

Schedule 13

Funding Request for the FY 2023-24 Budget Cycle

State

Request Title

R-3 Website Modernization and Technical Development Capacity

Dept. Approval By:	Christopher Beall, Deputy Secretary of State	Supplemental FY 2022-23
	<u> X </u>	Change Request FY 2023-24
OSPB Approval By:	OSPB Approval Not Required	Budget Amendment FY 2023-24

Summary Information	Fund	FY 2022-23		FY 2023-24		FY 2024-25
		Initial Appropriation	Supplementa l Request	Base Request	Elected Official	Budget Estimate
	Total	\$7,146,387	\$0	\$7,070,017	\$744,040	\$411,999
	FTE	46.0	0.0	46.0	3.7	4.0
Total of All Line Items Impacted by Change Request	GF	\$151,651	\$0	\$414,676	\$0	\$0
	CF	\$6,537,387	\$0	\$6,655,341	\$744,040	\$411,999
	RF	\$457,349	\$0	\$0	\$0	\$0
	FF	\$0	\$0	\$0	\$0	\$0

Line Item Information	Fund	FY 2022-23		FY 2023-24		FY 2024-25
		Initial Appropriation	Supplementa l Request	Base Request	Elected Official	Budget Estimate
	Total	\$6,642,663	\$0	\$6,565,768	\$713,335	\$409,059
	FTE	46.0	0.0	46.0	3.7	4.0
02. Information Technology Services -- Personal Services	GF	\$151,651	\$0	\$414,151	\$0	\$0
	CF	\$6,033,663	\$0	\$6,151,617	\$713,335	\$409,059
	RF	\$457,349	\$0	\$0	\$0	\$0
	FF	\$0	\$0	\$0	\$0	\$0

	Column 4 Total Funds	Column 5 Total Funds
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	\$6,642,663	\$0	\$6,565,768	\$713,335	\$409,059
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					Column 4 Total Funds	Column 5 Total Funds
	Total	\$503,724	\$0	\$504,249	\$30,705	\$2,940
	FTE	0.0	0.0	0.0	0.0	0.0
02. Information	GF	\$0	\$0	\$525	\$0	\$0
Technology Services	CF	\$503,724	\$0	\$503,724	\$30,705	\$2,940
-- Operating	RF	\$0	\$0	\$0	\$0	\$0
Expenses	FF	\$0	\$0	\$0	\$0	\$0

CF Letternote Text Revision Required	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	If Yes, see schedule 4 fund source detail.
RF Letternote Text Revision Required	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
FF Letternote Text Revision Required	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Requires Legislation?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Type of Request?	State Prioritized Request				
Interagency Approval or Related Schedule No Other Agency Impact					



Department Priority: R-3
Request Detail: Website Modernization and Technical Development Capacity Enhancement

Summary of Funding Change for FY 2023-24				
	Totals		Incremental Change	
	FY 2022-23 Appropriation	FY 2023-24 Base	FY 2023-24 Request	FY 2024-25 Request
Total Funds	\$7,146,387	\$7,070,017	\$818,991	\$506,768
FTE	46.0	46.0	3.7	4.0
General Fund	\$151,651	\$414,676	\$0	\$0
Cash Funds	\$6,537,387	\$6,655,341	\$818,991	\$506,768
Reappropriated Funds	\$457,349	\$0	\$0	\$0
Federal Funds	\$0	\$0	\$0	\$0

Summary of Request

The Department relies on our IT Division and their staff to operate, secure, and manage our online presence and the infrastructure that supports it. This ensures that the public and our multitude of customers can easily and effectively engage with the Department online to complete statutory filings required in the various program areas of the office, obtain information and official records concerning voting, elections, business registrations, charitable solicitations and the other core government functions performed by the Department. However, the Department is in need of additional resources to modernize the Department’s aging website, as well as to adequately staff an IT development team that is increasingly tasked with critical improvement efforts.

The Department’s request is two-fold:

- Improve the Department’s online services and website with a full redesign focused on usability and accessibility; and,
- Add technical staff to accelerate our efforts to modernize our website and the Department’s technical infrastructure, eliminate technical debt, and position the Department for adopting secure cloud-based environments for critical services.

Current Program:

The Department has a long history of providing online services for customers and supporting a high-performing technical team. The Department's website is the only public "face" that many of our customers ever see. The Department for years has been centralizing our service delivery to the Department's website. However, the main layout and design of the website has not been substantially redesigned or modernized in over ten years, leaving the Department with a web presence that is notably outdated in functionality, feel, and design, without any optimization for mobile-based access, despite the website serving upward of a million members of the public and various program customers each and every month, and supporting millions of page views every month.

The Information Technology Division, which supports the website and our online services, is organized in two core work units: software development lifecycle management; and infrastructure operations and security. Over the past several years, most staff additions to the IT division have been focused on security operations, project management, and senior technical leadership. This request is focused on adding line technical staff to support the agency in our website improvement and modernization efforts.

Problem or Opportunity:

The Department's website has been the core of our service delivery to customers and constituents for twenty years, with over 95% of all transactions processed online. The Department's website serves a vast and varied set of audiences, such as members of the public wanting information on elections or looking to register to vote, all manner of business filers, notaries public, durable medical equipment providers, and more. The website and online services supported by it allow customers of the Department to comply with statutory filing requirements and provides public access to official records of the various programs of the agency. While we continue to receive positive accolades from users of our online services, the current information architecture design of the website has remained unchanged for over a decade.

The Department has a defined number of permanent FTE dedicated to software design, development, quality assurance testing, and infrastructure operational management for the Department's systems. As the agency is modernizing technical systems to eliminate technical debt, improve security, and make functional improvements, the number of technical staff and the specific skillsets required to support our modernization efforts are not sufficient to keep pace with the demand from our line of business units. Personnel increases over the past several years have mainly been focused on security operations, operations support, and higher-level strategic positions. The Department is early in its move to cloud-based systems and as we continue to transition away from on-premise solutions to cloud-hosted solutions, our development capacity dedicated to core software development duties will have a critical impact on our modernization and improvement efforts.

Proposed Solution:

For the first part of the request, the Department seeks to engage with a reputable private company to perform a complete site redesign (including headers, footers, content layout, color palette, fonts, etc.). Our goal would be to modernize the “look and feel”, functionality, and accessibility, with an emphasis on current best practices, and establish the foundation for future design and development work to guide the Department’s modernization program. The Department will also conduct three moderated usability studies to identify specific areas of improvement for the redesign of the website and its online services¹. The Department also seeks an in-depth accessibility review to ensure compliance with HB21-1110, which requires the Department comply with accessibility standards set by the Office of Information Technology by July 1, 2024. This accessibility study will ensure the Department can review and adjust web assets as necessary to ensure compliance with that enacted legislation.

Based on research conducted by the Department, the estimated costs for these activities are:

- \$75,000 for a complete website redesign²;
- \$70,000 for a contract website designer to work alongside our current staff to implement the new design across our website³;
- \$75,000 for an expert usability review⁴;
- \$27,000 for an in-depth accessibility review⁵; and,
- \$90,000 for three moderated usability studies⁶.

For the second part of the request, the Department seeks to add permanent FTE personnel to increase our development capacity. We seek to add:

- one (1) software quality assurance (QA) staffer in addition to the three (3) current QA professionals in that work unit;
- two (2) software developers in addition to the nine (9) current positions in that work unit; and,
- one (1) systems engineer staffer in addition to the six (6) current positions in that work unit.

We anticipate recruiting “early career” professionals for three of these roles, with a focus on filling one of the two software developer roles with an experienced professional with cloud-based software development and operations experience.

¹ The three functional areas for moderated usability studies are business registrations, notary public, and voter & election information.

² Based on an estimate for a “big and complicated website”

³ Estimate based on a need for 6 months of website work at an estimated rate of \$70/hour

⁴ Estimate from <https://www.nngroup.com/consulting/expert-review/> (a one-time cost)

⁵ Based on our estimate of 240 hours of expert review at \$112.50/hour from the same source(a one-time cost)

⁶ Based on our estimate of three 5-participant, 5 group studies for each of three focus areas from <https://www.nngroup.com/articles/remote-usability-testing-costs/> (one-time costs)

Anticipated Outcomes:

A modernized Department website will foster greater usability and accessibility to the public and broad set of customers for the numerous statutory program areas housed at the agency. Further, the Department will be able to ensure, through the usability studies and accessibility review, that a new website will meet state statutory requirements for accessibility in addition to an enhanced user experience.

Expanded staffing levels will better equip the Department as we continue in our modernization efforts. By adding additional staff in these areas, we can accelerate our projects and more rapidly meet the demand to reduce technical debt and modernize our systems, which in turn will allow the Department to better serve its broad community of customers and members of the public.

Assumptions and Calculations:

The Department assumes that it can retain the services of a reputable private company with deep experience in website usability, accessibility, and current best practices for web and information architecture design.

The Department assumes that our existing service center will be able to respond to increased call volume. Many of our users only visit the site once or twice a year (to file required forms or check on their voter registration, for example), so deviations in what they remember from their previous visits tend to result in many users abandoning attempts to complete tasks on their own and calling for assistance.

The Department assumes that the Department will be able to recruit qualified staff to fill these positions.

Long Bill Line Item (Appropriation)	FY 2023-24 Incremental Amount	FY 2024-25 Incremental Amount
Information Technology: Personal Services	\$713,335 3.7 FTE	\$409,059 4.0 FTE
Information Technology: Operating Expenses	\$30,705	\$2,940
Central Appropriations	\$75,951	\$94,769
Total Incremental Spending Authority Requested	\$819,991 3.7 FTE	\$506,768 4.0 FTE



Legislative Council Staff

Nonpartisan Services for Colorado's Legislature

Room 029 State Capitol, Denver, CO 80203-1784

Phone: (303) 866-3521 • Fax: (303) 866-3855

lcs.ga@coleg.gov • leg.colorado.gov/lcs

Memorandum

January 11, 2023

TO: Joint Committee Joint Technology Committee

FROM: Samantha Falco, Research Analyst, 303-866-4794
Joint Technology Committee Staff

SUBJECT: JTC Staff Analysis of JBC-Referred FY 2023-24 Operating Budget Request
Secretary of State
R-03 State Website Modernization

Summary of Request

The Secretary of State's Office (SOS) is requesting \$337,000 in cash fund spending authority for FY 2023-24 to modernize the SOS website. The Joint Budget Committee (JBC) referred this portion of the operating budget request to the Joint Technology Committee (JTC) pursuant to Joint Rule 45(b), for the committee's review and recommendation as an IT-related operating request.

Request Details

The SOS website allows for SOS users and customers to complete statutory filings required by various program areas of the office, obtain voting information and records, obtain information on elections, file business registrations, access charitable solicitations, and other office functions. Currently, the website's layout and design have not been updated in over 10 years even though 95 percent of all department transactions are processed online.

Website redesign. SOS will engage a private company to perform a complete website redesign with the goal of modernizing the site, increasing functionality, and meeting statutory accessibility requirements. SOS conducted research to estimate the cost of this project as follows:

- \$75,000 for a complete website redesign;
- \$70,000 for a contract website designer to work alongside SOS current staff to implement the new design across the website;
- \$75,000 for an expert usability review;
- \$27,000 for an in-depth accessibility review; and
- \$90,000 for three moderated usability studies.

Options for Committee Action

The JTC has three options for committee action when it reviews an operating budget request and makes a recommendation to the JBC. The JTC can:

- recommend the request to the JBC for funding with no concerns;
- recommend the request to the JBC for funding with concerns; or
- not recommend the request for funding.

Colorado Department of State (State)
R3 Website Modernization and Technical Development Capacity

Joint Technology Committee Staff Questions

*Please respond by Wednesday, January 4, 2022
to: jtc.ga@coleg.gov*

Colorado Department of State's responses to Staff Questions.

1. **The request describes the department's aging website. Please summarize critical website issues, such as functionality and end-of-life technology.**

Response: We have done a pretty good job at keeping our static pages current with technology. However, we have over 30 applications on our website that were built over the years with a wide range of technology. Outdated applications present critical vulnerabilities to the Department's security and hinder the efforts to improve accessibility across our platforms. By modernizing the underpinning technology, the Department can improve its ability to enhance, protect, and maintain these applications. As one example, our core business entities search page¹ has not yet been optimized for use on mobile devices and is the starting point for many of our website users. While this search functionality is protected against malicious use by some of our cybersecurity controls, the underlying technical architecture is in need of modernization.

2. **In the request it is stated that "The Department for years has been centralizing our service delivery to the Department's website."**

If applicable, please explain any issues or challenges with centralizing service delivery. If not applicable, please explain.

Response: The Department has worked for many years to enable online filings for its customers. This model of providing free web-based access to filed documents, services, and requiring online submission of most statutory filings is highly efficient and enables customers to interact with the Department wherever they live. We have prioritized our high-volume transactions for online filing so that most of our customer base is able to quickly submit their transactions and obtain confirmation of successful filing. Most U.S. jurisdictions have moved to a similar filing model, however Colorado's percentage of online filings still is among the highest in the country.

However, there are still several less utilized filing types that can only be submitted on paper. While it would be great to have all these online, our limited resources have required us to prioritize other work above moving these online.

¹ Available at <https://www.coloradosos.gov/biz/BusinessEntityCriteriaExt.do>, retrieved 1/4/2023

3. **The request says that the website is not optimized for mobile devices.**

Please provide technical details explaining the existing mobile device capabilities, and potential changes with funding.

Response: Our static webpages are mostly mobile device compatible. However, most of our applications are not at this time. The process for modifying web applications to a “responsive web design” user interface requires that our team modify each application and change the way pages are displayed so they will be sized correctly for whatever device and software the user is using. New initiatives, like the business registrations system rewrite, are being created to make those applications fully functional and accessible. Part of our current backlog includes going back into the source code of all our other applications and making them “responsive.”

4. **The request also estimates \$27,000 to conduct an accessibility study. If known, please describe the existing accessibility functionality and issues.**

Response: We have been using SiteImprove, along with a few other tools, to look at the accessibility of our website. This software toolset helps insure we are meeting all the best standards and practices in accessibility. In addition to the accessibility study, we would like to hire a contractor to supplement our current web team so we can have a resource dedicated to improving the accessibility of our website.

5. **Please provide an estimated timeline for the project schedule.**

Response: For the static webpages, we would start as soon as we can and hire a vendor to perform an accessibility study on our website. We anticipate that we would follow that up with a 6-month contract for a web resource to facilitate implementation of recommended changes across our source html pages. On the application side, we would take the learnings from the study and begin working through a prioritized list of applications to improve their accessibility and make them “responsive.” It will likely be a multi-year effort to complete the upgrade of all our applications.