Crown Castle Fiber LLC

Competitive Access Provider

Tariff Format

A. Page

Issuance Date: December 15, 2016 Effective Date: January 15, 2017

Issued By: David Mayer, EVP, General Counsel

cc. Fernanda Biehl

196 Van Buren Street, Suite 250

Herndon, VA 20170

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1 General

- 1.1 Explanation of Symbols
 - (C) To signify "Change"
 - (D) To signify "Decrease"
 - (I) To signify "Increase"
- 1.2 Application of the Tariff
 - 1.2.1 This tariff governs the Company's intrastate telecommunications services that originate and terminate in the Commonwealth of Pennsylvania. Specific services and rates are described elsewhere in this tariff.
 - 1.2.2 The Company's services are available to business customers.
 - 1.2.3 The Company's service territory is the Commonwealth of Pennsylvania.
 - 1.2.4 The rates and regulations contained in this tariff apply only to the intrastate competitive access services furnished by the Company and

Issued Date: July 10, 2018 Effective Date: July 11, 2018
Issued By: Fernanda Biehl, Manager, Regulatory Affairs – Fiber (C)

cc. Michelle Salisbury 2000 Corporate Drive Canonsburg, PA 15317 Tel.: (703) 434-8533

Email: fernanda.biehl@crowncastle.com

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2.2 Obligations of the Customer

- 2.2.1 The Customer shall be responsible for:
 - 2.2.1.1 The payment of all applicable charges specified in Service Orders executed by the Customer and for charges due pursuant to this tariff.
 - 2.2.1.2 Reimbursing the Company for damage to, or loss of, the Company ¶ facilities or equipment caused by the act

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2.2.3 The Customer is responsible for ensuring that Customer-provided equipment connected to Company equipment and facilities is compatible with such equipment and facilities. The connection, operation, testing, or maintenance of such equipment shall b

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2.5 Application for Service

- 2.5.1 Minimum Contract Period
 - 2.5.1.1 Except as otherwise provided, the minimum contract period is one year for all services furnished.
 - 2.5.1.2 The Company may require a minimum contract period longer than one year in connection with special arrangements or construc.98 3[t)]TJETBT1 0 0 1 342.07 583.66c3.66 TmtETBT1m[.06 1 Tf9s44.8

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2.10 Overcharge/Undercharge

- 2.10.1 When a Customer has been overcharged, the amount shall be refunded or credited to the Customer.
- 2.10.2 When a Customer has been undercharged, the amount shall be billed to the Customer.
- Customer Complaints and Billing Disputes 2.11
 - Customers must notify the Company of billing or other disputes in writing within sixty (60) days of the receipt of the invoice and shall provide detailed information regarding any such disputed amounts. amounts disputed in good faith shall not be due and payable until such dispute is resolved as provided herein. All billed amounts not disputed in good faith and in writing by Customer within such sixty (60) days may not be disputed by Customer. All undisputed amounts are due and payable by the due date. The Company's Customer Service representatives may be contacted at:

(C) 2000 Corporate Drive (C) Canonsburg, PA 15317 Toll-free Telephone: (888) 583-4237 Attn: Accounts Receivable Department

2.11.2 The Company shall respond to billing disputes submitted to it pursuant to paragraph 2.11.1 within sixty (60) days after the Company's receipt of the same. If the Company denies the dispute then the Customer shall pay the disputed amount but may appeal the decision to the Commission.

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2.13 Dishonored Check Charge

A Dishonored Check Charge applies when any negotiable instrument presented for payment for service or deposit becomes dishonored, and is returned to the Company from the bank.

The Dishonored Check Charge is \$50 per instrument, per return. This charge is in addition to late payment charges.

2.14 Special Customer Arrangements

In cases where a Customer requests special or unique arrangements which may include but are not limited to engineering, conditioning, installation, construction, facilities, assembly, purchase or lease of facilities and/or other special services not offered under this tariff, the Company, may provide 1 time/or eques

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3.3 Trial Services

The Company may offer new services, not otherwise tariffed, from time to time on a trial basis subject to Commission approval where required. Such trials are limited to a predetermined period of time specified by the Company. At the Company ¶ Voption, and if permitted by Commission rules, a letter outlining the trial service may be filed with the Commission in lieu of tariff language.

4 Description of Services

4.1 SONET Service

4.1.1 Service Description

4.1.1.1 General

SONET Service provides high speed, synchronous optical fiber-based, full duplex data transmission capabilities. The Service is provisioned over the Company ¶ \shared SONET network and provides customers with SONET-based broadband access transport with the following capabilities.

DS3 Transmission services operating at the

terminating bit rate of 45 Mbps

OC3, OC3c or STM-1 Transmission services operating at the

terminating bit rate of 155.52 Mbps

OC12, OC12c Transmission services operating at the

terminating bit rate of 622.08 Mbps

OC48, OC48c Transmission services operating at the

terminating bit rate of 2,488 Mbps.

OC192, OC192c Transmission services operating at the

terminating bit rate of up to 9,953 Mbps

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Protected Digital DS1

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Ethernet LAN (E-LAN):

A VLAN based meshed service providing many-to-many services with dedicated or service-multiplexed UNIs. E-LAN supports transparent LAN service and multipoint Layer 2 VPNs. Bandwidth ranges from 3Mbps to 5Gbps.

Metro-E Advanced Private Line (MAPL):

A dedicated point-to-point switched Ethernet service provided within a metro area over dedicated fiber transport. Bandwidth ranges from 1Gbps to 10Gbps.

External Network to Network Interface (E-NNI)

An interconnection point between the Provider and Customer Ethernet networks as defined in MEF Specification 26. E-NNI is typically delivered as a 1Gbps or 10Gbps port.

4.2.1.2 Terms and Conditions

4.2.1.2.A Ethernet 5436c[t)21 271.61 398.47 Tm[5436c[t)21 2.243i85)21 54 TJETB

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4.2.1.3 Rates and Charges

4.2.1.3.1 Non-Re

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4.3 Wavelength Service

4.3.1 Service Description

4.3.1.1 General

Wavelength Service uses Wave Division Multiplexing (WDM) technology and involves unique optical signals that are multiplexed and transmitted over a single fiber. At the receiver end, the composite signal is de-multiplexed and the individual unique signals are recovered. Wavelength Service can be delivered as protected or unprotected based on the end user requirements. Wavelength Service includes, without limitation, the following service types:

Point-to-Point:

Wavelength Service is delivered between two endpoints over Company ¶ V : '0 network using a variety of protocols (Ethernet, SONET, Fiber Channel), in bandwidths ranging from 1Gbps to 100Gbps.

Managed Private Optical Network (MPON)

Managed Private Optical Networks are delivered between two or more endpoints using private fiber and private equipment, in bandwidths ranging from 1Gbps to 100Gbps.

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