

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(8) Voice Grade 8 (VG8) (Cont'd)(i) Intermodulation Distortion

The intermodulation distortion based upon the four-tone method shall be such that R2 is not less than 45 dB and R3 not less than 48 dB.

(j) Phase Jitter

The phase jitter over 20-300 Hz shall not exceed 4° peak-to-peak and over 4-300 Hz shall not exceed 9° peak-to-peak.

(k) Frequency Shift

The frequency shift shall not exceed  $\pm 1$  Hz.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(9) Voice Grade 9 (VG9)(a) C-Message Noise

The C-Message Noise shall be less than:

<u>Route Miles</u>	<u>Limit (dBmCO) *</u>	
	<u>Type V1</u>	<u>Type V2</u>
0 - 50	32	38
51 - 100	33	39
101 - 200	35	41
201 - 400	37	43
401 - 1000	39	45

(b) Improved Return Loss

The Return Loss (RL), expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), on two-wire ports of a four-wire point of interface shall be equal to or greater than:

<u>Standard RL</u>	<u>Improved RL</u>
ERL 5 dB	ERL 20 dB
SRL 2.5 dB	SRL 13.5 dB

(c) Loss Variation

The long term loss variation from the nominal 1004 Hz EML shall not exceed  $\pm 1.5$  dB.

- \* Where Facility network conditions will support the parameters, Type V1 will be provided. Where the Type V1 parameters cannot be supported, Type V2 will be provided.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(9) Voice Grade 9 (VG9) (Cont'd)(d) Attenuation Distortion

The Attenuation Distortion between 404 Hz and 2804 Hz shall be within -1.0 dB and +2.0 dB with reference to the loss at 1004 Hz (minus equals less loss, plus equals more loss). The Attenuation Distortion between 304 Hz and 3004 Hz shall be within -3.0 dB and +12.0 dB.

(e) Signal-to-C-Notched Noise

The Signal-to-C-Notched Noise Ratio shall not be less than 34 dB.

(f) Envelope Delay Distortion

The Envelope Delay Distortion (EDD) shall not exceed 700 microseconds between 800 and 2600 Hz.

(g) Impulse Noise

The number of impulse noise counts exceeding a threshold of 67 dBmCO in 15 minutes shall be less than 15.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(9) Voice Grade 9 (VG9) (Cont'd)(h) Intermodulation Distortion

The intermodulation distortion based upon the four-tone method shall be such that R2 is not less than 50 dB and R3 not less than 54 dB.

(i) Phase Jitter

The phase jitter over 20-300 Hz shall not exceed 3° peak-to-peak and over 4-300 Hz shall not exceed 8° peak-to-peak.

(j) Frequency Shift

The frequency shift shall not exceed  $\pm 1$  Hz.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(10) Voice Grade 10 (VG10)(a) C-Message Noise

The C-Message Noise shall be less than:

<u>Route Miles</u>	<u>Limit (dBmCO) *</u>	
	<u>Type V1</u>	<u>Type V2</u>
0 - 50	32	38
51 - 100	33	39
101 - 200	35	41
201 - 400	37	43
401 - 1000	39	45

(b) Improved Return Loss

The Return Loss (RL), expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), on two-wire ports of a four-wire point of interface shall be equal to or greater than:

<u>Standard RL</u>	<u>Improved RL</u>
ERL 5 dB	ERL 20 dB
SRL 2.5 dB	SRL 13.5 dB

(c) Loss Variation

The long term loss variation from the nominal 1004 Hz EML shall not exceed  $\pm 4$  dB.

\* Where Facility network conditions will support the parameters, Type V1 will be provided. Where the Type V1 parameters cannot be supported, Type V2 will be provided.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(10) Voice Grade 10 (VG10) (Cont'd)(d) Attenuation Distortion

The Attenuation Distortion between 404 Hz and 2804 Hz shall be within -2.0 dB and +10.0 dB with reference to the loss at 1004 Hz (minus equals less loss, plus equals more loss). The Attenuation Distortion between 504 Hz and 2504 Hz shall be within -2.0 dB and +8.0 dB with reference to the loss at 1004 Hz. The Attenuation Distortion between 304 Hz and 3004 Hz shall be within -3.0 dB and +12.0 dB.

(e) Signal-to-C-Notched Noise

The Signal-to-C-Notched Noise Ratio shall not be less than 24 dB.

(f) Envelope Delay Distortion

The Envelope Delay Distortion (EDD) shall not exceed 1750 microseconds between 800 and 2600 Hz.

(g) Impulse Noise

The number of impulse noise counts exceeding a threshold of 71 dBmCO is 15 minutes shall be less than 15.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(B) Voice Grade Services (Cont'd)(10) Voice Grade 10 (VG10) (Cont'd)(h) Intermodulation Distortion

The intermodulation distortion based upon the four-tone method shall be such that R2 is not less than 27 dB and R3 not less than 32 dB.

(i) Phase Jitter

The phase jitter over 20-300 Hz shall not exceed 10° peak-to-peak and over 4-300 Hz shall not exceed 15° peak-to-peak.

(j) Frequency Shift

The frequency shift shall not exceed  $\pm 3$  Hz.

(11) Voice Grade 11 (VG11)

Reserved For Future Use.

(12) Voice Grade 12 (VG12)

Reserved For Future Use.

(13) Voice Grade 13 (VG13)

Reserved For Future Use.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services(1) Program Audio 1 (AP1)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 10 dB. With the addition of optional gain conditioning, the initial AML will be  $0 \pm 0.5$  dB. Remedial action will be taken when the loss variation at 1004 Hz exceeds the initial AML by  $\pm 4.0$  dB.

(b) Gain/Frequency Distortion

Over the frequency band from 200 to 3500 Hz, the gain at any frequency will be within the range from +3.0 dB to -10.0 dB with respect to the gain 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The ratio of received 1004 Hz signal power to the C-message weighted idle circuit noise will be at least 65 dB. The received signal power level is determined by subtracting the channel AML from +18 dBm (the instantaneous peak signal level).



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(2) Program Audio 2 (AP2)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 32 dB. With the addition of optional gain conditioning, the initial AML will be  $0 \pm 0.5$  dB. Remedial action will be taken when the loss variation at 1004 Hz exceeds the initial AML by  $\pm 4.0$  dB.

(b) Gain/Frequency Distortion

Over the frequency band from 100 to 5000 Hz, the gain at any frequency will be 1.0 dB of the gain at 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The ratio of received 1004 Hz signal power to the 15 kHz flat weighted idle circuit noise will be at least 64 dB. The received signal power level is determined by subtracting the channel AML from +18 dBm (the instantaneous peak signal level).

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(3) Program Audio 3 (AP3)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 32 dB. With the addition of optional gain conditioning, the initial AML will be  $0 \pm 0.5$  dB. Remedial action will be taken when the loss variation at 1004 Hz exceeds the initial AML by  $\pm 4.0$  dB.

(b) Gain/Frequency Distortion

Over the frequency band from 50 to 8000 Hz, the gain at any frequency will be 1.0 dB of the gain at 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The ratio of received 1004 Hz signal power to the 15 kHz flat weighted idle circuit noise will be at least 62 dB. The received signal power level is determined by subtracting the channel AML from +18 dBm (the instantaneous peak signal level).

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(4) Program Audio 4 (AP4)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 32 dB. With the addition of optional gain conditioning, the initial AML will be  $0 \pm 0.5$  dB. Remedial action will be taken when the loss variation at 1004 Hz exceeds the initial AML by  $0 \pm 4.0$  dB.

(b) Gain/Frequency Distortion

Over the frequency band from 50 to 15000 Hz, the gain at any frequency will be 1.0 dB of the gain 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The ratio of received 1004 Hz signal power to the 15 kHz flat weighted idle circuit noise will be at least 67 dB. The received signal power level is determined by subtracting the channel AML from +18 dBm (the instantaneous peak signal level).

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(5) Program Audio 5 (AP5)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 12 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

For intraexchange channel, the gain at any frequency in the band 200-3000 Hz will be within 1 dB of the gain at 1004 Hz. For interexchange channels, the gain at any frequency will be within 3 dB of the gain at 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The C-message weighted idle circuit noise will be at least 54 dB below the received power of a 0 dBm 1004 Hz tone transmitted at the far end.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(6) Program Audio 6 (AP6)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 32 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

For intraexchange channel, the gain at any frequency in the band 100-5000 Hz will be within 1 dB of the gain at 1004 Hz. For interexchange channels, the gain at any frequency will be within 3 dB of the gain at 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The 15KC flat weighted circuit noise will be at least 54 dB below the received power of a 0 dBm 1004 Hz test tone transmitted at the far end. For interexchange channels, the noise will be at least 49 dB below the test tone level when T-digital carrier is used or 35 dB below when analog carrier is used.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(7) Program Audio 7 (AP7)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 32 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

For intraexchange channel, the gain at any frequency in the band 50-8000 Hz will be within 1 dB of the gain at 1004 Hz. For interexchange channels, the gain at any frequency will be within 3 dB of the gain at 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The 15KC flat weighted circuit noise will be at least 54 dB below the received power of a 0 dBm 1004 Hz test tone transmitted at the far end. For interexchange channels, the noise will be at least 49 dB below the test tone level when T-digital carrier is used or 35 dB below when analog carrier is used.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(8) Program Audio 8 (AP8)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 32 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

The gain at any frequency in the band from 50 Hz to 15000 Hz will be within 1 dB of the gain at 1004 Hz.

(c) Signal-to-Idle Circuit Noise

The 15KC flat weighted idle circuit noise will be at least 54 dB below the received power of a 0 dBrn 1004 Hz test tone transmitted at the far end.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(9) Program Audio 9 (AP9)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 14 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

The gain at any frequency in the band of 200-3000 Hz shall be within 4 dB of 1004 Hz loss.

(c) Signal-to-Idle Circuit Noise

The C-message weighted idle circuit noise will be less than 34 dBrn.



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(10) Program Audio 10 (AP10)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 14 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

The gain at any frequency in the band of 100-5000 Hz shall be within 4 dB of 1004 Hz loss.

(c) Signal-to-Idle Circuit Noise

The C-message weighted idle circuit noise will be less than 34 dBm.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(C) Program Audio Services (Cont'd)(11) Program Audio 11 (AP11)(a) Actual Measured Loss (AML)

When the service is initiated, the 1004 Hz AML will be less than 14 dB or with the optional gain will be  $0 \pm 0.5$  dB.

(b) Gain/Frequency Distortion

The gain at any frequency in the band of 50-8000 Hz shall be within 9 dB of 1004 Hz loss.

(c) Signal-to-Idle Circuit Noise

The C-message weighted idle circuit noise will be at less than 34 dBm.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(D) Wideband Analog Services(1) Wideband Analog (WA1)- Nominal Bandwidth

60 kHz to 108 kHz with pilot slot reserved at 104.08 kHz.

(2) Wideband Analog (WA2)- Nominal Bandwidth

312 kHz to 552 kHz with pilot slot reserved at 315.92 kHz.

(3) Wideband Analog to Digital (WA1T)- Transmission Performance

Provides two Special Access WA1 channels each with the performance shown for WA1 in (1) preceding.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(E) WATS Access Line Services(1) Standard Transmission Performance(a) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is  $\pm 4.0$  dB.

(b) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -3.0 dB to +9.0 dB.

(c) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than:

<u>Route Miles</u>	<u>C-Message Noise</u>
less than 50	35 dBmCO
51 to 100	37 dBmCO
101 to 200	40 dBmCO
201 to 400	43 dBmCO
401 to 1000	45 dBmCO

(d) Echo Path Loss

When provided in association with a two-wire interface, the Echo Path Loss, expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is equal to or greater than:

ERL	6.0 dB
SRL	3.0 dB

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(E) WATS Access Line Services (Cont'd)(2) Data Transmission Parameters(a) Signal-to-C-Notched Noise

The minimum Signal-to-C-Notched Noise Ratio is 30 dB.

(b) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands specified is:

1000 microseconds	604 to 2804 Hz
500 microseconds	1000 to 2404 Hz

(c) Impulse Noise Counts

The Impulse Noise Counts exceeding a 67 dB<sub>BrnCO</sub> threshold in 15 minutes is no more than 15 counts.

(d) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2)	31 dB
Third Order (R3)	34 dB

(e) Phase Jitter

The Phase Jitter over the 4 to 300 Hz frequency band is less than or equal to 7° peak-to-peak.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(E) WATS Access Line Services (Cont'd)(2) Data Transmission Parameters (Cont'd)(f) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

(3) Two-Wire Improved Voice Transmission Performance(a) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is -4.0 dB to +4.0 dB.

(b) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +6.0 dB.

(c) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than:

<u>Route Miles</u>	<u>C-Message Noise</u>
less than 50	35 dBrnCO
51 to 100	37 dBrnCO
101 to 200	40 dBrnCO
201 to 400	43 dBrnCO
401 to 1000	45 dBrnCO

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(E) WATS Access Line Services (Cont'd)(3) Two-Wire Improved Voice Transmission Performance (Cont'd)(d) Return Loss

The Return Loss, expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is equal to or greater than:

ERL	13.0 dB
SRL	6.0 dB

(4) Four-Wire Improved Voice Transmission Performance(a) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is -4.0 dB to +4.0 dB.

(b) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +6.0 dB.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(E) WATS Access Line Services (Cont'd)(4) Four-Wire Improved Voice Transmission Performance (Cont'd)(c) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than:

<u>Route Miles</u>	<u>C-Message Noise</u>
less than 50	35 dBrnC0
51 to 100	37 dBrnC0
101 to 200	40 dBrnC0
201 to 400	43 dBrnC0
401 to 1000	45 dBrnC0

(d) Echo Path Loss

The Echo Path Loss, expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is equal to or greater than:

ERL	16.0 dB
SRL	11.0 dB



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(F) Wideband Digital Services(1) Wideband Digital (WD1)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 98.75%.

(2) Wideband Digital (WD2)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 98.75%.

(3) Wideband Digital (WD3)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 98.75%.

(4) Wideband Digital (WD4)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 98.75%.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(G) Digital Data Access Services(1) Digital Data Access 1 (DA1)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 99.875%.

(2) Digital Data Access 2 (DA2)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 99.875%.

(3) Digital Data Access 3 (DA3)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 99.875%.

(4) Digital Data Access 4 (DA4)- Error-Free Seconds

While in service, the monthly average of the error-free seconds will be equal to or greater than 99.875%.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Transmission Performance (Cont'd)(H) High Capacity Services(1) High Capacity 1 (HC1)- Error-Free Seconds

While in service, 98.75% of the one-second intervals will be error-free measured over a continuous 24 hour period.

(2) High Capacity 2 (HC2)

Reserved For Future Use.

(3) High Capacity 3 (HC3)

Reserved For Future Use.

(4) High Capacity 4 (HC4)

Reserved For Future Use.

(5) High Capacity 1C (HC1C)

Reserved For Future Use.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Service Designator/Network Channel Code Conversion Table

The following table shows the relationship between the service designator codes (i.e. VG1, NB2, etc.) and the network channel codes that are used for various administrative purposes.

<u>Service Designator Code</u>	<u>Network Channel Code</u>
NB1	NT
NB2	NU
NB4	NW
NB5	NY
NB6	TS
NB7	TT
VG1	LB
VG2	LC
VG3	LD
VG5	LF
VG6	LG
VG7	LH
VG8	LJ
VG9	LK
VG10	LN
AP1	PE
AP2	PF
AP3	PJ
AP4	PK
AP5	MT
AP6	MT
AP7	MT
AP8	MT
AP9	MT
AP10	MT
AP11	MT
WA1	WJ
WA1T	WQ
WA2	WL

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Service Designator/Network Channel Code Conversion Table (Cont'd)

<u>Service Designator Code</u>	<u>Network Channel Code</u>
WALS (Standard)	SE
WALS (Improved)	SF
WD1	WB
WD2	WE
WD3	WF
WD4	WH
DA1	XA
DA2	XB
DA3	XG
DA4	XH
SR1	RB
SR2	RC
SR3	RD
HC1	HC
HC1C	HD
HC2	HE
HC3	HF
HC4	HG

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes

This section explains the facility interface codes set forth in Section 15.2.4 following that the IC can specify when ordering Special Access Service. Included is an example which explains the specific characters of the code, a glossary of facility interface codes and impedance levels.

Example: If the IC specifies a 2DC8-3 facility interface at the IC terminal location, it is requesting the following:

2 =	Number of physical wires at IC terminal location
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)

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(A) Glossary of Facility Interface Codes and Options

<u>Code</u>	<u>Option</u>	<u>Definition</u>
AB	-	accepts 20 Hz ringing signal at IC point of interface
AC	-	accepts 20 Hz ringing signal at end user network interface
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)
DA	-	data stream in VF frequency band at end user network interface
DB	-	data stream in VF frequency band at IC point of interface location
	- 10	VF for NB4 and NB5
	- 43	VF for 43 Telegraph Carrier type signals, NB4 and NB5
DC	-	direct current or voltage
	- 1	monitoring interface with series RC combination (McCulloh format)
	- 2	Telephone Company energized alarm channel
	- 3	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)
DD	-	DATAPHONE Select-A-Station (and TABS) interface at IC point of interface
DE	-	DATAPHONE Select-A-Station (and TABS) interface at the end user NI
DO	-	digital interface at IC terminal at the digital signal level zero A (DS-OA)

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(A) Glossary of Facility Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
DS	-	digital hierarchy interface
	- 15	1.544 Mbps (DS1) format per PUB 41451 plus D4
	- 15E	8-bit PCM encoded in one 64 kbps of the DS1 signal
	- 15F	8-bit PCM encoded in two 64 kbps of the DS1 signal
	- 15G	8-bit PCM encoded in three 64 kbps of the DS1 signal
	- 15H	14/11-bit PCM encoded in six 64 kbps of the DS1 signal
	- 15J	1.544 Mbps format per PUB 41451
	- 15K	1.544 Mbps format per PUB 41451 plus extended framing format
	- 15L	1.544 Mbps (DS1) with SF signaling
	- 27	274.176 Mbps (DS4)
	- 27L	274.176 Mbps (DS4) with SF signaling
	- 31	3.152 Mbps (DS1C)
	- 31L	3.152 Mbps (DS1C) with SF signaling
	- 44	44.736 Mbps (DS3)
	- 44L	44.736 Mbps (DS3) with SF signaling
	- 63	6.312 Mbps (DS2)
	- 63L	6.312 Mbps (DS2) with SF signaling
DU	-	digital access interface
	- 24	2.4 kbps
	- 48	4.8 kbps
	- 56	56.0 kbps
	- 96	9.6 kbps
	- A	1.544 Mbps format per PUB 41451
	- B	1.544 Mbps format per PUB 41451 plus D4
	- C	1.544 Mbps format per PUB 41451 plus extended framing format



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(A) Glossary of Facility Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
DX	-	duplex signaling interface at IC POI
DY	-	duplex signaling interface at end user NI
EA	- E	Type I E&M Lead Signaling. IC at POI or end user at NI originates on E Lead.
EA	- M	Type I E&M Lead Signaling. IC at POI or end user at NI originates on M Lead.
EB	- E	Type II E&M Lead Signaling. IC at POI or end user at NI originates on E Lead.
EB	- M	Type II E&M Lead Signaling. IC at POI or end user at NI originates on M Lead.
EC	-	Type III E&M Signaling at IC terminal POI tandem
EX	- A	channel unit signaling for loop start or ground start and IC supplies open end (dial tone, etc.) functions
EX	- B	tandem channel unit signaling for loop start or ground start and IC supplies closed end (dial pulsing, etc.) functions
GO	-	ground start loop signaling - open end function by IC or end user
GS	-	ground start loop signaling - closed end function by IC or end user
IA	-	E.I.A. (25 pin RS-232)
LA	-	end user loop start loop signaling - Type A OPS registered port open end
LB	-	end user loop start loop signaling - Type B OPS registered port open end

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(A) Glossary of Facility Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
LC	-	end user loop start loop signaling - Type C OPS registered port open end
LO	-	loop start loop signaling - open end function by IC or end user
LR	-	20 Hz automatic ringdown interface at IC with Telephone Company provided PLAR
LS	-	loop start loop signaling - closed end function by IC or end user
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 IC
	- T	reverse battery signaling, one-way operation, terminate by IC or end user
SF	-	single frequency signaling with VF band at either IC POI or end user NI
TF	-	telephotograph interface
TT	-	telegraph/teletypewriter interface at either IC POI or end user NI
	- 2	20.0 milliamperes
	- 3	3.0 milliamperes
	- 6	62.5 milliamperes

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(A) Glossary of Facility Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
WA -		wideband bandwidth interface at end user NI
-	1	limited bandwidth
-	2	nominal passband from 29000 to 44000 Hz
WB -		wideband data interface at IC POI
-	18S	18.75 kbps, synchronous
-	19A	up to 19.2 kbps asynchronous
-	19S	19.2 kbps synchronous
-	23A	up to 230.4 kbps, asynchronous
-	23S	230.4 kbps, synchronous
-	40S	40.8 kbps, synchronous
-	50A	up to 50.0 kbps, asynchronous
-	50S	50.0 kbps, synchronous
-	64	64.0 kbps, restored polar
WC -		wideband data interface at end user NI
-	18	18.75 kbps, synchronous
-	19	for 12-wire interface: 19.1 kbps, synchronous for 10-wire interface: up to 19.2 kbps, asynchronous
-	23	up to 230.4 kbps, asynchronous
-	23S	230.4 kbps, synchronous
-	40	40.8 kbps, synchronous
-	50	for 12-wire interface: 50.0 kbps, synchronous for 10-wire interface: up to 50.0 kbps, asynchronous
WD -		wideband bandwidth interface at IC POI
-	1	nominal passband from 300 to 18000 Hz
-	2	nominal passband from 28000 to 44000 Hz
-	3	nominal passband from 29000 to 44000 Hz

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(B) Impedance

The nominal reference impedance with which the IC or end user will terminate the channel for the purpose of evaluation transmission performance:

<u>Value (ohms)</u>	<u>Code(s)</u>
110	0
150	1
600	2
900	3 *
1200	4
135	5
75	6
124	7
Variable	8
100	9

- \* For those interface codes with a four-wire transmission path at the POI at the IC's terminal location, rather than a standard 900 ohm impedance the code (3) denotes an IC provided transmission equipment termination. Such terminations were provided to ICs in accordance with the F.C.C. Docket No. 20099 Settlement Agreement.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.3 Facility Interface Codes (Cont'd)(C) Digital Hierarchy Facility Interface Codes (4DS9-)

This facility interface is available only to ICs that select the multiplexed four-wire DSX-1 or higher facility interface option at the IC terminal location and provide subsequent system and channel assignment data. The various digital bit rates in the digital hierarchy employ the facility interface code 4DS9 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
4DS9-31	3.152	DS1C
4DS9-31L	3.152	DS1C
4DS0-63	6.312	DS2
4DS0-63L	6.312	DS2
4DS6-44	44.736	DS3
4DS6-44L	44.736	DS3
4DS6-27	274.176	DS4
4DS6-27L	274.176	DS4

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations

This section identifies the available Facility Interface (FI) Combinations for Special Access Services described in Sections 7.4 through 7.11 preceding.

(A) Narrowband Services

The following table shows the available Facility Interface (FI) Combinations and the Narrowband Services with which they may be ordered.

<u>FI Combinations</u>		<u>Narrowband NB-</u>						
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
2DC8-3	2DC8-3	X						
2DC8-2	2DC8-1		X					
2DC8-1	2DC8-2		X					
4DS9- {1}	2DC8-1		X					
4DS9- {1}	2DC8-2		X					
4AH6-D {2}	2DC8-2		X					
4AH5-B {2}	2DC8-1		X					
4AH5-B {2}	2DC8-2		X					
4AH6-C {2}	2DC8-2		X					
4AH6-D {2}	2DC8-1		X					
4AH6-C {2}	2DC8-1		X					
2TT2-2	2TT2-2			X				
2TT2-3	2TT2-2			X				
4TT2-2	4TT2-2			X				
2TT2-6	4TT2-2			X				
4TT2-6	2TT2-6			X				

{1} See Section 15.2.3(C) for explanation.

{2} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(A) Narrowband Services (Cont'd)

<u>FI Combinations</u>		<u>Narrowband NB-</u>						
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
2DB2-10	2TT2-2			X				
2DB2-43 {3}	2TT2-2			X				
4DB2-10	2TT2-2			X				
4DB2-43 {3}	2TT2-2			X				
2DB2-10	4TT2-2			X				
2DB2-43 {3}	4TT2-2			X				
4DB2-10	4TT2-2			X				
4DB2-43 {3}	4TT2-2			X				
2DB2-43 {3}	2TT2-6			X				
4DB2-43 {3}	2TT2-6			X				
4DS9- {1}	2TT2-2			X				
2DS9- {1}	4TT2-2			X				
4DS9- {1}	2TT2-6			X				
4DS9- {1}	4TT2-6			X				
4AH5-B {2}	2TT2-2			X				
4AH5-B {2}	4TT2-2			X				
4AH5-B {2}	2TT2-6			X				
4AH5-B {2}	4TT2-6			X				
4AH6-C {2}	2TT2-2			X				
4AH6-C {2}	4TT2-2			X				
4AH6-C {2}	2TT2-6			X				
4AH6-C {2}	4TT2-6			X				

{1} See Section 15.2.3(C) for explanation.

{2} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

{3} Supplemental Channel Assignment information required.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(A) Narrowband Services (Cont'd)

<u>FI Combinations</u>		<u>Narrowband NB-</u>						
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
4AH6-D {2}	2TT2-2			X				
4AH6-D {2}	4TT2-2			X				
4AH6-D {2}	2TT2-6			X				
4AH6-D {2}	4TT2-6			X				
2DB2-10	10IA2				X			
4DB2-10	10IA2				X			
2DB2-43 {3}	10IA2				X			
4DB2-43 {3}	10IA2				X			
4DS9- {1}	10IA2				X			
4AH5-B {2}	10IA2				X			
4AH6-C {2}	10IA2				X			
4AH6-D {2}	10IA2				X			
2TT2	4TT2					X		
2TT2	2TT2					X		
4TT2	4TT2					X		
10IA2	10IA2						X	

{1} See Section 15.2.3(C) for explanation.

{2} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

{3} Supplemental Channel Assignment information required.



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services

The following table shows the available Facility Interface (FI) Combinations and the Voice Grade Services with which they may be ordered.

FI Combinations		Voice Grade VG-									
IC	End User	1	2	3	5	6	7	8	9	10	
4AB2	4AC2		X								
4AB3	4AC2		X								
4AB2	2AC2		X								
4AB3	2AC2		X								
2AB2	2AC2		X								
2AB3	2AC2		X								
4AB2	4SF2		X								
4AB3	4SF2		X								
4AH6-D {1}	4AC2		X								
4AH6-D {1}	2AC2		X								
4AHC-C {1}	4AC2		X								
4AH6-C {1}	2AC2		X								
4AH5-B {1}	4AC2		X								
4AH5-B {1}	2AC2		X								
4AH6-D {1}	6DA2					X				X	
4AH6-C {1}	6DA2					X				X	
4AH5-B {1}	6DA2					X				X	
4AH6-D {1}	4DE2				X						
4AH6-C {1}	4DE2				X						
4AH5-B {1}	4DE2				X						

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4AH6-D {1}	4DX3								X		
4AH6-C {1}	4DX3								X		
4AH5-B {1}	4DX3								X		
4AH5-D {1}	4DX2								X		
4AH6-C {1}	4DX2								X		
4AH5-B {1}	4DX2								X		
4AH6-D {1}	9DY2			X			X	X			
4AH6-D {1}	9DY3			X			X	X			
4AH6-D {1}	6DY2			X			X	X			
4AH6-D {1}	6DY3			X			X	X			
4AH6-D {1}	4DY2			X			X	X			
4AH6-D {1}	2DY2			X			X	X			
4AH6-C {1}	9DY2			X			X	X			
4AH6-C {1}	9DY3			X			X	X			
4AH6-C {1}	6DY2			X			X	X			
4AH6-C {1}	6DY3			X			X	X			
4AH6-C {1}	4DY2			X			X	X			
4AH6-C {1}	2DY2			X			X	X			
4AH5-B {1}	9DY2			X			X	X			
4AH5-B {1}	9DY3			X			X	X			
4AH5-B {1}	6DY2			X			X	X			
4AH5-B {1}	6DY3			X			X	X			
4AH5-B {1}	4DY2			X			X	X			
4AH5-B {1}	2DY2			X			X	X			

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4AH6-D {1}	9EA2			X			X	X			
4AH6-D {1}	9EA3			X			X	X			
4AH6-D {1}	6EA2-E			X			X	X			
4AH6-D {1}	6EA2-M			X			X	X	X		
4AH6-D {1}	4EA2-E			X			X	X			
4AH6-D {1}	4EA2-M			X			X	X			
4AH6-C {1}	9EA2			X			X	X			
4AH6-C {1}	9EA3			X			X	X			
4AH6-C {1}	6EA2-E			X			X	X			
4AH6-C {1}	6EA2-M			X			X	X	X		
4AH6-C {1}	4EA2-E			X			X	X			
4AH6-C {1}	4EA2-M			X			X	X			
4AH5-B {1}	9EA2			X			X	X			
4AH5-B {1}	9EA3			X			X	X			
4AH5-B {1}	6EA2-E			X			X	X			
4AH5-B {1}	6EA2-M			X			X	X	X		
4AH5-B {1}	4EA2-E			X			X	X			
4AH5-B {1}	4EA2-M			X			X	X			
4AH6-D {1}	8EB2-E			X			X	X			
4AH6-D {1}	8EB2-M			X			X	X	X		
4AH6-D {1}	6EB2-E			X			X	X			
4AH6-D {1}	6EB2-M			X			X	X			
4AH6-C {1}	8EB2-E			X			X	X			
4AH6-C {1}	8EB2-M			X			X	X	X		

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4AH6-C {1}	6EB2-E			X			X	X			
4AH6-C {1}	6EB2-M			X			X	X			
4AH5-B {1}	8EB2-E			X			X	X			
4AH5-B {1}	8EB2-M			X			X	X	X		
4AH5-B {1}	6EB2-E			X			X	X			
4AH5-B {1}	6EB2-M			X			X	X			
4AH6-D {1}	2G02	X									
4AH6-C {1}	2G02	X									
4AH5-B {1}	2G02	X									
4AH6-D {1}	6GS2			X			X				
4AH6-D {1}	4GS2			X			X				
4AH6-D {1}	2GS3			X			X				
4AH6-D {1}	2GS2	X		X			X				
4AH6-C {1}	6GS2			X			X				

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel Assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4AH6-C {1}	4GS2			X			X				
4AH6-C {1}	2GS3			X			X				
4AH6-C {1}	2GS2	X		X			X				
4AH5-B {1}	6GS2			X			X				
4AH5-B {1}	4GS2			X			X				
4AH5-B {1}	2GS3			X			X				
4AH5-B {1}	2GS2	X		X			X				
4AH6-D {1}	2LA2		X				X				
4AH6-C {1}	2LA2		X				X				
4AH5-B {1}	2LA2		X				X				
4AH6-D {1}	2LB2		X				X				
4AH6-C {1}	2LB2		X				X				
4AH5-B {1}	2LB2		X				X				
4AH6-D {1}	2LC2		X				X				
4AH6-C {1}	2LC2		X				X				
4AH5-B {1}	2LC2		X				X				
4AH6-D {1}	2LO3		X				X				
4AH6-D {1}	2LO2	X									
4AH6-C {1}	2LO3		X				X				
4AH6-C {1}	2LO2	X									
4AH5-B {1}	2LO3		X				X				
4AH5-B {1}	2LO2	X									

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel Assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4AH6-D {1}	4LR2		X								
4AH6-D {1}	2LR2		X								
4AH6-C {1}	4LR2		X								
4AH6-C {1}	2LR2		X								
4AH5-B {1}	4LR2		X								
4AH5-B {1}	2LR2		X								
4AH6-D {1}	6LS2		X	X			X				
4AH6-D {1}	4LS2		X	X			X				
4AH6-D {1}	2LS2	X	X	X			X	X			
4AH6-D {1}	2LS3		X	X			X				
4AH6-C {1}	6LS2		X	X			X				
4AH6-C {1}	4LS2		X	X			X				
4AH6-C {1}	2LS2	X	X	X			X	X			
4AH6-C {1}	2LS3		X	X			X				
4AH5-B {1}	6LS2		X	X			X				
4AH5-B {1}	4LS2		X	X			X				
4AH5-B {1}	2LS2	X	X	X			X	X			
4AH5-B {1}	2LS3		X	X			X				
4AH6-D {1}	4NO2	X	X		X	X	X		X		
4AH6-D {1}	2NO2	X	X		X		X				
4AH6-C {1}	4NO2	X	X		X	X	X		X		
4AH6-C {1}	2NO2	X	X		X		X				
4AH5-B {1}	4NO2	X	X		X	X	X		X		
4AH5-B {1}	2NO2	X	X		X		X				

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel Assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4AH6-D {1}	4RV2-T			X			X				
4AH6-D {1}	2RV2-T			X			X				
4AH6-C {1}	4RV2-T			X			X				
4AH6-C {1}	2RV2-T			X			X				
4AH5-B {1}	4RV2-T			X			X				
4AH5-B {1}	2RV2-T			X			X				
4AH6-D {1}	4SF2		X	X			X	X	X		
4AH6-C {1}	4SF2		X	X			X	X	X		
4AH5-B {1}	4SF2								X		
4AH6-D {1}	4SF3								X		
4AH6-C {1}	4SF3								X		
4AH5-B {1}	4SF3								X		
6DA2 {1}	6DA2									X	
6DA2 {1}	4DA2									X	
4DA2 {1}	6DA2									X	
4DA2 {1}	4DA2									X	
4DB2 {1}	6DA2						X			X	
4DB2 {1}	4NO2					X					
4DD3 {1}	4DE2				X						
2DD3 {1}	2DE2				X						

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel Assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	1	2	3	5	6	7	8	9	10	
4DS9- {1}	4AC2		X								
4DS9- {1}	2AC2		X								
4DS9- {1}	6DA2					X				X	
4DS9- {1}	4DE2				X						
4DS9- {1}	4DX3								X		
4DS9- {1}	4DX2								X		
4DS9- {1}	9DY3			X			X	X			
4DS9- {1}	9DY2			X			X	X			
4DS9- {1}	6DY3			X			X	X			
4DS9- {1}	6DY2			X			X	X			
4DS9- {1}	4DY2			X			X	X			
4DS9- {1}	2DY2			X			X	X			
4DS9- {1}	9EA2			X			X	X			
4DS9- {1}	9EA3			X			X	X			
4DS9- {1}	6EA2-E			X			X	X			
4DS9- {1}	6EA2-M			X			X	X	X		
4DS9- {1}	4EA2-E			X			X	X			
4DS9- {1}	4EA2-M			X			X	X			
4DS9- {1}	8EB2-E			X			X	X			
4DS9- {1}	8EB2-M			X			X	X	X		
4DS9- {1}	6EB2-E			X			X	X			
4DS9- {1}	6EB2-M			X			X	X			
4DS9- {1}	2GO2		X								

{1} See Section 15.2.3(C) for explanation.



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4DS9- {1}	6GS2			X			X				
4DS9- {1}	4GS2			X			X				
4DS9- {1}	2GS2	X		X			X				
4DS9- {1}	2GS3			X			X				
4DS9- {1}	2LA2		X				X				
4DS9- {1}	2LB2		X				X				
4DS9- {1}	2LC2		X				X				
4DS9- {1}	2LO2	X									
4DS9- {1}	2LO3		X				X				
4DS9- {1}	4LR2		X								
4DS9- {1}	2LR2		X								
4DS9- {1}	6LS2		X	X			X				
4DS9- {1}	4LS2		X	X			X				
4DS9- {1}	2LS2	X	X	X			X	X			
4DS9- {1}	2LS3		X	X			X				
4DS9- {1}	4NO2	X	X		X	X	X		X		
4DS9- {1}	2NO2	X	X		X		X				
4DS9- {1}	4RV2-T			X				X			
4DS9- {1}	2RV2-T			X				X			
4DS9- {1}	4SF2		X	X			X	X	X		
4DS9- {1}	4SF3								X		

{1} See Section 15.2.3(C) for explanation.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4DX2	4DX2								X		
4DX3	4DX2								X		
4DX2	4DX3								X		
4DX3	4DX3								X		
6DX2	9DY3			X			X	X			
6DX2	9DY2			X			X	X			
6DX2	6DY3			X			X	X			
6DX2	6DY2			X			X	X			
6DX2	4DY2			X			X	X			
6DX2	2DY2			X			X	X			
4DX2	9DY3			X			X	X			
4DX3	9DY3			X			X	X			
4DX2	9DY2			X			X	X			
4DX3	9DY2			X			X	X			
4DX2	6DY3			X			X	X			
4DX3	6DY3			X			X	X			
4DX2	6DY2			X			X	X			
4DX3	6DY2			X			X	X			
4DX2	4DY2			X			X	X			
4DX3	4DY2			X			X	X			
4DX2	2DY2			X			X	X			
4DX3	2DY2			X			X	X			
6DX2	9EA3			X			X	X			
6DX2	9EA2			X			X	X			
6DX2	6EA2-E			X			X	X			
6DX2	6EA2-M			X			X	X			
6DX2	4EA2-E			X			X	X			
6DX2	4EA2-M			X			X	X			

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4DX2	9EA2			X			X	X			
4DX3	9EA2			X			X	X			
4DX2	9EA3			X			X	X			
4DX3	9EA3			X			X	X			
4DX2	6EA2-E			X			X	X			
4DX3	6EA2-E			X			X	X			
4DX2	6EA2-M			X			X	X	X		
4DX3	6EA2-M			X			X	X	X		
4DX2	4EA2-E			X			X	X			
4DX3	4EA2-E			X			X	X			
4DX2	4EA2-M			X			X	X			
4DX3	4EA2-M			X			X	X			
6DX2	8EB2-E			X			X	X			
6DX2	8EB2-M			X			X	X			
6DX2	6EB2-E			X			X	X			
6DX2	6EB2-M			X			X	X			
4DX2	8EB2-E			X			X	X			
4DX2	8EB2-M			X			X	X	X		
4DX3	8EB2-E			X			X	X			
4DX3	8EB2-M			X			X	X	X		
4DX2	6EB2-E			X			X	X			
4DX2	6EB2-M			X			X	X			
4DX3	6EB2-E			X			X	X			
4DX3	6EB2-M			X			X	X			
4DX2	2LA2		X				X				
4DX3	2LA2		X				X				
2DX3	2LA2		X				X				
4DX2	2LB2		X				X				
4DX3	2LB2		X				X				
2DX3	2LB2		X				X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	1	2	3	5	6	7	8	9	10	
4DX2	2LC2		X				X				
4DX3	2LC2		X				X				
2DX3	2LC2		X				X				
4DX2	2LO3		X				X				
4DX3	2LO3		X				X				
2DX3	2LO3		X				X				
4DX2	6LS2		X	X			X				
4DX3	6LS2		X	X			X				
4DX3	4LS2		X	X			X				
4DX2	4LS2		X	X			X				
4DX3	2LS3		X	X			X				
4DX2	2LS3		X	X			X				
4DX3	2LS2		X	X			X	X			
4DX2	2LS2		X	X			X	X			
2DX3	2LS2		X	X			X				
2DX3	2LS3		X	X			X				
4DX3	4RV2-T			X			X				
4DX2	4RV2-T			X			X				
4DX3	2RV2-T			X			X				
4DX2	2RV2-T			X			X				
6DX2	4SF2			X			X	X			
4DX2	4SF2		X	X			X	X	X		
4DX3	4SF2		X	X			X	X	X		
4DX2	4SF3								X		
4DX3	4SF3								X		
6EA2-E	4AC2		X								
6EA2-M	4AC2		X								
6EA2-E	2AC2		X								
6EA2-M	2AC2		X								

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
6EA2-E	4DX2								X		
6EA2-M	4DX2								X		
6EA2-E	4DX3								X		
6EA2-M	4DX3								X		
6EA2-E	9DY3			X			X	X			
6EA2-E	9DY2			X			X	X			
6EA2-E	6DY3			X			X	X			
6EA2-E	6DY2			X			X	X			
6EA2-E	4DY2			X			X	X			
6EA2-M	9DY3			X			X	X			
6EA2-M	9DY2			X			X	X			
6EA2-M	6DY3			X			X	X			
6EA2-M	6DY2			X			X	X			
6EA2-M	4DY2			X			X	X			
6EA2-M	2DY2			X			X	X			
6EA2-E	2DY2			X			X	X			
4EA3-E	9DY3			X			X				
4EA3-E	9DY2			X			X				
4EA3-E	6DY3			X			X				
4EA3-E	6DY2			X			X				
4EA3-E	4DY2			X			X				
4EA3-E	2DY2			X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	1	2	3	5	6	7	8	9	10	
6EA2-E	9EA2			X			X	X			
6EA2-E	9EA3			X			X	X			
6EA2-M	9EA2			X			X	X			
6EA2-M	9EA3			X			X	X			
6EA2-E	6EA2-E			X			X	X			
6EA2-E	6EA2-M			X			X	X	X		
6EA2-M	6EA2-E			X			X	X			
6EA2-M	6EA2-M			X			X	X	X		
6EA2-E	4EA2-E			X			X	X			
6EA2-E	4EA2-M			X			X	X			
6EA2-M	4EA2-E			X			X	X			
6EA2-M	4EA2-M			X			X	X			
4EA3-E	6EA2-E			X			X				
4EA3-E	6EA2-M			X			X				
4EA3-E	4EA2-E			X			X				
4EA3-E	4EA2-M			X			X				
4EA3-E	9EA2			X			X				
4EA3-E	9EA3			X			X				
6EA2-E	8EB2-E			X			X	X			
6EA2-E	8EB2-M			X			X	X	X		
6EA2-E	6EB2-E			X			X	X			
6EA2-E	6EB2-M			X			X	X			
6EA2-M	8EB2-E			X			X	X			
6EA2-M	8EB2-M			X			X	X	X		
6EB3-E	6EB2-E			X			X				
6EB3-E	6EB2-M			X			X				
6EA2-M	6EB2-E			X			X	X			
6EA2-M	6EB2-M			X			X	X			
4EA3-E	8EB2-E			X			X				
4EA3-E	8EB2-M			X			X				
4EA3-E	6EB2-E			X			X				
4EA3-E	6EB2-M			X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
6EA2-E	2LA2		X				X				
6EA2-M	2LA2		X				X				
6EA2-E	2LB2		X				X				
6EA2-M	2LB2		X				X				
6EA2-E	2LC2		X				X				
6EA2-M	2LC2		X				X				
6EA2-E	2LO3		X				X				
6EA2-M	2LO3		X				X				
6EA2-E	6LS2		X	X			X				
6EA2-M	6LS2		X	X			X				
6EA2-E	4LS2		X	X			X				
6EA2-M	4LS2		X	X			X				
6EA2-E	2LS2		X	X			X	X			
6EA2-M	2LS2		X	X			X	X			
6EA2-E	2LS3		X	X			X				
6EA2-M	2LS3		X	X			X				
6EA2-E	4RV2-T		X				X				
6EA2-M	4RV2-T		X				X				
6EA2-E	2RV2-T		X				X				
6EA2-M	2RV2-T		X				X				
6EA2-E	4SF3								X		
6EA2-M	4SF3								X		
6EA2-E	4SF2		X	X			X	X	X		
6EA2-M	4SF2		X	X			X	X	X		
4EA3-E	4SF2			X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	1	2	3	5	6	7	8	9	10	
8EB2-E	4AC2		X								
8EB2-M	4AC2		X								
8EB2-E	2AC2		X								
8EB2-M	2AC2		X								
8EB2-E	4DX2									X	
8EB2-M	4DX2									X	
8EB2-E	4DX3									X	
8EB2-M	4DX3									X	
8EB2-E	9DY3			X			X	X			
8EB2-E	9DY2			X			X	X			
8EB2-E	6DY3			X			X	X			
8EB2-E	6DY2			X			X	X			
8EB2-E	4DY2			X			X	X			
8EB2-E	2DY2			X			X	X			
8EB2-M	9DY3			X			X	X			
8EB2-M	9DY2			X			X	X			
8EB2-M	6DY3			X			X	X			
8EB2-M	6DY2			X			X	X			
8EB2-M	4DY2			X			X	X			
8EB2-M	2DY2			X			X	X			
6EB3-E	9DY2			X			X				
6EB3-E	9DY3			X			X				
6EB3-E	6DY2			X			X				
6EB3-E	6DY3			X			X				
6EB3-E	2DY2			X			X				
6EB3-E	4DY2			X			X				



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

IC	FI Combinations		Voice Grade VG-									
	End User		<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
8EB2-E	9EA2				X			X	X			
8EB2-E	9EA3				X			X	X			
8EB2-M	9EA2				X			X	X			
8EB2-M	9EA3				X			X	X			
8EB2-E	6EA2-E				X			X	X			
8EB2-E	6EA2-M				X			X	X	X		
8EB2-M	6EA2-E				X			X	X			
8EB2-M	6EA2-M				X			X	X	X		
8EB2-E	4EA2-E				X			X	X			
8EB2-E	4EA2-M				X			X	X			
8EB2-M	4EA2-E				X			X	X			
8EB2-M	4EA2-M				X			X	X			
6EB3-E	9EA2				X			X				
6EB3-E	9EA3				X			X				
6EB3-E	6EA2-E				X			X				
6EB3-E	6EA2-M				X			X				
6EB3-E	4EA2-E				X			X				
6EB3-E	4EA2-M				X			X				
8EB2-E	8EB2-E				X			X	X			
8EB2-E	8EB2-M				X			X	X	X		
8EB2-M	8EB2-E				X			X	X			
8EB2-M	8EB2-M				X			X	X	X		
6EB2-E	8EB2-E				X			X				
6EB2-E	8EB2-M				X			X				
6EB2-M	8EB2-E				X			X				
6EB2-M	8EB2-M				X			X				
6EB3-E	8EB2-E				X			X				
6EB3-E	8EB2-M				X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

IC	FI Combinations		Voice Grade VG-									
		End User	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
8EB2-E	2LA2			X				X				
8EB2-M	2LA2			X				X				
8EB2-E	2LB2			X				X				
8EB2-M	2LB2			X				X				
8EB2-E	2LC2			X				X				
8EB2-M	2LC2			X				X				
8EB2-E	2LO3			X				X				
8EB2-M	2LO3			X				X				
8EB2-E	6LS2			X	X			X				
8EB2-M	6LS2			X	X			X				
8EB2-E	4LS2			X	X			X				
8EB2-M	4LS2			X	X			X				
8EB2-E	2LS2			X	X			X	X			
8EB2-M	2LS2			X	X			X	X			
8EB2-E	2LS3			X	X			X				
8EB2-M	2LS3			X	X			X				
8EB2-E	4RV2-T			X				X				
8EB2-M	4RV2-T			X				X				
8EB2-E	2RV2-T			X				X				
8EB2-M	2RV2-T			X				X				
8EB2-E	4SF2			X	X			X	X	X		
8EB2-M	4SF2			X	X			X	X	X		
8EB2-E	4SF3									X		
8EB2-M	4SF3									X		
6EB3-E	4SF2				X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

IC	FI Combinations		Voice Grade VG-									
		End User	1	2	3	5	6	7	8	9	10	
8EC2	9DY2				X			X	X			
8EC2	9DY3				X			X	X			
8EC2	6DY2				X			X	X			
8EC2	6DY3				X			X	X			
8EC2	4DY2				X			X	X			
8EC2	2DY2				X			X	X			
8EC2	9EA2				X			X	X			
8EC2	9EA3				X			X	X			
8EC2	6EA2-E				X			X	X			
8EC2	6EA2-M				X			X	X			
8EC2	4EA2-E				X			X	X			
8EC2	4EA2-M				X			X	X			
8EC2	8EB2-E				X			X	X			
8EC2	8EB2-M				X			X	X			
8EC2	6EB2-E				X			X	X			
8EC2	6EB2-M				X			X	X			
8EC2	4SF2				X			X	X			
6EX2-A	6GS2				X			X				
6EX2-A	4GS2				X			X				
6EX2-A	2GS2				X			X				
6EX2-A	2GS3				X			X				
6EX2-B	2LA2			X				X				
6EX2-B	2LB2			X				X				
6EX2-B	2LC2			X				X				
6EX2-B	2LO2		X									
6EX2-B	2LO3			X				X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
6EX2-B	4LR2		X								
6EX2-B	2LR2		X								
6EX2-A	6LS2		X	X			X				
6EX2-A	4LS2		X	X			X				
6EX2-A	2LS2	X	X	X			X				
6EX2-A	2LS3		X	X			X				
6EX2-A	4SF2		X		X		X				
6EX2-B	4SF2		X								
6G02	6CS2			X			X				
6G02	4GS2			X			X				
6G02	2GS2	X		X			X				
6G02	2GS3			X			X				
4G02	6GS2			X			X				
4G03	6GS2			X			X				
4G02	4GS2			X			X				
4G03	4GS2			X			X				
4G02	2GS2	X		X			X				
4G02	2GS3			X			X				
4G03	2GS2	X		X			X				
4G03	2GS3			X			X				
2G02	2GS2	X		X			X				
2G03	2GS2	X		X			X				
2G02	2GS3			X			X				
2G03	2GS3			X			X				
6G02	4SF2			X			X				
4G02	4SF2			X			X				
4G03	4SF2			X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

IC	FI Combinations		Voice Grade VG-									
	End User		<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
6GS2	2GO2		X									
4GS2	2GO2		X									
4GS3	2GO2		X									
2GS2	2GO2		X									
2GS3	2GO2		X									
6LO2	6LS2			X	X			X				
6LO2	4LS2			X	X			X				
6LO2	2LS2		X	X	X			X				
6LO2	2LS3			X	X			X				
4LO2	6LS2			X	X			X				
4LO2	4LS2			X	X			X				
4LO3	6LS2			X	X			X				
4LO3	4LS2			X	X			X				
4LO3	2LS3			X	X			X				
4LO3	2LS2		X	X	X			X				
4LO2	2LS2		X	X	X			X				
4LO2	2LS3			X	X			X				
2LO3	2LS3			X	X			X				
2LO3	2LS2		X	X	X			X	X			
2LO2	2LS2		X	X	X			X	X			
2LO2	2LS3			X	X			X				
6LO2	4SF2			X	X			X				
4LO2	4SF2			X	X			X				
4LO3	4SF2			X	X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4LR3	4LR2		X								
4LR3	2LR2		X								
4LR2	4LR2		X								
4LR2	2LR2		X								
2LR2	2LR2		X								
2LR3	2LR2		X								
4LR2	4SF2		X								
4LR3	4SF2		X								
6LS2	2LA2		X					X			
4LS2	2LA2		X					X			
4LS3	2LA2		X					X			
2LS2	2LA2		X					X			
2LS3	2LA2		X					X			
6LS2	2LB2		X					X			
4LS2	2LB2		X					X			
4LS3	2LB2		X					X			
2LS2	2LB2		X					X			
2LS3	2LB2		X					X			
6LS2	2LC2		X					X			
4LS2	2LC2		X					X			
4LS3	2LC2		X					X			
2LS2	2LC2		X					X			
2LS3	2LC2		X					X			

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
6LS2	2L03		X				X				
6LS2	2L02	X									
4LS2	2L02	X									
4LS2	2L03		X				X				
4LS3	2L02	X									
4LS3	2L03		X				X				
2LS2	2L02	X									
2LS3	2L02	X									
2LS2	2L03		X				X				
2LS3	2L03		X				X				
6LS2	4SF2		X								
4LS3	4SF2		X								
4NO2	6DA2					X				X	
4NO2	4DA2					X				X	
4NO2	2DA2					X					
4NO2	4NO2	X	X		X	X	X		X		
4NO2	2NO2	X	X		X		X				
2NO2	2NO2	X	X		X		X				
2NO3	2NO2	X	X		X		X				
4RV2-O	4RV2-T			X			X				
4RV2-O	2RV2-T			X			X				
2RV2-O	2RV2-T			X			X				
4RV2-O	4SF2			X			X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4SF2	4AC2		X								
4SF3	4DX3								X		
4SF3	4DX2								X		
4SF2	4DX2								X		
4SF2	4DX3								X		
4SF3	9DY3			X			X	X			
4SF2	9DY2			X			X	X			
4SF3	9DY2			X			X	X			
4SF2	9DY3			X			X	X			
4SF3	6DY3			X			X	X			
4SF2	6DY2			X			X	X			
4SF2	6DY3			X			X	X			
4SF3	6DY2			X			X	X			
4SF2	4DY2			X			X	X			
4SF3	4DY2			X			X	X			
4SF3	2DY2			X			X	X			
4SF2	2DY2			X			X	X			



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

FI Combinations		Voice Grade VG-									
IC	End User	1	2	3	5	6	7	8	9	10	
4SF2	9EA2			X			X	X			
4SF3	9EA2			X			X	X			
4SF2	9EA3			X			X	X			
4SF3	9EA3			X			X	X			
4SF2	6EA2-E			X			X	X			
4SF2	6EA2-M			X			X	X	X		
4SF3	6EA2-E			X			X	X			
4SF3	6EA2-M			X			X	X	X		
4SF2	4EA2-E			X			X	X			
4SF2	4EA2-M			X			X	X			
4SF3	4EA2-E			X			X	X			
4SF3	4EA2-M			X			X	X			
4SF2	8EB2-E			X			X	X			
4SF2	8EB2-M			X			X	X	X		
4SF3	8EB2-E			X			X	X			
4SF3	8EB2-M			X			X	X	X		
4SF2	6EB2-E			X			X				
4SF2	6EB2-M			X			X				
4SF3	6EB2-E			X			X				
4SF3	6EB2-M			X			X				
4SF3	6GS2			X			X				
4SF2	6GS2			X			X				
4SF2	4GS2			X			X				
4SF3	4GS2			X			X				
4SF2	2GS2	X		X			X				
4SF2	2GS3			X			X				
4SF3	2GS2	X		X			X				
4SF3	2GS3			X			X				
4SF2	2LA2		X				X				
4SF3	2LA2		X				X				

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(B) Voice Grade Services (Cont'd)

<u>FI Combinations</u>		<u>Voice Grade VG-</u>									
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	
4SF2	2LB2		X				X				
4SF3	2LB2		X				X				
4SF2	2LC2		X				X				
4SF3	2LC2		X					X			
4SF2	2LO3		X				X				
4SF3	2LO2	X									
4SF3	2LO2	X									
4SF3	2LO3		X				X				
4SF2	4LR2		X								
4SF2	2LR2		X								
4SF3	4LR2		X								
4SF3	2LR2		X								
4SF3	6LS2		X	X			X				
4SF2	6LS2		X	X			X				
4SF2	4LS2		X	X			X				
4SF3	4LS2		X	X			X				
4SF2	2LS2		X	X			X	X			
4SF2	2LS3		X	X			X				
4SF3	2LS2		X	X			X	X			
4SF3	2LS3		X	X			X				
4SF3	4RV2-T			X			X				
4SF2	4RV2-T			X			X				
4SF2	2RV2-T			X			X				
4SF3	2RV2-T			X			X				
4SF3	4SF3									X	
4SF3	4SF2		X	X			X	X	X		
4SF2	4SF2		X	X			X	X	X		
4SF2	4SF3									X	

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(C) Program Audio Services

The following table shows the available Facility Interface (FI) Combinations and the Program Audio Services with which they may be ordered.

IC	FI Combinations		Program Audio AP-										
		End User	<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>
2PG2-3		2PG2-3	X										
4DS9-15E	{1}	2PG2-3	X										
4AH5-B	{2}	2PG2-3	X										
4AH6-C	{2}	2PG2-3	X										
4AH6-D	{2}	2PG2-3	X										
2PG2-3		2PG1-3	X										
4DS9-15E	{1}	2PG1-3	X										
4AH5-B	{2}	2PG1-3	X										
4AH6-C	{2}	2PG1-3	X										
4AH6-D	{2}	2PG1-3	X										

{1} Available only to ICs selecting the multiplexed four-wire DSX facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

{2} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(C) Program Audio Services (Cont'd)

<u>FI Combinations</u>			<u>Program Audio AP-</u>										
<u>IC</u>		<u>End User</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>
2PG2-5		2PG2-5		X									
4DS9-15F	{1}	2PG2-5		X									
4AH5-B	{2}	2PG2-5		X									
4AH6-C	{2}	2PG2-5		X									
4AH6-D	{2}	2PG2-5		X									
2PG2-5		2PG1-5		X									
4DS9-15F	{1}	2PG1-5		X									
4AH5-B	{2}	2PG1-5		X									
4AH6-C	{2}	2PG1-5		X									
4AH6-D	{2}	2PG1-5		X									

{1} Available only to ICs selecting the multiplexed four-wire DSX facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

{2} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data. Channels 5 and 6 are assigned for AP2.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(C) Program Audio Services (Cont'd)

<u>IC</u>	<u>FI Combinations</u>		<u>Program Audio AP-</u>										
		<u>End User</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>
2PG2-8		2PG2-8			X								
4DS9-15E	{1}	2PG2-8			X								
4AH5-B	{2}	2PG2-8			X								
4AH6-C	{2}	2PG2-8			X								
4AH6-D	{2}	2PG2-8			X								
2PG2-8		2PG1-8			X								
4DS9-15E	{1}	2PG1-8			X								
4AH5-B	{2}	2PG1-8			X								
4AH6-C	{2}	2PG1-8			X								
4AH6-D	{2}	2PG1-8			X								
2PG2-1		2PG2-1				X							
4DS9-15H	{1}	2PG2-1				X							
2PG2-1		2PG1-1				X							
4DS9-15H	{1}	2PG1-1				X							
2PG2		2PG2					X	X	X	X	X	X	X

{1} Available only to ICs selecting the multiplexed four-wire DSX facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

{2} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data. Channels 5, 6 and 7 are assigned for AP3.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(D) Wideband Analog Services

The following table shows the available Facility Interface (FI) Combinations and the Wideband Analog Services with which they may be ordered.

<u>FI Combinations</u>		<u>Wideband Analog WA-</u>	
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>
4AH5-B	4AH5-B	X	
4AH6-C {1}	4AH5-B	X	
4AH6-D {1}	4AH5-B	X	
4AH6-C	4AH6-C		X
4AH6-D {1}	4AH6-C {2}		X

{1} Available only to ICs selecting the multiplexed four-wire High Capacity analog facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

{2} Available only via a Telephone Company designated HUB where multiplexing is offered.

ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)

15.2 Special Access Service (Cont'd)

15.2.4 Available Facility Interface (FI) Combinations (Cont'd)

(E) WATS Access Line Services

WATS Access Line Service is available with either loop start or ground start facility interfaces at the end user premises. The codes for these are as follows:

2LS2 or 2GS2  
4LS2 or 4GS2

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(F) Wideband Digital Services

The following table shows the available Facility Interface (FI) Combinations and the Wideband Digital Services with which they may be ordered.

<u>FI Combinations</u>		<u>Wideband Digital WD-</u>			
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
8WB5-19S	12WC6-19	X			
8WB5-18S	12WC6-18	X			
8WB5-19A	10WC6-19	X			
8WB5-50S	12WC6-50		X		
8WB5-40S	12WC6-40		X		
8WB5-50A	10WC6-50		X		
8WB5-23S	12WC6-23S			X	
8WB5-23A	10WC6-23			X	
4WB5-64	6DU5-56				X
4DO5	6DU5-56				X



## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(G) Digital Data Access Services

The following table shows the available Facility Interface (FI) Combinations and the Digital Data Services with which they may be ordered.

<u>FI Combinations</u>		<u>Digital Data Access DA-</u>			
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
4DS9-15 {1}	6DU5-24	X			
6DU5-24	6DU5-24	X			
4DS9-15 {1}	6DU5-48		X		
6DU5-48	6DU5-48		X		
4DS9-15 {1}	6DU5-96			X	
6DU5-96	6DU5-96			X	
4DS9-15 {1}	6DU5-56				X
6DU5-56	6DU5-56				X

{1} Available only to ICs selecting the multiplexed four-wire DSX facility interface option at the IC terminal location and providing subsequent system and channel assignment data.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.4 Available Facility Interface (FI) Combinations (Cont'd)(H) High Capacity Services

The following table shows the available Facility Interface (FI) Combinations and the High Capacity Services with which they may be ordered.

<u>FI Combinations</u>		<u>High Capacity HC-</u>				
<u>IC</u>	<u>End User</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>IC</u>
4DS9-15J	6DU9-A	X				
4DS9-15	6DU9-B	X				
4DS9-15K	6DU9-B	X				
4DS9-15K	6DU9-C	X				
4DS9-31 {1}	6DU9-A,B,C	X				
4DS0-63 {1}	6DU9-A,B,C	X				
4DS6-44 {1}	6DU9-A,B,C	X				
4DS6-27 {1}	6DU9-A,B,C	X				
4DS9-31 {2}	4DS9-31					X
4DS0-63 {2}	4DS0-63		X			
4DS6-44 {2}	4DS6-44			X		
4DS6-27 {2}	4DS6-27				X	

{1} Available only to ICs selecting the multiplexed four-wire DSX facility interface option of the IC terminal location and providing subsequent system and channel assignment data.

{2} See Section 7.2.8(B) preceding for explanation.

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.3 Directory Access Service15.3.1 Interface Group and Premise Interface Codes

When Directory Access Service is combined with FGB, FGC, or FGD Switched Access Service, the Premises Interface Code for the combination will be the available Premises Interface Code provided for the FGB, FGC, or FGD Switched Access Service ordered by the customer. Premises Interface Codes are described in Section 15.1.1(F) preceding.

When Directory Access Service is provided as a separate trunk group (not in combination with Switched Access Service) Interface Groups 2 through 10 as set forth in Section 15.1.1 preceding are available. Only the following Premises Interface Codes are available when Directory Access Service is provided as a separate trunk group:

4DS9-15	6EA2-E	4RV2-0
4DS9-31	6EA2-M	4AH5-B
4DS0-63	4SF3	4AH6-C
4DS6-44		4AH6-D
4DS6-27		

## ACCESS SERVICE

15. Access Service Interfaces and Transmission Specifications (Cont'd)15.3 Directory Access Service (Cont'd)15.3.2 Standard Transmission Specifications

Following is a matrix illustrating the transmission specifications available with Directory Access Service. Descriptions of the Standard Transmission Specifications, Type A and Type B, are set forth respectively in Section 15.1.2(E) and (F) preceding.

<u>Directory Access Service Provided in Combination with Switched Access Service</u>	<u>Transmission Specifications</u>	
	<u>Type A</u>	<u>Type B</u>
- FGB (Interface Groups 2 through 10)		X
- FGC		X
- FGD	X	
 <u>Directory Access Service Not Combined with Switched Access Service</u>		
- Routed Direct to DA location (Interface Groups 2 through 10)		X
- Routed via an access tandem (Interface Groups 2 through 10)	X	

## ACCESS SERVICE

SECTION CONTENTS

16.	<u>Special Construction</u> .....	2
16.1	<u>Ownership of Facilities</u> .....	2
16.2	<u>Interval to Provide Facilities</u> .....	2
16.3	<u>Payments for Special Construction</u> .....	2
16.3.1	Payment of Charges .....	2
16.3.2	Start/End of Billing .....	2
16.4	<u>Liabilities and Charges for Special Construction</u> .....	3
16.4.1	General .....	3
16.4.2	Conditions Requiring Special Construction .....	3
16.4.3	Development of Liabilities and Charges .....	3
16.4.4	Types of Liabilities and Charges .....	4
16.5	<u>Deferral of Start of Service</u> .....	10
16.5.1	Construction Has Not Begun .....	10
16.5.2	Construction Has Begun .....	11
16.5.3	Construction Complete .....	11

## ACCESS SERVICE

16. Special Construction

This section contains the regulations, liabilities, rates and charges applicable for Special Construction of Telephone Company facilities which are used to provide services offered in this tariff.

When Special Construction of facilities is required, the provisions of this section apply in addition to all regulations, rates and charges set forth in other sections of this tariff.

16.1 Ownership of Facilities

The Telephone Company retains ownership of all specially constructed facilities.

16.2 Interval to Provide Facilities

Based on available information and the type of service ordered, the Telephone Company will establish a completion date for the specially constructed facilities. The Telephone Company will make every reasonable effort to assure that the date is met. However, shortage of material, personnel or other factors may lengthen the installation interval. The Telephone Company does not guarantee that the facilities will be available on the scheduled date and assumes no liability if that date is missed. If the scheduled completion date cannot be met, the customer will be notified and a new completion date will be established.

16.3 Payments for Special Construction16.3.1 Payment of Charges

All bills associated with Special Construction are due in accordance with the appropriate regulations in the service tariff under which service is being provided.

16.3.2 Start/End of Billing

Billing of recurring charges for specially constructed facilities starts on the day after the facilities are made available for use. Billing accrues through and includes the day that the specially constructed facilities are discontinued.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction16.4.1 General

There are various charges and liabilities that may apply when the Telephone Company provides Special Construction of facilities in accordance with an order for service. Written approval of all liabilities and charges must be provided to the Telephone Company prior to the start of construction.

16.4.2 Conditions Requiring Special Construction

Special Construction is required when (1) suitable facilities are not available to meet an order for service, or (2) the Telephone Company constructs facilities, and (3) one or more of the following conditions exist:

- the Telephone Company has no other requirement for the facilities constructed;
- it is requested that service be furnished using a type of facility, or via a route, other than that which the Telephone Company would normally utilize in furnishing the requested service;
- more facilities are requested than would normally be required to satisfy an order;
- it is requested that construction be expedited, resulting in added cost to the Telephone Company.

16.4.3 Development of Liabilities and Charges

Special Construction charges and liabilities will be developed based on estimated costs, except when actual costs are requested in writing prior to the start of Special Construction. In order to meet a scheduled service date when actual costs are requested, an initial Special Construction case will be made based on estimated costs. Such case will be revised when actual costs are available.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges

Depending on the specifics associated with each individual case, one or more of the following Special Construction charges and/or liabilities may be applicable:

(A) Nonrecurring Charge

A nonrecurring charge always applies and includes one or more of the following components:

(1) Quotation Charge

A nonrecurring charge for the preparation of a quotation applies whenever an estimate for Special Construction charges and liabilities is requested.

In order to comply with Government regulations, a quotation charge will not apply when submitting unsolicited quotes or when submitting quotes in response to a general Request for Proposal or Invitation to Bid from agencies or branches of the Government.

(2) Expediting Charge

A nonrecurring charge may include an expediting charge when it is requested that Special Construction be completed on an expedited basis. The charge equals the difference in estimated cost between expedited and nonexpedited construction.



## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges (Cont'd)(A) Nonrecurring Charge (Cont'd)(3) Optional Payment

An optional payment charge may be included in the nonrecurring charge in association with a type of facility or route other than that which the Telephone Company would normally use in furnishing the requested service if lower recurring monthly charges are desired for the specially constructed facilities. This charge is equal to the excess installed cost or the total nonrecoverable cost, whichever is less. This election must be made in writing, before Special Construction starts. If this election is coupled with the actual cost option, the optional payment charge will reflect the actual cost of the specially constructed facilities.

(4) Replacement Charge

If any portion of specially constructed facilities for which an optional payment charge has been paid requires replacement involving capital investment, a replacement charge will apply. This charge will be in the same ratio to the total replacement cost as the initial optional payment charge was to the installed cost of the original specially constructed facilities. If any portion of the facilities subject to the replacement charge fails, service will not be restored until notification is provided in writing that replacement is required and such replacement is ordered.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges (Cont'd)(A) Nonrecurring Charge (Cont'd)(5) Rearrangement Charge

If the Telephone Company is requested to rearrange existing specially constructed facilities, a nonrecurring charge component equal to the cost of rearrangement will apply.

(6) Special Construction of Facilities for Use for less than One Month

When the Telephone Company is requested to construct facilities to provide service for less than one month, a nonrecurring charge only applies. In addition to the quotation preparation charge component, this nonrecurring charge recovers all elements of cost, including engineering, shipping of equipment, equipment installation, line-up, equipment leasing, space rental, equipment removal, and any other costs associated with the construction of the facilities.

(B) Maximum Termination Liability and Termination Charge

Maximum Termination Liability is equal to the non-recoverable costs associated with specially constructed facilities and is the maximum amount which could be applied as a Termination Charge if all specially constructed facilities were discontinued before the Maximum Termination Liability expires.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges (Cont'd)(B) Maximum Termination Liability and Termination Charge (Cont'd)

The Maximum Termination Liability is executed in decreasing amounts at ten-year intervals over the average account life of the facilities. In the event that the average account life of the facilities is not an even multiple of ten, the last increment will reflect the appropriate number of years remaining.

Example Illustrating a 27-Year Average Account Life

<u>Maximum Termination Liability</u>	<u>Effective Date</u>	<u>Expiration Date</u>
\$10,000	6/1/84	5/31/94
7,000	6/1/94	5/31/04
3,000	6/1/04	5/31/11

Prior to the expiration of each liability period, the customer has the option to (1) terminate the Special Construction case and pay the appropriate charges, or (2) extend the use of the specially constructed facilities for the new liability period.

The Telephone Company will notify the customer six months in advance of the expiration date of each ten-year liability period. The customer must provide the Telephone Company with written notification at least 30 days prior to the expiration of the liability period if termination is elected. Failure to do so will result in an automatic extension of the Special Construction case to the next liability period.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges (Cont'd)(B) Maximum Termination Liability and Termination Charge (Cont'd)

A Termination Charge may apply when all services using specially constructed facilities are discontinued prior to the expiration of the liability period. The charge reflects the unamortized portion of the nonrecoverable costs at the time of termination, adjusted for net salvage and possible reuse. Administrative costs associated with the specific case of Special Construction and any cost for restoring a location to its original condition are also included.

(C) Annual Underutilization Liability and Underutilization Charge

Annual Underutilization Liability is a per unit amount which is based on the per unit cost of specially constructed facilities. The liability remains in effect until the expiration of the Maximum Termination Liability or until the Special Construction case is discontinued and all termination liabilities associated with the case are discharged. An underutilization charge may be applicable after the expiration of the minimum period, as set forth in the appropriate service tariff, under which service is being provided, depending on the quantity of specially constructed facilities in service.

No underutilization charges are computed or billed until one year after the minimum period expires. At that time, an underutilization charge applies to the difference, if any, between the original number of specially constructed facilities and the number of specially constructed facilities in service at filed tariff rates. The underutilization charge applies from the date the minimum period expires and annually thereafter. For purposes of determining an underutilization charge, any facilities subject to minimum service period monthly charges are considered to be in service at filed tariff rates.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges (Cont'd)(D) Recurring Monthly Charges(1) Excess Capacity Charge

A recurring monthly excess capacity charge applies when more facilities are requested and subsequently specially constructed than are required to satisfy an order for service. The charge is based on the estimated cost difference between the facilities constructed and the facilities which would normally be required to meet the order for service. Charges apply until there are sufficient services to warrant the facilities which were originally constructed.

(2) Charge for Route or Type other than Normal

When Special Construction is requested using a route or type of facility other than that which the Telephone Company would normally use, a recurring monthly charge, in addition to the monthly rates for service, is applicable. The charge is equal to the difference between the recurring costs of the specially constructed facilities and the recurring cost of the facilities the Telephone Company would have normally used.

- (a) When an Optional Payment Charge as set forth in Section 16.4.4(A)(3) preceding has been elected, the recurring monthly charge will include specially constructed facility operating expenses only.
- (b) If the actual cost option has been elected, the recurring charge will be adjusted to reflect the actual cost of the new construction when the costs have been determined. This adjusted recurring charge is applicable from the start of service.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.4 Liabilities and Charges for Special Construction (Cont'd)16.4.4 Types of Liabilities and Charges (Cont'd)(E) Lease Charge

A lease charge applies when the Telephone Company leases equipment in order to meet service requirements. The amount of the charge is equal to the net added cost to the Telephone Company caused by the lease.

(F) Cancellation Charge

If a service order, with which Special Construction is associated, is canceled prior to the start of service, a cancellation charge will apply. The charge will include all nonrecoverable costs incurred by the Telephone Company in association with the Special Construction up to and including the time of cancellation.

16.5 Deferral of Start of Service

The Telephone Company may be requested to defer the start of service which will use specially constructed facilities subject to the provisions set forth in the service tariff under which service is being provided. Requests for Special Construction deferral must be in writing and are subject to the following regulations:

16.5.1 Construction Has Not Begun

If the Telephone Company has not incurred any installation costs before receiving a request for deferral, the quotation charge applies. The original quotation is subject to Telephone Company review at the time of reinstatement of Special Construction activity to determine if the original charge estimates are still valid.

An additional quotation charge will, therefore, apply. Any change in liabilities and charges requires concurrence in writing.

## ACCESS SERVICE

16. Special Construction (Cont'd)16.5 Deferral of Start of Service (Cont'd)16.5.2 Construction Has Begun

If the construction of facilities has begun before the Telephone Company receives a request for deferral, charges will vary as follows:

(A) All Services Are Deferred

When all services which will use specially constructed facilities are deferred, a charge based on the costs incurred by the Telephone Company during each month of the deferral will apply. Those costs include the recurring costs for that portion of the facilities already completed and any other costs associated with the deferral. The quotation charge and cost of any components of the nonrecurring charge which have been completed at the time of deferral will also apply.

(B) Some Services Are Deferred

When some services which will use the specially constructed facilities are deferred, the construction case will be completed and all Special Construction charges will apply.

16.5.3 Construction Complete

If the construction of facilities has been completed before the Telephone Company receives a request for deferral, all Special Construction charges will apply.

## ACCESS SERVICE

SECTION CONTENTS

17.	<u>Rates and Charges</u> .....	2
17.1	<u>Carrier Common Line Access Service</u> .....	2
17.1.1	Carrier Common Line.....	{1}
17.2	<u>Switched Access Service</u> .....	2
17.2.1	Nonrecurring Charges.....	{1}
17.2.2	Local Transport.....	{1}
17.2.3	End Office .....	{1}
17.2.4	FGB with an Abbreviated Dialing Arrangement (ADA).....	{1}
17.2.5	Assumed Minutes of Use .....	{1}
17.2.6	Operator Transfer Service .....	{1}
17.2.7	800 Data Base Access Service Queries .....	{1}
	ALENCO COMMUNICATIONS INC. ....	2.1.1
	RESERVED FOR FUTURE USE .....	2.2.1
	BIG BEND TELEPHONE COMPANY .....	2.3.1
	BLOSSOM TELEPHONE COMPANY .....	2.4.1
	BRAZORIA TELEPHONE COMPANY .....	2.5.1
	BRAZOS TELEPHONE COOPERATIVE, INC. ....	2.6.1
	CAMERON TELEPHONE COMPANY .....	2.7.1
	CAP ROCK TELEPHONE COOPERATIVE, INC. ....	2.8.1
	CENTRAL TEXAS TELEPHONE COOPERATIVE, INC. ....	2.9.1
	COLEMAN COUNTY TELEPHONE COOPERATIVE, INC. ....	2.10.1
	COLORADO VALLEY TELEPHONE COOPERATIVE, INC. ....	2.11.1
	TOTELCOM COMMUNICATIONS.....	2.12.1
	COMMUNITY TELEPHONE COMPANY, INC. ....	2.13.1
	CUMBY TELEPHONE COOPERATIVE, INC. ....	2.14.1
	DELL TELEPHONE COOPERATIVE, INC. ....	2.15.1
	E.N.M.R. TELEPHONE COOPERATIVE, INC.. ....	2.16.1
	EASTEX TELEPHONE COOPERATIVE, INC. ....	2.17.1
	ELECTRA TELEPHONE COMPANY .....	2.18.1
	ETEX TELEPHONE COOPERATIVE, INC. ....	2.19.1

{1} See company-specific rate sheet listed below.



## ACCESS SERVICE

SECTION CONTENTS17. Rates and Charges (Cont'd)17.2 Switched Access Service (Cont'd)

FIVE AREA TELEPHONE COOPERATIVE, INC.....	2.20.1
RESERVED FOR FUTURE USE .....	2.21.1
GANADO TELEPHONE COMPANY, INC. ....	2.22.1
GUADALUPE VALLEY TELEPHONE COOPERATIVE, INC.....	2.23.1
HILL COUNTRY TELEPHONE COOPERATIVE, INC. ....	2.24.1
INDUSTRY TELEPHONE COMPANY .....	2.25.1
LA WARD TELEPHONE EXCHANGE, INC.....	2.26.1
RESERVED FOR FUTURE USE .....	2.27.1
LAKE LIVINGSTON TELEPHONE COMPANY .....	2.28.1
LIPAN TELEPHONE COMPANY .....	2.29.1
LIVINGSTON TELEPHONE COMPANY.....	2.30.1
MID-PLAINS RURAL TELEPHONE COOPERATIVE, INC.....	2.31.1
NORTEX COMMUNICATIONS, INC. ....	2.32.1
RESERVED FOR FUTURE USE .....	2.33.1
NORTH TEXAS TELEPHONE COMPANY .....	2.34.1
PEOPLES TELEPHONE COOPERATIVE, INC.....	2.35.1
POKA LAMBRO TELEPHONE COOPERATIVE, INC. ....	2.36.1
RIVIERA TELEPHONE COMPANY, INC. ....	2.37.1
SANTA ROSA TELEPHONE COOPERATIVE, INC. ....	2.38.1
SOUTH PLAINS TELEPHONE COOPERATIVE, INC. ....	2.39.1
SOUTHWEST ARKANSAS TELEPHONE COOPERATIVE, INC.....	2.40.1
RESERVED FOR FUTURE USE .....	2.41.1
TATUM TELEPHONE COMPANY .....	2.42.1
TAYLOR TELEPHONE COOPERATIVE, INC. ....	2.43.1
RESERVED FOR FUTURE USE .....	2.44.1
RESERVED FOR FUTURE USE .....	2.45.1
WES-TEX TELEPHONE COOPERATIVE, INC.....	2.46.1
WEST TEXAS RURAL TELEPHONE COOPERATIVE, INC. ....	2.47.1
XIT RURAL TELEPHONE COOPERATIVE, INC.....	2.48.1
RESERVED FOR FUTURE USE .....	2.49.1
RESERVED FOR FUTURE USE .....	2.50.1
WEST PLAINS TELECOMMUNICATIONS, INC.....	2.51.1
BORDER TO BORDER COMMUNICATIONS, INC. ....	2.52.1

## ACCESS SERVICE

SECTION CONTENTS17. Rates and Charges (Cont'd)

17.3	<u>Special Access Service</u> .....	3
17.3.1	Narrowband Services .....	3
17.3.2	Voice Grade Services .....	7
17.3.3	Program Audio Services .....	18
17.3.4	Wideband Analog Service .....	23
17.3.5	WATS Access Line .....	26
17.3.6	Wideband Digital Services .....	27
17.3.7	Digital Data Access Services .....	30
17.3.8	High Capacity Services .....	35
17.3.9	Special Access Service Surcharge .....	40
17.4	<u>Other Services</u> .....	41
17.4.1	Access Ordering .....	41
17.4.2	Additional Engineering .....	42
17.4.3	Additional Labor .....	42
17.4.4	Miscellaneous Services .....	44
17.4.5	Presubscription .....	47
17.4.6	Special Federal Government Access Services .....	48
17.4.7	Special Facilities Routing of Access Services .....	49
17.4.8	Specialized Service or Arrangements .....	49
17.5	<u>Billing and Collection Services</u> .....	50
17.5.1	Recording Service .....	50
17.5.2	Message Billing Service .....	51
17.5.3	Private Line Billing Service .....	57
17.5.4	Billing Analysis Service .....	59
17.5.5	Billing Information Service .....	60
17.6	<u>Directory Assistance Service</u> .....	63
17.6.1	Nonrecurring Charges .....	63
17.6.2	Directory Assistance Service .....	63

ACCESS SERVICE

17. Rates and Charges

17.1 Carrier Common Line Access Service

Each Issuing Carrier has company-specific Carrier Common Line Access Service rates. Refer to the applicable Issuing Carrier rate sheets following.

17.2 Switched Access Service

Each Issuing Carrier has company-specific Switched Access Service rates. Refer to the applicable Issuing Carrier rate sheets following.

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.1 Carrier Common Line Access Service17.2 Switched Access Service

Regulations concerning Switched Access Service are set forth in Section 6, preceding.

17.2.1 Nonrecurring ChargesRate(A) Local Transport - Installation,  
Per Entrance Facility

- Voice Grade Two-Wire	\$ 480.90
- Voice Grade Four-Wire	\$ 480.90
- High Capacity DS1	\$ 352.68
- High Capacity DS3	\$ 475.56
- ESALT 2 Mbps	\$ 569.95
- ESALT 10 Mbps	\$ 569.95
- ESALT 50 Mbps	\$ 569.95

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.2 Switched Access Service (Cont'd)

17.2.1	<u>Nonrecurring Charges</u> (Cont'd)	<u>Rate</u>
(B)	<u>Interim NXX Translation</u>	
	- Per Order, Per LATA or Market Area	\$ 235.11
(C)	<u>FGC and FGD Conversion of Multifrequency Address Signaling to SS7 Signaling or SS7 Signaling to Multifrequency Address Signaling</u>	
	- Per 24 Trunks Converted or Fraction thereof, on a Per Order Basis	\$ 472.35
(D)	<u>Trunk Activation</u>	
	- Per 24 Trunks Activated or Fraction thereof, on a Per Order Basis	\$ 490.51
(E)	<u>Flexible Automatic Number Identification (Flex ANI)</u>	
	- Per End Office, Per CIC	None
(F)	<u>ESALT Direct Trunked Termination (DTT)</u>	
	- Per ESALT DTT Installed	\$ 375.50
(G)	<u>ESALT Entrance Facility Protection (EFP)</u>	
	- Per ESALT EFP Installed	\$ 576.11

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.2 Switched Access Service (Cont'd)17.2.2 Local TransportMonthly  
RatePremium Access(A) Entrance Facility (EF), Per Termination

Voice Grade (2-Wire)	\$ 46.97
Voice Grade (4-Wire)	\$ 75.16
High Capacity DS1	\$ 228.99
High Capacity DS3	\$ 2,090.79
ESALT 2 Mbps	\$ 405.59
ESALT 10 Mbps	\$ 437.14
ESALT 50 Mbps	\$ 566.34

(B) Direct Trunked Transport(1) Direct Trunked Facility (DTF), Per Mile

Voice Grade	\$ 3.35
High Capacity DS1	\$ 15.69
High Capacity DS3	\$ 136.67

ESALT DTF-E1, Per Facility

ESALT 2 Mbps	\$ 46.20
ESALT 10 Mbps	\$ 117.17
ESALT 50 Mbps	\$ 328.07

ESALT DTF-E2, Per Facility

ESALT 2 Mbps	\$ 30.81
ESALT 10 Mbps	\$ 70.31
ESALT 50 Mbps	\$ 218.73

ESALT DTF-E3, Per Facility

ESALT 2 Mbps	\$ 79.58
ESALT 10 Mbps	\$ 200.30
ESALT 50 Mbps	\$ 654.18

ESALT DTF-E4, Per Facility

ESALT 2 Mbps	\$ 133.24
ESALT 10 Mbps	\$ 410.84
ESALT 50 Mbps	\$ 1,165.85

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.2 Switched Access Service (Cont'd)17.2.2 Local Transport (Cont'd)Monthly  
RatePremium Access (Cont'd)(B) Direct Trunked Transport (Cont'd)(2) Direct Trunked Termination (DTT), Per Termination

Voice Grade	\$ 33.63
High Capacity DS1	\$ 81.40
High Capacity DS3	\$ 522.67
ESALT 2 Mbps	\$ 107.83
ESALT 10 Mbps	\$ 131.82
ESALT 50 Mbps	\$ 161.10

(3) Multiplexing, Per Arrangement

DS3 to DS1	\$ 476.90
DS1 to Voice	\$ 184.12

(C) Tandem Switched Transport

Rate

(1) Tandem Switched Facility,  
Per Access Minute, Per Mile

- Originating	\$ 0.000188
- Terminating	\$ 0.000200

(2) Tandem Switched Termination,  
Per Access Minute, Per Termination

- Originating	\$ 0.000979
- Terminating	\$ 0.001046

(3) Tandem Switching,  
Per Access Minute, Per Tandem

- Originating	\$ 0.002468
- Terminating	\$ 0.002639

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.2 Switched Access Service (Cont'd)17.2.2 Local Transport (Cont'd)RatePremium Access (Cont'd)(D) Network Blocking,  
Per Blocked Call

- Applied to FGD Only	\$ 0.0080
-----------------------	-----------

(E) ESALT Real Time CoS/QoS,  
Per ESALT DTF, Per Option

ESALT 2 Mbps	\$ 8.83
ESALT 10 Mbps	\$ 44.13
ESALT 50 Mbps	\$ 137.35

(F) ESALT Entrance Facility Protection,  
Per ESALT EF, Per Option

ESALT 2 Mbps	\$ 284.10
ESALT 10 Mbps	\$ 284.10
ESALT 50 Mbps	\$ 284.10



## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.2 Switched Access Service (Cont'd)17.2.3 End OfficeRatePremium Access(A) Local Switching, {1}  
Per Access Minute

- Originating	\$ 0.038760
- Terminating	
- Effective 7-3-2012	\$ 0.045396
- Effective 7-2-2013	\$ 0.047157
- Effective 7-1-2014	\$ 0.033554
- Effective 7-1-2015	\$ 0.018465
- Effective 7-1-2016	\$ 0.005000
- Effective 7-1-2017	\$ 0.003567
- Effective 7-1-2018	\$ 0.002133
- Effective 7-1-2019	\$ 0.000700
- Effective 7-1-2020	\$ 0.000000

(B) Information Surcharge,(C) FCC Transitional Charge,  
Per Access Minute

- Terminating Only	
- Effective 7-3-2012	\$ 0.008256
- Effective 7-2-2013	\$ 0.000000

{1} End Office Local Switching rate element consists of previous Local Switching, Information Surcharge, and Carrier Common Line rate elements per §51.903(d) of the FCC's rules.

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: ALENCO COMMUNICATIONS INC**17.2 Switched Access Service (Cont'd)

		<u>Rate Factor</u>	<u>Tariff Section Reference</u>
17.2.4	<u>FGB with an Abbreviated Dialing Arrangement (ADA)</u>	N/A	6.9.1
17.2.5	<u>Assumed Minutes of Use</u>		
	(A) FGA, Two Way Calling (1510 Orig., 2685 Term.)	4195	6.5.4
	(B) FGA, Originating Only	1510	6.5.4
	(C) FGA, Terminating Only	2685	6.5.4
	(D) FGB, Two Way Calling (3132 Orig., 5568 Term.)	8700	6.6.4
	(E) FGB, Originating Only	3132	6.6.4
	(F) FGB, Terminating Only	5568	6.6.4
17.2.6	<u>Operator Transfer Service</u> (Per Call Transferred)	<u>Rate</u> N/A	6.10.4
17.2.7	<u>800 Data Base Access Service Queries</u>		
	Basic (Per Query)	.0079	6.1.3(C)
	Vertical Feature (Per Query)	.0082	6.1.3(C)

ACCESS SERVICE

17. Rates and Charges (Cont'd)

**ISSUING CARRIER: RESERVED FOR FUTURE USE**

17.1 Carrier Common Line Access Service

RESERVED FOR FUTURE USE

17.2 Switched Access Service

RESERVED FOR FUTURE USE

17.2.1 Nonrecurring Charges

RESERVED FOR FUTURE USE

17.2.2 Local Transport

RESERVED FOR FUTURE USE

17.2.3 End Office

RESERVED FOR FUTURE USE

17.2.4 FGB with an Abbreviated Dialing Arrangement (ADA)

RESERVED FOR FUTURE USE

17.2.5 Assumed Minutes of Use

RESERVED FOR FUTURE USE

17.2.6 Operator Transfer Service

RESERVED FOR FUTURE USE

17.2.7 800 Data Base Access Service Queries

RESERVED FOR FUTURE USE

## ACCESS SERVICE

17. Rates and Charges (Cont'd)**ISSUING CARRIER: BIG BEND TELEPHONE COMPANY**17.1 Carrier Common Line Access Service17.2 Switched Access Service

Regulations concerning Switched Access Service are set forth in Section 6, preceding.

17.2.1	<u>Nonrecurring Charges</u>	<u>Rate</u>
(A)	<u>Local Transport – Installation,*</u> Per Entrance Facility	
-	Voice Grade Two-Wire	\$ 480.90
-	High Capacity DS1	\$ 352.68
-	High Capacity DS3	\$ 475.56
-	ESALT 2 Mbps	\$ 569.95
-	ESALT 10 Mbps	\$ 569.95
-	ESALT 50 Mbps	\$ 569.95

*\*Effective March 1, 2019, Big Bend Telephone Company no longer offers Voice Grade Four-Wire Service.*