	8EC2	8EB2-E	6EX2-A	4LS2
8EB2-M	4LS2			6EX2-A	2LS2
8EB2-E	2LS2			6EX2-A	2LS3
8EB2-M	2LS2				
8EB2-E	2LS3				
8EB2-M	2LS3				

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6EX2-A	4SF2	6LO2	6LS2	4LR2	4SF2
6EX2-B	4SF2	6LO2	4LS2	4LR3	4SF2
		6LO2	2LS2		
6GO2	6GS2	6LO2	2LS3	6LS2	2LA2
6GO2	4GS2	4LO2	6LS2	4LS2	2LA2
6GO2	2GS2	4LO2	4LS2	4LS3	2LA2
6GO2	2GS3	4LO3	6LS2	2LS2	2LA2
4GO2	6GS2	4LO3	4LS2	2LS3	2LA2
4GO3	6GS2	4LO3	2LS3		
4GO2	4GS2	4LO3	2LS2	6LS2	2LB2
4GO3	4GS2	4LO2	2LS2	4LS2	2LB2
4GO2	2GS2	4LO2	2LS3	4LS3	2LB2
4GO2	2GS3	2LO3	2LS3	2LS2	2LB2
4GO3	2GS2	2LO3	2LS2	2LS3	2LB2
4GO3	2GS3	2LO2	2LS2		
2GO2	2GS2	2LO2	2LS3	6LS2	2LC2
2GO3	2GS2			4LS2	2LC2
2GO2	2GS3	6LO2	4SF2	4LS3	2LC2
2GO3	2GS3	4LO2	4SF2	2LS2	2LC2
		4LO3	4SF2	2LS3	2LC2
6GO2	4SF2				
4GO2	4SF2	4LR3	4LR2	6LS2	2LO3
4GO3	4SF2	4LR3	2LR2	6LS2	2LO2
		4LR2	4LR2	4LS2	2LO2
6GS2	2GO2	4LR2	2LR2	4LS2	2LO3
4GS2	2GO2	2LR2	2LR2	4LS3	2LO2
4GS3	2GO2	2LR3	2LR2	4LS3	2LO3
4GS2	2GO3				

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6LS2	4SF2	4SF3	9DY2	4SF3	2LA2
4LS3	4SF2	4SF2	9DY3		
		4SF3	6DY3	4SF2	2LB2
4NO2	6DA2	4SF2	6DY2	4SF3	2LB2
4NO2	4DA2	4SF2	6DY3		
4NO2	2DA2	4SF3	6DY2	4SF2	2LC2
2NO2	2DA2	4SF2	4DY2	4SF3	2LC2
		4SF3	4DY2		
4NO2	4NO2	4SF3	2DY2	4SF2	2LO3
4NO2	2NO2	4SF2	2DY2	4SF3	2LO3
2NO2	2NO2				
2NO3	2NO2	4SF3	9EA2	4SF2	2LR2
		4SF3	9EA3	4SF3	4LR2
4SF2	4AC2	4SF3	4EA2-E	4SF3	2LR2
4SF2	2AC2	4SF3	4EA2-M		
				4SF3	6LS2
4SF3	9DY3	4SF3	6EB2-E	4SF2	4LS2
4SF2	9DY2	4SF3	6EB2-M	4SF3	4LS2
				4SF2	2LS2
		4SF2	2GO3	4SF2	2LS3
				4SF3	2LS2
		4SF3	6GS2	4SF3	2LS3
		4SF2	6GS2		
		4SF2	4GS2	4SF3	4SF3
		4SF3	4GS2		
		4SF2	2GS2	4SF3	4SF2
		4SF2	2GS3	4SF2	4SF2
		4SF3	2GS2		
		4SF3	2GS3	4TF2	4TF2
				4TF2	2TF2
		4SF2	2LA2	2TF3	2TF2

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.5 Compatible Channel Interfaces (Cont'd)

(D) Program Audio**

Compatible CIs

2PG2-1	2PG1-1
2PG2-1	2PG2-1
2PG2-3	2PG1-3
2PG2-3	2PG2-3
2PG2-5	2PG1-5
2PG2-5	2PG2-5
2PG2-8	2PG1-8
2PG2-8	2PG2-8

(E) Digital Service

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS9-15*	4DS9-15	4DS9-15*	6DU5-48	4DU5-96	4DU5-96
4DS9-15*	4DU5-24	4DS9-15*	6DU5-56	6DU5-24	6DU5-24
4DS9-15*	4DU5-48	4DS9-15*	6DU5-96	6DU5-48	6DU5-48
4DS9-15*	4DU5-56	4DU5-24	4DU5-24	6DU5-56	6DU5-56
4DS9-15*	4DU5-96	4DU5-48	4DU5-48	6DU5-96	6DU5-96
4DS9-15*	6DU5-24	4DU5-56	4DU5-56		
4DS9-15	4DU5-24S	4DS0-15	6DU5-48S	4DU5-96S	4DU5-96S
4DS9-15	4DU5-48S	4DS9-15	6DU5-56S	6DU5-24S	6DU5-24S
4DS9-15	4DU5-56S	4DS9-15	6DU5-96S	6DU5-48S	6DU5-48S
4DS9-15	4DU5-96S	4DU5-24S	4DU5-24S	6DU5-56S	6DU5-56S
4DS9-15	6DU5-24S	4DU5-48S	4DU5-48S	6DU5-96S	6DU5-96S
4DS9-15B	4DU9-D	4DU5-56S	4DU5-56s		
4DS9-15S	4DU9-S				

* Available to customers selecting the multiplexed four-wire DSX channel interface option and providing subsequent system and channel assignment data.

** As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.6 Channel Interfaces Related to Transmission Function Rate Elements

The following tables show the relationship of channel interface codes to transmission function rate elements:

<u>Service</u>	<u>Category</u>	<u>Interface Codes</u>	<u>Transmission Function</u>
(A) <u>Metallic*</u>	(1)	DC/DC	- Metallic
	(2)	DS/DC	- Metallic equivalent
(B) <u>Telegraph*</u>	(1)	TT/TT, DB/TT, DS/TT	- Telegraph Grade & Teletypewriter-75 baud
	(2)	DB/IA	- Telegraph Grade & Teletypewriter-150 baud
(C) <u>Voice Grade</u>	(1)	DS/NO, DS/TF, NO/NO, TF/TF	- Voice grade without signaling

* As of October 31, 2014, all Metallic Service and Telegraph Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.6 Channel Interfaces Related to Transmission Function Rate Elements (Cont'd)

<u>Service</u>	<u>Category</u>	<u>Interface Codes</u>	<u>Transmission Function</u>
(C) <u>Voice Grade</u> (Cont'd)	(2)	AB/AB, AB/AC, AH/LS*, DS/AC, DS/DE, DS/GO, DS/GS, DS/LO, DS/LR, DS/LS, DS/RV, EX/GS, EX/LO, EX/LS, GO/GS, GS/GO, LO/LS, LR/LR, LS/LO, NO/DA	- Voice grade with basic signaling
	(3)	AH/LA*, AH/LC*, DS/LA DS/LB, DS/LC, EX/LA, DS/LS, DS/RV, EX/GS, EX/LC, LS/LA, LS/LB, LS/LC	- Voice grade with A, B or C signaling
	(4)		- Voice grade tieline with- out E & M signaling:
		DS/DX, DS/DY, DX/DX, DX/DY, DX/LC, DX/LS	customer premises to customer premises customer premises to wire center
		DS/CT, DX/CT, DY/CT, CT/CT	- wire center to wire center
	(5)	DS/EA, DS/EB, DX/EA, DX/EB, EA/AC, EA/CT, EA/DX, EA/DY, EA/EA, EA/EB, EA/LA, EA/LB, EA/LC, EA/LO, EA/LS, EB/CT, EB/EA, EB/EB, EB/DY, EB/LA, EB/LB, EB/LC, EB/LO, EB/LS, EC/CT, EC/DY, EC/EA, EC/EB, EX/LR	- Voice grade tieline with E & M signaling: customer premises to customer premises
	(6)	AH/DA*, DA/DA, DB/DA, DB/DB, DB/NO, DB/PR, DS/DA, DD/DE, DS/PR	- Voice grade data transmission
	(7)	DS/SF, DX/SF, EA/SF, EB/SF, EC/SF, EX/SF, GO/SF, LO/SF, LR/SF, LS/SF, RV/SF, SF/AC, SF/CT, SF/DX, SF/DY, SF/EA, SF/EB, SF/GO, SF/GS, SF/LA, SF/LB, SF/LC, SF/LO, SF/LR, SF/LS, SF/RV, SF/SF	- Voice grade with SF signaling

* Service will be provided only where analog facilities are available.

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SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

4.6 Channel Interfaces Related to Transmission Function Rate Elements (Cont'd)

<u>Service</u>	<u>Category</u>	<u>Interface Codes</u>	<u>Transmission Function</u>
(D) <u>Program Audio*</u>			- nominal frequency from 200 to 3500 Hz, non-equalized
	(1)	PG3/PG3, DS/PG3	100 to 5000 Hz, equalized
	(2)	PG5/PG5, DS/PG5	50 to 8000 Hz, equalized
	(3)	PG8/PG8, DS/PG8	50 to 15000 Hz, equalized
	(4)	PG1/PG1, DS/PG1	
(E) <u>Digital Service</u>	(1)	DU-24/DS-24, DU-24/DU-24	- 2.4 kbps
	(2)	DU-48/DS-48, DU-48/DU-48	- 4.8 kbps
	(3)	DU-96/DS-96, DU-96/DU-96	- 9.6 kbps
	(4)	DU-56/DS-56, DU-56/DU-56	- 56. Kbps
(F) <u>High Capacity</u>	(1)	4DS15-DU	- 1.544 Mbps.

* As of October 31, 2014, all Program Audio Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

5. Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Special Services.

5.1 Types of Rates and Charges

There are two types of rates and charges. These are monthly rates and nonrecurring charges. In addition, there are three types of nonrecurring charges. The rates and charges are described as follows:

(A) Monthly Rates

Monthly rates are flat recurring rates that apply each month or fraction thereof that a Special 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 a specific work activity (i.e., installation of service, installation of feature(s) and service rearrangements).

(1) Installation of Service

Nonrecurring charges apply to each service installed. The nonrecurring charges for the installation of service are set forth in 6. following.

For each two-point Special Service or multipoint Special Service, the Nonrecurring Charge-Initial applies per termination of a Special Service.

When more than one two-point Special Service or multipoint Special Service of the same type is installed at the same time between the same premises, a Nonrecurring Charge-Additional per termination applies after the application of the Nonrecurring Charge-Initial for the first Special Service.

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SPECIAL SERVICES

5. Rate Regulations (Cont'd)

5.1 Types of Rates and Charges (Cont'd)

(B) Nonrecurring Charges (Cont'd)

(2) Installation of Optional Features

Nonrecurring charges apply for the installation of some of the optional features available with Special Services. The Initial Nonrecurring Charge applies when the feature is installed coincident with the initial installation of service. The Subsequent Nonrecurring Charge applies when the feature is installed at any time subsequent to the installation of the service.

(3) Rearrangements of LATA Access Services

All changes to existing LATA Access services other than changes involving the addition of optional features having specific nonrecurring charges or changes involving administrative activities only will be treated as the discontinuance of the existing service and an installation of a new service. The nonrecurring charge described in (1) preceding 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 5.3 following.

If the change involves the addition of B8ZS options to an existing point-to-point high capacity DS1 service, a charge equal to the channel termination non-recurring charge will apply for each Local Channel converted. This rate application does not apply when either of these options are initially ordered with the service.

Administrative changes will be made without charge(s) to LATA access customers. Such changes require the continued provision and billing of the service to the same customer (i.e., same customer remains responsible for all outstanding indebtedness for the LATA access service). 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.

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5. Rate Regulations (Cont'd)

5.2 Minimum Periods

Services are provided 24 hours a day, 7 days a week for a minimum service period of one month except as otherwise noted in the regulations applicable to the specific service.

5.3 Moves

A move involves a change in the physical location of the customer's premises which may also involve a connection to a different Rate Demarcation Point.

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.

(B) Moves to A Different Building in the Same Wire Center.

When the move is to a different building in the same wire center the charge for the move will be an amount equal to the nonrecurring charge for the service termination affected.

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.

(C) Moves to a Different Building in a Different Wire Center.

Moves to a different building will be treated as a discontinuance and start of service and all associated nonrecurring charges will apply. However, when the move involves one or more legs of a multipoint service, the charge for the move will be an amount equal to the nonrecurring charge for the service termination(s) affected. When the move of a customer premises also requires the move of other legs on the multipoint service to a different Hub, each leg moved will incur a nonrecurring charge. 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.

SPECIAL SERVICES

5. Rate Regulations (Cont'd)

5.3 Moves (Cont'd)

(D) Time and Material Charges

Time and Material nonrecurring charges as described in Pa. P.U.C.-No. 1, Sections 22A and 22B, and Additional Labor Charges as described in Pa. P.U.C.-No. 302, Part 13, apply to all customer-requested work performed by the Telephone Company on the customer premises beyond the Rate Demarcation Point for intraLATA and interLATA access services respectively.

5.4 Rate Application Exception Rules

(A) Intrabuilding Services

Intrabuilding cable facilities, provided by the Telephone Company to connect two customer terminal locations in the same public building, will be rated as a Local Channel and an appropriate Transmission Function combination.

5.5 Mileage Measurement

EFFECTIVE DECEMBER 1, 1999 with the date of this Guide, mileage measurements of existing intraLATA multipoint services which were computed based upon combinations of airline distances between serving wire centers producing the lowest total mileage will remain unchanged.

Additions, changes and/or deletions of channels served from wire centers which are presently part of the multipoint service will be permitted.

The addition of a new wire center to an existing multipoint service will result in the recomputation of mileage between the wire centers serving the customer premises and the wire center of the Telephone Company Hub.

The mileage to be used to determine the monthly rate for the Channel Mileage is calculated on the airline distance between the locations involved, i.e., the serving wire centers associated with two customer premises, a serving wire center associated with a customer premises and a Telephone Company Hub, or two Telephone Company Hubs. The serving wire center associated with a customer premises is the serving wire center from which the customer premises would normally obtain dial tone unless Alternate Serving Wire Center is also provided as described in P.U.C. No. 1, Section 15.

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SPECIAL SERVICES

5. Rate Regulations (Cont'd)

5.5 Mileage Measurement (Cont'd)

Mileage is shown in 6. following in terms of mileage bands. To determine the rate to be billed, first compute the mileage using the V&H coordinates method, as set forth in the National Exchange Carrier Association Tariff F.C.C. No. 4, then find the band into which the computed mileage falls and apply the rates shown for that band. When the calculation results in a fraction of a mile, always round up to the next whole mile before determining the mileage band and applying the rates.

When Hubs are involved, mileage is computed and rates applied separately for each section of the Channel Mileage, i.e., customer premises serving wire center to Hub, Hub to Hub and/or Hub to customer premises serving wire center.

5.6 Facility Hubs

A customer has the option of ordering digital High Capacity facilities (DS1) to a facility Hub for channelizing to individual services requiring lower capacity facilities (e.g., Telegraph*, Voice, Program Audio*, etc.).

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. The customer will choose the desired Hub(s) from a list of available Hub locations which is set forth in the National Exchange Carrier Association Tariff F.C.C. No. 4. The Hub list will specify the type of multiplexing available at a specific location and the wire centers served from that Hub.

Some of the types of multiplexing available include the following:

- from higher to lower bit rate
- from digital to voice frequency channels

End to end services may be provided on channels of these facilities to a Hub. The transmission performance for the end to end service provided between customer premises will be that of the lower capacity or bit rate. For example, when a 1.544 Mbps facility is multiplexed to voice frequency channels, the transmission performance of the channelized services will be Voice Grade, not High Capacity.

* As of October 31, 2014, all Metallic, Telegraph Services and Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

5. Rate Regulations (Cont'd)

5.6 Facility Hubs (Cont'd)

The Telephone Company will commence billing the monthly rate for the facility to the Hub on the date specified by the customer on the service order. Individual services utilizing these facilities may be installed coincident with the installation of the facility 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 High Capacity Local Channel, Transmission Function, Channel Mileage (when applicable), and the multiplexer at the time the facility is installed. The customer will also be liable for individual service rates (by service type) for a Local Channel, Transmission Function and additional Channel Mileage (as required) for each channelized service installed.

Cascading multiplexing occurs when a High Capacity digital channel is de-multiplexed to provide channels with a lesser capacity and one of the lesser capacity channels is further de-multiplexed.

When cascading multiplexing is performed whether in the same or a different Hub, a charge for the additional multiplexing unit also applies. When cascading multiplexing is performed at different Hubbing locations, Channel Mileage Charges also apply between the Hubs.

5.7 Shared Use High Capacity Services

Shared use occurs when Switched Access Service is provided over a Special Service High Capacity facility through a common interface. The shared use facility will be ordered and rated only as Special Service (i.e., Local Channel, Channel Mileage, Transmission Function, as appropriate, and Multiplexer) regardless of whether individual channels of the shared use Special Service facility are used for Special Service, Switched Access Service, or any other type of service. The practice known as "ratcheting" (to apply non-special service access rates on a proportional basis) shall not apply in any circumstance. The customer must place an order for each individual Switched Access or Special Service utilizing the Special Service High Capacity Shared Use Facilities and specify the channel assignment for each such service.

Shared use of Switched Access facilities (i.e., Special Services provided over Switched Access facilities) is not allowed.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges
6.1 Metallic Service***

		Monthly Rate/Cell			
		1	2	3	4
(A)	<u>Local Channel</u>				
	- Per termination				
	- two-wire	\$120.80	\$166.18	\$256.22	\$316.80
	- four-wire*	18.43	25.36	39.22	48.40
		<u>Monthly</u>		<u>Nonrecurring Charge</u>	
		<u>Rate</u>		<u>Initial</u>	<u>Additional</u>
(B)	<u>Transmission Function</u>				
	- Per termination#				
	<u>Same Wire Center</u>				
	- Metallic for up to				
	2 or 3 point service	\$9.94		\$ 95.00	\$ 60.00
	- Metallic Equivalent				
	for up to 26 points	35.84		115.00	70.00
	- Metallic Data Signaling*o/	174.84		335.00	230.00
	<u>Demultiplexed Channels and</u>				
	<u>Different Wire Center</u>				
	- Metallic for up to				
	2 or 3 point service**	99.88		120.00	75.00
	- Metallic Equivalent				
	for up to 26 points	111.46		150.00	90.00
		<u>Monthly Rate</u>			
		<u>Fixed</u>		<u>Per mile</u>	
(C)	<u>Channel Mileage</u>				
	<u>Mileage Bands</u>				
	Over 0 to 1 mile	\$179.84		-	
	Over 1 to 3 miles	158.34		\$57.46	
	Over 3 to 5 miles	201.46		57.46	
	Over 5 to 15 miles	230.30		57.46	
	Over 15 to 25 miles	460.80		42.96	
	Over 25 miles	633.76		35.84	

NOTES:

- * Available for two-point intraLATA service only.
A minimum of two transmission functions apply per service.
Requires four-wire Local Channel.

** Not available as demultiplexed channel.

*** As of October 31, 2014, all Metallic Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.2 Metallic and Telegraph Grade**

(A) IntraLATA Channels in Excess of 100

This service offering is an option which is limited to intraLATA channels as described in 1.3 preceding. When more than 100 intraLATA Telegraph Grade (0 to 75 baud) or Metallic (0 to 30 baud) Channels are furnished between the same premises of the subscriber and the normal serving wire center, the local channel charge, preceding, will apply to each of the first 100 channels. All local channels in excess of 100 are rated as follows:

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
First 1/2 airline mile or fraction, each	\$6.05	\$59.00+
Additional 1/2 airline mile or fraction, each	1.21	-

6.3 Telegraph Grade Service**

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
(A) <u>Local Channel</u>				
- Per termination				
- two-wire	\$120.80	\$255.48	\$356.44	\$429.12
- four-wire	16.75	25.35	35.65	44.00

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
		<u>Initial</u> <u>Additional</u>
(B) <u>Transmission Function</u>		
- Per termination*		
<u>Same Wire Center</u>		
- Telegraph & Teletypewriter up to 75 baud	\$10.55	\$338.42 \$162.10
- Telegraph & Teletypewriter up to 150 baud	24.30	390.80 188.56

NOTES:

+ Nonrecurring Charges do not apply for the re-use of local channels in excess of 100 for which previous Nonrecurring Charges were applied.

* A minimum of two transmission functions apply per service.

** As of October 31, 2014, all Metallic Service and Telegraph Service are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.3 Telegraph Service* (Cont'd)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
		<u>Initial</u>	<u>Additional</u>
(B) <u>Transmission Function</u> (Cont'd)			
<u>Different Wire Center and Demultiplexed Channels</u>			
- Telegraph & Teletypewriter up to 150 baud	\$17.75	\$475.00	\$280.00
- Telegraph & Teletypewriter up to 150 baud	705.12	524.72	280.00

	<u>Monthly Rate</u>	
	<u>Fixed</u>	<u>Per mile</u>
(C) <u>Channel Mileage</u>		
<u>Mileage Bands</u>		
Over 0 to 1 mile	\$230.30	-
Over 1 to 3 miles	230.30	\$35.84
Over 3 to 5 miles	230.30	35.84
Over 5 to 15 miles	230.30	35.84
Over 15 to 25 miles	230.30	35.84
Over 25 miles	230.30	35.84

6.4 Voice Grade (VG) Service

	<u>Monthly Rate/Cell</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
(A) <u>Local Channel</u>				
- Per termination				
- two-wire	\$120.12	\$252.54	\$354.90	\$386.82
- four-wire	241.08	365.14	511.98	575.34

* As of October 31, 2014, all Telegraph Service is no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
		<u>Initial</u>	<u>Additional</u>
(B) <u>Transmission Function</u> (Cont'd)			
- Per 2-wire or 4-wire termination/			
<u>Same Wire Center</u>			
- without signaling#	\$ 78.26	\$258.51	\$140.20
- with basic signaling	195.84	294.93	170.00
- with Type A, B, or C signaling	267.76	340.00	210.00
- tieline without E & M signaling:			
customer premises to customer premises*	191.50	457.05	234.23
customer premises to wire center*	241.08	442.50	227.50
- tieline with E & M signaling:			
customer premises to customer premises*	125.52	465.00	234.23
customer premises to wire center*	107.40	457.50	242.50
- with data transmission*	241.08	429.08	270.41
- with single frequency signaling	49.00	780.00	390.00
<u>Different Wire Center and Demultiplexed Channels</u>			
- without signaling#	176.32	418.15	240.00
- with basic signaling	190.66	344.85	205.00
- with Type A, B, or C signaling	370.08	477.62	259.01
- tieline without E & M signaling:			
customer premises to customer premises*	91.64	655.00	320.00
customer premises to wire center*	266.28	530.00	280.00
wire center to wire center	18.55	412.88	245.00
- tieline with E & M signaling:			
customer premises to customer premises*	619.36	685.00	350.00
customer premises to wire center*	430.50	545.00	295.00
- with data transmission*	336.92	660.00	363.64
- with single frequency signaling	49.00	780.00	390.00

NOTES:

- o/ A minimum of two transmission functions apply per service.
When provided for full duplex operation, rates for four-wire channels apply.
* Requires four-wire local channel.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

		<u>Monthly Rate</u>	
		<u>Fixed</u>	<u>Per mile</u>
(C)	<u>Channel Mileage</u>		
	<u>Mileage Bands</u>		
	Over 0 to 1 mile	\$230.30	\$35.84
	Over 1 to 3 miles	230.30	35.84
	Over 3 to 5 miles	230.30	35.84
	Over 5 to 15 miles	230.30	35.84
	Over 15 to 25 miles	230.30	35.84
	Over 25 miles	230.30	35.84

(D) Optional Features

(1) Bridging

In addition to all other applicable charges for the channel, the following charges apply for bridging multipoint Voice Grade channels.

		<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
			<u>Initial</u>	<u>Additional</u>
(a)	Voice Bridging at each premises at which a channel terminates	\$338.96	\$230.00	\$135.00
(b)	Data Bridging at each station at which a channel terminates	290.76	135.00	80.00

Verizon Pennsylvania Inc.

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

(D) Optional Features (Cont'd)

(1) Bridging (Cont'd)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
		<u>Initial</u>	<u>Additional</u>
(c) <u>Select-A-Station Bridging:</u>			
Primary Data Station Selector, Sequential Arrangement - Common equipment (1) Ports	\$525.88	\$30.00	\$25.00
- Per 2-wire channel connected (2)	23.71	70.00	50.00
- Per 4-wire channel connected (2)	39.01	90.00	60.00
Secondary Data Station Selector, Sequential Arrangement - Common equipment(1) Ports	528.88	30.00	25.00
- Per 2-wire channel connected (2)	23.71	70.00	50.00
- Per 4-wire channel connected (2)	38.90	90.00	60.00

NOTES:

- (1) Furnished for a minimum period of one year. Termination liability reduces 1/12 for each month in service.
- (2) Nonrecurring charge not applicable if installed at the same time as the Data Station Selector with which it is associated. The minimum period of one year and the termination liability are applicable to intraLATA arrangements only.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

(D) Optional Features (Cont'd)

(1) Bridging (Cont'd)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
(d) <u>Telemetry and Alarm Bridging:</u>		
Split Band, Active Bridging*		
Common Equipment, per Serving Wire Center		
- First bridging shelf, capacity of 48 two-wire connections	\$1,163.20	\$950.00
- Additional bridging shelf, capacity of 56 two-wire connections	55.85	750.00
Channel Connections,		
- Remote station channel connection, per group of four	144.00	118.57
- Mid-Link channel connection,		
- First channel	244.60	210.40
- Each subsequent channel	42.96	92.49

* Connections to additional bridges reduce the capacity by two two-wire connections.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

(D) Optional Features (Cont'd)

(1) Bridging (Cont'd)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
(d) <u>Telemetry and Alarm</u>		
Passive Bridging*		
Common Equipment, per Serving Wire Center - Capacity of 10 2-wire connections each port	\$1.72	\$275.00
	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
		<u>Initial</u> <u>Additional</u>
(2) <u>Conditioning</u>		
(a) LATA Access Conditioning		
(a.1.) <u>C-Type Conditioning:</u>	\$12.45	\$48.00 \$34.00
- Per Termination		
(a.2.) <u>DA-Type Conditioning:</u>	12.45	48.00 34.00
- Per Termination		
(a.3.) Telephoto <u>Conditioning:</u>		
- Per Termination	12.45	48.00 34.00
	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
		<u>Initial</u> <u>Subsequent</u>
(a.4.) <u>Hybrid:</u>		
Provides conver- sion from 4-wire local channel to 2-wire termination	\$8.28	\$184.74 \$406.43

* Connections to additional bridges reduce the capacity by one two-wire connection.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

(D) Optional Features (Cont'd)

(2) Conditioning (Cont'd)

		<u>Monthly</u> <u>Rate</u>	<u>Nonrecurring Charge</u>	
			<u>Initial</u>	<u>Additional</u>
(b)	<u>IntraLATA Conditioning</u>			
-	Per termination			
	(b.1.) C1	\$179.20	\$ 48.00	\$ 34.00
	(b.2.) C2	179.20	48.00	34.00
	(b.3.) C4	179.20	48.00	34.00
-	Per Two Point Channel			
	(b.4.) D1	179.20	48.00	34.00
		<u>Monthly</u> <u>Rate</u>	<u>Nonrecurring Charge</u>	
			<u>Initial</u>	<u>Additional</u>
(c)	<u>Alternate Use Arrangements</u>			
	For each termination of a two point channel used alternately as:			
	Telegraph Grade			
	0-75 Baud	\$21.11*	\$170.00	\$100.00
	0-150 Baud	28.75	170.00	100.00
	Voice Grade	21.11	170.00	100.00
(d)	<u>Special Design</u>			

For each interexchange voice grade channel without signaling provided for use as a specially designed mobile radio channel, a monthly charge of \$18.50 applies for each station connected to a two-point channel.

* Where the customer's requirements are such that either the removal of regenerative repeaters or the provision of echo suppression cut-off control, or both, are required, a monthly charge of \$23.75 applies for the alternate use.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.4 Voice Grade (VG) Service (Cont'd)

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
(E) <u>Direct Inter-Premises Channel Option</u>		
Available to customers having a minimum of 25 channels between the same two non-adjacent premises.	ICB	ICB
Per channel activated after the initial placement of the facility.	-	\$39.00
(F) <u>Multiple Channel Service Pricing Option</u>		
Provides reduced recurring charges for groups of 24 channels between the same two customer switching or premises locations of the same customer. Rates are determined by applying the factor shown in 3.8.B(6) preceding to the total channel rates.	-	-

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.5 Program Audio Services* (Cont'd)

		Monthly Rate/Cell			
		1	2	3	4
(A)	Local Channel				
	- Per termination				
	- Two-wire	\$120.12	\$252.54	\$355.62	\$428.26
		Monthly Rate	Nonrecurring Charge		
			Initial	Additional	
(B)	Transmission Function				
	- Per termination*				
	<u>Same Wire Center</u>				
	Non-Equalized Service				
	- 200 to 3500 Hz	\$63.92	\$277.15	\$156.61	
	Equalized Service				
	- 100 to 5000 Hz	99.49	446.27	229.74	
	- 50 to 8000 Hz	334.76	446.94	230.02	
	- 50 to 15000 Hz	655.36	478.75	248.47	
	<u>Different Wire Center and Demultiplexed Channels</u>				
	Non-Equalized Service				
	- 200 to 3500 Hz	192.08	705.00	430.00	
	Equalized Service				
	- 100 to 5000 Hz	579.74	950.00	505.00	
	- 50 to 8000 Hz	716.64	950.00	505.00	
	- 50 to 15000 Hz	1,224.46	680.00	341.98	

* As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.5 Program Audio Services* (Cont'd)

		Monthly Rate	
		Fixed	Per Mile
(C)	Channel Mileage Mileage Bands		
	<u>Nonequalized Service</u>		
(1)	<u>200 to 3500 Hz</u>		
	Over 0 to 1 mile	\$31.15	-
	Over 1 to 3 miles	31.15	\$4.85
	Over 3 to 5 miles	31.15	4.85
	Over 5 to 15 miles	31.15	4.85
	Over 15 to 25 miles	31.15	4.85
	Over 25 miles	31.15	4.85
	<u>Equalized Service</u>		
(1)	<u>100 to 5000 Hz</u>		
	Over 0 to 1 mile	34.50	-
	Over 1 to 3 miles	34.50	6.00
	Over 3 to 5 miles	34.50	6.00
	Over 5 to 15 miles	34.50	6.00
	Over 15 to 25 miles	34.50	6.00
	Over 25 miles	34.50	6.00
(2)	<u>50 to 8000 Hz</u>		
	Over 0 to 1 mile	741.78	-
	Over 1 to 3 miles	741.78	129.38
	Over 3 to 5 miles	741.78	129.38
	Over 5 to 15 miles	741.78	129.38
	Over 15 to 25 miles	741.78	129.38
	Over 25 miles	741.78	129.38

* As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

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SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.5 Program Audio Service* (Cont'd)

		<u>Monthly Rate</u>	
		<u>Fixed</u>	<u>Per Mile</u>
(C)	<u>Channel Mileage</u> <u>Mileage Bands</u> (Cont'd)		
	<u>Equalized Service</u> (Cont'd)		
(3)	<u>50 to 15000 Hz</u>		
	Over 0 to 1 mile	\$103.00	-
	Over 1 to 3 miles	103.00	\$17.00
	Over 3 to 5 miles	103.00	17.00
	Over 5 to 15 miles	103.00	17.00
	Over 15 to 25 miles	103.00	17.00
	Over 25 miles	103.00	17.00

(D) Optional Features

(1) Bridging

In addition to all other applicable charges for the channel, the following charges apply for bridging multipoint Program Audio Channels.

	<u>Monthly</u> <u>Rate</u>	<u>Nonrecurring Charge</u>	
		<u>Initial</u>	<u>Additional</u>
At each premises at which the channel terminates	\$290.76	\$75.00	\$45.00

* As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.6 Digital Service

(A) Digital Data(DA)

		<u>Monthly Rate/Cell</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
(1)	<u>Local Channel</u>				
	- Per termination				
	2.4 Kbps	\$359.92	\$432.12	\$576.16	\$720.28
	4.8 Kbps	359.92	432.12	576.16	720.28
	9.6 Kbps	359.92	432.12	576.16	720.28
	56.0 Kbps	720.28	792.26	864.34	1,008.34
		<u>Monthly</u>	<u>Nonrecurring Charge</u>		
		<u>Rate</u>	<u>Initial</u>	<u>Additional</u>	
(2)	<u>Transmission Function</u>				
	- Per termination				
	2.4 Kbps	\$792.26	\$600.00	\$354.25	
	4.8 Kbps	1,224.46	600.00	354.25	
	9.6 Kbps	1,296.52	600.00	354.25	
	56.0 Kbps	1,980.94	600.00	354.25	
(3)	<u>Channel Mileage</u>				
	<u>Mileage Bands</u>	<u>Fixed</u>	<u>Monthly Rate</u>		
			<u>Per mile</u>		
(a)	<u>2.4 Kbps</u>				
	Over 0 to 1 mile	\$359.92		-	
	Over 1 to 3 miles	359.92	\$28.68		
	Over 3 to 5 miles	359.92	28.68		
	Over 5 to 15 miles	359.92	28.68		
	Over 15 to 25 miles	359.92	28.68		
	Over 25 miles	359.92	28.68		

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.6 Digital Service (Cont'd)

(A) Digital Data (DA)(Cont'd)

		<u>Monthly Rate</u>	
		<u>Fixed</u>	<u>Per mile</u>
(3)	<u>Channel Mileage</u> <u>Mileage Bands</u> (Cont'd)		
(b)	<u>4.8 Kbps</u>		
	Over 0 to 1 mile	\$359.92	-
	Over 1 to 3 miles	359.92	\$28.68
	Over 3 to 5 miles	359.92	28.68
	Over 5 to 15 miles	359.92	28.68
	Over 15 to 25 miles	359.92	28.68
	Over 25 miles	359.92	28.68
(c)	<u>9.6 Kbps</u>		
	Over 0 to 1 mile	\$359.92	-
	Over 1 to 3 miles	359.92	\$28.68
	Over 3 to 5 miles	359.92	28.68
	Over 5 to 15 miles	359.92	28.68
	Over 15 to 25 miles	359.92	28.68
	Over 25 miles	359.92	28.68
(d)	<u>56 Kbps</u>		
	Over 0 to 1 mile	\$359.92	-
	Over 1 to 3 miles	359.92	\$28.68
	Over 3 to 5 miles	359.92	28.68
	Over 5 to 15 miles	359.92	28.68
	Over 15 to 25 miles	359.92	28.68
	Over 25 miles	359.92	28.68

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SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.6 Digital Service (Cont'd)

(A) Digital Data (DA) (Cont'd)

(4) Optional Features

(a) Digital Bridging

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
- Multistation Arrangement When Digital Data Service is arranged for multi- station operation, an additional monthly charge applies to each station connected to the multi- station service		
- Per station	\$359.92	\$36.23

<u>Monthly Rate</u>	<u>Nonrecurring Charge</u> <u>Initial Subsequent</u>
-------------------------	---

(b) 1 x N Transfer Arrangement

- This arrangement is only available from a Telephone Company-designated digital hub. A key activated control service is required to operate the transfer arrangement. This control service must be separately ordered.			
- Per Arrangement	ICB	ICB	ICB

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.6 Digital Service (Cont'd)

(A) Digital Data (DA) (Cont'd)

(4) Optional Features (Cont'd)

(c) Secondary Channel (Working in parallel with the following primary channels)

- Per Termination

	<u>Monthly Rate</u>	<u>Nonrecurring Charge (1)</u>
2.4 Kbps	\$215.90	\$400.00
4.8 Kbps	288.00	400.00
9.6 Kbps	359.92	400.00
56 Kbps	432.12	400.00

NOTE:

(1) The nonrecurring charge for a Secondary Channel does not apply if installed at the same time as the associated Digital Data Circuit.

Verizon Pennsylvania LLC

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.7 High Capacity Digital Hand-Off Service¹

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>
(A) <u>High Capacity Digital Hand-Off Service</u>		
1. Dedicated Hand-Off Facility, each.....	\$195.00	\$455.00
2. Multiplexed Hand-Off Facility, each.....	\$490.00	\$455.00
3. PRI Alternative Digital Arrangement	Rates and charges same as those for IntelliLinQ ® PRI 24b arrangement specified in P.U.C.-No. 1, Section 21D.	

¹ Effective November 3, 2012, High Capacity Digital Hand-Off Service is grandfathered and no longer available to new customers. Moves, additions or changes to subscribers' existing service are not permitted. High Capacity Digital Hand-Off Service is still available for resale until February 16, 2013, on which date the foregoing terms shall be effective for resale.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.8 **IntelliMux** Service*

	<u>Monthly Rate</u>	<u>Nonrecurring Charges</u>
(a) Service Establishment		ICB
(b) Database Modification, per occasion		ICB
(c) Telephone Company-Performed Reconfiguration - Each 30-minute increment per occasion		ICB
(d) Ports, per channel		
(1) Voice Grade or DDS Port	ICB	ICB
(2) DS1 Port.....	ICB	ICB

6.9 Statistical Multiplexer Service

	<u>Monthly Rate</u>	<u>Nonrecurring Charges</u>
Statistical Multiplexer per arrangement	ICB	ICB

* **IntelliMux** Service and DDS can only be provided in Hub offices which support both services.

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SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.10 Volume Term Pricing Plans

(A) Plan # 1

	Monthly 2-Year Rate	Monthly 3-Year Rate	Monthly 5-Year Rate
Digital Data 2.4 Kbps Local Channel			
Cell 1	\$24.50	\$23.75	\$22.50
Cell 2	29.40	28.50	27.00
Cell 3	9.20	38.00	36.00
Cell 4	49.00	47.50	45.00
Transmission Function	53.90	52.25	49.50
Fixed Mileage	24.50	23.75	22.50
Per mile	1.90	1.80	1.60
Digital Data 4.8 Kbps Local Channel			
Cell 1	24.50	23.75	22.50
Cell 2	29.40	28.50	27.00
Cell 3	39.20	38.00	36.00
Cell 4	49.00	47.50	45.00
Transmission Function	83.30	80.75	76.50
Fixed Mileage	24.50	23.75	22.50
Per mile	1.90	1.80	1.60
Digital Data 9.6 Kbps Local Channel			
Cell 1	24.50	23.75	22.50
Cell 2	29.40	28.50	27.00
Cell 3	39.20	38.00	36.00
Cell 4	49.00	47.50	45.00
Transmission Function	88.20	85.50	81.00
Fixed Mileage	24.50	22.50	20.00
Per mile	1.90	1.70	1.60

Verizon Pennsylvania Inc.

SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.10 Volume Term Pricing Plans (Cont'd)

(A) Plan # 1 (Cont'd)

	Monthly 2-Year Rate	Monthly 3-Year Rate	Monthly 5-Year Rate
Digital Data 56 Kbps Local Channel			
Cell 1	\$49.00	\$47.50	\$45.00
Cell 2	53.90	52.25	49.50
Cell 3	58.80	57.00	54.00
Cell 4	68.60	66.50	63.00
Transmission Function	134.75	130.63	123.75
Fixed Mileage	24.50	22.50	20.00
Per mile	1.90	1.70	1.60

(B) Plan # 2

Digital Data 2.4 Kbps Local Channel			
Cell 1	23.75	22.50	21.25
Cell 2	28.50	27.00	25.50
Cell 3	38.00	36.00	34.00
Cell 4	47.50	45.00	42.50
Transmission Function	52.25	49.50	46.75
Fixed Mileage	23.75	22.50	21.25
Per mile	1.80	1.70	1.50
Digital Data 4.8 Kbps Local Channel			
Cell 1	23.75	22.50	21.25
Cell 2	28.50	27.00	25.50
Cell 3	38.00	36.00	34.00
Cell 4	47.50	45.00	42.50
Transmission Function	80.75	76.50	72.25
Fixed Mileage	23.75	22.50	21.25
Per mile	1.80	1.70	1.50

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SPECIAL SERVICES

6. Rates and Charges (Cont'd)

6.10 Volume Term Pricing Plans (Cont'd)

(B) Plan # 2 (Cont'd)

	Monthly 2-Year Rate	Monthly 3-Year Rate	Monthly 5-Year Rate
Digital Data 9.6 Kbps Local Channel			
Cell 1	\$23.75	\$22.50	\$21.25
Cell 2	28.50	27.00	25.50
Cell 3	38.00	36.00	34.00
Cell 4	47.50	45.00	42.50
Transmission Function	85.50	81.00	76.50
Fixed Mileage	23.75	21.25	18.75
Per mile	1.80	1.70	1.50
Digital Data 56 Kbps Local Channel			
Cell 1	47.50	45.00	42.50
Cell 2	52.25	49.50	46.75
Cell 3	57.00	54.00	51.00
Cell 4	66.50	63.00	59.50
Transmission Function	130.63	123.75	116.88
Fixed Mileage	23.75	21.25	18.75
Per mile	1.80	1.60	1.50

6.11 Term Pricing Plans

(A) Voice Grade

	Monthly 3-Year Rate	Monthly 5-Year Rate
Fixed Mileage	\$15.20	\$14.40
Per mile	2.38	2.25

Verizon Pennsylvania LLC

SPECIAL SERVICES

7. Abbreviations and Definitions

7.1 Abbreviations

ac	-	alternating current
AML	-	Actual Measured Loss
AP	-	Program Audio*
CO	-	Central Office
Cont'd	-	Continued
CPE	-	Customer Provided Equipment
db	-	decibel
dc	-	direct current
f	-	frequency
F.C.C.	-	Federal Communications Commission
FI	-	Facility Interface
HC	-	High Capacity
Hz	-	Hertz
ICB	-	Individual Case Basis
kbps	-	kilobits per second
kHz	-	kilohertz
LATA	-	Local Access and Transport Area
Ma	-	milliamperes
Mbps	-	Megabits per second
Mcs	-	Microseconds
MHz	-	Megahertz
MTL	-	Maximum Termination Liability
rms	-	root-mean-square
SWC	-	Serving Wire Center
VG	-	Voice Grade
V & H	-	Vertical & Horizontal
1 X N	-	One by number

* As of October 31, 2014, all Program Audio Services are no longer available to new customers. Existing customers may maintain their channels; however, term commitment plans will not be renewed. Moves, Adds or changes to subscribers' existing channels are permissible.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions

Acceptance (Cooperative) Tests

The term "Acceptance (Cooperative) Tests" denotes those nonchargeable tests which are performed by the Telephone Company in cooperation with the customer at the customer's request at the time service is installed.

Attenuation Distortion

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

Baud

Baud denotes a unit of signaling speed. It is the reciprocal of the time duration in seconds of this shortest signal element (mark or space) within a code signal. The speed in bauds is the number of signal elements per second.

Bit

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

Bridging

Bridging defines the transmission equipment, e.g., amplifier equipment, required for the proper operation of multipoint voice grade and digital data channels.

Cell

Designation used to determine the local channel rate applicable for service within a central office serving area.

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.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

Central Office Serving Area

A central office serving area is the geographical area normally served from a single Telephone Company local office switching location having one or several switching units which may be used interchangeably to serve all customers located within the area.

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 voice channels using analog or digital techniques.

C-Message Noise

The term "C-Message Noise" denotes the frequency weighted average noise within an idle voice channel. The frequency weighting, called C-message, is used to simulate the frequency characteristic of the 500-type telephone set and the hearing of the average subscriber.

C-Notched Noise

The term "C-Notched Noise" denotes the C-message frequency weighted noise on a voice channel with a holding tone, which is removed at the measuring end through a notch (very narrow band) filter.

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.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

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 Guide.

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.

Demarcation Point

The electrical terminus of a circuit on a customer's premises. It provides a physical interface to the circuit in terms of design, installation, and/or testing depending on the equipment provided.

Duplex

The term "Duplex" denotes an operation which provides the transmission of communications in both directions simultaneously.

Echo Control

The term "Echo Control" denotes the control of reflected signals in a telephone transmission path.

Echo Path Loss

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

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 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 DECEMBER 1, 1999 Two-Wire

The term "EFFECTIVE DECEMBER 1, 1999 Two-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 DECEMBER 1, 1999 two-wire channels may be terminated with two-wire or four-wire interfaces.

EFFECTIVE DECEMBER 1, 1999 Four-Wire

The term "EFFECTIVE DECEMBER 1, 1999 Four-Wire" denotes a condition which permits the simultaneous independent transmission of information in both directions over a channel. The method of implementing EFFECTIVE DECEMBER 1, 1999 four-wire transmission is at the discretion of the Telephone Company (physical, time domain, frequency-domain separation or echo cancellation techniques). EFFECTIVE DECEMBER 1, 1999 four-wire channels may be terminated with a two-wire interface at the customer's premises. However, when terminated two-wire, simultaneous independent transmission cannot be supported because the two-wire interface combines the transmission paths into a single path.

Envelope Delay Distortion

The term "Envelope Delay Distortion" denotes a measure of the linearity of the phase versus frequency of a channel.

Equal Level Echo Path Loss

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

Equalized

A channel is considered to be equalized when the characteristics of the signal transmitted are preserved at the receiving end.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

Exchange

The term "Exchange" denotes a unit 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.

Facilities

The term "Facilities" denotes any cable, fiber optics, poles, conduit, microwave or carrier equipment, wire center distribution frames, central office switching equipment, etc., utilized to provide intrastate services.

Framing

Establishing a reference so that digital signals within a sequence of time slots can be identified.

Frequency Shift

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

Half Duplex

The term "Half Duplex" denotes the alternate transmitting and receiving of communications one way at a time but not both simultaneously.

Impedance Balance

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

Impulse Noise

The term "Impulse Noise" denotes any momentary occurrence of the noise on a channel over a specified level threshold. It is evaluated by counting the number of occurrences which exceed the threshold.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

Individual Case Basis

The term "Individual Case Basis" (ICB) denotes a condition in which the regulations, if applicable, rates and charges for an offering under the provisions of this Guide 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.

Isochronous

Timing that is derived from the signal carrying the data (i.e., no timing or clock lead is provided at the demarcation point on the customer's premises).

Intermodulation Distortion

The term "Intermodulation Distortion" denotes a measure of the non-linearity of a channel. It is measured using four tones, and evaluating the ratios (in dB) of the transmitted composite four-tone signal power to the second-order products of the tones (R2), and the third-order products of the tones (R3).

Local Access and Transport Area (LATA)

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

Local Channel

A local channel consists of the wiring and facilities required for that portion of the service which extends from the customer's premises to the normal serving wire center.

Loss Deviation

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

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

Maximum Termination Liability

The term "Maximum Termination Liability" denotes the maximum amount which may be billed if all services using specially constructed facilities are terminated prior to the expiration of the Maximum Termination Liability Period.

Maximum Termination Liability Period

The term "Maximum Termination Liability Period" denotes the length of time for which a termination charge may apply if all services using specially constructed facilities are terminated.

Milliwatt (102 Type) Test Line

The term "Milliwatt (102 Type) Test Line" denotes an arrangement in an end office which provides a 1004 Hz tone at 0 dBm0 for one-way transmission measurements towards the customer's premises from the Telephone Company end office.

Multipoint Service

Multipoint service denotes a service which provides common communications capability to more than two customers' premises, or, in the case of data service, to more than two station locations.

Network Interface Device (NID or NI)

The Telephone Company-provided interface terminating the telecommunications network, on the property where the customer's service is located, at a point determined by the Telephone Company. The NID is an FCC Part 68 registered jack from which inside wire may be connected to the regulated Telephone Company network.

Phase Jitter

The term "Phase Jitter" denotes the unwanted phase variations of a signal.

Point of Interface

The term "Point of Interface" denotes a point of demarcation, at the customer's premises, between Telephone Company-provided and customer-provided services.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

Protector

A device designed for the grounding of network facilities to protect against hazardous voltages and harm to the network. The protector, which is part of the Telephone Company's network, is installed and maintained by the Telephone Company. It shall not be accessed, modified or disturbed in any way by the building owner, property owner or customer.

Rate Demarcation Point (RDP or DEMARC)

The point where network access recurring charges and Telephone Company responsibility stop and beyond which customer responsibility begins.

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.

Secondary Rate Demarcation Point (SRDP)

An additional Rate Demarcation Point resulting from a specific customer request, or the initiation of the Telephone Company. Construction of an SRDP will be considered a Special Assembly.

Service Terminating Arrangement

The term "Service Terminating Arrangement" denotes equipment furnished by the Telephone Company which is utilized for the termination of Telephone Company provided Special Service. Such "Service Terminating Arrangement" provides a clearly delineated interface which facilitates the design, isolation, and testing of the Special Service where the service is connected with customer's communications systems.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

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, plug-in equipment, etc., necessary to provide the service requested by the customer.

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.

Termination Charge

The term "Termination Charge" denotes the portion of the Maximum Termination Liability that is applied as a nonrecurring charge when all services are discontinued prior to the expiration of the specified liability period.

Transmission Function

The term denotes the equipment necessary for testing and to adapt a circuit to the station interface requirements and bring transmission characteristics into objective range. A transmission function is not necessarily identifiable with specific equipment, but rather is defined in terms of performance characteristics. These characteristics may be obtained by using various combinations of equipment.

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.

Verizon Pennsylvania Inc.

SPECIAL SERVICES

7. Abbreviations and Definitions (Cont'd)

7.2 Definitions (Cont'd)

Transmission Path

The term "Transmission Path" denotes an electrical path capable of transmitting signals within the range of the 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.

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).

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.

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.