VILLAGE OF HOMEWOOD

To: Village President and Board of Trustees

Through: Napoleon Haney, Village Manager

From: Terence Acquah, Assistant Village Manager

Topic: Purchase – Network Firewall Upgrade

PURPOSE

Staff is recommending the purchase and installation of a FortiGate Network Firewall from Urban Communications of Oak Forest, IL, the lowest responsible bidder, for a total cost of $50,534.21. This investment will replace the Village's existing network firewalls, which have been in operation since 2010, and will help prepare the Village's network for a new Cook County fiber internet connection anticipated to take place next year. The current firewalls are outdated and lack security features that are currently available. Additionally, the new firewalls will offer increased redundancy to enhance the Village's network reliability and redundancy in the event of an outage.

PROCESS

Homewood, over the past 5 years, has moved the majority of our processes over to a "cloud" environment. This means that our data and our departmental processes are fully dependent on having a reliable, fast and "safe" internet connection. Because the internet is crucial to our operation, it then becomes necessary to safeguard these connections against bad actors, and outages. Homewood, like all other businesses and organizations use firewalls as the first line of defense. Network firewalls are designed to protect computers from outside threats such as viruses, malware, spyware, and other malicious software. They also prevent unauthorized access to Homewood's internal network resources which contain private information and even financial information. A network firewall is essential because it can stop hackers from accessing sensitive information and either disrupting operations or holding the organization ransom for its own data (also known as a ransomware attack). In addition, it can also help us monitor employee activities and ensure compliance with State and internal policies.

What are Network Firewalls?
Network firewalls are equipment or software that stand between the internet and the internal network of an organization. The network firewalls also filter the traffic between the internet network and the internal network based on programmed rules and services. Firewalls also have features like Virtual Private Networks (VPN) that allow outside users to connect to the network remotely as if they are on-site. These (VPN) connections can carry heavy security implications that necessitate periodic upgrades to keep up with modern standards and regulatory compliance.

Upgrading Homewood's firewalls will also change the network topography for the Village from an outdated "hub and spoke" design where there is always a *single point of failure*, to more of a redundant ring or mesh network design. Currently, if Village Hall experiences a network disruption, nearly all facilities will be negatively impacted. The new design will allow the other firewall devices (Public Works, Police Dept., Fire Dept. Village Hall, etc.) to continue functioning independently without sacrificing security and would reduce or prevent service disruption.
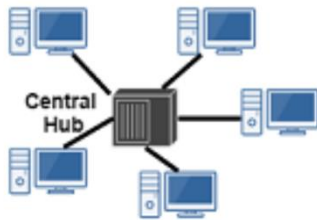
Existing Village design.
If HUB internet fails, all systems fail.

Desired "mesh network" design
Each network has multiple connections.

Timeline of the Proposal

In the spring of 2022, Village staff reached out to UrbanCom, of Oak Forest, IL, regarding their fiber internet service expansion into the Homewood area. Urbancom is a locally owned, privately held corporation providing broadband internet and boutique technology services to Chicago's southern, southwestern, and western suburbs since 1997 and has joined the Cook County backed Chicago Southland Fiber Network to provide low-cost high-speed fiber to municipalities and local businesses alike. Upon reviewing their competitive prices against Comcast pricing, the Village of Homewood insisted on expediting the expansion of the fiber to our facilities.

In order to accommodate the increased speed and additional points of connection to UrbanCom or any new Internet Service Provider (ISP), the Village needs appropriately sized firewalls and a partner who can help support the firewalls. Staff researched potential equipment vendors and prepared a request for proposal (RFP) that was posted on October 3, 2024 and closed on October 28, 2024. There were four proposals received, but after careful review, staff recommends the Board accept the lowest proposal cost submitted by UrbanCom. There are many benefits to using one vendor for both fiber internet connectivity and managed network services. Benefits include having one number to call in case of an outage or for support, increased familiarity with the internal network and its functions, and reduced complexity in the network. UrbanCom's close proximity in Oak Forest is also ideal for dispatching for the replacement of defective equipment and regular operational reviews.

VILLAGE OF HOMEWOOD

VENDOR	TOTAL COST
Scientel Solutions – Aurora, IL	$57,781.07
Complex Network Solutions – Hickory Hills, IL	$71,800.00
All Information Services Inc. – Oakbrook Terrace, IL	$76,100.61
Urban Communications - Oak Forest, IL	$50,534.21

The proposal from UrbanCom includes:

- Providing "Fortinet" branded firewalls that will be interconnected to each other for failover at six (6) Village owned sites (Village Hall, Fire Department, Police Department, Public Works, Brian Carey Training Center, and Lawn and Maintenance).
- Firewalls that will provide content filtering and secure access for remote users.
- Implementation and installation of the firewalls at Village-owned sites.
- Three years of licensing and support.

It is projected to take six to eight months to install the network firewalls at the various Village locations.

OUTCOME
This purchase and install will replace the Village's existing network firewall and prepare the Village's network for a new fiber internet connection anticipated for next year. Additionally, the new firewalls will offer increased redundancy to enhance the Village's network reliability in the event of an outage.

FINANCIAL IMPACT
- **Funding Source:** American Rescue Plan Act (ARPA) Funds
- **Budgeted Amount:** $43,250.00
- **Cost:** $50,534.21
- **Budget Amendment Requested:** $7,285.00 (This amount will come from the Ambulance purchase coming in under budget.)

LEGAL REVIEW
Completed

RECOMMENDED BOARD ACTION
Approve a budget amendment in the amount of $7,825.00; and, accept the lowest cost proposal submitted by Urban Communications of Oak Forest, IL, by approving the purchase and installation of six (6) FortiGate Network Firewalls for a total cost of $50,534.21.

ATTACHMENT(S)

- Urban Communications proposal
- Scientel Solutions proposal
- Complex Network Solutions proposal
- All Information Services Inc. proposal
- RFP for Network Infrastructure updates