

AT&T INTERSTATE ACCESS GUIDEBOOK

PART 9 - Special Access Services - Southwest
SECTION 45 - WaveMAN?

3rd Revised Page 1

45. Wavelength Metropolitan Area Network (WaveMANSM)⁽¹⁾

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45.1 Service Description

(A) Basic Channel Description

WaveMANSM is a fiber based, point-to-point, Wavelength service that allows customers to transport SONET OC48, SONET OC192 or other optical data signals at 100 Mbps - 10 Gbps between two locations. WaveMANSM transports SONET signals at one of two rates. An OC-48 (STM16) interface will be transported at a line rate of 2.4853 (2.5) Gigabits per second, while an OC192 (STM64) interface will be transported at a line rate of 9.95328 (10) Gigabits per second (Gbps). Transparent Transport has two options. The first option allows the transmission of data between 100 Mbps - 2.5 Gbps while the other option allows the transmission of data between 2.5 Gbps - 10 Gbps. The Transparent Transport does not contain any monitoring above the physical layer.

Rates and charges for WaveMANSM Service are set forth in Section 45.2, with the exception of the services provided by the Telephone Company in the Metropolitan Statistical Areas (MSAs) in which the Telephone Company has received Phase II pricing flexibility pursuant to Subpart H of Part 69 of the Commission's Rules. The rates and charges for the WaveMANSM Service in the MSAs that have received Phase II pricing flexibility are set forth in Section 39 of this Guidebook.

(B) Service Provisioning

(a) There are four provisioning options for WaveMANSM:

1. OC-48, which provides 2.4853 (2.5) Gigabits per second transport
2. OC-192, which provides 9.95338 (10) Gigabits per second transport
3. 100 Mbps - 2.5 Gbps Transparent Transport
4. 2.5 Gbps - 10 Gbps Transparent Transport

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- (b) WaveMANSM provides physical layer transport only. The Telephone Company assumes no responsibility for the through transmission of signals generated by the CPE, for the signals by the CPE, or address signaling to the extent the CPE performs addressing. Error detection and correction of data generated by the CPE is the customer's responsibility.

WaveMAN Transparent Transport Service options are available in two transmission speeds: 100 Mbps to 1.25 Gbps, and 2.5 Gbps to 10 Gbps. The following chart lists the interfaces available and examples of the customer generated digital optical signals that can be transported for each speed:

Bandwidth	Interface to Customer (Wavelength in nm)	Type of Fiber	Example Speeds of Customer Generated Digital Signals Transported:
100 Mbps to 2.5 Gbps	1310 nm, 1550 nm, Single ITU Grid (up to 1580 nm)	Single Mode; 2-Fiber interface	52 Mbps, 100 Mbps, 155 Mbps, 200 Mbps, 270 Mbps, 622 Mbps, 1.0625 Gbps, 1.25 Gbps, 2.5 Gbps
2.5 Gbps to 10 Gbps	1471/1491 nm, 1511/1531 nm, 1551/1571 nm & 1591/1611 nm	Single Mode; 2-fiber interface	100 Mbps, 155 Mbps, 200 Mbps, 270 Mbps, 622 Mbps, 1.0625 Gbps, 1.25 Gbps, 2.5 Gbps, 10 Gbps

- (c) The customer provided equipment (CPE) must deliver the data signals for WaveMANSM transport for the subscribed data service.

(C) Rate Conditions

WaveMANSM has seven basic rate elements. Only Local Distribution Channel (1) and Interoffice Miles (2)(A)(1), below, apply as to the Transparent transportation provisioning options. All seven rate elements apply to both OC-48 and OC-192 WaveMANSM service.

(1) Local Distribution Channel (LDC)

Local Distribution Channel (Same as Channel Termination) is the termination of WaveMANSM at a customer designated premise (node), as described in Section 7 of this Guidebook, consisting of the following two elements:

- (a) the termination equipment for the fiber optic facilities at each node and its serving wire center.
- (b) the fiber optic facility between each node and its serving wire center.

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45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd ⁽¹⁾ (C)

(2) Interoffice Mileage

Interoffice Transport facilities, which provide the transmission path between Serving Wire Centers associated with two customer designated premises, are comprised of Fixed and Per Mile rate elements.

(A) Mileage Measurement

(1) Standard Two Fiber Circuit

The mileage is calculated on the airline distance between the locations involved, i.e. the serving wire centers associated with two customer designated premises and an international boundary point, a serving wire center associated with a customer designated premise and a Telephone Company Hub, a serving wire center associated with a customer designated premise and a WATS Serving Office.

(2) Diversely Routed Circuit

Mileage measurements for Access Services provisioned via an Inter-Wire Center Diversity will be based on the special routing; i.e. mileage measurements will be calculated between the Intermediate Serving Wire Centers along the circuit path of the diversely routed WaveMANSM service.

(3) Protected Four Fiber Circuit

For protected WaveMANSM service, mileage charges are applicable on both paths of the protected service. Both Fixed Mileage and Variable Mileage rates will be applied to each fiber path. Mileage measurements for the primary path will be calculated similar to a standard circuit.

Mileage measurements for the secondary path will be based on the special routing (i.e., mileage measurements will be calculated between the intermediate Wire Centers along the circuit path of the diversely routed WaveMANSM service).

(3) Repeater

Repeaters (Circuit Regenerators) provide essential detection and retransmission of WaveMANSM signals. Repeaters are provided as required by the Telephone Company when actual fiber facility loss between customer designated premises and/or central office locations exceed design limits. Repeaters will be located exclusively in Telephone Company central offices.

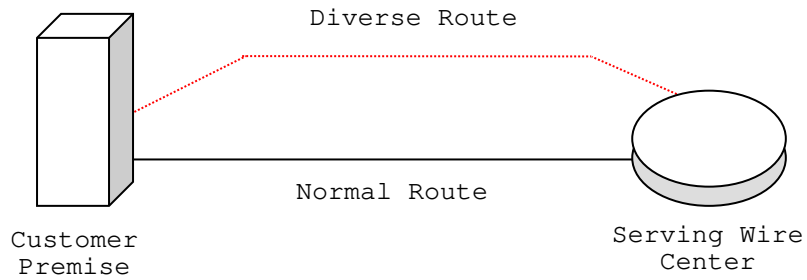
When protection options are ordered, as set forth in Section 45.1(J), additional repeaters may be necessary on the protected path as determined by the Telephone Company. The Repeater rate element will be applied to a protected circuit per fiber pair.

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(4) Local Channel Diversity

Local Channel Diversity provides for a transmission path between a designated customer premises and the standard Serving Wire Center (SWC) that is diverse from the normal/standard transmission path. With this arrangement, one or more local distribution channels will be provisioned over the standard route and one or more local distribution channels will be provisioned over the diverse route. Local Channel Diversity requires two circuits. Local Channel Diversity can be requested between a WaveMANSM circuit and a DecaMAN®, GigaMAN® or FibreMAN circuit. Local Channel Diversity does not provide for all diversity, it only allows for diversity from the splice point closest to the customer's property line to the SWC. If a customer desires full diversity, arrangements must be made for constructing dual entrance facilities into the customer's premises, at the customer's expense.



(5) Inter-Wire Center (IWC) Diversity

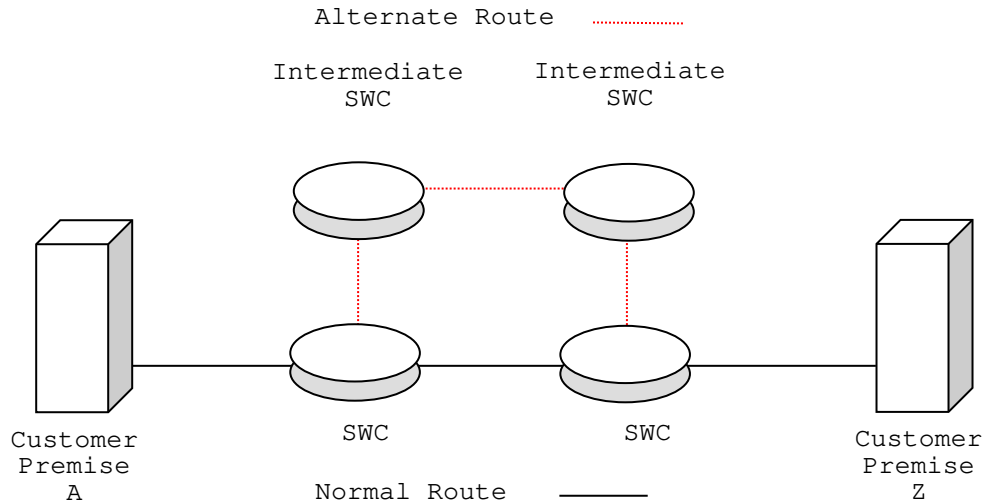
Inter-Wire Center (IWC) Diversity arrangements presume that each end of a WaveMANSM local distribution channel is served out of a different Serving Wire Center (SWC).

This arrangement provides a transmission path for WaveMANSM local distribution channels between the customer's designated SWC and the SWC at the distant end of the circuit over a transmission path that is separate from the standard transmission path between the two wire centers. IWC diversity requires two circuits. IWC diversity can be requested between a WaveMANSM circuit and a DecaMAN®, GigaMAN®, or FibreMAN circuit. IWC diversity does not provide for full diversity. It only offers interoffice diversity. If a customer desires full diversity, Alternate Wire Center Diversity must be implemented along with IWC Diversity. Additionally, arrangements must be made for constructing dual entrance facilities at the customer's premises, at the customer's expense.

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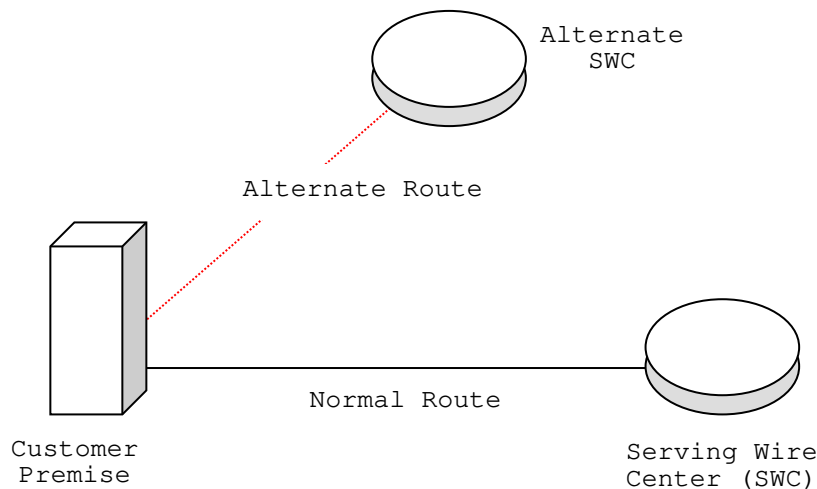
45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd⁽¹⁾ (C)

(a) Inter-Wire Center Diversity (IWC) Mileage Measurement
Described in Section 45.1(C) (2) (A) (2).



(6) Alternate Wire Center Diversity
Alternate Wire Center Diversity is for the local loop only. It provides a local channel transmission path for WaveMANSM service between the customer's designated premises and a wire center that is not the normal (or standard) SWC. The Telephone Company will choose the alternate wire center closest to the customer's designated premises that is capable of providing WaveMANSM service over the alternate route. If a customer desires full diversity, arrangements must be made for constructing dual entrance facilities into the customer's premises, at the customer's expense.

If the circuit routed to the alternative wire center has Interoffice Mileage, measurements will be based on the special routing; i.e. mileage measurements will be made to the alternate wire center rather than the serving wire center from which the customer designed premises would normally obtain dial tone.



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(7) Collocation Transport

Collocation Transport provides for the transmission facilities arrangement between a Telephone Company Central Office frame and a collocation frame located in the Telephone Company Central Office.

There are two components of Collocation Transport.

(a) Inter/Intra Office Fixed

Inter/Intra office fixed rate element provides for the electronic equipment required to terminate a channel between two collocation arrangements located either in the same Central Office (intra) or in two separate Central Offices (inter).

(b) Inter Office Per Mile

The per mile charge provides for the electronic equipment and facilities necessary to provide the interoffice transport between collocation arrangements.

The following types of collocation transport are:

- OC-48
- OC-192

In addition to one collocation transport charge, two EISCC charges will apply per collocation arrangement.

(D) Rate Elements

(1) Non-recurring Charges

Non-recurring Charges are one-time charges that apply for specific work activity related to the provisioning of WaveMANSM Service, as described in Section 7 of this Guidebook

(2) Recurring Charges

Recurring Charges are rates that apply each month, or fraction thereof, that the service is provided. Recurring rates apply to 12-, 24-, 36-, or 60- month periods under the terms and conditions of Term Pricing Plans (TPP), as described below.

(3) Monthly Extension Rates

Upon expiration of a TPP, customer's service will automatically convert to the Monthly Extension Rates unless the customer requests a new TPP, disconnects service, or converts to an alternate service.

(E) Term Pricing Plan (TPP)

WaveMANSM, excluding Transparent Transport options, is available for 12-, 24-, 36-, or 60-month term periods. If the Telephone Company initiates rate changes resulting in a decrease of rates for an existing service with a TPP, those rate changes will be passed along to the customer. Rate changes resulting in an increase of rates for an existing service with a TPP will not exceed the initial rate for that selected TPP. WaveMANSM Transparent Transport options are available for a 60-month term period only.

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(1) Renewals

At the expiration of a TPP, the customer must select one of the following options within one month prior to the expiration date:

- (a) Renew the service for a 12-, 24-, 36-, or 60- month TPP as provided in this Guidebook;
- (b) Elect to disconnect the service upon expiration of the TPP; or
- (c) Continue the service on a monthly basis at the prevailing Monthly Extension Rates.

All services under an existing TPP that are not renewed within the period stated above will revert to Option (1) (c) above and will be billed at the prevailing Monthly Extension Rates.

(2) Conversions

During the customer's TPP, term conversions may be made to a new TPP term of the same or greater length. The expiration date of the new service must be beyond the expiration date of the original TPP term. With the new TPP, the customer incurs no liability for the remaining months on the original TPP.

An Administrative Charge is applicable when customers renew or change the length of the TPP term.

(3) Termination Liability

Customers requesting termination of service prior to the expiration date of the TPP term will be liable for a termination liability charge, as described below:

Billing Period	Termination Percentage
12 Month	85%
24 Month	85%
36 Month	75%
60 Month	60%

(Monthly Recurring Rate) X (Months Remaining in Billing) X (Termination Percentage) = Termination Liability Charge

Example: A WaveMANSM Customer with a \$10,000.00 monthly recurring rate terminates service after 2 years with 1 year (12 months) remaining in a 3 year TPP. The termination liability would be calculated as follows:

$\$10,000 \times 12 \times .75 = \$90,000.00$ Termination Charge

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(F) Moves

Moves involve a change in the physical location of one of the following:

- (i) Service rearrangement;
- (ii) Point of Termination at the customer's premises; or
- (iii) Customer's premises.

Move charges are dependent upon the type of move requested by the customer.

(1) Service Rearrangement

Service rearrangements are changes to existing (installed) services, which do not result in a change in the minimum period requirements, as set forth in Section 7 of this Guidebook

(2) Moves Within the Same Building

When the move is to a new location within the same building, the Administration Charge and Customer Connection Charge for the service termination affected will apply. There will be no change in the minimum period requirements, as described in Section 7 of this Guidebook

(3) Moves to a Different Building

Moves to a different building will be treated as a discontinuance, therefore, start of service, all associated Nonrecurring Charges, and new minimum period requirements, as described in Section 7 of this Guidebook, will apply.

(4) WaveMANSM customers subscribing to 36 Month and 60 Month Term Pricing Plans may move one end of the WaveMANSM service per the following conditions:

- (a) A customer may move one end of the WaveMANSM service to a different premises in the same LATA, without incurring early termination liability charges for their existing WaveMANSM service, providing the following criteria are met, and are contingent upon the availability of fiber from premises to premises.
 - i. Customers must have completed at least 15 months (for 3 year term plan), and 18 months (for 5 year term plan) of their existing WaveMANSM contracted term plan,
 - ii. The customer subscribes to a new Term Pricing Plan period that is greater than the remaining months in the existing Term Payment Plan,
 - iii. Nonrecurring Charges will apply where applicable,
 - iv. Spare facilities and equipment must be available or special construction charges, shall apply.

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The moved service will require a disconnect of the existing WaveMANSM service and placement of an order for the new WaveMANSM service for the same customer of record as disconnected service.

The monthly rates for the new services(s) shall be those rates in effect at the time the new service(s) is being installed, requiring a disconnect of the existing WaveMANSM service and placement of an order for new WaveMANSM service.

The billing period revenue for the new service is equal to, or greater than, the billing period revenue remaining in the service being convert.

(b) The WaveMANSM service is installed without protection and customer subsequently requests protection options after the WaveMANSM order has been completed, and customer premises locations remain the same. This will require a change to the customer premises based Telephone Company equipment. This change will be treated as an upgrade to the WaveMANSM service, and a new Nonrecurring Charge is applicable. This change will require a disconnect of the existing WaveMANSM service and placement of an order for the new WaveMANSM service for the same customer of record. With this upgrade, the customer will experience an out of service condition.

(c) The WaveMANSM service was installed with protection options and the customer subsequently requests a move of the channel termination within the same building afterwards. This request may require a change to the customer premises based Telephone Company equipment, which will be determined by the Telephone Company. Nonrecurring Charges as set forth in Section 5 of this Guidebook, are applicable (one-half the Nonrecurring Charge for the channel termination). With this upgrade, the customer will experience an out of service condition.

(G) Upgrade to WaveMANSM from Other Access Products

Other Access products may not upgrade to WaveMANSM without incurring applicable Termination Liability Charges, if any, on that current access product.

(H) Modification of Access Service

The customer may request a modification of its Access Order at anytime prior to notification by SWBT that service is available for the customer's use. SWBT will make every effort to accommodate a requested modification when it is able to do so with the normal work force assigned to complete such an order within normal business hours.

If the modification cannot be made with the work force during normal business hours, SWBT will notify the customer. If the customer still desires the Access Order Modification, SWBT will schedule a new service date. All charges for Access Order modifications will apply on a per occurrence basis as described in Section 5 of this Guidebook.

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Customers with one, two, three, or five year OC-48 WaveMANSM TPPs may, at any time, upgrade to OC-192 WaveMANSM without incurring the Termination Liability Charge, providing the following criteria are met:

- i. The customer subscribes to a Term Pricing Plan period that is equal to, or greater than, 12 months;
- ii. The expiration date for the new Term Pricing Plan period is beyond the end of the original Term Pricing Plan period;
- iii. No lapse in service occurs;
- iv. 100% of any waived or unamortized Nonrecurring Charges will apply, when applicable;
- v. The monthly rates for the new service(s) will be those rates in effect at the time the new service(s) is/are installed;
- vi. The new service is provided between the same customer locations and with the same customer of record as the disconnected service;
- vii. The billed monthly recurring revenue for the new service is equal to, or greater than, the billed monthly recurring revenue remaining in the service being converted;

(J) Optional Features (Excluding Transparent Transport)

(1) Protection Options

Protection options are provisioned on the customers WaveMANSM service and the customer is not required to purchase a second WaveMANSM circuit for protection options. Protection options are applied on a per WaveMANSM circuit basis only.

Protection options are available where facilities and/or operating conditions permit. Where facilities and/or operating conditions do not permit, special construction charges may apply. Protection options provide additional levels of reliability to WaveMANSM service. There are multiple protection options offered. The options do not need to be the same, but both Channel Terminations of the WaveMANSM service must include some form of protection for the service to be considered protected.

The Telephone Company will design the protection option based upon the configuration of the customers WaveMANSM service.

Additional repeaters may be necessary on the protected path as determined by the Utility and as set forth in Section 45.1(C) (3).

Protection switching in less than 50 milliseconds will occur on WaveMANSM services with protection options, with the exception of Power Protection which is not Switch protected. Protection options are offered with a Service Level Agreement (SLA) that targets a service availability of 99.999%. SLAs are not applicable in the event of cable cuts in any unprotected portion of the WaveMANSM service fiber path, or when customer requested modifications to the service require down time.

WaveMANSM Protection Options are offered as follows:

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- (a) Equipment Only Protection - per Termination End
- (b) Equipment Plus Fiber Path Protection
 - (1) Equipment Plus Alternate Wire Center Path Protection - per Terminating End
 - (2) Equipment Plus Channel Termination Path Protection - per Terminating End
 - (3) Inter Wire Center Path Protection - per Interoffice Segment
- (c) Power Protection

(2) Equipment Only Protection

Equipment Only Protection offers one WaveMANSM signal routed on two different fiber pairs that co-exist in the same cable and conduit structure that terminate into two distinct and separate network terminating equipment devices at the customer's premises.

All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, the WaveMANSM equipment will switch, within 50 milliseconds of detection, the customer's transmission to a dedicated standby path. In the event of a failure to both fiber transmission paths, an out of service condition will result. This form of protection can only be ordered per channel termination for each protected WaveMANSM service, and may also apply to the Inter-Wire center segment if the WaveMANSM service is served by more than one serving wire center.

If a customer requests complete protection extending to the SBC serving wire center from their premises location when utilizing Equipment Protection, they must request diverse entrance facilities into their premises at each end from the nearest SBC splice point closest to the customer premises location, this work is subject to special construction charges.

(3) Equipment Plus Fiber Path Protection

Equipment Plus Fiber Path Protection offers varying degrees of path protection for each channel termination of the WaveMANSM service, plus the inter-wire segment if the service is served by more than one serving wire center, and is offered as follows:

- (a) Equipment Plus Alternate Wire Center Path Protection

Equipment Plus Alternate Wire Center Path Protection offers one WaveMANSM signal routed over one fiber pair of the protected WaveMANSM service from the customer's premises to the customer's normal serving wire center, and a duplicate WaveMANSM signal routed over a diversely routed fiber pair to the Alternate Wire center selected by the Telephone Company.

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If any location(s) between the two fiber paths is closer than ten feet, the location(s) will be disclosed to the customer. The customer will determine to accept the engineered path or agree to pay special construction charges to provide a completely diverse route where the ten foot allowance is not acceptable to the customer.

Where facilities are not available, the customer may select Equipment Only Protection for an inter-office segment. This option can be selected for one or both channel terminations of the WaveMANSM service.

All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, the WaveMANSM service will switch to a dedicated standby path within 50 milliseconds of detection. In the event of a failure to both fiber transmission paths, an out of service condition will result. This form of protection can only be ordered per channel termination for each protected WaveMANSM service.

If a customer requests complete protection extending to the SBC serving wire center from their premises location when utilizing Equipment Protection Plus Alternate Wire Center Path Protection, they must request diverse entrance facilities into their premises at each end from the nearest SBC splice point closest to the customer premise location. This work is subject to special construction charges.

(b) Equipment Plus Channel Termination Path Protection

Equipment Plus Channel Termination Path Protection offers a duplicate WaveMANSM signal routed over two diversely routed fiber paths, to the customer's normal serving wire center.

If any location(s) between two fiber paths is closer than ten feet, the location(s) will be disclosed to the customer. The customer will determine to accept the engineered path or agree to pay special construction charges to provide a completely diverse route where the ten foot allowance is not acceptable to the customer.

All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, WaveMANSM technology will switch, within 50 milliseconds of detection, the customer's transmission to a dedicated standby path. In the event of failure to both fiber transmission paths, an out of service condition will result.

This form of protection can only be ordered per Channel Termination for each protected WaveMANSM service from the customers premises location, or from the manhole/splice point nearest the customer premises), to the Utility serving wire center.

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If a customer requests complete protection extending to the SBC serving wire center from their premises location when utilizing Equipment Protection Plus Channel Termination Path Protection, they must request diverse entrance facilities into their premises at each end from the nearest SBC splice point closest to the customer premises location. This work is subject to special construction charges.

(c) Inter-Wire Center Path Protection

Inter-Wire Center Path Protection offers a duplicate WaveMANSM signal routed over two diversely routed fiber paths, between the two serving wire centers or alternate wire centers. Path protection starts at the nearest manhole outside the Telephone Company serving wire center. Inter Wire Center Path Protection must be ordered with either Equipment Only, Channel Termination Path Protection or Alternate Wire Center Path Protection.

If any location(s) between the two fiber paths is closer than ten feet, the location(s) will be disclosed to the customer. The customer will determine to accept the engineered path or agree to pay special construction charges to provide a completely diverse route where the ten foot allowance is not acceptable to the customer.

All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, WaveMANSM technology will switch, within 50 milliseconds of detection, the customer's transmission to a dedicated standby path. In the event of a failure to both fiber transmission paths, an out of service condition will result. Mileage measurements are described in Section 45.1(C) (2) (A) (3).

(d) Power Protection

Power Protection provides WaveMANSM customers with battery backup for up to eight (8) hours to maintain WaveMANSM equipment in the event of a commercial AC power failure.

Power Protection is offered on a per equipment bay capacity basis, per customer premise, and depending upon the number of WaveMANSM services for the WaveMANSM customer of record. The Telephone Company will apply the power protection rate elements based upon the circuit capacity, and more than one element may be applicable. The Telephone Company will determine the design and engineering requirements for Power Protection for WaveMANSM customers.

Customers in multi-tenant buildings will require separate equipment and bays dedicated to each customer.

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The addition of Power Protection to existing WaveMANSM service may result in temporary service interruption.

Power Protection is not available for installations using the wall mounted cabinet.

Customers are responsible for providing floor space for power equipment, as set forth in Section 2 of this Guidebook.

(K) Allowance for Service Interruptions

A Service Level Agreement (SLA) is offered with fully-protected WaveMANSM service, which provides the customer with a performance commitment that includes financial compensation if the service does not perform as described.

Service availability performance 99.999% is offered on a WaveMANSM service with protection (defined as Equipment Plus Path Protection) for every segment of the service.

If this SLA is not met, the customer will be entitled to a credit equal to 100% of the monthly rate for the period of the interruption of service affecting that rate element(s), not to exceed the total monthly charges for the services. Only one such credit in a billing period will apply.

The service is considered interrupted when the customer reports a service disruption of greater than ten (10) consecutive seconds to the Telephone Company and the Telephone Company confirms that continuity of its service has been lost.

In order to qualify for this credit, the outage must be determined by the Telephone Company to be in its network and the failure occurred in that part of the service with the protection. SLA adjustments are not available in the event of a cable cut in any unprotected portion of the WaveMANSM service fiber path, or due to customer requested modifications to the service that may require down time.

SLAs are applicable to customers who purchase Equipment Plus Alternate Wire Center Path Protection or Equipment Plus Channel Termination Path Protection on both ends of a WaveMANSM service (both channel terminations), as well as Inter-Wire Center Path Protection when applicable. The customer is responsible for notifying the Telephone Company when the service parameter within the calendar month falls below the committed level. The customer must request a service credit adjustment within 25 days after the end of the month when the failure occurred.

(L) Meet Point Arrangements

In some cases, the Telephone Company and another Incumbent Local Exchange Carrier (ILEC, sometimes also referred to as an Independent Company or ICO) may agree to jointly provide an Ethernet service where such service will be provided to locations in both the Telephone Company's and the other ILEC's serving territories within the same LATA. In such cases, the Telephone Company and the other ILEC may mutually agree to meet at a location (i.e., meet point) within the LATA utilizing facilities suitable for delivery of WaveMANSM service. The rates and charges for WaveMANSM service are applicable for the Telephone Company provided portion of such service. The Telephone Company is responsible for the ordering, provisioning, billing and maintenance of WaveMANSM service up to the meet point. See Part 2, Section 2.6, for regulations applicable to Jointly Provided Access Services.

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(N)

(N)

45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd ⁽¹⁾ (C)

45.2 Rates and Charges

(1) Recurring Charges

(a) OC-48

	USOC	Monthly Extension	Term Pricing Plan				NRC
			12 Mo.	24 Mo.	36 Mo.	60 Mo.	
(1) Local Distribution Channel							
-Per Point of Termination Terminating Bit Rate 2.5 Gbps							
-All States	TMECS	\$9,000.00	\$7,500.00	\$6,000.00	\$4,700.00	\$3,800.00	
(2) Interoffice Transport Mileage							
-Fixed							
-All States	1L5XX	\$1,400.00	\$1,100.00	\$800.00	\$600.00	\$500.00	
-Per Mile 2.5 Gbps							
-All States	1L5XX	\$425.00	\$300.00	\$260.00	\$240.00	\$200.00	
(3) Repeater							
-each	VU4	\$3,100.00	\$2,640.00	\$2,100.00	\$1,500.00	\$1,300.00	
(4) Diversity Options							
Local Channel Diversity							
-Per Channel Terminating Bit Rate 2.5 Gbps							
-All States	CPALX	\$1,400.00	\$1,200.00	\$1,000.00	\$900.00	\$800.00	\$850.00
Inter Wire Center Diversity							
-Per Channel Terminating Bit Rate 2.5 Gbps							
-All States	CPATX	\$1,050.00	\$800.00	\$700.00	\$600.00	\$500.00	\$700.00
Alternate Wire Center Diversity							
-Per Channel Terminating Bit Rate 2.5 Gbps							
-All States	CPAAX	\$2,500.00	\$1,900.00	\$1,700.00	\$1,400.00	\$1,200.00	\$950.00
(5) Protection							
-per WaveMAN SM service arranged							
-Equipment Only Protection, per terminating end	CPAEX	\$2,250.00	\$2,000.00	\$1,800.00	\$1,550.00	\$1,350.00	\$625.00
-Equipment Plus Alternate Wire Center Path Protection, per terminating end	CPAFX	\$3,700.00	\$3,050.00	\$2,750.00	\$2,400.00	\$2,100.00	\$1,400.00

(1) Effective June 30, 2021, this Service will no longer be available for purchase by new or existing customers. In addition, requests to move, add, change, or renew existing service arrangements will not be accepted. Following the expiration of a customer's existing term agreement, service will be provided on a month-to-month basis at the applicable Monthly rates until the service is discontinued. The Company currently plans to discontinue this service on or after March 30, 2024. (N)

45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd ⁽¹⁾ (C)

	USOC	Monthly Extension	12 Mo.	Term Pricing Plan			NRC
				24 Mo.	36 Mo.	60 Mo.	
-Equipment Plus Channel Termination (Local Channel) Path Protection, per terminating end	CPAGX	\$3,250.00	\$2,700.00	\$2,400.00	\$2,100.00	\$1,800.00	\$1,255.00
-Inter Wire Center Path Protection, per interoffice segment	CPAHX	\$570.00	\$450.00	\$240.00	\$180.00	\$120.00	\$625.00
-Power Protection	VBBGX	\$700.00	\$625.00	\$525.00	\$480.00	\$435.00	\$475.00

(Power Protection rate elements are applicable, as set forth in 45.1 (J) (3) (d))

(6) -Collocation Transport facilities between Collocation Arrangements

-Fixed	1H48S	\$5,200.00	\$4,100.00	\$3,250.00	\$2,800.00	\$1,800.00	
-Per Mile	1H48S	\$425.00	\$300.00	\$260.00	\$240.00	\$200.00	

(b) OC-192

	USOC	Monthly Extension	12 Mo.	Term Pricing Plan			NRC
				24 Mo.	36 Mo.	60 Mo.	
(1) Local Distribution Channel							
-Per Point of Termination Terminating Bit Rate 10 Gbps							
-All States	TMECS	\$22,770.00	\$18,000.00	\$15,000.00	\$10,500.00	\$9,000.00	
(2) Interoffice Transport Mileage							
-Fixed							
-All States	1L5XX	\$1,800.00	\$1,350.00	\$900.00	\$650.00	\$575.00	
-Per Mile 10 Gbps							
-All States	1L5XX	\$425.00	\$300.00	\$260.00	\$240.00	\$200.00	
(3) Repeater							
-each	VU4	\$7,920.00	\$6,600.00	\$5,280.00	\$3,840.00	\$3,280.00	

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45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd ⁽²⁾ (C)

	USOC	Monthly Extension	Term Pricing Plan				NRC
			12 Mo.	24 Mo.	36 Mo.	60 Mo.	
(4) Diversity Options							
Local Channel Diversity							
-Per Channel Terminating Bit Rate 10 Gbps							
-All States	CPALX	\$3,938.00	\$3,038.00	\$2,700.00	\$2,250.00	\$2,025.00	\$850.00
Inter Wire Center Diversity							
-Per Channel Terminating Bit Rate 10 Gbps							
-All States	CPATX	\$2,625.00	\$2,025.00	\$1,800.00	\$1,500.00	\$1,350.00	\$700.00
Alternate Wire Center Diversity							
-Per Channel Terminating Bit Rate 10 Gbps							
-All States	CPAAX	\$6,300.00	\$4,860.00	\$4,320.00	\$3,600.00	\$3,240.00	\$950.00
(5) Protection - per WaveMAN SM service arranged							
-Equipment Only Protection, per terminating end	CPAEX	\$9,000.00	\$8,250.00	\$7,350.00	\$6,300.00	\$5,400.00	\$3,000.00
-Equipment Plus Alternate Wire Center Path Protection, per terminating end	CPAFX	\$14,760.00	\$12,300.00	\$11,040.00	\$9,600.00	\$8,400.00	\$4,500.00
-Equipment Plus Channel Termination (Local Channel) Path Protection, per terminating end	CPAGX	\$13,140.00	\$10,950.00	\$9,900.00	\$8,550.00	\$7,350.00	\$4,200.00
-Inter Wire Center Path Protection, per interoffice segment	CPAHX	\$1,425.00	\$1,125.00	\$600.00	\$450.00	\$300.00	\$625.00
-Power Protection ⁽¹⁾	VBBGX	\$700.00	\$625.00	\$525.00	\$480.00	\$435.00	\$475.00
(6) -Collocation Transport facilities between Collocation Arrangements							
-Fixed	1H48S	\$9,600.00	\$6,700.00	\$4,800.00	\$4,200.00	\$3,800.00	
-Per Mile	1H48S	\$425.00	\$300.00	\$260.00	\$240.00	\$200.00	

(1) Power Protection rate elements are applicable, as set forth in 45.1 (J) (3) (d).

(2) Effective June 30, 2021, this Service will no longer be available for purchase by new or existing customers. In addition, requests to move, add, change, or renew existing service arrangements will not be accepted. Following the expiration of a customer's existing term agreement, service will be provided on a month-to-month basis at the applicable Monthly rates until the service is discontinued. The Company currently plans to discontinue this service on or after March 30, 2024. (N)

45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd⁽¹⁾ (C)

(c) Transparent Transport (100 Mbps - 2.5 Gbps)

	USOC	Monthly Extension	Term Pricing Plan 60 Mo.
(1) Local Distribution Channel			
-Per Point of Termination Terminating Bit Rate 100 Mbps - 2.5 Gbps	TMECS	\$9,000.00	\$3,800.00
(2) Interoffice Transport Mileage			
a) Channel Mileage -Fixed 100 Mbps - 2.5 Gbps	1L5XX	\$1,400.00	\$500.00
b) Channel Mileage -Per Mile 100 Mbps - 2.5 Gbps	1L5XX	\$425.00	\$200.00

(d) Transparent Transport (2.5 Gbps - 10 Gbps)

	USOC	Monthly Extension	Term Pricing Plan 60 Mo.
(1) Local Distribution Channel			
-Per Point of Termination Terminating Bit Rate 2.5 Gbps to 10 Gbps	TMECS	\$22,770.00	\$9,000.00
(2) Interoffice Transport Mileage			
a) Channel Mileage -Fixed 2.5 Gbps to 10 Gbps	1L5XX	\$1,800.00	\$575.00
b) Channel Mileage -Per Mile 2.5 Gbps to 10 Gbps	1L5XX	\$425.00	\$200.00

⁽¹⁾ Effective June 30, 2021, this Service will no longer be available for purchase by new or existing customers. In addition, requests to move, add, change, or renew existing service arrangements will not be accepted. Following the expiration of a customer's existing term agreement, service will be provided on a month-to-month basis at the applicable Monthly rates until the service is discontinued. The Company currently plans to discontinue this service on or after March 30, 2024. (N)

45. Wavelength Metropolitan Area Network (WaveMANSM) Cont'd⁽¹⁾ (C)

(2) Installation and Rearrangement Charges

The installation Non-recurring charges will be waived for customers purchasing a new 36 or 60 month term pricing plan. This waiver does not include moves and upgrade of services.

(a) OC-48,
Transparent Transport (100 Mbps-2.5 Gbps)

	<u>USOC</u>	<u>Nonrecurring Charges</u>
(1) Administrative Charge per Order	ORCMX	\$60.00
(2) Design Central Office Connection Charge per circuit	NRMCK	\$600.00
(3) Customer Connection Charge per Termination	NRBBL	\$1,500.00

(b) OC-192,
Transparent Transport (2.5 Gbps - 10 Gbps)

	<u>USOC</u>	<u>Nonrecurring Charges</u>
(1) Administrative Charge per Order	ORCMX	\$60.00
(2) Design Central Office Connection Charge per circuit	NRMCK	\$600.00
(3) Customer Connection Charge per Termination	NRBBL	\$1,500.00

⁽¹⁾ Effective June 30, 2021, this Service will no longer be available for purchase by new or existing customers. In addition, requests to move, add, change, or renew existing service arrangements will not be accepted. Following the expiration of a customer's existing term agreement, service will be provided on a month-to-month basis at the applicable Monthly rates until the service is discontinued. The Company currently plans to discontinue this service on or after March 30, 2024. (N)