

**RFP 2023-6002;**  
**DATA CENTER FOR CO-LOCATION SERVICES**  
**ATTACHMENT A: SCOPE OF WORK**



The Cincinnati Metropolitan Housing Authority (CMHA) is requesting proposals from interested firms for Data Center Colocation Services, as described in the enclosed Request for Proposals (RFP).

**SCHEDULE REQUIREMENT: CMHA requires the cabinets, power, and internet connectivity to be available by 60 days after the contract is signed. If your firm is unable to meet this deadline, please do not respond to this RFP.**

1. Colocation Requirements

The colocation facility shall deliver technical space, power, cooling, fire protection, security and connectivity to ensure a fail-safe 24/7 computing site with site support. This data center will serve as a hot site with live production systems that run CMHA’s virtual environment and filestorage. CMHA will also review and consider proposals that include additional services that can be performed upon phone or email direction from CMHA. Those additional services are described in the Section below titled, “Optional Remote Hands Services”.

The colocation facility will provide one lockable cabinet. Access to the cabinet area must be secured by a key card or biometric system (backed up with physical key) that also secures access to the general colocation facility. At the time of implementation, CMHA’s cabinet will require **approximately 25kW of power available** over a normal monthly billing cycle the cabinet of servers, network and storage equipment. **Each cabinet will have 5kW capacity with 30A/208v 3PH power.**

1.1. Architecture

CMHA intends to move and/or install 1 cabinet worth of equipment including the following types of equipment:

- Rack mount servers
- Rack mount NAS and SAN storage
- Network switching equipment

1.2. Minimum Facilities Requirements

1.2.1. Location

- 1.2.1.1. A Tier 2 or higher rated Colocation facility that is located within 10 miles of 1627 Western Ave Cincinnati, Ohio 45214

1.3. Building and Grounds

- 1.3.1. The building must meet all applicable municipal, state and federal codes. It is CMHA’s preference that the facility must be certified to meet the Uptime Institute’s Tier III or “Concurrently Maintainable Site Infrastructure” rating. This means the data center has redundant capacity components and multiple independent distribution paths serving the computer equipment. During normal operation, only one distribution path is required to serve the computer equipment at any time.

- 1.3.2. Access by CMHA’s personnel and designated vendors at any time, 24 hours a day

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and seven days a week, must be allowed. This access will also be needed during disasters.

- 1.3.3. Parking for a minimum of two cars. Although this need not be reserved, there must always be at least two spaces available for CMHA personnel
- 1.3.4. Building access for the loading and unloading of equipment via a loading dock.
- 1.3.5. Process for receiving and securing storage of any deliveries for CMHA's equipment.
- 1.3.6. Adequate liability coverage

**1.4. Cabinets**

- 1.4.1. The lockable equipment cabinets that will be provided by the Firm must be at least 42U or larger in height and 37 inches or larger in depth. These racks must be properly grounded.
- 1.4.2. Each cabinet will have 5kW capacity with 30A/208v 3PH power
- 1.4.3. PDUs will be furnished by the Firm. These must be remote reboot PDUs.

**1.5. Computer Room**

- 1.5.1. The facility must supply a minimum of 16-inch raised floor with a cable tray system or an overhead wire racking system. Either raised flooring with cable tray system and/or overhead cabling and power systems must have sufficient space for proper airflow, after equipment and wiring is installed. Please describe which system(s) will be used.
- 1.5.2. The facility must maintain a management information system used for monitoring the environmental systems — power, air-conditioning, humidity controls — of the server room.
- 1.5.3. The facility shall have maintenance staff that respond to system alarms on a 24/7 basis, according to thresholds and action plans specified by the Firm. Additionally, CMHA will be granted portal access to real-time remote monitoring of data center alarms and conditions or be notified via text and email within 5 minutes of an event.
- 1.5.4. The facility's data center facility must address the following fire protection requirements:
  - 1.5.4.1. The facility must have a zone-based fire detection system within the data center facilities to monitor and continuously sample the air for any indication of fire and warn on-site staff of potential fire hazards, initiating extensive and localized emergency procedures to extinguish any fire at the source. The emergency procedures must include proper notification to the local fire department.
  - 1.5.4.2. The facility will have a dry pipe suppression system.
  - 1.5.4.3. The facility will take the proper precautions and implement the proper industry standard safeguards to ensure unnecessary activation of fire-suppression equipment.
  - 1.5.4.4. The facility must maintain emergency response plans and procedures, including for fire and natural emergencies such as tornadoes, hurricanes, snow blizzards, etc. The Firm must inform CMHA of any facility or procedural changes five days or more prior to such changes taking effect.
- 1.5.5. Access to CMHA's cabinet must be controlled (lockable) and limited to CMHA

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and necessary colocation facility staff. The facility shall provide 24/7 access to the data center facilities for CMHA's authorized individuals (this would include pre-approved CMAP employees, and firms authorized to work on CMHA's behalf).

- 1.5.6. The computer room floor should be able to support between 2,500 and 3,000 lbs. per rack.
- 1.5.7. Proper tile cut-outs are required for cabling, routing and proper airflow.
- 1.5.8. Space layout must be acceptable — no odd shaped areas.
- 1.5.9. The floor to ceiling clearance must be at least 10 feet within the computer room.
- 1.5.10. The facility must provide customer hoteling space with typical amenities (telephone, Internet access) or include such space free of charge within the raised floor area should CMHA experience any outage that requires the need to recover and for use while testing. The Firm must indicate how much space and other resources that will be available during these times.

**1.6. Power Requirements**

The Firm must propose a data center facility that addresses the following power requirements:

- 1.6.1. The facility will provide power billing to CMHA based on actual usage per kilowatt(KW). Currently, CMHA estimates that it requires approximately 25kW per regular billing cycle.
  - 1.6.1.1. The facility must have sufficient electrical capacity to accommodate CMHA's current and potential future infrastructure.
  - 1.6.1.2. Power will enter the data center facility via two feeds from one or more local electric utilities and shall be configured as required to support CMHA's IT infrastructure requirements. The Firm shall provide redundant power distribution throughout the facility and each component within the system must be at least N+1 redundant. The incoming power will feed into two busses, Bus A and Bus B, providing the option for diverse power distribution to the floor areas within CMHA's cabinets and ultimately to power distribution units within the racks.
  - 1.6.1.3. The Firm will be responsible for installing the ground strips and for making sure that racking is properly grounded. CMHA's provided computer hardware in the facility-provided racks must be properly grounded to the existing data center infrastructure.
  - 1.6.1.4. The Firm shall provide the data center facility with conditioned power delivered via redundant UPS systems. Power quality monitoring will be done by the Firm to protect CMHA's equipment and prevent data loss by eliminating surges and other irregularities in power. All power cabling must be in segregated cable trays. CMHA must be alerted of all power incidents by text and email within five minutes of an event.
- 1.6.2. It is preferred for CMHA to have access to the breaker panels that supply power to their space at all times. If this is not possible, CMHA must be provided with clear process for requesting changes.
- 1.6.3. N + 1 redundant PDUs must feed CMHA's space. PDUs must have redundant, diverse feeds from separate UPS modules. The circuitry for electrical feeds should have no single point of failure from the grid to the cabinet. Power distribution

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systems shall be designed to meet electrical power draw necessary for CMAP's environment.

- 1.6.4. Cabling and power receptacles must be provided from site power distribution unit(s)(PDU) to our equipment.
- 1.6.5. Sites must conduct bi-annually generator tests.

**1.7. HVAC Requirements**

- 1.7.1. Sufficient heating, air conditioning and humidity control to handle CMHA's equipment and maintain a temperature of 70 degrees (plus or minus five degrees) and relative humidity of 50% (plus or minus 10%). Temperature as measured at approximately 48 inches above the raised floor surface on the front intake of each supported equipment cabinet.
- 1.7.2. Humidity Guidelines: Humidity as measured at approximately 48 inches above the raised floor surface on the front intake of each supported equipment cabinet.
- 1.7.3. The Firm shall ensure that HVAC controls are in place to provide appropriate airflow, temperature, and humidity and such HVAC controls will be designed according to at least N+1 redundancy specification.
- 1.7.4. HVAC must function when commercial power is unavailable.
- 1.7.5. Air flow and positioning of equipment must be capable of handling our requirements. This would include side-to-side (most network equipment), front-to-back (servers) and bottom-to-top airflow requirements.
- 1.7.6. CMHA must be alerted of all HVAC incidents by text or email within five minutes of the event.

**1.8. Monitoring, Recording and Security Access**

- 1.8.1. Building and computer room area must remain locked and secured at all times.
- 1.8.2. Security procedures must be documented.
- 1.8.3. Access must be controlled and logged.
- 1.8.4. The Firm shall monitor and record all aspects of the data center facility 24/7. The recorded data shall be archived to disk for 30 days.
- 1.8.5. Interior cameras must cover all areas of the production floor and all corridors, all egress/exit points for secured areas within the data center facility, all mechanical areas and all shipping and receiving areas.
- 1.8.6. Upon request of CMHA, recorded camera data of CMHA-controlled areas shall be made available to authorized CMHA personnel.
- 1.8.7. A list of all personnel authorized to enter must be kept at all times.
- 1.8.8. Intrusion alarms must be in place at all entry or exit points.
- 1.8.9. The Firm will perform semi-annual audits of facility security by a third party whose results are shared upon release of the report with CMHA.
- 1.8.10. Details must be submitted regarding any Data Center Infrastructure Management (DCIM) solution the Firm has or is installing, and a customer portal view into the DCIM solution must be provided to CMHA, if available.

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**1.9. Internet and Services Point of Presence Requirements**

- 1.9.1. The facility will be carrier neutral and have a broad range of Internet providers within the facility with 1 Gb Internet Port services provided.
- 1.9.2. The facility enables a cloud strategy through direct or extended cross connects.
- 1.9.3. CMHA will require two (2) ports for service redundancy with high availability
- 1.9.4. CMHA will require a minimum of five (5) public, static internet IP addresses.
- 1.9.5. The proposal will include at a minimum two (2) fiber or CAT7 connects to the Internet Service Provider demarcation.
- 1.9.6. The proposal will include an enabling business model to allow CMHA alternative service providers access to the facility.

**2. Acceptance**

Before the data center will be accepted as complete, CMHA must verify the following:

- 2.1. The cabinets are installed and grounded.
- 2.2. Two separate power sources are supplied to all cabinets.
- 2.3. All applicable cable plant, diagrams and certificates of testing/compliance have been supplied by the Firm and accepted by CMHA’s project manager.
- 2.4. All equipment is in the racks correctly, including but not limited to on rails, screws are not misaligned or stripped and the cable management is complete.
- 2.5. All equipment powers on and the connectivity is established to each system as verified by CMHA’s project manager.
- 2.6. Power load report is generated and provided to CMHA’s project manager.
- 2.7. Environmental checks have verified sufficient power for all equipment and adequate cool for all equipment (e.g., no hot spots present).

**3. Optional Services**

***Remote Hands Services***

CMHA is looking for Firms who are able to fulfill requests for discrete services that CMHA may submit through a portal or telephone-based system. If such services are available, services roles and hourly rates must be included in the Price Proposal form. Some of the types of requests might include, but are not intended to be limited to:

• Power on resets	• Structured Cabling	• Equipment upgrades
• Server reboots	• Equipment troubleshooting	• Data circuit installs
• Data circuit cross connects	• Equipment de-installs	• Equipment monitoring
• Media Handling	• Equipment re-installs	

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**4.0 Performance Standards**

- 4.1** The data center will maintain an average uptime of 99.99% per year. In event of an outage over 8 hours, due to a failure of the data centers core components, power, HVAC or connectivity, the data center will be responsible for any agency costs during the outage.
- 4.2** Contractor will ensure ability to perform all services awarded. A Contractor claiming inability to perform a service due to insufficient staffing is not acceptable. If Contractor is unable to do the work for which they submitted a quote/proposal, the Contractor's contract for that work will be cancelled in whole or that part of the contract will be inactivated and no longer considered for award.
- 4.3** In the event of a schedule conflict, vendors will service CMHA and/or TPS first. Failure to do so will result in the vendor being sent a Notice to Cure to complete the service. If the vendor does not complete the service within the date specified on the Notice, another vendor may be contacted to perform the service. Per Section 2.4 of the General Terms and Conditions, three warnings (Notices) will result in vendor termination. (This situation is avoidable by arranging a schedule with the Property Manager for services.)
- 4.4** Failure to comply with all of the requirements in the resulting contract and/or the requirements in the purchase order may result in a reduction of the consultant's fee by 10% for that service
- 4.5** Invoices are to be submitted within two weeks after completion of the service (see *Invoicing* in the General Terms and Conditions). If invoices are submitted late, the amount to be paid shall be reduced:

Number of days to submit invoice to CMHA after completion of work or receipt by CMHA in Yardi (whichever is later)	Performance Deduction from Invoice
<30	0%
>30	30%
>60	50%
>90	75%
>120	100% (No payment)

- 4.6** CMHA may waive the fee reductions at their discretion after discussing extenuating circumstances with the Contractor. Such waiver shall be in writing at the time of the service and may be considered by CMHA in the award of future work under this contract and award of future contracts.

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**5.0 The Authority’s Motto and Gold Performance Standards**

In 2012, the Authority implemented its motto “Being an Asset to Hamilton County” in addition to establishing Gold Performance Standards which consist of the principles and values by which the Agency performs and how our partners, vendors, contractors and consultants are measured. The Gold Performance Standards are:

<i>Respect</i>	<i>Timely</i>	<i>Exceptional</i>	<i>Initiative</i>
<i>Excellent</i>	<i>Quality</i>	<i>Accurate</i>	<i>Integrity</i>
<i>Value</i>	<i>Creativity</i>	<i>Accountability</i>	<i>Professionalism</i>

It is the Authority’s intent that the contractor will also adhere to these standards.

**6.0 Contract Terms**

**6.1 Contract Term**

**6.1.1** The Authority intends to enter into a 3 contract with the option, at the Authority’s sole discretion, to extend 2 one-year contracts with the successful offeror(s) selected to provide the services.

**6.2 Indefinite Quantities Contract (IQC)** CMHA does not guarantee any minimum or maximum amount of work as a result of any award ensuing from this RFP, but will reserve the right to award work on an as-needed basis.

**6.2.1** Guaranteed Contract Minimum Amount and Not-to-exceed Maximum Amount: As may be further detailed herein, as the ensuing contract will be an Indefinite Quantities Contract (IQC), which, pursuant to HUD regulation, requires CMHA to award the responsive and responsible contractor a Guaranteed Contract Minimum Amount (GCMA) and Not-to-exceed Maximum Contract Amount (NMCA) of work, those required minimum and maximum contract levels are: (a) GCMA: \$100; (b) NMCA: \$24,000 annually. CMHA reserves the right to adjust these amounts, if in its best interest to do so, prior to contract approval.