City of Columbus

Upgrade Boundary Network and VoIP Communication | RFQ020154

November 18, 2021

Digital Copy

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City of Columbus
90 W Broad Street
Columbus, OH 43215

November 18, 2021

Re: Upgrade Boundary Network and VoIP Communication RFQ020154

Dear Lorraine Bells,

The City of Columbus is seeking Request for Proposals in response to a Best Value Procurement (BVP) to enter into a Universal Term Contract (indefinite quantity) to purchase and install both an upgraded boundary network, wire and wireless, and telephony equipment. CDW Government LLC (CDW•G) is a trusted partner of the City, and we believe our organization can provide the strongest solution of the City to achieve your strategic goals and is pleased to offer our solution with the following advantages:

Proven and Strong Partnership with Cisco: CDW•G's longstanding partnership with Cisco for over 20 years has generated unique differentiators which yield great benefits for the City. CDW and, by extension, CDW Government LLC (CDW•G), is both a Cisco Gold Integrator and Cisco Gold Provider. These designations are indicative of CDW•G's ability to design and architect at a high level in various Cisco architectures.

Highest Levels of Cisco Certifications: CDW•G has more than 250 Cisco Certified Network/Data/Voice Professionals (CCNPs/DPs/VPs) and has earned over 100 of the highest technical certifications offered by Cisco, ensuring any engineers that do work for the City are qualified and certified with the Cisco technology.

Superior Account Support: The City dedicated CDW•G Account Team is committed to providing your organization with outstanding customer service and support. Your Account Team is already familiar with the inner working of your organization, allowing for better communication and more efficient solution development.

This proposal presents how CDW•G can efficiently provide a solution to meet your goals for a successful Upgrade Boundary Network and VoIP Communication. If you have any questions regarding this proposal, please contact Proposal Specialist Donna Pugliese. She can be reached by phone at 629.208.8248 or by email at donna.pugliese@cdw.com.

Sincerely,

Cailee Filkin
Manager, Proposal Teams

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Executive Summary

As the City department responsible for providing cost-effective, high-end computing, networking facilities, and technical services for agencies of the City of Columbus (the City), DoT requires a partner with the experience, capabilities, and relationships to address the emergent needs of the ever-evolving IT landscape. Celebrating 37 years of growth, success, and leadership in the technology industry, CDW•G is perfectly positioned to provide DoT with the solutions they need to effectively serve the City agencies and their constituents. With unparalleled OEM partnerships including Cisco Meraki, a vast portfolio of IT services, and an expansive network of skilled and diverse services providers, we have the knowledge and resources necessary to support the City's systems integration projects

Strong Cisco/Meraki Partnership

CDW•G maintains strong relationships with more than 1,000 vendor partners to provide the best products, services, and support to City Agencies. Choose from more than 100,000 technology products from industry-leading brands including Cisco, Microsoft, HPE, Palo Alto, NetApp, and Dell EMC, to name a few. With the industry's largest in-stock inventories, DoT can be certain we'll have the technology required for the City's systems integration projects.

As you will see from our narrative in Section 3.0, CDW•G has a stout partnership with Cisco that the City will benefit from. Because of the depth and breadth of our services, we can leverage numerous team members for you to ensure the accuracy and stability of the final solution. The City can rest assured knowing that the knowledge shared from CDW•G is tested with experience because we have many clients similar to you.

Through this intimate partnership, CDW•G has detailed insight into supply chain availability, manufacturing delays, distribution shortages and overstocks, as well as other disruptions related to supply and demand variability. With this intelligence, we are often able to secure additional inventory to offset any known supply issues. This strategic advantage has particularly tested through the pandemic as the supply chain constraints have narrowed availability on most technologies. It also means that our procurement teams are acutely aware of the fluctuation in pricing that has hit all manufacturers including Cisco. We will continue to leverage our relationships with Cisco to communicate those price changes and work with the City to mitigate any adverse effects as soon as possible. Although we don't currently have a formal relationship with the Optokon ruggedized phones, we will continue to pursue it in order to meet the City's request and also offer alternatives that we have from experience to make sure the City receives the best solution.

Finally, the success of this project is of utmost importance to CDW•G. So much so, that we are willing to fund a Cisco High Touch Operations Manager for the first year of the contract. This High Touch Operations Manager (HTOM) will provide you with a single point of contact for operations management and case coordination. Your HTOM will fast-tracks responses and resolutions from Cisco's technical support and contract administration to provide special access to Cisco subject matter experts that know your products best and is a value of over $100K for the City.

HTOM Deliverables and Activities	
Contract Administration	• Cisco.com profile updates • Quick reference cards personalized for the City • Scrubbing of CCO Bulletins associated with contracts to "lock down" contract variables

Technical Support Collaboration	• Provides reach back into other Cisco Teams • Assists with Certificate of Destruction for RMA'd devices • Delivers 24x7 Severity 1 and Severity 2 alerts • Provides 8:00 am - 5:00 pm Severity 3 alerts • Includes knowledge transfers and individualized trainings
Service Request Management	• Ensures routing of Service Requests to appropriate queue • Works with Account Team on entitlement issues • Provides Cisco Tech support (TAC/HTTS) process SME • Follows up on cases that are in pending states • Provides trending data to account teams for proactive support • Creates proactive cases for use in planned outages or upgrades • Generates prepositioning of spares in depots when necessary
Service Continuity	• Helps to solve network issues more quickly and efficiently which enables the City's internal staff to focus on day-to-day operations • Provides guaranteed U.S. Citizens in a U.S. Time Zones • Delivers a dedicated, relationship driven, single point of contact

CDW•G also employs a Partner Engagement Supervisor who provides a strategic partnership with assigned Services Management by operating the City's daily Services business with precision and urgency. The incumbent in this role has a high degree of resourcefulness, is an excellent communicator, thrives in a fast-paced and dynamic environment, and is process driven but flexible in approach. This Supervisor is responsible for enabling all aspects of Services by acting as a liaison between Services departments, Sales departments, CDW•G clients and The Trusted Partner Network in support of service delivery. This can include:

- Assisting in Statement of Work reviews to ensure compliance with CDW's standards
- Providing full lifecycle Engagement Management not merely project engagement and
- Acting as a point of escalation to assist and/or resolve sales, customer, and partner satisfaction issues

Robust Services Practice

For over 37years, CDW•G has been delivering IT services for the government, education, and healthcare industries. While we may be best known for providing leading IT solutions, our Integrated Technology Services (ITS) division plays an equally important role in continually helping the City manage, optimize, and transform your IT services.

CDW AMPLIFIED™ Services Portfolio

City of Columbus will benefit from accessing CDW•G's comprehensive set of services that offer an unparalleled breadth of experience and expertise. Our portfolio of services includes data center, networking, hybrid cloud, end-user workspace and collaboration, application development, data analytics, and technical support and service desk services. Our services are purpose-built, with pre-defined service descriptions, statements of work, deliverables, service level objectives, and pricing. The

benefit for City Agencies is the ease they can transact with CDW•G from solution planning to service startup.

CDW AMPLIFIED™ Infrastructure Services provide the expertise, tools, and resources to scale and future-proof City Agencies' critical data centers and network architecture. With the acquisition of Aptris, CDW now provides ServiceNow services for the design, orchestration, and management of the ServiceNow applications, including ITSM, ITOM, SecOps, CSM, and HR Management.

CDW AMPLIFIED™ Security Services help with ever-evolving security threats and maintains compliance with their industry and regulatory standards. Cybersecurity risks are higher than ever, and organizations require continuous defense, detection, and dynamic responses against evolving threats while maintaining industry compliance. Holding certifications in CISSP, CISA, CISM, CIPP, Ethical Hacking, ISO Auditing, and ITIL, our security engineers can design comprehensive strategies and solutions for protecting critical IT resources and data.

CDW AMPLIFIED™ Workspace Services provide a comprehensive approach for users to work from anywhere, on any device, at any time. Our two configuration centers can support complex deployments, including staging, imaging, integration, kitting, and deploying up to 10,000 devices per day. Workspace Services also provides integrated solutions for managing the security risks to endpoint devices to remain productive and secure.

CDW AMPLIFIED™ Development Services help City Agencies address your growing technical debt in legacy application stacks and software delivery processes. Development Services provide modern, cloud-native technologies and industry-leading best practices to allow customers to develop applications that revolutionize their infrastructure and solve business issues.

CDW AMPLIFIED™ Data Services help customers like the City make data-driven decisions by leveraging the benefits of a modernized data warehouse. Data Services also provides Artificial Intelligence (AI) and Machine Learning (ML) services to develop actionable insights and realize the full benefit of your data warehouse.

CDW AMPLIFIED™ Support Services deliver custom warranty, maintenance, and technical support services that augment the City's IT staff so that you can focus on maximizing business outcomes.

Project Management Services

The mission of CDW•G's Project Management Office (PMO) is to drive excellence and leadership in Project and Program Management for our customers. We leverage a proven methodology based on the Project Management Institute's (PMI) standards and best practices while tailoring projects to meet business outcomes and requirements. Our PMO is an active member of the PMI Global Executive Council whose role is to lead and direct the future of the project management profession and ensure its continued growth and success. CDW•G has over 160 customer-facing Project and Program Managers, with over 70 being PMP Certified.

CDW•G project methodology is scalable to any project size, customer-value driven, and flexible enough to integrate with and the City's methods as needed. By being PMI aligned, we focus on communication, quality management, and continual improvement during all phases of the project.

This is especially important for these projects as we know that there are still details that we need to address prior to finalizing the formal Statement of Work and Bill of Materials to the City. Consequently, we didn't provide a firm final services calculation because we believe there is still significant information that needs to be gathered. For instance, regarding the Boundary Network project, below is a sample of the additional details that CDW•G needs to discover in order to ensure that accuracy for our Amplified Infrastructure Services engineers:

For Meraki Wired Considerations, we need to understand:

- The VLAN structure of each location and how complex the port assignments are to each existing switch

- If cutover of the cabling from the current switches to the new will be handled by CDW or the City
- If cutover times must occur after hours
- In some cases during the walkthrough there were IDFs that could be consolidated by rewiring into other IDFs. We need to understand if any of this consolidation will occur.
- Several locations were found to not have functional UPS in the IDFs so we need to understand if this will be addressed as part of the project
- The capacity of the MDF and IDF racks/cabinets to determine if new equipment can be racked in advance of cutover or if equipment will need to be removed in order to make room for the new gear

For Meraki Wireless Considerations, we need to

- Determine if we will do a one for one swap at each location or if we should do pre deployment site surveys for every location
- Engage in a wireless design session to determine the best method of design that limits the number of SSIDs for the city while still enabling proper segmentation
- Discuss authentication requirements, integration with ISE, etc.
- Discuss guest wireless requirements
- Discuss implementation strategies and timing for installation

The level of effort would be impacted by the answers to these questions.

For the VOIP Implementation project, below is the sample of the additional details we need to discover in order to ensure that same accuracy for our Amplified Infrastructure Services engineers:

- PBXmodel
- Handset quantities, models
- Analog requirements, Paging requirements, Fax requirements, Contact and/or AC requirements
- 3rd party integrations
- Dial plan for the site
    - Range of extensions, Digit length of extensions, Internal Calling, External Calling, Inter-site Calling, Intra-site Calling, Emergency Calling requirements
- Call pickups
- Hunt groups
- MOH specifics
    - Headset needs, Wireless phone usage, Conference room phones, External Conf room microphones, Attendant console requirements
    - Voicemail requirements:
        - Number of voicemail users, shared voicemail users, and voicemail distribution lists
    - IVR/Auto-attendant requirements
    - PSTN Connections

- SIP / PRI / Analog: circuit information, circuit handoff type & requirements, Carrier local presence requirements

- WAN Connections
  - DIA / Ethernet/ Fiber: circuit information, circuit handoff type & requirements
- List of inbound DID numbers
  - List of any main/departmental numbers
  - Call flow for each of the above
- Photos of PBX closet and Telco demarc(s)
- Photos of Telco demarc(s)
- Wall mounts required
- TTY or special needs requirements
- Assess Cat3/5/6 cabling
- Assess analog cabling
- Assess and document PoE requirements, QoS (voice and video only) requirements, licensing requirements, additional hardware requirements, network rack requirements, and power requirements

Expansive Network of Diverse Partners

Through our Business Diversity Program, CDW generates business opportunities that position diverse suppliers for economic sustainability, yield competitive advantages for our company, and deliver exceptional technology experiences for our customers through innovation. Currently, we partner with over 1,100 small, minority-owned, and woman-owned businesses across the U.S. including Sophisticated Systems Inc., (SSI) based out of Columbus. Having an extensive diverse supplier base enables CDW to contribute to the economic well-being of all segments of the U.S. population and support the diversity goals of customers like the City of Columbus.

We recognize that partnering with suppliers who provide a diverse set of ideas in addition to delivering support, goods, and services it —creates a significant competitive advantage for CDW and our customers. In 2020, CDW spent roughly $2.6 billion with diverse firms. In addition to added sales revenues, the impact for our diverse partnerships is also felt in customized training and advocacy support, creating a powerful multiplier effect of supporting jobs, increasing wages, and boosting local economies.

Our strong commitment to ensuring a diverse and inclusive supply chain is reflected through achieving membership in the Billion Dollar Roundtable, an exclusive group of U.S. based companies that have procured more than $1 billion annually from minority and women-owned businesses on a first-tier basis.

We not only want to be your IT Contractor of choice; our goal is to be a true, valued partner for the City of Columbus. Specifically, by partnering with SSI we can deliver the full complement of implementation services including our mature, robust services practice with the local smart hands support of SSI. As mentioned previously, CDW•G would perform formal walkthroughs with SSI of each City location to validate the design/Bill of Materials and final scope of work. SSI was an integral part of our Meraki deployment for the Columbus Metropolitan Library ensuring accurate Wi-Fi deployment.

Should you have any questions regarding this proposal, please contact Proposal Specialist Donna Pugliese at 629.208.8248 or by email at donna.pugliese@cdw.com.

Attachment A. Generic Boundary Network Reference Architecture

3.3.3 Section Three – Quality and Feasibility (30 points): The quality and feasibility of the Offeror's technical proposal. Offeror will demonstrate through the conversion of the BVP technical specifications into detailed implementation plans and documents that clearly explain how the Offeror meets the operational needs expressed by the preferences of the technical specifications. The committee will give points to Offerors who clearly demonstrate their compliance with the needs defined in the technical specifications. If the Offeror does not include a specific item preferred in the technical specification, the Offeror will be scored based on its ability to demonstrate how its offer meets the high-quality demands of the information technology industry and the feasibility of Offeror's proposed solution.

The proposal shall not include components, or finished units that are of a prototype nature, or have not been in production for a sufficient period to prove their performance capabilities. The Offeror shall clearly describe any parts of its proposed solution products or services which are currently not sold or supported by the Offeror as part of their standard product offering for purchase at the time their BVP was submitted to the City.

Offerors shall submit with their proposal detailed drawings, logical diagrams and build sheets clearly showing all the necessary components of the turnkey Cisco Meraki boundary network solution and/or of the turnkey Cisco VOIP solution as required in the sections below. Offerors are encouraged to submit with their proposal descriptive literature, brochures, and other technical details. Offerors may respond to all or some of the listed locations.

The response includes the following components and references various industry standards. See Attachment A. Generic Boundary Network Reference Architecture, and Attachment B. Generic VOIP Reference Architecture.

3.3.3.1 Boundary Network Sites

1. Columbus City Hall, 90 West Broad Street, Columbus, OH 43215
2. Jerry Hammond Center, 1111 East Broad Street, Columbus, OH 43205
3. Columbus Public Health, 240 Parsons Avenue, Columbus, OH 43215
4. Income Tax Division, City Attorney, and Public Safety, 77 N. Front Street Columbus, OH 43215
5. Division of Police, 120 Marconi Blvd, Columbus, OH 43215
6. Neighborhood Policing Center, Precinct #18, 1120 Morse Road, Columbus, OH 43229
7. Fire Station #1 and #9, 300 North Fourth Street, Columbus, OH 43215
8. Public Utilities Administration Building, 910 Dublin Rd, Columbus, OH 43215

3.3.3.2 Public Safety, Division of Police VOIP Sites

1. Public Safety, Division of Police VOIP Sites
2. Police, 750 Gateway Building, 750 E. Long Street, Columbus, OH 43203
3. Police, Property Room, 724 E. Woodrow Avenue, Columbus, OH 43207
4. Police Impound Lot, 2700 Impound Lot Road, Columbus, OH 43207
5. Police SWAT, 2609 McKinley Avenue, Columbus, OH 43204

6. Police Substations 11 and 12, 950 East Main Street, Columbus, OH 43205
7. Police Substations 14 and 20, 2500 Park Crescent Drive, Columbus, OH 43232
8. Police Public Safety Director's Office, 77 N. Front Street, Columbus, OH 43215
9. Police Substations 03 and 17, 5400 Olentangy River Road, Columbus, OH 43235
10. Police Substation 05, 1371 Cleveland Avenue, Columbus, OH 43211
11. Police Substations 08 and 16, 333 W. Town Street, Columbus, OH 43215
12. Police Substation 10, 4215 Clime Road, Columbus, OH 43228
13. Police Substation 13, 544 Woodrow Avenue, Columbus, OH 43207
14. Police Substation 19, 2070 Sullivant Avenue, Columbus, OH 43223
15. Police Substation 18, 1120 Morse Road, Columbus, OH 43229
16. Police Substation 01, 4560 Karl Road, Columbus, OH 43224
17. Police Substation 02, 2077 Parkwood Avenue, Columbus, OH 43219
18. Police Substation 04, 248 E. 11th Avenue, Columbus, OH 43201
19. Police Substation 06, 5030 Ulry Avenue, Columbus, OH 43081
20. Police Substation 07, 1475 Granville Street, Columbus, OH 43203
21. Police Substation 09, 3022 Winchester Pike, Columbus, OH 43232
22. Police 1250 Fairwood Avenue, Columbus, OH 43206
23. Police Substation 15, 1000 N. Hague Avenue, Columbus, OH 43204

End State Target: Approximately 687 Cisco 8851 is Standard Handset Model, including Conference Phones, Cisco 8832 is Standard Conference Handset Model, and a Cisco site SRST/Survivability, using Cisco ISR 4000 Series Router.

3.3.3.3 Public Safety, Division of Fire VOIP Sites

1. Fire Training 3639, 3675, 3669 S. Parsons Avenue, Columbus, OH 43207
2. Fire Stations 1 and 9, 300 N. 4th Street, Columbus, OH 43215
3. Fire Alarm Office, 1250 Fairwood Avenue, Columbus, OH 43206
4. Fire Station 3, 220 Greenlawn Avenue, Columbus, OH 43223
5. Fire Station 2, 150 E. Fulton Street, Columbus, OH 43215
6. Fire Station 18, 1630 Cleveland Avenue, Columbus, OH 43211
7. Fire Station 19, 3601 N. High Street, Columbus, OH 4314
8. Fire Station 33, 440 Lazelle Road, Columbus, OH 43240
9. Fire Station 10, 1096 W. Broad Street, Columbus, OH 43222
10. Fire Station 11, 2170 West Case Road, Columbus, OH 43235
11. Fire Station 17, 2250 W. Broad Street, Columbus, OH 43223
12. Fire Station 14, 1514 Parsons Avenue, Columbus, OH 43207
13. Fire Station 34, 5201 Wilcox Road, Columbus, OH 43016

14. Fire Station 22, 3069 Parsons Avenue, Columbus, OH 43207
15. Fire Station 26, 5333 Fisher Road, Columbus, OH 43228
16. Fire Station 7, 1425 Indianola Avenue, Columbus, OH 43201
17. Fire Station 8, 1240 E. Long Street, Columbus, OH 43203
18. Fire Station 6, 5750 Maple Canyon Avenue, Columbus, OH 43229
19. Fire Station 13, 309 E. Arcadia Avenue, Columbus, OH 43202
20. Fire Station 15, 1800 E. Livingston Avenue, Columbus, OH 43205
21. Fire Station 25, 739 W 3rd Avenue, Columbus, OH 43212
22. Fire Station 28, 3240 McCutcheon Road, Columbus, OH 43230
23. Fire Station 31, 5305 Alkire Road, Columbus, OH 43228
24. Fire Station 32, 3675 Gender Road, Columbus, OH 43110
25. Fire Station 4, 3030 Winchester Pike, Columbus, OH 43232
26. Fire Station 12, 3200 Sullivant Avenue, Columbus OH 43204
27. Fire Station 21, 3294 E. Main Street, Columbus, OH 43213
28. Fire Station 27, 7560 Smokey Row Road, Columbus, OH 43235
29. Fire Station 29, 5151 Little Turtle Way East, Columbus, OH 43081
30. Fire Station 20, 2646 E. 5th Avenue, Columbus, OH 43219
31. Fire Station 23, 4451 E. Livingston Avenue, Columbus, OH 43227
32. Fire Station 24, 1585 Morse Road, Columbus, OH 43229
33. Fire Station 30, 3555 Fishinger Blvd. Columbus, OH 43026
34. Fire Station 16, 1130 E. Weber Road, Columbus, OH 43224
35. Fire Station 5, 211 McNaughten Road, Columbus, OH 43213

End State Target: Approximately 1,117 Handsets, Cisco 8851 is Standard Handset Model, and Cisco 8832 is Standard Conference Handset Model with Cisco site SRST/Survivability, using Cisco ISR 4000 Series Router, and Cisco FXS Card utilized for: Emergency Call Box, Fax, PA Ringer for Fire Alarm Office, and Cisco ATA unit utilize for Paging with SRST.

3.3.3.4 Public Utilities VOIP Sites

1. Jackson Pike Waste Water Treatment Plant, 2104 Jackson Pike, Columbus, OH 43223
2. Southerly Waste Water Treatment Plant, 6977 S. High Street, Columbus, OH 43137
3. Hap Cremean Water Plant, 4250 Morse Road, Columbus, OH 43230
4. Dublin Road Water Plant, 940 Dublin Road, Columbus, OH 43215
5. Parsons Avenue Water Plant, 5600 Parsons Avenue, Columbus, OH 43137
6. Compost Facility, 7000 Jackson Pike, Columbus, OH 43137

End State Target: Approximately 488 Handsets Cisco 8851 is Standard Handset Model, Cisco 8832 is Standard Conference Handset Model, Cisco Optokon LMIPT-41 for sites requiring Ruggedized Phone,

Cisco site SRST/Survivability, using Cisco ISR 4000 Series Router, and Cisco FXO/FXS Card utilized for: Door and Gate Controls. Cisco ATA unit utilize for Paging with SRST.

3.3.3.5 Use of Existing City Assets

Use of any existing city assets (racks, UPS, wiring, mounting, cable management, etc.) should be clearly indicated by the Offeror in their response. Offerors must adhere to all standards and codes.

Attachment A. Generic Boundary Network Reference Architecture

2.0 Legacy Boundary Network Architecture

The legacy boundary network connectivity that will be replaced is achieved through multiple Cisco systems. The wired boundary network connectivity is currently utilizing older Cisco WS-C3xxx and WS-C4xxx Power over Ethernet ("POE") enabled switches and Cisco WS-45xx aggregation switches at each site where appropriate. The wireless boundary network connectivity is achieved through an older Cisco AIR-CT5760 Wireless controller based architecture. The current wireless access points are primarily Cisco 2702x, 2602x, 3502x, and 3702x models utilizing the Wi-Fi protocols 802.11 n and ac. This wireless architecture supports both guest and employee Wi-Fi. The network cables utilized in the sites identified below are a mixture of CAT5, CAT5e and CAT6 network cabling.

2.1 Generic Boundary Network Reference Architecture Overview

The purpose of this document is to provide an overview of the technologies the City of Columbus has identified to modernize its boundary network infrastructure, leveraging Cisco's Meraki Cloud Based Networking Platform.

This document is divided into multiple sections.

- The first section of this document provides additional boundary network infrastructure information for large, medium, small scenarios, based a fire station (small), the Public Health (medium), and City Hall (large).
- The next section provides a statement on the cloud management of this architecture
- The final section visually depicts the planned Meraki architecture for small, medium, and large sites

The following are assumptions based on current information:

- All Networking equipment port densities will be 48 port.
- All uplinks (based on site discovery) will use multi-mode 10G connections northbound.
- All edge switches will have (1) 1100W power supply distributed across 48 ports.
- All switches will use a NEMA classified plug (not a cabinet Jumper).
- All aggregation switches will have redundant power (i.e., MS425).
- The large and medium site model provides redundancy at the aggregation layer
- The small site does not include redundancy.
- Extended stacking cables have been included to create virtual stacks; however, quantity and location must be validated.

- All equipment will include 5-year subscriptions that provide 24/7/365 Meraki Support, Next Business Day RMA support and full access to hardware/firmware upgrades.

2.2 Generic Boundary Network Reference Sites

Small Site

Small Site The small site configuration estimates the following:

- An estimated 24-96 ports or more of Ethernet density
- An estimated 8-10 access points
- Based on the inventory of the Fire Station 1

Medium Site

The medium site configuration estimates the following:

- An estimated 450 ports or more of Ethernet density
- An estimated 50 Access points
- Based on the inventory of Public Health

Large Site

The large site configuration estimates the following:

- Redundancy at the aggregation level
- An estimated 850 ports or more of Ethernet density
- An estimated 50 Access points
- Based on the inventory of City Hall

2.3 Wireless Cloud Management

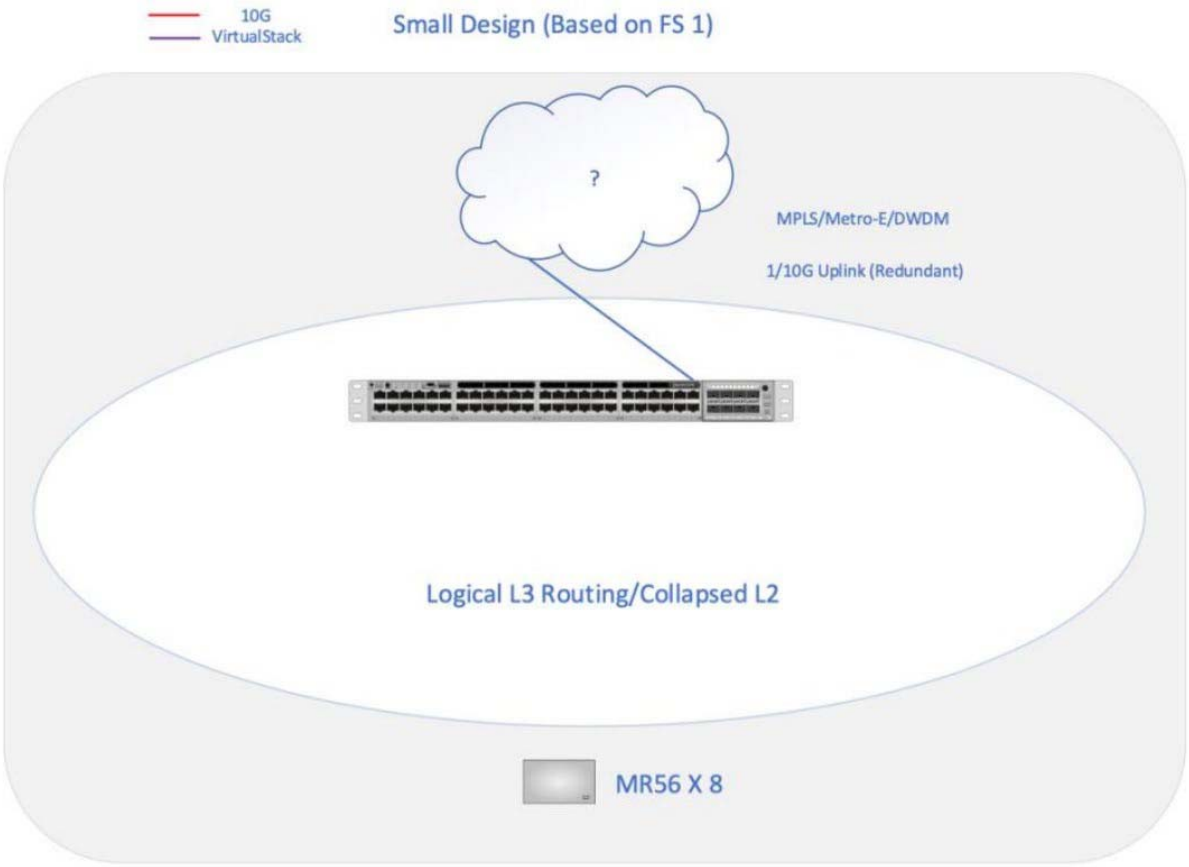
All Meraki products inclusive of the switches and access points will require Internet connectivity to allow secure termination to the Meraki managed node for City of Columbus. There should be no additional on premise controllers.

Meraki cloud management allows for zero touch provisioning. It also enabled faster deployment, the ability to manage anywhere, and to easily scale to meet the City's needs.

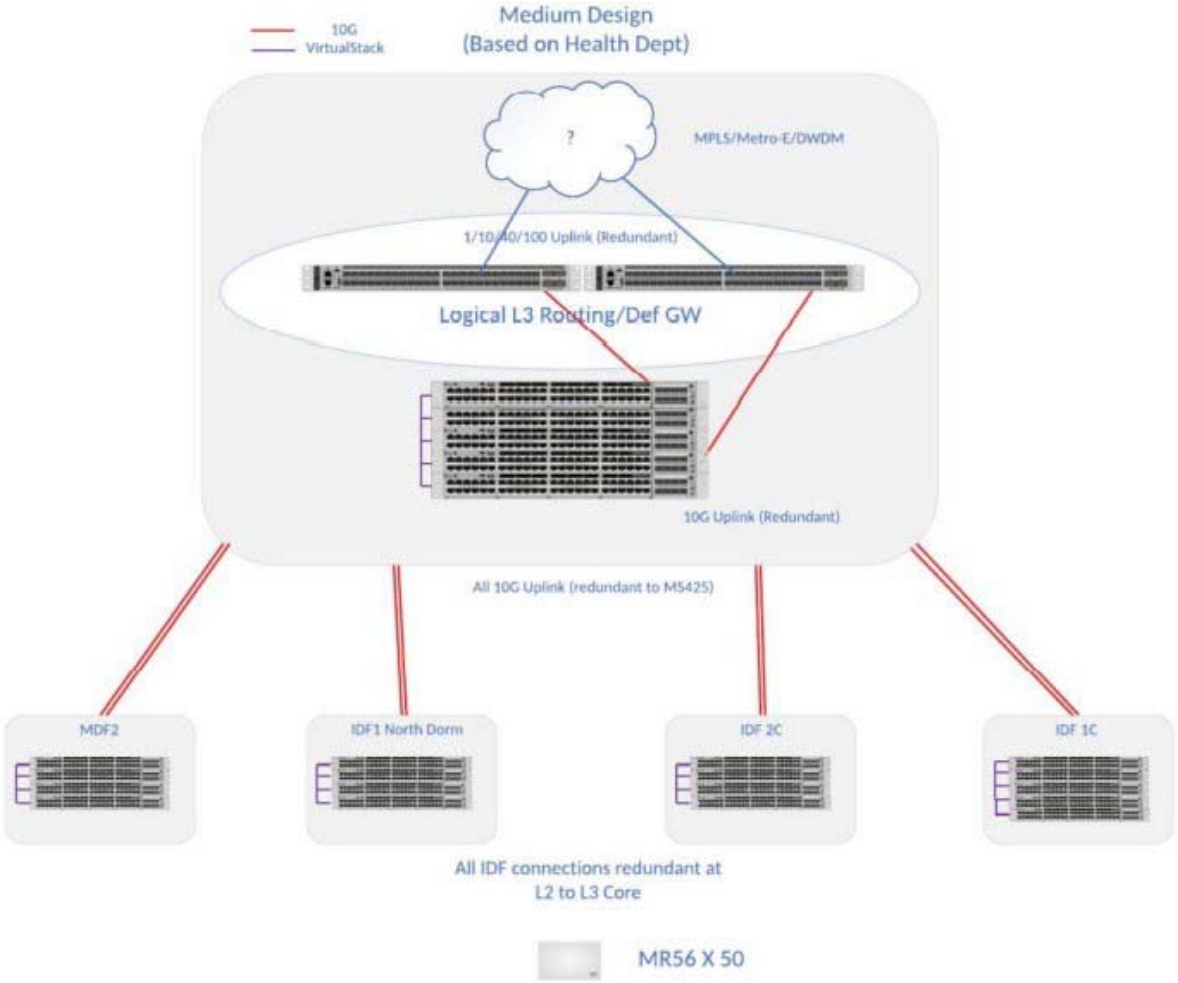
The Meraki cloud management platform will allow the City to monitor and manage the health of the City's entire boundary network from a single pane of glass. This will reduce administrative overhead as the boundary network increases in size.

2.4 Generic Boundary Network Reference Architecture Diagrams

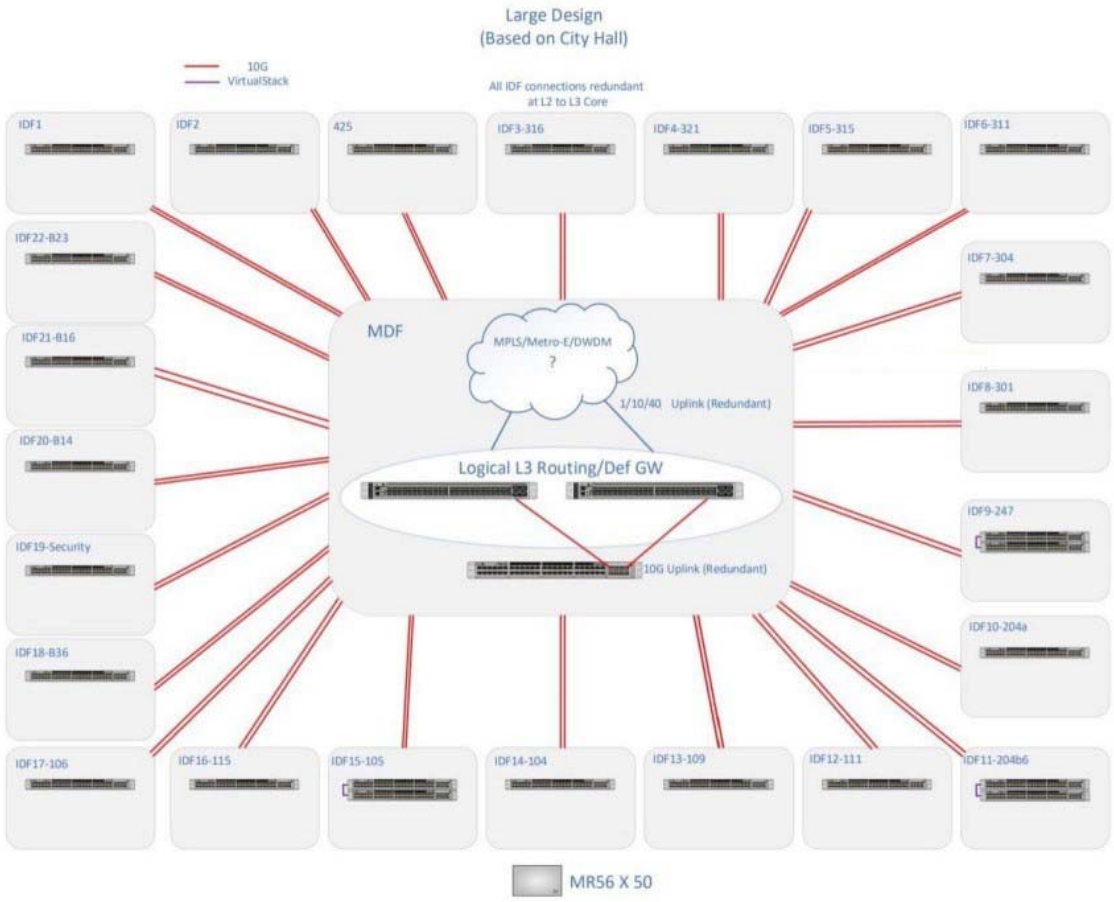
Attachment A



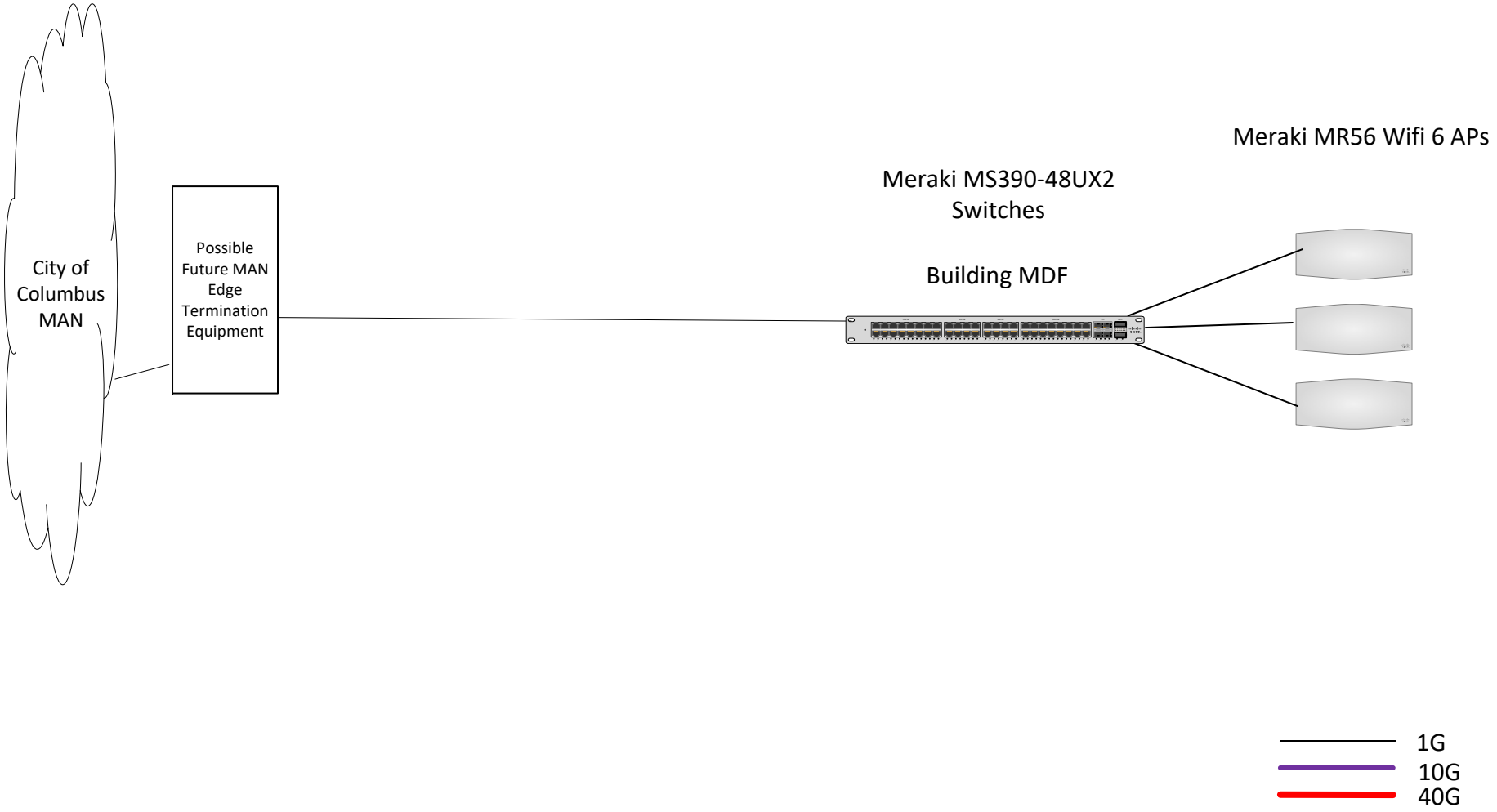
Attachment A



Attachment A



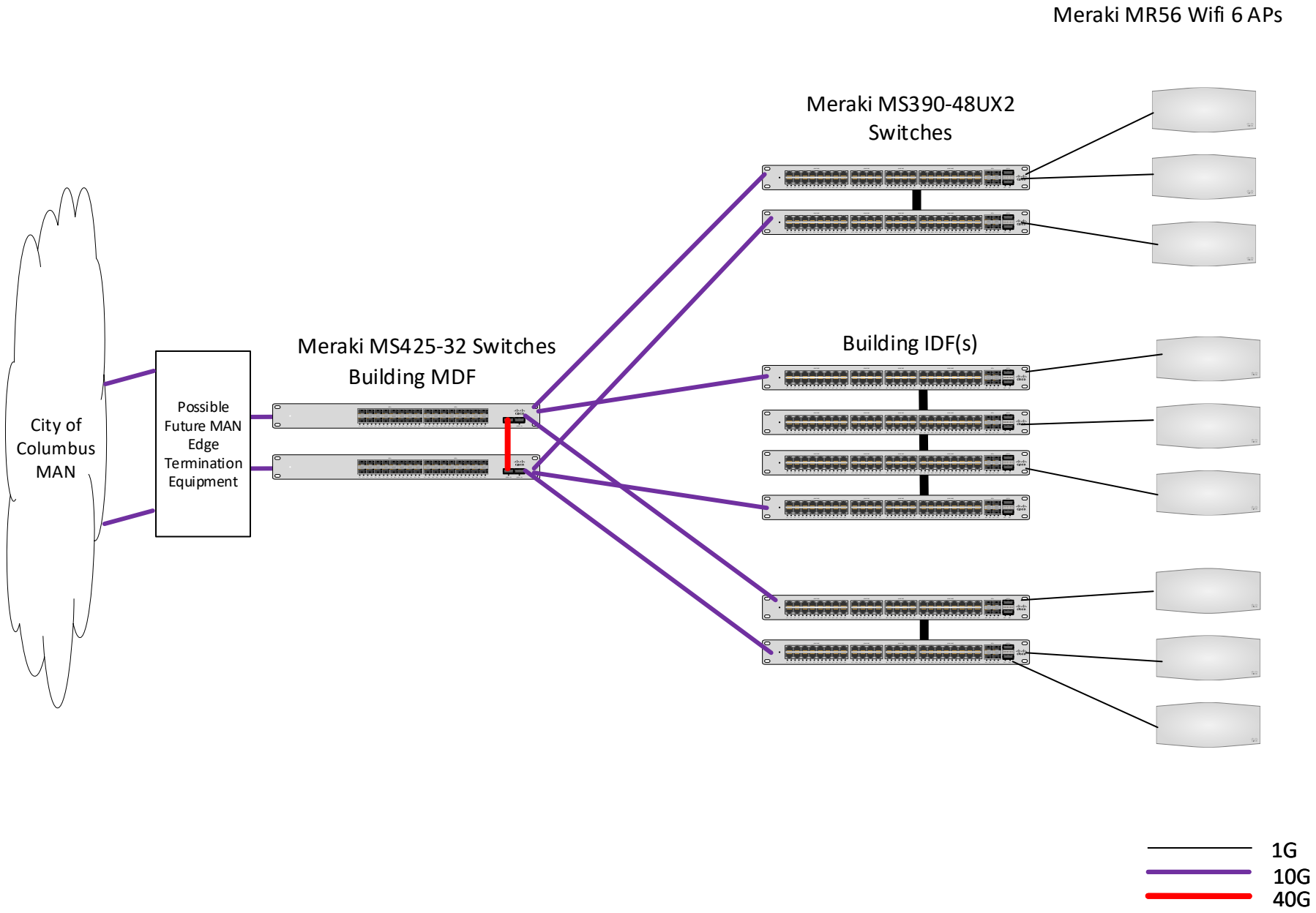
Please see CDW•G ‘s response for our Boundary Network Architecture on the following pages.



City of Columbus Boundary Network – Small Site

Steve Braswell CDW Principle Network FSA / Mike Skiba CDW Senior Collaboration FSA

Date: November, 2021

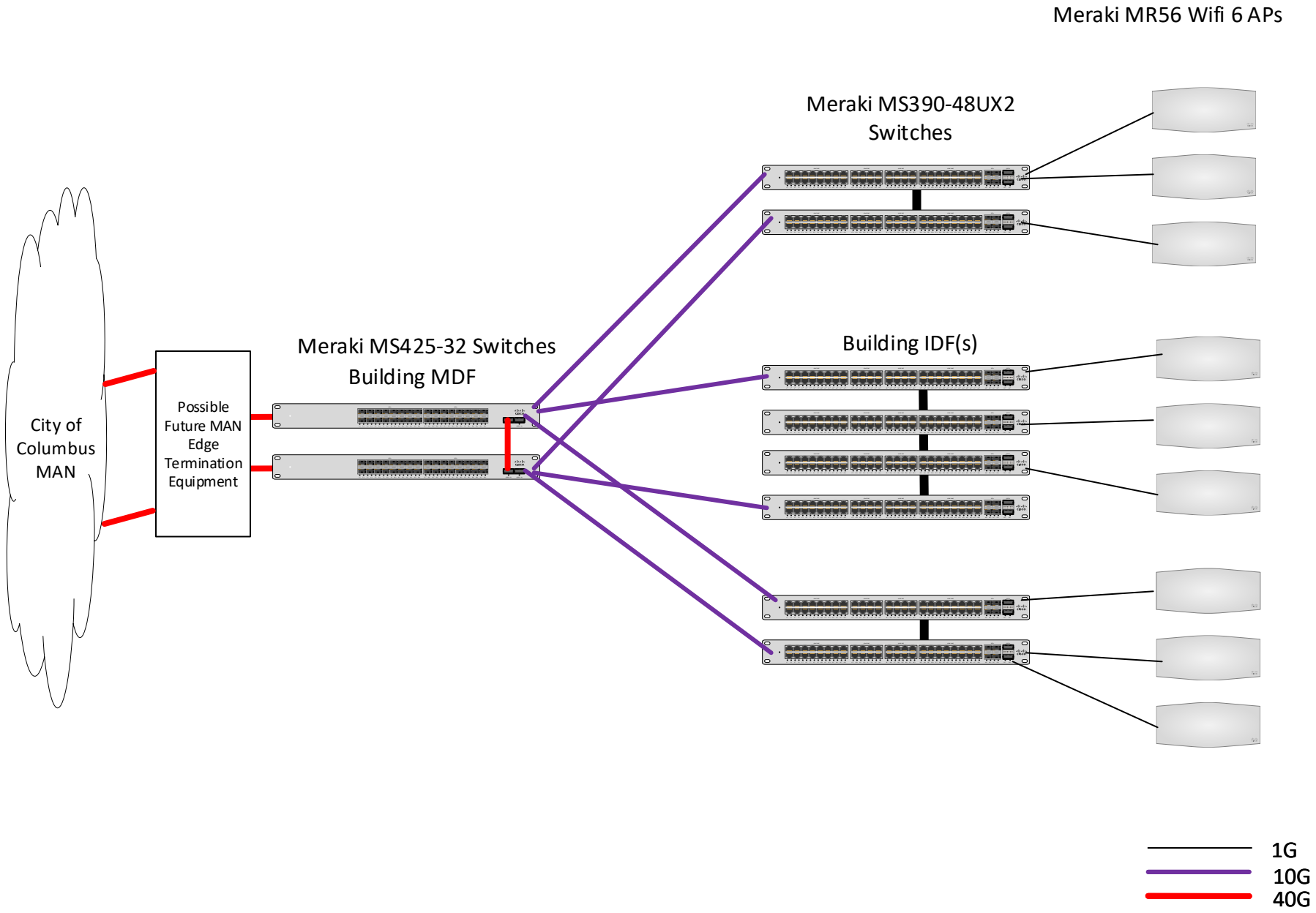


City of Columbus Boundary Network – Medium Site

Steve Braswell CDW Principle Network FSA / Mike Skiba CDW Senior Collaboration FSA

Date: November, 2021

CDW PEOPLE WHO GET IT



City of Columbus Boundary Network – Large Site

Steve Braswell CDW Principle Network FSA / Mike Skiba CDW Senior Collaboration FSA

Date: November, 2021

CDW PEOPLE WHO GET IT

Attachment B. Generic VOIP Reference Architecture

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11. Columbus Public Health, 240 Parsons Avenue, Columbus, OH 43215
12. Income Tax Division, City Attorney, and Public Safety, 77 N. Front Street Columbus, OH 43215
13. Division of Police, 120 Marconi Blvd, Columbus, OH 43215
14. Neighborhood Policing Center, Precinct #18, 1120 Morse Road, Columbus, OH 43229
15. Fire Station #1 and #9, 300 North Fourth Street, Columbus, OH 43215
16. Public Utilities Administration Building, 910 Dublin Rd, Columbus, OH 43215

3.3.3.2 Public Safety, Division of Police VOIP Sites

24. Public Safety, Division of Police VOIP Sites
25. Police, 750 Gateway Building, 750 E. Long Street, Columbus, OH 43203
26. Police, Property Room, 724 E. Woodrow Avenue, Columbus, OH 43207
27. Police Impound Lot, 2700 Impound Lot Road, Columbus, OH 43207
28. Police SWAT, 2609 McKinley Avenue, Columbus, OH 43204

29. Police Substations 11 and 12, 950 East Main Street, Columbus, OH 43205
30. Police Substations 14 and 20, 2500 Park Crescent Drive, Columbus, OH 43232
31. Police Public Safety Director's Office, 77 N. Front Street, Columbus, OH 43215
32. Police Substations 03 and 17, 5400 Olentangy River Road, Columbus, OH 43235
33. Police Substation 05, 1371 Cleveland Avenue, Columbus, OH 43211
34. Police Substations 08 and 16, 333 W. Town Street, Columbus, OH 43215
35. Police Substation 10, 4215 Clime Road, Columbus, OH 43228
36. Police Substation 13, 544 Woodrow Avenue, Columbus, OH 43207
37. Police Substation 19, 2070 Sullivant Avenue, Columbus, OH 43223
38. Police Substation 18, 1120 Morse Road, Columbus, OH 43229
39. Police Substation 01, 4560 Karl Road, Columbus, OH 43224
40. Police Substation 02, 2077 Parkwood Avenue, Columbus, OH 43219
41. Police Substation 04, 248 E. 11th Avenue, Columbus, OH 43201
42. Police Substation 06, 5030 Ulry Avenue, Columbus, OH 43081
43. Police Substation 07, 1475 Granville Street, Columbus, OH 43203
44. Police Substation 09, 3022 Winchester Pike, Columbus, OH 43232
45. Police 1250 Fairwood Avenue, Columbus, OH 43206
46. Police Substation 15, 1000 N. Hague Avenue, Columbus, OH 43204

End State Target: Approximately 687 Cisco 8851 is Standard Handset Model, including Conference Phones, Cisco 8832 is Standard Conference Handset Model, and a Cisco site SRST/Survivability, using Cisco ISR 4000 Series Router.

3.3.3.3 Public Safety, Division of Fire VOIP Sites

36. Fire Training 3639, 3675, 3669 S. Parsons Avenue, Columbus, OH 43207
37. Fire Stations 1 and 9, 300 N. 4th Street, Columbus, OH 43215
38. Fire Alarm Office, 1250 Fairwood Avenue, Columbus, OH 43206
39. Fire Station 3, 220 Greenlawn Avenue, Columbus, OH 43223
40. Fire Station 2, 150 E. Fulton Street, Columbus, OH 43215
41. Fire Station 18, 1630 Cleveland Avenue, Columbus, OH 43211
42. Fire Station 19, 3601 N. High Street, Columbus, OH 4314
43. Fire Station 33, 440 Lazelle Road, Columbus, OH 43240
44. Fire Station 10, 1096 W. Broad Street, Columbus, OH 43222
45. Fire Station 11, 2170 West Case Road, Columbus, OH 43235
46. Fire Station 17, 2250 W. Broad Street, Columbus, OH 43223
47. Fire Station 14, 1514 Parsons Avenue, Columbus, OH 43207
48. Fire Station 34, 5201 Wilcox Road, Columbus, OH 43016

49. Fire Station 22, 3069 Parsons Avenue, Columbus, OH 43207
50. Fire Station 26, 5333 Fisher Road, Columbus, OH 43228
51. Fire Station 7, 1425 Indianola Avenue, Columbus, OH 43201
52. Fire Station 8, 1240 E. Long Street, Columbus, OH 43203
53. Fire Station 6, 5750 Maple Canyon Avenue, Columbus, OH 43229
54. Fire Station 13, 309 E. Arcadia Avenue, Columbus, OH 43202
55. Fire Station 15, 1800 E. Livingston Avenue, Columbus, OH 43205
56. Fire Station 25, 739 W 3rd Avenue, Columbus, OH 43212
57. Fire Station 28, 3240 McCutcheon Road, Columbus, OH 43230
58. Fire Station 31, 5305 Alkire Road, Columbus, OH 43228
59. Fire Station 32, 3675 Gender Road, Columbus, OH 43110
60. Fire Station 4, 3030 Winchester Pike, Columbus, OH 43232
61. Fire Station 12, 3200 Sullivant Avenue, Columbus OH 43204
62. Fire Station 21, 3294 E. Main Street, Columbus, OH 43213
63. Fire Station 27, 7560 Smokey Row Road, Columbus, OH 43235
64. Fire Station 29, 5151 Little Turtle Way East, Columbus, OH 43081
65. Fire Station 20, 2646 E. 5th Avenue, Columbus, OH 43219
66. Fire Station 23, 4451 E. Livingston Avenue, Columbus, OH 43227
67. Fire Station 24, 1585 Morse Road, Columbus, OH 43229
68. Fire Station 30, 3555 Fishinger Blvd. Columbus, OH 43026
69. Fire Station 16, 1130 E. Weber Road, Columbus, OH 43224
70. Fire Station 5, 211 McNaughten Road, Columbus, OH 43213

End State Target: Approximately 1,117 Handsets, Cisco 8851 is Standard Handset Model, and Cisco 8832 is Standard Conference Handset Model with Cisco site SRST/Survivability, using Cisco ISR 4000 Series Router, and Cisco FXS Card utilized for: Emergency Call Box, Fax, PA Ringer for Fire Alarm Office, and Cisco ATA unit utilize for Paging with SRST.

3.3.3.4 Public Utilities VOIP Sites

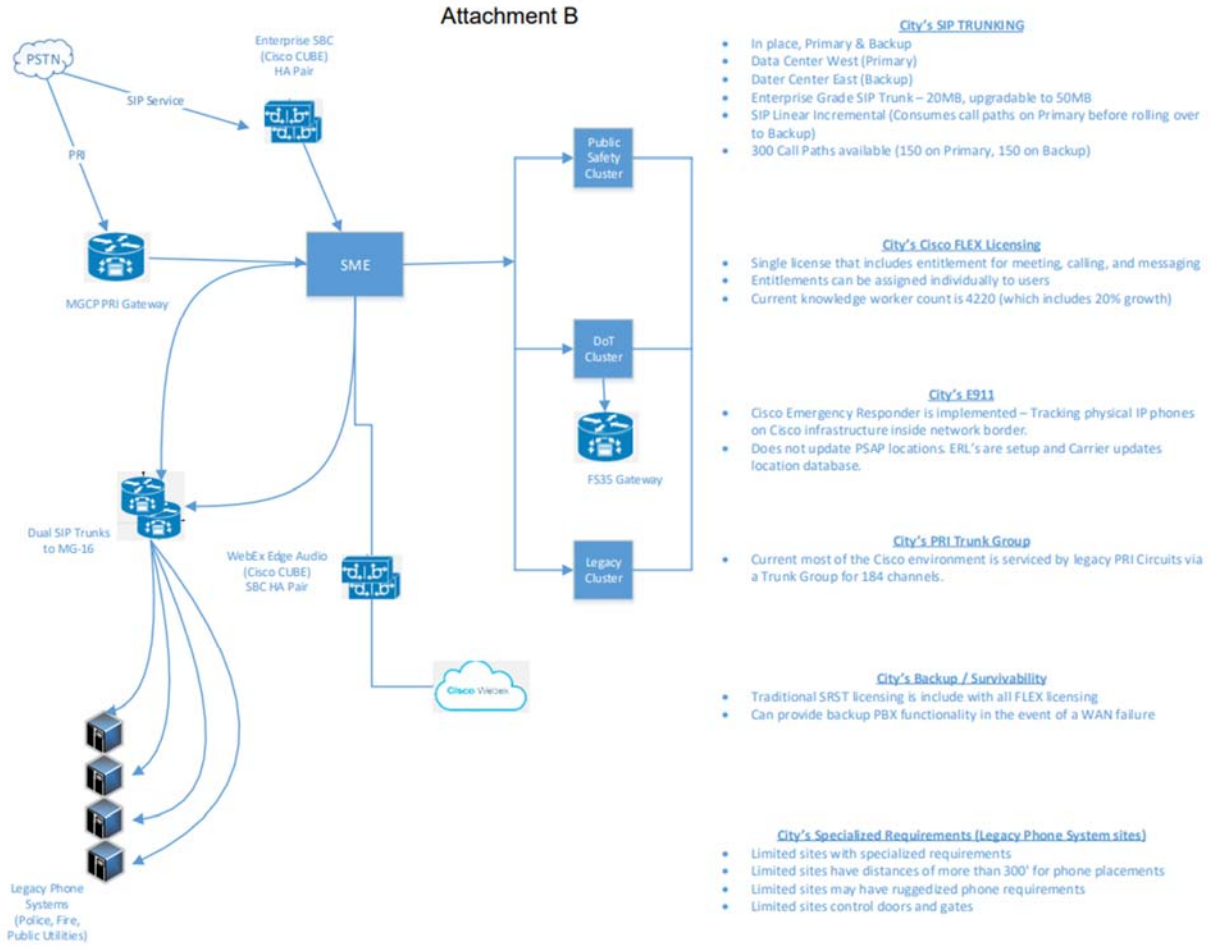
7. Jackson Pike Waste Water Treatment Plant, 2104 Jackson Pike, Columbus, OH 43223
8. Southerly Waste Water Treatment Plant, 6977 S. High Street, Columbus, OH 43137
9. Hap Cremean Water Plant, 4250 Morse Road, Columbus, OH 43230
10. Dublin Road Water Plant, 940 Dublin Road, Columbus, OH 43215
11. Parsons Avenue Water Plant, 5600 Parsons Avenue, Columbus, OH 43137
12. Compost Facility, 7000 Jackson Pike, Columbus, OH 43137

End State Target: Approximately 488 Handsets Cisco 8851 is Standard Handset Model, Cisco 8832 is Standard Conference Handset Model, Cisco Optokon LMIPT-41 for sites requiring Ruggedized Phone,

Cisco site SRST/Survivability, using Cisco ISR 4000 Series Router, and Cisco FXO/FXS Card utilized for: Door and Gate Controls. Cisco ATA unit utilize for Paging with SRST.

3.3.3.5 Use of Existing City Assets

Use of any existing city assets (racks, UPS, wiring, mounting, cable management, etc.) should be clearly indicated by the Offeror in their response. Offerors must adhere to all standards and codes.



Please see CDW•G 's response for our Boundary Network and VOIP Architecture on the following pages.

Cisco 4331 Voice Router
- Public Safety Fire (1x NIM-4FXSP)
- Public Safety Police
- Spare

Cisco 4351 Voice Router
- Public Safety Fire (1x NIM-4FXSP)
- Public Safety Police
- Public Utilities -Remote Locations

Cisco 4451-X Voice Router
- Public Safety Police

City of Columbus MAN

Possible Future MAN Edge Termination Equipment

Meraki MS390-48UX2 Switches

Building MDF

Meraki MR56 Wifi 6 APs

Cisco 8851 VoIP Phone
- Public Safety Fire
- Public Safety Police
- Spare

Cisco 8832 Conference VoIP Phone
- Wired Mic Kit
- Public Safety Fire
- Public Safety Police
- Public Utilities – Remote Locations
- Spare

Cisco ATA 191 Adapter
- Public Safety Fire
- Public Safety Police
- Public Utilities – Remote Locations
- Spare

OPTOKON LMIPT-41 Rugged VoIP Phone
- Public Utilities – Remote Locations
- Spare

1G
10G
40G

City of Columbus Boundary Network – Small Site

Steve Braswell CDW Principle Network FSA
Mike Skiba CDW Senior Collaboration FSA

Date: November, 2021

CDW PEOPLE WHO GET IT

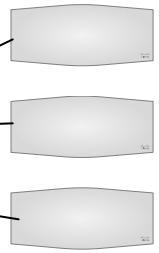
Cisco 4331 Voice Router
- Public Safety Fire (1x NIM-4FXSP)
- Public Safety Police
- Spare

Cisco 4351 Voice Router
- Public Safety Fire (1x NIM-4FXSP)
- Public Safety Police
- Public Utilities -Remote Locations

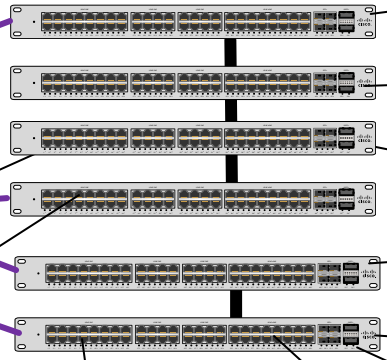
Cisco 4451-X Voice Router
- Public Safety Police

Meraki MR56 Wifi 6 APs

Meraki MS390-48UX2 Switches

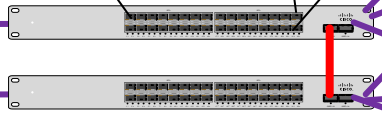


Building IDF(s)



City of Columbus MAN

Possible Future MAN Edge Termination Equipment



Meraki MS425-32 Switches
Building MDF

Cisco 8851 VoIP Phone
- Public Safety Fire
- Public Safety Police
- Spare

Cisco 8832 Conference VoIP Phone
- Wired Mic Kit
- Public Safety Fire
- Public Safety Police
- Public Utilities – Remote Locations
- Spare

Cisco ATA 191 Adapter
- Public Safety Fire
- Public Safety Police
- Public Utilities – Remote Locations
- Spare

OPTOKON LMIPT-41 Rugged VoIP Phone
- Public Utilities – Remote Locations
- Spare

1G
10G
40G

City of Columbus Boundary Network – Medium Site

Steve Braswell CDW Principle Network FSA
Mike Skiba CDW Senior Collaboration FSA

Date: November, 2021

CDW PEOPLE WHO GET IT

Cisco 4331 Voice Router
- Public Safety Fire (1x NIM-4FXSP)
- Public Safety Police
- Spare

Cisco 4351 Voice Router
- Public Safety Fire (1x NIM-4FXSP)
- Public Safety Police
- Public Utilities -Remote Locations

Cisco 4451-X Voice Router
- Public Safety Police

Meraki MR56 Wifi 6 APs

Meraki MS390-48UX2 Switches

Building IDF(s)

City of Columbus MAN

Possible Future MAN Edge Termination Equipment

Meraki MS425-32 Switches
Building MDF

Cisco 8851 VoIP Phone
- Public Safety Fire
- Public Safety Police
- Spare

Cisco 8832 Conference VoIP Phone
- Wired Mic Kit
- Public Safety Fire
- Public Safety Police
- Public Utilities – Remote Locations
- Spare

Cisco ATA 191 Adapter
- Public Safety Fire
- Public Safety Police
- Public Utilities – Remote Locations
- Spare

OPTOKON LMIPT-41 Rugged VoIP Phone
- Public Utilities – Remote Locations
- Spare

1G
10G
40G

City of Columbus Boundary Network – Large Site

Steve Braswell CDW Principle Network FSA
Mike Skiba CDW Senior Collaboration FSA

Date: November, 2021

CDW PEOPLE WHO GET IT

Attachment C. Offeror Solution Response

2.0 Offeror Information

Offer Background

3.3.1.1 What is the formal name of your company? If your company has changed its name in the past 5 years, also list the previous name(s)?

CDW Government LLC (CDW•G).

3.3.1.2 Is your company a division or subsidiary of another organization? If so, what is the name of your parent company?

CDW Government LLC (CDW•G) is the wholly-owned subsidiary of CDW LLC (CDW).

3.3.1.3 Describe the products and services offered by your company.

Our broad array of offerings ranges from discrete hardware and software products to integrated IT solutions such as mobility, security, data center optimization, cloud computing, virtualization and collaboration. We are technology “agnostic,” with a product portfolio that includes more than 100,000 products from more than 1,000 brands. We provide our products and solutions through our sales and service delivery teams, consisting of nearly 6,000 customer-facing coworkers, including more than 2,000 field sellers, highly skilled technology specialists and advanced service delivery engineers.

3.3.1.4 Is your company publicly traded or privately held? For public companies, provide a link to your most recent annual and quarterly financial reports. For privately held companies, provide your full-time employee count, your most recent full-year revenue, and your most recent quarterly revenue.

As a wholly-owned subsidiary of CDW LLC, CDW•G is a publicly traded company.

For our most recent annual financial reports, please visit: https://investor.cdw.com/financials/annual-reports/default.aspx For our most recent quarterly reports, please visit: https://investor.cdw.com/financials/quarterly-results/default.aspx.

3.3.1.5 Total number of years your company has been in business.

CDW was founded in 1984 and has been in business for over 37 years. CDW•G was founded in 1998 to focus specifically on the needs of our public-sector customers, putting us in business for 23 years.

3.3.1.6 In what country are you incorporated, and what is the location of your corporate headquarters? If you have regional headquarters in multiple regions, list those as well.

CDW•G is organized in the United States with our corporate headquarters located at 230 N. Milwaukee Avenue, Vernon Hills, IL 60061.

CDW•G maintains 28 regional sales offices across the United States and can provide nationwide coverage. Local to the City of Columbus is our office at the following location: 655 Metro Place South, Suite 600/601, Dublin, OH 43017.

3.3.1.7 Are you a current or former supplier to the City of Columbus, or any of our agencies? If "yes", please list the date or date ranges of business conducted and the products or product categories.

CDW•G has worked extensively with the City of Columbus over the past ten years as an IT solutions provider. Over the past three years, we have provided solutions in the following categories:

- Software
- Enterprise Storage
- Collaboration Hardware
- Servers & Server Management
- NetComm Products
- Power and Cooling
- Cables
- Accessories

3.3.1.8 What is your contact information including email address and telephone number?

For questions regarding this proposal, please contact Proposal Specialist, Donna Pugliese, at donna.pugliese@cdw.com or 629.208.8248.

For sales related questions, please contact your dedicated Account Team:

- Advanced Technology Account Executive, Nick Geiser at nickgei@cdwg.com or 614.318.9058 or
- Executive Account Manager, Ryan Marron at ryamarr@cdwg.com or 312.547.2877

3.3.1.9 Has your company been involved in any contracts ended due to termination for cause, any unresolved claims, any litigation or arbitration with our company and/or one of our affiliates in the past 5 years? If "yes," provide details.

No.

3.3.1.10 Total number of current clients (all services).

CDW has over 250,000 active accounts. CDW's customers include State and Local government agencies, K12 schools, institutions of higher education, federal government agencies, and private sector companies.

3.3.1.11 Duns Number (If available).

026157235

3.3.1.12 Does your company hold any Minority Business Enterprise certificates? If so, please send all appropriate certifications along with your response to this document.

No.

3.3.1.13 Please describe any existing or pending business arrangements your firm may have with City or any of its personnel.

CDW•G has been privileged to be able to work with the City often over the past several years. While most of our projects have been completed, we still are in the midst of some current projects. These projects include the following:

- Palo Alto Firewall Implementation
- Webex Edge Audio Implementation
- Proofpoint Email Security Renewal

3.3.1.14 Do you use sub-contractors and/or 3rd party companies in your implementation or installations? If yes, please list the name(s), address(s) and contact information.

CDW•G can implement and deploy both Cisco Meraki Wireless/Network and Cisco VOIP solutions with our own badged resources. In some circumstances, we choose to partner with local businesses to provide a well-rounded solution to our customers and help our customers meet their diverse spend goals. Our partner network is robust with over two hundred partners eligible for subcontract work. CDW•G will work with the City to thoroughly vet partners to ensure success.

For this opportunity, CDW•G has elected to partner with Sophisticated Systems, Inc. Please see the contact information below.

Subcontractor	
Company Name	Sophisticated Systems, Inc.
Address	2191 Citygate Drive Columbus, Ohio 43219
Contact Name	Zach Evans
Telephone	614.337.6511
Email	zevans@ssicom.com

Manufacturer

3.3.1.15 Manufacturer, if you are proposing a solution other than CISCO equipment.

CDW•G is proposing Cisco equipment.

3.3.1.16 Name of the manufacturer(s) of the proposed system. If multiple manufacturers are involved, please list each one and the component(s) used from them.

CDW•G is proposing Cisco equipment.

3.3.1.17 Do you hold any certifications, or belong to any partner programs, for this vendor or proposed system? If so, describe your certification level or relationship with this vendor.

Yes, CDW and, by extension, CDW Government LLC (CDW•G), is both a Cisco Gold Integrator and Cisco Gold Provider. With over 20 years of experience providing Cisco solutions, CDW•G has been a Cisco Gold Certified Partner since the program was introduced by Cisco in 2001. These designations are indicative of CDW•G's ability to design and architect at a high level in

various Cisco architectures in addition to passing rigorous third-party audits. CDW•G employs more than 250 Cisco Certified Network/Data/Voice Professionals (CCNPs/DPs/VPs). In addition,100 coworkers of our team hold Cisco Certified Internetwork Expert (CCIE) certifications which is one of the highest technical certifications offered by Cisco and more than 100 CDW employees who solely work on Cisco technologies.

References

3.3.1.18 How many of these systems have been sold to date? How many unique customers?

CDW•G has sold thousands of the Meraki network, Meraki wireless and Cisco VOIP solutions. Because our customer base ranges from corporate, financial, education, healthcare, federal and state/local customers these are unique customers.

3.3.1.19 References: Give five (5) references for a company or organization that has purchased a similar solution to the one being proposed. Include company name, location, a brief description of the purchase (if available), and the name, role, and contact information for someone at that company that buyer can speak to about their purchase.

Reference 1	
Company Name	Columbus Metropolitan Library
Location	96 S Grant Avenue Columbus, OH 43215
Description of Purchase	CDW•G partnered with SSI to provide and implement a Meraki Network and Wireless solution for the branches throughout Columbus.
Contact Name and Role	Justin Bumbico, IT Director
Telephone	614.479.1265
Email	Jbumbico@columbuslibrary.org

Reference 2	
Company Name	Central Ohio Transit Authority
Location	33 N High Street Columbus, OH 43215
Description of Purchase	CDW•G has been the main IT solutions provider for all Cisco solutions for COTA including Cisco Nexus, Cisco Access Layer, Cisco UCS, and Cisco VOIP/Webex solutions for the past four years.
Contact Name and Role	Shane Warner, IT Director
Telephone	614.275.5937
Email	Warnerts@cota.com

Reference 3	
Company Name	City of Cincinnati
Location	805 Central Avenue, Suite 300 Cincinnati, OH 45202
Description of Purchase	CDW•G has been the City-appointed Cisco solution provider since 2018. The City has used CDW•G to provide Cisco backbone network, access layer network, and security technologies.
Contact Name and Role	Hanna Khoury, Network Manager
Telephone	513.352.6227
Email	Hanna.khoury@cincinnati-oh.gov

Reference 4	
Company Name	Louisville Metro Government
Location	410 S 5th Street Louisville, KY 40202
Description of Purchase	CDW•G is one of the main IT solutions providers for Metro for nearly ten years. These include Cisco solutions for the past five years including Cisco network, security, and VOIP/Webex solutions.
Contact Name and Role	Leslie Harral, IT Director
Telephone	502.574.3837
Email	Leslie.harral@louisvilleky.gov

Reference 5	
Company Name	City of Mason
Location	6000 S. Mason Montgomery Road Mason, OH 45040
Description of Purchase	CDW•G has delivered Meraki solutions to the City of Mason for four years now and provided architecture guidance to develop the right solutions.
Contact Name and Role	Eric Meister, Director
Telephone	513.229.8500
Email	Emeister@masonoh.org

Subcontractors

3.3.1.20 Subcontractor: If applicable, provide the following subcontractor information; subcontractor company name, location, phone number, federal ID #, a brief description of the subcontractor's participation.

Subcontractor	
Company Name	Sophisticated Systems, Inc. (SSI)
Location	2191 Citygate Drive Columbus, Ohio 43219
Telephone	614.418.4600
Federal ID#	31-1303163
Description of Participation	SSI will be tasked with the physical rack/stack of Meraki switch components along with the hanging of the Meraki Access Points. In addition, SSI will be the smart hands to support the physical cutover, as necessary.

Cisco Value Added Reseller (VAR) Deliverables

3.3.1.21 A Cisco Value Added Reseller (VAR) Deliverables is preferred. If not, do you hold a similar credential?

CDW has been selling Cisco since 1996. Cisco's Gold Partner program was introduced in 2001 and CDW has been a Gold Cisco Partner since 2001 CDW was Cisco's first Master Security Partner, First Master Unified Communications Partner, and Cisco's first Master Cloud Builder Partner.

3.3.1.22 A Gold Certified Cisco Channel Partner is preferred. Describe your VAR level.

The City of Columbus prefers a Gold Certified Cisco Channel Partner and CDW has maintained this certification since 2001. We are one of Cisco's Largest U.S. National Direct Integrator Partner and have attained the broadest range of expertise across multiple technologies. Please see CDW's partnerships described below.

Partnerships	
Master Partner	Collaboration*, Security*, Master Data Center and Hybrid Cloud Specialization*, Enterprise Networking, Cloud and Managed Services Masters. *First worldwide partner to achieve this status.
Master Collaboration Specialized Partners	Master Collaboration partners have demonstrated the ability to deliver sophisticated, value-added collaboration solutions to help customers communicate effectively and improve customer service while saving time and money.
Master Security Specialized Partners	The Cisco Master Security Specialization is an elite group of partners with in-depth technology skills for selling and deploying Cisco security solutions.
Master Data Center and Hybrid Cloud Specialization	Master Data Center and Hybrid Cloud Specialization partners have proven capabilities

	to build and deploy cloud-ready, integrated infrastructures. Infrastructures are based on Cisco technologies and solutions, as well as ecosystem partner cloud offerings across storage, virtualization, cloud management, and the virtual desktop.
Cloud and Managed Service Masters (CMSP)	Partners participating in Cisco's CMSP must meet various Cisco requirements to prove the ability to develop, deliver, manage, and support Cisco-based cloud and managed service solutions. CMSP partners have demonstrated IT Infrastructure Library (ITIL) Foundation processes, practices, and tools to support Cisco technologies at all lifecycle phases." CMSP partners must complete an extensive third-party audit process to ensure they can deliver managed services with consistent operational discipline and excellence from the cloud or on premises.
Cisco TelePresence Video Master Authorized Technology Provider	The Cisco TelePresence Video Master Authorized Technology Provider (ATP) Program is an invitation-only program. The program identifies, qualifies, trains, and enables a select set of Cisco channel partners to provide solution services for the Cisco TelePresence Video products. TelePresence Video Master ATP program goal is to help partners offer the entire Cisco TelePresence experience through: Infrastructure solutions, Architecture capabilities, Managed services, and Intercompany integrations.

3.3.1.23 Do you have the ability to provide Cisco products, equipment and support services to multiple locations?

Yes.

3.3.1.24 Do you have the ability to supply time and material services through their technical staff and Cisco Certified personnel to work on the Department's equipment.

Yes, CDW•G has an extensive breadth and depth of technical staff that the City can leverage for presales, deployment, and post-sales support. As mentioned previously, CDW•G has an extensive partnership with Cisco which allows us to deliver and support the breadth of Cisco solutions including Data Center, Collaboration, Network Infrastructure, IoT, security, Software, Software Defined Networking and Wireless/Mobility.

3.0 Competence

General Requirements

3.3.1.25 What is the total number of years your company has implemented Cisco Meraki boundary network solutions, or similar systems?

CDW•G has implemented Meraki solutions since Cisco acquired Meraki at the end of 2012.

3.3.1.26 What is the total number of years your company has implemented Cisco VOIP solutions?

CDW•G has over 22 years of experience in deploying Cisco VOIP solutions.

3.3.1.27 Describe the strategic direction for the boundary network including any planned major enhancements. Include a product roadmap for the duration of warranty and product life with life cycles of all equipment provided. The City is willing to enter into non-disclosure agreements to gain better insights into Offerors roadmap for their product line.

It is difficult to project the next 5-10 years in terms the of the lifecycle of this Meraki solutions, however Meraki is committed to having a Cloud First native approach to their solutions. The hardware will continue to evolve and utilizing cloud has a competitive advantage to provide the best experience for both the operators and users of a Meraki environment.

3.3.1.28 Describe any industry awards, articles, or third-party evaluations of your company.

CDW received the following awards at the 2020 Cisco Partner Summit:

- Global Award Winner for Software Partner of the Year
- Americas US Partner of the Year
- Americas Marketing Partner of the Year
- US Central Enterprise Partner of the Year
- US South Commercial Partner of the Year

In addition, in 2019, CDW's robust services and lifecycle management practice and customer-first focus was recognized at Cisco's Partner Summit in Las Vegas as the winner of the Cisco Partner Innovation Challenge.

The challenge is designed to drive awareness and adoption of Cisco application program interfaces (APIs) across Cisco's global partner community. Cisco challenged its partners to develop creative solutions to unique business challenges using Cisco open APIs. More than 150 partners submitted solutions to year's challenge. From among 14 finalists, CDW was awarded the first-place prize a $200,000 bonus to the company and recognition on the Cisco Partner Summit main stage.

3.3.1.29 Describe at a high-level the key differentiating, or highly innovative aspects of your offer compared to leading competitors.

CDW•G's long-standing partnership with Cisco has led to some unique differentiators for us which yield great benefits for City of Columbus. Cisco is widely known for creating and developing innovative, industry-leading technologies. We build customizable, end-to-end solutions using Cisco products, pushing the limits of the technology, and integrating the products into the City of Columbus' IT environments to solve their unique business challenges. Our partnership with Cisco is unmatched. We help drive Cisco's product roadmap by providing in-field feedback, including hands-on Early Field

Trials, of Cisco's next-generation products to make them customer ready, build the best business cases to share with the City of Columbus and complement the offerings with services that take full advantage of the emerging technology. CDW•G has the Cisco-certified engineers and architects who know or can find an answer for just about any engagement or environment imaginable, and the City of Columbus will have the confidence in knowing that we don't stop until we get the solution that is right for you. CDW•G brings Cisco along with our full portfolio of technologies and ecosystem partners to deliver the infrastructure and capabilities across the City of Columbus' technology lifecycles that deliver business results.

In addition**,** a key differentiator of CDW•G is that we actively participate in Cisco's Early Field Trial (EFT) program. This program allows our top engineers to receive and test the latest and greatest code prior to the general release of products for the City of Columbus. It also lets CDW, as an organization, shape the products prior to shipping the first release level. There are only four partners in the world and a handful of customers that participate in the Cisco Early Field Trials and this really differentiates us from our competition. Generally, Cisco only invites two partners to each EFT opportunity. Most partners are only doing 3-4 EFTs at most. CDW•G participates in more than 20+ EFT's a year across Data Center, Engineering, Collaboration, and Security. For example:

- CDW•G was one of two partners worldwide that was allowed to participate in the Early Field Trial (EFT) of Cisco's early UC rollout. We were developing the software nine months prior to public release. When it was released to the public, all CDW•G engineers were already trained to deploy the solution and were familiar with known differences from prior versions.
- CDW•G receives pre-release software in advance of Cisco's release to other partners and works with Cisco to validate and test features and functionality. During this period, CDW•G trains the implementation engineers, operational support staff and solution architects, and implements the software for use amongst this team.
- As part of the CDW•G new product adoption process, sales organizations are trained, and the City is educated on new content. Production pilots are aligned with sample sets prior to being rolled out as a full production solution. Our partnership with Cisco allows us to be the experts you need, delivering solutions that bring value to the City.

CDW•G has developed a standard solution adoption process to ensure that when we recommend a product or solution to the City, we know that it will work, perform, and meet the business demands in the field for you. It starts with the Cisco Early Field Trial program but extends to our Cisco delivery teams where our 320+ voice engineers communicate and collaborate around field tested best practices.

CDW•G has developed tools that are able to take data from a high level, such as a user spreadsheet, and build a set of import files. These tools are designed to help the City create an easy repeatable process, reduce errors and speed the deployment process, thereby increasing efficiency when implementing and managing the system. These tools can be invaluable in large deployments for the City.

When you combine thousands of implementations, the Cisco Early field Trials program, and a proven product adoption process we generate significant knowledge for the City which turns into the CDW•G field-tested and approved best practices. CDW•G shares this knowhow internally among our entire engineer staff through our internal WIKIs and internal email list. The City benefits from this information sharing by having a more stable environment that produces higher end user satisfaction levels without the on-going expense of maintaining your system.

CDW•G has the necessary resources to assist with the development and implementation of any Cisco solution that the City may require. We have a large team of LAN/WAN, Security, Collaboration Design, and Server Storage Specialists on hand who hold Cisco certifications from CCNA and CCDA all the way to the highest honor, CCIE. These highly qualified individuals are fully certified in all the latest technologies and remain ahead of the curve in designing and implementing efficient, cost-effective solutions that allows the City to receive the maximum amount of reward from their technology

investments. From planning to discovery to installation, testing, training, and transition to support, CDW•G can cover the complete lifecycle of any Cisco project for the City

3.3.1.30 The total number of full-time employees dedicated to providing Cisco Meraki boundary network implementations in North America?

CDW•G has over 50 trained Meraki field services personnel in North America.

3.3.1.31 The total number of full-time employees dedicated to providing Cisco VOIP implementations in North America?

Currently, CDW•G has over 100 coworkers dedicated to deploying Cisco VOIP solutions to customers in North America.

3.3.1.32 What is the total number of full-time employees dedicated to providing Cisco product pre-sales and support in North America?

CDW•G has over 100 coworkers dedicated to providing Cisco pre-sales and support in the United States. These roles range from Inside PreSales Architects, Field Architects and Technical Leads. We also support a wide array of Cisco technologies from network, wireless, security, compute, collaboration with these roles.

3.3.1.33 Describe your firm's Cisco bench strength in terms of the number of Cisco certified staff and the types of Cisco or other relevant industry certifications held.

CDW•G currently has over 475 engineers that support the Cisco solution stacks in both deployments and on-going managed services. We support Cisco Collaboration, Data Center, Networking, Security and Wireless categories with our bench. In addition, our services and managed services catalog is extensive with over 200 pages of Infrastructure Services (Storage, Backup, Server, HCI, Server Virtualization, Network, Wireless), Workspace Services (Voice, Video, Contact Center), Security (Firewall, SIEM, InfoSec), Security Services (IAM, PAM, Governance), and Support Services (CTS, ServiceNow, HelpDesk). CDW•G has built a cohesive catalog to ensure we can provide a holistic solution that fits the City's current and future needs.

3.3.1.34 List all relevant industry or consulting partnerships related to your proposal.

CDW Quality Certifications

International Organization for Standardization (ISO) certified since 2001, CDW•G has a mature, well-defined Quality Management Systems (QMS) that includes continued compliance to the following ISO Standards: ISO 9001, ISO 28000, ISO 27001, ISO 20243 and ISO 14001. The International Organization for Standardization (ISO) accreditation program is one of the first of its kind, offering certification to organizations that invests in process risk management against industry recognized standards framework. To achieve that accreditation, CDW demonstrated that we conform to each of the required controls across the entire product lifecycle. CDW leverages our repeatable and effective processes and procedures in providing products and services. The following is a summary of the scope of CDW's ISO certifications and areas of compliance that spread across our organization to benefit City of Columbus:

- *ISO 9001 – Quality Management System:* Sales, configuration and support of computer and related technology within both of CDW's Configuration Centers.

- *ISO 28000 – Supply Chain Security Management System:* The planning, delivery and oversight of secure supply chain management and supporting activities in the US.
- *ISO 27001 – Information Security Management System:* Provision of product sales to CDW customers, including all backbone functions and support of computer and related technology.
- *ISO/IEC 20243 – Information Technology:* Complies with the requirements in the Open Trusted Technology Provider Standard (O-TTPS).
- *ISO 14001 – Environmental Management System:* The environmental activities related to product/service management, inventory control, shipping, returns management, and receiving for computers and related technologies, excluding the office, cafeterias and the lessee area.
- *HIPAA - Health Insurance Portability and Accountability Act:* CDW complies with all applicable HIPAA regulations, including those related to auditing.
- *SSAE18 SOC2 Type 2* - CDW Managed Services has had clean, annual PCI and SAS70 Type II (and now SSAE18) audits since 2004. This report also includes an assessment of compliance with ISO27001.
- *PCI Level 1 Compliance* – CDW Managed Services is audited annually for Level 1 Payment Card Industry (PCI) compliance which attests to the fact that its Managed Services operations and services meet requirements to comply with the standards of the PCI Security Standards Council.

Professional/Industry Memberships

CDW and CDW•G are part of several government related organizations. Each of these organizations have a different purpose and help ensure CDW•G is on top of the latest trends in the industry.

Coalition for Government Procurement	Our Premier membership allows us to receive networking opportunities and updates on procurement, policy and regulations for GSA, VA, OFPP, GAO, DoD, and Congress
NASCIO (National Association of State Chief Information Officers)	Corporate branding and awareness, event discounts, networking, and engagement opportunities with state leaders
NASTD (National Association of State Technology Directors)	Access to NASTD member directory, online resource library, corporate affiliate, and committee conference calls
E.Republic / Center for Digital Government Navigator	Access to bid, E-Rate 470 and RFP database, procurement guidelines and strategic plans, awards database, buyer contacts and jurisdictions, analyst hours for custom research
CJIS (Criminal Justice Information Systems)	Access to identify and better qualify leads, visibility into awarded IT projects and reports, agency profiles, IT briefs
IACP (International Association of Chiefs of Police	World's largest and most influential professional association for police leaders, is committed to advancing the safety of communities worldwide. Allows us to understand technology advancement in the Public Safety space.

Industry Awards

- CDW•G is the largest reseller serving Federal agencies and #30 on Washington Technology's list of Top 100 Federal Contractors.
- CDW was named to Fortune's Future 50, an index that evaluates the long-term growth prospects of major public companies. The index measures capacity across four dimensions – strategy, technology and investments, people and structure.
- Fortune also honored CDW by naming CEO Chris Leahy to its Most Powerful Women in Business list
- CDW was also named one of America's Most JUST Companies for 2020, a ranking of leading corporate actors from Forbes and JUST Capital. CDW ranked No. 81 of 922 companies evaluated and No. 3 among computer services industry companies.
- For the 11th consecutive year, CDW was recognized as a Military Friendly Employer
    - Also recognized CDW as one of the Top 60 Veteran and Military-Friendly Employers in 2020 for going above and beyond in its efforts to create an inclusive and military-friendly experience.

3.3.1.35 Describe your company's overall market position in the Cisco Meraki market. What is your approximately market share in your current and prior fiscal year?

CDW•G is one of Cisco's largest resellers with over 20 years of experience of delivering Cisco solutions. CDW has sold over $3B in Cisco solutions in 2020 and this includes over $200M in Meraki solutions. CDW•G holds the distinction of having the largest market share for their partners.

3.3.1.36 Describe your company's overall market position in the Cisco VOIP market. What is your approximately market share in your current and prior fiscal year?

CDW•G again classifies as one of Cisco largest resellers in the Voice arena as well. CDW•G has sold over $240M because of this collaboration and held the #2 position in market share of Cisco partners in FY21. This is in addition to the thousands of VOIP deployments that we have done over the years to ensure customer success.

3.3.1.37 Explain various stages of your company's hiring process. What skills do you require employees to possess to work for your project teams of this complexity?

The market for qualified resources is more competitive than ever and finding reliable talent can be extremely difficult. CDW's Digital Velocity Solutions (DVS) Staff Augmentation services take the hassle out of resourcing. We maintain relationships with thousands of qualified resources and provide organizations, like the City, with the best candidates the first time around. Our critical TTM (Time to Market) solutions will help the City scale up or down rapidly depending on where you are in the project lifecycle.

Upon initial receipt of the City's initial request, a DVS business development manager (BDM) schedules an intake call with the hiring manager to understand the position requirements, candidate profile, length of engagement, and ideal start date. Our BDMs also review factors including soft skills, technical skills, nice-to-have skillsets and experiences, non-negotiables, and organizational culture. In this way, we can best align project teams with the correct talent. The alignment fostered during the intake call ensures a more cohesive candidate experience and hiring process.

After the intake call, the BDM screens potential candidates from our Applicant Tracking System which contains over 110,000 candidates qualified for all different types of roles. We understand the quality of people in an organization creates the ultimate competitive advantage. We are dedicated to getting the City the right resources quickly and efficiently. Our BDMs are IT professionals who deliver solutions themselves allowing relationships to transcend the normal recruiter-candidate-company interaction. Due to their technical experience, our BDMs are acutely aware of the technical requirements needed for roles. As a result, we can typically find one to two specialized candidates that aligns with the City's needs within one week after the intake call.

Once the BDM identifies one or two strong candidates, they are presented to the City's Hiring Manager for review and selection. We coordinate the interviews, the background checks, and start dates (including getting first day instructions).

Based on our intake methodology and technical acumen, 81% of our staffing engagements have been satisfactorily fulfilled by the first or second candidate, cutting down on time spent in multiple interviews and enables the project team to get to work.

3.3.1.38 Explain the process used by your company to select contracted staff. What do you require of a contractor to make them a part of your project team of this complexity?

CDW•G utilizes a model called Time to Market which allows us the ability to staff resources properly and keep the entity using our services to stay on the City's projected timeline. Our system contains over 11,000 candidates with technology backgrounds, again ensuring CDW•G has access to plenty of resources to develop our team for the City.

3.3.1.39 What is your company-wide employee average tenure? Among the employees you plan to assign to this project?

CDW does not release our turnover rate information and company-wide average tenure, but the City can feel confident that CDW is a strong company with a positive work environment.

It is CDW's practice to regularly measure and have in depth awareness of movement throughout our coworker population including, hiring, transfers, promotions and demotions, and turnover of our workforce. With this awareness, we are able to continually assess and implement effective programs which attract, retain, manage, develop, and reward the best coworkers.

Your dedicated account team of Nick Geiser and Ryan Marron have been serving the needs of the City for 10 years and 3 years respectively. Mike Skiba, our dedicated Senior Field Solution Architect focusing on collaboration solutions, has been working with the City for 5 years. Steve Braswell, the team's Principal Field Solution Architect focusing on networking solutions, has been focused on the City for 6 years.

3.3.1.40 Explain your company's strategy to deal with turnover of staff as it relates to providing service to your clients.

CDW•G understands the importance of long-term customer relationships that rely on deep customer specific experience and knowledge gained over the length of extensive projects like the City's Meraki network and Cisco VOIP solutions. Firstly, before we assign resources to projects CDW•G tries to align schedules to ensure our team members can complete projects when possible. Secondly, we will often engage several engineers in the project to prevent having a single engineer resource which could cause significant delays for the City.

In the rare event that we experience staff turnover, CDW•G will involve on our wide depth and breadth of talent throughout the United States to meet the City's requirements and deadlines.

3.3.1.41 Explain the training services you provide your staff to ensure their expertise is relevant as technology changes. How does this affect your cost structure and prices?

CDW•G prides itself on continually training all our presales, deployment, and post sales teams on the latest technologies. This ensures that we continue to deliver optimal solutions to the City and meet your needs today and in the future. These trainings include formal training directly from the manufacturers, internal best practice trainings from our technical leads and certified training courses that our engineers may take. This does not affect the cost structure or pricing to the City and is an essential differentiator in driving additional partnerships.

4.0 Past Performance

General Requirements

3.3.2.1 List the total number of current government clients in the United States for all products and services of your company?

CDW currently works with over 250,000 different customers. We do not break out those customer numbers by segment, however we can confidently state we work with thousands of government clients each year.

3.3.2.2 List the current number of clients you have implemented and are in production of implementing Cisco Meraki solutions?

CDW•G has delivered hundreds of Cisco Meraki implementations and still has over 5,000 Meraki switches and appliances under management for customers.

3.3.2.3 List the current number of clients you have implemented and are in production of implementing Cisco VOIP solutions?

CDW•G has delivered and managed over 10,000 deployments Cisco VOIP solutions.

3.3.2.4 List the total number of Cisco Meraki solutions sold by your company.

CDW•G has sold Meraki solutions to over 15,000 customers to our customer base of corporate, financial, education, healthcare, federal and state/local customers.

3.3.2.5 List the total number of Cisco VOIP solutions sold by your company.

CDW•G has delivered thousands of Cisco VOIP solutions over our history which includes over 6 million IP Endpoints.

3.3.2.6 Does your company have a Net Promotor Score or NPS? If yes, please provide your current NPS.

CDW take great pride is our service quality, and customer satisfaction is a top priority. Our organization utilizes Net Promote Score (NPS) and we consistently exceed the Managed Service industry rating. It's important to note that NPS rating are based on scale of -100 to +100, with the following rating categories:

-100 to 0	Poor
0 to 30	Good
30 to 70	Great
70 to 100	Exceptional

NPS asks two questions every 6 months:

- "How likely would you be to recommend CDW Managed Services for business?"
- "Thinking about CDW Managed Services, taking everything into account, how satisfied are you with them overall?"

The TSIA Industry Average is 38 and CDW Managed Services 2020 NPS was 58.8.

3.3.2.7 Has your company been involved in any contracts which were ended due to termination for cause, any unresolved claims, any litigation, or arbitration in the past 5 years with any government agency? If "yes," provide the details.

No, CDW•G has not had any contracts terminated for unresolved claims, any litigation, or arbitration.

3.3.2.8 Return Attachment D. Performance Evaluation Questionnaires included at the end of this document from four of your company's prior or current clients.

CDW•G has provided Attachment D. Performance Evaluation Questionnaires from four of our current clients.

5.0 Project - Boundary Network

Operational Management, Installation, and Configuration

3.3.3.6.1 List the steps involved in an initial deployment, and the time typically taken for each step.

CDW•G follows a standardized engagement lifecycle process that includes Advisory Workshops, Planning and Design Sessions, Implementation, Adoption, and Solution Review. We have worked extensively with the City of Columbus to communicate options and finalize a preliminary design for each location, all of which have been completed as part of our Pre-Sales complimentary services. For Implementation, CDW•G will conduct a finalized design review for each location, develop an implementation strategy for each site, develop a test plan to validate success once the cutover occurs, and finally complete the implementation for each location against an agreed to cutover schedule. Timelines for each of these steps will largely be dependent upon City of Columbus' facility size and the agreed to deployment strategy. Based up on the Bill of Materials that has been presented, we believe each site could take 3-7 weeks in total depending on those variables.

3.3.3.6.2 Describe any auto-configuration or default templates for setup and initial configuration.

Within the Meraki solution, there are a variety of templates and standards that can be used to automate portions of the deployment for the City of Columbus. In addition, CDW•G has several best practice standards that we will incorporate into the overall solution as we move forward.

3.3.3.6.3 List required information to be prepared or provided before installation (e.g., network addresses, power, wiring, rack space, etc.)

The details of the existing network for each of the City of Columbus' sites will be critical to a successful cutover. VLAN structure, IP Scheme, port assignments among other information will all be necessary. CDW•G's engineers will gather this information as part of the engagement with remote read only access into the City of Columbus' existing equipment. In addition, if any standards are to be applied across all sites, for example new or different port assignments, switch uplink standards, etc., those will be needed. CDW•G has already conducted an extensive walk through of each location and documented most of the physical current states of each site. However, additional walkthroughs or additional site information may be necessary to determine other required information such as power availability and rack space.

Management Console

3.3.3.6.4 Boundary Network: Management Console: Briefly describe the layout of Cisco's Meraki Cloud Management web console.

The elegance of the Meraki solution is evident within the cloud management console known as the Meraki Dashboard. Within the dashboard the City of Columbus can view details for the entire network, or you can drill down into specific sites. In both cases you can see all of your Meraki devices, client device status, wireless health, security status, network health, and more, all with a simple web login from anywhere. The dashboard is laid out intuitively covering the primary categories of the City of Columbus' environment including Network-Wide, Security, Switching, Wireless, Cameras, Environmental, and Organization. Each category is then broken into Monitor and Configure sections. The City of Columbus can upload floor plans and position equipment specific to each site based off those floor plans.

3.3.3.6.5 Describe any resources or software required by the management console. (E.g. browser requirements, Java plug-ins, specific CLI tools, etc.)

The Meraki dashboard is available through commonly used browsers including Chrome, Edge, Firefox, and Safari without requirement of extensions, plugins, or other applications beside the browser. The dashboard is not designed for mobile browsers but will generally work in those as well. For additional information please see: https://documentation.meraki.com/General_Administration/Support/Dashboard_Browser_Compatibility.

3.3.3.6.6 Describe the customizable elements of the management console dashboard.

The dashboard supports some customizability in the form of color blindness support, C/F temperature units and dashboard language, as well as, summarizing widgets being displayable for various time scales. For the case of MSPs, some branding can be added. For additional information please see:

https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Dashboard_Branding_for_MSPs

3.3.3.6.7 Provide a link to a recorded demonstration of the GUI management console.

Please see https://www.youtube.com/watch?v=ERMzSrDALFs

Management Integrations, Plug-Ins and CLIs

3.3.3.7.1 Is there a CLI for device management? If yes, describe the format.

The intent and power of Meraki is in the Dashboard and as such, all devices are intended to be managed via the dashboard. Depending on the device, there may be local direct web-based interfaces that permit basic configuration like static IP address assignment, if required.

3.3.3.7.2 Describe the external plug-in for ESRI GIS, or available location information management, if available.

Meraki's location analytics can be integrated using its Open RESTful API and this includes Wi-Fi and BLE based analytics on user foot traffic behavior available in JSON posts.

Beyond the available APIs, various plugins can be installed to make use of these location analytics including asset tracking, contact tracing, occupancy measurement and enforcement, navigation, and marketing. For additional information please see: https://apps.meraki.io/.

3.3.3.7.3 Describe the plug-in for Splunk ITSI.

The Splunk Add-on for Cisco Meraki enables the City to monitor network and security events in your environment. The Splunk Add-on for Cisco Meraki can collect the following data via the Cisco Meraki REST APIs: Configuration changes, organization security events, and events from devices including access points, cameras, switches. and security appliances.

The Splunk Add-on for Cisco Meraki provides the inputs and CIM-compatible knowledge to use with other Splunk apps, including the Splunk Enterprise Security and the Splunk App for PCI Compliance. For additional information please see: https://splunkbase.splunk.com/app/5580/.

3.3.3.7.4 List all supported plug-in management tools.

Meraki solutions' cloud-hosted management and dashboard eliminates the need for much of the additional functionality provided by external management tools. Still, some API-based applications for additional management functionality are available as are syslog exports. Tools like Splunk can use the APIs to fetch network and security events and consolidate management with other solutions.

For additional information please see https://apps.meraki.io/. https://splunkbase.splunk.com/app/5580/ and https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting/Syslog_Server_Overview_and_Configuration.

3.3.3.7.5 List all IT infrastructure monitoring tools that can natively interface with the system, or plug-ins for integration.

Meraki solutions' cloud-hosted management and dashboard eliminates the need for much of the additional functionality provided by external management tools. Some API-based applications for additional management functionality are available as are syslog exports. Tools like Splunk can use the APIs to fetch network and security events and consolidate management with other solutions. For additional information please see:

https://apps.meraki.io/. https://splunkbase.splunk.com/app/5580/ and https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting/Syslog_Server_Overview_and_Configuration.

3.3.3.7.6 What management protocols (e.g., SNMP, IPMI, and Redfish) are supported by the system?

The Meraki suite supports SNMP for device polling and syslog for event exports. For additional information please see:

https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting/SNMP_Overview_and_Configuration and https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting/Syslog_Server_Overview_and_Configuration

For management, all external tools must make use of the API for communication with the cloud and configuration changes. Ansible playbooks are supported and can support, for example, Redfish, indirectly through this. For additional information please see:

https://docs.ansible.com/ansible/latest/collections/cisco/meraki/index.html

Monitoring and Reporting

3.3.3.8.1 Describe how the management system reports overall status (e.g., Normal, Degraded, and Failed) in a single screen.

The Meraki dashboard provides status pages per devices, grouped per network, that are typically used to geographically group devices. These pages provide a summary of connectivity detected clients, and their connectivity performance either direct or downstream, through e.g. Access Points, STP, VLAN and PoE status, CDP/LLDP info per port, event logs, their location in the topology and various troubleshooting options such as cable tests, reachability tests and more. For alerts on licensing, hardware defects or maintenance, email addresses can be configured to send. Beyond this SNMP, syslog, and the API can be utilized to configure event streaming. For additional information please see:

https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting/Meraki_Device_Reporting_-_Syslog%2C_SNMP%2C_and_API and https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Organization_Menu/Organization_Settings#Administration

3.3.3.8.2 List the metrics reported by the management system report (for example, raw storage capacity, usable capacity, CPU utilization, current IOPS, etc.).

For MS Series switches, metrics can be viewed via Switch Overview, and on the Statistics page, in addition to the switchport view for detailed port by port information. For additional information please see: https://documentation.meraki.com/MS/Monitoring_and_Reporting.

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For MR Access points, a wireless summary report, traffic analytics and Layer 7 view, client list, AP list with tags, maps, and floorplan view are available. For additional information please see:

https://documentation.meraki.com/MR/Monitoring_and_Reporting/Monitoring_the_Wireless_Network

3.3.3.8.3 Describe how monitoring data is saved, length of time data is saved, and if saved time be changed by administrators? Describe how monitoring data is exported, and the format (e.g., CSV).

Meraki stores management data including application usage, configuration changes, and event logs within the backend system. Customer data is for 26 months. Meraki data storage time periods are based on year-over-year reporting features in the dashboard for 12-month periods, plus additional time to ensure data is removed from Meraki backups upon deletion which is two months. Meraki uses a proprietary database system to build up easily searchable and referenceable data. For additional information please see:

https://documentation.meraki.com/General_Administration/Privacy_and_Security/Cloud_Data_Retention_Policies

3.3.3.8.4 Describe the system report alerts metrics, administrator and user defined thresholds. List dynamic thresholds and how they are adjusted (i.e., adjusted automatically based on other monitored metrics).

In the Meraki Dashboard's Event Log, each Meraki product offers a different variety of reported events. For additional information please see:https://documentation.meraki.com/General_Administration/Cross-Platform_Content/Alerts_and_Notifications.

Aside from the event log, there are several methods for device reporting and information gathering including via Syslog, API, and SNMP. For additional information please see:

https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting/Meraki_Device_Reporting_-_Syslog%2C_SNMP%2C_and_API

Dynamic thresholds are only available with the Meraki Health solution via smart thresholds (WLAN). Smart threshold alerts are triggered by using historical data from the dashboard network each alert is configured on. The dashboard will look at data up to six weeks in the past and will use that data to create a baseline threshold for the onboarding metrics of wireless clients. These onboarding metrics include Association, Authentication, DHCP, and DNS.

3.3.3.8.5 Does the system report any data directly to the OEM (i.e., "call home")? If so, what data is sent and when? Can this reporting be disabled by the administrator?

The Meraki cloud is the backbone of the Meraki management solution. This "cloud" is a collection of highly reliable multi-tenant servers strategically distributed around the world at Meraki data centers. Meraki data centers contain active Meraki device configuration data and historical network usage data. These data centers house multiple compute servers which houses the City's management data. These data centers do not the City's user data. For more information on the Meraki Cloud Architecture please see here: https://documentation.meraki.com/Architectures_and_Best_Practices/Cisco_Meraki_Best_Practice_Design/Meraki_Cloud_Architecture

and additional information on Data Privacy and Protection is located here: https://documentation.meraki.com/General_Administration/Privacy_and_Security/Meraki_Data_Privacy_and_Protection_Features.

3.3.3.8.6 Describe how failure alerts automatically trigger support cases with the OEM.

Cisco Meraki Support is available 24/7 to the City for assistance with resolving network issues and providing answers to questions not covered by the documentation. There is no embedded functionality to create a support case from Meraki Dashboard alerts. For additional information please see:

https://documentation.meraki.com/General_Administration/Support/Contacting_Support

3.3.3.8.7 Describe any capabilities for predictive hardware failure.

Meraki Dashboard provide users the visibility into statistics that could be associated with a higher likelihood of hardware failover, such as power utilization, but does not provide any specific alerts or analysis for predictive hardware failure.

3.3.3.8.8 List reports or status screens (e.g., health status, capacity usage) built-in to the management interface.

Monitoring: Clients, Traffic Analytics, Topology, Packet Capture, Events and Logs, Maps and Floorplans, Switches, Switchports, DHCP servers & ARP, Access Points, Air Marshall, Location Heatmap, Splash Page, PCI Report, Bluetooth Clients, RF Spectrum, Wireless Health, Organization Overview, Change Log, Login Attempts, Security Center, Location Analytics, Configuration Templates, VPN Status, Firmware Upgrades, and Summary Report. For additional information please see:

https://documentation.meraki.com/General_Administration/Monitoring_and_Reporting

3.3.3.8.9 Describe user defined reports.

Reports can be tailored for the City to a specific organization or network within the Meraki Dashboard hierarchy. The basic structure of Dashboard consists of two levels:

- Networks which contain Cisco Meraki devices, their configurations, statistics, and any client-device information and
- Organizations which are a collection of networks that are all part of a single organizational entity

For additional information please see:
https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Meraki_Dashboard_Organizational_Structure

3.3.3.8.10 List data integrations supported. Is the system able to integrate withTableau?

The Meraki Dashboard integrates with several solutions, such as Cisco Umbrella and Identity Services Engine (ISE), and supports a large host of other integrations through the use of exports to common data formats such as CSV and by leveraging REST APIs. For additional information please see:

https://documentation.meraki.com/General_Administration/Other_Topics/Cisco_Meraki_Dashboard_API

Chargeback and Resource Limiting

3.3.3.9.1 Describe how the solution associates costs with resources in the management console.

Meraki devices use the Meraki cloud for centralized management and control. The Meraki cloud is licensed on a per device, per year basis and the information is available in the Meraki Dashboard. All basic license information for the current Organization is displayed at the top of the License Info page, right above the 'License limit' and 'Current device count' table. This includes the overall Organization License Status, which displays a green 'OK' if there are no licensing issues. For additional information please see:

https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Organization_Menu/License_Info_Page_-_Co-Termination_License_Model

Additionally, there is a License Calculator tool in the dashboard that can be used to simulate licensing states and calculate a projected co-termination date.
https://documentation.meraki.com/General_Administration/Licensing/Using_the_License_Calculator

3.3.3.9.2 Describe how resources are tagged to cost centers or similar groupings. List usage reports generated by the solution.

Manage Tags page allows Administrators to configure a combination of Network and Device specific tags for the City to create Summary Reports across multiple networks. This allows the City to create more specific Summary Reports rather than creating reports based on entire Networks.

To apply tags to specific devices CDW•G will need to go into each Network and tag devices individually. Tags can be applied for the following device families in the listed locations:

- MS: Switch > Monitor > Switches
- MR: Wireless > Monitor > Access Points
- MC: Phones > Monitor > Phones
- MV: Cameras > Monitor > Cameras

Tags can be used for basic management purposes or to partition the wireless network into both physical and security-based segments. This article describes how to tag one or more access points and how to use tags for management purposes for:

- Marking the APs with tags
- Organizing a wireless network with many APs
- VLAN tagging on specific Aps

For additional information please see:

https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Organization_Menu/Manage_Tags

https://documentation.meraki.com/MR/Monitoring_and_Reporting/Using_Tags_to_Manage_MR_Access_Points

and

The Link Summary Report Overview for using the device tag to filter information on the report is located here : https://documentation.meraki.com/General_Administration/Cross-Platform_Content/Summary_Report_Overview.

3.3.3.9.3 List any resource limits for users or groups that can be set by the administrator.

The two basic types of dashboard administrators are Organization and Network. Organization administrators have complete access to their organization and all its networks. This type of account is equivalent to a root or domain admin. Network administrators have access to individual networks and their devices. These users can have complete or limited control over their network configuration, but do not have access to organization-level information such as licensing or device inventory.

Organization Permission Types include Read-only and Full. For Ready-only permission, the user can access most aspects of network and organization-wide settings but is unable to make any changes. With Full permission, users have full administrative access to all networks and organization-wide settings. This is the highest level of access available.

Network Permission Types include Guest ambassador, Monitor-only, Read-only and Full. Guest ambassador users are only able to see the list of Meraki authentication users, add users, update existing users, and authorize/deauthorize users on an SSID or client VPN. Guest ambassadors can remove wireless users if they are an ambassador on all networks. The existence of network templates anywhere in a dashboard organization prevents guest ambassadors from deleting wireless users and this is presented with user management portal only. Monitor-only permission only allows users to view a subset of the monitor section in the dashboard and no changes can be made. Monitor-only admins can view summary reports, but not schedule reports via email in the dashboard. Read-only users can access most aspects of a network, including the configure section, but no changes can be made. With Full permission users has access to view all aspects of a network and make any changes to it. For additional information please see:

https://documentation.meraki.com/General_Administration/Managing_Dashboard_Access/Managing_Dashboard_Administrators_and_Permissions

Optimizations, Capacity Planning, Trending Analysis and Analytics

3.3.3.10.1 Describe how the solution optimizes performance automatically.

Meraki Health is the assurance solution that provides Meraki dashboard users with analytics and machine learning insights for WLAN and beyond, with visibility into LAN, SD-WAN, clients, WAN, and applications.

Wireless assurance provides insights and analytics for an organization's wireless network. It proactively verifies Wi-Fi behavior and performance, validates configuration changes, and assists with troubleshooting. For additional information please see:

https://documentation.meraki.com/General_Administration/Cross-Platform_Content/Meraki_Health_Overview

3.3.3.10.2 Describe how the solution creates capacity projections based on trend analysis.

Summary Reports provide a high-level overview of total traffic across all devices on this network over the time selected. The quantities next to the section header indicate the total amount of data traffic in each direction, upload and download, over the course of the timeframe. The graph will show the average total network usage over time and are best used for analyzing overall trends in reports. Summary Reports may include:

- **Top Devices by Usage:** Provides the top 10 Cisco Meraki devices in the network, ranked by total network usage, along with the total number of unique clients that used the device.
- **Top Clients by Usage**: Provides the top 10 clients on the network based on total usage (upload and download) during the time period. Percentage Usage is the percent of total usage on the network that was tied to the client. If individual clients are generating higher than desirable amounts of traffic, consider applying group policies to those clients in order to limit their usage. Alternatively, consider using global traffic shaping rules, on wireless or security appliance networks.
- **Top Client Device Manufacturers by Usage**: Provides the top 10 device manufacturers by total usage. In addition to aggregate information from the section above, it also provides a total number of clients with the indicated manufacturer.
- **Top Device Models by Per-Device Usage:** Provides the top 10 Cisco Meraki device models in this network based on average usage, upload and download, per device.
- **Top Applications by Usage**: Provides the top 10 applications on this network based on overall usage, upload and download. These applications should align with those used for traffic analytics. If undesirable applications are generating large amounts of traffic, utilize layer 7 firewall rules to block or restrict traffic.
- **Number of Sessions Over Time**: Provides the number of wireless device sessions per day. A session is defined as a series of wireless probes from one device with no more than a five-minute gap between adjacent probes. Sessions from unassociated devices will be included, as well as sessions from devices associated to any SSID.
- **Wireless-Specific Sections**: Wireless networks will also provide a section titled Top SSIDs by usage. This section will list the top 10 SSIDs configured on the network based on their overall usage (upload and download) and will provide the total number of unique clients that were seen on the SSID.

For additional information please see:

https://documentation.meraki.com/General_Administration/Cross-Platform_Content/Summary_Report_Overview.

3.3.3.10.3 Describe any event correlation capabilities of the management console.

Smart threshold alerts are triggered by using historical data from the dashboard network each alert is configured on. The dashboard will look at data up to the past six weeks and will use that data to create a baseline threshold for the onboarding metrics of wireless clients. These onboarding metrics include Association, Authentication, DHCP, and DNS. If the dashboard notices an anomaly or a deviation from the baseline when onboarding the wireless clients, an alert will be triggered. When a network administrator configures this alert, the user will receive emails that will be sent on a weekly basis.

If a user selects to not use the smart thresholds functionality, the dashboard will expose individual parameters that a user can configure to track and trigger the alert for. When opting to not use smart thresholds, a user will have more direct, manual control over which SSID and the onboarding step will be monitored and triggered with this alert. For additional information please see: https://documentation.meraki.com/General_Administration/Cross-Platform_Content/Meraki_Health_Alerts_-_Smart_Thresholds

3.3.3.10.4 List the solutions machine learning techniques for monitoring, trending or troubleshooting.

Smart Threshold is a tool built into Web App Health that intelligently sets the thresholds for application performance. This sophisticated machine-learning algorithm will learn over time what a healthy network looks like for a given organization. Past workloads across networks and applications will be analyzed on a per-customer basis to autonomously identify anomalies that fall outside their norm. For additional information please see:

https://documentation.meraki.com/MI/Smart_Threshold_in_Meraki_Insight

Meraki Health is the assurance solution that provides Meraki dashboard users with analytics and machine learning insights for WLAN and beyond, with visibility into LAN, SD-WAN, clients, WAN, and applications. For additional information please see:

https://meraki.cisco.com/product-collateral/meraki-wireless-assurance-solution-guide/?file

3.3.3.10.5 Describe the solutions use of proactive cloud-based analytics.

Wireless Health is a powerful heuristics engine that rapidly identifies anomalies impacting end users' experience across every stage of client connectivity including association, authentication, IP addressing, and DNS availability for rapid root cause analysis and response.

Similarly, Smart threshold alerts are triggered by using historical data from the dashboard network each alert is configured on. The dashboard will look at data up to the past six weeks and will use that data to create a baseline threshold for the onboarding metrics of wireless clients. These onboarding metrics include Association, Authentication, DHCP, and DNS. If the dashboard notices an anomaly or a deviation from the baseline when onboarding the wireless clients, an alert will be triggered. When a network administrator configures this alert, the user will receive emails that will be sent on a weekly basis. For additional information please see:

https://meraki.cisco.com/product-collateral/meraki-wireless-assurance-solution-guide/?file

and

https://documentation.meraki.com/General_Administration/Cross-Platform_Content/Meraki_Health_Alerts_-_Smart_Thresholds.

Automation and Templates

3.3.3.11.1 Describe multistep task scripting capability within the managementconsole.

The Meraki dashboard API is an interface for software to interact directly with the Meraki cloud platform and Meraki-managed devices. The API contains a set of tools known as endpoints for building software and applications that communicate with the Meraki dashboard for use cases such as provisioning, bulk configuration changes, monitoring, and role-based access controls. The dashboard API is a modern, RESTful API using HTTPS requests to a URL and JSON as a human-readable format. The dashboard API is an open-ended tool that can be used for many purposes that enables the City to:

- Add new organizations, admins, networks, devices, and VLANs
- Configure thousands of networks in minutes
- On-board and off-board new employees' teleworker setup automatically
- Build your own dashboard for store managers, field techs, or unique use cases

For additional information please see:

https://documentation.meraki.com/General_Administration/Other_Topics/Cisco_Meraki_Dashboard_API

3.3.3.11.2 Describe how new devices are added to the system.

While there are multiple ways devices can be added to a network, below is simplest process that applies to all devices and network types for the City.

1. Select the network devices should be added to.

2. Navigate to Network-wide > Configure > Add devices.

3. (Optional) Use the search box above the device list to find devices by model, serial number, etc.

4. Check the boxes next to any devices that should be added.

If the desired devices are not listed, they may need to be claimed first.

5. Click Add <device_type>. In this case, Add devices.

6. The device(s) will then be added to the network and become available for monitoring and configuration.

For additional information please see:

https://documentation.meraki.com/General_Administration/Inventory_and_Devices/Adding_and_Removing_Devices_from_Dashboard_Networks

Multiple Site Management

3.3.3.12.1 Describe how a single management console manages multiple boundary networks.

Meraki Dashboard networks provide a way for the City to logically group and configure Cisco Meraki access points, security appliances, switches, and systems manager. Devices in the same network can be configured and monitored in the same way. Dashboard networks are also a useful way to separate physically distinct sites for the City. To create the network:

1. As an organization administrator, hover over the Organization tab, then select Create network.

2. Enter a Name for the network. Make sure this clearly identifies the purpose of this network.

3. Select the Network type.

- Wireless: Contains only wireless access points (ex. MR series)
- Security appliance: Contains a single security appliance or teleworker gateway (ex. MX series or Z1). Can also contain an HA pair of MX appliances
- Switch: Contains only switches (ex. MS series).
- Combined hardware: Can contain a combination of different device types. Useful for locations with each type of device.
- EMM: Systems Manager enterprise mobility management network

4. Select the Configuration:

Use default: Creates the network with all default settings.

Clone from network: If another network of this Type is available, most network and configuration settings can be copied. If the source network type is different, it will override the selection above.

Bind to template: This network will have minimal local settings, with most configuration determined by the selected template

5. (Optional) In the Devices section, check the box for any devices that should be added to the network

6. Click Create network

For additional information please see:

https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Creating_and_Deleting_Dashboard_Networks

3.3.3.12.2 List the solutions tools to manage multisite deployments.

All aspects of the Meraki solution are managed through one centralized management console known as the Meraki Dashboard.

3.3.3.12.3 What geographical, network or other constraints apply to a single management domain?

Meraki solutions can be added regardless of location, with the exception of China, for which a separate deployment is advised. For additional information please see:

https://documentation.meraki.com/General_Administration/Support/Information_for_Users_in_China

Upgrades

3.3.3.13.1 Describe how are system updates are distributed? List the three most recent versions and their release dates.

Firmware upgrades are automated with the option for manual intervention by administrators. Once a rollout process has started, three stages of rollout occur: Beta, Stable Release Candidate, and Stable. Users can opt into using Beta versions for a faster reception of new features and can always opt out or roll back these upgrades. When approximately 10%-20% of devices have a specific version of the software deployed, it will be determined to be stable. Network admins are notified 7 to 14 days in advance of a scheduled upgrade and are given the option to delay or advance these moments. As the firmware is downloaded, devices will continue to function until it reboots with the new firmware. Once this has occurred, the device tests its connectivity to the Meraki cloud. If it is unable to pass these tests, it reverts to the previous build.

For additional information please see:

https://documentation.meraki.com/General_Administration/Firmware_Upgrades/Meraki_Firmware_Release_Process

3.3.3.13.2 Describe how the solution supports "one-click" upgrades of the management stack.

The Meraki dashboard is cloud-hosted and so it continually upgrades with no user intervention. Because it was built as a cloud service, it can provide near-continuous uptime by always providing an instance that is not going through an upgrade.

3.3.3.13.3 Describe how the solution performs non-disruptive maintenance and upgrades. List any impact on performance during maintenance and upgrades.

The Meraki dashboard is cloud-hosted and so it continually upgrades with no user intervention. Because it was built as a cloud service, it can provide near-continuous uptime by always providing an instance that is not going through an upgrade.

For disruptive upgrades, devices will generally require a reboot to load the new image, which may take a few minutes. The download process may incur some throughput reduction, but this should not provide further reduction in service until the reboot.

3.3.3.13.4 Does the solution permit rolling back upgrades?

Yes.

3.3.3.13.5 Describe how new devices are added to the management console?

To add new devices, within the Meraki dashboard, navigate to Organization> Configure> Inventory. In the box next to the blue Claim button, enter order numbers, one per line. Choose Claim.

3.3.3.13.6 Does the solution allow increases or decreases in capacity, bandwidth and latency without disruption?

Additional capacity can be installed as needed by adding new switches or Access Points, and being a cloud-managed solution, can be quickly realized by first provisioning the devices in the dashboard, configuring them and then plugging them in for deployment. For additional information please see: https://documentation.meraki.com/Getting_Started

Security: General and Access Control

3.3.3.14.1 Does the solution support role-based access control (RBAC) supported? List any default or predefined roles.

The Meraki dashboard administrators can be given one of five roles:

- Organization-wide full admin or per-network
- Full admin
- Read-only admin with similar access as full
- Monitor-only for viewing the monitoring section without changing
- Guest ambassador for configuring users on an SSID or client VPN

For additional information please see:
https://documentation.meraki.com/General_Administration/Managing_Dashboard_Access/Managing_Dashboard_Administrators_and_Permissions

3.3.3.14.2 Describe the solutions security audit logs and the ability to export the logs. List events recorded in the audit log.

The Meraki dashboard provides a changelog for each activity that administrators perform. It can be filtered per description, admin, network, SSID and label, and exported per item in CSV format. For additional information please see:

https://documentation.meraki.com/General_Administration/Organizations_and_Networks/Organization_Menu/Organization_Change_Log

3.3.3.14.3 List the security features (e.g., SSH, SSL) available in the management console.

The Meraki dashboard requires a HTTPS connection for access and will prompt for a login. Functionality like ACLs. Authentication policies are available for the MS and MR lines, as are client isolation, application recognition-based access controls, and L3/L7 firewall rules for MR.

For additional information please see:

https://documentation.meraki.com/MS/Access_Control/MS_Switch_Access_Policies_(802.1X), https://documentation.meraki.com/MR/Access_Control, and https://documentation.meraki.com/MR/Firewall_and_Traffic_Shaping/MR_Firewall_Rules

3.3.3.14.4 Identify third-party integrations with management tools (e.g., LDAP, Radius, and Active Directory) available and supported by the solution.

Meraki can integrate with user stores over RADIUS or LDAP for e.g. (W)LAN access using 802.1x or a splash page, remote access VPN access, or create group policies. For additional information please see:
https://documentation.meraki.com/MR/Encryption_and_Authentication/External_Identity_Sources
https://documentation.meraki.com/MX/Content_Filtering_and_Threat_Protection/Configuring_Active_Directory_with_MX_Security_Appliances,
https://documentation.meraki.com/MX/Client_VPN/Configuring_RADIUS_Authentication_with_Client_VPN,and
https://documentation.meraki.com/MS/Access_Control/MS_Switch_Access_Policies_(802.1X).

3.3.3.14.5 Describe how the solution performs authentication. Does it support administration multifactor authentication?

The Meraki solution supports 802.1x for port and WLAN authentication, MAC-based authentication, identity PSK with or without RADIUS for WLAN, or a pre-shared key for WLAN. Dashboard admins are stored internally or can be added using SAML-compliant SSO, and 2FA can be enforced, if required. For additional information please see:

https://documentation.meraki.com/General_Administration/Other_Topics/Two-Factor_Authentication,
https://documentation.meraki.com/MR/Encryption_and_Authentication/Wireless_Encryption_and_Authentication_Overview,
https://documentation.meraki.com/MS/Access_Control/MS_Switch_Access_Policies_(802.1X),
https://documentation.meraki.com/General_Administration/Managing_Dashboard_Access/Managing_Dashboard_Administrators_and_Permissions, and
https://documentation.meraki.com/General_Administration/Managing_Dashboard_Access/Configuring_SAML_Single_Sign-on_for_Dashboard.

3.3.3.14.6 Describe the solution's recommended Wi-Fi encryption and authentication.

The MR supports a wide variety of encryption and authentication methods from simple, open access to WPA2-Enterprise with 802.1X authentication. Supported methods include open, MAC-based access control, WEP, WPA2-PSK, and WPA2-Enterprise with 802.1x authentication. For more information on encryption and authentication, please see the following:
https://documentation.meraki.com/MR/Encryption_and_Authentication/Wireless_Encryption_and_Authentication_Overview

3.3.3.14.7 Describe how the solution adheres to NIST 800 security standards.

Meraki will work within the City's security standards while the is no specific NIST 800 compliance certifications. Below is the compliance documentation for the Meraki components that CDW•G is proposing.

- Meraki Compliance Documentation:

https://meraki.cisco.com/compliance

- MS425 Declaration of Conformity:

https://meraki.cisco.com/lib/pdf/compliance/MS425-16-32-CEDoC.pdf

- MS390 Declaration of Conformity:

https://meraki.cisco.com/lib/pdf/compliance/CEDoCMS390.pdf

- MR56 Declaration of Conformity:

https://meraki.cisco.com/lib/pdf/compliance/CEDoCMR56.pdf

- Meraki FIPS 140-2 information:

https://www.cisco.com/c/en/us/solutions/industries/government/global-government-certifications/fips-140.html?flt0_general-table0=meraki

Availability

3.3.3.15.1 Describe how the solution insures against single point of failure (SPOF) in the product architecture.

Every Meraki device including wireless access points, ethernet switches, and security appliances, connects over the Internet to Meraki's data centers, which run Meraki's cloud management platform. In place of traditional command-line based network configuration, Meraki provides a rich web-based dashboard that delivers visibility and control over up to tens of thousands of Meraki devices, anywhere in the world.

Meraki's cloud platform is designed to spread computation and storage across independent server clusters in geographically isolated data centers. Any server or data center can fail without affecting customers or the rest of the system. Additionally, Meraki's data center design is field proven to support tens of thousands of endpoints. For additional information please see:

https://meraki.cisco.com/lib/pdf/meraki_datasheet_cloud_management.pdf#page=2

3.3.3.15.2 Specify fault tolerant capabilities for Meraki switches and aggradation switches at each site. Connected users can experience a hardware failure without interruption.

CDW•G's design includes fully redundant aggregation switches at all City of Columbus' locations. Each wiring closet will have dual uplinks, one to each of the aggregation switches. A failure of an aggregation switch, fiber cut, fiber optic failure, etc. will result in automated failover to the secondary switch/connection.

3.3.3.15.3 How is system availability impacted by failure of domain controllers, DHCP, and DNS? Describe how the solution functions independently without these resources.

Because of Meraki's out of band architecture, most end users are not affected if Meraki wireless APs, switches, or security appliances cannot communicate with Meraki's cloud services (e.g., because of a temporary WAN failure):

- Users can access the local network for printers, file shares, etc.
- If WAN connectivity is available, users can access the Internet
- Network policies, such as firewall rules and QoS continue to be enforced
- Users can authenticate via 802.1X/RADIUS and can roam wirelessly between access points
- Users can initiate and renew DHCP leases
- Established VPN tunnels continue to operate

- Local configuration tools are available such as device IP configuration

While Meraki's cloud is unreachable, management, monitoring, and hosted services are temporarily unavailable:

- Configuration and diagnostic tools are unavailable
- Usage statistics are stored locally until the connection to the cloud is re-established, at which time they are pushed to the cloud
- Splash pages and related functionality are unavailable

For additional information please see:

https://meraki.cisco.com/lib/pdf/meraki_datasheet_cloud_management.pdf#page=4

3.3.3.15.4 Describe how the solution updates firmware and software no service disruption.

Firmware upgrades allow network administrators to utilize the latest features and security enhancements on their Meraki devices. The Cisco Meraki dashboard allows administrators to easily schedule and reschedule firmware upgrades on their networks, opt into beta firmware releases, view firmware change log notes, and set maintenance windows. The firmware upgrades tool in the dashboard allows organization administrators to manage firmware versions quickly and easily on a per-network and per-device type basis. Additionally, the firmware upgrades tool can be used to schedule, reschedule, and cancel bulk upgrades of networks, view firmware change log notes, view firmware version numbers, and roll back the firmware on a recently upgraded network. For additional information please see:

https://documentation.meraki.com/General_Administration/Firmware_Upgrades/Managing_Firmware_Upgrades

3.3.3.15.5 Describe how the solution adds hardware (such as access points, switches, and aggregation switches) without service disruption.

Before Cisco Meraki devices can be monitored and configured, they must first be added to a network in the dashboard.

While there are multiple ways devices can be added to a network, the following outlines the simplest process that applies to all devices and network types:

- Before beginning, create a network if one doesn't already exist
- Select the network devices should be added to
- Navigate to Network-wide > Configure > Add devices
- (Optional) Use the search box above the device list to find devices by model, serial number, etc.
- Check the boxes next to any devices that should be added. If the desired devices are not listed, they may need to be claimed first. Please see the following link for documentation on the claim process: https://documentation.meraki.com/General_Administration/Inventory_and_Devices/Using_the_Organization_Inventory
- Click Add <device_type>. In this case, Add devices.

- The device(s) will then be added to the network and become available for monitoring and configuration

For additional information please see:

https://documentation.meraki.com/General_Administration/Inventory_and_Devices/Adding_and_Removing_Devices_from_Dashboard_Networks

3.3.3.15.6 List the mean time to failure in border network architecture for major components.

The mean time to failure in in border network architecture for major components includes:

- MS425:
    - MS425-16 - 284,423 hours
    - MS425-32 - 287,587 hours

For additional information please see:

https://meraki.cisco.com/product-collateral/ms425-series-datasheet/?file

- MS390
    - Between 198,647 and 314,790 hours depending on the model

For additional information please see:

https://documentation.meraki.com/MS/MS_Overview_and_Specifications/MS390_Datasheet#MTBF_Rating

- MR56:
    - 1,315,498 hours at +25°C operating temperature

For additional information please see:https://documentation.meraki.com/MR/MR_Overview_and_Specifications/MR56_Datasheet

Disaster Recovery

3.3.3.16.1 Describe the solution's native disaster recovery capabilities. List required components, additional licenses, number of nodes, and other necessary items.

Customer management data is replicated across independent same-region data centers in real time. The same data is also replicated in automatic nightly archival backups hosted by in-region third-party cloud storage services. The Meraki cloud does not store the City's user data.

All Meraki services, dashboards, and APIs are also replicated across multiple independent data centers, so they can failover rapidly in the event of a catastrophic data center failure.

Meraki data centers are located around the world, enabling high-availability local data containment for data sovereignty in sensitive countries and regions, and high-speed connections to facilitate reliable cloud management communication. These data centers hold certifications such as PCI, SAS70 Type II/SSAE, PCI, and ISO27001. Additionally, all Meraki data centers undergo daily penetration testing by an independent third party. More key data center features include:

- 99.99% uptime service level agreement
- 24x7 automated failure detection

- Real-time replication of data between data centers
- All sensitive data (e.g., passwords) is hashed on servers

For additional information please see:

https://documentation.meraki.com/Architectures_and_Best_Practices/Cisco_Meraki_Best_Practice_Design/Meraki_Cloud_Architecture#Data_Centers

3.3.3.16.2 Specify "high availability" capabilities for disaster recovery in the event of a hardware failure with the switches, aggregation switches, or power.

Meraki enables a high-availability (HA) architecture in multiple ways to ensure high serviceability to our customers. Network connections through our data centers are high in bandwidth and highly resilient. Shared HA structures ensure data is available in case of a localized failure, and our data center backup architecture ensures the City's management data is always available in the case of catastrophic failure. These backups are stored on third-party cloud-based storage services. These third-party services also store Meraki data based on region to ensure compliance with regional data storage regulations. For additional information please see:

https://documentation.meraki.com/Architectures_and_Best_Practices/Cisco_Meraki_Best_Practice_Design/Meraki_Cloud_Architecture#Reliability_and_Availability

3.3.3.16.3 List the range of RTOs and RPOs supported?

Real-Time replication of data between Cisco Meraki data centers is performed within 60 seconds. All Meraki services (the dashboard and APIs) are replicated across multiple independent data centers, so they can fail over rapidly in the event of a catastrophic data center failure. CDW•G provides:

- 99.99% uptime service level agreement (that's under one hour per year)
- 24x7 automated failure detection and all servers are tested every five minutes from multiple locations
- Rapid escalation procedures across multiple operations teams
- Independent outage alert system with 3x redundancy

Support, Maintenance and Warranty

3.3.4.1.1 Describe the system maintenance proposed, including coverage hours, service type, and any response time-to-repair commitments. If any warranty terms vary by location or country, answer for each location indicated in the BVP instructions.

Cisco Meraki hardware products are covered under the warranty periods below.

Product	Warranty Period
MS Products	Lifetime**
MX Products	Lifetime**
MR Indoor Products	Lifetime**
MG Products	Lifetime**
MR Outdoor Products	1 year
MY Indoor Products	3 years
MV Products (except MV21, MV71, and MV2)	5 year***
Accessories*	1 year

*Original and replacement modular power supply units and fans for MS and MX Products included in lifetime warranty.

**Product lifetime ends concurrently with product End-of-Support (EOST) Date as described in Cisco Meraki's End of Life (EOL) Policy.

***Warranty period for MV21, MV71 and MV2 is 3 years.

Because the Meraki solution is cloud managed, the only maintenance to be addressed by the City would be hardware failures and those would be done by submitting a ticket through your Meraki dashboard or calling Meraki support.

To request a return materials authorization (RMA), please complete the RMA request form in the Meraki dashboard. If your RMA request is approved, Cisco Meraki will email you an RMA number and a return shipping label free of charge. We will ship replacement units within five business days of receiving your defective units. If no trouble is found, we will contact you before taking further action.

If the City is interested in additional support, CDW offers Gold Managed Services for the services below. Pricing would be available to the City upon further discussion on term length and hardware coverage.

Managed Service (MS, MX, Virtual MX, MR & MV)	Availability Management (Gold)
Monitoring: 24/7/365 connection to the cloud, device interfaces and licensing.	✓
Maintenance & Management: Provide end-user administration (create/modify/delete) through Meraki authentication. Create and configure policies, authentication, encryption, VPNs, WLAN, interfaces and ports.	✓
Hardware Incident Management: Identify and verify potential hardware failures and work on behalf of the customer resolve the issue with the manufacturer.	✓
Reporting: Provide automated reports via Meraki Dashboard (usage, clients, devices and applications).	✓
Telco Incident Management: Notify customer of circuit outage/incident, open service call with telecommunications provider and receive notice from telecommunications provider when circuit is operational.	MX only

Please see Appendix 1: CDW's Managed Cisco Meraki Services.

3.3.4.1.2 For the hardware and software covered under warranty, indicate when the warranty period starts. Define project phases, such as configuration, testing, and go-live.

Warranties begin on the hardware and software received date.

3.3.4.1.3 Specify the standard warranty periods for all solution hardware and software. If you offer different levels of warranty or service, innumerate them in the solution. The preferred manufacturer warranty is five years to be free of defects in equipment, software, support and services, and workmanship.

All equipment proposed to the City of Columbus includes 5-year licensing. The licensing includes full hardware warranty and full software support and upgrades. Additional licensing options exist for 1-year, 3-year, 7-year, and 10-year terms.

3.3.4.1.4 During the warranty period, and any subsequent maintenance agreement, any defective hardware and software components shall be repaired or replaced at no cost to the City.

CDW•G concurs because all licensed equipment includes a full hardware warranty during the term of the license.

3.3.4.1.5 During the implementation period, the Offeror must supply no more than a 30- minute response to major problems directly with the equipment manufacturer, 24 hours a day, and 7 days a week.

CDW•G will scope in proper implementation and cutover support to the City as a part of the final scope of work. We will also work directly with Cisco Meraki to identify the proper escalation path to ensure successful implementation.

3.3.4.1.6 Post implementation and for the duration of the agreement, the selected Offeror must have technical support services available. The City prefers this support be on a toll-free basis, 24 hours a day, 7 days a week, during the entire contract period with a ½ hour (30 minutes) or less response time to major problems, with a clearly defined priority escalation process. The selected Offeror shall also provide on-site technical support when required. This on-site support may be requested when problems are escalated without resolution and normal operations cannot be reasonably retained or restored.

The City will have access to Cisco Meraki technical support services directly through the Meraki dashboard or by calling Meraki support directly. This is included as part of the subscription license that is necessary for each Meraki hardware component. Additionally, CDW•G also has managed services option for the City if they are interested in a more comprehensive technical support option for an additional cost.

For onsite support, CDW•G also offers ad-hoc support for non-SLA backed onsite resources as requested by the City.

Please see Appendix 1: CDW's Managed Cisco Meraki Services.

3.3.4.1.7 Offeror must provide a 24 hour or less hardware Return Material Authorization response for all components in the solution.

Cisco Meraki allows the City to enter RMA tickets directly through the Meraki dashboard or by calling Meraki support directly to ensure a quick response.

3.3.4.1.8 Technicians must be certified by the original equipment manufacturer to support any hardware and software implemented as a part of this project.

The City may contact Cisco Meraki support directly through the Meraki dashboard or by calling Meraki. Any technicians contacted through Meraki support would be certified.

In addition, CDW•G has certified Meraki technicians that can support the solution either through Managed Services, which is backed by an SLA, or an ad-hoc which would be first come, first serve.

Please see Appendix 1: CDW's Managed Cisco Meraki Services.

3.3.4.1.9 The City staff shall have the ability to call the manufacturer of all solution components directly during warranty period. If problems cannot be corrected by telephone support, Offeror shall include description in the proposal response outlining the support services offered and any limitations to the services.

As mentioned above, the City will have the ability to call Cisco Meraki directly or reach out to their local Cisco team to ensure a quick response. CDW•G is also able to offer additional support options via the Managed Services or an ad-hoc agreement.

Please see Appendix 1: CDW's Managed Cisco Meraki Services.

3.3.4.1.10 List the location of the support center(s) that will deliver remote support.

Cisco Meraki 24x4x7 remote support is provided from Chicago and San Francisco.

If the City leverages the CDW•G Managed Services team, support will be provided from Minnesota.

3.3.4.1.11 Describe support escalation stages and the roles and capability delivered at each stage.

During the Implementation, Cutover, and Post Cutover support the following would apply for Escalation:

- Sev3: CDW•G Project Manager/Meraki Support
- Sev2: CDW•G Customer Engagement Manager/ CDW•G Account Team/Meraki Account Team
- Sev1: CDW•G Sales Management/ CDW•G Branch Director/Cisco/Meraki Regional Manager

Service numbers for the City will be defined during Planning/Design phase of project.

After completion of Implementation, the following would apply for Escalation:

- Sev3: Meraki Support
- Sev2: Meraki Account Team
- Sev1: Cisco/Meraki Regional Manager

3.3.4.1.12 If issue severity varies, include a matrix defining severity levels and entitlements.

Severity levels during the City's project will be defined during Planning/Design phase. Severity levels after the completion of Implementation will be defined in conjunction with Cisco Meraki support.

3.3.4.1.13 If hardware parts are included as part of a warranty, list where parts depots are located, or sources and timeline for shipping parts on-site.

To provide consistent and timely remote and onsite support, Cisco has more than 900 fulfillment depots globally. Cisco can store parts in appropriate departments based on the City's equipment inventories and site data taken from the Service Contract Center. There are several fulfillment depots located in the Midwest to service the City of Columbus. Timelines are dependent on the Smartnet coverage level.

3.3.4.1.14 List the titles and locations of personnel performing on-site services.

CDW•G has three branch offices within driving distance of the City of Columbus in Columbus, Cincinnati, and Cleveland. Based on the technology, urgency, and availability of our resources, we have Associate Engineers, Engineers, and Sr. Engineers who can assist in an onsite capacity. These differing engineer levels will provide various levels of support depending upon the City's needs. Associate Engineers will help with basic rack/stack and connectivity or initial remediation steps. Engineers will provide best practices and higher-level remediation, while Sr. Engineers will be utilized for complex design and remediation help.

3.3.4.1.15 List any solution components the City will be responsible for installing or repairing.

This City will be responsible for Issues and remediation of problems associated with copper or fiber cabling, power limitations, bad or non-existent UPSs, Rack, or cabinet mounting. CAT6 cabling to new Access Point locations are not currently included in the pricing.

3.3.4.1.16 Describe how the solution handles software updates.

Automated upgrades for the City can be optionally permitted and are scheduled during off hours. Notifications will be sent to the City well in advance of any upgrade. You may elect to schedule the upgrade at a different time or manually force an upgrade.

3.3.4.1.17 List any resources provided by the City to receive warranty or maintenance support.

A City coworker will need to initiate a call to Cisco TAC support to received warranty or maintenance support.

3.3.4.1.18 Describe any self-maintenance solution. Indicate costs, parts, training, and certification requirements.

The City may choose to self-maintain by employing a sparing model in which you would buy extra hardware and put it on the shelf to use in case of hardware failures.

3.3.4.1.19 Provide the solution standard, Software License Agreement, Maintenance Services Agreement and Service Level Agreements soft copies.

Use of Cisco Meraki products is governed by the Meraki Offer Description published at

https://www.cisco.com/c/dam/en_us/about/doing_business/legal/OfferDescriptions/meraki.pdf

If the City needs additional documentation outside of this, CDW•G will work with Cisco to provide that.

Please see Appendix 2: Offer Description Meraki Cloud Networking.

Implementation and Project Management

3.3.4.2.1 Describe in detailed narrative of Project Management Plan for implementing the proposed solution. Include a schedule of work responsibility matrix, identifying the tasks Performed by the Offeror and the tasks the City is expected to perform. The plan shall include detailed work breakdown structure, project milestone and schedule information presented in Microsoft Project file format, Excel spreadsheet, or SmartSheet. The Offeror shall include an estimated start time and completion date for the project, and a Gantt chart.

CDW•G is available to provide a Project Management Plan for the City after the final walkthroughs are performed and the Statement of Work has been agreed upon between CDW•G and the City. Work responsibilities, tasks, scope of work, project milestones and deliverables can all be tracked through the project plan.

3.3.4.2.2 Project Incident management and progress reports will be made available online weekly, and upon request.

CDW•G normally has weekly status calls with all stakeholders in which we discuss incident management, progress reports, and budget reports.

3.3.4.2.3 The City reserves the right to require the awarded Offeror to replace the assigned project manager at any time, without additional costs to theCity.

CDW•G understands this requirement and will comply.

Solution Implementation Requirements

3.3.4.3.1 All Offeror staff must pass City background checks to be admitted into City facilities.

Upon award, CDW•G understands this requirement and will comply review the City's requirements and advise whether its pre-employment screening process aligns. Once agreed, CDW•G recommends incorporating such requirements into the resultant contract.

3.3.4.3.2 New feature(s) require testing, failover testing, performance testing, validation, and documentation.

Each of the City of Columbus' locations will have a developed post implementation test plan to validate the installation prior to go live. CDW•G's engineers will work closely with the City of Columbus' technical staff to develop an appropriate test plan.

3.3.4.3.3 All hardware must be the latest fully supported firmware version.

In some cases, there may be a difference between the latest fully supported manufacturer version and what CDW•G engineers recommend based on our best practices. Our engineers will work with the City of Columbus' team to deploy the latest versions that fit your specific requirements.

3.3.4.3.4 All software implemented must be the most recent manufacturer version available.

In some cases, there may be a difference between the latest fully supported manufacturer version and what CDW•G engineers recommend based on our best practices and extensive

product knowledge. Our engineers will work with the City of Columbus' team to deploy the latest versions that fit your specific requirements.

3.3.4.3.5 Offerors must provide details of how City users will be assisted during switch over activities and maintenance.

CDW•G will work with the City to identify the implications of cutover activities and identify roles and responsibilities to support switch over activities and maintenance.

3.3.4.3.6 Offeror will received written notice of any outstanding problems with a location installation within fourteen (14) days. Offeror will correct any outstanding problems within thirty (30) days from the date of notification. Payments will not be made until the City accepts the installation.

CDW•G understands this requirement and will comply.

Training: General and Documentation

3.3.4.4.1 All instructor led training costs for ten (10) City employees to administer as super-users; training and reference materials, travel and expenses, and any other associated costs must be included in the submitted proposal. Training must be completed prior to the solution operating in production.

CDW•G will provide administrative training specific to the Meraki switches and access point required for the manage the new Meraki solution. We will provide administrative training for the City's key technical staff.

Below is a sample of the Administrative training that CDW•G will provide to the City:

- Meraki Cloud Dashboard
    - General Dashboard Navigation
    - Security Appliance Settings
    - Policy-based routing settings
    - VPN settings
    - VLAN settings
    - Switchport and uplink settings

In addition, CDW•G will also provide Global Knowledge Training Credits as part of the BOM that will include the two Meraki Engineering courses that were requested by the City.

3.3.4.4.2 Each aspect of the proposed solution, requires a detailed description of the training, pricing, and syllabus.

CDW•G can provide a comprehensive description of training based on final SOW walkthrough, but most of our customers prefer to utilize a combination of over the shoulder training while our engineers assist with configuration, the administrative training session listed above, and formal Cisco Meraki training courses that will be outlined below.

3.3.4.4.3 Prior to implementation, Offeror must provide a Microsoft Visio format of physical and logical diagram of the proposed solution architecture, including as-built drawings and access point placement.

CDW•G's standard documentation will include full per site as built drawings and access point placement.

3.3.4.4.4 All critical solution aspects and access to knowledge systems require configuration documentation for the duration of thewarranty.

Configuration documentation is included as part of CDW•G's standard as-built documentation.

3.3.4.4.5 Provide reproducible standard operating procedures documentation for the solution.

CDW•G recommends the City utilizing the Cisco documentation regarding their architectures and best practices. This documentation can be found at the following link: https://documentation.meraki.com/Architectures_and_Best_Practices

3.3.4.4.6 Describe how the solution would pre-populate placement information in cloud management tool.

Cisco recommends referencing the same link for technical information regarding placement in the cloud management tool:
https://documentation.meraki.com/Architectures_and_Best_Practices

Training: Learning and Skills Required

3.3.4.5.1 Indicate the skill level and training recommended to administer thesolution.

As with supporting any network environment, a basic and fundamental understanding of networking concepts is important for the City. CCNA level knowledge along with specific Meraki training is recommended including ECMS1 and ECMS2. For additional information please see:

https://www.cisco.com/c/en/us/training-events/training-certifications/training/training-services/courses/engineering-cisco-meraki-solutions-part-1-ecms1.html

and https://www.cisco.com/c/en/us/training-events/training-certifications/training/training-services/courses/engineering-cisco-meraki-solutions-part-2-ecms2.html

3.3.4.5.2 List knowledge base resources are available for thesolution.

Cisco has a robust documentation center and community support portal that many customers leverage for additional information. Those links are listed below.

Documentation - https://documentation.meraki.com/

Community - https://community.meraki.com/t5/Meraki-Community/ct-p/meraki

3.3.4.5.3 List any product-specific training available for the products in the solution. Indicate any fees for the training.

Meraki offers some free online training that is helpful for the City to get familiar with the solution. In addition, the courses that the City has requested pricing for are the best training available to understand managing the solution. Pricing for those is indicated in our BOM proposal.

Costs: Boundary Network

3.3.5 Overall cost for the proposed solution, expressed as a total cost of ownership (TCO) over a period of five-years.

Based on the BOM that the City has provided, the total cost of ownership over the five-year period is $2,459,928.15. There are two important variables to this cost in that we were not able to include professional services costs at this time until more formal discussions and physical walkthroughs can be completed.

3.3.5.1 Offeror must provide a bill of materials (BOM) that includes full and complete line-item-level pricing in Attachment C. Offeror Solution Response. Specify the hardware, software, storage, other components, and services required to meet these specifications. Include any recurring payments, and specify their term. A single figure for "total cost of solution" will be rejected. Attachments must be provided in an unlocked and editable spreadsheet.

CDW•G has included pricing per the BOM that the City has provided.

3.3.5.2 List any existing contracts or purchasing agreements contract number(s), such as a federal or state government or consortium pricing, or any other contract reference information offered as part of your proposal. State discount level for all quantitates of stock units listed on these contracts.

CDW•G has many existing contracts that could be leveraged based on the solutions. However, because CDW•G understands this Best Value Procurement is to be used as the basis of the Universal Term Contract, we plan to contract directly with the City.

3.3.5.3 List any solution parts subject to import tariffs and how tariffs are factored into Section 3.1.2.1.

CDW•G is not aware of any components of the Meraki solution that are subject to import tariffs.

3.3.5.4 List units for software license.

All Meraki hardware requires a subscription license that is tied to that particular hardware as already noted in the City provided BOM.

3.3.5.5 List any additional software license recurring charges that are not included in the BOM Attachments.

The only additional license recurring charges would be to renew the subscription at the end of the City’s term or for new hardware that is not currently identified in the BOM.

Warranty and License Extensions

3.3.5.2 Warranty and License Extensions

3.3.5.2.1 List the items that require warranty extensions with any associated costs.

All Meraki hardware requires the subscription licensing that is currently included in the BOM. This provides maintenance and support access for the City along with the subscription to the solution.

3.3.5.2.2 List any consequences for not renewing licenses.

The renewal of the subscription licenses is required in order to utilize the Meraki solution.

Operating Cost Assumptions: Consumption-Based Offerings

3.3.5.3 Operating Cost Assumptions: Consumption-Based Offerings

3.3.5.3.1 List any product available on a consumption-based (pay-per-use) basis. If the solution does not include consumption-based products, ignore the rest of the questions in this subsection.

The Cisco Meraki solution does not have any consumption-based components.

3.3.5.3.2 Describe the recurring payment, include payment frequency, and unit of measurement.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.3 List any termination notice requirements and penalties.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.4 List any additional software or services, beyond those listed on the Attachments required in a consumption-based offering.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.5 List required length of term.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.6 List minimum payments.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.7 For the solution, list the minimum and maximum payments for a 3-year term, and 5-year term separately. List all assumptions for consumption rates, growth rates, price changes, etc.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.8 Describe circumstances when Offeror may unilaterally adjust prices or minimum payments during the contract term.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.9 If pre-deployed resources (buffer stock) are offered, how are these resources initially sized? List triggers for additional capacity. Describe returning excess buffer stock.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.10 Describe triggers for technology refresh in the solution.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

5.1 Boundary Network - Pricing

CDW-G has provided two different pricing offers for the City's consideration. Price offers for Categories 1 and 2 will remain fixed through May 1, 2022. CDW-G's catalog price offer is based upon a discount off Cisco's global price list, this means that while the discount percentage will remain fixed, the resulting cost to the City may fluctuate based upon Cisco's changes to its global price list.

5.1 Boundary Network - Pricing

Line Item	Part Category	Quantity	Vendor Part #	Description	Term (If Applicable)	Unit List Price	Extended List Price	Discount %	Unit Offered Price	Extended Offered Price	Comments
	Columbus City Hall - Large										
	MDF Switches										
5.1.1	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.2	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.3	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.4	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.5							$ -			$ -	
5.1.6	**IDF Switches**										
5.1.7	Hardware	28.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 381,942.68	61.00%	$ 5,319.91	$ 148,957.48	
5.1.8	Hardware	28.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 59,305.68	53.00%	$ 995.48	$ 27,873.44	
5.1.9	Hardware	28.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 79,626.12	53.00%	$ 1,336.58	$ 37,424.24	
5.1.10	Licensing	28.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 223,231.68	53.00%	$ 3,747.10	$ 104,918.80	
5.1.11							$ -			$ -	
5.1.12	**APs**										
5.1.13	Hardware	50.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 107,266.00	58.00%	$ 901.03	$ 45,051.50	
5.1.14	Licensing	50.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 48,318.50	53.00%	$ 454.19	$ 22,709.50	
5.1.15							$ -			$ -	
5.1.16	**SFPs/Cables**										
5.1.17	Supplies - Under $5,000	100.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 106,997.00	53.00%	$ 502.88	$ 50,288.00	
5.1.18	Supplies - Under $5,000	2.0	MA-CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Modules, 1 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.19	Supplies - Under $5,000	6.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 806.52	53.00%	$ 63.17	$ 379.02	
5.1.20							$ -			$ -	
5.1.21	**City of Columbus - Firestation #1 and #9 - Small**										
5.1.22	**MDF Switches**										
5.1.23	Hardware	1.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 13,640.81	61.00%	$ 5,319.91	$ 5,319.91	
5.1.24	Hardware	1.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 2,118.06	53.00%	$ 995.48	$ 995.48	
5.1.25	Hardware	2.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 5,687.58	53.00%	$ 1,336.58	$ 2,673.16	
5.1.26	Licensing	1.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License		$ 7,972.56	$ 7,972.56	53.00%	$ 3,747.10	$ 3,747.10	
5.1.27							$ -			$ -	
5.1.28	**APs**										
5.1.29	Hardware	5.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 10,726.60	58.00%	$ 901.03	$ 4,505.15	
5.1.30	Licensing	5.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 4,831.85	53.00%	$ 454.19	$ 2,270.95	
5.1.31							$ -			$ -	
5.1.32	**SFPs/Cables**										

5.1 Boundary Network - Pricing

5.1.33	Supplies - Under $5,000	1.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 134.42	53.00%	$ 63.17	$ 63.17	
5.1.34	Supplies - Under $5,000	1.0	MA-CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Modules, 1 Meter		$ 118.24	$ 118.24	53.00%	$ 55.57	$ 55.57	
5.1.35							$ -			$ -	
5.1.36	**Jerry Hammond Center - Medium**										
5.1.37	**MDF Switches**										
5.1.38	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.39	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.40	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.41	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.42							$ -			$ -	
5.1.43	**IDF Switches**										
5.1.44	Hardware	15.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 204,612.15	61.00%	$ 5,319.91	$ 79,798.65	
5.1.45	Hardware	15.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 31,770.90	53.00%	$ 995.48	$ 14,932.20	
5.1.46	Hardware	15.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 42,656.85	53.00%	$ 1,336.58	$ 20,048.70	
5.1.47	Licensing	15.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 119,588.40	53.00%	$ 3,747.10	$ 56,206.50	
5.1.48							$ -			$ -	
5.1.49	**APs**										
5.1.50	Hardware	51.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 109,411.32	58.00%	$ 901.03	$ 45,952.53	
5.1.51	Licensing	51.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 49,284.87	53.00%	$ 454.19	$ 23,163.69	
5.1.52							$ -			$ -	
5.1.53	**SFPs/Cables**										
5.1.54	Supplies - Under $5,000	13.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 1,747.46	53.00%	$ 63.17	$ 821.21	
5.1.55	Supplies - Under $5,000	2.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 537.68	53.00%	$ 126.35	$ 252.70	
5.1.56	Supplies - Under $5,000	1.0	MA-CBL-120G-3M	Meraki MS390 120G Data-Stack Cable, 3 meter		$ 403.26	$ 403.26	53.00%	$ 189.53	$ 189.53	
5.1.57	Supplies - Under $5,000	1.0	SFP-10G-AOC1M=	10GBASE Active Optical SFP+ Cable, 1M		$ 252.57	$ 252.57	53.00%	$ 118.70	$ 118.70	
5.1.58	Supplies - Under $5,000	12.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 12,839.64	53.00%	$ 502.88	$ 6,034.56	
5.1.59							$ -			$ -	
5.1.60	**Columbus Public Health - Medium**										
5.1.61	**MDF Switches**										
5.1.62	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.63	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.64	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	

5.1 Boundary Network - Pricing											
5.1.65	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.66							$ -			$ -	
5.1.67	**IDF Switches**										
5.1.68	Hardware	22.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 300,097.82	61.00%	$ 5,319.91	$ 117,038.02	
5.1.69	Hardware	22.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 46,597.32	53.00%	$ 995.48	$ 21,900.56	
5.1.70	Hardware	18.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 51,188.22	53.00%	$ 1,336.58	$ 24,058.44	
5.1.71	Licensing	22.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 175,396.32	53.00%	$ 3,747.10	$ 82,436.20	
5.1.72							$ -			$ -	
5.1.73	**APs**										
5.1.74	Hardware	50.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 107,266.00	58.00%	$ 901.03	$ 45,051.50	
5.1.75	Licensing	50.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 48,318.50	53.00%	$ 454.19	$ 22,709.50	
5.1.76							$ -			$ -	
5.1.77	**SFPs/Cables**										
5.1.78	Supplies - Under $5,000	17.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 2,285.14	53.00%	$ 63.17	$ 1,073.89	
5.1.79	Supplies - Under $5,000	4.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 1,075.36	53.00%	$ 126.35	$ 505.40	
5.1.80	Supplies - Under $5,000	3.0	MA-CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Modules, 1 Meter		$ 118.24	$ 354.72	53.00%	$ 55.57	$ 166.71	
5.1.81	Supplies - Under $5,000	18.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 19,259.46	53.00%	$ 502.88	$ 9,051.84	
5.1.82	Supplies - Under $5,000	1.0	QSFP-H40G-AOC1M=	Meraki 40GBASE Active Optical Cable, 1m		$ 1,016.77	$ 1,016.77	53.00%	$ 477.88	$ 477.88	
5.1.83							$ -			$ -	
5.1.84	**City of Columbus – Income Tax, City Attorney, Public Safety, etc - Medium**										
5.1.85	**MDF 1 Switches**										
5.1.86	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.87	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.88	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.89	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.90							$ -			$ -	
5.1.91	**MDF 2 Switches**										
5.1.92	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.93	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.94	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.95	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.96							$ -			$ -	
5.1.97	**IDF Switches**										

5.1 Boundary Network - Pricing											
5.1.98	Hardware	14.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 190,971.34	61.00%	$ 5,319.91	$ 74,478.74	
5.1.99	Hardware	14.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 29,652.84	53.00%	$ 995.48	$ 13,936.72	
5.1.100	Hardware	14.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 39,813.06	53.00%	$ 1,336.58	$ 18,712.12	
5.1.101	Licensing	14.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 111,615.84	53.00%	$ 3,747.10	$ 52,459.40	
5.1.102							$ -			$ -	
5.1.103	**APs**										
5.1.104	Hardware	51.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 109,411.32	58.00%	$ 901.03	$ 45,952.53	
5.1.105	Licensing	51.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 49,284.87	53.00%	$ 454.19	$ 23,163.69	
5.1.106							$ -			$ -	
5.1.107	**SFPs/Cables**										
5.1.108	Supplies - Under $5,000	4.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 537.68	53.00%	$ 63.17	$ 252.68	
5.1.109	Supplies - Under $5,000	2.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 537.68	53.00%	$ 126.35	$ 252.70	
5.1.110	Supplies - Under $5,000	3.0	MA-CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Modules, 1 Meter		$ 118.24	$ 354.72	53.00%	$ 55.57	$ 166.71	
5.1.111	Supplies - Under $5,000	24.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 25,679.28	53.00%	$ 502.88	$ 12,069.12	
5.1.112	Supplies - Under $5,000	4.0	SFP-10G-AOC1M=	10GBASE Active Optical SFP+ Cable, 1M		$ 252.57	$ 1,010.28	53.00%	$ 118.70	$ 474.80	
5.1.113	Supplies - Under $5,000	1.0	QSFP-H40G-AOC1M=	Meraki 40GBASE Active Optical Cable, 1m		$ 1,016.77	$ 1,016.77	53.00%	$ 477.88	$ 477.88	
5.1.114							$ -			$ -	
5.1.115	**City of Columbus – Division of Police - Large**										
5.1.116	**MDF Switches**										
5.1.117	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.118	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.119	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.120	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.121							$ -			$ -	
5.1.122	**IDF Switches**										
5.1.123	Hardware	31.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 422,865.11	61.00%	$ 5,319.91	$ 164,917.21	
5.1.124	Hardware	31.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 65,659.86	53.00%	$ 995.48	$ 30,859.88	
5.1.125	Hardware	31.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 88,157.49	53.00%	$ 1,336.58	$ 41,433.98	
5.1.126	Licensing	31.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 247,149.36	53.00%	$ 3,747.10	$ 116,160.10	
5.1.127							$ -			$ -	
5.1.128	**APs**										
5.1.129	Hardware	24.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 51,487.68	58.00%	$ 901.03	$ 21,624.72	

5.1 Boundary Network - Pricing											
5.1.130	Licensing	24.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 23,192.88	53.00%	$ 454.19	$ 10,900.56	
5.1.131							$ -			$ -	
5.1.132	**SFPs/Cables**										
5.1.133	Supplies - Under $5,000	1.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 134.42	53.00%	$ 63.17	$ 63.17	
5.1.134	Supplies - Under $5,000	26.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 6,989.84	53.00%	$ 126.35	$ 3,285.10	
5.1.135	Supplies - Under $5,000	3.0	MA-CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Modules, 1 Meter		$ 118.24	$ 354.72	53.00%	$ 55.57	$ 166.71	
5.1.136	Supplies - Under $5,000	18.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 19,259.46	53.00%	$ 502.88	$ 9,051.84	
5.1.137	Supplies - Under $5,000	1.0	QSFP-H40G-AOC1M=	Meraki 40GBASE Active Optical Cable, 1m		$ 1,016.77	$ 1,016.77	53.00%	$ 477.88	$ 477.88	
5.1.138							$ -			$ -	
5.1.139	**City of Columbus – Neighborhood Policing Center – Precinct #18 - Medium**										
5.1.140	**MDF Switches**										
5.1.141	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		$ 26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.142	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		$ 604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.143	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		$ 118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.144	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	$ 4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.145							$ -			$ -	
5.1.146	**IDF Switches**										
5.1.147	Hardware	6.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 81,844.86	61.00%	$ 5,319.91	$ 31,919.46	
5.1.148	Hardware	6.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 12,708.36	53.00%	$ 995.48	$ 5,972.88	
5.1.149	Hardware	6.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 17,062.74	53.00%	$ 1,336.58	$ 8,019.48	
5.1.150	Licensing	6.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 47,835.36	53.00%	$ 3,747.10	$ 22,482.60	
5.1.151							$ -			$ -	
5.1.152	**APs**										
5.1.153	Hardware	2.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 4,290.64	58.00%	$ 901.03	$ 1,802.06	
5.1.154	Licensing	2.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 1,932.74	53.00%	$ 454.19	$ 908.38	
5.1.155							$ -			$ -	
5.1.156	**SFPs/Cables**										
5.1.157	Supplies - Under $5,000	3.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 403.26	53.00%	$ 63.17	$ 189.51	
5.1.158	Supplies - Under $5,000	1.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 268.84	53.00%	$ 126.35	$ 126.35	
5.1.159	Supplies - Under $5,000	4.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 4,279.88	53.00%	$ 502.88	$ 2,011.52	
5.1.160	Supplies - Under $5,000	1.0	QSFP-H40G-AOC1M=	Meraki 40GBASE Active Optical Cable, 1m		$ 1,016.77	$ 1,016.77	53.00%	$ 477.88	$ 477.88	

5.1 Boundary Network - Pricing

5.1.161							$ -			$ -	
5.1.162	City of Columbus – Public Utilities Administration Building - Medium										
5.1.163	MDF Switches										
5.1.164	Hardware	2.0	MS425-32-HW	Meraki MS425-32 L3 Cld-Mngd 32x 10G SFP+ Switch		26,496.62	$ 52,993.24	53.00%	$ 12,453.41	$ 24,906.82	
5.1.165	Hardware	2.0	MA-PWR-250WAC	Meraki 250WAC PSU		604.28	$ 1,208.56	53.00%	$ 284.01	$ 568.02	
5.1.166	Hardware	2.0	MA-CBL-40G-50CM	Meraki 40GbE QSFP Cable, 0.5 Meter		118.24	$ 236.48	53.00%	$ 55.57	$ 111.14	
5.1.167	Licensing	2.0	LIC-MS425-32-5YR	Meraki MS425-32 Enterprise License and Support, 5YR	60 Months	4,166.13	$ 8,332.26	53.00%	$ 1,958.08	$ 3,916.16	
5.1.168							$ -			$ -	
5.1.169	IDF Switches										
5.1.170	Hardware	20.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 272,816.20	61.00%	$ 5,319.91	$ 106,398.20	
5.1.171	Hardware	20.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 42,361.20	53.00%	$ 995.48	$ 19,909.60	
5.1.172	Hardware	20.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 56,875.80	53.00%	$ 1,336.58	$ 26,731.60	
5.1.173	Licensing	20.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 159,451.20	53.00%	$ 3,747.10	$ 74,942.00	
5.1.174							$ -			$ -	
5.1.175	APs										
5.1.176	Hardware	31.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 66,504.92	58.00%	$ 901.03	$ 27,931.93	
5.1.177	Licensing	31.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 29,957.47	53.00%	$ 454.19	$ 14,079.89	
5.1.178							$ -			$ -	
5.1.179	SFPs/Cables										
5.1.180	Supplies - Under $5,000	16.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 2,150.72	53.00%	$ 63.17	$ 1,010.72	
5.1.181	Supplies - Under $5,000	3.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 806.52	53.00%	$ 126.35	$ 379.05	
5.1.182	Supplies - Under $5,000	10.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 10,699.70	53.00%	$ 502.88	$ 5,028.80	
5.1.183	Supplies - Under $5,000	1.0	QSFP-H40G-AOC1M=	Meraki 40GBASE Active Optical Cable, 1m		$ 1,016.77	$ 1,016.77	53.00%	$ 477.88	$ 477.88	
5.1.184							$ -			$ -	
5.1.185	Spare Inventory										
5.1.186	IDF Switches										
5.1.187	Hardware	7.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch		$ 13,640.81	$ 95,485.67	61.00%	$ 5,319.91	$ 37,239.37	
5.1.188	Hardware	7.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply		$ 2,118.06	$ 14,826.42	53.00%	$ 995.48	$ 6,968.36	
5.1.189	Hardware	7.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module		$ 2,843.79	$ 19,906.53	53.00%	$ 1,336.58	$ 9,356.06	
5.1.190	Licensing	7.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	60 Months	$ 7,972.56	$ 55,807.92	53.00%	$ 3,747.10	$ 26,229.70	
5.1.191							$ -			$ -	
5.1.192	APs										
5.1.193	Hardware	13.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 27,889.16	58.00%	$ 901.03	$ 11,713.39	
5.1.194	Licensing	13.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 12,562.81	53.00%	$ 454.19	$ 5,904.47	

5.1 Boundary Network - Pricing											
5.1.195	Hardware	50.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP		$ 2,145.32	$ 107,266.00	58.00%	$ 901.03	$ 45,051.50	Included an additional 50 to meet short-term needs
5.1.196	Licensing	50.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	60 Months	$ 966.37	$ 48,318.50	53.00%	$ 454.19	$ 22,709.50	Included an additional 50 to meet short-term needs
5.1.197							$ -			$ -	
5.1.198	**SFPs/Cables**										
5.1.199	Supplies - Under $5,000	3.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter		$ 134.42	$ 403.26	53.00%	$ 63.17	$ 189.51	
5.1.200	Supplies - Under $5,000	2.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter		$ 268.84	$ 537.68	53.00%	$ 126.35	$ 252.70	
5.1.201	Supplies - Under $5,000	9.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode		$ 1,069.97	$ 9,629.73	53.00%	$ 502.88	$ 4,525.92	
5.1.202											
5.1.203	**Training**										
5.1.204	Training	100.0	ECMS1	Engineering Cisco Meraki Solutions Part 1 (ECMS1) 2.0		$ 100.00	$ 10,000.00	15.00%	$ 85.00	$ 8,500.00	Utilizing Global Knowledge Training Credits -10 Credits needed per Student; 12Mo Expiration on Credits
5.1.205	Training	280.0	ECMS2	Engineering Cisco Meraki Solutions Part 2 (ECMS2) 2.0		$ 100.00	$ 28,000.00	15.00%	$ 85.00	$ 23,800.00	Utilizing Global Knowledge Training Credits -28 Credits needed per Student - 12Mo Expiration on Credits
5.1.206	**Professional Services - Rate Card**										
5.1.207	Professional Services	1.0		Sr. Project Manager - Hourly Rate - Remote	1 Hour	$ 215.00	$ 215.00	16.28%	$ 180.00	$ 180.00	
5.1.208	Professional Services	1.0		Sr. Project Manager - Hourly Rate - Onsite	1 Hour	$ 240.00	$ 240.00	14.58%	$ 205.00	$ 205.00	Onsite rates assume 40hr work week
5.1.209	Professional Services	1.0		Consulting Engineer - Hourly Rate- Remote	1 Hour	$ 215.00	$ 215.00	16.28%	$ 180.00	$ 180.00	
5.1.210	Professional Services	1.0		Consulting Engineer - Hourly Rate- Onsite	1 Hour	$ 240.00	$ 240.00	14.58%	$ 205.00	$ 205.00	Onsite rates assume 40hr work week
5.1.211	Professional Services	1.0		Sr. Consulting Engineer - Hourly Rate- Remote	1 Hour	$ 235.00	$ 235.00	14.89%	$ 200.00	$ 200.00	
5.1.212	Professional Services	1.0		Sr. Consulting Engineer - Hourly Rate- Onsite	1 Hour	$ 260.00	$ 260.00	13.46%	$ 225.00	$ 225.00	Onsite rates assume 40hr work week
5.1.213	Professional Services	1.0		Principal Consulting Engineer - Hourly Rate- Remote	1 Hour	$ 250.00	$ 250.00	14.00%	$ 215.00	$ 215.00	
5.1.214	Professional Services	1.0		Principal Consulting Engineer - Hourly Rate- Onsite	1 Hour	$ 275.00	$ 275.00	12.73%	$ 240.00	$ 240.00	Onsite rates assume 40hr work week

5.1 Boundary Network - Pricing											
5.1.215	Professional Services	1.0		SSI Smart Hands Engineer - Hourly Rate - Business Hours	1 Hour	$ 155.00	$ 155.00	14.19%	$ 133.00	$ 133.00	
5.1.216	Professional Services	1.0		SSI Smart Hands Engineer - Hourly Rate - After Hours	1 Hour	$ 232.00	$ 232.00	13.79%	$ 200.00	$ 200.00	
5.1.217	Professional Services	1.0		SSI Cabling Engineer - Hourly Rate - Business Hours	1 Hour	$ 175.00	$ 175.00	12.57%	$ 153.00	$ 153.00	
5.1.218	Professional Services	1.0		SSI Cabling Engineer - Hourly Rate - After Hours	1 Hour	$ 262.00	$ 262.00	12.21%	$ 230.00	$ 230.00	
5.1.251	**Misc**										
5.1.252											
5.1.253											
5.1.254							$ -			$ -	

5.2 Boundary Network - 5yr TCO

5.2 Boundary Network - 5yr TCO

Item Number	Cost Type	Year 1	Year 2	Year 3	Year 4	Year 5	Totals
5.2.1	Hardware	$ 1,597,198.59	$ -	$ -	$ -	$ -	$ 1,597,198.59
5.2.2	Software	$ -	$ -	$ -	$ -	$ -	$ -
5.2.3	Licenses and Support	$ 719,431.81	$ -	$ -	$ -	$ -	$ 719,431.81
5.2.4	Training	$ 32,300.00	$ -	$ -	$ -	$ -	$ 32,300.00
5.2.5	Professional Services	TBD	TBD	TBD	TBD	TBD	$ -
5.2.6	Maintenance and Support	TBD	TBD	TBD	TBD	TBD	$ -
5.2.7	Supplies - Under $5,000	$ 110,997.75	$ -	$ -	$ -	$ -	$ 110,997.75
	Totals	$ 2,459,928.15	$ -	$ -	$ -	$ -	**$ 2,459,928.15**

6.0 Project - NEC to Cisco VOIP

Operational Management, Installation, and Configuration

3.3.3.17.1 List the steps involved in an initial deployment, and the time typically taken for each step.

CDW•G adheres to the following phases for deployments to ensure success:

1. Discovery

2. Planning

3. Implementation

4. Testing

5. Training

6. Cutover

7. Post Cutover Support

Time dedicated to each phase is dependent on-site location, size, user, and device count.

3.3.3.17.2 Describe any auto-configuration or default templates for setup and initial configuration.

CDW•G leverages propriety tools for Cisco VoIP configuration and templates to reduce or eliminate potential human error and reduce task time. These tasks are assumed to be performed prior to site cutover.

3.3.3.17.3 List required information to be prepared or provided before installation (e.g., network addresses, power, wiring, rack space, etc.)

As part of the Discovery phase, we gather information including IP addresses, PoE requirements, Hostnames, Users, Usernames, Call flows, Phone MAC Addresses, Phone Numbers, Phone Placement, Circuit Information, Analog Device placement, rack space, UPS/PDU power. We will work with the City to gather this appropriate information.

Optimizations, Capacity Planning, Trending Analysis and Analytics

3.3.3.18.1 Can the management system automatically recommend upgrades or configuration adjustments for the system?

The requested items in tab 6.1 do not have embedded functionality relative to proactive upgrades or configuration adjustments.

Automation and Templates

3.3.3.19.1 Specify capabilities and processes for adding/provisioning new devices into the system.

CDW•G leverages propriety tools for Cisco configuration and templates to reduce or eliminate potential human error and reduce task time. Post implementation, existing City of Columbus technical provisioning processes can be followed for moves, adds, changes, and deletion of configuration elements on the solution.

Support, Maintenance and Warranty

3.3.4.6.1 Describe the system maintenance proposed, including coverage hours, service type, and any response time-to-repair commitments. If any warranty terms vary by location or country, answer for each location indicated in the BVP instructions.

Currently as part of the Bill of Materials, the City did not include request our Smartnet coverage on the Integrated Service Routers (ISR) or Phones. We strongly encourage the City to include the ISRs with a Smartnet coverage which has varying options available. CDW•G has offered a popular 24x7x4 option in our offer for the City to review. For the phones, CDW•G encourages the City to use a sparing model in order to provide quick turnaround at an effective costing model.

3.3.4.6.2 For the hardware and software covered under warranty, indicate when the warranty period starts. Define project phases, such as configuration, testing, and go-live.

Per Cisco, warranties begin on the hardware and software received date.

3.3.4.6.3 Specify the standard warranty periods for all solution hardware and software. If you offer different levels of warranty or service, innumerate them in the solution. The preferred manufacturer warranty is five years to be free of defects in equipment, software, support and services, and workmanship.

Warranty duration and level of coverage aligns with the procured SmartNet for each item in tab 6.1. The City can adjust service levels and durations if desired. CDW•G can provide alternatives during final BOM review to match the desired SLAs.

3.3.4.6.4 During the warranty period, and any subsequent maintenance agreement, any defective hardware and software components shall be repaired or replaced at no cost to the City.

As long as the defective hardware is covered under a Smartnet agreement then the City will be able to have it replaced or repaired at no cost.

3.3.4.6.5 During the implementation period, the Offeror must supply no more than a 30- minute response to major problems directly with the equipment manufacturer, 24 hours a day, and 7 days a week.

CDW•G will scope in proper implementation and cutover support to the City as a part of the final scope of work. We will also work directly with Cisco to identify the proper escalation path to ensure successful implementation.

3.3.4.6.6 Post implementation and for the duration of the agreement, the selected Offeror must have technical support services available. The City prefers this support be on a toll-free basis, 24 hours a day, 7 days a week, during the entire contract period with a ½ hour (30 minutes) or less response time to major problems, with a clearly defined priority escalation process. The selected Offeror shall also provide on-site technical support when required. This on-site support may be requested when problems are escalated without resolution and normal operations cannot be reasonably retained or restored.

If the City orders Smartnet coverage on the hardware devices (Integrated Services Routers and Phones) you will have access to log tickets via Cisco.com or by calling Cisco TAC support Additionally, CDW•G also has managed services option for the City if they are interested in a more comprehensive technical support option for an additional cost.

For onsite support, CDW•G also offers ad-hoc support for non-SLA backed onsite resources as requested by the City.

Please see Appendix 3: CDW's Managed Services Voice Managed Services.

3.3.4.6.7 Offeror must provide a 24 hour or less hardware Return Material Authorization response for all components in the solution.

The City must order Smartnet coverage on the hardware devices (Integrated Services Routers and Phones) to receive Return Material Authorization response in a 24 hour Service Level Agreement.

3.3.4.6.8 Technicians must be certified by the original equipment manufacturer to support any hardware and software implemented as a part of this project.

CDW•G is a Master Collaboration Certified Partner.

3.3.4.6.9 The City staff shall have the ability to call the manufacturer of all solution components directly during warranty period. If problems cannot be corrected by telephone support, Offeror shall include description in the proposal response outlining the support services offered and any limitations to the services.

As mentioned above, the City will have the ability to call Cisco directly or reach out to their local Cisco team to ensure a quick response. CDW•G is also able to offer additional support options via the Managed Services or an ad-hoc agreement.

Please see Appendix 3: CDW's Managed Services Voice Managed Services.

3.3.4.6.10 List the location of the support center(s) that will deliver remote support.

If the City leverages the CDW•G Managed Services team, support will be provided from our support center in Minnesota.

Please see Appendix 3: CDW's Managed Services Voice Managed Services.

3.3.4.6.11 Describe support escalation stages and the roles and capability delivered at each stage.

During the Implementation, Cutover, and Post Cutover support the following would apply for Escalation:

- Sev3: CDW•G Project Manager/Meraki Support
- Sev2: CDW•G Customer Engagement Manager/ CDW•G Account Team/Meraki Account Team
- Sev1: CDW•G Sales Management/ CDW•G Branch Director/Cisco/Meraki Regional Manager

Service numbers for the City will be defined during Planning/Design phase of project.

After completion of Implementation, the following would apply for Escalation:

- Sev3: Meraki Support
- Sev2: Meraki Account Team
- Sev1: Cisco/Meraki Regional Manager

3.3.4.6.12 If issue severity varies, include a matrix defining severity levels and entitlements.

Severity levels during the City's project will be defined during Planning/Design phase. Severity levels after the completion of Implementation will be defined in conjunction with Cisco Meraki support.

3.3.4.6.13 If hardware parts are included as part of a warranty, list where parts depots are located, or sources and timeline for shipping parts on-site.

To provide consistent and timely remote and onsite support, Cisco has more than 900 fulfillment depots globally. Cisco can store parts in appropriate depts based on customer equipment inventories and site data taken from the Service Contract Center. There are several fulfillment depots located in the Midwest to service the City of Columbus. Timelines are dependent on the Smartnet coverage level.

3.3.4.6.14 List the titles and locations of personnel performing on-site services.

CDW•G has three branch offices within driving distance of the City of Columbus in Columbus, Cincinnati, and Cleveland. Based on the technology, urgency, and availability of our resources, we have Associate Engineers, Engineers, and Sr. Engineers who can assist in an onsite capacity. These differing engineer levels will provide various levels of support depending upon the City's needs. Associate Engineers will help with basic rack/stack and connectivity or initial remediation steps. Engineers will provide best practices and higher-level remediation, while Sr. Engineers will be utilized for complex design and remediation help.

3.3.4.6.15 List any solution components the City will be responsible for installing or repairing.

This City will be responsible for Issues and remediation of problems associated with copper or fiber cabling, power limitations, bad or non-existent UPSs, Rack, or cabinet mounting. CAT6 cabling to new Access Point locations are not currently included in the pricing.

3.3.4.6.16 Describe how the solution handles software updates.

Software updates will be accessible for the routers and phones by having active Smartnet contracts attached to them. In some circumstances, software updates can be attained and managed through the Cisco Call Manager platform that the City is leveraging.

3.3.4.6.17 List any resources provided by the City to receive warranty or maintenance support.

A City coworker will need to initiate a call to Cisco TAC support to received warranty or maintenance support.

3.3.4.6.18 Describe any self-maintenance solution. Indicate costs, parts, training, and certification requirements.

The City may choose to self-maintain by employing a sparing model in which you would buy extra hardware and put it on the shelf to use in case of hardware failures.

3.3.4.6.19 Provide the solution standard, Software License Agreement, Maintenance Services Agreement and Service Level Agreements soft copies.

Cisco has simplified their licensing documents so their End User Licensing Agreement is now applicable to all Cisco Software. Below is the link to find the Cisco EULA:

https://www.cisco.com/c/en/us/about/legal/cloud-and-software/end_user_license_agreement.html?dtid=osscdc000283

CDW•G will coordinate with Cisco to provide any additional documentation requested by the City.

Implementation and Project Management

3.3.4.6.1 Describe in detailed narrative of Project Management Plan for implementing the proposed solution. Include a schedule of work responsibility matrix, identifying the tasks Performed by the Offeror and the tasks the City is expected to perform. The plan shall include detailed work breakdown structure, project milestone and schedule information presented in Microsoft Project file format, Excel spreadsheet, or SmartSheet. The Offeror shall include an estimated start time and completion date for the project, and a Gantt chart.

CDW•G is available to provide a Project Management Plan for the City after the final walkthroughs are performed and the Statement of Work has been agreed upon between CDW•G and the City. Work responsibilities, tasks, scope of work, project milestones and deliverables can all be tracked through the project plan.

3.3.4.6.2 Project Incident management and progress reports will be made available online weekly, and upon request.

CDW•G normally has weekly status calls with all stakeholders in which we discuss incident management, progress reports, and budget reports.

3.3.4.6.3 The City reserves the right to require the awarded Offeror to replace the assigned project manager at any time, without additional costs to the City.

CDW•G understand this request and will comply if requested.

Solution Implementation Requirements

3.3.4.7.1 All Offeror staff must pass City background checks to be admitted into City facilities.

Upon award, CDW•G understands this requirement and will comply review the City's requirements and advise whether its pre-employment screening process aligns. Once agreed, CDW•G recommends incorporating such requirements into the resultant contract.

3.3.4.7.2 New feature(s) require testing, failover testing, performance testing, validation, and documentation.

Each of the City of Columbus' locations will have a developed post implementation test plan to validate the installation prior to go live. CDW•G's engineers will work closely with the City of Columbus' technical staff to develop an appropriate test plan.

3.3.4.7.3 All hardware must be the latest fully supported firmware version.

In some cases, there may be a difference between the latest fully supported manufacturer version and what CDW•G engineers recommend based on our best practices. Our engineers will work with the City of Columbus' team to deploy the latest versions that fit your specific requirements.

3.3.4.7.4 All software implemented must be the most recent manufacturer version available.

In some cases, there may be a difference between the latest fully supported manufacturer version and what CDW•G engineers recommend based on our best practices. Our engineers will work with the City of Columbus' team to deploy the latest versions that fit your specific requirements.

3.3.4.7.5 Offerors must provide details of how City users will be assisted during switch over activities and maintenance.

CDW•G will work with the City to identify the implications of cutover activities and identify roles and responsibilities to support those activities.

3.3.4.7.6 Offeror will received written notice of any outstanding problems with a location installation within fourteen (14) days. Offeror will correct any outstanding problems within thirty (30) days from the date of notification. Payments will not be made until the City accepts the installation.

CDW•G understands this requirement and will comply.

Training: General and Documentation

3.3.4.8.1 All instructor led training costs for ten (10) City employees to administer as super-users; training and reference materials, travel and expenses, and any other associated costs must be included in the submitted proposal. Training must be completed prior to the solution operating in production.

CDW•G will provide administrative training specific to the routers required for the transition from NEC to Cisco at the various locations for the City. We will provide administrative training for the City's key technical staff as well as end-user training to ensure the City's end-users effectively utilize the new system.

CDW•G projects (1) 8-hour segment of knowledge transfer and basic Unified Communications administration training for up to 10 of the City's staff members in a classroom setting. This will include moves, adds, changes, and management where applicable and will cover the following topics:

- Cisco Unified Communications Manager
- Cisco Unity Connection
- Cisco Instant Messaging & Presence
- Cisco Emergency Responder
- Cisco Expressway
- Cisco Meetings Server
- Cisco Prime License Manager
- Cisco Prime Collaboration Deployment
- Cisco Prime Collaboration Provisioning
- Cisco Unified Contact Center Express NOTE SLIPSTREAM INCLUDES one (1), 60-minute training class for basic Unified Contact Center Express administration
- Cisco Advanced Quality Manager
- Cisco SocialMiner
- Cisco MediaSense
- Cisco Jabber Guest
- Singlewire InformaCast Basic/Advanced Paging
- System backups

3.3.4.8.2 Each aspect of the proposed solution, requires a detailed description of the training, pricing, and syllabus.

CDW•G can provide End-user training for all of the City's staff covering standard user features and functionality. Additional training classes covering specialized features and functionality will be conducted for the appropriate staff. Standard features and functionality are those that are configured for all or the majority of most users related to calling, messaging, presence, and voicemail functionality. CDW•G can provide this either via onsite sessions with end users or via recorded sessions that can be given access to end users. Projected time allocations and pricing is dependent upon further conversations with the City of most effective adoption strategy that you would like to deploy.

3.3.4.8.3 Prior to implementation, Offeror must provide a Microsoft Visio format of physical and logical diagram of the proposed solution architecture, including as-built drawings and access point placement.

CDW•G's standard documentation will include full per site as built drawings and access point placement for the City.

3.3.4.8.4 All critical solution aspects and access to knowledge systems require configuration documentation for the duration of thewarranty.

Configuration documentation is included as part of CDW•G's standard as-built documentation for the City.

3.3.4.8.5 Provide reproducible standard operating procedures documentation for the solution.

CDW•G will work with the City to define specific standard operating procedure documentation as part of final scoping discussion.

3.3.4.8.6 Describe how the solution would pre-populate placement information in cloud management tool.

CDW•G does not believe this is applicable because the VOIP solution is not currently managed in the cloud.

Training: Learning and Skills Required

3.3.4.9.1 Indicate the skill level and training recommended to administer the solution.

CDW•G recommends the City have coworkers who have a Cisco Certified Network Professional Collaboration certification to administer the solution. However, having worked with the City in the past, we do know that you have experienced resources who are currently managing the solution. The Integrated Service Routers and phones would simply be extensions of the current Cisco Unified Communications Platform. For additional information please see:

https://www.cisco.com/c/en/us/training-events/training-certifications/certifications/professional/ccnp-collaboration-v2.html

3.3.4.9.2 List knowledge base resources are available for the solution.

There is a plethora of knowledge base articles and documentation on all Cisco solutions including the Integrated Services Routers and 8000 Series phones on the Cisco website. Below are couple of the general links to those sites:

ISR 4000 Series Router Data Sheets: https://www.cisco.com/c/en/us/products/collateral/routers/4000-series-integrated-services-routers-isr/data_sheet-c78-732542.html and

Cisco 8851 Phone Data Sheet: https://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-8800-series/ip-phone-8851-ds.html

3.3.4.9.3 List any product-specific training available for the products in the solution. Indicate any fees for the training.

Cisco offers some free online training that is helpful for the City to get familiar with the solution. In addition, the courses that the City has requested pricing for are the best training available to understand managing the solution. Pricing for those is indicated in CDW•G's BOM proposal.

Costs: NEC to Cisco VOIP

3.3.5 Overall cost for the proposed solution, expressed as a total cost of ownership (TCO) over a period of five-years.

Based on the BOM that the City has provided, the total cost of ownership over the five-year period is $2,134,345.86. There are two important variables to this cost in that we were not able to include professional services costs at this time until more formal discussions and physical walkthroughs can be completed. Additionally, as mentioned previously, we highly recommend Smartnet coverage on the Integrated Service Routers which would add costs to the total. Finally, we were unable to generate a final firm price regarding the Optokon rugged phones which represent a large cost as well.

3.3.5.6 Offeror must provide a bill of materials (BOM) that includes full and complete line-item-level pricing in Attachment C. Offeror Solution Response. Specify the hardware, software, storage, other components, and services required to meet these specifications. Include any recurring payments, and specify their term. A single figure for "total cost of solution" will be rejected. Attachments must be provided in an unlocked and editable spreadsheet.

CDW•G has included pricing per the BOM that the City has provided along with some important options that we suggest we discuss further with the City.

3.3.5.7 List any existing contracts or purchasing agreements contract number(s), such as a federal or state government or consortium pricing, or any other contract reference information offered as part of your proposal. State discount level for all quantitates of stock units listed on these contracts.

CDW•G has many existing contracts that could be leveraged based on the solutions. However, because CDW•G understands this Best Value Procurement is to be used as the basis of the Universal Term Contract, we plan to directly contract with the City.

3.3.5.8 List any solution parts subject to import tariffs and how tariffs are factored into Section 3.1.2.1.

CDW•G is currently working to establish a distribution relationship with Optokon for their rugged phones hardware. Currently, due to the hardware coming from the Czech Republic, we are not certain what import tariffs, shipping costs, or taxes will be applicable.

3.3.5.9 List units for software license.

The only software license option that CDW•G provided for the City is the Cloud Meetings/On Premise Calling license in the option section. This license unit for this solution is Knowledge Worker.

3.3.5.10 List any additional software license recurring charges that are not included in the BOM Attachments.

The only additional software license that CDW•G has identified at this time is the Cloud Meetings/On Premise Calling license referenced above.

Warranty and License Extensions

3.3.5.2 Warranty and License Extensions

The warranties provided to the City for the Cisco phones include a 1-year limited hardware warranty. The following is the site address to view this warranty:

https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740608.html

The warranties provided to the City for the Cisco Integrated Services Routers include a 90-day limited liability warranty. The following is the site address to view this warranty:

https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740613.html

3.3.5.2.3 List the items that require warranty extensions with any associated costs.

CDW•G highly encourages the City to consider adding the Cisco Smartnet coverage for the Integrated Service Routers to extend the warranty and provide Technical Assistance Center (TAC) support.

3.3.5.2.4 List any consequences for not renewing licenses.

The main consequence for not covering hardware with Smartnet coverage is the inability for the City to contact Cisco TAC support for troubleshooting or replacement of hardware.

Operating Cost Assumptions: Consumption-Based Offerings

3.3.5.3 Operating Cost Assumptions: Consumption-Based Offerings

3.3.5.3.11 List any product available on a consumption-based (pay-per-use) basis. If the solution does not include consumption-based products, ignore the rest of the questions in this subsection.

The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.12 Describe the recurring payment, include payment frequency, and unit of measurement.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.13 List any termination notice requirements and penalties.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.14 List any additional software or services, beyond those listed on the Attachments required in a consumption-based offering.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.15 List required length of term.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.16 List minimum payments.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.17 For the solution, list the minimum and maximum payments for a 3-year term, and 5-year term separately. List all assumptions for consumption rates, growth rates, price changes, etc.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.18 Describe circumstances when Offeror may unilaterally adjust prices or minimum payments during the contract term.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.19 If pre-deployed resources (buffer stock) are offered, how are these resources initially sized? List triggers for additional capacity. Describe returning excess buffer stock.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

3.3.5.3.20 Describe triggers for technology refresh in the solution.

Not applicable. The Cisco VOIP solution that CDW•G is providing for the City does not include any consumption-based components.

6.1 NEC to Cisco VOIP - Pricing

CDW-G has provided two different pricing offers for the City's consideration. Price offers for Categories 1 and 2 will remain fixed through May 1, 2022. CDW-G's catalog price offer is based upon a discount off Cisco's global price list, this means that while the discount percentage will remain fixed, the resulting cost to the City may fluctuate based upon Cisco's changes to its global price list.

6.1 NEC to Cisco VOIP - Pricing

Line Item	Part Category	Quantity	Vendor Part #	Description	Term (If Applicable)	Unit List Price	Extended List Price	Discount %	Unit Offered Price	Extended Offered Price	Comments
	Public Safety Police										
	Cisco Handsets										
6.1.1	Hardware	657.0	CP-8851-K9=	Cisco 8851 VoIP Phone		$ 649.23	$ 426,544.11	61.00%	$ 253.19	$ 166,345.83	
6.1.2	Hardware	30.0	CP-8832-W-K9=	Cisco 8832 VoIP Conference Phone		$ 1,815.03	$ 54,450.90	61.00%	$ 707.86	$ 21,235.80	
6.1.3	Supplies - Under $5,000	30.0	CP-8832-MIC-WIRED=	Cisco 8832 VoIP Conference Phone wired Mic Kit		$ 474.25	$ 14,227.50	61.00%	$ 184.95	$ 5,548.50	
6.1.4							$ -			$ -	
6.1.5							$ -			$ -	
6.1.6	**Cisco Routers**										
6.1.7	Hardware	21.0	ISR-4331V/K9	Cisco 4331 ISR Router		$ 6,843.72	$ 143,718.12	55.00%	$ 3,079.67	$ 64,673.07	
6.1.8	Hardware	1.0	ISR-4351V/K9	Cisco 4351 ISR Router		$ 16,906.83	$ 16,906.83	55.00%	$ 7,608.07	$ 7,608.07	
6.1.9	Hardware	2.0	ISR4451-X-V/K9	Cisco 4451 ISR Router		$ 28,711.63	$ 57,423.26	55.00%	$ 12,920.23	$ 25,840.46	
6.1.10							$ -			$ -	
6.1.11							$ -			$ -	
6.1.12	**Public Safety Fire**										
6.1.13	**Cisco Handsets**										
6.1.14	Hardware	1067.0	CP-8851-K9=	Cisco 8851 VoIP Phone		$ 649.23	$ 692,728.41	61.00%	$ 253.19	$ 270,153.73	
6.1.15	Hardware	50.0	CP-8832-W-K9=	Cisco 8832 VoIP Conference Phone		$ 1,815.03	$ 90,751.50	61.00%	$ 707.86	$ 35,393.00	
6.1.16	Supplies - Under $5,000	50.0	CP-8832-MIC-WIRED=	Cisco 8832 VoIP Conference Phone wired Mic Kit		$ 474.25	$ 23,712.50	61.00%	$ 184.95	$ 9,247.50	
6.1.17							$ -			$ -	
6.1.18							$ -			$ -	
6.1.19	**Cisco Routers**										
6.1.20	Hardware	34.0	ISR-4331V/K9	Cisco 4331 ISR Router		$ 6,843.72	$ 232,686.48	55.00%	$ 3,079.67	$ 104,708.78	
6.1.21	Hardware	3.0	ISR-4351V/K9	Cisco 4351 ISR Router		$ 16,906.83	$ 50,720.49	55.00%	$ 7,608.07	$ 22,824.21	
6.1.22											
6.1.23							$ -			$ -	
6.1.24	**FXS/FXO/ATA**										
6.1.25	Hardware	37.0	NIM-4FXSP=	Cisco FXS Card		$ 1,299.78	$ 48,091.86	55.00%	$ 584.90	$ 21,641.30	
6.1.26	Hardware	37.0	ATA191-K9	Cisco ATA Adapter		$ 350.42	$ 12,965.54	55.00%	$ 157.68	$ 5,834.16	
6.1.27											
6.1.28							$ -			$ -	
6.1.29	**Public Utilities - Remote Locations**										
6.1.30	**Cisco Handsets**										
6.1.31	Hardware	478.0	LMIPT-41 (ruggedized)	Cisco OPTOKON LMIPT-41 Rugged Phone			$ -		$ 2,477.00	$ 1,184,006.00	Optokon does not have a formal distribution relationship with any US entity currently. We are working to finalize something but nothing is final currently. If we are not able to finalize then the City may have to procure directly from Optokon. Additionally, any warranties/support would flow directly to Optokon. Pricing DOES NOT include shipping/import taxes. Minimum QTY of 100
6.1.32	Hardware	10.0	CP-8832-MIC-WIRED=	Cisco 8832 VoIP Conference Phone wired Mic Kit		$ 474.25	$ 4,742.50	61.00%	$ 184.95	$ 1,849.50	
6.1.33							$ -			$ -	
6.1.34							$ -			$ -	
6.1.35	**Cisco Routers**										
6.1.36	Hardware	5.0	ISR-4351V/K9	Cisco 4351 ISR Router		$ 16,906.83	$ 84,534.15	55.00%	$ 7,608.07	$ 38,040.35	

6.1 NEC to Cisco VOIP - Pricing

6.1.37							$ -			$ -	
6.1.38							$ -			$ -	
6.1.39	**FXS/FXO/ATA**										
6.1.40	Hardware	5.0	NIM-4FXSP=	Cisco FXS Card		$ 1,299.78	$ 6,498.90	55.00%	$ 584.90	$ 2,924.50	
6.1.41	Hardware	5.0	ATA191-K9	Cisco ATA Adapter		$ 350.42	$ 1,752.10	55.00%	$ 157.68	$ 788.40	
6.1.42											
6.1.43							$ -			$ -	
6.1.44	**Spare Inventory**										
6.1.45	**Cisco Handsets**										
6.1.46	Hardware	86.0	CP-8851-K9=	Cisco 8851 VoIP Phone		$ 649.23	$ 55,833.78	61.00%	$ 253.19	$ 21,774.34	
6.1.47	Hardware	4.0	CP-8832-W-K9=	Cisco 8832 VoIP Conference Phone		$ 1,815.03	$ 7,260.12	61.00%	$ 707.86	$ 2,831.44	
6.1.48	Hardware	5.0	CP-8832-MIC-WIRED=	Cisco 8832 VoIP Conference Phone wired Mic Kit		$ 474.25	$ 2,371.25	61.00%	$ 184.95	$ 924.75	
6.1.49	Hardware	24.0	LMIPT-41 (ruggedized)	Cisco OPTOKON LMIPT-41 Rugged Phone					$ 2,477.00	$ 59,448.00	Optokon does not have a formal distribution relationship with any US entity currently. We are working to finalize something but nothing is final currently. If we are not able to finalize then the City may have to procure directly from Optokon. Additionally, any warranties/support would flow directly to Optokon.
6.1.50							$ -			$ -	
6.1.51							$ -			$ -	
6.1.52	**Cisco Routers**										
6.1.53	Hardware	3.0	ISR-4331V/K9	Cisco 4331 ISR Router		$ 6,843.72	$ 20,531.16	55.00%	$ 3,079.67	$ 9,239.01	
6.1.54											
6.1.55							$ -			$ -	
6.1.56	**FXS/FXO/ATA**										
6.1.57	Supplies - Under $5,000	2.0	NIM-4FXSP=	Cisco FXS Card		$ 1,299.78	$ 2,599.56	55.00%	$ 584.90	$ 1,169.80	
6.1.58	Supplies - Under $5,000	2.0	ATA191-K9	Cisco ATA Adapter		$ 350.42	$ 700.84	55.00%	$ 157.68	$ 315.36	
6.1.59							$ -			$ -	
6.1.60											
6.1.61	**Training**										
6.1.62	Training	294.0	350-801 CLCOR	Implementing and Operating Cisco Collaboration Core Technologies v1.0		$ 100.00	$ 29,400.00	15.00%	$ 85.00	$ 24,990.00	Utilizing Global Knowledge Training Credits - 42 Credits needed per Student - 12Mo Expiration on Credits
6.1.63	Training	294.0	300-815 CLACCM	Implementing Cisco Advanced Call Control and Mobility Services		$ 100.00	$ 29,400.00	15.00%	$ 85.00	$ 24,990.00	Utilizing Global Knowledge Training Credits - 42 Credits needed per Student - 12Mo Expiration on Credits
6.1.70	**Professional Services - Rate Card**										
6.1.71	Professional Services	1.0		Sr. Project Manager - Hourly Rate - Remote	1 Hour	$ 215.00	$ 215.00	16.28%	$ 180.00	$ 180.00	
6.1.72	Professional Services	1.0		Sr. Project Manager - Hourly Rate - Onsite	1 Hour	$ 240.00	$ 240.00	14.58%	$ 205.00	$ 205.00	Onsite rates assume 40hr work week
6.1.73	Professional Services	1.0		Consulting Engineer - Hourly Rate-Remote	1 Hour	$ 215.00	$ 215.00	16.28%	$ 180.00	$ 180.00	
6.1.74	Professional Services	1.0		Consulting Engineer - Hourly Rate-Onsite	1 Hour	$ 240.00	$ 240.00	14.58%	$ 205.00	$ 205.00	Onsite rates assume 40hr work week
6.1.75	Professional Services	1.0		Sr. Consulting Engineer - Hourly Rate-Remote	1 Hour	$ 235.00	$ 235.00	14.89%	$ 200.00	$ 200.00	
6.1.76	Professional Services	1.0		Sr. Consulting Engineer - Hourly Rate-Onsite	1 Hour	$ 260.00	$ 260.00	13.46%	$ 225.00	$ 225.00	Onsite rates assume 40hr work week

6.1 NEC to Cisco VOIP - Pricing											
6.1.77	Professional Services	1.0		Principal Consulting Engineer - Hourly Rate- Remote	1 Hour	$ 250.00	$ 250.00	14.00%	$ 215.00	$ 215.00	
6.1.78	Professional Services	1.0		Principal Consulting Engineer - Hourly Rate- Onsite	1 Hour	$ 275.00	$ 275.00	12.73%	$ 240.00	$ 240.00	Onsite rates assume 40hr work week
6.1.79	Professional Services	1.0		SSI Smart Hands Engineer - Hourly Rate - Business Hours	1 Hour	$ 155.00	$ 155.00	14.19%	$ 133.00	$ 133.00	
6.1.80	Professional Services	1.0		SSI Smart Hands Engineer - Hourly Rate - After Hours	1 Hour	$ 232.00	$ 232.00	13.79%	$ 200.00	$ 200.00	
6.1.81	Professional Services	1.0		SSI Cabling Engineer - Hourly Rate - Business Hours	1 Hour	$ 175.00	$ 175.00	12.57%	$ 153.00	$ 153.00	
6.1.82	Professional Services	1.0		SSI Cabling Engineer - Hourly Rate - After Hours	1 Hour	$ 262.00	$ 262.00	12.21%	$ 230.00	$ 230.00	
6.1.116	**Misc**										
6.1.117	Hardware	1.0	CP-860S-BUN-K9	Cisco 860S WW Phone with Scanner, Battery, Cable, Charger		$ 4,371.43	$ 4,371.43	53.00%	$ 2,054.57	$ 2,054.57	Rugged Wireless Phone alternative to Optokon
6.1.118	Maintenance and Support	1.0	CON-SW-CP860SBU	SNTC Smartnet 860S Phone		$ 266.00	$ 266.00	18.00%	$ 218.12	$ 218.12	1YR Smartnet Coverage for Cisco 860S
6.1.119	Hardware	1.0	CP-840S-BUN-K9	Cisco 840S WW Phone with Scanner, Battery, Cable, Charger		$ 2,286.38	$ 2,286.38	53.00%	$ 1,074.59	$ 1,074.59	Rugged Wireless Phone alternative to Optokon
6.1.120	Maintenance and Support	1.0	CON-SNT-CP840SBN	SNTC Smartnet 840S Phone		$ 182.00	$ 182.00	18.00%	$ 149.24	$ 149.24	1YR Smartnet Coverage for Cisco 840S
6.1.121	Hardware	1.0	CP-8821-EX-K9-BUN	Cisco Unified Wireless IP Phone 8821 EX, World Mode Bundle		$ 1,693.68	$ 1,693.68	53.00%	$ 796.02	$ 796.02	Rugged Wireless Phone alternative to Optokon
6.1.122	Maintenance and Support	1.0	CON-SNT-CP882XU	SNTC Smartnet 8821 EX Phone		$ 101.00	$ 101.00	18.00%	$ 82.82	$ 82.82	1YR Smartnet Coverage for Cisco 8821 EX Phone
6.1.123	Software	1.0	A-FLEX-EA-MPL	EA Cloud Meetings with EA On Prem Calling	36 Months	$ 621.00	$ 621.00	59.86%	$ 249.30	$ 249.30	Cisco Knowledge Worker Subscription for Cloud Webex Meetings with On Prem Calling. Possible need for licenses to be added to current subscription.
6.1.124	Maintenance and Support	1.0	CON-SNTP-ISR4331V	SNTC-24X7X4 Cisco ISR 4331 UC Bundle, PVDM4-32, UC L	12 Months	$ 927.31	$ 927.31	18.00%	$ 760.39	$ 760.39	Suggested 24x7x4 Smartnet coverage on ISR4331V
6.1.125	Maintenance and Support	1.0	CON-SNTP-ISR4351V	SNTC-24X7X4 Cisco ISR 4351 UC Bundle, PVDM4-64, UC L	12 Months	$ 2,454.99	$ 2,454.99	18.00%	$ 2,013.09	$ 2,013.09	Suggested 24x7x4 Smartnet coverage on ISR4351V
6.1.126	Maintenance and Support	1.0	CON-SNTP-ISR4451-X	SNTC-24X7X4 Cisco ISR 4451 UC Bundle		$ 4,715.66	$ 4,715.66	18.00%	$ 3,866.84	$ 3,866.84	Suggested 24x7x4 Smartnet coverage on ISR4451V

6.2 NEC to Cisco VOIP - 5yr TCO

6.2 NEC to Cisco VOIP - 5yr TCO

Item Number	Cost Type	Year 1	Year 2	Year 3	Year 4	Year 5	Totals
6.2.1	Hardware	$ 2,068,084.70	$ -	$ -	$ -	$ -	$ 2,068,084.70
6.2.2	Software	$ -	$ -	$ -	$ -	$ -	$ -
6.2.3	Licenses and Support	$ -	$ -	$ -	$ -	$ -	$ -
6.2.4	Training	$ 49,980.00	$ -	$ -	$ -	$ -	$ 49,980.00
6.2.5	Professional Services	TBD	TBD	TBD	TBD	TBD	$ -
6.2.6	Maintenance and Support	TBD	TBD	TBD	TBD	TBD	$ -
6.2.7	Supplies - Under $5,000	$ 16,281.16	$ -	$ -	$ -	$ -	$ 16,281.16
	Totals	$ 2,134,345.86	$ -	$ -	$ -	$ -	**$ 2,134,345.86**

7.0 Cisco Pricing Catalog

CDW-G has provided two different pricing offers for the City's consideration. Price offers for Categories 1 and 2 will remain fixed through May 1, 2022. CDW-G's catalog price offer is based upon a discount off Cisco's global price list, this means that while the discount percentage will remain fixed, the resulting cost to the City may fluctuate based upon Cisco's changes to its global price list.

7.0 Cisco Pricing Catalog

Line Item	Part Category	Quantity	Vendor Part #	Description	Contract Type	Term (If Applicable)	Unit List Price	Extended List Price	Effective %	Unit Offered Price	Extended Offered Price	Vendor Notes
7.0.1	Licensing	1.0	C9300-DNA-L-A-5Y	DNA Advantage 5 Year License	Boundary Network	60 Months	$ 3,602.42	$ 3,602.42	50.00%	$ 1,801.21	$ 1,801.21	
7.0.2	Hardware	1.0	C9300-SSD-NONE	No SSD Card Selected	Boundary Network		$ -	$ -		$ -	$ -	Included in C9300 Build
7.0.3	Hardware	1.0	C9300X-12Y-A	Catalyst 9300X 12x25G Fiber Ports, modular uplink Switch	Boundary Network		$ 18,280.95	$ 18,280.95	50.00%	$ 9,140.47	$ 9,140.48	
7.0.4	Licensing	1.0	C9300X-DNA-12Y-A	C9300 DNA Advantage, Term License	Boundary Network		$ -	$ -		$ -	$ -	Included in C9300 Build
7.0.5	Hardware	1.0	C9300X-NM-8Y	Catalyst 9300 8 x 10G/25G Network Module SFP+/SFP28	Boundary Network		$ 2,742.14	$ 2,742.14	50.00%	$ 1,371.07	$ 1,371.07	
7.0.6	Hardware	1.0	C9300X-NW-A-12	C9300 Network Advantage, 12-port license	Boundary Network		$ -	$ -		$ -	$ -	Included in C9300 Build
7.0.7	Hardware	1.0	C9500-24Y4C-A	Catalyst 9500 24x1/10/25G and 4-port 40/100G, Advantage	Boundary Network		$ 23,926.54	$ 23,926.54	50.00%	$ 11,963.27	$ 11,963.27	
7.0.8	Hardware	1.0	C9500-48Y4C-A	Catalyst 9500 48-port x 1/10/25G + 4-port 40/100G, Advantage	Boundary Network		$ 26,034.22	$ 26,034.22	50.00%	$ 13,017.11	$ 13,017.11	
7.0.9	Licensing	1.0	C9500-DNA-24Y4C-P	C9500 DNA Premier, 24Y4C Port , Term License	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.10	Licensing	1.0	C9500-DNA-48Y4C-P	C9500 DNA Premier, 48Y4C Port , Term License	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.11	Licensing	1.0	C9500-DNA-L-P-5Y	C9500 DNA Premier 12Q/16X / 24Y4C 5Year Term License	Boundary Network	60 Months	$ 14,248.39	$ 14,248.39	50.00%	$ 7,124.19	$ 7,124.20	
7.0.12	Licensing	1.0	C9500-DNA-P-5Y	C9500 DNA Premier,40X/24Q/48Y4C/32C/32QC ,5Year Term License	Boundary Network	60 Months	$ 23,216.81	$ 23,216.81	50.00%	$ 11,608.40	$ 11,608.41	
7.0.13	Hardware	1.0	C9500-NW-A	C9500 Network Stack, Advantage	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.14	Hardware	1.0	C9500-SSD-NONE	No SSD Card Selected	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.15	Hardware	1.0	C9K-F1-SSD-BLANK	Cisco pluggable SSD storage	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.16	Hardware	1.0	C9K-PWR-650WAC-R	650W AC Config 4 Power Supply front to back cooling	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.17	Hardware	1.0	C9K-PWR-650WAC-R/2	650W AC Config 4 Power Supply front to back cooling	Boundary Network		$ 2,258.24	$ 2,258.24	50.00%	$ 1,129.12	$ 1,129.12	
7.0.18	Hardware	1.0	C9K-T1-FANTRAY	Catalyst 9500 Type 4 front to back cooling Fan	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.19	Hardware	1.0	CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.20	Hardware	1.0	CAB-SPWR-150CM	Catalyst Stack Power Cable 150 CM - Upgrade	Boundary Network		$ 243.28	$ 243.28	50.00%	$ 121.64	$ 121.64	
7.0.21	Hardware	1.0	CAB-TA-NA	North America AC Type A Power Cable	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.22	Maintenance and Support	1.0	CON-SSSNT-C9300X21	SOLN SUPP 8X5XNBD Catalyst 9300X 12x25G Fiber Ports 5YR	Boundary Network	60 Months	$ 8,025.00	$ 8,025.00	50.00%	$ 4,012.50	$ 4,012.50	
7.0.23	Maintenance and Support	1.0	CON-SSSNT-C95024YA	SOLN SUPP 8X5XNBD Catalyst 9500 24-port 25/100G 5YR	Boundary Network	60 Months	$ 8,865.00	$ 8,865.00	50.00%	$ 4,432.50	$ 4,432.50	
7.0.24	Maintenance and Support	1.0	CON-SSSNT-C9504YA4	SOLN SUPP 8X5XNBD Catalyst 9500 48-port 25/100G 5YR	Boundary Network	60 Months	$ 9,645.00	$ 9,645.00	50.00%	$ 4,822.50	$ 4,822.50	
7.0.25	Licensing	1.0	CON-SSTCM-C9300XXD	SOLN SUPP SW SUB C9300 DNA Advantage 5YR	Boundary Network	60 Months	$ 505.00	$ 505.00	50.00%	$ 252.50	$ 252.50	
7.0.26	Maintenance and Support	1.0	CON-SSTCM-C9512QP	SOLN SUPP SW SUBC9500 DNA Premier 5YR	Boundary Network	60 Months	$ 1,990.00	$ 1,990.00	50.00%	$ 995.00	$ 995.00	
7.0.27	Maintenance and Support	1.0	CON-SSTCM-C9524QP	SOLN SUPP SW SUBC9500 DNA Premier 5YR	Boundary Network	60 Months	$ 3,240.00	$ 3,240.00	50.00%	$ 1,620.00	$ 1,620.00	
7.0.28	Licensing	1.0	ISE-BASE-T	ISE BASE Term License	Boundary Network		$ -	$ -		$ -	$ -	Included with DNA License
7.0.29	Licensing	1.0	ISE-BASE-TRK-5Y	ISE BASE Tracker Term 5Y	Boundary Network	60 Months	$ -	$ -		$ -	$ -	Included with DNA License
7.0.30	Licensing	1.0	ISE-PLS-T	ISE PLS Term License	Boundary Network		$ -	$ -		$ -	$ -	Included with DNA License
7.0.31	Licensing	1.0	ISE-PLS-TRK-5Y	ISE PLS Tracker Term 5Y	Boundary Network	60 Months	$ -	$ -		$ -	$ -	Included with DNA License
7.0.32	Licensing	1.0	LIC-MR-ADV-5Y	Meraki MR Advanced License and Support, 5YR	Boundary Network	60 Months	$ 966.37	$ 966.37	50.00%	$ 483.18	$ 483.19	
7.0.33	Licensing	1.0	LIC-MS390-48A-5Y	Meraki MS390 48-port Advanced License and Support, 5 Year	Boundary Network	60 Months	$ 7,972.56	$ 7,972.56	50.00%	$ 3,986.28	$ 3,986.28	

7.0 Cisco Pricing Catalog

Line Item	Part Category	Quantity	Vendor Part #	Description	Contract Type	Term (If Applicable)	Unit List Price	Extended List Price	Effective %	Unit Offered Price	Extended Offered Price	Vendor Notes
7.0.34	Hardware	1.0	MA-CBL-120G-1M	Meraki MS390 120G Data-Stack Cable, 1 meter	Boundary Network		$ 268.84	$ 268.84	50.00%	$ 134.42	$ 134.42	
7.0.35	Hardware	1.0	MA-CBL-120G-3M	Meraki MS390 120G Data-Stack Cable, 3 meter	Boundary Network		$ 403.26	$ 403.26	50.00%	$ 201.63	$ 201.63	
7.0.36	Hardware	1.0	MA-CBL-120G-50CM	Meraki MS390 120G Data-Stack Cable, 50 centimeter	Boundary Network		$ 134.42	$ 134.42	50.00%	$ 67.21	$ 67.21	
7.0.37	Hardware	1.0	MA-CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Modules, 1 Meter	Boundary Network		$ 118.24	$ 118.24	50.00%	$ 59.12	$ 59.12	
7.0.38	Hardware	1.0	MA-MOD-8X10G	Meraki MS390 8x10GE Module	Boundary Network		$ 2,843.79	$ 2,843.79	50.00%	$ 1,421.89	$ 1,421.90	
7.0.39	Hardware	1.0	MA-PWR-1100WAC	Meraki MS390 1100W AC Power Supply	Boundary Network		$ 2,118.06	$ 2,118.06	50.00%	$ 1,059.03	$ 1,059.03	
7.0.40	Hardware	1.0	MA-SFP-10GB-SR	Meraki 10G Base SR Multi-Mode	Boundary Network		$ 1,069.97	$ 1,069.97	50.00%	$ 534.98	$ 534.99	
7.0.41	Hardware	1.0	MR56-HW	Meraki MR56 Wi-Fi 6 Indoor AP	Boundary Network		$ 2,145.32	$ 2,145.32	50.00%	$ 1,072.66	$ 1,072.66	
7.0.42	Hardware	1.0	MS390-48UX2-HW	Meraki MS390 48m5G L3 UPOE Switch	Boundary Network		$ 13,640.81	$ 13,640.81	50.00%	$ 6,820.40	$ 6,820.41	
7.0.43	Licensing	1.0	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	Boundary Network		$ -	$ -		$ -	$ -	Included with DNA License
7.0.44	Licensing	1.0	PI-LFAS-AP-T-5Y	PI Dev Lic for Lifecycle & Assurance Term 5Y	Boundary Network		$ -	$ -		$ -	$ -	Included with DNA License
7.0.45	Licensing	1.0	PI-LFAS-T	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	Boundary Network	60 Months	$ -	$ -		$ -	$ -	Included with DNA License
7.0.46	Hardware	1.0	PWR-C1-715WAC-P	715W AC 80+ platinum Config 1 Power Supply	Boundary Network		$ 1,344.19	$ 1,344.19	50.00%	$ 672.09	$ 672.10	
7.0.47	Hardware	1.0	PWR-C1-715WAC-P/2	715W AC 80+ platinum Config 1 SecondaryPower Supply	Boundary Network		$ 1,344.19	$ 1,344.19	50.00%	$ 672.09	$ 672.10	
7.0.48	Hardware	1.0	QSFP-H40G-AOC1M=	Meraki 40GBASE Active Optical Cable, 1m	Boundary Network		$ 1,016.77	$ 1,016.77	50.00%	$ 508.38	$ 508.39	
7.0.49	Hardware	1.0	SC9300UK9-175	Cisco Catalyst 9300 XE 17.5 UNIVERSAL UNIVERSAL	Boundary Network		$ -	$ -		$ -	$ -	Included in C9300 Build
7.0.50	Hardware	1.0	SC9500HUK9-1612	Cisco Catalyst 9500H XE.16.12 UNIVERSAL	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.51	Hardware	1.0	SC9500HUK9-173	Cisco Catalyst 9500H XE.17.3 UNIVERSAL	Boundary Network		$ -	$ -		$ -	$ -	Included in C9500 Build
7.0.52	Hardware	1.0	SFP-10G-AOC1M=	10GBASE Active Optical SFP+ Cable, 1M	Boundary Network		$ 252.57	$ 252.57	50.00%	$ 126.28	$ 126.29	
7.0.53	Hardware	1.0	STACK-T1-3M	3M Type 1 Stacking Cable	Boundary Network		$ 409.69	$ 409.69	50.00%	$ 204.84	$ 204.85	
7.0.54	Licensing	1.0	SWATCH-T	StealthWatch 1 FPS Term License	Boundary Network		$ -	$ -		$ -	$ -	Included with DNA License
7.0.55	Licensing	1.0	SWATCH-TRK-5Y	ISE BASE Tracker Term 5Y	Boundary Network	60 Months	$ -	$ -		$ -	$ -	Included with DNA License
7.0.56	Maintenance and Support	1.0	CISCO2921-V/K9	Cisco 2921 Integrated Services Router	SMARTnet: SNTC 8X5XNBD	12 Months	$ 1,014.00	$ 1,014.00	18.00%	$ 831.48	$ 831.48	
7.0.57	Maintenance and Support	1.0	CISCO2921/K9	Cisco 2921 Integrated Services Router	SMARTnet: SNTC 8X5XNBD	12 Months	$ 1,017.00	$ 1,017.00	18.00%	$ 833.94	$ 833.94	
7.0.58	Maintenance and Support	1.0	CISCO2921-SEC/K9	Cisco 2921 Integrated Services Router	SMARTnet: SNTC 8X5XNBD	12 Months	$ 982.00	$ 982.00	18.00%	$ 805.24	$ 805.24	
7.0.59	Maintenance and Support	1.0	C1-CISCO4451/K9	Cisco 4451-X Integrated Services Router	SMARTnet: SNTC 24X7X4	12 Months	$ 4,502.21	$ 4,502.21	18.00%	$ 3,691.81	$ 3,691.81	
7.0.60	Maintenance and Support	1.0	ISR4451-X-V/K9	Cisco 4451-X Integrated Services Router	SMARTnet: SNTC 24X7X4	12 Months	$ 4,715.66	$ 4,715.66	18.00%	$ 3,866.84	$ 3,866.84	
7.0.61	Maintenance and Support	1.0	ISR4451-X-AX/K9	Cisco 4451-X Integrated Services Router	SMARTnet: SNTC 24X7X4	12 Months	$ 4,488.00	$ 4,488.00	18.00%	$ 3,680.16	$ 3,680.16	
7.0.62	Maintenance and Support	1.0	AIR-CT5760-1K-K9	Cisco 5508 Wireless Controller	SMARTnet: SNTC 8X5XNBD	12 Months	$ 58,025.00	$ 58,025.00	18.00%	$ 47,580.50	$ 47,580.50	Cisco Last Day of Support is April 30th, 2022
7.0.63	Maintenance and Support	1.0	ASA5505-SEC-BUN-K9	Cisco ASA 5505 Adaptive Security Appliance	SMARTnet: SNTC 24X7X4	12 Months	$ 533.00	$ 533.00	18.00%	$ 437.06	$ 437.06	Cisco Last Day of Support is August 31st, 2022
7.0.64	Maintenance and Support	1.0	ASA5508-K9	Cisco ASA 5506-X with FirePOWER Services	SMARTnet: SNTC 24X7X4	12 Months	$ 785.00	$ 785.00	18.00%	$ 643.70	$ 643.70	
7.0.65	Maintenance and Support	1.0	ASA5506-SEC-BUN-K9	Cisco ASA 5506-X with FirePOWER Services	SMARTnet: SNTC 24X7X4	12 Months	$ 371.00	$ 371.00	18.00%	$ 304.22	$ 304.22	

7.0 Cisco Pricing Catalog

Line Item	Part Category	Quantity	Vendor Part #	Description	Contract Type	Term (If Applicable)	Unit List Price	Extended List Price	Effective %	Unit Offered Price	Extended Offered Price	Vendor Notes
7.0.66	Maintenance and Support	1.0	ASA5515-MB	Cisco ASA 5515-X Adaptive Security Appliance	SMARTnet: SNTC 24X7X4	12 Months		$ -		$ -	$ -	Product is EOL, support is no longer available
7.0.67	Maintenance and Support	1.0	ASR1001X-2.5G-K9	Cisco ASR 1001 Router	SMARTnet: SNTC 24X7X4	12 Months	$ 1,950.00	$ 1,950.00	18.00%	$ 1,599.00	$ 1,599.00	
7.0.68	Maintenance and Support	1.0	ASR1002X-SB	Cisco ASR 1002-X Router	SMARTnet: SNTC 24X7X4	12 Months	$ 4,418.00	$ 4,418.00	18.00%	$ 3,622.76	$ 3,622.76	
7.0.69	Maintenance and Support	1.0	WS-C2960XR-24PS-I	Cisco Catalyst 2960XR-24PS-I Switch	SMARTnet: SNTC 8X5XNBD	12 Months	$ 415.95	$ 415.95	18.00%	$ 341.07	$ 341.08	
7.0.70	Maintenance and Support	1.0	WS-C2960XR-24TS-I	Cisco Catalyst 2960XR-24TS-I Switch	SMARTnet: SNTC 8X5XNBD	12 Months	$ 366.60	$ 366.60	18.00%	$ 300.61	$ 300.61	
7.0.71	Maintenance and Support	1.0	WS-C2960XR-48FPS-I	Cisco Catalyst 2960XR-48FPS-I Switch	SMARTnet: SNTC 8X5XNBD	12 Months	$ 787.79	$ 787.79	18.00%	$ 645.98	$ 645.99	
7.0.72	Maintenance and Support	1.0	WS-C3850-12S-E	Cisco Catalyst 3850-12S-E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 1,520.01	$ 1,520.01	18.00%	$ 1,246.40	$ 1,246.41	
7.0.73	Maintenance and Support	1.0	WS-C3850-24S-E	Cisco Catalyst 3850-24S-E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 3,022.01	$ 3,022.01	18.00%	$ 2,478.04	$ 2,478.05	
7.0.74	Maintenance and Support	1.0	WS-C3850-24XS-E	Cisco Catalyst 3850-24XS-E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 3,504.16	$ 3,504.16	18.00%	$ 2,873.41	$ 2,873.41	
7.0.75	Maintenance and Support	1.0	WS-C3850-48P-E	Cisco Catalyst 3850-48P-E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 2,653.82	$ 2,653.82	18.00%	$ 2,176.13	$ 2,176.13	
7.0.76	Maintenance and Support	1.0	WS-C4506E-S7L+96V+	Cisco Catalyst 4500 Series Line Cards	SMARTnet: SNTC 24X7X4	12 Months	$ 3,478.00	$ 3,478.00	18.00%	$ 2,851.96	$ 2,851.96	
7.0.77	Maintenance and Support	1.0	WS-C4503-E	Cisco Catalyst 4503-E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 3,544.20	$ 3,544.20	18.00%	$ 2,906.24	$ 2,906.24	
7.0.78	Maintenance and Support	1.0	WS-C4506-E	Cisco Catalyst 4506-E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 4,146.31	$ 4,146.31	18.00%	$ 3,399.97	$ 3,399.97	
7.0.79	Maintenance and Support	1.0	WS-C4510R+E	Cisco Catalyst 4510R+E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 9,891.20	$ 9,891.20	18.00%	$ 8,110.78	$ 8,110.78	
7.0.80	Maintenance and Support	1.0	WS-C4510RE-S8+96V+	Cisco Catalyst 4510R+E Switch	SMARTnet: SNTC 24X7X4	12 Months	$ 5,411.00	$ 5,411.00	18.00%	$ 4,437.02	$ 4,437.02	
7.0.81	Maintenance and Support	1.0	IE-3000-8TC	Cisco IE 3000-8TC Industrial Ethernet Switch	SMARTnet: SNTC 8X5XNBD	12 Months	$ 299.51	$ 299.51	18.00%	$ 245.59	$ 245.60	
7.0.82	Maintenance and Support	1.0	IE-4010-16S12P	Cisco IE-4010-16S12P Industrial Ethernet Switch	SMARTnet: SNTC 8X5XNBD	12 Months	$ 713.79	$ 713.79	18.00%	$ 585.30	$ 585.31	
7.0.83	Hardware	1.0	CP-8851-K9=	Cisco 8851 VoIP Phone	Cisco Voice		$ 649.23	$ 649.23	50.00%	$ 324.61	$ 324.62	
7.0.84	Hardware	1.0	CP-8832-W-K9=	Cisco 8832 VoIP Conference Phone	Cisco Voice		$ 1,815.03	$ 1,815.03	50.00%	$ 907.51	$ 907.52	
7.0.85	Hardware	1.0	CP-8832-MIC-WIRED=	Cisco 8832 VoIP Conference Phone wired Mic Kit	Cisco Voice		$ 474.25	$ 474.25	50.00%	$ 237.12	$ 237.13	
7.0.86	Hardware	1.0	ISR-4331V/K9	Cisco 4331 ISR Router	Cisco Voice		$ 6,843.72	$ 6,843.72	50.00%	$ 3,421.86	$ 3,421.86	
7.0.87	Hardware	1.0	ISR-4351V/K9	Cisco 4351 ISR Router	Cisco Voice		$ 16,906.83	$ 16,906.83	50.00%	$ 8,453.41	$ 8,453.42	
7.0.88	Hardware	1.0	ISR4451-X-V/K9	Cisco 4451 ISR Router	Cisco Voice		$ 28,711.63	$ 28,711.63	50.00%	$ 14,355.81	$ 14,355.82	
7.0.89	Hardware	1.0	NIM-4FXSP=	Cisco FXS Card	Cisco Voice		$ 1,299.78	$ 1,299.78	50.00%	$ 649.89	$ 649.89	
7.0.90	Hardware	1.0	ATA191-K9	Cisco ATA Adapter	Cisco Voice		$ 350.42	$ 350.42	50.00%	$ 175.21	$ 175.21	
7.0.91	Hardware	1.0	LMIPT-41 (ruggedized)	Cisco OPTOKON LMIPT-41 Rugged Phone	Cisco Voice			$ -		$ 2,961.00	$ 2,961.00	Optokon does not have a formal distribution relationship with any US entity currently. We are working to finalize something but nothing is final currently. If we are not able to finalize then the City may have to procure directly from Optokon. Additionally, any warranties/support would flow directly to Optokon. Pricing DOES NOT include shipping/import taxes.

Attachment D. Performance Evaluation Questionnaires

PERFORMANCE QUESTIONNAIRE
Upgrade Boundary Network and VoIP Communication

To: Justin Bumbico
(*Name of person completing survey*)

Phone: (614) 479-3038 E-mail: jbumbico@columbuslibrary.org

Subject: Past Performance Survey of CDW Government LLC
(*Offeror Company Name*)

Nick Geiser (Rep)/Steve Braswell(Architect)
(*Name of individuals*)

City of Columbus (the City) is implementing a process that collects past performance information on firms and their key personnel. The information will be used to assist the City in the selection of firms. The Offeror listed above identified you as someone for whom the Offeror either currently provides a service or for whom the Offeror has provided this service in the past. Please take a moment to tell us about this Offeror's performance. The City *may contact you to gather further information* about the Offeror.

HOW SATISFIED. Rate each of the criteria on a scale of 1 to 10, with a 10 representing highly satisfied and a 1 representing highly dissatisfied. Use a number in between to show different degrees of satisfaction. Please rate each of these criteria to the best of your knowledge. If you have no knowledge of past performance in a particular area, leave it blank.

NO.	CRITERIA	UNIT	YOUR SCORE
1.	Ability to meet customer expectations	(1-10)	10
2.	Ability to financially perform in the best interest of the client and citizens	(1-10)	10
3.	Ability to maintain schedules and meet	(1-10)	10
4.	Ability to increase value	(1-10)	10
5.	Quality of service	(1-10)	10
6.	Ability to identify and minimize the users risk	(1-10)	10
7.	Leadership ability (minimize the need of owner/client direction)	(1-10)	10
8.	Your comfort level in hiring the firm/individual again based on performance	(1-10)	10

Justin Bumbico Printed Name (of Evaluator)

Justin Bumbico Signature (of Evaluator)

Thank you for your time and effort in assisting us in this important endeavor. Please email survey back to nickgei@cdwg.com
(Offeror enter your e-mail here)

PERFORMANCE QUESTIONNAIRE
Upgrade Boundary Network and VoIP Communication

To: Shane Warner
(*Name of person completing survey*)

Phone: (614) 275-5937 E-mail: warnerts@cota.com

Subject: Past Performance Survey of CDW Government LLC
(*Offeror Company Name*)

Nick Geiser (Rep)/Steve Braswell(Architect)
(*Name of individuals*)

City of Columbus (the City) is implementing a process that collects past performance information on firms and their key personnel. The information will be used to assist the City in the selection of firms. The Offeror listed above identified you as someone for whom the Offeror either currently provides a service or for whom the Offeror has provided this service in the past. Please take a moment to tell us about this Offeror's performance. The City *may contact you to gather further information* about the Offeror.

HOW SATISFIED. Rate each of the criteria on a scale of 1 to 10, with a 10 representing highly satisfied and a 1 representing highly dissatisfied. Use a number in between to show different degrees of satisfaction. Please rate each of these criteria to the best of your knowledge. If you have no knowledge of past performance in a particular area, leave it blank.

NO.	CRITERIA	UNIT	YOUR SCORE
1.	Ability to meet customer expectations	(1-10)	10
2.	Ability to financially perform in the best interest of the client and citizens	(1-10)	10
3.	Ability to maintain schedules and meet	(1-10)	10
4.	Ability to increase value	(1-10)	10
5.	Quality of service	(1-10)	10
6.	Ability to identify and minimize the users risk	(1-10)	10
7.	Leadership ability (minimize the need of owner/client direction)	(1-10)	10
8.	Your comfort level in hiring the firm/individual again based on performance	(1-10)	10

Shane Warner Printed Name (of Evaluator)

SHane Warner Signature (of Evaluator)

Thank you for your time and effort in assisting us in this important endeavor. Please email survey back to nickgei@cdwg.com
(Offeror enter your e-mail here)

PERFORMANCE QUESTIONNAIRE
Upgrade Boundary Network and VoIP Communication

To: Leslie Harral
(*Name of person completing survey*)

Phone: (502) 574-3837 E-mail: Leslie.harral@louisvilleky.gov

Subject: Past Performance Survey of CDW Government LLC
(*Offeror Company Name*)

Nick Geiser (Rep)/Steve Braswell/Mike Skiba(Architect)
(*Name of individuals*)

City of Columbus (the City) is implementing a process that collects past performance information on firms and their key personnel. The information will be used to assist the City in the selection of firms. The Offeror listed above identified you as someone for whom the Offeror either currently provides a service or for whom the Offeror has provided this service in the past. Please take a moment to tell us about this Offeror's performance. The City *may contact you to gather further information* about the Offeror.

HOW SATISFIED. Rate each of the criteria on a scale of 1 to 10, with a 10 representing highly satisfied and a 1 representing highly dissatisfied. Use a number in between to show different degrees of satisfaction. Please rate each of these criteria to the best of your knowledge. If you have no knowledge of past performance in a particular area, leave it blank.

NO.	CRITERIA	UNIT	YOUR SCORE
1.	Ability to meet customer expectations	(1-10)	10
2.	Ability to financially perform in the best interest of the client and citizens	(1-10)	10
3.	Ability to maintain schedules and meet	(1-10)	10
4.	Ability to increase value	(1-10)	10
5.	Quality of service	(1-10)	10
6.	Ability to identify and minimize the users risk	(1-10)	10
7.	Leadership ability (minimize the need of owner/client direction)	(1-10)	10
8.	Your comfort level in hiring the firm/individual again based on performance	(1-10)	10

Leslie Harral Printed Name (of Evaluator)

Leslie Harral Signature (of Evaluator)

Thank you for your time and effort in assisting us in this important endeavor. Please email survey back to nickgei@cdwg.com
(Offeror enter your e-mail here)

PERFORMANCE QUESTIONNAIRE
Upgrade Boundary Network and VoIP Communication

To: Hanna Khoury
(*Name of person completing survey*)

Phone: (513) 325-6227 E-mail: hanna.khoury@cincinnati-oh.gov

Subject: Past Performance Survey of CDW Government LLC
(*Offeror Company Name*)

Nick Geiser (Rep)/Steve Braswell(Architect)
(*Name of individuals*)

City of Columbus (the City) is implementing a process that collects past performance information on firms and their key personnel. The information will be used to assist the City in the selection of firms. The Offeror listed above identified you as someone for whom the Offeror either currently provides a service or for whom the Offeror has provided this service in the past. Please take a moment to tell us about this Offeror's performance. The City *may contact you to gather further information* about the Offeror.

HOW SATISFIED. Rate each of the criteria on a scale of 1 to 10, with a 10 representing highly satisfied and a 1 representing highly dissatisfied. Use a number in between to show different degrees of satisfaction. Please rate each of these criteria to the best of your knowledge. If you have no knowledge of past performance in a particular area, leave it blank.

NO.	CRITERIA	UNIT	YOUR SCORE
1.	Ability to meet customer expectations	(1-10)	9
2.	Ability to financially perform in the best interest of the client and citizens	(1-10)	9
3.	Ability to maintain schedules and meet	(1-10)	9
4.	Ability to increase value	(1-10)	8
5.	Quality of service	(1-10)	10
6.	Ability to identify and minimize the users risk	(1-10)	9
7.	Leadership ability (minimize the need of owner/client direction)	(1-10)	9
8.	Your comfort level in hiring the firm/individual again based on performance	(1-10)	10

Hanna Khoury Printed Name (of Evaluator)

Hanna S. Khoury Signature (of Evaluator)

Thank you for your time and effort in assisting us in this important endeavor. Please email survey back to nickgei@cdwg.com
(Offeror enter your e-mail here)

Appendices

Appendix 1: CDW's Managed Cisco Meraki Services

CLOUD MANAGED NETWORKING SERVICES

Cisco Meraki

CDW's Managed Cisco Meraki service provides 24/7 monitoring and management of your Cisco Meraki wired and wireless network.

Service Level Agreement (SLA)

Since Cisco Meraki devices rely upon Internet connectivity, the service SLA is equal to the Internet availability SLA.

Security Appliances Supported:

MX64, MX65, MX67, MX68, MX84, MX100, MX250, MX450
Virtual MX

Switches Supported:

MS120, MS2xx, MS35x

Access Points Supported:

MR20, MR3x, MR4x, MR5x, MR7x, MR84

MV Cameras Supported:

MV12, MV22, MV32 & MV72

TASK	AVAILABILITY MANAGEMENT (Gold)
MONITORING (MX, MS, MR & MV)	
Monitor device reachability from the cloud	●
Monitor device interfaces	●
Monitor license status	●
LTE cellular wireless up/down alerting	●
MAINTENANCE (MX, MS, MR & MV)	
Provide end-user administration (create/modify/delete) through Meraki authentication (configuration of external authentication sources is not included)	●
Provide access policy administration (configuration of external authentication sources is not included)	●
Maintain group policy Configurations	●
Maintain device interfaces and port configurations	●
Maintain authentication and encryption configurations	●
Initial configuration and maintenance of new/replacement equipment[1]	●

● Included in the monthly recurring fee
Scoping needed to determine if a Change Order and/or Statement of Work is required
o Requires Customer approval of Time and Materials expense
– Customer is responsible for this task

TASK	AVAILABILITY MANAGEMENT (Gold)
Maintain shaping, content filtering and firewall (L3 and L7 rules) configurations	●
Create and maintain client and site-to-site VPN	●
Create and maintain WLANs	●
Create & maintain SD-WAN configuration	●
Create & maintain LTE failover configuration	●
Maintain Software/Firmware Updates	●
MV CAMERAS	
Create and maintain alerts and logging configuration	●
Complete initial configuration of cameras including zoom, crop, focus, privacy windows, night mode, audio and wireless settings	●
Maintain video retention configurations and archival (Client responsible for Cloud Archive licensing or any video storage backup)	●
Maintain image quality	●
Maintain optional advanced configuration steps including video walls, motion alerts and custom permissions	–
Viewing and Processing video	–
Video analytics	–
Site Survey and Physical Installations	–
Camera positioning and physical security	–
HARDWARE INCIDENT MANAGEMENT (MX, MS, MR & MV)	
Identify and verify potential hardware failures	●
Provide hardware support incident management on behalf of customer with provider (RMA assistance)	●
REPORTING (MX, MS, MR & MV)	
Provide automated reports via Meraki Dashboard (usage, clients, devices and applications)	●

● Included in the monthly recurring fee
Scoping needed to determine if a Change Order and/or Statement of Work is required
o Requires Customer approval of Time and Materials expense
– Customer is responsible for this task

TASK	AVAILABILITY MANAGEMENT (Gold)
TELECOMMUNICATIONS CIRCUIT INCIDENT MANAGEMENT – MX Appliances	
Notify customer of circuit outage/incident	●
Open service call with telecommunications provider	●
Receive notice from telecommunications provider when circuit is operational up to the DEMARC with CDW	●

[1]Generally, CDW can accommodate adding a new CDW managed device to existing deployments. CDW reserves the right to decline the configuration of newly managed equipment if CDW deems the effort should be conducted by implementation services. Some examples would be the addition of new locations or networks and large quantities of new equipment.

Important Notes:

- *The relationship with the circuit provider is maintained by the client.*
- *Authorization will be given to CDW by the customer to engage with the carrier for circuit repair, including CPNI information if required.*
- *CDW Managed Services responsibility is to work with the telecommunications provider's repair centers and repair/central office technicians to remediate against the outage/incident.*
- *Inside wiring agreements with telecommunications providers are the responsibility of the client.*

● Included in the monthly recurring fee
Scoping needed to determine if a Change Order and/or Statement of Work is required
o Requires Customer approval of Time and Materials expense
– Customer is responsible for this task

Appendix 2: Offer Description Meraki Cloud Networking

Offer Description: Meraki Cloud Networking

This Offer Description (the **"Offer Description"**) describes the Cisco Meraki cloud-networking products listed at http://meraki.cisco.com. Your subscription is governed by this Offer Description and the Cisco End User License Agreement located at www.cisco.com/go/eula (or similar terms existing between You and Cisco) (the **"Agreement"**). Capitalized terms used in this Offer Description and not otherwise defined herein have the meaning given to them in the Agreement.

1. Description

The suite of Cisco Meraki cloud-networking products includes network hardware devices (wireless access points, switches, and security appliances/firewalls), surveillance cameras, sensors, endpoint management software and web application and WAN performance software. All Cisco Meraki products are managed through a cloud-hosted software platform known as the Meraki "**Dashboard**". Dashboard allows customers to configure, manage, and monitor Meraki devices deployed across their worldwide networks through a single pane of glass.

2. Supplemental Terms and Conditions

2.1. License and Right to Use Condition

Your Software license for each item of Hardware that You purchase is contingent upon Your purchasing and maintaining the relevant Meraki Cloud Service, without which the Hardware will not function. Your Software licenses and rights to use the Meraki Cloud Service are not transferable.

2.2. Term and Licensing Models

2.2.1. The start date of the Usage Term for Cisco Technology under the co-termination Licensing Model is the date the associated Cisco Technology ships to You and the end date is the earlier of (a) the Co-Termination Date or (b) the date the Usage Rights are terminated.

2.2.2. The start date of the Usage Term for Cisco Technology under the per-device Licensing Model is the earlier of (a) the date You assign the associated Hardware via the Meraki Cloud Service or (b) the 91st day following the date the associated Cisco Technology ships to You. The end date of such Usage Term is the earlier of (1) the start date plus the Meraki Cloud Service Usage Term set forth in the applicable purchase order or (2) the date the Usage Rights are terminated.

2.3. Additional Conditions of Use

You agree to use the Hardware and Cisco Technology only in accordance with the specifications available on Cisco Meraki's website, and You (not Cisco Meraki) are solely responsible for maintaining administrative control over Your Meraki Cloud Services account.

2.4. Compliance with Laws

If Cisco Meraki detects any Hardware or Cisco Technology operating in violation of laws, that Hardware and/or Cisco Technology may be removed from Your Meraki Cloud Services account following written notice to You via email.

2.5. Service Providers

If You are an authorized Cisco Meraki channel partner and Your agreement with Cisco Meraki permits You to provide managed services, then so long as (i) You contract with Your end user (who is not owned by, or affiliated with, You) to provide such managed services in return for a flat monthly fee, (ii) You (not Cisco Meraki) provide technical support to Your managed services end users, and (iii) You hold title to the Hardware and have the right to use the Cisco Technology, You are subject to the terms of the Agreement.

2.6. Publicity

Cisco Meraki may use Your company name and logo in customer lists, on its website and collateral.

2.7. Service Level Agreement

The Service Level Agreement available at https://meraki.cisco.com/trust#sla is Your exclusive remedy for any interruptions in the availability of the Meraki Cloud Service.

2.8. Hardware Warranties

We represent to the original purchaser of the Hardware that, during the Warranty Period, the Hardware will be free from material defects in materials and workmanship. Hardware not meeting this warranty will be, at Cisco Meraki's option, (a) repaired, (b) replaced, or (c) Cisco Meraki will refund You the depreciated amount of the price You paid for such Hardware, calculated on a straight-line, five-year basis. All Hardware repaired or replaced by Cisco Meraki under warranty will be warranted for the remainder of the Warranty Period. For any return permitted under Cisco Meraki's then-current return policy (available at http://meraki.cisco.com/support/#policies:return), You will request a Return Materials Authorization number in writing with the reasons for the return request. The warranties in this Section are subject to our Product End of Life Policy, available at https://meraki.cisco.com/support/#policies:eol. This Section 2.8 is Cisco Meraki's sole liability and Your sole remedy for Cisco Meraki's breach of this Hardware warranty.

2.9. Disclaimer of Warranties

Except as set forth in Sections 2.7 and 2.8 above, Cisco Meraki disclaims all warranties, express, implied, statutory, or otherwise, including any implied warranty of merchantability, fitness for a particular purpose, non-infringement, or title. Cisco Meraki assumes no responsibility for any damages to Your hardware, software, or other materials.

2.10. Notice

Any notice You provide to us under the Agreement must be in writing and sent by overnight courier or certified mail (receipt requested) to 500 Terry A. Francois Blvd, San Francisco, CA 94158 ATTN: LEGAL.

3. Data Protection

By using the Hardware and Cisco Technology, You understand and agree that You are collecting data regarding the devices that connect to Your Network and how Your Network is being used, including the types of data described below. By means of the Hardware and Cisco Technology, You are then transferring that data to Cisco Meraki for processing and storage, including data that may contain personally identifiable information of Your Network Users (collectively, "**Customer Data**"). Cisco Meraki may process and store Customer Data in the United States or outside of the country where it was collected. That said, the Cisco Technology includes functionality that limits or restricts the types of information collected, and You may certainly make use of that functionality. You retain all right, title and interest in and to Your Customer Data, except Cisco Meraki is permitted to use Customer Data as reasonably required to provide the Cisco Technology and, only to the extent necessary, to protect our rights in any dispute with You or as required by law.

3.1. Traffic Information

"Traffic Information" means information about devices that connect to Your Network, such as MAC address, device name, device type, operating system, geolocation information, and information transmitted by devices when attempting to access or download data or content (e.g., host names, protocols, port numbers, and IP addresses) via our Network. We process and store Traffic Information on Your behalf so You can monitor the use and performance of Your Network and exercise control (such as network traffic shaping) over the traffic on Your Network.

3.2. Location Analytics

By enabling and using Location Analytics, You collect the MAC address and relative signal strength of WiFi-enabled devices that are within range of Your wireless Network. Cisco Meraki does not store these MAC addresses on its servers, except in a de-identified form, and they are not stored on Your Hardware. You are responsible for whether and how You configure the API to transfer this data to non-Meraki servers and what happens to this data following such a transfer.

3.3. Systems Manager

If You use Systems Manager, certain agent software must be installed on the mobile devices, laptops or other devices You choose to enroll. Depending on the type of device, You will be able to perform remote actions such as accessing and deleting files, tracking location, enforcing policies, and installing and removing apps on enrolled devices.

3.4. Meraki MV

If You use Meraki MV security cameras, video and audio recordings and still images captured by the MV device(s) will be collected, processed, transferred and stored by Cisco Meraki as described in Section 3. Your Meraki MV security camera may not work if You lose Your connection to power or internet, so Meraki MV should not be used as a life safety or emergency service device.

4. Support Services

The customer support services provided by Cisco Meraki are included with the Meraki Cloud Service and are described at http://meraki.cisco.com/support.

Definitions

"**Co-Termination Date**" means, the expiration date of the applicable Meraki Cloud Services purchased or received in a product trial, as modified each time You purchase additional Meraki Cloud Services. For each subsequent purchase of Meraki Cloud Services, the Co-Termination Date will be adjusted so that all of Your Meraki Cloud Services terminate on the same date. This adjusted Co-Termination Date is calculated by (i) determining the aggregate amount of time that Your new Meraki Cloud Services extend past Your existing Co-Termination Date, and (ii) distributing that amount of time among all Your Meraki Cloud Services (including both new and existing ones) pro-rata, based on the one-year list price for each type of Meraki Cloud Service. Further information is available at http://meraki.cisco.com/support#policies:licensing.

"**Hardware**" means Meraki hardware products You purchased, received in a product trial, promotion, or beta test, or are otherwise running on Your Network.

"**Meraki Cloud Services**" means the Meraki proprietary, web-based software platform, including the interface known as the "Dashboard," Systems Manager and any API provided by Meraki.

"**Licensing Model**" means either the co-termination licensing model or the per-device licensing model. You can view the Licensing Model You have opted into for Your Hardware via the Meraki Cloud Service.

"**Location Analytics**" means the Location Analytics features of the Meraki Cloud Services.

"**Network**" means Your local area network, created in whole or in part by use of the Meraki Hardware and Cisco Technology.

"**Network User**" means anyone who obtains access to Your Network or uses a device that You manage with Systems Manager.

"**Systems Manager**" means Meraki's web-based mobile device management software.

"**Warranty Period**" is defined at https://meraki.cisco.com/support/#policies:return, and commences on the date Hardware is shipped to the original purchaser.

Appendix 3: CDW's Managed Services Voice Managed Services

CDW AMPLIFIED™ WORKSPACE SERVICES

OVERVIEW

CDW can manage your communications solutions including conferencing, messaging, voice, and video applications and ensure your customers remain engaged with your business by managing your contact center applications. In addition, your productive and collaborative workforce will enjoy expert Help Desk support for their go-to applications.

- ✓ CDW Amplified™ Collaboration
- ✓ CDW Amplified™ Endpoint
- ✓ CDW Amplified™ Productivity

VENDORS SUPPORTED

Cisco

Citrix

Calabrio

ESNA

Microsoft

SingleWire

IQ NetSolutions

Requirements

All customers regardless of the level of service must have a completed QA and remediation prior to enrollment. In addition, the following requirements apply to ensure successful support of the Unified Communications (UC) environment:

Cluster Management: CDW must manage every application that has a dependency that is managed. This includes but is not limited to every Communications Manager in a managed cluster. If a new application that fits this description is added to a managed cluster, the customer must notify CDW for a full QA and have it added to their managed servers.
Virtual Layer Management: ESXi instances must be managed at the same level as the UC Applications running on them.
Change Management: If the customer performs any work on UC managed devices outside of normal MAC work, CDW must be involved and CDW change management must take place.

Guidelines

If service is interrupted, CDW works with you to restore service as quickly as possible. Some UC systems, such as test labs, devices that are vendor-driven end of software maintenance or end of life, or non-CDW managed UC endpoints, may introduce service restoration delays. The following guidelines help to describe the special considerations of these situation and apply to all supported UC technologies supported by CDW.

Test Lab Management: Any work on a test lab is done on a T&M/reasonable-effort basis.
Test Lab Root Cause Analysis: CDW may be unable to perform root cause analysis for test lab systems. Definitive cause of an issue may not be possible to obtain, if the software is no longer supported by the vendor. CDW will collect as much information about the issue as possible and make recommendations based on the findings.
End of Vendor Support: Intermittent and/or non-reproducible issues that occur on a version of software that has reached end of life/end of maintenance will be deferred until an upgrade is completed.
UC Endpoint Management: All endpoint maintenance and resolution is the responsibility of Customer. [1]CDW engineers may leverage endpoints to troubleshoot an application issue and is not responsible for endpoint hardware, software, or security vulnerabilities.

[1]This does not apply to video endpoints managed by CDW.

CDW AMPLIFIED™ COLLABORATION

Remote Engineering and Operations Support

For a predictable monthly fee, CDW can take on the responsibility for tasks associated with monitoring, upgrades, maintenance, hardware and SIP trunk incident management, configuration, and reporting for the Voice, Video, Conferencing and Messaging and Contact Center solutions detailed below.

The following sections present more comprehensive operating tasks included at each level of service. If the task has a mark under the service level, it is included as part of the fixed monthly fee for the level of service. If there is no mark, CDW can perform the task on an hourly, effort-based fee, outside of the fixed monthly fee.

General Collaboration Applications and Server Management

The table below lists the tasks included in all Managed Voice, Video, Conferencing and Messaging and Contact Center services. This is in addition to the tasks detailed in the service-specific descriptions found later in this section.

TASK	ADVANCED MONITORING (Bronze)	PROACTIVE MAINTENANCE (Silver)	AVAILABILITY MANAGEMENT (Gold)
MONITORING			
Monitor status of CDW-identified critical services	●	●	●
Monitor event logs or syslogs for issues identified by CDW best practices where allowed by Cisco	●	●	●
Identify and adjust monitoring to include events attainable through CDW's monitoring tools	●	●	●
Monitor for performance thresholds	●	●	●
Monitor server back-up status[1]	●	●	●
Monitor using additional tools or scripting outside CDW's existing tools	–	–	–
UPGRADES			
Review Microsoft and Cisco security patches as released by vendor	○	●	●
Install, test and troubleshoot standalone Cisco security patches (point fixes)	○	●	●
Install, test and troubleshoot Microsoft security patches and Cisco packaged Windows Media Convergence Server Operating System (MCS-OS) service releases. Frequency and determination of actual patches applied are at the discretion of CDW	○	●	●
Install, test and troubleshoot Microsoft and Cisco software version upgrades on a customer's server	📝	📝	📝

● Included in the monthly recurring fee
○ Requires Customer approval of Time and Materials expense
📝 Scoping needed to determine if a Change Order and/or Statement of Work is required
– Customer is responsible for this task

TASK	ADVANCED MONITORING (Bronze)	PROACTIVE MAINTENANCE (Silver)	AVAILABILITY MANAGEMENT (Gold)
Break/fix issue where a minor upgrade is available which is defined as a third decimal upgrade (for example, if the version is v.w.x.y and an upgrade to v.w.x.z is available)	○	●	●
MAINTENANCE			
Assume management and ownership of administrative access	–	–	●
Start/stop services	○	○	●
Reboot the server as required	○	○	●
Modify registry	○	○	●
Install new peripherals for equipment in CDW's data centers	–	–	○
Troubleshoot voice-quality issues if CDW manages all voice network components	○	○	●
Provide incident management for Windows and Cisco-related issues	○	○	●
Provide problem management for Windows and Cisco-related issues	○	○	●
Provide end-user administration (create/modify/delete)	○	○	○
Troubleshoot backup for servers[1]	○	○	●
Provide recovery for servers[2]	○	○	●
Troubleshoot non-covered applications	–	–	–
Manage and verify antivirus signature file updates	–	–	–
Install applications (requires change management)	📝	📝	📝
Adding TelePresence endpoints not included. Requires engagement with CDW professional services for installation and T&M charges apply	📝	📝	📝
"White glove"/"concierge service" of creating individual video conference calls are not included	–	–	–
Onsite hardware support	–	–	–
CONFIGURATION			
Resolve Cisco UC system backup issues	○	○	●
Make minor call routing changes	○	○	●
Resolve Cisco UC system issues	○	○	●
Resolve Cisco UC client issues	○	○	●
Perform change management of administrative access	○	○	●

● Included in the monthly recurring fee
📝 Scoping needed to determine if a Change Order and/or Statement of Work is required
○ Requires Customer approval of Time and Materials expense
– Customer is responsible for this task

TASK	ADVANCED MONITORING (Bronze)	PROACTIVE MAINTENANCE (Silver)	AVAILABILITY MANAGEMENT (Gold)
Resolve end-user desktop issues	–	–	–
Make call routing changes	✎	✎	✎
Support third-party systems or software	–	–	–
Gateway migrations (including circuit move/adds/changes)	✎	✎	✎
Perform UCC script changes	✎	✎	✎
Perform additional disaster recovery tasks	✎	✎	✎
Create/modify custom reports	–	–	–
Create/troubleshoot custom gadgets	✎	✎	✎
HARDWARE INCIDENT MANGEMENT			
Identify potential hardware failures	○	○	●
Provide hardware support incident management on behalf of customer with provider (RMA assistance)	○	○	●
REPORTING			
Access to automated performance reports	●	●	●

[1]Requires set up of customer-provided back-up repository

[2]Requires valid customer-provided back-up file

● Included in the monthly recurring fee
✎ Scoping needed to determine if a Change Order and/or Statement of Work is required
○ Requires Customer approval of Time and Materials expense
– Customer is responsible for this task

MANAGED COLLABORATION ANYWHERE REMOTE MANAGED VOICE SERVICES

Remote Engineering and Operations Support

For specific tasks included see **Collaboration Applications and Server Management** table.

Applications and Servers Supported

Cisco UC Communications Manager (CUCM/Call Manager)
Cisco UC Manager Business Edition (6000 or 7000)
Cisco UC Manager Express
Cisco Unity Connection and Express
Cisco Emergency Responder
Cisco Paging Server
Cisco Webex Meeting Server (CMS)
Cisco Meeting Management (CMM)
Cisco Unified Attendant Console (CUxAC)
Cisco Voice Gateway/Router
Cisco Enterprise License Manager (ELM)
Cisco Prime License Manger (PLM)
Cisco Prime Collaboration Deployment (PCD)
SingleWire Informacast
IQ NetSolutions VistaPoint Attendant Console

Moves, Adds, Changes and Deletes (MACD)

As a Voice add-on service, the following moves, adds, changes and delete tasks can be performed by CDW based on two pricing models These include a pay-per-use model where price is determined by the time spent performing the MACD work., or a tiered model where a tiered fixed fee is charged based on the quantity of MACD work performed in a month.

TASK	PAY-PER-USE	TIERED PRICING
COMMUNICATIONS MANAGER		
Add/remove/change a phone	○	Tiered pricing
Add/remove/change a line	○	Tiered pricing
Add/remove/change a user (non-LDAP)	○	Tiered pricing
Add/remove/change a user device profile	○	Tiered pricing
Add/remove/change a UC end device	○	Tiered pricing
Add/remove/change hunt pilot/group settings	○	Tiered pricing
Add/remove/change an account within Cloudlink	○	Tiered pricing
UNITY/VOICEMAIL		
Add/remove/change a voicemail user	○	Tiered pricing

● Included in the monthly recurring fee
○ Requires Customer approval of Time and Materials expense
Scoping needed to determine if a Change Order and/or Statement of Work is required
– Customer is responsible for this task

SIP Trunk Incident Management

In addition to Remote Engineering and Operations support, CDW can also take on the responsibilities of the tasks associated with managing incidents generated by your SIP trunks.

TASK	ADVANCED MONITORING (Bronze)	PROACTIVE MAINTENANCE (Silver)	AVAILABILITY MANAGEMENT (Gold)
Notify customer of SIP Trunk outage/incident	—	●	●
Open service call with SIP Trunk provider	—	●	●
Receive notice from SIP Trunk provider when trunk is operational	—	●	●
Monitor SIP Trunk utilization	—	●	●
IF INCIDENT IS NOT RESOLVED			
Additional CDW network engineer troubleshooting	○	○	●

Note: Relationship with the SIP Trunk provider is maintained by the customer. CDW Managed Services will work with the SIP trunk provider.

End User Helpdesk Support

As a partner to CDW, Mechdyne Corp. provides a single point of contact for end-user helpdesk support for Cisco Jabber, UC Manager (Call Manager), Unified Presence, Unity Connection, Webex, Microsoft Office 365 and Skype for Business, as well as many, many other applications. Standard monthly reporting options include service level agreement report, contact statistics, incident metrics, root cause analysis and end-user satisfaction reporting. Three levels of service are available to suit your business needs. See the **Help Desk/Service Desk** section for details.

● Included in the monthly recurring fee
○ Requires Customer approval of Time and Materials expense
Scoping needed to determine if a Change Order and/or Statement of Work is required
— Customer is responsible for this task

MANAGED COLLABORATION ANYWHERE REMOTE MANAGED VIDEO SERVICES

Remote Engineering and Operations Support

For specific tasks included see Collaboration Applications and Server Management table.

Applications and Servers Supported

Cisco Video Communications Server (VCS)
Cisco Expressway-C (Control/VCSC)
Cisco Expressway-E (VCSE)
Cisco Mobile and Remote Access (MRA)
Cisco Telepresence Management Suite (TMS)
Cisco Telepresence Management Suite Exchange Extension (TMSEX)
Cisco Telepresence Management Suite Provisioning Extension (TMSPE)
Cisco Multipoint Control Unit (MCU)
Cisco TelePresence Server VM
Cisco TelePresence Server HW Platform (Multiparty Media Server)
Cisco Meeting Server (CMS)
Cisco Meeting Management (CMM)

End User Helpdesk Support

As a partner to CDW, Mechdyne Corp. provides a single point of contact for end-user helpdesk support Cisco Jabber, Webex, Microsoft Office 365 and Skype for Business, as well as many, many other applications. Standard monthly reporting options include service level agreement report, contact statistics, incident metrics, root cause analysis and end-user satisfaction reporting. Three levels of service are available to suit your business needs. See the Help Desk/Service Desk section for details.

Appendix 4: Proposed Language for Negotiation

City of Columbus

Proposal- RFQ020154 Upgrade Boundary Network and VoIP Communication

Proposed Language for Negotiation

I. Introductory Comment

Thank you for the opportunity to provide feedback and engage in negotiation of a Universal Term Contract post-award. CDW-G appreciates the partnership with the City and the looks forward to the opportunity to earn additional business.

II. INFORMATION FOR OFFERORS (BVP)

DELIVERY

Explanation: The current constraints felt across the global supply chain causes challenges in agreeing to absorb the ramifications of a time of the essence clause.

Revision: ~~Time will be of the essence for any orders placed as a result of this response.~~ Offeror will make commercially reasonable efforts to cause deliver orders to be delivered within the estimated delivery timeframe. Except for orders determined to be non-cancellable or non-returnable by the manufacturer, Purchaser ~~reserves~~ will have the right to cancel such orders, or any part thereof, without obligations if delivery is not made within the time(s) specified. Delivery shall be made during normal working hours and to the destination shown on the proposal.

LIMITATION OF LIABILITY

Explanation: It is in the parties' best interests to limit their respective exposure to contractual damages which may arise out of the agreement. CDW-G is proposing the addition of the below clause.

Revision: UNDER NO CIRCUMSTANCES, AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY SET FORTH HEREIN, WILL EITHER PARTY BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITIES OF SUCH DAMAGES OR IF SUCH DAMAGES ARE OTHERWISE FORESEEABLE. IN THE EVENT OF ANY LIABILITY INCURRED BY EITHER PARTY, THE ENTIRE LIABILITY OF EACH PARTY AND ITS AFFILIATES FOR DAMAGES FROM ANY CAUSE WHATSOEVER WILL NOT EXCEED THE AMOUNT PAID OR PAYABLE BY PURCHASER FOR THE SPECIFIC PURCHASED ITEM(S) GIVING RISE TO THE CLAIM.


CDW·G
PEOPLE
WHO
GET IT™