01/22/2021

NEWPORT-MESA UNIFIED SCHOOL DISTRICT
WIDE AREA NETWORK (WAN) SERVICE
E-RATE YEAR 24 (2021/2022)

Prepared for: Jonathan Geiszler
RFP Number: 116-21
Proposal submitted by: Crown Castle Fiber LLC

Shannon Stanton
Client Service Manager
Crown Castle
624 S Grand Ave, Suite 2500, Los Angeles, CA 90017
(213) 204-7416
Shannon.Stanton@CrownCastle.com

The pathway to possible.
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January 22, 2021

Jonathan Geiszler
NEWPORT-MESA UNIFIED SCHOOL DISTRICT
2985 Bear St., Bldg. A, Costa Mesa, California 92626
RE: Wide Area Network Service RFP #11 6-21

Dear Mr. Geiszler:

Crown Castle Fiber LLC, a wholly owned subsidiary of Crown Castle International Corporation, owns and operates more than 40,000 cell towers and 80,000 fiber route miles, supporting small cells and fiber-based solutions across the U.S. We have 25 years of experience building and maintaining the communications infrastructure behind the world’s most revolutionary technologies. Our comprehensive portfolio of towers, small cells, and fiber gives people and communities access to essential data, technology, and wireless services.

We partner with communities: wireless carriers; technology companies; wholesale providers; federal, state, and local municipalities; schools and universities; and others to design and deliver unique infrastructure solutions. As more devices come online and new advancements like 5G are deployed, Crown Castle’s towers, small cells, and fiber assets will provide the connectivity to make these transformative technologies possible.

The Crown Castle Fiber network offers unparalleled local density and route diversity. We’re also one of the only fiber providers that can operate in the power space with diverse power line routes throughout most of our footprint. This makes it possible for customers to have diverse routing for mission critical services. Crown Castle offers our customers a complete suite of fiber-based networking solutions, including Dark Fiber, Ethernet, Wavelengths, SONET, Video, Internet Access, and Collocation. We also provide Fixed Wireless and CBRS solutions.

With over 5,000 employees, we work closely with our customers to build a solution that allows them to run their organizations today, while setting the stage for tomorrow’s most transformative innovations. Through organic growth, strategic mergers and acquisitions, and an unwavering commitment to customer support and satisfaction, Crown Castle has positioned itself as a top provider of mission critical networking and broadband services with end-to-end fiber.

This proposal/offer is valid and irrevocable for sixty days after the RFP closing date. Any required work will be completed on or before the District’s required completion date. Please note any applicable Crown Castle legal clarifications in “Section e” of this response and reference our Master Telecommunications License Agreement and Ethernet Supplement.

Thank you for giving us the opportunity to participate in the Newport-Mesa Unified School District RFP.

Very truly yours,

Troy Knuckles
VP Fiber Sales
b. DESCRIPTION OF FIRM, K12 EXPERIENCE, AND E-RATE EXPERIENCE

Company Profile

Crown Castle Fiber LLC, the bidding entity here, is a wholly owned subsidiary of Crown Castle International Corp., an S&P 500 company that is dedicated to long-term ownership and operation of communications infrastructure. Crown Castle owns and operates approximately 40,000 cell towers and 80,000 route miles of fiber supporting small cells and fiber solutions across every major US market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service – bringing information, ideas and innovations to the people and businesses that need them. Custom built networking solutions tailored to specific customer needs enable the highest levels of diversity, security, and protection.

Company Experience

Crown Castle is a fiber solutions provider with a 25-year history of owning and operating communications infrastructure across the country. We work closely with our customers to build a solution that allows them to run their organizations today, while setting the stage for tomorrow’s transformative innovations. Through organic growth, strategic mergers and acquisitions, and an unwavering commitment to customer support and satisfaction, Crown Castle has positioned itself as a top provider of mission critical networking and broadband services utilizing end-to-end fiber connectivity.

Crown Castle’s network also offers unparalleled local density and route diversity. Crown Castle is also proud to be one of the only fiber providers who can operate in the power space and diverse power line routes throughout most of our footprint. This makes it possible for customers to have diverse routing for their mission critical services. Crown Castle offers customers a complete suite of fiber-based networking solutions including Dark Fiber, Ethernet, Wavelengths, SONET, Video, Internet Access, Collocation, DDoS, SD-WAN Fixed Wireless, and Managed Security.

Crown Castle is committed to providing exceptional support and care to customers while ensuring industry-leading levels of service and reliability for their networks. At a time when the fiber industry is going through great changes, we’re committed to be a dependable, stable partner that you can count on today, tomorrow, and for many years to come. Since we own our entire fiber network, we are directly invested in its integrity and can provide faster response times and issue resolution.

Crown Castle continually receives the highest marks and reviews in the industry for our operations and customer support. Since 2009, Atlantic-ACM has ranked us first in the industry in categories including Network Performance, Provisioning, and Customer Service.

Your District, Our Expertise

Today’s modern classrooms and libraries use advanced technologies and applications that require high-performing network solutions. As a long-standing E-rate partner across every major US market and connectivity to more than 500 school districts and libraries, we have a depth of experience and expertise you can count on. And with our broad range of both lit and dark fiber solutions, we are in the best position to help you build and maintain exactly the network you need today and in the future.
Why Crown Castle?

Expertise:
- We are a certified E-rate Program Provider with experience implementing and managing both lit and dark fiber solutions for K-12 schools.

Consultation:
- We take the time to carefully consider all your needs and deliver a solution that meets your business requirements and opens new opportunities.

Service:
- We have locally based service teams who are available to you whenever you need them, and with our around-the-clock Network Operations Center, you can be sure your network will always be in good hands.

Streamlined solution:
- With a single point of contact, you'll always know who to reach out to for all your network needs.

E-Rate Expertise

E-rate, the schools and libraries Universal Service support mechanism, provides discounts to assist eligible schools and libraries in the United States in obtaining affordable telecommunications and internet access solutions. With participation in the E-rate program for over 18 years and dedicated E-rate personnel, we are experts in the field aiding our customers to participate in the program through a seamless process. One of Crown Castle's prime missions is to provide fiber-based WAN services for academic institutions through this E-rate program. Crown Castle currently serves over 500 educational institutions and is among the top 10 service providers across the country for E-rate funding.

Bidding entity: Crown Castle Fiber LLC
SPIN (498 ID) # 143005274
FCCRN # 0006-2544-03

Green Light Status

FRN Financial
NEWPORT-MESA USD

Crown Castle Financial Summary

We are a wholly owned subsidiary of Crown Castle International Corp., a Delaware corporation ("CCIC"). CCIC is an S&P 500 company and is a publicly traded company on the New York Stock Exchange (NYSE: CCI).

Key Financial Information about CCIC:

- A Fortune 500 company with approximately 5,000 employees nationwide
- Total assets and net assets of approximately $38.48 billion & $11 billion, respectively, as of December 31, 2019
- Total annualized net revenues of $5.773 billion, as of December 31, 2019
- Total market capitalization of approximately $72 billion, as of November 30, 2020

## Response Highlights

<table>
<thead>
<tr>
<th>HIGHLIGHT</th>
<th>YES/NO</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Owned Fiber</td>
<td>YES</td>
<td>All fiber spans/routes included in the Crown Castle response are owned and maintained by Crown Castle.</td>
</tr>
<tr>
<td>Dedicated Project Team</td>
<td>YES</td>
<td>Crown Castle will provide a dedicated Project Management team that will assist you from start to finish, providing timely updates throughout the deployment of the new Network.</td>
</tr>
<tr>
<td>Implemented Networks of Similar Scope</td>
<td>YES</td>
<td>Crown Castle has deployed and is currently managing several large enterprise customers of similar size and scope.</td>
</tr>
</tbody>
</table>
| Competitive Advantages                   | YES    | - Crown Castle has extensive expertise and is solely focused on designing and deploying large, complex data networks for commercial corporations across all verticals, and other network providers.  
- Crown Castle designs networks for optimal latency measurements.  
- Crown Castle operates its own fiber plant and is not reliant on other network providers. We design our networks without reliance on carrier Central Offices.  
- Crown Castle core competency is building fiber into customer locations to create a complete design for the managed service.  
- Crown Castle will provide an experienced implementation team and 7x24x365 post cutover NOC support.  
- Crown Castle has standardized and offered the Ciena DWDM platform for years with over (800) Ciena 6500 Nodes deployed in our footprint. |
Account Management

The Crown Castle team provides dedicated support for the proposed solution from Point of Sale through Implementation. We work hard to design solutions that not only meet today's needs, but also provide scalability for tomorrow's transformative innovations. Here in Southern California and across the nation, our customers include:

- Schools and Universities
- Federal, State, and Local Governments
- Enterprises and Corporations
- Wireless Service Providers
- Carriers

Sales

Jon Rosen – Government & Education Overlay
Anthony Rasco - Director Government & Education
Michelle Kavey - Head of Government & Education
Jeff Henderson – Regional Director Enterprise Sales
Dave Hurwitz – Head of Enterprise Sales

Engineering

Frank Eck - Sales Engineer
Jeff Sloan - Manager Sales Engineering
Erik Labutti - Regional Director Sales Engineering
Michael Gracheck - Complex Solutions Engineer
Andre Rivera - Manager of Complex Solutions
Massimo Cardarelli - Head of Sales Engineering

Client Services

Shannon Stanton - Client Services Manager
  - POC for Billing, MAC's, and account-related inquiries

Nicole Jackson - Manager of Enterprise Client Services
Michael Nicolosi - Head of Client Services

Service Management

(TBD) - Project Manager
Christine D'Angelo - Manager Enterprise Project Delivery
Janet Valencia - Regional Manager Project Delivery
Darrin Smith - Head of Project Delivery

Additionally, Crown Castle has a Southern California-based team of qualified technicians and engineers to install, test, and troubleshoot circuits and services.
c. E-RATE ELIGIBLE COSTS

Total Cost of Ownership over 60 Month Term

District Hub plus 34 School Sites

1Gbs
$2,550,000

10Gbs
$2,550,000

40Gbs
$8,160,000

100Gbs
$8,160,000

Please reference the Cost Sheet in Section H of this response for additional details.
d. ABILITY TO SUPPORT REQUIREMENTS OF THIS RFP

Crown Castle’s Ethernet Benefits

Crown Castle’s Ethernet services combine the reliability and ubiquity of Carrier Ethernet with next-generation metro area transport technology. The result is services that deliver an efficient, fully restorable, easily managed network that’s ready for any vertical or application requirement. Additionally, the natural flexibility of Carrier Ethernet allows you to decide the amount of bandwidth you need to support your applications within your budget now with the assurance that it can scale in the future.

Crown Castle’s business Ethernet solutions include Metro-E Advanced Private Line, E-Line, Ethernet Virtual Private Line (EVPL), and Ethernet Private LAN (E-LAN). With support for Layer 2 point-to-point, point-to-multipoint, and multipoint-to-multipoint topologies, Crown Castle enables you to seamlessly extend your Ethernet network from your building into the metro area and beyond.

Crown Castle’s private, diverse fiber backbone, along with protected access options, provides a robust solution set for your business continuity requirements. Our extensive Ethernet service footprint offers a total solution for businesses with a presence in multiple cities.

Crown Castle’s skilled Network Operations Center (NOC) technicians proactively monitor the network 24x7 to ensure reliability and responsiveness.

Crown Castle’s Ethernet service includes:

- No protocol conversion is required, ensuring interoperability between LAN and MAN, simplifying installation & turn-up.
- Easier installation and management allow for rapid provisioning compared to other platforms.
- Flexible bandwidth allows you to grow as your business needs grow. Scalable for long term network evolution connectivity. Resilient, high availability core transport services for high reliability.
- Standards-based IEEE Ethernet service for Layer 2 transport.
- 802.1Q VLAN and 802.1 QinQ tunnelling supported.
- MEF 9 and MEF 14 certified technology.

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>METRO-E ADVANCED PRIVATE LINE</th>
<th>E-LINE</th>
<th>EVPL, E-LAN</th>
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<tbody>
<tr>
<td>Technology</td>
<td>Layer 2 Ethernet over private fiber</td>
<td>Layer 2 Ethernet over DWDM or fiber</td>
<td>Layer 2 Ethernet over MPLS or fiber</td>
</tr>
<tr>
<td>Throughput</td>
<td>1Gbps - 10Gbps</td>
<td>50Mbps - 100Gbps</td>
<td>10Mbps - 10Gbps</td>
</tr>
<tr>
<td>Interface</td>
<td>10 GigaE</td>
<td>GigE or 10 GigaE</td>
<td>GigE or 10 GigaE</td>
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<tr>
<td>Framing</td>
<td>Jumbo Frames up to 9100</td>
<td>Jumbo Frames up to 9100</td>
<td>Jumbo Frames up to 9100</td>
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<tr>
<td>Network</td>
<td>24/7 monitoring and surveillance</td>
<td>24/7 monitoring and surveillance</td>
<td>24/7 monitoring and surveillance</td>
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<tr>
<td>Management</td>
<td>Metro configurations</td>
<td>Long-haul and metro configurations</td>
<td>Long-haul and metro configurations</td>
</tr>
<tr>
<td>Network Options</td>
<td>Available at most on-net locations throughout the Crown Castle network</td>
<td>Available at most on-net locations throughout the Crown Castle network</td>
<td>Available at most on-net locations throughout the Crown Castle network</td>
</tr>
<tr>
<td>Availability</td>
<td>Point-to-point</td>
<td>Point-to-point</td>
<td>Point-to-point point-to-multipoint; multipoint-to-multipoint</td>
</tr>
<tr>
<td>Architecture</td>
<td>Point-to-point</td>
<td>Point-to-point</td>
<td>Point-to-point point-to-multipoint; multipoint-to-multipoint</td>
</tr>
</tbody>
</table>
CCF POPs are designed for network fault tolerance and performance reliability:

- Multiple POEs
- Diverse DC power plants with generator back-ups
- 24x7x365 physical access to the facilities
- Dedicated electrical circuits from the public utility company
- Environmentally controlled spaces
- UPS electrical power back-ups

CCF MPLS routers and switches at aggregation and core POPs are equipped with maximum hardware redundancy, including:

- A switched core architecture that provides resiliency and backbone efficiency
- Aggregation switches to help conserve ports on core routers
- Dual routing engines
- Redundant switch control boards
- Redundant power modules
- Redundant fan trays

**Crown Castle Products & Services**

We provide a wide array of Products and solutions including:

- Dark Fiber P2P, P2MP, and Rings
- Wavelengths
- Metro Private Optical Networks for Layer 1 and Layer 2 Services
- Ethernet P2P, P2MP/EVPL, and ELAN
- Dedicated Internet Access
- SD-WAN
- DDOS
- Cloud Connectivity
- Video Transport
- Fixed Wireless
- CBRS
- Collocation

Some of our Products in development include:

- Bandwidth on Demand (Wavelengths, Ethernet, DIA)
- Managed Security
- Edge Computing
- NFV
NEWPORT-MESA USD

Logical Diagram

Newport Mesa District Office 2985 Bear St, Costa Mesa, CA (HUB)

Adams 2850 Clubhouse Dr, Costa Mesa
Andersen 1900 Port Seabourne Wy, Newport Beach
Back Bay/ Monte Vista 390 Monte Vista Ave, Costa Mesa
California 3232 California Ave, Costa Mesa
College Park 2380 Notre Dame Rd, Costa Mesa
Corona del Mar 2101 Eastbluff Dr, Newport Beach
Costa Mesa 2650 Fairview Rd, Costa Mesa
Davis 1050 Arlington Dr, Costa Mesa
Early College 2990 Mesa Verde Dr, Costa Mesa
Eastbluff 2627 Vista del Oro, Newport Beach
Ensign 2000 Cliff Dr, Newport Beach
Estancia 2322 Placentia Ave, Costa Mesa
Harbor View 900 Goldenrod Ave, Corona del Mar
Harper Pre-School 425 E 18th St, Costa Mesa
Kaiser 2130 Santa Ana Ave, Costa Mesa
Killybrooke 3155 Killybrooke Ln, Costa Mesa
Lincoln 3101 Pacific View Ln, Corona del Mar

Lindebergh 220 23rd St, Costa Mesa
Mariners 2100 Mariners Dr, Newport Beach
Newport 1327 W Balboa Blvd, Newport Beach
Newport Coast 6655 Ridge Park Rd, Newport Coast
Newport Harbor 600 Irvine Ave, Newport Beach
Newport Heights 300 E 15th St, Newport Beach
Parsons 2352 Canyon Dr, Costa Mesa
Paularino 1060 Paularino Ave, Costa Mesa
Pomona 2051 Pomona Ave, Costa Mesa
Presidio 1001 Presidio Square, Costa Mesa
Rea/Besset Center 661 Hamilton Ave, Costa Mesa
Sonora 966 Sonora Rd, Costa Mesa
TeWinkle 3224 California Ave, Costa Mesa
Victoria 1025 Victoria St, Costa Mesa
Whittier 1800 Whittier Ave, Costa Mesa
Wilson 801 Wilson Ave, Costa Mesa
Woodland 2025 Garden Ln, Costa Mesa
Fiber Routes
Implementation Services Plan

Project Managers (PMs) are responsible for managing the delivery of services to Crown Castle customers. The PM role is comprised of four stages - Order Validation, Order Kickoff, Service Provisioning and Order Completion.

Project Managers (PMs) will:

- Coordinate and lead customer meetings, including customer kick-off calls and regularly scheduled customer status update calls.
- Manage the activities of internal Crown Castle operational and engineering groups to ensure proper planning, communications, and implementation of solutions.
- Communicate customer requirements to other project stakeholders to achieve required results.
- Perform critical path analysis for projects to identify and manage all aspects of the service deployment and mitigate identified risks.
- Develop a relationship with the customer and serve as the primary point of contact for project status and deliverables.
- Resolve issues in a timely fashion as they present themselves during the project interval.
- Upon project completion ensure project documents are complete, accurate, and archived appropriately. Deliver all required customer turn-up documentation to identified point of contact.

Project Plan

Summarized below are the “key” milestones and activities that make up a significant portion of the implementation timeline for network installation. The plan below is flexible, and Crown Castle can adjust to meet the needs of the customer should you desire to meet with a project manager and other project team members more or less often.

“Key” milestones associated with the Project Plan:

**Kickoff meeting:** Once a signed contract is received, the designated project manager is assigned to the project and will schedule a kickoff meeting with all parties involved in the installation. Timelines and milestones will be discussed and agreed upon. Space and electrical requirements will be discussed for each individual site. Priority sites will be identified and receive precedence. Ongoing updates will be provided by the assigned project manager.

**Aerial Network Extensions:** This activity covers all required engineering, design, and documentation, the formal Right of Way and Municipal consent applications and approvals and the physical installation of the fiber optic cabling on utility infrastructure.

**Building Entry Construction:** Crown Castle will perform site surveys and document all engineering and construction work required to physically install the fiber optic network including outside conduit and inside extended wiring.
NEWPORT-MESA USD

**Splicing Termination and Testing:** This activity takes place once construction of the aerial network and building entries are completed. Proposed WAN undergoes testing, acceptance and turn up.

**Turn Over and Billing:** Crown Castle will coordinate all testing of the network with the customer. Once the WAN is performing as contracted, Crown Castle will turn over the network to the customer and initialize billing.

Each of the above milestones includes numerous activities that will be completed by Crown Castle across the design/engineering and construction of the network:

**System Design/Engineering**

Crown Castle shall provide complete design services. These services be:

**Fiber Route:** The Fiber Route consists of all buildings, streets, poles, conduits and manholes used for routing connectivity. The routing includes:

- Overall Route Survey
- Trunk and Lateral Cabling Distances
- Pole & Span Measuring
- Conduit Evaluations
- Drafting and Strand Maps
- Ownership Submittals

**Make Ready:** Make Ready consists of all engineering and submittals for making the system compliant with the utilities guidelines for attaching or having fiber cable in the communications space. The make ready engineering specify:

- Cable Clearances
- Utility Pole Replacement
- Conduit and Pole Permits

**Service Entrance:** Service Entrance Engineering determines where the service enters and terminates in a structure. The Service Entrance Engineering include:

- Service Entrance Surveys
- Service Entrance Drawings

**System Construction**

Crown Castle shall provide all construction and make ready necessary to establish the service. The following procedures will be taken prior to installation:

- Develop a comprehensive overall design package
- Obtain all necessary permits
- Organize and direct pre-construction meetings
- Obtain all necessary insurance and bonding
Our services during the installation phase includes:

- Initial Project kick-off review meeting with the customers project staff
- Site visits with the customers project staff
- Contract schedule and equipment delivery monitoring
- Shop drawings and submittals review
- System design updates
- Make-ready pole work
- Demarcation extensions in each building to the predetermined equipment rack location
- System stranding and accessories
- Optical cabling and accessories to provide single mode fiber to each building
- Splicing
- Final system testing
- Power Meter
- OTDR

**Loss Estimates:** The Loss Estimates will be calculations based on the actual field conditions that will show the estimated loss and dispersion characteristics for each link. The calculations show:

- Fiber Optic Attenuation
- Fiber Optic Connector Loss
- Splice Loss
- Total Passive System Attenuation
- Chromatic Dispersion (ICB)

**Test and Accept Example**

At the completion of the Fiber Engineering and Provisioning tasks, Field Operations will be dispatched to complete the required Customer Premise Equipment (CPE) installation and RFC 2544 testing of the circuit (sample RFC testing below). Crown Castle’s dedicated Test and Turn Up group will work with Field Operations in the testing stages and with the customer for turn-up and acceptance.
**RFC 2544 Ethernet Test Report**

<table>
<thead>
<tr>
<th>Configuration Name</th>
<th>lg test</th>
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</thead>
<tbody>
<tr>
<td>Customer</td>
<td>NYSE-Buronext</td>
</tr>
<tr>
<td>Technician</td>
<td>Adam Cohen</td>
</tr>
<tr>
<td>Location</td>
<td>777 Central Blvd</td>
</tr>
<tr>
<td>Comments</td>
<td>36244-et</td>
</tr>
<tr>
<td>Date</td>
<td>09/28/2012</td>
</tr>
<tr>
<td>Time Start</td>
<td>04:54:17 PM</td>
</tr>
<tr>
<td>Time End</td>
<td>05:09:46 PM</td>
</tr>
<tr>
<td>RFC 2544 Mode</td>
<td>Symmetric</td>
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<tr>
<td>Test Instrument Name</td>
<td>T-BERD/MTS5800</td>
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<tr>
<td>Serial Number</td>
<td>WMDF0100820045</td>
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<tr>
<td>Software Revision</td>
<td>BERT 3.0</td>
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RFC 2544 Ethernet Test Report

**Test Set Setup**

<table>
<thead>
<tr>
<th>Termination</th>
<th>1GigE Layer 2 Traffic Term</th>
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</thead>
<tbody>
<tr>
<td>Pause Advrt</td>
<td>Both</td>
</tr>
<tr>
<td>FDX Capable</td>
<td>Yes</td>
</tr>
<tr>
<td>HDX Capable</td>
<td>Yes</td>
</tr>
<tr>
<td>Framing</td>
<td>DIX</td>
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<tr>
<td>Encapsulation</td>
<td>None</td>
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<tr>
<td>Source Address</td>
<td>00:80:16:6A:69:90</td>
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<tr>
<td>Destination Address</td>
<td>00:80:16:6A:69:9D</td>
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**Auto Negotiation Status**

<table>
<thead>
<tr>
<th>Capability</th>
<th>Status</th>
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<tbody>
<tr>
<td>Pause Capable</td>
<td>Both Rx and Tx</td>
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<tr>
<td>FDX Capable</td>
<td>Yes</td>
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<tr>
<td>HDX Capable</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Test Configuration

<table>
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<tr>
<th>Tests to Run</th>
<th>Throughput Latency (RTD)</th>
<th>Frame Loss Rate</th>
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<tbody>
<tr>
<td>Maximum Test Bandwidth</td>
<td>1000.00 Mbps</td>
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<tr>
<td>Frame Lengths</td>
<td>128, 512, 1024, 1280, 1518, 9100</td>
<td></td>
</tr>
<tr>
<td>Bandwidth Measurement Accuracy</td>
<td>To within 0.01 Mbps</td>
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<tr>
<td>Throughput Zeroing-in Process</td>
<td>RFC 2544 Standard</td>
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<tr>
<td>Throughput Frame Loss Tolerance</td>
<td>0%</td>
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<td>Throughput Trial Duration</td>
<td>20 seconds</td>
<td></td>
</tr>
<tr>
<td>Throughput Pass Threshold</td>
<td>Not Selected</td>
<td></td>
</tr>
<tr>
<td>Number of Latency (RTD) Trials</td>
<td>2 trials</td>
<td></td>
</tr>
<tr>
<td>Latency (RTD) Trial Duration</td>
<td>20 seconds</td>
<td></td>
</tr>
<tr>
<td>Latency (RTD) Load</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Latency (RTD) Pass Threshold</td>
<td>Not Selected</td>
<td></td>
</tr>
<tr>
<td>Frame Loss Test Procedure</td>
<td>RFC 2544</td>
<td></td>
</tr>
<tr>
<td>Frame Loss Trial Duration</td>
<td>20 seconds</td>
<td></td>
</tr>
<tr>
<td>Frame Loss Bandwidth Granularity</td>
<td>100 Mbps</td>
<td></td>
</tr>
</tbody>
</table>

RFC 2544 Ethernet Test Report

Throughput Test Results:

![L1 Throughput Chart](image-url)
RFC 2544 Ethernet Test Report

Latency (RTD) Test Results:

![Latency (RTD) Chart]

<table>
<thead>
<tr>
<th>Frame Length (Bytes)</th>
<th>Latency (us)</th>
<th>Measured L1 Rate (Mbps)</th>
<th>Measured L1 (%) of Line Rate</th>
<th>Measured Rate (frms/sec)</th>
<th>Pause Detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>128</td>
<td>247</td>
<td>999.96</td>
<td>99.996</td>
<td>844561</td>
<td>No</td>
</tr>
<tr>
<td>512</td>
<td>250</td>
<td>999.96</td>
<td>99.996</td>
<td>234953</td>
<td>No</td>
</tr>
<tr>
<td>1024</td>
<td>254</td>
<td>999.96</td>
<td>99.996</td>
<td>119727</td>
<td>No</td>
</tr>
<tr>
<td>1280</td>
<td>256</td>
<td>999.96</td>
<td>99.996</td>
<td>96150</td>
<td>No</td>
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<tr>
<td>1518</td>
<td>258</td>
<td>999.97</td>
<td>99.997</td>
<td>81272</td>
<td>No</td>
</tr>
<tr>
<td>9100</td>
<td>319</td>
<td>999.99</td>
<td>99.999</td>
<td>13706</td>
<td>No</td>
</tr>
</tbody>
</table>
Estimated Installation Timeline

OSP construction and splicing are required at some locations. Offset OSP installation intervals for single locations average between 120 (Aerial) - 150 (Underground) calendar days after the execution of a signed agreement. Please keep this in mind so we can meet your target dates.

Estimated Time Frames:

- Day 1 - Order signed
- Day 3 - Order verified and is in the system, task assignments begin
- Day 20 - Initial engineering package to build laterals completed, submit to APS, & local Agencies
- Day 35 - Engineering of fiber splicing and patch installation completed, assign tasks to splicing teams, schedule for after lateral build is completed
- Day 45 - Follow up on new lateral applications, work through any concerns that any of the various agencies have
- Day 50 - Verify BOM with vendor, place order for appropriate fiber termination panels
- Day 55 - Receive approval for build of new laterals, finalize construction designs, and submit orders to 3rd party construction firm
- Day 60 - Lateral builds begin
- Day 80 - Schedule splicing to coincide with completion of lateral builds
- Day 110 - Lateral builds complete
- Day 120 - Splicing complete, OTDR testing of fibers can begin
- Day 125 - Testing of fibers complete, test results recorded
- Day 135 - Hand-over of network to customer
- Day 145 - Customer accepts network, billing begins

Once a location is On-net, standard market estimated installation intervals are:

- Service to new floor or suite within an On-net building: 50 Calendar Days
- New fibers to On-net suite in the building: 45 Calendar Days
- New lit service but no new fiber is required: 30 Calendar Days
- New dark service but no new fiber is required: 40 Calendar Days
- Fiber builds and splicing for new locations that are currently Off-net: Estimated installation interval will be provided at time of quote
Crown Castle Customer Center Portal

The Customer Center portal provides around the clock access to information about your services from Crown Castle, including Billing, Orders, Services, Support and your Account Team contacts. Below are some sample screen shots.
NEWPORT-MESA USD

Services Screen: Circuit View example. Click any circuit to see specific Service Details

Orders Screen: Here you will find pending and completed order information. Need status of a current order? Simply click on the Order# in column 1 and it will then show all information pertaining to that order.

ORDERS:

Advance/Go Back by page when searching numerous records

Use advanced search features to sort or filter by status. Contact your CSM for order type definitions.
NEWPORT-MESA USD

Support Screen: This section of the site will allow you to create a new ticket, view pending and closed tickets, and interact directly with the NOC via integrated messaging.

NOC Messaging Screen: Create Notes and view comments history.
Service Utilization Statistics Screen: Utilization graphs are real-time statistics that allow you to monitor and manage your E-Line and Internet service bandwidth more effectively. You will be able to see your information in easy-to-view graphs, and you can display your information across multiple time periods:

**SERVICE DETAILS: S113731**

<table>
<thead>
<tr>
<th>Service Number:</th>
<th>S113731</th>
<th>Service Status:</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Category:</td>
<td>Ethernet</td>
<td>Service Type:</td>
<td>E-Line</td>
</tr>
<tr>
<td>Service Speed:</td>
<td>200Mbps</td>
<td>Billing Start Date:</td>
<td>04/13/2017</td>
</tr>
<tr>
<td>Circuit ID:</td>
<td>26111-ET-COLNYXK-NYPLNYAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Location(s):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z Location(s):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start Time (GMT):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End Time (GMT):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submit

***The above utilization graph is only an example. The Service Utilization Statistics Screen varies in certain Crown Castle Markets.***

These graphs are useful for:
- Long Term Capacity Planning - Analyze your bandwidth across time to plan long-term resource allocation across your entire network.
- Short Term Capacity Management - View real-time graphs to understand how data is traversing your network and optimize your connections accordingly.
- End-User Experience Management - Make sure your internal customers are satisfied by detecting performance fall-off early and taking preemptive action to resolve service degradations before end-users are impacted.
- Non-Intrusive Visibility - Unlike other network reporting tools, Crown Castle Network Statistics does not need an in-line probe. The equipment that we deliver your bandwidth on supports Network Reporting.
- Executive Reporting - Provide easy-to-view graphs of your network to your internal customers.

Crown Castle Utilization Bandwidth graphing is just one more tool that Crown Castle provides. It empowers you and your organization to more effectively deploy, manage, solve, and optimize your network environment.
Network Management Services for Monitoring and Alerting

Geographic Diverse Locations

Generator & UPS Protected Facilities
On-Net Network Connectivity

- Boxborough, Massachusetts
- Melville, New York
- Rochester, New York
- Doral, Florida

Trouble Ticket Management

- 24x7 Onsite Management Support
- Tier I & II Troubleshooting
- Incident Management
- Customer Communications & Escalations
- Technical Support Engineers
- Tier III Troubleshooting
- Vendor TAC Engagement
- Engineering Engagement

Network Operations Center Systems and Tools

IBM Tivoli NETCOOL Network Management System

- Automation & Enhancements
- Alarm Filtering
- Alarm Enrichment
- Backbone Topology MAPS
- Customizable, dedicated customer alarm views

Microsoft Dynamics CRM Ticketing System

- Automation & Enhancements
- Automatic Notification upon ticket creation
- Standardize Templates for Communication
- Automatic Ticket Assignments
- Automated management escalation of unresolved Trouble tickets

Systems & Tools

- Microsoft CRM
- NETCRACKER
- OSP Insight GIS System
- Operations Data Warehouse
- Traffic / Taper Reporting Tool

Root Cause Analysis
Network Investigations
Performance Metrics
Customer SLA Reporting

Major Incident Management (BCDR Activation)

Process Development and Improvement

Chronics
Reporting
BCDR
Process
Customers may report problems by:

- Calling our NOC: 855-93-FIBER
- Via Email: FiberSupport@crowncastle.com
- Through the CCF Portal

Priority descriptions and response times are:

**Priority 1**: Services are down or severely degraded to the point of unusable. Continuous effort is applied until services are restored.

- Time to repair: 4 hours
- Status Update Frequency: 1 hour

**Priority 2**: Services are in simplex condition (working or protect path down, but still operational) or service is errored but not to the point of service disrupting. Efforts made to restore service would be limited to those efforts that will not worsen the condition. Service affecting repair efforts would be reserved for scheduled, agreed upon, maintenance windows.

- Time to repair: 6 hours
- Status Update Frequency: 2-4 hours

**Priority 3**: Non-Service affecting issues, requests for information, root cause analysis of previous service disruption that has cleared, requests for changes to service.

- Time to repair: 8 hours
- Status Update Frequency: 8 hours

Please reference the NOC Escalation List below:

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>Name</th>
<th>Email</th>
<th>Office #</th>
<th>Cell #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Shift Managers</td>
<td>On Duty</td>
<td><a href="mailto:fibersupport@crowncastle.com">fibersupport@crowncastle.com</a></td>
<td>Primary: 1-855-93-FIBER</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td>Manager, NOC Operations</td>
<td>Tommy Fay</td>
<td><a href="mailto:Thomas.Fay@crowncastle.com">Thomas.Fay@crowncastle.com</a></td>
<td>(631) 300-3783</td>
<td>(516) 987-3578</td>
</tr>
<tr>
<td>3rd</td>
<td>Manager, NOC Operations</td>
<td>Steve Cassianos</td>
<td><a href="mailto:Steve.Cassianos@crowncastle.com">Steve.Cassianos@crowncastle.com</a></td>
<td>(212) 337-4083</td>
<td>(646) 745-4023</td>
</tr>
<tr>
<td>4th</td>
<td>Sr. Manager, NOC Operations</td>
<td>Miles O'Shaughnessy</td>
<td>LiLies.O'<a href="mailto:Shaughnessy@crowncastle.com">Shaughnessy@crowncastle.com</a></td>
<td>(631) 300-3781</td>
<td>(631) 774-2412</td>
</tr>
<tr>
<td>5th</td>
<td>Director, Network Assurance</td>
<td>Steve George</td>
<td><a href="mailto:Stephen.George@crowncastle.com">Stephen.George@crowncastle.com</a></td>
<td>(978) 268-9370</td>
<td>(781) 254-8795</td>
</tr>
<tr>
<td>6th</td>
<td>Vice President, Network Operations</td>
<td>Sheldon Jordan</td>
<td><a href="mailto:Sheldon.S.Jordan@crowncastle.com">Sheldon.S.Jordan@crowncastle.com</a></td>
<td>(786) 701-7404</td>
<td>(305) 206-2976</td>
</tr>
<tr>
<td>7th</td>
<td>Vice President, Network Engineering &amp; Operations</td>
<td>Chris Levendos</td>
<td><a href="mailto:Chris.Levendos@crowncastle.com">Chris.Levendos@crowncastle.com</a></td>
<td>(914) 906-1067</td>
<td>(914) 906-1067</td>
</tr>
</tbody>
</table>
Crown Castle Business Continuity

Today, there are many steps already being taken and actions defined within Crown Castle’s standard operating policies and procedures that serve or act as business continuity guidelines.

- Diversity in Network Operations Centers from a systems and connectivity perspective, as well as geography.
- All NOC systems are supported by secondary power supplies, both UPS and generator.
- All NOC technicians are equipped with full remote secure logins and voice capability for remote access in all regions to perform their duties and responsibilities.
- Each region maintains maintenance spares depot for all core equipment technology hardware deployed within the network and region. Lessens our dependency on the manufacturer and decreases MTTR (mean time to repair).
- Operations team has a clear escalation and call-out policy and plan that is updated and reviewed weekly to determine coverage and back-up requirements.
- Emergency call-out agreements with retainer fees are established with prime vendors in all regions for support of the physical plant. This includes spare components and fiber cable to handle any network impact.
- All network equipment configurations are backed up and archived to facilitate immediate restoration in the event of network element failure.
- Establish a crisis conference bridge for all updates and information sharing during any event.
e. PROPOSED CONTRACT TERMS AND CONDITIONS

Definitive Agreement—Exception/Clarification: Crown Castle Fiber LLC (CCF) proposes to contract pursuant to its standard terms and conditions contained in its Master Telecommunications License Agreement and related Ethernet Supplement (the “Agreement”), a copy of which is included with its RFP response. CCF requests the services and products described in the RFP be provided under the terms and conditions set forth in the Agreement as finally negotiated between and executed and delivered by the parties (the “Definitive Agreement”). All references in the RFP to the “agreement” or the “contract” shall mean the Definitive Agreement. In interpreting the agreement between the parties, the Definitive Agreement shall control and take precedence over the terms and conditions of the RFP and the RFP response. In the event, the District requires the use of the agreement contained in the RFP, additional exceptions/clarifications are outlined below. In the event, the District’s contractual terms contained in the RFP are in conflict with the proposed Agreement, CCF would like to further negotiate.

Service Level Agreement—Clarification: All service metrics, repair timeframes, and credits will be governed by the Definitive Agreement. To the extent there is a conflict between the RFP’s service level terms and those proposed in the Agreement, CCF takes exception.

Subcontractors—Exception/Clarification: CCF cannot, at this time, provide a list of subcontractors contemplated being used on this project or their respective experience or qualifications. Contractor availability is variable and CCF does not know what contractor availability might be for a prospective project. CCF selects vendors prior to the work being commenced based upon, among other things, the type of work required, the complexity thereof, the availability of contractors and CCF’s recent experience therewith. As a result, CCF is unable to provide a complete list of the vendors/subcontractors it would ultimately utilize for this project in the event it is awarded there to. If the project is awarded to CCF, it will provide a list of contemplated contractors as well as their experience and qualifications upon request.

Growth Clause—Exception/Clarification: CCF is willing to increase the service capacity of any individual circuit in the network. Upon such request and mutual agreement, both parties will execute an amendment to the Definitive Agreement, which shall, among other things, provide the MRC per circuit and the NRC, if any, associated with such request. For individual circuits receiving the upgrade, there must be at least twelve (12) months remaining term of the service after completion of the upgrade.
MASTERTELECOMMUNICATIONS LICENSE AGREEMENT

LICENSEE: ____________________________
Address: ________________________________________________________________
State of Organization: _______________________

This MASTER TELECOMMUNICATIONS LICENSE AGREEMENT is effective as of the last date of execution below ("Effective Date") by and between CROWN CASTLE FIBER LLC ("Crown Castle" or "Company"), and Licensee (as named above). This Master Telecommunication License Agreement and any and all Supplements (as defined herein) and exhibits hereto are collectively referred to as the "Agreement". Crown Castle and Licensee are collectively referred to as the "Parties" or individually as a "Party".

1. PRODUCTS, ORDER FORMS, AND SUPPLEMENTS.

1.1 Products and Order Forms. This Agreement applies to each telecommunications facility, or product, provided or licensed by Crown Castle to Licensee (each a "Product"). Each Product will be specified in an order form executed by the Parties (each an "Order Form"). Purchase orders issued by Licensee shall not be deemed to amend, modify or supplement this Agreement or any Order Form issued hereunder and shall not be legally binding on Crown Castle unless otherwise agreed in writing by Crown Castle.

1.2 Supplements. From time to time, the Parties may execute one or more supplements to this Agreement that may contain technical specifications, service level objectives, and other terms and conditions applicable to specific types of Products (each a "Supplement"). Upon execution by the Parties, each such Supplement shall be incorporated into this Agreement.

1.3 Crown Castle Affiliates. At Crown Castle’s option, Products may be provided or licensed by Crown Castle, or by an Affiliate of Crown Castle. Any charges or other amounts received by the Crown Castle under this Agreement, to the extent attributable to Products provided or licensed by an Affiliate of Crown Castle, shall be received by the Crown Castle in its capacity as an agent on behalf of such Affiliate. Internet access will be provided by Crown Castle’s Affiliate, Crown Castle Fiber Enterprise LLC. In addition, Order Forms may be executed by an Affiliate of Crown Castle, and in such event, any and all references to "Crown Castle" herein shall be deemed to be a reference to the applicable Affiliate of Crown Castle that executed such Order Form. The term "Affiliate" as used hereunder shall mean, with respect to either Party, any entity controlled by, in control of, or under common control with such Party.

2. TERM.

2.1 Agreement Term. The term of this Agreement commences on the Effective Date, and continues through the later of (i) five (5) years from Effective Date, or (ii) latest expiration of active Order Forms, unless earlier terminated as provided herein. This Agreement is a set of general terms and conditions, and does not obligate either Party to provide or pay for any Product other than as reflected in a particular Order Form executed by the Parties.

2.2 Product Term. The term (each a "Product Term") for each Product begins on the Acceptance Date (as defined below) applicable to such Product, and remains in effect until the expiration of the initial Product Term specified in the applicable Order Form unless earlier terminated as provided herein. The Product Term shall automatically extend for consecutive one-year renewal terms, unless either Party notifies the other of its intent not to renew at least ninety (90) days prior to the expiration of the then-current initial or renewal Product Term.

2.3 Acceptance Date. The "Acceptance Date" for each Product shall be the earliest of (a) the date on which Licensee delivers written notice of acceptance, (b) the date on which Licensee begins to use the Product, other than for testing purposes, or (c) the second (2nd) business day following Crown Castle’s delivery of notice of the installation of the Product (such notice, a "Connection Notice"), unless Licensee notifies Crown Castle in writing within said two-day period of a Defect in the Product, specifying in detail the nature of such Defect. A "Defect" exists if the Product fails to perform materially in accordance with its technical specifications as set forth in the applicable Supplement ("Specifications"). Upon receipt of notice of a Defect, Crown Castle and Licensee shall work cooperatively to promptly remedy such Defect, and Crown Castle shall deliver another Connection Notice, whereupon the process described in the first sentence of this Section shall apply again. If the Acceptance Date is delayed as a result of any failure, act or omission of Licensee, Crown Castle will give Licensee written notice to cure such failure within five (5) calendar days. If Licensee fails to cure within such period, the Acceptance Date will be deemed to be the end of such five (5) calendar-day period.

3. PAYMENT TERMS.

3.1 Charges. Crown Castle will invoice Licensee for any non-recurring charge ("NRC") associated with the Product upon or after execution of the applicable Order Form. The monthly-recurring charge ("MRC") associated with the Product shall begin to accrue on the Acceptance Date of such Product. Crown Castle will invoice Licensee the MRC associated with the Product in advance, except Crown Castle
will invoice Licensee usage based charges (if any) associated with the Product in arrears. An MRC for a partial month will be pro-rated. Licensee shall be responsible for payment of the MRC for the entire Product Term specified in the applicable Order Form.

3.2. Payments; Late Payments. Licensee shall pay each invoice within thirty (30) days of the date of the invoice (the “Due Date”), without scoff or deduction. In the event Licensee fails to make any payment by the Due Date, Licensee shall pay a late charge on all past due amounts at the rate of one and one-half percent (1.5%) per month, compounded monthly (or, if lower, the maximum rate allowed by law). Further, Crown Castle shall be entitled to recover from Licensee all collection costs, including attorney fees.

3.3 Disputed Payments. Licensee may in good faith dispute charges set forth in an invoice, provided Licensee notifies Crown Castle of such dispute in writing no later than sixty (60) days after the date of the invoice. Failure of Licensee to so notify Crown Castle of any dispute shall constitute a waiver by Licensee of any dispute. In the event Licensee disputes any amount in good faith, Licensee shall submit a documented claim in writing for the disputed amount and pay the undisputed amounts in accordance with Section 3.2. Licensee shall submit all documentation as may reasonably be required to support the claim. If the dispute is resolved in favor of Licensee and Licensee previously paid the disputed amount to Crown Castle, Crown Castle will apply a credit to Licensee’s account in the amount of the dispute. If the dispute is resolved in Crown Castle’s favor and Licensee has withheld the disputed amount, Licensee must pay the disputed amount (together with the late payment charge pursuant to Section 3.2) within five (5) business days following notice of the resolution of the dispute.

4. TAXES AND FEES.

4.1 Taxes and Fees. All charges set forth in an Order Form(s) are exclusive of, and Licensee shall be responsible for and agrees to pay, any and all applicable international, federal, state and local use, excise, sales, value added, consumption, gross receipts, access, franchise and other taxes, fees, assessments, duties and surcharges (including, without limitation, any universal service fund surcharge) in connection with the provision, sale or use of the Product or facility furnished to Licensee (collectively referred to as “Taxes”). Licensee shall not be responsible for, and Taxes will not include, taxes on Crown Castle’s net income. If Licensee believes it is exempt from Taxes, Licensee shall provide Crown Castle with a valid and duly executed exemption certificate and any other information with respect to such exemption as Crown Castle may require; such certificate will be dated from the date that Crown Castle receives such certificate and additional information from Licensee. If any such exemption is ruled invalid by the tax or governmental authority for any reason, Licensee shall reimburse Crown Castle for any Taxes, including without limitation any penalties and interest, arising from or in connection with such invalid claim of exemption.

4.2 REIT Status. Licensee acknowledges that: (i) Crown Castle is directly or indirectly owned in whole or in part by an entity (“REIT Owner”) that qualifies as a “real estate investment trust” (“REIT”) under Sections 856 through 860 of the Internal Revenue Code of 1986, as amended (the “Code”); and (ii) Crown Castle and REIT Owner are therefore subject to operating and other restrictions under the Code. The Parties intend that this Agreement shall constitute a lease of the Products for purposes of Section 856 of the Code, and the Parties shall not take any position on any tax return inconsistent therewith except as required by law.

5. CROWN CASTLE EQUIPMENT AND NETWORK; LICENSEE EQUIPMENT.

5.1 Crown Castle Equipment; Crown Castle Network. The telecommunications devices, apparatus and associated equipment owned, leased, or otherwise obtained by Crown Castle to provide Products (“Crown Castle Equipment”) and Crown Castle’s fiber optic cable network and associated optical/electronic equipment used to deliver Products, whether owned, leased or otherwise obtained by Crown Castle (the “Crown Castle Network”) shall remain the sole and exclusive property of Crown Castle notwithstanding that it may be or become attached or affixed to real property, and nothing contained herein or in any Order Form grants or conveys to Licensee any right, title or interest in any Crown Castle Equipment or the Crown Castle Network. Licensee may not, and may not permit others to, alter, adjust, encumber, tamper, repair, rearrange, change, remove, relocate, or damage any Crown Castle Equipment or the Crown Castle Network without the prior written consent of Crown Castle. Licensee may not cause any liens to be placed on any Crown Castle Equipment or the Crown Castle Network, and will cause any such liens to be removed within ten (10) days of Licensee’s knowledge thereof. Licensee shall be liable to Crown Castle for any loss or damage to the Crown Castle Equipment or Crown Castle Network caused by Licensee or Licensee’s employees, contractors, agents or end users. Nothing herein shall prevent Crown Castle from using the Crown Castle Network and Crown Castle Equipment to provide products to other customers.

5.2 Extension of Network. To the extent an Order Form requires Crown Castle to complete construction, extend the Crown Castle Network and/or obtain additional Underlying Rights, Licensee shall use commercially reasonable efforts to assist Crown Castle in obtaining such Underlying Rights as necessary to provide the Product. Crown Castle may, without liability to either Party, terminate a Product prior to delivery, if Crown Castle encounters unexpected construction costs, or unavailability of or excess costs for Underlying Rights, that make the construction economically or legally unfeasible. Following the Acceptance Date of the Product, in the event that Crown Castle is unable to maintain any necessary Underlying Rights without incurring additional costs, unless Licensee bears the costs of obtaining such Underlying Rights, Crown Castle may cancel the applicable Order Form and shall incur no liability to Licensee hereunder. Without limiting the foregoing, Crown Castle shall not be deemed to be in breach of this Agreement for its failure to meet any anticipated Product installation or delivery date if such failure is caused, in whole or in part, by (i) a Force Majeure Event, (ii) failure to obtain, or delay in obtaining, any required Underlying Rights, (iii) construction delays, or (iv) any other circumstances beyond the control of Crown Castle. “Underlying Rights” means any and all agreements, licenses, conduit use agreements, pole attachment agreements, leases, easements, rights-of-way, franchises, permits, governmental and regulatory approvals and authorizations, and other rights, consents, and approvals that are necessary to construct, install, maintain, operate, and repair the Crown Castle Network and/or for Crown Castle to provide a Product other than building access rights described in Section 7.1. Without limiting the foregoing, Underlying Rights include agreements for Off-Net Products that are necessary for Crown Castle to provide a Product. “Off-Net Products” shall mean any products provided by a third-party. “On-Net Products” shall mean Products that use transmission and related facilities owned and controlled by Crown Castle.

Master Telecommunications License Agreement Rev. 8/10/2020 2 CROWN CASTLE PROPRIETARY AND CONFIDENTIAL
5.3 **Licensee Equipment.** Licensee shall, at its own expense, procure any equipment necessary to implement or receive each Product ("Licensee Equipment"). Crown Castle will have no obligation to install, maintain, or repair Licensee Equipment. Promptly upon notice from Crown Castle, Licensee shall eliminate any hazard, interference or Product obstruction that any such Licensee Equipment is causing or may cause as reasonably determined by Crown Castle.

6. **MAINTENANCE.**

6.1 **Scheduled Maintenance.** Crown Castle will endeavor to conduct (or cause to be conducted) scheduled maintenance that is reasonably expected to interrupt the Product between 12:00 midnight and 6:00 a.m. local time or, upon Licensee’s reasonable request, at a time mutually agreed to by Licensee and Crown Castle. Crown Castle will use commercially reasonable efforts to notify Licensee of scheduled maintenance that is reasonably expected to interrupt the Product via telephone or e-mail, no less than five (5) days prior to commencement of such maintenance activities. Licensee shall provide a list of Licensee contacts for maintenance and escalation purposes, which may be included on the Order Forms, and Licensee shall provide updated lists to Crown Castle, as necessary.

6.2 **Emergency Maintenance.** Crown Castle may perform emergency maintenance in its reasonable discretion, with or without prior notice to Licensee, to preserve the overall integrity of the Crown Castle Network. Crown Castle will notify Licensee as soon as reasonably practicable of any such emergency maintenance activity that materially and adversely impacts a Product.

6.3 **Product Issues.** Licensee may notify Crown Castle’s Network Operating Center (“NOC”) of Product problems by telephone 888-LT-FIBER, or at the contacts listed in Crown Castle’s Customer Support Information provided to Licensee, which may be updated by Crown Castle from time to time. If Crown Castle dispatches a field technician to Licensee or an end-user location and the problem is caused by (i) the Licensee Equipment or any end-user’s equipment or (ii) any acts or omissions of Licensee or its end user, or of any of its or their invitees, licensees, customers or contractors, Licensee will pay Crown Castle for any and all associated time and materials at Crown Castle’s then-current rates.

7. **IMPLEMENTATION REQUIREMENTS.**

7.1 **Access to Premises.** Unless otherwise provided for in the applicable Order Form, Licensee, at its own expense, shall secure throughout the Product Term any easements, leases, licenses or other agreements necessary to allow Crown Castle to use pathways into and in each building at which Licensee’s or its end user’s premises is located, to the Demarcation Point. Such access rights shall grant to Crown Castle the right to access such premises to the extent reasonably requested by Crown Castle to install, maintain, repair, replace and remove any and all equipment, cables or other devices Crown Castle deems necessary to provide the Product. Upon expiration or termination of the applicable Product Term, Licensee shall grant Crown Castle access to its premises as necessary to enable Crown Castle to remove the Crown Castle Equipment. Crown Castle, its employees, contractors and agents shall have access to any Crown Castle Equipment or facilities at a Licensee or end user premises. Notwithstanding anything to the contrary herein, Crown Castle shall have no liability for any delay or failure in its performance to the extent caused by any delay or failure of Licensee (including, but not limited to, the failure to provide Crown Castle prompt access) and/or caused by any notice or access restrictions or requirements. "Demarcation Point" shall mean the network interface point where Crown Castle hands off the Product to Licensee. The Demarcation Point delineates where responsibility for the Parties’ respective networks, equipment and/or maintenance obligations begin and end. Licensee is responsible, at its sole cost and expense, for connecting to the Demarcation Point.

7.2 **Space and Power.** Licensee shall procure and make available to Crown Castle, at Licensee’s locations and at end user locations where a Product is provided or licensed, at Licensee’s sole cost and expense, adequate space, AC power and HVAC for Crown Castle Equipment.

7.3 **Property Owner Not Liable.** Neither Licensee nor any of Licensee’s end-users shall have any recourse against any property owner or property manager of any premises to which any Product is delivered and/or at which Crown Castle Network or Equipment is located, as a result of or in reliance upon this Agreement. Without limiting the foregoing, this provision shall not be construed to impose any liability on Crown Castle, nor shall Crown Castle have any liability, for or on behalf of such property owner or property manager.

8. **DEFAULT & REMEDIES.**

8.1 **Default By Licensee; Suspension.** In the event (i) Licensee fails to timely and fully make any payment required hereunder, and such payment breach is not cured within five (5) days after written notice thereof, or (ii) Licensee breaches any other provision of this Agreement and such breach is not cured within thirty (30) days after receipt of written notice thereof, then Crown Castle may, at its sole option, either (a) terminate any and all Products, (b) suspend the affected Product to which the breach is related without further notice to Licensee, and/or (c) pursue any other remedies available to Crown Castle at law, or in equity.

8.2 **Default By Crown Castle.** Licensee may terminate a Product in the event Crown Castle breaches this Agreement with respect to such Product and such breach is not cured within thirty (30) days after Crown Castle’s receipt of written notice thereof, provided that if a breach subject to this Section 8.2 cannot be cured within thirty (30) days, but is capable of being cured within a reasonable time thereafter, then Licensee may not terminate the Product if Crown Castle commences to cure within said thirty (30) days and thereafter diligently and continuously pursues such cure to completion, or Crown Castle provides Licensee reasonable assurance that the same breach to the same Product will not subsequently occur.
9. **INSURANCE.**

9.1 **Insurance.** Each Party shall procure and maintain the following insurance coverage:

- **Commercial General and Umbrella Liability Insurance.** Commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than $5,000,000 for each occurrence. CGL insurance shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. Each Party shall name the other Party as an additional insured to provide coverage for the additional insured on a primary and non-contributory basis. The coverage provided to the additional insured shall apply to the extent of the indemnification obligation identified in paragraphs 10.2.

- **Workers Compensation Insurance.** Workers compensation and employers liability insurance as required by the laws and regulations applicable to the employees who are engaged in the performance of any activities hereunder or under an Order Form.

9.2 **Type and Proof of Insurance.** The insurance coverage required by this Section 9 shall be obtained on an occurrence basis from carriers having a Best Rating Product rating of A- or better. Upon request, a Party will provide the other Party a certificate of insurance or other proof of such insurance.

10. **LIMITATION OF LIABILITY; INDEMNIFICATION.**

10.1. **LIMITATION OF LIABILITY.** NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, CONSEQUENTIAL, SPECIAL, EXEMPLARY, INCIDENTAL, OR PUNITIVE DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF USE OF DATA, OR LOST BUSINESS, REVENUE, PROFITS OR GOODWILL, ARISING IN CONNECTION WITH THIS AGREEMENT OR ANY PRODUCT OR ANY ORDER FORM, EVEN IF THE PARTY KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES.

CROWN CASTLE’S TOTAL LIABILITY TO LICENSEE IN CONNECTION WITH THIS AGREEMENT FOR ANY AND ALL CAUSES OF ACTION AND CLAIMS, INCLUDING WITHOUT LIMITATION, BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, MISREPRESENTATION AND OTHER TORTS, SHALL BE LIMITED TO THE LESSER OF: (A) PROVEN DIRECT DAMAGES OR (B) THE AGGREGATE AMOUNT OF PAYMENTS MADE BY LICENSEE TO CROWN CASTLE FOR THE AFFECTED PRODUCT DURING THE TWELVE (12) MONTH PERIOD IMMEDIATELY PRECEDING THE MONTH IN WHICH THE CIRCUMSTANCES GIVING RISE TO THE CLAIM OCCURRED. IN NO EVENT SHALL CROWN CASTLE BE LIABLE FOR ANY DAMAGES ARISING OUT OF THE ACTS OR OMISSIONS OF UNAFFILIATED THIRD PARTIES, INCLUDING UNDERLYING PRODUCT PROVIDERS, OR ANY THIRD-PARTY EQUIPMENT OR PRODUCTS NOT PROVIDED OR LICENSED BY CROWN CASTLE.

10.2. **Indemnification.** Except to the extent of the other Party’s negligence or willful misconduct, each Party shall indemnify, defend, release, and hold harmless the other Party, its Affiliates, directors, members, officers, employees, managers, agents, representatives, and contractors (collectively, “Indemnities”) from and against any third-party action, claim, suit, judgment, damage, demand, loss, or penalty, and any cost or expense associated therewith (including but not limited to reasonable attorneys’ fees, expert fees and costs) (collectively, “Claims”) imposed upon such Indemnitee(s) by reason of damage to real or tangible personal property or for bodily injury, including death, as a result of any willful misconduct or negligent act or omission on the part of the indemnifying Party in connection with the performance of this Agreement. In addition to the foregoing, Licensee shall indemnify, defend, release, and hold harmless Crown Castle and its Indemnites from and against any third-party Claims brought against such Crown Castle and its Indemnites arising from or in connection with Licensee’s (or its end users’) unlawful use of a Product.

10.3. **Indemnification Process.** If a Party (“Indemnifying Party”) is required to indemnify the other Party (“Indemnified Party”) pursuant to Section 10.2, the Indemnified Party shall promptly notify the Indemnifying Party. The Indemnifying Party will be permitted to assume primary control of the defense of the action with counsel of the Indemnifying Party’s choice. The Indemnified Party will cooperate in the defense of the action as requested by the Indemnifying Party. The Indemnified Party may, but shall not be required to, participate in the defense of the action with its own counsel, at its own expense. The Indemnifying Party will assume the cost of the defense on behalf of the Indemnified Party and its Affiliates (other than the expense of Indemnified Party’s counsel pursuant to the immediately preceding sentence) and will pay all expenses and satisfy all judgments which may be incurred or rendered against the Indemnified Party or its Affiliates in connection therewith, provided that without the Indemnified Party’s written consent, the Indemnifying Party shall not enter into or acquiesce to any settlement containing any admission of or stipulation to any guilt, fault, or wrongdoing on the part of the Indemnified Party, which would otherwise adversely affect the Indemnified Party, or which results in less than a full release of all claims.

11. **REPRESENTATIONS AND WARRANTIES.**

11.1 **EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, CROWN CASTLE MAKES NO REPRESENTATIONS AND WARRANTIES UNDER THIS AGREEMENT, EITHER EXPRESS, IMPLIED OR STATUTORY, AND CROWN CASTLE HEREBY EXPRESSLY EXCLUDES AND DISCLAIMS ALL OTHER WARRANTIES, INCLUDING, WITHOUT LIMITATION, (i) NON-INFRINGEMENT, (ii) IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND (iii) PERFORMANCE OR INTEROPERABILITY OF THE PRODUCT WITH ANY LICENSEE OR END-USER EQUIPMENT. NO WARRANTY IS MADE OR PASSED ON WITH RESPECT TO ANY PRODUCTS OR SERVICES PROVIDED BY OR FURNISHED BY ANY THIRD PARTY.**
11.2 Each Party represents and warrants to the other that (a) it has the full right and authority to enter into, execute, deliver and perform its obligations under this Agreement, (b) it will comply with all applicable federal, state and local laws, statutes, rules and regulations in connection with the provision and use of the Products (including but not limited to the FCC’s “intermediate provider” requirements, 47 CFR § 64.2119, where applicable), and (c) this Agreement constitutes a legal, valid and binding obligation of such Party enforceable against such Party in accordance with its terms.

12. CONFIDENTIALITY; SERVICE MARKS; PUBLICITY.

12.1 Confidentiality. Neither Party, without the other Party’s prior written consent, shall disclose to any third party, including but not limited to its customers or prospective customers, any information supplied to it relating to the disclosing Party, its Affiliates, and/or its customers by the other Party which has been designated as confidential, proprietary or private or which, from the circumstances, in good faith should be treated as confidential (“Proprietary Information”). Proprietary Information shall not include any of the following: (i) information that has been, or is subsequently, made public by the disclosing Party; (ii) information that is independently developed by the receiving Party; and (iii) information that has been previously known by or disclosed to the receiving Party by a third party not bound by confidentiality restrictions. Pricing information exchanged in connection with this Agreement, or included in any Order Form hereunder, and the terms and conditions of this Agreement, are hereby designated as confidential without further obligation on the part of either Party to mark or designate it as such. Neither Party shall permit any of its employees, Affiliates nor representatives to disclose Proprietary Information to any third person, and it shall disclose Proprietary Information only to those of its employees, Affiliates, and representatives who have a need for it in connection with the use or provision of Products required to fulfill this Agreement. If a receiving Party is required by any governmental authority or by applicable law to disclose any Proprietary Information, then to the extent permitted by applicable law, such receiving Party shall provide the disclosing Party with written notice of such requirement as soon as possible and prior to such disclosure. Upon receipt of written notice of the requirement to disclose Proprietary Information, the disclosing Party, at its expense, may then either seek appropriate protective relief in advance of such requirement to prevent all or part of such disclosure or shall waive the receiving Party’s compliance with the requirements of the foregoing sentence with respect to all or part of such Proprietary Information.

12.2 Service Marks, Trademarks and Publicity. Neither Party shall: (a) use the name, service mark, trademark, trade name, logo, or trade dress of the other Party; or (b) refer to the other Party in connection with any advertising, promotion, press release or publication, unless it obtains the other Party’s prior written approval.

13. ASSIGNMENT. Neither Party will assign or transfer this Agreement or any license or Order Form hereunder without the other Party’s prior written consent, such consent not to be unreasonably withheld. Any assignment made in violation of this requirement shall be void and invalid. Notwithstanding the foregoing, either Party may assign this Agreement without the other Party’s consent to a person or entity (i) that controls, is controlled by or is under common control with the assigning Party, (ii) which purchases all or substantially all of its assets or equity, or (iii) resulting from any merger, consolidation or other reorganization involving such Party.

14. FORCE MAJEURE. Neither Party shall be liable, nor shall any claim or other remedy be extended, for any delay or failure to fulfill any obligation under this Agreement or any Order Forms due to any cause beyond a Party’s reasonable control, including, but not limited to: acts of God, flood, extreme weather, fire, natural calamity, terrorism, any moratorium, law, order, regulation, action or inaction of any governmental entity or civil or military authority, power or utility failures, fiber or cable cuts caused by third parties, unavailability of rights-of-way, national emergencies, insurrection, riots, wars, strikes, lock-outs, work stoppages or other labor difficulties, pole hits, or material shortages (each a “Force Majeure Event”).

15. NOTICES. Any request to terminate this Agreement, or any claim for breach thereof, shall be in writing and transmitted either via (i) overnight courier or hand delivery, or (ii) certified or registered mail, postage prepaid and return receipt requested, to the other Party at the following address. Notices shall be deemed delivered upon receipt.

Address for Licensee Notices:

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***
***

Address for Crown Castle Notices:

Crown Castle Fiber LLC
One North Broadway
White Plains, NY 10601

Att’n: – Legal Department

A Party may change the address for notices by notice to the other Party provided pursuant to this Section 15. All other notices, requests, or communications may be transmitted by email as specified in the relevant invoice or Order Form, at http://fiber.crowncastle.com/support, or as otherwise directed by Crown Castle.

16. MISCELLANEOUS

16.1 Governing Law. This Agreement shall be governed by the laws of the State of Delaware without regard to its choice of law principles.

16.2 No Third-Party Beneficiaries. The covenants, undertakings, and agreements set forth in this Agreement are solely for the benefit of and enforceable by the Parties or their respective successors or permitted assigns. It is the explicit intention of the Parties hereto that no person or entity other than the Parties (and, with respect to the provisions of Section 10, the Indemnitees) is or shall be entitled to any legal rights under this Agreement.
16.3 Relationship of the Parties. The relationship between the Parties hereunder is not that of partners or agents for one another and nothing contained in this Agreement shall be deemed to constitute or create a partnership, joint venture or similar relationship. Nothing in this Agreement shall be construed to authorize either Party to represent the other Party for any purpose whatsoever without the prior written consent of such other Party.

16.4 Order of Precedence. If any conflict or contradiction exists between these general terms and conditions and a Supplement, the terms of a Supplement will control. If any conflict or contradiction exists between a Supplement and the terms of an Order Form, the terms of the Order Form will control. If any conflict or contradiction exists between these general terms and conditions and the terms of an Order Form, the terms of the Order Form will control.

16.5 Non-Exclusivity. This Agreement is non-exclusive. Both Parties may enter into similar arrangements with others, and Crown Castle may, as part of its normal business undertakings, actively market its products to any person or entity anywhere in the world, including but not limited to in competition with Licensee and/or Licensee’s end users.

16.6 Non-Waiver. The waiver by any Party hereto of a breach or a default under any of the provisions of this Agreement, any Supplement or any Order Form, or the failure of any Party, on one or more occasions, to enforce any of the provisions of this Agreement or to exercise any right or privilege hereunder shall not thereafter be construed as a waiver of any subsequent breach or default of a similar nature, or as a waiver of any such provision, right or privilege hereunder.

16.7 Survival. The terms and provisions contained in this Agreement that by their nature and context are intended to survive the performance thereof by the Parties hereto shall so survive the completion of performance and termination or early termination of this Agreement, including, without limitation, provisions for indemnification, confidentiality, and the making of payments due hereunder.

16.8 Headings. Section and subsection headings contained in this Agreement are inserted for convenience of reference only, shall not be deemed to be a part of this Agreement for any purpose, and shall not in any way define or affect the meaning, construction or scope of any of the provisions hereof.

16.9 Severability; Void or Illegal Provisions. If any part of this Agreement, Supplement or an Order Form shall be determined to be invalid or unenforceable by a court of competent jurisdiction, said part shall be ineffective to the extent of such invalidity or unenforceability only, without in any way affecting the remaining parts of this Agreement or such Order Form. The remainder of this Agreement will continue in full force and effect insofar as it remains a workable instrument to accomplish the intent and purposes of the Parties. The Parties will replace the severed provision with a provision that reflects the initial intention of the Parties.

16.10 Entire Agreement; Amendment. This Agreement, including all Supplements, Order Forms, exhibits and addenda attached hereto is the entire agreement between the Parties with respect to the subject matter hereof and supersedes any and all prior negotiations, understandings and agreements, whether oral or written, with respect to such subject matter. This Agreement may be amended only by a written instrument executed by the Parties.

16.11 Counterparts. This Agreement may be executed in one or more counterparts, all of which taken together shall constitute one and the same instrument. The Parties agree that fully-executed electronic copies or facsimile copies of this Agreement and corresponding Order Forms are legally binding and shall act as originals for the purpose thereof.

16.12 Disconnection Notice Requirement. Licensee shall submit all requests for disconnection of Products in writing to Crown Castle. The effective date of any such disconnection will be the later of (i) thirty (30) days from Crown Castle’s receipt of such disconnection request, or (ii) the date requested by Licensee in the disconnection request. Each disconnection request must specify the Licensee name and address, email address and telephone number of the person authorizing the disconnect, the circuit ID for the Product to which the disconnect request applies, the product type, and requested disconnection date. Upon termination of a Product, Crown Castle shall have the right (but not the obligation) to act on behalf of and as agent for Licensee to terminate all cross-connects relating to such Product, including cross-connects ordered by Licensee. Upon request Licensee shall confirm to the applicable supplier of the cross-connect(s) that Crown Castle is authorized to terminate such cross-connects on Licensee’s behalf. Disconnections shall not affect Licensee’s obligation to make payments as agreed in each Order Form.

The Parties have executed this Agreement as of the last date of execution below.

**LICENSEE:**

By: ____________________________
Print Name: ____________________________
Title: ____________________________
Date: ____________________________

**CROWN CASTLE FIBER LLC**

By: ____________________________
Print Name: ____________________________
Title: ____________________________
Date: ____________________________

Master Telecommunications License Agreement Rev. 8/10/2020 6

CROWN CASTLE PROPRIETARY AND CONFIDENTIAL
ETHERNET SUPPLEMENT
TO THE
MASTER TELECOMMUNICATIONS LICENSE AGREEMENT
LICENSEE:

This Ethernet Supplement ("Supplement") is effective as of the last date of execution below ("Supplement Effective Date") by and between CROWN CASTLE FIBER LLC ("Crown Castle") and Licensee, and is hereby incorporated into and made a part of the Master Telecommunications License Agreement or Master Service Agreement between Licensee and Crown Castle (the "Agreement"). Unless otherwise defined herein, capitalized terms in this Supplement shall have the meanings given in the Agreement. Section and subsection headings contained in this Supplement are inserted for convenience of reference only, shall not be deemed to be a part of this Supplement for any purpose, and shall not in any way define or affect the meaning, construction or scope of any of the provisions hereof.

1. SCOPE OF SUPPLEMENT

This Supplement applies to Ethernet licensed to Licensee under an Order Form that specifies Ethernet. This Supplement shall not apply to other products, including dark fiber, wavelength, Internet, or colocation.

1.1 "Ethernet" or "Product" means a method of switched communication between or among two or more Locations using the Ethernet protocol defined by IEEE 802.3. Ethernet may be ordered and provisioned either as On-Net Products or Off-Net Products. Ethernet includes, without limitation, the following types of Products:

- **E-Line**: a port-based Product providing dedicated UNIs for point to point connections. E-Line supports a single EVC between two (2) UNIs.

- **Ethernet Virtual Private Line (EVPL)**: a VLAN based Product providing multiplexed UNIs allowing multiple EVCs per UNI.

- **Ethernet LAN (E-LAN)**: a VLAN based meshed Product providing many-to-many communication with dedicated or service-multiplexed UNIs. E-LAN supports transparent LAN and multipoint Layer 2 VPNs.

- **Metro-E Advanced Private Line**: dedicated point-to-point switched Ethernet provided within a metro area over dedicated fiber transport.

- **ENNI (External Network to Network Interface)**: an interconnection point between the Crown Castle and Licensee Ethernet networks as defined in MEF Specification 26.

1.2 "Class of Service" or "CoS": Crown Castle offers CoS with Ethernet. CoS enables Licensee to differentiate traffic by assigning Bandwidth with various classes of network priority designated by Licensee. If Licensee elects CoS, (i) Licensee’s traffic must be marked by Licensee in accordance with Crown Castle’s available classes of network priority, and (ii) Licensee traffic will be prioritized in accordance with the assigned network priority. If Licensee does not elect CoS, Licensee’s traffic will be treated with the default network priority level. Crown Castle offers the following classes of CoS ranging from highest to lowest in terms of network priority:

- Mission Critical
- Business Critical
- Business Priority
- Standard (Default class for all Ethernet)

1.3 Protection Options: Ethernet comes with various Protection Options, as described below.

<table>
<thead>
<tr>
<th>Protection Option</th>
<th>Description</th>
<th>Minimum Location Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unprotected (Level A Access)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Level A Access means the access portion of the Ethernet (i.e. the segments from the last Crown Castle Network switching hub (or for Metro-E Advanced Private Line the lateral segments from the Crown Castle Network backbone) to the point</td>
<td>(1) Space (2) Power (4) Environmental Control</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Ethernet Supplement Rev. 8/10/2020

CROWN CASTLE PROPRIETARY & CONFIDENTIAL
of entry of the Location) is provided over a single fiber path without protection. Level A Access consists of the following minimum requirements at each Location: (i) a single point of entry into the Location; (ii) one (1) Crown Castle Equipment chassis; (iii) one (1) port; and (iv) a 2-fiber handoff to the Licensee from the Crown Castle Equipment.

<table>
<thead>
<tr>
<th>Optical Protection (Level AA Access)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level AA Access means the access portion of the Ethernet (i.e. the segments from the last Crown Castle Network switching hub to the point of entry of the Location) is provided over two (2) separate fiber paths, one of which is the working (primary) path and the other the protect (secondary) path. Crown Castle is responsible for managing the Failover Switching at each Location. Level AA Protection consists of the following minimum requirements at each Location: (i) a single point of entry into the Location; (ii) one (1) Crown Castle Equipment chassis; (iii) one (1) port; and (iv) a 2-fiber handoff to the Licensee from the Crown Castle Equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dual Path Protection (Level AAA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level AAA Access means the access portion of the Ethernet (i.e. the segments from the last Crown Castle Network switching hub to the point of entry of the Location) is provided over two (2) separate fiber paths, one of which is the working (primary) path and the other the protect (secondary) path. Failover Switching at each Location will be provided by Licensee or by Crown Castle as specified in the Order Form. Level AAA Protection consist of the following minimum requirements at each Location: (i) two (2) separate points of entry into the Location; (ii) two (2) Crown Castle Equipment chassis; (iii) one (1) line card per chassis; (iv) 4-fiber handoff to the Licensee from the Crown Castle Equipment, with two fibers handed off from one of the Crown Castle Equipment chassis and two fibers handed off from the other Crown Castle Equipment chassis; and (v) Licensee Equipment must have dual-card redundancy (i.e., separate cards, one for one of the two fiber handoffs and the other for the second 2-fiber handoff).</td>
</tr>
</tbody>
</table>

1. Secure space for Crown Castle Equipment at each Location with 24x7x365 access.
2. Dedicated electrical circuit for Crown Castle Equipment (i.e. the circuit has no other load from the Crown Castle Equipment to a circuit breaker) at each Location from the public utility.
3. Redundant, dedicated electrical circuit at each Location from the public utility (i.e. each power circuit is fed from a different circuit breaker panel and has its own circuit breaker).
4. Substantially dust free with temperature control that maintains temperature between 50 and 80-deg F and humidity control that maintains relative humidity below 80%.
5. Substantially dust free with temperature control that maintains temperature between 60 and 80-deg F and humidity control that maintains relative humidity between 40% and 60%.
6. Crown Castle (or Licensee if the Parties agree) to install and maintain a minimum of four (4) hours of standby power.
7. Crown Castle (or Licensee if the Parties agree) to install and maintain a minimum of eight (8) hours of standby power and Licensee shall provide emergency power generation.

## 2. ADDITIONAL DEFINITIONS

"Bandwidth" or "BW" means the amount of data (quantified as "Mbps" or "Gbps") made available to Licensee.

"Ethernet Virtual Connection" or "EVC" is a logical connection between two or more UNIs.

"Failover Switching" means the automatic restore and reroute of a Product to an alternate transmission path.

"Location" is an address wherein Crown Castle will hand off Ethernet to Licensee.

"Product Availability" means the percentage of minutes during a calendar month that the licensed Product has not incurred a Product Outage. Product Availability is calculated as follows: (43,200 - total number of minutes of Product Outage during the calendar month) divided by 43,200.
“Product Credit” means a credit that Licensee is eligible to receive if Crown Castle fails to meet the parameters set forth in Section 5.2 below.

“Product Outage” means a complete interruption of communications between any two (2) or more Locations.

“Product Performance Failure” means a failure of the Product to meet any performance parameters set forth in Section 5.2(B) through 5.2(D) below. Product Performance Failure is not a Product Outage.

“User Network Interface” or “UNI” means the interface used to interconnect Licensee to the Crown Castle Network which provides a reference point for demarcation between the Licensee’s network and the Crown Castle Network.

“Virtual Local Area Network” or “VLAN” means a data communication network, configured using the IEEE 802.1q standard that logically interconnects computers and network devices, allowing a group of hosts to communicate, regardless of Location, as if they were attached to the same physical media.

“VPN” means a virtual private network.

3. SPECIFICATIONS

3.1 The Specifications applicable to Ethernet are as follows:

Technical Specifications:
- IEEE 802.3

4. USE BY LICENSEE

4.1 Interstate Traffic. Licensee acknowledges that Crown Castle has no ability to determine whether the communications traffic carried via the licensed Ethernet is jurisdictionally interstate or intrastate. Unless otherwise stated in the applicable Order Form, Licensee acknowledges and agrees that the communications traffic to be carried via the Crown Castle Network shall be treated as jurisdictionally interstate, pursuant to the Federal Communications Commission’s mixed-use “10% Rule” (47 CFR 36.154, 4 FCC Red. 1352).

4.2 Permitted Use. Licensee may use the Ethernet for its own use. Licensee acknowledges that Crown Castle does not monitor the content of the Ethernet traffic unless required by law and Licensee shall be solely liable and responsible for the content of any communications transmitted via the Ethernet.

5. SERVICE LEVEL AGREEMENT

5.1 Product Service Level. Subject to this Section 5, in the event of a Product Outage to any licensed Ethernet or a Product Performance Failure, Licensee may be entitled to a Product Credit in accordance with the applicable Service Level Objective set forth in Section 5.2 below. A Product Outage, or Product Performance Failure as the case may be, shall be deemed to begin upon the earlier of Crown Castle’s actual knowledge of the same or Crown Castle’s receipt of notice from Licensee of the same, and end when the Product is operational and in material conformance with the applicable Specifications. Notwithstanding anything to the contrary in this Supplement, the Agreement or any Order Form, in no event shall a Product Outage and/or Product Performance Failure be deemed to be or constitute a breach by Crown Castle of this Supplement, the Agreement or any Order Form.

5.2 Service Level Objectives.

A. Product Availability

If the total minutes of Product Outage in any month exceeds the number of minutes or hours set forth in the table below, Licensee shall be entitled to a Product Credit equal to the percentage of the applicable MRC set forth in the following table:
<table>
<thead>
<tr>
<th>Quality Level</th>
<th>Product Availability Objective</th>
<th>Measurement Timeframe</th>
<th>Product Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cumulative Duration of Product Outage(s)</td>
</tr>
<tr>
<td>On-Net Level A Access</td>
<td></td>
<td>One Month</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Product Availability</td>
<td>99.9%</td>
<td>0 to 43.2 mins.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;43.2 mins. to 10 hrs.</td>
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<tr>
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<td></td>
<td>&gt;10 hrs. to 16 hrs.</td>
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<td></td>
<td>&gt;16 hrs. to 24 hrs.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;24 hrs. to 36 hrs.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;36 hrs.</td>
</tr>
<tr>
<td>On-Net Level AA Access</td>
<td></td>
<td>One Month</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Product Availability</td>
<td>99.99%</td>
<td>0 to 4.32 mins.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;4.32 mins. to 30 mins.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;30 mins to 1 hr.</td>
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<td>&gt;1 hrs. to 8 hrs.</td>
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<td></td>
<td>&gt;8 hrs. to 16 hrs.</td>
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<td></td>
<td>&gt;16 hrs. to 24 hrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;24 hrs.</td>
</tr>
<tr>
<td>On-Net Level AAA Access</td>
<td></td>
<td>One Month</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Product Availability</td>
<td>99.999%</td>
<td>0 to 43 secs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;43 secs. to 4 mins.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;4 mins. to 10 mins.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;10 mins. to 2 hrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;2 hrs. to 8 hrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;8 hrs.</td>
</tr>
</tbody>
</table>

B. **Network Latency**

"Network Latency" is the average round-trip transmission time (in milliseconds) for packets to travel on the Crown Castle Network (including, but not limited to, link insertion delays, propagation delays and queuing delays in the Crown Castle Network). Network Latency is determined by Crown Castle by averaging sample measurements taken each calendar month between Crown Castle's designated points of presence.

If Network Latency in any month exceeds the number of milliseconds set forth in the table below and such failure is quality-impacting, Licensee shall be entitled to a Product Credit equal to the percentage of the applicable MRC set forth in the following table:

<table>
<thead>
<tr>
<th>NETWORK LATENCY</th>
<th>CoS Designation -</th>
<th>% of MRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;120ms</td>
<td>10%</td>
<td>20%</td>
</tr>
</tbody>
</table>

C. **Frame Delivery Rate (Packet Delivery)**

"Frame Delivery Rate" is the ratio of performance test frames successfully received from the Crown Castle Network relative to the number of performance test frames offered to the Crown Castle Network. Frame Delivery Rate is determined by Crown Castle by averaging sample measurements taken each calendar month between Crown Castle's designated points of presence.

If Frame Delivery Rate in any month is less than the percentages set forth in the left column of the table below and such failure is quality-impacting, Licensee shall be entitled to a Product Credit equal to the percentage of the applicable MRC set forth in the following table:

<table>
<thead>
<tr>
<th>FRAME DELIVERY RATE</th>
<th>% of MRC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10%</td>
</tr>
</tbody>
</table>
### D. Frame Delay Variation (Jitter)

"Frame Delay Variation", also known as packet jitter, is a measurement of the average variation (measured in milliseconds) in the time delay for packet transfers between two performance test frames. Frame Delay Variation is determined by Crown Castle by averaging sample measurements taken each calendar month between designated points of presence.

If Frame Delay Variation in any month exceeds the number of milliseconds set forth in the table below and such failure is quality-impacting, Licensee shall be entitled to a Product Credit equal to the percentage of the applicable MRC set forth in the following table:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>99.999% or greater</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
</tr>
<tr>
<td>99.99% to 99.99%</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
<td>10%</td>
</tr>
<tr>
<td>99.9% to 99.98%</td>
<td>No Credit</td>
<td>No Credit</td>
<td>10%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>99% to 99.8%</td>
<td>No Credit</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Less than 99%</td>
<td>10%</td>
<td>20%</td>
<td>30%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

### 5.3 Product Credits

Product Credits hereunder are calculated as a percentage of the MRC set forth in the Order Form, and may not be applied to usage charges, government fees, taxes, or surcharges, or any third party charges passed through to Licensee by Crown Castle. Product Credits hereunder may be paid only once per any given billing cycle. Product Credits issued to Licensee hereunder shall be Licensee's sole and exclusive remedy at law or in equity on account of any Product Outage and/or Product Performance Failure. Product Credits will not be issued to Licensee if Licensee's account with Crown Castle is in arrears. If an incident affects the performance of the Ethernet and results in a period or periods of interruption, disruption, failure or degradation in quality, entitling Licensee to one or more credits under multiple quality level standards, only the single highest credit with respect to that incident will be applied, and Licensee shall not be entitled to credits under multiple quality level standards for the same incident. Notwithstanding anything to the contrary herein, the above-stated Product Credits shall not apply to Off-Net Products; in the event of a Product Outage or Product Performance Failure, Crown Castle agrees to pass through a credit equal to the credit received by Crown Castle from its underlying Crown Castle(s) for such Product Outage or Product Performance Failure, in lieu of the above-stated Product Credits. In no event shall Product Credits in any month for any and all interruptions, disruptions, failures, and/or degradations in quality (including, without limitation, any Product Outage or Product Performance Failure) exceed fifty percent (50%) of the MRC for the affected Product for that month.

### 5.4 Product Credit Request

Licensee must submit a written request to claim a Product Credit no later than thirty (30) days following the event which gives rise to Licensee's right to the Product Credit. Failure to request a Product Credit within such period shall constitute a waiver of any claim for a Product Credit.

### 5.5 Events Excepted From Product Credit

Notwithstanding the foregoing, Licensee shall not receive any Product Credit for any Product Outage, failure to meet any objectives or parameters hereunder, or delay in performing repairs, arising from or caused, in whole or in part, by any of the following events:

- a. Licensee's (including its agents, contractors and vendors) acts or omissions;
- b. Failure on the part of Licensee Equipment, end user equipment or Licensee's vendor's equipment;
- c. Failure of electrical power not provided by Crown Castle;
- d. Election by Licensee, after requested by Crown Castle, not to release the Product for testing and repair;
- e. Crown Castle’s inability to obtain access required to remedy a defect;
- f. Scheduled maintenance periods;
- g. Scheduled upgrade of Product at the request of Licensee;
- h. Force Majeure Event;

---

Ethereal Supplement Rev. 8/10/2020

CROWN CASTLE PROPRIETARY & CONFIDENTIAL
i. Disconnection or suspension of the Product by Crown Castle pursuant to a right provided under this Agreement; and/or
j. Crown Castle’s inability to repair due to utility safety restrictions.

The Parties have executed this Supplement as of the last date of execution below.

**LICENSEE:**

By: ____________________________
Print Name: ______________________
Title: ____________________________
Date: ____________________________

**CROWN CASTLE FIBER LLC:**

By: ____________________________
Print Name: ______________________
Title: ____________________________
Date: ____________________________
f. SERVICE RELIABILITY AND DEDICATED INFRASTRUCTURE

Crown Castle Metro Ethernet Advanced Private Line

Our Metro Private Ethernet solution is delivered over dedicated Crown Castle fiber circuits with dedicated switches at each location. A fiber telemetry circuit from your hub location to the nearest Crown Castle POP allows our NOC to monitor all your Ethernet circuits.

Key Benefits

> Seamless interconnection with no additional equipment on your premises, reducing equipment capital costs
> Simple installation and turn-up with no protocol conversion
> Easier installation and management allow for rapid provisioning compared to other platforms
> Flexible bandwidth allows you to pay as you grow
> Scalability for long-term network evolution connectivity

Key Features

> Speeds from 10Mbps to 100Gbps
> Switches provide both Copper and Fiber customer ports
> Switched and dedicated bandwidth configurations
> Dedicated access links with multiple protection options
> Bandwidth on Demand gives you the agility and control you need to upgrade bandwidth in near real-time
> Standards-based IEEE Ethernet service for Layer 2 transport
> 802.1Q VLAN and 802.1 QinQ tunneling supported
> MEF Carrier Ethernet 2.0, MEF 9, and MEF 14 certified technology
> 24/7 network monitoring
Standard Private Ethernet Hub & Spoke Design
g. E-RATE INELIGIBLE COSTS

E-Rate ineligible costs are not applicable to the Crown Castle proposal. Please reference the Cost Sheet in Section H of this response for additional details.
## h. COST SHEETS

<table>
<thead>
<tr>
<th>#</th>
<th>Function</th>
<th>Site Name</th>
<th>Special Construction Cost</th>
<th>Non-Recurring Cost</th>
<th>MRC 1 GBPS 60 month term</th>
<th>MRC 10 GBPS 60 month term</th>
<th>MRC 45 GBPS 60 month term</th>
<th>MRC 100 GBPS 60 month term</th>
<th>Estimated Initial Turn-up Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hub Site</td>
<td>Newport-Mesa Unified School District - Office</td>
<td>$0</td>
<td>$0</td>
<td>$3</td>
<td>$9</td>
<td>$3</td>
<td>$9</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>2</td>
<td>School Site</td>
<td>Adams Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>3</td>
<td>School Site</td>
<td>Anderson Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$250</td>
<td>$250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>4</td>
<td>School Site</td>
<td>California Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>5</td>
<td>School Site</td>
<td>College Park Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>6</td>
<td>School Site</td>
<td>Davis Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>7</td>
<td>School Site</td>
<td>Estrella Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>8</td>
<td>School Site</td>
<td>Harbor View Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>9</td>
<td>School Site</td>
<td>Kaiser Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>10</td>
<td>School Site</td>
<td>Kynlee Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>11</td>
<td>School Site</td>
<td>Lincoln Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>12</td>
<td>School Site</td>
<td>Mariemont Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>13</td>
<td>School Site</td>
<td>Newport Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>14</td>
<td>School Site</td>
<td>Newport Coast Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>15</td>
<td>School Site</td>
<td>Newport Highlands Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>16</td>
<td>School Site</td>
<td>Paseo Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>17</td>
<td>School Site</td>
<td>Penbrook Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>18</td>
<td>School Site</td>
<td>Ran Elementary School / BECKST Center</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>19</td>
<td>School Site</td>
<td>Rancho Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>20</td>
<td>School Site</td>
<td>Sonora Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>21</td>
<td>School Site</td>
<td>Victoria Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>22</td>
<td>School Site</td>
<td>Whitter Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>23</td>
<td>School Site</td>
<td>Wilson Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>24</td>
<td>School Site</td>
<td>Woodland Elementary School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>25</td>
<td>School Site</td>
<td>Youth Intermediate School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>26</td>
<td>School Site</td>
<td>Tesoro Middle School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>27</td>
<td>School Site</td>
<td>Corona del Sol High School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>28</td>
<td>School Site</td>
<td>Crestview High School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>29</td>
<td>School Site</td>
<td>Valley View High School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>30</td>
<td>School Site</td>
<td>Estancia High School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>31</td>
<td>School Site</td>
<td>Newport Harbor High School</td>
<td>$0</td>
<td>$0</td>
<td>$1,250</td>
<td>$1,250</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing 10G Service</td>
</tr>
<tr>
<td>School District Site</td>
<td>Service Type</td>
<td>Base Cost</td>
<td>First Year</td>
<td>Second Year</td>
<td>Third Year</td>
<td>Existing IG Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>-----------</td>
<td>------------</td>
<td>-------------</td>
<td>------------</td>
<td>-------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hugel Pre School</td>
<td>$0</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing IG Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edmonton</td>
<td>$0</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$4,000</td>
<td>$4,000</td>
<td>Existing IG Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vancouver</td>
<td>$0</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$4,000</td>
<td>$4,000</td>
<td>60-90 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victoria</td>
<td>$0</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$4,000</td>
<td>$4,000</td>
<td>120 days</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
i. Attachment A: REFERENCES

Please provide at least three (3), preferably K12, references of projects of similar size and scope. To be a qualified Proposer, the vendor must include below three references with similar systems or equipment installed. Include a separate sheet(s) containing supporting documentation regarding reference projects if available.

Name of Service Provider: Crown Castle

<table>
<thead>
<tr>
<th>REFERENCE #1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Name</td>
<td>Garden Grove Unified School District</td>
</tr>
<tr>
<td>Contact Person(s)</td>
<td>Rick Rodriguez, Information Technology Director</td>
</tr>
<tr>
<td>Address</td>
<td>10331 Stanford Ave, Garden Grove, CA 92840</td>
</tr>
<tr>
<td>Telephone</td>
<td>(714) 663-6591</td>
</tr>
<tr>
<td>Project Dates</td>
<td>8/1/2018 – 7/30/2023</td>
</tr>
<tr>
<td>Brief Description (Attach detail)</td>
<td>Customer since 2007. Crown provides a 1Gbps/10Gbps Hybrid Hub &amp; Spoke network design for 70 schools and educational facilities. We also provide a 40Gbps IP connection to the Level 3 data center is Tustin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFERENCE #2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Name</td>
<td>Orange Unified School District</td>
</tr>
<tr>
<td>Contact Person(s)</td>
<td>Tam Nguyen, Director Information Technology</td>
</tr>
<tr>
<td>Address</td>
<td>1401 N Handy St, Orange, CA 92867</td>
</tr>
<tr>
<td>Telephone</td>
<td>(714) 628-4550</td>
</tr>
<tr>
<td>Project Dates</td>
<td>4/20/2016-4/29/2021</td>
</tr>
<tr>
<td>Brief Description (Attach detail)</td>
<td>Customer since 2015. Recently signed a 5-year renewal that will go from 5/1/2021-4/30/2026 for a 10Gbps 40 circuit Hub &amp; Spoke Wide Area Network between their District Officer and their school and other educational sites</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFERENCE #3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Name</td>
<td>Santa Ana Unified School District</td>
</tr>
<tr>
<td>Contact Person(s)</td>
<td>Ricardo Enz, Information Technology Director</td>
</tr>
<tr>
<td>Address</td>
<td>1601 E Chestnut Ave, Santa Ana, CA 92701</td>
</tr>
<tr>
<td>Telephone</td>
<td>(714) 480-4702</td>
</tr>
<tr>
<td>Project Dates</td>
<td>7/1/2020-6/30/2025</td>
</tr>
<tr>
<td>Brief Description (Attach detail)</td>
<td>Customer since 2008. Crown provides a 10Gbps Hub &amp; Spoke Wide Area network to support the 60 school and educational facilities within the district. Crown also provides a 40Gbps Dedicated Internet Access Circuit.</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>Name of Subcontractor</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* This information must be provided at the time of submission of bid or must be provided within 24 hours after the time set for the opening of bids. Bidders who choose to provide this information within 24 hours after the time set for the opening of bids are solely responsible to ensure the District receives this information in a timely manner. The District is not responsible for any problems or delays associated with emails, faxes, delivery, etc. Absent a verified fax or email receipt date and time by the District, the District’s determination of whether the information was received timely shall govern and be determinative. Bidder shall not revise or amend any other information in this form submitted at the time of bid. The information submitted at the time of bid shall govern over any conflicts, discrepancies, ambiguities or other differences in any subsequent Subcontractor Designation Forms submitted by the bidder.

Proper Name of Bidder: Crown Castle Fiber LLC  
Date: January 22, 2021  
Name: John Messenger  
Signature of Bidder Representative: John S. Messenger  
Address: 4545 East River Road, West Henrietta, NY, 14586  
Phone: 585-697-5162

WAN Districtwide  
Newport Mesa Unified School District
CONTRACTOR'S CERTIFICATE REGARDING WORKERS' COMPENSATION
FORM

Labor Code section 3700 in relevant part provides:

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to employees.

3. For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702.

I am aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provision before commencing the performance of the work of this Contract.

John B. Messenger

(Signature)

John Messenger

(Print)

January 22, 2021

(Date)

In accordance with Article 5 (commencing at section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and submitted with the Contractor's bid.
NON-COLLUSION DECLARATION

The undersigned declares:

I am the Regional Director Enterprise [Title] of Crown Castle Fiber LLC [Name of Company], the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on January 22, 2021 [Date], at Los Angeles [City], CA [State].

Signed: Jeffrey Henderson

Typed Name: Jeff Henderson
ACKNOWLEDGMENT OF BIDDING PRACTICES REGARDING INDEMNITY FORM

TO: Newport Mesa Unified School District

RE: Project Number 116-21

Contract for Wide Area Network

Please be advised that with respect to the above-referenced Project the undersigned Contractor on behalf of itself and all subcontractors hereby waives the benefits and protection of Labor Code section 3864, which provides:

“If an action as provided in this chapter is prosecuted by the employee, the employer, or both jointly against the third person results in judgment against such third person, the employer shall have no liability to reimburse or hold such third person harmless on such judgment or settlement in the absence of a written agreement to do so executed prior to the injury.”

This Agreement has been signed by an authorized representative of the contracting party and shall be binding upon its successors and assignees. The undersigned further agrees to promptly notify the District of any changes of ownership of the contracting party or any subcontractor while this Agreement is in force.

Crown Castle Fiber LLC
Contracting Party

John Messenger / Managing Counsel
Name of Agent/Title
CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE

This Drug-Free Workplace Certification form is required from all successful bidders pursuant to the requirements mandated by Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts. In addition, the Act provides that each contract or grant awarded by a State agency may be subject to suspension of payments or termination of the contract or grant, and the Contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

Pursuant to Government Code section 8355, every person or organization awarded a contract or grant from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

1. Publishing a statement, notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person’s or organization’s workplace, and specifying actions which will be taken against employees for violations of the prohibition.

2. Establishing a drug-free awareness program to inform employees about all of the following:
   a. The dangers of drug abuse in the workplace;
   b. The person’s or organization’s policy of maintaining a drug-free workplace;
   c. The availability of drug counseling, rehabilitation and employee-assistance programs; and
   d. The penalties that may be imposed upon employees for drug abuse violations;

3. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will (a) publish a statement notifying employees concerning the prohibition of controlled substance at the workplace, (b) establish a drug-free awareness program, and (c) require each employee engaged in the performance of the contract be given a copy of the statement required by section 8355(a) and require such employee agree to abide by the terms of that statement.

I also understand that if the Newport Mesa Unified School District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350 et seq.

I acknowledge that I am aware of the provisions of Government Code section 8350 et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

DATE: January 22, 2021

Crown Castle Fiber LLC

By: John B. Messenger

Signature

WAN Districtwide
Newport Mesa Unified School District

Contractor's Certificate Regarding Drug-Free Workplace
Page 8
CONTRACTOR’S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE AND TOBACCO-FREE CAMPUS POLICY

The Contractor agrees that it will abide by and implement the District’s Alcoholic Beverage and Tobacco-Free Campus Policy, which prohibits the use of alcoholic beverages and tobacco products, of any kind and at any time, in District-owned or leased buildings, on DISTRICT property and in DISTRICT vehicles. The Contractor shall procure signs stating “ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED” and shall ensure that these signs are prominently displayed in all entrances to school property at all times.

DATE: January 22, 2021

Crown Castle Fiber LLC

CONTRACTOR

By: John B. Messenger

Signature