

Facilities Management

Year in Review 2015-16



London Health Sciences Centre
Facilities Management

Introduction

The 2015-16 year at Facilities Management (FM) has seen the development of initiatives started in 2014-15, as well as a few surprises. Financial constraints across the entire hospital have meant a hard look at how we operate as a department, and ways to optimize some processes even further. A feature of this report is a summary of the ways FM has introduced cost-saving measures.

FM has continued its initiatives for improved customer service. We've streamlined the process for making maintenance, repair, or signage requests. Regular FM Broadcasts are delivered to inform staff about shutdowns and construction work, and all broadcasts are archived on the FM Intranet site. We've implemented digital wayfinding kiosks at Victoria Hospital, and are working closely with LHSC's volunteers to improve the wayfinding experience for staff, patients, and visitors.

This past year, we've also had a few surprises. Severe storms in the early summer wreaked havoc on our aging roofs and building envelopes, causing flooding and water damage at both UH and VH. Remedial action fixed the immediate issues, and FM is continuing work to improve the state of our roofs, windows, and building envelopes. In October, a chiller failure and an emergency generator failure at VH required quick remedial action by FM.

By April 2016, the South Street Annex will be completely vacant and decommissioned. All remaining staff from South Street have been relocated to VH and UH campuses, completing the very last phase of a massive, city-wide restructuring that began twenty years ago. Plans are underway for the Phase 2 demolition of the remaining buildings. The Health Services Building and the Old War Memorial Children's Hospital have been designated as heritage buildings by the City of London and will remain.

Message from the VP

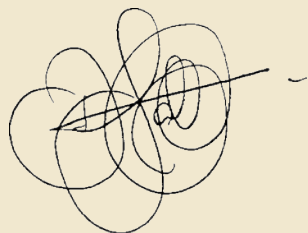
For the past year at Facilities Management, I've been focusing largely on team building and grappling with financial constraints. As a team, we've been shifting towards more leadership and management roles and less on executing projects in-house. I believe that having a strong leadership and effective project managers allows us to see the broader scope of the work we do, and ensure tasks are properly delegated and managed.

Effective team building is also a reflection of the changing landscape in health care, and at LHSC. During years of restructuring, many small projects were given to our trade workers to manage. Now, all capital projects are managed by qualified Project Managers, while the trades focus on catching up on maintenance and repair orders. It's a better balance between ensuring projects are properly managed and not letting maintenance and repair fall behind. It's also more effective to get the right people doing the kind of work they are qualified for and do well.

I've also been focusing lately on financial recovery, as all departments have been. It's taken a good hard look at how we operate, and the truth is that there were plenty of opportunities to improve. We looked at trade worker's productivity, the management of meeting spaces and clinic spaces, and ways to take advantage of our world-class Power Plant to save money and reduce our carbon footprint. The results so far have improved not only our bottom line, but improved customer service and quality of work too.

I'm very pleased by the improvements we've made, and proud of the team we've built to make it all happen. I'm looking forward to an even better department in the coming year, and excited to see what surprises are coming up next!

Sincerely yours,

A handwritten signature in black ink, appearing to be "Dipesh Patel", with a horizontal line extending to the right.

Dipesh Patel

Vice-President, Facilities Management

The Facilities Management Team

There have been several key additions to our staff over the past year. Facilities Management (FM) leaders have been focused on developing our project management roster and increasing customer support for the hospital.

We've added a key manager to our Power Plant. Gary Zions is a First Class Engineer who was previously Chief Engineer at LHSC for four years. He has been busy optimizing operations at the Power Plant, making improvements to reduce our energy consumption, and ensuring smooth operations for our infrastructure.

Additional Project Managers have been brought on to oversee project moves, renovations, expansions, and other smaller projects throughout the hospital. The new managers include Emily Englehart and Dino DiMurro.

Christine Graham was moved from UH to VH to join our Systems Team, and Michelle Turino was transferred over from Customer Support Centre to join our team at UH. These moves were made to support the new streamlined process for maintenance and repair requests, which have been managed by FM instead of Customer Support Centre since January 2016.

Please see the Facilities Management intranet website for more details on our team makeup.



The Facilities Management Leadership Team (from left to right): Perry Schwab, Manager; Derek Lall, Director; Tim Johnson, Business Manager; Dipesh Patel, Vice-President; Gary Zions, Manager, Power Plant

Cost Saving Measures

Facilities Management (FM) has taken on many initiatives to reduce our costs. These measures have taken on a greater priority in the last year, as cost saving measures are being mandated and implemented across all LHSC departments.

Electricity Peak Reduction Exercises

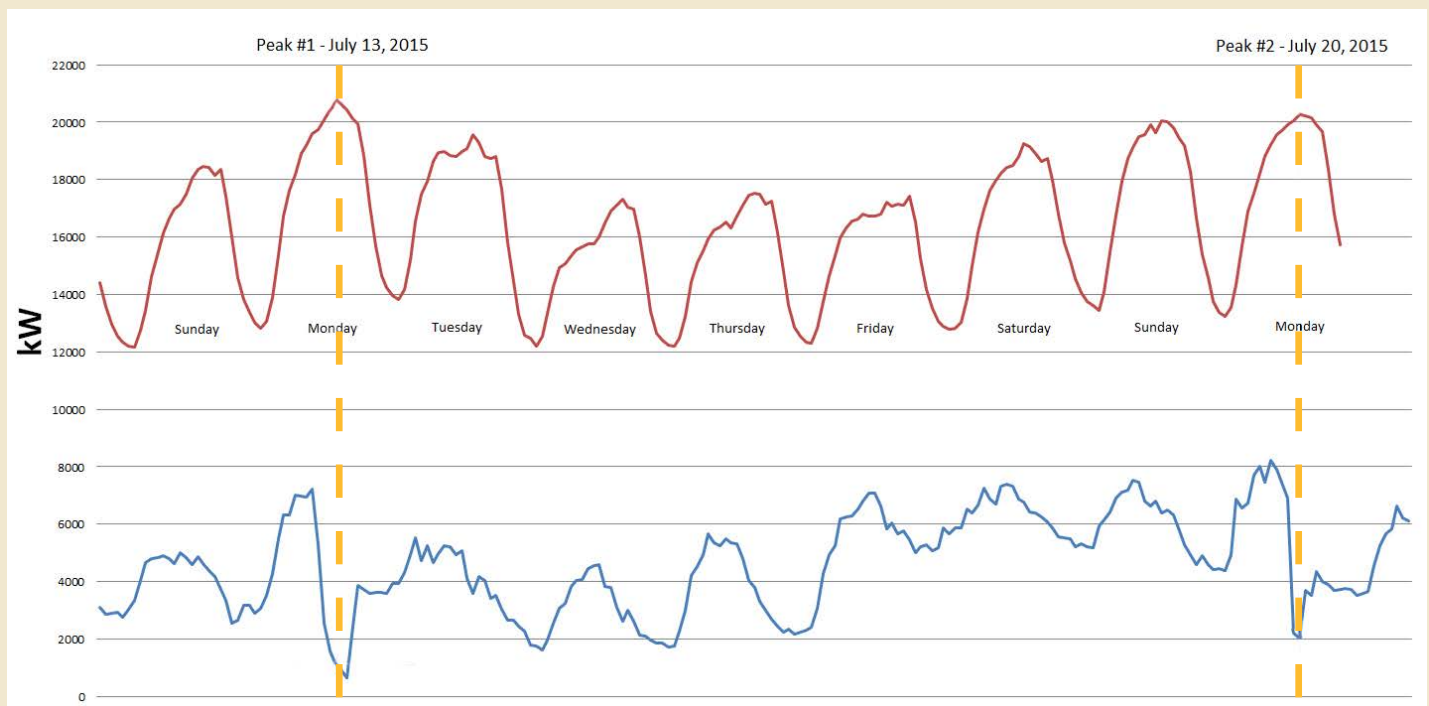
As a cost-saving measure to reduce our electricity charges, and our carbon footprint, FM engaged in a strategy to shut down selected air handling units (AHU's, the fans that move cold air) on the top five peak usage days in Ontario during the 2015 summer at Victoria Hospital (VH).

London Hydro adds a Global Adjustment charge to our base market rate for electricity. "Class B" customers are charged based on electricity usage over the entire year, and "Class A" customers are charged based on peak usage in the summer. By conducting 12 strategic shutdowns at VH, FM was able to reduce our usage on the top five peak days in Ontario and help our transition to becoming a Class A customer.

The exercise entailed shutting down cooling systems servicing support and administrative spaces between 4 pm and 8 pm on projected peak days, when electricity demand in Ontario was at its highest. LHSC staff were informed of planned shutdowns, and critical care areas were not affected.

Projected savings in hydro costs are estimated at \$413,270 in F15/16, and \$595,503 in the F16/17 billing period.

Specialized Energy Management Utility software was used to combine external data with LHSC systems data and provide reliable information to help FM run the cooling system to save both energy consumption and money, without compromising patient care. Moving forward, new absorption chillers expected to be installed in time for summer 2016, in combination with steam cooling and our own electricity generation, will help in our goal to ultimately reduce LHSC's demand to zero.



Graph showing two peak reduction exercises we conducted in 2015. The red line represents the total hydro consumption in Ontario (in 1000's of kW), and the blue line represents LHSC's usage.

Also on the electricity market front, the provincial government is in the process of implementing a cap and trade program in Ontario to put a price on carbon emissions and help reduce them. LHSC, together with other Ontario Hospital Association members and Western University, has requested an institutional exemption to paying for carbon. Although we are still awaiting a response from the Ministry of Environment and Climate Change, we are optimistic that an exemption to mandatory participation will be forthcoming.

Mark Read is the FM Team Leader spearheading these initiatives.

Power Plant Optimization

The Power Plant at Victoria Hospital was upgraded in 2010, and since, has provided cost effective energy for Victoria Hospital, at a rate less than purchasing electricity from London Hydro. The co-generation facility uses lower-cost natural gas to generate steam and electricity for Victoria Hospital.

Since 2013, a surplus in electricity has generated credits with London Hydro, and allowed us to sell power and steam to St Joseph's Parkwood Institute as a reliable revenue stream. The facility is truly state-of-the-art, and LHSC is recognized nationally as a leader in energy production and efficiency. In many ways, our Power Plant is the "goose that lays the golden eggs," netting the hospital \$750,000 to \$1 million each year.

Gary Zions is the Power Plant's manager, and since joining us in 2015, has been continuing to find efficiencies and reduce both our energy consumption and costs.



South Street Decommissioning

With the closure of South Street Hospital in early 2016, control of the land returns to the City of London following demolition. However, some cost savings have already been seen as a result of the closing:

- Utilities (hydro, gas, water), security, and maintenance savings will add up to \$200,000 to \$300,000 for F16/17 and F17/18.
- LHSC does own a parking lot, which is estimated to sell for \$200,000.

Some of these savings will be offset by increased demands at 54 Riverview, Victoria and University Hospitals, as hundreds of staff have been relocated from South Street.



Western Counties Pavilions Divestment

For years, the Western Counties buildings and land adjacent to the Westminster Ponds have been costing us more in maintenance and repairs than we have been collecting in rent from the tenants there. Further, our Master Plan 2020 indicates no need for these facilities, and the current tenants do not meet any community-based health care needs. The buildings are located south of Victoria Hospital, past St Joseph's Parkwood Institute.

FM worked closely with Corporate Communications to issue a public Expression of Interest, seeking interested parties to renovate and sustain the buildings and land, while respecting their cultural heritage, environmental significance, and veteran-care related past.

Although savings will not be realized until F17/18, we stand to save over \$150,000 in annual maintenance costs.

Procured Services

Some cost savings are not realized through actual dollar amounts, but rather through value-added services. One such example is the work FM has been doing with Healthcare Materials Management Services (HMMS) to renegotiate vendor contracts to add services for the same prices.

- Honeywell agreed to replace all obsolete control items for the same contract price
- Clintar agreed to provide ground services for 5 years with no increase in price

HMMS has also partnered with HealthPro to expand our access to vendors at better rates through competition. We've also procured vendor services from Acklands Grainger Inc (AGI) to handle maintenance supplies. With support from HMMS, we are now able to properly track all supplies to individual jobs or projects, providing greater accountability and inventory management. Through this measure, we are able to save approximately \$50,000 each month, compared to our previous business model. Ryan Davies, Sourcing Specialist with HMMS has been spearheading many of these initiatives.

As with our own in-house trade workers, measurements and performance metrics are applied to external vendors to ensure quality service and accountability.

FM is also developing an updated Vendor of Record list for Architectural services, which brings time and budget efficiencies to the procurement process for smaller projects.

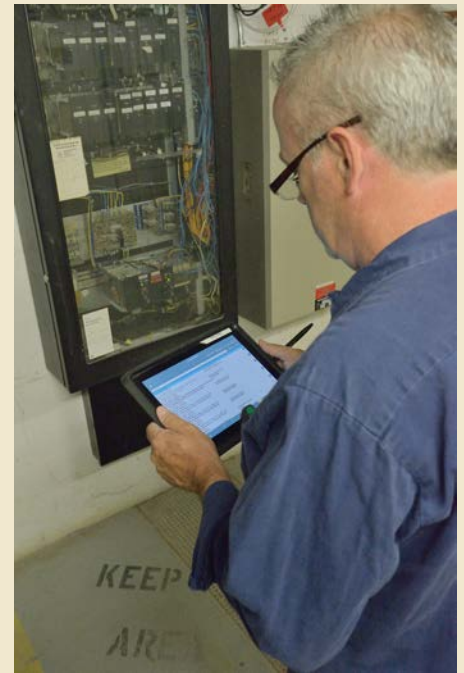
In addition, as part of a new 10-year capital plan to upgrade and repair aging elevators and related equipment, FM has procured F. Shaw Elevator Consulting to review existing maintenance contracts and conduct an audit of all elevators at LHSC. Expected outcomes for this are better performance and management, reduced hourly rates for work, and a properly planned maintenance schedule for our elevators. We expect to save between \$200,000 and \$300,000 each year from these efficiencies.

Trades Business

Facilities Management was asked to look at ways to reduce costs in the management of our trade workers – electricians, carpenters, mechanics, painters, etc. Since 2014, we have been studying performance metrics with the trades, tracking job requests, job completions, and how long jobs take. Digital tablets were given to each trade worker to track their jobs. Our conclusions were very clear: the trades were being underutilized.

FM leaders have been reviewing options for streamlining the Engineering team, including better management of the trades and greater productivity for the workers. Cost savings are realized through the consolidation of skill sets, and assigning trade jobs to individual projects. For example, we've separated the trade workers into two shifts to reduce the cost of overtime hours. FM is also looking at ways to reduce high sick time expenses. Angela Hodson, Director of Employee & Labour Relations with Human Resources has been a great help in managing the Engineering Team.

As the massive restructuring projects are now completed, Engineering is focusing more on preventative maintenance and repair jobs as requested by LHSC staff, rather than taking on small capital projects. During the restructuring years, we accumulated a large backlog of maintenance items, and the FM department has been reorganized to take on the demand.



Repatriating Off-Campus Leases

FM was asked to look at programs which are currently housed at off-campus locations in lease agreements. For programs that do not engage directly in community-based patient care, there is an argument for cost savings by repatriating them to Victoria Hospital, or potentially, our newly acquired facility at 54 Riverview Ave. Already, SWO Regional Cancer Services, NPP Clinical Informatics, and Decision Support have been moved from 746 Baseline Road to VH, allowing us to close their leases and save over \$250,000 in rental costs. Other groups are currently under review, pending some additional freed up space from the Ambulatory Care Renewal Strategy. While this does add demand for services at VH, the added cost doesn't compare to the savings made by closing off-campus leases. Moving forward, FM is also looking at the Red Cross Building as a potential decant site for repatriated programs.

Completed Capital Projects

Emergency Department Transformations

Facilities Management (FM) oversaw the management and renovation of the Emergency Department Transformations (ED) at Victoria Hospital (VH) and University Hospital (UH), in support of the first-in, first-out philosophy of the Emergency Department System Transformation.

The design process was carefully planned with needs assessments from users and evaluations of various design options. Fundamental principles of design decisions included safety, function, efficiency and economy. The redesigned “Front Care Bubble” was envisioned as an open-concept space, allowing unobstructed movement of patients, care providers, and equipment. Each ED is equipped with treatment bays, beds, examiner lighting, medical gases and medical power.

Kevin Sanche was the FM Project Manager responsible for executing this project, together with external consultants, ED staff and the construction contractor. Phase 1 renovations were completed in the summer of 2015, and Phases 2 and 3 in early 2016. Very aggressive, 6-week schedules minimized the downtime of the EDs, and temporary triage spaces were constructed to maintain patient volumes during the Phase 1 renovations.



Victoria Hospital redesigned ED



Victoria Hospital redesigned ED



University Hospital redesigned ED



University Hospital redesigned ED

54 Riverview Ave

54 Riverview Ave, formerly known as the Bethesda Building, was purchased by LHSC in 2014, with the goals of extending mental health programs into the community and consolidating programs in one location. A community meeting was held in June 2014, and renovations began later that year. Construction was completed in November 2015. The work included a new parking lot, interior renovations to finishes and new walls. In the main stairwell, an existing skylight was uncovered, and a fresh paint job was applied, giving the space a lighter, airier look and feel.

The facility is now the home for the Adult Eating Disorders Service, as well as CMHA-Middlesex transitional apartment units.

Lindsey Webber was the FM Project Manager for this project.



Victoria Hospital Flex Space

As part of an FM initiative to find innovative and efficient ways to better utilize our space and accommodate decants from South Street Hospital, the idea for dedicated swing space came forward. Built in the former Cerner Centre, the new Flex Space at Victoria Hospital is designed with temporary “swing” stations for managers and executive staff on the move. The space features 15 drop-in workstations, two boardrooms, lounge area, and a small kitchenette.

Renovations were completed in November 2015 under FM Project Manager Kevin Sanche.



“Swing” workstations



Boardroom



Kitchenette



Meeting Room

South Street Decants

The decanting of over 100 staff from the old South Street Hospital was the final major piece of the 20-year long restructuring process in London. For over 10 years, South Street was used as a “hoteling” space for new staff, in anticipation of final decommissioning and demolition. Staff from Human Resources, Occupational Health and Safety, Risk Management, and other departments were moved to Victoria Hospital. Final moves took place in early 2016, and final demolition of the remaining South Street buildings are scheduled for later this year. Having these programs consolidated at VH will help achieve one of the main goals of restructuring: operational efficiency.

Following demolition, control of the land will return to the City of London.

As decants took place, renovations of spaces continued at Victoria and University Hospital to accommodate the decanted staff, including innovative spaces such as the new Flex Space at VH.

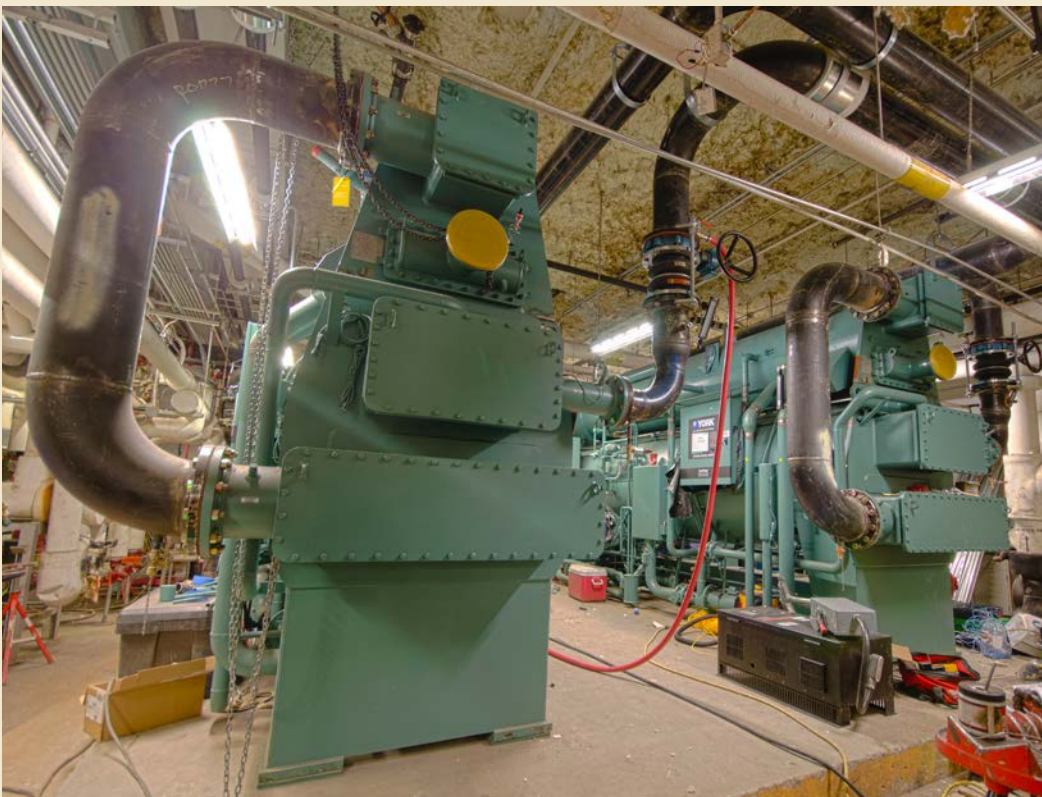
Several FM staff were responsible for managing renovations and moves, led by Kevin Sanche and David Payne.



New Chillers at Victoria Hospital

Critical infrastructure renewal has become a high priority for Facilities Management, as we continue to see increased failures of aging equipment, sometimes with potentially serious consequences on patient and staff safety. In October 2015, one of six steam absorption chillers (needed for cooling) failed, reducing an already low number of operational chillers to only two. We had to act quickly to ensure adequate cooling supply for the 2016 warm season. Internal studies also revealed that fully operational steam absorption chillers would play a large part in sustaining our Class A Customer status with London Hydro, and reducing our hydro cost and carbon footprint.

Four of the chillers are being replaced, while two are being refurbished. We expect to have the first four online in May, with the final two brand new chillers coming online in June and July. Dan Neaves is the FM Project Manager for these critical infrastructure projects.



Two brand new absorption chillers at Victoria Hospital

Kidney Clinical Research Unit

The Kidney Clinical Research Unit is dedicated to clinical research in the areas of kidney health, kidney disease and treatments of dialysis and kidney transplantation. Renovations were completed in December of 2015 to provide much needed improvements. Upgrades included the total replacement of all room lighting with energy efficient LED lights to reduce facility and life cycle costs. All exterior windows were replaced with new, high efficiency aluminum windows to provide a reduction in heating and cooling costs. The conference room



was upgraded and outfitted with proper A/V systems allowing the department to interface more efficiently with their partners. The area also received a complete upgrade to fire and life safety systems to meet the latest building code requirements.

FM Project Manager Matt Keast led the development for this project.

Parking Garage Barriers

The plan to install safety barriers on all LHSC parking garages began in 2014, with custom made screens installed on the interior of all levels from the Level 2 up to the roofs. Garages at VH were recently completed, and UH garages are on track to be completed by the end of May 2016, under FM Project Manager Matt Keast.



Emergency Remediation Projects

In the early summer of 2015, Southern Ontario experienced several days of severe storms, with heavy rain and strong winds. These storms wreaked havoc on our aged roof and windows systems at all three campuses. Areas were flooded, and water penetration into infrastructure systems caused power outages.

Facilities Management made efforts to remedy the situations quickly, dealing with flooded areas and power outages as priorities. We completed many on-demand jobs in the days following the storms.

A significant factor leading to so much water penetration was the age and deterioration of our building envelopes. Widespread eroded caulking at window and door openings, concrete panels, and stonework continues to be a threat. Much of the caulking is very old, well past its normal life span, with compromised ability to repel water shot at them by high winds. Water penetrated behind curtain walls (non-structural exterior walls made of windows and panels) can seep into mechanical and electrical systems, and onto interior surfaces such as drywall. Water that collects in one area can lead to mould, which can be hidden behind panels and within wall cavities, invisible to casual observation.

While the age of our buildings and infrastructure is a key issue here, the harshness of the past two winters may have exasperated the situation and made us more vulnerable to these increasingly frequent severe weather events. For example, extreme fluctuations in temperature (e.g. deep freeze vs. thaw) can stretch and erode the integrity of rubber seals, accelerating their deterioration.

Since these remedial issues were handled, FM began a longer-term project to replace all older roofs and windows at VH and UH.



Working on the roof replacements



Deteriorated caulking



Newly completed roof replacement at VH

Moving Forward

Capital Requirements Plan

In September 2015, Facilities Management prepared a complete overview of all anticipated future capital projects at LHSC for the next five years, including infrastructure, clinical, and maintenance projects. The overview also included supporting documentation for each project, including briefing notes, cost estimates, consultant reports, and VFA reports (third-party, systems life-cycle assessments based on industry models). The aim here was to gather all relevant data, provide an overview of needs and priorities, and give a clearer picture of recommended funding sources. The information was consolidated into four large binders, and is regularly being updated. The plan is available to anyone by contacting Heather Acton at Facilities Management.



Risk Management

Infrastructure renewal has become a high priority for Facilities Management (FM) following the increasing number of critical subsystem failures in the past few years. Some of these failures were expensive to remedy, caused damage to other building systems, and posed risk to patient and staff safety. In all cases, the subsystems were old, in disrepair, and well past their expected operational lifespans. In recent years we have had several “close calls” where the timing or extent of the failure came close to necessitating campus-wide evacuations. FM has been advocating for dedicated capital infrastructure renewal funding at LHSC; that is, treating infrastructure as an investment rather than something that needs to be fixed after it breaks.

It’s a slow and long process, but step by step we are addressing our aging infrastructure needs. Several projects are either on the go or have been recently completed:

- VH Chillers replacements and refurbishments
- UH Boilers
- Roofing & window replacements at VH and UH
- VH Hydro Distribution upgrades

Steam contract with St. Joseph's

Since we expanded the Power Plant at Victoria Hospital in 2010, we have been making continual improvements to energy efficiency and power generation. Since 2013, we've been generating a surplus of hydro at the plant, and selling it back to London Hydro and to St Joseph's Health Care for their Parkwood Institute.

In December 2015, we formalized a new Energy Services Agreement with St Joseph's for long-term supply of steam and electricity that is generated at the Power Plant. The agreement will be renewed every year, providing LHSC with a reliable and continuous revenue stream.

Digital Wayfinding

FM installed six digital wayfinding kiosks at Victoria Hospital in June 2015, which were well received by volunteers, staff, and visitors. The kiosks are part of a larger LHSC-wide initiative to improve the wayfinding experience, from a referral in the community to getting a patient or visitor to the right room with little or no detours. Usage has been increasing every month since the launch, and the most used kiosk is at Zone B, Level 1. Volunteers have been instrumental in helping patients and visitors become familiar with the kiosks' interface and providing gaps in information back to FM for additions and edits to the wayfinding data.

Plans are currently underway to implement digital wayfinding at University Hospital.



Western Counties Pavilions and Land Divestment

At the southern edge of its property, London Health Sciences Centre (LHSC) owns a section of environmentally sensitive land adjacent to the Westminster Ponds. This is an area of great community interest given its unique geological, environmental, historical, veterans care and cultural heritage. Four pavilion buildings are part of the site, and while they have great historical significance, they are in disrepair and costly to maintain.

In January 2016, Facilities Management (FM), Healthcare Materials Management Service (HMMS), and Corporate Communications issued a Request for Expressions of Interest from suitable private investors or appropriate charitable, not-for-profit organizations to rejuvenate, develop, and sustain the property.



Wellington Pavilion, the largest of the four remaining buildings on the Western Counties site

FM will continue to assume responsibility for the upkeep of the pavilion buildings until June 30, 2017, at which time a land transfer would take place, or, if no suitable steward can be found, FM will apply to demolish the buildings.

In either scenario, we anticipate LHSC will be free from obligation to maintain the buildings and service the site, reducing our costs and risks.

Land Lease Opportunity

LHSC owns approximately 27 acres of green space land, south of Victoria Hospital, on the other side of Commissioners Road. Our Master Plan has deemed these lands unnecessary for hospital related purposes. It is valuable real estate that is currently sitting unused. To leverage this asset, we need to engage partners in the wider community.

Facilities Management and Healthcare Materials Management Service have issued a Request for Proposals for consulting services to determine the best uses for the land. LHSC is dedicated to seeing the development of community-based health care on the site, and we're looking forward to facilitating some partnerships with other health providers and businesses in London.





London Health Sciences Centre

Facilities Management

Victoria Hospital

800 Commissioners Road East

London ON

N6A 5W9

519-685-8500