

SPECIFICATIONS

1. **CURRENT WIRELESS CONNECTIVITY.** SDC currently operates a Ruckus wireless (802.11n) network in all locations with centralized Smart Zone 100 controllers located in the data center at 1 Mark Twain Circle, Clayton MO 63105. The existing network was designed and built for high density throughout each location with an average of 1 AP in every other classroom and 2-4 APs for most common areas depending on various conditions and/or construction materials. Cat6a cabling is connected to each homes from a MDF or IDF located within each building. All wireless network traffic is dropped onto the local switch (Aruba) VLAN for network segmentation purposes.

2. **WIRELESS INFRASTRUCTURE UPGRADE OPTIONS DESIRED UNDER THIS PROPOSAL.** **The District is seeking a turn-key wireless implementation, to include design and installation for all district facilities. The District is seeking to upgrade its current wireless infrastructure.** SDC seeks proposals from qualified vendors for its wireless infrastructure upgrade to meet the continuously increasing demand and high speed wireless connectivity. SDC prefers Aruba equipment. However, according to E-rate rules, we will accept bids for “functionally equivalent equipment”.

Specifications:

Vendor Shall:

- Provide all new wireless (802.11ax – Wi-Fi 6) access points and controller(s) throughout each building to replace the current Ruckus SmartZone 100 controller and R610 or R510 access points. Vender is expected to use the exiting Cat6A cabling located at each current AP to create a high speed and high-density wireless network to support the future of SDC WiFi needs. Aruba AP-635 or equivalent access points shall be used for classrooms and Aruba AP-655 or equivalent for all common areas including gyms, auditoriums, and cafeterias. Aruba AP-575 and Aruba AP-577 models or equivalent should be proposed for outdoor usage at our Adzick baseball sport field and Gay Field.

- Provide a solution that seamlessly integrates with Aruba ClearPass Network Authentication Controller (NAC) for WiFi endpoint network access. The proposed solution must also provide the following functionality or compatibilities:
 - Dynamic VLAN assignment
 - Layer 3 filtering, policy management & features
 - Bonjour and broadcast management
 - Bonjour Gateway
 - Bonjour Fencing
 - 802.1X & Radius integration
 - Role based ACLs
 - Captive Portal WLAN

- Provide a general design concept that matches the device quantities as listed below. If vendor requires additional APs to reach the functional objectives, written documentation must be provided to explain and adjust the numbers/cost on the bid

and clearly identified as listed under the “Other” column. Cabling is NOT part of the scope of this project and would be handled separately if required.

| Location: | Access Point Type: | Qty: | Maps: |
|-------------------------|--------------------|------|-----------------------------------|
| Clayton High School | R610 | 113 | Building Diagrams |
| Wydown Middle School | R510 | 48 | |
| Captain Elementary | R510 | 32 | |
| Glenridge Elementary | R510 | 33 | |
| Meramec Elementary | R510 | 30 | |
| Family Center | R510 | 28 | |
| Administration Building | R510 | 14 | |
| Facility Services | R510 | 5 | |
| Field House | R510 | 5 | |

- Provide access points to provide coverage from property line to property line and cover interior areas such as classrooms & courtyards. Courtyards are currently not covered specifically with our current wireless access points.
- If applicable, provide new controllers to support a minimum of 10,000 concurrent end-points that will scale beyond 20,000.
- Provide all applicable software, monitoring, configuration and hardware licenses required to fulfill the intent of this RFP. Any exclusions must be provided and clearly documented in bid response.
- Remove existing access points and associated hardware should be removed in a non-destructive manner and boxed for delivery to the SDC warehouse.
- Include licensing for management & monitoring of all access points within a centralized controller.

SDC assumes vendor will provide the following for each proposed option:

- Access points will be a combination of wall and ceiling mounted, therefore wall mounting brackets may be required.
- Where all existing category 6A data cable can be reused or moved. The anticipated number of drops is our best estimate and may vary depending upon proposed solution from the

bidder. Any new cable that would be required as part of this proposal must be added as a recommendation in the "Other" column of your proposal. Cabling is NOT part of the scope of this project and would be handled separately.

- Vendor will provide design documents and maps with access point locations prior to installation at each location and receive approval prior to installation.
- Work in classroom areas must be performed outside of school hours to prevent disruption of teaching and learning.
- Provide 7-year hardware and software support for controllers and limited-lifetime warranty for access points.
- Must validate coverage and throughput for each location in a manner agreed to in writing by SDC and witnessed by SDC Technology Services designee. Provide your preferred methodology with response for review.
- Radios must be able to dynamically adjust power and band steer (Beam Forming) at all locations.
- For gyms, access point must be mounted with a cage or appropriate protection specifically manufactured for the access point.
- Solution must meet or exceed the intent of this proposal at location completion not project completion. Each proposer must submit testing procedures with proposal.
- Blank maps will be included for placement verification of additional access points needed for all courtyards and outdoor Elementary school spaces.
- Implementation schedule will need to be approved by SDC prior to receiving "Notice to Proceed". A proposed schedule, Master Service Agreement and Terms and Conditions document must be provided with proposal. SDC will review each document and schedule when considering the best option.
- (Optional) Any and all other services relevant to SDC's need that the responding vendor may deem beneficial to accomplishing the district's goals. Please list these with associated costs separately under a proposal budgetary section identified as "Other".
- Provide all installation, configuration and applicable knowledge transfer for SDC personnel.
- Provide a centralized configuration and monitoring system for all access points.
- Provide as-built maps upon completion of each location and import them into the Wireless controllers management software (if this feature is available).
- Weekly project meetings with SDC must be maintained while the project is in process.
- From written notice to proceed, the project should be finished within 180-days from the date of receipt of hardware unless requested otherwise by SDC.
- SDC requires a "turnkey" proposal from a vendor(s) capable of supplying all infrastructure components, patch cabling, hardware, software, installation, etc. The proposal should include no out-of-pocket expenses for the district and will be structured in a manner that makes it easy for the district to add, remove or relocate services in the future.
- Appropriate formal training class(s) must be provided for up to 3 SDC Employees.