Date: March 18, 2025

To: City of Hamilton, Finance and Corporate Services

From: Paul Takala, CEO/Chief Librarian

             Dijia Qin, Director, Digital Technology and Creation

Subject: **Business Plan for IT Infrastructure Capital Upgrade**

INTRODUCTION

We have been asked to provide a business case for the Information Technology (IT) Infrastructure upgrades related to our $1.5 million capital request. This document provides that business case, please advise if additional information is required.

BACKGROUND

Supporting digital access to Hamilton residents has been a core public library service at HPL for several decades. Among many other tasks, residents come into our locations to apply for jobs, complete school assignments, print forms and navigate government services.

We have had a long partnership with the City in terms of delivering information technology services. The City IT department is located on the 6th floor of the Central library where there is a shared data centre. HPL utilizes some City enterprise applications and has been on a shared network layer. Because of the nature of our IT services includes providing access to residents, we worked for years to try and ensure our network traffic was sufficiently segregated from the City's. The cyber event of 2024 demonstrated that our continued reliance on the City network created significant risks for both parties. A critical part of rebuilding our technology infrastructure has been to work with the City to ensure that rebuilt and new systems are significantly more secure and separated from the City's.

The need for a capital infusion now to ensure we can continue to provide residents with access to technology and effectively manage our business is twofold:

1. **Network and WiFi Infrastructure Replacement** – After the cyber event, HPL worked with the City to rebuilt and segregate our network. The only option to restore service in a reasonable time frame was to use existing City switches and routers already in place. Working with Hamilton Community Enterprise (HCE) Telecom Inc, we have our own enterprise firewall deployed and now need to complete the rebuilding process by replacing the existing network equipment that is end-of-life (EOL). The same situation exists with our WiFi infrastructure. The existing Access Points (APs) are all end-of-life, and they need to be replaced with newer WiFi 5/6E

APs to meet growing public demand for wireless connectivity.

2. **HPL Server Infrastructure Replacement** – Our current server infrastructure is overdue for replacement and will reach end-of-support later in 2025. This includes necessary upgrades to our back-up infrastructure. It is important to note that during the pandemic, we were aware of the need to replace our core infrastructure and back-up systems but were faced with significant supply chain issues and inflated costs. In addition, our internal staff IT resources were focused on supporting our emergency response, so we delayed these investments. In 2024 our IT operating budget had to assume new costs related to enhanced cyber-security measures limiting our capacity to internally fund this needed infrastructure renewal.

Upgrading and segregating our Network, WiFi and Server infrastructure is necessary to securely and reliably maintain library services, including our ability to provide digital access to residents. Our public facing information technology services benefit residents in all parts of the City with a broad range of backgrounds, however, we need to recognize how vital these services are to residents with less resources and less options available for access.

WORK AND BUDGET SUMMARY

Item	Schedule	Estimated Cost
Network Switch & Router Replacement	2025-27	$950,000
Wi-Fi Upgrade	2025-26	$140,000
Server Hardware Upgrade	2025	$150,000
Tiered Data Backup Solution	2026	$120,000
Contingency (9%)		$140,000
Total		$1,500,000

HPL appreciates the opportunity to work with the City in understanding where the funding for this capital project totalling $1.5M will originate. This approved capital funding for a network rebuild restructure is a critical component of the 2025 goals that HPL has pledged. HPL has reviewed the unallocated reserve balance – that totals approximately $4M and will contribute what is deemed necessary and reasonable to ensure the installation of this network equipment in a timely manner.