

Changing For Excellence Business Case Goal Completion Report

Construction

Report Date

August 2016

Context

- KU and KUMC have a combined capital plan of over \$960M across 390 potential projects, each in varying stages of development, and each managed independently of one another with limited procurement group involvement.
- In FY2010, KU and KUMC spent over \$60M on construction-related projects.
- Payment vouchers are approved without the analytical support needed to test compliance with key contract provisions.
- Construction Materials is the largest addressable spend category at the University; however, it is not linked to architectural and infrastructure standards and purchases are made at variable prices across projects.
- KU takes a project-by-project approach to construction risk management rather than one based strategically on a risk management portfolio.
- Although self-performed construction work provides a labor cost advantage in the 20%+ range, KU spends approximately \$10M on specialty contractors per year.

Goals

For each goal answer the following: What percent is this goal complete? If the goal has been met, please describe how it was met. If the goal has not been met, how will you be completing this goal or why will it not be complete?

Goals for Construction Strategic Sourcing - 100% Complete August 2015

- Create a construction specific strategic sourcing capability within a unified purchasing group with responsibility for all KU campuses.
- An 18-24 month sourcing effort to get all categories under various multi-year contracts will result in standard contracts for materials, on call contractors, and services and an enhanced pool of qualified contractors with expertise specific to KU.

Goals for Financial Management Best Practices - 100% Complete August 2015

- Embed audit language in all future construction contracts and engage a professional construction audit group to enhance due diligence and financial control.
- Align insurances and bonds with a portfolio approach that will eliminate duplication and take advantage of KU's buying power.

Goals for Construction Management Best Practices - 100% Complete August 2015

- Immediately update campus Master Plans to account for infrastructure, enabling strategic thinking and increased building component standardization.
- Develop a KU construction team to deliver self-performed work in a more timely fashion and at a lower cost. Increase the on-call contractor program to include routine and continuous renovation/improvement needs.

Overall, how did goals change during Changing For Excellence and what goals were added or removed:

Construction Strategic Sourcing

In partnership with KU Procurement, DCM has increased the number of construction-related strategic sourcing contracts (including on-call consultants, job-order contractors, and suppliers) from 17 to 60. These contracts reduce procurement times, improve quality and service, and in some cases include substantial discounts or rebates.

As shown in the table below, the number of construction-related strategic sourcing contracts increased by 250% from 2012-present.

Type	Vendor	As of January 2012	As of Fall 2014	Comments
On-call architect	Sabatini Architects	X	X	Renewed
	Kevin Cowan Architects	X		
	International Architects Atelier		X	
On-call engineer	Professional Engineering Consultants	X	X	Renews 1/5/15
	Smith & Boucher	X	X	Renews 1/5/15
	Bartlett & West		X	Effective 1/5/15
On-call landscape architect	Bartlett & West	X		
	Landworks Studio		X	
	Vireo		X	
On-call commissioning	Doyle Field Services/MFEC		X	
	Engineering Economics		X	
	Henderson Engineers		X	
On-call geotechnical	GeoSource		X	
	Professional Service Industries		X	
On-call land surveying	Landplan Engineering		X	
	Professional Engineering Consultants		X	
On-call material testing	GeoSource		X	
	Professional Service Industries		X	
Job-order general contractor	Nouveau Construction	X	X	E&I contract
	BA Green Construction		X	Renewed & renegotiated

	KBS Constructors		X	Renewed & renegotiated
Job-order fire alarm/sprinkler	SimplexGrinnell	X	X	Renewed & renegotiated
Job-order building controls	Johnson Controls	X	X	Renewed & renegotiated
	Control Service Company		X	
Job-order card access/CCTV	Capital Electric	X	X	Renewed & renegotiated
Job-order MEP contractor	McElroy's	X	X	Was state contract, now KU contract
	P1 Group	X	X	Was state contract, now KU contract
	Central Mechanical Construction		X	
Job-order roofing contractor	Centimark	X	X	Was consortium contract, now KU contract
	Diamond Everley		X	
	Kaw Roofing		X	
Job-order landscaping	Hermes Landscaping		X	
	Lawrence Landscape		X	
	Turf Design		X	
Job-order paving contractor	King's Construction		X	
	Kissick Construction		X	
	RD Johnson Excavating		X	
Job-order flooring	National Flooring	X	X	Renewed & renegotiated
Doors/frames/hardware supplier	Overhead Door		X	
	Montgomery Door Controls		X	
Carpet supplier	Interface Americas		X	
	Mohawk Carpet		X	
	Shaw Industries		X	
Lab equipment supplier	Fisher Scientific		X	
Parking access control gates	T2		X	
Furniture-classroom	Kruger International		X	
Furniture-lounge/library/dining	BA Designs		X	
	Furnishings Inc.		X	
	Designed Business Interiors		X	
	Encompas		X	
	Scott Rice Office Works		X	

	Business Interiors by Staples		X	
Lab shelving	Trespa		X	
Partition systems	DIRTT		X	
Backflow preventers	Watts	X	X	State contract
Faucets and lab valves	Chicago Faucets	X	X	E&I contract
Sinks, urinals, water closets	Grainger		X	
Chillers	Trane	X	X	Renewed & renegotiated
	York	X	X	Through Johnson Controls contract
Cooling towers	Marley/McQuay		X	Through Midwest Machinery contract
Electrical equipment	Stanion Electric		X	
Trash/recycle receptacles	Peterson Manufacturing		X	
		17	60	Total
			253%	Percent Increase

Financial Management Best Practices

Construction audits

In 2013, DCM began the design of a capital project audit program. The Cross-Campus Construction Business Case outlined the following steps:

- Focus on compliance to contract terms
- Obtain documentation from sub-contractors
- Image all pertinent documents in a searchable database
- Use findings to assess improvements needed to contract language and/or payment procedures
- Enhance project financial management data
- Allow the capability to build a price and labor rate database

DCM initially consulted with JBK Associates. After significant discussion, it was determined that using a KU auditor was preferable to an outside auditing firm. A number of software options were considered for a searchable audit database. Ultimately, IT staff assisted in creating a process using ImageNow to create the database. Audit guidelines were written to document the process. DCM staff worked with the General Counsel's Office to embed audit language in construction contracts. The audit process was presented to and approved by KU leadership in June 2013.

Since June, 2013 the following projects have been audited:

- DeBruce Center, In process as of August 2014
- Fieldhouse Apartments/McCarthy Hall, In process as of September 2014
- Jayhawk Boulevard, Phase 2, In process as of January 2014
- LEEP 2, In process as of summer 2013
- McCollum Replacement, In process as of November 2013
- School of Business, In process as of December 2013

- Studio 804, In process as of December 2013
- Swarthout Renovation, In process as of May 2014

After a year of conducting capital project audits, enough data has been collected to begin evaluating costs using this information. Recently, an equipment rental charge was reduced by approximately 50% after comparing the charge to prevailing rental rates and a request to pay interns 30% more than what other contractors charge has been questioned.

Work with Risk Management on insurance and bond guidelines for contractors

DCM managers met with KU's Risk Manager and representatives of KU's insurance broker, Lockton, a number of times in 2012-2013. Key outcomes included insurance cost percentage thresholds to use as guidelines for judging if insurance costs are reasonable, or above which to consult with the insurance broker on a case-by-case basis for evaluation; and guidance that owner-funded bonding for capital improvement projects was deemed not to be in KU's best interests from a risk management perspective.

Construction Management Best Practices

2014-2024 Campus Master Plan

Changing for Excellence included a recommendation to update the existing campus master plan to enable proactive campus planning. The 2014-2024 Campus Master Plan was developed over a 13-month period, with an official start in December 2012. Working with master plan consulting firm HEWV, hundreds of individuals were engaged in community open forums, meetings, focus groups, interviews, and charrettes. The resulting living document contains extensive analysis of KU's infrastructure, space and classroom utilization, historic patterns and resources, land use, program accommodation, sustainability issues, and anticipated student enrollment and academic research growth.

DCM leadership has since reviewed the campus master plan with project managers to ensure that all staff understand the plan's recommendations. A webpage within the DCM website houses information about the master plan process and links to the Executive Summary, Regents Master Plan Presentation, and full master plan. The website was updated in November, 2014 to include the recent work to develop a Central District Master Plan, in preparation for the release of the Central District PPP request for qualifications.

KU Construction – As of August 2015. Please see current status in Post Changing for Excellence Update section below.

KU Construction was officially established effective July 8, 2012. Approximately 30 employees made up the inaugural group which were responsible for interior remodeling and renovation as well as a site crew responsible for outdoor paving, pavement patching, underground utility repair, and snow plowing.

There are currently 21 KUC employees who focus their efforts on billable office, classroom, and laboratory remodeling and renovation projects. KUC completed 55 such projects having total construction fees of about \$2.8 million in FY14.

Noteworthy DCM/KUC accomplishments include:

- Established monthly safety training in partnership with EHS.
- Invested in employee safety equipment.
- Effected significant wage adjustments for many KUC employees through the KU market classification and compensation initiative.
- Adopted Maximo as KUC's work management and billing platform in keeping with direction from the Provost's Office. (DCM office staff have coordinated with implementation team and await the

Maximo re-start and programmed functionality in order to convert to Maximo for their project management database.)

- Trained and obtained Public Safety approval for selected KUC employees to install CBORD card access devices, so KU customers have another option besides the single Public Safety-approved outside contractor for these systems.

Challenges

- These risks can be addressed through communication and project planning activities and will not be a significant hurdle to the success of this implementation.
- Creating an advisory board with cross campus and customer perspectives will help manage and mitigate these risks. Significant dialogue and communication with contractors is planned to implement these concepts effectively.
- Many of Huron's recommendations regarding the sourcing of construction materials will change current business practices and will require coordination with the contractor community.

Describe if these challenges were encountered during Changing for Excellence and what unanticipated challenges occurred during the process:

Challenges were encountered when implementing the CFE recommendations. A number of construction material strategic sourcing vendors initially refused to extend KU discounts to contractors. Procurement continues to negotiate with these vendors.

Unanticipated challenges:

On June 9, 2013 the eight members of the site crew were transferred back to Facilities Services because much of their work was non-billable, which was incongruent with the KUC business model.

Tracking strategic sourcing savings and savings that result from the use of KU Construction remains a challenge.

Opportunities

- Once fully implemented in timeframes ranging from 6 months to 2 years, improvements in construction across all campuses would produce annual cost savings by reducing material costs, through audit recovery, by improving insurance/bond costs, and reducing labor costs by increasing in-house and on-call work.
- Opportunities exist in three areas:
 - Construction Strategic Sourcing
 - Financial Management Best Practices
 - Construction Management Best Practices
- Across all campuses, the combined capital plan is over \$960 million across 390 potential projects. This represents the largest addressable spend category at KU.

Describe if these opportunities occurred during Changing for Excellence and what unanticipated opportunities were realized during the process:

Strategic sourcing savings achievements are reported in Procurement section of this report

Financial management best practice savings/cost avoidance: *As of August 2015. Please see current status in Post Changing for Excellence Update section below.*

Since June, 2013 the following audit savings/cost avoidance have been achieved:

- LEEP 2: \$239,990 savings/cost avoidance to date
- McCollum Replacement: \$187,848 savings/cost avoidance to date
- School of Business: \$6,874 savings/cost avoidance to date
- Studio 804: \$54,807 savings/cost avoidance to date
- Swarthout Renovation: \$1,395 savings/cost avoidance to date

Construction management best practices:

- Ended lunchtime shop trips to reduce site mobilization (windshield time and fuel costs) by 50% and improve efficiency.
- Implemented 4-day work weeks to reduce site mobilization by another 20%, improve efficiency, and provide an employee benefit.

KU determined that historical spend on insurance and bonds was in line with best practices based on review by Lockton, KU's insurance broker. Lockton is a regional leader in construction risk management and favorably evaluated our past spend with its book of business. These findings were reviewed with Huron, who concurred with Lockton's findings.

Changing For Excellence Summary

Summarize the process to date and lessons learned. Provide specific future direction, next steps, and strategy for this business case. Indicate what metrics will be used to measure success:

Major DCM accomplishments on CFE goals and objectives included:

- In partnership with KU Procurement, increased the number of construction-related strategic sourcing contracts (including on-call consultants, job-order contractors, and suppliers) from 17 to 60, a 250% increase from the start of 2012 through fall 2014. These contracts reduce procurement times, improve quality and service, and in some cases include substantial discounts or rebates.
- Established a KU construction auditing program that to date has resulted in approximately \$500,000 in savings or avoided costs.
- Completed a comprehensive ten-year campus master plan founded on principles in KU's strategic plan and based on input from a large number of stakeholders that is being implemented and is slated for annual or biennial updates.
- Developed an in-house construction group, KU Construction, which completed 55 projects having total construction fees of about \$2.8 million in FY2014, avoiding an estimated 10% to 20% additional costs for profit and increased overhead if the work had been outsourced.

Post-Changing For Excellence Updates (Completed Projects Only)

The CFE business cases, while complete for routine reporting purposes, are never considered done as they are constantly being monitored and grown. With this in mind, please provide your detailed strategies on the continued growth and development of these business cases. Information about how units continue to improve and innovate from these business cases should be addressed. Details could include information about refining processes, new projects, measuring success, metrics being reviewed, and other methods for understanding improvements.

Goals for Construction Strategic Sourcing:

- Create a construction specific strategic sourcing capability within a unified purchasing group with responsibility for all KU campuses.

- Procurement Services continues to serve this role.
- An advisory workgroup including DCM and FS staff provides input. The current list includes:

Contract Name	Supplier Name	Effective Date	Expiration date
On Call Architectural Services	CLARK HUESEMANN LC	2/19/2016	2/18/2019
On Call Architectural Services	GOULD EVANS PA	2/19/2016	2/18/2019
On Call Architectural Services	SABATINI ARCHITECTS INC	2/19/2016	2/18/2019
On Call Engineering Services	BARTLETT & WEST ENGINEERS INC	12/4/2014	12/7/2017
On Call Engineering Services	PROFESSIONAL ENGINEERING CONSULTANTS PA	12/4/2014	12/7/2017
On Call Engineering Services	SMITH & BOUCHER INC	12/4/2014	12/7/2017
On Call Landscape Architectural Services	LANDWORKS STUDIO LLC	2/19/2016	2/18/2019
On Call Landscape Architectural Services	TREANOR ARCHITECTS	2/19/2016	2/18/2019
On-Call Abatement (must be scheduled via KU EHS)	ASSOCIATED INSULATION INC	11/1/2015	10/31/2016
On-Call Building Systems Commissioning & Testing Services	DOYLE FIELD SERVICES INC	6/25/2012	6/24/2017
On-Call Building Systems Commissioning & Testing Services	ENGINEERING ECONOMICS INC	6/25/2012	6/24/2017
On-Call Building Systems Commissioning & Testing Services	HENDERSON ENGINEERS INC	6/25/2012	6/24/2017
On-Call Construction Documentation Services	MULTIVISTA-KANSAS CITY	11/1/2012	10/31/2017
On-Call Fluid Applied Flooring Services	DESCO COATINGS INC	9/1/2015	8/31/2016
On-Call Fluid Applied Flooring Services	EPOXY COATING SPECIALISTS	9/1/2015	8/31/2016
On-Call Fluid Applied Flooring Services	FLORLINE GROUP INC	9/1/2015	8/31/2016
On-Call Geotechnical Engineering Services	GEOSOURCE LLC	6/8/2012	6/7/2017
On-Call Geotechnical Engineering Services	PROFESSIONAL SERVICE INDUSTRIES INC	6/8/2012	6/7/2017
On-Call Job Order Contracting	BA GREEN CONSTRUCTION CO INC	1/29/2013	1/28/2017
On-Call Job Order Contracting	KANSAS BUILDING SYSTEMS CONSTRUCTORS INC	1/29/2013	1/28/2017
On-Call Land Surveying Services	LANDPLAN ENGINEERING PA	6/12/2012	6/11/2017
On-Call Land Surveying Services	PROFESSIONAL ENGINEERING CONSULTANTS PA	6/12/2012	6/11/2017
On-Call Landscaping Services	HERMES COMPANY INC	2/1/2014	1/31/2017
On-Call Landscaping Services	LAWRENCE LANDSCAPE INC	2/1/2014	1/31/2017
On-Call Landscaping Services	TURF DESIGN INC	2/1/2014	1/31/2017
On-Call Masonry Services	MID-CONTINENTAL RESTORATION CO INC	5/19/2015	5/19/2016
On-Call Masonry Services	RESTORATION & WATERPROOFING CONTRACTORS	5/19/2015	5/19/2016
On-Call Masonry Services	WESTERN SPECIALTY CONTRACTORS	5/19/2015	5/19/2016
On-Call Materials Testing Services	GEOSOURCE LLC	6/8/2012	6/7/2017
On-Call Materials Testing Services	PROFESSIONAL SERVICE INDUSTRIES INC	6/8/2012	6/7/2017
On-Call Mechanical, Electrical, Plumbing (MEP) Services	CENTRAL MECHANICAL CONSTRUCTION CO INC	5/15/2014	5/14/2016
On-Call Mechanical, Electrical, Plumbing (MEP) Services	MCELROYS INC	5/15/2014	5/14/2016
On-Call Mechanical, Electrical, Plumbing (MEP) Services	P1 GROUP INC	5/15/2014	5/14/2016

On-Call Painting Services	BLUE BEAR INC	1/30/2015	1/31/2017
On-Call Painting Services	BROTHERTON PAINTING LLC	1/30/2015	1/31/2017
On-Call Paving & Utility Services	KINGS CONSTRUCTION CO INC	12/16/2013	12/16/2016
On-Call Paving & Utility Services	KISSICK CONSTRUCTION CO	12/16/2013	12/16/2016
On-Call Paving & Utility Services	RD JOHNSON EXCAVATING CO	12/16/2013	12/16/2016
On-Call Roofing Services	CENTIMARK CORPORATION	3/15/2014	3/14/2017
On-Call Roofing Services	DIAMOND EVERLEY ROOFING CONTRACTORS	3/15/2014	3/14/2017
On-Call Roofing Services	KAW ROOFING & SHEET METAL INC	3/15/2014	3/14/2017

- Strategy for continued growth and development: Continually evaluate strategic sourcing capabilities. Support Procurement’s efforts by supplying requested data, reporting on problems with vendors, and suggesting new opportunities.
 - Measuring success and metrics: Determine relevant benchmarks set by KU’s Bold Aspirations peers/aspirational peers, industry standards, and KU’s past performance. Measure and report KU’s performance compared to benchmarks. Develop and implement action plans to improve performance.
- An 18-24 month sourcing effort to get all categories under various multi-year contracts will result in standard contracts for materials, on call contractors, and services and an enhanced pool of qualified contractors with expertise specific to KU.
 - KU continues to renew contracts annually if warranted by contractor performance, etc.
 - KU continues to establish new contracts, typically on a five-year cycle.
 - KU continues to add contracts for different goods and services as needed.
 - Strategy for continued growth and development: Continually evaluate strategic sourcing needs and opportunities. Vet and implement plans to expand or change strategic sourcing through appropriate procurement methods.
 - Measuring success and metrics: Determine relevant benchmarks set by KU’s Bold Aspirations peers/aspirational peers, industry standards, and KU’s past performance. Measure and report KU’s performance compare to benchmarks. Develop and implement action plans to improve performance.

Goals for Financial Management Best Practices:

- Embed audit language in all future construction contracts and engage a professional construction audit group to enhance due diligence and financial control.
 - Audit language was added to KU’s contracts and is working well.
 - A strategic decision was made that Campus Operations would perform audits.
 - Strategy for continued growth and development: Periodically evaluate construction cost auditing processes and performance. Vet and implement plans to expand or change cost auditing through improved technology and automation, targeting strategies, and/or other methods.
 - Measuring success and metrics: Audit history typically shows a number of reported issues in the first 4-6 months of a project, followed by relatively few identified issues in subsequent months. Success is measured by identifying and receiving credits for billing issues and modifying contractor behavior so fewer issues are identified during the middle and later stages of the project life cycle. Metrics measured are the number and dollar value of identified issues, by month, by project.
- Since June, 2013 the following audit savings/cost avoidance have been achieved:

- LEEP 2: \$250,581 savings/cost avoidance to date (project complete)
- Self-Oswald: \$243,701 savings/cost avoidance to date (project complete)
- School of Business: \$34,174 savings/cost avoidance to date (project complete)
- Studio 804: \$54,807 savings/cost avoidance to date (project complete)
- Swarthout Renovation: \$1,395 savings/cost avoidance to date (project complete)
- DeBruce Center: \$3,784 (project complete)
- EEEEC: \$12,687 (items currently under discussion)
- Central District: \$2,974
- HEB – Medical Center: \$244,469
- Align insurances and bonds with a portfolio approach that will eliminate duplication and take advantage of KU's buying power.
 - Earlier evaluations resulted in decisions to check insurance costs against market rates and not to pursue owner-bonding. This strategy is still being employed and seems to have worked well.
 - Strategy for continued growth and development: Work with Risk Management to periodically evaluate insurance and bonding costs and strategies. Vet and implement plans to reduce costs – without incurring unacceptable risks – through renegotiated coverage, pooled coverage, and/or other methods as appropriate.
 - Measuring success and metrics: Risk Management determines appropriate relevant benchmarks based on industry standards and KU's past performance. Each new major construction project is evaluated in comparison to these benchmarks. Projects falling outside of the benchmarks are reviewed with Risk Management and subject to negotiation.

Goals for Construction Management Best Practices:

- Immediately update campus Master Plans to account for infrastructure, enabling strategic thinking and increased building component standardization.
 - To date KU has completed nine major building projects outlined in the 2014 campus master plan, 10 others are currently in construction, and one is currently in design (see attached Exhibit A):
 - School of Business (Capital Federal Hall) – completed
 - Spencer Art Museum Renovation – completed
 - Watkins Memorial Health Center Renovations – completed
 - Outdoor Recreation Field (practice field) – completed
 - Replacement Tennis Courts (and sand volleyball courts) – completed
 - Freshman Housing (Self & Oswald Residence Halls) – completed
 - Scholarship Hall Renovations – five completed (one in design)
 - DeBruce Center – completed
 - BTBC Incubator Lab Phase 2 – completed
 - Earth, Energy & Environment Center north (Ritchey Hall) – in construction
 - Earth, Energy & Environment Center south (Slawson Hall) – in construction
 - Central Plant Improvements (Power Plant) – in construction
 - Integrated Sciences Building 1 – in construction
 - Summerfield Hall Renovations – in construction
 - Mixed-Use Development (Apartment Buildings) – in construction
 - Parking Garage – in construction
 - Residence Hall & Dining Center – in construction

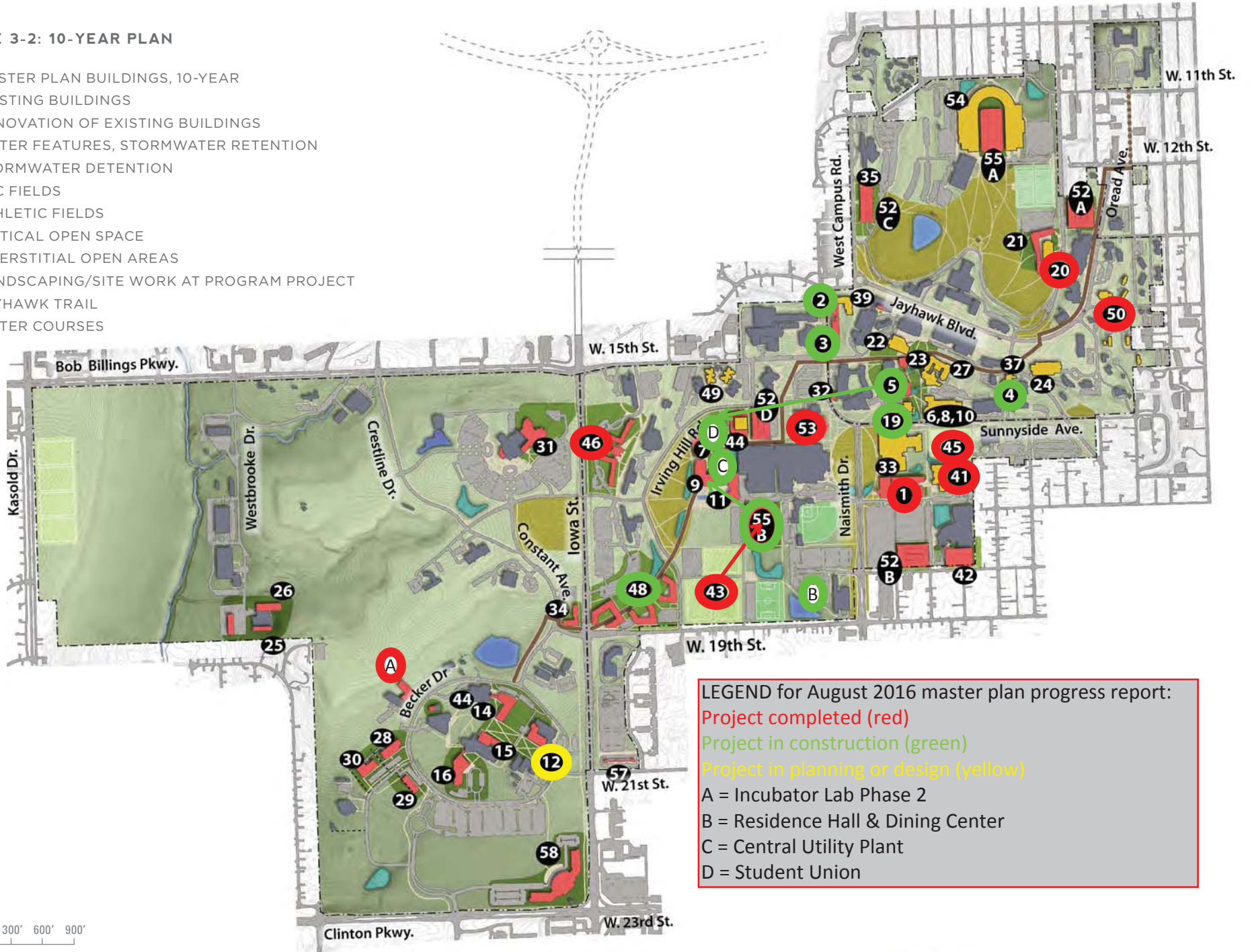
- Central Utility Plant – in construction
- Student Union – in construction
- Simons Laboratories Addition – in design
- In addition, KU has completed a number of site infrastructure projects outlined in the 2014 campus master plan and others are in progress:
 - Jayhawk Boulevard Reconstruction, Phases 1-3 – completed (Phase 4 is in design)
 - Memorial Drive Reconstruction, Phase 1 – completed (Phases 2 & 3 are in design)
 - Central Physical Plant Improvements – completed secondary water supply line
 - Sunnyside to Recreation Center Promenade – completed (accessible connection at Sunnyside is pending)
 - 15th Street Improvements – completed
 - Iowa Street Bridge Improvements (Irving Hill Road Bridge) – completed
 - Pavement Improvements at Lied Center – completed new north parking area and repaved east parking area; improvements to south and west parking areas pending
 - Central District site improvements (Jayhawk Trail, detention basin, roads, parking, utilities, etc.) – in construction
 - Fambrough Drive Realignment – in design
- KU worked with consultants to refine the master plan for the Central District redevelopment, (<http://dcm.ku.edu/sites/dcm.ku.edu/files/docs/Planning/KU%20Central%20District%20Plan.pdf>). Construction of this project is well underway.
- Recent accomplishments toward increased building component standardization have included new or updated design & construction standards on:
 - Interior signage
 - Privacy restrooms
 - Mother rooms
 - Sensor-activated toilets and lavatories
 - Paper towel dispensers
 - Interior finishes
 - Waste and recycling containers
 - Fire suppression equipment
 - Drinking fountains
 - Site lighting
 - Bus shelters
- Strategy for continued growth and development: Periodically update the campus master plan in collaboration with campus stakeholders, other partners, and outside experts. KU's plan has been to update the campus master plan on an annual or biennial frequency. The rapid pace of physical changes to the campus may increase the urgency of master plan updates. KU plans to retain a consulting firm to perform the updates.
- Measuring success and metrics: Determine relevant benchmarks set by KU's Bold Aspirations peers/aspirational peers, industry standards, and KU's past performance. Measure and report KU's performance compare to benchmarks. Develop and implement action plans to improve performance.
- KU Construction Update: The original goal was to develop a KU construction team to deliver self-performed work in a more timely fashion and at a lower cost. Increase the on-call contractor program to include routine and continuous renovation/improvement needs.

- The in-house construction group, KU Construction, formed in 2012 based on the Huron recommendations and Changing for Excellence objectives, was reorganized in summer 2016 and its employees were distributed to FS zones. This was a strategic decision by senior leadership to blend the maintenance and construction workforces with an aim toward improving efficiencies while reducing costs.
- The on-call contractor approach has worked very well for KU over the years, and we continue to expand these opportunities to meet KU's evolving needs. For example, the latest additions to KU's on-call contractor family are two on-call fluid applied flooring contractors.
- Strategy for continued growth and development: Periodically evaluate in-house and on-call construction needs and performance. Vet and implement procurement/organizational changes, recruitment and retention, training and continuing educational opportunities as appropriate.
- Measuring success and metrics: Percent of projects completed on time, percent of projects completed at or below budget, customer surveys – 100% satisfied or higher rating.

EXHIBIT A: MASTER PLAN PROJECTS COMPLETED OR UNDERWAY AS OF AUGUST 2016

FIGURE 3-2: 10-YEAR PLAN

- MASTER PLAN BUILDINGS, 10-YEAR
- EXISTING BUILDINGS
- RENOVATION OF EXISTING BUILDINGS
- WATER FEATURES, STORMWATER RETENTION
- STORMWATER DETENTION
- REC FIELDS
- ATHLETIC FIELDS
- CRITICAL OPEN SPACE
- INTERSTITIAL OPEN AREAS
- LANDSCAPING/SITE WORK AT PROGRAM PROJECT
- JAYHAWK TRAIL
- WATER COURSES



LEGEND for August 2016 master plan progress report:
Project completed (red)
Project in construction (green)
Project in planning or design (yellow)
 A = Incubator Lab Phase 2
 B = Residence Hall & Dining Center
 C = Central Utility Plant
 D = Student Union

PROJECT DESCRIPTIONS

ACADEMIC PROJECTS

① **School of Business:** Currently in design, this new building provides for increased enrollment, expanded programs and outreach, and will vacate Summerfield Hall.

② ③ **Earth, Energy and Environment Center North and South:** Based on the strategic initiative theme *Sustaining the Planet, Powering the World*. Additions to Lindley Hall support evolving programs in geology and petroleum engineering to address the next generation of energy, environmental assessment, and program outreach.

④ **Central Plant Building Improvements:** This project entails heating and cooling system improvements and building structural modifications necessary to address the firm capacity for current demands and additional capacity to support future academic and research facilities.

⑤ **Integrated Sciences 1:** This new facility addresses high priority needs for program space in the basic sciences, including teaching labs, collaborative classrooms, and experiential research labs to support current and growing enrollment.

⑥ ⑧ ⑩ **Haworth Hall Renovations Phases 1, 2, and 3:** This project addresses necessary upgrades to deteriorated science teaching and research facilities.

⑦ ⑨ ⑪ **Integrated Sciences 2, 3, and 4:** These projects provide additional collaborative teaching labs, research labs, and outreach representing the next generation of facilities for multidisciplinary science.

⑫ **Simons Addition:** This project provides an addition to the existing pharmaceutical chemistry research lab supporting the strategic initiative theme, *Promoting Well-Being, Finding Cures*.

⑬ **Pharmaceutical Chemistry Lab Building:** Demolition of this building coincides with completion of Simons Addition.

⑭ **School of Pharmacy Research Lab Expansion:** This addition, on a site adjacent to the School of Pharmacy teaching and administration facility, provides state-of-the-art research lab and lab support space to be relocated from Malott Hall.

⑮ **West District Animal Facility:** This facility replaces vivarium space from Malott Hall and complements Pharmacy and other sciences research.

⑯ **Interdisciplinary Research Center:** This project embraces our strategic initiative theme *Promoting Well-Being, Finding Cures* by providing lab space for foundation hires and initiatives focused on multidisciplinary biology and chemistry research.

⑰ ⑱ **Life Sciences Research Lab:** This project addresses necessary renovations and upgrades to the HVAC system and additional research and process development labs for expanding programs in engineering and other disciplines involving industry partners.

⑲ **Summerfield Renovation:** The move of the School of Business provides the opportunity to renovate for needed academic and student support programs.

⑳ **Spencer Art Museum Renovation:** This project responds to the strategic initiative theme *Building Communities, Expanding Opportunities* by providing improved building systems, public amenities, and security to enhance the visitor experience in anticipation of a major addition.

㉑ **Spencer Art Museum Addition:** This project is a significant addition to upgrade and expand exhibit spaces, collections storage, and collaborative public program space.

㉒ **Anschutz Library Conversion:** This project addresses the need for continued conversion of square footage from library stacks to technology-enriched learning commons space.

㉓ **Anschutz “Convergence” Center:** This project provides space for the integration of new technologies to support curriculum redesign efforts and connection to Anschutz Library service and professional staff.

㉔ **Watson Library Renovations:** This project addresses building system deferred maintenance, interior reconfiguration for suitable study space, and removal of existing stacks as print collections are relocated to the high-density storage facility.

㉕ **Library Annex Storage Module Addition:** This project provides additional capacity for the migration of materials from Central District libraries.

㉖ **Library Annex Processing / Office Expansion:** This project provides additional space for the accessioning and processing of library materials.

㉗ **Malott Hall Renovations:** This project requires continued evaluation for potential reuse or selective demolition.

㉘ ㉙ ㉚ **Research Buildings #1, #2, and #3:** Public-private partnerships leverage resources to provide square footage for research, start-ups, and industry partnerships.

㉛ **Lied Center Expansion:** This project provides a black box theater venue and other performance space.

③② **Theater Scene Shop Addition:** Limited expansion to Murphy Hall provides space for fabrication of stage scenery.

③③ **Robinson Renovation:** This project addresses general building improvements and potential repurposing of natatorium and deteriorated locker room space.

③④ **University Office Building:** This project consolidates support services from the academic core, providing accessibility and connectivity with the Jayhawk Trail.

③⑤ **Carruth-O’Leary:** This project requires continued evaluation for potential reuse or selective demolition.

③⑥ **Not Used**

③⑦ **Facilities Administration Building:** This project requires continued evaluation regarding repurposing.

③⑧ **Oldfather Studios:** This project requires continued evaluation regarding repurposing.

③⑨ **Lindley Renovations:** This project addresses building system deferred maintenance issues, lab improvements, and potential reconfiguration for better access and usability.

④① **Lippincott Stacks Demolition:** This poorly configured and deteriorated space is not suitable for occupancy.

STUDENT AFFAIRS PROJECTS

④① **Watkins Health Center:** This project includes general building upgrades and interior finishes.

④② **Ambler Student Recreation Fitness Center Natatorium Addition:** This project includes the addition of competition and recreational swimming pools in partnership with KU affiliate corporations.

④③ **Outdoor Recreation Fields:** This project proposes development of three lighted artificial turf fields.

④④ **Student Center Space:** This project provides for the renovation and addition of Union-based activities, including space for student activities, meeting rooms, and food service.

④⑤ **Replacement Tennis Courts:** Currently under construction, this project provides a new site for tennis and sand volleyball courts displaced by the new School of Business.

AUXILIARIES PROJECTS

④⑥ **Freshman Housing:** Design is underway for two new residence halls on Daisy Hill.

④⑦ **McCullum Demolition:** This building is no longer viable for any university use and will be demolished to provide surface parking for two new residence halls on Daisy Hill.

④⑧ **Mixed-Use Development:** This project represents partial redevelopment of the Stouffer Place site, with mixed-use residential, limited commercial, and other student support space.

④⑨ **Jayhawker Towers B & C:** This renovation addresses deferred maintenance issues in the remaining two apartment buildings in the complex.

⑤① **Scholarship Hall Renovations:** This project includes general building upgrades to the scholarship halls, eight of which contribute to the East Historic District.

⑤① **Parking Improvements Program:** This project includes necessary upgrades to the surface parking areas throughout the Lawrence campus and addresses the strategic initiative theme *Sustaining the Planet, Powering the World*.

⑤② **Parking Garage Options:** Evaluation of additional structured parking at various locations is on-going.

ATHLETICS PROJECTS

⑤③ **DeBruce Center:** This facility includes exhibit space for the “Rules of the Game,” as well as athlete training table and public-accessed campus dining space.

⑤④ **Memorial Stadium Improvements:** This project includes aesthetic and functional renovations that will improve the stadium experience.

⑤⑤ **Indoor Football Practice Facility:** Evaluation of the optimal location for a new indoor football practice space continues.

OTHER PROJECTS

⑤⑥ **Not Used**

⑤⑦ **Transit Transfer Center:** Assessment of the feasibility of a city transit hub facility continues to be evaluated with the City of Lawrence and the KU Endowment.

⑤⑧ **Conference Center:** There is a proposal with the City of Lawrence to develop a joint market study to assess the need for a conference center, possibly on KU property.