
2016-17 Capital Budget

A. The Evolution of Capital Expenditures

The Capital Budget for 2016-17 should be seen in the context of both recent trends in capital spending and the University's proposed Long-Range Space Plan as outlined in Table 14 of the Operating Budget portion of this document. Table 15 sets out expenditures in the Capital Budget since 2012-13 in nine categories.

Category 1 shows all new construction, while categories 2 to 7 show renovations to existing space. Category 1 expenditures are usually funded from general University funds, the major exceptions being projects funded all or in part from external research grants, private funds, government, student contributions, and Housing construction – the latter being funded from the Housing budget. Categories 2 to 5 are funded primarily from general University funds and government, while category 6 is funded from Housing operations, and category 7 is funded by the particular Ancillary undertaking the work. Categories 8 and 9 involve carrying costs and loan repayments, and other expenditures such as purchases of land and buildings and transfers from the capital budget for other purposes. Planned capital expenditures for 2016-17 total \$134.4 million.

Categories 2 to 5 involve **Maintenance, Modernization, and Infrastructure (MMI)** and are eligible to receive funds from the annual MMI transfer from the operating budget to the capital budget, which is budgeted to increase to \$14.75 million in 2016-17 (\$14.0 M in 2015-16). These are expenditures directed at modification of existing space and renewal and expansion of the utilities and infrastructure of the University.

In planning future expenditures on Maintenance, Modernization, and Infrastructure, it is useful to review the value of our current fixed assets on campus. At February 29, 2016, our buildings and infrastructure have a current replacement value (CRV) of approximately \$2,363 million, as follows:

	CRV \$M	Square Metres	Major Buildings
Major Non-Residential Buildings	1,652	529,319	69
Utilities and Infrastructure	200		
Subtotal, Eligible for MMI	1,852	529,319	69
Housing	411	257,546	15
Other Ancillary Buildings	100	49,300	8
Total	2,363	836,165	92

At February 29, 2016, the University had 529,000 gross square metres in 69 major non-residential buildings, ranging in size from the Cronyn Observatory (338 square metres) to the Social Science

Centre (33,757 square metres). Those buildings, and \$200 million in utilities and infrastructure, are the physical assets generally eligible for MMI expenditures. On that same date, the University had 258,000 square metres of Housing space in eleven major undergraduate residences, four major apartment buildings, and numerous smaller buildings for graduate students in Platt's Lane Estates. Other than Housing, there are many buildings which are operated largely or entirely as ancillaries: Western Student Recreation Centre, Thompson Recreation and Athletic Centre, TD Stadium, Boundary Layer Wind Tunnel, Child Care Centre, the Ivey Spencer Leadership Centre, and facilities at the Research Parks.

With this background in mind, we briefly set out the nine categories of capital expenditures.

- 1. New Construction.** This category includes projects which create new buildings, including housing, additions to existing buildings, and other new facilities such as parking lots and athletic fields. It does not include projects which improve the space within existing buildings or projects which upgrade other existing facilities.
- 2. Major Building Renovations.** This category involves major maintenance and renovation expenditures on non-residential building projects – and the projects generally span more than one year. Of the 529,000 square metres in major buildings, over 57% was built before 1980, so renovations to major buildings will be a continuing part of University capital planning.
- 3. Utilities and Infrastructure Projects.** This category involves projects with values greater than \$10,000 directed at the upgrading and new installation of utilities and other infrastructure, including boilers and chillers, as well as electrical, water, and sewer distribution systems. Given that most of our Utilities and Infrastructure plant and equipment is over thirty years old, these projects will continue to be a critical part of our capital budget. It is noted that proposed projects in this category include many that are devoted to the renewal of portions of our steam, water and chilled water systems. Major projects in future years will include continued work on electrical distribution systems and utility conservation.
- 4. Modernization of Instructional and Research Facilities.** This category includes the renewal and modernization of classrooms, laboratories, libraries, and other space used for instruction and research, as well as upgrades to information technology. These expenditures are critical to maintaining Western's reputation as a leader in the quality of teaching and research. These projects are sometimes funded by the units themselves with operating or research funds.
- 5. General Maintenance and Modernization Projects.** This category consists of a wide variety of maintenance and modernization projects which are not included in categories 2 to 4. Most of the projects are under \$100,000, involving such work as roof replacement, interior and exterior painting, road, bridge, and sidewalk repair, and general maintenance of structures and systems. A small provision for unforeseen projects forms part of the allotment in this category.
- 6. Housing Renovations.** This category includes all maintenance and modernization expenditures on University residences and apartment buildings. Construction of a new residence or apartment building would be included in category 1. Maintenance and modernization expenditures, projected to be \$13.6 million in 2016-17, are funded from Housing revenues. Housing has always set aside adequate maintenance funds and does not have the significant deferred maintenance on its buildings which may be observed in many other University buildings.

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7. **Ancillary Projects.** This category includes capital expenditures on Ancillaries other than Housing, including Hospitality Services, the Book Store, Parking Services, student fee-funded units, self-funded support units, and self-funded research units. These units pay a charge to the University for the space they occupy.
 8. **Carrying Costs and Debt Repayments.** This category consists of principal repayments and interest on debt for capital projects.
 9. **Other Capital Expenditures.** This category includes asset acquisitions and other miscellaneous expenditures. It has been an established principle in Western's Campus Master Plan that the University pursue, as appropriate, the purchase of lands contiguous to University property as lands become available. Western will continue to seek to protect the Regional Facilities zoning around the main campus and to buy land near our campus when it comes up for sale. The University will also look to acquire strategic physical assets.

The last twelve lines of Table 15 are labeled A to M. Line A shows total sources of funding for the capital budget, including debt; B, sources of funds less expenditures; C, the capital reserve at year-end (which changes each year by the amount in line B); and D, capital debt outstanding at year-end. Details on these items are shown in Tables 17 and 19. Annual changes in the Capital Reserve (line C) are driven by the differences between funding and expenditure (line B). Thus for 2014-15, line B shows a surplus of \$11,868, the difference between funding of \$88,934 (all figures in \$000) and expenditures of \$77,066. The capital reserve in line C increases by this same amount of \$11,868, reflecting an increase in the capital reserve.

Line E shows the replacement value of non-residential buildings and utilities and infrastructure – the assets eligible for MMI spending -- while line F shows the ratio of the annual MMI expenditure to the replacement value. For example, in 2014-15, MMI expenditures were \$26.0 million, while the estimated replacement value of non-residential buildings, utilities, and infrastructure was \$1.78 billion. The ratio of the two is 1.5%, as shown in line F.

Line G of Table 15 shows the annual transfer from the operating budget to the capital budget for Maintenance, Modernization, and Infrastructure (the MMI transfer). As part of the 1995 Strategic Plan, the Board of Governors approved an incremental annual base transfer of \$750,000 from operating to capital in support of maintenance spending for ten years, from 1996-97 to 2005-06. Since there was an existing transfer of \$500,000 in 1995-96, the annual transfer was \$8.0 million in 2005-06. In 2004, Western's Board of Governors approved the recommendation that the base transfer of \$750,000 be continued for another ten years after 2005-06 until 2015-16, when the annual transfer will be \$15.5 million. This commitment established Western as a leader among Canadian universities in maintaining its facilities and dealing with deferred maintenance. For 2009-10 and 2010-11, given the financial constraints faced by the University at that time, the Board approved the annual transfer be held at \$10.25 million. Since that time the base transfer has resumed. In 2016-17, the base transfer will be increased by \$750,000 to \$14.75 million (2015-16, \$14.0 million) and will reach the intended maximum annual transfer of \$15.5 million in 2017-18.

Line H of Table 15 shows the ratio of the annual MMI transfer to total MMI expenditures; for example, in 2014-15, the transfer was \$13.25 million and MMI expenditures were \$26.0 million, so the ratio in line H is 50.9%. Other sources of funding for MMI expenditures include the annual

capital facilities renewal grant from the Province (projected for 2015-16 and 2016-17 at \$2.4 million), special Provincial grants; additional one-time allocations from the University's operating budget; additional one-time allocations from the Province; fundraising; and borrowing.

Line J contains an estimate of maintenance spending, defined narrowly as spending required to bring aging facilities up to their condition when originally built. In fact, whenever Western undertakes a major maintenance project, there is also modernization of the facility, and whenever we carry out a major modernization project, there is generally some maintenance expenditure; it is thus difficult to separate the two. Line J is calculated on the assumption that 2/3 of the expenditures in categories 2, 3, and 5 involve maintenance (the remaining 1/3 involve modernization), while 1/3 of the expenditures in category 4 is for maintenance (the remaining 2/3 involves modernization). While these ratios would vary by project and by year, Facilities Management considers them a reasonable average for the four categories over a number of years.

The value of line J in 2014-15 is \$15.2 million, or (in line K) 0.9% of the replacement value in that year. A standard target in industry for this ratio is 2.0%: if large buildings last an average of 50 years, then on average maintenance spending should be 2.0% of replacement value. When the actual ratio is consistently lower than 2.0%, as has been the case at Western and most Canadian universities over the last three decades, the level of deferred maintenance will grow.

Table 16 reviews major capital projects – and the projects are assigned to one of the nine categories. For most of the projects, the year and month of the start and end of the project are shown.

The projects listed in Table 16 are the result of an update to the Long-Range Space Plan outlined in Table 14 of the Operating Budget portion of this document. These projects include new construction that will create the additional space necessary to accommodate undergraduate and graduate enrolment expansion and the associated additional faculty and staff, and major building renovations and utilities and infrastructure projects – reflecting the need to maintain and modernize Western's aging physical plant. With new building construction on campus continuing, Western is utilizing scarce developable land in the core campus. The Campus Master Plan, approved in June 2015, highlights the constraints in the amount of buildable land on our campus, and the fact that new buildings are being constructed on parking lots – thus increasing the pressure on available parking. We are exploring options for the construction of parking garages in the periphery of campus – including siting, funding plan, and the required parking fee rates to finance the structures. University-wide Infrastructure Projects are also included on Table 16. These projects cover upgrades to Western's central power plant, chiller facilities and major electrical upgrades – and are typically comprised of multiple projects completed over a number of years.

B. Sources of Funding and Capital Expenditures in 2016-17

Table 17 displays sources of funding for budgeted capital expenditures with estimates of comparative data for 2015-16, divided into six major categories: federal, provincial and municipal government grants; funds transferred from Western's operating budget; interest earned; general fundraising; borrowing; and other sources, including internal recoveries. As compared to a decade ago, the University's capital budget is more dependent on transfers from the operating budget and debt.

Table 18 shows expenditures in Categories 1 and 2, for 2015-16 (estimates as of January 31, 2016) and 2016-17 (current proposals).

Table 15
CAPITAL BUDGET SUMMARY, 2012-13 TO 2016-17
(\$000)

Category	Purpose	Actual 2012-13	Actual 2013-14	Actual 2014-15	Projected 2015-16	Budget 2016-17
	New Construction					
1	New Construction (Table 18, line 7)	108,508	55,619	23,523	27,557	55,747
	Maintenance, Modernization, and Infrastructure (MMI)					
2	Major Building Renovations (Table 18, line 13)	5,565	3,506	4,215	5,401	25,877
3	Utilities and Infrastructure Projects	4,760	3,737	9,790	8,279	8,518
4	Modernization of Instructional and Research Facilities	5,805	5,266	6,480	6,753	9,813
5	General Maintenance and Modernization Projects	4,826	4,819	5,523	6,218	10,670
	Sub-Total MMI	20,956	17,328	26,008	26,651	54,878
	Other					
6	Housing Renovations	5,860	7,073	20,012	9,680	13,587
7	Ancillary Projects	1,099	1,503	1,187	2,317	880
8	Carrying Costs and Debt Repayments	3,541	5,077	5,843	6,613	6,354
9	Other Capital Expenditures	48	18	493	1,555	2,986
	Sub-Total Other	10,548	13,671	27,535	20,165	23,807
10	Total Expenditures	140,012	86,618	77,066	74,373	134,432

Line		Actual 2012-13	Actual 2013-14	Actual 2014-15	Projected 2015-16	Budget 2016-17
	Sources of Funding, Reserves, and Debt					
A	Total Sources of Funding, Including Debt (Table 17)	146,646	83,780	88,934	78,168	111,206
B	Sources of Funding less Expenditures	6,634	-2,838	11,868	3,795	-23,226
C	Capital Reserve, Year End (Table 19)	30,891	28,053	39,921	43,716	20,490
D	Capital Debt Outstanding, Year End (Table 19)	314,148	306,703	299,065	291,565	283,784
E	Replacement Value of Nonresidential Buildings, Utilities & Infrastructure, \$M	1,608	1,750	1,783	1,852	1,883
F	MMI Expenditures/Replacement Value	1.3%	1.0%	1.5%	1.4%	2.9%
G	Annual MMI transfer from Operating to Capital Budget	11,750	12,500	13,250	14,000	14,750
H	MMI transfer/MMI Expenditures	56.1%	72.1%	50.9%	52.5%	26.9%
J	Estimate of Maintenance Expenditure	12,036	9,797	15,179	15,516	33,314
K	Maintenance Expenditure/Replacement Value	0.7%	0.6%	0.9%	0.8%	1.8%
L	Number of Major Buildings	86	91	91	92	93
M	Total Gross Square Meters (000's)	784	829	829	836	848

Category 8 does not include carrying costs and loan repayments for Residences and Apartments, Research Park, and the Richard Ivey School of Business Foundation.

Line B is equal to Line A Total Sources of Funding less Total Expenses.

The change in line C from one year to the next is equal to Line B.

Line J consists of 2/3 of Category 2, 3 and 5 and 1/3 of Category 4.

Table 16
MAJOR CAPITAL PROJECTS

		Category	Start	End
1	<i>Projects Underway or Soon-to-Start</i>			
2	New Music Building - and removal of Old Music Building	1&9	Mar 12	Apr 17
3	New Academic Building (To House FIMS and Nursing)	1	Jan 14	Dec 16
4	Medical Research Facilities (Microbiology & Immunology & RRI)	2	Dec 14	Dec 16
5	Modernization of University College	2	Jan 15	Sep 18
6	Western Interdisciplinary Research Building - Phase 1	1	Nov 15	Jan 18
7	New Engineering Building	1	Jan 16	Sep 18
8	Follow-on Renovation Projects - HSA, NCB	2	Jan 17	Aug 18
9	Integrated Learning and Innovation Centre	1	Sep 16	tbd
10	University-wide Infrastructure Projects (multiple stages)	1&3	May 16	Apr 17
11	Parking-related Projects	1&3	May 14	tbd
12	Campus Sustainability Initiatives (multiple stages)	3&5	Ongoing	
13	<i>Projects Under Consideration</i>			
14	Modernization of Thames Hall	2	tbd	tbd
15	Follow-on Renovation Projects - NSc	5	tbd	tbd
16	New Research Initiatives/Partnerships at the Research Parks	1	tbd	tbd
17	Renewal/Replacement/Expansion of Medical/Dental School Facilities	1&2	tbd	tbd
18	Multi-Level Parking Structures	1	tbd	tbd
19	Renewal of Engineering Facilities - SEB	4	tbd	tbd
20	<i>Projects for Future Consideration</i>			
21	Renewal and/or Realignment of Library Facilities	2	tbd	tbd
22	Renewal of Talbot College, Elborn College, Chemistry Addition	2	tbd	tbd
23	Residence Projects	1&7	tbd	tbd
24	Athletic Facilities - Indoor and Outdoor	1	tbd	tbd
25	Asset Acquisitions	9	tbd	tbd

Table 17
CAPITAL BUDGET: SOURCES OF FUNDING
(\$000)

		Projected 2015-16	Budget 2016-17
1	Government Grants		
2	MTCU Targeted Capital Grant - New Academic Building (to house FIMS and Nursing)	14,000	5,000
3	MTCU Graduate Expansion Capital Grant	3,846	3,808
4	MTCU Annual Capital Grant (Facilities Renewal Program)	2,424	2,424
5	Sub-Total	20,270	11,232
6	Operating Budget		
7	Operating Budget MMI Transfer - Base	14,000	14,750
8	Operating Budget MMI Transfer - Base (Ancillaries)	600	600
9	Operating Budget - Integrated Learning and Innovation Centre	0	15,000
10	Operating Budget - FFICR	3,000	3,000
11	Operating Budget - Energy Efficiency and Classroom Upgrades	1,908	2,000
12	Operating Budget - Pedestrian Friendly and Campus Safety Initiatives	0	2,000
13	Operating Budget - CRC Transfer	808	760
14	Engineering Operating Budget - New Engineering Building	4,476	5,543
15	Medicine Operating Budget - Medical Research Facilities (Microbiology & Immunology & RRI)	806	3,950
16	Music Operating Budget - New Music Building - and removal of Old Music Building	250	2,000
17	Science Operating Budget - Chemistry and WISc Integrated Laboratories	1,750	1,924
18	Education Operating Budget - Modernization of Instructional Facilities in FEB	0	1,600
19	Social Science Operating Budget - Academic Facility Renewal Projects	0	1,498
20	Dentistry Operating Budget - Modernization of Dentistry Teaching Laboratories	1,452	648
21	Miscellaneous Faculty/Department Budgets	871	307
22	Sub-Total	29,921	55,580
23	Interest Earned	52	0
24	Fundraising		
25	Ivey Building	2,400	1,921
26	Western Fund	350	350
27	The Claudette MacKay-Lassonde Pavilion (Green Building)	290	290
28	All Other	76	0
29	Sub-Total	3,116	2,561

Table 17
CAPITAL BUDGET: SOURCES OF FUNDING
(\$000)

		Projected 2015-16	Budget 2016-17
30	Borrowing		
31	Long-Range Space Plan	8,531	21,927
32	Sub-Total	8,531	21,927
33	Other		
34	Richard Ivey School of Business Foundation - Ivey Building	0	2,300
35	Student Contributions - Western Student Recreation Centre	1,213	1,249
36	Housing Contribution - Delaware Hall Residence Renovations	2,341	245
37	Energy Conservation Incentives (Rebates)	185	185
38	Miscellaneous	198	162
39	Projects Funded by Housing	7,339	13,342
40	Projects Funded by Units	2,685	1,543
41	Projects Funded by Ancillaries	2,317	880
42	Sub-Total	16,278	19,906
43	Total Sources of Funding	78,168	111,206

Table 18
CAPITAL EXPENDITURES FOR NEW CONSTRUCTION AND MAJOR BUILDING RENOVATIONS
2015-16 and 2016-17
(\$000)

		Projected 2015-16	Budget 2016-17
1	<i>Category 1: New Construction</i>		
2	Western Interdisciplinary Research Building - Phase 1	2,255	25,000
3	New Academic Building (To House FIMS and Nursing)	20,340	15,605
4	New Engineering Building	180	11,000
5	New Music Building - and removal of Old Music Building	2,431	4,000
6	Secondary IT Data Centre at the AMP	2,351	142
7	<i>Total, Category 1</i>	<i>27,557</i>	<i>55,747</i>
8	<i>Category 2: Major Building Renovations</i>		
9	Modernization of University College	2,362	12,875
10	Medical Research Facilities (Microbiology & Immunology & RRI)	1,587	10,254
11	Modernization of Instructional Facilities in the Althouse Faculty of Education Building	0	2,100
12	Modernization of Dentistry Teaching Laboratories	1,452	648
13	<i>Total, Category 2</i>	<i>5,401</i>	<i>25,877</i>

Table 19
CAPITAL RESERVES AND DEBT AT FISCAL YEAR END
(\$000)

		Actual 2012-13	Actual 2013-14	Actual 2014-15	Projected 2015-16	Budget 2016-17
1	A. Capital Reserves					
2	General Capital Fund	13,359	17,118	13,802	16,922	10,238
3	Designated Capital Fund	15,898	9,293	24,469	25,142	8,600
4	Gibbons Property	1,634	1,642	1,650	1,652	1,652
5	Total Capital Reserves	30,891	28,053	39,921	43,716	20,490

		Actual 2012-13	Actual 2013-14	Actual 2014-15	Projected 2015-16	Budget 2016-17
6	B. Capital Debt					
7	New Construction, Major Renovations & Other	126,377	123,519	100,290	100,628	129,548
8	Housing	139,671	152,066	144,575	132,437	120,136
9	Research Park	31,100	30,318	29,500	28,800	27,900
10	Richard Ivey School of Business Foundation	1,300	800	300	0	0
11	Unused and Invested Debenture Proceeds	15,700	0	24,400	29,700	6,200
12	Total Capital Debt	314,148	306,703	299,065	291,565	283,784

Line 2 includes the required \$6 million general capital reserve fund.

Line 3 includes fund balances for large capital projects

Long-Term Financial Trends

The Operating and Capital Budgets set out in this document describe, in Tables 2 and 15, proposed spending of some \$867 million for the single year of 2016-17. That spending will take place, however, in a longer term context which must be understood in evaluating the Operating and Capital Budgets. The Administration and Board have identified three elements of that longer term context which should be reviewed in the annual Budget of the University: capital reserves and debt, employee future benefits, and deferred maintenance. These three items are described below.

The long term context for Western changed in May 2007, when the University issued its first debenture, for \$190 million. As part of this process, the University received a credit rating of AA from Standard & Poor's. This credit rating was reaffirmed in February of 2016. Part of the credit rating evaluation focused on a number of long-term obligations that the University manages on an ongoing basis, including the three which we review below.

A. Capital Reserves and Debt

Table 19 displays Capital Reserves and Debt for April 30 fiscal year-ends. Capital Reserves are divided into three categories:

- The General Capital Fund, not yet designated for specific purposes and funds designated for future infrastructure projects
- Designated Capital Fund, which has been assigned to specific capital projects
- Gibbons Property, the remaining funds from the sale of that property

The University's intention is that when the Gibbons funds are spent, there will be naming opportunities to honor the Gibbons name.

Capital Debt is divided into the following categories:

- **New Construction, Major Renovations, Infrastructure, and Other** – represents debt on projects that are largely new construction, additions to existing buildings, other new facilities, non-residential projects that involve major maintenance and renovations to existing space. It also includes debt on purchases of property and parking related projects.
- **Housing** – debt required for new construction, maintenance, and modernization projects for University residences and apartment buildings.
- **Research Park** – debt incurred by the Research Park.
- **Richard Ivey School of Business Foundation** – debt held by Richard Ivey School of Business Foundation.

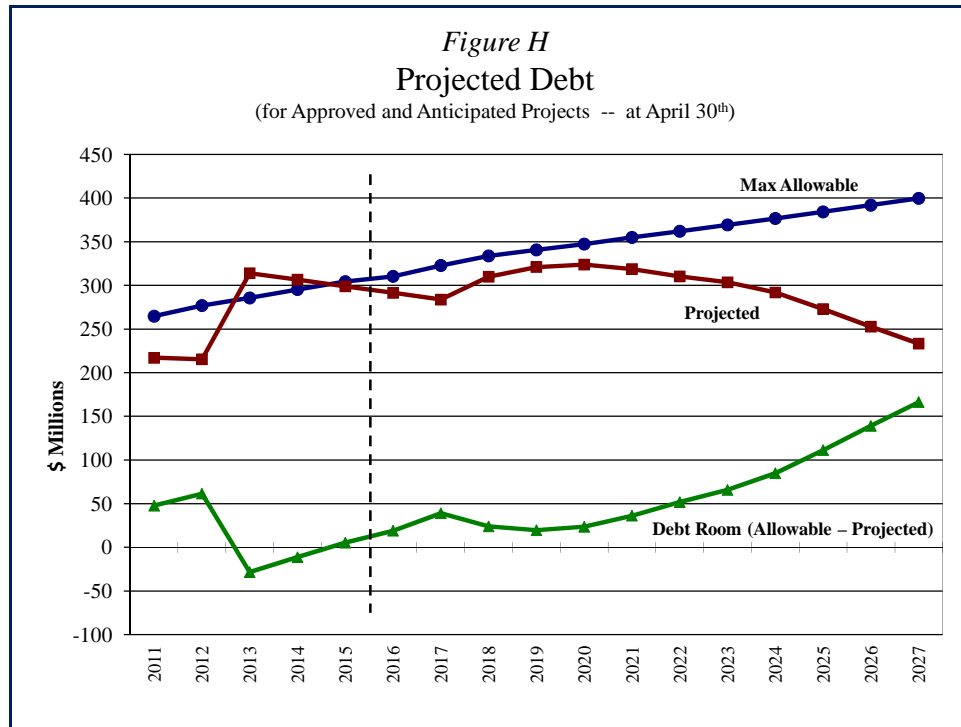
- **Unused and Invested Debenture Proceeds** – unused proceeds from Western’s first debenture issue that have been committed, and invested until the specific capital project requires the funding.

In 2002-03, the Board of Governors approved a Capital Debt Policy, which included a limit of \$7,500 in debt per student full-time equivalent (FTE). In 2005-06, the Board policy was modified to increase the \$7,500 each year by the change in the CPI, beginning in 2002. The table below shows the allowed debt per FTE (shown with indexation beginning in 2003-04) and actual debt per FTE; the figures are for years ending on April 30th. Debt was increased significantly in 2008 due to the issuance of the \$190 million debenture, and again in 2013 when the University entered into a \$100 million long-term facility to finance the new 1,000 bed residence and other capital projects.

	Actual		Forecast	
	2014	2015	2016	2017
Total Debt (in millions)	\$307	\$299	\$292	\$284
FTE Enrolment	31,448	31,766	31,765	32,390
Allowable debt per FTE	\$9,393	\$9,581	\$9,772	\$9,968
Actual debt per FTE	\$9,753	\$9,412	\$9,175	\$8,762
Debt room per FTE	(\$360)	\$169	\$597	\$1,206

In 2016, the maximum allowed debt per FTE under Western’s Capital Debt Policy is \$9,772 and the forecast is \$9,175.

Figure E shows total debt as well as three measures of debt per FTE since 2013: the maximum allowable debt, indexed to the CPI; the actual and projected debt; and the difference between the two, which we call debt room. The projected debt is based on Board-approved projects with allowance for other projects which may be presented to the Board during the period under consideration. Figure E shows that projected debt grew beyond the maximum allowable debt from 2013 to 2014 to support the funding of the new student residence, as approved by the Board. In 2015, total debt once again reduced to within Board Policy.



	Debt (\$M)	Combined Revenue (\$M)	FTE Enrolment	Revenue per FTE	Debt / Revenue (%)
2012	215.4	1,017.4	30,679	\$33,163	21.2%
2013	314.1	1,081.3	31,018	\$34,860	29.0%
2014	306.7	1,159.3	31,448	\$36,864	26.5%
2015	299.0	1,160.4	31,766	\$36,530	25.8%
2016 p	291.5	1,101.8	31,765	\$34,686	26.5%

B. Employee Future Benefits

Subject to eligibility rules set within various collective agreements, the University provides medical, dental and life insurance benefits to eligible employees after their employment with Western has ended.

These employee future benefits are determined using actuarial valuations every three years. In the years between valuations, an extrapolation of the actuarial valuation is used to determine the projected benefit obligations. At April 30, 2015, the University's accrued benefit liability relating to the employee future benefit plans was \$482 million (2014 - \$402 million).

Cost containment of active and post-retirement benefits has been a focus in recent negotiations. For staff, Western introduced a measure that limits cost increases for active and retiree benefits to no greater than CPI (3% maximum) in each year, reduced the age limit for dependent coverage and increased service requirements to qualify for post-retirement benefits to 10 years. For faculty, the threshold for eligibility has been increased from 5 to 10 years for all new employees and cost containment changes were introduced to the plan.

Included in the University's 2015 Audited Combined Statement of Operations is an annual expense in the amount \$22.5 million (2014 - \$23.2 million) for non-pension employee future benefits.

A recent review of major research universities identified only five institutions with significant post-employment benefit obligations greater than \$200 million, ranging from \$227 million to \$581 million and an unweighted average of \$371 million. Western ranked 2nd in total liability for Employee Future Benefits. The ratio of obligations to total revenues ranged from 20.5% to 41.6% with an unweighted average of 30.4%.

Employee Future Benefits (EFB) Obligation and Expense as a % of Total Expenditures: 2011 to 2015

	Obligation (\$M)	Expense (\$M)	Total University Expenses (\$M)	EFB Obligation as % of Total	EFB Expense as % of Total
2011	\$287.4	\$23.3	\$952	30.1%	2.4%
2012	\$339.9	\$19.6	\$975	34.9%	2.0%
2013	\$362.6	\$22.6	\$1,009	35.9%	2.2%
2014	\$401.7	\$23.2	\$1,067	37.6%	2.2%
2015	\$482.3	\$22.5	\$1,084	44.4%	2.1%

C. Deferred Maintenance

Deferred Maintenance is defined as work on the maintenance of physical facilities that has been deferred on a planned or unplanned basis to a future budget cycle or postponed until funds become available. To avoid increasing the size of the deferred maintenance backlog, it is necessary to carry out replacement of facility components on an annual basis.

The estimates of deferred maintenance are different than estimates of debt or employee future benefits in the previous sections. There are actual contracts in place for the first two that allow us to make reasonable estimates. For deferred maintenance, that is not the case; therefore, we have to find other ways to quantify this liability. In 2001, a common capital-asset management system was purchased by the Ontario University system to assess, track, and report on the condition of facilities. The system requires that each major component of a building – roof sections, classrooms, heating, ventilation, air-conditioning systems and so on – be inspected, either entirely or on a sample basis. Data on the findings of these inspections are entered into a central database. The system uses industry-standard cost and lifecycle data to forecast the timing and costs of capital renewal projects. The Facilities Management Division estimates that (as of February 29, 2016) deferred maintenance at Western is \$210 million for non-residential buildings and \$35 million for residences. Slightly more than 50% of the deferred maintenance for non-residential buildings relates to mechanical, electrical, and infrastructure requirements. Other major components include maintenance driven by code requirements and maintenance for roofs and windows.

A common measure for determining the overall condition of facilities is the ratio of deferred maintenance over replacement value of the facilities. The calculation for February 29, 2016 is as follows:

	Non-Residential Buildings	Combined Residences
Current Replacement Value (CRV)	\$1,852 million	\$ 411 million
Deferred Maintenance (DM)	\$210 million	\$35 million
DM/CRV	11.3%	8.5%

The average age of buildings for universities in the Province of Ontario was 42.9 years as of June 2015. Western's average age is 39.5 years. Over 57% of our buildings were built before 1980. Western's residences are funded through rents which cover maintenance; the University has never had a problem with deferred maintenance on residences. A ratio of 11.3% (Deferred Maintenance/Current Replacement Value) for non-residential buildings indicates a significant need for maintenance funding.

If the average component of a large building lasts 50 years, then on average, maintenance spending should be 2.0% of replacement value. This level of spending is a standard target in the industry. When the actual ratio is consistently less than 2.0%, as has been the case at most Canadian universities, the volume of deferred maintenance will grow. Failure to adequately address deferred maintenance results in substandard facilities and could result in the failure of critical systems. Based

on the current replacement value of our facilities at \$1.85 billion, spending on major maintenance for campus buildings at 2% should be in the range of \$37 million annually.

As part of the 1995 Strategic Plan, the Board of Governors approved an incremental annual base transfer of \$750,000 from operating capital in support of maintenance spending for ten years, from 1996-97 to 2005-06. In 2004, Western's Board of Governors approved the recommendation that the base transfer of \$750,000 be continued for another ten years after 2005-06, until 2015-16, when the annual transfer will be \$15.5 million. However, for 2009-10 and 2010-11, the annual transfer was maintained at \$10.25 million. For 2016-17, the base transfer will be increased by \$750,000 to \$14.75 million (2015-16, \$14.0 million) and will reach the intended maximum annual transfer of \$15.5 million in 2017-18.

As explained at the start of the Capital Budget, the maintenance transfer is used for Maintenance, Modernization, and Infrastructure (MMI). The administration is sometimes asked by faculty and staff if the MMI transfer is too large. As lines G and E in Table 15 show, the ratio of the MMI transfer to the current replacement value (CRV) of our nonresidential buildings, utilities, and infrastructure has been below 1% in recent years.

	Actual 2012-13	Actual 2013-14	Actual 2014-15	Projected 2015-16	Budget 2016-17
MMI (\$M)	\$ 11.75	\$ 12.50	\$ 13.25	\$ 14.0	\$ 14.75
CRV (\$M)	\$ 1,608	\$ 1,750	\$ 1,783	\$ 1,852	\$ 1,883
Ratio	0.73%	0.71%	0.74%	0.77%	0.78%

Thus the MMI transfer from the operating to the capital budget is less than half the 2% required to keep deferred maintenance from growing. Continuation of this MMI transfer is essential to maintaining a safe and reliable campus infrastructure, which supports modern research and teaching, and sustains faculty, staff, and student morale.

Line J of Table 15 presents an estimate of maintenance spending from all sources, with maintenance defined as spending required to bring aging facilities up to their condition when originally built. During the five years, 2006-07 through 2010-11, the ratio was about 2%, so that the level of deferred maintenance was stabilized. The University reached the 2% ratio with one-time funds from the provincial and federal governments, and by borrowing. The actual ratio in 2014-15, and the estimated ratios through 2016-17 have fallen short of the 2% target.

In 2015-16, the Province increased its annual facilities renewal grant to the prior level of \$40 million (for Ontario's universities and colleges). Western's share of this \$40 million is \$2.4 million in 2016-17. The Ontario government has committed to a gradual increase in this total level of funding to \$100 million by 2019-20, and the universities' share is normally about two-thirds of this total. While this increased support is welcome, the most recent assessment within the sector indicates the need for much larger investments (on an entirely different scale) to begin to restore to the condition of university facilities.