



Legislation Text

File #: 22-5423, **Version:** 1

Department: Universal Services

Department Head: Major General Rick Noriega (Ret) - Executive Director

Regular or Supplemental RCA: Regular RCA

Type of Request: Investment Memo

Investment Memo Type: Final Investment Memo

Project Name: Infrastructure Enhancements & Replacements

Project ID (if applicable): NI008

Vendor Legal Name (if applicable): N/A

MWDBE Contracted Goal (if applicable): N/A

MWDBE Current Achievement (if applicable): N/A

Justification for 0% MWDBE Participation Goal: N/A - Goal not applicable to request

Managing Entity: Universal Services

Incremental Authorization Requested: \$440,000

Total Estimated Project Cost: \$7,252,500 (FY23-FY27)

Request Summary:

Request for approval of a Final Investment Memo for the Infrastructure Enhancements & Replacements project for an additional incremental authorization of \$440,000 for an FY 2023 authorization of \$1,344,000.

Project Description:

The project is for the ongoing refresh, replacement, and expansion of the Harris County's compute (virtualization), storage, monitoring, and backup infrastructure that supports all of our enterprise services. These services include but are not limited to the following systems: PeopleSoft, CAD, JWeb, Email, Directory Services, etc. This project also includes enhancements to the redundancy and availability of systems supported which would require additional expansion of these systems to better provide modern services as well as increased capacity when required.

Project Scope:

Due to the limited number of resources, we need to implement the replacement in phases and at the same time plan for delays in obtaining hardware which have had lead times in excess of 6 months. Phase 1 will be from October 2022-February 2023. Phase 2 will be March 2023-September 2023. Expenditures and project scope associated with this effort

are identical.

Both phases of the project will focus on the following:

- Replace end of life systems that support and provide server capacity to core IT infrastructure services. There is a significant level of compute (processing) capacity that will become obsolete and unsupported, items that will reach end of life between October 2022 - February 2023 will be addressed in Phase 1, and the rest in Phase 2.
- Scheduling and moving servers from the soon to be obsolete hardware so the refreshed capacity can be introduced and workloads rebalanced.
- Support and maintenance services as well as the hardware management and support licensing required to operate the systems.
- Replace storage switch(es) that will no longer be supported from May 2024. Storage switches are network devices specifically used to provide connectivity between the storage systems and the rest of the server environment. Without these devices, our server infrastructure cannot communicate to the storage systems resulting in the inability to use any server service in our datacenter. Required for ongoing support and maintenance between the existing compute (processing) environment and storage systems. The compute environment referenced here includes existing compute systems as well as those included in Phase 1/2 tasks above.

Justification:

Compute (processing) hardware is a core component to the services utilized across Harris County and is essential that these systems remain supported and capacity available. These systems provide server resources for a wide breadth of critical systems like those utilized by Law Enforcement and the Justice Community as well others in the Harris County community. These services include but are not limited to: public facing websites serving constituents, CAD, JWeb, email services, directory services, financials, etc.

Furthermore, there is a growing need for long-term storage of electronic and scanned documents/data that is creating an increasing need for storage, backup, and retention. This data, including those for Harris County Elections, have seen a surge in compute and storage requirements placing more burden and capacity demands. This growth requires periodic expansion to replace used storage capacity so we maintain proper available overhead for to address immediate needs and emergencies.

Alternatives and Engagement:

The anticipated projects and scope of work below are required to maintain both support and maintenance for production systems and services. Failure to realize these expenditures would prevent the County from being able to patch, maintain, and replace core infrastructure services leaving those systems vulnerable to security issues and unable to accommodate the growing demand for IT resources.

Failure to maintain supported system hardware for systems covered by this CIP would result in: no vendor support, no replacement services to cover hardware failures, no patching or firmware updates to address vulnerability or feature enhancements. This unsupported state would pose a significant risk to Harris County services.

Anticipated Project Expenditures and Timeline:

Scope of Work	Estimated Cost	Estimated Completion
Replace end of life compute resources- End of Support 2/2024 (35 units)	\$1,000,000	12/2023
Replace storage switches - End of Support 5/2024	\$120,000	1/2024
Contingency (20%)	224,000	
Total planned FY2023 expenditures	\$1,344,000	-
Unencumbered existing project balance to carry into FY23	\$900,000	
Incremental authorization requested	\$444,000	

Note: the additional contingency dollars were included due to the higher than normal hardware costs seen over the last year. Identical hardware costs increased by nearly 25% less than one year ago in a similar compute upgrade.

Alignment with Goal(s):

- Justice and Safety
- Economic Opportunity
- Housing
- Public Health
- Transportation
- Flooding
- Environment
- Governance and Customer Service

Previous Court Action:

Date	Agenda Item #	Action Taken
7/10/2018	6.b.1	Request for approval of funding for project cost \$870,000
7/31/2018	4.j.2	Request for approval of commercial paper funding for \$870,000
11/12/2019	4.g.4	Request for approval of commercial paper funding for \$3,775,000
10/27/2020	5.b.2	Request for approval of funding for project cost \$3,800,000
11/10/2020	4.g.3	Request for approval of commercial paper funding for \$3,800,000
8/24/2021	21-4291	Request for approval of commercial paper funding for \$4,000,000
1/25/2022	22-0644	Request for approval of commercial paper funding for \$1,940,000
3/8/2022	22-1699	Request for SFY22 authorization of \$1,398,000

Address: Multiple

Precinct(s): Countywide

Fiscal and Personnel Summary			
Service Name	IT Infrastructure		
	SFY 22	FY 23	Next 3 FYs
Incremental Expenditures (do NOT write values in thousands or millions)			

Labor Expenditures	\$	\$	\$
Non-Labor Expenditures	\$	\$	\$
Total Incremental Expenditures	\$	\$	\$
Funding Sources (do NOT write values in thousands or millions)			
Existing Budget			
Choose an item.	\$	\$	\$
Choose an item.	\$	\$	\$
Choose an item.	\$	\$	\$
Total Current Budget	\$	\$	\$
Additional Budget Requested			
Choose an item.	\$	\$	\$
Choose an item.	\$	\$	\$
Choose an item.	\$	\$	\$
Total Additional Budget Requested	\$	\$	\$
Total Funding Sources	\$	\$	\$
Personnel (Fill out section only if requesting new PCNs)			
Current Position Count for Service	-	-	-
Additional Positions Requested	-	-	-
Total Personnel	-	-	-

Anticipated Court Date: 9/13/2022

Anticipated Implementation Date (if different from Court date): 10/1/2022

Department Approval by: William Kominek, Senior Manager - Enterprise Information Systems, 8/26/22

OMB CIP Team Approval by: Amiel Chen, CIP Manager, 8/26/22

Commercial Paper Request (For OMB use only):

Receiving Department: N/A

Project PeopleSoft ID: N/A

CP Series Description: N/A

HB 1869 compliance confirmed by: N/A

OMB Financial Management contact: N/A