



ROCK RIVER WATER RECLAMATION DISTRICT

ROCKFORD, ILLINOIS

EXHIBIT A

REQUEST FOR PROPOSALS #17-209

WIRELESS LAN

TECHNICAL SPECIFICATIONS AND RESPONSE DETAIL

FOR REVIEW PURPOSES ONLY

1.0 Overview

The District is beginning a 3 phase, multi-year project to install a campus wide WLAN infrastructure. This will include most of the buildings on site as well as some outdoor coverage. This RFP addresses phase 1, which will focus on the Maintenance building with an option to include the Laboratory building.

2.0 Pre-Bid Meeting

The respondent shall attend the Pre-Proposal Conference to be held on March 31, 2017 at 10:00 a.m.

The purpose of this meeting is to familiarize the respondent with the Rock River Water Reclamation District's campus and review the scope of the Maintenance Building Wireless LAN Project with the District's Project Manager. The respondent may tour the campus to view the coverage area.

The District shall supply plant drawings depicting the buildings and structures. These drawings are for reference only. It is the respondent's sole responsibility to determine the amount and location of access points required for coverage.

2.1 Request for Proposal – Purpose and Scope

The purpose of the Request for Proposal (RFP) is to solicit proposals to install a wireless infrastructure for the Maintenance building at the Rock River Water Reclamation District (The District). General information about the District can be found on the District's website at www.rrwr.district.il.us.

The District is seeking to leverage the 802.11 protocol to provide wireless network coverage across our campus. Users should be able to roam from one access point to another access point without dropping the wireless signal. The solution should include a centralized, comprehensive management solution and be scalable so that we can eventually incorporate wireless coverage throughout our entire campus. Any proposed system should have available scalability to accommodate additional growth.

Management of the wireless solution shall be onsite and not solely cloud based. The District should be able to manage all access points even in the event of an internet outage. The management solution shall be autonomous and independent.

3.0 Standards

All work performed on this project shall be in compliance with the rules and regulations of the Federal, State and Local Authorities, the Utilities and the Rock River Water Reclamation District.

4.0 Fire-stopping

The respondent shall provide and install appropriate fire-stopping materials in the Maintenance Building as required to fill holes, spaces and voids at communication cable penetrations.

Fire-stopping materials shall maintain fire and smoke seal under normal expected movements of cables and conduits.

All fire-stops shall be installed in accordance with the manufacturer's instructions in order to maintain the specific assigned ratings.

5.0 Wireless Access Points

Minimum requirements for wireless access points:

- Dual Band Concurrent (2.4 and 5.0 Ghz)
- 802.11
- Minimum radio type 3x3 mimo
- PoE 3af/3at
- Shall support a segmented "guest" network in addition to the District's wireless network

The District prefers a solution that does have a centralized management interface but does **not** require a hardware based controller. Centralized configuration of the access points shall be accessible to the District and shall not require an ongoing subscription based model to maintain administration of the WLAN.

6.0 Common Applications in use

Applications that the Wireless LAN shall support are, but not limited to:

- Barcode scanning
- VOIP
- Internet & Email traffic
- Streaming video and audio
- Desktop Computing via Virtual Desktop Infrastructure
- Plant Control Systems

7.0 Installation

The District's Local Area Network (LAN) uses VLAN segmentation to separate and prioritize traffic. In the Maintenance building, two HP Procurve PoE switches (J8165A & J8164A) with a redundant power supply are interconnected to our Data Center via single mode fiber. The District will provide the wired LAN switch; it will be the vendor's responsibility to provide Ethernet cabling from the network switch to the access points. Vendor is to include all hardware, software, management tools and licensing required to implement the proposed system. Vendor must also clearly identify any additional resources required of the District, or to be in place in District facilities, to ensure all proposed system functionality can be realized.

The successful respondent shall supply the District with 1 spare of each model of access point being installed.

Option 1: In addition, the District shall optionally consider additional proposals to complete the installation of a wireless LAN implementation in our Laboratory building.

8.0 Required Response

A. Architecture and Technology

Describe your currently available wireless technology and include a typical District-wide wireless deployment architecture that would best fit our environment and goals. In your solution, include only products that are currently shipping. Specify which specific product families the proposed architecture would utilize including model numbers, software versions and date both were released.

B. Solution Features

Complete the table on the following pages as it relates to the solution being proposed. All equipment shall be new, unused and of a current model. No remanufactured or refurbished equipment shall be accepted.

C. References

Provide at least three (3) references of comparable campus-wide institutions where the proposed equipment manufacturer's product is the primary wireless solution used. The references must be for similar size customers with similar environments and end users. Deployments where the equipment manufacturer's products are only in a limited deployment should not be considered. A single vendor solution shall be used.

Provide the names and contact information of at least three (3) current clients of similar size to the District that can attest to the quality of work provided by your company using or procuring similar goods and/or services as requested in this RFP.

<u>WLAN Solution Features and Details</u>	<u>Yes</u>	<u>No</u>	<u>NA</u>
Support statically assigned channels for both individual 2.5 GHz and 5 GHz radios on a per AP basis			
Support auto-assignment of channels for both individual 2.5 GHz and 5 GHz radios on a per AP basis			
Support statically assigned power for both individual 2.5 GHz and 5 GHz radios on a per AP basis			
Support auto-power for both individual 2.5 GHz and 5 GHz radios on a per AP basis			
Support load balancing across multiple radios on a per AP basis			
Support band steering such that 5 GHz capable wireless clients have a much higher probability of associating to an available 5 GHz radio over an available 2.4 GHz radio.			
Support the ability to remove selected data rates (IE remove 802.11b and specified 802.11n MCS indexes)			
Do Access Points have to be rebooted when making a settings change			
Supports a captive portal that integrates with current AD users/groups.			
Captive portal support SSL encryption			
Support categorized debug logging on a per technology basis			
Support remote packet capture from AP capturing either wireless traffic or wired traffic			
Support the identification of rogue access points			
Support ability to perform spectrum analysis to detect Wifi sources of interference			
Support ability to perform spectrum analysis to detect non-Wifi sources of interference			
Support ability to allow visibility into resource consumption on controller and AP (bandwidth,CPU,memory,...)			
Support layer 7 firewall from the AP, on a per AP basis			
Support layer 3 firewall from the AP, on a per AP basis			
System provides a single point of configuration for the entire solution			
Support multiple "role-based" permission levels that can be set via returned RADIUS attribute-value pairs, per AP radio.			
Supports Concurrent Dual-Band, Two Radio Operation With One Operating at 2.4 GHz and a Second at 5.0 GHz			
Supports Concurrent Single-Band, Two Radio Operation With Two Operating at 2.4 GHz or Both at 5.0 GHz			

WLAN Solution Details	Yes	No	NA
Protocol Support 802.11a			
Protocol Support 802.11b			
Protocol Support 802.11g			
Protocol Support 802.11n			
Protocol Support 802.11ac			
Supports DFS channels that are currently FCC certified			
Operate with 802.af Power			
Operate with 802.at Power			
Ability to turn off LEDs			
LLDP Support			
Supports 802.1x-based authentication integration with Active Directory			
Supports non 802.1x based clients			
Wi-Fi certified WMM Support			

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9.0 Testing

The Contractor shall generate a System Acceptance Testing Plan for the District's review and approval under which all integrated system components will be tested and accepted by the District.

The completed System Acceptance Test Plan shall be provided to the Project Manager as part of the "as-built" package.

The successful respondent shall be responsible for providing all the required test equipment used to conduct acceptance tests.

The District reserves the right to be present during any or all testing. The successful respondent shall notify the District twenty-four (24) hours in advance of any planned testing. Testing performed without the District's knowledge and approval will be rejected.

Test results must be provided to the District's Project Manager prior to project acceptance.

A. Test Results

The successful respondent shall submit test results in electronic format. Handwritten test reports are unacceptable.

All test results must clearly indicate the test operator name, the manufacturer and model of each test instrument, along with software and firmware versions used to perform tests.

Electronic results shall be submitted on CD, DVD or USB memory stick. The respondent must include any software required to view test results unless results are in non-proprietary format (example: PDF). It is the respondent's responsibility to confirm that the District is able to review and print electronic test results.

10.0 Labeling

The District requires that all equipment and Ethernet cables have a unique identifier. This identifier shall be permanently affixed to each device. The labels shall be generated with an appropriate labeling device. Hand written labels are unacceptable and will be rejected. Labels shall be printed in clearly legible font and resistant to heat & moisture.

Printed Labels shall be compliant with ANSI/TIA/EIA 606A standards.

11.0 Warranty

The successful respondent shall unconditionally guarantee in writing the materials, equipment, and workmanship, for the length of the manufacturer's standard warranty period.

The successful respondent shall transfer manufacturer's warranties to the District.

12.0 Proposer's Qualifications and Support Capabilities

12.1 Information about the Proposer

1. Contractor name _____(Prime Contractor)
2. Legal name (if different) _____
3. Years in business _____
4. Number of years installing wireless networks _____
5. Contact person _____
6. Full mailing address _____
7. Telephone number _____
8. Fax number _____
9. Email address of contact person _____
10. Name and phone number of bonding company _____
11. Number of full-time employees _____
12. Number of full-time technical/installation personnel trained and certified by manufacturer of proposed platform: _____
13. Names, titles, roles, experience and qualifications/certifications of personnel who would work on this project
14. Name of person who would be Project Manager for this project. (also attach project management experience listing similar projects to this)

This person will be required to meet with Rock River Water Reclamation District's (RRWRD) Project Manager and/or his/her designee(s) regularly during the entire course of the installation to report on progress.

12.2 Qualifications and Requirements

1. If more than one vendor is involved in the planning, installation, training and/or support of RRWRD after installation, there must be one contractor acting as Prime Contractor. This Prime Contractor assumes responsibility for all other entities involved. List Prime Contractor here: _____
2. Proposer must list three referenced installations. See following pages for reference requirements.
3. Prime Contractor must take responsibility for all proper component parts ordered. This includes any components to be ordered from a third party.

12.3 Experience and Existing Customers

RRWRD is interested in proposer's experiences that most closely resemble this implementation. Provide answers with cumulative counts below.

How many wireless LAN installations, of same or larger size and scope, has the proposer installed?

Within 50 miles of Rockford: ____ Total IL: ____ Total US: ____

12.4 Proposer Qualification and Customer References

Proposers must possess extensive knowledge of, and be certified to sell, support and install all proposed components, with at least three (3) full years' experience installing and supporting the proposed components.

Preference will be given to proposers with references for implementations at organizations most similar to that of RRWRD. **Please verify reference information before submitting**, and inform your references that short telephone contacts should be anticipated.

- The Proposer **should include three references.**

Reference #1

Organization name _____

Full address _____

Type of business _____

Contact person/e-mail _____

Telephone and fax #s _____

Secondary contact/e-mail _____

Date of installation _____

Reference #2

Organization name _____

Full address _____

Type of business _____

Contact person/e-mail _____

Telephone and fax #s _____

Secondary contact/e-mail _____

Date of installation _____

Reference #3

Organization name _____

Full address _____

Type of business _____

Contact person/e-mail _____

Telephone and fax #s _____

Secondary contact/e-mail _____

Date of installation _____

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12.5 Subcontractors

Identify all subcontractors or partners used for any purposes. Failure to disclose subcontractors/partners may lead to disqualification. Include separate sheet(s) labeled "Subcontractors/Partners" if necessary.

Every subcontractor shall be bound by the applicable terms and provisions of the contract documents. Further information about subcontractors may be requested prior to award.

Business Name/Address	Years Exp.	Function
_____	_____	_____
_____	_____	_____
_____	_____	_____

12.6 References for Subcontractor

Include below two references for EACH subcontractor (duplicate this page if needed for multiple subcontractors). Again, preference will be given to proposers with references for implementations at organizations most similar to RRWRD.

Reference #1

Organization name _____

Address _____

Type of business _____

Contact person/e-mail _____

Telephone and fax #s _____

Approximate date _____

Work performed _____

Reference #2

Organization name _____

Address _____

Type of business _____

Contact person/e-mail _____

Telephone and fax #s _____

Approximate date _____

Work performed _____

13.0 Service After Installation

1. How many service personnel trained and certified in maintaining a wireless LAN infrastructure are employed by proposer in RRWRD's area (50-mile radius of downtown Rockford) or, within one-hour travel thereof?

Wireless LAN Personnel _____

2. Provide the address of proposer's service center(s) within one-hour travel of RRWRD:

Company name _____

Address _____

Phone # _____

4. Who will maintain parts inventory? At what location?

Company name _____

Address _____

Phone # _____

5. What critical component parts are or are not kept in stock at this location?

Are: _____

Are not: _____

6a. What response time can proposer guarantee in an emergency (service down) situation?

Telephone response: ___ hours. On-site response: ___ hours.

6b. What response time does proposer guarantee in a non-emergency situation?

Telephone response: ___ hours. On-site response: ___ hours.

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