

# **UNBUNDLED DARK FIBER**

## **SERVICE DESCRIPTION**

1.0 As a result of the Massachusetts Department of Telecommunications and Energy's Phase 3 and Phase 4-N Orders in the Consolidated Arbitrations (D.P.U. 96-73/74, 96-75, 96-80/81, 96-83 and 96-94), Bell Atlantic-Massachusetts (BA-MA) is required to offer dark fiber as an unbundled network element (UNE) to Competitive Local Exchange Carriers (CLECs) in Massachusetts. Unbundled Dark Fiber will be offered in Massachusetts to CLECs in the manner described herein in order to comply with the Department's Orders.

1.1 Unbundled Dark Fiber is defined as a continuous fiber optic strand within an existing, in-place fiber optic cable sheath owned by BA-MA that a CLEC may access at existing splice or termination points. Establishment of applicable fiber optic transmission equipment or intermediate repeaters needed to power the Unbundled Dark Fiber in order to transmit information is the responsibility of the CLEC. A strand is not considered continuous if splicing is required to provide fiber continuity between locations. If a fiber strand can be made continuous by joining fibers at existing splice points within the same sheath, BA-MA will perform such splicing at the CLEC's request on a time-and-materials basis.

1.2 Unbundled Dark Fiber will be offered in Massachusetts to CLECs, subject to availability, solely for the purpose of their using the fiber as a transmission medium in the provision of telecommunications services. Unbundled Dark Fiber, where available, may be accessed from the CLEC's collocation arrangement at existing BA-MA hard termination points (e.g. fiber distribution frames, industry standard mechanical fiber connectors) or, as directed by the Department's Orders, at existing splice points. Unbundled Dark Fiber will be offered in a minimum quantity of two (2) fibers.

1.3 BA-MA will make available for lease existing, in-place, spare dark fiber as Unbundled Dark Fiber to CLECs under contractual agreements and on a "first come, first served" basis. Reservations are not accepted for Unbundled Dark Fiber. BA-MA will not construct new or additional facilities to satisfy a CLEC's request for Unbundled Dark Fiber.

1.4 The Bell Atlantic Telecom Industry Services Operations Center (TISOC) will be the single point of contact for all Unbundled Dark Fiber requests. The CLEC must submit a written request designating the two locations between which Unbundled Dark Fiber is desired and the quantity of Unbundled Dark Fiber pairs requested. Each request must specify two (2) locations only; additional locations will require additional requests.

Upon receipt of the CLEC's written request, BA-MA will initiate a review of its cable records to determine whether spare dark fiber may be available for lease as Unbundled Dark Fiber between the locations and in the quantities specified in the CLEC's request, subject to field verification as outlined in 1.9 below. BA-MA will respond within ~~fifteen~~ ~~(15)~~ five (5) business days from receipt of the CLEC's request, indicating whether Unbundled Dark Fiber may be available based on the records search except that for voluminous requests or large, complex projects, BA-MA reserves the right to negotiate a different interval. BA-MA will also provide an estimate of the applicable rates and charges for Unbundled Dark Fiber when the records indicate spare dark fiber may be available.

1.5 Upon written request of a CLEC, BA-MA will create a fiber layout map for a BA-MA wire center based on its existing records. The map will show the routes within the wire center where there are existing BA-MA fiber cable sheaths. The maps are available to a CLEC for preliminary design purposes only. The CLEC must submit a request to the TISOC as set forth in section 1.4 above for the purpose of BA-MA undertaking a review of its cable records to determine whether spare dark fiber may be available for lease as Unbundled Dark Fiber between locations and in the quantities specified by the CLEC.

A CLEC's written request for a fiber layout map for a wire center shall be sent to the Service Delivery Engineer (SDE) in the TISOC. BA-MA will charge the CLEC requesting the map on a time and material basis for all work performed by BA-MA in connection with creating the map. Where such work reflects incremental changes to previously created maps, BA-MA's charges shall reflect only the incremental work required. Before undertaking any work to create the map and within five (5) business days of receipt of a written request, BA-MA will provide the CLEC with a written estimate of the time and cost associated with creating the map. ~~BA-BA-MA~~ BA-MA will proceed with the work to create the map only upon receipt of the CLEC's written authorization and full payment of the estimated charges. Upon completion of the work to create the map, BA-MA will provide the CLEC with a final statement of the total costs incurred to perform the work and either issue a bill or provide a credit for the difference between the

estimated and actual costs. Nothing herein shall prevent a group of CLECs from joining together to make a joint request in order to share benefits and costs of the fiber layout map.

BA-MA will provide the fiber layout map to the CLEC subject to a non-disclosure agreement. Said agreement shall limit disclosure to personnel of the CLEC that have a need for fiber layout information solely for the purpose of designing the CLEC network

If another CLEC submits a written request for a fiber layout map for the same wire center, BA-MA will provide the map to other CLEC subject to the same non-disclosure agreement. Before undertaking any work to reproduce and update the map, BA-MA will provide the CLEC with a written estimate of the time and cost associated with providing the map. BA-MA will proceed with the work to reproduce and update the map only upon receipt of the CLEC's written authorization and full payment.

1.6 In order to maintain network survivability and reliability of the BA-MA network, BA-MA will reserve a reasonable quantity of fibers in a cable, based on the Department's Orders, to be designated as maintenance spares. These spares will not be available for lease as Unbundled Dark Fiber. BA-MA will reserve up to five percent of fibers in a sheath with a minimum of two fibers reserved in cables with 12 to 24 fibers and no more than 12 reserve fibers in larger fiber cables. If BA-MA denies a request for dark fiber and has reserved fibers in excess of these amounts for maintenance spares, BA-MA shall inform the CLEC in writing that it is doing so and the reasons therefore. The dispute resolution procedures set forth in the interconnection agreement will then govern any ensuing disagreement between the CLEC and BA-MA. If experience with this approach proves unsatisfactory over the next two or three years, BA-MA will suggest revisions.

1.7 BA-MA will not reserve fiber pairs for unknown and unspecified future growth. As directed by the Department's Phase 3 Order, BA-MA will not reserve fiber pairs unless such fibers have been "installed or allocated to serve a particular customer in the near future". ~~unless pairs are required to serve a customer from whom a specific order was received.~~

1.8 In the event no spare fiber exists, other than fiber that has been reserved by BA-MA in accordance with Sections ~~1.6 and~~ 1.7, BA-MA will so notify the requesting CLEC as soon as practical. The CLEC may request documentation supporting BA-MA's determination that existing, spare fiber is not available for lease as Unbundled Dark Fiber. BA-MA will provide a copy of the service order and such other documentation which may include, at BA-MA's sole option, copies of its records or information extracted from its records, omitting all proprietary or confidential information. Such documentation will be provided within ~~thirty (30)~~ five (5) business days of the CLEC's request for the documentation, except that for voluminous requests or large, complex projects, BA-MA reserves the right to negotiate a different interval. The CLEC will be billed a non-recurring charge for cable documentation per request to reimburse BA-MA for the costs incurred in providing the CLEC with the documentation described in this provision.

1.9 BA-MA makes no representation or warranty regarding the accuracy or completeness of its cable records. At the CLEC's option, per the terms of individually negotiated contracts, BA-MA will initiate a field survey to verify the availability of dark fiber pairs for lease as Unbundled Dark Fiber, and that such fiber pairs are not defective or have not been used by field personnel for prior emergency restoration activity. In addition, as part of the field survey, the fiber pairs requested by the CLEC will be tested by placing a light source on the individual fibers and measuring the end-to-end loss utilizing industry standard fiber optic test equipment. The test results will be documented and provided to the CLEC. The applicable rates and charges estimated in 1.4 will also be confirmed at the conclusion of the field survey, and the CLEC will be informed of any modifications to the preliminary rate quote. When a field survey is performed, the CLEC will be billed a non-recurring charge on a time-and-materials basis, ~~regardless of the outcome of the survey.~~ unless the field survey indicates that the information based on cable records was inaccurate. The interval for the field survey will be negotiated based upon the number of locations and quantity of fiber pairs requested.

1.10 The CLEC may proceed to order Unbundled Dark Fiber any time following completion of the request and/or field survey. However, since spare fiber is available to satisfy other requests on a first-come, first-served basis, BA-MA is not responsible if the fiber is utilized before the CLEC places its order. BA-MA will notify the CLEC if the spare fiber is utilized within 60 days of being notified of spare fiber availability.

1.11 Should the CLEC decline the field survey described in 1.9 above and place an order for Unbundled Dark Fiber based solely on the information contained in BA-MA's cable records, the CLEC assumes all risks of relying on such records including, but not limited to, service order charges and/or order cancellation charges if it is subsequently determined during the implementation process that Unbundled Dark Fiber is not available.

1.12 BA-MA's sole obligation is to provide Unbundled Dark Fiber, where available, that conformed to BA-MA standard transmission characteristics at the time the fiber was installed. It is the CLEC's responsibility to determine that the transmission characteristics of the Unbundled Dark Fiber provided by BA-MA will accommodate the CLEC's transmission requirements and loss budget. BA-MA will not re-terminate or re-splice fibers in order to improve the transmission characteristics of Unbundled Dark Fiber. Time-and-materials charges will apply if the CLEC requests BA-MA to re-test the fibers subsequent to the field survey described in 1.9 above, except that no such charges shall apply if the second test demonstrates that the results of the first test are in error. In cases where a field survey is declined by the CLEC, as described in 1.9 above, initial or subsequent testing of the fiber to determine actual transmission requirements will be performed at the CLEC's request on a time-and-materials basis. If the CLEC subsequently determines the Unbundled Dark Fiber provided by BA-MA is not suitable, the CLEC must submit a request to disconnect the Unbundled Dark Fiber.

1.13 The transmission characteristics of the Unbundled Dark Fiber cannot be guaranteed to remain constant over time. Cable restoration or network rearrangements that require additional field splices may result in additional loss being introduced. The CLEC assumes all risks associated with the unforeseen introduction of future splices.

1.14 When the CLEC places an order for Unbundled Dark Fiber, the CLEC will be billed a non-recurring service order charge for the initial pair of fibers between the two (2) locations specified in the CLEC's request. In addition to the service order charge, appropriate time-and-materials charges will be billed to the CLEC to recover the work efforts involved with the initial review of BA-MA's records.

The CLEC will also be billed a monthly rate that consists of a fixed monthly charge per fiber pair, per serving wire center, and a monthly rate per fiber pair, per tenth of a mile. The mileage used to determine the monthly rate for Unbundled Dark Fiber is based on airline mileage utilizing the Vertical and Horizontal (V&H) coordinate method between the locations to which the facility is provisioned. When the calculation results in a fraction smaller than one tenth of a mile, the mileage will be rounded up to the next tenth of a mile before applying the rates.

1.15 In a BA-MA central office, BA-MA will provide Unbundled Dark Fiber hard termination at a fiber distribution frame (FDF). BA-MA will provide appropriate cross-connections at such FDFs to the completed collocation node augmented with fiber terminations at their POT bays. (Appropriate recurring monthly charges will apply: Service Access Charge (SAC) with physical collocation and Interconnection Access Charge (IAC) with virtual collocation.) In addition, when BA-MA provides intermediate cross-connection(s) at a FDF in intermediate BA-MA central office(s) to accommodate a CLEC's request, an Unbundled Dark Fiber Intermediate Cross-Connection recurring charge will apply.

1.16 BA-MA will not introduce additional splice points to accommodate a CLEC's request. All work required to be performed at an existing splice location will be performed by BA-MA personnel. In the case of interconnection at an existing splice point, BA-MA, using current BA-MA approved splicing methods, will connect to a fiber optic cable provided, installed and maintained by the CLEC. All rights-of-ways, conduit, duct, and pole space for the CLEC-provided cable are to be secured by the CLEC at the CLEC's expense. Any additional BA-MA costs incurred to gain access to an existing splice point and to perform a splice or related work will be billed to the CLEC on a time-and-materials basis. To the extent any governmental or private property permit, easement, or other authorization or approval is required for access to Unbundled Dark Fiber, such as to open manhole covers, the CLEC is responsible for obtaining such permit, easement, or authorization. In the case where the fiber terminates at an FDF in a building telco room, the CLEC will be responsible for installing a demarcation point, such as a fiber patch panel, for BA-MA to terminate the fiber. BA-MA will install a jumper from its FDF to the fiber patch panel installed by the CLEC.

1.17 If BA-MA believes that a request by a CLEC for lease of Unbundled Dark Fiber would strand an unreasonable amount of fiber capacity, BA-MA reserves the right to petition the Department for relief from its obligation to provide Unbundled Dark Fiber.

BA-MA also reserves the right to seek relief from its obligation if a request for Unbundled Dark Fiber would result in service disruption or degradation of service provided to other customers or carriers.

1.18 In leasing Unbundled Dark Fiber, the CLEC accepts the environmental risks inherent in outside plant construction. In the event BA-MA must perform emergency cable restoration to its own facilities, all efforts will be made to restore the CLEC's leased Unbundled Dark Fiber pairs in the same manner as other fibers in the same cable sheath using BA-MA standard restoration procedures. Upon notification by BA-MA, the CLEC must also agree to cooperate with BA-MA for normal cable maintenance activity (e.g., cable rearrangements, etc.). BA-MA agrees to compensate CLECs for their time and materials required for such activities.

1.19 BA-MA will commence billing the applicable non-recurring and recurring rates for Unbundled Dark Fiber upon completion of the service order on the requested due date. The CLEC may submit to the TISOC a written supplement to the original ASR requesting a change of service date for the Unbundled Dark Fiber request, but the new service date may not exceed the original service date by more than 30 calendar days. The CLEC will be billed a non-recurring Service Date Change Charge to delay the start of the service.

If the CLEC's requested service date is more than 30 calendar days after the original service date, or if the CLEC is unable to accept the Unbundled Dark Fiber within 30 calendar days of the original service date, the CLEC's order for the Unbundled Dark Fiber will be canceled by the TISOC representative on the 31<sup>st</sup> day with the appropriate Cancellation Charges as defined in Section 1.20. In addition, the pairs requested on the canceled order(s) will not be reserved for the CLEC and will be returned to available inventory.

1.20 Cancellation charges billed to the CLEC include appropriate service order charges in addition to any time-and-materials charges for installation work performed and other expenses incurred on behalf of the CLEC's request(s) up to and including the day the cancellation is received or the order is canceled by BA-MA per the terms of Section 1.19.

## TIME & MATERIALS BILLING

(When Applicable)

WORK GROUP		USOC		WORK FUNCTION		
		Field Survey	Testing	Splice	Records Review (Section 1.9)	Fiber Layout Map (Section 1.5)
		(Section 1.9)	(Section 1.12)	(Section 1.16)		
NTE <sup>1</sup> Planning	TM1DA	X	X	X	X	X
NTE <sup>1</sup> Design	TM1DB	X	X	X	X	X
NTE <sup>1</sup> Technician	TM1DC	X	X	X	X	X
C.O. Frame Technician	TM1DD	X	X			X

<sup>1</sup> NTE - Network Transport Engineering (Used generically to represent all outside plant work groups involved in the planning, design, and implementation of fiber optic cable.)