



AGENDA ITEM ANALYSIS

Project/Issue Name: 20-R-21 A Resolution of the City Council of the City of Republic, Missouri, Awarding the Bid for the Purchase of Network Switching Hardware.

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Issue Statement

To award the bid for purchase of network switch hardware.

Discussion and/or Analysis

As part of a multi-phase project to bring to date communication and internet technologies, the City of Republic solicited sealed bids for network switch hardware. General hardware specifications (Figure 1) were shared in an Invitation for Bid published in the Greene County Commonwealth on the 20th of May. Two bids were submitted, each containing Cisco Catalyst series network equipment, making them nearly identical in bid items. Table 1 below shows the cost comparison between contracts.

Solution	Submitted By	Bid Total
Cisco Catalyst C9200 Series Switches	Pearson Kelly	\$ 41,703.70
Cisco Catalyst C9200 Series Switches	CDW-G	\$ 29,800.00

Table 1: Bid Solution Summary

Existing network infrastructure at the City averages nearly 10 years in age, with all equipment deemed “End of Life” by vendor and is no longer supported in hardware repair or security updates. Communications technology and internet availability have greatly advanced since the purchase of this equipment, and the City’s steady adoption of new internet-based solutions have brought the speed limitations of the equipment to light, with employees seeing occasional performance impacts. Additionally, the upgrade becomes even more necessary, as the equipment plays a vital role in the operation of the new cloud hosted phone system recently approved by council on May 19th. The two items will be operating in conjunction at network speeds of up to 1 Gbps, which is nearly 10 times our current network operating speeds. This equipment also serves as the backbone for all city wireless networks and will provide a capable,



reliable, and stable foundation to the future build out of said network.

Recommended Action

Given the strong similarity in bid content, with both meeting the requirements specified in the invitation for bid, price becomes the operating factor of the bid. Staff recommends award of the bid to CDW-G, who included the proper equipment at the most aggressive price.



Figure 1: General Hardware Specifications as included in the IFB

Bid Scope (Requirements)

The City's needs for networking equipment are specific and straightforward. Below are items requested for the bid. For reasoning behind these needs, see existing environment section. Please feel free to include any optional components as recommendation for an improved solution.

- All switches include L2 features and routed access capabilities (L3 segmentation is not needed)
- 48 port PoE switches (Quantity: 8)
- 24 port PoE switches (Quantity: 6)
- Support licensing for each device
- Any optional items at bidder's discretion

Existing Environment

The City of Republic network includes 8 buildings which are connected to one another via fiber MPLS network provided by Liberty Connect Utilities. One building acts as hub for all sites, hosting all server and core network resources, fiber internet service, and phone system equipment. Each site connects to the fiber MPLS directly with an access switch and routes all traffic back to and through the hub site. The hub site includes a core switch stack, model Cisco Catalyst 6506-E. Existing access switches are also Cisco Catalyst devices and include the following models (quantity):

- 3560G-24PS (2)
- 6506-E (1)
- 3750-48PS (1)
- 3560V2-48PS (4)
- WS-C3560-48PS (1)
- 3550-48 (1)
- 3750G-24PS (1)
- 3524 PWR XL (1)
- C3750-24P (1)
- C3560-24PS (1)

Many of our current access switches contain L3 switching and routing capabilities. Current network topology and traffic pattern minimize the extent of benefit for these capabilities. Between this and general cost consideration, the City's interest is in L2 switching equipment. Existing equipment includes PoE function and 10/100 mbps data transfer capabilities.