



NEW HAVEN PUBLIC SCHOOLS

Operations Memorandum

To: New Haven Board of Education Finance and Operations Committee
From: Gilda Herrera, IT Director
Date: January 7, 2021
Re: F&O Action Item Request/Approval for Agreement Renewal for Leased Fiber Circuit WAN Solution with Crown Castle Fiber, LLC

Executive Summary/Statement: For consideration and approval to renew the agreement between the New Haven Board of Education and Crown Castle International Corporation to provide leased fiber circuit WAN Ethernet Services from July 1, 2021 to June 30, 2022.

Contractor Name: Crown Castle International Corporation

Contractor Address: 1220 Augusto Drive, Suite 600, Houston TX 77057

Is the contractor a Minority or Women Owned Small Business? No

Renewal or Award of Contract/Agreement? Renewal

Total Amount of Contract/Agreement and the Hourly or Service Rate: not to exceed \$507,000 Without Erate/ \$50,700 With Erate Reimbursement

Contract or Agreement #:

Funding Source & Account #: 2020-2021 Operating Budget – Telecommunications / Internet Account #190-47200-52265

Key Questions: (Please have someone ready to discuss the details of each question during the Finance & Operations meeting or this proposal might not be advanced for consideration by the full Board of Education):

- 1. What specific service will the contractor provide:**
Crown Castle (formerly known as Fibertech/LightTower) provides the wide area network infrastructure NHPS uses for all communications and data transmissions.
- 2. How was the contractor selected? Quotes? RFP? Sealed Bid or Sole Source? Please describe the selection process including other sources considered and the rationale for selecting this method of selection:** Sealed bid 2019-12-1248 Crown Castle was awarded this contract based on results of RFP#2019-12-1248. Crown Castle services qualify for ERATE discounts which allows the district to receive a 90% discount on services. Crown Castle Services are considered a Category 1 funding level and is typically approved and disbursed first. Crown Castle is included on our ERATE application for the 21-22 School Year.

3. **If this is a renewal with a current vendor, has the vendor's performance been satisfactory under the existing contract or agreement?** The vendor guarantees 1-10 Gbps up time of 99.9 %, per contract. This is industry standard.
4. **If this Contract/Agreement is a Renewal has cost increased? If yes, by how much?** No, decreased, \$2,525 per month, connections as necessary to meet network and internet requirements for the district. Cost increase within contracted award of \$507,000.
5. **If this Contractor is New has cost for service increased from previous years? If yes, by how much?** N/A
6. **Is this a service existing staff could provide? Why or why not?** No, this is an infrastructure which is leased and would require the city/school district to install fiber optic cabling throughout the city, which is cost prohibitive.

Licensee or Customer Contact Detail			
Licensee or Customer	New Haven Public Schools		
Address & Contact	Address	54 MEADOW ST	
	City, State	NEW HAVEN, CT 06519	
	Phone	203-946-8888	Fax
Billing Address & Contact	Name	NEW HAVEN PUBLIC SCHOOLS (13920)	
	Billing Address	54 Meadow Street	
	City, State	New Haven, CT 06510	
Technical Contact	Name	Robert Cusson	Primary Phone 2039468800
	E-mail	robert.cusson@new-haven.k12.ct.us	Alternate Phone 12034106772

Product Detail			
Ethernet #1	Product Type	Metro-E Advanced Private Line	Total Bandwidth 1Gbps
	Total MRC	\$750.00	Total NRC \$0.00
	Install Lead Time	30 Days	Service Level 99.9%
	Existing Product ID S134940		
Location A Product Details	Connector	1000T	Copper
Location A	170 Derby Ave, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector	1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #2	Product Type	Metro-E Advanced Private Line	Total Bandwidth 1Gbps
	Total MRC	\$750.00	Total NRC \$0.00
	Install Lead Time	30 Days	Service Level 99.9%
	Existing Product ID S204633		
Location A Product Details	Connector	1000T	Copper
Location A	180 Canner St, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector	1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #3	Product Type	Metro-E Advanced Private Line	Total Bandwidth 1Gbps
	Total MRC	\$750.00	Total NRC \$0.00
	Install Lead Time	30 Days	Service Level 99.9%
	Existing Product ID S204634		
Location A Product Details	Connector	1000T	Copper
Location A	130 Bassett St, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector	1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #4	Product Type	Metro-E Advanced Private Line	Total Bandwidth 1Gbps
	Total MRC	\$750.00	Total NRC \$0.00
	Install Lead Time	30 Days	Service Level 99.9%
	Existing Product ID S204635		
Location A Product Details	Connector	1000T	Copper
Location A	150 Fournier St, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector	1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #5	Product Type	Metro-E Advanced Private Line	Total Bandwidth 1Gbps
	Total MRC	\$750.00	Total NRC \$0.00
	Install Lead Time	30 Days	Service Level 99.9%
	Existing Product ID S204636		
Location A Product Details	Connector	1000T	Copper
Location A	200 Wilmot Rd, 1st Floor, New Haven, CT 06515		
Location Z Product Details	Connector	1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		

Ethernet #6	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204637	
Location A Product Details	Connector	1000T	Copper	
Location A	199 Wilmot Rd, 1st Floor, New Haven, CT 06515			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #7	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204638	
Location A Product Details	Connector	1000T	Copper	
Location A	311 Valley St, 1st Floor, New Haven, CT 06515			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #8	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204639	
Location A Product Details	Connector	1000T	Copper	
Location A	737 Edgewood Ave, 1st Floor, New Haven, CT 06515			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #9	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204640	
Location A Product Details	Connector	1000T	Copper	
Location A	55 Foote St, 1st Floor, New Haven, CT 06511			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #10	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204642	
Location A Product Details	Connector	1000T	Copper	
Location A	114 Truman St, 1st Floor, New Haven, CT 06519			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #11	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204645	
Location A Product Details	Connector	1000T	Copper	
Location A	60 S Water St, 1st Floor, New Haven, CT 06519			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #12	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204646	
Location A Product Details	Connector	1000T	Copper	
Location A	140 Legion Ave, 1st Floor, New Haven, CT 06519			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #13	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204646	
Location A Product Details	Connector	1000T	Copper	
Location A	140 Legion Ave, 1st Floor, New Haven, CT 06519			
Location Z Product Details	Connector	1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			

		Existing Product ID S204647	
Location A Product Details	Connector 1000T	Copper	
Location A	130 Orchard St, 1st Floor, New Haven, CT 06519		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #14	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204648	
Location A Product Details	Connector 1000T	Copper	
Location A	150 Kimberly Ave, 1st Floor, New Haven, CT 06519		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #15	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204649	
Location A Product Details	Connector 1000T	Copper	
Location A	103 Hallock Ave, 1st Floor, New Haven, CT 06519		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #16	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204650	
Location A Product Details	Connector 1000T	Copper	
Location A	100 Jewell St, 1st Floor, New Haven, CT 06515		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #17	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204651	
Location A Product Details	Connector 1000T	Copper	
Location A	293 Clinton Ave, 1st Floor, New Haven, CT 06513		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #18	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204652	
Location A Product Details	Connector 1000T	Copper	
Location A	15 Lexington Ave, 1st Floor, New Haven, CT 06513		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #19	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204653	
Location A Product Details	Connector 1000T	Copper	
Location A	400 Canner St, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #20	Product Type Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
		Existing Product ID S204654	
Location A Product Details	Connector 1000T	Copper	
Location A	21 Wooster Pl, 1st Floor, New Haven, CT 06511		

Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #21	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204655	
Location A Product Details	Connector 1000T	Copper		
Location A	360 Columbus Ave, 1st Floor, New Haven, CT 06519			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #22	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204656	
Location A Product Details	Connector 1000T	Copper		
Location A	177 College St, 1st Floor, New Haven, CT 06510			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #23	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204657	
Location A Product Details	Connector 1000T	Copper		
Location A	115 Water St, LL1 Floor, New Haven, CT 06511			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #24	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204658	
Location A Product Details	Connector 1000T	Copper		
Location A	691 Whitney Ave, 1st Floor, New Haven, CT 06511			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #25	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204659	
Location A Product Details	Connector 1000T	Copper		
Location A	191 Fountain St, 1st Floor, New Haven, CT 06515			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #26	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204660	
Location A Product Details	Connector 1000T	Copper		
Location A	1481 Quinpiac Ave, 1st Floor, New Haven, CT 06513			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #27	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204661	
Location A Product Details	Connector 1000T	Copper		
Location A	75 Barnes Ave, 1st Floor, New Haven, CT 06513			
Location Z Product Details	Connector 1000T	Copper		
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519			
Ethernet #28	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID		S204662	
Location A Product Details	Connector 1000T	Copper		
Location A	75 Barnes Ave, 1st Floor, New Haven, CT 06513			

	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204662		
Location A Product Details	Connector 1000T	Copper	
Location A	35 Davis St, 1st Floor, New Haven, CT 06515		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #29	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204663		
Location A Product Details	Connector 1000T	Copper	
Location A	259 Edgewood Ave, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #30	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204664		
Location A Product Details	Connector 1000T	Copper	
Location A	133 Nash St, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #31	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204665		
Location A Product Details	Connector 1000T	Copper	
Location A	569 Congress Ave, 1st Floor, New Haven, CT 06519		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #32	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204666		
Location A Product Details	Connector 1000T	Copper	
Location A	444 Orange St, 1st Floor, New Haven, CT 06519		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #33	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204667		
Location A Product Details	Connector 1000T	Copper	
Location A	185 Goffe St, 1st Floor, New Haven, CT 06511		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519		
Ethernet #34	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204668		
Location A Product Details	Connector 1000T	Copper	
Location A	500 Boston Post Rd, 1st Floor, West Haven, CT 06516		
Location Z Product Details	Connector 1000T	Copper	
Location Z	54 Meadow St, LL1 Floor, New Haven, CT 06519		
Ethernet #35	Product Type Metro-E Advanced Private Line	Total Bandwidth 1Gbps	
	Total MRC \$750.00	Total NRC \$0.00	Service Level 99.9%
	Install Lead Time 30 Days		
	Existing Product ID S204669		

Location A Product Details	Connector 1000T	Copper
Location A	164 Grand Ave, 1st Floor, New Haven, CT 06513	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #36	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204670			

Location A Product Details	Connector 1000T	Copper
Location A	100 James St, 1st Floor, New Haven, CT 06513	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #37	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204671			

Location A Product Details	Connector 1000T	Copper
Location A	511 Chapel St, 1st Floor, New Haven, CT 06511	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #38	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204672			

Location A Product Details	Connector 1000T	Copper
Location A	175 Water St, 1st Floor, New Haven, CT 06511	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #39	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204673			

Location A Product Details	Connector 1000T	Copper
Location A	185 Barnes Ave, 1st Floor, New Haven, CT 06513	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #40	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204674			

Location A Product Details	Connector 1000T	Copper
Location A	375 Quinnipiac Ave, 1st Floor, New Haven, CT 06513	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #41	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204675			

Location A Product Details	Connector 1000T	Copper
Location A	480 Townsend Ave, 1st Floor, East Haven, CT 06512	
Location Z Product Details	Connector 1000T	Copper
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519	

Ethernet #42	Product Type	Metro-E Advanced Private Line	Total Bandwidth	1Gbps
	Total MRC	\$750.00	Total NRC	\$0.00
	Install Lead Time	30 Days	Service Level	99.9%
	Existing Product ID S204676			

Location A Product Details	Connector 1000T	Copper
Location A	460 Lexington Ave, 1st Floor, New Haven, CT 06513	
Location Z Product Details	Connector 1000T	Copper

Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519					
Ethernet #43	Product Type	Metro-E Advanced Private Line		Total Bandwidth	1Gbps	
	Total MRC	\$750.00	Total NRC	\$0.00	Service Level	99.9%
	Install Lead Time	30 Days				
			Existing Product ID	S217701		
Location A Product Details	Connector	1000T	Copper			
Location A	580 Ella T Grasso Blvd, 1st Floor, New Haven, CT 06519					
Location Z Product Details	Connector	1000T	Copper			
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519					
Ethernet #44	Product Type	Metro-E Advanced Private Line		Total Bandwidth	1Gbps	
	Total MRC	\$750.00	Total NRC	\$0.00	Service Level	99.9%
	Install Lead Time	30 Days				
			Existing Product ID	S209624		
Location A Product Details	Connector	1000T	Copper			
Location A	495 Blake St, 1st Floor, New Haven, CT 06515					
Location Z Product Details	Connector	1000T	Copper			
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519					
Ethernet #45	Product Type	Metro-E Advanced Private Line		Total Bandwidth	1Gbps	
	Total MRC	\$750.00	Total NRC	\$0.00	Service Level	99.9%
	Install Lead Time	30 Days				
			Existing Product ID	S204575		
Location A Product Details	Connector	1000SX	MM			
Location A	69 Farnham Ave, 1st Floor, New Haven, CT 06515					
Location Z Product Details	Connector	1000SX	MM			
Location Z	54 Meadow St, 1st Floor, New Haven, CT 06519					
Ethernet #46	Product Type	Ethernet LAN (E-LAN)		Total Bandwidth	10Gbps	
	CoS Bandwidth	Standard EVC	Business Priority EVC	Business Critical EVC	Mission Critical EVC	
		10 Gbps	0 Mbps	0 Mbps	0 Mbps	
		CoS MRC	\$1,700.00	\$0.00	\$0.00	\$0.00
		Total MRC	\$1,700.00	Total NRC	\$0.00	Service Level
	Install Lead Time	30 Days				
			Existing Product ID	S204570		
Location A Product Details	Connector	10 Gbps				
Location A	54 Meadow St, LL1 Floor, New Haven, CT 06519					
Ethernet #47	Product Type	Ethernet LAN (E-LAN)		Total Bandwidth	10Gbps	
	CoS Bandwidth	Standard EVC	Business Priority EVC	Business Critical EVC	Mission Critical EVC	
		10 Gbps	0 Mbps	0 Mbps	0 Mbps	
		CoS MRC	\$1,700.00	\$0.00	\$0.00	\$0.00
		Total MRC	\$1,700.00	Total NRC	\$0.00	Service Level
	Install Lead Time	30 Days				
			Existing Product ID	S204571		
Location A Product Details	Connector	10 Gbps				
Location A	480 Sherman Pkwy, 1st Floor, New Haven, CT 06511					
Ethernet #48	Product Type	Ethernet LAN (E-LAN)		Total Bandwidth	10Gbps	
	CoS Bandwidth	Standard EVC	Business Priority EVC	Business Critical EVC	Mission Critical EVC	
		10 Gbps	0 Mbps	0 Mbps	0 Mbps	
		CoS MRC	\$1,700.00	\$0.00	\$0.00	\$0.00
		Total MRC	\$1,700.00	Total NRC	\$0.00	Service Level
	Install Lead Time	30 Days				
			Existing Product ID	S204572		
Location A Product Details	Connector	10 Gbps				
Location A	181 Mitchell Dr, 1st Floor, New Haven, CT 06511					
Ethernet #49	Product Type	Ethernet LAN (E-LAN)		Total Bandwidth	10Gbps	
	CoS Bandwidth	Standard EVC	Business Priority EVC	Business Critical EVC	Mission Critical EVC	
		10 Gbps	0 Mbps	0 Mbps	0 Mbps	
		CoS MRC	\$1,700.00	\$0.00	\$0.00	\$0.00
		Total MRC	\$1,700.00	Total NRC	\$0.00	Service Level
	Install Lead Time	30 Days				
			Existing Product ID			
Location A Product Details	Connector	10 Gbps				

	Existing Product ID S204573
Location A Product Details	Connector 10 Gbps
Location A	255 Blatchey Ave, 1st Floor, New Haven, CT 06513

Ethernet #50	Product Type Ethernet LAN (E-LAN)	Total Bandwidth 10Gbps			
		Standard EVC	Business Priority EVC	Business Critical EVC	Mission Critical EVC
	CoS Bandwidth	10 Gbps	0 Mbps	0 Mbps	0 Mbps
	CoS MRC	\$1,700.00	\$0.00	\$0.00	\$0.00
	Total MRC	\$1,700.00	Total NRC \$0.00	Service Level 99.9%	
	Install Lead Time	30 Days			

	Existing Product ID S204574
Location A Product Details	Connector 10 Gbps
Location A	140 Dewitt St, 1st Floor, New Haven, CT 06519

Order Summary	Account Exec										
Pricing & Contract Terms	Salesperson Bob David	Term (Months) 12									
	Client Service Mgr Jennifer Falotico										
	Order Contact Robert Cusson	Contact Email robert.cusson@new-haven.k12.ct.us									
		<table border="1"> <thead> <tr> <th></th> <th>NRC *</th> <th>MRC*</th> </tr> </thead> <tbody> <tr> <td>Ethernet</td> <td>\$0.00</td> <td>\$42,250.00</td> </tr> <tr> <td>Total</td> <td>\$0.00</td> <td>\$42,250.00</td> </tr> </tbody> </table>		NRC *	MRC*	Ethernet	\$0.00	\$42,250.00	Total	\$0.00	\$42,250.00
	NRC *	MRC*									
Ethernet	\$0.00	\$42,250.00									
Total	\$0.00	\$42,250.00									
*Pricing shown does not reflect applicable taxes and fees.											

ORDER ACCEPTANCE

This Order Form is entered into between Provider (or "Company") and Customer (or "Licensee") effective as of the date of the last signature below, and is subject to the provisions of the Master Telecommunications License Agreement or other master agreement between the parties dated 1/1/2016 ("Agreement"), which is incorporated herein by reference. In the event the date in the previous sentence is blank, then this Order Form will be governed by the "Crown Castle Terms and Conditions Version2.1" available at <https://fiber.crowncastle.com/crown-castle-telecommunications-license-terms-and-conditions.pdf> ("Online Terms"). In addition, if Company and Licensee have not executed a Supplement or Service Level Agreement applicable to the type of product contemplated by this Order Form, then the product-specific portion of the Online Terms applicable to the product under this Order Form shall apply.

Licensee or Customer		Company or Provider	
	New Haven Public Schools		Crown Castle Fiber LLC
Signature		Signature	
Name/Title		Name/Title	
Date		Date	