COLORADO GENERAL ASSEMBLY
JOINT BUDGET COMMITTEE

FY 2016-17 STAFF FIGURE SETTING

CAPITAL CONSTRUCTION

(Information Technology Projects Only)

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How to Use this Document

This document begins with an overview of the process by which the Joint Technology Committee and the Joint Budget Committee use to evaluate, prioritize, and fund capital construction information technology projects requested by the executive branch. The next section provides a summary of Joint Budget Committee staff's recommendations compared to the executive branch's requests and the Joint Technology Committee's prioritizations for funding. Finally, Joint Budget Committee staff's recommendations for each of the projects are described in detail in two sections: FY 2016-17 State-funded Projects and FY 2016-17 Cash-funded Projects. Each project is identified in the table of contents as a decision item.

Overview of Requested Capital Construction Information Technology Projects

Per H.B. 14-1395 (Information Technology Budget Requests), the Joint Technology Committee is tasked with producing a written report setting forth recommendations, prioritization, findings, and other comments with respect to each information technology budget request submitted for consideration for inclusion in the capital construction budget section of the Long Bill. The report must be submitted to the Joint Budget Committee by February 15th of each year. The Joint Budget Committee is required to consider the prioritized list of information technology budget requests made by the Joint Technology Committee. For FY 2016-17, the prioritized list is as follows. Note, if the Joint Budget Committee alters the determinations of priority established by the Joint Technology Committee, it is required to notify the Joint Technology Committee of the changes, and allow for a joint meeting of the two committees to discuss the differences.

FY 2016-17 State-funded Projects

Recommended for Funding:

1. Modernizing the Child Welfare Case Management System (Human Services)
2. Interoperability, Phase II (Human Services)

Recommended for Funding, If Additional Funds are Available:

3. Critical portions of higher education requests:
- Colorado State University – Pueblo
- Community College of Denver
- Lamar Community College
- Otero Junior College
- Pueblo Community College
- University of Northern Colorado

4. High rated portions of higher education requests:
- Colorado State University – Pueblo
- Community College of Denver
- Lamar Community College
- Otero Junior College

5. Medium rated portions of higher education requests:
- Community College of Denver
- Lamar Community College
- Otero Junior College
- Pueblo Community College
- University of Northern Colorado

6. Low rated portions of higher education requests:
- Colorado State University – Pueblo
- Lamar Community College
- Otero Junior College
- Pueblo Community College

Not Recommended for Funding:

7. I-25 Fiber Optic Communications Infrastructure (Transportation)

FY 2016-17 Cash-funded Projects

Recommended for Funding:

1. Child Care Automated Tracking System Modernization (Human Services)
2. Laboratory Information Management System (Public Health and Environment)
3. Unemployment Insurance Mainframe Migration and Modernization (Labor and Employment)

SUMMARY OF STAFF RECOMMENDATIONS

Capital Construction Information Technology Projects					
	Total Funds	**General Fund**	**Cash Funds**	**Reappropriated Funds**	**Federal Funds**
FY 2015-16 Appropriation					
S.B. 15-234 (Long Bill)	$119,943,391	$76,877,790	$13,911,135	$13,911,135	$15,243,331
TOTAL	**$119,943,391**	**$76,877,790**	**$13,911,135**	**$13,911,135**	**$15,243,331**
FY 2016-17 Recommended Appropriation					
State-funded Projects					
Modernizing the Child Welfare Case Management System	$6,749,617	$4,709,617	$0	$0	$2,040,000
Interoperability, Phase II	9,288,520	928,852	0	0	8,359,668
Higher education requests	6,665,808	6,393,748	272,060	0	0
I-25 Fiber Optic Communications Infrastructure	0	0	0	0	0
Cash-funded Projects					
Child Care Automated Tracking System Modernization	1,458,125	0	0	0	1,458,125
Laboratory Information Management System	515,972	0	192,119	0	323,853
Unemployment Insurance Mainframe Migration and Modernization	25,263,480	0	25,263,480	0	0
TOTAL	**$49,941,522**	**$12,032,217**	**$25,727,659**	**$0**	**$12,181,646**
Increase/(Decrease)	($70,001,869)	($64,845,573)	$11,816,524	($13,911,135)	($3,061,685)
Percentage Change	(58.4%)	(84.3%)	84.9%	(100.0%)	(20.1%)
FY 2016-17 Requested Appropriation:	**$60,366,028**	**$22,379,828**	**$25,804,554**	**$0**	**$12,181,646**
Request Above/(Below) Recommendation	$10,424,506	$10,347,611	$76,895	$0	$0

Description of Incremental Changes

State-funded Projects

Modernizing the Child Welfare Case Management System: The recommendation includes an increase of $6,749,617 total funds, including $4,709,617 General Fund, for FY 2016-17 for the second year of a three year request for the Department of Human Services to make changes to the existing Trails system (rather than fully replacing it) to make it more mobile-friendly for case workers, better able to integrate data from a variety of sources into a case file, and easier for users to interface with for different purposes based on agency or job-specific tasks. This project was recommended for funding by the Joint Technology Committee.

Interoperability, Phase II: The recommendation includes an increase of $9,288,520 total funds, including $928,852 General Fund, for FY 2016-17 for the second year of a five year request for the Department of Human Services to standardize all existing information technology systems the agency uses in an effort to allow the data contained in the systems to be made available without removing the data from the core systems. The solution is creating interfaces to access the data directly rather than exporting data from the core systems for import into other systems. This project was recommended for funding by the Joint Technology Committee.

Higher education requests: The recommendation includes an increase of $6,665,808 total funds, including $6,393,748 General Fund, for FY 2016-17 to fund a portion of the projects requested by higher education institutions that the Joint Technology Committee deemed critical. These projects were recommended for funding by the Joint Technology Committee if additional funding is available. Specifically, staff's recommendation includes the following funds:

FY 2016-17 Staff Recommendation for Appropriations to Higher Education Institutions					
Institution	**Total Funds**	**General Fund**	**Cash Funds**	**Reappropriated Funds**	**Federal Funds**
Colorado State University – Pueblo	$1,826,475	$1,826,475	$0	$0	$0
Community College of Denver	1,046,383	774,323	272,060	0	0
Lamar Community College	170,900	170,900	0	0	0
Otero Junior College	250,000	250,000	0	0	0
Pueblo Community College	959,300	959,300	0	0	0
University of Northern Colorado	2,412,750	2,412,750	0	0	0
Total	**$6,665,808**	**$6,393,748**	**$272,060**	**$0**	**$0**

I-25 Fiber Optic Communications Infrastructure: The recommendation does not include $6,000,000 General Fund requested by the Department of Transportation for FY 2016-17 to extend the Department-administered fiber optic telecommunications backbone along Interstate 25 from Aguilar, in Las Animas County, to the Colorado and New Mexico border. This project was not recommended for funding by the Joint Technology Committee.

Cash-funded Projects

Child Care Automated Tracking System Modernization: The recommendation includes an increase of $1,458,125 federal funds for FY 2016-17 for the second and final year of a two year request for the Department of Human Services to implement a hybrid approach to enhance and replace the Child Care Automated Tracking System (CHATS). This project was recommended for funding by the Joint Technology Committee.

Laboratory Information Management System: The recommendation includes an increase of $515,972 cash and federal funds for the Department of Public Health and Environment to purchase an off-the-shelf Laboratory Information Management System (LIMS) to replace the existing Laboratory Information Tracking System (LITS) that has been in place since 2001. This project was recommended for funding by the Joint Technology Committee.

Unemployment Insurance Mainframe Migration and Modernization: The recommendation includes an increase of $25,263,480 cash funds for FY 2016-17 for the Department of Labor and Employment to migrate the current benefits and employer premium systems onto a modernized computer platform. This project was recommended for funding by the Joint Technology Committee.

Major Differences from the Request

Overall, staff's recommendations for FY 2016-17 are $17,090,314 total funds, including $16,741,359 General Fund, lower than the appropriations requested for projects by the executive branch. The difference is due to staff's recommended appropriations not including the full amount of funding sought by higher education institutions for information technology projects.

When compared to the Joint Technology Committee recommendations, staff's recommended appropriations for FY 2016-17 are $6,665,808 total funds, including $6,393,748 General Fund, higher due to the inclusion of a portion of requests submitted by higher education institutions that the Joint Technology Committee deemed critical.

Comparing FY 2016-17 Capital Construction Information Technology Projects Appropriations					
	Total Funds	General Fund	Cash Funds	Reappropriated Funds	Federal Funds
Requested	$60,366,028	$22,379,828	$25,804,554	$0	$12,181,646
Joint Technology Committee Recommendation	$43,275,714	$5,638,469	$25,455,599	$0	$12,181,646
Joint Budget Committee Staff Recommendation	$49,941,522	$12,032,217	$25,727,659	$0	$12,181,646

FY 2016-17 State-funded Projects

➔ **Modernizing the Child Welfare Case Management System**

Lead Department	Project Type	OSPB Priority	JTC Priority
Human Services	Continuation	#3	State-funded #1

Request: The Department of Human Services requests and appropriation of $6,749,617 total funds, including $4,709,617 General Fund, for FY 2016-17 for the second year of a three year request to make changes to the existing Trails system (rather than fully replacing it) to make it more mobile-friendly for case workers, better able to integrate data from a variety of sources into a case file, and easier for users to interface with for different purposes based on agency or job-specific tasks.

JTC Recommendation: This project was recommended for funding for FY 2016-17 by the Joint Technology Committee.

JBC Staff Recommendation: Staff recommends an appropriation of $6,749,617 total funds, including $4,709,617 General Fund and $2,040,000 federal funds, for FY 2016-17 for the continuation of this project.

Analysis: Colorado Trails is a statewide system, operational since 2002, that supports activities in the Department of Human Services' Division of Child Welfare and the Division of Youth Corrections (DYC). The Trails database links all divisions of DYC staff located in facilities and offices throughout the state, as well as State and county child welfare workers, supervisors, and support staff. The system provides case management support for direct client workers, decision-making support tools for managers, and access to client information across all DYC and child welfare populations in the state. The client/server-based system also provides an interface with the Colorado Integrated Criminal Justice Information System (CICJIS).

The Division of Child Welfare portion of Trails includes functions for intake, eligibility, resource management, court processing, case management, facilities management, financial management, and administration. The DYC portion of Trails allows users to track the stages a youth goes through in terms of their placements and counselor assignments. Workers can create, modify, and maintain treatment plans and release goals, and identify and assess resource providers.

For FY 2015-16, the legislature provided an appropriation of $6,824,567 total funds, including $4,648,707 million General Fund, for the first year of a Trails modernization project. The technology and architecture of the current Trails system is over 20 years old and is no longer supported by the manufacturers of the system. The project will improve Trails by upgrading its infrastructure to allow for faster implementation of system modifications and to accommodate changing child welfare practices. Critical components of the project include:

- Mobile device compatibility and support to provide secure systems that meet industry standards;
- Data integration to help promote the effective use and availability of data across multiple systems that influence child welfare, including the ability to add unstructured or external data; and
- Profile-driven capabilities for data administration and ease of use by providing user-appropriate interfaces (agency specific and/or job function related).

Staff recommends that funding be provided to continue this project for FY 2016-17 as requested by the Department and as recommended by the Joint Technology Committee. Despite a slower than planned commencement of the project due to changes in the federal approval of the procurement process, the Department anticipates that its full FY 2015-16 appropriation will be encumbered by May 2016 and it will be able to encumber the requested FY 2016-17 appropriation during the course of the fiscal year to keep this three year project on schedule for deployment following FY 2017-18.

➔ Interoperability, Phase II

Lead Department	Project Type	OSPB Priority	JTC Priority
Human Services	Continuation	#1	State-funded #2

Request: The Department of Human Services requests an appropriation of $9,288,520 total funds, including $928,852 General Fund, for FY 2016-17 for the second year of a five year request to standardize all existing information technology systems the agency uses in an effort to allow the data contained in the systems to be made available without removing the data from the core systems. The solution is creating interfaces to access the data directly rather than exporting data from the core systems for import into other systems. The request also includes a companion operating

JTC Recommendation: This project was recommended for funding for FY 2016-17 by the Joint Technology Committee.

JBC Staff Recommendation: Staff recommends an appropriation of $9,288,520 total funds, including $928,852 General Fund and $8,359,668 federal funds, for FY 2016-17 for the continuation of this project.

Analysis: This project comes on the heels of a 15 month analysis of the Department's information technology systems and protocols that was funded by a $1.1 million grant from the federal Department of Health and Human Services' Administration for Children and Families. The analysis found that the Department has no standard policy, procedure, or practice addressing interoperability between its systems. To solve this issue (and to ultimately leverage data for decision making purposes), the legislature provided an appropriation of $ 12,815,940 total funds, including $1,281,594 million General Fund, for the first year of a five year project to implement a broad-based plan that calls for:

- Building out data governance strategies (e.g. bring all parties together to work toward a common goal);
- Inventorying all information technology systems and data (e.g. knowledge of what data looks like now and what it should like in the future);
- Deploying tools for proof of concept studies and for evaluative purposes (e.g. what tools work and what tools do not work);
- Reaching agency-wide agreement on a strategy going forward (e.g. stakeholder buy-in);
- Changing and improving existing business processes and workflows based on the implementation of tools that assist in combining data into an analytical tool; and
- Managing the organizational change that is required to make the initiative successful.

Staff recommends that funding be provided to continue this project for FY 2016-17 as requested by the Department and as recommended by the Joint Technology Committee. This recommendation is made with some hesitation, however. Staff is concerned that this project is at high-risk for failure given the complexities associated with linking data from many systems and in many formats that are maintained by countless staff throughout the Department. Even if

systems and data are linked in such a manner that information can be shared across the Department, it is unknown how the systems will perform at various load and stress levels. Given the level of planning that the Department and its federal partner completed prior to commencing this project in FY 2015-16, staff recommends that this project continue for FY 2016-17 and be closely monitored by the legislature to ensure that State funds are not being expended for a project that proves more challenging than originally planned and funded.

➔ **I-25 Fiber Optic Communications Infrastructure**

Lead Department	Project Type	OSPB Priority	JTC Priority
Transportation	New	Not included	State-funded #7

Request: The Department of Transportation seeks an appropriation of $6,000,000 General Fund for FY 2016-17 to extend the Department-administered fiber optic telecommunications backbone along Interstate 25 from Aguilar, in Las Animas County, to the Colorado and New Mexico border. The Department uses the telecommunications backbone to operate its Intelligent Transportation Systems (ITS) infrastructure to gather data, which is used to manage traffic and traffic incidents and provide real-time information to the traveling public.

JTC Recommendation: The Joint Technology Committee recommends that this project be rejected for FY 2016-17.

JBC Staff Recommendation: Staff recommends that this project be rejected for FY 2016-17.

Analysis: The Department of Transportation currently has installed a fiber optic telecommunications backbone along Interstate 70 from the Kansas state line to Glenwood Springs, and is currently working to complete the backbone segment extending to the Utah state line. In terms of Interstate 25, a fiber optic telecommunications backbone stretches south from the Wyoming border to a point 34-mile north of the state's border with New Mexico.

The Department uses its fiber optic network for several purposes. The network communicates with and controls ITS devices such as cameras, dynamic message signs, and weather stations from various traffic operation centers connected to the backbone. It assists in quickly detecting and verifying traffic incidents, allowing the Department to work with law enforcement and emergency responders to ensure fast, appropriate levels of response to incidents, thereby increasing the ability to save lives. Additionally, the fiber optic backbone allows Colorado to work with neighboring states, like Wyoming to provide transportation services in a seamless manner to interstate travelers. Finally, in the near future, it is envisioned that this telecommunications backbone will assist in the implementation of connected vehicle applications (e.g. curve speed warning communicated to the vehicle) to increase traveler safety.

To complete the Interstate 25 network from state border to state border, the Department requests a one-time appropriation of $6,000,000 General Fund for FY 2016-17. The moneys would be used to extend the network 34 miles from Aguilar, Colorado to the state border with New Mexico. After reviewing this request and holding a hearing with the Department, the Joint Technology Committee opted not to recommend this project for funding for FY 2016-17 due to the existence of higher priorities for State funding. Joint Budget Committee staff finds the project request interesting and potential-laden, yet concurs with the Joint Technology Committee that funding it in FY 2016-17 may not be a top priority for the legislature.

➔ **Colorado State University – Pueblo Campus Information Technology Upgrades and Security**

Lead Department	Project Type
Higher Education	New

Request: Colorado State University – Pueblo seeks a one-time appropriation of $3,944,430 General Fund for FY 2016-17 to upgrade its technology infrastructure in the areas of data center services, campus network and security, classroom technology, and unified messaging.

JTC Recommendation: The Joint Technology Committee recommends that this project be funded for FY 2016-17 if additional funds are available.

JBC Staff Recommendation: Staff recommends that the components of the request that have been classified as critical by the Joint Technology Committee be funded for FY 2016-17. The recommended appropriation for the critical components of the request is $1,826,475 General Fund.

Analysis: Staff recommends funding the critical components of the request because it provides Colorado State University – Pueblo with real time network security logging and notification in response to the changes in network security and threats levied against the campus network. Additionally, funding the critical components of the request will provide moneys to replace outdated analog connections with digital connections in classrooms to improve instructional delivery. The following table summarizes the recommendation and the request.

Colorado State University - Pueblo Requests and Recommendations		
Recommended Components	**Amount**	**JTC Rating**
Campus Security System	$372,750	Critical
Classroom Digital Technology	1,453,725	Critical
Total Recommended Components	**$1,826,475**	
Components Not Recommended		
Unified Messaging	$947,205	High
Containerized Datacenter	1,034,250	Low
Fiber Truck	136,500	Low
Total Components Not Recommended	**$2,117,955**	

➔ **Community College of Denver Technology Infrastructure**

Lead Department	Project Type
Higher Education	New

Request: Community College of Denver seeks a one-time appropriation of $1,342,134 total funds, including $993,179 General Fund for FY 2016-17 to update and improve its technology infrastructure and telephony equipment.

JTC Recommendation: The Joint Technology Committee recommends that this project be funded for FY 2016-17 if additional funds are available.

JBC Staff Recommendation: Staff recommends that the components of the request that have been classified as critical by the Joint Technology Committee be funded for FY 2016-17. The recommended appropriation for the critical components of the request is $1,046,383 total funds, including $502,263 General Fund.

Analysis: Staff recommends funding the critical components of the request because without the network replacement and telephony projects the Community College of Denver is risking its ability to conduct classes or regular business by relying on outdated equipment. The following table summarizes the recommendation and the request.

Community College of Denver Requests and Recommendations		
Recommended Components	**Amount**	**JTC Rating**
Network Replacement Project	$781,683	Critical
Telephony Project	264,700	Critical
Total Recommendation	**$1,046,383**	
Components Not Recommended		
Data Security and Wireless Project	$105,751	High
Fiber Cabling	150,000	High
Video Conferencing	40,000	Medium
Total Not Recommended	**$295,751**	

➔ **Lamar Community College Technology Infrastructure**

Lead Department	Project Type
Higher Education	New

Request: Lamar Community College seeks a one-time appropriation of $644,400 General Fund for FY 2016-17 to upgrade its technology infrastructure in the areas of wired and wireless networks, servers, IP telephony devices, and office and classroom computer equipment.

JTC Recommendation: The Joint Technology Committee recommends that this project be funded for FY 2016-17 if additional funds are available.

JBC Staff Recommendation: Staff recommends that the components of the request that have been classified as critical by the Joint Technology Committee be funded for FY 2016-17. The recommended appropriation for the critical components of the request is $170,900 General Fund.

Analysis: Staff recommends funding the critical components of the request because its existing switches and wireless network infrastructure at Lamar Community College are not fault tolerant and are prone to extended outages negatively impacting voice and data communications. The following table summarizes the recommendation and the request.

Lamar Community College Request and Recommendations		
Recommended Components	**Amount**	**JTC Rating**
Switches	$107,700	Critical
Wireless Network Infrastructure	63,200	Critical
Total Recommendation	**$170,900**	
Components Not Recommended		
Classroom Technology	$184,800	High
Computers	173,700	High
Servers	59,000	Medium
Phones	56,000	Low
Total Not Recommended	**$473,500**	

➔ **Otero Junior College Technology Infrastructure**

Lead Department	Project Type
Higher Education	New

Request: Otero Junior College seeks a one-time appropriation of $637,500 General Fund for FY 2016-17 to upgrade its technology infrastructure in the areas of its storage area network, core switch, and telepresence capabilities.

JTC Recommendation: The Joint Technology Committee recommends that this project be funded for FY 2016-17 if additional funds are available.

JBC Staff Recommendation: Staff recommends that the component of the request that has been classified as critical by the Joint Technology Committee be funded for FY 2016-17. The recommended appropriation for the critical component of the request is $250,000 General Fund.

Analysis: Staff recommends funding the critical component of the request because its existing switch is no longer supported and is at risk of failure due to age. The following table summarizes the recommendation and the request.

Otero Community College Requests and Recommendations		
Recommended Components	**Amount**	**JTC Rating**
Core Switch Replacement	$250,000	Critical
Total Recommended Components	**$250,000**	
Components Not Recommended		
Storage Area Network	$125,000	High
Telepresence	225,000	Medium
Classroom Project	20,000	Medium
Digital Signage	17,500	Low
Total Components Not Recommended	**$387,500**	

➔ **Pueblo Community College Critical Core Technology Infrastructure**

Lead Department	Project Type
Higher Education	New

Request: Pueblo Community College seeks a one-time appropriation of $1,490,050 General Fund for FY 2016-17 to replace and upgrade its technology infrastructure in the areas of core network switches, disk storage, wireless networks, collaborative conferencing, and servers.

JTC Recommendation: The Joint Technology Committee recommends that this project be funded for FY 2016-17 if additional funds are available.

JBC Staff Recommendation: Staff recommends that the components of the request that have been classified as critical by the Joint Technology Committee be funded for FY 2016-17. The recommended appropriation for the critical components of the request is $959,300 General Fund.

Analysis: Staff recommends funding the critical components of the request because the switches and disk storage solutions at Pueblo Community College are at or nearing end-of-life and are no longer supported. Both categories of infrastructure are exposed to potential security attacks or failure given the age of the hardware and software. The following table summarizes the recommendation and the request.

Pueblo Community College Requests and Recommendations		
Recommended Components	**Amount**	**JTC Rating**
Core Network Switches / Associated Backup Power	$741,700	Critical
Disk Storage Solutions	217,600	Critical
Total Recommended Components	**$959,300**	
Components Not Recommended		
Network Wireless Solutions	$165,000	Medium
Collaborative Conferencing Solutions	191,000	Low
Servers (Virtual / Physical Components)	174,750	Low
Total Components Not Recommended	**$530,750**	

➡ **University of Northern Colorado Wireless and Network Infrastructure Upgrade**

Lead Department	Project Type
Higher Education	New

Request: University of Northern Colorado seeks a one-time appropriation of $3,123,300 General Fund for FY 2016-17 to upgrade its technology infrastructure in the areas of wireless and network technologies.

JTC Recommendation: The Joint Technology Committee recommends that this project be funded for FY 2016-17 if additional funds are available.

JBC Staff Recommendation: Staff recommends that the components of the request that have been classified as critical by the Joint Technology Committee be funded for FY 2016-17. The recommended appropriation for the critical components of the request is $2,412,750 General Fund.

Analysis: Staff recommends funding the critical components of the request because the University of Northern Colorado's wireless and network infrastructure is at its end-of-life and exposed to potential security attacks or failure due to age. The following table summarizes the recommendation and the request.

University of Northern Colorado Requests and Recommendations		
Recommended Components	**Amount**	**JTC Rating**
Wireless and Network Infrastructure (Controllers, Failing Switches, Access Points)	$605,625	Critical
Wireless and Network Infrastructure (Major Switch Investment)	1,807,125	Critical
Total Recommended Components	**$2,412,750**	
Components Not Recommended		
Wireless and Network Infrastructure (Wireless Access Units and Expansion)	$567,800	Medium
Total Components Not Recommended	**$567,800**	

FY 2016-17 Cash-funded Projects

➔ Child Care Automated Tracking System Modernization

Lead Department	Project Type	OSPB Priority	JTC Priority
Human Services	Continuation	#4	Cash-funded #1

Request: The Department of Human Services requests an appropriation of $1,458,125 federal funds for FY 2016-17 for the second and final year of a two year request to implement a hybrid approach to enhance and replace the Child Care Automated Tracking System (CHATS).

JTC Recommendation: This project was recommended for funding for FY 2016-17 by the Joint Technology Committee.

JBC Staff Recommendation: Staff recommends an appropriation of $1,458,125 federal funds for FY 2016-17 for FY 2016-17 for the continuation of this project.

Analysis: The Child Care Automated Tracking System (CHATS) supports the Colorado Child Care Assistance Program (CCCAP) in the Department of Human Services. CCCAP provides financial assistance to low-income families that are working, searching for employment or are in training, and families that are enrolled in the Colorado Works Program and need child care services to support their efforts toward self-sufficiency. CCCAP is administered through county departments of social services under the direction of the Department's Division of Child Care.

For FY 2013-14, the General Assembly provided funding to conduct a needs assessment to identify options for the future operational and functional sustainability of CHATS. The Department of Human Services contracted with BerryDunn to undertake the assessment, which included in-depth interviews with county CHATS personnel. The consultant recommended a hybrid approach to incrementally enhance and replace currents CHATS modules, as opposed to a full system replacement or doing nothing.

For FY 2015-16, the legislature provided an appropriation of $1,533,125 federal funds from the Child Care Development Fund for the first year of the hybrid approach to enhancing and replacing CHATS. Staff recommends that funding be provided to continue this project for FY 2016-17 as requested by the Department and as recommended by the Joint Technology Committee. This funding will allow the Department to complete nearly all facets of this modernization project.

➔ **Laboratory Information Management System**

Lead Department	Project Type	OSPB Priority	JTC Priority
Public Health and Environment	New	#2	Cash-funded #2

Request: The Department of Public Health and Environment requests an appropriation of $515,972 total funds to purchase an off-the-shelf Laboratory Information Management System (LIMS) to replace the existing Laboratory Information Tracking System (LITS) that has been in place since 2001.

JTC Recommendation: This project was recommended for funding for FY 2016-17 by the Joint Technology Committee.

JBC Staff Recommendation: Staff recommends an appropriation of $515,972 total funds, including $192,119 cash funds and $323,853 federal funds, for FY 2016-17 for this project.

Analysis: The new LIMS will replace LITS that was issued for free by the federal Centers for Disease Control (CDC). The Department has used LITS since 2001 to track, process, and report end-to-end laboratory data for the Laboratory Services Division (LSD). The Department intends to purchase the LIMS software and support from an outside vendor. The new tools will include federal Health Insurance Portability and Accountability Act of 1996 (HIPAA)-compliant electronic reporting, electronic billing capabilities, electronic test requisitions, and the ability to interface with laboratory. Staff recommends the project based on its merits, however the Joint Budget Committee may wish to consider the source of funding for the project, the Laboratory Cash Fund, as a variable in determining whether or not to fund the project for FY 2016-17.

The Laboratory Cash Fund receives revenue from fees charged for testing microbiological specimens (e.g. HIV, West Nile, Hantavirus, tuberculosis, pertussis, syphilis, etc.) submitted to the State Laboratory. The Fund is used to pay for the chemical, bacteriological and biological laboratory units within the State Laboratory.

The Department's request for LIMS in the amount of $515,972 total funds, of which $192,119 is from the Laboratory Cash Fund, may drive a fee increase based on Department-provided data. The following table illustrates the existing fund balance in the Laboratory Cash Fund without factoring in moneys needed for the LIMS project.

Laboratory Cash Fund					
	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Beginning Fund Balance	$961,456	$463,789	$256,510	$51,629	$53,019
Revenue	1,338,627	1,211,006	1,114,705	1,170,439	1,170,439
Expenditures	(1,836,294)	(1,418,285)	(1,319,586)	(1,169,049)	(1,187,487)
Ending Fund Balance	$463,789	$256,510	$51,629	$53,019	$35,971

The following table summarizes the Laboratory Cash Fund balance factoring in moneys needed for the LIMS project. In order for the Fund to remain solvent, the Department may need to raise fees to cover its anticipated expenditures beginning in FY 2016-17.

Laboratory Cash Fund					
	FY 2013-14	**FY 2014-15**	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**
Beginning Fund Balance	$961,456	$463,789	$256,510	$51,629	($139,100)
Revenue	1,338,627	1,211,006	1,114,705	1,170,439	1,170,439
Expenditures	(1,836,294)	(1,418,285)	(1,319,586)	(1,169,049)	(1,187,487)
LIMS Project	0	0	0	(192,119)	(21,897)
Ending Fund Balance	$463,789	$256,510	$51,629	($139,100)	($178,045)

➔ **Unemployment Insurance Mainframe Migration and Modernization**

Lead Department	Project Type	OSPB Priority	JTC Priority
Labor and Employment	New	Not Included	Cash-funded #3

Request: The Department of Labor and Employment requests an appropriation of $25,263,480 cash funds for FY 2016-17 for the first year of a three year project to migrate the current benefits and employer premium systems onto a modernized computer platform. The Department had previously been a partner in a multi-state consortium called WyCAN to obtain an unemployment insurance tax and benefit system. This initiative encountered significant challenges and the consortium disbanded. As a result, the Department seeks funds to conduct a Colorado-specific project to upgrade its existing systems.

JTC Recommendation: This project was recommended for funding for FY 2016-17 by the Joint Technology Committee.

JBC Staff Recommendation: Staff recommends an appropriation of $25,263,480 cash funds for FY 2016-17 for this project.

Analysis: The Department, in conjunction with the Governor's Office of Information Technology, was a partner in a multi-state consortium called WyCAN to obtain an unemployment insurance tax and benefit system. WyCAN, which included Wyoming, Colorado, Arizona, and North Dakota, entered into a contract with HCL America, Inc. to build out the new system. This initiative encountered significant challenges and the consortium disbanded and HCL America, Inc. is no longer working on this project. The contract was terminated with two years remaining and with only a fraction of funds expended. Today, the legality of the contract termination is being challenged by the vendor.

The Department of Labor and Employment had expended $6.1 million of State funds prior to the contract termination. A total of $20.0 million of State funds budgeted for the project was not expended due to the contract termination. The Department still faces the same information technology system challenges, however, that spurred its participation in the failed WyCAN project. The existing system is over 30 years old, unreliable and challenging to maintain. It does not have the ability to meet claimant, employer, or departmental needs and reporting requirements. As a result of issues with the existing systems, the Department and the Governor's Office of Information Technology have designed a Colorado-specific project to upgrade its current benefits and employer premium systems onto a modernized computer platform.

The proposal submitted calls for an appropriation of $51,476,960 cash funds over two years ($25,263,480 for FY 2016-17 and $26,213,480 for FY 2017-18) from the Employment and Training Technology Fund and the Unemployment Revenue Fund to convert the mainframe COBOL code to a different programming language and move the data stored in the mainframe to a relational database. The impacted mainframe systems will be the Colorado Unemployment Benefits System (CUBS) and the Colorado Automated Tax System (CATS).

Staff recommends that funding be provided for this project for FY 2016-17 as requested by the Department and as recommended by the Joint Technology Committee. The State is in the unenviable position of operating an outdated and cumbersome system that is vulnerable to failure. It must be replaced. Unfortunately, prior efforts to upgrade the system have been unsuccessful. This alone makes this high-risk project that the legislature may wish to exert greater oversight than usual to ensure that it is completed and within budget. There are other factors, too, that may impact the budget that staff recommends the Joint Budget Committee follow over the course of the project's three year implementation timeline.

First, staff recommends that the Joint Budget Committee monitor costs associated with migrating data from the mainframe to a relational database. The Department has experience in this area having done a similar migration for its workers' compensation system, but challenges may arise once the data is copied from one format to another that may increase costs. These challenges are difficult to fully identify until the migration process takes place.

Second, staff recommends that the Joint Budget Committee monitor costs associated with converting COBOL code to a more modern programming language. It is common practice to use a code conversion tool to take code from one language and translate it into another language. The goal of such an endeavor is to reuse as much code as possible to cut down on costs associated with writing computer code from scratch. Conversion tools work well if the source code used, COBOL in this case, was written in a structured manner that can easily be translated by the tool to a different language. Given the amount of code that must be converted, it is difficult to fully identify how much manual code conversion will need to be done. Depending on the amount of manual code conversion that may need to be performed, costs may increase over what is planned for now.

Long Bill Footnotes and Requests for Information

LONG BILL FOOTNOTES

Staff does not recommend the inclusion of any Long Bill footnotes related to capital construction information technology projects.

REQUESTS FOR INFORMATION

Staff does not recommend the inclusion of any requests for information related to capital construction information technology projects.

JBC Staff FY 2016-17 Figure Setting
Information Technology
Capital Construction Projects

Presented by:

Kevin Neimond, JBC Staff
March 10, 2016

Overview

Staff Recommendation
$49.9 total funds
$12.0 General Fund

Request
$60.4 total funds
$22.4 General Fund

9 State-funded Projects

3 Cash-funded Projects

12 Decision Items

Decision Items: Cash-Funded Projects

Change Requests

Child Care Automated Tracking System Modernization (p.18)

Laboratory Information Management System (p.19)

UI Mainframe Migration and Modernization (p.21)

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