



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 4d

**ACTION ITEM**

**Date of Meeting** June 27, 2017

**DATE:** June 19, 2017

**TO:** Dave Soike, Interim Executive Director

**FROM:** Matt Breed, ICT Infrastructure Services

**SUBJECT:** Enterprise Network Firewall Upgrade Project (CIP #C800908)

**Amount of this request:** \$1,500,000

**Total estimated project cost:** \$1,500,000

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to (1) proceed with the Enterprise Network Firewall Upgrade project; (2) procure required hardware, software, vendor services, and maintenance; and (3) use Port staff for implementation, for a total project cost not to exceed \$1,500,000.

**EXECUTIVE SUMMARY**

This project will procure and upgrade firewalls protecting the Port Enterprise network through which our financial, human resource, maintenance, project management, and many other critical systems communicate. Our network firewalls provide the first line of defense against cyber threats. Because cyber-crime is increasing rapidly in sophistication and prevalence, it is imperative that we keep pace with current technology in order to stay ahead of these very real threats.

A network firewall is a security device that grants or rejects network access between an untrusted zone such as the Internet and an internal network. The Port network is constantly inundated with outside hacking attempts and viruses. Our firewalls are designed to protect our internal network resources from these external security vulnerabilities and advanced threats. Existing Port firewalls, last upgraded seven years ago, do not have the necessary sophistication and advanced features to fend off today's advanced cyber threats, and have reached their end of life.

**JUSTIFICATION**

This project includes several important benefits.

- (1) More advanced security features to stay ahead of today's cyber threats

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- (2) Increased processing speeds to meet new system requirements and allow for more frequent and realistic security penetration testing.
- (3) Continued availability of replacement hardware and security patches.
- (4) Common management platform across Port networks to reduce inconsistency and improve efficiency when dealing with security incidents.

**DETAILS**

***Scope of Work***

- (1) Procure and replace firewall equipment and software for the Port Enterprise network at the Port’s main SeaTac and backup Liberty Lake data centers.

***Schedule***

Commission design authorization	2017 Quarter 2
Procurement Complete	2017 Quarter 4
Installation Complete	2018 Quarter 4

***Cost Breakdown***

	This Request	Total Project
Hardware/Software	\$880,000	\$880,000
Vendor Implementation Services	\$182,000	\$182,000
Port Labor	\$350,000	\$350,000
WA State Tax	\$88,000	\$88,000
<b>Total</b>	<b>\$1,500,000</b>	<b>\$1,500,000</b>

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** – Purchase firewall equipment as it fails from 3<sup>rd</sup> party vendors

Cost Implications: \$0 for project implementation

Pros:

- (1) Capital funds are available for other projects.

Cons:

- (1) After May 2019, our current firewall vendor will no longer provide security patches for our system due to the system age. This leaves our network vulnerable to new cyber-attacks that are constantly maturing and evolving. These attacks will cause network outages, data loss, and corruption on one of our two largest networks running financials, maintenance, public safety, and access control systems.

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- (2) While redundant firewalls are in place to ensure an individual firewall failure doesn't immediately put our organization network in jeopardy, the failing equipment must be replaced or we risk the serious operational impacts of a total failure.
- (3) Individual firewall failures would need to be replaced with 3rd party equipment, reducing our effectiveness and ability to manage the system. This 3rd party equipment is extremely scarce at the moment and will be increasingly hard to find as the market matures.
- (4) A catastrophic firewall failure would expose the Port's information systems and sensitive data to cyber-attacks.
- (5) This solution will not scale to accommodate future needs that will require faster throughput and more advanced security features.

This is not the recommended alternative.

**Alternative 2** – Purchase and install redundant network firewall systems for the Port's Enterprise network

Cost Implications: \$1,500,000

Pros:

- (1) Significantly improves the protection of our data and information systems that are increasingly more vulnerable to cyber-attacks as a result of potential equipment failure and the growing sophistication of cyber threats.
- (2) Improves our flexibility, performance, and management capability to meet current and future technology requirements.
- (3) Provides a common management platform across multiple Port networks.
- (4) Meets future requirements for faster throughput and advanced security features.

Cons:

- (1) Capital funding is not available for other efforts.

***This is the recommended alternative.***

**FINANCIAL IMPLICATIONS**

***Cost Estimate/Authorization Summary***

	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Original estimate	\$800,000	\$0	\$800,000
Current change	\$700,000	\$0	\$700,000
Revised estimate	\$1,500,000	\$0	\$1,500,000

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<b>AUTHORIZATION</b>			
Previous authorizations	\$0	\$0	\$0
Current request for authorization	\$1,500,000	\$0	\$1,500,000
Total authorizations, including this request	\$1,500,000	\$0	\$1,500,000
Remaining amount to be authorized	\$0	\$0	\$0

***Annual Budget Status and Source of Funds***

This project was included in the 2016-2020 capital budget and plan of finance under committed CIP #C800908 in the amount of \$800,000. A competitive procurement was completed in early 2017 to set a firewall equipment standard and through that process it was determined that a larger budget will be necessary to meet the objectives for this project. The remaining \$700,000 for the capital funding will be transferred from the IT Renewal/Replacement CIP (C800097) to the project (C800908) resulting in no net change to the overall capital budget.

***Financial Analysis and Summary***

Project cost for analysis	\$1,500,000
Business Unit (BU)	ICT
Effect on business performance (NOI after depreciation)	NA
IRR/NPV (if relevant)	NA
CPE Impact	\$0.01

***Future Revenues and Expenses (Total cost of ownership)***

Annual maintenance costs are estimated to increase by \$31,000. This will be budgeted in the Information & Communication Technology (ICT) Operating Budget.

**ATTACHMENTS TO THIS REQUEST**

None

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

None