

AGENDA OF THE UTAH STATE BUILDING BOARD

Wednesday, March 4, 2015
Utah State Library for the Blind and Disabled
Rooms 218-219
Salt Lake City, Utah
9:00 am

- (Action) 1. **Approval of Minutes of January 14, 2015** Tab 1
- (Action) 2. **Request for Approval of University of Utah Hospital West Pavilion Building #522 Level 5, Hospital West Pavilion Building #522 Level B, and Madsen Surgery Center** Tab 2
- (Action) 3. **Request for Approval of DFCM's Revised Design Requirements** Tab 3
- (Action) 4. **Request for Approval of DFCM's Revised Space Standards** Tab 4
- (Information) 5. **Revised Architectural/Engineering Fee Schedule** Tab 5
- (Information) 6. **Administrative Reports for University of Utah and Utah State University**..... Tab 6
- (Information) 7. **Administrative Report for Department of Transportation** Tab 7
- (Information) 8. **Administrative Report for DFCM** Tab 8
- (Information) 9. **Future Agenda Items**

Notice of Special Accommodation During Public Meetings - In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify Cee Cee Niederhauser 538-3261 (TDD 538-3696) at least three days prior to the meeting. *This information and all other Utah State Building Board information is available on DFCM web site at:*
<http://dfcm.utah.gov/dfcm/utah-state-building-board.html>



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4 2015
Subject: **Approval of Minutes of January 14, 2015**

Attached for your review and approval are the minutes of the January 14, 2015 Building Board Meeting.

JR: cn
Attachments

Utah State Building Board



MEETING

January 14, 2015

MINUTES

Members in Attendance:

Ned Carnahan, Chair
Chip Nelson
David Tanner
Gordon Snow
David Fitzsimmons

Guests in Attendance:

Jeff Reddoor	Utah State Building Board
Tyson Gregory	Utah State Building Board
Mike Smith	Utah State Building Board
Kim Hood	Department of Administrative Services
Rich Amon	Department of Administrative Services
Bruce Whittington	Division of Facilities Construction & Management
Jim Russell	Division of Facilities Construction & Management
Lee Fairbourn	Division of Facilities Construction & Management
Wayne Christensen	Division of Facilities Construction & Management
CeeCee Niederhauser	Division of Facilities Construction & Management
Darrell Hunting	Division of Facilities Construction & Management
Alan Bachman	Attorney General's Office
Nicole Alder	Attorney General's Office
Ralph Hardy	USHE
Ken Nye	University of Utah
Mike Perez	University of Utah
Cory Higgins	University of Utah
Sherry Ruesch	Dixie State University
Bob Askerlund	Salt Lake Community College
Malin Francis	Salt Lake Community College
Kevin Griffin	UDOT
Tyler Brinkerhoff	UCAT
Tricia Pilny	Ken Garner Engineering
Bryan Webb	Layton Construction

Chris Coutts	Architectural Nexus
Jerry Jensen	Department of Corrections
Tiger Funk	Southern Utah University
Chad Nielsen	MHTN Architects
Dan Clark	State Parks and Recreation
Jamie Harsh	State Parks and Recreation
Amber Craighill	BHB Engineers
Mack McDonald	Department of Human Services
Travis Hogge	Weber State University
Jackie McGill	Spectrum Engineers
Lori Haglund	VBFA
Keri Hammond	Market Link

On Wednesday, January 14, 2015 the Utah State Building Board held a regularly scheduled meeting in Room 250 of the Utah State Capitol Building in Salt Lake City, Utah. Chair Ned Carnahan called the meeting to order at 9:00 am. It was noted that Board member Fred Hunsaker was excused from the meeting.

□ **APPROVAL OF MINUTES OF DECEMBER 10, 2014**

Chair Carnahan asked if there were any additions or corrections to the minutes. There were none.

MOTION: Gordon Snow moved to approve the Minutes of December 10, 2014. The motion was seconded by David Tanner and passed unanimously.

□ **LONG TERM LEASE REQUEST IN CEDAR CITY, UT FOR A NEW PUBLIC SAFETY AND DEPARTMENT OF CORRECTIONS BUILDING**

Wayne Christensen, Real Estate Specialist from DFCM, Commissioner Dale Brinkerhoff, and Major Mike Rapich from the Department of Public Safety reported on this project. Mr. Christensen said this new facility in Iron County has been in the works for several years. It will be located on property in front of the existing Sheriff's Offices and County Jail Complex. Major Rapich added this building will be constructed by Iron County with a \$3 Million bond from the "Permanent Community Impact Fund" and will house the Utah Highway Patrol, Driver License, Communication Dispatch, Adult Probation and Parole, and the Iron and Garfield County Narcotics Task Force. The facility is sized for the 20 year growth of Public Safety and Corrections. Adult Probation and Parole is presently located in the old DABC store on South Main – a total of 3,366 sf of space which does not allow for interview rooms, drug testing or private offices. This new space will correct all the deficiencies of the present AP&P office. The co-location of all these five agencies will improve the daily communication between the agencies. This 20 year lease will provide a small net savings in lease payments along with the needed additional square footage.

MOTION: David Tanner moved to approve the Long Term Lease Request in Cedar City for a New Public Safety and Department of Corrections Building. The motion was seconded by Chip Nelson and passed unanimously.

□ **ADMINISTRATIVE REPORTS FOR UNIVERSITY OF UTAH AND UTAH STATE UNIVERSITY**

Ken Nye from the University of Utah reported there were nine design and one planning/study agreement during this reporting period. Notable was item #4 HTW Pipeline Replacement Final Phases Project. This agreement is for the design of the final phase of the HTW pipeline replacement component of the Utility Infrastructure Project. The University is taking a small portion of the current funding they have in place to get the design started. Mr. Nye reminded the Board of last year's legislative decision to fund their Infrastructure Project through Capital Improvements. Since this phase of the project is under \$10 Million it made sense to have this portion managed by the University. Under Construction Contracts, notable was item #5 Wall Mansion Renovation. This CM/GC agreement was awarded to McCullough Engineering and Contracting on a sole source basis under the provision in the State Procurement Code that provides for direct award without competition when this is "a condition of a donation". McCullough had been engaged by the former owner of this property to perform previous work. The donors, who are funding this project, required the continued use of McCullough as a condition of their donations. The Project Reserve Fund shows two capital improvement projects that were closed out with the residual balance totaling \$7,089.38 transferred to Project Reserve as provided by statute. There were no decreases to this fund. The Contingency Reserve Fund had two projects which provided decreases to this fund -- both were for unforeseen conditions. There was a decrease of \$4,000 for the Social & Behavioral Science – Repair Exterior Concrete & Steel which were for very small items due to unforeseen conditions discovered during construction. The second was for \$12,529.85 for the Art & Architecture Fume Hood & Fire Protection Upgrade which covers the cost of additional speaker strobes that were required by the University's new Fire Marshall. This requirement had been missed in the plan review.

Ben Berrett from Utah State University was excused from the meeting and will give USU Report at the next Board Meeting.

□ **WEBER STATE UNIVERSITY'S REQUEST TO COMPLETE A SYSTEM RENOVATION FOR THE MILLER ADMINISTRATION BUILDING ON THE OGDEN CAMPUS**

Mark Halverson, Director of Campus Planning and Construction at Weber State University proposed an agency funded renovation of the Miller Administration Building. This facility was constructed in 1970. Mechanical, electrical and plumbing systems have exceeded their life expectancy for this 42,000 sf building. Weber State worked with DFCM to determine if a multi-year phased approach might be possible, but it was determined this was too disruptive to the critical operations in the building. A single, three and a half month renovation of the building, seemed more feasible. The cost of renovation is estimated at \$4 Million and will be funded by the Energy Savings Program and University Capital Budget Funding. No additional O&M will be requested. This will be a DFCM managed project. Board members expressed concerns with the seismic conditions of the building. Mr. Halverson reassured the Board the building was re-roofed a few years ago and seismic improvements were made at that time.

MOTION: **Gordon Snow moved to approve Weber State University's Request to Complete a System Renovation for the Miller Administration Building on the Ogden Campus. The motion was seconded by David Fitzsimmons and passed unanimously.**

□ **WEBER STATE UNIVERSITY'S REQUEST TO RENOVATE A RECENTLY ACQUIRED OFFICE BUILDING INTO A CLASSROOM BUILDING**

Mark Halverson reported a few years ago the University acquired a property close to their Davis Campus and near the south gate of Hill Air Force Base. The 2.25 acres of land and 27,000 sf office building had a previous tenant, who vacated the property in April, 2013. WSU wishes to renovate this facility into classroom space. The newly renovated facility will be used for evening classrooms for WSU and leased as daytime space of NUAMES Early College Charter High School. Estimated costs are at \$3.5 Million with upfront funding coming from accumulated lease revenue from the building and Continuing Education Funds. The lease payment from NUAMES will easily pay back all renovation costs as well as cover O&M. This renovation will provide 15 new classrooms, 2 new class-labs, faculty offices and student study space with minor structural upgrades.

MOTION: **Chip Nelson moved to approve Weber State University's Request to Renovate a Recently Acquired Office Building into a Classroom Building. The motion was seconded by David Tanner and passed unanimously.**

□ **FACILITY AUDIT REPORTS**

Jeff Reddoor introduced Mike Smith and Tyson Gregory, Facility Maintenance Auditors for the Building Board. The facility audits are in progress and should be completed by July, 2015. This report indicates how the agencies and institutions measure up to the State Facility Maintenance Standards. A score of 90% or higher is required in order for these facilities to be compliant with the state standards. Board members expressed concerns with some of the agencies that had scored low on the report and asked Mike Smith to report on any issues that should be brought to their attention. Jeff Reddoor mentioned the weighting factor recently used in the audit report which lowered most scores 1-2%. The original weight factors were 50/50 in work vs actual building conditions but now it is 75/25 which better reflects what is seen when auditors walk through the buildings. Improvements are needed by every agency and institution so reports are distributed to them with noted areas of improvement. Jeff Reddoor explained each year DFCM sends out a delegation notice (usually in August) which allows institutions and agencies to maintain their buildings themselves upon meeting certain state standards. This year there were three agencies that did not meet standards and were given one year to make the needed improvements. If these standards are not raised, then DFCM can revoke their delegation authority. Board members requested that an Executive Summary of the report be supplied to the Board with more detail including the judging criteria for the audit. Mike Smith responded a report will be made available when the audit is complete. Infrastructure was also a concern and the possibility of inclusion in the audit. In addition, Board members requested a five-year running average be included in the audit report to the Board. David Fitzsimmons expressed his support of the audit report and comments that this will be a forecasting tool for the Board.

Dan Clark, Construction Manager for Utah State Parks requested the scoring range be amended on a scale of 1-10. The original 1-5 scale for scoring does not portray an accurate rating of the facility because a score of 4 = 80% which is a fail. Mr. Clark feels the scoring matrix should be amended to be fairer. Jeff Reddoor said this standard was adopted by the Building Board as the standard, however changes can be made in the future. Jeff Reddoor will review this suggestion. Mr. Clark, a previous DFCM employee, also encouraged the Board to adopt a preventative approach to paving maintenance which would be a cost savings to the state.

□ **PRE-LEGISLATIVE APPROVAL OF FY 2016 CAPITAL IMPROVEMENT LIST**

Jeff Reddoor said this Capital Improvement List will be presented to the Legislature. With the help of DFCM, the use of CBE's, inflation indexes, and the new Capital Improvement Scoring Criteria, this is the recommended list that will be presented in the Five Year Book. The 1.1% Capital Improvement funding will be requested again this year. Last year this amounted to \$104 Million. This year, with the re-evaluation of the current replacement value of the State's inventory, this number has increased to \$111,546,900. The spreadsheet shows three different scenarios for possible funding:

- 1) Base funding of \$46,770,777
- 2) If funding is .09% = \$91,265,700
- 3) If funding is 1.1% = \$111,546,900

After the amount is determined and legislative approval received, possible adjustment will take place as needed. In reference to the FY 2016 Capital Improvement List, Board members expressed concerns that the state-wide energy metering funds be requested by individual agencies and institutions rather than remain in one lump sum so that it could be put into action. In addition, very little was allocated to paving on the CI List and Board members would like to see this addressed. Jeff Reddoor responded that some of the institutions and agencies have asked for metering projects, but not every one of them. It was determined that there should be a specific fund for metering and DFCM would oversee the distribution according to highest needs. The intention was to have the State's Energy Management Group manage this fund. However, if the Board chooses, this fund could be dedicated to a specific institution or agency for a project. In response to paving and roofing funds, Bruce Whittington reminded the Board that when roofing or paving projects come forward, it is in conjunction with DFCM. This year it was determined that additional funding was not needed.

MOTION: David Tanner moved to approve the Pre-Legislative FY 2016 Capital Improvement List as a preliminary list only and acknowledged this is in preparation for the final Capital Improvement List which will be approved at a later date. The motion was seconded by David Fitzsimmons and passed unanimously.

□ **ADMINISTRATIVE REPORT FOR DEPARTMENT OF TRANSPORTATION**

Kevin Griffin from UDOT indicated there were no new contracts issued during this reporting period. They have numerous projects being advertised this month. UDOT does not have an Contingency Fund. Yesterday, UDOT had the final selection on the Hooper Maintenance

Station Design Build Project. Three teams presented various different plans for the Hooper Station. A selection was made and agreements will be drawn up shortly. They had set a minimum of a 50 year design for their building which was met with all the teams. In addition, a lot of innovations were introduced creating more efficiency with less cooling and heating costs. UDOT may potentially adopt this new type of design as their proto-type which will enable them to stretch their dollars as much as possible in the future.

□ **ADMINISTRATIVE REPORT FOR DFCM**

DFCM Interim Director, Bruce Whittington reported DFCM processed ten leases which were all renewals. There was typical activity with the Professional Services Agreement as well as Construction Contracts. During this reporting period, DFCM awarded 28 Professional Agreements and 29 Construction Contracts. The Contingency Reserve Fund increases were a result of the Capital Development Fund which transferred monies out from seven projects with a total value of \$929,000 this period and leaves a balance of \$5.7 Million. The Capital Improvement Contingency Reserve Fund transferred out to twelve projects with a value of \$195,000 and has a balance of \$4.4 Million. There was no activity in the Project Reserve Fund this period. The remaining balance is just under \$3.8 Million. The Capital Improvement Reserve Fund saw transfers which increased the balance by \$315,000 with a total of \$6.5 Million in that fund.

□ **FUTURE AGENDA ITEMS**

Chair Carnahan asked if there were any future agenda items to be discussed. Gordon Snow encouraged the distribution of an Executive Summary to the Legislature which clarifies some of the issues and recommendations from the Board this year. Jeff Reddoor informed that the Five Year Book will be on the Building Board's Website tomorrow. Mr. Snow also expressed concern that the Board review some of the projects from previous years which did not receive O&M funding.

Chair Carnahan also thanked DAS Director, Kim Hood for attending the meeting.

□ **ADJOURNMENT**

MOTION: David Tanner moved to adjourn the meeting. The motion was seconded by Gordon Snow and passed unanimously.

The meeting adjourned at 10:36 am



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4, 2015
Subject: **Request for Approval of University of Utah Hospital West Pavilion Building #522 Level 5, Hospital West Pavilion Building #522 Level B, and Madsen Surgery Center**
Presenter: Quinn McKenna, Chief Operating Officer at University of Utah

Recommendation:

Jeff Reddoor recommends the Board approve the request from the University of Utah for the projects reference above. These three projects will allow the processes of the School of Medicine Building to continue at other locations, facilitate the demolition of the School of Medicine Building (Building #521), and allow the University to move forward with future construction of the New Medical, Education and Discovery Building (MED) and the Rehabilitation Hospital.

Background:

University Hospital West Pavilion, Building #522, Level 5 – The West Pavilion, Building #522 was constructed with a shelled 5th floor in order to accommodate future expansion of the patient care unit. There is now a shortage of acute care patient rooms and the University would like to convert this shelled space to finished space in order to expand this unit as well as relocate the Rehabilitation Unit and Therapy Services from Building #521 to this facility. The proposed budget for this project is \$12 Million and will be funded by the University Hospital and Clinics funds.

University Hospital West Pavilion, Building #522, Level B – Level B of the West Pavilion Building #522 is a shelled sub-basement level which when finished will be used to house the University's Facilities and Engineering (F&E) Department as well as other Hospital services. The proposed budget for this project is \$6 Million and will be funded by the University Hospital and Clinics funds.

Madsen Surgery Center – This project will convert approximately 8,000 sf of under-utilized, existing surgical services space into more efficient outpatient clinic space in the Madsen Surgery Center. In addition, clinics which will be displaced in Building #521/#525 and will be relocated here which will accommodate 20,000 patient visits each year. The proposed budget is \$5 Million and will be funded by the University Hospital and Clinics funds.

The O&M for all three projects will be paid by the University Hospital and Clinics funds. These projects are consistent with the University's Master Plan.

Attachments
JR: cn

January 15, 2015

Mr. Jeff Reddoor, Director
Capital Planning & Budget
Utah State Building Board
4110 State Office Building
Salt Lake City, UT 84114

Dear Mr. Reddoor:

**RE: *University of Utah
Hospital West Pavilion, Building 522, Level 5
Hospital West Pavilion, Building 522, Level B
Madsen Surgery Center***

The three projects referenced above are being provided for State Building Board approval at the February 4, 2015 meeting.

Consistent with recent presentations to Building Board in 2014, the University of Utah plans to demolish the current School of Medicine Building (Building #521) as noted in the updated Campus Master Plan. In order to do this, a series of projects will be constructed that will continue decant of the School of Medicine Building. These combined efforts will allow for the eventual construction of the Medical, Education and Discovery Building (MED) and the Rehabilitation Hospital.

The following three projects being submitted for approval are:

University Hospital West Pavilion, Building #522, Level 5

The University constructed the West Pavilion of the Hospital (Building 522) with a shelled 5th floor. The original design for the space was intended to accommodate an additional patient care unit at the point it is required. The Hospital is now experiencing an increased shortage of acute care patient rooms. Apart from this, in order to facilitate the eventual demolition of Building 521, School of Medicine Building, the Rehabilitation Unit and Therapy Services need to be relocated out of Building 521.

This proposed project will convert the existing shelled space into usable space for inpatient care. It will provide needed acute care beds and facilitate the relocation of the Rehabilitation Unit and Therapy Services out of Building 521.

The proposed total project budget is \$12,000,000 and will be funded by University Hospital and Clinics funds. State funds will not be used for the design or construction of this facility.

University Hospital West Pavilion, Building #522, Level B

The University constructed the West Pavilion of the Hospital (Building 522) with a shelled sub-basement level. The original design for the space was intended to accommodate the Facilities and Engineering (F&E) Department currently located in Building 521, but due to budget constraints was not constructed at that time. In order to facilitate the eventual demolition of Building 521, it is recommended that the finish out of this shelled space for its intended purpose, housing the F&E Department and other Hospital services, be accomplished at this time.

The proposed total project budget is \$6,000,000 and will be funded by University Hospital and Clinics funds. State funds will not be used for the design or construction of this facility.

Madsen Surgery Center

In preparation for the demolition of Building 521, housing the School of Medicine, ambulatory clinical services, rehabilitation and hospital support functions, this proposed project will convert approximately 8,000 square feet of under-utilized, existing surgical services space into outpatient clinic space in Madsen Surgery Center. It will provide space for clinics displaced from Building 521 and/or Building 525 as part of the demolition of Building 521. The renovated clinic space will accommodate 20,000 patient visits per year and relocate approximately 30 employees.

The proposed total project budget is \$5,000,000 and will be funded by University Hospital and Clinics funds. State funds will not be used for the design or construction of this facility.

As an auxiliary operation, O&M for all three projects will be paid for by University Hospital and Clinics funds. Representatives from University of Utah Health Care will be attending the February meeting offering a presentation that will provide additional details of these projects. The attached power point document further explains the benefits this project will have to the University, confirming no adverse impact to the state.

These projects are consistent with the University of Utah's Campus Master Plan that was approved by the University's Board of Trustees, State Board of Regents, and the State Building Board; do not adversely impact the State of Utah; and as mentioned earlier, will not require state funds for design, construction, or O&M.

The University of Utah respectfully seeks your support of this request and the opportunity to present these projects for approval at the February 4, 2015 Building Board meeting.

Thank you for your consideration and continued support.

Sincerely,

A handwritten signature in black ink, appearing to read "John Nixon", with a stylized flourish at the end.

John Nixon
Senior Chief Administrative Officer and CFO

Cc: Michael G. Perez, Associate Vice President
David Browdy, Chief Financial Officer, Health Sciences
Jason Perry, Vice President

Utah State Building Board

February 2015



❑ Seeking approval for 3 projects:

- 1. West Pavilion (522) – Level 5 Build Out**
- 2. West Pavilion (522) – Level B Build Out**
- 3. Madsen Surgery Center Remodel**

❑ All 3 projects were reviewed/approved by:
Hospital Board in March 2014
Board of Trustees in November 2014
Board of Regents in January 2015

❑ Total funding to be approved
\$23 Million

❑ No State O&M requested

Seeking Approval for the following projects:

1. West Pavilion (522) – Level 5 Build Out

- Create 37 acute care patient rooms
- Build out existing shelled space
- Cost \$12 Million

2. West Pavilion (522) – Level B Build Out

- Build out existing shelled space
- Relocate Facilities & Engineering Department from Building 521
- Cost \$6 Million

3. Madsen Surgery Center Remodel

- Convert existing surgery center to outpatient clinic
 - Relocate clinic volumes from Hospital and School of Medicine buildings
 - Cost \$5 Million
-



West Pavilion (522)

West Pavilion (522) – **Level 5** Build Out

✓ **Scope**

- **Build out 30,000 SF of existing shelled space**
- **Create 37 acute care patient rooms**

✓ **Justification**

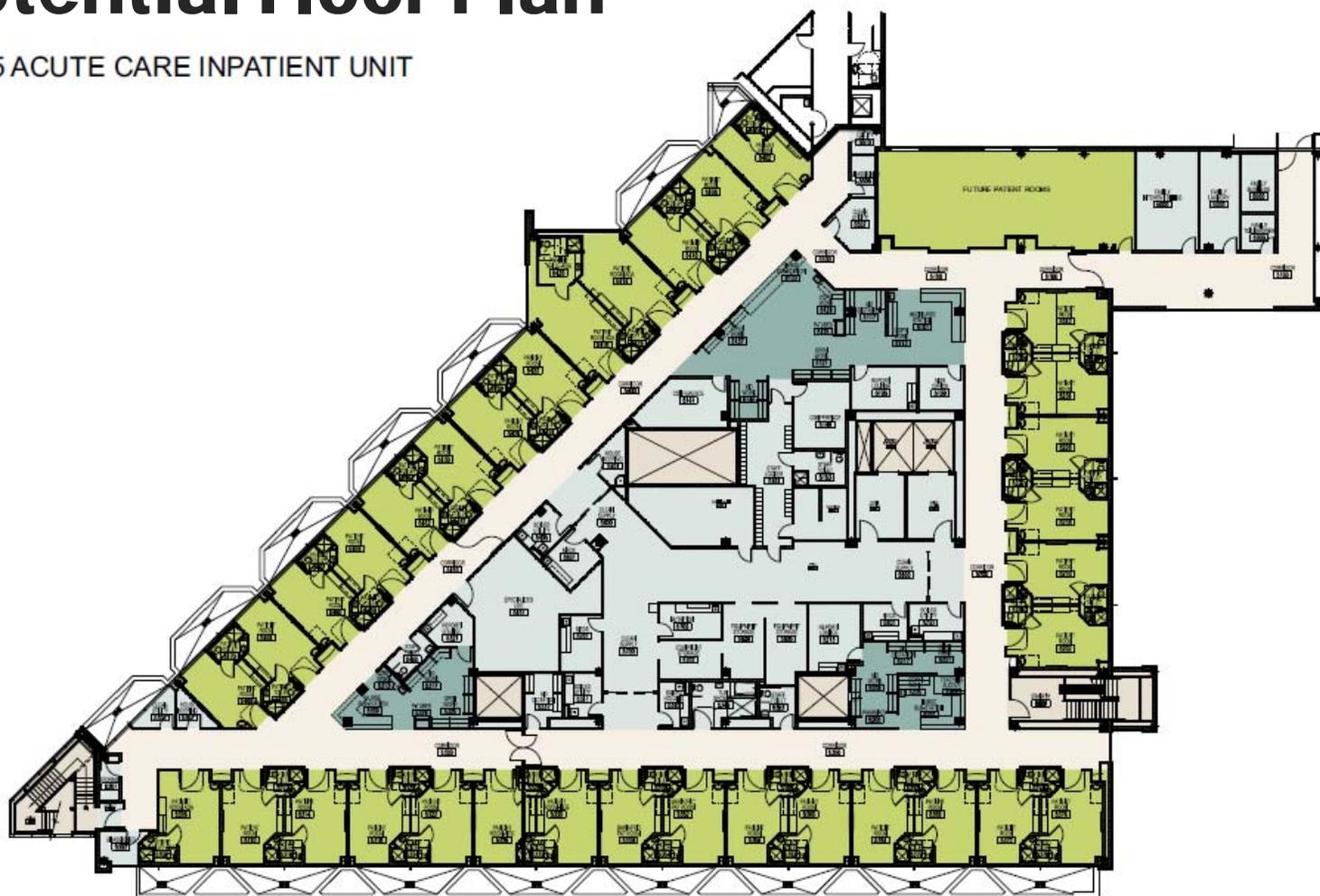
- **Hospital increasingly experiencing a shortage of acute care patient rooms**
- **Hospital has experienced a 3.7% growth this past year**
- **Nationally, academic health centers have experienced a 3.5% growth**
- **Part of the Health Sciences Master Plan**
- **Space originally designed to accommodate an additional patient unit**

✓ **Cost**

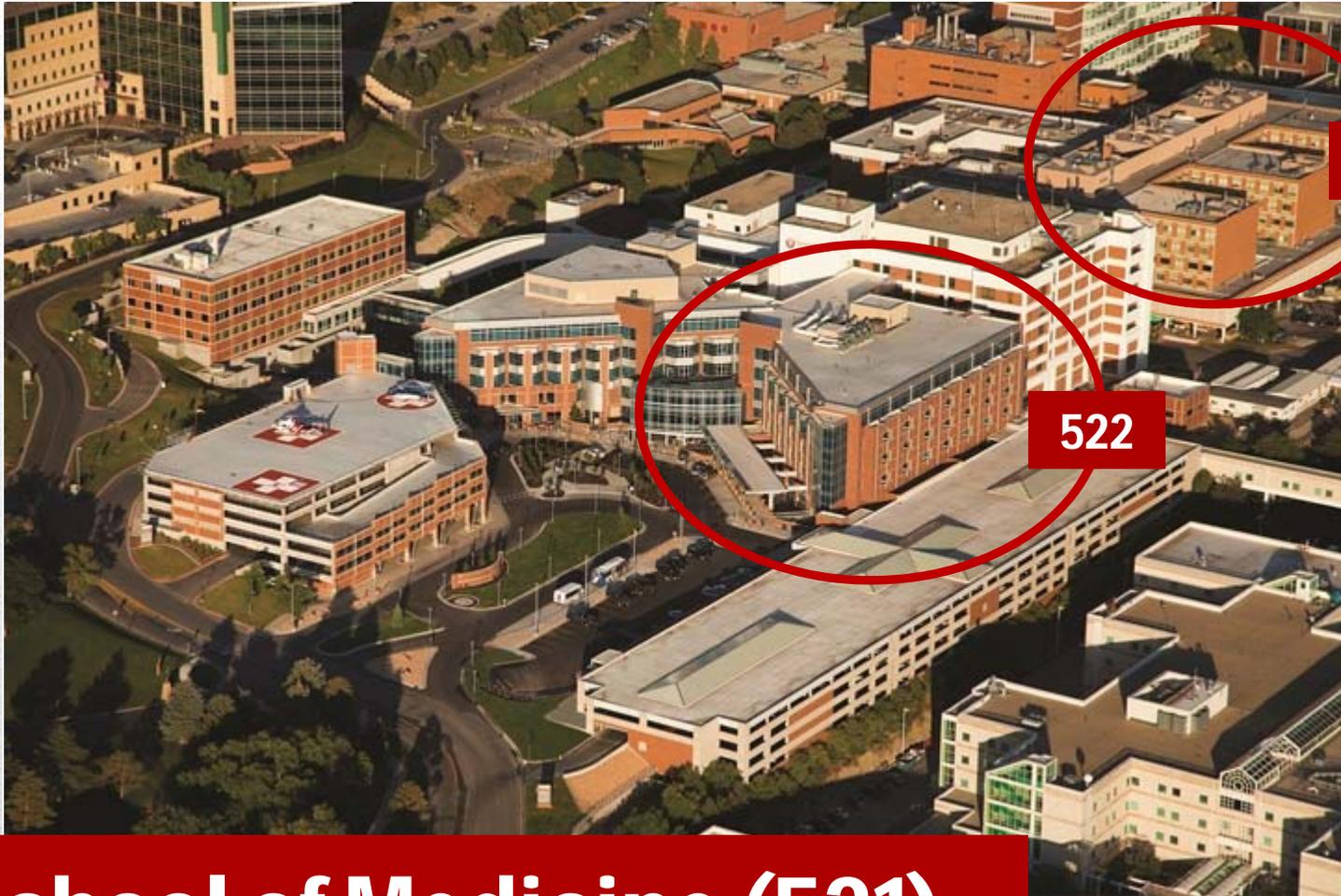
- **\$12 Million**
 - **Funded by Working Capital**
-

Potential Floor Plan

LEVEL 5 ACUTE CARE INPATIENT UNIT



BUILDING 522 LEVEL 5 BUILD OUT



**School of Medicine (521)
& West Pavilion (522)**

West Pavilion (522) – **Level B** Build Out

✓ **Scope**

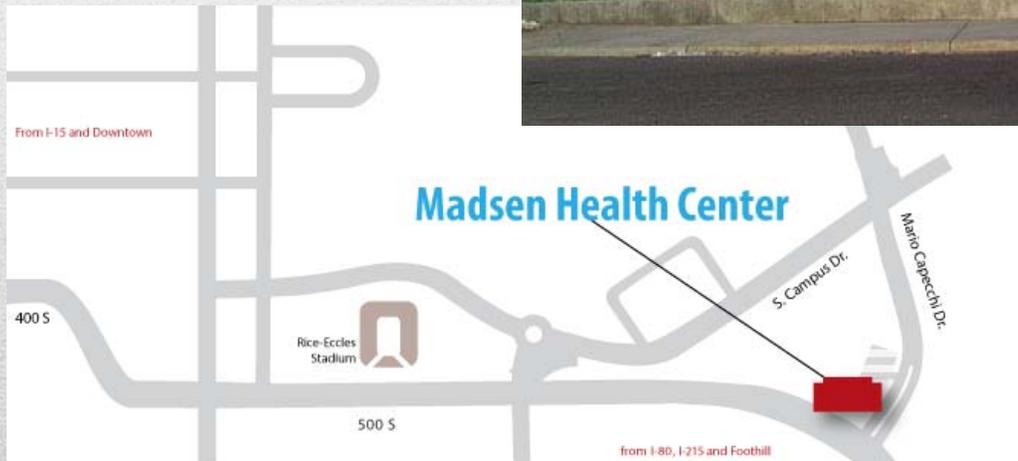
- **Build out 19,600 SF of existing shelled space**
- **Relocate Facilities & Engineering Department from Building 521**

✓ **Justification**

- **Part of the Health Sciences Master Plan**
- **Original design for the space was to accommodate the Facilities & Engineering Department**
- **Helps to decant Building 521 for eventual demolition**

✓ **Cost**

- **\$6 Million**
 - **Funded by Working Capital**
-



Madsen Health Center

Madsen Surgery Center Remodel

✓ Scope

- Convert existing surgery center to outpatient clinic (8,300 SF)
- Relocate clinic services from the Hospital & School of Medicine

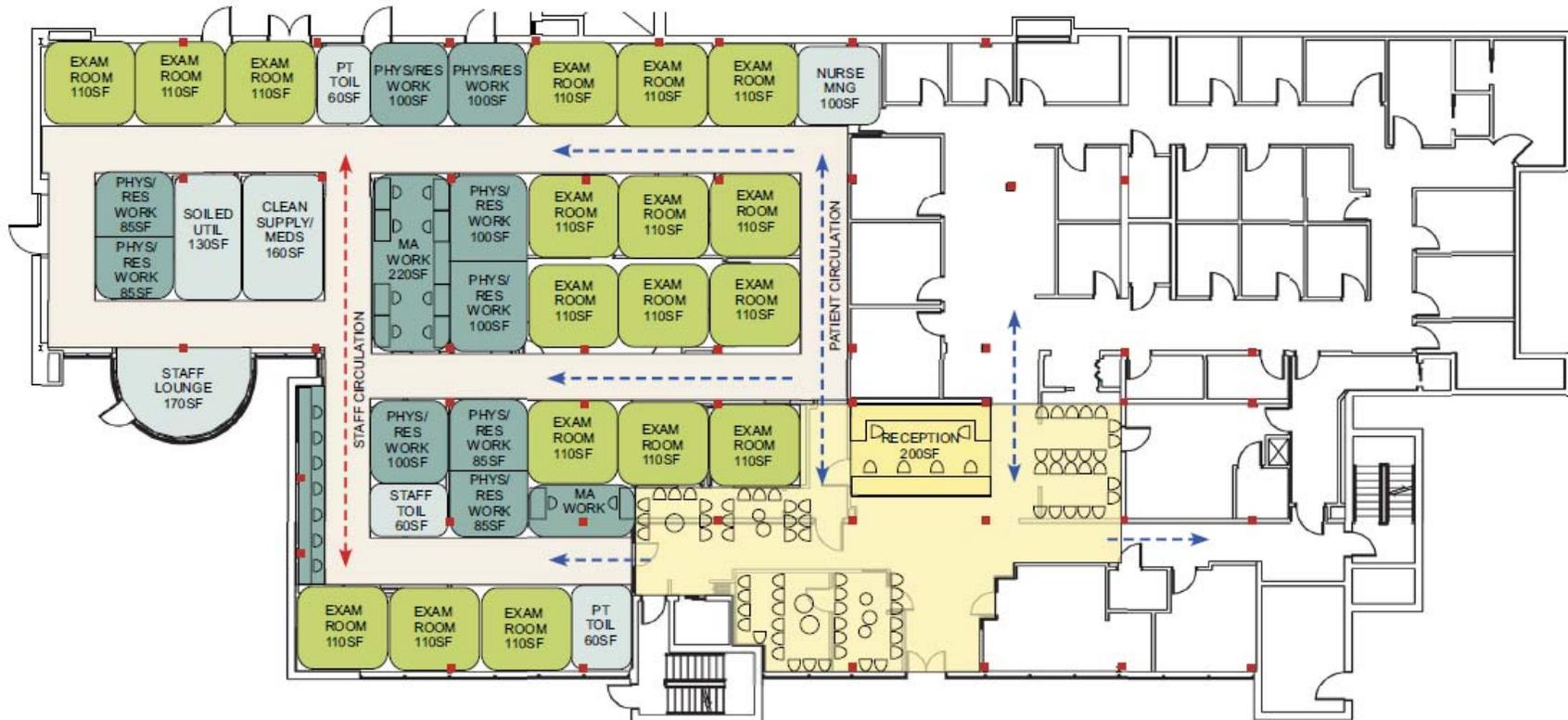
✓ Justification

- Surgery Center is currently under-utilized
- New clinic space will allow for 18,000 patient visits to be moved out of the Hospital to the Madsen Health Center
- This move will allow renovation of existing Hospital clinics to accommodate clinics to be moved out of the School of Medicine
- Helps to decant School of Medicine for eventual demolition

✓ Cost

- **\$5 Million**
 - **Funded by Cash**
-

Potential Floor Plan



Questions?





Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4 2015
Subject: **Request for Approval of DFCM's Revised Design Requirements**
Presenter: Jim Russell

Jeff Reddoor recommends the Board approve the revised Design Requirements for the Division of Facilities and Construction Management. These Design Requirements apply to all plans, processes, and procedures required for compliance with the design process of all Utah State Buildings.

JR: cn
Attachments



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

DESIGN REQUIREMENTS

February 2, 2015

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1.0 GENERAL

1.1 General

- A. These Design Requirements apply to all plans, processes, and procedures required for compliance with the Design Process.

1.2 Procedure

- A. Complete the Design Requirement/Variance Form to make recommendations for additions, deletions, and changes to the Design Requirements.
- B. Complete the Design Requirement/Variance Form to request approval by the Director to vary from these Design Requirements based upon the specific project needs.
- C. All Design Requirement modifications require approval by the Director. If the Design Requirement is approved by the Director, then the DFCM's Designated Representative shall distribute the Design Requirements Procedure document to the appropriate project participants and shall file it in the project file.
 - (1) If the Design Requirement is approved by the Director and has general applicability to other projects, the Director shall arrange for the Design Requirement modification to be added to the appropriate document.
 - a. Verify with the DFCM person responsible for the specific professional discipline and the appropriate DFCM maintenance person that the proposed Design Requirement meets their requirements.

1.3 Hierarchy of Requirements

- A. The hierarchy of requirements is as follows:
 - (1) Comply with the minimum requirements of all applicable laws, rules, and regulatory requirements.
 - a. Exceptions: Wherever there are practical difficulties involved in carrying out these provisions, the State Building Official with the approval of the Director of DFCM and/or the State Fire Marshall shall have authority to grant modifications. The modifications granted by the State Building Official shall be documented in this standard under the heading "Design Requirements."
 - (2) Comply with the consensus based ANSI standards for design, products, installation, and services unless the applicable laws, rules, and regulatory requirements are more stringent.
 - (3) Comply with the "Performance Requirements: Design Requirements" unless the ANSI standards or the applicable laws, rules, and regulatory requirements are more stringent.
 - (4) Comply with the Contract Documents, unless the "Performance Requirements: Design Requirements", the ANSI standards, or the applicable laws, rules, and regulatory requirements are more stringent.

1.4 Changes and Additions to Design Requirements

- A. Complete the following document and submit it to the person to whom you are responsible to for ultimate decision by the Director, for requested changes/additions to the Design Requirements.

Design Requirement/Variance Change Request	
Project Name	Date
	DFCM Project Number
	Risk Management Number
Requested by	Entity
Brief Description of the Problem	
Design Requirements	
Justification	
Director Approval	Date
Action to Include This Design Requirements in the Design Requirements	
Professional Reviewer	Position
Maintenance Reviewer	Position
Director Approval	Date

2.0 CODES / LAWS/ RULES AND REGULATORY REQUIREMENTS

- 2.1 General
 - A. Comply with adopted State Codes and all other applicable Standards and Codes at the time submitted to the State Building Official, including but not limited to Section 0 through Section 0.
- 2.2 DFCM requirements include (but are not limited to):
 - A. Administrative Services: Comply with Title R23: Administrative Services, Facilities Construction and Management. Refer to <http://www.rules.utah.gov/publicat/code/r023/r023.htm>.
 - B. DFCM Services: Comply with Services requirements. Refer to <http://dfcm.utah.gov>. Services requirements include:
 - (1) Inspections and Testing, refer to <http://dfcm.utah.gov/dfcm/building-official.html>.
 - (2) Standards and Standard Project Documents, refer to <http://dfcm.utah.gov/dfcm-forms.html>.
 - (3) Roofing, Paving, and Hazardous Materials, refer to <http://dfcm.utah.gov/2012-11-29-22-30-23.html>.
 - (4) Other requirements which may be added after this document is published.
- 2.3 Building Code Commission
 - A. Comply with Utah State Construction and Fire Codes Act. Refer to Utah Code Title 15A. Enforcement of these codes is the responsibility of the State Building Official.
- 2.4 Fire Prevention Board
 - A. Comply with Fire Codes in accordance with “Laws, Rules” of the State Fire Marshal. Refer to <http://publicsafety.utah.gov/firemarshal/>. Enforcement of these codes is the responsibility of the Utah Fire Marshal.
- 2.5 Accessibility Code
 - A. Comply with the US Department of Justice Federal Registers – Americans with Disabilities Act. Refer to <http://www.ada.gov/>.
- 2.6 Labor Commission
 - A. Comply with requirements of the Labor Commission. Refer to <http://www.laborcommission.utah.gov/>
 - (1) Boiler and Pressure Vessel Compliance Manual, Refer to <http://laborcommission.utah.gov/media/pdfs/boilerelevatormine/pubs/Boiler%20Compliance%20Manual.pdf>.
 - (2) Utah Occupational Safety and Health, refer to <http://www.rules.utah.gov/publicat/code/r614/r614.htm>.
 - (3) Elevator Rules: American National Standard Safety Code for Elevators and Escalators, ANSI/ASME A17.1 with amendments administered by Labor-Industrial Commission of Utah, Department of Occupational Safety and Health Elevator Division. Refer to <http://www.rules.utah.gov/publicat/code/r616/r616-003.htm>.
- 2.7 Department of Health
 - A. Comply with requirements of Department of Health. Refer to <http://www.health.utah.gov>.
 - (1) Health Care Rules, refer to <http://health.utah.gov/hflcra>.
 - (2) Utah Indoor Clean Air Act, refer to <http://www.rules.utah.gov/publicat/code/r392/r392-510.htm>.
- 2.8 Department of Environmental Quality

- A. Comply with requirements of Department of Environmental Quality. Refer to <http://www.deq.utah.gov>.
- (1) Public Drinking Water Rules, refer to <http://www.drinkingwater.utah.gov/>.
 - (2) Utah Division of Air Quality: R307-801, Asbestos, refer to <http://www.rules.utah.gov/publicat/code/r307/r307-801.htm>; Environmental Protection Agency (EPA): Regulations for Asbestos – Code of Federal Regulations Title 40, Part 61 Subpart M; and Toxic Substances Control Act PART 763 (Updated 1997) – ASBESTOS: OSHA Standards 1910.1001, 1915.1001, and 1926.1101
 - (3) Underground Storage Tank Act, refer to <http://www.undergroundtanks.utah.gov/>.
 - (4) Air Conservation Act, refer to <http://www.le.utah.gov/UtahCode/section.jsp?code=19-2>
 - (5) Fugitive Dust Plan, Refer to <http://www.rules.utah.gov/publicat/code/r307/r307-309.htm>
 - (6) Utah Pollutant Discharge Elimination System, Refer to <http://www.rules.utah.gov/publicat/code/r317/r317.htm>.
 - (7) Operating Permits of the Division of Air Quality, refer to <http://www.rules.utah.gov/publicat/code/r307/r307-415.htm>.
 - (8) For all new buildings larger than 10,000 gross square feet and renovations to existing buildings affecting more than 10,000 gross square feet that are subject to an Air Emissions permit or the State Implementation Plan (SIP), consultant shall determine the total annual natural gas consumption for the project and submit that to DFCM and the state entity associated with the project at least 90 days prior to completion of contract documents so that compliance can be confirmed with Air Emissions permits and the SIP. Failure to do so will jeopardize approval for the startup and operation of any new natural gas equipment or increases in output of existing natural gas fired equipment.
- 2.9 County Health Department (for the county where the facility is located)
- A. Food Service Sanitation Rules
- 2.10 Department of Commerce
- A. Pipeline Safety, refer <http://www.rules.utah.gov/publicat/code/r746/r746-409.htm>.
- B. Qualifications: Refer to the Project Participants heading of this document.

3.0 DFCM REQUIREMENTS

These requirements are enhancements of code requirements that DFCM has initiated for best practices for State owned facilities.

3.1 General

A. Enhanced Accessibility

- (1) “It is the policy of the Utah State Building Board that, when appropriate for the intended use of the building and achievable within the project budget, the following accessibility enhancements beyond those required by the Americans with Disabilities Act be provided for in state owned buildings and buildings leased by DFCM: (1) powered door openers for the primary entrance designated for use by people with disabilities, and (2) powered door openers for one uni-sex restroom or for one male and one female restroom in the building unless restrooms with a door-less entry are provided. This policy is not intended to limit the use of powered door openers to the standard set forth herein. This policy applies to the construction or major renovation of state-owned facilities and new leases where the entire building is being leased by DFCM. This policy is not intended to create any rights to any third parties.
- (2) Determinations that this enhancement is not appropriate for the intended use of the building or not possible within the project or lease budget shall be made by the Director or his designee. Determinations of whether this enhancement to accessibility is appropriate should consider the potential of access by people with disabilities. The Director may determine that powered door openers are appropriate for the primary entrance while not warranted or not possible within the budget for access to restrooms. The Director may also determine that one or both of these enhancements are not feasible in (a) the renovation of an existing building due to its design or configuration or (b) in a leased facility due to the nature and circumstances of the lease.”

B. Energy Efficient Products

- (1) Select, where life-cycle cost-effective, products that are in the upper 25 percent range of the energy efficiency rating. Energy efficient products include:
 - a. Heating and cooling equipment;
 - b. Motors;
 - c. Lighting fixtures, compact fluorescent light bulbs, exit signs;
 - d. Windows, doors and skylights;
 - e. Roof products;
 - f. Food service equipment;
 - g. Transformers;
 - h. Office equipment;
 - i. Electronics; and
 - j. Appliances.
- (2) Exceptions
 - a. Energy efficient products that have been stipulated as life-cycle cost-effective by DFCM.
 - b. ENERGY STAR® products that are certified and labeled through the US Environmental Protection Agency.
 - c. Energy Efficient Products listed items on General Service Administration, GSA Advantage website. “Energy Efficient Products” mean items that meet Federal Energy Management Program (FEMP) energy efficiency levels as required by the Federal Acquisition Regulation (FAR) Subpart 23.203, Executive Order 13123, and Executive Order 13221.

C. Energy Design Standards: See Section 5.0 High Performance Building System

D. Hazardous Materials

- (1) DFCM shall procure a qualified abatement consultant during the Schematic Design phase of the Design stage. The abatement consultant shall survey all renovation and demolition projects for hazardous materials such as asbestos-containing building materials, lead-based paint, mold, universal wastes such as PCBs, CFCs, mercury, household/janitorial cleaning products, identified/unidentified containers of chemicals or products, or any other materials or waste that may be environmentally unsafe.
- (2) Prior to the start of a survey by the abatement consultant, the A/E shall provide drawings at the design development phase of the design stage to the abatement consultant with sufficient information to define the building or facility areas affected by the renovation or demolition. The abatement consultant shall coordinate abatement documents with the updated Contract Documents prior to final preparation. The abatement consultant shall prepare a complying and comprehensive hazardous materials survey report identifying and quantifying all hazardous and non-hazardous building materials to include asbestos-containing building materials, lead-based paint, mold and universal wastes that affect the areas of renovation or demolition.
- (3) DFCM shall procure a qualified abatement contractor to remove all hazardous materials prior to the beginning of any building demolition or renovation.

E. Vibration

- (1) Design structure in accordance with the following minimum requirements for vibration:

Space Category	Vibration Sensitivity
Laboratories with equipment sensitive to vibration	Comply with manufacturer's requirements for vibration.
Offices, classrooms, and other similar spaces.	There are no vibrations from machines or traffic which are detectable by people.
Common Area spaces.	There is occasional movement in the floor when heavy equipment are moved nearby.
Storage spaces.	There is obvious and annoying movement when people walk by or equipment is being moved nearby.

F. Utah Space Standards

- (1) Comply with the "Utah Space Standards," August 1994. Refer to <http://dfcm.utah.gov/dfcm-forms.html>

G. Infrastructure Flexibility

- (1) Interior Shear Walls: Minimize interior shear walls, bearing walls and braced frames which may disrupt future additions or modifications to the facility.
- (2) Spare Mechanical Space: Provide 25% spare space in pipe chases and for mechanical equipment (except air handlers).
- (3) Main Electrical Room: Locate main electrical room close to transformer and near the center of the load (which is usually located near where central mechanical equipment is located). Locate panel boards in satellite electrical rooms dedicated for electrical equipment and which stack vertically in the facility.
- (4) Spare Electrical Capacity: Provide 25% future space for additional overcurrent protection devices in panel boards and switchboards. Provide 25% additional load capacity in addition to the capacity required for continuous loads in panel boards and switchboards.
- (5) Communication Rooms: Locate communications rooms so they stack vertically and comply with TIA/EIA standards.

- (6) Spare Communication System Capacities: Provide 100% future space (this is not necessarily horizontal space, but may be vertical space in racks for future equipment) for cabling, data, and communications electronic equipment.
- (7) Equipment Access: In new facilities, provide access for replacement of equipment which does not require demolition.
- (8) Storage Space: Provide a minimum 6' X 6' space for storage of janitorial supplies or .2% of the gross square footage, whichever is greater.

H. Standard Building Plaque

- (1) For development projects provide a design for a building plaque to be mounted on a prominent wall near the entrance to the building in compliance with the DFCM plaque standard. Refer to <http://dfcm.utah.gov/dfcm-forms.html>

3.2 Civil

A. Paving

- (1) Use untreated base course under all curbs and gutters. Use untreated base course material under all sidewalks exterior flatwork and paved areas.
- (2) Untreated base course under asphalt paving: Asphalt - 8" minimum compacted base (96%)
- (3) Concrete – curbs, gutters, sidewalks, exterior flatwork – Minimum 6" compacted base (96%) or minimum 4-3/4" crushed gravel.

Untreated Base Course	
Size	% by Weight Paving Sieve
1"	100
1/2"	70 to 100
#4	41 to 68
#16	21 to 41
#50	10 to 27
#200	4 to 13

- (4) Surface course (asphalt) aggregate:

Surface Course (asphalt)	
Size	% by Weight Paving Sieve
1/2"	100
3/8"	70 to 100
#4	50 to 78
#16	30 to 48
#50	18 to 31
#200	7 to 13

- (5) Base course (lower lift) can be 3/4" asphalt if placed in more than 1 lift.
- (6) Construct asphalt paving only when atmospheric temperature is above 50 degree F and underlying base is from moisture. Permit no vehicular traffic for at least 24 hours after laying asphalt pavements.
- (7) Striping paint: State of Utah #780. Spread at the rate of 103-113 sf/gal. Minimum thickness shall be 7 dry mil.
- (8) Tack coat all adjoining materials, i.e. previously constructed asphalt, concrete, etc. except untreated base course.
- (9) Surface smoothness: variation in the finished surface must not exceed 1/8" in 10 ft. in any direction.
- (10) Asphalt shall comply with Marshall Design with voids 1.5% to 3.0%
- (11) Drainage: Slope all asphalt concrete paving surfaces for positive drainage a minimum of 1.5% and preferable 2%.

- (12) Minimum thickness for parking areas: 3". Minimum thickness for road areas and truck traffic is 3" including dumpster access.
- (13) Maximum thickness for lifts: 3"

3.3 Architectural

A. Daylight and Outside Views

- (1) Daylight and outside views are desirable for all occupied spaces. The needs of some occupied spaces may require special consideration for light control.

B. New Roofing Requirements

- (1) Comply with Contractor Roofing Warranty: Include DFCM requirements. Refer to [http://dfcm.utah.gov/downloads/Roofing/Contractor%20Roofing%20Warranty%20\(final\).pdf](http://dfcm.utah.gov/downloads/Roofing/Contractor%20Roofing%20Warranty%20(final).pdf).
- (2) Comply with Guaranty for Bituminous Roofing: Include DFCM requirements. Refer to [http://dfcm.utah.gov/downloads/Roofing/Warranty%20for%20Bituminous%20Roofing%20\(final\).pdf](http://dfcm.utah.gov/downloads/Roofing/Warranty%20for%20Bituminous%20Roofing%20(final).pdf).
- (3) Comply with Guaranty for Single-Ply Roofing: Include DFCM requirements. Refer to [http://dfcm.utah.gov/downloads/Roofing/Warranty%20for%20Single%20Ply%20Roofing%20\(final\).pdf](http://dfcm.utah.gov/downloads/Roofing/Warranty%20for%20Single%20Ply%20Roofing%20(final).pdf).
- (4) Comply with the list of DFCM approved manufacturers and approved installers.
- (5) Where manufacturer's standards show one or more possible approach for compliance to the standard, provide their most stringent approach.
- (6) Eliminate conflict between roof penetrations (i.e. vents, exhausts) and roof crickets, flashing, and valleys. Consider relocating penetrations to less visible areas. Provide 18" access for replacing roofing components.
- (7) In new facilities, build slope into roof structure in lieu of built-up insulation to solve roof drainage issues.
- (8) Minimum slope for all roofing and waterproofing systems shall be a ¼" per foot along the longest drainage path.
- (9) Do not provide the following components, unless approved by the Director: Other Roofing Components: ballasted roofs.
- (10) All roofing systems and components should meet or exceed all ASTM, UL and FM requirements.
- (11) Minimum 60 mil thickness required for all single ply roofs.
- (12) Minimum 4-ply, type VI felts with type III asphalt for all built-up roofs.
- (13) All metal associated with the roof should be color clad, use standing seam joints where possible. Follow SMACNA guidelines for all metal work.
- (14) Provide reasonable access to all roof levels for maintenance personnel.
- (15) Steep slope roofing should be designed as directed by the DCM Program Manager.
- (16) Comply with all other minimum standards as published by the DFCM roofing group.

- #### C. Roofing Requirements – Please see the DFCM Roofing website for a detailed description of the latest roofing design criteria and requirements at <http://dfcm.utah.gov/2012-11-29-22-30-23.html>. If for any reason, you are having difficulty accessing the page above, please contact DFCM immediately.

D. Waterproofing and Sealants

- (1) Warranty: For sealant systems, guarantee both labor and materials for a minimum of two years. For waterproofing project, guarantee both labor and materials for a minimum five years.

- (2) Qualifications: For Damp proofing and Waterproofing, select products that have performed successfully for a minimum 15 years and select manufacturers that have been producing materials for 15 years.

F. Acoustical Quality

- (1) When possible, design spaces in accordance with following minimum requirements for “Privacy.”

Privacy	
Space Category	Measured NIC Rating
Confidential with high voice levels	58-60+
Confidential with slightly raised voice levels	52-58
Confidential with normal voice levels	50-52
Confidential with lowered voice levels	45-50

- (2) Design spaces in accordance with the following minimum requirements for “Ambient Background Noise.

Ambient Background Noise	
Space Category	Measured NC Rating
Critical Performing Spaces	<20
Performing Spaces, Courtrooms, Executive Offices	20-30
Sleeping, testing, or relaxing spaces	25-35
Private offices, small conference rooms, classrooms, libraries	30 -35
Open offices, reception areas, cafeterias, gymnasiums	35-40
Lobbies, laboratories, maintenance shops	40 -45
Kitchens, industrial shops, equipment rooms	45-55

3.4 Structural

A. Concrete

- (1) Warranty: Provide additional two-year written guarantee commencing on the date of substantial completion to promptly remove and/or repair defective concrete (pitting, spalling, cracking, honeycombing, etc.).
- (2) Concrete Strengths & Testing: Provide minimum compressive strength measured at 28 days of 3000 psi for foundations, stem walls, piers, miscellaneous interior walls, etc., and 4000 psi minimum for all exterior flatwork, ramps, curbs, gutters catch basins, concrete pavements, interior floor slabs, elevated slabs, shear walls and columns. DFCM allows shear wall and columns to be specified in excess of 4000 psi. Specify pre-cast concrete with a minimum strength of 5000 psi.
- (3) Cement Types: Comply with the recommendations of the Geotechnical report. DFCM requires one of these types: Type I or Type II (both low alkali) and Type V. In southern Utah, usually select Type V. In other parts of the state select Type I or Type II (low alkali).
- (4) Concrete Mix: Provide low alkali cement for all concrete in direct contact with earth. Specify water/cement ratios in accordance with ACI 318. Specify number of bags of cement per/yard in accordance with C150. Provide admixtures complying with the requirements of ASTM C260 for air entrained concrete. Do not use “IA”, “IIA”, etc. For frost resistant concrete, the following minimum air contents are required for concrete in direct contact with soils or exposed to severe salting: for ¾” maximum aggregate size per C33, provide air content per ASTM C260 of 6-1/2%+ 1-1/2%; for 1”, provide 6%+ 1-1/2%; for 1-1/2”, provide 5-1/2”+1%. Water cement ratios shall be limited to 0.50. (excluding grout mixes) The slump of all concrete shall be limited to 4” unless plasticizers are used. A maximum of 10% fly ash is allowed.

- (5) Testing: DFCM shall pay for testing, unless other procedures are specified. The frequency and minimum numbers of test cylinders shall be as outlined in the IBC, however at least three test cylinders must be taken from each pour related to a structural member. The intent is to not to do testing on concrete for items such as curb, gutter, sidewalk, mow strips, light pole bases, etc. Concrete testing shall not be required where allowed by the currently adopted building code.
- (6) Reinforcement: Reinforce all concrete with conventional rebar or welded wire fabric. Slabs on grade supporting less than 400 psf uniform loads and no rack loads may be un-reinforced. The sub-base for all un-reinforced slabs must be uniformly compacted with on-site observation and per requirements specified in the project specifications.

3.5 Electrical

The latest adopted edition of the following Codes and Standards are to be considered a minimum requirement for Section 3.6. Where items contained in this section are in conflict with any of the following codes or standards, the more stringent requirement shall apply: National Electrical Code – NEC; International Building Code – IBC; International Energy Conservation Code; Illuminating Engineering Society of North America – IESNA Handbook; UL 96A; NFPA 780; Utah State Fire Marshal’s Rules R710; National Fire Alarm Code – NFPA 72; and Agency/Institution Design Standards (comply with the latest edition of the design standards of the project agency or institution. If conflicts exist between DFCM and these design standards, obtain written clarification from representatives of DFCM and the agency/institution).

A. Lighting

- (1) All lighting shall meet or exceed the current energy code for lighting power density, control requirements, and other requirements. All lighting shall utilize the most efficient fixtures available to meet the project requirements and budget. Incandescent lighting shall generally not be used, but may be used with the approval of the DFCM representative in the following applications: theaters/stages, television studios, and art galleries. However, in these applications, LED lighting shall be strongly considered. Exterior Lighting shall be LED unless approved by the DFCM Director. Refer to Section 5.0 for additional requirements on lighting energy requirements.
- (2) Light Pollution Reduction: Use full cut-off outdoor lighting fixtures for luminaries with more than 3,000 lumens and locate so that the maximum candela value falls within the property. Provide shielding or controlled distribution for any luminaries within a distance of 2.25 times its mounting height from the property boundary so that minimal light from the luminaire illuminates past the property boundary. Interior lighting shall be positioned so that the maximum candela value does not fall outside the interior space, such as out through a window).
- (3) Lighting Fixtures. Provide lenses that will not yellow due to exposure to sunlight or to the light sources in the fixture. When acrylic diffusers are specified, provide 100% virgin acrylic. Provide electronic ballast suitable for the load type, energy savings, and starting temperatures required. Provide program start ballasts if available for the lamp type. Connect equipment grounding conductor to fixture housing. Provide 10% spare lamps, diffusers, or glass for each light fixture type with not less than one for less than 10 lighting fixtures.
- (4) Interior Lighting: Provide T-8 lamps in fluorescent fixtures, except for areas requiring special lighting. Dimming of fluorescent fixtures should be avoided. Consideration shall be given to LED lighting for most applications. Provide independent safety-wires attached to structure in compliance with seismic requirements. For recessed fixtures that are removable, locate outlet box with 3’ of steel flexible conduit to the fixture to aid in removing and relocating fixture.

- (5) Exterior Lighting: Exterior Lighting shall be LED unless approved by the DFCM Director. Provide break-way fuses for all phase conductors for all outside pole-mounted lighting fixtures. Provide a shorting fuse insert for neutral fuse holder. Do not use common neutral multi-wire circuits for this type of lighting.
- (6) Reflected Ceiling Plan Coordination: Coordinate the lighting fixture with the reflected ceiling plan for suspended, lay-in, and surface-mounted fixtures. Recessed lighting fixtures in acoustical tile ceiling shall be located centered on a single tile.
- (7) Lighting Fixture Supports: Provide swivel bases for stems supporting lighting fixtures which exceed 12" in length.
- (8) HID Sources: Use metal halide sources. Provide Pulse Start Metal Halide lamps and electronic ballasts. Where High Pressure Sodium sources are approved, use auto-regulating ballasts.
- (9) LED Sources: Individual LEDs shall be tested in compliance with IES LM-79-08, and rated life shall be as determined by IES LM-80-08 and IES TM-21-11. The complete reports shall be available if requested. Specify high-CRI (85 or higher) sources. CRI (Ra) shall be based on CIE/IES definition using 8 color criteria. Driver and LED modules shall operate without measurable flicker below 25 kHz. Provide high power factor drivers (>.90). LED modules and drivers shall be replaceable in the field.

B. Raceways to 600 V

- (1) Raceways, Fittings, and Boxes. Provide steel raceway, fitting, and box system for all wiring, except that plastic conduit (minimum schedule 40) may be installed underground and aluminum cable trays may be installed for communications cabling. For steel raceway when installed in contact with soil, provide rigid or IMC PVC coated or wrapped raceways, fittings, etc. Provide steel raceways for penetrating structural elements (minimum 6" each side) and rigid steel conduit (PVC coated or wrapped) for bends greater than 30 degrees. Provide minimum 1/2" raceways except communications raceways shall be 1" minimum. Larger sizes may be required depending on users' cabling requirements. Provide flexible steel conduit (minimum 1/2") in short lengths where movement, vibration, misalignment, or cramped quarters exist. Provide insulated throat or equal type plastic bushings for box connections. Provide liquid-tight flexible conduit with approved moisture-tight fittings for wet, humid, corrosive, or oily locations. Provide a minimum 18" liquid-tight flexible conduit at each motor.
- (2) Electrical Supports: All raceways, boxes, and conductors shall be supported independently from all other electrical or mechanical systems, directly from building structure by a listed supporting device. Provide outlet boxes with rigid support using metal bar hangers between studs.
- (3) Equipment Pads. Provide concrete pads a minimum of 6" beyond the dimensions of the equipment. Extend equipment pad a minimum of 4" above finished floor or grade.
- (4) Future Raceways: Provide five capped spare 3/4" conduits from each section of a flush-mounted branch panel board into the ceiling and floor space. If the floor space is not accessible, provide an additional 3/4" conduit from each section of a branch panel board into the ceiling. Provide 200-lb. nylon pull cord in all empty conduit, then cap raceway using a blank cover similar to adjacent wiring device covers.
- (5) Underground Raceway Identification and Installation: Provide direct buried conduit in an area outside a building not less than 24" deep, with magnetic "yellow warning" ribbon 12" directly above and 6" below finished grade measured from the top of the conduit or duct bank.
- (6) Do not provide the following, unless approved by the DFCM Director: exposed cable wiring; other raceways systems (electrical non-metallic tubing, aluminum conduit, die cast fittings, or steel cable trays).

- C. Conductors
- (1) Provide copper conductors for all wiring in sizes not less than #12 AWG.
 - (2) Aluminum conductors may be considered for feeders and services in sizes #1/0 and larger where approved by the DFCM Director and the user/agency of the project.
 - (3) Size conductors such that total voltage drop on feeders and branch circuits will not be greater than 5%.
 - (4) Metal Clad Cable. Type MC Cable is allowed only when concealed in ceilings or walls. MC Cable must be protected from physical damage and supported directly from the building or structure by use of a listed support. MC Cable home runs are not allowed. Home runs must be in conduit from the electrical panel or cabinet to the first junction or pull box. MC Cable Used for Fire Alarm System Signaling or Initiation Circuits must have an overall outer coating of red.
 - (5) Non-metallic sheathed cable may be used only for residential single or multi-family housing unless approved by the DFCM Director.
 - (6) Do not provide the following unless approved by the DFCM Director: exposed cable wiring; splices in panel board, switchboard enclosures, or in conduit bodies.
- D. Grounding: Provide a separate green grounding conductor enclosed with phase conductors in all raceways on the load side of the service entrance.
- E. Medium Voltage
- (1) Medium Voltage Conductors: Provide copper conductors with copper tape shields and EPR insulation and copper neutral in Medium Voltage Duct banks; or, in utility tunnels or other areas without public access, provide armored cable or rigid conduit. Comply, as a minimum, with the installation requirements for Medium Voltage Cable standard NECA 600-2003. Perform Hi-Pot test after terminations have been made, but before connections have been made to buses or apparatus. Perform continuity tests of all cables after entire installation and terminations have been completed. If a cable fails to perform, replace faulty cable and retest. All tests will be recorded and submitted with O&M manuals at project conclusion.
 - (2) Medium Voltage Duct Banks. For above-ground or interior of buildings in non-public areas, provide rigid galvanized conduit or armored cable marked with red HIGH VOLTAGE. For underground, exterior applications, or public areas, provide concrete encased duct banks (red dye) with raceways in multi-les of two and a minimum of one spare conduit (with polypropylene pull wire) per feeder. Provide rigid metal conduit for the first 10 feet or duct bank from a facility or manhole. Provide minimum 4" raceway.
 - (3) Lighting Protection: Provide lightning (surge) arresters for medium voltage transformers and switchgear located above ground outside.
- F. Motor Controllers
- (1) Provide NEMA rated magnetic motor controllers with thermal overload relays for each phase.
 - (2) Variable Frequency Drives: Provide variable frequency drives suitable for the application, factory pre-wired with integral disconnect, input filter, and integral ventilation. For interior location VFDs, size ventilation for ambient temperature of 32 degrees F. to 90 degrees F. Avoid outdoor location mounted VFDs; but, if required, provide ventilation for ambient temperatures from -30 degrees F. to 120 degrees F. Fault current rating shall be sized based upon the fault current analysis of the nearest upstream overcurrent device. Include factory startup and tune to optimize life of motor.
 - (3) Provide a manual bypass of the VFD as part of controller where motor redundancy is not provided. For fan motor applications, coordinate with mechanical engineer to determine if a bypass should be provided.

- G. Electrical Distribution
- (1) Overcurrent and Ground Fault Protection: Set overcurrent and ground fault protection based upon Fault Current Protection and Coordination Study prepared by a licensed engineer. Submit study with O&M manuals.
 - (2) Arc Flash Analysis: For new construction and where main panel size exceeds 400 amps, provide an Arc Flash Assessment in accordance with NFPA 70E. Specify labels to be provided at each panel indicating incident energy and arc flash category level.
 - (3) Transformers: Provide transformers with copper or aluminum conductors. Provide transformer taps of 4 taps – 2.5% above normal and 2 taps – 2.5% below normal. Adjust voltage output to obtain the proper value at the main disconnect.
 - (4) Metering: Provide secondary digital metering (including demand monitoring) at the main distribution panel(s) in each facility. For secondary digital metering of services of 800 Amps or greater, include Harmonic monitoring and an option for building automation or remote monitoring.
 - (5) Utility Metering: Comply with serving utility’s regulations, if applicable. Comply with utility’s metering requirements. Include cost assessed by serving utility.
 - (6) Switchboards and Panel Boards: Provide bus hardware installed on the bus for future over-current devices of not less than 25% minimum. Provide over-current devices in the same sequence as shown on the panel schedules or one-line diagrams.
 - (7) Panel Boards. Provide listed panel board construction for all branch panels and circuit breaker distribution panels. Load Centers and plug in circuit breakers may be used only in Residential Single and Multi-family residences unless approved by the DFCM Director. Key all panel boards alike and provide three keys.
 - (8) Circuit Breakers: Provide one-, two, or three-pole over-current devices with common handle (not field modifiable).
- H. Power Quality: The A/E shall design for power quality by following either the performance-based requirements for the prescriptive-based requirements as indicated below.
- (1) Performance Approach
 - a. The A/E shall include as a basis of design, an evaluation of potential Harmonic Risks to the Electrical Distribution System and provide a plan to mitigate these risks. The Power Quality Plan shall be approved by the DFCM representative. Power Quality Testing may be performed by the DFCM after the facility is occupied to determine the effectiveness of the Power Quality Mitigation approach.
 - i. The Plan shall address each of the items listed in the Prescriptive Approach below.
 - ii. In no case shall the voltage harmonic distortion be greater than 3% THD at the building’s main service or feeder panel, and at other points in the system where sensitive loads may be adversely affected by harmonic distortion.
 - iii. Electrical Distribution System components shall be sized for and/or mitigate the anticipated current harmonic distortion produced by the loads on the system.
 - iv. The effects of the approach on the overall energy efficiency of the building shall be considered.
 - (2) Prescriptive Approach
 - a. Electrical Services
 - i. Services of 300 KVA or larger shall be 277/480 volt at the Service Main Disconnecting means except for those proven to be unnecessary and approved by the DFCM Director.

- ii. Harmonic producing (nonlinear) loads such as lighting, VFDs, UPSs and computer rooms shall be separated or grouped as far as reasonably cost effective.
 - iii. All panels fed from a step down transformer with 120/208V 3-phase/4-wire secondary shall have 200% neutral feeders.
 - iv. All multi-wire branch circuits shall have dedicated neutrals or oversized shared neutrals that are at least one trade size larger than the phase conductors. Circuits with shared neutral conductors shall have multi-pole breakers per the NEC.
 - v. Provide 277 volt lighting wherever there is a 277/480 volt wye service available.
- b. Existing Electrical Services. Power Quality Testing should be performed prior to the Upgrade, Addition, or Alteration of any of the following Electrical Components or Systems, VFDs, UPSs, Step down Transformers and Generators. It shall be determined from this testing the proper equipment and method to be used that will insure that the existing system will not be adversely affected by the work to be performed. Power Quality Testing should be performed after completion to determine the effectiveness of the material and methods used.
- c. Power Factor. All new Construction or Upgrade of existing Electrical Services shall meet the minimum requirement of 95% and maximum of 98% Power Factor. The DFCM representative shall approve the method and layout of Power Factor Correction Capacitors prior to installation.
- d. Step down Transformers
- i. All step down transformers shall be Energy Star NEMA TPI K rated or HMT with 200% neutral capability, unless proven unnecessary and approved by the DFCM representative. The K rating shall be as determined by Manufacturer recommendations for the equipment they serve.
 - ii. All step down transformers feeding computer rooms or areas subject to high non-linear loads shall be fed from a Harmonic Mitigating Transformer with 200% neutral.
- e. Variable Frequency Drives. For motors 15 hp and larger, provide a minimum power quality performance of 12% current THD and 3% voltage THD measured at the VFD input terminals. This shall be accomplished by using Harmonic filters or a minimum of 12 pulse drive that will comply with the power quality performance requirements. For motors less than 15 hp, provide AC Line Reactors and/or DC link chokes with a minimum of 3% impedance. Provide output filtering if the motor is located more than 50 feet from the drive.
- f. Lighting. Electronic Ballasts shall have <20% THD for 277 volt lighting systems and <10% THD for 120 volt lighting systems. In existing buildings where high Harmonic Currents are present, provide <10% THD ballasts.
- g. Generators. For new construction, a service that is to be backed up by a generator shall be designed to have no more than 12% current THD or 3% voltage THD when measured at the point where the generator connects to the system, while loads are running on generator. For existing services to be backed up by a generator, power quality testing shall be performed to determine that there is not more than 12% current THD or 3% voltage THD and that there is not a leading power factor. If there is, it shall be corrected prior to bringing the generator on line.
- h. Uninterruptible Power Supplies. Provide a minimum power quality performance of 12% current THD and 3% voltage THD measured at the UPS input terminals. Provide filtering if necessary.

- i. Transient Voltage Suppression System. TVSS shall be provided for the main service of each facility with services greater than 200 amps. A second level of TVSS shall be provided for panels serving primarily computer or non-linear loads.
- (3) Miscellaneous Electrical
- a. Lightning Protection. If the risk analysis performed per HFGA 780 or UL 96A exceeds moderate risk, provide a lightning protection system. Minimum qualifications required: LPI-certified installer, designer, and inspector. Obtain a UL Master Label of LPI Label for the facility.
 - b. Generator Fuel Tank Size. When generators are provided, size fuel tank to comply with the needs of the facility or a minimum of 24 hours of operation at full load capacity.
 - c. Hazardous Classifications. Coordinate with the State Fire Marshal hazardous classifications and requirements, including class, division, and group requirements.
 - d. Electrical Penetrations: All mechanical or electrical penetrations of the exterior envelope must be sealed air tight to the air barrier of the exterior wall assembly. If the building does not have an air barrier then the penetrations must be sealed air tight to the existing exterior sheathing and cladding in order to prevent excess air leakage.
- (4) Structured Cabling
- a. Coordinate structured cabling requirements with the IT departments of DFCM, the institution, and the user groups.
 - b. Test all structured cabling systems to demonstrate compliance with TIA/EIA standards for the category of system selected. Include warranty and the test results in the Project Resource Manual.
- (5) Fire Alarm
- a. Provide addressable fire alarm systems as required by State Fire Marshal's Rules R710. The installation shall comply with the State Fire Marshal's Rules R710 and NFPA 72.
 - b. For DFCM-managed buildings, specify non-proprietary manufacturers. Examples of approved types are: Fire-Lite and Silent Knight. All other manufacturers shall be approved by the DFCM Director.
 - c. For institutional buildings, comply with the requirements of the institution.
 - d. Install class "A" looped systems or as approved by the Fire Marshal.
 - e. Fire alarm wiring shall be installed in conduit.
 - f. Do not use the following components unless approved by the DFCM Director: other manufacturers, zoned fire alarm panels, ionization smoke detectors, MC Cable.
6. Miscellaneous Systems: Coordinate requirements for other systems such as security, CCTV, audio/visual, etc. with DFCM, the institution, and user groups.

3.6 Mechanical - General

A. Standards

- (1) The latest editions of publications and standards listed here are intended as guidelines for design. They are mandatory only where referenced as such in the text of this chapter or in applicable codes. The list is not meant to restrict the use of additional guides or standards.

When publications and standards are referenced as mandatory, any recommended practices or features shall be considered required.

- a. Most recent adopted version of International Code Council
- b. ASHRAE: Handbook of Fundamentals.
- c. ASHRAE: Handbook of HVAC Applications.
- d. ASHRAE: Handbook of HVAC Systems and Equipment.
- e. ASHRAE: Standard 15: Safety Code for Mechanical Refrigeration.
- f. ASHRAE: Standard 52: Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter.
- g. ASHRAE: Standard 55: Thermal Environmental Conditions for Human Occupancy.
- h. ASHRAE: Standard 62: Ventilation for Acceptable Indoor Air Quality.
- i. ASHRAE: Standard 90.1: Energy Standard for Buildings Except Low-Rise Residential Buildings.
- j. ASHRAE: Standard 100: Energy Conservation in Existing Buildings.
- k. ASHRAE: Standard 105: Standard Method of Measuring and Expressing Building Energy Performance.
- l. ASHRAE: Standard 111: Practices for Measurement, Testing, Adjusting and Balancing of Building HVAC Systems.
- m. ASHRAE: Standard 113: Method of Testing for Room Air Diffusion
- n. ASHRAE: Standard 114: Energy Management Control Systems Instrumentation.
- o. ASHRAE: Standard 135: BACnet: A Data Communication Protocol for Building Automation and Control Networks.
- p. ASHRAE: Standard 202: Commissioning Process for Buildings and Systems
- q. ASHRAE: Guideline #4: Preparation of Operating and Maintenance Documentation for Building Systems.
- r. American National Standards Association: ANSI Z 223.1.
- s. National Fuel Gas Code Standard 54.
- t. American Society of Mechanical Engineers: ASME Manuals.
- u. American Society of Plumbing Engineers: ASPE Data Books.
- v. Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA):
- w. ASHRAE HVAC System Duct Design.
- x. SMACNA HVAC Duct Construction Standards: Metal and Flexible.
- y. SMACNA HVAC Air Duct Leakage Test Manual.
- z. SMACNA Fire, Smoke and Radiation Damper Installation Guide for HVAC Systems.
- aa. Seismic Restraint Manual Guidelines for Mechanical Systems.
- bb. NFPA Standard 96.
- cc. ASTM A53: Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
- dd. ASTM A74: Standard Specification for Cast Iron Soil Pipe and Fittings
- ee. ASTM A106/: Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service
- ff. ASTM A197: Standard Specification for Cupola Malleable Iron
- gg. ASTM A234: Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
- hh. ASTM A888: Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications
- ii. ASTM B32: Standard Specification for Solder Metal
- jj. ASTM B88: Standard Specification for Seamless Copper Water Tube
- kk. ASTM C564: Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings

- ll. ASTM C1540: Standard Specification for Heavy Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
- mm. ASTM D1784: Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
- nn. ASTM D2444: Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
- oo. ASTM D2661: Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
- pp. ASTM D2665: Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
- qq. ASTM D3034: Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings
- rr. ASTM D3212: Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
- ss. ASTM E336: Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings
- tt. ASTM E779: Standard Test Method for Determining Air Leakage Rate by Fan Pressurization
- uu. ASTM F876: Standard Specification for Crosslinked Polyethylene (PEX) Tubing
- vv. ASTM F877: Standard Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems
- ww. All applicable regulations and requirements of local utility companies having jurisdiction.

B. Criteria

(1) Design Conditions

- a. Outdoor air design criteria is from weather data tabulated in the latest edition of the ASHRAE Handbook of Fundamentals.
 - i. Heating design conditions: 99 percent column heating dry bulb temperature.
 - ii. Cooling design conditions for sensible, latent and ventilation load calculations: 1 percent column dry bulb temperature, with its mean coincident wet bulb temperatures
 - iii. Cooling tower selection, and dehumidification load: 1 percent dew point, with its mean coincident dry bulb temperature.
- b. Occupancy:
 - i. Determine occupant density (persons/ft²) from the occupancy schedule of the Program.
 - ii. If this information is not available, use the occupancy density values in ASHRAE 62.1.
 - iii. For dining areas, auditoriums, and other high occupancy spaces, base occupancy densities on the number of available seats.
 - iv. Base sensible and latent loads per person on the latest edition of the ASHRAE Handbook of Fundamentals.

(2) Load Calculation Software Requirements

- a. Perform HVAC load calculations with a computer-based program using the latest ASHRAE Handbook of Fundamentals Heat Balance (HB) Method, Radiant Time Series (RTS) Method, or Transfer Function Method (TFM).
- b. The program must be capable of calculating each zone's peak heating and cooling loads as well as the whole-building simultaneous peak load.
- c. The program must calculate solar gains through fenestration, internal gains from occupants, including latent heat for cooling purposes, internal gains from lighting and equipment, outside air loads (sensible and latent) from ventilation and

- infiltration, and heat and moisture gains or losses through fenestration, walls, floors, and roofs.
 - d. Calculate the heating load without credit for occupants and internal gains.
 - e. Do not include safety factors in the HVAC load calculations unless specifically asked for in the Program.
- (3) Temperature
- a. Design for indoor setpoints specified in the Program.
 - b. Ensure control of dry bulb temperature range, allowing for seasonal and unoccupied set point adjustment.
 - c. Control surface temperatures surrounding the occupants to limit the detrimental effects of radiant temperature asymmetry. Use passive methods such as better R-values in materials, and active methods such as delivery of heating and cooling media (air, water, electricity, refrigerant) to offset undesirable surface temperatures.
- (4) Humidity Control
- a. Unless specific control ranges are required by the Program to protect materials or processes, humidity control is neither required nor encouraged
- (5) Air Movement
- a. Occupant comfort: Design to deliver air at less than 30 fpm air speed in heating and 50 fpm air speed in cooling at the occupied level.
 - b. Stratification: Reference ASHRAE 55 for allowable vertical air temperature stratification.
 - c. Airflow noise: Design to meet space and occupant noise level criteria as specified in the Program and or Section Noise Control below.
- (6) Building Pressure
- a. Manage the flow rates of building outdoor air, exhaust air and relief air by the HVAC equipment, reset as determined by the pressure differential of ground floor's exterior space with the outdoor, to achieve 0.02" - 0.05" wc positive building pressure when occupied.
 - b. Maintain positive building pressure when occupied, when outside dew point is higher than 47°F when unoccupied, and/or when specific space humidity control requirements must be maintained.
- (7) Ventilation
- a. Design ventilation rates to comply with ASHRAE Standard 62.1, latest edition, using the Ventilation Rate Procedure
 - b. Provide devices to measure and control minimum outdoor air flow for all variable air volume systems. Provide means for the outdoor air flow rate to be reported to the building DDC system.
 - c. Comply with all the technical requirements of Section 5.0 HPBS.
- (8) HVAC Noise Control
- a. Design all systems so that space RC is equal to or less than those listed in ASHRAE Applications, Noise and Vibration Control Chapter, Design Guidelines for HVAC-Related Background Sound in Rooms
 - b. Confirm design sound levels are achieved through field measurements in accordance with ASTM E336 "Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings"
- (9) Redundancy
- a. Provide for continuous operation through redundancy and/or modularization for facilities greater than 30,000 sf or which have critical functions or critical care residents.
 - b. The loss of one half or less of the design cooling or heating system for the entire facility shall be tolerated temporarily in the event of equipment failure for: heat

pumps, boilers, refrigeration machinery (excluding cooling towers), and condensate pumps.

- (10) Low-Load Operating Conditions (Shoulder seasons)
 - a. Design mechanical systems to be capable of stable operation at 10% of peak load capacity while maintaining space temperature requirements without equipment cycling that is outside of the equipment manufacturer's design and operating recommendations or that will shorten equipment life.

C. High Performance Building System

- (1) Reference High Performance Building System requirements

D. Operability and Maintainability

- (1) Locate mechanical rooms to take advantage of ductwork and piping proximities to major loads.
- (2) Locate all mechanical equipment within the building or on the property in areas not subject to flooding and 5 feet above the 100-year flood plain.
- (3) Accessible for Maintenance
 - a. Install equipment so that it can be safely and easily maintained and inspected.
 - b. Comply with OSHA and other access requirements (step height, reach length, railing and catwalks).
 - c. Comply with requirements for mechanical room sizes and manufacturer's recommended clearances around installed equipment.
 - d. Provide stair access to equipment installed on roof.
 - e. Provide disassembly access for all valves, piping, and equipment.
 - f. Do not locate equipment, panels, damper motors, or other elements more than three feet above a ceiling where access is required with a ladder. Provide walkways and /or catwalks for equipment above these heights.
- (4) Provide means such as overhead rails or structure for attaching winches, lifts, etc. for temporary lifting and support for removal of heavy and /or large parts.
- (5) Simple/Understandable to Operate
 - a. Design the HVAC system design to minimize the need for overly complex control systems.
 - b. Clearly describe and comprehensively document the sequence of operation for the control systems in Operator's manuals, as-built documents, and by posting as-build documents within the control panels.
- (6) Operations
 - a. Select equipment components, spare parts, and materials so that they are readily available and repairable by local technicians. Avoid special order and/or long lead items when other options are available.

E. Alterations in Existing Buildings and Historic Structures

- (1) Design HVAC systems to avoid affecting other systems and historic finishes, elements, and spaces.
- (2) Place exterior equipment where it is not visible. Recess equipment from the edge of the roof to minimize visibility of the equipment from grade. Alternatively, explore creating a vault for easier access to large mechanical equipment. If equipment cannot be concealed, specify equipment housings in a color that will blend with the historic face. As a last resort, enclose equipment in screening designed to blend visually with the facade.
- (3) Locate equipment with particular care for weight and vibration on older building materials.
- (4) Retain original plaster ceilings in significant spaces, such as lobbies and corridors, to the extent possible and modified only as necessary to accommodate horizontal distribution. Use soffits and false beams where necessary to minimize the alteration of overall ceiling

heights. In buildings containing ornamental or inaccessible ceilings, route piping and ductwork in furred wall space or exposed in the occupied building area. Consider exposed ducts in historic industrial buildings with open plan, tall ceiling, and high window spaces suited to flexible grid/flexible density treatments.

- (5) If new vertical air distribution risers are required, locate adjacent to existing shafts.
- (6) Select system types, components, and placement to minimize the alteration of significant spaces. In previously altered spaces, design systems to allow historic surfaces, ceiling heights, and configurations to be restored.
- (7) Retain decorative elements of historic systems such as ornamental grilles and radiators where possible.
- (8) Retain and enhance the performance of the original type of system where a new one cannot be totally concealed or would adversely affect historic spaces or features. For example, adapt existing radiators with modern heating and cooling units, rather than adding another type of system that would require the addition of new ceilings or other non-original elements.
- (9) To the greatest extent possible, ensure that space is available to maintain and replace equipment without damaging significant features and select components that can be installed without dismantling window or door openings.
- (10) Select temperature and humidity conditions that do not cause deterioration of building materials.
- (11) Locate and construct all mechanical rooms so that equipment can be replaced and repaired with standard, normally available equipment, without special or custom built dimensional requirements, and minimal disassembly.
- (12) Avoid locations requiring difficult lifting and / or heavy crane requirements that will interfere with occupant activities in an occupied building.

3.7 Plumbing

A. Domestic Water Supply Systems

- (1) Cold Water Service
 - a. Cold water service consists of a pressurized piping distribution system incorporating a separate supply line from the tap in the existing outside water main to the equipment area inside the building.
- (2) Materials
 - a. Exterior Buried
 - i. Copper tube: ASTM B88 Type K with wrought copper and bronze solder joint fittings in conformance with ANSI B16.22 or cast bronze solder joint fittings in conformance with ANSI B16.18.
 - ii. Ductile Iron Pipe Fittings and Joints, Class 150, with mechanical joints and fittings with set screw retaining glands conforming to ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11.
 - iii. Polyvinylchloride Water Pipe, Fittings, and Joints conforming with NSF Standards #14 and #61 and cell classification 12454-A or -B per ASTM D-1784.
 - (a) Solvent cement to be low volatile organic compound (VOC) to meet South Coast Air Quality Management District (SCAQMD) Rule #1168.
 - b. Interior Buried
 - i. ASTM B88 Type K annealed (soft) copper water tube with 95% tin 5% antimony solder joints using wrought fittings.
 - ii. No joints below grade.
 - c. Interior Tube Supported by Hangers and Clamps

- i. ASTM B88 Type L hard drawn copper tube with wrought copper fittings and couplers up to 6", cast brass or bronze fittings and couplers for sizes 6" and larger.
 - ii. Joints:
 - (a) 95-5 Class SnSb solder
 - (b) Roll-grooved couplers and fittings for 3" and larger tube.
 - iii. Copper ProPress fittings conforming to material requirements of ASME B16.18 or ASME B16.22 and performance criteria of IAPMO PS 117
 - iv. Crosslinked polyethylene tubing in accordance with ASTM F 876 and ASTM F 877.
- d. Penetrations
- i. All mechanical or electrical penetrations of the exterior envelope must be sealed air tight to the air barrier of the exterior wall assembly. If the building does not have an air barrier then the penetrations must be sealed air tight to the existing exterior sheathing and cladding in order to prevent excess air leakage.
- (3) Soil Cover
- a. For outside services greater than 6000 HDD, provide minimum cover of 48" or preferred cover of 60". In no instance shall the minimum depth be less than the frost line.
 - b. For outside services less than 6000 HDD: Provide minimum cover of 36" or preferred cover of 48".
- (4) Meters
- a. Meter water service with compound meter(s) furnished by the local department of public works.
 - b. Provide double check valves on incoming service.
 - c. Provide remote reading capability of meters.
 - d. Sub-meter irrigation systems.
 - e. Campus Water Meters.
 - i. Install meter in the main mechanical room or within easy access of mechanical spaces.
 - (a) If conditions do not permit inside installation, provide meter box outside.
 - (b) The meter box shall be 52" x 81" x 71" high with a concrete base under the meter, but the rest of the floor shall be gravel. Top shall have recessed eyes. Top to be poured separate so it can be moved off with a crane and the eyes shall be left large enough to insert a chain by which it can be lifted. Cover to have a 24 inch locking meter lid in center. Position meter so it can be read without personnel entering the vault. Water meter indicator shall be the totalize type reading directly in gallons of water. Water meter shall be installed with valves on both sides so meter can be removed and a bypass line installed. Sleeve around pipes passing through walls of meter box.
 - f. Where fire sprinklers are installed, connect the fire main ahead of the meter.
- (5) Gauges
- a. Provide pressure gauges with gauge cocks on each side of equipment and devices which have a pressure drop, such as PRVs, strainers, and heat exchangers.
- (6) Internal distribution to supply domestic cold water to all plumbing fixtures, water heaters and all mechanical make-up water needs.
- (7) Design distribution system to maintain adequate pressure and flow in all parts of the system under all operating conditions.

- (8) Use duplex booster pumping system if the water pressure is not adequate to provide sufficient pressure at highest, most remote fixture. Ensure that the water pressure at the fixture is in accordance with the International Plumbing Code.
- (9) Completely insulate, with vapor barrier, all domestic cold water piping above ceiling and where concealed in walls, or any location where condensation could cause mold growth or damage.
- (10) Provide water hammer arrestors at every branch to multiple fixtures and on every floor.
- (11) Valves
 - a. Use ball valves with full opening ports and adequate pressure and temperature rating up to three inches in size, and butterfly valves with wheel and gear operator for 4 inches and larger.
 - b. Provide valves near the main with a union for all branch lines of water which supply more than one outlet or unit.
 - i. Provide isolation valves as necessary and provide, as a minimum, valves for each toilet group outside of the toilet room, each floor, and each branch line that is 2" or greater
 - ii. Provide a quarter-turn ball shutoff valve on all water supply lines on the room side of the fixture.
 - iii. Supply lines from the valve shall be 3/8" brass, chrome plated.
 - iv. Provide chases or access panels to access valves, with proper identification on or near panel.
 - v. Water relief valves: Connect water relief valve exhaust or discharge to nearby floor drain. Provide sump in pipe tunnels at each cleanout.

B. Hot Water Service

- (1) Materials and valves: Same as cold water
- (2) Generate hot water with heaters utilizing natural gas, electricity or steam as an energy source. Support selection by an economic evaluation incorporating first cost, operating costs and life cycle costs in conjunction with the HVAC energy provisions.
- (3) Generate and store domestic hot water at 140°F, and temper to 120°F using a three-way mixing valve, before supplying to all plumbing fixtures.
- (4) Provide secondary drain pans under water heaters and hot water tanks, piped to the nearest floor drain.
- (5) Boost supply water temperature from 140°F to 180°F to dishwasher(s).
- (6) Evaluate heat pump hot water heaters where possible to save energy.
- (7) Ensure that hot water is available at the furthest fixture from the heating source within 15 seconds of the time of operation.
- (8) Distribution system consists of a piping system which connects water heater or heaters to all plumbing fixtures as required. Circulation systems or temperature maintenance systems are included.
 - a. Design and balance circulation systems to less than 4 fps velocity to minimize piping erosion.
 - b. Control circulation systems based on water return temperature and building occupancy.
 - c. Monitor domestic hot water supply and return temperatures and circulation pump status by the building automation controls system.
- (9) Provide water hammer arrestors at every branch to multiple fixtures and on every floor
- (10) Solar Water Heating
 - a. If lifecycle cost effective based on Program directive or five year ROI, meet at least 30 percent of the hot water demand for each new building or building undergoing a major renovation through the installation and use of solar hot water heaters.
- (11) Insulate hot water distribution systems per ASHRAE 90.1 and provide all exposed piping with PVC jacketing.

- (12) Coordinate installation to allow access for maintenance and replacement.
- (13) Provide combination temperature and pressure relief valve piped to adequate drain.
- (14) Specify flexible connections and tie-down straps to accommodate movement during seismic events.

C. Sanitary Waste and Vent System

(1) General

- a. Cast iron pipe centrifugally cast service weight (SV) soil pipe with cast iron drainage fittings conforming to ASTM A 74.
- b. Joint materials and systems
 - i. Hub and spigot with neoprene gaskets and lubricant conforming to ASA 021 and ASTM C 564 SV pattern.
 - ii. Cast iron hubless pipe and fittings conforming to ASTM A 888, CISPI 301.
 - (a) Hubless couplings shall conform to ASTM C 1277 for standard and ASTM C 1540 for heavy duty or CISPI 310.
- c. Polyvinylchloride (PVC) sewer pipe and fittings conforming to DR 35, ASTM D3034, bell and spigot type with reinforced rubber ring gasket integral with bell joint, material to meet ASTM D1784, D2444 and joint tightness in accordance with ASTM D3212.
 - i. Solvent cement to be low volatile organic compound (VOC) to meet South Coast Air Quality Management District (SCAQMD) Rule #1168.

(2) Buried Pipe

- a. SV hub and spigot cast iron pipe and fittings
- b. No-Hub standard weight cast iron pipe with either M-G couplings or heavy-duty stainless steel shielded couplings. The heavy-duty shielded couplings shall comply with ASTM C1540, with ASTM C564 neoprene gaskets,

(3) Interior Pipe Supported By Hangers and Clamps

- a. Hubless cast iron pipe using hubless cast iron soil pipe couplings certified to withstand a minimum of 50 psi internal pressure, or higher if required by application.
- b. Sump pump discharge shall be Schedule 40 galvanized steel pipe with NPT threaded joints and fittings.

(4) Plastic Drain, Waste and Vent Piping

- a. Plastic DWV may be either P.V.C. or A.B.S. as required by code, utilizing drainage pattern fittings.
 - i. P.V.C. (polyvinylchloride) pipe and fittings shall conform to ASTM D2665 with a flame spread rating of 25 or less
 - ii. A.B.S. (acrylonitrile butadiene styrene) pipe and fittings shall conform to ASTM D2661, CS 270 65
- b. Solvents for plastic piping
 - i. Solvents for plastic piping joints shall be certified to meet SCAQMD Rule #1168/316A. This includes but is not limited to PVC, CPVC, and ABS piping, all grades and sizes.

(5) Vent Piping and Fittings

- a. Same as waste piping above.

(6) Floor Drains.

- a. Provide floor drains in multi-toilet fixture restrooms, kitchen areas, mechanical equipment rooms, locations where condensate from equipment collects, and parking garages and ramps.
- b. Single fixture toilet rooms do not require floor drains.
- c. Provide cast iron body type floor drains with 6 inch diameter nickel-bronze strainers for public toilets, kitchen areas and other public areas.

- d. Equipment Room Floor Drains
 - i. Trenches with grating covers with bottoms sloped to drain are preferred but not required over multiple floor drains in mechanical equipment rooms and some laboratories
 - e. Parking Garages
 - i. Large diameter tractor grates or trench drains inlets when exposed to rainfall.
 - f. Water Still Drains
 - i. Provide Kimax glass to nearest main drain from water still drains or provide glass pipe for the first 20 feet horizontally or to the floor below.
 - ii. Provide cleanout at water still and at main drain line before glass is connected with soil piping
 - g. Provide drains indirectly connected to building drainage system for walk-in refrigerators and other places where food is stored.
 - h. Use deep seal traps or trap seals. Do not use trap primers.
- (7) Sanitary Waste Equipment
- a. Discharge specific drains in kitchen areas into a grease interceptor before connecting into the sanitary sewer in accordance with the requirements of the state health department and local authorities will determine which drains.
 - b. Discharge floor drains and/or trench drains in garage locations into sand/oil interceptors.
- (8) Automatic Sewage Ejectors
- a. Only use sewage ejectors where gravity drainage is not possible. If they are required, connect only the lowest floors of the building to the sewage ejector; for fixtures on upper floors use gravity flow to the public sewer.
 - b. Non-clog, screen less duplex pumps, with each discharge not less than 4 inches in diameter.
 - c. Connect to the emergency power system.
- (9) Pipe Tunnel Sumps
- a. Provide sump in pipe tunnels at each cleanout.
 - b. Three foot square and four feet deep with grating cover and porous walls.
 - c. Floor drains may be used in lieu of sump if depth of waste line is such that drains may be tied in.
- (10) Waterproofing Pans
- a. Provide membrane waterproofing pans for shower stalls and custodial floor sinks so they are 100% water tight.
 - b. Provide clamping device which clamps drain to pans.
 - c. Provide a mastic seal between floor drain bottom and lead or membrane so when clamping device is tightened there is a complete seal so no water can get through.
 - d. Do not clog weep holes.
 - e. Test pans by placing test plug in drain and filling with water overnight.
- (11) Dishwasher Connections
- a. Provide indirect connection for waste on automatic dishwashing machines. Install minimum 3" drain in an accessible location under conveyor table.
- (12) Cleanouts
- a. Provide cleanouts at base of each vertical rise, each turn in excess of 45 degrees and on straight runs every 50 feet.
- (13) Horizontal Waste lines:
- a. Provide dedicated minimum 3" horizontal waste lines with adequate cleanouts for garbage disposals and dishwashers.

D. Rainwater Drainage System

- (1) Size piping system based upon local rainfall intensity, with minimum pipe size = 3"
- (2) Roof Drains
 - a. Cast iron body type with cast iron high dome grates and membrane clamping rings.
 - b. Provide a separate overflow drain located adjacent to primary roof drain.
 - c. Overflow drains are the same drains as the roof drains except that a damming weir extension is included.
- (3) Rainwater Drainage Equipment.
 - a. Foundation drainage system with perforated drain tile collecting into a sump containing a pumping system as required by the applicable codes shall be provided.

E. Plumbing Fixtures

- (1) In compliance with the International Plumbing Code and local building codes.
- (2) Apply water conservation technologies to the extent that the technologies are life-cycle cost-effective, based on criteria established in Program, or 5 year ROI
- (3) Use plumbing products labeled under the EPA WaterSense program.
- (4) Reference the Architectural Barriers Act Accessibility Standard (ABAAS) for plumbing fixture accessibility clearances, installation, and accessories requirements.
- (5) Showers
 - a. Non-scald type shower valve with integral stops.
 - b. Vandal-proof institutional type shower heads with flow adjustment and adjustable head and spray.
 - c. Extend head out from wall so water does not run down wall when valve is turned off.
 - d. Provide watertight shower escutcheon with weep hole in bottom.
- (6) Drinking Fountains
 - a. Refrigerated type, wall hung drinking fountains with stainless basins.
 - b. Provide removable grid strainer to enable cable-style cleaning without having to dismantle the fountain.
- (7) Water Closets (Toilets)
 - a. Flushometer valve type
 - i. Either dual-flush or low-flow type, manually controlled. For single flush, maximum flush volume when determined in accordance with ASME A112.19.2 (1.28 gallon).
 - ii. For dual-flush, effective flush volume determined in accordance with ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification -1.28 gal.
 - iii. Exposed type flush valves with lever operator (no push buttons or floor operators), diaphragm type only.
 - iv. Screwdriver stop valves.
 - v. Concealed flush valves in restrooms subject to vandalism.
 - b. High Efficiency Toilets (HET) Water Closets Tank-Type
 - i. Do not specify unless approved by the Director
 - ii. If used, comply with the performance criteria of the U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification.
- (8) High Efficiency Urinals (HEU)
 - a. Low-flow, flush-type fixtures.
 - b. Maximum flush volume when determined in accordance with ASME A112.19.2: 0.125 gallon.
 - c. Sensor valves are acceptable
- (9) Public Lavatory Faucets

- a. Use metered-type faucets for lavatories. Maximum water use: 0.25 gallon per metering cycle when tested in accordance with ASME 112.18.1 / CSA B125.1.
- (10) Emergency Fixtures
 - a. Eyewash (0.4 gpm per fountain), face wash (3 gpm each), or shower (20 gpm each) must be tempered immediately at the fixture or group of fixtures within 25 feet to deliver tepid water between 85°F and 100°F, at 30 psi, within 10 seconds, for a minimum period of 15 minutes, and must account for temperature drop across the valve (generally 20°F) at flow.
- (11) Faucets and Hose Bibs
 - a. Provide non-freeze type hose bibs with shut-off valves for the lines serving the hose bib located inside facility.
 - b. Provide faucet with hose attachment and vacuum breaker in each restroom so floor can be washed with clean water.
 - c. Provide hose bib with vacuum breaker in mechanical rooms and chiller rooms.
 - d. Provide non-freeze hose bib with vacuum breaker near cooling tower.
 - e. Provide hose bibs outside building for window washing, walk and area way washdown (generally not more than 150' on center).
- F. Natural Gas Systems
 - (1) Service Entrance.
 - a. Protect gas piping entering the building from accidental damage by vehicles, foundation settlement or vibration.
 - b. Where practical, the entrance should be above grade and provided with a self-tightening swing joint prior to entering the building.
 - c. Do not locate gas piping in unventilated spaces, such as trenches or unventilated shafts, where leaking gas could accumulate and explode.
 - (2) Gas Piping within Building Spaces.
 - a. Do not route gas piping through confined spaces, such as trenches or unventilated shafts.
 - b. Ventilate vertical shafts carrying gas piping
 - c. Locate gas meters in a gas meter room.
 - d. Use plenum rated fittings for all gas piping inside ceiling spaces.
 - e. Vent all diaphragms and regulators in gas piping to outdoors.
 - f. Provide seismic bracing for all gas piping within building
- G. Fuel Oil Systems
 - (1) Fuel Oil Piping
 - a. Schedule 40 black steel or black iron piping. Fittings of the same grade as the pipe material.
 - b. Bronze, steel or iron valves, may be screwed, welded, flanged or grooved.
 - c. Use double-wall piping with a leak detection system for buried fuel piping.
 - (2) Use duplex fuel-oil pumps with basket strainers and exterior enclosures for pumping the oil to the fuel burning equipment.
 - (3) Underground Fuel Oil Tanks
 - a. Double wall, non-metallic construction or contained in lined vaults.
 - b. Size for sufficient capacity to provide 48 hours of system operation under emergency conditions (72 hours for remote locations).
 - c. Provide a leak detection system, with monitors and alarms for both
 - d. Provide emergency power to all components of the Fuel Oil Storage system
 - e. Comply with local, State and Federal requirements, as well as EPA 40 CFR 280 and 281.

A. Air Distribution Systems

- (1) Supply air distribution systems are to be fully ducted to the spaces that are served.
- (2) Coordinate the location of any exhaust or relief air with mechanical air intake systems to avoid short cycling
- (3) Provide dedicated relief air path for all systems which introduce outside air. Exfiltration through the building envelope does not comply with this requirement.
- (4) Ductwork Materials:
 - a. Provide rectangular and round ductwork from galvanized steel, stainless steel or aluminum.
 - b. Meet or exceed SMACNA and ASHRAE Standard 90.1 requirements for duct construction, installation and leakage.
- (5) Volume Adjusting Devices
 - a. Provide devices that can be securely locked in place and are accessible for adjustment after construction.
- (6) Do not provide the following components, unless approved by the Director:
 - a. Duct Lining in the following applications:
 - i. Outside air ducts,
 - ii. Ductwork within 10 feet downstream of any device that adds moisture to the air stream
 - iii. Ductwork exposed to humid air stream above 70% RH such as swimming pool applications.
 - b. Fiberboard ductwork.

B. Piping System

- (1) Materials:
 - a. Steel:
 - i. Pipe:
 - (a) 2 Inch & Smaller: ASTM A53, Grade A, Schedule 40 black butt-welded or continuous welded steel.
 - (b) 2 1/2 Inch & Larger: ASTM A53, Grade B, Schedule 40 black butt-welded or continuous welded steel.
 - ii. Fittings:
 - (a) 2 Inch & Smaller: ASTM A197, Class 150 black malleable iron screwed.
 - (b) 2 1/2 Inch & Larger: ASTM A234, Steel butt weld, standard weight forged fittings.
 - b. Copper:
 - i. Tube:
 - (a) Up to 4" inclusive ASTM B88, Type L, hard drawn.
 - ii. Fittings:
 - (a) ANSI/ASME B16.23 cast brass and/or
 - (b) ANSI/ASME B16.29 solder wrought copper
 - iii. Joints:
 - (a) ASTM B32, solder, Grade 95 TA.
 - iv. ProPress option for copper tubing, fittings, and joints:
 - (a) Conform to material requirements of ASME B16.18, ASME B16.22, and IAPMO PS 117.
 - (b) Joints conform to ASME B16.18, ASME B16.22, and IAPMO PS 117.
 - c. Penetrations:

- i. All mechanical or electrical penetrations of the exterior envelope must be sealed air tight to the air barrier of the exterior wall assembly. If the building does not have an air barrier then the penetrations must be sealed air tight to the existing exterior sheathing and cladding in order to prevent excess air leakage.
 - (2) Underground Pipe
 - a. Comply with ASTM A106.
 - (3) Air Vents
 - a. Provide suitable air vents for all heat producing equipment (converters, unit heaters, coils, etc.).
 - b. Provide with manual air vent valves at system high points and drain valves at system low points.
 - i. Furnish suitable provisions, such as access panels, to permit full access to these valves.
 - ii. Manual air vents shall be 3/8" globe valves with 1/4" copper tubing to near floor or to locations where water may be caught in bucket.
 - iii. Drain valves shall be threaded for 3/4" hose connections.
 - iv. Provide water-tight sleeve and caulking around pipe for all piping passing through floors.
 - (4) Valves
 - a. Provide valves near the main with a union for all branch lines of water or steam which supply more than one outlet or unit.
 - b. Ball valves with full opening ports and adequate pressure and temperature rating up to 3 inches in size, and butterfly valves with wheel and gear operator for 4 inches and larger.
 - c. Valves 2" and larger on systems greater than 200 degrees F shall be flanged or grooved.
 - d. Provide chases or access panels to access valves. Provide proper identification on or near panel.
 - (5) Insulation
 - a. Insulate piping in compliance with prevailing energy code or the requirements of the High Performance Building Standard, whichever is more stringent.
 - b. Provide PVC jacket on all piping exposed to view, and in mechanical rooms
 - c. On pipes subject to condensation, use non-permeable insulation of perm rating 0.10, such as cellular glass or preformed composite insulation system.
 - (6) If glycol is used for freeze protection, use propylene glycol. Do not use ethylene glycol.
- C. Steam
- (1) Motor Operated Steam Valve:
 - a. If the existing central plant serving the campus is a steam system, provide a motor operated steam valve for each new building.
 - b. Coordinate location with the Agency.
 - c. If equipment requires steam when the valve may be closed, connect equipment ahead of motor operated steam valve.
 - (2) Design for gravity flow of condensate in lieu of providing vacuum pumps.
 - (3) Provide tunnels, chases, access doors, or crawl spaces for accessing steam piping. Do not install underground or in split tile
 - (4) Provide properly dripped steam mains. Provide drip legs ahead of all steam pressure reducing valves and steam coils to ensure clean, dry steam at the valve.
 - (5) Valves

- a. Low pressure steam valves shall have a 200 psi rating and allow renewable seats and discs.
 - b. For 100 psi steam line use 250 psi flanges and 300 psi screwed valves.
 - c. Provide valves near the main with a union for all branch lines of steam which supply more than one outlet or unit.
- (6) Piping
- a. 2" and smaller: schedule 80 black steel.
 - b. 2-1/2" or larger: schedule 40 black steel for low pressure steam (15 psig or less) and schedule 80 black steel for medium and high pressure steam (greater than 15 psig).
 - c. Condensate piping: schedule 80 black steel pipe, including underground return lines.
- (7) Underground Steam Lines
- a. Use pre-insulated pipe for underground steam lines, materials as noted above, with separate insulated conduits for steam and condensate return piping.
- (8) Expansion Provisions
- a. Provide expansion loops, swing joints, offsets, etc., for expansion of piping.
 - b. Do not use expansion joints except when expansion loops, offsets, swing joints, etc., are not possible due to space constraints.
 - c. If expansion joints are provided, provide adequate internal or external guides that are properly supported anchored.
 - d. Do not provide swing joints on main runs; however, swing joints may be installed on risers off the main.
- (9) Pressure Reducing Stations
- a. Provide pilot-operated valve for pressure reducing stations.
 - b. Provide a three valve bypass at all reducing stations with ample clearance to permit normal maintenance and inspection.
 - c. Use parallel pressure reducing stations when low demand is expected.
 - d. Provide safety relief valves on the low pressure side of regulator stations. Provide discharge piping to facility exterior in a safe location.
 - i. For pipes discharging near grade, install pipes into an eight inch concrete tie set upright in the ground (buried) over a gravel base twelve inches deep.
 - e. Provide pressure gauges on both the high pressure and low pressure sides of all regulator stations. Locate gauges so they will function when bypass is used.
 - i. Provide gauge cocks and pig-tails.
- (10) Steam Meter
- a. Refer to section 5.0 HPBS.
- (11) If campus system hot water system is turned off during the summer, provide alternate heating system for equipment requiring a heating source.
- (12) Miscellaneous Requirements
- a. Provide eccentric reducers when steam piping changes pipe sizes with the flat side on the bottom of the pipe.
 - b. Provide water-tight sleeve and caulking around pipe for all piping passing through floors.
- D. High Temperature Water
- (1) Comply with the specific requirements of the high temperature water provider.
- E. Natural Gas
- (1) Seismic gas shut off valve:
 - a. Provide a seismic gas shut off for each natural gas system.
 - (2) Natural Gas Piping

- a. Weld all concealed natural gas piping if larger than 4”.
 - b. Install flexible connections and tie-down straps to accommodate movement during seismic events.
- (3) Soil cover for outside services: Provide minimum cover of 24” or preferred cover of 36” for gas.

F. Building Automation

(1) Direct Digital Control:

- a. For new construction, use DDC with an open BACnet or LonTalk communication protocol in accordance with ASHRAE Standard 135.
- b. For repair and alteration projects and new additions to existing projects, the following options are permitted:
 - i. Installation of DDC with the BACnet or LonTalk protocol,
 - ii. Integrating the existing system with customized gateways to the BACnet or LonTalk protocol.
 - iii. Pneumatic control as an extension of an existing system, if specifically required by operating personnel
- c. Provide digital metering of electrical, hot water, steam, and chilled water sources to each facility. Refer to section 5.0 HPBS.
- d. Provide flow metering devices for hot and chilled water heating systems. . Refer to section 5.0 HPBS.

(2) Zoning

- a. Provide as many thermal control zones as is practical, but a minimum:
 - i. Provide one zone per 1,000 ft² of internal space.
 - ii. Provide one zone for every three perimeter enclosed offices.
 - iii. Provide a separate control zone when a room has more than one external exposure (e.g. corner office).
 - iv. Provide separate control zone for densely occupied spaces such as classrooms, conference rooms.
 - v. Provide separate control zone for unusual occupancy zones such as dining halls, computer room, entryways, etc.
 - vi. For perimeter radiant systems, provide Hydronic piping sub circuits to match the cooling zones.

(3) Control Valves

- a. Provide characterized-type ball valves for modulating control valves up to 2-1/2”
- b. Provide visual position indicators.
- c. Provide control valves with stem in the vertical position.
- d. If possible, provide packless valves.

(4) Dampers

- a. Provide low leakage design of felt or neoprene edges for fresh air, relief, and exhaust air dampers.
- b. Provide appropriate blade action for the application. Generally, provide opposed blade type for modulating control and parallel blade type dampers for mixing or on-off control.
- c. Provide controls that close the fresh air dampers on fan shutdown or power failure.
- d. Provide steel trunnions mounted in bronze sleeve bearing or ball bearings for damper blades. Do not exceed 48 inches in length between damper bearings.
- e. Provide dampers that close substantially tight and provide substantially the full area of the opening when open.
- f. Provide substantial bar or channel frames for dampers.

- g. For rectangular dampers larger than four square feet in area, provide additional corner bracing.
- (5) Space Temperature Sensors
 - a. If system supports DDC monitoring, provide solid state temperature sensors.
 - b. Temperature sensors in corridors, halls, restrooms and other similar unsupervised areas shall be flush mounted aspirating type with stainless steel cover.
 - c. Temperature sensors in public, but supervised areas shall have locking covers with concealed adjustment.
 - d. Temperature sensors in private offices may have exposed adjustments.
 - e. Avoid locating temperature sensors on outside walls or on partitions between offices.
- (6) Panels
 - a. Provide control devices, relays, piping, wiring and terminals in cabinets, except for switches, pilot lights, and push buttons mounted on the door.
 - b. Provide minimum 14 gauge steel or 12 gauge aluminum.
 - c. Equip doors with hinges, latches, and locks
 - d. Secure panels to walls, columns or floors with clearances required by NEC.
 - e. Provide two (2) keys for each panel.
- (7) Wall Mounted Control Diagrams
 - a. Provide plastic laminated copies of all applicable controls diagrams mounted on the wall in each equipment room.
- (8) Control Wiring
 - a. Provide control wiring in raceway complying with the requirements of Section 3.6 Electrical.
 - b. Label all control wiring on each end of wire termination points and where passing at intermediate locations passing through walls, in junction / pull boxes. Labels shall match wiring diagrams.
 - c. Control wiring shall NOT be spliced.
- G. Chilled Water System
 - (1) If the peak cooling load is 300 tons or more, provide at least two equally sized chillers at 67 percent of the peak capacity.
 - (2) Design chilled water system for a minimum 15°F ΔT , or higher if feasible
 - (3) Provide adequate system volume to minimize potential for chiller short-cycling
 - (4) For water-cooled chillers, design entering condenser water temperature to be 75°F
 - (5) Provide adequate valving to isolate the offline unit without interruption of service.
 - (6) Evaluate primary-only pumping.
 - (7) Analyze a waterside-economizer cycle during the design of the chiller plant and incorporate in the design if it improves the performance.
- H. Boiler Plant
 - (1) If the peak heating load is greater than 500 MBH, provide at least two equally-sized modular boilers sized at 67 percent of peak demand.
 - (2) Evaluate the use of condensing boilers where feasible.
 - (3) Evaluate methods to minimize pumping energy through strategies such as high ΔT , primary only pumping
 - (4) Provide boiler backup by redundancy or modularization.
 - (5) If a power burner is specified, determine the maximum allowable length of positive pressure flue.
- I. Condenser Water System

- (1) Provide each chiller with its own matching cooling tower or cell, and condenser and chilled water pump.
- (2) In the event of multiple cooling towers, provide equalizing lines and automatic control valves to allow individual chiller/cooling tower operation.
- (3) Use plastic pipe where possible

J. Roof-Mounted Equipment

- (1) Mechanical equipment, except for cooling towers, air-cooled chillers, evaporative condensers, exhaust fans, and packaged rooftop equipment, is not permitted on the roof of the building.
- (2) Provide access to roof-mounted equipment by stairs or freight elevator. Do not use ship's ladders.

K. Water Treatment System

- (1) Design the water treatment for closed and open hydronic systems with consideration of the operational and maintenance needs of all system equipment including such components as boilers, chillers, cooling towers, other heat exchangers, pumps, and piping.
- (2) Subject to the specific requirements of the components, the performance of water treatment for closed and open systems must include:
 - a. Closed Systems
 - i. $8.5 < \text{pH} < 10$
 - ii. $100 \text{ ppm} < \text{alkalinity} < 500 \text{ ppm}$
 - iii. $\text{TDS} \leq 500 \text{ ppm}$
 - b. Open Systems
 - i. $7.5 < \text{pH} < 9.5$
 - ii. $100 \text{ ppm} < \text{alkalinity} < 500 \text{ ppm}$
 - iii. Iron content $\leq 3 \text{ ppm}$
 - iv. Soluble copper $\leq 0.2 \text{ ppm}$
 - v. $\text{TDS} \leq 500 \text{ ppm}$
 - c. The methods used to treat the systems' makeup water must follow the guidelines outlined in ASHRAE Applications Handbook.
- (3) Provide BACnet or LonTalk self-contained controls for the chemical feed.
- (4) Provide for one year on-site service by water Treatment Company including supply of chemicals.
- (5) Provide treated water in the heating system until facility is accepted by DFCM.

L. District Steam Heating

- (1) When steam is furnished to the building, convert to hot water with a heat exchanger in the mechanical room near the entrance into the building.
- (2) Steam heating is discouraged inside the building, other than the conversion of steam to hot water in the mechanical room.
- (3) Investigate the use of district steam condensate for preheating domestic hot water.
- (4) Refer to section 5.0 HPBS.

M. Special Area HVAC Systems

- (1) Special areas such as atriums, auditoriums, entrance lobbies and vestibules, cafeterias, mail rooms, loading docks, computer and server rooms, fire pump rooms, BAS control rooms, and fire command centers may require dedicated HVAC systems, separate from

all other HVAC in the building, with individual controls to condition these spaces as required.

- (2) Provide dedicated cooling units to any spaces or processes which require continuous cooling such as telecommunication and main telecommunication rooms, electrical, and server rooms.
- (3) Provide a separate dedicated air-handling system for each mail room. Airflow must maintain negative pressure in the room relative to adjacent spaces.

3.9 Automatic Sprinkler Systems

- A. Provide an automatic sprinkler system in buildings when required by State Fire Marshals Rules R710. The Installation shall conform to State Fire Marshals Rule R710 and NFPA 13.
- B. It is desirable that all buildings constructed by the State of Utah be equipped with an automatic sprinkler system to provide added life safety for the occupants and to protect the building from fire loss.
- C. Fire sprinklers shall be considered as an integral component of building design when the availability of water supply and the cost do not make the installation prohibitive.
- D. Secondary structures and small buildings or buildings with low occupant loads may be excluded from this requirement with the approval of the Director.

3.10 Components

- A. Air Handling Units (AHU)
 - (1) Provide DDC (BACnet or LonTalk) self-contained controls that are capable of being connected to the central BAS. Controller must have a current-sensing device that transmits information to the BAS for calculating the energy consumption of the AHU motor.
 - (2) Additionally, control panel should include:
 - a. fuses,
 - b. high static shut off
 - c. fire shut off
 - d. speed reference control
 - e. fan status
 - f. cfm air flow measurement
 - (3) Provide with mixing boxes on the return side of the AHU.
 - (4) Construction:
 - a. Formed and reinforced, double wall insulated panels, fabricated to allow removal for access to internal parts and components,
 - b. Maximum 1% leakage on the casing.
 - (5) Fans
 - a. It is preferred that fans be direct drive centrifugal with backward inclined, SWSI airfoil wheels
 - b. Be sure wheels are rated for maximum motor speed
 - c. Fans for large, custom, or built up air handler units may be provided with a single, double or fan array type fan system. The fan type should be based on system performance, redundancy, maintenance and efficiency requirements, as well as owner/user preference.

- B. Outdoor Air Intake Locations
- (1) Locate outdoor air intakes as high as possible to minimize potential of outdoor air contamination.
 - (2) On buildings more than 40 feet tall, locate intakes a minimum of 40 feet above grade. On buildings less than 40 feet, the locate intakes as high as practical on the roof or on a wall.
 - (3) Duct outdoor air intakes directly to the AHU cabinet. Do not use the equipment room as an outdoor air intake plenum.
 - (4) Locate outdoor intake locations as far away from contaminate sources as possible, and not less than code required minimum. Sources include but are not limited to; generator exhaust, loading docks, vehicle garages and parking lots, sewer vents, exhaust fans, dumpsters, smoke break enclosures, etc.
- C. Filtration
- (1) For air handlers exceeding 10,000 cfm, provide pressure differential instrumentation across the filter bank to facilitate maintenance.
 - (2) Provide minimum MERV 8 filters upstream of all cooling coils and other devices with wetted surfaces per Standard 62.1- Section 5.8
 - (3) Provide minimum MERV 13 filters on all ventilation outdoor air intakes where the national standard for PM10 is exceeded
 - (4) Provide minimum MERV 13 filters on all ventilation outdoor air intakes where the national standard for PM2.5 is exceeded
 - (5) Specify that the Contractor replace all filters prior to building occupancy and provide one replacement set of filters for the entire facility.
 - (6) Provide pressure differential sensors across each filter bank. Monitor and alarm through the building automation system.
- D. Cooling and Heating Coils
- (1) Locate equipment and other obstructions in the air stream sufficiently downstream of the coil so that they will not come in contact with the water droplet carryover.
 - (2) Cooling coils
 - a. Select cooling coils at or below 500 fpm face velocity.
 - b. Coils with five or fewer rows may have a maximum of 12 fins per inch.
 - c. Coils with six rows or more should not exceed 10 fins per inch.
 - d. Provide stainless steel drain pan, piped to drain
 - (3) Heating coils
 - a. Select heating coils, including reheat coils, at or below 750 fpm face velocity.
 - b. Maintain fluid velocity below 3.5 fps.
- E. Pumps
- (1) Provide pressure gauge with gauge cocks as close to pump suction and discharge as possible and avoid pressure drops across valves, strainer, flexible connectors, etc.
 - (2) Provide suitable throttling valves on discharge side of constant speed pumps, such as globe valves, or balancing cocks. Throttling valve shall have set point position indicator and shall not be used for shutoff valve.
 - (3) Provide pot feeder across pump for each closed hydronic system.
 - (4) Variable Speed Pumps:
 - a. Do not install throttling valves on the discharge of a variable speed pump.
 - b. Utilize a venturi to measure water flow rate.
- F. Boilers
- (1) Use equal-sized modular boilers for hydronic heating applications. Exception: One smaller "Pony" boiler may be used to meet low load conditions.

- (2) Install boilers in a mechanical room with all provisions made for breeching, flue stack, and combustion air.

G. Chillers

- (1) Acceptable Compressor Range (tons)
 - a. scroll \leq 200 ton
 - b. $100 \leq$ screw \leq 500 tons
 - c. $200 \leq$ centrifugal
- (2) Specify appropriate ASHRAE and ARI Standards and certification.

H. Accessories

- (1) Provide air separators and expansion tanks for all closed hydronic systems regardless of piping arrangement.
- (2) Connect air separators and expansion tanks into piping system on suction side of distribution pump.

I. Hot Water Piping and Pumps

- (1) Materials acceptable for piping systems are stainless steel, black steel, cast iron and copper.
 - a. Size fluid velocity at less than 4 fps in Copper piping systems with temperatures above 100°F.
- (2) For copper piping, brazed, soldered and press-seal (test to 300 psig) fittings are acceptable; grooved or mechanically formed T-type fittings are not acceptable.

J. Isolation of Piping at Equipment

- (1) Provide isolation valves, shutoff valves, bypass circuits, drain valves, flanges, and unions for piping at equipment to facilitate equipment repair and replacement.
- (2) Equipment requiring isolation includes boilers, chillers, pumps, coils, terminal units, and heat exchangers.
- (3) Provide valves for zones off vertical risers, including drain valves.

K. Flexible Pipe Connectors

- (1) Fabricate flexible pipe connectors from annular close pitched corrugated and braided stainless steel.
- (2) Grooved pipe solutions are acceptable. Select gasket materials for each fluid type, including temperature and pressure requirements of each system.
- (3) Provide flexible connectors at all pumps, chillers, cooling towers, and other rotating equipment. Exception: In-line pumps, if manufacturer recommends against or prohibits.

L. Meters, Gauges, and Flow Measuring Devices

- (1) Provide each piece of mechanical equipment with instrumentation in addition to test ports to verify critical parameters, such as capacity, pressures, temperatures, and flow rates.
- (2) Calibrate each meter, gauge, and flow measuring device before startup and make provisions for periodic calibration at its location.
- (3) All the metering devices must be capable of transmitting information to the central BAS for monitoring and control.
- (4) Refer to section 5.0 HPBS

M. Unit Heaters

- (1) If a unit heater is higher than 10' AFF, use a centrifugal blower (not a propeller fan).

- (2) Provide all gas or oil unit heater with a 2-stage thermostat. On call for heat, the first stage cycles the fan. The second stage fires the burner.
- (3) For shop applications with heavy duty or corrosive atmospheres, provide sealed combustion units that bring combustion air from outside the space.

N. Converters

- (1) Provide side inlets and side outlets for all converters.
- (2) Provide pressure gauges with snubbers on the primary and secondary side of each converter.
- (3) Install thermometers on the inlet and outlet of the secondary side of each converter.

O. Do not provide the following components, unless approved by the Director:

- (1) Electric resistance heat
- (2) Variable Refrigerant Flow (VRF)
- (3) Furnaces

P. Air Delivery Devices

- (1) Ceiling diffusers or booted-plenum slots that are used in variable air volume systems must be specifically designed for VAV air distribution.
- (2) Booted plenum slots must not exceed 4 ft. in length unless more than one source of supply air is provided.
- (3) Select the locations of the air delivery devices and the ranges of their outlet airflow rates to ensure that the air diffusion performance index (ADPI) values remain above 80 percent during all full load and part-load conditions, and below the specified noise level to achieve the background noise criteria, in accordance with the test procedures specified in Appendix A of ASHRAE Standard 113.

Q. Noise Control

- (1) Subject to the restrictions noted elsewhere for duct lining, acoustic duct lining used in supply air systems shall be non-fiberglass material impregnated with an antimicrobial agent and covered by an internal perforated sheet metal liner.
- (2) Sound attenuators should only be used if other methods of noise reduction such as duct velocity reduction, lining, and fan location are inadequate to achieve noise performance requirements.

4.0 LANDSCAPE AND IRRIGATION STANDARDS

Landscape irrigation sprinkler and emitter systems shall comply with the requirements of the ASABE/ICC 802-2014 Landscape Irrigation Sprinkler and Emitter Standard except as modified by this DFCM Design Requirements, Section 4.0

4.1 General

- A. **Applicability.** The provisions of this section shall apply to all projects on state property that involve the development or major modification of landscaping regardless of funding source, and all other projects under the jurisdiction of the DFCM or under state mandates. This section does not apply to:
 - (1) Registered Historical Sites
 - (2) Sites submitted for Design Variance due to unique context. Refer to section 1.4 Changes/Additions to Design Requirements for instructions on the design variance process.
- B. **Site.** The Design Requirements apply to all non-enclosed and non-building landscape areas within project limit lines or natural boundaries including restoration of construction damaged areas to the extent practical. Refer to section 3.2 Civil for site grading, parking requirements, sidewalks, and vehicular and service paths.
- C. **Purpose.** A purpose of this section is to designate site landscape standards for the design of attractive, water efficient landscapes that are sensitive to the geological and historical context of the site. The DFCM envisions landscapes that will endure because they are sensitive to the cultural, social, and aesthetic values of a community; the climate, water resources, and other environmental aspects of a location; and the financial investment of installation and maintenance over the life of the landscape. It is recognized that DFCM projects cover a wide range of community sizes, locations, and climates.
- D. **Definitions**
 - (1) For irrigation related definitions, refer to the following website by the Irrigation Association: <http://www.irrigation.org/defaultcontent.aspx?id=1243&terms=definitions>
 - (2) For planting related definitions, refer to the following website provided by Extension: https://www.extension.org/pages/63460/glossary-of-terms-water-conservation-for-lawn-and-landscape#.U_txH_mwKBQ
- E. **Designer(s).** Architect or another licensed professional as recognized by the State of Utah to perform Landscape Architectural services and documents submitted to the DFCM including the Site Landscape Plan, Planting Plan and Irrigation Plan. Designers to meet state and local license, insurance and bonding requirements and be able to show proof of such upon demand.
- F. **Contractor Qualifications and Experience.** The Contractor(s), sub-contractors, installers, and others providing materials or services and installing the site landscape shall meet state and local license, insurance and bonding requirements and be able to show proof of such upon demand. Contractors to be directly involved in regular meetings with owner and DFCM and site inspection.
- G. **Submittals**
 - (1) Submit all described documentation in sections 4.3 and 4.4 to the Landscape Architect for review and approval prior to construction or substantial completion as indicated.
 - (2) Contractor to submit all product literature and customer service information for products used/installed on project to Landscape Architect for review and approval prior to installation.

- H. Construction Inspection and Post-Construction Monitoring
- (1) During construction, site inspection of the landscaping may be performed by the DFCM, the local institution or agency.
 - (2) During construction a mainline pressure and leak test will be conducted.
 - (3) Following construction an inspection shall be scheduled with the DFCM to verify compliance with the approved landscape and irrigation plans. A Certificate of Substantial Completion Form shall be completed by the Contractor or Landscape Architect and submitted to the DFCM.
 - (4) Following construction a Water Use Efficiency Review (Audit) will be conducted by a certified Landscape Irrigation Auditor. The auditor shall be independent of the contractor, design firm and owner/developer of the project. The water performance audit will verify that the irrigation system complies with the minimum standards required by this ordinance. The auditor shall furnish a certificate to the DFCM, Landscape Architect, and installer certifying compliance with the minimum distribution requirements and an irrigation schedule.
 - (5) The DFCM reserves the right to perform site inspections at any time before, during or after the irrigation system and landscape installation, and to require corrective measures if requirements of this guideline are not satisfied.

4.2 Water Allowance

- A. The finished installed site landscape shall be designed to be maintained within a designated Water Allowance. Landscape water consumption must be at or below the Water Allowance for the established landscape. In order for site plantings to become established during the first year after planting, watering amounts may exceed the established Water Allowance.
- B. Use the EPA WaterSense tool at the following website to create the water allowance for your site. http://www.epa.gov/WaterSense/water_budget/. It is possible that the site and planting design will need to be adjusted to fit within the Water Allowance designated. Record the water allowance in the irrigation plans with the watering schedule; see section 4.7 B.
- C. For site landscapes with sports fields other justified planting or turf areas that may require more water than is designated by the Water Allowance, refer to section 1.4 Changes/Additions to Design Requirements for instructions on excusal from 4.2 A.

4.3 Landscape Design Standards

- A. Create a Landscape Plan with the following Design Guidelines:
- (1) Using the Water Allowance established for the sight, begin a water conscious design. Refer to the WaterSense website listed in section 4.2 to test percentages of turf and shrub areas to guide the design process.
 - (2) Topsoil Guidelines for Existing and Imported Topsoil
 - a. Imported topsoil installed on site to replace or augment existing soil on site shall be obtained from naturally drained areas and shall be fertile, friable loam suitable for plant growth. The imported topsoil shall be of uniform quality, free from subsoil stiff or lumpy clay, hard clods, hardpan, rocks, disintegrated debris, plants, roots, seeds, and any other materials that would be toxic or harmful to plant growth. Topsoil borrow shall contain no noxious weeds or noxious weed seeds.

- b. Topsoil testing is required to ensure that all specifications below for either “Ideal” or “Acceptable” categories are met. Soils fall within the “Not-Acceptable” range shall not be used unless sufficient soil amendments are added to reach the approved categories.

Category	pH	Soluble Salts dS/m or	Sodium Absorption Ratio (SAR)	Organic Matter %	Sand %	Silt %	Clay %	Texture Class
Ideal	5.5-7.5	<2	<3	≥2.0	<70	<70	<30	Loam (L), Silt Loam (SiL)
Acceptable	5.0-8.2	<4	3 to 7 SiL, SiCL, CL 3 to 10 SCL, SL, L	≥1.0	<70	<70	<30	Sandy Clay Loam (SCL) Sandy Loam (SL) Clay Loam (CL) Silty Clay Loam (SiCL)
Not-Acceptable	<5.0 >8.2	>4	>10	<1.0	≥70	≥70	≥30	Loamy Sand (LS) Sandy Clay (SC) Silty Clay (SiC) Sand (S), Silt (S), Clay (C)

TOPSOIL QUALITY*

COARSE FRAGMENTS*

Category	%>2 mm (>5.0% exceeds guidelines)	Rocks Present >1.5" (>1.5" exceeds guidelines)
Ideal	≤2.0	—
Acceptable	2.1-5.0	—
Not-Acceptable	>5.0	—

TOPSOIL NUTRIENT SPECIFICATION*

Category	Nitrate Nitrogen ppm	Phosphorus ppm	Potassium ppm	Iron ppm
Ideal / Acceptable	>20	>15	>150	>10

*from “Topsoil Quality Guidelines for Landscaping”, June 2002, AG/SO-02, prepared by Rich Koenig, Utah

State University Cooperative Extension Soil Specialist, and Von Isaman, QA Consulting and Testing, LLC.

- c. Mechanical Analysis shall be performed and shall conform to ANSI/ ASTM D 422.
- (1) Soil Preparation and Amendments (fertilizers). Soil preparation shall be suitable to provide healthy growing conditions for the plants and to encourage water infiltration and penetration. Soil preparation shall include scarifying the soil to a minimum depth of six (6) inches and amending the soil with organic materials and fertilizers based on the Soils Report in order to reach the “Acceptable” or “Ideal” category of soil composition from the tables in 4.3 A. 2.

- (2) Plant Selection. Choose site appropriate plant material. In most cases, this is water-efficient plant material. Refer to 4.1 C. to review the vision of DFCM landscapes.
- (3) Park Strips. Park Strips and other landscaped areas less than 8 feet wide shall be landscaped with water conserving plants and/or grass. Areas less than 5 feet wide shall not be planted in turf.
- (4) Practical Turf Areas. Plant turf only in areas of manageable sizes and shapes. Limit turf to areas where it provides a functional benefit. Selection of appropriate turf varieties should be determined by site location, functionality and climate. Excess turf may be replaced with a variety of other low water-use plants.
 - a. Areas less than 5 feet wide shall not be planted in turf.
 - b. Areas with slopes greater than 33% shall not be planted with turf.
- (5) Screening. Planting material should be used as a screening device for parking areas, service yards, transformers, and other site utilities etc. Trees in parking areas shall be selected based on reducing leaf litter and be “sap-drip” free.
- (6) Mulching. Use bark or rock mulches in tree, shrub and perennial beds to conserve soil moisture and increase soil nutrients. Mulch applied at the right depth will reduce weed growth and slow erosion. Organic mulches such as bark improve soil over time.
- (7) Appropriate Maintenance. Water-wise landscaping will reduce maintenance; however, it will not eliminate it. Low water-use landscapes are simply maintained differently than the average lawn. Maintain the landscape by pruning, fertilizing, watering, weeding mowing and proper deadheading of perennials and flowering plant material.

B. Submit the following to the DFCM for review and approval prior to construction:

- (1) A Landscape Plan with the following indicated graphically and labeled:
 - a. Project name, location, designer contact information, project boundaries, project address, street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements
 - b. Locations of all proposed plant material, landscape materials, mulches, and all other site amenities
 - c. Plant Schedule indicating botanical name, common name, and size for trees, shrubs, perennials, groundcovers, and seed mixes
 - d. Proposed hardscape areas and materials within scope
 - e. Existing and proposed contours and spot elevations
 - f. Existing vegetation
 - g. Necessary details for landscape amenities and installation instructions
- (2) Specifications
- (3) Water Allowance Results Sheets(s) created from Step 3 of EPA WaterSense Tool

C. Submit the following to the DFCM for review and approval prior to substantial completion:

- (1) As-Built Drawings
- (2) Operations and Maintenance Plan including the following:
 - a. A signed and dated written description of the contractor’s one-year landscape warranty period beginning from the date of substantial completion. Include name, address, phone number and license number.
 - b. All product literature and customer service information for products used/installed on project.

4.4 Irrigation Design Standards

A. Create an Irrigation Plan with the following Design Guidelines:

- (1) Recommended Point of Connection (POC) component installation order: 1-connection to source, 2-stop and waste valve/ or shut off, 3-filtration device, 4-pressure regulator, 5-backflow preventer, 6-quick coupler blowout, 7-master valve, and 8-flow meter – (if required).
- (2) In situations of secondary water supply, provide filtration system necessary to clean water supply and protect irrigation system components. Provide accessible pressure gauges immediately upstream and downstream of the filtration device. (Non self-cleaning units)
- (3) Landscape Water Meter. A separate irrigation system water meter and backflow prevention assembly that are in compliance with state code shall be installed for all new landscape irrigation systems. The landscape water meter and backflow prevention assembly shall be separate from the water meter and backflow prevention assembly installed for indoor uses. The size of the meter shall be determined based on irrigation demand.
- (4) Pressure Regulation. A pressure regulating valve shall be installed and maintained by the consumer if the static service pressure exceeds 80 pounds per square inch (psi). The pressure-regulating valve shall be located between the landscape water meter and the first point of water use or first point of division in the pipe and shall be set at the manufacture's recommended pressure for sprinklers and or drip/micro systems. Pressure regulation devices may include one or all of the following: 1-pressure regulation valve at the main line POC, 2-pressure regulation device on individual sprinkler heads, 3-regulation of low volume drip/micro systems.
- (5) Irrigation systems with 1" POC or 10,000 square feet and larger of landscaped area shall have a flow sensor and master valve installed. Systems with irrigated area of 1 acre and larger shall have a normally closed master valve. Where necessary, the master valve shall be capable of manual operation to allow manual use of the irrigation system. A normally open master valve is acceptable if the controller is capable to shut the valve off in event of unscheduled flow.
- (6) Automatic Controller. All irrigation systems shall include an electric automatic controller with multiple programs and multiple repeat cycle capabilities and a flexible calendar program. Controller shall be programmable for multiple start times for repeat and rest periods, and shall be capable of water budget adjustment. Controller shall be able to provide separate programs for turf zones, shrub zones, and drip zones. All controllers shall be capable of temporarily shutting down the system by utilizing internal/external options (such as rain, wind, and freeze devices) and the ability to adjust run times based on a percentage of maximum ET or by use of a soil sensor. Power wire and control wire shall not be contained in the same conduit.
- (7) On slopes exceeding 33%, the irrigation system shall consist of Drip Emitters, Bubblers or sprinklers with a maximum Precipitation Rate of 0.85 inches per hour and adjusted sprinkler cycle to eliminate Runoff. Lateral lines are to run parallel to slope when possible.
- (8) Each valve shall irrigate a landscape with similar site, slope and soil conditions and plant materials with similar watering needs. Turf and non-turf areas shall be irrigated on separate valves. No single zone shall be designed or installed with sprinklers of differing pressure requirements or precipitation rates. (Rotors, spray heads, drip emitters, micro sprays, etc. may not be mixed within a zone.
- (9) Drip Emitters or Bubblers shall be provided for each tree where practicable. Bubblers shall not exceed 1.5 gallons per minute per device. Bubblers for trees shall be placed on a separate valve unless specifically exempted by the DFCM.
- (10) Sprinklers shall have matched Precipitation Rates with each control valve circuit. All sprinkler heads shall be spaced at a maximum of 50% of design performance diameter of the sprinkler. In known windy areas sprinklers are to be designed with reduced head

spacing or low angle nozzles. Spacing shall be reduced below 50% of design performance diameter when conditions demand.

- (11) Check valves shall be required where elevation differences will cause low-head drainage. Pressure compensating valves and sprinklers shall be required where a significant variation in water pressure will occur within the irrigation system due to elevation differences.
- (12) Drip Irrigation lines shall be placed underground or otherwise permanently covered, except for Drip Emitters and where approved as a temporary installation. Filters and end flush valves shall be provided as necessary and as per industry standards.
- (13) Irrigation zones with overhead spray or stream sprinklers shall be designed to operate between 8:00 P.M. and 8:00 A. M. to reduce water loss from wind and evaporation. Drip or bubbler zones are excluded from this requirement.
- (14) Program valves for multiple repeat cycles where necessary to reduce runoff, particularly slopes and soils with slow infiltration rates.

B. Submit the following to the DFCM for review and approval prior to construction:

- (1) An Irrigation Plan with the following indicated graphically and labeled:
 - a. Project name, location, designer contact information, project boundaries, project address, street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements
 - b. Points of Connection present and future with static water pressure
 - c. Water meters
 - d. Pumps and sumps
 - e. Controller location(s), note manufacturer, model, size and number of stations used and central control
 - f. Lines and sizes, i.e. lateral, main, and pressure mains
 - g. Sleeve locations and sizes
 - h. Backflow preventers, quick couplers and hose bibs
 - i. Drip system pressure regulators and filters
 - j. Wire, i.e. control, remote control, and control wire junction boxes; label both ends and in junction box
 - k. Control valves, i.e. master, remote control, flush, pressure reducing, drip, etc., note station assignment, size, flow rate, pressure setting. D.U. and actual flow rates, if available from water audit for applicable valves
 - l. Sensors, i.e. rain, flow, and moisture
 - m. All sprinkler heads, rotary nozzles, bubblers, etc.
 - n. Capped lines and irrigation system removed or abandoned
 - o. Identify locations of existing utility systems encountered during installation, i.e.; gas, phone, sewer, etc.
 - p. Valve Schedule with flow rates in GPM for each valve
 - q. Watering Schedule listing valve station no. plant type, irrigation type, precipitation rate, and water times for initial plant establishment and post plant establishment
 - r. Irrigation Component Schedule
 - s. Necessary details and installation instructions
- (2) Specifications

5.0 HIGH PERFORMANCE BUILDING SYSTEM

The State of Utah Division of Facilities and Construction Management require each project meet a sustainable design standard. All projects must meet the following standards. In the case where a conflict arises between different sections, the more stringent requirement should apply and the Department of Facilities and Construction Management (DFCM) should be notified about the conflict.

5.1 Integrated Design Process

A. General Intent

- (1) The process and expectations outlined in section 5.1 includes certain activities and events that are required to happen during the project. Many of the activities are not required, but their inclusion is based upon the experience of DFCM and professionals that serve DFCM. The intent thereof is to inform the project team of what should happen over the course of a project to not only meet the requirements of the HPBS but also maximize the value of design and construction efforts to DFCM and the State of Utah.
- (2) Adjustments to the process outline below, in order to best suit the needs of each project, are expected and should be discussed with the project team periodically through the project and recorded in the OPR.
 - a. The Owner shall directly hire the Energy Engineer, Building Envelope Commissioning Agent, and Commissioning Agent in the programming phase.
 - i. For Design Build projects the Energy Engineer shall provide the Energy Engineering over the course of the entire project as part of the design build team.
 - ii. Energy modeling and LCCA will be reviewed by the DFCM's third party reviewer.
 - b. The Owner, Energy Engineer, Commissioning Agent, and Building Envelope Commissioning Agent, shall provide timely input to the design team related to the OPR, BOD, and related HPBS documentation.
 - c. An updated BOD and OPR, including narrative of HPBS goals and strategies, shall be included in each design phase submittal to the owner. Changes from one phase to the next shall be documented as to provide a record of the development of the project.
 - d. An updated sustainable site plan shall be included in each design phase submittal to the owner
 - e. A HPBS Workshop must be completed during the first half of each phase of the project. Goals, strategies, and performance metrics must be documented in the OPR, BOD, and project documents accordingly. Additional informal HPBS Workshops shall be held to provide clear direction to the project in regards to the requirements of the HPBS
 - i. As coordinated by the design team and DFCM Energy Program Director, each HPBS Workshop shall include, but not limited to, the following project team members:
 - (a) Design team members
 - (b) Owner
 - (c) Agency Project Manager
 - (d) DFCM Project Manager
 - (e) Agency Energy Manager
 - (f) DFCM Energy Program Director
 - (g) Facilities Operators, if unknown at the time, it must be clearly identified who will be in attendance to represent the interests of facility operations.
 - (h) Energy Engineer

- (i) Commissioning Agent
 - (j) User group representative(s)
 - f. The Owner, design team, Energy Engineer, Commissioning Agent, and Building Envelope Commissioning Agent shall review each design phase submittal for compliance to the HPBS. Appropriate design phase comments shall be provided to the design team within 10 business days.
 - g. The design team shall conduct a building envelop systems meeting, during design development and construction documents phases, to review possible envelope strategies. Topics to review included, but are not limited to, air, thermal and moisture performance, functional performance requirements, constructability, energy efficiency, aesthetics, mock ups, and testing.
- B. Programming
 - (1) The following must be provided during the schematic design phase of the project. The design team shall provide simplified modeling iterations of various conceptual design proposals including, but not limited to, massing, orientation, glazing orientation, and glazing amount for the Energy Engineer to assess.
 - a. On an as needed basis, projects may be permitted an exception to this requirement, if approved by the DFCM Energy Program Director.
- C. Schematic Design
 - (1) The following must be provided during the schematic design phase of the project.
 - a. The design team shall conduct a building systems meeting to review the possible systems applicable to the project. Agenda items to include, but not limited to, performance, LCC, first costs, operations and maintenance, and existing infrastructure integration.
 - i. The design team, appropriate Facilities Operators, Commissioning Agent, Agency Energy Manager and or DFCM Energy Program Director, General Contractor and appropriate subcontractors (if hired), and Energy Engineer must be in attendance.
 - b. DFCM Energy Program Director to sign Rocky Mountain Power's Incentive General Applications as provided by Architect
 - c. The Cost Estimator or General Contractor/Construction Manager must provide relevant supporting construction cost estimates to the Energy Engineer and Design Team in a timely manner.
- D. Design Development
 - (1) The following must be provided during the design development phase of the project
 - a. The design team shall conduct a second building systems meeting to review the possible systems applicable to the project. Agenda items to include, but not limited to, performance, LCC, first costs, operations and maintenance, and existing infrastructure integration.
 - i. The design team, appropriate Facilities Operators, Commissioning Agent, Agency Energy Manager and or DFCM Energy Program Director, General Contractor and appropriate subcontractors (if hired), and Energy Engineer must be in attendance.
- E. Construction Documents
 - (1) The following must be provided during the construction documents phase of the project.
 - a. The design team shall conduct a building controls meeting to review the possible systems applicable to the project. Agenda items to include, but not limited to, metering, controls, points, analytics and operations and maintenance.

- i. The design team engineers, appropriate Facilities Operators, Commissioning Agent, Agency Energy Manager and or DFCM Energy Program Director, General Contractor and appropriate subcontractors (if hired), must be in attendance.
- b. The Design Team shall coordinate all incentives and rebates as outlined in section 5.14.
- c. The Design Team shall submit all required documentation to DFCM as part of the CD submittal. The submittal shall include, but is not limited to the following.
 - i. Sustainable site plan
 - ii. HPBS Spreadsheet
 - iii. Any exceptions and appeals
 - iv. Owner's Project Requirements
 - v. Basis of Design
- d. The Energy Engineer shall submit all required documentation, per section 5.5, to DFCM as part of the CD submittal:
 - i. Energy Model Spreadsheet
 - ii. Life Cycle Cost Worksheet
- e. The CxA shall submit all required documentation, per section 5.12, to DFCM as part of the CD submittal:
 - i. Commissioning Plan
- f. The BECx A shall submit all required documentation, per section 5.13, to DFCM as part of the CD submittal:
 - i. Building Envelope Commissioning Plan

F. Bidding

- (1) Value engineering efforts and substitution request must be evaluated in context of the HPBS, preferred operations and maintenance procedures and performance impacts over the life of the building.
- (2) The General Contractor shall account for HPBS requirements including, but not limited to, functional testing, building envelope function performance testing, and building flush out, in the construction schedule.

G. Construction

- (1) Submittals and shop drawings related to HPBS requirements shall be reviewed by the CxA, BECx A and Energy Engineer in the time period set forth in the construction documents. Their review does not relieve or supersede the responsibility of the design team to review the HPBS related submittals and shop drawings for compliance set forth in the construction documents.
- (2) The Design Team shall provide the required incentive and rebate documentation to the DFCM Energy Program Director as outlined in Section 5.14 and related appendices
- (3) BECx related performance tests shall be tracked in the weekly OAC meeting minutes.
- (4) At a minimum, the BECx A shall attend, in person or via a conference call, OAC meetings monthly. Reasonable effort by other team members shall be made to discuss related issues at the beginning of each meeting
- (5) A building envelope commissioning kick off meeting shall be coordinated by the general contractor and BECx A.
 - a. Required attendees include, but are not limited to the following: Architect, DFCM Energy Program Director. Subcontractors responsible for the following building components shall attend when applicable; masonry, insulation, air barrier, cladding, glazing, roofing and others as dictated by the envelop design.
- (6) Testing of building envelope components, on the building mock up, shall be completed with acceptable results prior to installation of said components.

- a. The general contractor and subcontractors responsible for the installation of the components shall attend the functional testing
 - b. The BECxA shall review deficiencies and possible causes of failed tests with each subcontractor prior to leaving the site on the day of the test(s).
- (7) At a minimum the Commissioning Agent shall attend, in person or via a conference call, OAC meetings on a month basis.
- (8) A building systems commissioning kick off meeting shall be coordinated by the general contractor and CxA.

H. Substantial Completion and Project Closeout

- (1) The CxA shall coordinate with the agency Energy Manager to set up the project for benchmarking in EPA ENERGY STAR Portfolio Manager.
- a. The agency Energy Manger shall report the ECI, EUI, GHG emissions and water used per EPA ENERGY STAR Portfolio Manager in its annual energy report to DFCM.
- (2) The CxA, Owner, and General Contractor shall conduct a Four Month Walk Through Performance Walk Through meeting.
- (3) The CxA shall finalize the incentive and rebates per section 5.14
- (4) The O&M manuals and As-Built documents must include, but is not limited to, the OPR, BOD, HPBS Worksheet, Energy Modeling Spreadsheet, Life Cycle Cost Worksheet, and Controls As-Built.

5.2 Context Sensitive Design

A. Site Design

- (1) The Design Team shall conduct a review of the local and regional planning documents pertinent to the project. These documents may include, but are not limited to:
- a. Municipal Master Plan or Land Use Plan
 - b. Applicable Open Space Plans, including trail and recreation plans, municipal open space plans...
 - c. Municipal, Regional or State Transportation Plan
 - d. Local or Regional Stormwater Plans or Guidelines
 - e. Applicable environmental regulations that may apply to the site
- (2) The project design shall reflect the community vision for the site. The building site, open space design and access points shall reflect the goals of the regional and municipal planning documents.

B. Building Design

- (1) The building shall be sited and oriented to reflect the community development patterns and vision, while responding to the site, solar access, and other climate considerations.
- (2) The building design shall reflect the community vision and vernacular design patterns.

C. The façade design shall reflect the solar access and orientation of the site through the integration of shading devices, window location, and scale. Window to wall ratios that are appropriate based on building energy performance, orientation, and interior programming shall be integrated into the design.

D. Access

- (1) Provide enhanced access from the project entry to the identified pedestrian and transit access points at the perimeter of the site.
- a. Ensure pedestrian paths are safe, accessible and maintainable by facility staff
- (2) Separate pedestrian paths from vehicular paths with landscaped barriers to the extent feasible.

- (3) Identify key paths on a Sustainable Site Plan drawing submitted at the Schematic, Design Development, and Construction Document phases.

5.3 Transportation Management

- A. Identify transportation management goals for the project to help reduce single rider vehicle impacts. This goal may be an overall percentage reduction in single-vehicle ridership, an increase in transit usage or the implementation of a carpooling program. Record this goal in the OPR.
- B. Incentivize transit use through a reduction in parking stalls provided. This reduction should be based on a 10% reduction in comparison to municipal requirements or a 25% reduction based on the 4th Edition Parking Generation Guide by the Institute of Transportation Engineers.
- C. Define clear, safe paths of access for pedestrians and cyclists from the public right-of-way to the building entry. Locate shower and changing rooms – as applicable – near these locations.
- D. Provide a minimum of 10 secure bicycle storage locations.
 - (1) After the course of one year Facility Operators shall assess the need to for additional bicycle storage racks and provide as necessary.
 - (2) If the project cannot or should not meet the above requirements, provide a written justification in the OPR.
- E. Provide a minimum of two reserved parking stalls for carpool vehicles and fuel-efficient, low emitting vehicles on each project.
- F. Implement three of the following strategies to reduce single vehicle ridership to and from the project.
 - (1) Identify transit and alternative transportation options for the users and site. Identify strategies to encourage transit ridership, such as reduced or free pass offerings.
 - (2) Incentivize transit use through increased parking fees or paid parking lots.
 - (3) Provide telecommuting and / or reduced work week programs to minimize single vehicle ridership to the building.
 - (4) Provide shower and changing room(s) for cyclists and those who exercise mid-day.
 - (5) Designate 5% or more of the total parking provided as parking stalls for low emitting/fuel efficient - locate these stalls in preferred parking locations.
 - (6) Provide alternative fuel stations as applicable for the project.
 - (7) Designate 5% or more of the total parking provided as parking for carpool vehicles- locate these stalls in preferred parking locations.
 - (8) Demonstrate single-vehicle ridership or vehicle impact reductions through an alternative method.
- G. The three strategies shall be identified in the OPR and included in to the Education and Outreach program for the building users and visitors.

5.4 Site Design

- A. Open Space Design
 - (1) Create an open space plan that defines the usable site areas, designates open space, and identifies the landscape and hardscape areas. These specific areas shall be shown on the Sustainable Site Plan drawing, include a brief description of the anticipated level of use of each of the areas, and submit with each design review phase.

- (2) Necessary pedestrian open spaces such as sidewalks, paths, and passive and active recreation areas, shall be designated. Include transportation management areas as indicated in section 5.3
 - a. Define active hardscape areas that will be used for pedestrian traffic or regular pedestrian or visitor use.
 - b. Define active landscape areas that will be used by building users and visitors regularly. Identify intended uses that may occur within this landscaped area.
 - c. Turf shall only be used at active landscape areas that are a minimum of fifteen feet in any direction and a minimum of 200 square feet. Exceptions to this shall be justified by local landscape and/or zoning standards. Any alternate use must be reviewed and approved by the DFCM Energy Program Director.
 - d. Define aesthetic and native or natural open-space areas, as applicable
 - e. Define active pedestrian hardscape areas that are used for emergency or non-active uses
 - (3) The Landscape Architect shall provide an estimated maintenance schedule for the landscaped areas, with an emphasis on the reduced maintenance and reduced water consumption of the native and adapted landscaped areas.
 - a. This maintenance schedule shall be included in the Operation and Maintenance Manuals for the project.
- B. Landscape Water Consumption
- (1) Create a site irrigation water use budget based on your location and site conditions, per the EPA Water Sense criteria.
 - a. Use the EPA WaterSense Tool¹ to identify the water allowance for the site after landscaped areas have been defined. A summary of the water allowance shall be included in the Operations and Maintenance Manuals for the project.
 - (2) Landscape water consumption shall be at or below what is identified as the monthly water allowance for the site by the EPA WaterSense Tool. Justification for exceeding monthly water reviewed and approved by the DFCM Energy Program Director. Design and implement landscape materials and features that respond to the allocated water budget identified in section 5.4.B.1 and meet the native and adapted landscape material requirements.
 - (3) Landscape features shall align with the anticipated use areas defined in the in section 5.4.A Integrate an EPA WaterSense Labeled irrigation controller into the irrigation system.
- C. Storm Water Design
- (1) Design, construct, and maintain storm water BMPs that manage rainfall on site and prevent the off-site discharge of precipitation from the first one inch of rainfall from a 24-hour storm preceded by 48-hours of no measureable precipitation.
 - (2) Implement at least two BMPs from the Best Management Practices for Storm Water²
 - a. Provide two BMP Information Sheets from the Guidance Document and a description of how the specific BMPs are implemented in the project.
 - b. Identify and describe the selected strategies in the OPR, and submit with the Design Development submission.
 - c. Implement one additional site performance standard as identified in items 2 through 5 on page 7-4 of the Storm Water Management Guidance Document.

¹ http://www.epa.gov/WaterSense/water_budget/

² Salt Lake County Engineering and Flood Control – Guidance Document for Storm Water Management – January 2012; Chapter 7. <http://www.pweng.slco.org/stormwater/pdf/longswplan.pdf>

- D. Heat-Island Effect
- (1) Plan exterior hardscape materials to reduce the urban heat island effect. Use materials with an SRI of 35 or greater for all pedestrian oriented paved surfaces and reduce the overall use of asphalt as feasible.
 - a. Reduce the dimensions of 25% of parking stalls to meet compact stall requirements of 8'-6" in width and 16'-0" in length. Provide either signage or striping to indicate the compact vehicles stalls on the site.
 - b. Indicate the compact parking on the Sustainable Site Plan drawing.
 - c. Use concrete at all pedestrian oriented hardscape areas. Colored concrete shall not have an SRI of less than 29.
 - (2) Use reflective roofing to reduce the urban heat-island effect at the building. Install a reflective roof with an SRI of 78 or greater over 75% of the low slope roof areas (slopes below or equal to 2:12) for all buildings in Climate Zones three and five.
 - a. Consider a tan colored, planted or ballasted roof at roofs that are visible from inside the building to reduce glare and increase occupant comfort.
 - b. Darker roofs shall be considered in climate zone 6, where heat absorption may be beneficial to the overall energy use of the building.
 - c. Install roofing with an SRI of 29 or greater at steep-sloped areas (slopes above 2:12)
 - d. SRI values for roofing and hardscape must be included in the Sustainable Site Plan.
- E. Light Pollution Reduction
- (1) Use fixtures that as low in height as feasible, to ensure light is at the appropriate location for pedestrian safety and functionality..
 - (2) All exterior lamps shall be LED.
 - (3) Lighting values greater than 0.01 fc shall not extend beyond twenty feet over the defined site boundary, except as required by the municipality for pedestrian safety.
 - (4) Exterior lighting shall be controlled by a photocell sensor.
 - (5) All interior lighting systems shall be designed and controlled to shield interior light from the exterior of the building, or include a 50% reduction in lighting output between the hours of 11:00 pm and 5:00 am.

5.5 Energy

- A. Energy Performance
- (1) All state agencies and institutions shall design new construction and major renovation, commercial and multi-family high-rise buildings (Proposed design) to achieve, if life-cycle cost-effective, an energy cost performance 20% below the energy cost performance of the corresponding Baseline design as determined by a DFCM hired Energy Engineer.
 - a. For the purpose of calculating the energy cost savings, include all fuel costs incurred for all systems normally specified as part of the Proposed design scope, regardless of specifying entity (interior & exterior), including receptacle and process load energy costs.
 - b. Energy costs for both the Baseline and Proposed designs shall be determined by using the Performance Rating Method as defined by Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (with errata, without addenda).
 - c. The building/project Performance Rating percentage improvement shall be determined by use of the formula in paragraph G1.2 of *Standard 90.1-2010*, in terms of total energy cost, as follows.
$$\% \text{ Improvement} = 100 \times \frac{(\text{Baseline Utility Cost} - \text{Proposed Utility Cost})}{\text{Baseline Utility Cost}}$$

- d. Buildings or projects with a conditioned floor area less than 30,000 FT², or less than \$5,000,000 total project budget, or a projected EUI of less than 20 kbtu/FT²/yr may, by discretion of the DFCM Energy Program Director, be exempt from section 5.5.A.1.
 - e. Projects exempted from section 5.5.A.1 by the DFCM Energy Program Director are required to incorporate qualitative design assist from a state hired Energy Engineer.
 - f. For Design Build Competitions, each shortlisted team may engage an Energy Engineer, at their own discretion and expense, to provide design assistance during the design competition phase, to demonstrate compliance with the HPBS. The winning team's life cycle cost analysis and subsequent energy efficiency strategies will be subject to review and approval by a DFCM hired third party reviewer and DFCM Energy Program Director. At any time during the competitive proposal phase, design teams may access DFCM's third party reviewer to answer questions concerning the LCCA and adherence to the energy modeling protocol set forth in the HPBS. Contact information will be provided.
- (2) If no life-cycle cost effective package of measures can be found that meets the required energy cost savings, (cost effectiveness shall be measured in aggregate at the project level, rather than each measure individually), and then the life-cycle cost effective package that comes closest to achieving the required energy cost savings may be substituted.
- a. Life-cycle cost-effectiveness shall be determined using the FEMP procedure as described in 10 CFR 436 – *Subpart A – Methodology and Procedures for Life-Cycle Cost Analysis* and NIST Handbook 135 – *Life-Cycle Costing Manual for the Federal Energy Management Program - Dept. of Energy - Energy Life Cycle Cost Model – BLCC 5*.
 - b. Utility incentives must be included in the life-cycle cost analysis where applicable.
 - c. Life-cycle cost-effectiveness may be demonstrated by using one of the following methods consistently throughout the project.
 - i. Life-Cycle Costs
 - ii. Net Savings
 - iii. Savings-to-Investment Ratio
 - d. At the discretion of the DFCM Energy Program Director, the life cycle cost analysis and subsequent Energy Efficiency Measures strategy will be subjected to review and approval by an appropriate third-party reviewer, selected by the DFCM Energy Program Director.
 - e. All life cycle costing estimations must be provided with supporting documentation including but not limited to unit pricing, source of pricing, and labor wages.
- (3) Documentation demonstrating compliance with section 5.5.A.1 must be submitted through the DFCM Energy Program Director for review and acceptance by an appropriate Submittal Reviewer, selected by the DFCM Energy (or Energy Program) Director.
- a. Appeals regarding extenuating circumstances related to demonstrating compliance with section 5.5.A.1 may be submitted to the DFCM Energy Program Director, for consideration on a project/building specific basis. Appeals can only be considered if made prior to the Construction Document design phase.
 - b. Minimum documentation requirements for demonstration of compliance with section 5.5.A.1 are as follows, and must be based upon the drawings and specifications referenced in the final construction document bid set, including the completion of value engineering, bid alternates, and addenda.

- i. All relevant project information as required by *Standard 90.1-2010-G1.4* (Reference Appendix B – Project Energy Performance Statement (link to electronic copies))
- ii. All energy model input values not specified by *Standard 90.1-2010-G1.4*. Examples include, but are not limited to thermostatic settings and occupancy & equipment schedules. Software output reports may be used to demonstrate compliance with this section.
- c. Coordination regarding interpretation of Appendix G methodology and protocol can be discussed between the Energy Engineer and Submittal Reviewer on an as needed basis.
- d. The Submittal Reviewer shall review and discuss the energy modeling submittal with the Energy Engineer. Results of the discussion including clarifications and revisions shall be documented by the Submittal Reviewer with comments. Revisions to the energy model and revised documentation shall be provided in response. A meeting will be held with the Energy Engineer, Submittal Reviewer, and DFCM Energy Program Director, as necessary, to reconcile any outstanding issues. Final acceptance will be granted by the DFCM Energy Program Director.
- e. Projects seeking credit for Energy Efficiency Measures not addressed specifically by Appendix G, at the discretion of the DFCM Energy Program Director, may do so by demonstrating savings relative to a Baseline determined through collaboration between the Energy Engineer and Submittal Reviewer.

B. Appliances and Equipment

- (1) As available, provide appliances, equipment, products, and/or furnishings that meet one of the following criteria³.
 - a. ENERGY STAR Qualified.
 - b. EPEAT Registered
 - c. Products that meet or exceed the US Department of Energy's FEMP Energy Efficiency Recommendations
 - d. Rocky Mountain Power incentive, Questar Gas rebate program, or local utility company incentive/rebate approved equipment.
- (2) Credit for plug & process (unregulated) loads that are associated with products complying with section 5.5.B.1 may be given credit in the Proposed design energy model by following the exceptional calculation method described in *Standard 90.1-2010, G2.5*, or through use of the procedures described in section 6.4.5 of COMNET's *Commercial Buildings Energy Modeling Guidelines and Procedures*⁴.

C. Minimum requirements for new construction

- (1) The building envelope requirements in *Standard 90.1-2010 Tables 5.5.1-8* or code minimum, whichever is more stringent, are mandatory.
- (2) Minimum efficiency requirements of *Standard 90.1-2010 section 6.8 and section 7.8* or code minimum, whichever is more stringent, are mandatory for all new equipment covered under the standard.
- (3) The building envelope requirements of *IECC C402.3.1* are mandatory regardless if the project is complying with *ASHRAE 90.1* or *IECC*.
- (4) During design development the Electrical Engineer will provide a room-by-room count of installed and space-by-space allowed lighting power per *Standard 90.1-2010 Table 9.6.1*, as well as any lighting power exceptions taken per *Standard 90.1-2010 section 9.2.2.3*.

³ www.gsa.gov/eeproducts.

⁴ <http://www.comnet.org/mgp-manual>.

5.6 Water Efficiency

- A. Meet the EPA WaterSense⁵ requirements for high efficiency plumbing fixtures and appliances within the building.
- B. Once-through process water systems are not permitted.
- C. Identify water efficiency goals and system expectations into the OPR and BOD submitted at Design Development and Construction Documents phases.

5.7 Materials and Resources

- A. Provide recycling containers and implement a recycling program in all new buildings.
 - (1) Recycling containers shall be collocated with the garbage bins.
 - (2) If co-mingled recycling is not permitted, bins must be clearly marked.
 - (3) At a minimum, mixed papers, cardboard, mixed plastics, and mixed metals shall be recycled.
- B. Integrate water bottle filling stations at a minimum of one drinking fountain in the building.
- C. Implement a construction waste management plan to divert a minimum of 75% of construction waste, by volume, from the landfill.
 - (1) Provide a narrative for exceptions to compliance with section 5.7.C. Narrative shall define the feasible diversion rate, by volume, and is subject to review and approval by DFCM Energy Program Director.
 - (2) Contractor shall track recycled content, per the HBPS Worksheet, and provide a summary of construction waste at project construction meetings to be reviewed for compliance by the Architect.
- D. Sustainable Material Sourcing
 - (1) Identify and specify building materials that are both extracted and manufactured within 500 miles of the project site.
 - a. Only the value associated with the regional content, by percentage, shall contribute to the sustainable value of the product.
 - b. Key materials include concrete, concrete masonry, brick, stone, gypsum board, steel joists, and regionally manufactured misc. metals.
 - (2) Identify and specify building materials that contain recycled materials.
 - a. Recycled content shall be tracked as both pre-consumer and post-consumer recycled content. Only 50% of the value of the pre-consumer recycled content shall contribute toward the sustainable value of the product.
 - b. Only the value associated with the recycled content shall contribute to the sustainable value of the product.
 - c. Key materials containing recycled content include concrete, all metal containing materials, plastic containing materials, carpet, and suspended ceiling systems.
 - (3) 35% of building materials, by value, shall meet one or more of the above sustainable materials strategies.

⁵ http://www.epa.gov/WaterSense/water_budget/

- a. Provide the appropriate specification sections and documentation requirements in the construction document set to ensure the contractor understands the sustainable material requirements and expectations.
 - b. Contractor shall track sustainable material sourcing values and product purchase verification, per the HPBS spreadsheet. The Architect shall review summary values for compliance at the project construction meetings.
- (4) Only use low mercury or LED lamps in new construction projects.

5.8 Indoor Environment Quality

- A. Implement an indoor air quality management plan during construction. This plan shall meet the SMACNA IAQ Guidelines for Occupied Buildings Under Construction, 2nd edition ANSI/SMACNA 008–2008.
 - (1) The Contractor shall submit an Indoor Air Quality Plan to the CxA, outlining the implementation strategies to achieve the SMACNA requirements.
 - (2) Implementation of this plan shall be tracked on the weekly Construction Meeting Minutes.
- B. Implement a pre-occupancy air quality plan.
 - (1) At the end of construction, prior to occupancy, conduct an air quality test per USGBC LEED v4 Construction Indoor Air Quality Assessment requirements.
 - (2) The Test and Balance sub-contractor shall provide documentation to the Commissioning Agent demonstrating the dates and air flows achieved during the building flush.
- C. All interior paints and coatings shall meet the low emitting materials standards set forth by the South Coast Air Quality Management District Rule 1113, as adopted in January 2012.
- D. All interior adhesives and sealants shall meet the low emitting materials standards set forth by the South Coast Air Quality Management District Rule 1168, as adopted in January 2005.
- E. All flooring systems shall be low emitting, and meet the Green Label Plus program, FloorScore, Greenguard, or the Greenguard low emitting requirements.
- F. All janitor's closets, print and copy rooms, and chemical storage spaces shall be directly exhausted and constructed with a hard ceiling or walls constructed and sealed to deck.
- G. Provide permanently installed entryway systems, regularly maintained walk-off mats, or a combination of the two systems. All entry carpets shall be at least 10' in length at primary entryways.
- H. Office environments shall be designed with task lighting at each individual workstation.
- I. 65% of all regularly occupied spaces shall either have direct access to daylight and views or indirect access through shared glazing systems at interior partitions.
 - (1) Complete the HPBS Sustainability Worksheet to demonstrate compliance with Section 5.8.I.
 - (2) Daylighting and view strategies must be included in the OPR.

5.9 Education and Outreach Program

- A. Develop and implement a Building Education and Outreach Program to inform the building users of the sustainable design strategies. This program shall include a minimum of two of the following:

- (1) Digital or fixed signage describing the sustainable goals and strategies as well as behavior modifications to complement the sustainable design and construction efforts.
 - (2) A brochure or pamphlet on the sustainable strategies. This shall highlight the location of specific strategies and provide resources for additional information.
 - (3) Information on the building or department website highlighting the sustainable goals, strategies, and behavior modifications to compliment the sustainable efforts.
 - (4) Enhanced building training to ensure the building operators and users understand the systems and sustainable design strategies. This includes providing enhanced Operation and Maintenance information on the building systems and control strategies.
- B. The outreach program shall address the following sustainable strategies:
- (1) Context Sensitive Design
 - (2) Transportation Demand Management Plan and Programs
 - (3) Sustainable Site Design
 - (4) Energy Efficiency
 - (5) Water Efficiency
 - (6) Indoor Environment Quality
 - (7) Recycling and Material Management
- C. Energy Star Tracking
- (1) The Facilities Operator or Commissioning Authority shall register the building under the Energy Star Portfolio program and input and monitor energy and water consumption of the building.

5.10 Metering

- A. Metering System Scope
- (1) All state agencies and institutions shall incorporate the utility metering requirements of this section into new construction and major renovation projects. The scope of metering shall include at minimum:
 - a. Meters on each utility connected to the building, including but not limited to power, natural gas/propane, domestic water, irrigation water, chilled water, steam or condensate, and heating water, shall be provided as part of the construction project and shall be connected to an energy metering monitor network. If meters provided by utility companies can be connected to this network, these meters can serve to meet this requirement. Otherwise, separate meters will be required as part of the construction project that can connect to the meter monitoring network.
 - i. Irrigation metering is only required on projects where irrigation system feeds from a building or is a standalone system as part of the project.
 - b. Monitoring network for utility meters shall be connected to each meter and submeter in the building. This network shall connect to the building controls network via a dedicated automation engine device such as a JACE, NAE, or equivalent as approved by DFCM. Communication protocol on the monitoring network shall be BACnet, LON, and/or Modbus RTU and shall be coordinated with the building automation network. All devices connecting to this network shall use the selected communication protocol as their standard means of communication and shall make all data points readily available for monitoring through the network. A schematic of the monitoring network shall be included in the construction drawings.
 - c. Meter the entire building electrical load at the main service entrance switchboard. For projects with budgets exceeding \$5,000,000, or as directed by DFCM, provide submetering of electrical loads to HVAC systems, lighting, and plug loads. For Medium Voltage switchboards at 4160 volt or higher, provide

metering at each branch circuit. Multi-relays that gather metering data may be used in place of a standalone meter on branch circuits of large switchboards. Provide additional submeters for large renewable energy projects that interconnect to the building electrical panels.

- i. Submeters shall connect to the monitoring network. Connection to the monitoring network shall be through one connection point through a dedicated Building Automation node. Do not mix HVAC monitoring and Electrical metering on the same BAS node. Allow the HVAC monitoring and control to continue during maintenance on the metering side
- d. Provide additional submetering for any equipment or systems exceeding the following thresholds:
 - i. Electrical load exceeding 100 kW
 - ii. Natural gas/propane load exceeding 1,500,000 Btu/h
 - iii. Cooling tower fill and drain for cooling towers on systems with over 150 tons cooling capacity. If this information is available from chemical treatment or other systems, these systems can be included in the metering network in lieu of separate meters.
 - iv. Evaporative cooling system fill and drain for evaporative cooling systems sized for 50,000 CFM or more.
 - v. If individual pieces of equipment do not cross these thresholds, but they are part of systems (e.g. chiller or boiler plant) that have demands above the threshold level, provide submetering for the entire system.
 - vi. Verify with agency whether any additional submetering requirements exist (billable tenants, etc.)
- e. If individual pieces of equipment have internal metering capabilities that meet the requirements of this section, these points can be mapped into the meter monitoring network in lieu of external submeters.
- f. Where the project is part of a campus of other buildings, coordinate with campus personnel and design standard supplements for additional metering requirements. This may include matching existing head end equipment protocol, particular standards related to specifications of equipment, and requirements for programming on the head-end system to receive the new metering signals.
- g. The meter monitoring network shall be provided with graphics pages available over the web and through the building controls head end system (if provided). The graphics page shall provide a summary of the instantaneous readings of each meter, provide hourly and daily peak kW trend graphics, as well as the monthly and annual peak kW and total kW-hr readings of each meter. Provide data to allow comparisons of each month and year of the building's operation. Trends shall collect data at 15 minute intervals coincident for each meter on the network.
- h. The meter monitoring network shall be provided with export capabilities of a minimum of one year of data at hourly intervals, for all metered points, with trend data required, to either CSV or SQL format.
- i. Construction documents shall include schedules and locations of meters, and require submittals of meters for review by the design team, DFCM, and commissioning agent. Commissioning agent will review installation, calibration, and operation of meter system.

B. Utility Meter Requirements

(1) Electric Power Meters

- a. Provide digital power meters on all buildings. If there is more than one building on the project, provide separate metering for each structure.
- b. Provide power meter output in the communication protocol selected for the meter monitoring network.

- c. For monitoring the submeters, connect all back to a central location for interface with the Building Automation system node. Provide riser, plans, and details of wiring and conduit connections. Carefully consider how meter wiring can be routed and connected through switchboards. Consider how meters and wiring can be serviced in live switchboards. An acceptable alternate to switchboard mounting is a separate bank of meters adjacent to the switchboard.
 - d. Meters shall meet the ANSI standard for billable type meters. Provide meters to monitor with true RMS metering, with 0.2% accuracy.
 - e. Power meters shall have on board clock with date and time, and be able to record the day and time of any maximum demands or other events.
 - f. Monitor shall include instantaneous demand for kW, kWh, power factor PF, and shall also include maximum demand kW and total kWh.
 - g. Power meters shall have an on board digital display that reports measured voltage, amperage, kW, kWh, and power factor. The digital display shall be programmed and calibrated against a portable meter. Verification and commissioning is required for the monitoring network and the on unit digital display.
 - h. For large switchboards exceeding 2000 amp, or for medium voltage exceeding 4160 volt, provide test blocks on the face of the switchboard for testing the CT's and PT's. For medium voltage application, provide three PT's, 3 phase 4 wire system, and multiple tap CT's.
 - i. For main service meters, additional meter functions may be considered at the main service such as Total Harmonic Distortion, waveform capture, high speed event capture, and power analysis data. Do not provide these features for submetering unless requested by the agency or user group.
 - j. Where application calls for net metering, provide this function.
 - k. Metering and submetering data shall be coincident, with trending available independently for each individual metering point.
- (2) Natural Gas/Propane Meters
- a. Provide diaphragm type flow meters for sizes up to 1,000,000 Btu/h. Provide rotary type flow meters for sizes above 1,000,000 Btu/h. Accuracy on diaphragm meters shall be +/- 3% over the published flow range of the meter. Accuracy of the rotary meter shall be +/- 2% over the published flow range of the meter. Verify that maximum and minimum flow requirements for the project are suitable for the meter selected. Include requirement in the contract documents to correct meter multiplier for project gas pressure.
 - b. Provide a strainer upstream of all meters. Provide a bypass around meters. If meter is installed outside, route output wiring to local display inside building mechanical room. Orient pipe horizontally where meter is installed. Meter installation shall be in accordance with manufacturer's specifications. Show straight pipe requirements on contract drawings (12 pipe diameters upstream and 7 pipe diameters downstream, unless more is required by manufacturer). Strainers and bypass fittings are not to be included in the straight pipe length.
 - c. If the meter is provided with a dry-contact pulse output, a 4-20 mA output, or a proprietary protocol, require a controller/convertor be provided to convert the signal to the communication protocol used in the meter monitoring network.
 - d. Meter output to the monitoring network shall provide instantaneous flow rate as well as totalized flow rate. A local display shall be provided that shows these flow rates at the meter. Units shall be in CFH for instantaneous flow rate and 100's of cubic feet (CF) for the totalized flow rate.
- (3) Domestic/Irrigation Water Meters
- a. Provide positive displacement type flow meters for sizes up to 2" and direct coupled turbine type flow meters for sizes up to 20". Insertion turbine type flow

- meters are acceptable in sizes from 2 1/2" to 8". Accuracy on all meters shall be +/- 2% over the published flow range of the meter. Verify that maximum and minimum flow requirements for the project are suitable for the meter selected.
- b. Provide a strainer upstream of all meters. Provide a bypass around meters that are installed inline. Bypasses are not required for insertion turbine meters that can be removed from the pipeline for maintenance without interrupting flow. Provide a test port downstream of meters.
 - c. Install meter in well-lit and easily accessible area (irrigation meters may be installed in underground meter boxes, but display shall be located inside adjacent buildings). Orient pipe horizontally where meter is installed. Meter installation shall be in accordance with manufacturer's specifications. Show straight pipe requirements on contract drawings (12 pipe diameters upstream and 7 pipe diameters downstream, unless more is required by manufacturer). Strainers and bypass fittings are not to be included in the straight pipe length.
 - d. If the meter is provided with a dry-contact pulse output, a 4-20 mA output, or a proprietary protocol, require a controller/convertor be provided to convert the signal to the communication protocol used in the meter monitoring network.
 - e. Meter output to the monitoring network shall provide instantaneous flow rate as well as totalized flow rate. A local display shall be provided that shows these flow rates at the meter. Units shall be in GPM for instantaneous flow rate and Gallons, or 10's of Gallons, or 100's of gallons for the totalized flow rate as applicable to the project size.

(4) Steam Meters

- a. Provide a vortex type mass flow meter with integral density compensation. Accuracy to be +/-2% over the published range of the meter. Verify that maximum and minimum flow requirements for the project are suitable for the meter selected.
- b. Provide a strainer and drip leg upstream of all meters. Provide a bypass around meters.
- c. Install meter in well-lit and easily accessible area. Orient pipe horizontally where meter is installed. Meter installation shall be in accordance with manufacturer's specifications. Show straight pipe requirements on contract drawings (12 pipe diameters upstream and 7 pipe diameters downstream, unless more is required by manufacturer). Strainers and bypass fittings are not to be included in the straight pipe length.
- d. If the meter is provided with a dry-contact pulse output, a 4-20 mA output, or a proprietary protocol, require a controller/convertor be provided to convert the signal to the communication protocol used in the meter monitoring network.
- e. Meter output to the monitoring network shall provide instantaneous flow rate as well as totalized flow rate. A local display shall be provided that shows these flow rates at the meter. Units shall be in lb/hr for instantaneous flow rate and 1000's of lb for the totalized flow rate.

(5) Condensate Meters

- a. Provide positive displacement type flow meters for sizes up to 2" and direct coupled turbine type flow meters for sizes up to 20". All condensate meters shall be rated for operation with fluids up to 230°F. Accuracy on all meters shall be +/- 2% over the published flow range of the meter. Verify that maximum and minimum flow requirements for the project are suitable for the meter selected.
- b. Provide a strainer upstream of all meters. Provide a bypass around meters that are installed inline. Require that meter be installed in a low point in the piping system to ensure the pipe remains full of water. Provide a test port downstream of meters.

- c. Install meter in well-lit and easily accessible area. Orient pipe horizontally where meter is installed. Meter installation shall be in accordance with manufacturer's specifications. Show straight pipe requirements on contract drawings (12 pipe diameters upstream and 7 pipe diameters downstream, unless more is required by manufacturer). Strainers and bypass fittings are not to be included in the straight pipe length.
 - d. If the meter is provided with a dry-contact pulse output, a 4-20 mA output, or a proprietary protocol, require a controller/convertor be provided to convert the signal to the communication protocol used in the meter monitoring network.
 - e. Meter output to the monitoring network shall provide instantaneous flow rate as well as totalized flow rate. A local display shall be provided that shows these flow rates at the meter. Units shall be in GPM for instantaneous flow rate and Gallons, or 10's of Gallons, or 100's of gallons for the totalized flow rate as applicable to the project size.
- (6) Chilled Water or Heating Water (Below 200°F)
- a. On buildings that receive chilled water or heating water from a remote plant, provide a BTU meter that consists of flow meter, supply and return temperature sensors (matched pair of RTDs), and local display that calculates GPM, Btu/h, and totalizes Btu readings. The flow meter shall be an insertion turbine meter for pipe sizes from 2 1/2" to 8". For sizes larger than 8", the flow meter shall be an electromagnetic or ultrasonic flow meter. Accuracy to be +/-2% over the published range of the meter. Verify that maximum and minimum flow requirements for the project are suitable for the meter selected.
 - b. Provide a strainer upstream of all meters. Provide a bypass around meters that are installed inline. Bypasses are not required for insertion turbine meters or ultrasonic flow meters that can be removed from the pipeline for maintenance without interrupting flow. Provide a test port downstream of meters.
 - c. Install meter in well-lit and easily accessible area. Orient pipe horizontally where meter is installed. Meter installation shall be in accordance with manufacturer's specifications. Show straight pipe requirements on contract drawings (12 pipe diameters upstream and 7 pipe diameters downstream, unless more is required by manufacturer). Strainers and bypass fittings are not to be included in the straight pipe length.
 - d. Meter output to the monitoring network shall provide instantaneous flow rate, supply and return temperatures, instantaneous energy transfer rate as well as totalized flow and totalized energy transfer. A local display shall be provided that shows these values at the meter. Units shall be in GPM for instantaneous flow rate, Btu/h for instantaneous energy transfer rate, and 1,000,000's of Btu for the totalized energy transfer. If room temperature will exceed 85°F, move display to adjacent cooler room.
- (7) High Temperature Heating Water (Above 200°F)
- a. On buildings that receive high temperature heating water from a remote plant, provide a BTU meter that consists of flow meter, supply and return temperature sensors (matched pair of RTDs), and local display that calculates GPM, Btu/h, and totalizes Btu readings. The flow meter shall be an ultrasonic or flange to flange insertion type flow meter. Verify with DFCM or agency for each project. All components in this system shall be rated for temperatures up to 750°F. Accuracy to be +/-2% over the published range of the meter. Verify that maximum and minimum flow requirements for the project are suitable for the meter selected.
 - b. Provide a bypass around meters that are installed inline. Bypasses are not required for ultrasonic flow meters that can be removed from the pipeline for maintenance without interrupting flow.

- c. Install meter in well-lit and easily accessible area. Orient pipe horizontally where meter is installed. Locate flow meter on return line. Meter installation shall be in accordance with manufacturer's specifications. Show straight pipe requirements on contract drawings (12 pipe diameters upstream and 7 pipe diameters downstream, unless more is required by manufacturer). Strainers and bypass fittings are not to be included in the straight pipe length.
- d. Meter output to the monitoring network shall provide instantaneous flow rate, supply and return temperatures, instantaneous energy transfer rate as well as totalized flow and totalized energy transfer. A local display shall be provided that shows these values at the meter. Units shall be in GPM for instantaneous flow rate, Btu/h for instantaneous energy transfer rate, and 1,000,000's of Btu for the totalized energy transfer. If room temperature will exceed 85°F, move display to adjacent cooler room.

5.11 Data Points

A. Definitions

- (1) The input/outputs points list as defined in Appendix A have the following definitions:
 - a. Digital Input: This term is defined as binary data flow into a controller or control function. These values are "on/off", alarm or normal, 0 or 1, etc.
 - b. Digital Output: This term is defined as binary data flow out of a controller or control function. These values are on/off, start/stop, open/close, etc. These values are typically shown as 0 or 1, True or False, On and Off, etc.
 - c. Analog Input: This term is defined as analog data flow into a controller or control function. These values are associated with thermostats, thermo wells, transducers, CO2 sensors, humidity sensors, flow sensors etc. These values are typically shown in incremental values.
 - d. Analog Output: This term is defined as analog data flow out of a controller or control function. These values are associated with speed, position, damper actuators, valve actuators, etc. These values are typically shown as 0-100%.
 - e. Hardwire Interlock: This term refers to physical wiring between two devices which prevents one device from operating until the other device confirms ability to operate. These types of interlock are typically associated with a damper confirming open before a fan may start, a valve confirming open until a pump may start, etc. This does not refer to any software interlock but an actual physical connection.
 - f. BAS Communication: This term refers to values sent from or sent to devices which communicate over a software communication protocol such as LonWorks, BACnet, Modbus, or other software communications. These are not physical points directly wired to controllers but are typically sent over a communications protocol.
- (2) The graphics points list as defined in Appendix A have the following definitions:
 - a. Dynamic Flow Diagrams: This refers to graphics which have animation showing digital inputs operation. These are animations are typically fan status as shown as a moving fan, pump status as shown as a moving impeller on a pump graphic, a coil status as shown as a color change in the coil color, etc.
 - b. Start/Stop: This refers to a digital output value as shown in textual format. These values show open/close, start/stop, as physically shown on the graphic
 - c. Display Status: This refers to a digital input value as shown in textual format. These values show on/off, open close, as physically shown on the graphic.
 - d. Display Value: This refers to both analog inputs and outputs as shown in textual format. These values show percentage open, speed, gpm, cfm, etc.

- e. Adjust Value: This refers to any value that can be manipulated through the BMS system. These values can be adjusted as an override from the BMS or an adjusted set point. All controlling set points will be shown on the graphic.
- (3) The other points list as defined in Appendix A have the following definitions:
- a. Alarm Local: This refers to an alarm that is shown only locally on the BMS and an alarm that does not require immediate attention by staff or an alarm that is generally not detrimental to the system if it does not function correctly. Different priorities will be defined in the project requirements.
 - b. Alarm Email: This alarm is reserved for failures in the system which could create a great monetary expenditure to resolve if not addressed immediately. The intent is to alarm offsite personnel during unstaffed time periods to immediately come to the site to resolve the issue before further damage could be done.
 - c. Trend 15 Minutes: This refers to trending that needs to be setup in the system to trend every 15 minutes. The cache for these trends needs to be at least 8 weeks in storage for review by the DFCM or user groups. Trend charts shall be setup by the contractor in direction of the Cx, Engineer, or User group. It is not the intent that all points listed in the “trend 15 min” be all shown on a single chart but be separated in relation to the control of the system and the command of the system. An example is an pumping system where the lead/lag or duty/standby is shown compared to the differential pressure in the system.

B. Implementation

- (1) The points list shall only be implemented in buildings that require a BMS. If a BMS system is not required or requested by DFCM then the points list will not apply in its entirety.
 - a. This requirement is not to alleviate Design/Build applications from providing a BMS unless it is specifically stated in the program documents that it is not required.
 - b. If the program documents do not address a BMS then it will be inferred that a BMS is required in compliance with this section.
- (2) Trending will be implemented for all pieces of equipment as defined in the points list. Individual charts shall be created at direction of the Cx, Engineer, or DFCM representative. These trend charts shall be able to be accessed through a web interface and a single point click. The intent is not to have these charts created each time an individual logs into the system. The intent is to have these charts accessed through a single click.
- (3) Implementation of this section is not to be applied wholly to each individual building. The intent is only individual systems as applied to the project only be followed per the stated section.
- (4) Any system that is not listed in the points list shall not alleviate the design or construction team from implementing a defined points list. In the event that a system is not defined a list shall be provided to DFCM to show which points shall be implemented. The points list shall be delivered to the DFCM, user groups, and Cx by the design team before 50% CDs are created in a Design-Bid-Build or CM/GC delivery system. The points list shall be delivered to the DFCM, user groups, and Cx by the design team before DDs are created in a Design/Build delivery system. A narrative shall be submitted to DFCM in the event compliance with section 5.11 is too stringent or costly for a given project that requires a BMS. Any waiver shall be approved by the DFCM and the user group. The waiver shall be accompanied by a descriptive reason on why the standards are too stringent or costly for the project.
 - a. The waiver shall not be approved when finances are not in place, only when the implementation does not prove to have a reasonable use.

- A. The following industry standards provide a minimum level commissioning in to determine the scope for capital development projects.
- (1) American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) ASHRAE Standard 202, Commissioning Process for Building and Systems
 - (2) National Environmental Balancing Bureau (NEBB) - Procedural Standards for Whole Building Systems Technical Commissioning
 - (3) Building Commissioning Association (BCxA) - New Construction Building Commissioning Best Practice
 - (4) AABC Commissioning Group Guidelines (ACG) – ACG Commissioning Guideline
- B. DFCM shall determine the systems and assemblies to be commissioned, per the OPR, in the project's team's scope. The following systems must be commissioned as a minimum.
- (1) Cooling systems
 - (2) Heating systems
 - (3) Steam systems
 - (4) Air handling systems
 - (5) Smoke controls systems including fans ductwork and interconnected air handling/supply systems
 - (6) Plumbing systems
 - (7) Emergency power systems
 - (8) On-site renewable energy systems
 - (9) Electrical systems
 - (10) Building Automation Systems (BAS), including verification of correctly installed data points and meters
- C. The below following duties only pertain to mandatory systems to be commissioned. Other systems that may be commissioned shall be defined per individual project. The following duties shall be performed by the commissioning project manager and not any other individual commissioning team member:
- (1) Review OPR at each design phase
 - (2) Review BOD at each design phase
 - (3) Review each design phase (Programming, SD, DD, CD) submittal for compliance to HBPS Sections
 - (4) Attend Design Meetings as necessary, including design phase review meetings, systems meetings and HPBS Workshops
 - (5) Conduct Commissioning Kick-off Meeting, attendees per Section 5.1
 - (6) Review the Commissioning Plan (prepared by other commissioning team members)
 - (7) Review submittals for main pieces of equipment and issue a report written by the project manager (main pieces of equipment include Boilers, Chillers, Cooling Towers, Heat Pumps, Air Handling Units (larger than 5,00 CFM), Pumps, VFDs, Lighting Controls, Building Management System, Roof Top Units, VRF, Chilled Beams, VAV, FCU)
 - (8) Attend Construction Meetings (at least monthly at first install of MEP rough in)
 - (9) Review first installed or mock-up items
 - (10) Review Final Sequence of Operations as installed to ensure compliance with documentation.
 - (11) Review Functional Acceptance Test final test records(as performed by other commissioning team members)
 - (12) Review Test and Balance Report
 - (13) Review Commissioning Report
 - (14) Review Systems Manual
 - (15) Review Trending data (at least four weeks) for major pieces of equipment and lighting controls

- (16) Follow up on the project at 3,6,9,11 months to ensure the system is performing as intended.
- D. The following duties shall be performed by the commissioning agent or may be performed by the commissioning project manager and not any other individual commissioning team member:
- (1) Review SD drawings
 - (2) Prepare the commissioning plan
 - (3) Review minor submittals (minor submittals include piping, valves, plumbing equipment, other electrical equipment not defined in project managers duties, and other pieces of equipment not defined in the project manager duties)
 - (4) Conduct construction meetings
 - (5) Verify Equipment on site matches items submitted
 - (6) Prepare and execute PFAT checklist
 - (7) Prepare and execute FAT checklist
 - (8) Execute PT-PT checks on 100% of all of the points on the building management system
 - (9) Calibrate all (100%) points on PT-PT checks on the building management system, occupancy sensors, and day lighting controls.
 - (10) Attend Startup of major pieces of equipment and review startup reports from contractors.
 - (11) Review issues logs.
 - (12) Review Training Agendas
 - (13) Prepare the Commissioning Report
 - (14) Prepare the Systems Manual
- E. The following duties shall be performed by the commissioning technicians or may be performed by the commissioning agents or may be performed by the commissioning project manager and not any other individual commissioning team member:
- (1) Review all installed pieces of equipment, piping, insulation, conductors, receptacles, switches, transformers, switchgear, panel boards, switchboards, MCC, VAV, VRF, Chilled beams, FCU, Exhaust Fans, Relief Fans, etc. that they meet OPR, CD, and Manufacturer recommended instructions
 - (2) Assist in execution of PFAT checklist
 - (3) Assist in execution of FAT checklist
 - (4) Perform all other duties not defined in the commissioning project manager and commissioning agents responsibilities but defined in the Standards and Guidelines as defined in the Standards and Guidelines section.
 - (5) Prepare issues logs.

5.13 Envelope Commissioning

- A. High performance building shall be commissioned in general compliance with ASTM E2813-12 *Standard Practice for Building Enclosure Commissioning*. Where conflicts arise between ASTM E2813 and this Standard, this Standard shall supersede.
- B. Standard performance buildings shall be commissioned through the design phase in general compliance with ASTM E2813-12,
- (1) Project budget will dictate commissioning activities beyond the design phase.
- C. Building Components Included in Building Envelope Commissioning
- (1) Below-grade construction including foundations, basements, and slab-on-grade that functions as part of the exterior enclosure system with utilization of waterproofing and drainage systems, but excluding structural and fireproofing systems and components
 - (2) Superstructure floor and roof construction that functions as part of the exterior enclosure system.

- (3) Exterior enclosure construction, above grade, including exterior opaque walls and claddings, fenestration, sheathing, framing, insulation, air barriers, vapor barriers, drainage control layers (or Water Resistive Barriers –WRB’s), RF shielding materials, and additional components of the assembly that may impact the long term performance of the enclosure.
 - (4) Roofing, including roofing system, roofing insulation, air barriers, vapor barriers, roofing membranes, skylights, hatches, and other roof openings/penetrations.
- D. Building Envelope Commissioning – Phases and Tasks – Design-Bid-Build
- E. The overall BECx process and scope of services shall be in general accordance with the following industry standards, but with emphasis placed on ASTM E2813:
- (1) NIBS Guideline 3-2012 Building Enclosure Commissioning Process
 - (2) ASTM E2813 Standard Practice for Building Enclosure Commissioning
 - (3) CSA Z320-11 – Building Commissioning Standard & Check Sheets
- F. The following tasks shall be included in the BECx scope of work
- (1) Pre-Design Phase
 - a. The Building envelope commissioning agent (BECxA) must be engaged during or prior to the pre-design phase for all High Performance projects and during the design phase for all Standard Performance Projects.
 - b. The OPR, relative to the building envelope components selected for commissioning, is documented in order to establish a baseline of performance expectations to which the actual installed performance is compared. The BECxA, with the assistance of the Owner, discusses the BOD Summary that documents the OPR for those building systems selected for commissioning. The BOD Summary reflects the underlying assumptions and requirements that become represented in the construction documents. The OPR is developed by the Owner and documented by the BECxA. Project schedule, design life, and project delivery method should all be included in the OPR. For Standard Performance projects, this task is complete in the design phase.
 - c. Review of the design narratives to attain an understanding of the BOD. The Basis of Design (BOD) Document records the concepts, calculations, decisions, and product selections used in the design to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document generally includes both narrative descriptions and lists of individual items that support the design process. The BOD Document is developed by the Architect/Engineer of Record (A/E) through a series of design narratives. The BECxA reviews the BOD statement and design narrative documentation and provides written commentary to the A/E and other members of the Commissioning Team as required.
 - d. Identify the scope of the BECx process. A BECx Scope Meeting will be conducted. Topics to be covered during the BECx Scope meeting include, but are not limited to, the BECx process, communication protocols, and development of OPR and BOD. The step is often accomplished with a conference call.
 - e. Development of the initial BECx plan. The BECxA will develop the initial BECx plan, which can either be its own entity (common) or a part of the Master Commissioning Plan (uncommon). The plan shall include key elements including, but not limited to, project schedule inclusive of BECx tasks and milestones, systems to be commissioned, roles and responsibilities of commissioning team members, means of communication and reporting of conditions and progress throughout the BECx process, and the level of documentation expected throughout the BECx process. The plan is updated

periodically throughout the BECx process to reflect changing project conditions or requirements until the end of the project, when it then becomes the Project Commissioning Record.

(2) Design Phase

- a. The BECx shall review the relevant project documents to assist with the development of a building envelope that provides environmental separation. The design concepts will be evaluated against the OPR and BOD. The review will include verification that all systems to be commissioned are addressed in the BOD and fulfill the OPR such that the systems are coordinated with each other. The review shall occur a minimum of two times, including a back-check of subsequent issuances. Deliverables typically consist of written mark-ups of the architectural drawings and project specifications to be shared and discussed with the project team. The A/E provides a written response to the BECA and Owner as to how the comments will be reflected in the final bid documents. On a typical high performance project, there will be at least three in person meetings between the A/E and the BECx.
- b. The BECx requirements are incorporated into the construction documents via a BECx specification sections provided by the BECx and submitted to the A/E for review and approval. The functional performance testing requirements (including both mock-up and field testing) will be incorporated into the construction documents via a functional performance testing specification section. Both specification sections are created by the BECx based on the requirements outlined in the OPR and BOD and submitted to the A/E for review and approval.

(3) Pre-Construction Phase

- a. The A/E or Contractor shall provide all sub-contractor submittals, including material submittals, shop drawings, applicable substitution requests, and quality control documentation to the BECx prior to commencement of building envelope construction. The BECx will review all contractor exterior envelope submittals for compliance to the BOD, design documents, performance, and constructability, with concentration on transition details, sequencing concerns, and quality control contractual requirements. All concerns shall be forwarded, in writing, to the A/E for their review and formal response to the Contractor. All submittal and shop drawing reviews by the BECx will occur prior to review by the A/E, when possible. When applicable, the BECx will provide written mark-ups of the shop drawings to the A/E. Air barrier shop drawings are required on all projects.
- b. In general, the Contractor will complete CCs for all assemblies and systems prior to formal performance testing of equipment or subsystems of the given system. These checklists will be reviewed by and as needed commented on by the BECx.
- c. The Contractor will arrange and schedule a Pre-Construction Trade Orientation Meeting, prior to the commencement of the building envelope mock-up or building envelope construction, to be chaired by the BECx. Topics covered during the meeting would include, but not necessarily be limited to, inspection and testing procedures, review of plans and specifications, review of shop drawings, construction schedule and sequencing, material selection and compatibility, and other installation concerns. This meeting may also serve as the building envelope commissioning kick-off meeting or they may be separate meetings.
- d. Mock-ups of the critical envelope components shall be constructed and tested prior to the commencement of building envelope construction in order to verify the performance of the systems and to set construction standards and material

selection for the duration of the project. Components required in the mock-ups will be as identified in the relevant sections of the Project Specifications and Architectural Drawings. Construction of the mock-up is to be observed and documented by the BECxA. Once completed, the Contractor will provide confirmation of completion to the BECxA and A/E. The completed mock-up will then be reviewed by the BECxA and A/E for compliance to the Contract Documents. Once the mock-up has been visually observed for compliance to the Contract Documents, the mock-up will be tested to ensure adherence to the performance requirements set forth in the Contract Documents. The testing protocol will be as identified in the Contract Documents in the Functional Performance Test Specification developed by the BECxA and approved by the A/E during the Design Phase. Should failures occur during mock-up testing, the Contractor shall investigate the source of the failure and propose a remediation strategy for review and comment by the BECxA and A/E, and install the approved repair work. The mock-up shall be retested until passing results are achieved, prior to full scale construction at the project site. Any repairs or remedial work performed on the mock-up must be documented by the BECxA.

- (4) Construction Phase
- a. The BECxA will participate in pertinent envelope performance/installation meetings and commissioning meetings as required.
 - b. The BECxA will participate, in person or via conference call, at least one OAC meeting per month.
 - c. Upon commencement of building envelope construction and continuing throughout the construction process, on-site inspections will be conducted by the BECxA to review the Work for compliance to Contract Documents and industry standards. Deficiency logs will be generated by the BECxA and repairs tracked with the goal of having a zero punch list project.
 - d. The BECxA will observe or perform functional performance testing of the building envelope. The field testing protocol will be as identified in the Contract Documents in the Functional Performance Test Specification developed by the BECxA and approved by the A/E during the Design Phase. Failed tests should be retested until satisfactory results are achieved. Additional testing may be performed as determined by the Owner, BECxA, and A/E as outlined in the functional performance test specification. Envelope components and systems shall not be installed on the building or beyond the in situ mock location until testing has demonstrated satisfactory results.
 - e. The BECxA plan will be updated as needed, as this is a living document and may reflect new and/or reduced requirements as directed by the Owner.
 - f. The BECxA may participate in dispute resolution regarding exterior envelope components/systems and associated performance. The BECxA and the A/E may be relied upon during construction to evaluate compliance with the OPR; to provide and vet out alternative solutions; and to evaluate the associated risks.
- (5) Post-Occupancy Phase
- a. The BECxA will finalize the BECxA plan and the final commissioning report with respect to the building envelope.
 - b. The BECxA provides appropriate training to the building maintenance personnel with respect to building envelope maintenance.
 - c. The BECxA will provide a site review and follow-up meeting 10 months post-occupancy. A written post-occupancy site visit report will be incorporated into the Building Envelope Commissioning Record.

G. Guidelines for performance criteria and associated functional performance testing commissioned systems/assemblies are as follows below. The BECxA may deviate from the general

recommendations below to suit project needs. Section 5.16 lists Referenced Standards and Codes which can be applied to the building envelope functional performance testing plan.

- (1) Water
 - a. In general, water testing on a façade surface shall be in accordance with ASTM E 1105 or AAMA 501.1. Project test pressures will be based on the wind load calculations per ASCE 7 in conjunction with the rated performance of specified products per AAMA 101 with a minimum 6.24 psf differential pressure. Water leakage shall be defined as any water that is interior to the primary plane of air tightness (whether visible or not from the interior) that is not positively drained to the exterior. Detailed water penetration resistance requirements are outlined in Appendix G.
- (2) Vapor
 - a. A continuous vapor barrier (or vapor retarder) must be provided to all exterior opaque walls, roofing, below grade foundation walls and slabs, and slab-on-grade conditions as determined by appropriate hydrothermal analysis. This vapor barrier shall be sealed at all interfaces, fenestrations, penetrations, etc. A vapor barrier (or vapor retarder) is defined as materials with vapor permeability below 1.0 perm per ASTM E96 desiccant or dry cup method (Class I or Class II per 2012 IBC).
 - b. Testing is not required, but visual inspections of installed work are required. High Performance structures require vapor barriers to be included in the performance mock-up.
- (3) Air
 - a. In general, air testing is performed in accordance with ASTM E 1186, ASTM E 783, and ASTM E 779. Detailed performance criteria are identified in Appendix G

5.14 Incentives and Rebates

- A. Utility sponsored incentive and rebate programs when properly leveraged offer project additional cause to implement energy efficient strategies into the State's facilities. It is the intent of DFCM to obtain, in a timely manner, all possible gas and electric utility incentives and rebates for the *prescriptive or typical* measures included in their new building projects.
 - (1) *Prescriptive* energy efficiency measures are defined as those that propose equipment/systems that exceed existing building energy code and have incentives or rebates paid based on the type, size, and quantities of high efficiency equipment installed.
- B. This section of the HPBS and its supporting appendices provide information about the incentive and rebate process as well as guidance to project teams on how to best navigate both Rocky Mountain Power (RMP) and Questar Gas Company's (QG) programs.
 - (1) As of July 1st, 2014 only RMP and QG are the only utility providers in Utah who offer whole building program incentives and rebates. Therefore this section is oriented towards the programs that they currently offer. If, at a later time, local municipal utility companies offer incentive and rebate programs, the DFCM will utilize those programs, when possible, to further energy efficiency in State's facilities.
- C. Incentive and rebate opportunities shall be properly identified in the design phase of each project.
- D. Possible incentive and rebate values for specific energy efficiency strategies shall be incorporated as a separate line item in the LCCA required in section 5.5.

- E. In the case where the incentive and rebate program conflicts with the sections within the HPBS that conflict shall be made know to the DFCM Energy Program Director, who will then discuss the conflict with the project team.
- F. The architect is ultimately responsible for the design team performing their assigned tasks and obtaining all utility incentives and rebates.
- G. Custom energy efficiency measures (EEMs), are to be identified and handled by the design team by reporting them, as soon as they are identified, to the DFCM Energy Program Director who will coordinate with the proper utility.
- H. Appendix H, and Appendix I provides a road map for how the project's prescriptive measure incentives are to be obtained. Deviations from the process outlined in this appendix must be approved by DFCMs Energy Program Director.

5.15 Owner's Project Requirements

- A. A concise OPR must be developed by the design team and owner during the project programming phase, or by the midpoint of schematic design, for projects without a programming phase.
 - (1) For projects with a programming phase, the OPR is required to be complete and included in the project program.
 - (2) For projects without a programming phase the, the OPR is required to be complete and included in the schematic design review set.
- B. Once the initial OPR and BOD are developed by the design team and the Commissioning Agent (CxA) has been integrated into the project, it is to be reviewed by the CxA at the SD, DD and CD submittal.
- C. Changes to the OPR and BOD, from one design phase to the next, must be documented by the design team.
- D. Sections that must be included in the OPR are detailed in Appendix F. Coordination with DFCM's Design Requirements⁶ is required.

5.16 Referenced Standards

- A. American Architectural Manufacturers Association
 - (1) AAMA 101-2011 North American Fenestration Standard/Specification for Windows, Doors, and Skylights
 - (2) AAMA 511-08 Voluntary Guideline for Forensic Water Penetration Testing of Fenestration Products
 - (3) AAMA 501.1-05 Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure
- B. American Society of Civil Engineers
 - (1) ASCE 7 Minimum Design Loads for. Buildings and Other Structures
- C. American Society of Heating, Refrigerating and Air-Conditioning Engineers
 - (1) ASHRAE Standard 90.1-2010 -- Energy Standard for Buildings Except Low-Rise Residential Buildings

⁶ http://dfcm.utah.gov/downloads/design_manual/design_requirements.pdf

- D. ASTM International
- (1) ASTM C90-14 Standard Specification for Loadbearing Concrete Masonry Units
 - (2) ASTM C91/C91M-12 Standard Specification for Masonry Cement
 - (3) ASTM C144-11 Standard Specification for Aggregate for Masonry Mortar
 - (4) ASTM C150/C150M-12 Standard Specification for Portland Cement
 - (5) ASTM C207-06(2011) Standard Specification for Hydrated Lime for Masonry Purposes
 - (6) ASTM C270-12a Standard Specification for Mortar for Unit Masonry
 - (7) ASTM C370-12 Standard Test Method for Moisture Expansion of Fired Whiteware Products
 - (8) ASTM C595/C595M-13 Standard Specification for Blended Hydraulic Cements
 - (9) ASTM C794 Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
 - (10) ASTM C1060 Practice for Thermographic Inspection of Insulation Installations in Envelope Cavities of Frame Buildings
 - (11) ASTM C1153 Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging
 - (12) ASTM C1157/C1157M-11 Standard Performance Specification for Hydraulic Cement
 - (13) ASTM C1193 Guide for Use of Joint Sealants
 - (14) ASTM C1258 Test Method for Elevated Temperature and Humidity Resistance of Vapor Retarders for Insulation
 - (15) ASTM C1329/C1329M-12 Standard Specification for Mortar Cement
 - (16) ASTM C1384-12a Standard Specification for Admixtures for Masonry Mortars
 - (17) ASTM C1400-11 Standard Guide for Reduction of Efflorescence Potential in New Masonry Walls
 - (18) ASTM C1498-04a(2010)e1 Standard Test Method for Hygroscopic Sorption Isotherms of Building Materials
 - (19) ASTM C1715 Standard Test Method for Evaluation of Water Leakage Performance of Masonry Wall Drainage System
 - (20) ASTM D5957-98(2013) Standard Guide for Flood Testing Horizontal Waterproofing Installations
 - (21) ASTM E783-02(2010) Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors
 - (22) ASTM E1105-00(2008) Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference
 - (23) ASTM E1186-03(2009) Standard Practices for Air Leakage Site Detection in Building Envelopes and Air Barrier Systems
 - (24) ASTM E2357-11 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
 - (25) ASTM E2112-07 Standard Practice for Installation of Exterior Windows, Doors and Skylights
 - (26) ASTM E2178-13 Standard Test Method for Air Permeance of Building Materials
 - (27) ASTM E779-10 Standard Test Method for Determining Air Leakage Rate by Fan Pressurization
 - (28) ASTM E2813 Standard Practice for Building Enclosure Commissioning
- E. Canadian Standards Association
- (1) CSA Z320-11 – Building Commissioning Standard & Check Sheets
- F. Institute of Transportation Engineers
- (1) 4th Edition Parking Generation Guide
- G. International Code Council
- (1) AC38-2013 Acceptance Criteria for Water-Resistive Barriers

- (2) 2012 International Building Code
- (3) 2012 International Energy Conservation Code

- H. National Institute for Building Sciences
 - (1) NIBS Guideline 3-2012 Building Enclosure Commissioning Process

5.17 Definitions

Baseline – The performance level used for comparison to the above standard design.

Basis of Design – Formal documentation of the primary decision-making process and assumptions behind design decisions made to meet the OPR.

Building Analytics – Software programs that utilize data provided by building management systems (BMS) to deliver automated fault detection, diagnosis and real-time performance monitoring. Applications include building commissioning, equipment fault detection, energy analysis, load profiling, facility benchmarking, asset performance tracking, and carbon and greenhouse gas reporting.

Building Commissioning - A systematic and documented process of ensuring that the owner's operational needs and performance requirements are met. Additionally the process ensures that building systems perform efficiently and building operators are properly trained. The intent of the process is to set the stage for facility operators to operate the building as intended in the building design. A Commissioning Agent (CxA) is generally responsible for implementing the building commissioning process.

Building Envelop Commissioning - Building Envelop Commissioning (BECx) is a process involving evaluation, verification, and documentation that a building's design and construction meet defined performance expectations. BECx begins at the project inception and continues through the start of the Operations and Maintenance Phase. A Building Envelop Commissioning Agent (BECxA) is generally responsible for implementing the building commissioning process.

Cost Estimator – Consultant responsible for providing a forecast of construction cost prepared on the basis of a detailed analysis of materials and labor for all items of work. Note that this is different from preliminary estimates of construction costs based on area, volume or other conceptual estimating techniques often provided by the owner or architect.

Design Build – Design build is defined as the selection of the qualified design build entity through a competitive process which may require evaluation of the concept design and project cost, along with other criteria. The procurement of architect-engineer services and construction services by the use of a single contract with the design build provider.

Design Team – Consultants providing design services to the project, including but not limited to, Architects, Mechanical Engineers, Electrical Engineers, Civil Engineers, Landscape Architects, Acoustical Engineers, Kitchen Designers.

Direct/Site Emissions - Emissions from fuel that is directly burned at the building for heating, electricity generation or other facility operations.

General Contractor – Contractor providing construction management, cost estimating and general contracting services, including and not limited to supporting subcontractors.

High Performance Building Standard (HPBS) – The requirements and process outlined within DFCM’s Design Requirements, section 5.0, that require State buildings to be designed and built in such a manner to optimize energy efficiency, durability, life-cycle performance, water efficiency, material resources, occupant comfort and productivity.

High Performance Building Standard Workshop – Formal collaboration and coordination meetings in which various goals and strategies related to the HPBS are identified and evaluated in the context of the project. See Appendix? – HPBS Workshop Suggested Agenda.

Indirect/Source Emissions - Emissions associated with energy purchased from a utility, such as emissions generated from the generation of electricity at a coal fueled power plant.

Life Cycle Cost Analysis - Life-cycle cost analysis (LCCA) is a method for assessing the total cost of facility ownership. It takes into account all costs of acquiring, owning, and disposing of a building or building system. LCCA is useful when project alternatives that fulfill the same functional requirements, but differ with respect to initial costs, operating costs and performance, have to be compared in order to select the one that maximizes net savings.

Owner – One or more of the following, DFCM Project Manager, Facility Operator, Facility Manager, DFCM Energy Program Director, Agency Energy Manager, DFCM, State Institution, State Agency, or other governmental entity for which DFCM is providing project management services.

Owner’s Project Requirements (OPR) – A formal document created in the programming phase that provides a basis for the project’s functional and performance requirements. This document is intended to provide an explanation of ideas, concepts and requirements that are important to the owner. It is to be initially completed by the Architect with input from the owner and other parties as necessary. See Section 5.15 – Owner’s Project Requirements.

State Agency - Any state agency, board, commission, department, or division

State Institution –Institutions referring to the University of Utah, Utah State University, Southern Utah University, Weber State University, Snow College, Dixie State University, College of Eastern Utah, Utah Valley University, Salt Lake Community College, Utah College of Applied Technology, and any other university or college which may be established and maintained by the state.

5.18 Appendices

- A. Data Points List – Section 5.11
- B. Energy Modeling Spreadsheet – Section 5.5
- C. Life Cycle Cost Worksheet – Section 5.5
- D. HPBS Sustainability Worksheet – Section 5.6, 5.7, 5.8, 5.
- E. HPBS Workshop Suggested Agenda – Section 5.1
- F. OPR Required Sections – Section 5.15
- G. Envelope Commissioning Matrix – Section 5.13
- H. Incentives and Rebates Process Guidelines – Section 5.14

I. Incentives and Rebates Responsibility Matrix – Section 5.14



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4 2015
Subject: **Request for Approval of DFCM's Revised Space Standards**
Presenter: Jim Russell

Jeff Reddoor recommends the Board approve the Revised Space Standards for the Division of Facilities and Construction Management. The initial standards were adopted in 1967 and updated in 1994. This update was initiated by the Utah Legislature in 2011 and funded in 2012 to assure that the standards reflect industry trends as well as the current job classifications used for state employees.

JR: cn
Attachments

UTAH STATE

OFFICE

SPACE

STAN-

DARDS

INTRODUCTION

Utah has been a leader in the nation in the development and application of office space standards. The initial standards were adopted in 1967 and updated in 1994. This update was initiated by the Utah Legislature in 2011 and funded in 2012 to assure that the standards reflect industry trends as well as the current job classifications used for state employees. This report summarizes the update of the Utah State Office Space Standards.

Nationally there has been little change in traditional office space utilization – even with the advent of collaborative office design; the total amount of space needed by an agency has changed very little. The greatest impact on industry-wide use of office space has been mostly the result of more telecommuting. This study does not make any assumptions about telecommuting or allowing employees to work from home. If such policies are in place, the amount of office space required is clearly reduced.

The primary accomplishment of this update is to align office standards with the current job classifications used by the various state agencies. There were major changes in job classifications in 1997. The standards have also been developed in a database format to allow easier updating in the future.

This report summarizes the methodology and general outcomes of the analysis. The standards for each job classification have been delivered in a database for use by DFCM and other state agencies.

The standards will be used when changes or additions to state offices are made or new space is acquired through either construction or leasing. The standards are not retroactive. However, these updated standards have been developed to provide the Utah Division of Facilities,

Construction & Management (“DFCM”) with a tool to monitor office use and anticipate future office needs through the use of a database that tracks changes in employment by agency by location. It will also allow agencies to participate in the planning and budgeting for new space when needed. The standards have been developed to be available through the state intranet to state agencies and through the internet for use by design professionals.

A NEW APPROACH TO SPACE STANDARDS

In the past, standards have been a relatively static tool for use in the design of new space. The fact that job classifications change frequently lead to the decision to establish the updated standards with a procedure for regular and timely adjustments as job classifications are changed, added or deleted. This draft report identifies steps for establishing a system that can accomplish this goal.

SCOPE AND APPLICATION

Type of Space

These space standards apply only to Utah State office space and office support space and include:

- Office space area standards for state positions;
- Space standards for conference rooms and reception areas; and
- Space standards for commonly used furnishings and equipment, commonly used in support areas.

Spaces other than offices and office support spaces are more specialized by agency and must be dealt with on a project-by-project basis.

INTRODUCTION

AGENCIES AFFECTED

This volume of the Utah State Space Standards applies to all State agencies and institutions with the exception of the following:

- Office of the Governor
- Legislative Branch of State Government
- Lieutenant Governor
- Utah National Guard
- Higher Education

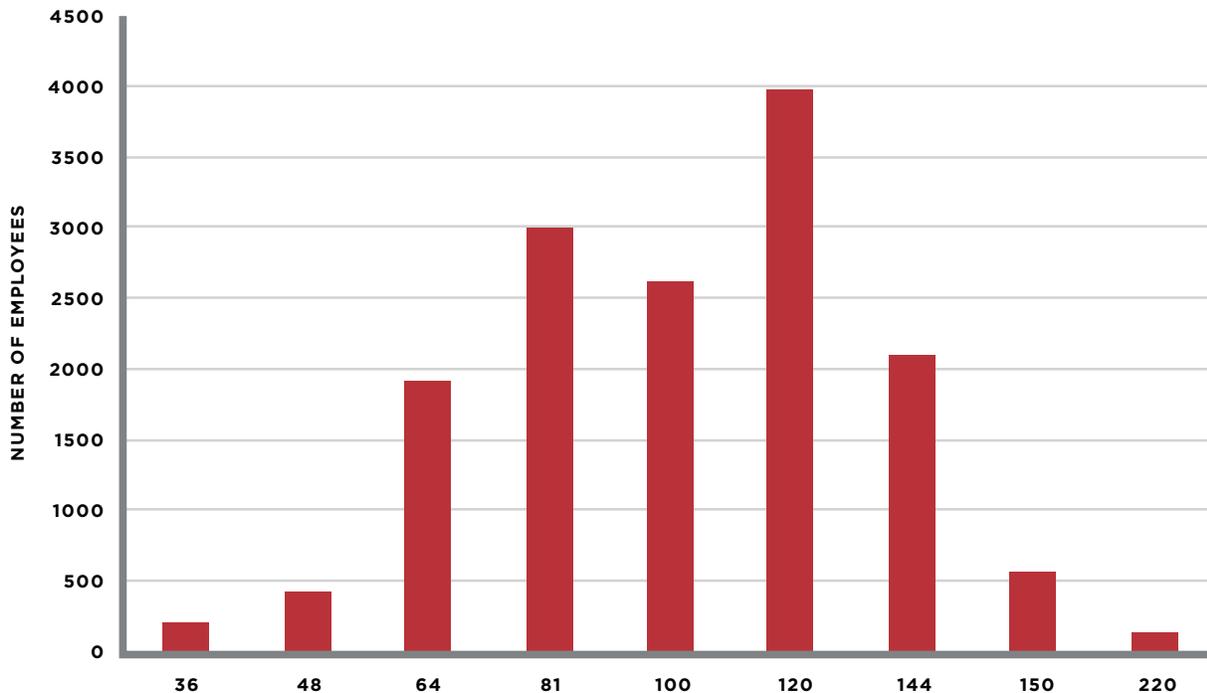
USE OF OFFICE SPACE IN UTAH STATE GOVERNMENT

As of second quarter 2012, there were 21,569 persons employed by the state in the agencies under study with 1,215 unique job classifications, of which 19,031 are addressed in this analysis

(excluding the agencies listed above). Information was received for 18,195 employees, or 89 percent. The remaining 3,091 employees are in positions that typically (for the most part) do not require offices. Applying the assigned standards to the number of employees in each position results in an estimated total office space needed of about three million GSF, or about 190 GSF per office using employee. This is lower than the industry standard of 200 GSF per employee.

Neither the Governor’s Office nor the National Guard was included in the evaluation. These two agencies represent 1,189 positions that are not represented in the database (283 in the Governor’s Office and 906 in the National Guard). The legislative branch and Higher Education were not included in the data provided for the study so numbers for these agencies are unknown.

NUMBER OF EMPLOYEES BY SPACE STANDARD (IN SF)



INTRODUCTION

DISTRIBUTION OF EMPLOYEES BY SPACE STANDARD SIZE AND BY AGENCY

Agency	Space Standard (SF)									Agency Identified as Not Needing Office	No Survey Data Provided	Total	Average Office Assignment (SF)
	36	48	64	81	100	120	144	150	220				
Administrative Services	35	3	2	85	107	65	16	20	7	105		445	99
Agriculture and Food		1	5	26	25	4	16	1	3	314	85	480	106
Alcoholic Beverage Control			25	22	15		2	4		493		561	85
Attorney General			7	81	99	2	104	118	2	1	1	415	122
Bd of Pardons and Parole				13	7							20	88
Capitol Preservation	3			1	1		1	2				8	92
Career Service Review Board		1		1						4		6	65
Commerce				126	54	30	8	4	1	271		494	95
Community and Culture			19	29	84	45	6	8	2	26		219	103
Corrections	6	7	810	302	148	593	81	67	21	22		2,057	93
Environmental Quality			4	189	111	21	50	6		47	8	436	98
Financial Institutions				2	1	1	6		3	37		50	147
Health		1	345	312	205	89	43	72	2	143		1,212	90
Human Resource Mgt.			31	8	42	23	23	3	1			131	104
Human Services	31	2	5	511	472	2,402	145	42	31	463	11	4,115	113
Insurance Commission				3	15	21	2	10	5	28		84	128
Labor Commission				13	11	2	24	9	1	65	9	134	124
Medical Education	1		4	1			1					7	74
Natural Resources	158	23	131	193	211	158	54	11	3	103	333	1,378	86
Navajo Trust			10	4	1	1					1	17	74
Public Education	6	21	86	102	91	81	4	5		50	865	1,401	87
Public Lands				7		5				3	3	18	97
Public Safety		2	352	301	328	25	100	42	14	253	1	1,418	92
Public Service Commission			3	4	1	5	3	4				20	112
SITLA			6	35	12	3	11	5		6	1	79	99
State Auditor				1	1	34	7		1		1	45	125
State Treasurer				8	7	3	2	2		1	1	24	104
Tax Commission			61	161	61	110	18	31	1	294	1	738	99
Techology Services		156	5	243	160	16	46	20	4	96		746	86
Transportation (UDOT)	1	214	54	302	318	220	79	27	1	399		1,615	92
Veteran Affairs	3			3	2	4	1	4		2		19	104
Workforce Services		1		117	234	67	1,352	45	20	121	7	1,964	134
Agency Not Identified					2	1					43	46	107
Grand Total	244	432	1,965	3,296	2,826	4,031	2,205	562	123	3,347	1,371	20,402	103

OFFICE SPACE STANDARDS POLICIES

State workspace should support and improve the productivity of the workers and programs that are housed. Professional standards and practices for space planning, programming requirements and development, furniture use, design and layout can all be used to achieve this goal.

The purpose of the standards is to provide Agencies with a quality workplace environment that supports program operations, preserves the value of real property assets, reduces State workspace to essential minimum requirements and meets all local, State and Federal codes.

SPACE STANDARDS BASED ON POSITION FUNCTIONS AND REQUIREMENTS

The development of office space standards allows for the uniform assignment of space from agency to agency so that space is equally distributed to similar position descriptions across state government. The standards are functionally based with the primary determinant being the activities and tasks performed in a particular position. Based on interviews, questionnaires, and research of other organizations, the standards are appropriate and supportive of most functions and provide space necessary to permit efficient performance of tasks. Position titles, pay classifications, seniority or rank are not as relevant to space assignment determinations as are the activities and duties performed by personnel occupying office space. The space allocations should also be adequate for the furniture and equipment needed by employees to perform assigned tasks.

While functionality is the primary focus, the approach used in this update took into account the “rank” of a position. (See Methodology section.)

PRIVATE V. OPEN OFFICES

It is State policy that employees will have open office workstations with few exceptions.

It is recognized that this policy is unworkable without the provision of an adequate amount of conference space to accommodate less frequent privacy requirements for staff supervision and discussion of confidential matters.

Private offices generally will be assigned on the basis of functional need. By far the most common functional need for privacy is frequent discussion of confidential matters in person or on the phone. Other occasional needs for privacy are as an aid to concentration or for security and for isolation of confidential documents.

A position must meet one of the following criteria in order for a private office to be permitted. Adequate conference space must be assumed (and provided) as part of these criteria.

- Position requires regular, confidential meetings with citizens or clients of a frequency and duration that cannot be accommodated in conference space.
- Position requires engagement in confidential conversations relative to agency internal matters or supervision of a number of personnel that involves dealing with sensitive



OFFICE SPACE STANDARDS POLICIES

personnel matters with a frequency and duration that cannot be accommodated in conference space.

- Position is responsible for sensitive investigations involving regular and frequent interviews or phone conversations in the work place that cannot be accommodated in conference space or separate interview rooms. Such investigations involve hearings, trials, actions against or on behalf of citizens of the State, or sensitive personnel investigation matters.

The standards indicate which positions have been assigned private offices.

EXCEPTIONS TO THE STANDARDS

It is recognized that the standards may not be applicable in every situation. Where necessary and

justified, exceptions can and will be made for special requirements or activities related to a particular position, existing furniture, existing building configuration or other physical constraints.

The space standards do not apply to existing spaces as presently configured. Existing space will not be required to be remodeled solely to satisfy the space standards. It is recognized that the use of the standards in programming space will be related to the acquisition of new space (through new construction or leases) or the reconfiguration and substantial renovation of existing space. Upon requests for new or additional space, the standards will be used to evaluate utilization of existing space.



OFFICE SPACE STANDARDS

The Utah State Office Space Standards are based on ten “typical” office sizes that represent the amount of space that should be allocated to state staff on average. These are not intended to be the final configuration of space, nor are they intended to dictate dimensions of the space. The diagrams were used in the survey administered to all state agencies during third quarter 2012 as illustrations of the relative differences of office sizes in each of the ten main categories. There are multiple configurations and options available to planners of state offices, and differences related to whether the office is an “open” workstation versus a hard-walled, enclosed room.

Diagrams providing alternative configurations within each category are included on the following pages in this section.

PROCESS

The Space Standards have four main components: general standards for individual private and open office spaces; standards for furniture and equipment within office support areas such

as copy areas; and standards for conference rooms and reception areas. Also included are a factor for internal circulation and partitions and a “gross area factor.” The internal circulation factor when multiplied by the offices and support spaces results in Net Useable Area. Multiplying the Net Useable Area by the Gross Area Factor will give a total gross building area. The Gross Area Factor should only be used in rough preliminary calculations. Space standards for open-office workstations are based on the use of systems furniture. Space standards for private offices assume that conventional furniture will be used. Systems furniture uses less space than conventional furniture. Therefore, the standards include a “conventional furniture factor” which is an upward adjustment in the size of open-office workstations if conventional furniture is used. The space standards are to be used when requesting additional space. Forms incorporating the standards into the space request process are included in Section IV. Diagrams illustrating space standards for office space, furniture and equipment, conference rooms, waiting areas are included in Section V.



OFFICE SPACE STANDARDS

GENERAL OFFICE SPACE STANDARDS

Below are space standards for various position categories in Utah State government. Written request must be made for deviation from these general assignments and from the specific assignments in the database for each State position.

Administrative Positions

A GROUP

Position usually requiring administration of several groups that report directly to it. Most

such positions report directly to the governor. Position has conference needs for six to eight people within office. Larger meetings will be held in a separate conference room. Visual and audio privacy is an important concern. Equipment and storage needs are generally modest. Examples: Commissioner, Department Executive Director, Deputy Director of large department, Division Director of large division.

Space Standard: 280 sq. ft. private office.

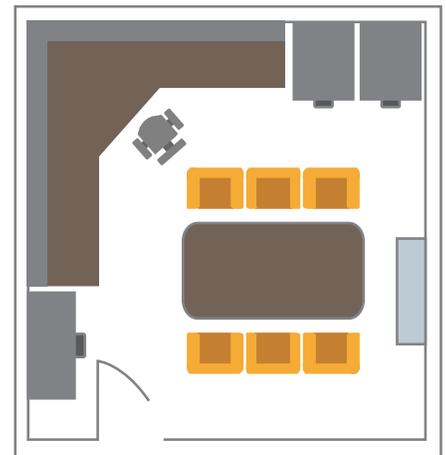
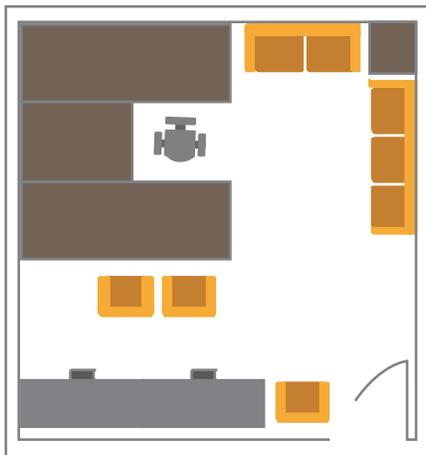
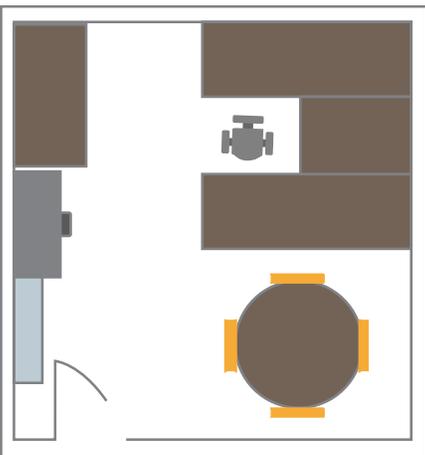
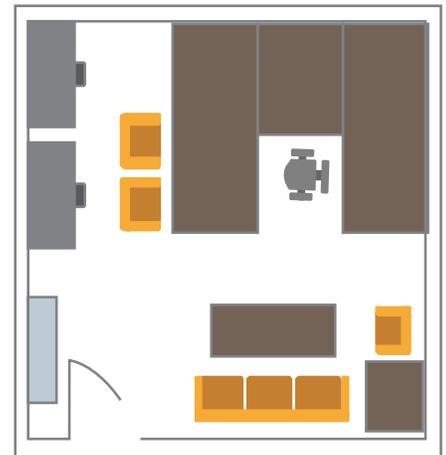
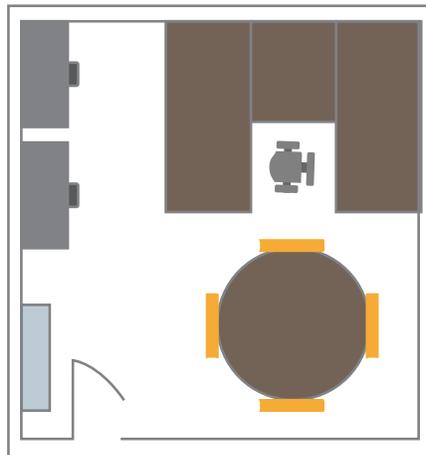
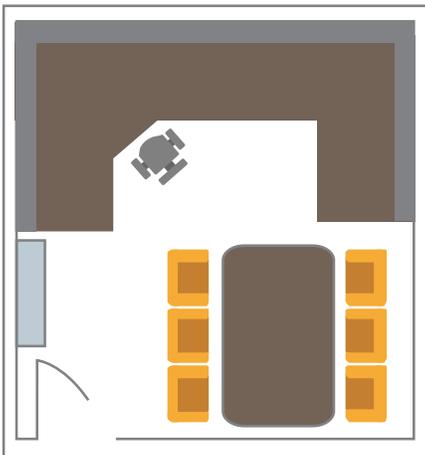
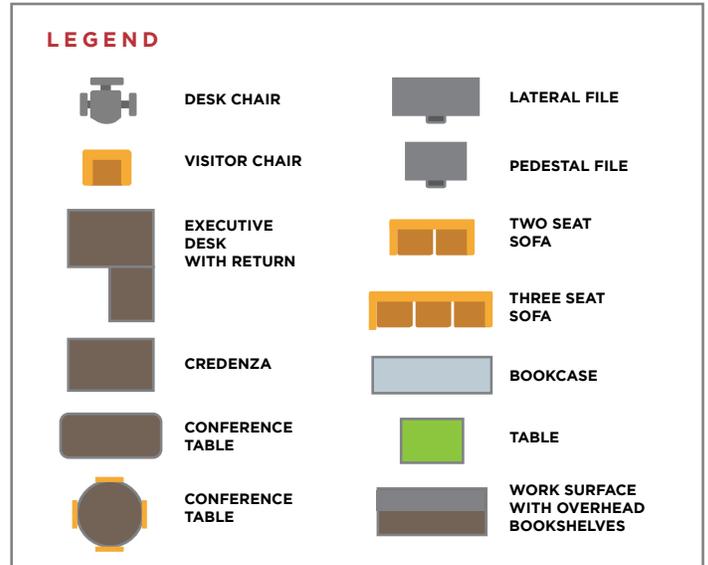


OFFICE SPACE STANDARDS

B GROUP

Position usually requiring administration of a number of subgroups and reporting directly to an "A Group" position. Position has conference needs for four to six people in office. Larger meetings will be held in a separate conference room. Visual and audio privacy is an important concern. Equipment and storage needs are generally modest. Examples: Department Deputy Director, Division Director.

Space Standard: 220 sq. ft. private office.



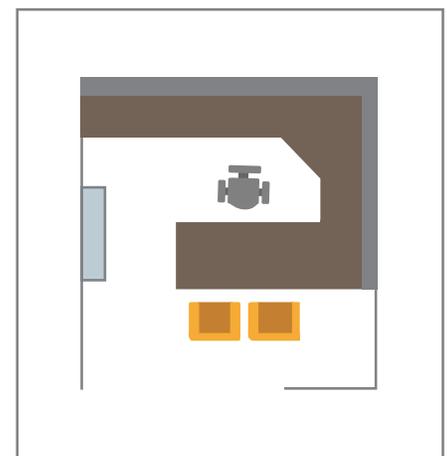
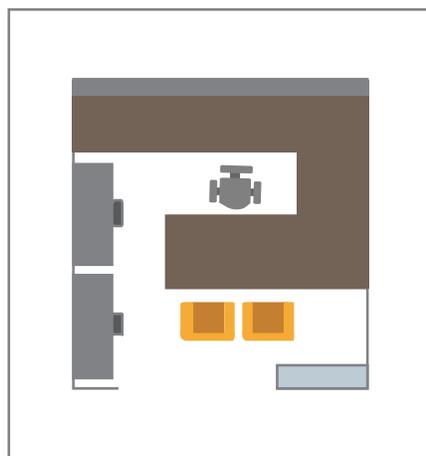
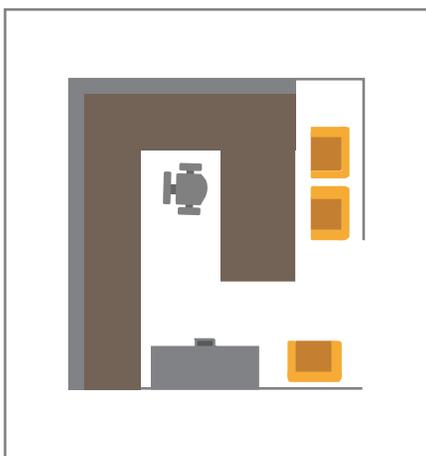
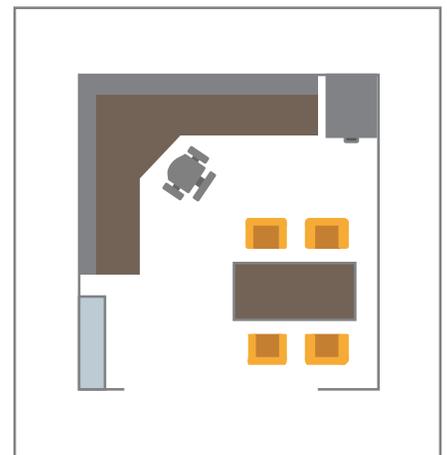
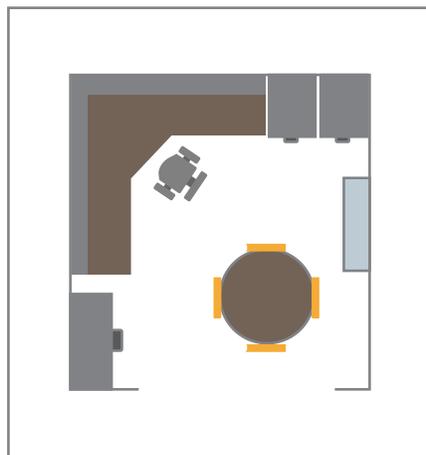
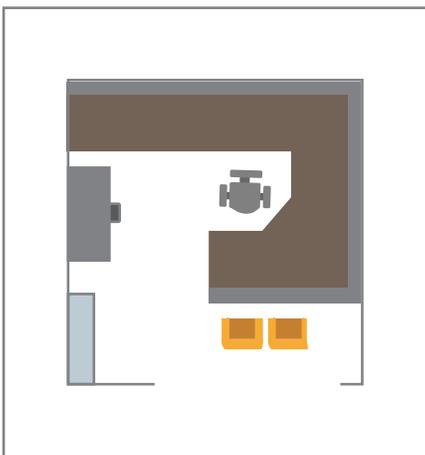
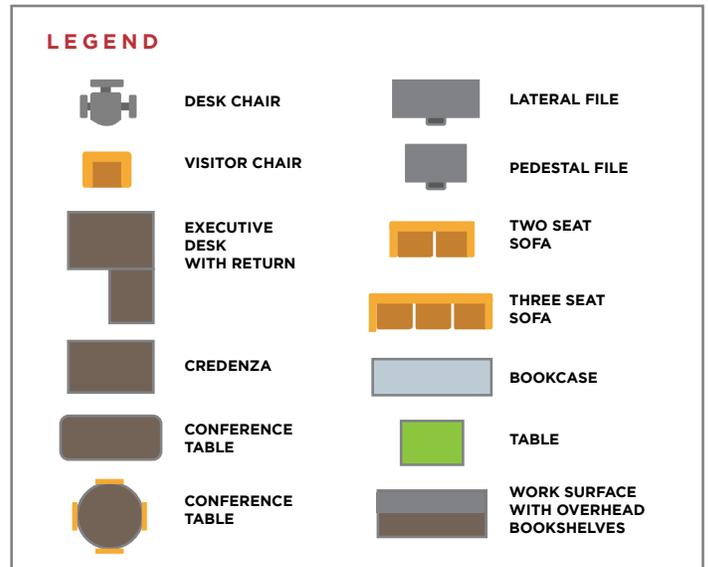
OFFICE SPACE STANDARDS

C GROUP

Position usually responsible for a specific subgroup and reporting directly to a “B Group” position. Position has conference needs for two to four people within office. Larger meetings will be held in a separate conference room. Visual and audio privacy may be an important concern. Equipment and storage needs are generally modest. Examples: Assistant Division Director, Deputy Commissioner.

Space Standard: 144 sq. ft. open-office workstation.

A private office of up to 150 sq. ft. can be considered for positions that meet the criteria for private offices.



OFFICE SPACE STANDARDS

SUPERVISORY POSITIONS

D GROUP

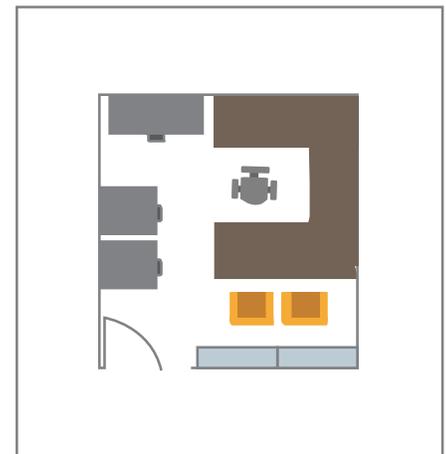
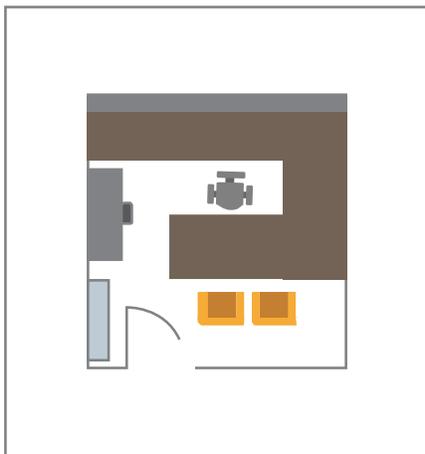
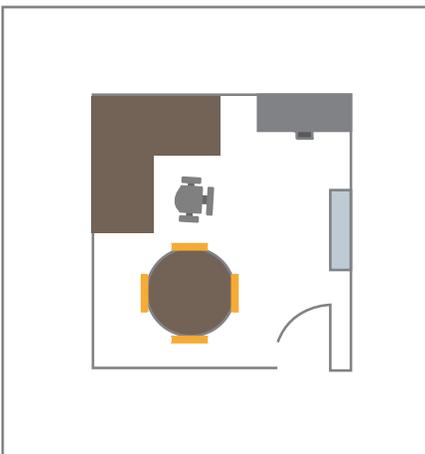
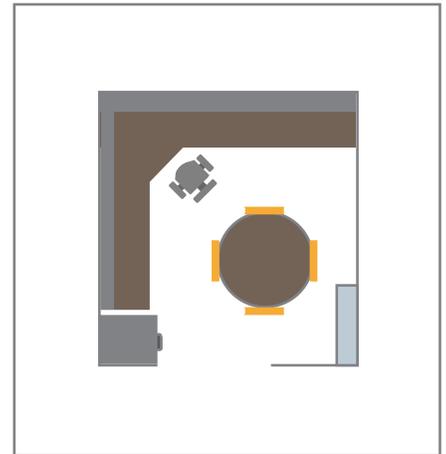
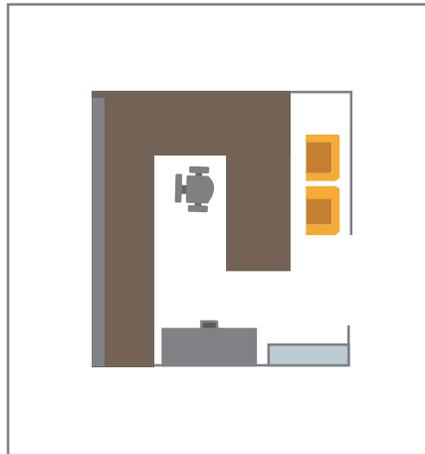
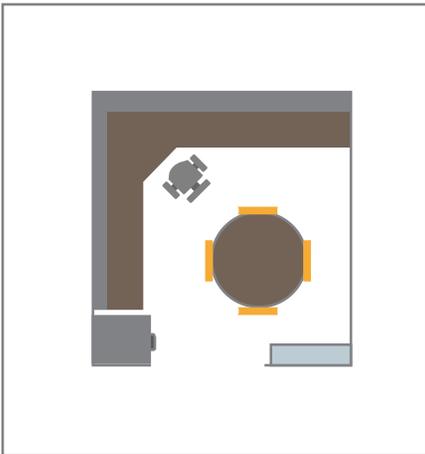
Position overseeing a large number of professional or technical personnel. Position has conference needs for two to four people within the office on a regular basis. Larger meetings will be held in separate conference room. Visual and audio privacy is not an important concern. Standard office equipment, filing, storage and work surface needs can be met. Examples: Bureau or Section Manager.

Space Standard: 120 sq. ft. open-office workstation.

An open-office work station of up to 144 sq. ft. can be considered if the position:

- involves meetings with a minimum of four people on a regular, daily basis that cannot be reasonably held in separate conference space; and
- has extraordinary equipment requirements.

A private office of up to 150 sq. ft. can be considered for positions that meet the criteria for private offices.



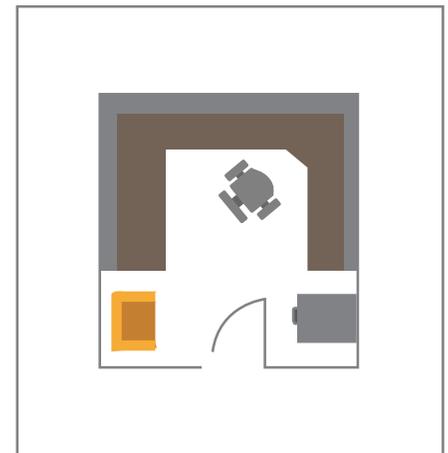
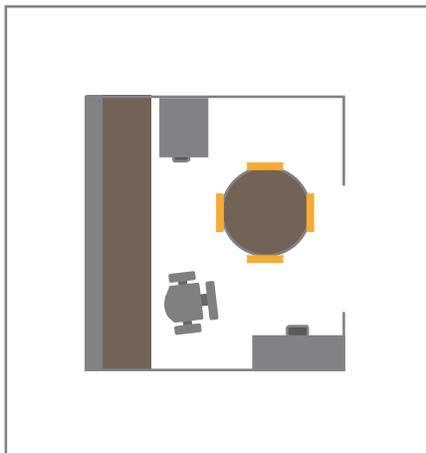
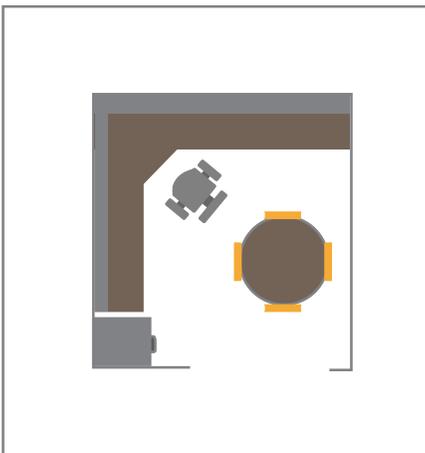
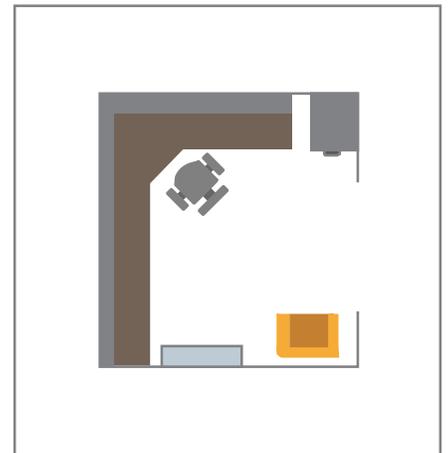
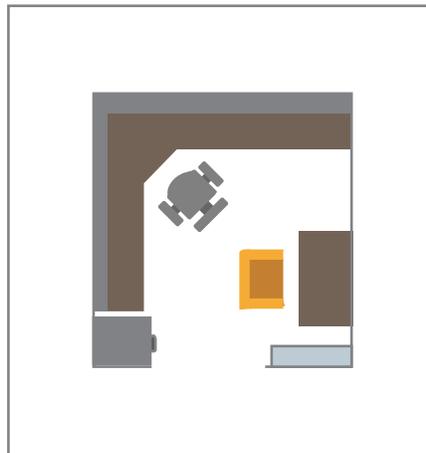
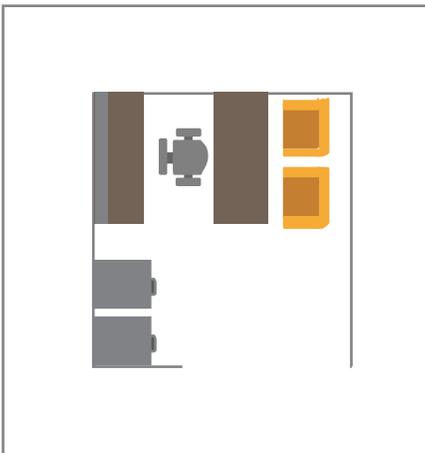
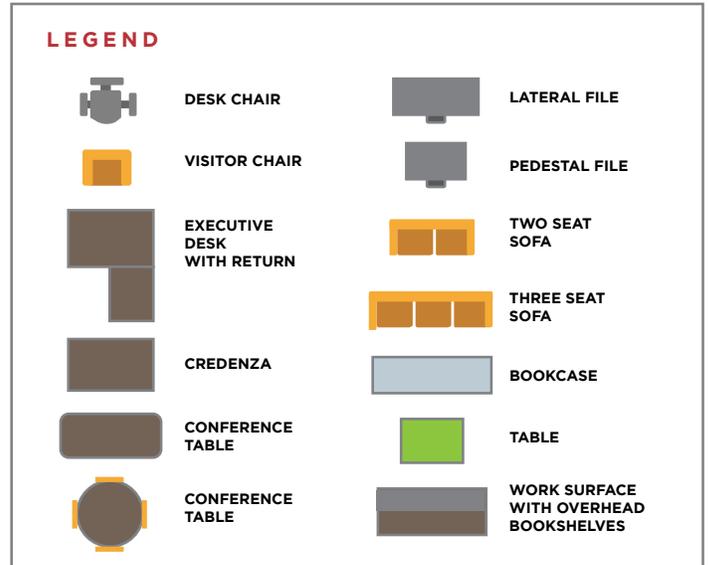
OFFICE SPACE STANDARDS

E GROUP

Position overseeing a limited number of personnel with conference needs for one or two people within office. Larger meetings will be held in separate conference room. Standard office equipment, filing, storage and work surface needs can be met. Visual and audio privacy is not an issue. Examples: Managers, Senior Professionals.

Space Standard: 100 sq. ft. open-office workstation.

A private office of up to 120 sq. ft. can be considered for positions that meet the criteria for private offices.



OFFICE SPACE STANDARDS

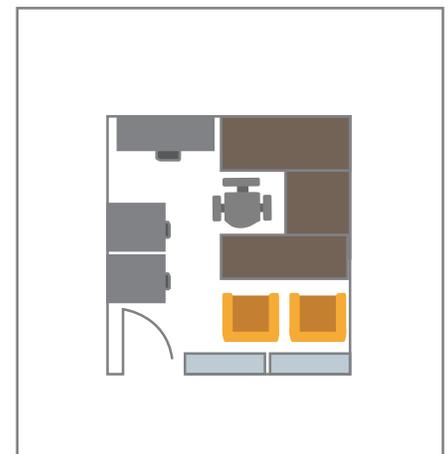
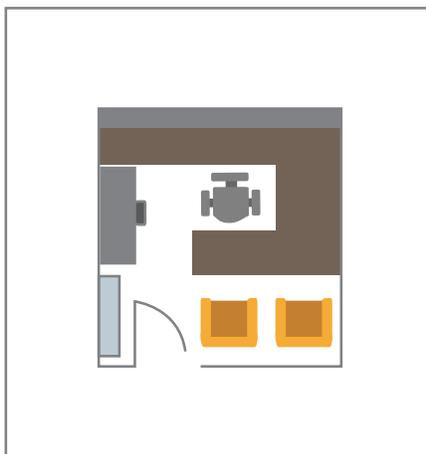
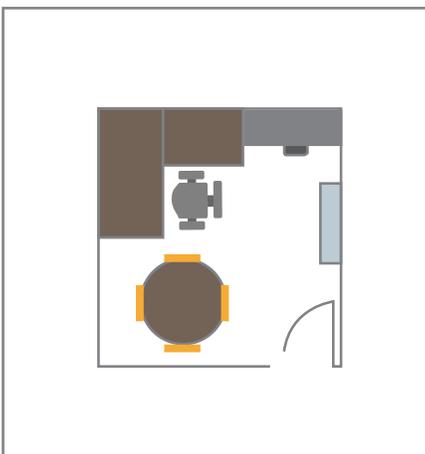
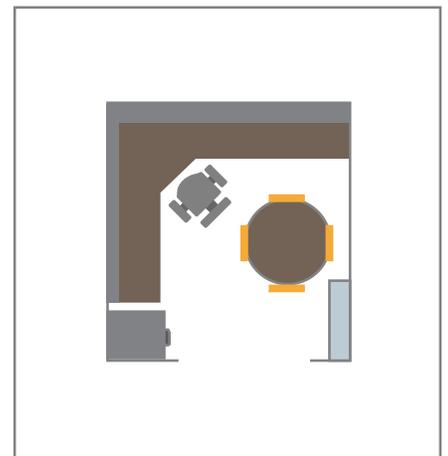
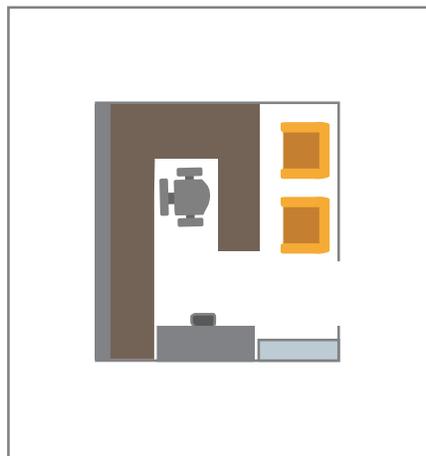
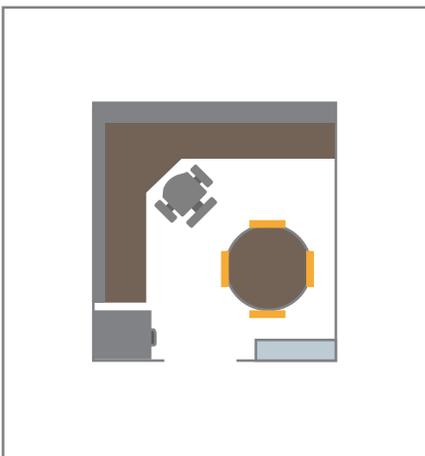
F GROUP

Full-time-professional position requiring extensive training. Conducts conferences with one to three visitors in office. May have supervision of a limited number of personnel. Larger conferences will be held in separate conference room. Visual and audio privacy is an important concern. Standard office equipment, filing, storage and work surface needs can be met. May need ample book shelving and file space. Examples: Coordinator

A private office of up to 150 sq.ft. can be considered for similar positions that:

- conduct regular hearings within their office; or
- meet regularly with four visitors and the meetings cannot be accommodated in separate conference space; or
- which meet with up to three visitors but have extraordinary needs for work surface or other furniture and equipment.

Space Standard: 120 sq. ft. private office.



OFFICE SPACE STANDARDS

G GROUP

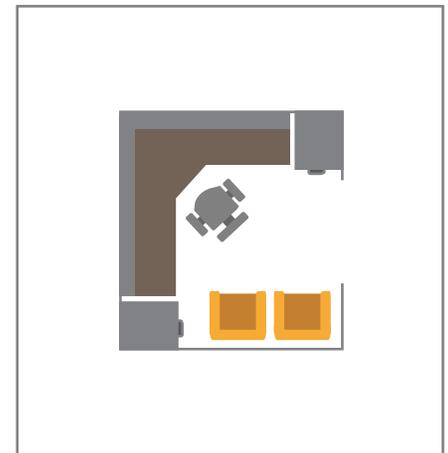
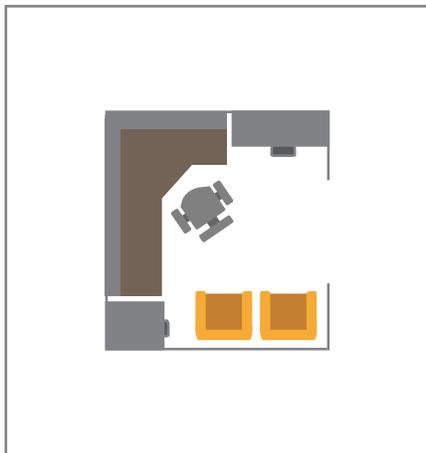
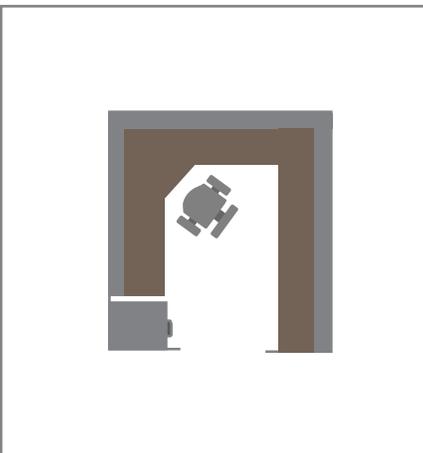
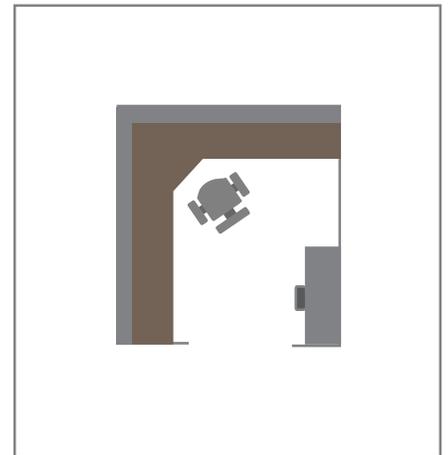
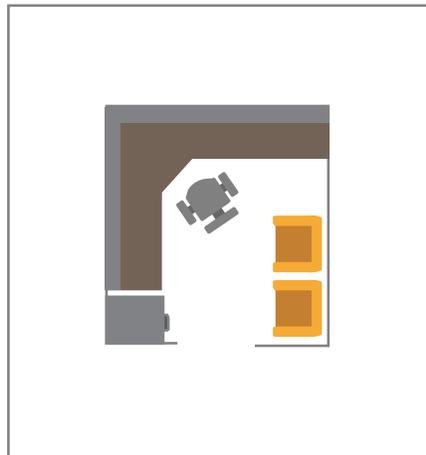
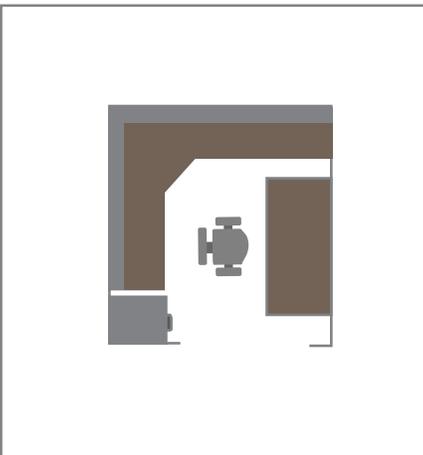
Full-time-professional/technical position requiring specialized training. Visual and audio privacy may be an important concern. Confers with one or two visitors within office. Larger meetings will be held in a separate conference room. Standard office equipment, filing, storage and work surface needs can be met. Examples: Counselor, Case Worker.

Space Standard: 81 sq. ft. open-office workstation.

Open-office work stations of up to 100 sq.ft. can be considered for positions that:

- involve regular meetings with one or two visitors; and
- have extraordinary in-office equipment, filing or storage needs,.

A private office of up to 120 sq. ft. can be considered for positions that meet the criteria for private offices.



OFFICE SPACE STANDARDS

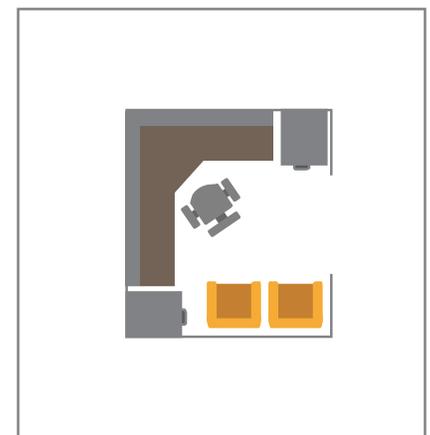
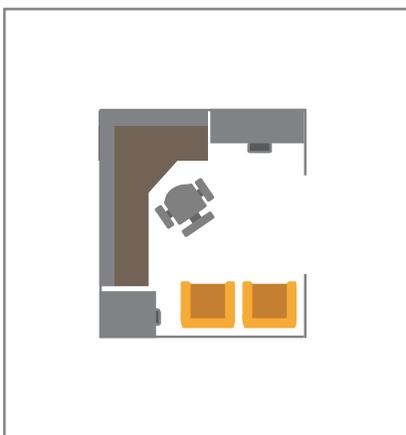
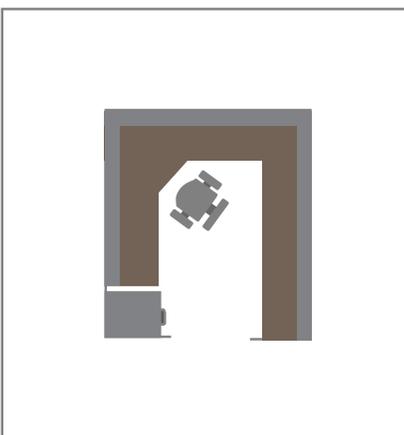
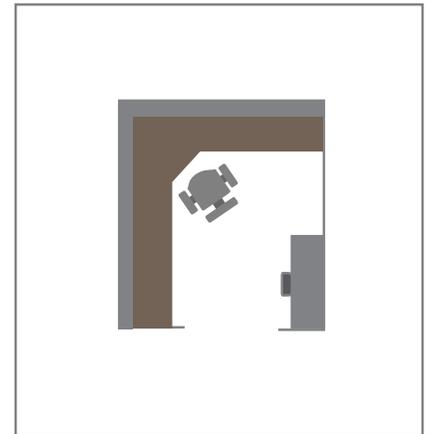
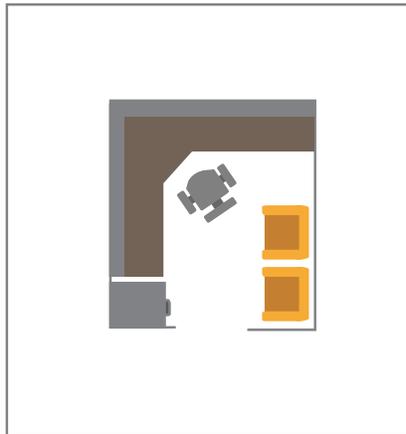
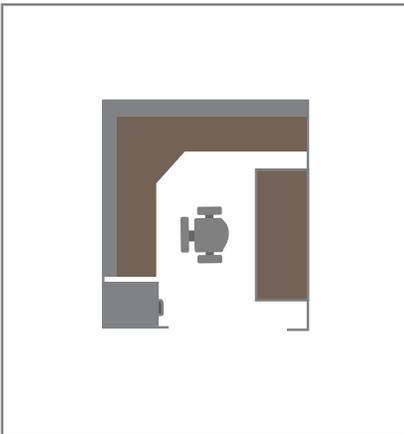
H GROUP

Full-time-professional/technical position requiring specialized training, without special visual and audio privacy needs. May have supervision of a limited number of personnel. Confers with one or two visitors within office or requires a generous amount of work surface. Standard office equipment, filing, storage and work surface needs can be met. Examples: Educational Specialist, Architect.

An open-office work station of up to 100 sq. ft. can be considered for positions that require special equipment such as a drafting table or several items of electronic equipment in addition to the work surface and visitor requirements outlined for this Group:

private offices.

Space Standard: 81 sq. ft. open-office work station.



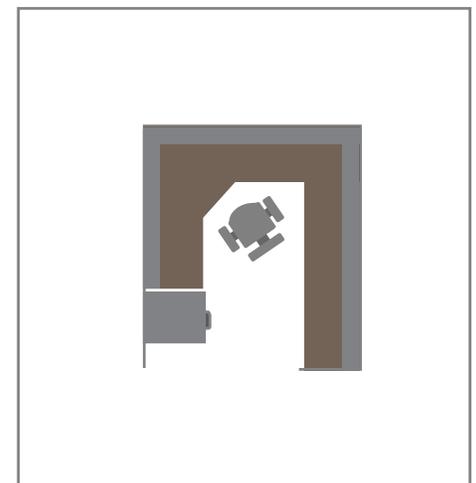
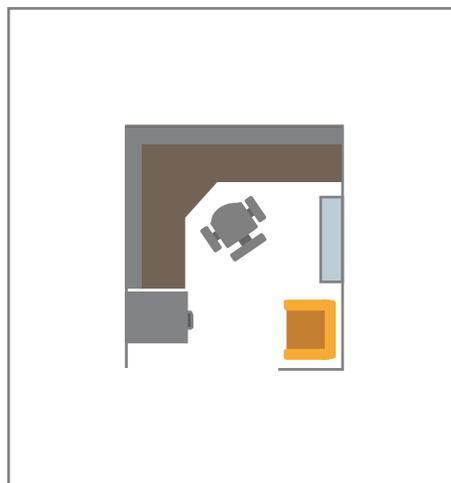
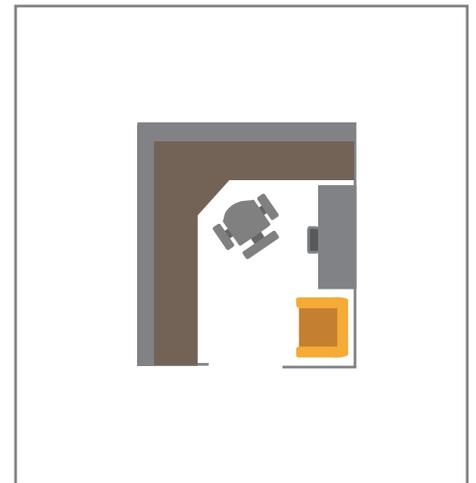
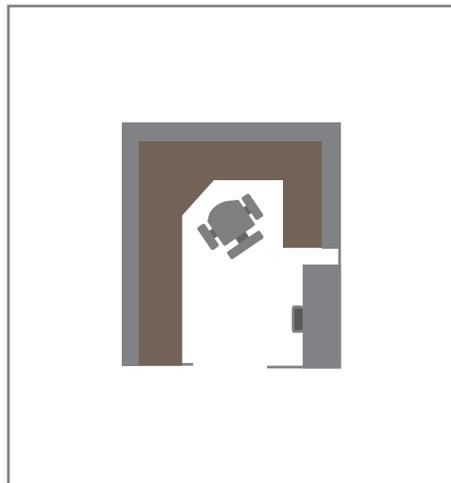
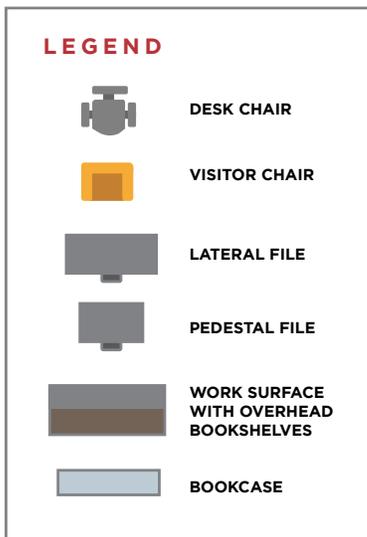
OFFICE SPACE STANDARDS

I GROUP

Full-time-professional/technical position requiring specialized training, or paraprofessional position without special visual and audio privacy needs. Meets with a single visitor or no visitors within the workstation. Standard office equipment, filing, storage and work surface needs can be met. Examples: Accountant, Analyst, Data Processing Programmer.

Space Standard: 64 sq. ft. open-office workstation.

An open-office workstation of up to 81 sq. ft. can be considered for positions with extraordinary equipment, filing, storage or work surface requirements



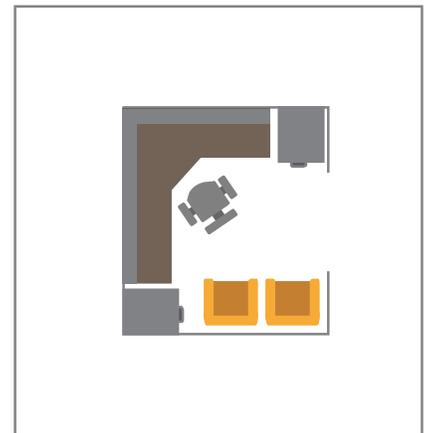
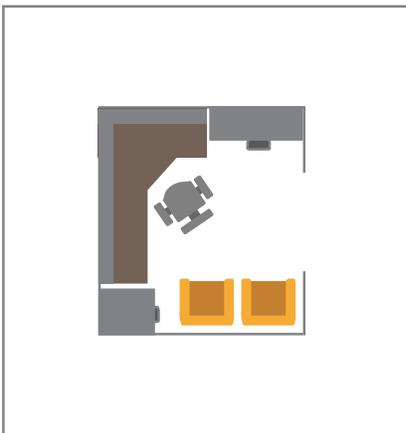
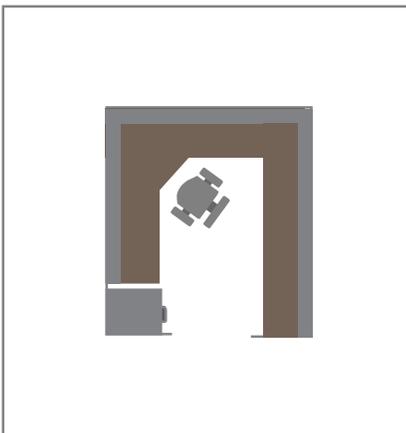
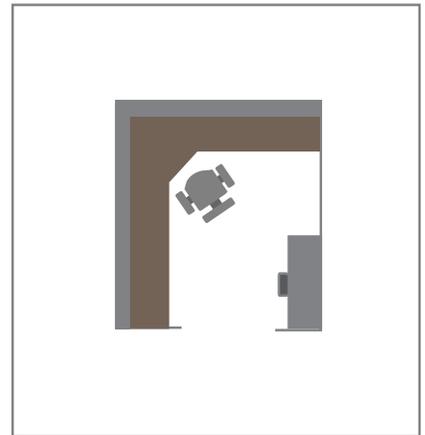
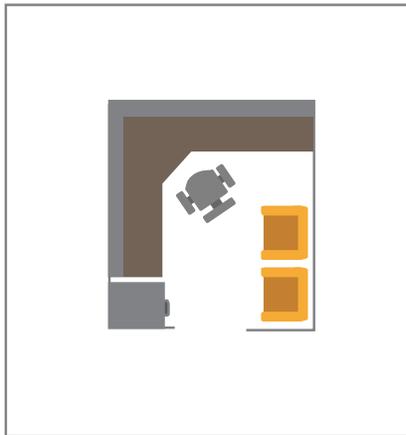
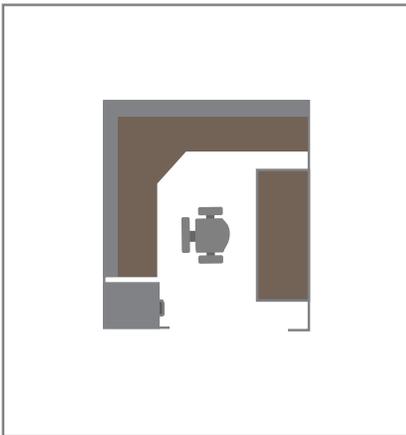
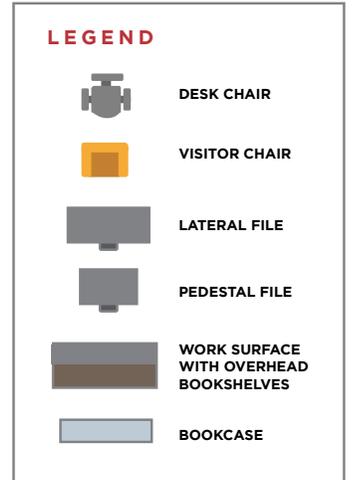
OFFICE SPACE STANDARDS

Clerical Positions

J GROUP

Full-time-senior position involving clerical responsibilities (word processing, filing, screening phone calls, data entry, etc.). May include overseeing a limited number of personnel. Does not require visual and audio privacy. Meets with a single visitor or no visitors within workstation. Standard clerical equipment, filing, storage and work surface needs can be met. May include a stand-up service counter. Example: Secretary

Space Standard: 81 sq. ft. open-office workstation.



OFFICE SPACE STANDARDS

K GROUP

Full-time-clerical position (word processing, filing, data entry, etc.). No visitor accommodation within work station. Equipment, filing, work surface and storage needs must be considered and will vary. Position involves paper-intensive tasks which require large work-surface area. Example: Clerk/Tech.

A smaller open-office workstation of no less than 49 sq. ft. can be considered for positions which:

- do not involve not paper-intensive tasks (such as data entry or filing); and/or
- adjacency to common file or work area is provided.

Space Standard: 64 sq. ft. open-office workstation.



OFFICE SPACE STANDARDS

Field, Shop/Lab/Warehouse, and Intern Positions

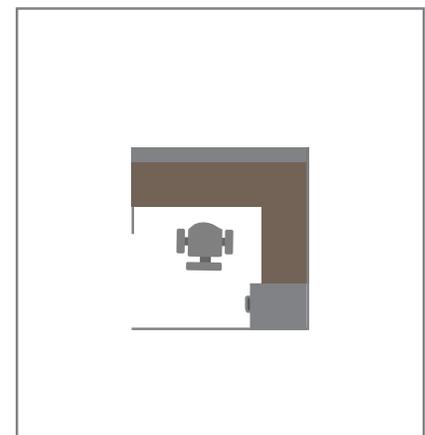
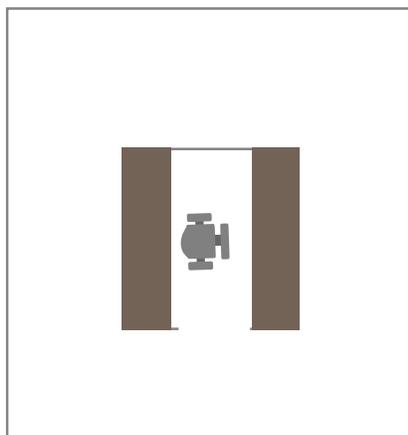
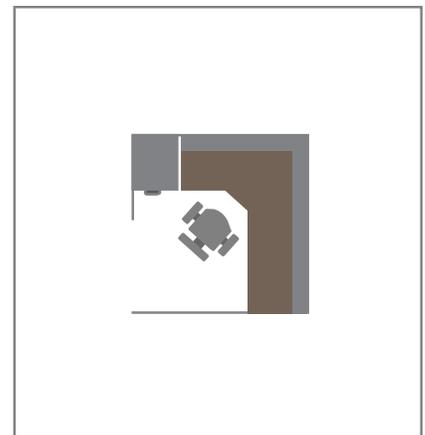
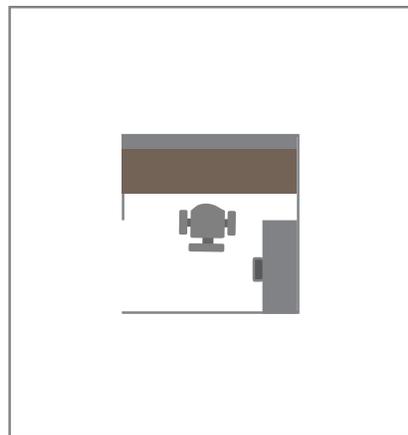
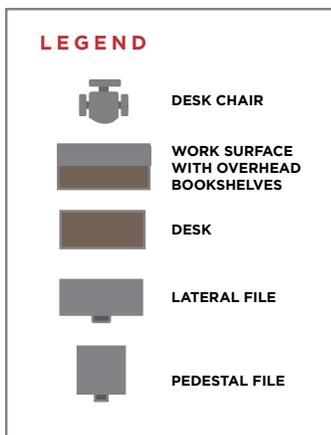
L GROUP

Full or part-time position where personnel are out of the work station more than 50 percent of the time or are present only seasonally. Visual privacy is not required. Applicable also to positions requiring a workstation in a shop, lab or warehouse, for data entry, record-keeping and communication. Standards office work surface needs can be met. Examples: Inspector, Lab Technician, Intern, Warehouse Supervisor.

Space Standard: 36 sq. ft. open-office workstation.

An open-office workstation of 49 sq. ft. can be considered for similar positions with:

- *extraordinary equipment, filing or work-surface needs.*



OFFICE SPACE STANDARDS

Space Standard (SF)		
Designation	Open Office Work Station	Private Office
A Group		280
B Group		220
C Group	144	
D Group	120	
E Group	100	
F Group		120
G Group	81	
H Group	81	
I Group	64	
J Group	81	
K Group	64	
L Group	36	

Distribution of Employees by Space Standard Group & EEOC Job Category										
	Group A 280 SF	Group B 220 SF	Group C 144-150 SF	Group D 120 SF	Group E 100 SF	Group F 120 SF	Group G, H, J 81 SF	Group I, K 48-64 SF	Group L 36 SF	NA
Clerical			0.1%	2%	16%	67%	3%		0.2%	11%
Officials & Administrators		8%	30%	2%	1%	1%		0.2%		57%
Paraprofessional			0.1%	42%	17%	10%	10%	1%		20%
Professionals		0.1%	26%	30%	19%	15%	4%	0.2%		6%
Protective Services		1%	5%	25%	7%	9%	51%	1%		1%
Service Maintenance			0.3%	0.2%	4%	6%	5%		15%	70%
Skilled Craft				3%	26%	17%		18%	23%	14%
Technician			2%	3%	16%	15%	10%	17%		38%

ESTIMATING TOTAL BUILDING AREA FROM SPACE STANDARDS

In order to estimate the size of building required to house employees using the standards, the following calculations should be used:

1. Sum the workstation sizes for all employees;
2. Add 10 percent for auxiliary spaces (conference rooms, break rooms, file storage, etc.);
3. Multiply the number obtained in Step 2 by 30 percent for building circulation; and

4. Multiply number obtained in Step 3 by an additional 30 percent to get total gross square feet of building.

NA - POSITIONS NOT REQUIRING ASSIGNED OFFICE SPACE

Positions not requiring assigned office space. Examples: Electrician, Maintenance Worker, Driver License Examiner.

OFFICE SPACE STANDARDS

FURNITURE AND EQUIPMENT

Furniture and equipment space standards are for determining areas of support spaces that differ among individual State agencies. Examples are file, copy and storage areas and common work areas. Because the needs of agencies differ, it is not possible to have a single space standard for a “file area,” a “copy area,” a “storage area,” or a “common work area.” The space standards are for individual items of furniture and equipment.

The standards can be translated into an area for a particular space by listing each type of furniture or equipment required, determining the quantity of each type, and then multiplying each quantity by the space standard for the specific item.

Do not use the furniture and equipment space standards to determine office areas; use the office space standards. Diagrams showing how furniture and equipment space standards were derived are included.



OFFICE SPACE STANDARDS

Type of Furniture or Equipment	Designation	Length (Inches)	Area Allowance (Sq. Ft.)	Type of Furniture or Equipment	Designation	Length (Inches)	Area Allowance (Sq. Ft.)
Bookcase	BC1	30	8	Work Table or Counter - 30 Inches Wide Access Two Sides	2T/C6	48	30
	BC2	36	10		2T/C7	60	38
	BC3	42	11		2T/C8	72	45
	BC4	48	13		2T/C9	84	53
	BC5	60	16		2T/C10	96	60
Storage Cabinet 18 Inches Deep	SC1	24	10	Work Table or Counter - 36 Inches Wide Access Two Sides	2T/C11	48	32
	SC2	30	13		2T/C12	60	40
	SC3	36	15		2T/C13	72	48
	SC4	42	18		2T/C14	84	56
	SC5	48	20		2T/C15	96	64
Storage Cabinet 24 Inches Deep	SC6	24	11	Work Table or Counter - 24 Inches Wide Access Four Sides	4T/C1	30	53
	SC7	30	14		4T/C2	36	56
	SC8	36	17		4T/C3	48	63
	SC9	42	19		4T/C4	60	70
	SCTO	48	22		4T/C5	72	77
Copier - Small	CS		30		4T/C6	84	84
Copier - Medium	CM		40		4T/C7	96	91
Copier - Large	CL		60	Work Table or Counter - 30 Inches Wide Access Four Sides	4T/C8	48	68
Coat Rack	CR1	36	9		4T/C9	60	75
	CR2	48	12		4T/C10	72	83
	CR3	60	15		4T/C11	84	90
Flat File 36 Inches Deep	FF1	48	32	4T/C12	96	98	
Flat Files 48 Inches Deep	FF2	60	50	Work Table or Counter - 36 Inches Wide Access Four Sides	4T/C13	48	72
Fax Machine	FX1		14		4T/C14	60	80
Laser Printer	LP1		9		4T/C15	72	88
Work Table or Counter - 24 Inches Wide Access One Side	IT/C1	30	11		4T/C16	84	96
	IT/C2	36	14		4T/C17	96	104
	IT/C3	48	18	Lateral File	LF1	30	13
	IT/C4	60	23		LF2	36	15
	IT/C5	72	27		LF3	42	18
Work Table or Counter - 30 Inches Wide Access One Side	IT/C6	48	20		LF4	48	20
	IT/C7	60	25	Vertical File Letter Size	VF1	15	7
	IT/C8	72	30	Vertical File Legal Size	VFG1	18	9
	IT/C9	84	35	1 Shelving 18 Inches Deep	S1	36	11
	IT/C10	96	40		S2	42	12
Work Table or Counter - 36 Inches Wide Access One Side	IT/C11	48	22		S3	48	14
	IT/C12	60	28	Shelving 24 Inches Deep	S4	36	12
	IT/C13	72	33		S5	42	14
	IT/C14	84	39		S6	48	16
	IT/C15	96	44	Printer Stands 24 Inches Deep	PS1	30	13
Work Table or Counter - 24 Inches Wide Access Two Sides	2T/C1	30	18		PS2	36	15
	2T/C2	36	21		PS3	48	20
	2T/C3	48	28	Printer Stands 30 Inches Deep	PS4	30	14
	2T/C4	60	35		PS5	36	17
	2T/C5	72	42		PS6	48	22

OFFICE SPACE STANDARDS

CONFERENCE ROOM SPACE STANDARDS

Conference rooms are enclosed spaces in an office environment where meetings at a table may be held in privacy. When open office workstations are the predominant type of office in an agency, it is critical to the success of the arrangement that there are enough conference rooms of appropriate sizes to meet the needs for private meetings. Adequacy of number and size of conference rooms is critical to the success of an open office plan.

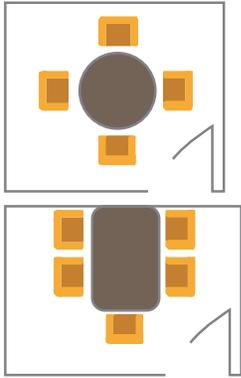
Sometimes for small meetings of a non-confidential nature, conference areas do not

need walls from floor to ceiling but can have low partitions. Space standards for open conference areas are the same as for conference rooms. The space standards below are for conference rooms for up to 20 people. Conference rooms for more than 20 people are considered specialized space and should be dealt with on a case-by-case basis.

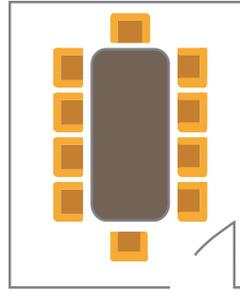
It may be noted that the area per person in a conference room for 20 people is greater than the area per person for some smaller groups of people. This occurs because a “square donut” configuration appropriate for larger groups requires increased area per person.

Designation	Number of People	Space Standard (Sq. Ft.)
CR4	4	120
CR6	6	150
CR8	8	200
CR10	10	230
CR12	12	260
CR16	16	340
CR20	20	450

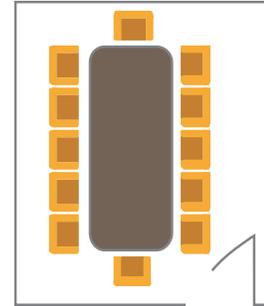
OFFICE SPACE STANDARDS



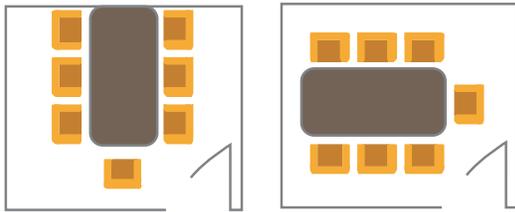
CR4 - 120 SF



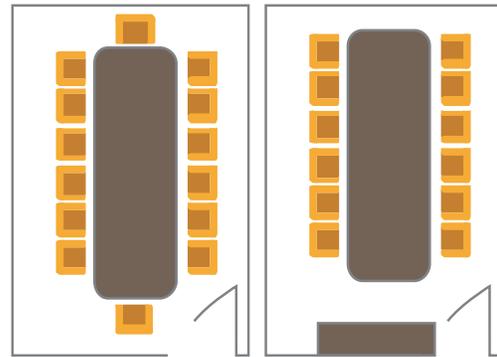
CR8 - 200 SF



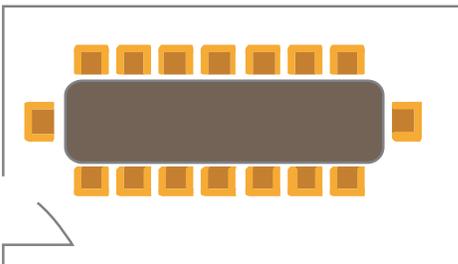
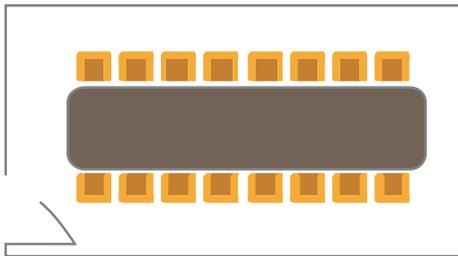
CR10 - 230 SF



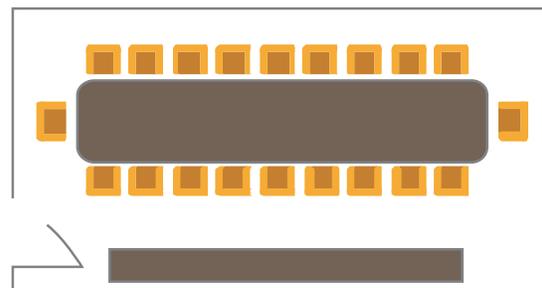
CR6 - 150 SF



CR12 - 260 SF



CR16 - 340 SF



CR20 - 450 SF

METHODOLOGY

The space standards were developed by surveying each agency regarding the nature of the job functions for each position held within the agency. The questions asked are included as Appendix A. The results of the survey were evaluated using advanced statistical methods to standardize the office space assignments across each State agency. This approach provides consistency, ground rules on size standards, and allows for easy development of standards for positions that have yet to be created.

The responses to quantitative questions on the survey were used in regression analysis to determine the exact size office necessary. This was followed by an algorithm process that assigned an office space designation to each position.

SAMPLE SIZE

All state agencies were surveyed and information was obtained for a sufficient number of positions to allow estimation for positions that were not addressed in a survey response. To ensure that the sample accurately represents the population we must accept that there is a chance that it is not an accurate representation. The minimum statistically acceptable practice is a confidence level of 95 percent with a margin of error of 5 percent. What this means is that when you survey a sample of the population, you don't know that you have found the correct answer, but that there is a 95 percent chance that you are within 5 percent of the correct answer. An example of this would be if 50 percent of 20,000 people are male and 377 people were surveyed (the minimum required sample for a population this size), the researcher would expect that 95 percent of the time this survey was performed, she would find that between 45 and 55 percent of the people are male.

Of the 1,205 positions that existed in the agencies included in these standards at the time

of the survey, the required sample size for 95 percent confidence and 5 percent margin is 292. Responses were provided for 760 positions.

The fact that numerous positions exist in multiple agencies increases the accuracy of the estimates. The amount of responses received (760), provides confidence of 99 percent and a margin of error of +/- 2.84 percent.

ECONOMETRIC ESTIMATION

The estimation of office space is completed using the data received from the surveys and cross-sectional Ordinary Least Squares (OLS). This process of estimation provides for precise coefficients to be attached to each quantifiable variable. In addition, estimation through OLS is auditable and able to be replicated. This process estimates a dependent variable, which in this case is the office size for each position; a dependent variable is one that "depends" on other variables. The variables that are important for the determining the applicable size standards are "independent" variables. This regression equation is given by:

$$y_i = \beta_0 + \beta_1 x_i + \varepsilon_i, \quad i = 1, \dots, n.$$

Where modeling data points, there is one independent variable: x_i , and two parameters, β_0 and β_1 . This model can be extended to include as many variables as are considered necessary to estimate the dependent variable. The parameters (coefficients) are estimated according to the regression principles of OLS with an attached statistical significance. If a variable is not determined to be statistically significant, that variable is not an important indicator of office size, and as such, was not used in the calculation of office size.

The results from the survey are in such a form that separating the responses and using them as variables was required. A dummy variable is one that takes the value of one or zero, otherwise

METHODOLOGY

know as true/false. A value of one is given when the observation is 'true' and zero when 'false.' While each of these variables plays a role in determining the space required, they are all conditional upon the other variables. What this means is that 'all else equal' a position will receive more or less square footage as assigned by the coefficients generated.

Office standards were estimated using two separate equations: one with the dependent variable being the office size from the 1994 study. This results in a much smaller sample size since there have been many jobs that have changed since that time, but does include enough data points for a solid estimation. We estimate this equation first because of the already established office standards produced, that have held up well over the years, provide for the estimation of each new position.

The computed standard was compared with the size of office the agencies determined to be the

best size necessary for that position. Wherever possible, we rely on the space standard selected by the agencies because it can rightfully be assumed that agencies know the detailed functioning of the position. However, there exists the presumption that the agencies would assign office sizes that are larger than are necessary. Due to the sampling, survey and estimation procedures we have been able to determine if, on average, there is any bias for the agencies to overestimate. In the cases where such a bias was determined to exist, the calculated standard was applied.

Other Research

Studies of trends in office space usage and other state's studies indicate that the standards recommended in this analysis are within the scale of other state's standards and consistent with industry standards. The following table provides the variables used in the analysis and the coefficients used in estimating the appropriate office standards.

METHODOLOGY

Variable Name	Coefficient	Description
Sq. Ft. Office	Dependent Variable	This size office identified by the survey taker as to the sized office required.
Cd. Sal. Index	119.5896	Variable used to identify additional office space based on prestige. Calculated as an index between zero and one where the average of a positions pay grade is divided by the highest paying state job. Therefore, the highest paid job will equal one and someone without a salary will be equal to zero.
Job. Class. Manage	30.984	If identified as being a part of management, this is the additional square footage required ceteris paribus over "clerical" or "technical" positions.
Job. Class. Pro	8.5711	If identified as being a part of "professional" classification, this is the additional square footage required ceteris paribus over "clerical" or "technical" positions.
1-2. visitors. less 1	19.8063	Dummy variable equal to one if the worker has 1-2 visitors in their office between zero and one hour per day; zero if not true
1-2. visitors. 1-2	26.698	Dummy variable equal to one if the worker has 1-2 visitors in their office 1-2 hours per day; zero otherwise.
1-2. visitors. 3 plus	31.4532	Dummy variable equal to one if the worker has 1-2 visitors in their office for three or more hours per day; zero if not true
3. visitors. less 1	-6.4608	Dummy variable equal to one if the worker has 3 or more visitors in their office from zero to one hour per day; zero otherwise.
3. visitors. 1-2	9.4393	Dummy variable equal to one if the worker has 3 or more visitors in their office one to two hours per day; zero otherwise.
3. visitors. 3 plus	insignificant	This dummy variable was not statistically significant at any level.
subord. 1-5	7.366	Dummy variable equal to one if the worker has 1-5 subordinates; zero if otherwise.
subord. 6-20	12.6765	Dummy variable equal to one if the worker has 6-20 subordinates; zero if otherwise.
subord. 21 plus	46.2391	Dummy variable equal to one if the worker has more than 21 subordinates; zero otherwise
special. eq	20.4479	Dummy variable equal to one if the worker has special equipment that necessitates additional space

ADDITIONAL USES OF STANDARDS

This update of the office space standards incorporated employee and employee-location data from the Human Resources Division (“HR”) and building data from the Division of Risk Management “RM”). These are two databases that, if linked to the dataset containing the office standards produced as part of this analysis, could form a powerful tool for the State of Utah in managing and planning for office space as well as establishing standards as new positions are created. These three potential applications of this tool are outlined below.

BUILDING MANAGEMENT

Conceptual Model

Because the HR database reflects all state employees at any one time and includes information regarding the employees physical location, combining this information with the space standards would allow the State to, on an on-going basis:

1. Track building utilization by applying current employee counts multiplied by the office standards for each position, compared against the available space in the building or buildings occupied by the agency or agencies (in the case of multi-agency buildings);
2. Update job classifications to reflect newly created positions, promotions or downsizing and have a real-time estimate of impact on building usage;
3. Anticipate new/additional space requests as the data indicate evidence of crowding as well as identification of excess capacity if there is downsizing; and
4. Modify standards as needed as job functions change.

Items to Address

It has been determined that a linked database through a user interface could easily accomplish these functions. The experience gained in

this update suggests that the items needed to implement this program include:

1. Programming of data interface;
2. Establishment of consistent naming and numbering for buildings in the HR and RM dataset.
3. Confirmation of the data and potential consolidation of some building data (such as the Calvin Rampton Complex);
4. Establishment of a protocol for including the questionnaire used in this study as part of the initial-hire paperwork for state employees— particularly in the case of newly-created positions; and
5. Establishment of standards for the agencies excluded from this update.

NEW SPACE PLANNING AND PROGRAMMING

Conceptual Model

The same dataset could also provide a model for agency/DFCM use to plan for future building needs by including an additional dataset — information regarding recent building costs incurred by the state — to:

1. Establish initial programming data through a combination of the standards and current employment;
2. Establish the amount of space needed for growth through access to historical records in the HR dataset;
3. Create the initial construction budget by applying recent construction cost data to the programmed space;
4. Establish an auditable record of adherence to or deviations from the standards; and
5. Establish benchmarks for current and future space use.

Items to Address

In addition to the data link and interface described above, this application would require

ADDITIONAL USES OF STANDARDS

additional programming of the interface to:

1. Access the database of construction costs maintained by DFCM;
2. Access historic employment data included in the HR dataset;
3. Provide an interface for access from agencies and outside architects.

Standards for Future Positions Not Yet Created

A major benefit of the estimation of office standards as laid out herein is that this standard can be applied to positions that have yet to be created or did not respond to the survey. The base analysis should continue to be applicable as long as there are no major changes in the manner in which office space is used. An office standard can be determined through answering the questions used in this update for any newly created position and applying the coefficients developed (see the coefficient table under “Methodology”).

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
92270	DEVELOPMENTAL INSTRUCTION AIDE III	I	64	O
92292	DEVELOPMENTALIST COORDINATOR	F	120	P
17013	DFCM ASSISTANT BUILDING CODE OFFICIAL		n/a	
17026	DFCM PROGRAM DIRECTOR, CONSTRUCTION MGMT	C	150	O
17024	DFCM PROGRAM DIRECTOR, FACILITIES MANAGEMENT, DAS	C	150	P
43052	DFCM QUALITY MANAGER	G	120	O
15300	DHRM FIELD TRAINING MANAGER	E	100	O
91096	DHS ADMINISTRATOR III	B	220	P
91097	DHS ASSISTANT DIVISION DIRECTOR I	C	150	P
91098	DHS ASSISTANT DIVISION DIRECTOR II	C	150	P
91048	DHS REGIONAL RELATIONS REPRESENTATIVE	E	120	P
75006	DIET TECHNICIAN	G	100	O
32401	DIETICIAN I	I	81	O
32403	DIETICIAN II	I	81	O
29064	DIR, AGRICULTURE MARKETING	C	144	O
32033	DIR, DIV OF COMMUNITY & FAMILY HEALTH SVCS (CFHS)	B	220	P
91011	DIR, DIV OF SUBSTANCE ABUSE AND MENTAL HEALTH	B	220	P
91081	DIR, DIV OF SVCS TO PEOPLE/DISABILITIES	B	220	P
86116	DIR, DIVISION OF ADULT PROBATION & PAROLE - DOC	C	220	P
32544	DIR, DIVISION OF DISEASE CONTROL AND PREVENTION	C	150	P
86114	DIR, DIVISION OF INSTITUTIONAL OPERATIONS, DOC	C	150	P
14487	DIR, RIGHT OF WAY AND PROP DEVELOPMENT - UDOT	C	120	P
10284	DIR, TRAVEL DEVELOPMENT	C	144	O
10179	DIR, USDB DIV/DUAL SENSORY IMPAIRME	C	144	O
10299	DIR, UTAH SUBSTANCE ABUSE & ANTI-VIOLENCE COUNCIL	B	220	P
91099	DIR, UTAH SUBSTANCE ABUSE & ANTI-VIOLENCE COUNCIL	B	220	P
10842	DIRECTOR ADMINISTRATIVE SVCS	B	220	P
10728	DIRECTOR INTERNAL AUDIT	D	150	P
10261	DIRECTOR LEGISLATIVE & GOVERNMENT AFFAIRS	C	144	P
29221	DIRECTOR LEGISLATIVE & GOVERNMENT AFFAIRS	D	150	P
09010	DIRECTOR OF COMMUNICATIONS & POLICY, ATT GEN	C	144	O
10160	DIRECTOR OF COMMUNICATIONS, GOVERNOR'S OFFICE	B	220	P
10141	DIRECTOR OF ELECTIONS	B	220	P
10718	DIRECTOR OF FINANCE	B	220	P
10954	DIRECTOR OF HEALTH PROFESSIONS RESOURCES	D	150	P
10818	DIRECTOR OF HUMAN RESOURCES	A	280	P
10112	DIRECTOR OF POLICY	D	150	P
43072	DIRECTOR OF PROGRAM DEVELOPMENT, UDOT	D	150	P
43074	DIRECTOR OF PROJECT DEVELOPMENT, UDOT	C	144	O
10111	DIRECTOR OF THE OFFICE OF THE FIRST LADY	B	220	P
01006	DIRECTOR OPERATIONAL EXCELLENCE, APPOINTED	B	220	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
16104	DIRECTOR QUALITY AND PROCESS IMPROVEMENT	D	150	P
14328	DIRECTOR, ADMINISTRATIVE SUPPORT SERVICES	B	220	P
14350	DIRECTOR, AGENCY ADMINISTRATIVE SERVICES	B	220	P
32835	DIRECTOR, AGRICULTURE HOMELAND SECURITY	E	100	P
10081	DIRECTOR, ALCOHOLIC BEVERAGE CONTROL COMMISSION	A	280	P
82110	DIRECTOR, ANTIDISCRIMINATION AND LABOR DIVISION	B	220	P
10110	DIRECTOR, BOARDS AND COMMISSIONS	B	220	P
14438	DIRECTOR, BUREAU OF AUDIT	C	150	P
14318	DIRECTOR, BUREAU OF CONTRACTS MANAGEMENT, DHS	C	150	P
10593	DIRECTOR, COURT SERVICES	C	155	P
10256	DIRECTOR, CRIME VICTIM REPARATION	B	220	P
17022	DIRECTOR, DFCM	B	150	P
91004	DIRECTOR, DHS OFFICE OF PUBLIC GUARDIAN	C	150	P
91093	DIRECTOR, DHS SERVICES REVIEW	C	150	P
85017	DIRECTOR, DIVISION OF ADMINISTRATIVE RULES, DAS	B	220	P
83726	DIRECTOR, DIVISION OF AERONAUTICS, UDOT	B	220	P
91012	DIRECTOR, DIVISION OF AGING & ADULT SERVICES	B	220	P
37285	DIRECTOR, DIVISION OF AIR QUALITY	B	220	P
37310	DIRECTOR, DIVISION OF ANIMAL INDUSTRY	C	144	P
28214	DIRECTOR, DIVISION OF ARCHIVES/RECORDS	B	220	P
91078	DIRECTOR, DIVISION OF CHILD AND FAMILY SERVICES	B	220	P
37287	DIRECTOR, DIVISION OF DRINKING WATER	B	220	P
14331	DIRECTOR, DIVISION OF FINANCE	B	220	P
53039	DIRECTOR, DIVISION OF FLEET SERVICES	B	220	P
32546	DIRECTOR, DIVISION OF HEALTH CARE FINANCING	B	220	P
15288	DIRECTOR, DIVISION OF HUMAN RESOURCE MGMT	B	220	P
83148	DIRECTOR, DIVISION OF INVESTIGATIONS	B	220	P
91007	DIRECTOR, DIVISION OF JJS	B	220	P
85009	DIRECTOR, DIVISION OF LEGAL SERVICES- DWS	B	220	P
37296	DIRECTOR, DIVISION OF OIL, GAS AND MINING	B	220	P
83164	DIRECTOR, DIVISION OF PARKS AND RECREATION	B	220	P
37306	DIRECTOR, DIVISION OF PLANT INDUSTRY	C	144	P
19390	DIRECTOR, DIVISION OF PURCHASING	B	220	P
37295	DIRECTOR, DIVISION OF RADIATION CONTROL	B	220	P
37308	DIRECTOR, DIVISION OF REGULATORY SERVICES	C	144	P
20412	DIRECTOR, DIVISION OF RISK MANAGEMENT	B	220	P
37027	DIRECTOR, DIVISION OF SAFETY	B	220	P
37294	DIRECTOR, DIVISION OF SOLID/HAZARDOUS WASTE	B	220	P
86112	DIRECTOR, DIVISION OF UCI	B	220	P
37293	DIRECTOR, DIVISION OF WATER QUALITY	B	220	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
43080	DIRECTOR, DIVISION OF WATER RESOURCES	B	220	P
63442	DIRECTOR, DIVISION OF WILDLIFE RESOURCES	B	220	P
36004	DIRECTOR, EDUCATIONAL PROGRAMS-USDB	D	120	P
16080	DIRECTOR, ETHNIC GROUP AFFAIRS	C	150	P
14472	DIRECTOR, FISCAL AUDIT- UDOT	C	144	O
14316	DIRECTOR, FISCAL OPERATIONS- DHS	B	220	P
10099	DIRECTOR, GOVERNORS OFFICE OF ECONOMIC DEVELOPMENT	B	220	P
30024	DIRECTOR, GOV'S COMMITTEE FOR EMPLMNT PEOPLE W/ DIS	D	150	P
37312	DIRECTOR, GRAZING IMPROVEMENT PROGRAM	E	100	P
10558	DIRECTOR, GUARDIAN AD LITEM	B	155	P
37026	DIRECTOR, INDUSTRIAL ACCIDENTS	B	144	P
10780	DIRECTOR, INFO TECHNOLOGY	B	220	P
14474	DIRECTOR, INTERNAL AUDIT	C	150	P
10161	DIRECTOR, JUDICIAL CONDUCT COMMISSION	B	220	P
10175	DIRECTOR, JUDICIAL PERF EVALUATION COMMISSION	B	220	P
09025	DIRECTOR, LAW ENFORCEMENT SERVICES, ATT GEN	C	150	P
10941	DIRECTOR, LAW ENFORCEMENT SERVICES, POST	C	150	P
10309	DIRECTOR, LEGISLATIVE FISCAL ANALYST	B	220	P
14375	DIRECTOR, MANAGEMENT SERVICES,HS	C	150	P
82275	DIRECTOR, MOTOR CARRIERS	D	150	P
37025	DIRECTOR, OCCUPATIONAL SAFETY AND HEALTH DIVISION	B	220	P
30158	DIRECTOR, OFFICE OF CHILD CARE	B	220	P
85022	DIRECTOR, OFFICE OF CHILD WELFARE PARENTAL DEFENSE	C	150	P
10127	DIRECTOR, OFFICE OF DOMESTIC/SEXUAL VIOLENCE	B	220	P
17002	DIRECTOR, OFFICE OF EMPLOYEE SUPPORT	C	144	O
10165	DIRECTOR, OFFICE OF ENERGY DEVELOPMENT	B	220	p
91094	DIRECTOR, OFFICE OF LICENSING, DHS	B	220	P
29056	DIRECTOR, OFFICE OF PLANNING & PUBLIC AFFAIRS, DEQ	C	150	P
91008	DIRECTOR, OFFICE OF RECOVERY SERVICES	B	220	P
14334	DIRECTOR, OFFICE OF STATE DEBT COLLECTION	B	220	P
01020	DIRECTOR, PRISON RELOCATION AND DEV. AUTHORITY	C	150	P
14324	DIRECTOR, PROGRAM FINANCING, DOT	B	220	P
29055	DIRECTOR, PUBLIC AFFAIRS	E	120	P
10253	DIRECTOR, RESEARCH AND DATA	B	220	P
10298	DIRECTOR, SENTENCING COMMISSION	B	220	P
85040	DIRECTOR, SENTENCING COMMISSION	B	220	P
10259	DIRECTOR, STATE AUDITOR	B	220	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
10570	DIRECTOR, STATE LAW LIBRARY	B	155	P
35362	DIRECTOR, STATE PUBLIC HEALTH LABORATORY	B	220	P
14322	DIRECTOR, TAX REVENUE/DISTRIBUTION	C	150	P
10079	DIRECTOR, TRUST LANDS ADMINISTRATION	B	220	P
10200	DIRECTOR, USDB DIV OF EDUCATIONAL SUPPORT SERVICES	D	120	P
10806	DIRECTOR, UTAH JUDICIAL INSTITUTE	B	150	P
63448	DIRECTOR, UTAH RECOVERY PROGRAMS	C	150	P
43081	DIRECTOR, WATER RIGHTS/STATE ENGINEER	B	220	P
16082	DIRECTOR,CENTER FOR HEALTH DATA	C	150	P
37291	DIRECTOR,DIVISION OF ENVIRONMENTAL RESPONSE	B	220	P
28619	DIRECTOR,OFFICE MUSEUM SERVICES	B	220	P
20214	DISABILITY CLAIMS SPECIALIST	D	120	P
10855	DIST COURT JUDGE	B	280	P
10838	DISTRICT COURT ADMIN	C	180	P
43042	DISTRICT ENVIRONMENTAL ENGINEER	D	144	O
10524	DISTRICT OPERATIONS MANAGER	D	120	O
44026	DISTRICT PERMITS OFFICER I	H	100	O
44028	DISTRICT PERMITS OFFICER II	H	100	O
14246	DIVISION ADMINISTRATIVE SERVICES DIRECTOR	B	220	P
16094	DIVISION DIRECTOR	B	220	P
30160	DIVISION DIRECTOR - DWS	B	220	P
83169	DIVISION DIRECTOR I, PUBLIC SAFETY	B	220	P
83168	DIVISION DIRECTOR II, PUBLIC SAFETY	B	220	P
21036	DIVISION DIRECTOR INSURANCE, PRODUCER SERVICES	B	220	P
21035	DIVISION DIRECTOR PROPERTY & CASUALTY INSURANCE	B	220	P
83162	DIVISION DIRECTOR, COMMERCE	B	220	P
22378	DIVISION DIRECTOR, DABC	B	220	P
21034	DIVISION DIRECTOR, HEALTH INSURANCE	B	220	P
21032	DIVISION DIRECTOR, INSURANCE FRAUD	B	220	P
21033	DIVISION DIRECTOR, MARKET REGULATION	C	144	P
22384	DIVISION DIRECTOR, TAX-POST	B	220	P
12492	DIVISION DIRECTOR, TECHNOLOGY SERVICES	B	220	P
22382	DIVISION DIRECTOR,TAX	B	150	P
32540	DOH ASSISTANT DIVISION/OFFICE DIRECTOR	C	144	O
10545	DOMESTIC CASE MANAGER	D	120	O
10664	DOMESTIC VIOLENCE CASE COORDINATOR	G	120	P
83012	DPS COMMUNICATIONS MANAGER	E	100	P
83010	DPS COMMUNICATIONS SUPERVISOR	H	81	O

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JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
51616	DRILLING SUPERVISOR	G	81	O
56250	DRIVER		n/a	
83292	DRIVER LICENSE ASSISTANT SUPERVISOR	G	81	O
83282	DRIVER LICENSE EXAMINER		n/a	
83278	DRIVER LICENSE EXAMINER-UNCERTIFIED-APPOINTED		n/a	
83280	DRIVER LICENSE EXAMINING TECHNICIAN		n/a	
83283	DRIVER LICENSE LEAD EXAMINER		n/a	
83300	DRIVER LICENSE MANAGER	E	150	P
83290	DRIVER LICENSE PROGRAM COORDINATOR		n/a	
83296	DRIVER LICENSE SUPERVISOR	E	120	P
10515	DRUG COURT COORDINATOR	F	140	P
30122	DWS MANAGER I	D	144	O
30148	DWS MANAGER II	D	150	P
30132	DWS MANAGER III	D	150	P
16020	ECONOMIST, DEPARTMENT OF WORKFORCE SERVICES	G	81	O
16070	ECONOMIST, PLANNING AND BUDGET - APPOINTED	E	100	P/O
10802	EDUCATION ASSISTANT II	J	81	O
10800	EDUCATION PROGRAM ASSISTANT I	J	81	O
10804	EDUCATION PROGRAM COORDINATOR	G	120	P
10207	EDUCATIONAL COORDINATOR	D	120	O
10203	EDUCATIONAL COORDINATOR WITH DOCTORATE	D	120	P
10211	EDUCATIONAL DIRECTOR	F	150	P
10213	EDUCATIONAL DIRECTOR WITH DOCTORATE	E	120	P
10225	EDUCATIONAL INTERPRETER, USDB	G	81	O
10201	EDUCATIONAL SPECIALIST	D	120	O
10205	EDUCATIONAL SPECIALIST WITH DOCTORATE	D	120	P
35004	EEG TECHNICIAN, DHS	G	100	O
15301	E-LEARNING INSTRUCTIONAL DESIGNER	I	64	O
12477	ELECTRONIC BUSINESS PROJECT MANAGER	D	150	P/O
14436	ELECTRONIC DATA PROCESSING AUDITOR	E	100	O
52608	ELECTRONIC TECHNICAL SPECIALIST I	I	81	O
52610	ELECTRONIC TECHNICAL SPECIALIST II	G	100	O
52612	ELECTRONIC TECHNICAL SPECIALIST III	G	100	O
52599	ELECTRONICS MAINTENANCE/REPAIR ASSISTANT	I	64	O
52604	ELECTRONICS MAINTENANCE/REPAIR SPECIALIST	I	64	O
52616	ELECTRONICS SUPERVISOR	E	100	O
52620	ELECTRONICS TECHNICAL MANAGER	H	81	O
82852	ELEVATOR/BOILER INSPECTOR	H	100	O
83450	EMERGENCY MANAGEMENT SPECIALIST	E	100	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
83472	EMERGENCY PLANNING/RISK MANAGEMENT COORDINATOR	E	100	P
83454	EMERGENCY PREP PLANNER II	H	81	O
83458	EMERGENCY PREP PLANNER III	H	81	O
30099	EMPLOYMENT SPECIALIST	H	81	O
34414	EMT/PARAMEDIC TESTER, DOH	I	81	O
10186	ENERGY POLICY COORDINATOR	F	120	O
43004	ENGINEER I	H	81	O
43006	ENGINEER II	H	100	O
43008	ENGINEER III	H	120	P/O
43002	ENGINEER INTERN	K	64	O
43010	ENGINEER IV	H	144	P/O
43076	ENGINEER MANAGER III - ADMIN. UDOT	D	150	P
43020	ENGINEERING ASSOCIATE MANAGER II	E	120	O/P
43012	ENGINEERING MANAGER I	E	120	O/P
43058	ENGINEERING MANAGER II	D	144	O
43016	ENGINEERING MANAGER III	D	144	O
43077	ENGINEERING MGR IV, UDOT	D	150	P
44008	ENGINEERING TECHNICIAN I	I	64	O
44010	ENGINEERING TECHNICIAN II	I	81	O
44012	ENGINEERING TECHNICIAN III	I	81	O
44014	ENGINEERING TECHNICIAN IV	I	81	O
10779	ENTERPRISE SYSTEMS MANAGER	D	120	O
43034	ENVIRONMENTAL ENGINEER I	I	81	O
43036	ENVIRONMENTAL ENGINEER II	H	100	O
43038	ENVIRONMENTAL ENGINEER III	H	100	O
43040	ENVIRONMENTAL ENGINEER IV	H	144	O
37298	ENVIRONMENTAL HEALTH SCIENTIST I	H	100	O
37300	ENVIRONMENTAL HEALTH SCIENTIST II	H	100	O
37302	ENVIRONMENTAL HEALTH SCIENTIST III	I	81	O
37282	ENVIRONMENTAL MANAGER	D	120	P
16148	ENVIRONMENTAL PLANNING CONSULTANT	G	100	O
37272	ENVIRONMENTAL PROGRAM COORDINATOR	H	81	O
37289	ENVIRONMENTAL PROGRAM MANAGER I	D	144	O
37286	ENVIRONMENTAL PROGRAM MANAGER II	D	144	O
37274	ENVIRONMENTAL SCIENTIST I	G	100	O
37288	ENVIRONMENTAL SCIENTIST II	I	81	O
37278	ENVIRONMENTAL SCIENTIST III	I	81	O
37280	ENVIRONMENTAL SCIENTIST IV	F	120	P
32560	EPIDEMIOLOGIST I	G	81	O
32562	EPIDEMIOLOGIST II	G	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
32564	EPIDEMIOLOGY MANAGER I	H	100	O
32566	EPIDEMIOLOGY MANAGER II	H	100	O
44052	EQUIPMENT CERTIFICATION SUPERVISOR	I	64	O
53028	EQUIPMENT OPERATIONS MANAGER	D	120	O
53030	EQUIPMENT SPECIALIST	I	81	O
14254	EQUIPMENT SYSTEMS SPECIALIST	I	81	O
44018	ESTIMATES & AGREEMENTS SPECIALIST I	I	81	O
91082	EXEC DIR, GOV'S COUNCIL FOR PEOPLE W/ DISABILITIES		n/a	
10085	EXEC DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET	B	220	P
10616	EXECUTIVE ASSISTANT	G	120	O
11056	EXECUTIVE ASSISTANT, APPOINTED	G	120	O
09015	EXECUTIVE ASSISTANT, ATT GEN	G	100	O
10140	EXECUTIVE DIR UTAH SCIENCE TECHNOLOGY AND RE- SEARCH	A	280	P
10097	EXECUTIVE DIRECTOR, CAPITOL PRESERVATION	A	220	P
10053	EXECUTIVE DIRECTOR, CCJJ	A	220	P
10051	EXECUTIVE DIRECTOR, COMMERCE	B	220	P
10067	EXECUTIVE DIRECTOR, DEPARTMENT OF ADMIN SERVICES	B	220	P
10063	EXECUTIVE DIRECTOR, DEPARTMENT OF HUMAN SERVICES	B	220	P
10057	EXECUTIVE DIRECTOR, DEPT OF CORRECTIONS	A	280	P
10072	EXECUTIVE DIRECTOR, DEPT OF HEALTH	A	280	P
10071	EXECUTIVE DIRECTOR, DEPT OF HEALTH, MD	A	280	P
10100	EXECUTIVE DIRECTOR, DEPT OF VETERANS AFFAIRS	A	280	p
10069	EXECUTIVE DIRECTOR, DEPT. OF HUMAN RESOURCE MGMT	A	280	P
10073	EXECUTIVE DIRECTOR, DEQ	B	220	P
10061	EXECUTIVE DIRECTOR, DNR	A	280	P
10055	EXECUTIVE DIRECTOR, HERITAGE AND ARTS	A	280	P
10306	EXECUTIVE DIRECTOR, LEGISLATIVE ETHICS COMMISSION	A	280	P
10117	EXECUTIVE DIRECTOR, MEDICAL EDUCATION COUNCIL	C	150	P
10059	EXECUTIVE DIRECTOR, TAX COMMISSION	B	220	P
10065	EXECUTIVE DIRECTOR, UDOT	A	280	P
10075	EXECUTIVE DIRECTOR, VOCATIONAL REHABILITATION	B	220	P
10095	EXECUTIVE DIRECTOR, WORKFORCE SERVICES	A	280	P
11032	EXECUTIVE SECRETARY	G	100	O
01005	EXECUTIVE SECRETARY, APPOINTED	G	100	P
09340	EXECUTIVE SECRETARY, ATT GEN	G	100	P
16504	EXECUTIVE STAFF DIRECTOR,PUBLIC SERVICE COMMIS- SION	B	220	P
17004	FACILITIES COORDINATOR I	E	100	P
17006	FACILITIES COORDINATOR II	E	120	P
17008	FACILITIES COORDINATOR III	E	100	P

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JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
17010	FACILITIES MANAGER	E	120	O
92286	FAMILY SUPPORT SPECIALIST	D	120	P
10287	FEDERAL PROCUREMENT SPEC	I	81	O
83200	FIELD SERVICE MANAGER, BCI	D	144	O
14320	FINANCE DIRECTOR	C	150	P
10956	FINANCE DIRECTOR-TRUST LANDS ADMINISTRATION	C	150	P
14212	FINANCIAL ANALYST I	I	100	O
10114	FINANCIAL ANALYST I, APPOINTED	I	100	O
14214	FINANCIAL ANALYST II	G	120	P/O
10262	FINANCIAL ANALYST II, APPOINTED	I	100	O
14216	FINANCIAL ANALYST III	I	100	O
10115	FINANCIAL ANALYST III, APPOINTED	I	100	O
09120	FINANCIAL ANALYST III, ATT GEN	I	100	O
10972	FINANCIAL ANALYST, TRUST LANDS ADMINISTRATION	I	100	O
14268	FINANCIAL INFORMATION SYSTEMS SUPERVISOR	E	120	P
14751	FINANCIAL INSTITUTIONS EXAMINER I	L	36	O
14753	FINANCIAL INSTITUTIONS EXAMINER II	L	36	O
14755	FINANCIAL INSTITUTIONS EXAMINER III	L	36	O
14759	FINANCIAL INSTITUTIONS MANAGER	L	144	O
14757	FINANCIAL INSTITUTIONS SPECIALIST	G	81	O
14218	FINANCIAL MANAGER I	E	120	O/P
10116	FINANCIAL MANAGER I, APPOINTED	F	120	P
09710	FINANCIAL MANAGER I, ATT GEN	D	120	O
14220	FINANCIAL MANAGER II	E	120	O/P
10118	FINANCIAL MANAGER II, APPOINTED	F	144	P
09110	FINANCIAL MANAGER II, ATT GEN	D	150	P
10922	FINANCIAL MANAGER, STATE TREASURER'S OFFICE	D	120	P
82010	FIRE FIGHTER CREW CHIEF, NATIONAL GUARD		n/a	
82008	FIRE FIGHTER DRIVER/OPERATOR, NATIONAL GUARD		n/a	
82002	FIRE FIGHTER I, NATIONAL GUARD		n/a	
82004	FIRE FIGHTER II, NATIONAL GUARD		n/a	
82006	FIRE FIGHTER III, NATIONAL GUARD		n/a	
82020	FIRE FIGHTER SHIFT LEADER, NATIONAL GUARD		n/a	
82017	FIRE PROTECTION ENGINEER		144	
82024	FIRE SAFETY AND TRAINING COORDINATOR	I	81	O
82012	FIRE SAFETY SPECIALIST I	G	100	O
82014	FIRE SAFETY SPECIALIST II	G	100	O
64014	FIRE TECHNICIAN I	K	64	O
64016	FIRE TECHNICIAN II	K	64	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
64018	FIRE TECHNICIAN III	K	64	O
64020	FIRE TECHNICIAN IV	K	64	O
10125	FIRST LADY		n/a	
14434	FISCAL AUDIT DIRECTOR	D	150	P
10332	FISCAL CONSULTANT		n/a	
10398	FISCAL NOTE COORDINATOR		n/a	
63370	FISH PATHOLOGIST AND NUTRITIONIST	K	64	P
53012	FLEET ANCILLARY EQUIPMENT SPECIALIST	I	64	O
53036	FLEET MANAGER	D	120	P
53010	FLEET SUPERVISOR	E	120	P
53040	FLEET TECHNICIAN	L	48	O
53041	FLEET VEHICLE SERVICES CENTER SPECIALIST	I	64	O
75012	FOOD SERVICE MANAGER	E	100	O
75008	FOOD SERVICE SUPERVISOR I	E	100	O
75010	FOOD SERVICE SUPERVISOR II	E	100	O
75000	FOOD SERVICE WORKER I		n/a	
75002	FOOD SERVICE WORKER II		n/a	
75004	FOOD SERVICE WORKER III		n/a	
35380	FORENSIC SCIENTIST I	G	100	P/O
35382	FORENSIC SCIENTIST II	G	100	P/O
35386	FORENSIC SCIENTIST MANAGER	D	144	P
64002	FORESTER I		n/a	
64004	FORESTER II	L	48	O
64066	FORESTRY PROGRAM COORDINATOR I	G	81	O
64026	FORESTRY PROGRAM COORDINATOR II	G	81	O
64050	FORESTRY PROGRAM COORDINATOR III	G	81	O
64012	FORESTRY TECHNICIAN	L	48	O
64062	FORESTRY, FIRE & LANDS ADMINISTRATOR	E	144	O
83177	FRAUD INVESTIGATION SUPERVISOR	E	100	O
10877	FULL TIME BOARD AND COUNCIL MEMBER		n/a	
10559	GAL ATTY I		n/a	
10560	GAL ATTY II		n/a	
10562	GAL ATTY III		n/a	
10555	GAL INVESTIGATOR		n/a	
10856	GENERAL COUNSEL		n/a	
58008	GENERAL INVENTORY CENTER COORDINATOR, USDB	I	81	O
51600	GENERAL MAINTENANCE WORKER I	L	36	O
51602	GENERAL MAINTENANCE WORKER II	L	36	O
09140	GENERAL SERVICES AIDE, ATT GEN	I	64	O
11812	GENERAL SERVICES MANAGER	L	48	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
11808	GENERAL SERVICES SPECIALIST	I	81	O
11810	GENERAL SERVICES SUPERVISOR	E	100	O
11802	GENERAL SERVICES TECHNICIAN I	I	81	O
09141	GENERAL SERVICES TECHNICIAN I, ATT GEN	I	81	O
11804	GENERAL SERVICES TECHNICIAN II	G	100	O
11806	GENERAL SERVICES TECHNICIAN III	G	100	O
68018	GEOLOGIC PROGRAM MANAGER/SENIOR SCIENTIST	D	144	O
68006	GEOLOGICAL TECHNICIAN	F	120	P
68022	GEOLOGIST	F	120	P
65506	GOLF COURSE STARTER	K	64	O
65511	GOLF COURSE SUPERINTENDENT I	E	100	P
65512	GOLF COURSE SUPERINTENDENT II	E	120	P
65508	GOLF PROFESSIONAL	I	64	O
01012	GOVERNMENT RELATIONS ASSISTANT - APPOINTED	B	120	P
10001	GOVERNOR		n/a	
10103	GOVERNOR'S EXECUTIVE ASSISTANT AND SCHEDULER		n/a	
29058	GRAPHICS ARTS SPECIALIST I	I	81	O
29060	GRAPHICS ARTS SPECIALIST II	I	120	O
29066	GRAPHICS ARTS SUPERVISOR	E	100	O
63444	GRAZING/RANGELAND BIOLOGIST	L	48	O
63446	GRAZING/RANGELAND COORDINATOR	K	64	O
51006	GROUNDS SUPERVISOR	E	144	P
51002	GROUNDSKEEPER I	L	36	O
51004	GROUNDSKEEPER II	L	36	O
10860	GUARDIAN AD LITEM	F	120	P
10557	GUARDIAN AD LITEM DEPUTY DIRECTOR	B	155	P
10556	GUARDIAN AD LITEM OFFICE MANAGER	D	120	O
10567	GUARDIAN AD LITEM PROGRAM ASSISTANT	G	81	O
10224	GUIDANCE COUNSELOR, USDB	G	120	P
16021	HEALTH ECONOMIST	G	81	O
32556	HEALTH INFORMATICIST	G	81	O
32568	HEALTH INFORMATICIST MANAGER	G	81	O
01201	HEALTH PROG SPECIALIST II, INSP GEN MEDICAID SRVS	I	81	O
01202	HEALTH PROG SPECIALIST III, INSP GEN MEDICAID SRVS	I	81	O
32532	HEALTH PROGRAM ADMINISTRATOR	D	144	O
32542	HEALTH PROGRAM COORDINATOR	I	64	O
32534	HEALTH PROGRAM MANAGER I	F	120	O
32535	HEALTH PROGRAM MANAGER II	F	150	P
01203	HEALTH PROGRAM MANAGER II, INSP GEN MEDICAID SRVS	E	100	O
01204	HEALTH PROGRAM MANAGER III, INSP GEN MEDICAID SRVS	E	100	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
32502	HEALTH PROGRAM SPECIALIST I	I	64	O
32504	HEALTH PROGRAM SPECIALIST II	I	81	O
32514	HEALTH PROGRAM SPECIALIST III	I	64	O
91054	HEARING OFFICER, DHS	F	120	P
20220	HEARING OFFICER, DISABILITY DETERMINATION SVC	F	120	P
83288	HEARING OFFICER, DRIVER LICENSE DIVISION	F	120	P
32528	HEARING OFFICER, HEALTH	F	120	P
86059	HEARING OFFICER, NON-POST, BOARD OF PARDONS	F	120	P
86058	HEARING OFFICER, POST	F	120	P
86516	HEARING OFFICER, YOUTH PAROLE AUTHORITY	F	120	P
37022	HIGHWAY SAFETY PROGRAM SPECIALIST I	I	81	O
37023	HIGHWAY SAFETY PROGRAM SPECIALIST II	I	81	O
28622	HISTORIAN	H	100	O
35010	HISTOTECHNOLOGIST		n/a	
10381	HOUSE ADMINISTRATIVE ASSISTANT	G	100	O
10385	HOUSE DEMOCRATIC CAUCUS COMMUNICATIONS COORDINATOR		n/a	
10380	HOUSE LEADERSHIP MINORITY ASSISTANT		n/a	
10317	HOUSE LEADERSHIP/MAJORITY ASSISTANT		n/a	
10377	HOUSE PUBLIC AFFAIRS OFFICER/MAJORITY PARTY		n/a	
10143	HOUSEHOLD AIDE, GOVR		n/a	
77008	HOUSEKEEPING/LAUNDRY MANAGER	I	64	O
15284	HUMAN RESOURCE CONSULTANT	I	81	O
15276	HUMAN RESOURCE DIRECTOR	C	150	P
15262	HUMAN RESOURCE MANAGER I	D	144	P
15315	HUMAN RESOURCE MANAGER II	E	120	P
09130	HUMAN RESOURCE MANAGER, ATT GEN	D	144	O
15302	HUMAN RESOURCES ANALYST I	I	100	O
15306	HUMAN RESOURCES ANALYST II	I	100	O
15297	HUMAN RESOURCES EDUCATION COORDINATOR	H	81	O
10808	HUMAN RESOURCES OPERATIONAL SUPPORT	G	81	O
10820	HUMAN RESOURCES PROGRAM MANAGER	D	120	O
15294	HUMAN RESOURCES PROGRAM SUPERVISOR	E	100	O
10812	HUMAN RESOURCES REP I	G	120	P
10814	HUMAN RESOURCES REP II	G	120	P
10816	HUMAN RESOURCES REP III	G	120	P
10817	HUMAN RESOURCES REP IV	G	120	P
15260	HUMAN RESOURCES SPECIALIST	G	120	P
15298	HUMAN RESOURCES TECHNICIAN I	I	64	O
15299	HUMAN RESOURCES TECHNICIAN II	I	64	O
10904	HUMAN SERVICES AIDE	G	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
37013	INDUSTRIAL HYGIENIST	G	100	P
10807	INFO SPEC III, COURTS	G	81	O
10586	INFORMATION ANALYST II	I	81	O
12495	INFORMATION SECURITY ANALYST I	I	100	O
12496	INFORMATION SECURITY ANALYST II	I	100	O
12497	INFORMATION SECURITY ANALYST III	I	100	O
12490	INFORMATION SECURITY DIRECTOR	B	220	P
29004	INFORMATION SPECIALIST I	G	81	O
09345	INFORMATION SPECIALIST I, ATT GEN	G	100	O
29006	INFORMATION SPECIALIST II	E	100	O
01013	INFORMATION SPECIALIST II, APPOINTED	G	100	O
09350	INFORMATION SPECIALIST II, ATT GEN	G	100	O
29008	INFORMATION SPECIALIST III	G	81	O
09355	INFORMATION SPECIALIST III, ATT GEN	G	100	O
29009	INFORMATION SPECIALIST IV	E	100	O
01018	INFORMATION SPECIALIST IV, APPOINTED	E	100	O
10963	INFORMATION SPECIALIST, TRUST LANDS ADMIN	G	81	O
10572	INFORMATION SVCS ASST I	I	64	O
10574	INFORMATION SVCS ASST II	I	64	O
10576	INFORMATION SVCS ASST III	I	64	O
29002	INFORMATION TECHNICIAN	I	81	O
12464	INFORMATION TECHNOLOGY DIRECTOR	C	180	P
12472	INFORMATION TECHNOLOGY MANAGER I	D	144	O
12486	INFORMATION TECHNOLOGY MANAGER II	D	144	O
12320	INFORMATION TECHNOLOGY PROJECT MANAGER	I	64	O
12322	INFORMATION TECHNOLOGY SENIOR PROJECT MANAGER	I	64	O
10758	INFRASTRUCTURE ARCHITECT	H	81	O
10777	INFRASTRUCTURE SERVICES MANAGER	D	120	O
10754	INFRASTRUCTURE SUPPORT SPECIALIST I	G	81	O
10756	INFRASTRUCTURE SUPPORT SPECIALIST II	G	81	O
10937	INMATE WORK PROGRAM PARTICIPANT		n/a	
01205	INSPECTOR GENERAL, MEDICAID SERVICES	E	120	P
44058	INSPECTOR I	I	64	O
60168	INSPECTOR I, AGRICULTURE	K	64	O
60163	INSPECTOR I, AGRICULTURE (COMP)	K	64	O
44060	INSPECTOR II	I	81	O
60156	INSPECTOR II, AGRICULTURE	K	64	O
60158	INSPECTOR III, AGRICULTURE	K	64	O
60161	INSPECTOR III, AGRICULTURE (COMP)	K	64	O
44062	INSPECTOR III, UDOT	I	64	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
60160	INSPECTOR IV, AGRICULTURE	K	64	O
29065	INSTRUCTIONAL MATERIALS SUPERVISOR	I	81	O
15502	INSTRUCTOR	K	64	O
10177	INSTRUCTOR, USDB	H	81	O
21004	INSURANCE ANALYST	I	64	O
14377	INSURANCE COMPLIANCE SPECIALIST	K	144	O
21000	INSURANCE SPECIALIST	K	64	O
11071	INTERN	L	64	O
11072	INTERN - TIME LIMITED	L	64	O
10620	INTERN I	L	64	O
10622	INTERN II	L	64	O
10926	INTERN II	L	64	O
10302	INTERN--LEGIS AUDITOR GENERAL	L	64	O
10505	INTERSTATE COMPACT SPECIALIST	G	81	O
92278	INTERVENER, USDB	H	81	O
14416	INVENTORY AUDITOR		n/a	
10912	INVENTORY COORDINATOR, CAPITOL PRESERVATION BOARD		144	
83142	INVESTIGATOR I, POST	F	120	P
83144	INVESTIGATOR II, POST	F	120	P
83099	INVESTIGATOR III, NON-POST	H	64	P
83147	INVESTIGATOR III, POST	F	120	P
83098	INVESTIGATOR III, POST SPECIAL FUNCTIONS OFFICER	H	64	P
83161	INVESTIGATOR IV, POST	F	120	P
14277	INVESTMENT ANALYST	F	120	P
10264	INVESTMENT ANALYST, APPOINTED	F	120	P
10267	INVESTMENT OFFICER	F	144	P
12466	IT ANALYST I	I	64	O
10965	IT ANALYST I, TRUST LANDS ADMINISTRATION	I	100	O
12468	IT ANALYST II	I	100	O
09510	IT ANALYST II, ATT GEN	I	100	O
10966	IT ANALYST II, TRUST LANDS ADMINISTRATION	I	100	O
12475	IT ANALYST III	I	64	O
09515	IT ANALYST III, ATT GEN	F	150	P
10967	IT ANALYST III, TRUST LANDS ADMINISTRATION	F	150	P
12481	IT MASTER ENGINEER	I	64	O
10778	IT SERVICES MANAGER	D	120	O
86506	JJS COUNSELOR I	G	120	P
86508	JJS COUNSELOR II	G	120	P
86510	JJS COUNSELOR III	G	120	P
86512	JJS SUPERVISOR	E	120	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
86502	JJS TECHNICIAN I		n/a	
86504	JJS TECHNICIAN II		n/a	
53020	JOURNEY AUTO WORKER	L	48	O
92252	JOURNEY BARBER	L	36	O
54305	JOURNEY BOILER OPERATOR		n/a	
52154	JOURNEY CARPENTER		n/a	
51608	JOURNEY DRILLER	L	36	O
52454	JOURNEY ELECTRICIAN		n/a	
54302	JOURNEY HEATING & AIR CONDITIONING SPECIALIST	L	36	O
56518	JOURNEY HEAVY EQUIPMENT OPERATOR	L	36	O
51614	JOURNEY MAINTENANCE/CONSTRUCTION SPECIALIST	L	36	O
51626	JOURNEY PAINTER	L	36	O
52304	JOURNEY PLUMBER	L	36	O
53254	JOURNEY WELDER	L	36	O
10864	JUDGE PRO TEM	D	280	P
10659	JUDICIAL ASSISANT - UNDERFILL	I	81	O
10660	JUDICIAL ASSISTANT I	I	81	O
10661	JUDICIAL ASSISTANT II	I	81	O
10662	JUDICIAL ASSISTANT III	I	81	O
10665	JUDICIAL CASE MANAGER	D	120	O
10653	JUDICIAL SERVICE REPRESENTATIVE I	G	100	P
10655	JUDICIAL SERVICE REPRESENTATIVE II	E	100	P
10657	JUDICIAL SERVICE REPRESENTATIVE III	E	100	P
10663	JUDICIAL SERVICES MANAGER	D	120	O
01009	JUNIOR STAFF AUDITOR - APPOINTED	F	100	O
10834	JUVENILE COURT ADMIN	D	180	P
10857	JUVENILE COURT JUDGE	A	280	P
10539	JUVENILE COURT PROGRAM COORDINATOR	H	140	P
10525	JUVENILE OPERATIONS MANAGER	D	120	O
10535	JUVENILE PROGRAM COORD I	H	140	P
10537	JUVENILE PROGRAM COORD II	H	140	P
82105	LABOR COMMISSION PROGRAM MANAGER	C	144	P
82097	LABOR COMMISSION SPECIALIST	F	120	P
44048	LABORATORY CERTIFICATION SPECIALIST I	I	81	O
44050	LABORATORY CERTIFICATION SPECIALIST II	I	81	O
35002	LABORATORY TECHNICIAN I	I	64	O
35006	LABORATORY TECHNICIAN II	I	64	O
35008	LABORATORY TECHNICIAN III	I	64	O
44036	LAND SURVEYOR	H	100	O
64058	LANDS COORDINATOR, DNR	E	120	O
10959	LANDS COORDINATOR, TRUST LANDS ADMINISTRATION	I	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
29220	LANGUAGE SUPPORT SPECIALIST, NG		n/a	
76004	LAUNDRY WORKER/SEAMSTRESS		n/a	
10850	LAW CLERK	L	120	O
09370	LAW CLERK, ATT GEN	J	81	O
83146	LAW ENFORCEMENT CHIEF	D	120	P
83127	LAW ENFORCEMENT DIRECTOR, DNR	C	150	P
09105	LAW OFFICE ADMIN / BUDGET DIRECTOR, ATT GEN	C	150	P
10255	LAW OFFICE ADMIN. & BUDGET DIRECTOR	B	220	P
53006	LEAD AUTO WORKER	L	48	O
54306	LEAD BOILER MECHANIC		n/a	
52156	LEAD CARPENTER		n/a	
10548	LEAD CHILD WELFARE MEDIATOR	G	81	O
20206	LEAD CLAIMS TECHNICIAN		n/a	
01001	LEAD CLAIMS TECHNICIAN, APPOINTED		n/a	
92284	LEAD DEVELOPMENTALIST	G	120	P/O
51612	LEAD DRILLER	I	64	O
52456	LEAD ELECTRICIAN	L	36	O
34416	LEAD EMT/PARAMEDIC TESTER, DOH	G	81	O
56528	LEAD HEAVY EQUIPMENT OPERATOR	I	64	O
15296	LEAD HUMAN RESOURCES TECHNICIAN	I	64	O
14379	LEAD INSURANCE COMPLIANCE SPECIALIST	K	144	O
14418	LEAD INVENTORY AUDITOR		n/a	
29222	LEAD LANGUAGE SUPPORT SPECIALIST, NG		n/a	
51618	LEAD MAINTENANCE/CONSTRUCTION SPECIALIST	L	36	O
29020	LEAD PARK RANGER AIDE	I	64	O
12038	LEAD PRINTER	I	64	O
17016	LEAD PROJECT MANAGER, DFCM	F	150	P
16030	LEAD RESEARCH ASSISTANT	I	81	O
53252	LEAD WELDER		n/a	
30114	LEAD WORKFORCE SERVICES SPECIALIST	H	81	O
85508	LEGAL ASSISTANT (PARALEGAL) I	I	81	O
85510	LEGAL ASSISTANT (PARALEGAL) II	I	81	O
10913	LEGAL ASSISTANT (PARALEGAL) II, APPOINTED	I	81	O
85512	LEGAL ASSISTANT (PARALEGAL) III	I	64	O
09325	LEGAL ASSISTANT I, ATT GEN	G	100	O
09330	LEGAL ASSISTANT II, ATT GEN	G	100	O
09335	LEGAL ASSISTANT III, ATT GEN	G	100	O
10969	LEGAL ASSISTANT, TRUST LANDS ADMINISTRATION	I	81	O
10935	LEGAL COUNSEL, TRUST LANDS ADMINISTRATION	C	144	
09151	LEGAL RESEARCH TECHNICIAN, ATT GEN	G	100	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
85504	LEGAL SECRETARY	J	81	O
10612	LEGAL SECRETARY I	J	81	O
10614	LEGAL SECRETARY II	J	81	O
85502	LEGAL SECRETARY TRAINEE	J	81	O
09310	LEGAL SECRETARY TRAINEE, ATT GEN	J	81	O
09315	LEGAL SECRETARY, ATT GEN	J	81	O
85513	LEGAL SERVICES COORDINATOR	I	81	O
85004	LEGAL/ENFORCEMENT COUNSEL I	E	100	P
85008	LEGAL/ENFORCEMENT COUNSEL II	E	100	P
85012	LEGAL/ENFORCEMENT COUNSEL III	E	120	P
85014	LEGAL/ENFORCEMENT COUNSEL IV		150	P
10356	LEGIS ADMIN ASSISTANT - SENATE		n/a	
10491	LEGIS ADMIN ASSISTANT I		n/a	
10435	LEGIS ADMIN ASSISTANT II		n/a	
10319	LEGIS ADMIN ASST III		n/a	
10333	LEGIS ASSOC GENERAL COUNSEL V		n/a	
10300	LEGIS AUDIT MGR		n/a	
10363	LEGIS AUDITOR GENERAL		n/a	
10798	LEGIS BILL ROOM ASSISTANT II	J	81	O
10796	LEGIS BILL ROOM CLERK	J	81	O
10365	LEGIS DEPUTY AUDITOR GENERAL		n/a	
10301	LEGIS DIRECTOR	B	220	P
10321	LEGIS DOCUMENT TECH I		n/a	
10323	LEGIS DOCUMENT TECH II		n/a	
10324	LEGIS DOCUMENT TECH III		n/a	
10325	LEGIS DOCUMENT TECH IV		n/a	
10388	LEGIS FISCAL ANALYST I	I	100	O
10389	LEGIS FISCAL ANALYST II	I	100	O
10391	LEGIS FISCAL ANALYST III	I	100	O
10995	LEGIS FISCAL ANALYST INTERN	L	64	O
10393	LEGIS FISCAL ANALYST IV	I	100	O
10395	LEGIS FISCAL ANALYST V	I	100	O
10397	LEGIS FISCAL ANALYST VI	I	100	O
10462	LEGIS FISCAL MANAGER	D	120	O
10347	LEGIS INFORMATION STAFF I		n/a	
10349	LEGIS INFORMATION STAFF II		n/a	
10494	LEGIS IT AUDITOR/SYSTEM ANALYST	I	100	O
10326	LEGIS IT STAFF I		n/a	
10328	LEGIS IT STAFF II		n/a	
10330	LEGIS IT STAFF III		n/a	

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
10355	LEGIS LAW CLERK I	J	81	O
10357	LEGIS LAW CLERK II	J	81	O
10362	LEGIS LEAD AUDITOR		n/a	
10359	LEGIS PARALEGAL I	J	81	O
10360	LEGIS PARALEGAL II	J	81	O
10364	LEGIS PARALEGAL III		n/a	
10366	LEGIS PARALEGAL IV		n/a	
10368	LEGIS PARALEGAL V		n/a	
10370	LEGIS PARALEGAL VI		n/a	
10367	LEGIS PERF AUDIT SUPV I		n/a	
10361	LEGIS PERF AUDIT SUPV II		n/a	
10487	LEGIS PERF AUDITOR I		n/a	
10488	LEGIS PERF AUDITOR II		n/a	
10410	LEGIS PRINTING & GRAPHICS SUPERVISOR	E	100	O
10411	LEGIS PRINTING SPECIALIST		n/a	
10400	LEGIS PUBLICATIONS SPECIALIST		n/a	
10341	LEGIS RECEPTIONIST/SECRETARY	J	81	O
10348	LEGIS SECRETARY I	J	81	O
10343	LEGIS SECRETARY II	J	81	O
10345	LEGIS SECRETARY III	J	81	O
10346	LEGIS SECRETARY IV	J	81	O
09299	LEGIS SESSION INTERN	L	64	O
10414	LEGIS SESSION INTERN	L	64	O
10373	LEGIS SR PERF AUDITOR I		n/a	
10493	LEGIS SR PERF AUDITOR II		n/a	
10314	LEGIS SYST ANALYST/COMPUTER SPEC I	I	100	O
10318	LEGIS SYST ANALYST/COMPUTER SPEC II	I	100	O
16072	LEGISLATIVE & PLANNING COORDINATOR		n/a	
10322	LEGISLATIVE ADMINISTRATIVE ASSISTANT V	G	100	O
10303	LEGISLATIVE ASSISTANT DIRECTOR	C	144	P
10334	LEGISLATIVE ASSOCIATE GENERAL COUNSEL		n/a	
10338	LEGISLATIVE DEPUTY GENERAL COUNSEL		n/a	
10307	LEGISLATIVE GENERAL COUNSEL		n/a	
10350	LEGISLATIVE INFORMATION STAFF III		n/a	
10315	LEGISLATIVE IT MANAGER	D	120	O
10313	LEGISLATIVE MANAGING POLICY ANALYST		n/a	
10344	LEGISLATIVE POLICY ANALYST		n/a	
10374	LEGISLATIVE REPORT REFERENCE/EDITOR/AUDITOR		n/a	
10304	LEGISLATIVE RESEARCH ASSISTANT		n/a	
10405	LEGISLATIVE SESSION WORKER		n/a	
20422	LIABILITY PREVENTION SPECIALIST	G	100	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
28043	LIBRARIAN I	I	81	O
28044	LIBRARIAN II	D	150	P/O
28046	LIBRARIAN III	E	120	O
10222	LIBRARIAN, USDB	I	81	O
10564	LIBRARY ASST I	H	81	O
10566	LIBRARY ASST II	H	81	O
28049	LIBRARY PROGRAM MANAGER	D	120	O
28032	LIBRARY TECHNICIAN I	I	64	O
09150	LIBRARY TECHNICIAN I, ATT GEN	I	81	O
28033	LIBRARY TECHNICIAN II	G	100	O
28034	LIBRARY TECHNICIAN III	G	100	O
91032	LICENSED CLINICAL THERAPIST	G	120	P
34000	LICENSED PRACTICAL NURSE	G	100	O
91050	LICENSING SPECIALIST	D	120	P
83085	LIEUTENANT		144	
83149	LIEUTENANT--DNR	E	100	P
92254	LIFEGUARD/SWIMMING INSTRUCTOR, USDB		n/a	
14610	LIQUOR RETAIL STORE MANAGER I	D	100	O
14612	LIQUOR RETAIL STORE MANAGER II	D	100	O
14614	LIQUOR RETAIL STORE MANAGER III	D	100	O
92288	LIVING SKILLS CENTER ATTENDANT, USDC	G	100	O
10198	LOW VISION SPECIALIST, USDB	I	81	O
10003	LT GOVERNOR		n/a	
10131	LT GOVERNOR'S EXECUTIVE ASSISTANT-APPOINTED		n/a	
44011	MAINTENANCE METHODS SPECIALIST	I	81	O
10578	MANAGEMENT ANALYST I	I	100	O
10581	MANAGEMENT ANALYST II	I	100	O
10582	MANAGEMENT ANALYST III	I	100	O
10843	MANAGEMENT SERVICES DIRECTOR	C	144	P
22367	MANAGER FEDERAL/STATE TAX PROGRAMS	D	144	O
83170	MANAGER I, COMMERCE	E	81	P
83172	MANAGER II, COMMERCE	E	81	P
14310	MANAGER OF MANAGEMENT AND BUDGET, GOVR	C	150	P
10492	MANAGER OF SENATE SERVICES		n/a	
60166	MANAGER, AGRICULTURE INSPECTION	F	120	P
19378	MANAGER, CONTRACTS ESTIMATES/AGREEMENTS	E	100	O
14273	MANAGER, INTERNAL CONTROL	D	144	P
14284	MANAGER, STATE FINANCIAL REPORTING	D	144	
14270	MANAGER, STATE FINANCIAL TRANSACTIONS	D	144	P
10745	MANAGING PURCHASING AGENT	E	100	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
10174	MANSION MANAGER	D	120	O
21014	MARKET CONDUCT EXAMINER I	I	64	O
21008	MARKET CONDUCT EXAMINER II - EXEMPT	I	64	O
29044	MARKETING SPECIALIST	E	100	P
44020	MASTER PLANNER, NATIONAL GUARD		n/a	
29046	MEDIA PRODUCTION SPECIALIST	G	100	O
10546	MEDIATOR	G	81	O
20204	MEDICAID MGMT INFORMATION SYSTEM SUPERVISOR	E	100	O
32030	MEDICAL ADMINISTRATOR	F	150	P
32014	MEDICAL DOCTOR	F	150	P
35018	MEDICAL EXAMINER ASSISTANT	I	64	O
83182	MEDICAL EXAMINER INVESTIGATOR	G	100	O
35014	MEDICAL X-RAY LAB SPECIALIST		n/a	
10093	MEMBER, BOARD OF PARDONS		n/a	
28638	MILITARY MUSEUM MANAGER, NATIONAL GUARD		n/a	
28608	MILITARY SPECIALIST, NATIONAL GUARD		n/a	
20213	MMIS MANAGER	H	100	O
82284	MOTOR CARRIER OPERATIONS MANAGER	L	48	O
82288	MOTOR CARRIER PROGRAM COORDINATOR	G	64	O
82272	MOTOR CARRIER SPECIALIST I	L	48	O
82276	MOTOR CARRIER SPECIALIST II	L	48	O
82278	MOTOR CARRIER SPECIALIST III	L	48	O
82290	MOTOR CARRIER SPECIALIST IV	F	64	O
60516	MOTOR FUEL SPECIALIST	I	81	O
22028	MOTOR VEHICLE DELEGATED SERVICES SPECIALIST	E	100	O
22016	MOTOR VEHICLE QUALITY ASSURANCE ANALYST	E	100	O
22012	MOTOR VEHICLE SUPERVISOR I	E	100	O
22014	MOTOR VEHICLE SUPERVISOR II	E	100	O
22018	MOTOR VEHICLE SUPERVISOR III	E	100	O
28618	MUSEUM/HISTORICAL COLLECTIONS CURATOR	H	100	O
93004	MUSIC THERAPIST	I	81	O
34642	NURSE PRACTITIONER/CLINICAL NURSE SPECIALIST	G	100	O
34648	NURSING DIRECTOR	B	220	P
93006	OCCUPATIONAL THERAPIST	I	64	O
10195	OCCUPATIONAL THERAPIST, USDB	H	81	O
93002	OCCUPATIONAL THERAPY ASSISTANT	F	120	P/O
93008	OCCUPATIONAL THERAPY SUPERVISOR	E	120	P
10122	OFFICE ADMINISTRATOR, APPOINTED	E	100	O
10130	OFFICE ADMINISTRATOR, LT GOVERNOR		n/a	
11008	OFFICE CLERK I	J	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
11010	OFFICE CLERK II	J	81	O
11011	OFFICE CLERK III	G	100	O
10942	OFFICE CLERK TRAINEE	I	64	O
10409	OFFICE MANAGER, LEGIS PRINTING/BILLROOM	D	120	O
11020	OFFICE SPECIALIST I	K	64	O
10101	OFFICE SPECIALIST I, APPOINTED		n/a	
09360	OFFICE SPECIALIST I, ATT GEN	J	81	O
01209	OFFICE SPECIALIST I, INSP GEN MEDICAID SRVS	I	81	O
11022	OFFICE SPECIALIST II	J	81	O
10102	OFFICE SPECIALIST II, APPOINTED	J	81	O
10960	OFFICE SPECIALIST, TRUST LANDS ADMINISTRATION	I	81	O
10600	OFFICE TECHNICIAN I	J	81	O
11012	OFFICE TECHNICIAN I	J	81	O
01004	OFFICE TECHNICIAN I, APPOINTED	J	81	O
09363	OFFICE TECHNICIAN I, ATT GEN	J	81	O
10605	OFFICE TECHNICIAN II	J	81	O
11018	OFFICE TECHNICIAN II	J	81	O
10173	OFFICE TECHNICIAN II, APPOINTED	J	81	O
09365	OFFICE TECHNICIAN II, ATT GEN	J	81	O
10129	OFFICE TECHNICIAN II, LT GOVERNOR		n/a	
10971	OFFICE TECHNICIAN, TRUST LANDS ADMINISTRATION	I	81	O
83124	OFFICER	I	81	O
10865	ONLINE TRAINING PROGRAM SPECIALIST, COURTS	H	81	O
10866	ONLINE TRAINING PROGRAM SUPPORT-TIME LIMITED	H	81	O
01014	OPERATIONAL EXCELLENCE CONSULTANT, APPOINTED		n/a	
32006	OPTOMETRIST	L	36	O
10223	ORIENTATION & MOBILITY SPECIALIST, USDB	H	81	O
28614	OUTREACH PROGRAMS SPECIALIST	D	120	O
34418	PA/NP PRECEPTORSHIP	G	81	P
68009	PALEONTOLOGY ASSISTANT	I	81	O
10580	PARALEGAL/INVEST, JUDICIAL CONDUCT	G	100	O
92264	PARENT ADVISORS		n/a	
10193	PARENT INFANT PROGRAM CONSULTANT, USDB	H	81	O
83501	PARK MANAGER I	E	120	P
83081	PARK MANAGER I, POST	E	120	P
83502	PARK MANAGER II	E	144	P
83156	PARK MANAGER II, POST	E	144	P
83503	PARK MANAGER III	E	144	P
83150	PARK MANAGER III, POST	E	144	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
29018	PARK RANGER AIDE	L	36	O
83179	PARK RANGER I	L	48	O
83072	PARK RANGER I, POST	K	64	O
83178	PARK RANGER II	L	48	O
83075	PARK RANGER II, POST	K	64	O
83504	PARKS PROGRAM MANAGER	E	120	P
83078	PARKS PROGRAM MANAGER, POST	E	120	P
83084	PARKS REGIONAL MANAGER	E	144	P
14106	PAYROLL COORDINATOR	G	81	O
14108	PAYROLL SPECIALIST, STATE FINANCE	G	100	O
14102	PAYROLL TECHNICIAN I	I	81	O
14104	PAYROLL TECHNICIAN II	I	81	O
14110	PAYROLL TECHNICIAN, STATE FINANCE	G	100	O
10271	PERFORMANCE AUDITOR, USOE	G	100	P
01015	PERFORMANCE MEASUREMENT DATA MANAGER, APPOINT- ED		n/a	
14446	PERSONAL PROPERTY APPRAISAL MANAGER	E	100	P/O
14442	PERSONAL PROPERTY APPRAISER	G	81	P/O
43028	PETROLEUM ENGINEER	G	100	P
32175	PHARMACIST	H	100	O
32171	PHARMACY DIRECTOR	D	144	O
32173	PHARMACY TECHNICIAN	G	100	O
01208	PHARMACY TECHNICIAN - INSPEC GENERAL MEDICAID SRVS	I	81	O
10973	PHARMACY TECHNICIAN - INSPEC GENERAL MEDICAID SRVS	I	64	O
10746	PHYSICAL RESOURCES COORD	H	81	O
93352	PHYSICAL THERAPIST	G	120	P
10196	PHYSICAL THERAPIST, USDB	H	81	O
93355	PHYSICAL THERAPY SUPERVISOR	E	100	O
92276	PHYSICAL THERAPY TECHNICIAN	F	120	P
34638	PHYSICIAN ASSISTANT	G	100	O/P
43024	PIPELINE LEAD SAFETY ENGINEER	G	81	O
43022	PIPELINE SAFETY ENGINEER	G	81	O
10153	PLANNING AND BUDGET ANALYST II	I	100	O
19398	PLANS AND CONTRACTS TECHNICIAN. UDOT	I	64	O
83158	POLICE CORPS BUREAU CHIEF-APPOINTED	C	150	P
10250	POLICY ANALYST, PUBLIC LANDS POLICY COORD OFFICE	E	100	O
16076	POLICY ANALYST, PUBLIC LANDS POLICY COORD OFFICE	E	100	O
10900	POST RETIRED EMPLOYEE (EXEMPT)		n/a	
10868	POST RETIRED EMPLOYEE (NON-EXEMPT), COURTS	H	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
63356	PREDATORY ANIMAL CONTROL SPECIALIST	I	64	O
10221	PRE-SCHOOL INSTRUCTOR, USDB	H	81	O
12036	PRINTING OPERATOR	H	81	O
10510	PROBATION OFFICER II	F	140	P
10512	PROBATION OFFICER III	F	140	P
10514	PROBATION SUPERVISOR	D	155	P
22373	PROBLEM RESOLUTION SPECIALIST I	H	81	O
22377	PROBLEM RESOLUTION SPECIALIST II	H	81	O
11821	PROCESSING SERVICES TECHNICIAN I	I	64	O
91042	PROGRAM ADMINISTRATOR I	D	150	P
09375	PROGRAM ADMINISTRATOR I, ATT GEN	D	144	O
91046	PROGRAM ADMINISTRATOR II	D	150	P
14222	PROGRAM COORDINATOR	F	144	O
14250	PROGRAM COORDINATOR, UDOT	G	100	O
10550	PROGRAM DIRECTOR ADR	C	155	P
10275	PROGRAM DIRECTOR, GOED	C	150	P
10278	PROGRAM DIRECTOR, USTAR	E	100	O
29052	PROGRAM MANAGER	D	144	O
91074	PROGRAM MANAGER	E	120	O/P
14332	PROGRAM MANAGER- SURPLUS PROPERTY	D	144	O
10295	PROGRAM MANAGER, APPOINTED	C	150	P
30136	PROGRAM MANAGER, DWS	D	150	P
30118	PROGRAM SPECIALIST - DWS	H	81	O
44016	PROGRAM SPECIALIST - WATER RIGHTS	E	100	P
16036	PROGRAM SPECIALIST I	I	81	O
10280	PROGRAM SPECIALIST I, APPOINTED	G	100	O
16040	PROGRAM SPECIALIST II	H	100	O
10282	PROGRAM SPECIALIST II, APPOINTED	G	100	O
16044	PROGRAM SPECIALIST III	D	120	P/O
10286	PROGRAM SPECIALIST III, APPOINTED	D	120	P
09380	PROGRAM SPECIALIST III, ATT GEN	G	100	O
10289	PROGRAM SPECIALIST, EXEMPT	J	81	O
14248	PROGRAM SUPPORT SPECIALIST	I	64	O
91030	PROGRAM SUPPORT SPECIALIST	F	120	P/O
14262	PROGRAMS & FIELD OPERATIONS ADMINISTRATOR	E	100	P
92298	PROJECT AIDE	J	81	O
10520	PROJECT COORDINATOR	H	140	P
68012	PROJECT GEOLOGIST	I	81	O
14252	PROJECT MANAGEMENT SPECIALIST	H	81	O
32524	PROJECT/ASSISTANT BUREAU DIRECTOR	D	144	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
92268	PSYCHIATRIC TRANSPORTATION SPECIALIST	G	100	O
92258	PSYCHIATRIC/DEVELOPMENTAL TECHNICIAN	G	120	P
92014	PSYCHOLOGICAL ASSISTANT I	G	100	O
92016	PSYCHOLOGICAL ASSISTANT II	G	100	O
92010	PSYCHOLOGIST	G		O/P
10933	PUBLIC AFFAIRS OFFICER, TRUST LANDS ADMINISTRATION	H	100	O
32405	PUBLIC HEALTH NUTRITIONIST	I	81	O
29028	PUBLIC INFORMATION OFFICER I	E	150	P
09006	PUBLIC INFORMATION OFFICER I, ATT GEN		n/a	
10822	PUBLIC INFORMATION OFFICER II	G	150	P
29031	PUBLIC INFORMATION OFFICER II	G		O/P
01002	PUBLIC INFORMATION OFFICER II, APPOINTED	C	150	P
10159	PUBLIC LANDS POLICY COORDINATOR	D	120	P
83460	PUBLIC SAFETY BUREAU CHIEF, CEM	C	150	P
83284	PUBLIC SAFETY BUREAU CHIEF, DRIVER LICENSE	B	220	P
29062	PUBLICATIONS/CODE EDITOR	I	81	O
10742	PURCHASING AGENT I	H	81	O
19364	PURCHASING AGENT I	H	81	O
10744	PURCHASING AGENT II	H	81	O
19366	PURCHASING AGENT II	H	81	O
19368	PURCHASING AGENT III	H	100	O
19370	PURCHASING COORDINATOR	G	100	O
19388	PURCHASING MANAGER	D	120	O
19392	PURCHASING TECHNICIAN I	G	100	O
19394	PURCHASING TECHNICIAN II	I	81	O
30140	QUALITY CONTROL DATA ANALYST, DWS	H	81	O
10542	R&E PROGRAM COORDINATOR	G	81	O
83002	RADIO DISPATCHER		n/a	
14280	REAL ESTATE AND DEBT MANAGER	C	150	P
14486	REAL ESTATE AND DEBT MANAGER DFCM	C	150	P
10949	REAL ESTATE FINANCIAL ANALYST-TRUST LANDS	I	81	O
14481	REAL ESTATE SPECIALIST	G	120	P
10602	RECEPTIONIST	J	81	O
10158	RECEPTIONIST, GOVR		n/a	
28204	RECORDS MANAGER/ARCHIVIST III	C	144	P
36352	RECREATIONAL THERAPIST I		n/a	
36362	RECREATIONAL THERAPIST II		n/a	
36358	RECREATIONAL THERAPY SUPERVISOR	D	144	O
10568	REFERENCE LIBRARIAN	G	81	O
37009	REG ENVIRONMENTAL HEALTH SERVICES SPECIALIST	F	120	P/O
43078	REGION DIRECTOR UDOT	C	150	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
44032	REGION RIGHT OF WAY CONTROL COORDINATOR	G	100	O
30155	REGIONAL DIRECTOR - DWS	B	220	P
14616	REGIONAL MANAGER, ABC STORES DIVISION	D	100	P
34620	REGISTERED NURSE I	H	81	O
34622	REGISTERED NURSE II	H	81	O
34628	REGISTERED NURSE III	H	100	O
01206	REGISTERED NURSE, INSP GEN MEDICAID SRVS	G	81	O
30144	REHAB SUPERVISOR/PROGRAM SPECIALIST	D	120	P
30104	REHABILITATION COUNSELOR I	F	120	P
30112	REHABILITATION COUNSELOR II	G	120	P
30100	REHABILITATION COUNSELOR TRAINEE	G	81	O
30022	REHABILITATION DIVISION DIRECTOR	B	220	P
30093	REHABILITATION PROGRAM ADMINISTRATOR	D	150	P
30116	REHABILITATION PROGRAM SPECIALIST	G	120	P
30124	REHABILITATION SPECIALIST	G	120	P
30009	REHABILITATION TECHNICIAN	I	64	O
30007	RELATED SERVICES TECHNICIAN	I	81	O
10013	REPRESENTATIVE		n/a	
10541	RESEARCH ANALYST	I	81	O
16033	RESEARCH ANALYST	I	81	O
10277	RESEARCH ANALYST, APPOINTED	I	81	O
16016	RESEARCH ASSISTANT I	I	64	O
16028	RESEARCH ASSISTANT II	I	81	O
10276	RESEARCH ASSISTANT II, APPOINTED	I	81	O
10964	RESEARCH ASSISTANT, TRUST LANDS ADMINISTRATION	I	81	O
16056	RESEARCH CONSULTANT I	I	81	O
10292	RESEARCH CONSULTANT I, APPOINTED	I	81	O
16058	RESEARCH CONSULTANT II	D	120	P/O
10293	RESEARCH CONSULTANT II, APPOINTED	D	120	P/O
09430	RESEARCH CONSULTANT II, ATT GEN		n/a	
01215	RESEARCH CONSULTANT II, INSP GEN MEDICAID SRVS	I	81	O
16048	RESEARCH CONSULTANT III	D	120	P/O
10290	RESEARCH CONSULTANT III, APPOINTED	D	120	P/O
01216	RESEARCH CONSULTANT III, INSP GEN MEDICAID SRVS	I	81	O
10921	RESEARCH CONSULTANT, MEDICAL EDUCATION COUNCIL		64	O
10938	RESIDENT WORKER	N/A	n/a	N/A
15541	RESOURCE CENTER MANAGER, DHS	E	100	O
14600	RETAIL SALES CLERK I		n/a	
14602	RETAIL SALES CLERK II		n/a	
14608	RETAIL STORE MANAGER I	H	81	O
10918	RETAIL STORE MANAGER I, APPOINTED	I	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
14475	RIGHT OF WAY AGENT I	I	64	O
14476	RIGHT OF WAY AGENT II	I	64	O
14477	RIGHT OF WAY AGENT III	I	81	O
20404	RISK MANAGEMENT CLAIMS ADJUSTER I	I	100	O
20414	RISK MANAGEMENT CLAIMS ADJUSTER II	I	81	O
20416	RISK MANAGEMENT CLAIMS ADJUSTER III	H	100	O
14251	ROADWAY OPERATIONS ANALYST	I	81	O
44003	ROADWAY OPERATIONS COORDINATOR	H	81	O
44002	ROADWAY OPERATIONS MANAGER I	E	100	O
44001	ROADWAY OPERATIONS MANAGER II	E	100	O
44015	ROADWAY SAFETY SPECIALIST I	H	64	O
44017	ROADWAY SAFETY SPECIALIST II	H	64	O
44019	ROADWAY SAFETY SUPERVISOR	H	64	O
37020	SAFETY AND HEALTH MANAGER	E	100	O
37012	SAFETY AND HEALTH OFFICER	H	81	O
37018	SAFETY AND HEALTH SUPERVISOR	D	144	O
37010	SAFETY OFFICER	G	100	O
44038	SAFETY SPECIALIST - UDOT	I	81	O
37024	SAFETY/LOSS CONTROL COORDINATOR	G	100	O
92248	SCHOOL BUS AIDE, USDB		n/a	
56258	SCHOOL BUS DRIVER/DISABLED STUDENTS		n/a	
10216	SCHOOL CHILDREN'S TRUST COORDINATOR	G	100	O
16100	SCHOOL CHILDREN'S TRUST DIRECTOR	C	144	O
10217	SCHOOL CHILDREN'S TRUST SPECIALIST	H	81	O
16098	SCHOOL CHILDREN'S TRUST SPECIALIST	H	81	O
14456	SCHOOL FINANCE SPECIALIST	G	100	O
10194	SCHOOL NURSE - RN, USDB	G	120	P
92018	SCHOOL PSYCHOLOGIST	G	120	P
10218	SCHOOL PSYCHOLOGIST, USDB	G	120	P
76010	SEAMSTRESS/MALL CLERK		n/a	
10604	SECRETARY I	J	81	O
10606	SECRETARY II	J	81	O
10416	SECRETARY OF THE SENATE		n/a	
11149	SECRETARY TO THE STATE BOARD OF EDUCATION	G	100	P
83198	SECTION SUPERVISOR, BCI	E	120	P
14426	SECURITIES ANALYST	G	81	O
14425	SECURITIES EXAMINER	G	81	O
83638	SECURITY & ENFORCEMENT OFFICER - DHS	E	120	P
83014	SECURITY CONTROL CENTER OPERATOR	G	100	O
83017	SECURITY CONTROL CENTER OPERATOR SUPERVISOR	E	100	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
83632	SECURITY OFFICER	G	100	O
83634	SECURITY SPECIALIST, NATIONAL GUARD		n/a	
10847	SELF-HELP CENTER ATTORNEY	D	150	P
10011	SENATOR		n/a	
82103	SENIOR ANTI-DISCRIMINATION AGENT	F	120	P
91018	SENIOR ASSISTANT CASEWORKER	G	120	P
12476	SENIOR BUSINESS ANALYST	H	100	O
10157	SENIOR BUSINESS ANALYST, APPOINTED	H	100	O
10955	SENIOR CONSULTANT	H	81	O
16022	SENIOR ECONOMIST, DEPARTMENT OF WORKFORCE SERVICES	G	100	O
82854	SENIOR ELEVATOR/BOILER INSPECTOR	G	100	O
35384	SENIOR FORENSIC SCIENTIST	F	120	P/O
68008	SENIOR GEOLOGICAL TECHNICIAN	I	81	O
68014	SENIOR GEOLOGIST	E	120	P
32558	SENIOR HEALTH INFORMATICIST	G	81	O
86060	SENIOR HEARING OFFICER	G	120	P
37017	SENIOR INDUSTRIAL HYGIENIST	D	144	O
21010	SENIOR INSURANCE ANALYST	I	64	O
76006	SENIOR LAUNDRY WORKER		n/a	
14444	SENIOR PERSONAL PROPERTY APPRAISER	F	120	P/O
28630	SENIOR PRESERVATION PROGRAM SPECIALIST	H	100	O
92266	SENIOR PSYCHIATRIC TECHNICIAN	D	150	P
16038	SENIOR RESEARCH ANALYST	I	81	O
10281	SENIOR RESEARCH ANALYST, APPOINTED	F	120	P
10970	SENIOR RESEARCH ANALYST, TRUST LANDS ADMIN	I	100	O
37014	SENIOR SAFETY/HEALTH OFFICER	D	144	O
01011	SENIOR STAFF AUDITOR - APPOINTED	F	100	O
28623	SENIOR STATE HISTORIAN	H	100	O
30152	SENSORY IMPAIRMENT SPECIALIST I	G	100	O
30154	SENSORY IMPAIRMENT SPECIALIST II	G	100	O
30150	SENSORY IMPAIRMENT TRAINER, USDB	G	81	O
83137	SERGEANT	H	100	O
91064	SERVICE REVIEW ANALYST	G	100	O
53004	SERVICE STATION OPERATOR		n/a	
91044	SERVICES REVIEW MANAGER	D	120	O
53038	SHOP MANAGER	E	100	O
53008	SHOP SUPERVISOR	E	100	O
91024	SOCIAL SERVICE WORKER	F	120	P
91052	SOCIAL WORKER	G	120	P
10197	SOCIAL WORKER, USDB	G	81	P

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
09410	SPECIAL AGENT I, ATT GEN		n/a	
09202	SPECIAL AGENT I, ATT GEN MFCU		n/a	
09415	SPECIAL AGENT II, ATT GEN		n/a	
09204	SPECIAL AGENT II, ATT GEN MFCU		n/a	
09420	SPECIAL AGENT III, ATT GEN		n/a	
09425	SPECIAL AGENT IV, ATT GEN		n/a	
10252	SPECIAL ASSISTANT TO ATT GEN		n/a	
92272	SPEECH AND HEARING TECHNICIAN	F	120	P
10219	SPEECH PATHOLOGIST, USDB	G	100	O
20224	SPR/CPAS ANALYST	I	81	O
10144	SR ECON, PLNG & BUDGET		n/a	
10498	SR FISCAL ANALYST II	I	100	O
10859	SR JUDGE	A	280	P
10854	SR STAFF ATTORNEY	D	150	P
64006	ST FORESTER/DIR, DIV, FORESTRY FIRE & STATE LANDS	C	150	P
10852	STAFF ATTORNEY	D	150	P
10146	STAFF ATTORNEY, GOVERNOR'S OFFICE		n/a	
10273	STAFF AUDIT SUPERVISOR - APPOINTED	E		O/P
01007	STAFF AUDITOR - APPOINTED	F	100	O
10352	STAFF ECONOMIST/STATISTICIAN II		n/a	
10354	STAFF ECONOMIST/STATISTICIAN III		n/a	
10795	STAFF INTERPRETER - SPANISH	H	81	O
14290	STATE ACCOUNTANT	C	150	P
10999	STATE ACTIVE DUTY, UTAH NATIONAL GUARD		n/a	
10005	STATE AUDITOR	A	280	P
14294	STATE BUDGETARY COMPLIANCE ADMINISTRATOR	E	100	O
14282	STATE BUILDING BOARD MANAGER	C	120	P
35364	STATE CHEMIST	F	150	P
19372	STATE CONTRACT ANALYST, DAS	I	100	O
10846	STATE COURT ADMINISTRATOR	A	280	P
14296	STATE DEBT COLLECTOR SUPERVISOR	D	150	P
33374	STATE DENTAL DIRECTOR	C	150	P
32035	STATE EPIDEMIOLOGIST - MEDICAL DOCTOR	D	150	P
14286	STATE FINANCIAL INFORMATION SYSTEMS MANAGER	C	150	P
68024	STATE GEOLOGIST/DIRECTOR, UTAH GEOLOGICAL SURVEY	B	220	P
28648	STATE HISTORY PRESERVATION MANAGER	D	120	O
20424	STATE LIABILITY PREVENTION SPECIALIST	F,G	120	P
60520	STATE METROLOGIST	I	81	O
14298	STATE PAYROLL SUPERVISOR	D	144	O
10113	STATE PLANNING COORDINATOR		n/a	

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
14258	STATE RESOURCE MANAGER, NATIONAL GUARD		n/a	
20420	STATE RISK PROGRAM ADMINISTRATOR	C	150	P
10087	STATE SUPT, PUBLIC INSTRUCTION	A	280	P
12491	STATE TECHNICAL ARCHITECT - APPOINTED		150	P
10007	STATE TREASURER	A	280	P
32552	STATE VETERANS' NURSING HOME OFFICER	B	150	P
32834	STATE VETERINARIAN I	D	120	O
32833	STATE VETERINARIAN II	D	150	P
32836	STATE VETERINARIAN PATHOLOGIST	F	120	P
12608	STATE VOICE SUPPORT SPECIALIST	I	64	O
15314	STATEWIDE EMPLOYMENT LABOR RELATIONS DIRECTOR	C	150	P
44022	STATEWIDE PERMITS OFFICER	H	100	O
12478	STORAGE MANAGEMENT SPECIALIST I	H	81	O
12480	STORAGE MANAGEMENT SPECIALIST II	H	81	O
12618	STRATEGIC NETWORK PLANNER	H	81	O
92280	STUDENT EDUCATIONAL SERVICES AIDE, USDB		n/a	
10180	SUBSTITUTE TEACHER, USDB		n/a	
10089	SUPERINTENDENT, SCHOOLS FOR THE DEAF & BLIND	B	220	P
91091	SUPERINTENDENT, USH/USDC	B	220	P
83166	SUPERINTENDENT, UTAH HIGHWAY PATROL	B	220	P
35020	SUPERVISING MEDICAL EXAMINER ASSISTANT	G	81	O
92000	SUPERVISING PSYCHOLOGIST	C	150	P
10508	SUPERVISOR PROBATION OFFICER I	D	155	P
10730	SUPPORT SERVICES COORD I	G	100	O
14238	SUPPORT SERVICES COORD I	H	81	O
10732	SUPPORT SERVICES COORD II	G	100	O
14240	SUPPORT SERVICES COORD II	G	100	O
10920	SUPPORT SERVICES COORD II, APPOINTED	G	100	O
10734	SUPPORT SERVICES COORD III	G	100	O
14242	SUPPORT SERVICES COORD III	G	100	O
10263	SUPPORT SERVICES COORD III, APPOINTED	J	81	O
11052	SUPPORT STAFF SUPERVISOR	E	100	O
10861	SUPREME COURT JUSTICE	A	350	P
14458	SYSTEM SPECIALIST	E	100	P/O
14453	TAX APPRAISAL MANAGER	D	120	P/O
14447	TAX APPRAISAL SPECIALIST I	H	81	P/O
14449	TAX APPRAISAL SPECIALIST II	G	81	P/O
14451	TAX APPRAISAL SPECIALIST III	F	81	P/O
22371	TAX COMPLIANCE MANAGER	D	144	O
16088	TAX ECONOMIST II	E	81	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
10251	TAX ECONOMIST II, APPOINTED	C	81	O
22008	TAX/MOTOR VEHICLE SPECIALIST		n/a	
22004	TAX/MOTOR VEHICLE TECHNICIAN I	H	81	O
22006	TAX/MOTOR VEHICLE TECHNICIAN II	H	81	O
92246	TEACHER AIDE		n/a	
10667	TEAM MANAGER	D	120	O
12449	TECHNICAL SUPPORT ASSISTANT	K	64	O
12452	TECHNICAL SUPPORT SPEC I	I	81	O
09505	TECHNICAL SUPPORT SPEC I, ATT GEN	E	100	O
12454	TECHNICAL SUPPORT SPEC II	I	81	O
10975	TECHNICAL SUPPORT SPEC II TRUST LANDS ADMIN	I	81	O
09520	TECHNICAL SUPPORT SPEC II, ATT GEN	D	144	O
09525	TECHNICAL SUPPORT SPEC III, ATT GEN	D	144	O
12456	TECHNICAL SUPPORT SPECIALIST III	H	81	O
10968	TECHNICAL SUPPORT SPECIALIST III, TRUST LANDS ADM	I	81	O
35016	TECHNICAL SUPPORT SUPERVISOR	E	120	P
29042	TECHNICAL WRITER	G	81	O
10294	TECHNICAL WRITER, APPOINTED	I	81	O
91308	TECHNICAL WRITER, DHS	F	120	P
12620	TELECOMMUNICATIONS MANAGER	D	144	O
30110	TELECOMMUNICATIONS RELAY SERVICES SPECIALIST	I	81	O
12610	TELECOMMUNICATIONS SPECIALIST I	I	64	O
12612	TELECOMMUNICATIONS SPECIALIST II	I	64	O
12614	TELECOMMUNICATIONS SPECIALIST III	I	64	O
10794	TEMP APPLICATION PROGRAMMER ANALYST IV, COM- MERCE	I	81	O
10917	TEMP. INTERPRETER CERT. STAFF-USOR	I	64	O
10916	TEMP. PROGRAM ASST. USOR	I	81	O
10867	TEMPORARY FLSA NON-EXEMPT JOB, COURTS	H	81	O
00004	TEMPORARY/SEASONAL FLSA EXEMPT JOB	I	81	O
00002	TEMPORARY/SEASONAL FLSA NON-EXEMPT JOB	I	64	O
10974	TEMPORARY/SEASONAL FLSA NON-EXEMPT JOB	I	64	O
36359	THERAPEUTIC RECREATION TECHNICIAN	F	120	P/O
91040	THERAPIST SUPERVISOR	D	150	P
92274	THERAPY TECHNICIAN, OT	F	120	P/O
91017	TITLE IV-E MEDICAID ELIG. SPEC.	F	120	P/O
83004	TRAFFIC CONTROL OPERATOR I	I	81	O
83006	TRAFFIC CONTROL OPERATOR II	I	81	O
83016	TRAFFIC CONTROL OPERATOR III	I	81	O
52464	TRAFFIC SIGNAL OPERATIONS COORDINATOR	I	64	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
15504	TRAINER I	G	100	O
15506	TRAINER II	G	100	O
15508	TRAINER III		100	O
10680	TRAINING COORDINATOR	H	81	P
15516	TRAINING COORDINATOR I	E	120	P
10915	TRAINING COORDINATOR I, APPOINTED	E	120	O
09385	TRAINING COORDINATOR I, ATT GEN	G	100	O
01214	TRAINING COORDINATOR I, INSP GEN MEDICAID SRVS	I	81	O
15518	TRAINING COORDINATOR II	G	100	O
09985	TRAINING COORDINATOR, CJC	I	81	O
15514	TRAINING DIRECTOR - APPOINTED		150	P
15510	TRAINING MANAGER I	D	120	O
83083	TRAINING SPECIALIST	I	81	O
43026	TRANSPORTATION PROJECT MANAGER	H	100	O
44004	TRANSPORTATION TECHNICIAN I	I	64	O
44005	TRANSPORTATION TECHNICIAN II	I	64	O
44006	TRANSPORTATION TECHNICIAN III	L	48	O
09362	TRAVEL COORDINATOR, ATT GEN	J	81	O
29069	TRAVEL DEVELOPMENT PROGRAM SPECIALIST	I	81	O
10832	TRIAL COURT EXECUTIVE	D	180	P
10828	TRIAL COURT PROGRAM ADMINISTRATOR	F	120	P
56252	TRUCK DRIVER I		n/a	
56254	TRUCK DRIVER II		n/a	
56257	TRUCK DRIVER III		n/a	
10948	TRUST LANDS ADMINISTRATION AUDIT MANAGER	G	100	O
10958	TRUST LANDS AUDITOR	I	81	O
10950	TRUST LANDS BLOCK PLANNING COORDINATOR	I	81	O
10952	TRUST LANDS RESOURCE SPECIALIST	I	81	O
14435	UDOT CERTIFIED GENERAL APPRAISER	I	81	O
37021	UDOT CLAIMS COORDINATION SPECIALIST	I	81	O
43030	UDOT DISTRICT ENGINEER	D	144	O
44034	UDOT REGIONAL NEPA/NHPA SPECIALIST	G	100	O
20421	UDOT RISK PROGRAM MANAGER	D	144	O
14018	UI EMPLOYER DIRECTORY SPECIALIST	H	100	O
10274	UNCLAIMED PROPERTY ADMINISTRATOR	C	150	P
14226	UNEMPLOYMENT INSURANCE SPECIALIST SUPERVISOR	H	81	O
43056	URBAN PLANNING MANAGER	H	81	O
91086	USAAV COUNCIL COORDINATOR-APPOINTED		n/a	
10202	USDB CURRICULUM DIR	D	144	O
14618	UTAH STATE CAPITOL STORE MANAGER		n/a	

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
44054	UTILITY & RAILROAD COORDINATOR	G	100	O
16512	UTILITY ANALYST	H	81	O
16514	UTILITY TECHNICAL CONSULTANT	F	120	P
32832	VETERINARIAN	F	120	P
32837	VETERINARIAN PATHOLOGIST	H	100	P
10523	VICTIM COORDINATOR	G	100	O
29070	VICTIM COORDINATOR I	G	100	P
10297	VICTIM COORDINATOR I, APPOINTED	G	100	P
09390	VICTIM COORDINATOR I, ATT GEN	G	100	P
29072	VICTIM COORDINATOR II	G	81	P
01003	VICTIM COORDINATOR II, APPOINTED	G	100	P
09391	VICTIM COORDINATOR II, ATT GEN	G	100	P
29074	VICTIM COORDINATOR III	G	81	P
10176	VICTIM COORDINATOR III-APPOINTED	G	100	P
30117	VISION REHABILITATION COORDINATOR	G	81	O
10906	VISITOR SERVICES COORDINATOR	D	150	P
30130	VOCATIONAL REHABILITATION COORDINATOR	G	120	P
29010	VOLUNTEER SERVICES COORDINATOR I	G	120	O
29012	VOLUNTEER SERVICES COORDINATOR II	G	120	O
29014	VOLUNTEER SERVICES COORDINATOR III	E	100	O
82094	WAGE CLAIM UNIT COMPLIANCE OFFICER	I	81	P
58010	WAREHOUSE MANAGER	G	100	O
58020	WAREHOUSE SPECIALIST	I	81	O
58002	WAREHOUSE WORKER I	L	64	O
58004	WAREHOUSE WORKER II	L	64	O
58006	WAREHOUSE WORKER III	L	64	O
58018	WAREHOUSE/SURPLUS PROPERTY MANAGER		n/a	
10049	WATER COMMISSIONERS & DEPUTIES	N/A	n/a	N/A
12467	WEB DEVELOPER I	I	81	O
12469	WEB DEVELOPER II	G	100	O
10769	WEB PUBLISHER	I	64	O
60510	WEIGHTS AND MEASURES INSPECTOR I	F	120	P
60512	WEIGHTS AND MEASURES INSPECTOR II	F	120	P
60522	WEIGHTS AND MEASURES PROGRAM MANAGER	D	120	O
63426	WILDLIFE ASSISTANT SUPERVISOR I	I	64	O
63430	WILDLIFE BIOLOGIST I	G	100	O
63434	WILDLIFE BIOLOGIST II	I	64	O
63436	WILDLIFE BIOLOGIST III	G	100	O
63368	WILDLIFE BOARD/RAC COORDINATOR	F	150	P
63372	WILDLIFE COORDINATOR	K	64	O

METHODOLOGY

JOB ID	MASTER JOB LIST	GROUP	SF	PRIVATE/ OPEN OFFICE
14256	WILDLIFE LICENSING COORDINATOR	E	100	P
14014	WILDLIFE LICENSING SPECIALIST	I	64	O
63340	WILDLIFE PROGRAM CHIEF	E	120	O/P
63349	WILDLIFE PROGRAM MANAGER	E	100	O
63360	WILDLIFE RESOURCE EDUCATION SPECIALIST I	H	81	O
63364	WILDLIFE RESOURCE EDUCATION SPECIALIST II	H	81	O
63396	WILDLIFE SPECIALIST	L	36	O
63432	WILDLIFE SUPERVISOR I	E	150	P
63428	WILDLIFE SUPERVISOR II	H	81	O
63392	WILDLIFE TECHNICIAN I		n/a	
63394	WILDLIFE TECHNICIAN II	I	64	O
30102	WORKFORCE SERVICES SPECIALIST I	H	81	O
30106	WORKFORCE SERVICES SPECIALIST II	H	81	O
30120	WORKFORCE SERVICES SUPERVISOR	F	120	O



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4 2015
Subject: **Revised Architectural/Engineering Fee Schedule**

Attached for your review is the revised Architectural/Engineer Fees for the Division of Facilities and Construction Management. This schedule updates the earlier standard and will become effective March 30, 2015. No action is required by the Board for this agenda item.

JR: cn
Attachments

DIVISION OF FACILITIES AND CONSTRUCTION MANAGEMENT
ARCHITECTURAL/ENGINEER FEES
EFFECTIVE DATE: March 30, 2015

I. Purpose

To provide a standard for reasonable A/E fee structure on State of Utah Projects

II. Background

State procurement statute requires that professional services be selected based on a RFP method or Direct Award for smaller projects. In both cases the fee cannot be used to determine the selection. A standard is required to ensure that reasonable fees are negotiated for awarded work, for which this is the definitive guide. This policy updates earlier standards with additional clarity.

III. Policy

DFCM Project Managers shall employ this standard for the negotiation of Architectural/Engineering Fees. Any exception to this standard can only be obtained by written approval of the DFCM Director.

IV. Procedures

- a. Fee should be established with the individual project size and complexities in mind.
- b. An individual project may have complexities due to the inherent nature of the project type, by complexity of consultants services required and/or by complexities of the scope of the project.
- c. The fee schedules represent the maximum allowable fee for basic services on a typical project type. Complexity of consultant is negotiated on a case by case basis and requires a separate proposal for each consultant. Complexity of scope is a reasonable fee negotiated on a case by case basis.
- d. Basic Services is the design work customary on a typical project to take an established building program, site, and budget, and then develop the architectural design, engineer the building systems, produce construction documents, and perform construction administration for a single phase project. Basic Services include the design services customary on every project such as architectural, structural, civil, mechanical, and electrical engineering services.
- e. Basic Services for Civil Engineering on an Architectural Project shall be limited to the following: site planning including layout of site features, building position, preliminary grading, location of paving for walkways, driveways and parking, and fencing locations. Also included are the normal connections required to service the building such as water, drainage, and sanitary systems, if applicable.
- f. Not included in the Basic Services are amounts to cover Direct and Reimbursable costs such as travel and printing. These costs are reimbursed at 1.05% of cost and travel will be determined as per State Travel Guidelines.

DIVISION OF FACILITIES AND CONSTRUCTION MANAGEMENT
ARCHITECTURAL/ENGINEER FEES

EFFECTIVE DATE: March 30, 2015

- g. Instructions for determining fee: determine if the project is Architectural or Engineering; by use of building type determine which schedule to use; using the proper budget range and schedule type find the basic fee percentage. The basic fee is then determined by multiplying the construction budget by the scheduled percentage. The total fee is then determined by combining the basic services fee, with the complexity of consultant fee and complexity of scope fee.
- h. Basic Services will vary from project to project. The following is an example of a typical project distribution as a percentage of the fee. The distribution will be determined on a project by project basis by the Prime Firm:
 - Architectural 60%
 - Mechanical 15%
 - Structural 12%
 - Electrical 10%
 - Civil 3%

V. Customer Satisfaction Incentive

Each A/E is eligible to earn a Customer Satisfaction Incentive (CSI) 12.5%. The eligible incentive is held at risk and will be earned by performance as described in this document.

Example: Architectural Project Design Fee (Schedule E) with a construction budget of 20,000,000 x 7.3% = \$1,460,000. 12.5 % (\$182,500) is at Risk.

Total Eligible CSI for this fee structure is = \$182,500.

Each period the DFCM will evaluate the performance of the A/E based on the evaluation criteria. The evaluation criteria will be determined for each project independently by the DFCM, the Agency and the Project Team. DFCM reserves the right to request any additional information required to complete this evaluation. Each period the A/E and the DFCM Management will meet with the Team and the Agency Representatives, to determine the amount of the Customer Satisfaction Incentive earned. After this meeting the DFCM will tabulate the score to determine the amount of incentive earned for that period.

Capital Development Projects will be divided into the following five periods: Schematic Design, Design Development, Construction Documents and bidding, 50% construction Complete and Closeout.

Capital Improvement Projects with a construction budget over \$1,000,000 will be divided into two periods; Completion of Design and Completion of Construction.

Capital Improvement Projects with a construction budget under \$1,000,000 will have one evaluation at Completion of Construction.

DIVISION OF FACILITIES AND CONSTRUCTION MANAGEMENT
ARCHITECTURAL/ENGINEER FEES
EFFECTIVE DATE: March 30, 2015

Example: \$182,500 Eligible CSI divided by five periods = \$36,500 per Period

Evaluation Criteria:

Budget and Change Management

Schedule Management and Timeliness of deliverables

Quality of Plans and Documents

Responsiveness & Collaboration

Innovation and Creativity

Total Points Possible 100

The total point score will be equal to the percentage of the CSI earned for each period.

Example: a score of 89 points will earn 89% of the fee for that period

Scores below 80 will result in no CSI earned for that period.

Re-earning of lost Quarterly CSI: The A/E may "re-earn" any CSI lost for the duration of one period. This is demonstrated by an increase in performance evaluation score from the previous period. The amount of CSI "re-earned" will be equal to the difference of the CSI earned in the current period and the CSI earned the previous period. A loss of CSI in the last period can't be re-earned.

The past performance rating for the project shall determined by an average of all the period scores and then will be converted to a 1-5 point rating scale.

Example: 90 point average of all periods would receive a past performance rating of 4.5

The re-earning of a period CSI shall have no effect on the past performance ratings.

SCHEDULE OF ARCHITECTURAL PROJECT COMPLEXITY

Schedule -A	Schedule - B	Schedule - C	Schedule -D	Schedule - E
Considerably less than average Complexity	Less than Average Complexity	Average Complexity	More than average Complexity	Considerably more than average Complexity
Warehouses Parking Structures Garages Farm Structures Residential Housing	Student Housing Office Buildings Complex Parking Structures Liquor Stores Visitor Centers Shop & Maintenance facility	Classroom Buildings General Teaching Spaces Medical Offices Clinics Gymnasias Armories Nursing Homes Care Facilities Strength/Fitness Ctr. Mixed-Use Housing Public Safety Admin. Laundry	Complex Classroom Bldgs. Libraries Dinning Facilities Theaters - no stage Arena's Auditoriums - no stage Medical Schools Specialty Schools Physically Disadvantaged Adult or Youth Detention Court Facilities Performing Arts Medical Clinics Skilled Nursing Computer Facilities Recreation Facilities	Scientific Research Medical Research Engineering Research Teaching Labs Hospitals Museums Mental Health Facilities Prison Facilities Stadiums Emergency Opps Center Vivarium's Fish Hatcheries Veterinarian Facilities Auditorium - w/Stage Theater - w/Stage
Complexity of Scope	Complexity of Consultant			
Multiple Bid Packages Schedule Acceleration Seismic Upgrade LEED Certification Complex Site Conditions Photo-realistic Rendering Additional Energy Measures Historical Renovation Complex Engineering	Commissioning Envelope Commissioning Envelope Testing Energy Modeling Scheduling Consultant	Programing Master Planning Feasibility Studies Site Surveys Geotechnical Surveys Cost Consultant	Specialty Consultants Lab Consultants Landscape Kitchen Acoustical Traffic Consultant	FF&E Design Haz Mat Branding AV/IT Security Elevator

STATE OF UTAH
ARCHITECTURAL PROJECT DESIGN FEE SCHEDULE

Remodel/Improvement Budget	Schedule A	Schedule B	Schedule C	Schedule D	Schedule E
\$50,000 and below	10.0	10.6	11.2	11.8	12.5
\$50,000 to \$99,999	9.5	10.1	10.7	11.3	12.0
\$100,000 to \$149,999	9.2	9.8	10.4	11.0	11.7
\$150,000 to \$199,999	8.9	9.5	10.1	10.7	11.4
\$200,000 to \$299,999	8.6	9.2	9.8	10.4	11.1
\$300,000 to \$,500,000	8.3	8.9	9.5	10.1	10.8
\$500,000 to \$750,000	8.0	8.6	9.2	9.8	10.5
\$750,000 to \$1,000,000	7.7	8.3	8.9	9.5	10.2
\$1,000,000 to \$1,499,999	7.4	8.0	8.6	9.2	9.9
\$1,500,000 to \$1,999,999	7.1	7.7	8.3	8.9	9.6
\$2,000,000 to \$2,999,999	6.8	7.4	8.0	8.6	9.3
\$3,000,000 to \$3,999,999	6.6	7.2	7.8	8.4	9.1
\$4,000,000 to \$4,999,999	6.4	7.0	7.6	8.2	8.9
\$5,000,000 to \$7,999,999	6.2	6.8	7.4	8.0	8.7
\$8,000,000 to \$11,999,999	6.0	6.6	7.2	7.8	8.5
\$12,000,000 to \$14,999,999	5.7	6.2	6.7	7.2	7.7
\$15,000,000 to \$19,999,999	5.5	6.0	6.5	7.0	7.5
\$20,000,000 to \$24,999,999	5.3	5.8	6.3	6.8	7.3
\$25,000,000 to \$29,999,999	5.2	5.7	6.2	6.7	7.2
\$30,000,000 to \$34,999,999	5.1	5.6	6.1	6.6	7.1
\$35,000,000 to \$39,999,999	5.0	5.5	6.0	6.5	7.0
\$40,000,000 to \$49,999,999	4.9	5.4	5.9	6.4	6.9
\$50,000,000 and above	4.8	5.3	5.8	6.3	6.8
For renovation projects add to percentage above for the portion that is renovation	1.0	1.3	1.5	1.7	2.0

SCHEDULE OF ENGINEERING PROJECT COMPLEXITY

Schedule -A	Schedule - B	Schedule - C
Average Complexity	Complex	Unusuall Complexity
Average Retaining Walls and Foundations Average Parks, Marinas and Rec Area's Average Roads and Streets Average Storm Drain & Sewage Collection Small Dams Small Bridges Airport with simple terminal Facilities Average Roofs Water Wells Water Tanks Pump Station Lift Station	Complex Retaining Walls and Foundations Complex Parks, Marinas and Rec Area's Complex Roads and Streets Complex Storm Drain & Sewage Collection Large or Complex Small Dams Asymmetric Bridges Airport with Complex terminal Facilities Complex Roofs Sewage & Water Treatment Facilities Average Telecom Facilities Electrical & Data Transmission Solid Waste Disposal Average Acoustical Design Air Pollution Abatement, Control and Testing Water Reservoirs Utility Tunnel	Unusual Foundations with Complex Soils Complex Acoustical Design Complex Mechanical and Electrical Controls Storm Drain & Sewers - Heavily Urbanized Area Complex Large Dams Extremely Complex Bridges Complex Sewage & Water Treatment Facilities Complex Telecom Facilities Complex Utility Tunnels

Complexity of Scope	Complexity of Consultant	
Commissioning Multiple Bid Packages Schedule Acceleration Complex Site Conditions Observation and Inspection Seismic Upgrade	Programming Master Planning Feasibility Studies Specialty Consultants	Site Surveys Geotechnical Surveys Arc/Fault Current Study

These are examples of additional services that are not included in the complexity of schedules A-C. These services will be negotiated singularly and shall require a separate fee proposal.

STATE OF UTAH
ENGINEERING PROJECT DESIGN FEE SCHEDULE

New Construction Budget	Schedule A		Schedule B		Schedule C
\$50,000 and below	12.0		13.0		14.0
\$50,000 to \$99,999	11.0		12.0		13.0
\$100,000 to \$149,999	10.5		11.5		12.5
\$150,000 to \$199,999	10.0		11.0		12.0
\$200,000 to \$299,999	9.5		10.5		11.5
\$300,000 to \$499,999	9.0		10.0		11.0
\$500,000 to \$749,999	8.5		9.0		9.7
\$750,000 to \$ 1,000,000	8.0		8.5		9.2
\$1,000,000 to \$1,499,999	7.6		8.1		8.8
\$1,500,000 to \$1,999,999	7.2		7.7		8.4
\$2,000,000 to \$2,999,999	7.0		7.5		8.2
\$3,000,000 to \$3,999,999	6.8		7.3		8.0
\$4,000,000 to \$4,999,999	6.6		7.1		7.8
\$5,000,000 to \$7,999,999	6.4		6.9		7.6
\$7,000,000 to \$11,999,999	6.2		6.7		7.4
\$12,000,000 to \$19,999,999	6.0		6.5		7.2
\$20,000,000 to \$29,999,999	5.9		6.4		7.1
\$30,000,000 to \$50,000,000	5.8		6.3		7.0
\$50,000,000 and above	5.7		6.2		6.9
For renovation projects add to percentage above for the portion that is renovation	1.0		1.5		2



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4, 2015
Subject: **Administrative Reports for University of Utah and Utah State University**
Presenter: Ken Nye, University of Utah
Presenter: Ben Berrett, Utah State University

Attached for your review are the Administrative Reports for University of Utah and Utah State University. The University of Utah will present reports for the past two reporting periods and Utah State will present for the past three reporting periods.

JR: cn
Attachments



Office of the Vice President
For Administrative Services

January 20, 2015

Mr. Jeff Reddoor, Building Board Director
Division of Facilities Construction and Management
State Office Building Room 4110
Salt Lake City, UT 84114

Subject: U of U Administrative Reports for the February 4, 2015 Building Board Meeting.

Dear Jeff:

The following is a summary of the administrative reports for the U of U for the period December 24, 2014 – January 16, 2015. Please include this in the packet for the February 4, 2015 Building Board meeting.

Professional Services Agreements (Page 1)

The Professional Services Agreements awarded during this period consist of:
2 Design Agreements, 5 Planning/ Study/Other Agreements.

No significant items.

Construction Contracts (Page 2)

The Construction Contracts awarded during this period consist of:
0 New Space Contracts, 6 Remodeling Contracts, 0 Site Improvement Contracts.

No significant items.

Report of Project Reserve Fund Activity (Page 3)

Increases:

One capital improvement project was closed out with the residual balance totaling \$28.06 transferred to Project Reserve as provided by statute.

Decreases:

None

Report of Contingency Reserve Fund (Page 4)

Increases:

None

Decreases:

Project 21223; Social & Behavioral Science - Repair Exterior Concrete & Steel
This transfer of \$41,559 addresses two unforeseen issues during design. The most substantial, \$30,924, covers the cost of constructability reviews and other consulting for the design of the seismic upgrade. Design changes identified by the contractor reduced estimated project costs by over \$100,000. The second

Associate Vice President Facilities Management

1795 East South Campus Dr, Room 219
V. Randall Turpin University Services Building
Salt Lake City, UT 84112-9404
(801) 581-6510
FAX (801) 581-6081

Mr. Jeff Reddoor, Building Board Director
January 20, 2015
Page 2

item covers the design of an accessible family restroom. This was an unexpected code requirement. These items pushed the design fee well above the amount budgeted for this purpose.

Project 21357; South Chiller Consolidation

This transfer of \$75,528 addresses a number of design omissions and unforeseen conditions including: (a) addition of a number of balancing and butterfly valves that are required for correct operation of the chilled water system and which had been left out of the bid documents (\$58,652); (b) replacement of a section of storm sewer which, when uncovered, was found to be corroded and leaking (\$8,531); and (c) several other unforeseen conditions (\$8,345).

Representatives from the University of Utah will attend the Building Board meeting to address any questions the Board may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth E. Nye". The signature is fluid and cursive, with a large initial "K" and "E".

Kenneth E. Nye, Director
Facilities Management Business Services

Enclosures

cc: University of Utah Trustees
Mike Perez
Bruce Whittington



Professional Services Agreements
Awarded From December 24, 2014 - January 16, 2015

Item Number	Project Number	Project Name	Firm Name	Project Budget	Contract Amount
Design					
1	21705	USA Balcony Repairs 2015	Reaveley Engineers	\$ 190,192	\$ 14,050
2	21714	BEHS Seismic Phase C - Classroom Level	GSBS	\$ 2,326,983	\$ 59,537
Planning/Study/ Other					
3	21223	BEHS Structural Peer Review - Phase 1 &Phase 2	West Coast Consultants / Kimball Eng	\$ 3,304,135	\$ 6,600
4	21726	Upper Campus HTW and CW Study	Colvin Engineering	\$ 40,000	\$ 40,000
5	21595	Tennis Center Outdoor Courts - Testing	Utah Testing and Engineering	\$ 2,601,000	\$ 20,090
6	21355	Alumni House Addition - Programming	Babcock Design Group	\$ 1,746,651	\$ 75,000
7	21553	HOER Central Chiller Plant Special Inspections	Western Technologies	\$ 2,515,845	\$ 9,875



Construction Contracts

Awarded From December 24, 2014 - January 16, 2015

Item Number	Project Number	Project Name	Firm Name	Design Firm	Project Budget	Contract Amount
Construction - New Space						
Construction - Remodeling						
1	21223	Social & Behavioral Science Structural Repairs - Abatement	Eagle Environmental		\$ 3,304,135	\$ 71,739
2	21279	Sill Center Remodel	Eagle Environmental		\$ 1,919,772	\$ 30,290
3	21669	Union West Freight Elevator Upgrade Abatement	Eagle Environmental		\$ 188,913	\$ 13,913
4	21674	UMFA Dehumidification Retrofit - HVAC	Mechanical Services and Systems		\$ 170,705	\$ 146,379
5	21685	Human Performance Lab Remodel	Archer Construction		\$ 156,640	\$ 97,146
6	70016	Farmington Temporary Clinic Remodel	ASHCO		\$ 249,999	\$ 214,243
Construction - Site Improvement						



University Of Utah
Report Of Project Reserve Fund Activity
For the Period of December 24, 2014 to January 16, 2015

PROJECT NUMBER	PROJECT TITLE	TRANSFER AMOUNT	DESCRIPTION FOR CONTINGENCY TRANSFER	% OF CONSTR. BUDGET
21453	BEGINNING BALANCE	412,246.11		
	INCREASES TO PROJECT RESERVE FUND:			
	Genetics Bldg Heating Water Piping Replacement	28.06	Project complete. Transferred remaining balance to Project Reserve	0.003%
	DECREASES TO PROJECT RESERVE FUND: None			
	CURRENT BALANCE OF PROJECT RESERVE:	412,274.17		



University Of Utah
Report Of Contingency Reserve Fund Activity
For the Period of December 24, 2014 to January 16, 2015

PROJ. NO.	DESCRIPTION	CURRENT TRANSFERS	TOTAL TRANSFERS FROM CONTINGENCY	% OF CONSTR. BUDGET	PROJECT STATUS
	BEGINNING BALANCE	1,917,056.12			
	INCREASES TO CONTINGENCY RESERVE FUND				
	None				
	DECREASES TO CONTINGENCY RESERVE FUND				
	NEW CONSTRUCTION				
	None				
	REMODELING				
21223	Social & Behavioral Science - Repair Exterior Concrete & Steel	(41,559.00)	59,723.47	2.39%	Construction
21357	South Chiller Consolidation	(75,528.00)	75,528.00	6.67%	Construction
	ENDING BALANCE	1,799,969.12			



Office of the Vice President
For Administrative Services

February 13, 2015

Mr. Jeff Reddoor, Building Board Director
Division of Facilities Construction and Management
State Office Building Room 4110
Salt Lake City, UT 84114

Subject: U of U Administrative Reports for the March 4, 2015 Building Board Meeting.

Dear Jeff:

The following is a summary of the administrative reports for the U of U for the period January 17, 2015 – February 13, 2015. Please include this in the packet for the March 4, 2015 Building Board meeting.

Professional Services Agreements (Page 1)

The Professional Services Agreements awarded during this period consist of:
4 Design Agreements, 1 Planning/ Study/Other Agreements.

No significant items.

Construction Contracts (Page 2)

The Construction Contracts awarded during this period consist of:
0 New Space Contracts, 2 Remodeling Contracts, 1 Site Improvement Contracts.

No significant items.

Report of Project Reserve Fund Activity (Page 3)

Increases:

One capital improvement project was closed out with the residual balance of \$4,370.63 transferred to Project Reserve as provided by statute.

Decreases:

None.

Report of Contingency Reserve Fund (Page 4)

Increases: None.

Associate Vice President Facilities Management

1795 East South Campus Dr, Room 219
V. Randall Turpin University Services Building
Salt Lake City, UT 84112-9404
(801) 581-6510
FAX (801) 581-6081

Mr. Jeff Reddoor, Building Board Director
February 13, 2015
Page 2

Decreases:

Project 21160, Eyring Chemistry North Tower East Fumehood Upgrade

This transfer of \$111,661.75 covers the cost of a number of unforeseen conditions, code requirements, and design omissions that were encountered with this project. The more substantial elements include: (a) \$17,351 for abatement of hazardous materials; (b) \$34,137 for duct modifications and installation of gate dampers to improve operations and lessen project impact on academic labs during construction; (c) \$17,253 to provide support as required by code for pipes and conduit that were discovered to be resting on the ceiling grid; (d) \$11,354 to revise the HVAC control system to allow operators to view graphics and manage building controls from a single workstation; and (e) \$31,577 for a variety (nine) other changes required to address unforeseen conditions or omissions in the design.

This project is substantially complete and no additional contingency draws are anticipated. The total contingency draws are less than the amount budgeted for contingency.

Project 21435, HEB North Tower East Fumehood

This transfer of \$17,422.80 covers the cost of adding ventilation to two existing flammable cabinets that were not identified during design and to relocate two sprinkler heads required when the ceiling was lowered.

Project 21553, HPER Chiller Plant Upgrade

This transfer of \$29,324.12 covers the cost of addressing several unforeseen conditions resulting from existing pipe being at a greater depth than expected, discovery of abandoned pipe that had to be removed, relocation of a fire sprinkler line due to routing conflict with a chilled water line, and replacement of 50 year old valves that would not close completely.

Representatives from the University of Utah will attend the Building Board meeting to address any questions the Board may have.

Sincerely,



Kenneth E. Nye, Director
Facilities Management Business Services

Enclosures

cc: University of Utah Trustees
Mike Perez
Bruce Whittington



Professional Services Agreements
Awarded From January 17, 2015 - February 13, 2015

Item Number	Project Number	Project Name	Firm Name	Project Budget	Contract Amount
Design					
1	21512	Lot 50 Garage Stairwell Restoration and Enclosure	Tracy Stocking and Assoc	\$ 413,615	\$ 60,815
2	21712	Nephi Nursing Aired Helipad	Eaton Architecture	\$ 77,785	\$ 9,729
3	21727	LNCO - TEAL Classroom Remodel	Pasker Gould Ames and Weaver	\$ 119,261	\$ 9,870
4	21713	Layton Helipad Upgrade	Eaton Architecture	\$ 85,719	\$ 5,145
Planning/Study/ Other					
5	20124	Mccarthey Track and Field	Lloyd Consulting	\$ 21,400	\$ 21,400



Construction Contracts

Awarded From January 17, 2015 - February 13, 2015

Item Number	Project Number	Project Name	Firm Name	Design Firm	Project Budget	Contract Amount
Construction - New Space						
Construction - Remodeling						
1	21614	Nano Tool Install phase 7	Alternative Mechanical		\$ 637,843	\$ 491,343
2	21557	Research Admin Building Remodel	Archer Construction		\$ 292,919	\$ 193,800
Construction - Site Improvement						
3	21606	Health Sciences Gateway Signs	Young Electric		\$ 578,078	\$ 252,844



University Of Utah
Report Of Project Reserve Fund Activity
For the Period of January 17, 2015 to February 13, 2015

PROJECT NUMBER	PROJECT TITLE	TRANSFER AMOUNT	DESCRIPTION FOR CONTINGENCY TRANSFER	% OF CONSTR. BUDGET
20034	BEGINNING BALANCE	412,274.17		
	INCREASES TO PROJECT RESERVE FUND:			
	Eccles Health Sciences Fire Protection	4,370.63	Project complete. Transferred remaining balance to Project Reserve	0.315%
	DECREASES TO PROJECT RESERVE FUND: None			
	CURRENT BALANCE OF PROJECT RESERVE:	416,644.80		



University Of Utah
Report Of Contingency Reserve Fund Activity
For the Period of January 17, 2015 to February 13, 2015

PROJ. NO.	DESCRIPTION	CURRENT TRANSFERS	TOTAL TRANSFERS FROM CONTINGENCY	% OF CONSTR. BUDGET	PROJECT STATUS
	BEGINNING BALANCE	1,799,969.12			
	INCREASES TO CONTINGENCY RESERVE FUND				
	None				
	DECREASES TO CONTINGENCY RESERVE FUND				
	NEW CONSTRUCTION				
	None				
	REMODELING				
21160	Eyring Chemistry North Tower East Fumehood Upgrade	(111,661.75)	111,661.75	5.94%	Substantial Completion
21435	HEB North Tower East Fumehood Upgrade	(17,422.80)	149,535.65	7.29%	Construction
21553	HPER SE-Chiller Plant Upgrade	(29,324.12)	29,324.12	1.26%	Construction
	ENDING BALANCE	1,641,560.45			

29 December 2014

Jeff Reddoor, Building Board Manager
Division of Facilities Construction
and Management
State Office Building Room 4110
PO Box 141160
Salt Lake City, UT 84114-1284

Dear Jeff:

SUBJECT: USU Administrative Reports for the January 2015 Building Board Meeting

The following is a summary of the administrative reports for USU for the period 11/24/14 to 12/29/14.

Professional Contracts, 3 contracts issued (Page 1)

Comments are provided on the report.

Construction Contracts, 11 contracts issued (Page 2)

Comments are provided on the report.

Report of Contingency Reserve Fund (Page 3)

Two projects needed funds from the contingency reserve during this reporting period. The contingency fund is in good order.

Report of Project Reserve Fund Activity (Page 4)

Four projects contributed to the project reserve fund and one project needed funds from the project reserve fund during this reporting period. The project reserve fund is in good order.

Current Delegated Projects List (Pages 5-6)

Of USU's 55 projects, 9 are pending, 6 are in the design/study phase, 33 are in construction, 2 are substantially complete and 5 are complete. The five projects that were completed during this period were Classroom Auditorium Upgrade FY13, Concrete Replacement FY14, OM Masonry Restoration FY15, Sign System FY13, and TSC Chiller Replacement.

Representatives from Utah State University will attend the Building Board meeting to address any questions the Board may have.

Sincerely,



David T. Cowley
Vice President for
Business and Finance

DTC/bg
c: Gregory L. Stauffer
Bruce Whittington

Professional Contracts Awarded From 11/24/14 to 12/29/14

Contract Name	Firm Name	A/E Budget	Fee Amount	Comments
1 Animal Science HVAC Upgrade 2014	Sine Source	\$12,567.00	\$3,950.00	Electrical engineering
2 Classroom/Auditorium Upgrades FY14	USU Facilities Planning and Design	\$16,068.00	\$194.00	Engr 103 projector modifications
MISCELLANEOUS CONTRACTS				
3 Planning and Design FY15	Johansen & Tuttle Engineering	\$114,875.00	\$15,500.00	Mapping/drafting of USUE Price Campus

Construction Contracts Awarded From 11/24/14 to 12/29/14

Project	Firm Name	Design Firm	Const Budget	Contract Amt	Comments
1 Morgan Theater Upgrade	Raymond Construction	CRSA	\$1,230,184.00	\$1,255,779.00	Bid reserve used to award contract
2 Animal Science HVAC Upgrade 2014	Raymond Construction	Sine Source	\$134,833.00	\$134,833.00	HVAC system upgrades for Animal Science Building
3 Eccles Conf Ctr Auditorium Upgrade	USU Information Technology	Spectrum Engineers	\$493,280.00	\$101,737.00	Equipment/switches for upgrade
4 Health, LS, Code, Asbestos FY15	USU Facilities Operations	USU Facilities Planning and Design	\$130,137.00	\$7,263.00	Replace fire separation doors in Fine Arts Hallway
5 Health, LS, Code, Asbestos FY15	USU Facilities Operations	USU Facilities Planning and Design	\$130,137.00	\$5,360.00	Install Exit device/leverlocks in Education 413, 413E, 487, 487C
6 Health, LS, Code, Asbestos FY15	Redd Mechanical Corp	USU Facilities Planning and Design	\$130,137.00	\$4,865.00	Replace sprinkler heads in Tech. building on Blanding campus
7 Classroom/Auditorium Upgrades FY14	USU Facilities Operations	USU Facilities Planning and Design	\$282,129.00	\$2,420.00	Engineering 103 projector modifications
8 Equine Education Center Classroom	USU Facilities Operations	Axis Architects	\$733,203.00	\$2,222.00	USU ASSA key system for new Equine Education Center
9 Equine Education Center Classroom	USU Facilities Operations	Axis Architects	\$733,203.00	\$665.00	Signage for Equine Education Center
MISCELLANEOUS CONTRACTS					
10 Eccles Conf Ctr Auditorium Upgrade	Cache Valley Electric		\$493,280.00	\$16,400.00	AV Controller/Equipment
11 Health, LS, Code, Asbestos FY15	Eagle Environmental		\$130,137.00	\$873.00	Business 420 floor tile abatement

Report of Contingency Reserve Fund From 11/24/14 to 12/29/14

Project Title	Current Transfers	Total Transfers To (From) Contingency	% to Construction Budget	Project Status	% Completed (Paid)
BEGINNING BALANCE	\$739,229.38				
INCREASES TO CONTINGENCY RESERVE FUND NONE					
DECREASES FROM CONTINGENCY RESERVE FUND					
BNR Fire Protection Upg Phase 3 (Changes to flashing/fan/fire alarm plan)	(5,121.00)	(5,121.00)	0.77%	Construction	59.92%
Access Control FY15 (Remove 2 ADA openers/reinstall after new entrances are installed in BNR building)	(530.00)	(530.00)	0.97%	Construction	0.00%
ENDING BALANCE	\$733,578.38				

Report of Project Reserve Fund Activity From 11/24/14 to 12/29/14

Project Title	Transfer Amount	Description	% of Construction Budget
BEGINNING BALANCE	\$231,330.81		
INCREASES TO PROJECT RESERVE FUND			
Concrete Replacement FY14	16,730.31	Close Project	7.42%
Classroom Auditorium Upg FY13	3,478.15	Close Project	0.91%
Sign System FY13	2,576.33	Close Project	5.56%
OM Masonry Restoration FY15	1,242.86	Close Project	0.69%
DECREASES TO PROJECT RESERVE FUND			
Morgan Theatre Upgrade	(25,595.00)	Construction	2.04%
ENDING BALANCE	\$229,763.46		

Current Delegated Projects List 12/29/2014

Project Number	Project Name	Phase	Project Budget
CAPITAL DEVELOPMENT/IMPROVEMENT			
A24858	Building Commissioning FY12	Commissioning	190,991
A26681	Medium Voltage Upgrades FY13	Construction	258,273
A27146	Campus Controls Upgrade FY13	Construction	245,098
A27147	Campus-wide Bike Racks FY13	Construction	54,074
A27148	Classroom Auditorium Upg FY13	Complete	298,243
A27150	Emergency Generator FY13	Substantial Completion	320,195
A27152	FAV Cooling	Construction	1,532,572
A27157	Planning & Design Fund FY13	Design/Study	103,180
A27158	Sign System FY13	Complete	46,498
A28857	Equine Education Center Classroom	Construction	857,964
A28909	Kent Concert Hall Entry Replacement	Construction	2,244,929
A28997	NFS Kitchen 243/208 Remodel	Construction	400,000
A28999	Building Commissioning FY14	Commissioning	196,296
A29000	Campus Controls Upgrade FY14	Construction	245,098
A29001	Classroom/Auditorium Upgrades FY14	Construction	308,965
A29002	Concrete Replacement FY14	Complete	273,932
A29003	Elevator Upgrades FY14	Construction	294,396
A29004	Emergency Generator FY14	Construction	250,000
A29005	Health, LS, Code, Asbestos FY14	Construction	148,205
A29006	Medium Voltage Upgrades FY14	Pending	343,637
A29007	Misc Critical Improvements FY14	Construction	249,979
A29008	Moab ADA Upgrades	Construction	243,054
A29010	Parking Lot Paving FY14	Construction	835,284
A29011	Planning and Design FY14	Design/Study	148,000
A29012	Sign System FY14	Construction	51,036
A29792	TSC Chiller Replacement	Complete	313,885
A30033	Sant Lab 004 Remodel	Substantial Completion	118,501
A30458	Matthew Hillyard Photovoltaic Array	Construction	235,819
A30560	Innovation Campus Water Line	Construction	185,000
A30682	Tooele Admin Office Remodel	Construction	271,002
A31318	1200 E Ealk Way Improvements	Pending	874,046
A31319	Access Control FY15	Construction	63,483

A31320	BNR Fire Protection Upg Phase 3	Construction	673,189
A31321	Classroom/Auditorium Upgrade FY15	Pending	275,847
A31322	Concrete Replacement FY15	Construction	303,265
A31323	Eccles Conf Ctr Auditorium Upgrade	Construction	506,480
A31324	Elevator Upgrades FY15	Pending	366,133
A31325	Emergency Generator FY15	Pending	229,872
A31326	Fine Arts Center Roofing	Construction	440,286
A31327	Health, LS, Code, Asbestos FY15	Construction	137,637
A31328	HVAC Controls Upgrade FY15	Pending	228,311
A31329	Medium Voltage Upgrade FY15	Pending	460,460
A31330	Morgan Theater Upgrade	Construction	1,421,029
A31331	OM Masonry Restoration FY15	Complete	195,257
A31332	Old Main Reroof	Design	114,919
A31333	Planning and Design FY15	Design/Study	114,875
A31334	Sign System FY15	Construction	46,009
A31335	Site & Safety Lighting	Design	322,525
A32688	Roosevelt Ed Ctr Controls Upg	Construction	120,004
A32689	Animal Sci HVAC Upg 2014	Construction	160,884
A33054	UB Nursing Lab Remodel	Design	129,520
C11368	USUE Mechanical/Lighting upgrade	Construction	877,397
C11375	USUE Library Concrete Replacement	Construction	297,173
C11461	USUE Infrastructure/Automation Upgrade	Pending	461,857
C11508	USUE Career Center Upgrades	Pending	834,234
TOTAL (55)			<u><u>\$20,918,798</u></u>

20 January 2015

Jeff Reddoor, Building Board Manager
Division of Facilities Construction
and Management
State Office Building Room 4110
PO Box 141160
Salt Lake City, UT 84114-1284

Dear Jeff:

SUBJECT: USU Administrative Reports for the February 2015 Building Board Meeting

The following is a summary of the administrative reports for USU for the period 12/29/14 to 01/20/15.

Professional Contracts, 3 contracts issued (Page 1)

Comments are provided on the report.

Construction Contracts, 3 contracts issued (Page 2)

Comments are provided on the report.

Report of Contingency Reserve Fund (Page 3)

No projects needed funds from or contributed to the contingency fund during this reporting period. The contingency fund is in good order.

Report of Project Reserve Fund Activity (Page 4)

No projects needed funds from or contributed to the contingency fund during this reporting period. The project reserve fund is in good order.

Current Delegated Projects List (Pages 5-6)

Of USU's 50 projects, 9 are pending, 6 are in the design/study phase, 33 are in construction, and 2 are substantially complete.

Representatives from Utah State University will attend the Building Board meeting to address any questions the Board may have.

Sincerely,



David T. Cowley
Vice President for
Business and Finance

DTC/bg
c: Gregory L. Stauffer
Bruce Whittington

Professional Contracts Awarded From 12/29/14 to 01/20/15

Contract Name	Firm Name	A/E Budget	Fee Amount	Comments
1 USUE Career Center Upgrades	Van Boerum & Frank Associates	\$69,000.00	\$54,190.00	Mechanical and electrical design
2 Classroom/Auditorium Upgrades FY14	USU Facilities Planning & Design	\$16,068.00	\$733.00	Design for Fine Arts classroom 216 remodel
3 Classroom/Auditorium Upgrades FY14	USU Facilities Planning & Design	\$16,068.00	\$725.00	Design for Fine Arts classroom 220 remodel

MISCELLANEOUS CONTRACTS

NONE

**Construction Contracts
Awarded From 12/29/14 to 01/20/15**

Project	Firm Name	Design Firm	Const Budget	Contract Amt	Comments
1 Emergency Generator FY14	Cache Valley Electric	CMT Engineering	\$229,730.00	\$11,048.00	Emergency circuit receptacles
2 Classroom/Auditorium Upgrades FY14	USU Facilities Operations	USU Facilities Planning and Design	\$282,129.00	\$12,220.00	Fine Arts Center classroom 216 remodel
3 Classroom/Auditorium Upgrades FY14	USU Facilities Operations	USU Facilities Planning and Design	\$282,129.00	\$12,083.00	Fine Arts Center classroom 220 remodel

MISCELLANEOUS CONTRACTS

NONE

Report of Contingency Reserve Fund From 12/29/14 to 01/20/15

Project Title	Current Transfers	Total Transfers To (From) Contingency	% to Construction Budget	Project Status	% Completed (Paid)
BEGINNING BALANCE	\$733,578.38				
INCREASES TO CONTINGENCY RESERVE FUND NONE					
DECREASES FROM CONTINGENCY RESERVE FUND NONE					
ENDING BALANCE	\$733,578.38				

**Report of Project Reserve Fund Activity
From 12/29/14 to 01/20/15**

Project Title	Transfer Amount	Description	% of Construction Budget
BEGINNING BALANCE INCREASES TO PROJECT RESERVE FUND None DECREASES TO PROJECT RESERVE FUND None	\$229,763.46		
ENDING BALANCE	\$229,763.46		

Current Delegated Projects List 1/20/2015

Project Number	Project Name	Phase	Project Budget
CAPITAL DEVELOPMENT/IMPROVEMENT			
A24858	Building Commissioning FY12	Commissioning	190,991
A26681	Medium Voltage Upgrades FY13	Construction	258,273
A27146	Campus Controls Upgrade FY13	Construction	245,098
A27147	Campus-wide Bike Racks FY13	Construction	54,074
A27150	Emergency Generator FY13	Substantial Completion	320,195
A27152	FAV Cooling	Construction	1,532,572
A27157	Planning & Design Fund FY13	Design/Study	103,180
A28857	Equine Education Center Classroom	Construction	857,964
A28909	Kent Concert Hall Entry Replacement	Construction	2,244,929
A28997	NFS Kitchen 243/208 Remodel	Construction	400,000
A28999	Building Commissioning FY14	Commissioning	196,296
A29000	Campus Controls Upgrade FY14	Construction	245,098
A29001	Classroom/Auditorium Upgrades FY14	Construction	308,965
A29003	Elevator Upgrades FY14	Construction	294,396
A29004	Emergency Generator FY14	Construction	250,000
A29005	Health, LS, Code, Asbestos FY14	Construction	148,205
A29006	Medium Voltage Upgrades FY14	Pending	343,637
A29007	Misc Critical Improvements FY14	Construction	249,979
A29008	Moab ADA Upgrades	Construction	243,054
A29010	Parking Lot Paving FY14	Construction	835,284
A29011	Planning and Design FY14	Design/Study	148,000
A29012	Sign System FY14	Construction	51,036
A30033	Sant Lab 004 Remodel	Substantial Completion	118,501
A30458	Matthew Hillyard Photovoltaic Array	Construction	235,819
A30560	Innovation Campus Water Line	Construction	185,000
A30682	Tooele Admin Office Remodel	Construction	271,002
A31318	1200 E Walk Way Improvements	Pending	874,046
A31319	Access Control FY15	Construction	63,483
A31320	BNR Fire Protection Upg Phase 3	Construction	673,189
A31321	Classroom/Auditorium Upgrade FY15	Pending	275,847
A31322	Concrete Replacement FY15	Construction	303,265
A31323	Eccles Conf Ctr Auditorium Upgrade	Construction	506,480
A31324	Elevator Upgrades FY15	Pending	366,133

A31325	Emergency Generator FY15	Pending	229,872
A31326	Fine Arts Center Roofing	Construction	440,286
A31327	Health, LS, Code, Asbestos FY15	Construction	137,637
A31328	HVAC Controls Upgrade FY15	Pending	228,311
A31329	Medium Voltage Upgrade FY15	Pending	460,460
A31330	Morgan Theater Upgrade	Construction	1,421,029
A31332	Old Main Reroof	Design	114,919
A31333	Planning and Design FY15	Design/Study	114,875
A31334	Sign System FY15	Construction	46,009
A31335	Site & Safety Lighting	Design	322,525
A32688	Roosevelt Ed Ctr Controls Upg	Construction	120,004
A32689	Animal Sci HVAC Upg 2014	Construction	160,884
A33054	UB Nursing Lab Remodel	Design	129,520
C11368	USUE Mechanical/Lighting Upgrade	Construction	877,397
C11375	USUE Library Concrete Replacement	Construction	297,173
C11461	USUE Infrastructure/Automation Upgrade	Pending	461,857
C11508	USUE Career Center Upgrades	Pending	834,234
TOTAL (50)			<u><u>\$19,790,983</u></u>

17 February 2015

Jeff Reddoor, Building Board Manager
Division of Facilities Construction
and Management
State Office Building Room 4110
PO Box 141160
Salt Lake City, UT 84114-1284

Dear Jeff:

SUBJECT: USU Administrative Reports for the March 2015 Building Board Meeting

The following is a summary of the administrative reports for USU for the period 01/20/15 to 02/17/15.

Professional Contracts, 3 contracts issued (Page 1)

Comments are provided on the report.

Construction Contracts, 5 contracts issued (Page 2)

Comments are provided on the report.

Report of Contingency Reserve Fund (Page 3)

Two projects needed funds from the contingency fund during this reporting period. The contingency fund is in good order.

Report of Project Reserve Fund Activity (Page 4)

No projects needed funds from or contributed to the contingency fund during this reporting period. The project reserve fund is in good order.

Current Delegated Projects List (Pages 5-6)

Of USU's 52 projects, 8 are pending, 8 are in the design/study phase, 28 are in construction, 6 are substantially complete, and 2 are complete. The two completed projects are Matthew Hillyard Photovoltaic Array and Sant Lab 004 Remodel.

Representatives from Utah State University will attend the Building Board meeting to address any questions the Board may have.

Sincerely,



David T. Cowley
Vice President for
Business and Finance

DTC/bg
c: Gregory L. Stauffer
Bruce Whittington



Professional Contracts Awarded From 01/20/15 to 02/17/15

Contract Name	Firm Name	A/E Budget	Fee Amount	Comments
1 USUE Cosmetology Relocation	Method Studio	\$23,298.00	\$23,298.00	Design proposal for relocation
2 Planning and Design FY15	Alta Planning & Design Inc	\$114,875.00	\$4,373.00	Bike/pedestrian master planning
3 San Juan Hall Remodel	Forsgren Associates	\$4,200.00	\$4,200.00	Roof engineering
MISCELLANEOUS CONTRACTS				
NONE				

**Construction Contracts
Awarded From 01/20/15 to 02/17/15**

Project	Firm Name	Design Firm	Const Budget	Contract Amt	Comments
1 Medium Voltage Upgrades FY14	Hubbell Power Systems	USU Facilities Planning and Design	\$318,182.00	\$24,720.00	High voltage switches
2 Classroom/Auditorium Upgrades FY14	USU Facilities Operations	USU Facilities Planning and Design	\$282,129.00	\$2,700.00	Replace whiteboards in BNR 014 and BNR 007
MISCELLANEOUS CONTRACTS					
3 Health, LS, Code, Asbestos FY15	Rocmont Industrial		\$130,137.00	\$4,350.00	FA 218/220 floor abatement
4 Morgan Theater Upgrade	Environmental Abatement		\$1,255,779.00	\$1,250.00	FA Hallway abatement
5 Health, LS, Code, Asbestos FY15	Environmental Abatement		\$130,137.00	\$550.00	RBW tile/mastic abatement

**Report of Contingency Reserve Fund
From 01/20/15 to 02/17/15**

Project Title	Current Transfers	Total Transfers To (From) Contingency	% to Construction Budget	Project Status	% Completed (Paid)
BEGINNING BALANCE	\$733,578.38				
INCREASES TO CONTINGENCY RESERVE FUND NONE					
DECREASES FROM CONTINGENCY RESERVE FUND					
BNR Fire Protection Upg Phase 3 (change lighting/relocate fume hood)	(10,430.00)	(15,551.00)	2.33%	Construction	83.13%
Eccles Conf Ctr Auditorium Upgrade (change lights and configuration/install additional carpet)	(5,064.42)	(7,680.10)	1.52%	Construction	23.06%
ENDING BALANCE	\$718,083.96				

Report of Project Reserve Fund Activity From 01/20/15 to 02/17/15

Project Title	Transfer Amount	Description	% of Construction Budget
BEGINNING BALANCE	\$229,763.46		
INCREASES TO PROJECT RESERVE FUND None			
DECREASES TO PROJECT RESERVE FUND None			
ENDING BALANCE	\$229,763.46		



Current Delegated Projects List 2/17/2015

Project Number	Project Name	Phase	Project Budget
CAPITAL DEVELOPMENT/IMPROVEMENT			
A24858	Building Commissioning FY12	Commissioning	190,991
A26681	Medium Voltage Upgrades FY13	Construction	258,273
A27146	Campus Controls Upgrade FY13	Construction	245,098
A27147	Campus-wide Bike Racks FY13	Construction	54,074
A27150	Emergency Generator FY13	Substantial Completion	320,195
A27152	FAV Cooling	Substantial Completion	1,532,572
A27157	Planning & Design Fund FY13	Design/Study	103,180
A28857	Equine Education Center Classroom	Substantial Completion	866,079
A28909	Kent Concert Hall Entry Replacement	Construction	2,244,929
A28997	NFS Kitchen 243/208 Remodel	Construction	400,000
A28999	Building Commissioning FY14	Commissioning	196,296
A29000	Campus Controls Upgrade FY14	Construction	245,098
A29001	Classroom/Auditorium Upgrades FY14	Construction	308,965
A29003	Elevator Upgrades FY14	Construction	294,396
A29004	Emergency Generator FY14	Construction	250,000
A29005	Health, LS, Code, Asbestos FY14	Construction	148,205
A29006	Medium Voltage Upgrades FY14	Construction	343,637
A29007	Misc Critical Improvements FY14	Construction	249,979
A29008	Moab ADA Upgrades	Substantial Completion	243,054
A29010	Parking Lot Paving FY14	Substantial Completion	835,284
A29011	Planning and Design FY14	Design/Study	148,000
A29012	Sign System FY14	Construction	51,036
A30033	Sant Lab 004 Remodel	Complete	109,379
A30458	Matthew Hillyard Photovoltaic Array	Complete	226,619
A30560	Innovation Campus Water Line	Construction	185,000
A30682	Tooele Admin Office Remodel	Construction	271,002
A31318	1200 E Walk Way Improvements	Pending	874,046

A31319	Access Control FY15	Construction	63,483
A31320	BNR Fire Protection Upg Phase 3	Construction	683,619
A31321	Classroom/Auditorium Upgrade FY15	Pending	275,847
A31322	Concrete Replacement FY15	Construction	303,265
A31323	Eccles Conf Ctr Auditorium Upgrade	Construction	511,544
A31324	Elevator Upgrades FY15	Pending	366,133
A31325	Emergency Generator FY15	Pending	229,872
A31326	Fine Arts Center Roofing	Substantial Completion	440,286
A31327	Health, LS, Code, Asbestos FY15	Construction	137,637
A31328	HVAC Controls Upgrade FY15	Pending	228,311
A31329	Medium Voltage Upgrade FY15	Pending	460,460
A31330	Morgan Theater Upgrade	Construction	1,421,029
A31332	Old Main Reroof	Design	114,919
A31333	Planning and Design FY15	Design/Study	114,875
A31334	Sign System FY15	Construction	46,009
A31335	Site & Safety Lighting	Design	322,525
A32688	Roosevelt Ed Ctr Controls Upg	Construction	120,004
A32689	Animal Sci HVAC Upg 2014	Construction	160,884
A33054	UB Nursing Lab Remodel	Design	129,520
A33519	San Juan Hall Remodel (NEW PROJECT)	Design	1,046,290
C11368	USUE Mechanical/Lighting upgrade	Construction	877,397
C11375	USUE Library Concrete Replacement	Construction	297,173
C11461	USUE Infrastructure/Automation Upgrade	Pending	461,857
C11508	USUE Career Center Upgrades	Design	834,234
C11560	USUE Cosmetology Relocation (NEW PROJECT)	Pending	300,000
TOTAL (52)			<u><u>\$21,142,560</u></u>



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4, 2015
Subject: **Administrative Report for Utah Department of Transportation**
Presenter: Kevin Griffin, Director of Maintenance, UDOT

Attached for your review is the Administrative Report for the Utah Department of Transportation.

JR: cn
Attachments



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

CARLOS M. BRACERAS, P.E.
Executive Director

SHANE M. MARSHALL, P.E.
Deputy Director

February 26, 2015

Mr. Jeff Reddoor, Building Board Director
Division of Facilities Construction and Management
State Office Building, Room 4110
Salt Lake City, UT 84114

Subject: Utah Department of Transportation Administrative Reports for October Building Board Meeting

Dear Jeff:

The following is a summary of the administrative reports for Utah Department of Transportation for the period [November 26, 2014](#) – [December 29, 2014](#). Please include this in the packet for the July Building Board meeting.

Construction Contracts (Page 1)

Advertised 5 new Projects:

I-80 Salt Storage Building @ MP 99
I-80 Salt Storage Building @ MP 58
Cedar City Office Entry Remodel
Moab Station Storage Building
Garrison Station Salt Storage Building

Hooper design build contract awarded to Northridge / Archiplex.

Report of Project Reserve Fund Activity

Increases:

None

Decreases:

None

Report of Contingency Reserve Fund

Increases:

None

Decreases:

None



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Executive Director

SHANE M. MARSHALL, P.E.
Deputy Director

Representatives from Utah Department of Transportation will attend the Building Board meeting to address any questions the Board may have.

Sincerely,

Kevin E. Griffin, Director of Maintenance
Utah Department of Transportation

Enclosures

CC: Bill Juszczak, Facilities Manager



Gary R. Herbert
Governor

Utah State Building Board

4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

MEMORANDUM

To: Utah State Building Board
From: Jeff Reddoor
Date: March 4, 2015
Subject: **Administrative Reports for DFCM**
Presenter: Bruce Whittington, DFCM Interim Director

The following is a summary of the administrative reports for DFCM.

Lease Report (Pages 1 - 2)
No significant items

Professional Services Agreements, 17 Agreements Issued (Pages 3 - 4)
The Professional Services Agreements awarded during this period consist of:
13 Design Agreements, 4 Planning/Study/Other Agreements.
No significant items

Construction Contracts, 24 Contracts Issued (Pages 5 - 7)
The Construction Contracts awarded during this period consist of:
1 New Space Contracts, 18 Remodeling Contracts, 2 Paving/Roofing Contracts, 3 Other

Item #3, Corrections CUCF Various Buildings Plumbing Improvements
Item #5, Unified Health Lab Replace Supply Fan with Box Fans
Item #13, Mantua Fish Hatchery HVAC and Electrical Improvements
Item #17, Judy Ann Buffmire Bldg Cooling System Upgrade
Funds from the Project Reserve Fund were used to award this contract

Item #11, DFCM Regional Center #2 Skylight Replacement
Additional funds from unallocated roofing to award construction contract

Report of Contingency Reserve Fund (Pages 8 - 26)

Increases

Increases are from budgeted contingency transfers and decrease change orders/modifications.

The decrease of (\$280,000) was from a revised budget on the Southwest ATC Allied Health & Technology Building project.

Decreases, Capital Development

UVU New Classroom Building

This transfer of \$134,371 covers change order #13 and design amendment #5. See attached pages #12 – 19 for details and contract summaries.

State Hospital New Medical Services Building and Pediatric Facility

This transfer of \$97,640 covers change order #27. See attached pages #20 – 23 for details and contract summary.

Report of Contingency Reserve Fund Continued (Pages 8 - 26)

Decreases, Capital Improvement

State Hospital Laundry/Recreation Storage Building Replacement

This transfer of \$91,206 covers change order #3, IT wiring costs, and additional construction costs.. See attached pages #24 - 26 for details and contract summary.

Tax Commission Building Carpet replacement

This transfer of \$55,782 covers additional carpet costs to complete project.

Capitol Hill DUP Museum Asbestos Abatement

This transfer of \$47,061 covers additional project costs to complete the project.

Report of Project Reserve Fund Activity (Pages 27 - 29)

Increases

The increases reflect savings on projects that were transferred to Project Reserve per statute.

Decreases

The decreases are to award construction contracts that were over budget.

This report also includes a total by Agency/Institution for increases and decreases to this reserve fund, on a rolling year basis. We will keep this updated, so you can see who has given and drawn from the Project Reserve Fund over the past year.

Contingency Reserve Fund Analysis (Pages 30 -39)

This is a quarterly report for the State Building Board, which shows an analysis of estimated future demands on the contingency reserve fund. It should be noted that this reserve fund only applies to projects funded with general funds, education funds, or general obligation bonds. The analysis assumes that contingency funds are utilized evenly over the life of the project. In reality, some projects have greater draws early in the project and others late in the project. So it is reasonable to assume that this averages into an even utilization of the contingency budget over

the life of the project. The analysis lists all open construction contracts on open projects that have contributed to and are eligible to draw from the contingency reserve along with the percentage completion of the construction contract. The current projection is excess funds of \$725,770. We believe these funds should remain with the reserve fund and not transferred by the Legislature for other needs, as this is an estimate and a small excess balance at this time. However it appears the 2015 Legislature will take some funds from this reserve fund. Amount unknown at this point in the session.

Statewide Funds Reports (Pages #40 – 45)

No significant items

Construction Contract Status (Pages #46 - 60)

This quarterly report shows the status of each construction contract that was open during the preceding quarter. The main intent of this report is to show those contracts/projects that are over the contractual completion time.

DDW:jr:ccn

Attachments



Division of Facilities Construction and Management
 4110 State Office Building, Salt Lake City, UT 84114
 Telephone (801) 538-3017 FAX (801) 538-3267

LEASE REPORT

From 01/15/2014 to 02/15/2015

No	Agency/Location	Services	Space Type	Lease Term	Square Feet		Cost/Sq. Ft.		Comment
					Old	New	Old	New	

NEW LEASES

1.	15-1659 Environmental Quality, 8440 S. Monroe Copperview Elementary, Midvale	New Lease	Ground- Air Monitoring Station	07/01/14 – 06/30/19	560	560	\$0.00	\$0.00	New Lease for 5 yrs.
2.									

AMENDMENTS

1.	91-0971 Public Safety, SBI 3495 S. 300 W., Salt Lake City	Renew Lease	Office/Storage	01/01/15 – 06/30/21	7,200	7,200	\$4.25	\$4.67	Add garbage services and snow removal services to Lease. Amendment-7.
2.	10-1785 Capitol Preservation Board, #120 State Capitol Building, Salt Lake City (Lessor Lease)	Renew Lease	Office	01/01/15 – 12/31/19	3,020	2,020	\$21.64	\$21.64	Renew Lease to Capitol Hill Association (Lessee). Reduce space by 1,000 sq. ft. Amendment-2.
3.	88-0278 Tax Commission, Auditing, 88 Fiddlers Canyon Dr., Cedar City	Renew Lease	Office	05/01/15 – 12/31/16	1,259	1,259	\$10.25	\$10.25	Renew Lease for 1 yr. and 8 mos. Amendment-5.
4.									
5.									



Division of Facilities Construction and Management
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LEASE REPORT

From 12/15/2014 to 01/15/2015

No	Agency/Location	Services	Space Type	Lease Term	Square Feet		Cost/Sq. Ft.		Comment
					Old	New	Old	New	

NEW LEASES

1.									
2.									

AMENDMENTS

1.	05-2525 Public Safety, Highway Patrol, 90 East Molen Rd., Ferron	Renewal	Office	05/01/15 – 06/30/20		200		\$12.00	Renew Lease for 5 yrs. and 2 months. Amendment-6.
2.	06-1637 Natural Resource, Water Rights, 88 Fiddlers Canyon Dr.	Renewal	Office	03/01/15 – 06/30/15		180		\$9.80	Renew Lease for 4 months. Amendment-3.
3.	00-2050 Tax Commission, Motor Vehicles, 540 W. Price River Dr., Price	Renewal	Office	07/01/15 – 06/30/20		1,849	\$21.98	\$23.02	Renew Lease for 5 yrs. Amendment-4.
4.	99-0286 Workforce Services, Admin., 522 N. 100 E., Blanding	Renewal	Office	12/01/14 – 06/30/17	10,731	10,636	\$15.49	\$16.07	Renew Lease for 2 yrs. and 7 months. Amendment-2. Reduce leased space by 95 sq. ft.
5.	12-1482 Governor's Office, 500 New Jersey Ave. NW, Suite 400, Washington, DC	Renewal	Office	01/01/15 – 07/31/16		200		\$111.00	Renew Lease for 1 yr. and 7 months. Amendment-3.
6.									



State of Utah

Division of Facilities and Construction Management

Professional Contracts Awarded

Contract Type = P; Award Date >= 01/07/2015; and less than 02/19/2015

#	Agency	Contract Name	Firm	Type	Budget	Award
Miscellaneous Services						JAIN
1	Dfcm - Statewide Funds 14313300	Administrative Office Of The Courts St. George 5t	Ihi Environmental	Haz Mat Consult 157158	\$177,443	\$15,360
2	University Of Utah 13336750	Building Envelope Commissioning Services Universi	Architectural Testing	Commissioning 157167	\$295,600	\$82,650
3	Developmental Center 14068410	Department Of Human Services Utah State Developme	Architectural Testing	Commissioning 157151	\$71,000	\$16,000
4	15012310	Dept Of Commerce Dept Of Commerce Heber Wells Bld	Whw Engineering Inc	Design 157175	\$13,500	\$11,000
5	Dfcm - Managed Buildings 14380310	Dfcm - Governor's Mansion Basement And Kitchen R	Mjsa Architecture Pc	Design 157140	\$67,000	\$63,050
6	Dnr - Wildlife Resources 14388520	Division Of Wildlife Resources Lee Kay Fish Hatch	Archplex Group Llc	Design 157153	\$51,685	\$16,112
7	Dnr - Wildlife Resources 14076520	Division Of Wildlife Resources Springville And Eg	Naylor Wentworth Lund Arch	Design 157172	\$4,040	\$3,800
8	Snow College 14296700	Snow College New Science Building - Programming	Vcbo Architecture Llc	Programming 157146	\$1,056,491	\$175,000
9	Southern Utah University 15001730	Suu Suu Science Building Reroof Matt Boyer	Campbell & Associates	Design 157145	\$34,804	\$24,750
10	Schools For Deaf & Blind 13224230	Usdb Libbie Edwards Reroof Phase Ii Matt Boyer	Prior & Associates	Design 157150	\$40,697	\$13,200
11	Fairpark 14358370	Utah State Fair Park Bonneville Building Reroof 	Bott Pantone Architects	Design 157161	\$9,754	\$8,050
12	State Hospital 14257420	Utah State Hospital Rampton Buildings I And Ii	Spectrum Engineers Inc	Design 157147	\$16,842	\$17,725



State of Utah

Division of Facilities and Construction Management

Professional Contracts Awarded

Contract Type = P; Award Date >= 01/07/2015; and less than 02/19/2015

#	Agency	Contract Name	Firm	Type	Budget	Award
Miscellaneous Services						
A						
13	Utah Valley University 15005790	Utah Valley University Summer 2015 Hvac Improveme	Whw Engineering Inc	Design 157170	\$77,428	\$55,350
14	Utah Valley University 15004790	Utah Valley University Mckay Education Mechanica	Whw Engineering Inc	Design 157168	\$58,790	\$44,750
15	University Of Utah 14383750	Uu Student Services Bldg Reroof Matt Boyer	Scott P Evans Architect&assoc	Design 157160	\$36,092	\$26,462
16	Utah Valley University 14384790	Uvu Health Professions Building Reroof & Window R	Prior & Associates	Design 157148	\$56,228	\$31,250
17	Weber State University 15006810	Weber State University Phase 5 Utility Tunnel Up	Whw Engineering Inc	Design 157154	\$19,858	\$16,500



State of Utah

Division of Facilities and Construction Management

Construction Contracts Awarded

Contract Type = C; Award Date >= 01/07/2015; and less than 02/19/2015

#	Agency	Contract Name	Firm	Type	Budget	Award
Construction						ZAIM
1	Dfcm - Managed Buildings 13206310	Brigham City Regional Center, Rtu Upgrade Dfcm L	Mechanical Service & Systems	Const Remodel 157768	\$208,842	\$206,282
2	Abc Stores 14298030	Department Of Alcoholic Beverage Control Provo St	Hoj Engineering & Sales Inc dba Hoj Dock And Door	Const Site Imp 157558	\$21,053	\$13,707
3	Corrections - Cucf 14041110	Department Of Corrections Cucf Various Buildings	Landmark Companies Inc	Const Remodel 157768	\$595,162	\$597,662
4	Corrections - Ap&p 14139120	Department Of Corrections Division Of Adult Proba	Commercial Mechanical Systems & Service	Const Remodel 157775	\$248,580	\$249,070
5	Health 14154390	Department Of Health Unified State Lab Facility F	Ralph Tye & Sons Inc	Const Remodel 157777	\$126,545	\$264,260
6	Natural Resources 14356510	Department Of Natural Resources Administration Bu	Hoj Engineering & Sales Co Inc	Const Remodel 157783	\$25,263	\$13,219
7	Natural Resources 14151500	Department Of Natural Resources Vfd's Upgrades T	Tod R Packer Heating & Air Conditioning	Const Remodel 157776	\$63,158	\$47,294
8	Bureau Of Criminal Indent 14158550	Department Of Public Safety Bureau Of Criminal Id	Tod R Packer Heating & Air Conditioning	Const Remodel 157797	\$68,226	\$51,077
9	Bureau Of Criminal Indent 14228550	Department Of Public Safety Ogden Crime Lab Pav	Post Construction Co Inc	Paving 157784	\$37,800	\$15,629
10	Dfcm - Managed Buildings 14189310	Departments Of Transportation And Public Safety R	Ralph Tye & Sons Inc	Const Remodel 157781	\$735,823	\$562,021
11	Administrative Services 14118300	Dfcm Regional 2 Center Roof At Skylight Matt	Rod Lewis Construction Llc	Const Remodel 157770	\$72,421	\$84,259



State of Utah

Division of Facilities and Construction Management

Construction Contracts Awarded

Contract Type = C; Award Date >= 01/07/2015; and less than 02/19/2015

#	Agency	Contract Name	Firm	Type	Budget	Award
Construction						JAM
		Boy				
12	Dfcm - Managed Buildings 14137310	Division Of Facilities Construction And Management	Landmark Companies Inc	Const Remodel 157732	\$72,926	\$51,183
13	Dnr - Wildlife Resources 14086520	Division Of Wildlife Resources Mantua Fish Hatche	Landmark Companies Inc	Const Remodel 157773	\$41,677	\$53,316
14	Natural Resources 14373500	Dwr Farmington Bay Entry Paving Dnr, Division Of	Advanced Paving & Construction	Paving 157758	\$52,839	\$52,680
15	State Hospital 14108420	Hvac Upgrades Rampton Bldg. And Rampton Cafeteria	Archer Mechanical Inc	Const Remodel 157751	\$662,654	\$662,594
16	Dfcm - Managed Buildings 12249310	Isf Contract - Joanna Reese Masob Fitness Center	Ehp Construction Inc	Const Remodel 157759	\$100,000	\$23,640
17	Serv Blind/visual Impair 14141200	Office Of Education/rehabilitation Judy Ann Buffm	Mechanical Service & Systems	Const Remodel 157792	\$199,579	\$225,949
18	Dfcm - Managed Buildings 12249310	Orem Udot (09349) - Install Charging Stations Cha	Arco Electric Inc	Const Remodel 157788	\$100,000	\$26,380
19	Salt Lake Comm College 13238660	Salt Lake Community College - Redwood Road Campus	Commercial Mechanical Systems & Service	Const Remodel 157771	\$568,840	\$44,173
20	Bridgerland Atc 14056210	Utah College Of Applied Technology Bridgerland At	Carson Plumbing & Mechanical Inc	Const Site Imp 157780	\$368,211	\$71,775



State of Utah

Division of Facilities and Construction Management

Construction Contracts Awarded

Contract Type = C; Award Date >= 01/07/2015; and less than 02/19/2015

#	Agency	Contract Name	Firm	Type	Budget	Award
Construction						EJAM
21	Ogden/weber Atc 14078240	Utah College Of Applied Technology Ogden Weber At	Carver Electric Llc	Const Remodel 157772	\$252,631	\$234,500
22	Dept Of Transportation 14249800	Utah Department Of Transportation Hooper Maintena	North Ridge Construction	Const New Space 157785	\$2,164,450	\$2,099,999
23	Dfcm - Statewide Funds 14312300	Utah Department Of Transportation Rampton Complex	Commercial Flooring	Haz Mat Const 157774	\$370,622	\$13,953
24	Dfcm - Managed Buildings 12249310	West Valley Drivers License Kiosk Area Remodel Sc	Ehp Construction Inc	Const Remodel 157809	\$100,000	\$22,105

DFCM

Division of Construction and Management
 4110 State Office Building Salt Lake City, UT 84144
 Telephone (801) 538-3018 Fax (801) 538-3267

REPORT OF CONTINGENCY RESERVE FUND

Jan-15

PROJECT TITLE		DEVELOPMENT STATE FUNDS CURRENT TRANSFERS	IMPROVEMENT STATE FUNDS CURRENT TRANSFERS	TRANSPORTATION FUNDS CURRENT TRANSFERS	TOTAL TRANSFERS FROM CONTINGENCY	% TO CONSTR. BUDGET	PROJECT STATUS	% Complete
BEGINNING BALANCE		5,714,211.80	4,400,480.24	7,415.55				
INCREASES TO CONTINGENCY RESERVE FUND								
FUNDING								
14202	UNG	West Jordan Armory Upgrade	-	165,000.00	-	-	0.00% Design	0%
14249	UDOT	Hooper Maintenance Station	-	78,853.00	-	-	0.00% Construction	0%
14189	UDOT	Rampton Boiler Replacement	-	55,332.00	-	-	0.00% Construction	32%
14331	Tax	Carpet Replacement	-	47,954.00	-	-	0.00% Complete	100%
14316	UNG	W Jordan PV Project	-	47,725.00	-	-	0.00% Construction	20%
14248	Agriculture	SF Veterinary Bldg	-	40,499.00	-	-	0.00% Design	0%
14254	SLCC	SCC Main Bldg HVAC Controls	-	37,912.00	-	-	0.00% Design	0%
14241	Parks	Escalante/Kodachrome Paving Improvements	-	37,723.00	-	-	0.00% Design	0%
14191	DHS	JJS Control Boards Various Centers	-	36,610.00	-	-	0.00% Design	0%
14282	Fairpark	Ext Repairs & Beautification	-	36,006.00	-	-	0.00% Complete	100%
14282	Health	Cannon Windows/Bathrooms Upgrade	-	35,424.00	-	-	0.00% Construction	0%
14252	SLCC	RRC VAV/AHU	-	35,145.00	-	-	0.00% Design	0%
13157	DHS	USDC TLC Bldg HVAC Replacement	-	32,644.00	-	-	0.00% Design	0%
14246	DWS	Regional #1 Generator Addition	-	31,684.00	-	-	0.00% Construction	12%
14281	Dixie	Burns Arena Boiler	-	30,119.00	-	-	0.00% Design	0%
14247	WSU	Electrical Distribution Phase Transformer	-	29,662.00	-	-	0.00% Construction	0%
14032	DHS	USDC Infrastructure	-	29,060.00	-	4,617.79	0.20% Construction	61%
14226	Corrections	CUCF Asphalt Repairs	-	28,221.00	-	-	0.00% Design	0%
14135	DHS	USDC Key Card Access	-	(26,221.00)	-	-	NA	#DIV/0!
14229	DFCM	Heber Wells Pavement Upgrades	-	24,951.00	-	-	0.00% Design	0%
14227	UVU	Asphalt Repairs	-	24,000.00	-	-	0.00% Design	0%
14258	Courts	Provo Juvenile Boiler Replacement	-	22,400.00	-	-	0.00% Pending	0%
14194	DFCM	Richfield Regional/DWS Parking Repairs	-	21,980.00	-	-	0.00% Design	0%
14211	DWS	Admin Air Damper Replacement	-	21,902.00	-	-	0.00% Complete	100%
14198	Parks	Fremont Maintenance Shop Replacement	-	21,760.00	-	-	0.00% Design	0%
14196	Courts	Richfield Fire & Utility Separation	-	21,528.00	-	-	0.00% Complete	100%
14210	Parks	Dead Horse Point Bike Parking	-	20,442.00	-	-	0.00% Pending	0%
14256	Corrections	Draper Admin Bldg HVAC Upgrades	-	20,146.00	-	-	0.00% Design	0%
14257	DHS	USH Rampton Electronic Door Control	-	20,000.00	-	-	0.00% Design	0%
14271	UND	Draper HQ Restroom Remodel	-	20,000.00	-	-	0.00% Design	0%
14253	SLCC	RRC Library Chiller	-	19,468.00	-	-	0.00% Design	0%
14242	Parks	Red Fleet Campground Asphalt Repairs	-	18,495.00	-	-	0.00% Design	0%
14360	DFCM	Ogden Reg Ceiling Tile Replacement	-	16,245.00	-	-	0.00% Pending	0%
14192	DFCM	Provo Regional Misc Repairs	-	16,000.00	-	-	0.00% Construction	96%
14363	Health	Childrens Ctr Sidewalk Repair	-	15,580.00	-	-	0.00% Pending	0%
14223	SUU	Bennion Parking Lot Repairs	-	15,331.00	-	-	0.00% Pending	0%
14362	CPB	Repaint Capiton Window Sills	-	15,200.00	-	-	0.00% Design	0%
14221	SUU	ADA Concrete Replacement	-	14,251.00	-	-	0.00% Pending	0%
14244	Parks	Jordanelle Slurry Seal	-	12,746.00	-	-	0.00% Construction	0%
14255	Agriculture	Boiler Replacement	-	11,876.00	-	-	0.00% Construction	81%
14307	Health	Cannon Interior Repaint	-	11,632.00	-	-	0.00% Construction	0%
14342	DCED	Rio Grande Doors & Hardware	-	11,601.00	-	-	0.00% Pending	0%
14358	Fairpark	Bonneville Roof Replacement	-	11,232.00	-	-	0.00% Design	0%

DFCM

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REPORT OF CONTINGENCY RESERVE FUND

Jan-15

	PROJECT TITLE	DEVELOPMENT STATE FUNDS CURRENT TRANSFERS	IMPROVEMENT STATE FUNDS CURRENT TRANSFERS	TRANSPORTATION FUNDS CURRENT TRANSFERS	TOTAL TRANSFERS FROM CONTINGENCY	% TO CONSTR. BUDGET	PROJECT STATUS	% Complete
14285	Tax	Switchgear Closets Cooling System	-	10,000.00	-	-	0.00% Construction	0%
14354	Archives	Dry Sprinkler Modifications	-	9,734.00	-	-	0.00% Pending	0%
14195	Courts	Richfield Council Remodel	-	8,000.00	-	-	0.00% Design	0%
14272	Courts	WV Juvenile Boiler Replacement	-	7,982.00	-	-	0.00% Construction	0%
14222	SUU	Fire Lane Approach Upgrades	-	7,980.00	-	-	0.00% Pending	0%
14351	ABC	Admin Carpet Replacement	-	6,777.00	-	-	0.00% Pending	0%
14359	DFCM	Ogden Reg Parking Structure Lighting	-	6,401.00	-	-	0.00% Pending	0%
14361	CPB	Reclad Dome Windows	-	5,700.00	-	-	0.00% Design	0%
14353	ABC	Store #37 Lighting Upgrade	-	5,600.00	-	-	0.00% Pending	0%
14225	Wildlife	Midway Hatchery Entrance Paving	-	5,577.00	-	-	0.00% Design	0%
14320	Courts	St George Ext Masonry Repairs	-	5,569.00	-	-	0.00% Complete	100%
14364	DHS	Vernal Carpet Replacement	-	5,147.00	-	-	0.00% Pending	0%
14349	Connections	AP&P VAV Box Upgrades	-	4,884.00	-	-	0.00% Construction	0%
14204	DPS	Farmington Irrigation Replacement	-	4,800.00	-	-	0.00% Design	0%
14217	Courts	Richfield HVAC & VAV Replacement	-	4,800.00	-	-	0.00% Construction	96%
14224	DFCM	Highland Regional ADA Parking Upgrade	-	4,380.00	-	-	0.00% Design	0%
14333	DCED	Rio Grande Bldg Security Upgrade	-	4,288.00	-	-	0.00% Pending	0%
14322	Health	Cannon Exit Signs Replacement	-	4,040.00	-	-	0.00% Construction	0%
14193	DFCM	Richfield Regional Fire Alarm Addition	-	3,600.00	-	-	0.00% Design	0%
14228	DPS	Ogden Parking Lot Repairs	-	3,591.00	-	-	0.00% Construction	0%
14260	DATC	Access Controls Upgrade	-	3,431.00	-	-	0.00% Complete	100%
14344	DWS	South County Parking Lot Lighting	-	3,406.00	-	-	0.00% Construction	0%
14215	DPS	Taylorsville BCI Lighting	-	3,360.00	-	-	0.00% Pending	0%
14330	Tax	Replace UPS System	-	3,062.00	-	-	0.00% Closed	100%
14357	DWS	Metro Bldg Bathroom Counters	-	2,435.00	-	-	0.00% Pending	0%
14356	DNR	Dock Lift Replacement	-	2,400.00	-	-	0.00% Design	0%
14327	CPB	Council Hall Break Room	-	2,375.00	-	-	0.00% Complete	100%
14291	Courts	Vernal Security Control Room A/C	-	2,336.00	-	-	0.00% Complete	100%
14355	Archives	Security Fence Reinforcement	-	2,336.00	-	-	0.00% Pending	0%
14207	ABC	Roy Power Door Openers/Dock Lift	-	2,230.00	-	-	0.00% Complete	100%
14343	DCED	Rio Grande Lighting Upgrade	-	2,111.00	-	-	0.00% Pending	0%
14216	DPS	UHP Murray Lobby/Breakroom Flooring	-	2,044.00	-	-	0.00% Complete	100%
14298	ABC	Store 5 Dock Leveler	-	2,000.00	-	-	0.00% Construction	0%
14323	Education	Buffmire Bldg Exit Signs	-	1,948.00	-	-	0.00% Construction	0%
14208	ABC	Roy Combined Projects	-	1,630.00	-	-	0.00% Pending	0%
14350	Courts	Tooele Walkway & Tunnel Restoration	-	1,558.00	-	-	0.00% Complete	0%
14209	ABC	Ogden Combined Projects	-	1,330.00	-	-	0.00% Pending	0%
14352	ABC	Store #14 Door Hardware Modification	-	1,200.00	-	-	0.00% Pending	0%
14203	DPS	UHP BDO Window Replacement	-	1,072.00	-	-	0.00% Complete	77%
14339	ABC	Store #10 Entrance Sidewalk	-	450.00	-	-	0.00% Complete	100%
DECREASES TO CONTINGENCY RESERVE FUND								
13081	DHS	USH Laundry/Recreation Storage Building	-	(51,564.24)	-	86,295.22	14.40% Complete	81%
13164	SNOW	Humanities Bldg Chiller Replacement	-	(22,727.00)	-	22,727.00	4.76% Complete	95%
14331	Tax	Carpet Replacement	-	(15,242.92)	-	15,242.92	2.55% Complete	100%
14037	UVU	Multiple Bldgs Fire Alarm System Replacement	-	(12,179.78)	-	15,947.10	8.58% Complete	84%
13236	DIXIE	Campus Fire Alarm & Control Front End	-	(11,727.70)	-	14,320.95	5.88% Construction	74%
14065	BATC	West Campus Restroom Code Compliance	-	(11,837.00)	-	16,838.19	4.02% Construction	24%

DFCM

Division of Construction and Management
 4110 State Office Building Salt Lake City, UT 84144
 Telephone (801) 538-3018 Fax (801) 538-3287

REPORT OF CONTINGENCY RESERVE FUND

Jan-15

	PROJECT TITLE		DEVELOPMENT STATE FUNDS CURRENT TRANSFERS	IMPROVEMENT STATE FUNDS CURRENT TRANSFERS	TRANSPORTATION FUNDS CURRENT TRANSFERS	TOTAL TRANSFERS FROM CONTINGENCY	% TO CONSTR. BUDGET	PROJECT STATUS	% Complete
12345	WSU	Tracy Hall Science Bldg	(9,464.00)	-	-	61,296.00	0.10%	Construction	11%
14241	Parks	Escalante/Kodachrome Paving Improvements	-	(9,012.00)	-	9,012.00	2.21%	Design	0%
13061	UBATC	Dust Collection And Exhaust System	-	(7,212.00)	-	7,212.00	5.95%	Complete	87%
11194	USU	Business Bldg Addition/Remodel	(6,920.33)	-	-	302,204.90	0.73%	Construction	48%
12185	DFCM	Gov Mansion West Entrance Seismic Improv	-	(5,073.00)	-	888,461.00	70.40%	Complete	99%
14242	Parks	Red Fleet Campground Asphalt Repairs	-	(4,925.00)	-	4,925.00	2.53%	Design	0%
14189	UDOT	Ramplon Boiler Replacement	-	(2,392.00)	-	2,392.00	0.29%	Construction	32%
13255	Courts	Cedar City Remodel/Woodwork Refinishing	-	(1,931.50)	-	1,931.50	1.69%	Complete	83%
14339	ABC	Store #10 Entrance Sidewalk	-	(900.00)	-	900.00	15.62%	Complete	100%
TOTAL			5,897,827.47	5,643,567.10	7,415.55				

DFCM

Division of Construction and Management
 4110 State Office Building Salt Lake City, UT 84144
 Telephone (801) 538-3018 Fax (801) 538-3267

Mar-15

REPORT OF CONTINGENCY RESERVE FUND

PROJECT TITLE			DEVELOPMENT STATE FUNDS CURRENT TRANSFERS	IMPROVEMENT STATE FUNDS CURRENT TRANSFERS	TRANSPORTATION FUNDS CURRENT TRANSFERS	TOTAL TRANSFERS FROM CONTINGENCY	% TO CONSTR. BUDGET	PROJECT STATUS	% Complete
BEGINNING BALANCE			5,697,827.47	5,643,567.10	7,415.55				
INCREASES TO CONTINGENCY RESERVE FUND									
FUNDING									
11342	SWATC	Allied Health & Technology Bldg	(280,000.00)	-	-	20,650.00	0.13%	Construction	15%
12146	CPB	Capitol Hill Signage Improvements	-	7,310.00	-	-	0.00%	On Hold	0%
14056	CPB	DUP Museum Asbestos Abatement	-	2,375.00	-	-	0.00%	Complete	24%
DECREASES TO CONTINGENCY RESERVE FUND									
12192	UVU	New Classroom Building	(134,371.00)	-	-	1,743,051.53	3.78%	Construction	90%
11065	USH	Building Consolidation	(97,640.00)	-	-	2,029,453.00	7.23%	Construction	99%
14056	CPB	DUP Museum Asbestos Abatement	-	(47,061.00)	-	47,061.00	64.16%	Complete	24%
14331	Tax	Carpet Replacement	-	(40,536.49)	-	55,781.41	9.35%	Complete	100%
13081	DHS	USH Laundry/Recreation Storage Building	-	(39,641.68)	-	125,936.90	21.02%	Complete	81%
08284	Courts	New Ogden Juvenile Building	(38,230.00)	-	-	1,330,795.70	4.48%	Construction	74%
13238	SLCC	RRC Technology Bldg VAV Controls	-	(31,705.10)	-	81,734.10	14.37%	Construction	75%
10036	SLCC	RRC New Instructional and Adm'n Complex	-	(29,883.00)	-	1,813,873.94	5.56%	Closed	100%
11342	SWATC	Allied Health & Technology Bldg	(28,921.35)	-	-	49,571.35	0.31%	Construction	15%
13049	USU	BRC Academic Bldg	(25,047.20)	-	-	25,047.20	0.20%	Construction	10%
13374	WSU	Steam Tunnel Phase IV	-	(15,647.00)	-	15,647.00	4.37%	Closed	100%
13309	UDOT	Ramplan VAV boxes/Controls	-	(11,376.00)	-	18,844.29	4.17%	Construction	95%
13238	DIXIE	New Boiler	-	(7,586.00)	-	23,658.00	3.39%	Construction	99%
12134	SUU	Centrum Chiller/Cooling Tower Replacement	-	(5,939.35)	-	6,829.45	1.01%	Closed	100%
12202	Courts	Matheson Front Counter Remodel	-	(4,422.00)	-	4,422.00	2.05%	Construction	33%
13119	Agriculture	Spry Bldg Door Hardware	-	(4,421.75)	-	4,421.75	4.18%	Construction	92%
14142	Education	Blind Library Boiler Replacement	-	(4,149.00)	-	4,149.00	2.44%	Complete	95%
14155	Health	Cannon Relief Fan Walls	-	(3,613.99)	-	3,613.99	2.44%	Construction	0%
13061	UBATC	Dust Collection And Exhaust System	-	(2,925.00)	-	10,137.00	8.17%	Complete	98%
13180	USU-EAST	Central Instructional Bldg	(2,557.00)	-	-	394,267.00	1.26%	Construction	25%
12293	UNG	West Jordan Armory Kitchen Remodel	-	(1,955.00)	-	8,915.73	1.78%	Complete	98%
13096	Fairpark	Various Bldgs Fire Alarm Upgrade	-	(1,102.00)	-	1,102.00	4.61%	Complete	70%
13255	Courts	Cedar City Remodel/Woodwork Refinishing	-	(296.36)	-	2,227.86	1.96%	Complete	83%
TOTAL			5,091,060.92	5,400,889.38	7,415.55				

CHANGE ORDER JUSTIFICATION STATEMENT (FOR INTERNAL USE ONLY)

To be submitted to DFCM Accounting at time the Project Manager has a Change Order executed by Contractor and the Project Manager.

CHANGE ORDER #13

PROJECT NAME: UVU New Classroom Bldg.
 AGENCY: UVU
 CONTRACTOR: Big D Construction

PROJECT NUMBER: 12192790 _____
 CONTRACT NUMBER: 137871 _____
 DESIGNER: CRSA Architects _____

The attached documentation supports the list of items on the change order cover sheet. These items have been reviewed and negotiated or accepted to be a reasonable adjustment of the contract amount and time. The purpose of this document is to describe the DFCM asserted cause for the change order, describe each item, categorize the change, list the approved funding and the funding source.

In the space below, and on additional pages if required, explain why this change is necessary. Explain the reasons for all time delays, costs changes and new timeframes. If the reason is "other," provide explanation.

2014 DEC 8 PM 1 37

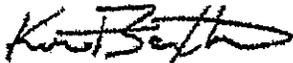
PCO/CCD /COR	Description	Category (reason)	Funding Source	Amount	Time
77	Omission of roof drains in the west portion of the roof	5	DFCM Contingency	14,649	1
87	Electric Metering per DFCM Energy standard.	6	DFCM Contingency	10,462	4
91	Additional sprinkler required where the tunnel connects to the library	6	DFCM Contingency	462	4
96	Door change requested by UVU IT.	2	UVU Funds	1,010	7
97	A soffit was required to install cove lights. Missing from plans	6	DFCM Contingency	2,745	4
98	UVU required a raised dock at the mechanical entrance for off load of equipment	6	DFCM Contingency	11,021	4
99	Missing cost for previous COR 68. Electrician forgot to add the cost of materials. DFCM allow material cost but not labor	6	DFCM Contingency	3,305	4
102	Roof drains at auditorium incorrectly specified.	6	DFCM Contingency	1,549	4
103	Missing door specifications led to the specifying of the wrong doors.	6	DFCM Contingency	31,025	4
104	Due to structural stiffness, the building didn't settle as expected. The camber required installation of break metal at window sills.	5	DFCM Contingency	12,768	1
105	UVU Requested a modification to ceiling.	2	PROJECT FUNDS	(930)	7
110	The architect showed beams from the tunnel attaching to library. There was redesign to accommodate the beams going through the glass to the structure.	5	DFCM Contingency	6,385	1
Total				95,381	7

94,451

CATEGORY (REASON):

- DFCM initiated Scope Change

2. Agency Requested Scope Change
3. Unforeseen Condition
4. Budget Expenditure (Award) in CM/GC
5. Design Error (including Scope Change due to deficiencies in Design Documents)
6. Design Omission (including Scope Change due to deficiencies in Design Documents)
7. Other: Credit for previous document errors

By DFCM Project Manager:  Date: 11/20/2014

State of Utah

Division of Facilities and Construction
Management

Consulting Contract = 137871

Construction Contract Summary

137871 - Utah Valley University | New Classroom Building | Kurt Baxter

Project Title:	Uvu New Classroom Building	Vendor #:	12332C
Project #:	<u>12192790</u>	Big D Construction Corporation	
Program Director:	Rick James (122062)	404 West 400 South	
Open PO's-Prj:	(0) for	Salt Lake City, Ut 84101	
Contract Name:	Utah Valley University New Classroom Building Kurt Baxter	Status:	Notice To Proceed
Contract Type:	Const New Space	DO #:	13082988527
<hr/>			
Component Group:	Construction	Expense Budget:	6811
Component:	Construction(8)	Property #:	
Account:	<u>3000-300-3336-FWA-12192790</u>	Retainage #:	8695084

Funding Sources

Funding Source	Budget %	Appropriation	Allotment
EDFY2014	100.00	\$47,676,446.74	\$0.00
Funding Totals:	100.00	\$47,676,446.74	\$0.00

Payment Summary

Date	Invoice #	Status	Amount
8/29/13	12192790#1	Invoice Released	\$957,338.75
9/18/13	041032	Invoice Released	\$1,795,609.63
10/28/13	041088	Invoice Released	\$1,422,789.35
11/14/13	041191	Invoice Released	\$1,587,383.50
12/11/13	041255	Invoice Released	\$1,160,585.55
1/13/14	041398	Invoice Released	\$1,550,673.60
2/10/14	041520	Invoice Released	\$1,573,093.60
3/17/14	041543	Invoice Released	\$2,420,349.58
4/10/14	041697	Invoice Released	\$2,212,785.60
5/13/14	041717	Invoice Released	\$4,336,274.80
6/17/14	041891	Invoice Released	\$3,030,504.77
7/15/14	12192790#12	Invoice Released	\$2,199,554.00
8/29/14	042115	Invoice Released	\$2,989,568.42
9/22/14	12192790 #14	Invoice Released	\$2,703,066.01
10/22/14	12192790 #15	Invoice Released	\$2,450,061.17
11/19/14	12192790#16	Invoice Released	\$3,364,521.09
1/22/15	12192790#18	Invoice Released	\$1,682,809.18
1/22/15	12192790#17	Invoice Released	\$1,965,436.00
Total Payments:			\$ 39,402,404.60

Retainage Summary

Date	Invoice #	Status	Amount
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Change Order Summary

Awards

Award Date	Number	Amount
06/20/2013	A001	\$41,087,600.00
Total Award:		\$ 41,087,600.00

Change Orders

Date	Number	Status	Amount
10/21/13	CO 001	Co Executed	\$115,228.00
11/20/13	CO 002	Co Executed	\$69,728.11
12/31/13	CO 003	Co Executed	\$97,870.20
1/13/14	CO 004	Co Executed	\$181,977.50
3/3/14	CO 005	Co Executed	\$154,903.00
4/4/14	CO 006	Co Executed	\$22,310.32
4/21/14	CO 007	Co Executed	\$52,274.00
6/16/14	CO 008	Co Executed	\$48,294.41
7/3/14	CO 009	Co Executed	\$48,184.00
8/12/14	CO 010	Co Executed	\$76,336.11
9/17/14	CO 011	Co Executed	\$71,174.00
11/3/14	CO 012	Co Executed	\$136,969.78
1/15/15	CO 013	Co Executed	\$94,451.00
1/28/15	CO 014	Co Executed	\$58,588.00

Change Order Total: \$1,228,288.43

Total Amendments (Less: Award Bid) \$1,228,288.43

State of Utah

Division of Facilities and Construction
Management

Consulting Contract = 137871

Construction Contract Summary

Retainage Summary

Date	Invoice #	Status	Amount
8/29/13	137871#1	Invoice Released	\$50,386.25
9/18/13	137871#2	Invoice Released	\$94,505.77
10/28/13	137871#3	Invoice Released	\$74,883.65
11/14/13	137871#4	Invoice Released	\$83,546.50
12/11/13	137871#5	Invoice Released	\$61,083.45
1/13/14	137871#6	Invoice Released	\$81,614.40
2/10/14	137871#7	Invoice Released	\$82,794.40
3/17/14	137871#8	Invoice Released	\$127,386.82
4/10/14	137871#9	Invoice Released	\$116,462.40
5/13/14	137871#10	Invoice Released	\$228,224.99
6/17/14	137871#11	Invoice Released	\$159,500.25
7/15/14	137871#12	Invoice Released	\$115,766.00
8/29/14	137871#13	Invoice Released	\$157,345.71
9/22/14	137871 #14	Invoice Released	\$142,266.63
10/22/14	137871 #15	Invoice Released	\$128,950.59
11/19/14	137871#16	Invoice Released	\$177,080.06
1/22/15	137871#17	Invoice Released	\$103,444.00
1/22/15	137871#18	Invoice Released	\$88,568.90
Retainage Total:			\$2,073,810.77

Release Summary

Release Date	Release	Amount
	Release # 1	
	Release # 2	
	Release # 3	
	Release # 4	
	Release # 5	
	Release Total:	\$ 0.00
	Net Retainage:	\$ 2,073,810.77

Contract Summary

Adjusted Contract Value:	\$ 42,315,888.43
Paid to Contractor:	\$39,402,404.60
Retainage to Bank:	\$2,073,810.77
Total Paid:	\$41,476,215.37
Contract Balance:	\$839,673.06

Contractor Summary

Adjusted Contract Value:	\$ 42,315,888.43
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Change Orders

Date	Number	Status	Amount
Pack Changes):			
Adjusted Contract Value:			\$42,315,888.43
Change Order % of Original:			2.99%
Percentage of Contract Paid:			98.02%
Dates		Days	
From	To	Target	Lapsed
6/28/13	11/29/14	519	602
Adjusted	Substantial	Original	Days
11/29/14		10/31/14	490
Percentage of Time Lapsed:			115.99%

Reasons for Change Orders

Reason	Percent	Amount
Scope - Dfcm	-18.45%	-\$226,640.22
Unknown - Dfcm	19.04%	\$233,898.26
A/e Err - Dfcm	3.63%	\$44,555.00
Ae Omission-con	8.61%	\$105,725.00
Agency Scope- A	0.38%	\$4,627.00
A/e Errors	0.56%	\$6,925.00
Omiss - Dfcm Cn	79.76%	\$979,631.39
Scope - Ag/inst	3.00%	\$36,880.00
Ae Error-contin	2.75%	\$33,802.00
Agency Scope-p	0.72%	\$8,885.00
Total Changes (less Award Bid Packs):		\$1,228,288.43



State of Utah

Division of Facilities and Construction
Management

Construction Contract Summary

Consulting Contract = 137871

Paid to Contractor:	\$39,402,404.60
Retainage Releases:	\$0.00
Total Paid to Contractor:	\$39,402,404.60
Contractor Balance:	\$2,913,483.83

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT
4110 State Office Building
Salt Lake City, Utah 84114

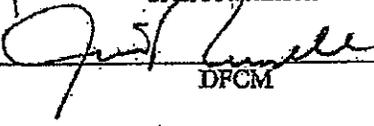
ARCHITECT / ENGINEER AGREEMENT MODIFICATION FORM

AE/Consultant: CRSA Architects Contract #: 137070
 Institution: Utah Valley University Project #: 12192790
 Project Name: New Classroom Building - Design Agrmnt. Rev. # 5
 Date: February 19, 2014

It is agreed that our agreement for the referenced project be changed to reflect an increase in the scope of this agreement to include planning and study to coordinate the central plant portion of the project (which was removed from original scope due to budget shortfalls) with the existing central plant as described in the Mechanical Engineer's proposal dated October 16, 2013, which is attached and made part of this modification, requiring an increase of \$40,000 to this professional services fee. The completion date remains unchanged.

All payments made under the current agreement shall be credited against the revised agreement.

	Current Agreement	Revised Agreement
Schematic Design Phase:	\$ _____	\$ _____
Design Development Phase:	_____	_____
Contract Documents Phase:	_____	_____
Bidding and Contract Award Phase:	_____	_____
Construction Phase:	_____	_____
Total Phases	\$ <u>2,015,288.00</u>	\$ <u>2,795,687.00</u>
Extras: <u>Modification Nos. 1 - 4</u>	<u>780,399.00</u>	_____
<u>Modification No. 5</u>	_____	<u>40,000.00</u>
AGREEMENT TOTAL	\$ <u>2,795,687.00</u>	\$ <u>2,835,687.00</u>

Accepted by 
 CRSA Architects
 Approved by 
 DFCM

8/25/14
 Date
8/25/14
 Date

State of Utah

Division of Facilities and Construction
Management

Consulting Contract = 137070

Consulting Contract Summary

137070 - Uvu Classroom Bldg

Project Title:	Uvu New Classroom Building	Vendor #:	91370AB
Project #:	12192790	Cooper Roberts Simonsen Architects	
Program Director:	Rick James (122062)	649 East South Temple	
Open PO's-Prj:	(0) for _	Salt Lake City, Ut 84102	
Contract Name:	Uvu Classroom Bldg	Status:	Notice To Proceed
Contract Type:	Design	DO #:	12100369116
<hr/>			
Component Group:	Design	Expense Budget:	6861
Component:	Design(6)	Property #:	
Account:	3000-300-3336-FWA-12192790	Retainage #:	

Funding Sources

Funding Source	Budget %	Appropriation	Allotment
EDFY2013	100.00	\$2,175,000.00	\$0.00
Funding Totals:	100.00	\$2,175,000.00	\$0.00

Payment Summary

Date	Invoice #	Status	Amount
12/17/12	12-029-1	Invoice Released	\$300.50
12/17/12	12-029-3	Invoice Released	\$166,283.10
12/17/12	12-029-2	Invoice Released	\$666,495.70
1/15/13	12-029-4	Invoice Released	\$108,382.00
3/7/13	12-029-5	Invoice Released	\$468,314.44
3/7/13	12-029-6	Invoice Released	\$155,878.80
4/3/13	12-029-7	Invoice Released	\$278,355.00
6/13/13	12-029-9	Invoice Released	\$1,752.89
6/14/13	12-029-8	Invoice Released	\$213,202.74
7/10/13	12-029-10	Invoice Released	\$31,612.61
8/21/13	12-029-11	Invoice Released	\$32,907.06
9/11/13	12-029-12	Invoice Released	\$32,221.72
10/7/13	12-029-13	Invoice Released	\$32,212.60
11/19/13	12-029-14	Invoice Released	\$42,637.61
12/9/13	12-029-15	Invoice Released	\$236,002.61
1/8/14	12-029-16	Invoice Released	\$31,612.60
2/10/14	12-029-17	Invoice Released	\$31,612.61
3/19/14	12-029-18	Invoice Released	\$31,612.60
4/8/14	12-026-19	Invoice Released	\$31,612.61
5/2/14	12-029-20	Invoice Released	\$31,612.60

Amendment Summary

Awards			
Award Date	Number	Amount	
09/10/2012	A001	\$2,015,288.00	
Total Award:		\$ 2,015,288.00	
Amendments			
Date	Number	Status	Amount
1/30/13	AMD 001	Amendment Executed	\$38,600.00
4/22/13	AMD 002	Amendment Executed	\$28,800.00
6/13/13	AMD 003	Amendment Executed	\$671,762.00
11/20/13	AMD 004	Amendment Executed	\$41,237.00
8/25/14	AMD 005	Amendment Executed	\$40,000.00
Amendment Total:			\$820,399.00
Total Amendments Less: (AC) Changes:			\$820,399.00
Adjusted Contract Value:			\$2,835,687.00
Amendment % of Original:			40.71%
Percentage of Contract Paid:			98.25%
Dates		Days	
From	To	Target	Lapsed
9/21/12	11/30/14	800	882



State of Utah

Division of Facilities and Construction Management

Consulting Contract = 137070

Consulting Contract Summary

Date	Invoice #	Status	Amount
7/8/14	12-029-21	Invoice Released	\$31,612.61
7/8/14	12-029-22	Invoice Released	\$31,612.61
8/8/14	12-029-23	Invoice Released	\$31,612.60
11/13/14	12-029-25	Invoice Released	\$64,422.21
12/18/14	12-029-26	Invoice Released	\$2,302.00
Total Payments:			\$ 2,786,184.43

<u>Adjusted</u>	<u>Substantial</u>	<u>Original</u>	<u>Days</u>
11/30/14		11/30/14	770
Percentage of Time Lapsed:			110.25%

Reasons for Amendments

Reason	Percent	Amount
Agency Scope	2.18%	\$17,917.00
Dfcm Scope	97.82%	\$802,482.00
Total Changes (less 'AC' Award Bid Packs):		\$820,399.00

Retainage Summary

Date	Invoice #	Status	Amount
Retainage Total:			

Release Summary

Release Date	Release	Amount
	Release # 1	
	Release # 2	
	Release # 3	
	Release # 4	
	Release # 5	
Release Total:		\$ 0.00
Net Retainage:		\$ 0.00

Contract Summary

Adjusted Contract Value:	\$ 2,835,687.00
Paid to Consultant:	\$2,786,184.43
Retainage to Bank:	\$.00
Total Paid:	\$2,786,184.43
Contract Balance:	\$49,502.57

Consultant Summary

Adjusted Contract Value:	\$ 2,835,687.00
Paid to Consultant:	\$2,786,184.43
Retainage Releases:	\$.00
Total Paid to Contractor:	\$2,786,184.43
Consultant Balance:	\$49,502.57



State of Utah

Division of Facilities and Construction Management

Consulting Contract = 137640

Construction Contract Summary

137640 - Department Of Human Services | Utah State Hospital | Building

Project Title:	State Hospital Consolidation New Medical Services Bldg And Pediatric Facility	Vendor #:	66309F
Project #:	<u>11065420</u>	Layton Construction Company	
Program Director:	Jim Russell (163400)	9090 S Sandy Pky	
Open PO's-Prj:	(1) for <u>\$3,080.00</u>	Sandy, Ut 84070-6409	
Contract Name:	Department Of Human Services Utah State Hospital Building	Status:	Notice To Proceed
Contract Type:	Const New Space	DO #:	12112972204
<hr/>			
Component Group:	Construction	Expense Budget:	6811
Component:	Construction(8)	Property #:	
Account:	<u>3000-300-3127-FVA-11065420</u>	Retainage #:	8694970

Funding Sources

Funding Source	Budget %	Appropriation	Allotment
GOBFY2012	100.00	\$26,058,813.00	\$0.00
Funding Totals:	100.00	\$26,058,813.00	\$0.00

Payment Summary

Date	Invoice #	Status	Amount
12/13/12	11065420#1	Invoice Released	\$573,898.80
1/14/13	11065420#2	Invoice Released	\$469,182.20
2/21/13	11065420#3	Invoice Released	\$979,693.20
3/12/13	11065420#4	Invoice Released	\$855,580.45
4/5/13	11065420#5	Invoice Released	\$1,415,995.90
5/8/13	11065420#6	Invoice Released	\$1,338,177.60
6/10/13	11065420#7	Invoice Released	\$2,305,501.00
7/3/13	11065420#8	Invoice Released	\$2,058,131.15
8/12/13	11065420#9	Invoice Released	\$2,145,213.05
9/9/13	11065420#10	Invoice Released	\$2,395,553.25
10/2/13	11065420#11	Invoice Released	\$1,868,198.75
11/8/13	11065420#12	Invoice Released	\$1,994,277.05
12/9/13	11065420#13	Invoice Released	\$1,885,826.95
1/10/14	11065420#14	Invoice Released	\$713,716.00
2/26/14	11065420#15	Invoice Released	\$762,396.85
3/6/14	11065420#16	Invoice Released	\$926,933.05
4/4/14	11065420#17	Invoice Released	\$709,607.25
5/12/14	11065420#18	Invoice Released	\$541,449.65
6/10/14	11065420#19	Invoice Released	\$204,366.85
7/18/14	11065420#20	Invoice Released	\$212,826.00
8/26/14	11065420#21	Invoice Released	\$123,106.00
9/24/14	11065420 #22	Invoice Released	\$80,292.00

Change Order Summary

Awards		
Award Date	Number	Amount
11/07/2012	A001	\$20,786,000.00
Total Award:		\$ 20,786,000.00

Change Orders

Date	Number	Status	Amount
4/2/13	CO 001	Co Executed	\$44,680.00
4/12/13	CO 002	Co Executed	\$3,430,000.00
5/30/13	CO 003	Co Executed	\$74,396.00
5/30/13	CO 004	Co Executed	\$97,385.00
6/11/13	CO 005	Co Executed	\$24,276.00
6/28/13	CO 006	Co Executed	\$177,203.00
9/4/13	CO 007	Co Executed	\$2,510.00
9/24/13	CO 008	Co Executed	\$186,875.00
9/24/13	CO 009	Co Executed	\$134,288.00
10/21/13	CO 010	Co Executed	\$30,137.00
10/21/13	CO 011	Co Executed	\$63,812.00
11/25/13	CO 012	Co Executed	\$32,674.00
11/25/13	CO 013	Co Executed	\$20,275.00
11/25/13	CO 014	Co Executed	\$74,591.00
12/4/13	CO 015	Co Executed	\$24,940.00
1/23/14	CO 016	Co Executed	\$29,447.00

State of Utah

Division of Facilities and Construction
Management

Consulting Contract = 137640

Construction Contract Summary

Date	Invoice #	Status	Amount
10/21/14	11065420 #23	Invoice Released	\$19,732.00
12/4/14	11065420#24	Invoice Released	\$103,257.00
1/15/15	11065420#25	Invoice Released	\$104,182.05
2/5/15	11065420#27	Invoice Released	\$23,054.00
2/5/15	11065420#26	Invoice Released	\$115,424.40
Total Payments:			\$ 24,925,572.45

Retainage Summary

Date	Invoice #	Status	Amount
12/13/12	137640#1	Invoice Released	\$30,205.20
1/14/13	137640#2	Invoice Released	\$24,693.80
2/21/13	137640#3	Invoice Released	\$51,562.80
3/12/13	137640#4	Invoice Released	\$45,030.55
4/5/13	137640#5	Invoice Released	\$74,526.10
5/8/13	137640#6	Invoice Released	\$70,430.40
6/10/13	137640#7	Invoice Released	\$121,500.10
7/3/13	137640#8	Invoice Released	\$108,164.75
8/12/13	137640#09	Invoice Released	\$112,905.95
9/9/13	137640#10	Invoice Released	\$126,081.75
10/2/13	137640#11	Invoice Released	\$98,326.25
11/8/13	137640#12	Invoice Released	\$104,961.95
12/9/13	137640#13	Invoice Released	\$99,254.05
1/9/14	137640#14	Invoice Released	\$37,564.00
2/26/14	137640#15	Invoice Released	\$40,126.15
3/6/14	137640#16	Invoice Released	\$48,785.95
4/4/14	137640#17	Invoice Released	\$37,347.75
5/12/14	137640#18	Invoice Released	\$28,497.35
6/10/14	137640#19	Invoice Released	\$10,756.15
1/15/15	137640#25	Invoice Released	\$2,041.95
Retainage Total:			\$1,272,762.95

Release Summary

Release Date	Release	Amount
8/7/14	Release # 1	\$ 1,115,001.00
10/20/14	Release # 2	\$ 10,986.00
11/13/14	Release # 3	\$ 138,236.10
12/3/14	Release # 4	\$ 6,497.30
2/3/15	Release # 5	\$ 2,042.55
Release Total:		\$ 1,272,762.95
Net Retainage:		-S 0.00

Change Orders

Date	Number	Status	Amount
1/23/14	CO 017	Co Executed	\$164,156.00
2/6/14	CO 018	Co Executed	\$28,230.00
3/6/14	CO 019	Co Executed	\$139,689.00
4/11/14	CO 020	Co Executed	\$21,477.00
6/5/14	CO 021	Co Executed	\$47,527.00
7/19/14	CO 022	Co Executed	\$89,557.00
8/26/14	CO 023	Co Executed	\$51,568.00
8/27/14	CO 024	Co Executed	\$79,410.00
11/3/14	CO 025	Co Executed	\$98,530.00
12/17/14	CO 026	Co Executed	\$147,063.00
1/21/15	CO 027	Co Executed	\$97,640.00

Change Order Total: \$5,412,336.00

Total Amendments (Less: Award Bid Pack Changes): \$1,982,336.00

Adjusted Contract Value: \$26,198,336.00

Change Order % of Original: 26.04%

Percentage of Contract Paid: 100.00%

Dates		Days	
From	To	Target	Lapsed
11/27/12	4/22/14	511	815
Adjusted	Substantial	Original	Days
4/22/14		2/21/14	451

Percentage of Time Lapsed: 159.49%

Reasons for Change Orders

Reason	Percent	Amount
Unknown - Dfcm	27.41%	\$543,382.00
Dfcm Scope-cont	1.16%	\$23,054.00
Award Bid Pack	173.03%	\$3,430,000.00
Scope - Ag/inst	1.13%	\$22,426.00
A/e Err - Dfcm	10.05%	\$199,192.00
Unk Cond	5.49%	\$108,882.00
Unk Cond-contin	0.08%	\$1,626.00
Omiss - Dfcm Cn	27.76%	\$550,325.00
Scope - Dfcm	23.23%	\$460,489.00
Ae Omission-con	3.68%	\$72,960.00
Total Changes (less Award Bid Packs):		\$5,412,336.00



State of Utah

Division of Facilities and Construction
Management

Consulting Contract = 137640

Construction Contract Summary

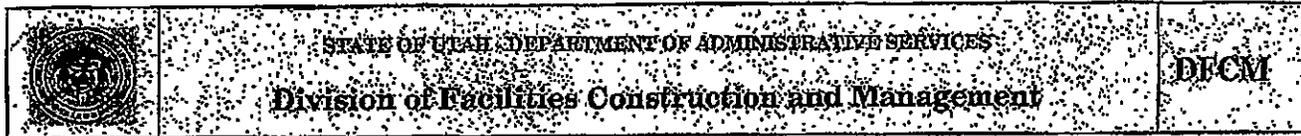
Contract Summary

Adjusted Contract Value:	\$ 26,198,336.00
Paid to Contractor:	\$24,925,572.45
Retainage to Bank:	\$1,272,762.95
Total Paid:	\$26,198,335.40
Contract Balance:	\$.60

Contractor Summary

Adjusted Contract Value:	\$ 26,198,336.00
Paid to Contractor:	\$24,925,572.45
Retainage Releases:	\$1,272,762.95
Total Paid to Contractor:	\$26,198,335.40
Contractor Balance:	\$.60

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CHANGE ORDER # 3

PROJECT NAME: Utah State Hospital Laundry Storage
 AGENCY: Human Services
 CONTRACTOR: Keller Construction

PROJECT NUMBER: 13081420
 CONTRACT NUMBER: 147635
 DESIGNER: Architectural JRCA

PCO NUMBER AND/OR CCD NUMBER	PROPOSAL REQUEST NUMBER	AMOUNT		DAYS	
		INCREASE	DECREASE	INCREASE	DECREASE
PCO-10		\$51,564.24		213	
		\$ 51,564.24			

	Amount	Days	Date
ORIGINAL CONTRACT	\$ 497,170.00	546	5-20-14
TOTAL PREVIOUS CHANGE ORDERS	\$ 30,496.71		N/A
TOTAL THIS CHANGE ORDER	\$ 51,564.24	213	
ADJUSTED CONTRACT	\$ 579,230.95		2-28-15

This change order is issued under the following conditions:

1. This work is to be performed in strict accordance with the terms of the Contract Documents, including prior issued Change Orders and Construction Change Directives, except as modified by this Change Order.
2. The rights of the DFCM (State of Utah) are not prejudiced.
3. The Contractor agrees that the terms, contract sum, scope of the Work and time specified in this Change Order shall constitute the full accord and satisfaction, and complete adjustment to the Contract and includes all direct and indirect costs and effects related to, incidental to, a consequence of and/or reasonably implied from such change in the contract terms, sum, scope of the Work and time.
4. Documents submitted with this Change Order are hereby incorporated as part of the Contract Documents for this Project.
5. This change order is not effective until executed by the DFCM below.
6. Signature of the Contractor below indicates agreement herewith.

THE TERMS AND CONDITIONS OF THIS CHANGE ORDER ARE HEREBY ACCEPTED:

Contractor _____ Date _____
 Architect/Engineer N/A. _____ Date _____
 Agency or Institution _____ Date _____
 DFCM Project Manager Bryan Boles _____ Date 12-28-14
 DFCM Management Gary Russell _____ Date 1/5/15
 Funding Verification Roy D. Fu 14 _____ Date 1-8-15

State of Utah

Division of Facilities and Construction
Management

Consulting Contract = 147635

Construction Contract Summary

147635 - Utah State Hospital Laundry Storage Bldg | Brian Bales

Project Title:	State Hospital Laundry/recreation Storage Building Replacement	Vendor #:	79573B
Project #:	13081420	Keller Construction Inc	
Program Director:	Brian Bales (172200)	2412 South 3400 West	
Open PO's-Prj:	(1) for \$5,000.00	Salt Lake City, Ut 84119	
Contract Name:	Utah State Hospital Laundry Storage Bldg Brian Bales	Status:	Notice To Proceed
Contract Type:	Const New Space	DO #:	13122495252
Component Group:	Construction	Expense Budget:	6811
Component:	Construction(8)	Property #:	
Account:	3000-300-3337-FXA-13081420	Retainage #:	3695221

Funding Sources

Funding Source	Budget %	Appropriation	Allotment
GFFY2014	100.00	\$632,545.22	\$0.00
Funding Totals:	100.00	\$632,545.22	\$0.00

Payment Summary

Date	Invoice #	Status	Amount
5/13/14	991188	Invoice Released	\$168,763.22
10/2/14	998192	Invoice Released	\$293,821.91
Total Payments:			\$ 462,585.13

Retainage Summary

Date	Invoice #	Status	Amount
5/13/14	147635#1	Invoice Released	\$8,882.28
10/2/14	147635#2	Invoice Released	\$15,464.31
Retainage Total:			\$24,346.59

Release Summary

Release Date	Release	Amount
	Release # 1	
	Release # 2	
	Release # 3	
	Release # 4	
	Release # 5	
	Release Total:	\$ 0.00
	Net Retainage:	\$ 24,346.59

Contract Summary

Adjusted Contract Value:	\$ 579,230.95
Paid to Contractor:	\$462,585.13

Change Order Summary

Awards

Award Date	Number	Amount
11/19/13	A001	\$497,170.00
Total Award:		\$ 497,170.00

Change Orders

Date	Number	Status	Amount
3/28/14	CO 001	Co Executed	\$15,389.71
10/28/14	CO 002	Co Executed	\$15,107.00
1/8/15	CO 003	Co Executed	\$51,564.24
Change Order Total:			\$82,060.95
Total Amendments (Less: Award Bid Pack Changes):			\$82,060.95
Adjusted Contract Value:			\$579,230.95
Change Order % of Original:			16.51%
Percentage of Contract Paid:			84.07%

Dates

From	To	Target	Lapsed
12/2/13	7/30/14	240	410
Adjusted	Substantial	Original	Days
7/30/14	8/19/14	5/20/14	
Percentage of Time Lapsed:			170.83%



State of Utah

Division of Facilities and Construction Management

Consulting Contract = 147635

Construction Contract Summary

Retainage to Bank:	\$24,346.59
Total Paid:	\$486,931.72
Contract Balance:	\$92,299.23

Contractor Summary

Adjusted Contract Value:	\$ 579,230.95
Paid to Contractor:	\$462,585.13
Retainage Releases:	\$0.00
Total Paid to Contractor:	\$462,585.13
Contractor Balance:	\$116,645.82

Reasons for Change Orders

Reason	Percent	Amount
Unknown - Dfcm	37.16%	\$30,496.71
Scope - Dfcm	62.84%	\$51,564.24
Total Changes (less Award Bid Packs):		\$82,060.95

DFCM

Division of Construction and Management
 4110 State Office Building Salt Lake City, UT 84144
 Telephone (801) 538-3018 Fax (801) 538-3267

REPORT OF PROJECT RESERVE FUNDS ACTIVITY

Mar-15

% of
 Constr.

PROJ #	DEPT	PROJECT TITLE	STATE FUNDS- DEVELOPMENT	STATE FUNDS- IMPROVEMENT	DOT FUNDS	DESCRIPTION	Budget
BEGINNING BALANCE			4,072,811	6,572,531	968,481		
INCREASES TO PROJECT RESERVE FUND:							
06272750	U OF U	David Eccles School Of Business	646,095.00			FFE, Arts, & Inspection Budgets	3%
13207310	DFCM	Brigham Regional Fire Alarm Replacement		183,467.00		Construction, Design, Inspection & Insurance Budget	54%
13374810	WSU	Steam Tunnel Phase IV Repairs		76,974.68		Construction, Design, Inspection & Insurance Budget	15%
14159550	DPS	DLD West Valley Stainless Steel Handrail		69,726.00		Construction, Design, Inspection & Insurance Budget	87%
14147030	ABC	Store #10 Entry Doors		47,149.00		Construction, Design, Inspection & Insurance Budget	51%
14206030	ABC	Roy RTU Replacement		20,668.00		Construction & Insurance Budgets	52%
14327050	GOED	Council Hall New Break Room		12,814.05		Construction, Design, Inspection & Insurance Budget	47%
13181900	UDOT	Rampton MTF / Fire Sprinkler Heads Replacement		10,240.00		Construction, Design, Inspection & Insurance Budget	24%
14157200	Education	Taylorsville Deaf Ctr Frone Awning		4,181.04		Construction & Insurance Budgets	20%
14115400	DHS	Layton Group Home Roof Repairs		3,071.00		Construction, Design, Inspection & Insurance Budget	7%
14203550	DPS	UHP BDO Window Replacement		2,736.00		Construction & Insurance Budgets	22%
14166100	UDC	Draper - Transportation Bldg HVAC		2,094.00		Construction & Insurance Budgets	7%
14260220	DATC	Access Controls Upgrade		1,450.39		Construction, Inspection, & Insurance Budgets	4%
13064400	DHS	Vernal Restroom Upgrade		926.00		Inspection & Insurance Budgets	1%
11080220	DATC	Administrative Area Upgrade		439.00		Project Residual	0%
14165100	UDC	Draper - Oquirrh 1-4 Parapet Wall Waterproofing		288.00		Construction & Insurance Budgets	1%
14216550	DPS	MHP Main Lobby/Breakroom Flooring		247.00		Inspection & Insurance Budgets	1%
DECREASES TO PROJECT RESERVE FUND:							
12202150	Courts	Matheson District Court Front Counter		(54,915.96)		To Award Construction Contract	29%
14050660	SLCC	RRC Tech Bldg Return Air Fans And VFD's		(51,135.00)		To Award Construction Contract	67%
13169290	DXATC	Old Airport Terminal Remodel		(27,277.34)		To Award Construction Contract	3%
09024670	SLCC	SCC Center For New Media	(901.00)			Return To Project For Additional Costs	
ENDING BALANCE			4,718,005.31	6,875,673.68	968,481.36		



Division of Construction and Management
 4110 State Office Building Salt Lake City, UT 84144
 Telephone (801) 538-3018 Fax (801) 538-3267

Mar-15

12 MONTH PROJECT RESERVE FUNDS ACTIVITY

DEPT	STATE FUNDS- DEVELOPMENT	STATE FUNDS- IMPROVEMENT	DOT FUNDS
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INCREASES TO PROJECT RESERVE FUND:

ABC Total	176,385.35
BATC Total	28,429.89
BLIND Total	7,433.70
COURTS Total	312,494.66
CPB Total	97,932.85
DAG Total	19,780.82
DAS Total	30,993.51
DATC Total	7,075.52
DCED Total	75,911.45
DEQ Total	524,137.00
DFCM Total	409,466.27
DHS Total	130,460.39
DIXIE Total	1,544.61
DNR Total	206,828.59
DPS Total	128,119.02
DWS Total	136,148.18
DXATC Total	3,780.17
ED Total	58,801.70
FAIRPARK Total	82,515.89
GOED Total	12,814.05
HEALTH Total	29,471.30
MATC Total	172,969.36
OWATC Total	1,365.72
SLCC Total	421,261.06
SNOW Total	35,370.85
SUU Total	274,520.01
TAX Total	218,518.00
U OF U Total	-
UBATC Total	82,320.65
UDC Total	211,665.67
UDOT Total	58,624.53
UNG Total	469,459.48
UVU Total	149,579.64
WSU Total	266,186.70
Grand Total	4,842,366.59



Division of Construction and Management
 4110 State Office Building Salt Lake City, UT 84144
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Mar-15

12 MONTH PROJECT RESERVE FUNDS ACTIVITY

DEPT	STATE FUNDS- DEVELOPMENT	STATE FUNDS- IMPROVEMENT	DOT FUNDS
------	-----------------------------	-----------------------------	-----------

DECREASES TO PROJECT RESERVE FUND:

BATC Total			(94,856.00)
COURTS Total			(127,646.96)
DFCM Total			(154,610.70)
DHS Total			(22,377.00)
DPS Total			(1,651.00)
DSU Total			(37,363.00)
DXATC Total			(283,277.34)
HEALTH Total			(19,551.60)
SLCC Total			(69,404.36)
TAX Total			(6,431.00)
UDC Total			(14,222.00)
UDOT Total			(11,467.00)
UNG Total			(28,544.00)
USU Total			-
UVU Total			(12,353.00)
WSU Total			(43,081.00)
Grand Total			(926,835.96)

OTHER ITEMS

OTHER	Unallocated Capital Improvement Funds		104,000.00
OTHER	Balance of FY2014 Improvement Funds		97,600.00
OTHER	Haz/Mat Surveys - Board Reallocation		(310,000.00)
OTHER	Hazmat Emergency Abatement - Board Reallocation		(200,000.00)
OTHER	Transfer To DFCM FY14 Admin Budget Per 2013 House Bill #6	(200,000.00)	
OTHER	Transfer To General Funs Per 2014 HB #2 Item #186	(5,100,000.00)	
OTHER	Correction of Transfer To General Fund Per 2014 HB #2 Item #	2,550,000	(2,550,000)

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
<u>NEW CONSTRUCTION</u>						
U OF U	Museum Of Natural History	100%	88,268,684	789,708	-	Closed
UOFU	David Eccles School Of Business	100%	60,944,567	816,110	-	Closed
USTAR	UU Neuroscience Research Center	94%	170,000,000	3,469,589	191,037	Construction
Dixie	Holland Centennial Commons	100%	37,055,090	1,345,210	-	Complete
CUCF	192 Bed Pod Expansion	0%	30,063,362	1,453,400	1,453,400	Design
Courts	New Ogden Juvenile Building	74%	29,702,686	1,176,574	306,137	Construction
USH	Building Consolidation	99%	28,052,170	1,109,520	11,648	Construction
WSU	Professional Classrm Bld And Central Plant	96%	35,687,160	1,190,587	52,933	Construction
USU	Business Bldg Addition/Remodel	51%	41,298,023	456,048	224,584	Construction
SWATC	Allied Health & Technology Bldg	15%	15,800,000	400,684	338,667	Construction
U OF U	Electrical/High Temp Water Utilities Upgrades	64%	72,126,649	1,821,788	661,114	Construction
UVU	New Classroom Building	90%	46,116,698	2,182,997	219,664	Construction
WSU	Tracy Hall Science Bldg	11%	58,407,812	2,168,774	1,926,177	Construction
USU	BRC Academic Bldg	10%	12,280,598	277,495	248,576	Construction
USU-EAST	Central Instructional Bldg	25%	31,394,738	742,090	556,968	Construction
DHS	USDC Durable Housing Units	0%	5,222,528	285,851	285,851	Design
SUBTOTAL		58%	762,420,765	19,686,425	6,476,756	
<u>REMODELING</u>						
SLCC	RRC New Instruational and Admin Complex	100%	32,647,350	1,110,367	-	Closed
DATC	Electrical System Upgrade	100%	323,595	34,560	-	Closed
DWS Metro	Office Replace Rooftop HVAC Units	97%	233,121	22,256	691	Complete
SOB	Das Security Upgrades Phase 11	100%	292,373	14,400	-	Closed
Corrections	AP&P Waste & Water Repairs	51%	246,396	29,842	14,739	Construction
Health	Children's Clinic Exam Rooms Remodel	100%	93,883	11,200	-	Complete
SUU	Centrum Chiller/Cooling Tower Replacement	100%	679,054	61,434	-	Closed

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
CPB	Capitol Hill Signage Improvements	0%	42,400	11,685	11,685	On Hold
DFCM	Gov Mansion West Entrance Seismic Improv	99%	975,098	26,694	139	Complete
Health	Upgrade Corridor Fire Doors	100%	248,873	20,000	-	Closed
DHS	JJS Southwest Youth Center Remodel	100%	1,216,452	99,022	-	Closed
Courts	Matheson Front Counter Remodel	33%	215,646	14,960	10,098	Construction
State Hospital	Slate Canyon Spring Development	100%	216,658	54,996	-	On Hold
USDC	Evergreen Bldg HVAC Replacement	0%	969,052	84,792	84,792	Construction
UNG	West Jordan Armory Kitchen Remodel	98%	507,848	45,821	804	Complete
UDOT	New Salina Maint Station	100%	2,563,564	78,179	-	Complete
WSU	Dee Event Center Site Improvements	100%	858,628	49,471	-	Closed
UBATC	Dust Collection And Exhaust System	98%	124,137	7,980	188	Complete
UBATC	ADA Interior Door Replacement	100%	36,802	7,806	-	Closed
DHS	Vernal Rooftop Unit Replacement	82%	189,399	21,537	3,816	Construction
DHS	Vernal Restroom Upgrades	100%	126,640	8,700	-	Closed
CPB	DUP Compressor/Water Cooled Condensor	0%	89,718	8,849	8,849	Design
DHS	USH Laundry/Recreation Storage Building	81%	599,098	31,750	5,944	Complete
SLCC	RRC Science Bldg Window Replacement	60%	454,568	47,535	19,073	Construction
Fairpark	IT Communications Upgrade	100%	40,421	3,840	-	Closed
Fairpark	Various Bldgs Fire Alarm Upgrade	70%	23,902	8,561	2,580	Complete
Parks	Rockport Culinary Water Line	24%	274,705	24,885	18,915	On Hold
BATC	Generator	100%	627,618	54,078	-	Complete
SNOW	Replace Irrigation System	11%	627,183	68,211	60,970	Construction
UDOT	Rampton Elevators	98%	498,155	117,593	1,970	Construction
Agriculture	Spry Bldg Door Hardware	92%	105,812	9,680	806	Construction
UDOT	Relocate Rampton Switchgear	100%	78,739	4,000	-	Closed
WSU	High Voltage Substation & Switching	57%	792,506	43,323	18,593	Construction
WSU	South Science Lab Irrigation	100%	296,693	20,000	-	Closed
DHS	USDC TLC Bldg HVAC Replacement	0%	79,000	32,644	32,644	Design
SUU	Campus Fire Alarm Separation	92%	153,834	12,343	950	Construction
SNOW	Humanities Bldg Chiller Replacement	100%	477,227	35,508	-	Complete

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
Snow	Washburn Bldg Replace Air Handler	100%	210,640	13,370	-	Closed
SNOW	Richfield Parking Lot Lighting	58%	20,120	10,355	4,346	Construction
DXATC	Terminal Remodel	90%	768,277	44,672	4,509	Construction
UDOT	Rampton MTF Bldg Fire Sprinkler Heads	100%	16,480	3,340	-	Closed
Courts	Tooele Front Counter	100%	30,506	9,520	-	Complete
OWATC	Various Bldgs HVAC Controls	75%	484,089	34,076	8,384	Complete
Courts	Farmington Security System	24%	108,993	7,020	5,365	Construction
DATC	Air Handling Units Phase I	100%	296,287	81,197	-	Complete
DFCM	Brigham Regional RTU	0%	208,842	19,840	19,840	Construction
DFCM	Brigham Regional Fire Alarm System	100%	120,001	26,540	-	Closed
DFCM	Ogden Regional Fire Suppression Tank	97%	69,789	6,800	217	Complete
Parks	Willard Bay North Marina Electric Line	0%	409,213	37,078	37,078	Construction
DIXIE	Campus Fire Alarm & Control Front End	74%	243,557	21,978	5,645	Construction
DIXIE	New Boiler	99%	697,021	57,240	623	Construction
SLCC	RRC Boiler #1 Replacement	93%	352,490	26,403	1,799	Construction
SLCC	RRC Technology Bldg VAV Controls	75%	568,840	41,664	10,321	Construction
Courts	Provo Juvenile Landscaping	12%	172,269	16,366	14,330	Construction
Courts	Matheson Roll Top Doors Controls	100%	74,576	9,580	-	Construction
Courts	Matheson Remodel 3rd floor Reception	100%	120,297	4,790	-	Closed
Courts	Price Clerical Work Area Remodel	100%	52,751	5,575	19	Closed
Courts	Cedar City Remodel/Woodwork Refinishing	83%	113,954	8,000	1,396	Complete
Courts	Provo Boilers Replacement	95%	68,025	7,029	384	Complete
SLCC	RRC Various Bldgs Fire Alarm Upgrade	100%	132,125	12,943	-	Closed
SUU	Conference Center ADA Parking Lot Replace	0%	65,000	-	-	Construction
ABC	Store #34 HVAC System	100%	81,612	5,800	-	Closed
CPB	Capitol Hill Security Camera Upgrades	0%	341,000	34,508	34,508	Construction
UDC	Draper - Timpanogos #5 Water Heater Replacemen	100%	222,926	20,517	-	Closed
UDC	Draper - Olympus HVAC Upgrade	0%	715,460	64,391	64,391	Design
UDC	Draper - Wasatch & Oquirrh Control Room Intercom	0%	232,169	19,717	19,717	Design
UDC	Draper - Timp 1-5 Control Room Remodel	0%	173,859	20,000	20,000	Construction

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
UDC	APP/CCC Floor Grind & Seal	0%	90,884	7,908	7,908	Construction
UDOT	Rampton VAV boxes/Controls	95%	452,324	50,654	2,359	Construction
DFCM	Richfield Regional Carpet/Paint	57%	234,973	21,875	9,313	Construction
Tax	Replace AHU's With Fan Walls	100%	373,396	45,393	-	Closed
DHS	Various Group Home Repairs	100%	60,369	13,360	-	Construction
Fairpark	Life Safety Barn Structural Upgrades	100%	2,529,717	179,198	-	Complete
ABC	Store @14 Wiring/Loading Dock	100%	5,984	880	-	Closed
ABC	Store #22 & 23 Store Front Replacement	59%	20,211	1,920	784	Complete
UNG	Vernal Armory Upgrades	83%	243,376	18,088	3,152	Construction
UNG	Blanding Armory Generator	100%	214,722	19,994	-	Complete
UNG	Tooele Armory Cooler Replacement	99%	52,124	2,177	21	Complete
WSU	Steam Tunnel Phase IV	100%	358,162	39,810	-	Closed
Deaf & Blind	School Improvements	100%	427,822	-	-	Complete
MATC	Remodel Phase III	100%	585,123	51,643	-	Closed
WSU	Overflow Parking Lot Phase V	100%	765,398	46,837	-	Complete
UVU	2014 HVAC Improvements	100%	382,907	33,564	-	Closed
DHS	USDC Infrastructure	80%	2,301,237	96,554	18,828	Construction
UVU	Exterior Park Lot Lights	0%	100,000	9,600	9,600	Complete
UVU	Education Bldg Elevator	0%	139,359	10,000	10,000	Construction
UVU	Multiple Bldgs Fire Alarm System Replacement	100%	185,847	16,000	31	Complete
UVU	Pope, Gunther Fire Doors	100%	11,792	6,400	-	Complete
UVU	Woodbury Bus Bldg Restrooms	100%	252,339	24,000	-	Closed
Corrections	CUCF Admin Plumb/Warehouse Air Handlers	0%	597,662	50,537	50,537	Construction
SNOW	Campus Lighting/Tunnel Emergency Lighting	0%	301,261	27,867	27,867	Design
SLCC	SCC Electrical Panel Upgrade	0%	239,000	24,336	24,336	Construction
SLCC	SCC Brick/Masonry Parapet Walls	0%	614,795	55,332	55,332	Design
CPB	DUP Museum Asbestos Abatement	24%	73,350	2,375	1,799	Complete
CPB	Mormon Battalion Repairs	0%	854,250	74,375	74,375	Design
UVU	Wolverine Ctr Skin Replacement	0%	151,440	-	-	Construction
UVU	Central Plant Cooling Tower	19%	314,468	35,200	28,485	Construction

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
Corrections	CUCF Henry Unit/ Admin Carpet	0%	110,679	10,515	10,515	Construction
UVU	Gunther, Pope, Woodbury, Losee Ext Paint	0%	158,000	2,000	2,000	Complete
BATC	West Campus Restroom Code Compliance	49%	418,608	19,955	10,124	Construction
BATC	West Campus HVAC Replacement	1%	363,359	38,576	38,209	Construction
BATC	Dust Collection System Replacement	0%	149,241	9,540	9,540	Construction
Corrections	CUCF Camera Installation	0%	190,482	18,096	18,096	Construction
DHS	Clearfield Security Window	0%	33,900	2,920	2,920	Complete
UDOT	MTF Bldg Fire Alarm Upgrade	78%	118,000	11,600	2,556	Construction
Courts	Matheson Sound System Replacement	0%	703,998	63,658	63,658	Construction
Courts	Matheson Security System Replacement	0%	826,272	72,299	72,299	Design
UBATC	Exterior Door Replacement	0%	455,915	42,172	42,172	Construction
Wildlife	Egan Hatchery Improvements	0%	37,422	3,555	3,555	Design
Wildlife	Springville/Egan Window Replacement	0%	81,033	7,698	7,698	Design
OWATC	Bus Bldg Chiller/Boiler Soft Water Systems	0%	268,763	39,030	39,030	Construction
OWATC	Campus Wide Exterior Lights	0%	234,500	24,000	24,000	Construction
WSU	Campus Master Plan	0%	500,000	20,000	20,000	Construction
WSU	Dee Event Ctr South Stairs Replacement	0%	330,000	26,540	26,540	Construction
WSU	Electrical Distribution Phase III	0%	434,901	32,512	32,512	Design
WSU	Stewart Library Infrastructure	0%	1,061,571	90,234	90,234	Pending
Courts	Logan Security Camers/DVR Upgrade	0%	39,946	4,000	4,000	Construction
Parks	Bear Lake East Restroom	0%	215,178	20,442	20,442	Construction
Wildlife	Mantua Hatchery Improvements	0%	53,316	3,959	3,959	Design
Parks	Bear Lake Marina Dock Replacement	0%	444,444	41,111	41,111	Construction
Courts	Brigham City Exhaust Fans Replacement	0%	54,737	5,200	5,200	Design
DFCM	Ogden Reg Fire Sprinkler Deficiencies/Pump	0%	110,262	10,475	10,475	Design
DFCM	Ogden Reg Halon Suppression System	0%	24,658	1,094	1,094	Construction
DFCM	Ogden Reg HVAC	0%	1,250,880	106,325	106,325	Design
Dixie	Cox Auditorium Elevator Modernization	100%	21,288	2,144	-	Closed
Dixie	Remove Underground Fuel Tank	0%	50,585	7,628	7,628	Complete
UDC	CCC's Security Project	0%	105,056	9,237	9,237	Design

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
UVU	Woodbury Bldg AHU-1, AHU-2	0%	1,096,513	102,060	102,060	Design
DATC	Boiler Replacement	0%	57,989	5,772	5,772	Construction
TATC	Diesel Shop Doors & Tool Room	100%	70,494	6,000	-	Closed
DFCM	Brigham Reg Fire Sprinkler Heads	0%	47,595	4,522	4,522	Design
DHS	USH Rampton #1 & Café Rooftop HVAC Units	12%	751,335	59,639	52,595	Construction
UVU	Fire Science Bldg Roof Repair	0%	67,368	6,400	6,400	Design
UOFU	Eyring South Bldg Reroof	0%	238,316	22,640	22,640	Design
DPS	W Valley DLD Reroof/Skylight	0%	417,721	38,639	38,639	Design
DHS	USH Chapel Reroof	0%	149,600	14,212	14,212	Design
DHS	Layton Group Home Roof Repairs	100%	36,400	3,458	-	Closed
Dixie	Campus Svcs Reroof	0%	57,684	5,480	5,480	Design
Dixie	Admin Reroof	0%	108,747	10,331	10,331	Design
DFCM	RDWD Reg #2 Skylight Replacement	0%	84,259	6,880	6,880	Construction
ABC	Store 13 Install Non-Slip Pads On Roof	0%	8,710	827	827	Design
ABC	Store 11 Safety Rail/ Non-Slip Pads On Roof	0%	42,105	4,000	4,000	Design
ABC	Store 10 Non-Slip Pads On Roof	0%	8,421	800	800	Design
AP&P	Freemont Bldg Reroof	0%	300,850	13,582	13,582	Construction
DHS	Cedar City Reroof	0%	38,619	3,669	3,669	Design
DHS	USH Rampton Cafeteria Skylight	90%	185,970	23,200	2,363	Complete
Courts	Ogden Elevator Replacement	0%	318,000	31,224	31,224	Construction
UDC	NUCCC Fire Alarm Upgrade	0%	51,368	4,880	4,880	Construction
Courts	Ogden Security Upgrade	0%	45,146	4,289	4,289	Construction
Courts	Ogden Window Seal	0%	39,005	3,600	3,600	Construction
Archives	Clearfield Cold Storage	0%	75,790	7,200	7,200	Construction
DFCM	Academy Square Main Boiler Refractory	0%	31,652	2,800	2,800	Construction
Wildlife	Northern Region Office Improvements	0%	58,948	5,600	5,600	Construction
DHS	USH Central Boiler Condensate Tank	83%	119,336	13,479	2,339	Construction
DFCM	Brigham Regional Plumbing Fixture Replace	66%	51,183	6,928	2,323	Construction
Courts	Brigham City Lighting/Exit Signs	0%	133,316	12,800	12,800	Construction
UDC	CCC's Mechanical Upgrades	0%	260,006	23,615	23,615	Construction

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
ABC	Brigham City Combined Projects	0%	13,996	1,330	1,330	Pending
Education	Buffmire Bldg Chiller Replacement	0%	225,949	18,960	18,960	Construction
Education	Blind Library Boiler Replacement	95%	170,301	33,175	1,782	Complete
CPB	UHP Control Room A/C	0%	13,340	3,325	3,325	Construction
ABC	Layton Store Fire Alarm Upgrade	100%	13,511	1,120	-	Complete
ABC	Store 10 Sliding Entry Doors	100%	42,767	8,000	-	Closed
ABC	Store 16 Fire & Security Panel	32%	12,632	1,200	822	Complete
DFCM	Heber Wells Outside Air Dampers	0%	184,438	17,522	17,522	Design
DNR	Replace Conf Room Wall Partitions	0%	25,950	2,400	2,400	Construction
DNR	VFD Replacement	0%	47,294	6,000	6,000	Construction
CPB	SOB Fire Alarm Replacement	0%	215,000	20,425	20,425	Construction
UDC	AP&P Bonneville Exterior/Staff Entry	0%	68,023	6,462	6,462	Design
Health	Unified Lab Supply Fan Replacement	0%	264,260	12,022	12,022	Construction
Health	Cannon Relief Fan Walls	0%	147,917	5,646	5,646	Construction
Education	Blind Library Fire Alarm Upgrade	62%	131,442	16,160	6,208	Construction
Education	Taylorville Awning Replacement	100%	15,874	1,948	-	Closed
DPS	BCI New Motor, VFD, & System Balance	0%	51,077	7,080	7,080	Construction
DPS	WV DLD Handrail	100%	10,774	7,000	-	Closed
Wildlife	Replace Evidence Freezer	0%	34,389	5,200	5,200	Complete
Wildlife	Lee Kay Ctr Mechanical/Electrical Upgrades	0%	109,992	12,400	12,400	Construction
Corrections	Draper-Oquirrh & Uinta Swamp Coolers	0%	57,199	5,434	5,434	On Hold
Corrections	Draper Admin Lightning Protection	53%	70,000	6,005	2,822	Complete
Corrections	Draper Oquirrh 1-4 Parapet Wall Waterproofing	100%	20,800	1,831	-	Closed
Corrections	Draper Transportation HVAC	100%	25,070	2,555	-	Complete
Corrections	Draper-Promontory Back Up Sewer Chopper	0%	59,139	5,202	5,202	Construction
UDOT	Rampton Boiler Replacement	32%	830,884	55,332	37,845	Construction
DHS	JJS Control Boards Various Centers	0%	395,780	36,610	36,610	Design
DFCM	Provo Regional Misc Repairs	96%	23,987	16,000	672	Construction
DFCM	Richfield Regional Fire Alarm Addition	0%	37,895	3,600	3,600	Design
DFCM	Richfield Regional/DWS Parking Repairs	0%	231,332	21,980	21,980	Design

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
Courts	Richfield Council Remodel	0%	84,210	8,000	8,000	Design
Courts	Richfield Fire & Utility Separation	0%	226,610	21,528	21,528	Design
Parks	Fremont Maintenance Shop Replacement	0%	344,000	21,760	21,760	Design
UNG	West Jordan Armory Upgrade	0%	1,806,773	165,000	165,000	Design
DPS	UHP BDO Window Replacement	100%	8,692	1,072	-	Closed
DPS	Farmington Irrigation Replacement	0%	50,526	4,800	4,800	Construction
DHS	Clearfield RTU Replacement	100%	22,965	2,400	-	Closed
ABC	Roy Store RTU Replacement	100%	15,865	3,431	-	Closed
ABC	Roy Power Door Openers/Dock Lift	100%	13,334	2,230	-	Complete
ABC	Roy Combined Projects	0%	17,156	1,630	1,630	Pending
ABC	Ogden Combined Projects	0%	13,996	1,330	1,330	Pending
Parks	Dead Horse Point Bike Parking	100%	188,672	20,442	-	Complete
DWS	Admin Air Damper Replacement	100%	157,389	21,902	-	Complete
ABC	Store 31 New Handrail	100%	14,925	800	-	Closed
ABC	Store 16 New Handrail	100%	15,765	800	-	Closed
DPS	Taylorville BCI Lighting	0%	35,368	3,360	3,360	Construction
DPS	UHP Murray Lobby/Breakroom Flooring	100%	24,890	2,044	-	Closed
Courts	Richfield HVAC & VAV Replacement	96%	24,875	4,800	170	Construction
SUU	ADA Concrete Replacement	0%	179,624	14,261	14,261	Construction
SUU	Fire Lane Approach Upgrades	0%	99,790	7,980	7,980	Construction
SUU	Bennion Parking Lot Repairs	0%	194,174	15,331	15,331	Construction
DFCM	Highland Regional ADA Parking Upgrade	0%	46,110	4,380	4,380	Design
Wildlife	Midway Hatchery Entrance Paving	0%	58,701	5,577	5,577	Design
Corrections	CUCF Asphalt Repairs	0%	298,192	28,221	28,221	Design
UVU	Asphalt Repairs	0%	252,631	24,000	24,000	Design
DPS	Ogden Parking Lot Repairs	0%	15,629	3,591	3,591	Construction
DFCM	Heber Wells Pavement Upgrades	0%	269,741	24,951	24,951	Design
Parks	Escalante/Kodachrome Paving Improvements	0%	407,814	37,723	37,723	Design
Parks	Red Fleet Campground Asphalt Repairs	0%	194,685	18,495	18,495	Design
Parks	Jordanelle Slurry Seal	0%	134,172	12,746	12,746	Construction

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
DWS	Regional #1 Generator Addition	12%	416,980	31,684	27,788	Construction
WSU	Electrical Distribution Phase Transformer	0%	20,445	29,662	29,662	Construction
Agriculture	SF Veterinary Bldg	0%	642,838	40,499	40,499	Design
UDOT	Hooper Maintenance Station	0%	2,099,999	78,853	78,853	Construction
SLCC	RRC VAV/AHU	0%	379,943	35,145	35,145	Design
SLCC	RRC Library Chiller	0%	204,932	19,468	19,468	Design
SLCC	SCC Main Bldg HVAC Controls	0%	409,863	37,912	37,912	Design
Agriculture	Boiler Replacement	98%	113,612	11,876	246	Construction
Corrections	Draper Admin Bldg HVAC Upgrades	0%	212,067	20,146	20,146	Pending
DHS	USH Rampton Electronic Door Control	0%	210,526	20,000	20,000	Design
Courts	Provo Juvenile Boiler Replacement	0%	235,789	22,400	22,400	Pending
DATC	Access Controls Upgrade	100%	22,960	3,431	-	Complete
UND	Draper HQ Restroom Remodel	0%	210,526	20,000	20,000	Design
Courts	WV Juvenile Boiler Replacement	0%	53,011	7,982	7,982	Construction
Dixie	Burns Arena Boiler	0%	325,841	30,119	30,119	Design
Health	Cannon Windows/Bathrooms Upgrade	0%	397,079	35,424	35,424	Construction
Tax	Switchgear Closets Cooling System	0%	30,194	10,000	10,000	Construction
Courts	Vernal Security Control Room A/C	100%	12,551	2,336	-	Closed
Fairpark	Ext Repairs & Beautification	100%	18,487	36,006	-	Complete
ABC	Store 5 Dock Leveler	0%	13,707	2,000	2,000	Construction
ABC	Store 40 New Handrail	0%	326	1,200	1,200	On Hold
Health	Cannon Interior Repaint	0%	122,447	11,632	11,632	Purchase
UNG	W Jordan PV Project	20%	650,000	47,725	38,180	Construction
Courts	St George Ext Masonry Repairs	100%	70,479	5,569	-	Complete
Health	Cannon Exit Signs Replacement	0%	23,488	4,040	4,040	Construction
Education	Buffmire Bldg Exit Signs	20%	20,501	1,948	1,552	Complete
DFCM	RDWD Reg #2 Sidewalk Replacement	100%	30,752	2,400	-	Closed
Tax	Replace Domestic Hot Water Heaters	100%	23,437	8,031	-	Closed
CPB	Council Hall Break Room	100%	13,398	2,375	-	Closed
Tax	Carpet Replacement	100%	596,818	47,654	0	Complete

CONTINGENCY FUND ANALYSIS

Mar-15

AGENCY	DESCRIPTION	% COMPLETE	CONSTRUCTION BUDGET	AUTHORIZED CONTINGENCY AMOUNT	CONTINGENCY FUNDS NEEDED	PROJECTS STATUS
DCED	Rio Grande Bldg Security Upgrade	0%	45,146	4,289	4,289	Pending
ABC	Store #10 Entrance Sidewalk	100%	5,800	450	-	Complete
DCED	Rio Grande Doors & Hardware	0%	122,123	11,601	11,601	Pending
DCED	Rio Grande Lighting Upgrade	0%	22,225	2,111	2,111	Pending
DWS	South County Parking Lot Lighting	0%	22,500	3,406	3,406	Construction
Corrections	AP&P VAV Box Upgrades	0%	19,895	4,884	4,884	Construction
Courts	Tooele Walkway & Tunnel Restoration	100%	14,547	1,556	-	Complete
ABC	Admin Carpet Replacement	0%	71,332	6,777	6,777	Construction
ABC	Store #14 Door Hardware Modification	0%	12,632	1,200	1,200	Pending
ABC	Store #37 Lighting Upgrade	0%	58,948	5,600	5,600	Pending
Archives	Dry Sprinkler Modificarions	0%	65,570	9,734	9,734	Construction
Archives	Security Fence Reinforcement	0%	15,995	2,336	2,336	Construction
DNR	Dock Lift Replacement	0%	13,219	2,400	2,400	Construction
DWS	Metro Bldg Bathroom Counters	0%	21,902	2,435	2,435	Construction
Fairpark	Bonneville Roof Replacement	0%	118,226	11,232	11,232	Design
DFCM	Ogden Reg Parking Structure Lighting	0%	67,368	6,401	6,401	Pending
DFCM	Ogden Reg Ceiling Tile Replacement	0%	171,000	16,245	16,245	Pending
CPB	Reclad Dome Windows	0%	60,000	5,700	5,700	Design
CPB	Repaint Capiton Window Sills	0%	160,000	15,200	15,200	Design
Health	Childrens Ctr Sidewalk Repair	0%	37,803	15,580	15,580	Construction
DHS	Vernal Carpet Replacement	0%	54,176	5,147	5,147	Pending
DFCM	Utah Space Standards Update	96%	76,928	-	-	Complete
SUBTOTAL		39%	99,539,665	6,758,039	3,289,524	
PROJECTED CONTINGENCY FUND NEEDS					9,766,280	
CONTINGENCY RESERVE FUND BALANCE					10,492,050	
PROJECTED EXCESS IN CONTINGENCY RESERVE FUND					725,770	



State of Utah

Division of Facilities and Construction Management

Fund Type = IMPROV EMERGENCY; From Date = 11/20/2014

Statewide Emergency Fund

<----- Encumbrance ----->

Agency	Project	Project Description	Budget	Prior	Current	Total
Fairpark	<u>13353370</u>	State Fairpark Barns Life Safety Structural Upgrades - Emergency Funds---see 13355370	\$0.00	\$0.00	\$0.00	\$0.00
Fairpark	<u>13354370</u>	State Fairpark Barns Life Safety Structural Upgrades - Emergency Funds	\$0.00	\$0.00	\$0.00	\$0.00
Fairpark	<u>13363370</u>		\$0.00	\$0.00	\$0.00	\$0.00
State Hospital	<u>14136420</u>	State Hospital Central Boiler Plant Condensate Tank & Pumps Emergency Replacement	\$200,000.00	\$139,766.24	\$103,278.24	\$243,044.48
State Hospital	<u>14136420</u>	State Hospital Central Boiler Plant Condensate Tank & Pumps Emergency Replacement	\$200,000.00	\$139,766.24	\$103,278.24	\$243,044.48
Dfcm - Managed Buildings	<u>14321300</u>	Multi-agency Solar Photo Voltaic Projets - Masb Bldg And Moab Regional Ctr	\$0.00	\$0.00	\$0.00	\$0.00
Dfcm - Managed Buildings	<u>14328310</u>	Governor's Mansion Install New Water Softening System And Backup Hot Water Heater	\$20,000.00	\$33,099.44	\$14,620.00	\$47,719.44
Dfcm - Managed Buildings	<u>14381310</u>	Dfcm Highland Plaza Fire Suppression Water Line Emergency Replacement	\$252,000.00	\$0.00	\$0.00	\$0.00
Average = \$84,000.00		8 Projects	\$672,000.00	\$312,631.92	\$221,176.48	\$533,808.40
Statewide Emergency Fund			Unencumbered Balance for Fund - 12200300		\$1,352,860.95	



State of Utah

Division of Facilities and Construction
Management

Fund Type = IMPROV HAZARDOUS; From Date = 11/20/2014

Statewide Hazardous Materials Projects

<----- Encumbrance ----->

Agency	Project	Project Description	Budget	Prior	Current	Total
Capitol Preservation Bd	<u>14056050</u>	Dup Museum Asbestos Abatement	\$74,374.00	\$73,350.00	\$96,677.91	\$170,027.91
Dfcm - Statewide Funds	<u>14313300</u>	Fy'15 Hazardous Materials Surveys, Etc.	\$228,401.31	\$85,763.34	\$114,273.24	\$200,036.58
Average = \$151,387.66		2 Projects	\$302,775.31	\$159,113.34	\$210,951.15	\$370,064.49
Statewide Hazardous Materials Projects			Unencumbered Balance for Fund - <u>14312300</u>		\$191,123.19	



State of Utah

Division of Facilities and Construction
Management

Fund Type = IMPROV LND OPTION; From Date = 11/20/2014

Statewide Land Options and Acquisition Fund

<----- Encumbrance ----->

Agency	Project	Project Description	Budget	Prior	Current	Total
Average =	0	Projects				
Statewide Land Options And Acquisition Fund			Unencumbered Balance for Fund - 12240300		\$798,711.92	



State of Utah

Division of Facilities and Construction Management

Fund Type = IMPROV PAVING; From Date = 11/20/2014

Statewide Paving Projects

Agency	Project	Project Description	Budget	Encumbrance		Total
				Prior	Current	
University Of Utah	<u>10204750</u>	Uu Delegated Unallocated Paving Funds	\$120,872.69	\$66,847.66	\$54,025.03	\$120,872.69
Dfcm - Statewide Funds	<u>12107300</u>	Fy'13, Fy'14 And Fy'15 Paving Preventative Maintenance Funds	\$713,779.69	\$892,648.95	\$39,720.25	\$932,369.20
Dfcm - Statewide Funds	<u>12108300</u>	Fy'13, Fy'14, And Fy'15 Ucl Paving Repairs	\$1,064,872.28	\$951,777.26	\$13,893.47	\$965,670.73
University Of Utah	<u>12260750</u>	Univ Of Utah 1900 East To Nursing Bldg Paving Improvements - Delegated	\$170,000.00	\$3,400.00	\$0.00	\$3,400.00
University Of Utah	<u>12261750</u>	Univ Of Utah Various Paving Repairs On Campus - Delegated	\$50,000.00	\$10,000.00	\$40,000.00	\$50,000.00
Corrections - Cucf	<u>13171110</u>	Cucf Entrance Road Paving Upgrade - Combined With 13170110	\$0.00	\$0.00	\$0.00	\$0.00
National Guard	<u>13174470</u>	Price National Guard Armory Paving And Grading	\$90,000.00	\$7,790.00	\$0.00	\$7,790.00
Public Safety	<u>13210550</u>	Farmington Driver's License/utah Highway Patrol Bldg Parking Lot Improvements	\$95,000.00	\$172,707.50	\$940.00	\$173,647.50
Ogden/weber Atc	<u>13212240</u>	Ogden/weber Atc Parking Lot Repairs	\$218,000.00	\$215,819.44	\$180,890.52	\$396,709.96
Dixie St College Of Utah	<u>13233640</u>	Dixie State College Paving Improvements - Mou	\$176,128.71	\$9,400.00	\$162,636.01	\$172,036.01
Utah State University	<u>13295770</u>	Usu Campus Parking Lot Paving Improvements - Delegated	\$725,000.00	\$507,874.61	\$217,125.39	\$725,000.00
National Guard	<u>13356470</u>	Camp Williams Bldgs 15170 And 9000 Paving Improvements, And West Jordan Armory Parking Lot Reconstruction	\$728,000.00	\$379,893.90	\$383,172.10	\$763,066.00
Workforce Services	<u>14268920</u>	Dws 1385 South State Parking Lot Repairs	\$133,846.00	\$0.00	\$6,310.00	\$6,310.00
University Of Utah	<u>14270750</u>	Univ Of Utah Fort Douglas Blvd Paving Replacement - Delegated	\$450,000.00	\$0.00	\$0.00	\$0.00
Average =	14 Projects		\$4,735,499.37	\$3,218,159.32	\$1,098,712.77	\$4,316,872.09
Statewide Paving Projects			Unencumbered Balance for Fund - 11284300		\$1,532,368.51	

State of Utah

Division of Facilities and Construction
Management

Statewide Roofing Projects

Fund Type = IMPROV ROOFING; From Date = 11/20/2014

Agency	Project	Project Description	Budget	Encumbrance		
				Prior	Current	Total
Dfcm - Statewide Funds	<u>12122300</u>	Fy'13, Fy'14 And Fy'15 Roofing Preventative Maintenance Account don't Close Until Emily B Is Ready To	\$831,094.92	\$239,874.17	\$48,535.98	\$288,410.15
Dnr - Wildlife Resources	<u>13111520</u>	Dwr Egan Hatchery Roofing	\$97,267.00	\$31,885.00	\$200.00	\$32,085.00
Utah State University	<u>13112610</u>	Usu Eastern Campus West Instructional Building Reroof	\$348,000.00	\$601,242.40	\$69,318.97	\$670,561.37
Utah State University	<u>13189770</u>	Usu Campus Misc Roofing Projects, Bid Sale/pdp Roofing Improvements, Health/wellness Roof And Skylight Replacement	\$487,702.64	\$871,194.64	\$13,169.27	\$984,363.91
Dixie St College Of Utah	<u>13217640</u>	Dixie State College Cox Auditorium Partial Reroof	\$237,000.00	\$338,536.88	\$8,104.12	\$346,641.00
Southern Utah University	<u>13219730</u>	Suu Roof Fall Protection Anchors Phase I	\$108,743.00	\$202,135.25	\$628.75	\$202,964.00
State Hospital	<u>13222420</u>	State Hospital Museum Excel House Reroof	\$39,000.00	\$0.00	\$0.00	\$0.00
Schools For Deaf & Blind	<u>13224230</u>	Salt Lake Libbie Edwards School For The Deaf & Blind Reroof	\$1,118,543.17	\$514,117.45	\$2,473.80	\$516,591.25
Dfcm - Statewide Funds	<u>13225300</u>	Fy'14 Roofing Seismic Program	\$545,895.49	\$0.00	\$0.00	\$0.00
Snow College South	<u>14011710</u>	Snow Richfield Campus Washburn Bldg Roof Replacement Phase I And Trane A/c Unit Replacement	\$562,295.00	\$1,162,626.40	\$6,431.24	\$1,169,057.64
Southern Utah University	<u>14012730</u>	Suu Multipurpose Center Bldg Reroof	\$467,500.00	\$1,144,089.88	\$332.88	\$1,144,422.76
Corrections - Draper	<u>14034100</u>	Draper Prison Timpanogos Vt Bldg Reroof	\$34,467.00	\$0.00	\$0.00	\$0.00
Dixie St College Of Utah	<u>14116640</u>	Dixie State University Campus Services Bldg Reroof	\$75,000.00	\$0.00	\$5,262.00	\$5,262.00
Dixie St College Of Utah	<u>14117640</u>	Dixie State University Administration Building Reroof	\$135,637.00	\$7,085.00	\$7,423.00	\$14,508.00
Corrections - Ap&p	<u>14122120</u>	Fremont Ap&p Building Reroof	\$319,687.00	\$329,840.00	\$119,674.45	\$449,514.45
Corrections - Ap&p	<u>14122120</u>	Fremont Ap&p Building Reroof	\$319,687.00	\$329,840.00	\$119,674.45	\$449,514.45
Human Services	<u>14124400</u>	Hs/dfcm Cedar City Regional Building Reroof	\$42,941.00	\$0.00	\$2,049.00	\$2,049.00
Weber State University	<u>14347810</u>	Wsu Marriott Allied Health Building Reroof	\$199,480.00	\$195,840.00	\$194,207.60	\$390,047.60
Salt Lake Comm College	<u>14369660</u>	Slcc Rrc Rampton Technical Bldg Emergency Reroof	\$391,960.00	\$387,121.00	\$361,211.66	\$748,332.66
Salt Lake Comm College	<u>14370660</u>	Slcc Meadow Brook Campus Building B Reroof	\$400,000.00	\$0.00	\$0.00	\$0.00
Developmental Center	<u>14376410</u>	Usdc Admin, Comp Therapy, Medical Services And Evergreen Buildings Reroof - Fund Design From Unallocated Roofing At This Time	\$1,299,125.00	\$69,000.00	\$13,820.00	\$82,820.00
Dfcm - Managed Buildings	<u>14382310</u>	Moab Regional Center Reroof	\$374,118.00	\$0.00	\$0.00	\$0.00



State of Utah

Division of Facilities and Construction
Management

Statewide Roofing Projects

Fund Type = IMPROV ROOFING; From Date = 11/20/2014

Agency	Project	Project Description	Budget	Encumbrance		Total
				Prior	Current	
University Of Utah	<u>14383750</u>	Univ Of Utah Student Services Bldg Reroof	\$439,931.00	\$0.00	\$26,462.00	\$26,462.00
Utah Valley University	<u>14384790</u>	Uvu Health Professionals Bldg Reroof	\$745,000.00	\$0.00	\$34,375.00	\$34,375.00
Southern Utah University	<u>15001730</u>	Suu Science Building Reroof	\$369,960.00	\$0.00	\$24,750.00	\$24,750.00
Juvenile Justice Services	<u>15011430</u>	Split Mountain Youth Center Reroof	\$322,382.00	\$0.00	\$0.00	\$0.00
Average = \$396,631.39		26 Projects	\$10,312,416.22	\$6,524,428.07	\$1,058,304.17	\$7,582,732.24
Statewide Roofing Projects			Unencumbered Balance for Fund - 11204300		\$1,959,078.99	



State of Utah

Division of Facilities and Construction Management

CP Construction Contract Status

Start Date = 11/20/2014; End Date = 02/20/2015; Agency = ALL; Manager = ALL; Contractor = ALL; Contract Type = CONST; Status Code = ALL

Open Contracts

2/11/15

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
National Guard	13328480	147591	Camp Williams J1c 6 Wayne Smith Jim Russell	Const New Space Notice To Proceed	Wayne Smith	\$723,695.19	151	-357	95.02%	
Snow College South	13166710	147659	Snow College Richfield Exterior Lighting Retrofit 13166710 Brent Lloyd, Pm	Const Remodel Notice To Proceed	Brent Lloyd	\$20,120.00	91	-325	58.03%	
State Hospital	11065420	137640	Department Of Human Services Utah State Hospital Building Consolidation	Const New Space Notice To Proceed	Jim Russell	\$26,196,336.00	511	-304	100.00%	
National Guard	12301480	147517	Tass Barracks Hvac Upgrade Re-commissioning Wayne Smith Jim Russell	Const Remodel Notice To Proceed	Wayne Smith	\$157,140.00	266	-285	90.91%	
National Guard	13316480	147602	Camp Williams South Garrison Infrastructure Ph I Wayne Smith Jim Russell	Const Remodel Notice To Proceed	Wayne Smith	\$1,769,190.84	235	-265	93.26%	
Southern Utah University	13162730	147645	Southern Utah University Simplex Grinnel Fire Alarm Separation Brian Bales	Const Remodel Notice To Proceed	Brian Bales	\$153,834.97	167	-235	92.30%	
Weber State University	13128810	147767	Weber State University Medium Voltage Upgrades Phase II Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$806,256.00	67	-235	95.24%	
Human Services	13063400	147751	Department Of Human Services Vernal Dhs Building Hvac And Bas Controls Replacement Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$168,780.00	102	-206	92.34%	
Utah Valley University	14036790	147870	Utah Valley University Extended Education Building Elevator Modernization Michael Ambre	Const Remodel Notice To Proceed	Brad Demond	\$139,359.00	51	-189	0.00%	
University Of Utah	09131750	117347	University Of Utah Beverley Taylor Sorensen Arts/education Complex Cm /gc	Const New Space Notice To Proceed	Rick James	\$29,696,861.00	1,039	-180	99.74%	7/31/14
Utah Basin Atc	13061250	147768	Utah Basin Atc Dust Collection And Exhaust System Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$137,886.00	288	-180	87.91%	8/28/15
Courts	13246150	147846	Administrative Office Of The Courts Matheson Courts Overhead Gates Improvements Michael Ambre	Const Remodel Contract Complete	Michael Ambre	\$78,108.00	25	-175	95.48%	
University Of Utah	11160750	127616	University Of Utah University Of Utah Healthcare Center Ambulatory Care Center And Parking Structure Cm/gc	Const New Space Notice To Proceed	Dave McKay	\$31,229,117.00	864	-165	97.54%	
Dfcm - Managed Buildings	14189310	157528	Utah Department Of Transportation Calvin Rampton Building Boiler Replacement/conversion, Controls And Piping Upgrade Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$268,863.00	45	-133	100.00%	
Salt Lake Comm College	14020580	147836	Sloc Lighting Project John Burningham	Const Remodel Notice To Proceed	John Burningham	\$21,122.50	143	-112	50.00%	
Tax Commission	12028310	157586	Tax Commission Building-replace All Cctv Cameras And Hardware Bob Lund	Const Remodel Contract Complete	Jake Jacobson	\$82,805.00	52	-112	34.40%	
Dfcm - Statewide Funds	14192300	157595	Dfcm Provo Regional Main Waterline, Stairs And Parking Lot Main Water Line Replacement Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$23,987.00	60	-105	95.80%	
Human Services	13063400	157546	Department Of Human Services Vernal Dhs Building Window And	Const Remodel	Dwight Palmer	\$20,619.00	40	-100	0.00%	1/8/15



State of Utah

Division of Facilities and Construction Management

CP Construction Contract Status

Start Date = 11/20/2014; End Date = 02/20/2015; Agency = ALL; Manager = ALL; Contractor = ALL; Contract Type = CONST; Status Code = ALL

Open Contracts

RAIN

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left % Paid	Sub-C
			Architectural Panel Improvements Dwight Palmer	Notice To Proceed					
State Hospital	14136420	157521	Utah State Hospital Central Heating Plant Condensate Surge Tank/pumps Replacement Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$110,336.24	93	-98 82.64%	
Dfcm - Statewide Funds	12200300	157620	Taylorville Bld Remove And Replace Existing Compressor Scott Whitney	Const Site Imp Notice To Proceed	Jim Russell	\$18,420.25	15	-98 0.00%	
Dept Of Transportation	13308900	147882	Utah Department Of Transportation Rampton Building Vav Replacement And Controls Upgrade Phase 2 Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$452,324.00	123	-91 95.34%	
National Guard	12280480	157563	Utah National Guard - Camp Williams Combat Pistol Range Improvements Wayne Smith	Const Remodel Notice To Proceed	Wayne Smith	\$816,980.70	64	-91 24.51%	
Health	14322390	157629	Exit Sign Replacement Cannon Health Building Bob Lund	Const Remodel Notice To Proceed	Robert Lund	\$23,488.71	52	-91 0.00%	
Dept Of Transportation	12335900	147702	Utah Department Of Transportation Salina Maintenance Station Brent Lloyd	Design Build Notice To Proceed	Brent Lloyd	\$2,620,808.78	263	-88 97.82%	
Dfcm - Managed Buildings	13310310	157534	Dfcm Richfield Regional Abatement, Repaint, Carpet And Wall Upgrades Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$22,225.00	112	-84 89.92%	
National Guard	13356470	157639	Utah National Guard Camp Williams Bldg 5170 Paving Improvements Mueller	Const Remodel Notice To Proceed	Matthias Mueller	\$335,136.00	36	-84 96.99%	
Utah Valley University	12192790	137871	Utah Valley University New Classroom Building Kurt Baxter	Const New Space Notice To Proceed	Rick James	\$42,315,888.43	519	-83 98.02%	
National Guard	10281480	137861	Utah National Guard Bachelor Enlisted Quarters Facility Matthias Mueller Lynn Hinrichs	Const New Space Notice To Proceed	Matthias Mueller	\$15,024,840.79	478	-82 88.59%	
National Guard	14332480	157602	Utah National Guard Blending Solar Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$170,809.00	74	-82 10.00%	
National Guard	13363480	157536	Utah National Guard Vernal Ng Armory Upgrades Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$243,376.50	120	-73 89.96%	
Dept Of Transportation	13109900	147639	Lidot Cal Rampton Complex Elevator Modernization Bob Anderson	Const Remodel Notice To Proceed	Timothy Christensen	\$498,155.00	353	-67 98.32%	1/27/15
Corrections - Draper	14348100	157708	Department Of Corrections Draper State Prison Geothermal Underground Hot Water Lines Replacement Taylor Maxfield	Const Remodel Notice To Proceed	Taylor Maxfield	\$277,450.00	26	-67 21.01%	
Dfcm - Managed Buildings	14293310	157622	State Archives Fume Hood Dfcm George Lewis	Const Remodel Notice To Proceed	Jake Jacobson	\$12,562.00	36	-63 0.00%	



State of Utah

Division of Facilities and Construction
Management

CP Construction Contract Status

Start Date = 11/20/2014; End Date = 02/20/2015; Agency = ALL; Manager = ALL; Contractor = ALL; Contract Type = CONST; Status Code = ALL

Open Contracts

2/11/15

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Bridgerland Atc	14066210	157693	Utah College Of Applied Technology Bridgerland Atc - Water Hammer Corrections Darrell Hunting	Const Site Imp Notice To Proceed	Darrell Hunting	\$64,131.17	52	-63	0.00%	
Weber State University	11077810	127003	Weber State University - Davis Campus Professional Classroom Building And Central Plant - Cmf/c	Const New Space Notice To Proceed	Matthias Mueller	\$32,255,365.56	1,013	-57	98.84%	6/11/14
University Of Utah	08015750	147604	University Of Utah George S. Eccles Student Life Center Construction Rick James Jim Russell	Const New Space Notice To Proceed	Rick James	\$41,402,200.00	512	-56	99.48%	
Dfcm - Managed Buildings	13310310	157607	Dfcm Richfield Regional Center - Repaint, Carpet Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$87,509.30	152	-54	53.30%	
Agriculture	14255010	157642	Department Of Agriculture And Food Agriculture Building - Boiler Replacement Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$93,646.00	31	-54	98.24%	1/7/15
Salt Lake Comm College	13044660	147676	Salt Lake Community College - Redwood Road Campus East And West Chiller Plants New Chiller Controls Sequencing John Burningham	Const Remodel Notice To Proceed	John Burningham	\$48,215.00	271	-51	40.54%	
Agriculture	13119010	147761	Utah Department Of Agriculture & Food Door Hardware Upgrades Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$105,812.42	260	-51	91.68%	
Salt Lake Comm College	14020660	157513	Stoc Interior Lighting Phase B John Burningham	Const Remodel Notice To Proceed	John Burningham	\$12,632.00	149	-51	99.20%	
Developmental Center	14032410	157666	Department Of Human Services Usdc Infrastructure Repairs Lucas Davis	Const Site Imp Notice To Proceed	Lucas Davis	\$2,513,012.23	133	-51	72.17%	
Corrections - Draper	14164100	157600	Department Of Corrections Lightning Protection Phase Ii Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$70,000.00	78	-51	53.00%	
Salt Lake Comm College	14020660	157623	Salt Lake Community College Various Campuses Interior Lighting Improvements - Phase C John Burningham	Const Remodel Notice To Proceed	John Burningham	\$24,975.00	99	-51	0.00%	
National Guard	14366480	157670	Utah National Guard Camp Williams Amphitheater Demolition Wayne Smith	Const Remodel Notice To Proceed	Wayne Smith	\$450,019.00	57	-51	0.00%	
Natural Resources	14150500	157688	Department Of Natural Resources Replace Main Conference Boardroom Wall Partitions Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$25,950.00	44	-51	0.00%	
Dfcm - Managed Buildings	13310310	157747	Dhs Richfield Regional Center Abatement And Interior Demolition Phase Ii Bob Anderson	Haz Mat Const Notice To Proceed	Dwight Palmer	\$43,589.00	12	-51	0.00%	
University Of Utah	12075750	137725	University Of Utah School Of Dentistry - Cmf/c - Dave Mckay -	Const New Space Notice To Proceed	Dave Mckay	\$27,571,658.96	598	-50	96.37%	
Salt Lake Comm College	14369660	157673	Sicc Rampton Technology Building Emergency Upper Roof Replacement Matt Boyer	Roofing Notice To Proceed	Matt Boyer	\$422,885.16	50	-48	76.89%	1/29/15



State of Utah

Division of Facilities and Construction
Management

CP Construction Contract Status

Start Date = 11/20/2014; End Date = 02/20/2015; Agency = ALL; Manager = ALL; Contractor = ALL; Contract Type = CONST; Status Code = ALL

Open Contracts

RAIN

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Dfcm - Managed Buildings	13208310	147883	Division Of Facilities Construction & Management Ogden Regional Center Fire Water Storage Tank Repairs Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$65,340.00	79	-46	96.10%	11/10/14
Dfcm - Statewide Funds	14312300	157794	Administrative Office Of The Courts St. George Fifth District Courts Building Emergency Bat And Bat Excrement Cleanup Bob Anderson	Haz Mat Const Notice To Proceed	Bob Anderson	\$35,410.00	4	-42	0.00%	
Agriculture	14255010	157694	Department Of Agriculture And Food Agriculture Building Automated Temperature Controls Upgrade Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$19,966.00	25	-40	96.47%	1/7/15
Bridgerland Atc	14065210	157553	Ucat - Bridgerland Atc West Campus Restroom Improvements Darrell Hunting	Const Remodel Notice To Proceed	Darrell Hunting	\$418,606.19	85	-35	49.27%	
Utah Valley University	14060790	167636	Utah Valley University Fall Fy15 Hvac Improvements Michael Ambre	Const Remodel Notice To Proceed	Brad Demond	\$314,468.00	107	-35	19.08%	
Dnr - Wildlife Resources	14161520	167712	Division Of Wildlife Resources Evidence Freezer Upgrade Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$36,674.50	44	-33	0.00%	2/2/15
Dnr - Wildlife Resources	13334520	157550	Division Of Wildlife Resources Whiterocks Hatchery Water Development Darrell Hunting	Design Build Notice To Proceed	Darrell Hunting	\$280,137.50	133	-31	55.06%	2/9/15
Dept Of Transportation	14071900	157663	Udot Udot Mf Bldg. Fire Alarm Upgrade Taylor Maxfield	Const Remodel Notice To Proceed	Taylor Maxfield	\$118,000.00	91	-28	94.75%	
Workforce Services	11096920	137754	Dws Metro Office Replace Rooftop Hvac Units	Const Remodel Notice To Proceed	Craig Wessman	\$233,121.37	105	-27	96.80%	8/13/13
Natural Resources	14373500	157758	Dwr Farmington Bay Entry Paving Dnr, Division Of Wildlife Resources Lucas Davis	Paving Notice To Proceed	Lucas Davis	\$52,680.00	12	-27	0.00%	
Tax Commission	14285310	157634	Utah State Tax Commission Building Switchgear Closets Cooling System Improvements Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$30,194.00	59	-25	0.00%	1/7/15
Courts	14130160	157733	Administrative Office Of The Courts Ogden Second District Courts Window Sealant Improvements Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$39,005.00	37	-22	0.00%	
National Guard	14286480	157650	Utah National Guard - Camp Williams Building 6170 - Addition And Remodel Wayne Smith	Const Remodel Notice To Proceed	Wayne Smith	\$498,500.00	108	-21	26.33%	
National Guard	14309480	157651	Utah National Guard - Camp Williams Well #3 Replacement Wayne Smith	Const Site Imp Notice To Proceed	Wayne Smith	\$677,121.58	120	-21	45.55%	
Bridgerland Atc	14067210	157690	Ucat - Bridgerland Atc Sawdust Collection System Upgrades - Construction Contract Darrell Hunting	Const Remodel Notice To Proceed	Darrell Hunting	\$154,416.00	78	-21	0.00%	
Bridgerland Atc	14068210	157691	Utah College Of Applied Technology Bridgerland Atc - West Campus Hvac System Replacement Phase Ii Darrell Hunting	Const Remodel Notice To Proceed	Darrell Hunting	\$241,747.00	93	-21	29.98%	



State of Utah

Division of Facilities and Construction Management

CP Construction Contract Status

Start Date = 11/20/2014; End Date = 02/20/2015; Agency = ALL; Manager = ALL; Contractor = ALL; Contract Type = CONST; Status Code = ALL

Open Contracts

CPAIN

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Corrections - Ap&p	14349120	157723	Department Of Corrections Ap&p Region III (fremont) - Vav Box Upgrades George Lewis	Const Remodel Notice To Proceed	George Lewis	\$19,895.00	73	-21	0.00%	
Dfcm - Managed Buildings	12249310	157738	Isf Contract - Joanna Reese Highland Regional Cooling Units Doug Hunter	Const Remodel Notice To Proceed	Jake Jacobson	\$27,706.00	58	-21	0.00%	
State Hospital	13081420	147635	Utah State Hospital Laundry Storage Bldg Brian Bales	Const New Space Notice To Proceed	Brian Bales	\$579,230.95	240	-20	84.07%	8/19/14
National Guard	14024480	157610	Utah National Guard Draper Complex - Csms Electrical Upgrade Wayne Smith	Const Remodel Notice To Proceed	Wayne Smith	\$812,540.09	138	-15	34.35%	
Salt Lake Comm College	13238860	157771	Salt Lake Community College - Redwood Road Campus Technology Building Prassure Relief Upgrade Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$44,173.00	25	-14	0.00%	
Public Safety	13210550	147782	Department Of Public Safety Farmington Ps Did/uhp Parking Lot Improvements Lucas Davis	Paving Notice To Proceed	Lucas Davis	\$79,063.76	65	-12	98.25%	7/17/14
Dixie St College Of Utah	13235640	147842	Dixie State University Campus Fire Alarm - Front End Upgrade Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$243,557.70	232	-10	74.32%	2/10/15
National Guard	13004480	147828	Camp Williams Sunrise Hall Jim Russell	Const New Space Notice To Proceed	Wayne Smith	\$1,906,743.50	260	-7	61.33%	
Dfcm - Statewide Funds	14312300	157774	Utah Department Of Transportation Rampton Complex - Main Building Basement Emergency Mold Remediation, Asbestos Abatement, Carpet Reinstall Bob Anderson	Haz Mat Const Notice To Proceed	Bob Anderson	\$13,952.92	22	-7	0.00%	
Weber State University	14347810	157704	Wsu Marriot Allied Health Reroof Matt Boyer	Roofing Notice To Proceed	Matt Boyer	\$198,255.00	66	-5	96.74%	1/7/15
Courts	12202150	157602	Matheson Courts, District Court Security Counter Remodel, N11 Administrative Office Of The Courts Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$215,846.21	155	-1	69.95%	
National Guard	14101480	157649	Utah National Guard Camp Williams - Jtc #7 Wayne Smith	Const New Space Notice To Proceed	Wayne Smith	\$714,500.00	127	-1	7.23%	
Corrections - Ap&p	14122120	157689	Dfcm / Corrections Fremont Ap&p Building Reroof Matt Boyer	Roofing Notice To Proceed	Matt Boyer	\$300,850.00	107	-1	0.00%	
Utah State University	13112610	157509	Usu Eastern Usu Eastern Wib Reroof Dwight Palmer	Const Remodel Notice To Proceed	Dwight Palmer	\$319,410.46	123	0	97.74%	12/22/14
Weber State University	14080810	157531	Weber State University Dee Event Center South Stairs Replacement Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$330,000.00		0	0.00%	10/15/14
Workforce Services	14344920	157683	Workforce Services Workforce Services South County Parking Lot	Const Site Imp	Scott Whitney	\$26,950.00		0	0.00%	



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Division of Facilities and Construction Management

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Open Contracts

MAIN

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
			Lighting Scott Whitney	Notice To Proceed						
Corrections - Cuct	14041110	157768	Department Of Corrections Cuct Various Buildings Upgrades Rick James	Const Remodel Notice To Proceed	Rick James	\$597,662.00		0	8.35%	
Dfcm - Managed Buildings	12249310	157788	Orem Udot (09349) - Install Charging Stations Chad Browning	Const Remodel Notice To Proceed	Jake Jacobson	\$26,380.00		0	0.00%	
Dfcm - Managed Buildings	12249310	157809	West Valley Drivers License Kiosk Area Remodel Scott Whitney	Const Remodel Notice To Proceed	Jake Jacobson	\$22,105.00		0	0.00%	
Dfcm - Managed Buildings	12185310	147648	Division Of Facilities Construction And Management Governor's Mansion West Porch Seismic Improvements Mike Ambre	Const Remodel Notice To Proceed	Michael Ambre	\$961,934.05	317	3	99.47%	10/28/14
Courts	14126150	157737	Ogden Courts Elevator Modernization Administrative Office Of The Courts Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$318,000.00	83	6	0.00%	
Davis Atc	14099220	157769	Utah College Of Applied Technology Davis Atc - 2nd Floor Boiler Tie-In Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$57,989.00	51	6	0.00%	
Dept Of Transportation	14005900	147867	Udot Saratoga Springs Maintenance Station Mueller	Const New Spaca Notice To Proceed	Mathias Mueller	\$2,586,180.00	240	7	61.16%	
Abc Stores	14298030	157958	Department Of Alcoholic Beverage Control Provo Store #5 (org 1356) Dock Lift Replacement Chad Browning	Const Site Imp Notice To Proceed	Chad Browning	\$13,707.24	25	7	0.00%	
Workforce Services	14246920	157655	Department Of Workforce Services Division Of Facilities Construction And Management Dws Regional Center #1 And Dfcm Regional Center #2 Emergency Generator Addition Mathias Mueller	Const Remodel Notice To Proceed	Mathias Mueller	\$418,980.00	121	7	12.30%	
Dfcm - Statewide Funds	14312300	157736	Utah State Hospital Administration Building Sheet Vinyl Flooring - Asbestos Abatement Bob Anderson	Haz Mat Const Notice To Proceed	Bob Anderson	\$11,363.00	60	7	0.00%	
Natural Resources	14151500	157776	Department Of Natural Resources Vid's Upgrades Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$47,294.00	25	7	0.00%	
Dixie St College Of Utah	13236640	147749	Dixie State University New Boiler For The Campus Heating System Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$697,021.00	218	8	98.91%	11/6/14
Dfcm - Statewide Funds	12107300	157654	Administrative Office Of The Courts Davis County 2nd District Courts Paving Maintenance/repair Brent Lloyd	Paving Contract Complete	Brent Lloyd	\$21,554.25	11	8	0.00%	11/7/14
Dnr - Wildlife Resources	14304520	157684	Division Of Wildlife Resources Lee Kay Hatchery Building Tim Christensen	Const New Spaca Notice To Proceed	Timothy Christensen	\$378,500.00	129	8	71.73%	
Serv Blind/visual Impair	14156200	157666	Office Of Education State Library For The Blind Fire Alarm System Replacement Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$131,442.00	123	8	61.58%	



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Open Contracts



Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Dnr - Wildlife Resources	14162520	157734	Division Of Wildlife Resources Lee Kay Center - Hvac Upgrades Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$112,696.18	85	8	40.12%	
Capitol Preservation Bd	14145050	157686	Capitol Preservation Board Uhp Control Room Cooling Upgrade Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$13,340.00	81	10	0.00%	1/7/15
National Guard	14288480	157665	Utah National Guard Mt Pleasant Fms Wayne Smith	Const Remodel Notice To Proceed	Wayne Smith	\$723,183.00	135	14	34.28%	
Corrections - Draper	13305100	157729	Department Of Corrections - Draper Prison Timpanogos Facility North Point Star Bldgs 1-4 Control Rooms Remodel. Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$173,859.00	94	14	0.00%	
Dfcm - Managed Buildings	14137310	157732	Division Of Facilities Construction And Management Brigham City Regional Center Plumbing Fixture Replacement Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$51,183.00	48	14	66.46%	2/12/15
Courts	14387150	157762	Administrative Office Of The Courts Scott Matheson Courthouse Directional Signage Improvements Mike Butler	Const Remodel Notice To Proceed	Mike Butler	\$56,077.20	66	14	50.00%	
Dfcm - Managed Buildings	12249310	157759	Isf Contract - Joanna Reese Masob Fitness Center Locker Rooms	Const Remodel Notice To Proceed	Jake Jacobson	\$23,640.00	58	20	0.00%	
Natural Resources	14356510	157783	Department Of Natural Resources Administration Building Dock Lift Replacement Bob Lund	Const Remodel Notice To Proceed	Robert Lund	\$13,219.00	39	20	0.00%	
Corrections - Draper	13304100	157731	Department Of Corrections - Draper Prison Wasatch And Quairh Buildings Intercom And Paging System Remodel Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$232,169.00	108	27	0.00%	
Health	14155390	157756	Department Of Health Cannon Health Bldg Relief Fan Walls Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$147,917.99	99	28	0.00%	
National Guard	14338480	157617	Utah National Guard Draper Canopy - Solar Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$841,690.00	195	38	10.00%	
Health	14282390	157742	Department Of Health Window & Restroom Upgrades Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$397,079.00	112	38	0.00%	
Courts	14272150	157765	Wvc Juvenile Probation Office, Boiler Replacement Administrative Office Of The Courts Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$53,011.00	92	38	0.00%	
Administrative Services	14118300	157770	Dfcm Regional 2 Center Roof At Skylight Matt Boyer	Const Remodel Notice To Proceed	Matt Boyer	\$84,259.00	82	39	0.00%	
Ogden/Weber Atc	14078240	157772	Utah College Of Applied Technology Ogden Weber Atc Exterior Lighting Upgrades Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$234,500.00	79	39	0.00%	
Dnr - Wildlife Resources	14085520	157773	Division Of Wildlife Resources Mantua Fish Hatchery Mechanical And Electrical Upgrades Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$53,318.00	79	39	0.00%	



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Open Contracts



Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Corrections - Ap&p	12066120	157687	Dept Of Corrections Fremont, Orange Street And Nuccc Ap&p Centers Waste And Water Repairs And Other Various Improvements Taylor Maxfield	Const Remodel Notice To Proceed	Taylor Maxfield	\$145,425.58	150	41	31.91%	
Health	14154380	157777	Department Of Health Unified State Lab Facility Fan Walls Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$264,260.00	60	41	0.00%	
Salt Lake Comm College	14047670	157752	Salt Lake Community College South City Campus Electrical Panel Up Grade Taylor Maxfield	Const Remodel Notice To Proceed	Taylor Maxfield	\$239,000.00	100	47	8.22%	
Serv Blind/Visual Impair	14141200	157792	Office Of Education/rehabilitation Judy Ann Buffmire Bldg Cooling System Upgrade Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$225,949.00	65	55	0.00%	
Bureau Of Criminal Indent	14158550	157797	Department Of Public Safety Bureau Of Criminal Identification Supply Fan Replacement Tim Christensen	Const Remodel Notice To Proceed	Timothy Christensen	\$51,077.00	73	56	0.00%	
National Guard	14340480	157626	Utah National Guard Wj Aasf Solar Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$712,512.00	219	62	10.00%	
National Guard	14316470	157627	Wj Armory Solar Pv Installation West Jordan, Utah John Harrington	Design Build Notice To Proceed	John Harrington	\$650,000.00	219	62	20.00%	
Corrections - Ap&p	14139120	157775	Department Of Corrections Division Of Adult Probation And Parole Fremont, Bonneville And Orange Street Cocs Mechanical Upgrades Taylor Maxfield	Const Remodel Notice To Proceed	Taylor Maxfield	\$248,070.00	88	62	0.00%	
National Guard	12267480	157669	Utah National Guard Tisa Recycle Facility Camp Williams Wayne Smith	Const New Space Notice To Proceed	Wayne Smith	\$369,500.00	189	68	0.30%	
Ogden/weber Atc	14077240	157739	Utah College Of Applied Technology Ogden Weber Atc Boiler Plant Mechanical Upgrades Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$268,763.00	143	68	13.42%	
State Hospital	14108420	157751	Hvac Upgrades Rampton Bldg. And Rampton Cafeteria Utah State Hospital Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$662,594.00	108	68	0.00%	
Bridgerland Atc	14066210	157780	Utah College Of Applied Technology Bridgerland Atc - Fire Hydrant Upgrades Phase 2 Water Hammer Correction Darrell Hunting	Const Site Imp Notice To Proceed	Darrell Hunting	\$71,775.00	94	68	0.00%	
Courts	14084150	157796	Courts Logan Court Security Camera And Dvr Upgrades Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$39,946.00	69	68	0.00%	
Public Safety	13048550	147861	Department Of Public Safety Drivers License Price Dld-udot-dispatch Brian Bales	Const New Space Notice To Proceed	Brian Bales	\$1,505,338.00	312	77	81.42%	
Dfcm - Statewide Funds	12107300	157591	Dept. Of Corrections Ap&p Orange Street Paving Maintenance/repair Brent Lloyd	Paving Notice To Proceed	Brent Lloyd	\$24,735.00	249	83	35.25%	



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Open Contracts

CPAN

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
National Guard	14334480	157612	Utah National Guard St. George, Utah Solar Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$510,167.00	240	83	85.00%	
Bureau Of Criminal Indont	14228550	157784	Department Of Public Safety Ogden Crime Lab Paving Repairs Brent Lloyd	Paving Notice To Proceed	Brent Lloyd	\$15,629.10	108	83	0.00%	
Courts	14072150	157680	Utah State Courts Aoc Mathason Courthouse Court Sound System Replacement Brian Bales	Const Remodel Notice To Proceed	Brian Bales	\$716,918.04	208	88	0.00%	
Dixie Ate	13169290	147706	Utah College Of Applied Technology Dixie Ate - Old St. George Airport Terminal Remodel Brent Lloyd	Const Remodel Notice To Proceed	Brent Lloyd	\$753,932.34	214	91	81.62%	7/1/14
Dfcm - Managed Buildings	13206310	157766	Brigham City Regional Center, Rtu Upgrade Dfcm Lucas Davis	Const Remodel Notice To Proceed	Lucas Davis	\$206,282.00	139	96	1.48%	
National Guard	14367480	157671	Utah National Guard - Camp Williams Building 6270 - Sergeant Majors Quarters Wayne Smith	Const New Space Notice To Proceed	Wayne Smith	\$246,600.00	205	97	0.00%	
Dfcm - Managed Buildings	14189310	157781	Departments Of Transportation And Public Safety Rampton Building Mechanical Phase Ii - Fan And Coil Upgrades Craig Wessman	Const Remodel Notice To Proceed	Craig Wessman	\$562,021.00	123	97	0.00%	
National Guard	14335480	157611	Utah National Guard Cw Southwest Area Solar Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$797,104.00	256	99	10.00%	
National Guard	14336480	157613	Utah National Guard Cw Jacobs Canal I - Soalr Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$797,104.00	256	99	10.00%	
National Guard	14337480	157616	Utah National Guard Cw Jacob Canal 2 John Harrington	Design Build Notice To Proceed	John Harrington	\$797,104.00	256	99	10.00%	
National Guard	14341480	157625	Utah National Guard Cw Series 9000 Solar Pv Installation John Harrington	Design Build Notice To Proceed	John Harrington	\$854,208.00	256	99	10.00%	
National Guard	11020480	137862	Utah National Guard - Camp Williams Rti Tass Complex Phase 2 Matthias Mueller / Lynn Hinrichs	Const New Space Notice To Proceed	Matthias Mueller	\$27,539,510.00	593	101	81.29%	12/18/14
Courts	08284150	147633	Administrative Office Of The Courts Ogden Second District Juvenile Court Lynn Hinrichs	Const New Space Notice To Proceed	Matthias Mueller	\$28,812,455.57	562	106	81.57%	
Utah State University	13050770	147581	Utah State University Student Recreation And Wellness Center Crn/gc Lynn Hinrichs	Const New Space Notice To Proceed	Darrell Hunting	\$24,134,540.00	622	129	47.51%	
National Guard	13240480	157608	Utah National Guard Phase Ii Infrastructure Camp Williams Wayne Smith	Paving Notice To Proceed	Wayne Smith	\$2,131,120.53	284	129	1.30%	
National Guard	13240480	157609	Utah National Guard Phase Ii Infrastructure Camp Williams (state Funding) Wayne Smith	Paving Notice To Proceed	Wayne Smith	\$2,784,085.62	284	129	26.83%	



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Open Contracts

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Natural Resources	<u>14026500</u>	<u>157707</u>	Dnr Cedar City Regional Center Kurt Baxter	Const New Space Notice To Proceed	Brad Demond	\$2,524,114.00	257	157	16.39%	
National Guard	<u>14287480</u>	<u>157804</u>	Utah National Guard Wendover Tuav Hangar Remodel Wayne Smith	Const Remodel Notice To Proceed	Wayne Smith	\$1,693,183.00	161	160	0.00%	
University Of Utah	<u>13026750</u>	<u>147841</u>	University Of Utah Business Loop Parking Structure Rick James	Const New Space Notice To Proceed	Rick James	\$13,124,047.06	419	173	30.74%	
University Of Utah	<u>13042750</u>	<u>147566</u>	U Of U Basketball Training Center Jim Russell	Const New Space Notice To Proceed	Michael Ambre	\$21,581,388.00	704	184	49.07%	
Southwest Ate	<u>11342270</u>	<u>157624</u>	Utah College Of Applied Technology Southwest Ate Allied Health And Technology Building Kurt Baxter	Const New Space Notice To Proceed	Darrell Hunting	\$16,281,615.00	401	273	18.68%	
Utah State University	<u>13049770</u>	<u>157843</u>	Utah State University Brigham Regional Academic Building Michael Ambre	Const New Space Notice To Proceed	Michael Ambre	\$12,297,095.45	414	285	19.05%	
Southern Utah University	<u>12218730</u>	<u>157542</u>	Southern Utah University Beverly Taylor Sorenson Center For The Arts Kurt Baxter	Const New Space Notice To Proceed	Jim Russell	\$28,684,160.00	503	311	8.20%	
Utah State University	<u>11194770</u>	<u>127525</u>	Utah State University Huntsman School Of Business Addition Crn/gc	Const New Space Notice To Proceed	Darrell Hunting	\$38,826,397.06	1,422	392	53.77%	
University Of Utah	<u>13285750</u>	<u>147798</u>	University Of Utah Lassonde Living Learning Center Rick James	Const New Space Notice To Proceed	Rick James	\$8,207,799.00	794	526	15.33%	
Dept Of Transportation	<u>14249900</u>	<u>157786</u>	Utah Department Of Transportation Hooper Maintenance Complex Mathias Mueller	Const New Space Notice To Proceed	Mathias Mueller	\$2,099,999.00	629	620	0.00%	
University Of Utah	<u>12042750</u>	<u>127609</u>	University Of Utah Electrical And High Temperature Water Utility Distribution Upgrade - Crn/gc	Unclass Const Notice To Proceed	Jim Russell	\$68,452,249.00	1,656	680	64.80%	

Count: 154

Open Contracts

\$589,387,081.68

Closed Contracts

Agency	Project	Contract	Contractor Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Dfcm - Managed Buildings	<u>05030300</u>	<u>087144</u>	Coates Electrical & Instrumentation Inc.	Const Remodel	John Harrington	\$47,650.00	70	-2,619	100.00%	



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Closed Contracts



Agency	Project	Contract	Contractor Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Dfcm - Managed Buildings	05030300	087416	Positive Power Llc	Const Remodel	John Harrington	\$16,548.00	153	-2,333	100.00%	
Dfcm - Managed Buildings	05030300	087424	Johnson Controls Inc	Const Remodel	John Harrington	\$18,691.00	161	-2,333	100.00%	
Dfcm - Managed Buildings	05030300	097009	Kw Electric inc	Const Remodel	John Harrington	\$12,511.50	53	-2,365	100.00%	
Weber State University	11008810	127441	Oklaid Construction Company, Inc.	Const New Space	Matthias Mueller	\$9,162,746.98	490	0	100.00%	7/17/13
Davis Atc	11081220	127397	True Power	Const Remodel	Lucas Davis	\$20,558.00	15	0	100.00%	2/15/12
Davis Atc	11081220	127679	True Power	Const Remodel	Lucas Davis	\$24,617.90	81	-888	100.00%	
Davis Atc	11081220	137634	True Power	Const Remodel	Lucas Davis	\$24,601.75	16	-827	100.00%	
Davis Atc	11081220	137700	Castor Electric	Const Remodel	Lucas Davis	\$18,175.38	28	-708	100.00%	
Davis Atc	11081220	137701	True Power	Const Remodel	Lucas Davis	\$24,247.61	39	-681	100.00%	
Davis Atc	11081220	137833	True Power	Const Remodel	Lucas Davis	\$15,506.00	30	-602	100.00%	
Davis Atc	11081220	137845	Aaa Fire Safety And Alarm Inc	Const Remodel	Lucas Davis	\$21,528.00	29	-603	100.00%	
Davis Atc	11081220	147764	Landmark Companies Inc	Const Remodel	Lucas Davis	\$14,242.50	29	37	100.00%	6/23/14
Davis Atc	11081220	147776	Rod Lewis Construction Llc	Const Remodel	Lucas Davis	\$31,896.00	188	-107	100.00%	
Fairpark	11092370	147682	Abs Architectural Bldg Supply	Const Remodel	Taylor Maxfield	\$31,848.00	207	-4	100.00%	9/23/14
Capitol Preservation Bd	11153310	137555	Simplex Grinnell	Const Remodel	Brian Bales	\$292,373.81	549	-147	100.00%	8/14/14
National Guard	11295480	127232	C K Construction & Services Corp	Const Remodel	Wayne Smith	\$532,647.00	329	-88	100.00%	11/26/11
National Guard	11315480	137599	Utah Correctional Industries	Const Remodel	Wayne Smith	\$461,128.00	228	-177	100.00%	11/25/11
Utah State University	12003770	127522	Spindler Construction Corp	Const New Space	Darrell Hunting	\$5,134,329.61	369	-61	100.00%	7/11/13
Tax Commission	12028310	157503	Utah Yamas Controls Corp	Const Remodel	Jake Jacobson	\$22,643.00	52	-76	100.00%	12/4/14
Health	12069390	147621	Patriot Construction	Const Remodel	Craig Wessman	\$93,883.00	58	-89	100.00%	4/17/14
Southern Utah University	12134730	147546	Western States Mechanical	Const Remodel	Craig Wessman	\$679,054.44	232	0	100.00%	4/25/14
Health	12188390	137744	Access Door Systems Lc	Const Remodel	Craig Wessman	\$12,980.00	44	-644	100.00%	
Health	12188390	147869	Wasatch West Contracting	Const Remodel	Craig Wessman	\$235,893.14	134	-82	100.00%	8/13/14
Juvenile Justice Services	12189430	147620	Carter Enterprises	Const Remodel	Dwight Palmer	\$1,216,452.26	151	-19	100.00%	6/4/14
National Guard	12242480	137598	Probst Electric Inc	Const Remodel	Wayne Smith	\$581,549.45	538	-326	100.00%	
Dnr - Parks & Recreation	12273510	157582	Landmark Companies Inc	Const Site Imp	Brent Lloyd	\$496,218.00	66	-1	100.00%	11/11/11



State of Utah

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Closed Contracts



Agency	Project	Contract	Contractor Name	Contract Type	Manager	Amount	Days	Left %	Paid	Sub-C
National Guard	12281480	137609	Vinyl Industries	Const Remodel	Wayne Smith	\$421,410.00	653	-204	100.00%	
National Guard	12285480	147599	Miller Paving Inc	Const Remodel	Wayne Smith	\$694,069.67	358	-133	100.00%	
National Guard	12291480	137593	Utah Correctional Industries	Const Remodel	Wayne Smith	\$550,000.00	257	-58	100.00%	8/27/13
National Guard	12302480	147571	Utah Correctional Industries	Const Remodel	Wayne Smith	\$266,560.24	310	-204	100.00%	
Dnr - Forest Fire St Land	12315500	147714	Ascent Construction Inc	Const New Space	Brian Bales	\$610,954.24	286	42	100.00%	10/30/14
Weber State University	12338810	147622	R & O Construction Co	Const New Space	Tim Parkinson	\$9,867,572.03	285	-172	100.00%	
University Of Utah	12341750	137829	Roomont Industrial Corp	Haz Mat Const	Matt Boyer	\$110,000.00	45	17	100.00%	6/13/13
University Of Utah	12341750	147840	North Face Roofing Inc	Roofing	Matt Boyer	\$317,573.00	117	0	100.00%	10/8/14
Weber State University	13005810	147772	Broderick & Henderson Construction Lc	Roofing	Matt Boyer	\$1,140,864.07	161	17	100.00%	9/15/14
National Guard	13013470	157554	Morgan Asphalt Inc	Paving	Brent Lloyd	\$386,665.53	72	14	100.00%	10/17/14
National Guard	13047480	147573	Khl Mechanical	Const Remodel	Wayne Smith	\$252,613.00	116	-396	100.00%	
Uintah Basin Atc	13062250	147653	Beacon Metals Inc	Const Remodel	Dwight Palmer	\$36,802.50	115	-284	100.00%	
Human Services	13064400	147651	Angus Construction Inc.	Const Remodel	Dwight Palmer	\$126,640.50	117	-10	100.00%	4/24/14
Bridgerland Atc	13102210	147686	Beacon Metals Inc	Const Remodel	Darell Hunting	\$459,157.33	146	53	100.00%	5/8/14
Bridgerland Atc	13102210	147689	Tec Electric Co	Const Remodel	Darell Hunting	\$168,460.86	95	0	100.00%	5/30/14
Dept Of Transportation	13124900	147805	Arco Electric Inc	Const Remodel	Taylor Maxfield	\$78,739.72	8	8	100.00%	9/22/14
Dept Of Transportation	13125900	147789	Kilgore Contracting	Paving	Brent Lloyd	\$215,398.13	146	-1	100.00%	10/8/14
Snow College	13127700	147812	Conwest Inc	Roofing	Matt Boyer	\$407,804.47	76	0	100.00%	8/13/14
Snow College	13127700	147832	Roomont Industrial Corp	Haz Mat Const	Matt Boyer	\$233,764.05	142	39	100.00%	9/15/14
Weber State University	13129810	147690	Saunders Construction Inc	Const Remodel	Tim Parkinson	\$296,693.11	230	-142	100.00%	
Salt Lake Comm College	13131660	147541	All Weather Waterproofing Inc	Roofing	Matt Boyer	\$798,238.49	132	2	100.00%	1/21/14
Public Safety	13145550	147847	Jts Roofing Inc.	Roofing	Matt Boyer	\$81,788.21	165	15	100.00%	5/15/14
Workforce Services	13147820	147662	Utah Correctional Industries	Roofing	Matt Boyer	\$140,000.00	109	-70	100.00%	7/7/14
Snow College South	13165710	147766	Sr Mechanical	Const Remodel	Brent Lloyd	\$210,840.00	100	-28	100.00%	8/29/14
Snow College	13168700	147736	Sumsion Construction	Paving	Brent Lloyd	\$183,508.08	113	50	100.00%	6/12/14
Corrections - Cudf	13170110	147730	Slaker Parson Companies dba Hales Sand And Gravel	Paving	Brent Lloyd	\$213,485.41	67	-11	100.00%	7/11/14



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Closed Contracts

Agency	Project	Contract	Contractor Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Dnr - Wildlife Resources	<u>13178520</u>	<u>147783</u>	Kendrick Bros Roofing Inc	Const Site Imp	Dwight Palmer	\$28,661.00	63	37	100.00%	5/27/14
Dept Of Transportation	<u>13181900</u>	<u>157601</u>	State Fire Sales & Service	Const Remodel	Timothy Christensen	\$16,480.00	13	19	100.00%	9/11/14
Dfcm - Managed Buildings	<u>13207310</u>	<u>147834</u>	Taylor Electric Inc.	Const Remodel	Lucas Davis	\$120,001.00	74	-10	100.00%	9/8/14
Schools For Deaf & Blind	<u>13224230</u>	<u>147826</u>	Perkes Roofing Inc	Roofing	Matt Boyer	\$215,503.17	89	0	100.00%	9/2/14
Courts	<u>13248150</u>	<u>147642</u>	Rod Lewis Construction Llc	Const Remodel	Michael Ambra	\$120,297.00	234	0	100.00%	7/31/14
Courts	<u>13253150</u>	<u>147963</u>	Bryan J Christensen / Superior Security	Const Remodel	Dwight Palmer	\$19,707.76	68	4	100.00%	3/27/14
Courts	<u>13253150</u>	<u>147731</u>	Rod Lewis Construction Llc	Const Remodel	Dwight Palmer	\$33,044.00	66	-266	100.00%	
Alcoholic Beverage Contrl	<u>13299030</u>	<u>147866</u>	Western Sheet Metal Inc	Const Remodel	Craig Wessman	\$81,612.00	71	-7	100.00%	10/7/14
Corrections - Draper	<u>13301100</u>	<u>147670</u>	Commercial Mechanical Systems & Service	Const Remodel	Craig Wessman	\$222,926.46	216	6	100.00%	8/12/14
Tax Commission	<u>13313310</u>	<u>147688</u>	Tod R Packer Heating & Air Conditioning	Const Remodel	Craig Wessman	\$373,396.00	99	-68	100.00%	8/8/14
National Guard	<u>13322480</u>	<u>147592</u>	Broderick & Henderson Construction Lc	Const Remodel	Wayne Smith	\$698,947.66	194	6	100.00%	4/24/14
Weber State University	<u>13339810</u>	<u>147739</u>	Perkes Roofing Inc	Const Remodel	Tim Parkinson	\$628,583.67	114	-21	100.00%	8/21/14
National Guard	<u>13365470</u>	<u>147734</u>	Morgan Pavement Maintenance dba Morgan Pavement	Const Site Imp	Brent Lloyd	\$60,207.00	141	14	100.00%	8/1/14
National Guard	<u>13371470</u>	<u>147808</u>	Tod R Packer Heating & Air Conditioning	Const Remodel	Wayne Smith	\$52,124.50	139	-141	100.00%	
Weber State University	<u>13374810</u>	<u>147791</u>	Mechanical Service & Systems I	Const Remodel	Tim Parkinson	\$373,809.00	138	-1	100.00%	10/2/14
Schools For Deaf & Blind	<u>13377230</u>	<u>147747</u>	Modular Space Corporation Dba Modspace	Const Remodel	Dave Mckay	\$106,199.50	25	-276	100.00%	
Schools For Deaf & Blind	<u>13377230</u>	<u>147748</u>	Landmark Companies Inc	Const Remodel	Dave Mckay	\$321,622.97	131	-194	100.00%	
Courts	<u>13378150</u>	<u>157505</u>	Rod Lewis Construction Llc	Const Remodel	Brian Bales	\$66,673.00	106	26	100.00%	10/10/14
Dept Of Transportation	<u>14003900</u>	<u>147695</u>	Kevin D. Allen & Associates	Roofing	Matt Boyer	\$131,615.00	268	8	100.00%	10/22/14
Dfcm - Managed Buildings	<u>14004310</u>	<u>147824</u>	Paulsen Construction	Const Remodel	Taylor Maxfield	\$218,376.91	74	-4	100.00%	8/15/14
Utah Valley University	<u>14009790</u>	<u>157529</u>	Utah Correctional Industries	Roofing	Matt Boyer	\$43,750.00	2	2	100.00%	8/13/14
University Of Utah	<u>14010750</u>	<u>147809</u>	North Face Roofing Inc	Roofing	Matt Boyer	\$298,999.00	72	0	100.00%	8/7/14
Utah Valley University	<u>14038790</u>	<u>157565</u>	Alder Sales Corp	Const Remodel	Michael Ambre	\$11,792.00	28	-51	100.00%	
Utah Valley University	<u>14040790</u>	<u>147872</u>	Keller Construction Inc	Const Remodel	Michael Ambre	\$213,618.94	51	-4	100.00%	8/19/14
Utah Valley University	<u>14040790</u>	<u>157523</u>	Eagle Environmental Inc	Haz Mat Const	Michael Ambre	\$38,721.00	10	-189	100.00%	



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Closed Contracts



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Agriculture	<u>14057010</u>	<u>157746</u>	Roomont Industrial Corp	Haz Mat Const	Bob Anderson	\$46,366.81	21	-52	100.00%	
Weber State University	<u>14082810</u>	<u>157533</u>	Post Construction Co Inc	Const Remodel	Tim Parkinson	\$708,196.00	67	37	100.00%	9/10/14
Dixie St College Of Utah	<u>14094640</u>	<u>157522</u>	Thyssenkrupp Elevator Corporation	Const Remodel	Bob Anderson	\$21,288.39	35	-143	100.00%	
	<u>14100280</u>	<u>147851</u>	Hughes General Contractors Inc	Const Remodel	Lucas Davis	\$46,347.55	-85	-69	100.00%	10/8/14
	<u>14100280</u>	<u>157551</u>	Rod Lewis Construction Llc	Const Remodel	Lucas Davis	\$25,275.00	69	11	100.00%	10/8/14
National Guard	<u>14109480</u>	<u>147801</u>	Utah Correctional Industries	Const Remodel	Wayne Smith	\$125,000.00	16	-266	100.00%	
Human Services	<u>14115400</u>	<u>157581</u>	Utah Correctional Industries	Roofing	Matt Boyer	\$38,800.00	61	10	100.00%	10/24/1
Capitol Preservation Bd	<u>14127050</u>	<u>147880</u>	Cdc Restoration & Construction Llc	Const Site Imp	Nick Radulovich	\$178,786.00	51	-19	100.00%	9/3/14
Utah Valley University	<u>14143780</u>	<u>157500</u>	Ralph Tye & Sons Inc	Const Remodel	Matt Boyer	\$24,338.00	23	-5	100.00%	8/13/14
Abc Stores	<u>14147030</u>	<u>157564</u>	Chad Husband Construction Inc	Const Remodel	Timothy Christensen	\$42,767.00	100	9	100.00%	11/20/1
Schools For Deaf & Blind	<u>14157200</u>	<u>157587</u>	Sugar House Awning & Canvas	Const Remodel	Timothy Christensen	\$15,874.96	56	-12	100.00%	11/12/1
Corrections - Draper	<u>14165100</u>	<u>157592</u>	Utah Correctional Industries	Const Remodel	Timothy Christensen	\$20,800.00	53	-11	100.00%	11/25/1
Corrections - Draper	<u>14166100</u>	<u>157589</u>	Commercial Mechanical Systems & Service	Const Remodel	Timothy Christensen	\$25,070.00	80	16	100.00%	11/6/14
Human Services	<u>14205400</u>	<u>157520</u>	Commercial Mechanical Systems & Service	Const Remodel	Rick Nauta	\$22,965.00	51	-12	100.00%	10/8/14
Alcoholic Beverage Contrl	<u>14206030</u>	<u>157516</u>	Commercial Mechanical Systems & Service	Const Remodel	Rick Nauta	\$15,865.00	51	353	100.00%	10/8/14
Alcoholic Beverage Contrl	<u>14213030</u>	<u>147878</u>	Ehp Construction Inc	Const Site Imp	Scott Whitney	\$14,825.00	44	0	100.00%	8/15/14
Utah Highway Patrol	<u>14216550</u>	<u>157685</u>	Ehp Construction Inc	Const Site Imp	Scott Whitney	\$24,890.00		0	100.00%	12/16/1
Davis A/c	<u>14260220</u>	<u>157583</u>	Integrated Controls & Electric Inc	Const Remodel	Lucas Davis	\$22,960.00	57	-113	100.00%	
	<u>14295310</u>	<u>157511</u>	Tod R Packer Heating & Air Conditioning	Const Remodel	Robert Lund	\$13,261.00	16	-33	100.00%	10/1/14
	<u>14295310</u>	<u>157543</u>	Temperature Technologies	Const Remodel	Robert Lund	\$14,092.29		0	100.00%	
Dfcm - Statewide Funds	<u>14312300</u>	<u>157676</u>	Roomont Industrial Corp	Haz Mat Const	Bob Anderson	\$19,430.81	10	-98	100.00%	
Dfcm - Managed Buildings	<u>14324310</u>	<u>157637</u>	Greene's Inc	Const Remodel	Robert Lund	\$30,752.70	52	49	100.00%	10/3/14
Dfcm - Managed Buildings	<u>14325310</u>	<u>157638</u>	Khl Mechanical	Const Remodel	Robert Lund	\$0.00	53	43	0.00%	10/9/14
Capitol Preservation Bd	<u>14327050</u>	<u>157605</u>	Ehp Construction Inc	Const Remodel	Dave McKay	\$13,398.00	20	-143	100.00%	



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Closed Contracts

EJAIN

Agency	Project	Contract	Contractor Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Tax Commission	<u>14330310</u>	<u>157641</u>	Tech Connect	Const Remodel	Robert Lund	\$38,656.00	37	-82	100.00%	
Count: 103			Closed Contracts	\$37,555,695.82						

Open Contracts on Closeout Projects

EJAIN

Agency	Project	Contract	Contract Name	Contract Type	Manager	Amount	Days	Left	% Paid	Sub-C
Utah State University Closeout-accounting	<u>13189770</u>	<u>147802</u>	Usu Wellness Center Roofing Improvements Utah State University Darrell Hunting	Roofing Notice To Proceed	Darrell Hunting	\$361,878.00	133	-30	98.49%	10/23/14
Weber State University Closeout-accounting	<u>14016810</u>	<u>147856</u>	Weber State University Wsu East Stadium Restroom Building Tim K Parkinson	Const Remodel Notice To Proceed	Tim Parkinson	\$474,950.00	66	-4	85.27%	9/5/14
Count: 2			Open Contracts	\$836,828.00						