HIGH CAPACITY SERVICES (REGION 11)

A AVAILABILITY OF SERVICE

This Product Guide contains the terms and conditions, rates and charges for Channel Terminations other than Non-Competitive End User Channel Terminations, Channel Mileage and certain Optional Features and Functions ordered for such Channel Terminations, including Multiplexing. Ordering options for other Special Access Services needed to complete a circuit are available under Company FCC Tariffs as described in Part 0, Section 1.

High Capacity Services are available where facilities exist in Region 11.

B SERVICE DESCRIPTION

A High Capacity channel is a digital channel for the transmission of nominal 64.0 kbps*, 1.544 Mbps or 44.736 Mbps isochronous serial data. The actual bit rate and framing formats are a function of the channel interface selected by the Customer. High Capacity channels are provided between Customer designated premises, between a Customer designated premises and a Company Hub, between a Customer designated premises and a wire center where connection to Frame Relay Service or ATM-Cell Relay Service occurs, or between a Customer designated premises, Company multiplexing Hub or Company Frame Relay Service Hub and an Expanded Interconnection multiplexing node or virtual collocation arrangement**. Additionally, a High Capacity channel may connect collocated equipment within the same Company serving wire center, access tandem or remote node subject to the terms and conditions set forth in The Verizon Telephone Companies FCC Tariff No. 11, Section 27.

High Capacity channels may also be connected to Company provided SONET services and Enterprise Services, provided that such connections are technically and operationally feasible.

The High Capacity 44.736 Mbps Service is provided on digital (optical equipment and lightwave facilities selected by the Company, and it is provided only through serving wire centers equipped to furnish such Service. At the Customer designated premises, an optical fiber interface and digital optical equipment convert the signal from optical to electrical. A 110 volt AC, 15 amperes, separately fused, non-switched controlled, single power outlet must be provided by the Customer at the Customer designated premises.

1. DS3 Optical Fiber Interface Option

   At the option of the Customer, 44.736 Mbps (DS3) Service may be provided with an optical interface at four levels of capacity, (i.e., as three (135 Mbps), twelve (560 Mbps) or 48 (2.488 Gbps) groups of 44.736 Mbps channels. The Customer may order a minimum of 1 and a maximum of 3 DS3 channels for the 135 Mbps capacity; a minimum of 2 and a maximum of 12 DS3 channels for the 560 Mbps capacity; or a minimum of 7 and a maximum of 48 DS3 channels for the 2.488 Gbps capacity. This Service may be provided between a Customer designated premises and a Company Hub subject to the availability of facilities under the following two options.

* Available only as a channel of a 1.544 Mbps facility between two Company digital Hubs or as a cross connect of two 2.4, 4.8, 9.6, 56.0 or 64.0 kbps channels of two 1.544 Mbps facilities at a digital Hub(s). The Customer must provide system and channel assignment data. Digital Hubs include both Digital Data Hubs and High Capacity Multiplexing Hubs.

** Expanded Interconnection is not available with 44.736 Mbps High Capacity Service provided with an optical fiber interface.

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B SERVICE DESCRIPTION (Cont'd)

1. DS3 Optical Fiber Interface Option (Cont'd)

a. Option 1

An optical channel from a Company Serving Wire Center equipped to furnish such Service to an optical fiber interface at the Customer's premises. The Customer will provide Optical Line Terminating Multiplexing (**OLTM**) or SONET equipment in lieu of Company provided digital optical equipment.

b. Option 2*

The Customer's optical cable is spliced to the Company's optical cable at a Company designated fiber meet point, or the Customer shall make available at the meet point an additional length of fiber optic cable for the purpose of connecting the fiber optic cable to the Company's central office. The latter option of providing an additional length of fiber optic cable shall be available to the Customer only where facilities permit. The location of the fiber meet point is considered to be a Customer designated premises for purposes of administering the terms, conditions and rates contained in this Product Guide. The Customer provides the OLTM at the Customer designated premises. The Company will work cooperatively with the Customer to select the Company designated fiber meet point which may be associated with the normal serving wire center or, at the Customer's option, the fiber meet point may be at a location associated with an alternate serving wire center. In the latter case, interoffice channel mileage will be calculated from the alternate serving wire center.

Under Option 2, the Customer's fiber for the midspan meet must be compatible with the fiber employed by the Company. The Company will perform the splice subject to an Interconnection Rearrangement Charge. Responsibility for maintenance, repair and disconnection of the splice shall be with the Company.

When an additional length of fiber optic cable is made available by a Customer at the meet point location, the Company shall designate the length of the additional fiber optic cable and shall complete the installation of the fiber optic cable to the central office. All rights, title and interest in the additional length of fiber optic cable shall be transferred, free of any and all liens and encumbrances, by the Customer to the Company for $1.00, the receipt and sufficiency of which is hereby acknowledged by the Customer. The Company shall clearly mark the fiber optic cable at the meet point location so as to designate where the Customer provided portion of the cable ends and where the Company cable begins. The transfer shall be deemed to have taken place as of the time the Company assumes physical control of the additional length of fiber optic cable to begin connection of that cable to the Company's central office.

* Option 2 is only provided on DS3 with an optical fiber interface option which was in-service or on order as of August 29, 2001.

HIGH CAPACITY SERVICES (REGION 11)

B SERVICE DESCRIPTION (Cont'd)

1. DS3 Optical Fiber Interface Option (Cont'd)

b. Option 2* (Cont'd)

Within each capacity level, individual 44.736 Mbps channels may be derived from SONET or OLTM equipment at the Company's Hub. The Customer may request that the SONET or OLTM equipment be located in a wire center other than the normal serving wire center. The appropriate Channel Mileage rate will apply between the normal serving wire center and the wire center designated by the Customer. The Customer must provide any device that supports an OC3, OC12 or OC48 interface as described in Technical Reference GR-253-CORE, Issue 4, for Synchronous Optical Network (**SONET**) Transport Systems in lieu of Company provided digital optical equipment. DS3 with an optical fiber interface option which is in-service or on order as of August 29, 2001 may employ Customer-provided Optical Line Terminating Multiplexing Equipment (**OLTM**) in lieu of Company provided digital optical equipment. Customer provided OLTM equipment must be compatible with the OLTM equipment employed by the Company. The Company employs the following OLTM equipment:

Verizon New England Inc.

- NEC Model 1840A for 135 Mbps capacity*
- Rockwell Model 1565D for 560 Mbps capacity*

Verizon New York Inc.

- NEC Model 1840A or Rockwell Model 3X50 for 135 Mbps Capacity*
- NEC Model 31201A or Rockwell Model 1565D for 560 Mbps capacity*

The selection of the OLTM or SONET equipment will determine the characteristics of the standard interface. The Company may request cooperative testing through the Customer provided equipment (e.g., fiber, OLTM, etc.) at the time of installation or in the event of a transmission failure.

C. TECHNICAL SPECIFICATIONS PACKAGES

Technical specifications and optional features and functions are delineated in Technical Reference GR-54-CORE, Issue 1 and GR-342-CORE, Issue 1.

The technical specifications for High Capacity Service provided to an Expanded Interconnection multiplexing node are delineated in the Technical Reference Publications specified in The Verizon Telephone Companies FCC Tariff No. 11, Section 28.1.5 and 28.4.5.

D. Channel interfaces for High Capacity Service may be found at the common language product of iconectiv.com.

* The use of OLTM equipment is limited as described above.

* Option 2 is only provided on DS3 with an optical fiber interface option which was in-service or on order as of August 29, 2001.

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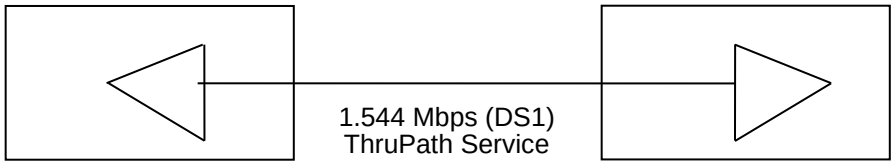
E. THRUPATH SERVICE

A ThruPath Service connection occurs when a channel which has been derived from one multiplexed or groomed facility is interconnected with a channel which has been derived from a different multiplexed or groomed facility of the same bit rate. When the ThruPath Service connection involves IDSR, DSR, or an IntelliLight Broadband Transport (IBT) multiplexing node, those Services must use symmetrical port combinations. ThruPath Service connections may not be associated with asymmetrical port combinations of an IDSR, DSR, or IBT multiplexing node. The two derived channels are interconnected to create a single channel of a lesser capacity between the two multiplexed or groomed facilities as follows.

- 1.544 Mbps High Capacity Services between two 44.736 Mbps High Capacity Services
- 1.544 Mbps High Capacity Service between an IDSR node, a DSR node, or multiplexed IBT and a multiplexed 44.736 Mbps High Capacity facility.
- 44.736 Mbps High Capacity Service between two Optical Line Multiplexers associated with two 44.736 Mbps High Capacity Services, each of which are provided with the optical fiber interface option
- DS3 between two IDSR or DSR services of higher capacity.

For example, two separate DS3 facilities are each de-multiplexed or groomed down to twenty eight DS1 channels and a DS1 channel from one multiplexed or groomed DS3 facility is interconnected with a DS1 channel from the other DS3 multiplexed or groomed facility to create a single DS1 channel between the two multiplexed facilities.

Example: Through-connection of multiplexed facilities



Intermediate Hub
(DS3 to DS1 Multiplexing
or grooming)

Intermediate Hub
(DS3 to DS1 Multiplexing
or grooming)

In addition to the channel mileage rates for the lesser capacity channel arranged between the two Hubs or between the Hub and either an IDSR or DSR central office node, a nonrecurring charge (Thrupath Connection Charge) applies. The ThruPath Connection Charge applies whether the Hubs or Hub and IDSR or DSR central office node are located in the same or different wire centers.

HIGH CAPACITY SERVICES (REGION 11)

E. THRUPATH SERVICE (Cont'd)

Except for the Company hub locations set forth below, High Capacity ThruPath Service connections* are available at or between (i) all Intermediate or Super-Intermediate Hubs; or (ii) all IBT multiplexing nodes; or (iii) an Intermediate or Super-Intermediate Hub and either an IDSR or DSR central office node or IBT multiplexing node.

- Mansfield, MA
- Maynard, MA
- Natick, MA
- New Bedford, MA
- North Chelmsford, MA
- Rehoboth, MA

F. OPTIONAL FEATURES AND FUNCTIONS

1. Automatic Loop Transfer

The Automatic Loop Transfer provides protection on a 1xN basis against failure of the facilities between a Customer designated premises and the wire center serving that premises. Protection is furnished through the use of a switching arrangement that automatically switches to a spare channel when a working channel fails. The spare channel is not included as a part of the option. This option requires compatible equipment at both the serving wire center and the Customer designated premises. The equipment at the Customer's designated premises must be compatible with that provided by the Company in the serving wire center. The Customer is responsible for providing the equipment at its premises. This option is not available for channels with the Clear Channel Capability feature.

2. Central Office Multiplexing

a. DS3 to DS1
An arrangement that converts a 44.736 Mbps channel to 28 DS1 channels using digital time division multiplexing.

b. DS1 to Voice (Verizon New England Inc.)
An arrangement that converts a 1.544 Mbps channel to 24 channels for use with Voice Grade Services. A channel(s) of this DS1 to the Hub can also be used for a Digital Data Service or DIGIPATH digital service II.

HIGH CAPACITY SERVICES (REGION 11)

F. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)

2. Central Office Multiplexing (Cont'd)

c. DS1 to Voice (Verizon New York Inc.)
An arrangement that converts a 1.544 Mbps channel to 24 channels for use with Voice Grade Services. A channel(s) of this DS1 to the hub can also be used for a Digital Data Service.

or

An arrangement that converts a 1.544 Mbps channel to 24 channels for use with Voice Grade Service and DIGIPATH digital service II*.

d. DS1 to DSO

An arrangement that converts a 1.544 Mbps channel to 24 64.0 kbps channels using digital time division multiplexing.

3. Clear Channel Capability (**CCC**)

CCC provides a Bipolar with Eight Zero Substitution (**B8ZS**) encoding technique that allows a Customer to transport 1.536 Mbps information rate signals over a 1.544 Mbps High Capacity Channel with no constraint on the quantity or sequence of ones (mark) and zero (space) bits. This arrangement allows Customers to derive 64 kbps clear channels. This Service is provided only on 1.544 Mbps High Capacity Channels between two Customer designated premises and is subject to availability of facilities. This arrangement requires the Customer-provided multiplexing equipment to be compatible with the B8ZS line code as specified in Technical References GR-54-CORE, Issue 1, and GR-342-CORE, Issue 1.

* When a 1.544 Mbps channel is converted to 24 channels for use with DIGIPATH digital service II and the DIGIPATH digital service II channels are provided in conjunction with Network Reconfiguration Service as specified in Part G, DS1 to Voice central office multiplexing may be provided in all serving wire centers.

HIGH CAPACITY SERVICES (REGION 11)

F. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)

4. Alternate Serving Wire Center

An optional feature in which High Capacity Channel Terminations are provided over an alternate route to a serving wire center other than that normally serving the Customer's designated premises. The Company will designate the serving wire center to be used. The mileage used to determine the monthly rate for channel mileage is based on the normal serving wire center associated with the Customer designated premises as described in Part 0, Section 7C. This feature may also be used in conjunction with DS3 Services provided over IntelliLight® Entrance Facility (**IEF**) service, which is available under Part F. This feature is not available with Shared Use Digital High Capacity Services. (T)

When a Customer orders the Alternate Serving Wire Center Optional Feature, the Alternate Serving Wire Center Rate applies in addition to the Channel Termination and Channel Mileage Rates and Charges for each applicable High Capacity Service.

The rates for Alternate Serving Wire Center apply per point of termination.

Subject to Provision of Services and Special Construction in Part 0, Alternate Serving Wire Center will be provided within one year from receiving a Customer request in any Verizon New York Inc. exchange and in the following Verizon New England Inc. exchanges: Boston, MA; Cambridge, MA; Waltham, MA; and Providence, RI. In all other exchanges in Verizon New England Inc., the provisioning interval is within two years. In the case of special construction, the provisioning intervals are within one or two years, as specified preceding, from the date the special construction agreement is signed by the Customer.

In the event a more generic demand develops in an area, the Company will review such Special Construction cases and will make adjustments, if necessary, to the initial Customer's account.

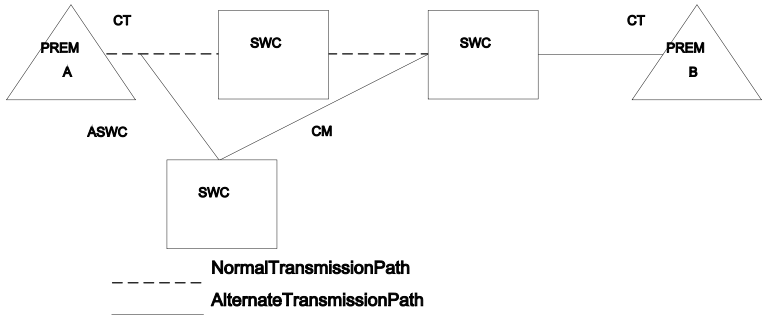
In Verizon New York Inc., a Volume Discount Plan is available with ASWC Channel Terminations for 1.544 Mbps and 44.736 Mbps High Capacity Service. The Volume Discount Plan is based on the number of channel terminations at each specific Customer's building location. When a Customer increases the number of channels with the ASWC feature, the rate will decrease.

HIGH CAPACITY SERVICES (REGION 11)

F. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)

4. Alternate Serving Wire Center (Cont'd)

Example: High Capacity Service connecting two Customer designated premises with the Alternate Serving Wire Center Optional Feature at Premises B.



---- Billed Route for High Capacity Service
---- Physical Route for High Capacity Service
CT - Channel Termination*
CM - Channel Mileage*
SWC - Serving Wire Center
ALT SWC - Alternative Serving Wire Center**

Applicable Rate Elements Are:
- Channel Termination (2 applicable)
- Channel Mileage (1 section)
- Alternate Serving Wire Center Optional feature (1 applicable)

5. Shared Billing Arrangement

At the option of the Customer, a Shared Billing Arrangement is available as specified in Part 0, Section 13.

* The Channel Mileage and Channel Termination Rates are calculated as if the Service were physically routed through the normal serving wire center.

** The Alternate Serving Wire Center Optional Feature Rate applies in addition to the Channel Mileage and Channel Termination Rates.

HIGH CAPACITY SERVICES (REGION 11)

F. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)

5. Shared Billing Arrangement (Cont'd)

Each Customer will be billed the applicable rates and charges for its individual Service(s). Except for ThruPath Service connections, the rates and charges for Central Office Multiplexing will be the responsibility of the Host Customer. For ThruPath Service connections, both the Host Customer and the Service User will be responsible for the rates and charges associated with their own Central Office Multiplexing arrangement.

Each Customer shall be responsible for reporting Service outages for its portion of the multiplexed Service. Out of service adjustments will be handled in accordance with Credit Allowance for Service Interruptions as set forth in Part 0, Section 2. The Maintenance of Service charge applies, as set forth in Part 0, Section 6, to the Customer whose Service is reported in trouble.

Under a Shared Billing Arrangement, the Company may share with the Host Customer record information pertaining to the multiplexed Service(s) of the Service User(s). For ThruPath Service connections, the Company may also share with the Service User record information pertaining to the multiplexed service(s) of the Host Customer(s). Such disclosure will be at the sole discretion of the Company as necessary to perform billing reconciliations or other functions required in connection with maintaining separate account records.

A Customer may request a Shared Billing Arrangement for an existing multiplexed High Capacity with an existing Service Discount Plan. The terms and conditions pertaining to such requests are set forth in Part H for the Service Discount Plan. (D)

Part 0, Section 13 contains the terms and conditions specific to Shared Billing Arrangement rates.

6. Enhanced Access Diversity (**EAD**)

EAD provides diversity on the transmission facilities for two or more 1.544 Mbps and 44.736 Mbps Services provided over not more than two different physical routes. The Customers with EAD will be advised of the design of each Service with EAD. This offering utilizes existing physically diverse facilities. Should facilities not be available, the Service may be subject to special construction as specified in Part 0, Section 5. The levels are described following.

a. Supreme

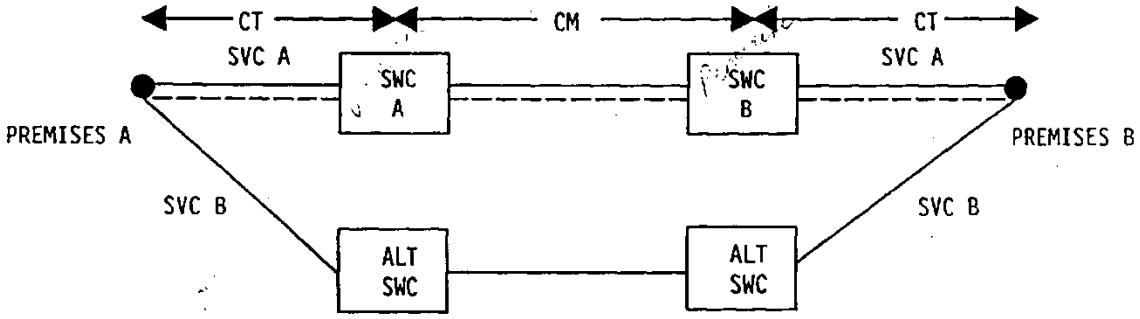
This optional feature is only available for Services with the ASWC feature and guarantees diversity of the interoffice facilities and central offices between the first manholes located outside the alternate serving wire centers.

When a Customer orders the Supreme EAD Optional Feature, the Supreme Rate applies in addition to the Channel Termination, Channel Mileage and ASWC Rates and Charges for each applicable High Capacity Service.

HIGH CAPACITY SERVICES
(Verizon New England Inc. and Verizon New York Inc.)

F. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)
6. Enhanced Access Diversity (**EAD**) (Cont'd)
a. Supreme (Cont'd)

Example: High Capacity Service connecting two Customer Designated premises with the Supreme EAD and ASWC Optional Features.



———— Billed Route for both High Capacity Services
_____ Physical Routes for High Capacity Services A and B
CT - Channel Termination*
CM - Channel Mileage*
SWC - Serving Wire Center
ALT SWC - Alternate Serving Wire Center

Applicable Rate Elements Are:
- Channel Termination (4 applicable)
- Channel Mileage (2 sections)
- Supreme EAD Optional Feature for Service B (1 applicable)**
- ASWC Optional Feature for Service B (2 applicable)**

* The Channel Mileage and Channel Termination Rates are calculated as if the Service were routed through the normal serving wire center.

** The Supreme EAD and ASWC Optional Feature Rates for Service B apply in addition to the Channel Termination and Channel Mileage Rates.

HIGH CAPACITY SERVICES (REGION 11)

G. APPLICATION OF RATES AND CHARGES

(D)
|
(D)

1. Coordinated Retermination

For 1.544 Mbps/DS1 High Capacity or 44.736 Mbps/DS3 High Capacity moves of a primary circuit termination from one Company Central Office to another Company Central Office, the Customer may pay a Coordinated Retermination Charge in lieu of treating the move as a discontinuance and start of Service. The Coordinated Retermination Charge applies per circuit reterminated. The Company will coordinate the work activities required in order to minimize the length of time the Service being moved is unavailable. Monthly rates will apply as if the circuit remained in service with no disruption. There will be no change in minimum period requirements. No termination liabilities will apply except where the retermination eliminates chargeable services such as IOF mileage for which specific termination liabilities exist.

2. Mid-Link

A Mid-Link Channel Mileage nonrecurring charge applies to Channel Mileage between two Company Hubs where multiplexing and/or Enterprise Network Reconfiguration Service functions are performed.

A Mid-Link Nonrecurring Charge does not apply to a ThruPath Service connection.

For the 44.736 Mid-link Charge in Verizon New England Inc., the nonrecurring cost for the installation of service will be recovered over the first twelve months of service.

In the event that service is disconnected prior to satisfying the nonrecurring charge recovery period, the Customer shall be responsible for:

a. a nonrecurring charge liability equal to the balance of the nonrecurring charge not yet recovered. The nonrecurring charge not yet recovered will be determined by multiplying the nonrecurring liability charge by the number of months remaining in the recovery period, and

b. satisfying the minimum period requirement as set forth in Part 0, Section 9, and

c. payment of any Service Discount Plan termination liability as set forth in Part H associated with the disconnected Service.

HIGH CAPACITY SERVICES (REGION 11)

G. APPLICATION OF RATES AND CHARGES (Cont'd)

3. Service Rearrangement

a. If the change involves the rearrangement of an existing High Capacity Service or an existing multiplexed High Capacity Service into a greater bit rate High Capacity Service, into an optical fiber interface arrangement, into an Enterprise SONET Private Network Service or into Switched Access Service Interface Group 9, a Digital to Digital Rearrangement Charge will apply for each Service reconfigured. No charge applies to the multiplexed Services on the existing High Capacity Service unless the Customer changes Service types, in which case the appropriate nonrecurring charge for each change will apply.

b. If the change involves the rearrangement of an existing Company provided High Capacity Service or an existing Company provided multiplexed High Capacity Service into a Company provided High Capacity under an Expanded Interconnection Arrangement, or from one Company provided Expanded Interconnection Arrangement to another within the same Company serving wire center, an Interconnection Rearrangement Charge will apply for each Service reconfigured.