UNIVERSITY SECRETARIAT
• Board of Governors
• Senate

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BOARD OF GOVERNORS
Thursday, March 7, 2019 at 9:00 a.m.
Gilmour Hall, Council Room (Room 111)

AGENDA

NOTE: Members who wish to have items moved from the Consent to the Regular Agenda should contact the University Secretariat before the Board meeting. Members may also request to have items moved when the Agenda is presented for approval at the Board meeting.

Page

A. OPEN SESSION

1. REMARKS FROM THE CHAIR

2. NOTICE OF MEETING - FEBRUARY 21, 2019

3. APPROVAL OF THE AGENDA - OPEN SESSION

CONSENT (9:05 a.m.)

4. MINUTES OF PREVIOUS MEETING – DECEMBER 13, 2018 (OPEN SESSION)

Approval

5 - 9 **a.** Minutes - December 13, 2018 (Open Session)

5. BUSINESS ARISING

6. REPORTS FOR INFORMATION

Information

10 - 20 **a.** McMaster Museum of Art - Annual Report

21 - 130 **b.** McMaster Museum of Art - Appendices

7. COMMITTEE REPORTS

a. EXECUTIVE AND GOVERNANCE COMMITTEE

Information

i. Revisions to Terms of Reference for the Vice-Dean, Faculty of Health Sciences and Associate Dean,

Graduate Studies (Health Sciences)

ii. McMaster Research Ethics Board Revised Terms of Reference

131 - 159 **iii. Research Ethics Appeals Board Revised Terms of Reference**

Report from the Executive and Governance Committee

MOTION: That items 4 to 7 be approved or received for information by consent.

REGULAR

8. BUSINESS ARISING

9. COMMUNICATIONS

10. PRESENTATION TO THE BOARD OF GOVERNORS

Name: Dr. Claudia Emerson, Director, Program on Ethics & Policy for Innovation and Associate Professor, Philosophy
Title: ESC (Ethical, Social, Cultural) Thinking and its Impact in Global Health

11. PRESIDENT'S REPORT TO THE BOARD

Information

160 - 164 **a.** President's Report to the Board

165 **b.** Minute of Appreciation

12. REPORT FROM SENATE

Approval

166 - 167 **a.** Amendment of Item 42 of the Tenure and Promotion Policy

13. COMMITTEE REPORTS

a. EXECUTIVE AND GOVERNANCE COMMITTEE

Notice of Motion

168 - 199 **i.** Revisions to Board By-Laws - Execution of Instruments and Title Changes

b. PLANNING AND RESOURCES COMMITTEE

Approval

i. Salaried Plan Actuarial Valuations

200 - 413 **ii. Restatement of Plan Texts**
Report from the Planning and Resources Committee

14. REPORTS RECEIVED FOR INFORMATION

414 - 418 **a.** Report from Health, Safety and Risk Management

15. OTHER BUSINESS

MCMASTER MUSEUM OF ART (MMA)
ANNUAL REPORT
SEPTEMBER 1, 2017 – AUGUST 31, 2018

MUSEOLOGICAL RENEWAL

MCMASTER MUSEUM OF ART (MMA)
ANNUAL REPORT
SEPTEMBER 1, 2017 – AUGUST 31, 2018

MUSEOLOGICAL RENEWAL

EXECUTIVE SUMMARY

Following many years of intensive research activity on collections and educational programs, in 2017/2018 we re-focused our efforts on several foundational museological processes. Subsequently, there are many developments that mark the year as particularly significant. In terms of exhibitions, most notably, *Levy* and *NIIPA*; in terms of collections, again *Levy* but also Davidson as well as *Daetwyler* and *Bos*; in terms of education, *The Art of Seeing* and the *N. Gillian Cooper Education Program*; in terms of facility, storage vault and security up-grades; and in terms of administration, the status of the positon of Curator of Indigenous Art. Several of these occurrences have been on the evolving agenda for more than the period of this report, yet they have come to some fruition and/or developmental achievement during 2017/2018, such that they warrant special mention here in the Executive Summary. These items will be discussed in detail in the appropriate section headings below but, suffice it to say that they have added to the MMA's traditional museological roles of collection, preservation, research, exhibition and interpretation, in ways which are innovative, exceptional and foundational.

These achievements are highlighted with much gratitude to the Office of the Provost, the Department of Canadian Heritage, and donor extraordinaire, N. Gillian Cooper; for without their considerable assistance, many of the above would have been unattainable.

ORGANIZATIONAL OVERVIEW

Our Mission
The McMaster Museum of Art (MMA) engages, educates and enlightens through its innovative exhibitions and public programs while preserving the integrity of its collection. The MMA is a unique meeting place for both the campus and the wider community that aims to provoke people's understanding of the visual arts with its online and physical presence.

Our Vision
The McMaster Museum of Art will inspire curiosity, expand knowledge, ignite creativity, and enrich people's lives through an experience with visual arts.

As a university-affiliated, public art museum, the McMaster Museum of Art acquires, preserves, exhibits and interprets a collection of European, Canadian, Inuit and First Nations works of art for the people of Canada. The role of the MMA is twofold: to support the academic mission of McMaster University and to contribute to the discourse on art in Canada.

The MMA resides in a purpose-renovated building located at the centre of McMaster University's main campus. It comprises 5 galleries, 5 on-site storage vaults, and attendant office and public areas. Specifically, these areas break down as follows: 1,700 net square feet of (non-collection area) public space; 5,000 net square feet of exhibition space; 4,000 net square feet of storage; and 1,200 net square

feet of office/administration space. The physical plant of the MMA is maintained by the University proper. The Museum maintains and pays for its own collections insurance coverage as a sub-set of the University's larger institutional policy. The Museum maintains comprehensive security coverage in collaboration with an independent provider, Campus Security and the City of Hamilton police force. The Museum has 11 full-time staff: Director, Senior Curator, Curator of Indigenous Art, Collections Administrator, Senior Education Officer, Education Officer, Communications Officer, Preparator, and 3 Information Officers. The Curatorial staff is broadened by the addition of an Honorary Curator of Numismatics and Antiquities, a position currently held by Dr. Spencer Pope, Classics, McMaster University. Various student and community volunteers round out the staff complement at the MMA, helping primarily with educational programming and events.

Of the 40 university-affiliated art galleries/museums nation-wide, the MMA houses one of the top three collections in one of the best facilities in the country. The collection at the MMA numbers 6,000+ works of art and contains important historical, modern and contemporary period works. Highlights of the collection include:

- The Herman H. Levy Collection of Impressionist, Post-Impressionist and Modern work: including paintings by Caillebotte, Courbet, Derain, Marquet, Monet, Pissaro, Sickert, Soutine and Van Gogh;
- the Denner Wallace Collection, the most comprehensive collection of German Expressionist and Weimar period prints in Canada, including works by Barlach, Beckmann, Dix, Kirchner and Kollwitz;
- a significant holding of European Old Master works including 16th to 18th Century paintings and prints from Gosseart to Turner;
- 20th Century European art including modernist and contemporary artists from Duchamp, Nicholson and Rodchenko to Beuys, Kiefer, Kapoor and Richter:
- Canadian art including historical works by Thomson, Milne and the Group of Seven and including contemporary works by Andrews, Astman, Goodwin, Keeley, Maggs and Scherman,;
- the Inuit collection with a focus on Cape Dorset prints and sculpture including works by Kenojuak, Pitseolak and Tookoome;
- and Contemporary First Nations Art, including works by artists such as Ash Poitras, Beam, Boyer, Kakegamic and Morrisseau.

The MMA produces on average 8 - 12 exhibitions annually and augments those exhibitions with publications and ancillary programs geared to engage both the campus and broader community audience of the region. Throughout its history, the MMA has actively contributed to the dialogue on contemporary art in its contemporary galleries while maintaining an active research program on the objects in the permanent collection in its collection galleries. The Museum, from its outset, has maintained a "doors open" policy in terms of collections access as well as an active education and public programs component.

The MMA is one among several cultural institutions in the Hamilton area. The City of Hamilton manages several historic buildings and homes – Dundurn Castle, Military Museum, Museum of Steam & Technology, Whitehern Historic House, and a Children's Museum; as well the City is home to the Art Gallery of Hamilton as well as the James Street North artists' district. The MMA attempts to distinguish its contribution to the arts scene in the area by providing programming that is directed toward, on the one hand, scholarly research and on the other hand, inter-disciplinary projects. In this way, the

collections, exhibitions and programs of the MMA add a perspective on visual culture and society not currently being addressed on an on-going basis elsewhere in the region.

The museum has a national and international community in terms of collaborative exhibition projects and the use of its collections by sister institutions. Works of art from the collection are regularly borrowed by international institutions such as the Belevdere Palace, Vienna, Austria; Tate Modern, Tate Britain, Brooklyn Museum, and Kunsthalle Bremen, Denmark, among others. In Canada, MMA works have been borrowed by the Art Gallery of Hamilton, Winnipeg Art Gallery, Art Gallery of Ontario, Montreal Museum of Fine Arts and the National Gallery of Canada, among others.

2017/2018 HIGHLIGHTS
ADMINISTRATION
General
In 2017/2018, at year end, the Museum staff and Advisory Committee members (a combination of campus and community partners), participated in a two-day Strategic Plan Retreat. As we neared the end of term for *Cultivating Community Connections (2015 – 2020)*, the staff and volunteers of the Museum met to take stock and look forward, to note achievements gained, as well as consider revisions due to recent environmental changes and, finally, challenges and opportunities heading into the next plan. In June 2019, the Museum will begin the work toward *Strategic Plan 2020 – 2025*. Stakeholder groups will be surveyed, SWOT analysis will be undertaken, the mission and vision will be reconsidered in light of de-colonization and other external environmental factors both on campus and in the community. Monthly meetings with a Strategic Plan Team, staff and Advisory Committee members will occur throughout the fall. A new Strategic Plan Report will be available in January 2020. The current Plan was very much a response to *Forward with Integrity*. The next plan will take into consideration structural and philosophical changes from both the external community (Hamilton and region as well as Canadian arts community) and those occurring at McMaster University.

With an impending facility shut down (April through July, 2019)* for the refurbishment of the Museum's environmental system, time was spent in 2017/2018 strategizing what programs might be offered to our varied audiences in order to keep them engaged during that period. With respect to public programs/education, the Information and Education staff of the Museum will be taking the programs to the streets. Workshops, lectures and courses will be offered IN elementary, middle and high schools as well as community organizations. As well, tours of campus: public art and architecture and on-the-lawn workshops, will be hosted on campus. In terms of presentation, since the Museum will be closed to the public, no exhibitions will be produced. Rather, the Acquisitions Sub-Committee of the MMA Advisory Committee have developed a program of public art commissions, both by invitation and public call, which will see several works of public art acquired and installed on campus. The goal with the commissioning project is several fold: to present "programming" in the community; to support artistic practice in the region; to highlight the exterior façade of the museum building; to engage artists and the public in the creative enhancement of the MMA and by association, McMaster University.

*It should be noted that the Museum has been in it's currently facility since 1994, at which time the original Mills Library was retrofitted to international museum standards for environmental and security control. In the subsequent twenty-five-year period, the Museum has proudly been able to boast a building compatible with the best of national institutions in Canada. We are a designated "A" facility

with the Canadian Cultural Property Export Review Board, an accredited institution with the Canadian Conservation Institute and Air Cargo Canada. We are able to borrow exhibitions and works of art from the best institutions in the country: National Gallery of Canada, Art Gallery of Ontario, Winnipeg Art Gallery and others. Thanks to McMaster Facilities Services, the $98,000,000 collection is in excellent hands. In recent years, however, replacement and/or refurbishment of the 25-year old systems has been required. The lighting systems in all five exhibition galleries were replaced in 2016 and 2017; the security system (software and hardware) was up-graded in 2017 and 2018. In both of those cases, we were able to keep the museum open to the public during the renovations. In the case of the environmental system refurbishment in 2019, it is impossible to do so. While staff will still be working in the Museum, inhabitants must be kept to a minimum in order to maintain the accuracy of mobile environmental controls in the storage vaults (only) for the care of the collection works, and thus the public will not be allowed in the building during the renovation period.

Staff Complement

In fall 2017, we were able to announce that the Aboriginal Curatorial Resident position (2016/2017) had become the full-time position, Curator of Indigenous Art. This action resulted in the MMA being only the fourth art gallery in Canada to be able to make such a claim. The other three? The National Gallery of Canada, Art Gallery of Ontario and McKenzie Art Gallery (the art gallery of the First Nations University of Canada, Regina, SK). It cannot be minimized how significant a move this was for the Museum/McMaster University within the context of the national museum community.

In 2017/2018, three new Information Officers replaced two previously held guarding positions such that education programs and social media contributions were able to be substantially increased. In August, the Senior Curator, on staff since 2009, retired from the position. Having guided the curatorial research component of the Museum's recent collections projects as well as collections work around Holocaust-era recovery and de-accessioning, his expertise will be missed. The position, a key one in the institution, will be filled at the beginning of fiscal 2020.

Facilities

In 2017/2018, thanks to a generous grant from the Department of Canadian Heritage, Museum Assistance Program, five on-site storage vaults were up-graded, improving accessibility and expanding space by an estimated 20%. Thanks to support from the Office of the Provost, the 25+ year old security system was up-graded and made compatible with systems managed and overseen by McMaster Security Services. The Museum also initiated a renovation to the lobby/reception area of the Museum. Projected completion date, Spring 2019.

Grants & Funding

The Museum continues to balance its budget year to year. Several cost containment efforts are practiced on an on-going basis. Exceptional and/or special projects are funded through project grants from external funding bodies. Overall programming budget, operating expenses and staff are covered by revenues from the gate, fees for services, host allocation, Ontario Arts Council operating grant, trust and endowment income and donations. Operating funding from the Ontario Arts Council was increased in 2017/2018 largely due to the Museum's on-going efforts to de-colonize the Museum as well as for its commitment to institutional organizational effectiveness. Two Project grants submitted to the OAC: one

for strategic planning and one to tour an exhibition, were unsuccessful. For the first time in the MMA's history, we applied to an important American Funding body: Terra Foundation for American Art (Chicago), for major financial support for an exhibition of modern and historic Native American and First Nations Canadian art. Announcement is expected in spring 2019. Museum special donor, N. Gillian Cooper, continued in 2017/2018 to provide funding towards the education and public programs component of the Museum's activities.

Attendance

From year to year, the Museum's attendance, through the door, remains relatively stable. Our on-line attendance, on the other hand continues to increase annually. In 2017/2018, 27,000 visitors came through the door. This continues to be one of the highest attendance figures for an art museum in the university-affiliated sector. Touring projects comprised of works from the permanent collection, specifically the exhibition's *Living Building Thinking* and *A Cultivating Journey*, saw attendance figures of 215,000 (Vancouver, BC) and 13,000 (Kelowna, BC) respectively, at tour venues.

In terms of virtual visitors, the Museum recorded the following statistics: website 93,704 page views; e-museum (on-line collection database) 41,289 page views; *The Unvarnished Truth* (virtual, inter-active exhibition) 6,319 views (this is down from last year but the exhibition is no longer circulating); Youtube Channel, 14,000 views this year (in its lifetime, 45,300 views). 1,581 people subscribe to our on-line invite; 1,898 to our Facebook page; 3,148 to our Twitter account; and, 1,156 to Instagram. Moreover, the Museum's digital campus sculpture walking tour (via QR code) had 625 views this year. Our Geocache coins logged more than 129,000 kilometers in 2017/2018. 10 Geocoins are still circulating (of 92 launched). Warhol geocoin is top traveler and still active. It has travelled from Hamilton, to Australia, to Saskatchewan and back to Ontario. All coins that have achieved their goals (to reach artists' birthplace or equivalent distance) have now been assigned new goal to return to McMaster.

See Appendix A: On-going Institutional Achievements for additional details and timeline with respect to above items.

See Appendix B: Digital Media Report for details on digital statistics.

COLLECTIONS

Acquisitions

In 2017/2018, the Museum acquired 361 works of art: 344 by donation and 17 by purchase. Donated works include an outstanding collection of 310 works of European, Inuit and First Nations art including paintings, sculptures and works on paper from Dr. Douglas Davidson, retired professor of Biology at McMaster University. In terms of purchases, exceptional acquisitions include two etching by 17th century Italian artist, Elisabetta Sirani (1638 – 1665); a large scale blanket painting by Metis artist Bob Boyer (1948 – 2004); a significant seven-component photo-based installation work by First Nations artist, Arthur Renwick (b.1965); as well as a public sculpture by Hamilton-based collective, TH&B ((Frank, (b.1968), Hind (b. 1965), Jurakic (b. 1967) and Lukasik-Foss (b. 1967)).

See Appendix C: Acquisitions to the Permanent Collection for a complete list of works acquired in the reporting period.

Loans
2017/2018 was an exceptional year for loans from the permanent collection. The Museum toured three exhibitions, totalling the loan of 193 works of art. Ninety works from the German Expressionist collection toured to Vancouver in the spring of 2018; seventy-five works of Impressionist, Post-Impressionist and Modern art toured to Vancouver in spring 2018 and subsequently to Kelowna in summer/winter 2018.* Attendance figures at the Vancouver Art Gallery were in the neighbourhood of 215,000; at the Kelowna Art Gallery, 13,000. A selection of twenty-eight European works on paper also toured to the Judith & Norman Alix Art Gallery in Sarnia in winter 2018.

*If you missed *A Cultivating Journey: The Herman H. Levy Legacy*, a block buster exhibition of Impressionist, Post-Impressionist and Modern works from the collection of McMaster University at the MMA in fall 2017, be sure not to miss it when we re-mount it at the Museum in Fall 2019!

In terms of loans of individual works of art, the Museum sent out a total of nine works to institutions around the globe: in Canada, to the Montreal Museum of Fine Arts; Art Gallery of Windsor; Mt. St. Vincent University Art Gallery, Halifax; Art Gallery of Peterborough; Art Gallery of Hamilton; Art Gallery of Mississauga; and Onsite Gallery, OCADU, Toronto. Internationally, the Museum loaned a work by Liz Magor to museums in Switzerland, Germany and France. All other individual loans - all to sister cultural institutions in Canada - were of works by Canadian artists from the collection: Brenda Francis Pelkey, David Blackwood, Norval Morrisseau, Daphne Odjig and Meryl McMaster.

See Appendix D: Permanent Collection Works on Exhibition Tour.

See Appendix E: Permanent Collection Works on Loan.

De-Accessioning
The Museum developed in 2016/2017 and initiated in 2017/2018, a De-Accessioning Plan. De-accessioning is the thoughtful, reasoned, and planned removal of works from the collection when those works do not support the collecting mandate of the institution. Advisory Committee and Acquisitions Sub-Committee members approved the Plan. The Plan was also discussed in detail in last year's Annual Report. In the reporting period, three works were sold, realizing a total of approximately $160,000 CDN towards future acquisitions. As well, four works were transferred to sister cultural organization, Museum/London, as per international museum protocol (works to be de-accessioned are to be offered first, to sister cultural institutions, before being sent to sale).

See Appendix F: Deaccessioned & Transferred Objects for details.

Holocaust-Era Provenance Research
While research continues, there is no up-date to activities presented in last year's Annual Report.

EXHIBITIONS
In the reporting period, the Museum produced twelve exhibitions. Five included works from the permanent collection; two were borrowed exhibitions (Institute of Modern Art, Brisbane, Australia; and University of Lethbridge Art Gallery, Lethbridge, AB); three were partnerships with other cultural

institutions (Indigenous Art Centre, Department of Indigenous & Northern Affairs Canada, Gatineau, QC; and two with Mills Memorial Archives, McMaster University); four exhibitions included the work of Indigenous artists; five were solo exhibitions for important Canadian and international artists; and one was a block buster project of Impressionist, Post-Impressionist and Modern Art, accompanied by a major publication and national tour.

In fall 2017, *A Cultivating Journey*, *Struck by Likening* and *Simon Glass* provided opportunities for the public to survey modern art, the conundrums of analogies from the art world and, religion, justice and forgiveness. These thematic projects brought together European, Canadian and First Nations art; collection and loan works; and guest and in-house curatorial expertise.

In winter 2018, the *Gordon Bennett* exhibition from MOA, Brisbane, offered audiences an excellent opportunity to consider the differences and similarities between Indigenous art from Canada and Australia. (The latter exhibition was hosted at only one other Canadian venue, the Contemporary Art Gallery in Vancouver). The exhibition of senior Canadian artist, *Susan Schelle*, along with that of nineteen Indigenous photographers in *no filter needed: Native Indian/Inuit Photographers Association, c. 1985-1995*, provided another opportunity for the consideration of Indigenous and non-Indigenous practices in like media. The winter 2018 term closed with the annual graduating exhibition of McMaster University's fine art studio program, *SUMMA*.

In summer 2018, the Museum hosted a borrowed exhibition, *Midnight Sun*: a study of various Canadian and international artists working with camera obscura and pin hole techniques. The Museum partnered on the project by inviting one of the participating artists, Dianne Bos, to create a life-sized camera obscura on the front lawn of the Museum. Bos's *Star Shed* was a stunning introduction to art and science and the landscape tradition in art. Also on in the summer months, Ojibwe artist Rebecca Belmore's video projection, *March 5, 1819*, from the Museum's permanent collection, provided an excellent connection with the Art Gallery of Ontario's summer programming wherein Belmore's work was presented in a retrospective context. The Museum also partnered in summer 2018 with Mills Memorial Library & Archives on the presentation of two exhibitions: *Undying Hope*, the Bertrand Russell Archive (in the Archives 50th year) and *Gentleman, Soldier, Scholar, Spy,* the Napoleonic era maps of Robert Clifford. Additionally, in summer 2018 it was time for a new project in the Museum's Artists' Garden, a plot in the 'front yard" of the Museum. This year, and for the next three, that space is filled with *The Boat Project* by artist Ernest Daetwyer. Meant to offer students the opportunity for respite in their schedules on campus, they can climb aboard the boat and ponder their time at McMaster University: through all kinds of weather, through smooth seas or rough passage, the route/journey they have begun at McMaster will set them off on their careers in love, learning and employment!

Outside of exhibition programming but related to it, the Museum also partnered with Hamilton Super Crawl (commissioned art) and Carleton University Art Gallery (publication). In terms of publications, our distributor, ABC Art Books Canada, Montreal, recorded 57 sales during the period, 46 of those in the United States of America. Sales for MMA publications through ABC are generally to university and/or museum libraries.

See Appendix G: ABC Art Books Canada 2017/2018 distribution list for details.

EDUCATION & PUBLIC PROGRAMS

Education programs at the MMA are varied and many. There is a public programs component in which public events are offered to the general public in support of the exhibition program; a public tours and workshops component offered to school and community groups as well as the general public; and a more scholarly component, including formal course work (for credit) and research visits. The public programs and tour components, for the past two years, have been aligned under the over-arching umbrella of the *N. Gillian Cooper Education Program*. The following list details the varied nature of the educational programs offered by the MMA:

- Talks, panels, workshops et al for the general public in association with all exhibitions
- Tour programs for McMaster students/classes/programs (from 48 groups in 17/18)
- Tour programs for elementary, middle, high and private schools in the region (from 24 schools in 17/18)
- Tour programs for community groups (from 32 groups in 17/18)
- Formal courses – *The Art of Seeing*, one of four electives for Residents in the Department of Family Medicine; component of leadership courses at the Centre for Continuing Education, offered to other interested groups as requested
- Formal Course – *Museum 101*, for high school students
- Formal Course – *Good Morning Museum*, for seniors
- Individual research appointments for external scholars and students
- + facility for several campus groups – MSU Creativity Circle, MSU Open Circle, Student Accessibility Services, Graduate Students/Year of Creativity, Onsite (student art journal)
- Museum provides special programs for several campus initiated events throughout the academic year: Alumni Weekend, New Marauder Orientation, Clubsfest, Healthy Workplace Fair, Student Mental Health Awareness Week, May @Mac, etc; as well as broader based community events: Hamilton Arts Week, National Culture Days, International Slow Art Day, Hamilton Winterfest, Supercrawl and so on.

The Art of Seeing, the Museum's joint visual literacy program with the Department of Family Medicine continues to expand its reach. In 2017/2018, the program continued to serve Family Medicine for their Resident Education Course, as well as for their Faculty Development and Research Days. It continues to be developed for a cultural sensitivity training program at Six Nations for the Family Medicine Clinic located there. The program also continues to be presented as a component of the Strategic Leadership program at the Centre for Continuing Education. In 2017/2018, the program was the focus of 11 new group sessions including programming for the Hamilton-Wentworth and Hamilton Wentworth Catholic District School Boards, MU Master of Public Health, Degroote's Emerging Leaders, and HHSc Centre for People Development, among others.

See Appendix H: Tour Groups, including campus, school and community, for a list of groups served.

See Appendix I: Educational Programming in Support of Campus and Community Events, for details.

See Appendix J: *The Art of Seeing* - Courses, Research & Presentations, for details.

MEDIA COVERAGE, SOCIAL MEDIA, DIGITAL OUTREACH

In terms of media coverage, the Museum received the following coverage: 36 print articles; 10 broadcast (9 TV, 1 radio); and 20 digital/blog reviews. Much of the coverage was with respect to Indigenous and/or permanent collection projects produced and circulated by the Museum

See Appendix L: Media Summary, for a detailed listing of all coverage.

LIST OF APPENDICES

APPENDICES

MCMASTER MUSEUM OF ART

ANNUAL REPORT 2017 - 2018

APPENDIX A: INSTITUTIONAL ACHIEVEMENTS 2007 – 2019

OPERATIONS

Including: FUNDING; ORGANIZATIONAL COMPETENCE & DEVELOPMENT; DIGITIAL & SOCIAL MEDIA LAUNCHES, PLATFORMS & DEVELOPMENT; COLLECTIONS MANAGEMENT; FACILITIES UP-GRADES

2007 – 2015 **CITY OF HAMILTON**, COMMUNITY PARTNERSHIP GRANT

2007 FACEBOOK LAUNCHED

2008 LAUNCH OF INTER-DISCIPLINARY, COLLABORATIVE EXHIBITIONS WITH MCMASTER FACULTY (Psychology, Neuroscience & Behavior; Physics & Astronomy; Classics; Theatre & Film Studies; English & Cultural Studies; Indigenous Studies Program; Radiation Sciences; Anthropology; Studio Art; and so on)

2009 STRATEGIC PLAN 2009-2014 (First in Museum's history, funded by a grant from **Canadian Heritage**, facilitated by Lord Cultural Resources)

2009 FACILITY REPORT CREATED (UP-DATED 2014)

2009 BLOG LAUNCHED

2010 ADVISORY COMMITTEE, TERMS OF REFERENCE REVISED

2010 EMERGENCY DISASTER RESPONSE PLAN CREATED

2010 BUDGET REPORT (7 YRS FORWARD)

2010 UNIVERSITY ALLOCATION TO MMA IS INCREASED BY 60%

2010 GEO-CACHE LAUNCHED

2010 DIGITIZATION OF PERMANENT COLLECTION (funded by a matching grant from **Canadian Heritage,** matching component from **private donor**)

2010 TMS/THE MUSEUM SYSTEM COLLECTION DATABASE (acquired and populated, funded by donation from **private donor**)

2010 MMA/DEPT OF FAMILY MEDICINE, VISUAL LITERACY PROGRAM, *THE ART OF SEEING* (Trade-marked in 2014; (1 of 4) Electives for Family Medicine Residents, CCE leadership course launched in 2016; among others; Memorandum of Agreement to signed with Department of Family Medicine 2017; Marketing Strategy Launched in 2016; Research Project with Family Medicine Launched in 2016)

2011- ON-GOING ONTARIO ARTS COUNCIL OPERATING GRANT

2011 INSURANCE REVIEW (with resulting change in provider for a savings of $30,000 annually)

2011 SECURITY UP-GRADE

2011 GO-GREEN, E-INVITES

2011 TWITTER LAUNCHED

2011- 2014 PAINTING ANALYSIS RESEARCH PROJECT (funded by **McMaster University, Office of Research** and through a grant from Canadian Heritage)

2011- 2015 ANTIQUITIES & NUMISMATIC RESEARCH PROJECT

2011 POLICIES & PROCEDURES MANUAL REVISED

2011 SECURITY & MONITORING PROCEDURES REVISED

2012 E-MUSEUM LAUNCHED

2013 MMA YOUTUBE CHANNEL LAUNCHED

2014 WEB REDESIGN

2014 SOCIAL MEDIA PLAN ACTIVIATED

2014 DEMOGRAPHIC/USER SURVEY (conducted by Hill Research Strategies Inc.)

2014 FIRE SYSTEM UP-GRADE

2014 DE-ACCESSIONING PLAN CREATED

2014 **CANADIAN HERITAGE**, MUSEUMS ASSISTANCE PROGRAM, ACCESS TO HERITAGE GRANT, $189,000, for *The Unvarnished Truth: exploring the material history of paintings*

2014 STRATEGIC PLAN, 2015-2020 (funded through a **Compass Grant** from the Ontario Arts Council, facilitated by Good Consulting)

2015 *The Unvarnished Truth: exploring the material history of paintings* INTER-ACTIVE WEB SITE (New Motto, Hamilton), launched, active until end of tour, Summer 2017

2015 **CANADIAN HERITAGE,** MUSEUMS ASSISTANCE PROGRAM, ACCESS TO HERITAGE GRANT, $100,000, *Living Building Thinking: art and expressionism*

2015 – 2018 *Living, Building, Thinking: art & expressionism* EXHIBITION TOUR, Venues: Art Gallery of Alberta, Edmonton, AB; Vancouver Art Gallery, Vancouver, BC

2015 Launch of MMA IN THE COMMUNITY, public programs off-site with Carnegie Gallery, Super Crawl, Downtown Health Centre, Mills Hardware and Hamilton Arts Council

2016 – 2017 *The Unvarnished Truth: exploring the material history of paintings* EXHIBITION TOUR, Venues: Art Gallery of Alberta, Edmonton, AB; Thunder Bay Art Gallery, Thunder Bay, ON; Agnes Etherington Art Centre, Queens University, Kingston, ON

2016 MUSEUM PERISCOPE LAUNCHED

2016 EXHIBITION RELATED DIGITAL COMMUNITY COLLABORATIONS on Instagram, Twitter & Facebook

2016 **CANADIAN HERITAGE**, MUSEUMS ASSISTANCE PROGRAM, ACCESS TO HERITAGE GRANT, $105,000, *Levy Legacy: A Cultivating Journey*

2016 LIGHTING RENOVATION, Main Floor, Contemporary Galleries, funded by **McMaster University**.

2016 ABORIGINAL CURATORIAL RESIDENT, Rheanne Chartrand, July 2016 – June 2017, funded by the **Office of the President and Office of the Provost, McMaster University.**

2016 MARKETING PLAN LAUNCHED

2017 LIGHTING RENOVATION, Fourth Floor Galleries & Lobby, funded by **McMaster University.**

2017 – 2019 *A Cultivating Journey: The Levy Legacy* EXHIBITON TOUR, Venues: Vancouver Art Gallery, Vancouver, BC; & Kelowna Art Gallery, Kelowna, BC.

2017 - 2020 INDIGENOUS CURATOR, July 1, 2017 – June 30, 2019. Funded by the **Office of the Provost, McMaster University.**

2017 COLLECTIONS STORAGE UP-GRADE ($50,000). Funded by the **Department of Canadian Heritage, Museum Assistance Program**.

2017 LAUNCH OF N. GILLIAN COOPER EDUCATION PROGRAM

2017/2018 UP-GRADE OF MUSEUM SECURITY SYSTEM/HARDWARE, funded by the **Office of the Provost.**

2018 EDUCATION PROGRAM expansion (staff move from 2 to 5).

2018 LOBBY RENOVATION

2019 CURATOR OF INDIGENOUS ART, permanence.

2019 UP-GRADE TO MUSEUM ENVIRONMENTAL SYSTEM

2019 POLICY & PROCEDURES MANUAL REVISED. Including: P&P Manual proper, Security & Monitoring Plan, Advisory Committee Terms of Reference, Facility Report, Emergency Disaster Response Plan.

2019 STRATEGIC PLAN, 2020 – 2025, June – December 2019, working year.

APPENDIX B: DIGITAL MEDIA REPORT

WEBSITE
# of Website visitors
- museum.mcmaster.ca 93,704 pageviews by 18,104 users
- eMuseum (online collections database) 41,289 pageviews by 2,456 users
- The Unvarnished Truth 6,319 pageviews by 3,317 users

EMAIL
Number of Subscribers 1303
+ news blog subscribers 278
= 1581

APP – Walking Tour of McMaster Campus Sculpture
625 views, 51 plays

YOUTUBE 11 videos published this year
Subscribers +59 subscribers (163 total)
Views +14,000 views (45,300 Overall views to date)

SOCIAL MEDIA
Demographic across all platforms is approx. M 35% W 65% Hamilton 80%
Facebook 1,898
Twitter 3,148
Instagram 1156

GEOCACHE
38 logged visits to McMaster geocache in this year (464 Logged Visits in lifetime)
10 Geocoins still circulating (of 92 launched). Warhol geocoin is top traveler still active. It has travelled 129457.24 km from Hamilton, to Australia, to Saskatchewan and back to Ontario. All coins that have achieved their goals (to reach artists birthplace or equivalent distance) have now been assigned new goal to return to McMaster.

AWARDS
OAAG AWARDS Dr. Ihor Holubizky, McMaster Museum of Art Senior Curator nominated for Curatorial Writing Award
Hamilton Spectator Readers Choice Awards 2018 – Best Art Gallery
Hamilton Community News Readers Choice Awards 2018 – Best Art Gallery

APPENDIX C: ACQUISITIONS TO THE PERMANENT COLLECTION

Félix Vallotton (Swiss-French, 1865-1925)
Puvis de Chavannes, published in *The Studio* magazine, London, 15 December 1898
Woodcut on paper
18 x 13.5 cm image
27.3 x 19 cm sheet
Gift of Roald Nasgaard and Lori Walters
2017.004.0001

Félix Vallotton (Swiss-French, 1865-1925)
Le Mont-Rose, 1892
Woodcut on wove paper
24.5 x 36.8 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0002

Pierre Puvis de Chavannes (French, 1824-1898)
Femme Assise, n.d. (no later than 1890)
Published*, L'Art dans les Deux Mondes*, Paris, 20 Nov. 1890
Sanguine and white chalk on tan paper
28.5 x 22 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0003

Pierre Puvis de Chavannes (French, 1824-1898)
L'Espérance [Étude de tête de jeune fille], 1896
Published in *L'Estampe Moderne* no. 12, April 1896
Lithograph (photolithograph) on paper
26.8 x 20.2 cm primary support
40.5 x 30.5 cm secondary support
Gift of Roald Nasgaard and Lori Walters
2017.004.0004

Edmond Aman-Jean (French, 1858-1936)
Sous les Fleurs, 1897
Published by Champenois for *L'Estampe Moderne*
Lithograph on paper; No. 50 of 100 original colored lithographs
35 x 27 cm image
40 x 30.5 cm sheet
Gift of Roald Nasgaard and Lori Walters
2017.004.0005

Jens Ferdinand Willumsen (Danish, 1863-1958)
Seated Male nude with Boughs, 1900
Pencil, ink and crayon on paper
20.5 x 31.8 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0006

Jens Ferdinand Willumsen (Danish, 1863-1958)
Girl Holding Branches, 1900
Pencil and ink on paper
20.5 x 31.7 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0007

Jens Ferdinand Willumsen (Danish, 1863-1958)
Jan Bjørn Willumsen, 1891
Pencil on paper
26.5 x 18.5 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0008

Jan Verkade (Dutch, 1868-1946)
Head of Breton Woman, 1891-92
Watercolour on paper
22.1 x 18.3 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0009

Jan Verkade (Dutch, 1868-1946)
Boy with Cape, c. 1892
Pencil on paper
11.5 x 8.3 cm (irregular shape)
Gift of Roald Nasgaard and Lori Walters
2017.004.0010

Jan Verkade (Dutch, 1868-1946)
Landscape with Barn, c. 1892
Ink on paper
19.5 x 13.3 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0011

Evelyn de Morgan (English, 1855-1919)
Study of Nude (from Evelyn de Morgan's sketchbooks), n.d.
Pencil and colour on paper
36.8 x 23.5 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0012

Henri Le Sidaner (French, 1862-1939)
La Ronde, 1897
Lithograph on blue laid paper
One of 100 original colored lithographs published by Champenois for "L'Estampe Moderne", no. 14 (published between 1897 and 1899)
25 x 34.5 cm primary support
30.5 x 40.8 cm secondary support
Gift of Roald Nasgaard and Lori Walters
2017.004.0013

František Kupka (Czech, 1871-1957)
Portrait, c. 1894
Pencil on Arches paper
12.3 x 9.4 cm
[possibly Karl Wilhelm Diefenbach]
Gift of Roald Nasgaard and Lori Walters
2017.004.0014

Émile Schuffenecker (French, 1851-1934)
Portrait of César Franck, c. 1892
Graphite on paper
30.5 x 29 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0015

Joakim Skovgaard (Danish, 1856-1933)
The Fall, c. 1900
Watercolour on paper
32 x 47 cm primary support
32.8 x 47.5 secondary support
Study for decoration for Viborg Cathedral, Viborg, Denmark
Gift of Roald Nasgaard and Lori Walters
2017.004.0016

Émile Bernard (French, 1868-1941)
La Promenade, 1893
Watercolour on paper
41.3 x 28.4 cm primary support
51 x 38 cm secondary support
Gift of Roald Nasgaard and Lori Walters
2017.004.0017

Émile Bernard (French, 1868-1941)
Illustration from *Les fleurs du mal* by Charles Baudelaire, 1916
Wood engraving on paper
18.5 x 13 cm image
32.5 x 25 cm sheet
Gift of Roald Nasgaard and Lori Walters
2017.004.0018

Henri Fantin-Latour (French, 1836-1904)
La Muse (Richard Wagner), 1886
Illustration from *Richard Wagner, sa vie et ses oeuvres* / *His Life and Work*, by Adolphe Jullien, Paris
Lithograph on paper
22.8 x 15 cm image
33.3 x 24 cm sheet
Gift of Roald Nasgaard and Lori Walters
2017.004.0019

Georges Lacombe (French, 1868-1916)
The Calvary of Tronoën, 1894
Black crayon on heavyweight white woven paper
45.3 x 30.8 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0020

Félix Vallotton (Swiss-French, 1865-1925)
Cover illustration of *Le Rire*, no. 50, 19 Oct. 1895
30.3 x 23 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0021

Abel Faivre (French, 1867- 1945)
Rowing, illustration from *Le Rire*, 20 Juin 1903
31.2 x 23.5 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0022

Juan Cardona (Spanish, 1877-1958)
Cover illustration of *Le Rire*, 23 Novembre 1901
No. 368, 8e année
30.5 x 23.3 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0023

René Georges Hermann-Paul (French, 1864- 1940)
Cover illustration of *Le Rire*, 15 Mai 1897
No. 132, 3e année
31 x 23.5 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0024

Théophile Alexandre Steinlen (French, 1859-1923)
Cover illustration of *Gil Blas*, 15 Janvier 1893
No. 3, 3e année
39.8 x 26.5 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0025

Émile Bernard (French, 1868-1941)
Illustration for *L'Odyssee*, 1930
23.5 x 16.6 cm image
37 x 27.5 cm sheet
Gift of Roald Nasgaard and Lori Walters
2017.004.0026

Paul Balluriau (French, 1860-1917)
Illustration of Léda (Les Poètes de l'Amour) from the Paris Daily *Gil Blas*, c. 1895
39.3 x 27 cm
Gift of Roald Nasgaard and Lori Walters
2017.004.0027

Joseph Hartman (Canadian, b. 1978)
Hughson Street, Hamilton, 2011
Digital Chromogenic Print from 4 x 5 inch negative
68.6 x 86.4 cm
Purchase
2017.005.0001

Josef Dobrowsky (Austrian, 1889-1964)
No title, c. 1931,
Pastel on paper
57 x 41.8 cm
Gift of Barbara Carpio
2017.006.0001

Laura Marotta (Canadian, b. 1984)
Drawing for *Mattamy Eclectic*, 2011
Pencil, pen and marker on paper
65.2 x 50.9 cm
Gift of the artist
2017.007.0001

Svava Thordis Juliusson (Canadian b. Iceland, 1966)
Klumpur #1, 2014
Polypropylene rope and cable ties
74 x 50 x 40 cm
Purchase
2017.008.0001

Klumpur #2, 2014
Polypropylene rope and cable ties
35 x 60 x 70 cm
Purchase
2017.008.0002

Klumpur #3, 2014
Polypropylene rope and cable ties
40 x 37 x 38 cm
Purchase
2017.008.0003

Michael Allgoewer (Canadian b. 1954)
Drawing for Islands #1, 2000
Pencil on matt board
19.3 x 24 cm
Gift of the artist
2017.009.0001

Tenebrae #3 with element 3A, 2014
Painting: gesso, graphite powder, acrylic and wax on plywood panel
45.7 x 45.7 x 2.5 cm
Element: gesso, graphite, acrylic and wax on oak
107.3 x 4.5 x 7.6 cm (13.3 cm at bottom)
Purchase
2017.009.0002

Tenebrae #5 with element 5A, 2014
Painting: gesso, graphite powder, acrylic and wax on plywood panel
45.7 x 45.7 x 2.5 cm
Element: gesso, graphite, acrylic and wax on oak
90.8 x 4.5 x 7.6 cm (13.3 cm at cross member)
Purchase
2017.009.0003

Tenebrae #6 with element 6A, 2014
Painting: gesso, graphite powder, acrylic and wax on plywood panel
45.7 x 45.7 x 2.5 cm
Element: gesso, graphite, acrylic and wax on oak
Purchase
2017.009.0004

Dianne Bos (Canadian b. 1955)
Science naturelles, 1938, 2006
Unique altered book
19 x 11.8 x 1.6 cm
Plexi case
23 x 30.5 x 12.7 cm
Four positive silver gelatin prints from book camera negatives
22.5 x 20.3 cm each
Nina Ses Martschenko Memorial Fund
2017.010.0001

Paul Cvetich (Canadian b. 1947)
lolalidia, 2012
Painted wood
86 x 81 x 43 cm
Gift of the artist
2017.011.0001

John Hartman (Canadian b. 1950)
Not titled, c. 1971-73
Etching on paper
29.5 x 51 cm
Transfer from McMaster University School of the Arts
2017.012.0001

Meryl McMaster (Canadian, b. 1988)
Weight of the Shadow, 2015
From *Wanderings* series
Edition of 3 with 2 APs
Archival pigment print on watercolour paper
114.3 x 76.2 cm
Purchase
2017.013.0001

Avian Wanderer I, II, III, 2015
From *Wanderings* series (triptych)
Edition of 3 with 2 APs
Archival pigment prints on watercolour paper
50.8 x 76.2 cm (each)
Purchase
2017.013.0002

Bob Boyer (Métis/Cree, 1948-2004)
10 minutes to Drum Role Call, 1988
Oil and beeswax over acrylic on canvas
156 x 304 cm (diptych overall); 156 x 152 cm each panel
Purchase
2017.014.0001

Elisabetta Sirani (Italian 1638-1665)
The Holy Family with Saint Elizabeth and Infant Saint John the Baptist, c.1655-65
Etching on paper
29.3 x 22.2 cm
Museum of Art Collection Trust
2017.015.0001

The Rest on the Flight into Egypt, c.1655-65
Etching on paper
16.1 x 17.5 cm
Museum of Art Collection Trust
2017.015.0002

Douglas Davidson gift of 310 artworks: 2018.001
Pierre Alechinsky (Belgian, b. 1927)
Avec Plaisier, 1963
Edition 4/50
Etching and aquatint on paper
47.5 x 32.5 cm image
Gift of Douglas Davidson, 2018

Lithograph from *XXe siècle. Nouvelle série - XXIIe Année - No 14*, Juin 1960. Nouvelles situations de l'art contemporain/*Twentieth century. New series - XXII - No 14*, June 1960. New situations of contemporary art, 1960
Printed by atelier Fernand Mourlot, Paris, France
Published by éditions Cahiers d'Art XXe Siècle, Paris, France
31.4 x 24.3 cm
Gift of Douglas Davidson, 2018

Peter Aliknak (Inuit, 1928-1998)
Eating Dry Fish, 1968
Edition 26/50
Stonecut on paper
45.8 x 61 cm
Gift of Douglas Davidson, 2018

Davidialuk Alasua Amittu (Inuit, 1910-1976)
A Man Called Anahautik Was Killing People Long Ago, 1973
#14 Povungnituk print catalogue 1973
Edition 16/30
Stonecut on paper
62.8 x 62.8 cm
Gift of Douglas Davidson, 2018

Luke Anguhadluq (Inuit, 1895-1982)
Friendly Greeting, 1971
Edition 40/43
Stonecut and stencil on paper
26.5 x 43.5 cm
Gift of Douglas Davidson, 2018

Man and the Land, 1972
Edition 47/50
Stonecut and stencil on paper
43 x 53.5 cm irreg
Gift of Douglas Davidson, 2018
Tethered Dogs, 1971
Edition 25/40
Stonecut and stencil on paper
6.5 x 8.5 cm
27 x 33.7 cm
Gift of Douglas Davidson, 2018

Karel Appel (Dutch,1921-2006)
Black Mountains, 1961
Edition 23/125
Lithograph on BFK Rives paper
56.5 x 76 cm
Gift of Douglas Davidson, 2018

Femme/Woman, 1960
Edition 95/125
Lithograph on paper
76.5 x 56.3 cm
Gift of Douglas Davidson, 2018

Jules et Bichette, 1969
Edition 75/120
Lithograph on Arches paper
56.5 x 76.2 cm
Gift of Douglas Davidson, 2018

Kopf, 1963
A.P.
Lithograph on paper
50 x 46 cm image
Gift of Douglas Davidson, 2018

Le Chat, 1969
Artist's proof
Lithograph on paper
59.5 x 82.5 cm
Gift of Douglas Davidson, 2018

Ohne Titel or *Personnage*, 1970
Artist's Proof
Lithograph on paper
90 x 63 cm
Gift of Douglas Davidson, 2018

Kenneth Armitage (English, 1916-2002)
Balanced Figure, 1960-1961
Edition 18/35
Lithograph on paper
57.2 x 40 cm
Gift of Douglas Davidson, 2018

Syollie Arpatuk (Inuit, 1936-1986)
Snow Geese Near their Nests, 1973
#22 Povungnituk print catalogue 1973
Edition 17/30
Stonecut on paper
58 x 77.5 cm
Gift of Douglas Davidson, 2018

Johnniebo Ashevak (Inuit, 1923-1972)
Animal Cycle, 1966
#46 Cape Dorset Print catalogue 1966
Edition 38/50
Engraving on paper
Paper: 32.5 x 50.4 cm
Gift of Douglas Davidson, 2018

Sea Dogs and Sea Spirits, 1962
#20 Cape Dorset Print Catalogue 1962
Edition 38/50
Engraving on paper
31.5 x 46 cm irreg
Gift of Douglas Davidson, 2018

Untitled (Sedna), #39 Cape Dorset Print catalogue, 1962
Edition 27/50
Engraving on paper
33 x 48.3 cm irreg
Gift of Douglas Davidson, 2018

Kenojuak Ashevak (Inuit, 1927-2013)
Bird in a Summer Sky, 1978
#45 Cape Dorset print catalogue 1978
Edition 18/50
Stonecut and stencil on paper
62 x 76.3 cm
Gift of Douglas Davidson, 2018

Carrier Bird, 1967
#58 Cape Dorset Print Catalogue 1967
Edition 37/50
Engraving on paper
13 x 18 cm
Gift of Douglas Davidson, 2018

Mask, 1967
#49 Cape Dorset Print catalogue 1968
Edition 45/50
Engraving on paper
25.1 x 33 cm
Gift of Douglas Davidson, 2018

Seal with Scavengers, 1967
#61 Cape Dorset Print catalogue 1967
Edition 47/50
Engraving on paper
Paper: 25 x 33 cm
Gift of Douglas Davidson, 2018

Seal with Scavengers, 1967
#61 Cape Dorset Print catalogue 1967
Edition 44/50
Engraving on paper
Paper: 25 x 28.8 cm
Gift of Douglas Davidson, 2018

Kiawak Ashoona (Inuit, 1933-2014)
Owl Descending on Walrus, 1963
#47 Cape Dorset Print Catalogue 1963
Edition 10/50
Engraving on paper
31.5 x 45.5 cm irreg
Gift of Douglas Davidson, 2018

Pitseolak Ashoona (Inuit, 1904-1983)
Bellowing Caribou, 1973
#16 Cape Dorset Print catalogue 1973
Edition 23/50
Stonecut on paper
61 x 44 cm irreg
Gift of Douglas Davidson, 2018

Birds and Hunting Items, 1969
Edition 11/50
Engraving on paper
32.5 x 25.3 cm
Gift of Douglas Davidson, 2018

Bird and Sea Beasts, 1967
#14 Cape Dorset Print catalogue 1967
Edition 31/50
Stonecut on paper
62 x 86 cm irreg
Gift of Douglas Davidson, 2018

Bird and Seabeasts, 1967
#70 Cape Dorset Print Catalogue 1967
Edition 32/50
Engraving on paper
18.7 x 14 cm image
Gift of Douglas Davidson, 2018

Untitled (strange animals scene)
Felt tip marker drawing
45.7 x 61 cm
Gift of Douglas Davidson, 2018

Untitled (strange sea creatures), #43 Cape Dorset Print catalogue, 1962
Edition 35/50
Etching on paper
31.5 x 45.4 cm
Gift of Douglas Davidson, 2018

Untitled (faces with ulu), #31 Cape Dorset Print Catalogue, 1962
Edition 36/50
Engraving on paper
32 x 45.5 cm irreg
Gift of Douglas Davidson, 2018

Untitled (man versus bear), #49 Cape Dorset Print Catalogue, 1962
Edition 39/50
Engraving on paper
31.5 x 45.5 cm
Gift of Douglas Davidson, 2018

Untitled (two fishermen), #55 Cape Dorset Print Catalogue, 1962
Edition 42/50
Engraving on paper
31 x 45.3 cm irreg
Gift of Douglas Davidson, 2018

Witch and Friends, 1963
#19 Cape Dorset Print Catalogue 1963
Edition 42/50
Engraving on paper
23 x 27.3 cm
Gift of Douglas Davidson, 2018

Milton Avery (American, 1885-1965)
Dancing Jester, 1954
Edition 4/25
Woodblock on paper
30 x 24.5 cm
Gift of Douglas Davidson, 2018

Leonard Baskin (American 1922-2000)
J.F. Millet and Theodore Rousseau, 1969
Plate 10 of 15 from the Laus Pictorum: Portraits of Nineteenth-Century Artists
Printed and published by the Gehenna Press
Edition LII/C (52/100)
Wood engraving on thin wove paper
35.5 x 28 cm irreg
Gift of Douglas Davidson, 2018

Montecelli, 1969
Trial Proof (essai)
Etching on paper
53.4 x 48.5 cm
Gift of Douglas Davidson, 2018

Watteau, c.1970
Artist's Proof (from edition of 70)
Etching on Arches paper
75.3 x 58.8 cm
Gift of Douglas Davidson, 2018

Hans Bellmer (German, 1902-1975)
Hands
Edition 76/90
Etching on paper
32.6 x 35.3 cm
Gift of Douglas Davidson, 2018

David Blackwood (Canadian, b. 1941)
Captain Llewellyn Kean, 1971
Edition 8/25
Etching on paper
41.4 x 30.5 cm irreg
Gift of Douglas Davidson, 2018

Four Mummers, 1971
Edition 7/25
Etching on paper
14.5 x 25 cm
Gift of Douglas Davidson, 2018

Man Warning Two Boys, 1981
Edition 4/50
Etching on paper
38.3 x 47.4 cm irreg
Gift of Douglas Davidson, 2018

Marc Chagall (Russian, 1887-1985)
On nettoie les pantalons / Cleaning the Trousers, 1923-27
Plate LIX quater in the book *Les Âmes mortes* / *Dead Souls* by Nicolas Gogol, published 1948
Printed by Louis Fort, Atelier Paul Haason
Published by Tériade
Edition XXI / XXXIII
Etching and drypoint on Arches wove paper, watermark Les Ames Mortes
27.7 x 22 cm image
Gift of Douglas Davidson, 2018

The Anointing of Saul, 1956
#60 from the Bible Suite (to be verified)
Etching on paper
31.2 x 21.4 cm image
Gift of Douglas Davidson, 2018

Corneille (Guillaume Cornelis van Beverloo) (Dutch, 1922-2010)
Hors des chemins, 1962
Edition 118/120
Lithograph on paper
39.5 x 53 cm image
Gift of Douglas Davidson, 2018

Le dialogue avec l'arbre, 1970
Edition 2/120
Lithograph on paper
66 x 50.5 cm
Gift of Douglas Davidson, 2018

L'île aux soleils, 1968
Edition 27/120
Lithograph on paper
57 x 76.3 cm image and sheet
Gift of Douglas Davidson, 2018

Many Thoughts, 1967
Edition 31/50
Lithograph on paper
36 x 49 cm
Gift of Douglas Davidson, 2018

Scène Mexicaine, 1971
Edition 48/100
Lithograph on paper
50 x 65.5 cm sheet
Gift of Douglas Davidson, 2018

Terre Africaine, 1959
Edition 74/100
Lithograph on paper
57 x 44 cm
Gift of Douglas Davidson, 2018

Tropique, 1968
Edition 116/120
Lithograph on paper
76 x 56.5 cm image and sheet
Gift of Douglas Davidson, 2018

Jack Coughlin (American, b. 1932)
Owl, 1976
Edition 90/160
Wood engraving on paper
Paper: 32.8 x 24 cm
Gift of Douglas Davidson, 2018

Pierre Courtin (French, 1921-2012)
Jubilé de Mars, 1972
Etching with chine collé on BFK Rives
49.7 x 52 cm
Gift of Douglas Davidson, 2018

Première Machine, 1969
Colour engraving on zinc relief printed on hand-made laminated paper
46 x 26.5 cm irreg
Gift of Douglas Davidson, 2018

Organisation Rurale, 1968
Colour engraving on zinc relief printed on hand-made laminated paper
52 x 32.5 cm irreg
Gift of Douglas Davidson, 2018

Jose Luis Cuevas (Mexican, 1934-2017)
L'Amour Fou, 1968
XXIII/XXV
Lithograph on paper
55.5 x 75 cm
Gift of Douglas Davidson, 2018

Alan Davie (English, 1920-2014)
Zurich Improvisation IX, 1965
Edition 1/75
Lithograph on paper
55 x 76 cm
Gift of Douglas Davidson, 2018

Bertrand Dorny (French, 1931-2015)
Untitled Christmas card published by Éditions de L'Oeuvre Gravée, dedicated by Nesto Jacometti, c. 1970
Edition 49/225
Engraving and aquatint on paper
25 x 32.8 cm
Gift of Douglas Davidson, 2018

François Fiedler (Hungarian, 1921-2000)
Lithograph from *XXe siècle. Nouvelle série - XXIIe Année - No 14*, Juin 1960. Nouvelles situations de l'art contemporain/*Twentieth century. New series - XXII - No 14*, June 1960. New situations of contemporary art, 1960
Printed by atelier Fernand Mourlot, Paris, France
Published by éditions Cahiers d'Art XXe Siècle, Paris, France
Edition of 2000
Lithograph on paper
31.4 x 24.2 cm
Gift of Douglas Davidson, 2018

Marcel Fiorini (b. Algeria 1922-d. France, 2008)
A Ile de Ré, n.d.
Trial Proof (essai)
Linocut in intaglio on BFK Rives paper
50.3 x 65.8 cm
Gift of Douglas Davidson, 2018

Untitled "colour etching with typographic impression" from a Christmas card (dedication overleaf missing), published by Éditions de L'Oeuvre Gravée, Nesto Jacometti, not dated
Edition 53/200
22.8 x 20 cm
Gift of Douglas Davidson, 2018

Johnny Friedlander (Polish, 1912-1992)
Le cheval et son ombre, 1956
Edition 9/15
Etching and aquatint on BFK Rives paper
65.6 x 50.6 cm irreg
Gift of Douglas Davidson, 2018

Petit Bestiaire/Little Bestiary, 1963
Bound publication with 11 etchings on BFK Rives paper
Text by Jean Cassou
Published by Manus Press, Stuttgart
Edition 226/240 (no. 61-240 printed on BFK Rives)
Etching dimensions variable
50.6 x 36 x 2 cm book overall
Gift of Douglas Davidson, 2018

Untitled illustration from *Petit Bestiaire/Little Bestiary*, 1963
Etching on BFK Rives paper
Published by Manus Press, Stuttgart
From an edition of 240 (no. 61-240 printed on BFK Rives)
50 x 32.8 cm
Gift of Douglas Davidson, 2018

Conrad Furey (Canadian, 1954-2008)
Untitled (man in boat, woman in water), 1979
Pencil on paper
25 x 30 cm sight
Gift of Douglas Davidson, 2018

Untitled (woman hanging laundry), 1979
Pencil on paper
25 x 30.5 cm sight
Gift of Douglas Davidson, 2018

Sergio Gonzalez-Tornero (Chilean, b. 1927)
Blueprint for a Portrait Gallery, 1965
Edition 14/100
Lithograph on paper
60 x 49.8 cm
Gift of Douglas Davidson, 2018

Portrait of the Artist, 1965
Edition 51/100
Etching on paper
75.7 x 59.5 cm
Gift of Douglas Davidson, 2018

Frederick Hagan (Canadian, 1918-2003)
End of a Portage, Killarney, 1985
Ink brush on paper
27.5 x 35.8 cm
Gift of Douglas Davidson, 2018

John Hartman (Canadian, b. 1950)
A Mid-Winter's Dream, 1991
Edition 9/10
Drypoint on paper
44.5 x 37.3 cm
Gift of Douglas Davidson, 2018

Adam Naming the Plants and Animals, 1987
Edition 2/10
Drypoint on paper
29 x 38.3 cm
Gift of Douglas Davidson, 2018

After the Flood, 1987
Unique proof
Silkscreen and pastel on Whatman paper
55.9 x 77 cm
Gift of Douglas Davidson, 2018

Airplane Flying Above Highway 67, 1985
Pastel on ragboard
16.3 x 22.6 cm
Gift of Douglas Davidson, 2018

Indian Harbour, 1987
From the portfolio American Camp Series, published by the artist
Edition 5/10
Drypoint on Whatman paper
28 x 38.3 cm irreg
Gift of Douglas Davidson, 2018

Prouse Painting at Indian Harbour, 1987
From the portfolio American Camp Series, published by the artist
Edition 5/10
Drypoint on Whatman paper
27.5 x 38.5 cm irreg
Gift of Douglas Davidson, 2018

Sketching on American Camp Island, 1987
From the portfolio American Camp Series, published by the artist
Edition 5/10
Drypoint on Whatman paper
27.7 x 38.5 cm irreg
Gift of Douglas Davidson, 2018

Untitled (American Camp Island), 1987
From the portfolio American Camp Series, published by the artist
Edition 5/10
Drypoint on Whatman paper
27.8 x 38.5 cm irreg
Gift of Douglas Davidson, 2018

Untitled (Summer Picnic, American Camp Island), 1987
From the portfolio American Camp Series, published by the artist
Edition 5/10
Drypoint on Whatman paper
27.8 x 38.5 cm irreg
Gift of Douglas Davidson, 2018

Apotheosis of Gilbert D., 1991
Edition 10/10
Drypoint on paper
37.5 x 49.2 cm irreg
Gift of Douglas Davidson, 2018

Baptism, 1985
Edition 5/9
Drypoint on BFK Rives paper
38 x 49.7 cm irreg
Gift of Douglas Davidson, 2018

Days and Nights on 'la plaine de Lafontaine', 1987
V.E. 1/10
Drypoint on black paper
25 x 35.1 cm
Gift of Douglas Davidson, 2018

Fishing with Ronald Goodwin, 1987
Brush and ink drawing
17.8 x 25.4 cm
Gift of Douglas Davidson, 2018

Hamilton Harbour – Flagship of Industry, 1985
Edition 5/10
Drypoint on paper
28.2 x 38.3 cm
Gift of Douglas Davidson, 2018

Headland and Blue Water, 1980
Acrylic on ragboard
75 x 98.5 cm
Gift of Douglas Davidson, 2018

Horse and Demon Vision, 1985
Edition 10/10
Drypoint on paper
25.3 x 33.2 cm
Gift of Douglas Davidson, 2018

Jacob's Ladder, 1987
Edition 17/20
Etching and drypoint on Whatman paper
55.9 x 77 cm
Gift of Douglas Davidson, 2018

Job and the Law, 1987
Edition 1/10
Drypoint on paper
28.2 x 38.2 cm
Gift of Douglas Davidson, 2018

Job's Garden, 1987
Edition 10/10
Drypoint on paper
28.5 x 38.3 cm irreg
Gift of Douglas Davidson, 2018

John Spade's Camp, Collins, 1987
Watercolour on paper
41.7 x 55.8 cm
Gift of Douglas Davidson, 2018

L'ange de printemps, 1985
Edition 1/7
Drypoint on Arches paper
28.8 38 cm
Gift of Douglas Davidson, 2018

Lazarus, 1989
Edition 1/5
Drypoint on black paper
24.8 x 34.9 cm irreg
Gift of Douglas Davidson, 2018

Le Chemin des Croix, 1983
Pastel on Turner Grey paper
57.5 x 80 sheet
Gift of Douglas Davidson, 2018

Life Before Noah, 1986
Monoprint on paper
51 x 66.3 cm
Gift of Douglas Davidson, 2018

Lucifer Surveying Job's Garden, 1987
Monoprint on Fabriano paper
56.5 x 76 cm
Gift of Douglas Davidson, 2018

Luke and the Wolf, 1987
V.E. 7/10
Drypoint on paper
28.3 x 38.3 cm
Gift of Douglas Davidson, 2018

Luke and the Wolf, 1987
V.E. 1/10
Drypoint on paper
28.5 x 38.1 cm
Gift of Douglas Davidson, 2018

Noah Campbell Converts Collins, 1985
Edition 4/8
Drypoint on paper
28.2 x 38.2 cm irreg
Gift of Douglas Davidson, 2018

Penetanguishene Harbour and Magazine Island, 1985
Edition 9/9
Drypoint on BFK RIves paper
32.8 x 44.8 cm irreg
Gift of Douglas Davidson, 2018

Penetanguishene Harbour, 1985
Edition 1/10
Drypoint on paper
28.4 x 38.3 cm
Gift of Douglas Davidson, 2018

Primitive Dream Figure, 1985
Edition 2/10
Drypoint on paper
33.2 x 44.7 c irreg
Gift of Douglas Davidson, 2018

Richard S. Wrestles with an Angel, 1991
Artist's Proof
Drypoint on paper
37.5 x 48.3 cm irreg
Gift of Douglas Davidson, 2018

Richard Wrestles with an Angel, n.d.
H.C. 1/5
Lithograph on Arches paper
56 x 76 cm
Gift of Douglas Davidson, 2018

Richard Wrestling with an Angel, 1988
Edition 19/25
Silkscreen on paper
58 x 76.3 cm
Gift of Douglas Davidson, 2018

Sachigo, 1985
Unique proof
Drypoint on paper
29 x 37.3 cm irreg
Gift of Douglas Davidson, 2018

Shaman and Priest, 1985
Edition 9/9
Drypoint on paper
38 x 49 cm
Gift of Douglas Davidson, 2018

Sinclair, Riel, Dumont, Batoche and the Métis, 1987
Edition 1/10
Drypoint on paper
28 x 38.2 cm irreg
Gift of Douglas Davidson, 2018

Temptation, 1987
Monoprint on Fabriano paper
56.5 x 76 cm
Gift of Douglas Davidson, 2018

The Artist and his Son among the Islands, 1985
Edition 5/10
Drypoint on paper
28 x 37.8 cm irreg
Gift of Douglas Davidson, 2018

The Dark Ages, 1986
Monoprint on paper
46.5 x 67 cm image
Gift of Douglas Davidson, 2018

The Deluge, 1987
Edition 1/10
Drypoint on paper
28.5 x 38.1 cm irreg
Gift of Douglas Davidson, 2018

The Fox in the Midnight Sun, 1991
Edition 2/5; second state
Drypoint on paper
39.8 x 30 cm image/plate
Gift of Douglas Davidson, 2018

The Mountain of Ancestors, 1987
V.E. 2/10
Drypoint on BFK Rives paper
28.5 x 38 cm
Gift of Douglas Davidson, 2018

The Mountain of Ancestors, 1987
V.E. 1/10
Drypoint on paper
28.3 x 38.3 cm
Gift of Douglas Davidson, 2018

The River, 1987
Monoprint on paper
55.7 x 77 cm
Gift of Douglas Davidson, 2018

The Road Beside Lake W., 1985
Edition 3/4
Drypoint on paper
28.3 x 37.5 cm irreg
Gift of Douglas Davidson, 2018

The Sacrifice of Isaac, 1987
Monoprint on Fabriano paper
56.5 x 76 cm
Gift of Douglas Davidson, 2018

The Society of Jesus Bring Christianity to the New World, 1985
Edition 1/10
Drypoint on paper
28.5 x 37.7 cm irreg
Gift of Douglas Davidson, 2018

The Tree of Life, 1989
Edition 8/10
Drypoint on Whatman paper
28 x 38.2 cm
Gift of Douglas Davidson, 2018

Travel in the Land of Intellectuals, 1986
Monoprint on paper
46 x 65.5 cm image
Gift of Douglas Davidson, 2018

Two Blue Angels, 1987
Edition 1/10
Drypoint onpaper
28.5 x 38.3 cm irreg
Gift of Douglas Davidson, 2018

Wash Day, 1987
Edition 11/25
Silkscreen on black paper
49.9 x 70 cm
Gift of Douglas Davidson, 2018

Stanley Hayter (English, 1901-1988)
La Noyée, 1955
Artist's Proof XXIII
Engraving, soft-ground etching and scorper on BFK Rives paper
49.5 x 65.3 cm
Gift of Douglas Davidson, 2018

L'oeil, 1971
Published by Galerie La Hune, Paris
Edition 28/50
Engraving, soft ground etching, etching and scorper on BFK Rives paper
65 x 49.8 cm
Gift of Douglas Davidson, 2018

Nautilus, 1969
Edition 34/50
Engraving and etching on BFK Rives paper
75.5 x 55.5 cm
Gift of Douglas Davidson, 2018

Daniel Inukpuk (Inuit, b. 1942)
Birds and Seals in the Springtime, 1974
#6 Povungnituk print catalogue 1975
Edition 28/40
Stonecut on paper
49.8 x 58.8 cm
Gift of Douglas Davidson, 2018

Seals at Breathing Hole Looking out for Innuit, 1974
#1 Povungnituk print catalogue 1974 (II)
Edition 4/30
Stonecut on paper
37 x 54.5 cm
Gift of Douglas Davidson, 2018

The Inuit Going for Caribou, 1974
#8 Povungnituk print catalogue 1975
Edition 28/40
Stonecut on paper
43.7 x 61.5 cm irreg
Gift of Douglas Davidson, 2018

Juanisialu Irqumia (Inuit, 1912–1977)
Getting a Walrus by Kayaks, 1973
#25 Povungnituk print catalogue 1973
Edition 17/30
Stonecut on paper
38.8 x 48.3 cm
Gift of Douglas Davidson, 2018

Triptych of the Hunt, 1965
#93 Povungnituk print catalogue 1965 and 1960-1970
Stonecut on paper
66.5 x 53 cm image
Gift of Douglas Davidson, 2018

Goyce Kakegamic (Cree, b. 1948)
The Black Ravens
Acrylic on textured paper
60.6 x 45.5 cm
Gift of Douglas Davidson, 2018

Untitled (group of birds), undated
Acrylic on paper
56.2 x 76.2 cm
Gift of Douglas Davidson, 2018

Joshim Kakegamic (Cree, 1952-1993)
Early Bird, 1977
Edition 20/65
Screenprint on paper
52.8 x 75 cm
Gift of Douglas Davidson, 2018

Cast Out, 1977
Edition 26/56
Screenprint on paper
37.8 x 56.7 cm
Gift of Douglas Davidson, 2018

Cast Out, 1977
Artist's Proof I/VI
Screenprint on paper
37.8 x 56.7 cm
Gift of Douglas Davidson, 2018

Nursing the Child, 1976
Edition 65/65
Screenprint on paper
Paper: 52 x 37.5 cm
Gift of Douglas Davidson, 2018

The Portage, 1976
Edition 66/68
Serigraph on paper
52.5 x 37.5 cm
Gift of Douglas Davidson, 2018

Two Lovers, 1977
Edition 55/84
Serigraph on paper
38.2 x 56.8 cm
Gift of Douglas Davidson, 2018

Untitled (figure beside owl in tree), n.d.
Acrylic on paper
56.8 x 76 cm sheet
Gift of Douglas Davidson, 2018

Untitled (man and snake), undated
Acrylic on paper
56.5 x 76 cm
Gift of Douglas Davidson, 2018

Helen Kalvak (Inuit, 1901-1984)
Ambitious Crows, 1968
Edition 29/50
Stonecut on paper
45.9 x 61 cm
Gift of Douglas Davidson, 2018

Apparition Dream, 1964
#32 Holman Western Arctic
Edition 17/40
45.5 x 61 cm
Gift of Douglas Davidson, 2018

Capture of a Wolf, 1969
Edition 15/50
Stonecut on paper
45.5 x 61 cm irreg
Gift of Douglas Davidson, 2018

Duck Hunt, 1967
Edition 39/40
Stonecut on paper
61 x 45.5 cm irreg
Gift of Douglas Davidson, 2018

Kidnapper, 1973
Edition 20/50
Stonecut on paper
45.5 x 61.5 cm
Gift of Douglas Davidson, 2018

Kidnapping, 1969
Stonecut on paper
45.8 x 60.9 cm
Gift of Douglas Davidson, 2018

Magic Power, 1973
Edition 20/50
Stonecut on paper
62 x 44 cm irreg
Gift of Douglas Davidson, 2018

Man Stealer, 1969
Edition 26/50
Stonecut on paper
45.7 x 61 cm
Gift of Douglas Davidson, 2018

Man with Dog and Bird, 1964
Edition 28/40
Stonecut on paper
45.8 x 61 cm
Gift of Douglas Davidson, 2018

Nightmare, 1967
Edition 23/51
Stonecut on paper
45.3 x 60.5 cm
Gift of Douglas Davidson, 2018

Sea Travellers, 1973
Edition 20/50
Stonecut on paper
46 x 61.3 cm
Gift of Douglas Davidson, 2018

Shaman's Ritual, 1970
Edition 29/50
Stonecut on paper
45.5 x 61 cm
Gift of Douglas Davidson, 2018

Kiakshuk (Inuit, 1886-1966)
Family Scene, 1963
Edition 14/50
Engraving on paper
31 x 45.5 cm
Gift of Douglas Davidson, 2018

Hunters, 1963
#28 Cape Dorset Print catalogue 1963
Edition 10/50
Engraving on paper
31.5 x 44.2 cm
Gift of Douglas Davidson, 2018

Men and Animals, 1963
#30 Cape Dorset Print catalogue 1963
Edition 50/50
Engraving on paper
31.4 x 45.5 cm
Gift of Douglas Davidson, 2018

Untitled (hunting scene), #35 Cape Dorset Print catalogue, 1962
Edition 13/50
Engraving on paper
31.2 x 45.2 cm
Gift of Douglas Davidson, 2018

Untitled (marine and land animals), #9 from Cape Dorset print catalogue, 1962
Edition 28/50
Engraving on paper
33 x 48.3 cm irreg
Gift of Douglas Davidson, 2018

Rosalie Ookangok Kopak (Inuit, b.1935)
Animal figure (Rabbit?), n.d.
Dark grey stone
19 x 13 x 4.5 cm
Gift of Douglas Davidson, 2018

Timothy Kuananapik Kuanana (Inuit, 1938-1984)
Going Fishing, 1965
#299 Povungnituk print catalogue 1960-1970
Edition 30/30
Stonecut on paper
34 x 47.7 cm irreg
Gift of Douglas Davidson, 2018

He Will Get an Otter with a Harpoon, 1973
#1 Povungnituk print catalogue 1973
Edition 25/30
Stonecut on paper
38 x 48.8 cm
Gift of Douglas Davidson, 2018

Losing the Catch, 1972
#34 Povungnituk print catalogue 1972
Edition 31/40
Stonecut on paper
70 x 39 cm image
Gift of Douglas Davidson, 2018

Man throwing a knife at an otter, 1973
Edition 16/30
#5 Povungnituk print catalogue 1973
Stonecut on paper
43 x 59.5 cm irreg
Gift of Douglas Davidson, 2018

Myra Kukilyaut (Inuit, 1929-2006)
Evil Spirits, 1971
Edition 43/50
Stencil on paper
66 x 83.5 cm
Gift of Douglas Davidson, 2018

Mona Ohoveluk Kuneyuna (Inuit, 1935-1992)
Taken by Surprise, 1970
Edition 28/50
Stonecut on paper
45.5 x 61 cm
Gift of Douglas Davidson, 2018

The Climax of the Dance, 1970
Edition 6/50
Stonecut on paper
45.8 x 61 cm
Gift of Douglas Davidson, 2018

Jack Levine (American, 1915-2010)
Death's-Head Hussar, 1965
Edition 38/100
Drypoint etching on BFK Rives paper
56 x 37.8 cm
Gift of Douglas Davidson, 2018

Richard Lin (Taiwanese, 1933-2011)
Flirtation, 1965
Edition 27/70
Serigraph on paper
44 x 56 cm irreg
Gift of Douglas Davidson, 2018

Bernard Meadows (English, 1915-2005)
Cock I, 1955
Edition 2/10
Lithograph on paper
50.8 x 35.4 cm irreg
Gift of Douglas Davidson, 2018

Lucy Meeko (Inuit, 1929-2004)
Study, 1973
#24 Arctic Quebec print catalogue 1973
Edition 27/31
Stonecut on paper
Paper: 47 x 63.5 cm
Gift of Douglas Davidson, 2018

René Mels (Belgian, 1909-1977)
Untitled Christmas card published by Éditions de L'Oeuvre Gravée, dedicated by Nesto Jacometti, not dated
Edition 84/150
Print
25 x 32.8 cm
Gift of Douglas Davidson, 2018

Annie Mikpiga (Inuit, 1900-1984)
A Long Time Ago, Inuit Used to Hunt by Walking, 1973
#10 Povungnituk print catalogue 1973
Edition 16/40
Stonecut on paper
36 x 45.2 cm irreg
Gift of Douglas Davidson, 2018

Tanya Moiseiwitsch (English, 1914-2003)
Stratford Festival costume design sketch, *Enobarbus, Scene XIV from Antony and Cleopatra*, 1967
Watercolour on brown card
39 x 27.5 cm
Gift of Douglas Davidson, 2018

Henry Moore (English, 1898-1986)
Seated Figures, 1957
Edition 144/200
Lithograph on paper
Printed by Mourlot Frères, Paris
Released by Berggruen & Cie, Paris on occasion of a Moore exhibition in the Galerie Berggruen, Paris 1957
53.5 x 36.3 cm
Gift of Douglas Davidson, 2018

Norval Morrisseau (Ojibway, 1932-2007)
All Within, 1978
Edition 42/50
Serigraph on paper
62.5 x 88.2 cm
Gift of Douglas Davidson, 2018

Fish Dream, 1978
Edition 38/81
Serigraph on paper
28.3 x 38.2 cm
Gift of Douglas Davidson, 2018

Inner Self, 1976
Ink and acrylic on paper
24.3 x 33 cm image
Gift of Douglas Davidson, 2018

Life in General, n.d.
Edition 51/75
Serigraph on paper
76.3 x 56.5 cm image
Gift of Douglas Davidson, 2018

Man Seeing Visions, 1974
Edition 50/50
Serigraph on paper
64.6 x 51.2 cm
Gift of Douglas Davidson, 2018

Sacred Fish (Woodland Series), 1976
Edition 89/100
Serigraph on paper
59.8 x 79.5 cm
Gift of Douglas Davidson, 2018

Spirit Forms Manifesting, n.d.
Edition 21/74
Serigraph on paper
54.7 x 75.8 cm
Gift of Douglas Davidson, 2018

Spiritual Feast, c. 1977
Edition 77/750
Serigraph on paper
63.6 x 80.2 cm
Gift of Douglas Davidson, 2018

The Nazarene Whom We Call Jesus The Christ, 1978
Edition 65/100
Serigraph on paper
101.5 x 66.1 cm
Gift of Douglas Davidson, 2018

The Visionary, 1977
Edition 42/62
Serigraph on paper
101.5 x 67.4 cm
Gift of Douglas Davidson, 2018

Untitled (figure with animals), undated
Acrylic on canvas
174 x 94 cm
Gift of Douglas Davidson, 2018

Agnes Nanogak (Inuit, 1925-2001)
Strangled to Death, 1969
Edition 18/30
Stonecut on paper
45.8 x 61.2 cm
Gift of Douglas Davidson, 2018

Ben Nicholson (English, 1894-1982)
Bird's Eye, 1966
Edition 18/50
Etching on paper
32 x 37.8 cm irreg
Gift of Douglas Davidson, 2018

Daphne Odjig (Odawa-Potawatomi, 1919-2016)
Alone, but not Alone #5, 1979
Ink on paper
44 x 39 cm sight
Gift of Douglas Davidson, 2018

Toni Onley (Canadian, 1928-2004)
Black Log, 1972
Edition 12/50
Etching on paper
21.8 x 25.2 cm
Gift of Douglas Davidson, 2018

Balcony Still Life, n.d.
Edition 6/30
Etching on paper
26.8 x 36.7 cm
Gift of Douglas Davidson, 2018

Cape Storm, 1975
Edition 11/32
Serigraph on paper
52.8 x 58.3 cm
Gift of Douglas Davidson, 2018

Chiesa di S. Giovanni Battista, Firenze, 1972
Edition 11/30
Etching on paper
25.6 x 31.2 cm
Gift of Douglas Davidson, 2018

Edge of a Dark Forest, 1974
Edition 14/33
Serigraph on paper
28.5 x 38.5 cm image
Gift of Douglas Davidson, 2018

Garden, Soquel, Calif. April 11, 1976, 1976
Watercolour on paper
26.5 x 36.5 cm sight
Gift of Douglas Davidson, 2018

Headland, 1974
Edition 11/40
Serigraph on paper
52.4 x 58.4 cm irreg
Gift of Douglas Davidson, 2018

Inland, Sea of Seto, Japan, 1978
Edition 6/44
Serigraph on BFK Rives paper
49.8 x 61 cm
Gift of Douglas Davidson, 2018

Island Shore, n.d.
Edition 15/42
Serigraph on paper
28.5 x 38.5 cm
Gift of Douglas Davidson, 2018

Jack's Garden #2, 1971
Edition 6/36
Serigraph on paper
28.5 x 38.5 cm image
Gift of Douglas Davidson, 2018

London Set #5, 1964
Edition 20/20
Etching, drypoint and aquatint on wove paper
49 x 57 cm
Gift of Douglas Davidson, 2018

My Valley, 1976
Edition 27/27
Serigraph on paper
52.8 x 56 cm
Gift of Douglas Davidson, 2018

Oasis, n.d.
Edition 13/20
Serigraph on paper
28.5 x 38.5 cm
Gift of Douglas Davidson, 2018

Pinyon Hills, 1978
Edition 7/31
Serigraph on BFK Rives paper
50.2 x 61 cm
Gift of Douglas Davidson, 2018

Red Bottle, 1973
Edition 3/36
Serigraph on paper
28.5 x 38.6 cm image
Gift of Douglas Davidson, 2018

Sailing to Byzantium, n.d.
A.P.
Etching on paper
37 x 27 cm irreg
Gift of Douglas Davidson, 2018

Thunderheads, n.d.
Edition 7/37
Serigraph on BFK Rives paper
49.8 x 61 cm
Gift of Douglas Davidson, 2018

Jessie Oonark (Inuit, 1906-1985) and Francis Kaluraq (Inuit, 1931-1990)
Fitirauyagamaiq, 1977
Edition 31/55
Stonecut on BFK Rives paper
56 x 76.7 cm irreg
Gift of Douglas Davidson, 2018

Jessie Oonark (Inuit, 1906-1985)
Angutkoq, 1975
Edition 32/50
Serigraph on paper
32.5 x 40.2 cm
Gift of Douglas Davidson, 2018

Two fish looking for something to eat, 1978
Edition 16/50
Serigraph on paper
56.1 x 75.5 cm
Gift of Douglas Davidson, 2018

Untitled (group of figures and animals orange/green), 1975
Drawing on paper
52.5 x 75.7 cm sheet
Gift of Douglas Davidson, 2018

Probably **Jessie Oonark (Inuit, 1906-1985)**
Untitled (group of figures), not dated
Drawing on paper
50.2 x 66 cm
Gift of Douglas Davidson, 2018

Anirnik Oshuitoq (Inuit, 1902-1983)
Spirit with Animals, 1963
#61 Cape Dorset Print Catalogue 1963
Edition 39/50
Engraving on paper
21 x 26 cm image
Gift of Douglas Davidson, 2018

Timothy Ottochie (Inuit, 1904-1982)
Bear, Walrus, Duck, 1963
#64 Cape Dorset Print Catalogue 1963
Edition 43/50
Engraving on paper
21 x 28.5 cm image
Gift of Douglas Davidson, 2018

Dora Oweetaluktuk (Inuit, b. 1945)
Owl/bird with long wings, n.d.
Black stone
12.5 x 13 x 7 cm
Gift of Douglas Davidson, 2018

Josie Pamiutu Papialuk (Inuit, 1918-1996)
Baby Ptarmigans with their Mother, 1974
Edition 40/40
Stonecut on paper
63 x 91 cm irreg
Gift of Douglas Davidson, 2018

Eleeshushe Parr (Inuit, 1896-1975)
End of the Hunt, 1967
#23 Cape Dorset print catalogue 1968
Edition 47/50
Stonecut on paper
62.5 x 86.8 cm
Gift of Douglas Davidson, 2018

Victor Pasmore (English, 1908-1998)
Transformation 7, 1970-71
From *Points of Contact: Transformations* Portfolio
Edition 26/60
Screenprint on paper
47 x 47.5 cm
Gift of Douglas Davidson, 2018

Paunichea (Inuit, 1920-1968)
Winter Camp Scene, 1965
#60 Cape Dorset Print catalogue 1966
Edition 15/50
Serigraph on paper
62 x 92 cm irreg
Gift of Douglas Davidson, 2018

Eegyvudluk Pootoogook (Inuit, b. 1931)
Untitled (walrus/human figures), #48 Cape Dorset Print Catalogue, 1962
Edition 1/50
Engraving on paper
31.3 x 45.5 cm irreg
Gift of Douglas Davidson, 2018

Kananginak Pootoogook (Inuit, 1935-2010)
Kopanuwak (Bird), 1972
#9 Cape Dorset Print Catalogue 1973
Edition 34/50
Engraving on paper
23 x 29.3 cm
Gift of Douglas Davidson, 2018

Pudlo Pudlat (Inuit, 1916-1992)
Young Woman, 1975
#61 Cape Dorset Print Catalogue 1975
Edition 24/41
Lithograph on paper
43.5 x 56.8 cm
Gift of Douglas Davidson, 2018

Harold Qarliksaq (Inuit,1928-1980)
Untitled drawing (various birds, animals and one figure), 1979
Pencil crayon on paper
56 x 76 cm sheet
Gift of Douglas Davidson, 2018

Untitled drawing (various figures with utensils), 1979
Pencil crayon on paper
38 x 56 cm
Gift of Douglas Davidson, 2018

Lucy Qinnuayuak (Inuit, 1915-1982)
Bird Feeding, 1968
#38 Cape Dorset Print catalogue 1969
Edition 42/50
Stonecut on paper
25 x 41 cm image
Gift of Douglas Davidson, 2018

Birds of Kangiak, 1982
#27 Cape Dorset Print catalogue 1982
Edition 18/50
Stonecut and stencil on paper
56 x 62.8 cm
Gift of Douglas Davidson, 2018

Owl in Winter Light, 1982
#21 Cape Dorset print collection 1982
Edition 26/50
Stonecut and stencil on paper
52.5 x 62.5 cm
Gift of Douglas Davidson, 2018

Untitled (four animal figures), #15 Cape Dorset Print Catalogue, 1962
Edition 49/50
Engraving on paper
31.5 x 45.5 cm irreg
Gift of Douglas Davidson, 2018

Leah Qumaluk (Inuit, 1934-2010)
Hunter with a Fish, 1963
Edition 24/30
Stonecut on stencil
63.5 x 37.5 cm irreg
Gift of Douglas Davidson, 2018

Inuit Falling into Water Trying to Catch a Fish, 1973
#31 Povungnituk print catalogue 1973
Edition 16/40
Stonecut
62.5 x 69.5 cm irreg
Gift of Douglas Davidson, 2018

Woman working on sealskin while children play outside, 1974
#25 Povungnituk print catalogue 1974 (II)
Edition 32/40
Stonecut on paper
62.5 X 85.5 cm irreg
Gift of Douglas Davidson, 2018

Woman working on sealskin while children play outside, 1974
#25 Povungnituk print catalogue 1974 (II)
Edition 31/40
Stonecut on paper
62.5 x 85 cm
Gift of Douglas Davidson, 2018

Untitled (two people fighting), 1965
Edition 17/30
30.8 x 36 cm
Gift of Douglas Davidson, 2018

Levi Qumaluk (Inuit, 1919-1997) and Annie Amamatuak (Inuit, b. 1933)
Men Making Kayak; Women Cleaning Sealskin for Boots, 1977
Edition 10/40
Stonecut on paper
53.5 x 74 irreg
Gift of Douglas Davidson, 2018

Levi Qumaluk (Inuit, 1919-1997) and Caroline Qumaluk (Inuit, 1913-unknown)
A Woman Cooking Fish Outdoors, 1978
#2 Povungnituk print catalogue 1978
Edition 10/40
Stonecut on paper
49.7 x 50.6 cm irreg
Gift of Douglas Davidson, 2018

Carl Ray (Cree, 1943-1978)
Ducks, n.d.
Edition 47/75
Screenprint on paper
50 x 60.9 cm
Gift of Douglas Davidson, 2018

Evil Serpent, 1975
Edition 47/75
Screenprint on paper
69.3 x 79.3 cm
Gift of Douglas Davidson, 2018

Family, n.d.
Edition 47/75
Screenprint on paper
39.3 x 54.5 cm
Gift of Douglas Davidson, 2018

Medicine Gribe, 1974
Edition 47/75
Screenprint on paper
60.5 x 50.2 cm
Gift of Douglas Davidson, 2018

Spirit Crane, n.d.
Edition 47/75
Screenprint on paper
69 x 79 cm
Gift of Douglas Davidson, 2018

Georges Rouault (French, 1871-1958)
Are We Not All Convicts?/Ne somme-nous pas forçats?, 1926 (published 1948)
Plate 6 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
64.5 x 50.2 cm
Gift of Douglas Davidson, 2018

Beneath a Forgotten Crucifix/Sous un Jésus en croix oublié là, 1926 (published 1948)
Plate 20 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
65 x 50.7 cm irreg
Gift of Douglas Davidson, 2018

Christ and the Exegetes (Christ Appearing Before the Sanhedrin)/Christ et les Exégètes, 1936
Plate XIV from *Passion* by André Suarès, 1939
Engraved by Georges Aubert
Black and white aquatint on laid paper
44 x 34 cm
Gift of Douglas Davidson, 2018

Courtesan with Downcast Eyes/Courtesan aux yeux baisses, 1937
Colour aquatint on paper
44 x 34.1 m
Gift of Douglas Davidson, 2018

Eternally scourged…/ Toujours flagellé…, 1922 (published 1948)
Plate 3 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
65 x 50.5 cm
Gift of Douglas Davidson, 2018

He Was oppressed, and He Was Afflicted, Yet He Opened Not His Mouth/Il a été maltraité etopprimé et il n' a pas ouvert la bouche, 1922 (published 1948)
Plate 21 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
65 x 50.2 cm
Gift of Douglas Davidson, 2018

On lips that were fresh, the taste of gall/En bouche qui fut, fraiche, gôut de fiel, 1922
Plate 15 from *Miserere*
Etching, aquatint, drypoint, roulette over photogravure on paper
50 x 35 cm image
Gift of Douglas Davidson, 2018

Satan II, 1926
From *Fleurs de Mal I*
Edition 28/425
Etching on paper
34.7 x 25.6 cm image
Gift of Douglas Davidson, 2018

The Juggler/Jongleur, 1938
Plate 5 from Cirque de l'Étoile Filante/Circus of the Shooting Star
Edited by Ambroise Vollard
Aquatint and etching over photogravure
44 x 33.5 cm
Gift of Douglas Davidson, 2018

The just, like sandalwood, perfume the axe that strikes them/Le juste, comme le bois de santal, parfume la hache qui le frappe, 1926 (published 1948)
Plate 20 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
65 x 50 cm
Gift of Douglas Davidson, 2018

The Law is Hard, but it is the Law/Dura lex sed lex, 1926 (published 1948)
Plate 52 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
65 x 50.7 cm irreg
Gift of Douglas Davidson, 2018

We Think Ourselves Kings/Nous cryoants rois, 1923
Plate 7 from *Miserere*
Aquatint and drypoint over heliogravure on paper
58.3 x 41.8 cm image
Gift of Douglas Davidson, 2018

With Tooth and Nail/ Des ongles et du bec, 1926 (published 1948)
Plate 50 from *Miserere*
Photogravure, sugar aquatint, drypoint and copper engraving on Arches paper with Ambroise Vollard watermark
65 x 50.3 cm
Gift of Douglas Davidson, 2018

Pauta Saila (Inuit, 1916-2009)
Eagle with Rabbit, 1963
#52 Cape Dorset Print Catalogue 1963
Edition 39/50
Engraving on paper
31.4 x 45.5 cm irreg
Gift of Douglas Davidson, 2018

Mating Dance, 1969
#20 Cape Dorset Print collection 1970
Edition 11/50
Stonecut on paper
52.5 x 24 cm image
Gift of Douglas Davidson, 2018

Untitled (owl and birds), #33 Cape Dorset Print Catalogue, 1962
Edition 27/50
Engraving on paper
31 x 45 cm irreg
Gift of Douglas Davidson, 2018

Antonio Saura (Spanish, 1930-1998)
The King (plate 2), 1971
Artist's proof
Serigraph on paper
69 x 49.6 cm
Gift of Douglas Davidson, 2018

Aubrey Schwartz (American, b. 1928)
Hawk, 1959
Edition 64/100
Drypoint on paper
42.5 x 33.2 cm
Gift of Douglas Davidson, 2018

Jack Shadbolt (Canadian, b. England, 1909-1998)
Mexican Morning, 1981
Edition 1/50
Serigraph on paper
55.7 x 71 cm image
Gift of Douglas Davidson, 2018

Secret Garden #4, 1977
Edition 21/40
Lithograph on Arches paper
65.5 x 50.3 cm
Gift of Douglas Davidson, 2018

Secret Garden #6, 1977
Edition 21/40
Lithograph on Arches paper
50.3 x 65.8 cm
Gift of Douglas Davidson, 2018

Gordon Appelbe Smith (Canadian, b. England, 1919)
Sea Wall #2, n.d.
Edition 9/50
Serigraph on paper
47 x 56.8 cm image
Gift of Douglas Davidson, 2018

Squamish A.P. IV, 1986
Acrylic on paper
60 x 40.5 cm (sight)
Gift of Douglas Davidson, 2018

Dan Steeves (Canadian, b. 1959)
Lines and Worlds Unparallel, 1984
Edition 12/20
Etching on paper
22.8 x 28.1 cm
Gift of Douglas Davidson, 2018

Graham Sutherland (English, 1903-1980)
Three Standing Forms in Black, 1953
Edition 48/50
Lithograph on Arches paper
56 x 45 cm
Gift of Douglas Davidson, 2018

Joe Talirunili (Inuit, 1893-1976)
Old Tools for Survival a Long Time Ago / Les vieux outils de jadis, 1975
#33 Povungnituk print catalogue 1975
Printed by Caroline Qumaluk
Edition 33/50
Stonecut on paper
63 x 85.8 cm
Gift of Douglas Davidson, 2018

Rufino Tamayo (Mexican, 1899-1991)
Torso de jeune fille, 1969
From the series *Mujeres/Women* (16 lithographs)
Published by Touchstone Publishers, New York
Edition 99/150
Lithograph on BFK Rives paper
76 x 56.5 cm
Gift of Douglas Davidson, 2018

Muckpa Tassugat (Inuit, 1948-1988)
Bird, 1974
Bone
25 x 26 x 8.5 cm
Gift of Douglas Davidson, 2018

Jamasie Teevee (Inuit, 1910-1985)
Amadjuak Camp, 1972
#49 Cape Dorset Print catalogue 1972
Edition 25/50
Engraving on paper
32.5 x 38.8 cm
Gift of Douglas Davidson, 2018

Bear Hunt, 1967
#80 Cape Dorset Print catalogue 1967
Edition 7/50
Engraving on paper
33 x 43.6 cm
Gift of Douglas Davidson, 2018

Family Portrait, 1966
#14 Cape Dorset Print catalogue 1966
Edition 40/50
Stonecut on paper
25 x 32.8 cm
Gift of Douglas Davidson, 2018

Owl and Geese, 1972
#47 Cape Dorset Print Catalogue 1972
Edition 25/50
Engraving on paper
39 x 32.8 cm irreg
Gift of Douglas Davidson, 2018

Owls and Rabbit, 1967
#81 Cape Dorset Print catalogue 1967
Edition 19/50
Engraving on paper
25 x 33 cm
Gift of Douglas Davidson, 2018

The Fish Weir, 1971
#61 Cape Dorset Print catalogue 1971
Edition 44/50
Lithograph on paper
38.7 x 32.5 cm
Gift of Douglas Davidson, 2018

Roy Thomas (Ojibway, 1949-2004)
Animal Circle, 1979
Artist's Proof
Serigraph on paper
48.8 42.4 cm
Gift of Douglas Davidson, 2018

Loon with Lake Legend, 1977
Ink on paper
20 x 27.5 cm image
Gift of Douglas Davidson, 2018

Water Being, 1979
Pencil on paper
30 x 29 cm image
Gift of Douglas Davidson, 2018

Untitled (figure with two birds), 1980
Acrylic on canvas
61.2 x 78.4 cm
Gift of Douglas Davidson, 2018

Untitled (group of birds), 1979
Acrylic on canvas
61 x 91 cm
Gift of Douglas Davidson, 2018

Art Thompson (Coast Salish/Nuu-chah-nulth [Ditidaht], 1948-2003)
Man Changing into a Wolf, 1974
Edition 127/200
Serigraph on paper
Paper: 50.9 x 66 cm
Gift of Douglas Davidson, 2018

Salmon, 1976
Edition 187/200
Serigraph on paper
45.6 x 60.9 cm
Gift of Douglas Davidson, 2018

Giovanni Domenico Tiepolo (Italian, 1727-1804)
The Stoning of St. Stephen, c. 1780
Etching on laid paper
49 x 26.7 cm
Gift of Douglas Davidson, 2018

Irene Avaalaaqiaq Tiktaalaaq (Inuit, b.1941)
Joyful Mood, 1976
Edition 31/40
Serigraph and stencil on paper
43 x 53 cm
Gift of Douglas Davidson, 2018

Lucassie Tookalook (Inuit, 1917-unknown) and Leah Qumaluk (Inuit, 1934-2010)
Women Sewing Kayak and Man Cooking, 1977
#18 Povungnituk print catalogue 1977
Edition 21/40
Stonecut on paper
52.8 x 66.8 cm
Gift of Douglas Davidson, 2018

Simon Tookoome (Inuit, 1934-2010)
The Shaman Performs, 1979
Edition 22/55
Linocut and stencil on paper
73.5 x 56.5 cm irreg
Gift of Douglas Davidson, 2018

Thinking of Animals, 1979
Edition 45/50
Linocut and stencil on paper
47 x 63.4 cm irreg
Gift of Douglas Davidson, 2018

Untitled, undated
Crayon on paper
28 x 38 cm
Gift of Douglas Davidson, 2018

Tuckyashuk (Inuit, 1898-1972)
Man Watching Sea Animals, 1963
#55 Cape Dorset Print catalogue 1963
Edition 13/50
Engraving on paper
31.5 x 45.3 cm
Gift of Douglas Davidson, 2018

Isah Ajagutaina Tukala (Inuit, 1905-1977)
Untitled (figure with two dogs), 1965
Edition 11/30
Stonecut on paper
Gift of Douglas Davidson, 2018

Probably **Alasi Audla Tullaugak (Inuit, b. 1935)**
Untitled fishermen -two images (black and grey) on one sheet, 1965
Edition 22/30
63.8 x 50.2 cm irreg
Gift of Douglas Davidson, 2018

Alasi Audla Tullaugak (Inuit, b.1935)
Stretching Skin, 1963
Edition 28/30
Stonecut on paper
61 x 48 cm
Gift of Douglas Davidson, 2018

With Several Thoughts, 1965
#348 Povungnituk print catalogue 1960-1970
Edition 21/30
Stonecut on paper
41 x 63 cm irreg
Gift of Douglas Davidson, 2018

Unknown artist "Foucent"
Flesh, 1955
Edition 1/20
Lithograph on paper
56.8 x 45.7 cm
Gift of Douglas Davidson, 2018

Fallen Mask, Forgotten Dreams, 1955
Edition 2/19
Lithograph on paper
56.8 x 45.7 cm
Gift of Douglas Davidson, 2018

Unknown artist "Pape"
Much Ado About Nothing: Duenna (Miss Carol Forte), 1980
Costume design sketch for Stratford Festival
Watercolour on paper
57 x 38.6 cm
Gift of Douglas Davidson, 2018

Unknown artist
Untitled, (three figures)
watercolour and pastel
58.5 x 75.5 cm
Gift of Douglas Davidson, 2018

Untitled (red abstract figure), undated
Acrylic on paper
75.5 x 56 cm
Gift of Douglas Davidson, 2018

Untitled portrait (In style of Max Beckmann) (1), n.d.
Print
54.5 x 36.5 cm sight
Gift of Douglas Davidson, 2018

Untitled portrait (In style of Max Beckmann) (2), n.d.
Print
66 x 50.5 cm sheet
Gift of Douglas Davidson, 2018

Untitled drawing, undated
Crayon on paper
76 x 56.7 cm

Untitled (two figures), n.d.
Watercolour on paper
50 x 40 cm sight
Gift of Douglas Davidson, 2018

The School Superintendent, 1967
Costume sketch
Pastel on paper
38.6 x 28.8 cm
Gift of Douglas Davidson, 2018

Unknown artist (Inuit)
(Ice fishing, two scenes, black), 1965
Edition 28/30
Stonecut on paper
37 x 66 cm
48 x 75.3 cm irreg
Gift of Douglas Davidson, 2018

Abstracted figure (cat/bird-like), n.d.
Grey stone
13 x 24.5 x 12 cm
Gift of Douglas Davidson, 2018

Bird (on two feet), n.d.
Black soapstone
6.7 x 22 x 9 cm
Gift of Douglas Davidson, 2018

Bird/frog like figure, n.d.
Black stone
17 x 16 x 17 cm
Gift of Douglas Davidson, 2018

Black Bird (no feet), n.d.
Black stone
9.5 x 17.3 x 11 cm
Gift of Douglas Davidson, 2018

Mother and Child
Black stone
26.5 x 24 x 15 cm
Gift of Douglas Davidson, 2018

Seal, n.d.
Green stone
22 x 7 x 6.5 cm
Gift of Douglas Davidson, 2018

Small bird (owl?), n.d.
Dark green stone
10 x 11 x 5 cm
Gift of Douglas Davidson, 2018

Jacques Villon (French, 1875-1963)
Composition (L'Envole), n.d.
Edition 28/220
Lithograph on BFK Rives paper
50.5 x 65.5 cm
Gift of Douglas Davidson, 2018

Saul Williams (Ojibway, b. 1954)
Hard Times, 1977
Edition 30/55
Serigraph on paper
56.2 x 76.2 cm
Gift of Douglas Davidson, 2018

Wolverine Hunting at Nite, 1976
Edition 57/60
Serigraph on paper
56.2 x 76.3 cm
Gift of Douglas Davidson, 2018

Ossip Zadkine (French/Russian, 1890-1967)
Le Guitariste, 1966
Edition 59/100
Etching on Arches paper
66 x 50.2 cm
Gift of Douglas Davidson, 2018

Leonor Fini (Argentinian, 1907-1996)
Nude with red hair, 1969
Published by Editions Tartas, Paris
E.A. from an edition of 150
Colour lithograph for the deluxe edition of Parallement by Paul Verlaine
38 x 30.2 cm
Gift of Susan Evans Shaw, 2018
2018.002.0001

Conrad Felixmüller (German, 1897-1977)
Madonna, 1913
Published in 'Die Aktion' no. 14/15, April 7, 1917
Woodcut on newsprint
21.4 x 15.2 cm image
28.5 x 20.5 cm irregular sheet
Gift of Christos Dikeakos, 2018
2018.003.0001

Aufruf Für Sowjetrussland, 1920
Published in 'Die Aktion' vol 10, no. 21/22, May 29, 1920
Woodcut on newsprint
14 x 17 cm image
28.2 x 21 cm irregular sheet
Gift of Christos Dikeakos, 2018
2018.003.0002

Arthur Renwick (Haisla, b. 1965)
Seven works from the series *Delegates: Chiefs of the Earth and the Sky*, 2004

1. I-A-WI-CA-KA (The One Who Tells the Truth)
2. MAH-PI-AH-LU-TAH (Red Cloud)
3. MO-TA-VA-TO (Black Kettle)
4. TA-OYA-TE-DUTA (Little Crow)
5. TAH-TON-KAH-HE-YO-TA-KAH (Sitting Bull)
6. WAM-BU-LEE-WAH-KON (Medicine Eagle)
7. YAH-SHUN-KA-CO-QUI-PAH (Man Afraid of his Horses)

Gelatin silver prints mounted on aluminum with copper
150 x 76 cm
Donald Murray Shepherd Trust Purchase, 2018
2018.004.0001-2018.004.0007

TH&B artist collective: Simon Frank (Canadian, b. Scotland, 1968); Dave Hind (Canadian, b. 1965); Ivan Jurakic (Canadian, b. 1967); and Tor Lukasik-Foss (Canadian, b. 1967)
Basin, 2016
metal
Naomi Jackson Groves Fund, 2018
2018.005.0001

Unknown Inuit artist
Model of a kayak, c. early 1900s
Wood, hide and sinew
68.6 cm long; harpoon 23 cm long
Gift of the Moulden Family, 2018
2018.006.0001

Peter Nadin (American b. England, 1954)
Not titled, 1994
Oil pastel and mixed media on paper
100 x 65 cm
Gift of David and Julie Moos, 2018
2018.007.0001

APPENDIX D: PERMANENT COLLECTION WORKS ON EXHIBITION TOUR

Exhibition Details / Borrowing Institution	**Works on loan**
Living Building Thinking: Art and Expressionism **Vancouver Art Gallery** 750 Hornby St, Vancouver, BC V6Z 2H7 March 3 – May 21, 2018	**90 works from the permanent collection:** **Stephen Andrews (Canadian b. 1956)** *Self Portrait as Jim Black*, 1985 Conté crayon and sumi ink on J.A. Dessin folded paper and board 297.2 x 50.8 cm Gift of Carla Garnet, 2009 **Elvira Bach (German b. 1951)** *What Can I Do About My Dreams*, 1985 Mixed media on canvas 228 x 187 cm Gift of Miriam Shiell, 2012 **Ernst Barlach (German 1870-1938)** *Die Dome* / *The Cathedrals*, 1920-1921 #2 from the portfolio *Die Wandlungen Gottes* / *The Transformations of God* Woodcut on paper Image: 25.7 x 36.2 cm Gift of Janet Black, 1997 *Russische Bettlerin mit Schale* / *Russian Beggarwoman with bowl*, 1906; produced c. 1912-1913 Porcelain 24.1 x 25.3 x 19 cm Gift of Ann Cameron, 1998 **Max Beckmann (German 1884-1950)** *Der Zeichner in Gesellschaft (Rudolf Grossmann)* / *The Draftsman in Society (Rudolf Grossmann)*, 1922 Etching on paper Image: 32.5 x 25.5 cm Purchase, 1968 *In der Trambahn* / *In the Tram*, 1922

	Published by Verlag R. Piper & Co., Munich Etching on paper Image: 29 x 43 cm Purchase, 1972 *Die Enttäuschten II* / *The Disappointed Ones*, 1922 Plate 6 from the portfolio *Berliner Reise* / *Journey to Berlin* Edition 95/100 Lithograph on paper Image: 47.3 x 39 cm Purchase, 1979 Joseph Beuys (German, 1921-1986) *Geist Wirtschaft Recht* / *Intellect Economy Law*, 1984 Three colour photographs on aluminum plates and 3 painted, inscribed fire extinguishers 225 x 100 cm each panel Levy Bequest Purchase, 1996 **William Blake (English 1757-1827)** *The Messengers tell Job of his Misfortunes*, 1825 Plate 4 from Illustrations to the Book of Job Engraving on paper Image: 21.6 x 17 cm Gift of Dr. Michael Brain, 2015 **Lovis Corinth (German 1858-1925)** *Der Kuss* / *The Kiss*, 1921 Printer's Proof; Edition of 100 Drypoint on paper Image: 17.9 x 15.9 cm Gift of Mr. R. Langstadt, 1985 **Otto Dix (German 1891-1969)** *Verwundeter (Herbst 1916, Bapaume)* / *Casualty (Autumn, 1916, Bapaume)*, 1924 Plate 6 from *Der Krieg* / *The War* Edition of 70 Etching and aquatint on paper Image: 19.7 x 29 cm Purchase, 1967

	Fliehender Verwundeter (Sommeschlacht 1916) / *Fleeing Casualty (Battle of the Somme 1916)*, 1924 Plate 10 from *Der Krieg* / *The War* Edition of 70 Etching on paper Image: 19.7 x 14.2 cm Purchase, 1974 *Portrait of Anna Grünebaum*, 1926 Oil, tempera and gesso on wood panel 79.9 x 59.9 cm Levy Bequest Purchase, with the assistance of the Government of Canada through a Department of Canadian Heritage, Cultural Property Export Review Board Purchase Grant, 1993 *Leonie*, 1923 Edition 27/65 Colour lithograph on paper Image: 47.4 x 37 cm Levy Bequest Purchase, 1995 August W. Dressler (German 1896-1970) *Vorstadt Bordell*, n.d. Etching and drypoint on wove paper Image: 28.5 x 27 cm Gift of Jan Johnson, 2009 Conrad Felixmüller (German 1897-1977) *Bildnis Renz, Heilbronn*, 1922 Edition 15/35 Lithograph on simile Japon Image: 29.7 x 19 cm Gift of Jan Johnson, 2009 Rainer Fetting (German b. 1949) *Back Nude - Donald*, 1986 Oil on canvas 200 x 149.9 cm Gift of Leon Liffmann, 2010

	Paul Gauguin (French 1848-1903) *Noa Noa. Embaumé Embaumé.* / *Fragrant Scent*, 1893-1894 Woodcut on pale cream Japan paper Block: 35.6 x 20.4 cm Levy Bequest Purchase, 1995 George Grosz (German 1893-1959) *Selbstporträt: fur Charlie Chaplin* / *Self-portrait for Charlie Chaplin*, 1919 Lithograph on paper Image: 49.5 x 33 cm Levy Bequest Purchase, 1993 Richard Hamilton (English 1922-2011) *Kent State*, 1970 Edition 2150/5000 Screenprint on Schoeller Durex paper Image: 72.5 x 101.5 cm Gift of Jane Irwin, 2007 Erich Heckel (German 1883-1970) *Badende Soldaten* / *Bathing Soldiers*, 1916 Edition of 50 Lithograph on paper Image: 27.3 x 20.4 cm Purchase, 1966 *Zwei Männer am Tisch* / *Two Men at the Table*, 1913 Woodcut on paper Image: 23.7 x 26.1 cm (irregular) Purchase, 1985 *Irrer Soldat* / *Demented Soldier*, 1916 Lithograph on handmade paper Image: 29.8 x 24.2 cm Gift of Dr. Douglas Davidson, 1987 *Junges Mädchen* / *Young Woman*, 1913 Woodcut on silk Japan paper 50 x 38.4 cm Gift of Undercliffe Limited, 1990

	Hannah Höch (German 1889-1978) *Mutter und Kind (Selbstbildnis Traum) / Mother and Child (Self-portrait Dream)*, c. 1931 Oil on cotton canvas 66.5 x 50 cm Donald Murray Shepherd Trust Purchase, 2013 **Karl Horst Hödicke (German b. 1938)** *Stadt Landschaft / City Landscape*, 1988 Oil on canvas 150 x 190 cm Levy Bequest Purchase, 1995 **Natalka Husar (Canadian b. U.S.A. 1951)** *Deviled Eggs*, 2006 Oil on rag board 81 x 102 cm Purchased with funds from the Canada Council for the Arts Acquisition Assistance Program, 2011 *Commissar's Daughter*, 2007 Oil on rag board 81 x 102 cm Gift of the artist, 2011 *Looking at Art*, 2009 Oil on rag board 81 x 102 cm Donald Murray Shepherd Trust Purchase, 2011 **Jörg Immendorff (German 1945-2007)** *C. Deutschland Patriot Komm / Café Deutschland Come Patriot*, 1983 Oil glazes and tempera on gesso on canvas 150 x 200.5 cm Levy Bequest Purchase, 1993 **Gershon Iskowitz (Canadian b. Poland 1920-1988)** *Buchenwald*, 1944-1945 Watercolour and ink on paper mounted on cardboard 39.5 x 52.3 cm Levy Bequest Purchase, 1993

	Nancy Johnson (Canadian b. 1951) *Not titled, undated*, 1984-1985 Gouache on paper 55.8 x 72.3 cm Gift of Carla Garnet, 2009 **Wassily Kandinsky (Russian 1866-1944)** *Drei Reiter in Rot, Blau und Schwarz* / *Three Riders in Red, Blue and Black*, 1911 Plate 16 from *Klänge* Colour woodcut on pale cream laid Van Gelder paper Block: 22.3 x 22 cm Purchase, 1990 **Anselm Kiefer (German, b. 1945)** *Yggdrasil*, 1985-1991 Emulsion, acrylic (partially charred) and melted lead on canvas 220 x 190 cm Levy Bequest Purchase, 1993 **Ernst Ludwig Kirchner (German 1880-1938)** *Toilettemachende Mädchen* / *Girls at their Toilette*, 1910 Lithograph on paper Image: 38.5 x 32.5 cm Gift of Mr. Walter Carsen, 1977 *Segelboote bei Fehmarn / Sailboats off Fehmarn Island*, 1914 Woodcut on paper Image: 41.6 x 40 cm Levy Bequest Purchase, 1993 *Porträt Frau Bluth* / *Portrait of Frau Bluth*, 1916 Lithograph on wove paper Image: 41.5 x 31.5 cm Levy Bequest Purchase, 1995 **Käthe Kollwitz (German 1867-1945)** *Das Bangen* / *Fear* (in-text plate, p. 40) from the periodical *Kriegszeit. Künstlerflugblätter*, Vol. 1, No. 10 (28 Oct 1914) Double sided work with *Samariter* / *Samaritan* by Max Liebermann

	Transfer lithograph on paper Image: 33.5 x 25 cm Purchase, 1966 *Weberzug* / *Weaver's March*, 1897 Plate 4 from *Ein Weberaufstand* / *The Weaver's Revolt* Second State Etching on paper Image: 21.2 x 29.5 cm Purchase, 1968 *Selbstbildnis* / *Self Portrait*, 1924 Fifth State Woodcut on paper Block: 20.8 x 30 cm Purchase *Brustbild einer Arbeiterfrau mit blauem Tuch* / *Bust of a Working Class Woman with Blue Shawl*, 1903 Published in *Gesellschaft für vervielfältigende Kunst* / *Society of Reproducible Art*, 1906 Colour lithograph on paper Image: 36.4 x 24.5 cm Purchase, 1985 *Selbstbildnis am Tisch* / *Self-Portrait at Table*, 1893; probably printed 1922 Etching, aquatint, and roulette on paper Image: 17.2 x 12.3 cm Gift of Rabbi and Mrs. Bernard Baskin, 1987 **Bernard Kretzschmar (German 1889-1972)** *Der Auktionator* / *The Auctioneer*, 1921 Drypoint on paper Image: 35 x 40 cm Purchase, 1976 **Arnaud Maggs (Canadian, 1926–2012)** *Barbara Astman from 64 Portrait Studies, 1976–78*, 1978 Gelatin silver print 38 x 38 cm each

	Gift of Barbara Astman, 2011 **Jeanne Mammen (German 1890-1976)** *Brustbild einer Frau mit Stupsnase und zugekniffenen Augen* / *Half-length portrait of a woman with closed eyes and upturned nose*, c. 1933 Pencil on Simili Japan paper (irregular) 50.4 x 38.6 cm Donald Murray Shepherd Trust Purchase, 2015 **Ludwig Meidner (German 1884-1966)** *Selbstbildnis mit Hut vor einem brennenden Haus* / *Self Portrait with Hat before a Burning House*, 1923 Etching on paper Image: 17.5 x 13 cm Purchase, 1978 **Paula Modersohn-Becker (German 1876-1907)** *Bildnis einer Bäuerin (Mädchen mit Nase)* / *Portrait of a Peasant Woman (Girl with Nose)*, c. 1900 Second State Aquatint etching on heavy off white wove paper Image: 9.8 x 14 cm Purchased with funds from the Levy Trust, 2008 *Zwei Bauernmädchen* / *Two Peasant Girls*, 1902 Etching on heavy cream wove paper Image: 14 x 10 cm Purchased with funds from the Levy Trust, 2008 **László Moholy-Nagy (Hungarian 1895-1946)** *Untitled* (Self Portrait Photogram, cr: fgm 172), 1926; printed 1979 From the portfolio *Vierzehn Fotos* Gelatin silver print on PE paper; Edition 1/11 35.3 x 29 cm Donald Murray Shepherd Trust Purchase, 2012 *Das Weltgebäude* / *Structure of the World*, 1925; printed 1979 From the portfolio Vierzehn Fotos Gelatin silver print on PE paper; Edition 1/11 35 x 29 cm Donald Murray Shepherd Trust Purchase, 2012

	Edvard Munch (Norwegian 1863-1944) *Badende Mädchen* / *Bathing Girls*, 1895 Drypoint and aquatint on heavy Japan paper Image: 22 x 32.2 cm Purchase, 1982 *Der Kuss* / *The Kiss*, 1897 1902 Woodcut from two blocks on tissue-thin Japan paper Block: 46.7 x 45 cm Levy Bequest Purchase, 1993 **Emil Nolde (German 1867-1956)** *Der Ritter* / *Knight*, 1906 Woodcut on grey textured paper Block: 29 x 23 cm Purchase, 1984 **Sir Eduardo Paolozzi (Scottish, 1924–2005)** *A Brand New Kind of Brilliance*, from the *BUNK* series, 1949 Collage on pink heavy weight paper Image: 34.3 x 27 cm Levy Bequest Purchase, 1949 **Gary Pearson (Canadian b. 1951)** *Soliloquy*, 2006 Video transfer to DVD, colour, no audio Running time 12:47 minutes Gift of the artist, 2011 **Hermann Max Pechstein (German 1881-1955)** *Zwiesprache* / *Conversation*, 1920 Edition of 120 Colour woodcut on cream laid paper Block: 40.3 x 32 cm Purchase, 1976 *Das Vater Unser* / *The Lord's Prayer*, 1921 12 prints from the portfolio *Das Vater Unser* / *The Lord's Prayer* Edition 55/250 Woodcut on paper

	Support: 59.5 x 41.2 cm Purchase, 1978 **Christiane Pflug (Canadian b. Germany 1936-1972)** *Sketch for a Portrait of Luise Pflug*, 1966 Graphite on paper Support: 25 x 16 cm (folded) Gift of Dr. Michael Pflug, 1995 **Leopold Plotek (Canadian b. U.S.S.R., 1948)** *Master of the Genre of Silence*, 2002 Oil on canvas 177.8 x 182.9 cm Gift of the artist **Sigmar Polke (German, 1941–2010)** *Zaun (Mutlangen)* / *Fence (Mutlangen)*, 1986 Synthetic resin, acrylic medium, metallic, and graphite pigments on cotton canvas 180 x 200 cm Levy Bequest Purchase, 1996 **Christian Rohlfs (German 1849-1938)** *Paar*, 1910-1911 Watercolour and charcoal on paper Primary support: 55.9 x 37.7 cm Donald Murray Shepherd Trust Purchase, 2011 **August Sander (German 1876-1964)** *The Painter Otto Dix and his Wife Martha*, 1925-1926; printed 1990 Edition 6/12 Gelatin silver print mounted on cardboard 20.5 x 24.4 cm Levy Bequest Purchase, 1996 **Tony Scherman (Canadian, b. 1950)** *Poseidon*, 2007 From the series Odyssey II Encaustic on canvas 137 x 152 cm Gift of the artist, 2010

	Egon Schiele (Austrian 1890-1918) *Stehender Mann (Selbstbildnis)* / *Standing Man (Self Portrait)*, 1911 Watercolour and gouache over pencil on paper Image: 44.6 x 26.5 cm Levy Bequest Purchase, 1992 **Karl Schmidt-Rottluff (German 1884-1976)** *Mädchen vor dem Spiegel* / *Girl Before a Mirror*, 1914 Block: 49.8 x 39.8 cm Purchase, 1967 *Weiblicher Kopf (Mädchenkopf)* / *Head of a Girl*, 1915 Woodcut on Japan paper Block: 24.8 x 18 cm Purchased with funds from the Walter Gordon Foundation, Toronto **Books:** An alle Künstler! / To All Artists!, 1919 Published by Advertising Service of the German Republic, Berlin Cover illustration by Hermann Max Pechstein (German, 1881–1955) Donald Murray Shepherd Trust, 2015 Barlach, Ernst. Der Findling, Ein Spiel in drei Stücken (mit Holzschnitten). # 34 of 80 Signed Editions, Berlin: Paul Cassirer Verlag, 1922 Entartete "Kunst" Ausstellungsführer / Degenerate "Art" Exhibition, 1937 Edited by Fritz Kaiser Verlag für Kultur und Wirtschaftswerbung / Publishing House for Cultural and Economic Publicity, Berlin Donald Murray Shepherd Trust, 2015 Goya y Lucientes, Francisco José de. Los Desastres de la Guerra / Disasters of War. Madrid: Royal Academy of Fine Arts of San Fernando, Madrid, aquatints and etchings 1810-20, published 1863 Levy Bequest Purchase, 1993 Grosz, George. Ecce Homo. Berlin: Malik Verlag, 1923 Gift of Janet Black, 1997

	Joel, Hans Theodor (ed.) Das Graphische Jahrbuch. Darmstadt: Karl Lang Verlag, 1919 Anonymous gift, 2000 Masereel, Frans. Mein Stundenbuch. Edition #319/650. Munich: Dr. C. Wolf & Sohn, 1920 Anonymous gift, 2001 Pfister, Kurt and Richard Seewald. Deutsche Graphiker der Gegenwart. 23 lithographs. Leipzig: Klinkhardt & Biermann Verlag, 1920 Gift of Janet Black, 1997 Schiefler, Gustav. Das graphische Werk von Max Liebermann. Edition #25 of 300. Berlin: Verlag von Bruno Cassirer, 1907 Anonymous gift, 2001 The Marées Gesellschaft; Dritte Reihe Der Drucke. Texts by Julius Meier-Graefe, Oskar Hagen and Herman Uhde-Bernays. Munich: R. Piper and Co., 1919 Gift of Rabbi Baskin, 2011
A Cultivating Journey: The Herman H. Levy Legacy **Vancouver Art Gallery** 750 Hornby St. Vancouver, BC V6Z 2H7 March 3 – May 21, 2018 **Kelowna Art Gallery** 1315 Water St. Kelowna, BC V1Y 9R3 June 16 - October 21, 2018	**75 works from the permanent collection:** **Frank Auerbach (English, b. Germany, 1931)** *Study after Rubens's Samson and Delilah*, 1993 oil on board 63.5 × 68.6 cm Levy Bequest Purchase, 1994 **Mary Beale (English, 1633–1699)** *Portrait of Charles Beale*, c. 1660 oil on paper, later mounted to canvas 39.3 × 31.2 cm Gift of Herman H. Levy, 1984 **Émile Bernard (French, 1868–1941)** *Still Life with Cup and Bowl of Fruit*, 1887 oil on canvas 24.4 × 43.2 cm Levy Bequest Purchase, 1993 **Jean Victor Bertin (French, 1767–1842)** *Roman Figures in the Sabine Mountains*, 1825 oil on canvas

	82 × 114.5 cm Levy Bequest Purchase, 1993 **François Boucher (French, 1703–1770)** *A Peasant Family on the Way to Market*, mid-18th century oiled black chalk on sepia-coloured, laid, smooth paper with watermark 28.8 × 18.1 cm Levy Bequest Purchase, 1993 *Joseph Resisting Seduction by Potiphar's Wife*, c. 1728 black chalk, pen and brown ink, brown wash heightened with white on paper 30 × 23.5 cm Levy Bequest Purchase, 1993 **Georges Braque (French, 1882–1963)** *Bass*, 1911; printed 1950 drypoint on cream Arches paper edition 23/50 46.5 × 33 cm Levy Bequest Purchase, 1992 *Woman with Mandolin*, 1945 lithograph printed in nine colours on paper edition 214/225 24 × 16.8 cm Gift of Herman H. Levy, 1984 **Philips Breughel (Netherlandish, 1635– c. 1662)** *Still Life with Pike, Barbel and Vegetables*, 17th century oil on linen 88.3 × 115.3 cm Levy Bequest Purchase, 1995 **Workshop of Adriaen Brouwer (Flemish, 1605/6–1638)** *The Drinker*; *The Bitter Draught*, c. 1635–1638 oil on oak panel on oak cradle 34.3 × 27.1 cm Gift of Herman H. Levy, 1984 **David Burliuk (American, b. Ukraine, 1882–1967)**

	Yellow Irises, c. 1948 oil on burlap 56.5 × 50.5 cm Gift of Herman H. Levy, 1984 **Gustave Caillebotte (French, 1848–1894)** *Sailboats at Anchor on the Seine at Argenteuil*, 1883 oil on canvas 60.2 × 73.3 cm Gift of Herman H. Levy, 1984 **Mary Cassatt (American, 1844–1926)** *Young Girl*, c. 1878–1890 pencil on paper 17.7 × 8.9 cm Gift of Herman H. Levy, 1984 **Gustave Courbet (French, 1819–1877)** *Landscape at Ornans*, 1874 oil on canvas 61 × 78.8 cm Gift of Herman H. Levy, 1984 **Edgar Degas (French, 1834–1917)** *Portrait of His Father*, c./v. 1856–1858 graphite on paper 40.3 × 29 cm Gift of Herman H. Levy, 1984 *Copy of the "Self Portrait" by Filippino Lippi in the Uffizi*, 1858–1859 graphite heightened with white on paper 47 × 31.7 cm Gift of Herman H. Levy, 1984 **André Derain (French, 1880-1954)** *Bust of woman with bare breasts*, 1932-1933 oil on canvas Gift of Herman H. Levy, 1984 **Raoul Dufy (French, 1877–1953)** *Green Trees at l'Estaque*, 1908

	oil on canvas 81 × 65 cm Levy Bequest Purchase, 1996 **Albrecht Dürer (German, 1471–1528)** *Das Meerwunder*/*The Sea Monster*, 1498 engraving on paper 25 × 18.4 cm Gift of Herman H. Levy, 1984 *Der Fahnenschwinger*/*A Burgundian Standard Bearer*, c. 1502–1503 engraving on paper 11.6 × 6.8 cm Gift of Herman H. Levy, 1984 *Christ Among the Doctors in the Temple*, 1503 Woodcut on paper Gift of George Wallace in memory of Herman H. Levy, 1990 **John Flaxman (English, 1755–1826)** *The Nymphs of the Ocean*, 1795 grey wash on paper 36.7 × 41.7 cm Levy Bequest Purchase, 1993 *St. Augustine's Arrival in Britain*, c. 1783 grey wash on paper 39.5 × 58.5 cm Levy Bequest Purchase, 1993 **Tsugouharu Leonard Foujita (French, b. Japan, 1886–1968)** *Portrait of a Child*, 1955 pencil on paper 26 × 20.6 cm Gift of Herman H. Levy, 1984 **Lucian Freud (English, 1922–2011)** *Naked Man on a Bed*, 1987 etching on paper edition 10/10 57.2 × 74.3 cm

	Levy Bequest Purchase, 1993 **Pieter Jalhea Furnius (Flemish, c. 1545–1626)** *Satan Sowing Darnel* (after Gerard van Groeningen) 22 × 27.5 cm Gift of the Herman H. Levy Estate, 1990 **Thomas Gainsborough (English, 1727–1788)** *Shepherds and Sheep in a Wooded Landscape,* 1770–1780 black chalk, watercolour, and body colour on tan-coloured, laid paper 22.5 × 31 cm Levy Bequest Purchase, 1992 **Henri-Gaudier Brzeska (French, 1891–1915)** *Composition with Three Figures*, 1914 black crayon on Ingres laid paper 48 × 31.5 cm Levy Bequest Purchase, 1993 *Sketch of a Man*, 1912 pencil on paper 20.3 × 15.2 cm Gift of Herman H. Levy, 1984 *Standing Male Nude*, 1914 charcoal on paper 50.9 × 35.2 cm Levy Bequest Purchase, 1993 **Harold Gilman (English, 1876–1919)** *Portrait of an African American*, c. 1905 oil on canvas 61 × 50.9 cm Gift of Herman H. Levy, 1984 **Hans Baldung Grien (German, 1484–1545)** (block altered by an unknown hand) *Witches' Sabbath*, late impression, after 1510 woodcut on paper 42.5 × 31 cm Gift of Herman H. Levy, 1984

	Josef Herman (English, b. Poland, 1911–2000) *Portrait of Mr. Levy*, 1961–1962 oil on canvas 65.4 × 50.2 cm Gift of Herman H. Levy, 1984 *Miner with Glass of Beer*, 1964 oil on canvas 59.6 x 44.5 cm Gift of Herman H. Levy, 1984 **Hiroshige II (Japanese, 1826–1869)** *Ejiri, the 19th Station on the Tōkaidō*, 1857 woodblock on paper 39 × 26 cm Gift of Herman H. Levy, 1984 *Okitsu, the 18th Station on the Tōkaidō*, c 1860 woodblock on paper 39 × 26 cm Gift of Herman H. Levy, 1984 **Utagawa (Ando) Hiroshige (Japanese, 1797–1858)** *Ōhashi, Atake No Yudachi/Ōhashi Bridge*, 1857 woodblock on paper 37.2 × 25.1 cm Levy Bequest Purchase, 1995 **Wenzel (Wenceslaus) Hollar (Czech, 1607–1677)** After Martin Schongauer (Schön) (German, c. 1440–1491) *Woman with Wreath of Oak Leaves*, 1646 etching on paper 25.5 × 21.5 cm Gift of the Herman H. Levy Estate, 1990 **Jodocus Hondius (Flemish, 1563–1612)** *America Septentrionalis*, c. 1609 engraving on paper 37.5 × 50.8 cm Gift of Herman H. Levy, 1984

	Attributed to James Jefferys (English, 1751–1784) (formerly identified as Master of the Giants) *The Crucifixion (Deposition)*, 1779 pen and ink on paper 37.6 × 55.4 cm Levy Bequest Purchase, 1993 **Cornelis de Jode (Flemish, 1568–1600)** *Americae Pars Borealis*, 1593 engraving on paper 36.5 × 50.5 cm Gift of Herman H. Levy, 1984 **Paul Klee (Swiss, 1879–1940)** *Untitled [Spatial architecture, Tunisia]*, 1915 watercolour with white gouache on Kupferdruck paper 16.3 × 20.7 cm Levy Bequest Purchase, 1992 **Sir Thomas Lawrence (English, 1769–1830)** *Portrait of/de William Esdaile*, 1829–1830 oil on canvas 59.7 × 49.6 cm Gift of Herman H. Levy, 1984 **Henri Le Sidaner (French, 1862–1939)** *The House in the Morning, Gerberoy*, 1929 oil on canvas 69.9 × 88.9 cm Gift of Herman H. Levy, 1984 **Georges Lemmen (Belgian, 1865–1916)** Sketch for *Sewing*, 1891 oil on cardboard 31.7 × 43.2 cm Gift of Herman H. Levy, 1984 *The Meuse River*, 19th century oil on wood 15.6 × 22.8 cm

	Gift of Herman H. Levy, 1984 **Pierre Albert Marquet (French, 1875–1947)** *The Factory on the Canal, Hamburg*, 1909 oil on canvas 61 × 75.8 cm Gift of Herman H. Levy, 1984 **Henri Matisse (French, 1869–1954)** *Isaia*, 1938 linocut on paper edition 2/6 41.8 × 32.5 cm Levy Bequest Purchase, 1993 **Georges Michel (French, 1763–1843)** *Landscape*, c. 1830 oil on canvas 31.7 × 55.9 cm Gift of Herman H. Levy, 1984 **Claude Monet (French, 1840–1926)** *Waterloo Bridge, Sunlight Effect*, 1903 oil on canvas 65.1 × 100 cm Gift of Herman H. Levy, 1984 **Sebastian Münster (Swiss, 1488–1552)** *Typus Orbis Universalis*, 1540 From the *Geographia Universalis, vetus et nova, complectens* woodcut on paper 31.1 × 39.6 cm Gift of Herman H. Levy, 1984 **Roderic O'Conor (Irish, 1860–1940)** *Red Rocks and Foam*, c. 1898 oil on canvas 48.9 × 61 cm Gift of Herman H. Levy, 1984 **Camille Pissarro (French, 1830–1903)**

	Apple Trees, 1870 oil on canvas 45.7 × 55.3 cm Gift of Herman H. Levy, 1984 **Guido Reni (Italian, 1575–1642)** *The Emperor's Soldiers Taking Away the Library of the Cardinal of Bologna*, late 16th-mid-17th century pen and brown ink, brown wash, black chalk on sepia-coloured, lightly textured rag paper with Barberini arms watermark 21.4 × 18.6 cm Levy Bequest Purchase, 1993 **George Romney (English, 1734–1802)** *The Anatomy Lesson* c. 1775–1776 oil on canvas 76 × 63.2 cm Levy Bequest Purchase, 1994 **Georges Rouault (French, 1871–1958)** *Courtesan with Downcast Eyes*, 1937 coloured aquatint on paper edition of 250 44 × 34 cm Gift of Herman H. Levy, 1984 **Workshop of Peter Paul Rubens (Flemish, 1577–1640)** *Portrait of Maximilian III, Archduke of Austria*, 1621–1640 oil on canvas 36.6 × 30 cm Gift of Herman H. Levy, 1984 **Walter Richard Sickert (English b. Germany 1860–1942)** *Façade of Saint-Jacques, Dieppe*, c. 1902 oil on canvas 54.6 × 45.7 cm Gift of Herman H. Levy, 1984 *The Stepping Stones* (preparatory sketch for *Rushford Mill, Devon*), 1916 pencil, pen, and watercolour on paper 18.4 × 23.1 cm

	Gift of Herman H. Levy, 1984 *Blue Corset*, 1906 oil on canvas 52.1 × 44.5 cm Gift of Herman H. Levy, 1984 *Londra benedetta!*, 1911 ink and brush on paper 28.6 × 18.1 cm Gift of Herman H. Levy, 1984 *Vernet*, c. 1920–1922 pencil and ink on paper 25.5 × 19.5 cm Gift of Herman H. Levy, 1984 **Chaim Soutine (French, b. Lithuania, 1893–1943)** *Portrait of the Painter Richard X*, c. 1916–1917 oil on canvas 55.9 × 46.4 cm Gift of Herman H. Levy, 1984 *Landscape at Céret*, c./v. 1919 oil on canvas 66 × 54.6 cm Levy Bequest Purchase, 1995 **Giovanni Battista Tiepolo (Italian, 1696–1770)** *Head of an Oriental, Turned to the Left*, c. 1742-1757 black chalk, pen and brown ink, brown wash on cream coloured, smooth, laid paper 25 × 19.7 cm Levy Bequest Purchase, 1993 **Joseph Mallord William Turner (English, 1775–1851)** *Boston in Lincolnshire*, c. 1833 watercolour on paper 28.8 × 42.3 cm Levy Bequest Purchase, 1992

	Illustration of the Battle at Sentinum during the Third Samnite War (297 BC), 1551 From the *Römische Historien*, German translation of *Titus Livius: Ab urbe condita/History of Rome* woodcut on paper 12.2 × 14.5 cm Gift of the Herman H. Levy Estate, 1990 **Unknown Flemish, 17th century** After Alexander Adriaenssen (Flemish, 1587–1661) *Still Life with Oysters*, 1630s oil on panel 39.3 × 44.5 cm Gift of Herman H. Levy, 1984 **Unknown Venetian, 16th century** *Unknown, Portrait of a Man,* 16th century oil on canvas 45.2 × 38.7 cm Gift of Herman H. Levy, 1984 **Maurice Utrillo (French, 1883-1955)** *Church in Domrémy (Vosges)*, c. 1923 oil on canvas Gift of Herman H. Levy, 1984 **Attributed to Joos van Cleve (Netherlandish, c. 1485–1540/41)** *Head of a Woman*, early 16th century silverpoint on prepared ground on paper 23.4 × 18.3 cm Gift of Herman H. Levy, 1984 **Vincent van Gogh (Dutch, 1853–1890)** *Untitled, Still Life: Ginger Pot and Onions*, 1885 oil on canvas 34.5 × 49.5 cm Gift of Herman H. Levy, 1984 **Lucas van Leyden (Dutch, 1494–1533)** *The Milkmaid*, 1510 engraving on paper

	11.5 × 15.6 cm Levy Bequest Purchase, 1995 **Rochus van Veen (Dutch, c. 1640–1693)** *Studies of Spiders*, 1670 watercolour on paper 21 × 30.7 cm Gift of Herman H. Levy, 1984 *Studies of Insects*, 1659 watercolour on paper 20.8 × 29.7 cm Gift of Herman H. Levy, 1984

APPENDIX E: PERMANENT COLLECTION WORKS ON LOAN

Exhibition details - Borrowing Institutions	Works on loan
Liz Magor: you you you 1. Migros Museum fur Gegenwartskunst Zurich, Switzerland February 18 – May 7, 2017 2. Kunstverein Hamburg, Germany July 1-September 3, 2017 3. Musee d'art Moderne et d'Art Contemporain, Nice, France November 18, 2017-May 13, 2018	**Liz Magor (Canadian b. 1948)** *Banff Chair*, 1991 Steel base, soft polyurethane foam, synthetic fur, deerskin gloves 77 x 111 x 88 cm Purchased with the assistance of the Walter and Duncan Gordon Foundation Challenge Grant, 1998
Brenda Francis Pelkey: A Retrospective 1. Art Gallery of Windsor, October 21 – January 22, 2017 2. Mount St. Vincent Univ. Art Gallery, April 22 – July 9, 2017 3. Art Gallery of Peterborough, September 30, 2017 – Jan. 7, 2018 4. MacKenzie Art Gallery, Regina, June 23 - September 29, 2018	**Brenda Francis Pelkey (Canadian b. 1950)** *Mountie and Farm Artifacts, Mr. Friesen*, 1989 Photograph (triptych) 47 x 111.8 cm Gift of the artist, 1994 *Eiffel Tower and Golden Gate Bridge, Mel Affleck*, 1988 Photograph (triptych) 48.3 x 113 cm Gift of the artist, 1994
The Living Room: RESERVOIR: Stories of Water Art Gallery of Hamilton January 20 – May 13, 2018	**David Blackwood** *Fire at Sea*, 1969 Etching and aquatint on paper 57 x 82 cm Gift of Farley and Claire Mowat, 1993 *Brian and Martin Winsor, March 30, 1978*, 1979 Etching and aquatint on paper 57 x 82 cm Gift of Farley and Claire Mowat, 1993 **Norval Morrisseau** *Mishipeshoo (water spirit)*, 1965-1967 Acrylic on paper; 56.5 x 76.2 cm Gift of Dr. Paul R. MacPherson, 2012
Making Marks: Works on Paper from the Collections of the McMaster Museum of Art and the Judith & Norman Alix Art Gallery Judith & Norman Alix Art Gallery, Sarnia	**28 works on paper:** **Harold Cohen (English, 1928-2016)** *London / At the Tate*, 1983 Computer drawing and ink stylus on paper 57 x 76.5 cm Gift of Dr. Paul and Mrs. Helen Walton, 2000

February 2 – May 6, 2018	**Nicolas De Staël (French, born Russia, 1914-1955)** *Composition*, 1952 India ink on paper 28.7 x 44.7 cm Gift of Mr. Jack Greenwald, 2000 **Eugène Victor Ferdinand Delacroix (French, 1798-1863)** Sketch sheet with figure studies for "Faust", c. 1826 Brown ink and pencil on laid paper 35.9 × 28.3 cm Gift of Christopher Varley, 2016 **Jean Dubuffet (French, 1901-1985)** *Activation 16.12.84*, 1984 Coloured crayon and black felt pen on paper 26 x 20.7 cm Gift of Gordon Eberts, 1992 **Raoul Dufy (French, 1877-1953)** *Woman*, c.1925-1930 Pencil on paper 33 x 25 cm Gift of Gordon Eberts, 1991 **Eric Freifeld (Canadian, born Russia, 1919-1984)** *The MacNeil Place*, 1964 Watercolour and pencil on paper 57 x 78.6 cm Purchased with funds from the Mary E. Hatch Bequest, in memory of Clifton W. Sherman, with the assistance of Wintario, 1978 **George Grosz (German, 1893-1959)** *Study of Nude from Behind*, c. 1921-1925 Pencil on paper 48 x 35.3 cm Anonymous gift, 1995 **Nigel Hall (English, born 1943)** *Drawing No. 50*, 1977

	Charcoal on paper 63.5 x 88.9 cm Gift of Gordon Eberts, 1992 *Drawing No. 63*, 1977 Charcoal on paper 63.5 x 88.9 cm Gift of Gordon Eberts, 1992 **David Haughton (English, 1924-1991)** *Backyard*, before 1962 Etching on paper; Edition 20/50 72.9 x 65.2 cm Wentworth House Art Committee Purchase, 1962 **David Hockney (English, born 1937)** *Henry in MMA Garden*, 1976 Ink on paper 43.2 x 35.6 cm Gift of Mr. Georges Loranger, 1988 **Ann Kipling (Canadian, born 1934)** Falkland Landscape, September 6, 1997 Ink on Fabriano paper 64.8 x 100.3 cm Gift of Christopher Varley, 2014 **Käthe Kollwitz (German, 1867-1945)** *Selbstbildnis* / *Self Portrait*, 1921 Etching on paper; 7th State 41 x 41.5 cm Purchase, 1961 *Vergewaltigt* / *Raped*, Plate 2 from *Bauernkrieg* / *Peasants' War*, 1907 Etching with tonal textures and engraving on paper 51.5 x 65 cm Purchase, 1967 *Beim Dengeln* / *Whetting the Scythe*, Plate 3 from *Bauernkrieg* / *Peasants War*, 1905

	Etching with tonal textures and engraving on paper 48 x 39.5 cm Purchase, 1969 *Figures from the Zertretene* / *The Downtrodden*, 1900 Etching and aquatint on paper 29.9 x 23.7 cm Purchase, 1971 *Schlachtfeld / Battlefield*, Plate 6 from *Bauernkrieg* / *Peasants War*, 1907 Etching with tonal textures, aquatint and engraving 51 x 65.5 cm Purchase, 1971 *Selbstbildnis* / *Self Portrait*, 1934 Lithograph on paper 37.3 x 27 cm Purchase, 1989 **Paula Modersohn Becker (German, 1876-1907)** *Seated Female Nude, Facing Left*, 1905 Charcoal on paper 23.8 x 31.1 cm Purchased with funds from the Levy Trust, 2008 **Henry Moore (English, 1898-1986)** *Seated Figure*, c. 1973-1974 Pencil, charcoal, pen, ink on paper 25.4 x 17.8 cm Gift of Gordon Eberts, 1991 **Roland Poulin (Canadian, born 1940)** *Noche Oscura (to St. John of the Cross), No. 4*, 1993 Oil paint, charcoal, pastel and paper collage on paper 145.5 x 127 cm Gift of Ron Kaplansky, 2010 **Tony Scherman (Canadian, born 1950**) *Louis XVI, About 1789*, 1998 Encaustic and pastel on paper

	77 x 56 cm Gift of the artist, 2012 *Head of M. Lambolle, 1792, About 1789*, 1998-2000 Etching on paper; Edition 3/12 84 x 66 cm Gift of the artist, 2012 **Ben Shahn (American, 1898-1969)** *Many Cities*, from the portfolio *For the Sake of a Single Verse* by Ranier M. Rilke, 1968 Lithograph on paper 57.5 × 45 cm Gift of Mrs. Miriam Lebow, 1990 **Takao Tanabe (Canadian, born 1926)** *Alberta Foothills A*, 1979 Graphite on paper 52.7 × 76.8 cm Gift of the artist, 2015 **Unknown artist** Title not known, possibly 17th Century Chalk or conté on paper 27.4 x 17.8 cm Georges Loranger Bequest, 1994 **George Burton Wallace (Canadian, 1920-2009)** *Morning Toilet*, 1952 Conte and crayon on paper 31.8 x 26 cm Gift of the artist, 1998 **Scottie Wilson (Scottish, 1890-1972)** *Greedy Faces*, c. 1950 Coloured pencil, pen and ink drawing on paper 31.6 x 28.7 cm Gift of Mr. Georges Loranger, 1991
niigaanikwewag Mississauga Art Gallery	**Daphne Odjig (Ojibway-Odawa, 1919 – 2016)** *Secure in Mother's Arms*, 1982 acrylic on canvas

February 22 – April 15, 2018	76.2 x 63.5 cm Gift of Dr. Paul R. MacPherson, 2012
New Generation Photography Award at OCAD Onsite Gallery, 199 Richmond St. W. Organized by the National Gallery of Canada, Ottawa May 5 – June 17, 2018	**Meryl McMaster (Canadian, b. 1988)** *Weight of the Shadow*, from the *Wanderings* series, 2015 Archival pigment print on watercolour paper, mounted to dibond 114.3 × 76.2 cm Donald Murray Shepherd Trust Purchase, 2017 *Avian Wanderer I, II, III*, from the *Wanderings* series, 2015 Archival pigment print on watercolour paper, mounted to dibond 50.8 × 76.2 cm each Donald Murray Shepherd Trust Purchase, 2017

APPENDIX F: DE-ACCESSIONED AND TRANSFERRED OBJECTS

Auction Details	**Works**
Heffel Fine art Auction House September 2017 Online Auction **Price Realized: Macdonald $4000** **Price Realized: Town $6000**	**Jock Macdonald (Canadian 1896-1960)** *Inscribed Stones*, 1951/1952 Watercolour on paper 38.1 x 45.7 cm **Harold Town (Canadian 1924-1990)** *Homage to Turner #4*, 1960 Oil and Lucite on board 73.7 x 73.7 cm Both unrestricted gifts of John Hansler, 2016
Christie's Impressionist and Modern Art Day Sale Date: May 16, 2018 **Price Realized: $130,000 US**	Jean-Pierre Cassigneul (French, b. 1935) *La Loge*, 1974 Oil on canvas 92 x 64.9 cm Deaccessioned gift of Irving Zucker, 1993

Transfers to other institutions

Transfer Details	**Works**
Institution: Museum London 421 Ridout Street North London, ON N6A 5H4 Date of Transfer: February 6, 2018	**Harold Klunder (Canadian b. Netherlands, 1943)** *Greenpeace III*, 1976 Watercolour, wax and gouache 59 x 81.5 cm *High Noon*, 1976 Watercolour, wax and gouache 76 x 56.3 cm *Navaho*, 1976 Watercolour and gouache 81.5 x 59.8 cm **Lionel LeMoine FitzGerald (Canadian 1890 – 1956)** *Abstract*, [1950s] Pencil on paper 23.9 x 18.2 cm

	All unrestricted gifts of John Hansler, 2016

APPENDIX G: ABC ART BOOKS CANADA – RECENT MMA PUBLICATION SALES/DISTRIBUTION

CANADA
Concordia University Library, Montreal, QC
McGill University Library, Montreal, QC
Universite d'Ottawa, Ottawa, ON
OCAD University, Toronto, ON
Art Gallery of Ontario, Toronto, ON
Vancouver Art Gallery, BC
University of Guelph Library, Guelph, ON
University of Alberta, Edmonton, AB
University of Calgary, Taylor Family Library, Calgary, AB
University of British Columbia, Library, Vancouver, BC

USA
Dartmouth Library, Hanover, NH
Harvard University Fine Arts Library, Cambridge, MA
Museum of Fine Arts, Boston
Boston University Libraries, MA
Cornell University Library, Ithaca, NY
RIT Library, Wallace Library, Rochester, NY
Columbia University, NYC, NY
Metropolitan Museum of Art, Thomas J. Watson, Library, NY, NY
New York Public Library System, NY, NY
Princeton University Library, NJ
Temple University Libraries, Paley Libraries, Philadelphia, PA
University of Pennsylvania Libraries, Van Pelt Library, Philadelphia, PA
University of Delaware Library, Hugh M. Morris, Library, DE
Johns Hopkins University, Sheridan libraries & the Milton S. Eisenhower Library, Baltimore, MD
University of Maryland Libraries, UMD Libraries, College Park, MD
National Gallery of Art, Washington, DC
Oberlin College Library, OH
James Madison University Libraries, Harrisonburg, VA
University of Michigan, Ann Arbour, MI
Virginia Tech, Blacksburg, VA
University of Notre Dame, Hesburgh Library, IN
University of North Carolina at Chapel Hill, NC
Lawrence University, Seeley G. Mudd Library, Appleton, WI
Northwestern University, Evanston, IL
Art Institute of Chicago, Ryerson & Burnham Libraries, Chicago, IL
University of Illinois at Chicago Library, IL
University of Kentucky Libraries, Lexington, KY

Indiana University, Bloomington, IN
University of Wisconsin, Madison Library, WI
University of Georgia, Main Library, Athens, GA
University of Iowa Libraries, Iowa City, IA
University of Minnesota, Minneapolis, MN
Saint Louis Art Museum, Richardson Memorial Library, St. Louis, MO
Iowa State University, Parks University, Ames, IA
University of North Dakota, Chester Fritz Library, Grand Forks, ND
John & Mable Ringling Museum of Art Library, Ringling Museum, Sarasota, FL
Tulane University, Howard-Tilton Memorial Library, New Orleans, LA
Rice University, Fondren Library, Houston, TX
University of Denver, University Libraries, Denver, CO
University of Texas Libraries, Austin, TX
University of Arizon Libraries, Tucson, AZ
University of Washington Libraries, Seattle, WA
San Francisco Public Library, Main Library, San Francisco, CA
Stanford University Libraries, Stanford, Ca
UC Berkeley Libraries, CA
University of California, Santa Cruz, CA

International
Art Gallery of New South Wales, Research Library & Archive, NSW, Australia

APPENDIX H: EDCUATION PROGRAMS - TOUR GROUPS

McMaster University
McMaster Summer ESL Program
McMaster Continuing Education New Employee Orientation
MSU Creativity Circle
MSU Open Circle
McMaster Health Sciences MD Reunion
McMaster Department of Surgery Alumni
McMaster Health Sciences Alumni
McMaster School of Medicine Alumni
McMaster Residence Life
McMaster Creative Expression Living Learning Community
McMaster Edwards Hall Residence
McMaster Graduate Studies
McMaster Discovery Program
McMaster Librarians
McMaster Alumni
McMaster Indigenous Studies & Six Nations Youth
McMaster Office of International Affairs
McMaster Language Development Program
McMaster English Language Development (MELD)
McMaster Civil Engineering Water Network
McMaster Student Success Centre
McMaster Student Global Health Conference
McMaster Engineering Youth Codemakers Summer Program
McMaster Campus Tour Leaders

Arts and Sciences
Nursing PhDs and undergraduate
Biomedical Graphics
Foundations for Community Engagement
Integrated Business and Humanities
Classics
English/Cultural Studies/Critical Theory
New Media Arts
Multimedia
Art History
Theatre and Film Graduate Students
Applied Humanities
Health Sciences

Indigenous Studies
Fine Art
Religious Studies
Communications Studies and Multimedia
Peace Studies
Humanities
New Media
Philosophy
History
Global Health
Pediatrics

Elementary Schools
Dundas Montessori School
River Heights School (GEDSB)
St. Faustina School (DPCDSB)
Dalewood Elementary (HWDSB)
Mountain View Elementary (HWDSB)
Queen Mary Elementary (HWDSB)
Holy Name of Mary Elementary (HWCDSB)
St. Benedict Catholic Elementary, Milton (HCDSB)
Princess Elizabeth Elementary (GEDSB)
Landsdowne-Costain Public School (GEDSB)
Glenview Elementary School (HDSB)
Holbrook Elementary School (HWDSB)
Dundas Central Elementary School (HWDSB)
Queensdale School (HWDSB)
P.L. Robertson School (PDSB)
Cootes Paradise School (HWDSB)
Pauline Johnson Elementary School (HWDSB)

Secondary Schools
MacLachlan College, Oakville
Holy Trinity Secondary School (HCDSB)
Dundas Valley Secondary School (HWDSB)
Westdale Collegiate (HWDSB)
Rockway Mennonite Collegiate, Kitchener
International School of Cambridge (Private School)
Notre Dame Secondary School (HCDSB)

Community Groups
Petites Pommes French Immersion Winter Camp

Petites Pommes French Immersion March Break Camp
Petites Pommes French Immersion Summer Camp
14th Hamilton Sparks and Brownies Unit
Mohawk College ESL
Hamilton YMCA Youth Job Connection
Columbia College (Hamilton, Private School)
Camp d'été Francophone Summer Camp
Charlton House Compass Day Treatment
Women’s Art Association Hamilton
Mohawk College Citizenship Course
Mohawk College Explore Program
St. Charles ESL Adult Education
Mohawk College Nursing
Mohawk Broadcasting Television and Communications
Toronto Friends of the Visual Arts
Aldershot High School Teachers
Helson Gallery Docents
Canadian Federation of University Women
hair xtacy academy
Kontiya'taseha: Youth Photographs about Body Sovereignty & Land Sovereignty in Six Nations of the Grand River (workshops for young Haudenosaunee women)
Nya Weh Elementary school program
Martha’s Landing Retirement Residence
Power Plant Gallery Members Acute Mental Health (Orchard 1) and Concurrent Disorders St. Joseph's Healthcare Hamilton, West 5th Campus
Language Instruction for Newcomers to Canada program, Mohawk College
Choices Group ((Supporting Individuals with Developmental Disabilities), Hamilton
St. Peter’s Day Care, Hamilton
Hamilton Trail Blazers/Adventures in Hamilton
Bertrand Russell Society Conference
Society for the Study of the History of Analytical Philosophy

APPENDIX I: EDUCATION PROGRAMS – EVENTS & COMMUNITY INVOLVEMENT

International Slow Art Day 2018
National Culture Days (annual)
McMaster Take Our Kids to Work Day (annual)
McMaster Applied Humanities: Art Drop event (March 15, 2018)
Hamilton Arts Week (annual)
May@Mac Campus Open House (annual)
McMaster Alumni Weekend (annual)
McMaster New Marauder Orientation (Welcome Day) (annual)
McMaster Welcome Week Clubsfest (annual)
Hamilton Winterfest (annual)
Westdale High School: Innovation, Creativity and Entrepreneurship (ICE) Project Day
Bookmaking Tour and Workshop
McMaster University *Incite Magazine* Launch venue
50th Anniversary Painting Workshops and Tours

MUSEUM EDUCATION

McMaster Museum of Art Volunteer Program (annual).

The Art of Seeing™ Visual Literacy Partnership with the McMaster Department of Family Medicine (see below for details)

#ArtwordWednesday hashtag promotion and distance-tour education live videos and posts on Instagram, Twitter, and Facebook (every Wednesday of the year)

@macmuseum Instagram account: regular (3-5 times a week) education posts from collection and artwork on loan to museum

Museum-in-a-Minute Youtube videos: ongoing series of short informative videos on art techniques, periods, artists. Produced with education and communications staff.

Museum Selfie Day

52Museums Instagram Takeover: worldwide collaborative project between international museums and galleries with a weekly takeover from a different institution throughout the year

SPEAKING ENGAGEMENTS AND CONFERENCES

Canadian Art Gallery Educators Conference: Making Learning Visible, May 2018, (Teresa Gregorio)

Hamilton-Area Museum Educators Mini Conference: Technology in Museums, November 2017, (Teresa Gregorio coordinator)

Halton Heritage Services Connections Conference, Hamilton Museum Educators group presentation from coordinator (Teresa Gregorio), April 12, 2018

COMMUNITY INVOLVEMENT

Hamilton-Area Museum Educators (HME), Teresa Gregorio, *Coordinator*

Canadian Art Gallery Educator (CAGE), Nicole Knibb, *Member at Large,* Teresa Gregorio, *Social Media & Blog*

Hamilton-Wentworth District School Board Co-op Community Partner, Co-op student, Naomi Meidinger, in Winter Term 2018 from Westdale Secondary School Fine Arts Special High Skills Major Program

APPENDIX J: EDUCATION PROGRAMS – *The Art of Seeing*

Courses and Workshops

Hamilton Community Foundation/HWDSB & HWCDSB *Grad Track* Program, September – October 2017

McMaster University Master of Public Health, September 27, 2017

ACCADA (Association of Canadian Clinical Academic Department Administrators Conference), October 5, 2017

McMaster University Family Medicine Residents, October - November 2017

McMaster University Centre for Continuing Education Staff Professional Development Day, October 26, 2017

McMaster University Family Medicine Staff Professional Development Workshop, November 2, 2017

Hamilton Health Sciences Centre for People Development, December 6, 2017

McMaster University Centre for Continuing Education Strategic Leaders Program, February 14, 2018

McMaster DeGroote School of Business Emerging Health Leaders Academy, May 8, 2018

National Collaborating Centre for Methods and Tools (NCCMT) Conference for National Collaborating Centre for Public Health Canada, May 24, 2018

McMaster Department of Family Medicine Education Team, May 31, 2018

McMaster DeGroote School of Business Emerging Health Leaders Academy, August 23, 2018

Conference Presentations and Workshops

Royal College of Physicians and Surgeons of Canada International Conference on Residency Education

Presenter: *Arts-Based Training to Improve Residents Skills in Observation, Communication and Empathy*

October 2017

Research and Publications

Zazulak, J., Sanee, M., Frolic, A., Knibb, N., Tesluk, E., Hughes, E., and Grierson, L. (2017). *The art of medicine: arts-based training in observation and mindfulness for fostering the empathic response in medical residents.* British Medical Journal (BMJ) Medical Humanities.

Featured Articles

The Art of Seeing™ featured in Maclean's Magazine Canadian Universities Guidebook Spring 2018.

APPENDIX L: MEDIA SUMMARY

Akimblog:

- Canada's Online Contemporary Art Review, May 10, 2018
  Work in Progress by Dianne Bos
- Dr. Ihor Holubizky**,** McMaster Museum of Art nominated for Ontario Association of Art Galleries Curatorial Writing Award, November 2017

ArtDaily International Art News Site

- *Exhibition shines light on the Native Indian/Inuit Photographers' Association,* January 11, 2018
- *The Vancouver Art Gallery presents five centuries of remarkable art in two distinct exhibitions*, March 4, 2018
- A Cultivating Journey Exhibition Opens September 1, 2017
- *The Midnight Sun Camera Obscura Project* exhibition, May 14, 2018

Blouin ArtInfo International

"Living, Building, Thinking: Art and Expressionism" at Vancouver Art Gallery, March 20, 2018

'A Cultivating Journey: The Herman Levy Legacy' at Vancouver Art Gallery, March 23, 2018

Cable 14:

- **Hamilton Life** - Linda Rourke Interview with Teresa Gregorio, Education Officer about A Cultivating Journey Exhibition, September 2018
- **Hamilton Life** - Linda Rourke Interview with Teresa Gregorio, Education Officer about Struck by Likening exhibition, September 2018
- **City Matters** Show - Interview with emerging artists Chantelle Stringle, Clara Laratta and Professor Judy Major-Girardin in studio about their exhibition at McMaster Museum of Art, April 12, 2018

Canadian Art Magazine

#nofilterneeded exhibition *is Must Sees* in 2018 – banner exhibition, Jan 4, 2018

Castanet:

- McMaster Museum of Art's traveling exhibition *A Cultivating* at the Kelowna Art Gallery Online story and video interview with McMaster Curator Ihor Holubizky, June 12, 2018
- *Priceless Art Leaving Town*, McMaster's exhibition A Cultivating Journey closes in Kelowna. October 27, 2018

CBC Arts
You don't need power or wifi to create these incredible images — just 'everyday magic'. The Midnight Sun Exhibition*. By* Leah Collins · May 18

CBC North by Northwest
McMaster Museum of Art's traveling exhibition *A Cultivating Journey*, major works of art from McMaster's Levy collection at the Kelowna Art Gallery June 16 to Oct. 28
Interview with McMaster Curator Ihor Holubizky in the exhibition

CFMU – Interview with Rheanne Chartrand about the Native Indian and Inuit Photography Exhibition #nofilterneeded, January 2018

The Daily Courier, Okanagan
McMaster Museum of Art's traveling exhibition *A Cultivating Journey*, major works of art from McMaster's Levy collection at the Kelowna Art Gallery by Ron Seymour, June 12

Galleries West Magazine

- *Living, Building, Thinking: art and expressionism*/ McMaster Museum of Art's exhibition on tour, Dec 6, 2017
- *A review of McMaster Museum of Art's touring exhibition*, *Living Building Thinking*, by John Thomson. April 30, 2018

Global TV Okanagan
Travis Lowe interviews McMaster Curator Ihor Holubizky about McMaster Museum of Art's traveling exhibition *A Cultivating* at the Kelowna Art Gallery, June 15, 2018

Global News
McMaster Museum of Art's exhibition *A Cultivating Journey* in Kelowna
"Van Gogh and Monet on display at Kelowna Art Gallery" By Shay Galor , August 13, 2018

Globe and Mail
The Unvarnished Truth exhibition story on research by Dr. Mike Noseworthy, December 4, 2017

HamiltonNews / Ancaster News
Event feature with banner image: *Gentleman, Soldier, Scholar & Spy: The Napoleonic era maps of R. Clifford, Summer 2018*

Hamilton Magazine

- *Reshaping the Fundamentals: Rheanne Chartrand Pushes the Potential of Indigenous Art in Hamilton.* Feature story on Rheanne Chartrand by Stephanie Vegh, Fall 2017 issue
- *A&E* – Gordon Bennett exhibition feature image, Winter 2018 issue

Hamilton Spectator

- *McMaster celebrates its artistic riches*
  Review of the exhibition *A Cultivating Journey, by Regina Haggo,* November 4, 2017
- *Richard Tomlinson* Obituary: Mac chemistry professor made one of the largest donations in Canadian history. Story includes Tomlinson's Gift to McMaster Museum of Art. Museum's 4th Floor Gallery is named in his honour. by Daniel Nolan, Mar 18, 2018
- Review of the Graduating Art student exhibition
  by Regina Haggo, April 21, 2018
- *Hamilton group was key to giving Indigenous photography a national perspective*
  Shining light on the Native Indian/Inuit Photographers' Association, 1985-1992
  by Graham Rockingham January 11, 2018. Shared in:
  Flamborough Review
  Inside Halton
  The Record
  Guelph Mercury Tribune
- *Acknowledgment, reconciliation and reckoning: are we experiencing an 'Indigenous moment'?*
  Jon Wells. Includes mention of Curator of Indigenous Art at the Museum, January 13, 2018
  Shared on:
  Aboriginal Art News Directory *Canadas First People First*
- *A woman's take on the Holy Family,* Feb 11/18 by Regina Haggo. Article about recently acquired works by E. Sirani. Shared in:
  The Record
  Guelph Mercury Tribune
  Hamilton News
- *Drawing attention to the sufferings of Indigenous people*, Feb 23, 2018 Review of Gordon Bennett exhibition by Regina Haggo
- front page feature and interview with Gord Beck from McMaster Library about McMaster's collection of Napoleonic era maps, the Robert Clifford Collection, currently exhibited at the McMaster Museum of Art. Jul 06, 2018 by Mark McNeil
  shared in
  Hamilton Community News
  Napoleon.org magazine
- *What's on* photo feature – photo from the Midnight Sun exhibition, May 22, 2018
- *Art That Shatters the Human Heart*, Regina Haggo on the art of Kathe Kollwitz. Two of the three works that she discusses are from McMaster's collection. August 10, 2018

The Inlet, online magazine

- #nofilterneeded exhibition, January 2, 2018
- *What's on* (Midnight Sun photo feature), May 22, 2018

Kelowna Capital News

McMaster Museum of Art's traveling exhibition *A Cultivating* at the Kelowna Art Gallery Jun. 8, 2018

Maclean's Magazine
Jennifer Lewington and May Truong w/ Wade Hemsworth, McMaster PR interview Nicole Knibb and Joyce Zazulak re: *The Art of Seeing* visual literacy program. A collaboration between the McMaster Museum of Art and Family Medicine.

McMaster Daily News

- McMaster Museum of Art Celebrates 50 years, November 2, 2017
- McMaster Museum of Art receives "extraordinary" gift of 250 plus works, by Erica Balch, April 12, 2018
- 4th Year Visual Art Students Prep Final Exhibition, March 27, 2018
- A New work of art sails onto campus, Ernest Daetwyler's The Boat Project, August 20, 2018

Mohawk News Now / Mohawk College TV

- Interview Teresa Gregorio in *Struck by Likening* and *A Cultivating Journey Exhibitions*. November 22, 2017
- Interview Rheanne Chartrand about NIIPA exhibition #nofilterneeded, Feb 15, 2018

Muskrat Magazine – #nofilterneeded exhibition announcement, December 18, 2017

North Shore News
McMaster Museum of Art at Vancouver Art Gallery. March 8, 2018. Events article by Trevor Lautens

Now Magazine
AGO boosts Indigenous focus in Canadian art department. Story on Indigenous voices in leadership roles at major institutions across Canada Interviewed Carol Podedworny and Rheanne Chartrand, McMaster Museum of Art. by Kelly Boutsalis, October 7, 2017

Sculpture News – Gil McElroy article on Ernest Daetwyler, discussing his body of work and the upcoming installation of *The Boat Project* at McMaster University.

Toronto Star
Review of Niigaanikwewag exhibition at Mississauga Art Gallery, curated by McMaster Museum of Art Curator of Indigenous Art, Rheanne Chartrand. *Works of Defiance*, by Murray Whyte, April 2018

Tupelo Quarterly
Liss Platt on the Potential Presence in her Work
Story on *Liss Platt: A Constant Decade* exhibition at McMaster Museum of Art, Oct-Dec 2017 issue

Turtle Island News
NIIPA: The World Through an Indigenous Lens (#nofilterneeded exhibition)
by Chris Pimentel, January 17, 2018

University of Waterloo: *Truth and Reconciliation Response Projects* – NIIPA Roundable discussion at McMaster Museum of Art *(#nofilterneeded* exhibition) March 20

BLOGS

- **Art History News Report Blog** – September, 2017 *A Cultivating Journey*
  Canadian Art Magazine *Midnight Sun Camera Obscura Project*
- **Carpe Diem Vancouver**, Two Exhibitions organized and circulated by the McMaster Museum of Art open at Vancouver Art Gallery, February, 2018
- **Catholic Peers in Georgian England** features McMaster's Romney painting, February 7
  By Regina Jeffers (Author, Historical Fiction)
- **Daily Hive***:* Two Exhibitions organized and circulated by the McMaster Museum of Art open at Vancouver Art Gallery, February 27, 2018
- **Georgia Straight News**, Two Exhibitions organized and circulated by the McMaster Museum of Art open at Vancouver Art Gallery, February, 2018
- **Hamilton Community News** *Midnight Sun Camera Obscura Project*
- **Niagara this Week** *Midnight Sun Camera Obscura Project*
- **OCADU news online** – Simon Glass at McMaster Museum of Art
- **Toronto.com** *What's on* (Midnight Sun photo feature), May 22, 2018
- **TrueResident** a Hamilton Community Blog. *The 10 Must Visit Art Galleries in Hamilton for 2018* by Natasha Brown
- **Van Gogh the Life** – Posted McMaster Museum of Art's Van Gogh painting as their daily feature. Site by Pulitzer Prize-winning authors and van Gogh biographers Steven Naifeh and Gregory White Smith.
- **Wellness@Mac Newsletter** – Interview with Museum educators/artists Teresa Gregorio and Rachel Sullivan, June 2018

UNIVERSITY SECRETARIAT
- Board of Governors
- Senate

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REPORT TO THE BOARD OF GOVERNORS
FROM THE
EXECUTIVE AND GOVERNANCE COMMITTEE

On February 28, 2019 the Executive and Governance Committee reviewed and approved, on the recommendation of Senate, revisions to the following terms of reference via electronic vote. Details of the proposed revisions are contained in attachments I-III of the circulated report and are now presented to the Board of Governors for information.

i. Revised Terms of Reference – Vice-Dean, Faculty of Health Sciences and Associate Dean, Graduate Studies (Health Sciences)
ii. Revised Terms of Reference - McMaster Research Ethics Board
iii. Revised Terms of Reference – Research Ethics Appeals Board

Board of Governors: FOR INFORMATION
March 7, 2019

Attachment I

February 1, 2019

Senate Committee of Appointments
c/o University Secretariat
Gilmour Hall
Room 210

Re: Recommendation for the approval of the Terms of Reference for the Vice-Dean, Faculty of Health Sciences and Associate Dean, Graduate Studies (Health Sciences)

On behalf of the School of Graduate Studies and the Faculty of Health Sciences, we would like to recommend the attached updated terms of reference for approval.

Thank you for considering this request. If you need further information, please do not hesitate to contact us.

Yours sincerely,

Doug Welch
Vice-Provost and Dean of Graduate Studies

Paul M. O'Byrne, MB, FRCPC, FRSC
Dean and Vice President

Encl.

/rc

Terms of Reference

Vice-Dean, Faculty of Health Sciences, Associate Dean of Graduate Studies (Health Sciences)

The Vice-Dean, Faculty Health Sciences/Associate Dean of Graduate Studies (Health Sciences) (VD FHS/AD Graduate Studies (HS) has the primary responsibility within the Faculty of Health Sciences for furthering McMaster's goals regarding graduate education and research training, and provides leadership and coordination for all activities related to those goals. The VD FHS/ AD Graduate Studies (HS) will normally have a five-year term of office, with the possibility of reappointment for a second term.

The VD FHS/AD Graduate Studies (HS) reports both to the Dean and Vice-President (Health Sciences) and to the Vice-Provost and Dean of Graduate Studies. The VD FHS/AD Graduate Studies(HS) works in a coordinated way with the Assistant, Associate and Vice-Deans of both the Faculty of Health Sciences and the School of Graduate Studies to ensure that both Faculty-specific and University-wide goals are addressed.

Responsibilities include, but are not limited to:

a) Working closely with the Dean and Vice-President Health Sciences and the Vice-Provost and Dean of Graduate Studies to assist with development, maintenance, and improvement of graduate programs in the Faculty of Health Sciences
b) Maintaining ongoing liaisons with the Vice-Dean Research, (FHS) the Vice-Dean, Health Professional Education, (FHS), Vice-Dean, Undergraduate Education (FHS) and the Associate Deans of Graduate Studies (Engineering; Science; Business, Humanities and Social Sciences) for matters relating to these areas as they affect graduate programs and research training, including interdisciplinary programs.
c) Providing input into and strategic planning for matters of graduate admissions, student enrolment, development of new disciplinary and interdisciplinary programs, and student recruitment and retention.
d) Overseeing quality assurance for new and on-going graduate programs within the Faculty of Health Sciences, and facilitating internal and external reviews of graduate programs. The VD FHS/AD Graduate Studies (HS) oversees the graduate educational activities of the Assistant Deans and Program Directors who recognize a dual responsibility to consult and inform both the VD FHS/ AD Graduate Studies (HS) and the relevant Department Chair (or Vice Dean) within the Faculty of Health Sciences.
e) Encouraging and facilitating innovation in graduate education and research training across campus within the Faculty of Health Sciences and in conjunction with other Faculties in interdisciplinary programs.
f) Developing and overseeing financial strategies for the growth and enhancement of graduate studies in Health Sciences; managing financial resources allocated for graduate programs in

Health Sciences (as appropriate); and overseeing the administrative support in the office of the VD FHS/ AD Graduate Studies (HS).

g) Serving as a member on, or Chair of, University-wide and Faculty-specific committees. (Including: chairing the Graduate Curriculum and Policy Council and the Graduate Admissions and Study Committee in the Faculty of Health Sciences; co-chairing the Scholarships Committee of the Graduate Council; chairing, when so delegated by the Dean of Health Sciences, selection committees for Assistant Deans (or equivalent) of graduate programs in the Faculty; ex officio member of search committees in Health Sciences as requested by the Dean of Health Sciences; membership on Graduate Council and Graduate Council Executive; membership on the Health Sciences Education and Research Councils and the Faculty of Health Sciences Executive Council; and membership on the School of Graduate Studies Executive).

h) Interviewing candidates for tenured and tenure-track positions when requested, assessing the candidates' suitability for a faculty position at McMaster University, particularly regarding graduate supervision.

i) Performing functions specified in such documents as the Student Appeal Procedures, including dealing with issues raised by individual students or problems involving their academic progress, conducting formal inquiries where required, participating in appeal hearings, and negotiating informal settlements to disputes to benefit students while upholding the regulations and standards of the School, Faculty, or Department.

j) Performing functions specified in such documents as the Research Integrity Policy, including investigating allegations of research misconduct and, if found, represent the University's position at a Hearing.

k) Serving from time-to-time on bargaining teams in the University's negotiations (e.g., regarding the TA or PDF collective agreements).

l) Examining, and proposing revisions to policies, procedures, and regulations to improve the operation of graduate programs and graduate student success; and ensuring those policies, procedures, and regulations are implemented within the Faculty of Health Sciences.

m) Working to enhance the quality of life and sense of community amongst the diverse group of graduate students and research trainees within the Faculty of Health Sciences and encourage their involvement in interdisciplinary activities.

n) Communicate best practices in graduate supervision and provide oversight and resolutions for graduate supervision issues, when necessary.

o) Discharging such duties as may be assigned by the Vice-Provost and Dean of Graduate Studies from time to time, including serving as the Acting Vice-Provost and Dean of Graduate Studies in the Dean's absence or as Acting AD (Graduate Studies) when the Associate Dean from another Faculty is away.

The ideal candidate for this position will be an accomplished researcher, an excellent graduate mentor, and faculty member within the Faculty of Health Sciences. He or she should have extensive experience in graduate education and research training, a strong understanding of and

commitment to the role of graduate education in Health Sciences, demonstrated success in networking and collaboration, and excellent interpersonal and communication skills.

McMaster University is located on the traditional territories of the Haudenosaunee and Mississauga Nations and, within the lands protected by the “Dish With One Spoon” wampum agreement.

In keeping with its Statement on Building an Inclusive Community with a Shared Purpose, McMaster University strives to embody the values of respect, collaboration and diversity, and has a strong commitment to employment equity. The diversity of our workforce is at the core of our innovation and creativity and strengthens our research and teaching excellence. The University seeks qualified candidates who share our commitment to equity, diversity and inclusion. While all qualified candidates are invited to apply, we particularly welcome applications from women, persons with disabilities, First Nations, Métis and Inuit peoples, members of visible minorities, and LGBTQ+ persons.

Approved – FHS Faculty Executive – January 31.
For Approval – SCA – February 11.

McMaster University

Vice-President
(Research)

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TO: Executive Senate Committee

FROM: Robert Baker, Vice-President, Research

RE: McMaster Research Ethics Board Revisions

DATE: January 15, 2019

I am writing to inform the Senate Executive regarding proposed changes to the McMaster Research Ethics Board Terms of Reference and Appeal Board Terms of Reference. Please see below brief description of the proposed changes:

McMaster Research Ethics Board Terms of Reference

The impetus for the revision was to reduce the quorum requirements for approving minutes, guidelines, and other minor business. Therefore, the major change was to reduce quorum from 50% of membership to the minimum Tri-Council Policy Statement (TCPS) quorum requirements in order to facilitate the approval of minutes and other minor business at every meeting. Additionally, the quorum requirement for full board review of an ethics application was lowered from 50% to 40% of the membership (in addition to TCPS requirements) to decrease the likelihood of failing to meet quorum for the review (failure to meet quorum would cause the researcher(s) to have to wait an additional month to receive MREB feedback).

As the last change to the MREB ToR appears to have been in 2003, several other minor changes to update the document were included.

- Connected the membership and quorum requirements to the specific articles in the TCPS.
- Clarified that recruitment of new MREB Chairs is overseen by the Office of the VPR, and that it is not mandatory that a new Chair be appointment from the current MREB membership.
- Removed the mandate for MREB to serve as the appeal board for Student Research Ethics Committee decisions due to the conflict of interest.
- Clarified that HiREB reviews all Faculty of Health Science studies, with allowance for MREB to review in unique cases.
- Other minor changes to wording for clarity or to update to correct language (e.g. no longer VP Research and International Affairs).

Appeal Board Terms of Reference

The main reason for the revision was to update a document that predated the formation of the Hamilton Integrated REB (HiREB), as the document has outdated language referring to the old hospital REBs. Several other necessary changes were made through the revision process.

- Added a preamble that sets the context for appeal of an REB decision.
- Connected the membership and quorum requirements to the specific articles in the TCPS.
- Changed to a single membership structure for the Appeal Board that includes members from Hamilton Health Sciences and St. Joseph's Healthcare Hamilton. The original ToR only had this as a future possibility.
- Student Research Ethics Committee decisions to be appealed to the Appeal Board instead of MREB.
- Added a new section outlining the appeal procedure in detail.
- Increased the term length of board members to five years.

McMaster Research Ethics Board Terms of Reference

Terms of Reference

Membership

The MREB shall consist of at least 10 members, including both women and men, appointed by the President, on the recommendation of the Vice President, Research and International Affairs, following consultation with the current MREB Chair, Faculty Deans, and program and department Chairs. The Chair shall be appointed by the President from among the appointed members and shall serve, normally, for a term of three years, once renewable. MREB Members shall serve, normally, for staggered three year terms, once renewable. Members shall represent a broad range of disciplines and faculties, especially those in which research with human participants takes place. The Board membership will consist of at least one member knowledgeable in ethics and two members with no affiliation with McMaster University and recruited from the community served by McMaster University. All REB members shall be competent to judge the ethical acceptability of proposals and shall be knowledgeable about the McMaster University Policy and about the specific procedures of the REB of which they are members. Fifty percent of the appointed members (of which one shall be a community member) shall constitute a quorum. MREB members shall be without conflict of interest in the review process and shall disclose actual, perceived or potential conflicts of interest at the outset of a review.

Mandate:

The mandate of the MREB is

1. to keep current on ethical issues related to research involving human participants, to educate the University community on these issues and to formulate policies on these matters;

2. to review (using a proportionate approach), approve, reject, propose modifications to, or terminate any proposed or ongoing non medical research involving human participants conducted at McMaster or by members of McMaster University, including anyone affiliated with the University conducting such research at or under the auspices of McMaster University;

3. to assess and limit the risks to participants in research involving humans; and where there is more than minimal risk is identified, the REB shall satisfy itself that the design of a research project is capable of addressing the questions being asked in the research;

4. to monitor ongoing projects and to determine guidelines for the review of ongoing research projects and guidelines for reviewing requests for changes in previously approved research;

5. to develop policies and procedures for assessing and approving undergraduate student research;

6. to act as the Appeal Board for appeals of decisions rendered regarding undergraduate student research;

7. to serve as a resource to the research community, communicating and advising researchers on guidelines, procedures and other matters relating to the conduct of research with humans;

8. to meet regularly to discharge their responsibilities, and to keep and maintain minutes of such meetings; with the documentation being accessible to researchers, as it pertains to their application, and to "authorized" representatives of the institution and funding agencies;

9. to liaise with REBs of affiliated institutions to optimize efficiencies, co-ordinate activities and to ensure consistency of decisions;

10. to keep the Vice-President, Research & International Affairs informed of substantive issues in terms of policy, process and compliance and to submit a written report annually on the activities of the MREB to the Vice President, Research and International Affairs; and.

11. to implement and monitor the final decision of the Appeal Panel on behalf of the Research Ethics Appeal Board.

McMaster Research Ethics Board Terms of Reference

Mission

The mission of the McMaster Research Ethics Board (MREB) is to ensure research involving human participants carried out under the auspices of McMaster University is of the highest quality, is conducted to protect the interests of human participants and of society and is in compliance with the Tri Council Policy Statement: Ethical Conduct for Research Involving Humans. The REB shall function as an autonomous entity.

Terms of Reference

Membership

The MREB shall consist of at least 10 members and shall have a sufficient number of members to allow for a reasonable review workload for all members. The MREB membership shall comply with the TCPS membership requirements in Article 6.4 and shall include adequate expertise in the relevant research disciplines. MREB members shall be without conflict of interest in the review process and shall disclose actual, perceived or potential conflicts of interest at the outset of a review.

The MREB members shall be appointed by the President, on the recommendation of the Vice-President, Research, following consultation with the current MREB Chair, and including consultation with Faculty Deans and program and department Chairs as applicable. MREB members shall serve, normally, for staggered three year terms, once renewable. The Chair and Vice-Chair(s) shall be appointed by the President and shall serve, normally, for a term of three years, once renewable. The recruitment of the Chair or Vice-Chair(s) shall be the responsibility of the Vice-President, Research, and may be in consultation with the current Chair and Vice-Chair(s) as well as the ethics office staff. It is preferable, but not mandatory, that the new Chair or Vice-Chair(s) be appointed from among the current, appointed MREB members.

Quorum

For full board ethics review of proposed research, quorum shall be constituted by meeting the TCPS quorum requirements (Article 6.9) and having at least 40% of the membership present for the discussion and vote.

For conducting general business (e.g. approving agenda/minutes/guidelines), quorum shall be constituted by meeting the TCPS quorum requirements (Article 6.9).

The MREB will also meet any additional quorum requirements resulting from specific funding sources or local regulations on a case by case basis. For instance, for full board review of proposed research with United States government funding, MREB will meet the 50% plus one quorum threshold required by US regulations (in addition to the TCPS requirements).

Mandate

1. To keep current on ethical issues related to research involving human participants, to educate the University community on these issues and to formulate policies and guidelines on these matters.

2. To review (using a proportionate approach), approve, reject, propose modifications to, or terminate any proposed or ongoing research involving human participants conducted under the auspices of McMaster University. This includes research by anyone affiliated with McMaster and/or research making use of McMaster resources. Research conducted through the Faculty of Health Sciences is reviewed by the Hamilton Integrated Research Ethics Board (with an allowance for MREB to review FHS research, and HiREB to review non-FHS research, if appropriate based on the study details).

3. To assess and limit the risks to participants in research involving humans. Where there is more than minimal risk identified, the REB shall satisfy itself that the design of a research project is capable of addressing the questions being asked in the research.

4. To monitor ongoing projects, and to establish procedures for the review of ongoing research projects and requests for changes to previously approved research.

5. To develop policies and procedures for assessing and approving undergraduate student research.

6. To serve as a resource to the research community, communicating and advising researchers on guidelines, procedures and other matters relating to the conduct of research involving human participants.

7. To meet regularly to discharge their responsibilities, and to keep and maintain minutes of such meetings; with the documentation being accessible to researchers, as it pertains to their application, and to "authorized" representatives of the institution and funding agencies, and in accordance with relevant legislation including, but not limited to, the Freedom of Information and Protection of Privacy Act (FIPPA).

8. To liaise with REBs of affiliated institutions to optimize efficiencies, co-ordinate activities and to ensure consistency of decisions.

9. To keep the Vice-President, Research informed of substantive issues in terms of policy, process and compliance, and to submit a written report annually on the activities of the MREB to the Vice President, Research.

10. To implement and monitor the final decision of the Appeal Panel on behalf of the Research Ethics Standing Appeal Board.

McMaster Research Ethics Board Terms of Reference

Mission

The mission of the McMaster Research Ethics Board (MREB) is to ensure research involving human participants carried out under the auspices of McMaster University is of the highest quality, is conducted to protect the interests of human participants and of society and is in compliance with the Tri Council Policy Statement: Ethical Conduct for Research Involving Humans. The REB shall function as an autonomous entity.

Terms of Reference

Membership

The MREB shall consist of at least 10 members and shall have a sufficient number of members to allow for a reasonable review workload for all members. The MREB membership shall comply with the TCPS membership requirements in Article 6.4 and shall include adequate expertise in the relevant research disciplines. MREB members shall be without conflict of interest in the review process and shall disclose actual, perceived or potential conflicts of interest at the outset of a review.

The MREB members shall be appointed by the President, on the recommendation of the Vice-President, Research, following consultation with the current MREB Chair, and including consultation with Faculty Deans and program and department Chairs as applicable. MREB members shall serve, normally, for staggered three year terms, once renewable. The Chair and Vice-Chair(s) shall be appointed by the President and shall serve, normally, for a term of three years, once renewable. The recruitment of the Chair or Vice-Chair(s) shall be the responsibility of the Vice-President, Research, and may be in consultation with the current Chair and Vice-Chair(s) as well as the ethics office staff. It is preferable, but not mandatory, that the new Chair or Vice-Chair(s) be appointed from among the current, appointed MREB members.

Quorum

For full board ethics review of proposed research, quorum shall be constituted by meeting the TCPS quorum requirements (Article 6.9) and having at least 40% of the membership present for the discussion and vote.

Commented [NC1]: REVISED membership section: The main change being the reference to the TCPS and Art. 6.4 – instead of spelling out all the requirements. This ties the membership to the article itself, in case there are changes in the TCPS.

Commented [NC2]: Made clear the recruitment of new Chairs is under the direction of the office of the VPR.

Commented [NC3]: Revised so it is not mandatory for the Chair to be from the current membership. As it may be the case that no one currently on the board wants to be Chair.

Commented [NC4]: NEW quorum section: Major change to the ToR is the quorum section, which outlines three levels of quorum and drops the 50% requirement for regular non-review business (e.g. approving minutes). The full board review requirement dropped from 50% to 40%, to enable reviews to take place and avoid researchers having to wait another month.

Commented [NC5]: As with membership, just referring to the relevant article instead of listing every requirement. Links embedded for easy access to the TCPS requirements.

For conducting general business (e.g. approving agenda/minutes/guidelines), quorum shall be constituted by meeting the TCPS quorum requirements (Article 6.9).

The MREB will also meet any additional quorum requirements resulting from specific funding sources or local regulations on a case by case basis. For instance, for full board review of proposed research with United States government funding, MREB will meet the 50% plus one quorum threshold required by US regulations (in addition to the TCPS requirements).

Commented [NC6]: With this change, to pass minutes, all that is needed is five people, both men and women, at least one member knowledgeable in ethics, at least on community member, and at least two members with expertise in relevant research fields (so at least two faculty/students). Basically art. 6.9 states minimum quorum = the art. 6.4 membership requirements.

Commented [NC7]: Revised to open up the possibility of modified quorum requirements for reasons beyond US funding, as per suggestion of the AVPR. Included the US example as it is the most likely scenario.

Mandate

Commented [NC8]: The original #6 below was removed. This was MREB serving as the appeal board for SREC decisions.

The revised appeal Board ToR makes the appeal board the board that reviews all appeals. MREB will no longer be the appeal board for SREC reviews due to COI. (as stated during the appeal board ToR revisions – the chances of a SREC review being appealed are essentially nil since anything more sensitive/complex gets bumped to MREB anyway).

1. To keep current on ethical issues related to research involving human participants, to educate the University community on these issues and to formulate policies and guidelines on these matters.

2. To review (using a proportionate approach), approve, reject, propose modifications to, or terminate any proposed or ongoing research involving human participants conducted under the auspices of McMaster University. This includes research by anyone affiliated with McMaster and/or research making use of McMaster resources. Research conducted through the Faculty of Health Sciences is reviewed by the Hamilton Integrated Research Ethics Board (with an allowance for MREB to review FHS research, and HiREB to review non-FHS research, if appropriate based on the study details).

Commented [NC9]: Mandate based on TCPS, Art. 6.1, see also interpretation #1 in multi-jurisdictional research for definition of university "resources".

http://www.pre.ethics.gc.ca/eng/policy-politique/interpretations/multijurisdictional-plusieurs_autorites/

Commented [NC10]: This longer statement replaces the "non-medical" designation. Originally, it was non-medical in that FHS studies that didn't involve a medical procedure (e.g. pedagogical study) were reviewed by MREB. But at some point FHS decided that all FHS research should be reviewed by their board – so the "non-medical" distinction on what is reviewed by which REB is not really accurate anymore.

3. To assess and limit the risks to participants in research involving humans. Where there is more than minimal risk identified, the REB shall satisfy itself that the design of a research project is capable of addressing the questions being asked in the research.

4. To monitor ongoing projects, and to establish procedures for the review of ongoing research projects and requests for changes to previously approved research.

5. To develop policies and procedures for assessing and approving undergraduate student research.

6. To serve as a resource to the research community, communicating and advising researchers on guidelines, procedures and other matters relating to the conduct of research involving human participants.

7. To meet regularly to discharge their responsibilities, and to keep and maintain minutes of such meetings; with the documentation being accessible to researchers, as it pertains to their application, and to "authorized" representatives of the institution and funding agencies, and in accordance with relevant legislation including, but not limited to, the Freedom of Information and Protection of Privacy Act (FIPPA).

Commented [NC11]: Added at the suggestion of the Privacy Officer.

8. To liaise with REBs of affiliated institutions to optimize efficiencies, co-ordinate activities and to ensure consistency of decisions.

9. To keep the Vice-President, Research informed of substantive issues in terms of policy, process and compliance, and to submit a written report annually on the activities of the MREB to the Vice President, Research.

10. To implement and monitor the final decision of the Appeal Panel on behalf of the Research Ethics Standing Appeal Board.

McMaster University & Affiliated Hospitals Appeals Board Terms of Reference

Structure of Research Ethics Appeal Board

1. Research Ethics Appeal Board Membership

The Appeal Board, from which the Appeal Panel will be formed, shall consist of a minimum of eight (8) members, including both women and men, drawn from the broad range of disciplines and faculties in which research with human participants takes place. All members of the Appeal Board will have the appropriate background and be without conflict of interest. Membership will include at least:

1. three McMaster University faculty members with broad expertise in the methods or in the areas of research that are covered by the REB(s);
2. one McMaster University faculty member knowledgeable in ethics;
3. one member knowledgeable in the law relevant to biomedical research;
4. a previous member of the MREB; and
5. two members from the community external to the University.

Members shall be appointed by The President, upon the recommendation of the Vice President, Research and International Affairs, for staggered terms of three years, renewable.

2. Quorum

For meetings of the Board, at least 50 per cent of the membership of the Board shall constitute a quorum.

3. Chair and Vice-Chair

A Chair and a Vice Chair shall be appointed from the Board membership by the President, upon the recommendation of the Vice President, Research and International Affairs. These appointments will be for two years, renewable terms.

Appeal Board's Terms of Reference

The mandate of the Appeal Board is:

1. to hear, through an Appeal Panel, appeals of decisions reached by the MREB, HHS/FHS REB or the SJH REB, provided that decisions rendered by the latter two REBs are specific to an appeal by a McMaster University faculty member under the auspices of their University appointment;

2. to submit annually to the Vice President, Research & International Affairs a written report on the appeals received and considered by the Appeal Panel and

3. to assess periodically the appeal process and to make recommendations to the President through the Vice President, Research & International Affairs, for modifications, as appropriate.

Appeal Panel's Structure

To hear an appeal, the Chair or Vice-Chair shall select four members, including both women and men, with a minimum of one and up to two McMaster University appointed faculty members, from the Appeal Board membership and, together, these five shall constitute the Appeal Panel. Composition of the Appeal Panel shall meet the requirements of the Tri-Council Policy Statement. Chairs of the REBs may serve only on an Appeal Panel reviewing a decision not made by their respective REB.

The members of the Appeal Panel shall have appropriate background and be without conflict of interest. In the case of a conflict of interest or absence on the part of the Chair, the Vice Chair will chair the Appeal Panel.

Appeal Panel's Terms of Reference

The mandate of the Appeal Panel is:

1. to review the decision made by the REB which has been appealed by a researcher;

2. to conduct a full review of the application and associated documentation***(1)*** in order to reach an independent decision;

3. to render a final and binding decision, by majority vote, which may either

a) uphold the original decision,
b) modify the original decision or
c) impose specific conditions for approval of the project.

In the event a majority vote is not rendered, the Chair or the Vice-Chair shall cast the deciding vote.

4. to communicate the decision, in writing and with reasons, to the researcher, Chair of the REB and to all members of the Appeal Board, and

5. to provide advice, in the event of 3.b) or 3.c) above, to the REB charged with the responsibility for implementing and monitoring the final decision of the Appeal Panel.

(1) may include the original ethics application, the original REB decision, all subsequent written communications, documents and records, including REB Minutes pertaining to the submission, a copy of a research proposal for funding of the proposed research, if applicable, relevant references or copies of pertinent guidelines, internal and external policies and legislation.

Single, Regional University/Hospital Appeal Process

Recognizing the merits of and mutual interest expressed in having a single, university/hospital appeal process for McMaster University, Hamilton Health Sciences (HHS) and St. Joseph's Healthcare, Hamilton (SJH), provision is made for McMaster University to broaden, through agreements with its affiliated hospitals, the mandate and structure of the Standing Appeal Board. Such agreements between McMaster University and its affiliated hospitals will enable the mandate and structure of and terms of reference for the Standing Appeal Board and Appeal Panel to be expanded to include the adjudication of any appeal of a decision reached by the joint HHS/FHS REB and the SJH REB and to include appropriate representation from these REBs and from HHS and SJH.

1. McMaster University and Affiliated Hospital Agreements

The agreement(s) between McMaster University and its affiliated hospital(s) shall define communication and repository procedures and designated administrative resources.

2. Ex-officio Members

Subject to the execution of agreement(s) with the affiliated hospital(s), the Chairs of the MREB, HHS/FHS REB and SJH REB will serve as ex-officio members on the Appeal Board. Chairs of the REBs may serve only on an Appeal Panel reviewing a decision not made by their respective REB.

3. Chair and Vice-Chair of Research Ethics Appeal Board

Subject to the execution of agreement(s) with the affiliated hospital(s), the Vice-President, Research and International Affairs shall consult with the heads of the affiliated hospitals prior to making appointment recommendations.

4. Affiliated Hospital Representation on the Research Ethics Appeal Board

Representation from affiliated hospitals will be added to the membership of the Appeal Board under separate agreements and will include at least:

a. a previous member from the joint HHS/FHS REB and SJH REB;
b. one member from each hospital and
c. the Chairs of the joint HHS/FHS and the SJH REBs, as per 2. Ex-officio Members above.

The members from the hospitals (item 4. above) will be appointed by their respective Trustees, upon the recommendation of their respective Chief of Staff.

5. Composition of the Complete Single Regional University / Hospital Appeal Board

Subject to the execution of agreements between McMaster University and its affiliated hospitals, the full composition of the Single Regional University / Hospital Appeal Board shall constitute at least the following 15 positions:

Ex-Officio Members:

The chairs of the MREB, the HHS/FHS REB and the SJH/REB

Appointed Members:

Three faculty members expert in methods of research
One faculty member knowledgeable in ethics
One faculty member knowledgeable in the law relevant to biomedical research
One previous member of the MREB
One previous member of the HHS/FHS REB
One previous member of the SJH REB
One faculty member from HHS
One faculty member from SJH
Two community members

MCMASTER UNIVERSITY
Appeal of a Research Ethics Board Decision

Terms of Reference – Research Ethics Standing Appeal Board

A Standing Appeal Board shall be established by the President of McMaster University to adjudicate any appeal of a negative decision, concerning a research protocol, reached by the McMaster University Research Ethics Board (MREB), one of the Student Research Ethics Committees (SRECs), the Hamilton Integrated Research Ethics Board (HiREB), or the Student Research Committee (SRC) of the HiREB.

The Research Ethics Boards and Appeal Board are guided by the Tri-Council Policy Statement (TCPS) in its most current form and principles of natural justice in their decision-making. Such principles include providing a reasonable opportunity for the researcher to be heard, a written explanation of the reasons for opinions or decisions, an opportunity for rebuttal, fair and impartial judgment, and reasoned and written grounds for the decisions. The appeal process is not a substitute for Research Ethics Boards (REBs) and researchers to work closely together to ensure high-quality ethical research, nor is it a forum to merely seek a second opinion.

To this end, the TCPS and REBs encourage ongoing discussion with researchers prior to the submission of a new human ethics application and during the review process, with the provision for reconsideration of a Research Ethics Board decision affecting a research project. The researcher and the REB must have fully exhausted the reconsideration process, and the REB must have issued a final decision before the researcher initiates an appeal through the established appeal mechanism. Such appeals will be considered by an Appeal Panel, drawn from the membership of the Standing Appeal Board as defined below. The Terms of Reference and the Structure of the Appeal Panel are outlined later in this document.

The mandate of the Standing Appeal Board is:

1. to hear appeals, through a panel of the Standing Appeal Board, of negative decisions reached by the MREB, the HiREB, or the Student Research Committee (SRC) of the HiREB, made by the researcher (i.e. the Applicant for MREB applications, and designated Local Principal Investigator [LPI]/faculty advisor for HiREB applications);

2. to submit to the McMaster University Vice President (Research), a written report on each appeal received and considered by the Standing Appeal Board; and

3. to assess periodically the appeal process and to make recommendations to the McMaster University President through the Vice President (Research) , for modifications, as appropriate.

Structure of the Research Ethics Standing Appeal Board

1. Membership

The Appeal Board (from which an Appeal Panel is formed), shall consist of a minimum of nine (9) members, reflect the human diversity of the institutions, be drawn from the broad range of disciplines and Faculties in which research involving human participants takes place, and be in compliance with the TCPS membership requirements in Article 6.4.

All members of the Standing Appeal Board will have the appropriate background as specified below. Membership will include at least:

a. one member knowledgeable in ethics;
b. one member knowledgeable in the law relevant to biomedical research;
c. one previous member of the MREB;
d. one previous member of the HiREB;
e. one member from Hamilton Health Sciences Corporation (HHS);
f. one member from St. Joseph's Healthcare Hamilton (SJHH);
g. two faculty members from McMaster University (non-Faculty of Health Science appointment and;
h. one member from the community external to the University, HHS, and SJHH;

At a minimum, McMaster faculty members, and HHS and SJHH members should have broad expertise in the methods or in the areas of research that are covered by the MREB and HiREB.

Members shall be appointed by the McMaster University President, upon the recommendation of the Vice-President (Research), for staggered terms of five years, once renewable. The members from the hospitals (items 1e and 1f above) will be appointed by their respective Trustees/Governors, upon the recommendation of their respective Chief/VP/Director/Chair.

2. Ex-officio Members of the Standing Appeal Board

The current Chairs of the MREB and HiREB will serve as ex-officio members on the Appeal Board, with non-voting privileges, and may only serve in this capacity on an Appeal Panel reviewing a decision not made by their respective REB.

3. Chair and Vice-Chair of the Standing Appeal Board

The Appeal Board Chair and a Vice-Chair shall be appointed from the membership of the Appeal Board by the University President, upon the recommendation of the Vice-President (Research). These appointments will be for five-year, once renewable terms. The community member external to the University, HHS, and SJHH cannot serve as Chair or Vice-Chair.

4. Quorum of the Appeal Board

Quorum shall be constituted by meeting the TCPS quorum requirements (Article 6.9) and having at least 50 per cent of the membership of the Board present.

Appeal Panel Structure

To hear an appeal, the Chair of the Appeal Board (provided s/he is free of a conflict of interest regarding the REB decision under appeal), shall serve as the Panel Chair and select four members from the general Appeal Board membership. The Panel should meet the TCPS requirements for REB membership (Art. 6.4). The Panel members should have the appropriate background and be without conflict of interest relative to the research ethics decision under appeal.

If the Appeal Board Chair has a conflict of interest in relation to the REB decision under appeal, or in the absence of the Appeal Board Chair; the Vice-Chair will serve as Panel Chair.

The current HiREB Chair or current MREB Chair may only serve as a non-voting ex-officio member on an Appeal Panel that is reviewing a decision not made by their respective REB.

Appeal Panel Terms of Reference

The mandate of the Appeal Panel is:

1. to review the decision made by the REB which has been appealed by a researcher;

2. to conduct a full review of the application and associated documentation[1] in order to reach an independent decision and to make every effort to reach consensus.

3. to render on behalf of the institution a final and binding decision, by majority vote, which may
    a. approve;
    b. approve with modifications; or
    c. disapprove the project.

    A decision should be reached by majority vote of the five individuals comprising the Appeal Panel (four members plus the Chair).

4. to communicate the Appeal Panel decision, in writing and with reasons, to the researcher; Chair of the REB; and to all members of the Appeal Board; and to fulfill the mandate of the Appeal Board, by submitting to the Vice President (Research), a written report on the appeal received and considered by the Appeal Panel of the Appeal Board. This report will be completed by the Chair or Vice-Chair of the Appeal Panel.

5. to provide advice to the REB charged with the responsibility for implementing and monitoring the final decision of the Appeal Panel, in the event the Appeal Panel's decision is to a) approve the research; or b) to approve the research with modifications.

All documents pertaining to the appeal of a MREB decision will be housed at the administrative offices of HiREB. All documents pertaining to the appeal of a HiREB decision will be housed in the administrative offices

of MREB. Paper records will be kept a minimum of one year and digital documents, including copies of paper documents, will be retained permanently.

[1]documents may include the original ethics application, the original REB decision, all subsequent written communications, documents and records, including portions of the REB Minutes pertaining to the submission, relevant references or copies of pertinent guidelines, internal and external policies, and legislation.

Appeal Procedure

1. While the Appeal Board will be provided administrative support by the ethics office personnel of both the HiREB and the MREB, the Appeal Panel will be provided administrative support by the ethics office personnel of the REB not undergoing an appeal of one of its decisions.

2. The researcher/applicant, within thirty (30) working days of receiving a REB's final negative decision, must submit a written appeal of that decision to the administrator of the ethics office supporting that REB. That written appeal shall outline the grounds of the appeal and be accompanied by any supporting documentation held by the researcher/applicant.

3. The administrator of the ethics office supporting the REB that made the decision under appeal will in a timely manner: a) acknowledge receipt of the appeal in writing to the researcher/applicant; b) forward a copy of the written appeal to the Chair of the Appeal Board and to the Chair of the REB that made the decision.

4. The REB will be required to provide a written response to the appeal within ten (10) working days of receipt of the appeal request. The REB's written response to the appeal must be sent to the administrator of the alternate REB supporting the Appeal Board who will send it to the Appeal Board Chair.

5. The Appeal Board Chair or, the Vice-Chair as described in the section above entitled "Appeal Panel Structure", will select members of the Panel.

6. The ethics office administrative staff providing administrative support to the Appeal Panel will request the REB whose decision is being appealed, to provide all relevant documentation and then assemble and distribute that supporting documentation, including the response by the REB whose decision is being appealed; to the Appeal Panel Chair and members for review, along with a copy of the complete documents package sent to the researcher/applicant and the REB. Additional appeal-related documents may include the original ethics application, original REB decision, all subsequent written communications, documents and records, including REB Minutes pertaining to the submission, relevant references or copies of pertinent guidelines, internal and external policies, and legislation.

7. A meeting of the Appeal Panel, with provision for presentations by the researcher/applicant and the REB Chair/REB representative, will be convened by the Appeal Panel, within thirty (30) working days of receipt of the appeal by the REB that rendered the decision. Both parties may be accompanied by a colleague of their choice.

8. Meetings of an Appeal Panel will be conducted in accordance with the principles of natural justice. Both

the researcher/applicant and the REB will have the right to speak to the Panel regarding the issues raised in the distributed documentation. The Appeal Panel is free to ask questions at any time during the presentations.

9. The following procedure is a natural sequence, which any Appeal Panel may vary at its discretion.
    a. The researcher presents the reasons for the appeal and speaks to the issues.
    b. The REB Chair presents the reasons for the decision of the REB and speaks to the issues.
    c. Neither the researcher/applicant nor the REB Chair/REB representative shall be present when the Appeal Panel deliberates and makes a decision.

10. The Appeal Panel, having heard the oral presentations of both parties and having reviewed the written supporting documentation, shall be the sole judge of the facts and shall render a decision which is fair and just in the circumstances.

11. The majority decision of the Appeal Panel will be final and binding and will be communicated to the researcher/applicant and the REB within ten (10) working days of the meeting.

12. The Chair or Vice-Chair of the Appeal Panel will communicate the decision of the Appeal Panel in writing, including a summary of issues, factual findings, conclusions and reasons for the decision to the researcher, the Appeal Board, and the Chair of the REB. The Chair of the REB that rendered the original decision will be responsible for implementation and follow-up through the REB and such other parties as it deems appropriate.

13. The Chair or Vice-Chair of the Appeal Board shall submit to the McMaster University Vice President, Research, a written report on each appeal received and considered by the Appeal Board.

MCMASTER UNIVERSITY
Appeal of a Research Ethics Board Decision

Terms of Reference – Research Ethics Standing Appeal Board

A Standing Appeal Board shall be established by the President of McMaster University to adjudicate any appeal of a negative decision, concerning a research protocol, reached by the McMaster University Research Ethics Board (MREB), one of the Student Research Ethics Committees (SRECs), the Hamilton Integrated Research Ethics Board (HiREB), or the Student Research Committee (SRC) of the HiREB.

The Research Ethics Boards and Appeal Board are guided by the Tri-Council Policy Statement (TCPS) in its most current form and principles of natural justice in their decision-making. Such principles include providing a reasonable opportunity for the researcher to be heard, a written explanation of the reasons for opinions or decisions, an opportunity for rebuttal, fair and impartial judgment, and reasoned and written grounds for the decisions. The appeal process is not a substitute for Research Ethics Boards (REBs) and researchers to work closely together to ensure high-quality ethical research, nor is it a forum to merely seek a second opinion.

To this end, the TCPS and REBs encourage ongoing discussion with researchers prior to the submission of a new human ethics application and during the review process, with the provision for reconsideration of a Research Ethics Board decision affecting a research project. The researcher and the REB must have fully exhausted the reconsideration process, and the REB must have issued a final decision before the researcher initiates an appeal through the established appeal mechanism. Such appeals will be considered by an Appeal Panel, drawn from the membership of the Standing Appeal Board as defined below. The Terms of Reference and the Structure of the Appeal Panel are outlined later in this document.

The mandate of the Standing Appeal Board is:

1. to hear appeals, through a panel of the Standing Appeal Board, of negative decisions reached by the MREB, the HiREB, or the Student Research Committee (SRC) of the HiREB, made by the researcher (i.e. the Applicant for MREB applications, and designated Local Principal Investigator [LPI]/faculty advisor for HiREB applications);

2. to submit to the McMaster University Vice President (Research), a written report on each appeal received and considered by the Standing Appeal Board; and

3. to assess periodically the appeal process and to make recommendations to the McMaster University President through the Vice President (Research) , for modifications, as appropriate.

Commented [NC1]: In addition to the specific comments on revisions below, the main revisions were updates to language that pre-dated the formation of HiREB, permanent inclusion of hospital representatives on the standing appeal board, and increase in the term length of the board members from 2/3 to 5 years, and the addition of an appeal procedure section.

Commented [NC2]: Following Christi Garneau's advice, and after confirming with the MREB Chairs, appeals for SREC decisions will go straight to the appeal board and not to MREB. This also then follows the same procedure as HIREB's SRC.

Structure of the Research Ethics Standing Appeal Board

1. **Membership**

The Appeal Board (from which an Appeal Panel is formed), shall consist of a minimum of nine (9) members, reflect the human diversity of the institutions, be drawn from the broad range of disciplines and Faculties in which research involving human participants takes place, and be in compliance with the TCPS membership requirements in Article 6.4.

Commented [NC3]: Revised to remove the TCPS gender requirements for membership as trying to merge the "both men and women" TCPS clause with gender inclusive language was problematic. It seemed to prioritize gender above other diversity and still retained a binary gender focus. Instead, this document can just refer to the TCPS article containing the gender clause, and let the phrase "reflect the human diversity of the institutions" call for inclusivity in membership for not only gender, but ethnicity, ability, etc. Similar edits made below.

All members of the Standing Appeal Board will have the appropriate background as specified below. Membership will include at least:

a. one member knowledgeable in ethics;
b. one member knowledgeable in the law relevant to biomedical research;
c. one previous member of the MREB;
d. one previous member of the HiREB;
e. one member from Hamilton Health Sciences Corporation (HHS);
f. one member from St. Joseph's Healthcare Hamilton (SJHH);
g. two faculty members from McMaster University (non-Faculty of Health Science appointment and;
h. one member from the community external to the University, HHS, and SJHH;

At a minimum, McMaster faculty members, and HHS and SJHH members should have broad expertise in the methods or in the areas of research that are covered by the MREB and HiREB.

Members shall be appointed by the McMaster University President, upon the recommendation of the Vice-President (Research), for staggered terms of five years, once renewable. The members from the hospitals (items 1e and 1f above) will be appointed by their respective Trustees/Governors, upon the recommendation of their respective Chief/VP/Director/Chair.

2. **Ex-officio Members of the Standing Appeal Board**

The current Chairs of the MREB and HiREB will serve as ex-officio members on the Appeal Board, with non-voting privileges, and may only serve in this capacity on an Appeal Panel reviewing a decision not made by their respective REB.

3. **Chair and Vice-Chair of the Standing Appeal Board**

The Appeal Board Chair and a Vice-Chair shall be appointed from the membership of the Appeal Board by the University President, upon the recommendation of the Vice-President (Research). These appointments will be for five-year, once renewable terms. The community member external to the University, HHS, and SJHH cannot serve as Chair or Vice-Chair.

4. **Quorum of the Appeal Board**

Quorum shall be constituted by meeting the TCPS quorum requirements (Article 6.9) and having at least 50 per cent of the membership of the Board present.

Commented [NC4]: Simplified this section by linking directly to TCPS quorum requirements. In practice, the board is unlikely to meet as a full board – as the appeals are handled through the panel process.

Appeal Panel Structure

To hear an appeal, the Chair of the Appeal Board (provided s/he is free of a conflict of interest regarding the REB decision under appeal), shall serve as the Panel Chair and select four members from the general Appeal Board membership. The Panel should meet the TCPS requirements for REB membership (Art. 6.4). The Panel members should have the appropriate background and be without conflict of interest relative to the research ethics decision under appeal.

Commented [NC5]: As above, simplified to just refer to Art. 6.4.

If the Appeal Board Chair has a conflict of interest in relation to the REB decision under appeal, or in the absence of the Appeal Board Chair; the Vice-Chair will serve as Panel Chair.

The current HiREB Chair or current MREB Chair may only serve as a non-voting ex-officio member on an Appeal Panel that is reviewing a decision not made by their respective REB.

Appeal Panel Terms of Reference

The mandate of the Appeal Panel is:

1. to review the decision made by the REB which has been appealed by a researcher;

2. to conduct a full review of the application and associated documentation[1] in order to reach an independent decision and to make every effort to reach consensus.

3. to render on behalf of the institution a final and binding decision, by majority vote, which may
   a. approve;
   b. approve with modifications; or
   c. disapprove the project.

   A decision should be reached by majority vote of the five individuals comprising the Appeal Panel (four members plus the Chair).

4. to communicate the Appeal Panel decision, in writing and with reasons, to the researcher; Chair of the REB; and to all members of the Appeal Board; and to fulfill the mandate of the Appeal Board, by submitting to the Vice President (Research), a written report on the appeal received and considered by the Appeal Panel of the Appeal Board. This report will be completed by the Chair or Vice-Chair of the Appeal Panel.

5. to provide advice to the REB charged with the responsibility for implementing and monitoring the final decision of the Appeal Panel, in the event the Appeal Panel's decision is to a) approve the research; or b) to approve the research with modifications.

All documents pertaining to the appeal of a MREB decision will be housed at the administrative offices of HiREB. All documents pertaining to the appeal of a HiREB decision will be housed in the administrative offices

of MREB. Paper records will be kept a minimum of one year and digital documents, including copies of paper documents, will be retained permanently.

Commented [NC6]: There was some confusion about record retention as this section said indefinitely and #14 below said a minimum of one year. I've put them together here, differentiated between paper and digital, and deleted #14.

[1]documents may include the original ethics application, the original REB decision, all subsequent written communications, documents and records, including portions of the REB Minutes pertaining to the submission, relevant references or copies of pertinent guidelines, internal and external policies, and legislation.

Appeal Procedure

1. While the Appeal Board will be provided administrative support by the ethics office personnel of both the HiREB and the MREB, the Appeal Panel will be provided administrative support by the ethics office personnel of the REB not undergoing an appeal of one of its decisions.

2. The researcher/applicant, within thirty (30) working days of receiving a REB's final negative decision, must submit a written appeal of that decision to the administrator of the ethics office supporting that REB. That written appeal shall outline the grounds of the appeal and be accompanied by any supporting documentation held by the researcher/applicant.

3. The administrator of the ethics office supporting the REB that made the decision under appeal will in a timely manner: a) acknowledge receipt of the appeal in writing to the researcher/applicant; b) forward a copy of the written appeal to the Chair of the Appeal Board and to the Chair of the REB that made the decision.

4. The REB will be required to provide a written response to the appeal within ten (10) working days of receipt of the appeal request. The REB's written response to the appeal must be sent to the administrator of the alternate REB supporting the Appeal Board who will send it to the Appeal Board Chair.

5. The Appeal Board Chair or, the Vice-Chair as described in the section above entitled "Appeal Panel Structure", will select members of the Panel.

6. The ethics office administrative staff providing administrative support to the Appeal Panel will request the REB whose decision is being appealed, to provide all relevant documentation and then assemble and distribute that supporting documentation, including the response by the REB whose decision is being appealed; to the Appeal Panel Chair and members for review, along with a copy of the complete documents package sent to the researcher/applicant and the REB. Additional appeal-related documents may include the original ethics application, original REB decision, all subsequent written communications, documents and records, including REB Minutes pertaining to the submission, relevant references or copies of pertinent guidelines, internal and external policies, and legislation.

7. A meeting of the Appeal Panel, with provision for presentations by the researcher/applicant and the REB Chair/REB representative, will be convened by the Appeal Panel, within thirty (30) working days of receipt of the appeal by the REB that rendered the decision. Both parties may be accompanied by a colleague of their choice.

8. Meetings of an Appeal Panel will be conducted in accordance with the principles of natural justice. Both

the researcher/applicant and the REB will have the right to speak to the Panel regarding the issues raised in the distributed documentation. The Appeal Panel is free to ask questions at any time during the presentations.

9. The following procedure is a natural sequence, which any Appeal Panel may vary at its discretion.
    a. The researcher presents the reasons for the appeal and speaks to the issues.
    b. The REB Chair presents the reasons for the decision of the REB and speaks to the issues.
    c. Neither the researcher/applicant nor the REB Chair/REB representative shall be present when the Appeal Panel deliberates and makes a decision.

10. The Appeal Panel, having heard the oral presentations of both parties and having reviewed the written supporting documentation, shall be the sole judge of the facts and shall render a decision which is fair and just in the circumstances.

11. The majority decision of the Appeal Panel will be final and binding and will be communicated to the researcher/applicant and the REB within ten (10) working days of the meeting.

12. The Chair or Vice-Chair of the Appeal Panel will communicate the decision of the Appeal Panel in writing, including a summary of issues, factual findings, conclusions and reasons for the decision to the researcher, the Appeal Board, and the Chair of the REB. The Chair of the REB that rendered the original decision will be responsible for implementation and follow-up through the REB and such other parties as it deems appropriate.

13. The Chair or Vice-Chair of the Appeal Board shall submit to the McMaster University Vice President, Research, a written report on each appeal received and considered by the Appeal Board.

PRESIDENT'S REPORT TO
McMASTER UNIVERSITY'S BOARD OF GOVERNORS
MARCH 7, 2019

New Tuition and Student Fees Framework: Overview of Recent Government Announcements

On January 17, 2019, and in advance of the provincial budget process, the Ministry of Training, Colleges and Universities announced a range of changes to the tuition framework for Ontario universities and colleges, the division of ancillary fees charged to students into mandatory and optional categories, and revisions to OSAP award amounts and eligibility.

Tuition Reduction

Under the new Tuition Fee Framework, universities and colleges are required to reduce tuition fees by 10 per cent, in comparison to 2018-19 levels, in the fall of 2019-20; tuition fees will then be frozen at this reduced level during 2020-21. The reduction and freeze apply to virtually all programs at both the graduate and undergraduate levels, and to all funding-eligible students. Full cost recovery programs are not subject to the new framework, nor are fees for funding-ineligible students, which includes most international students. The Council of Ontario Universities calculates that the 2019-20 tuition reduction of 10 per cent will reduce university revenue in Ontario by about $360M. On average, around 35 per cent of university operating revenue comes from domestic tuition fees; this figure has gradually increased as the provincial operating grants provided to universities have decreased over the last 16 years. Since 2002-03, per-student operating grants have dropped by 10.6 per cent, when adjusted for inflation. The Ministry has noted that it does not plan to reduce the operating grants provided to universities this cycle.

In anticipation of a potential freeze or cuts, the offices of the Provost and Vice-President (Administration) had already been modelling potential scenarios and are now working closely with the Deans on a strategy to enable McMaster to weather these reductions. McMaster's prudent fiscal management over many years, and detailed financial risk mitigation strategies, provide a strong basis for managing the situation. The reduction amounts to 3 per cent of the University's operating budget, or approximately $22M per year. This can be absorbed in part through incremental international enrolment growth which, as Board members know, has been part of the University's long-term planning, and focus on internationalizing the campus, in any event. The Deans are working to meet and exceed their targets for international enrolment this year, while continuing to ensure access for domestic students. As highlighted in my last report to the Board in December, the University has been working over the last couple of years to put in place additional support and programming to assist our growing international student population, focusing both on transition/student life, as well as academic and career supports. Work to develop this additional programming and infrastructure will continue over the coming years.

Over the next year it is also planned to make use of the data generated through McMaster's participation in the UniForum global benchmarking program. This program provides detailed comparative data which helps us better understand how we work administratively across campus, and how we compare to our peers in Canada, the United Kingdom, Australia and New Zealand. McMaster was one of the first Canadian institutions to join this program, which highlights best practices and approaches within the sector and provides the opportunity to review potential

efficiencies and cost saving strategies. In addition to preserving the financial well-being of the institution as a whole, the senior team is also focused on preserving internal equity and ensuring that the burden of the tuition reduction and subsequent freeze is distributed as equitably as possible across the University and doesn't unfairly impact particular Faculties or areas.

Ancillary Fees Framework
The new Ancillary Fees Framework, known as the 'Student Choice Initiative' introduces an ancillary fee classification framework, to be in place for September 2019, which allows students to opt-out of paying for those campus services, activities, associations and groups they do not wish to fund or participate in. The Ministry states that the goal is to ensure transparency regarding the non-tuition fees students are expected to pay, bring consistency and simplicity to the opt-out process, and ensure students have more choice regarding the services and activities they support.

Although additional details are still awaited and clarification is needed on a range of issues, the government has confirmed that students will still be required to pay fees for those things deemed to be "essential" services, which include fees relating to athletics and recreation, career services, student buildings, health and counselling, academic support, fees for ID cards, convocation and transcripts, financial aid offices, walk-safe programs, existing compulsory transit passes, and health and dental plans (except where students can provide proof of existing coverage). All other fees, whether charged through ancillary fee protocols with the university administration, or introduced by student associations, are deemed non-essential and students must be given the opportunity to opt-out online before paying any fees. More details and further information are expected from the Ministry to address some of the many questions being raised by universities and student unions across the province. In the meantime, Student Affairs and other offices are working closely with the University's student associations to understand the magnitude and impact of this new framework and explore how and whether we can work together to provide access to the services and supports that students need to be successful, and help preserve the rich diversity of student life on our campus.

OSAP
Starting in the 2019-20 academic year, provincial government changes are being made to focus OSAP on demonstrated financial need, with the non-needs-based portion of the Ontario Student Grant being eliminated. The income thresholds associated with the Ontario Student Grant will be reduced and students eligible to receive grants and loans will receive a larger portion of their aid as Ontario Student Loans. Changes are also being made to the repayment provisions for student loans. Again, further information is gradually being made available and Student Financial Aid, the Registrar's Office and other offices are working through the implications and effect of this.

Next Steps
Work to address the impact of the new tuition and ancillary fees framework, and to understand the changes to OSAP, will continue over the coming months, with further details to be provided as more detailed information is received from the Ministry. Additional financial modelling is also underway to ensure that the long-term financial health of the institution is maintained and that appropriate and ongoing risk mitigation strategies are in place.

CAMPUS UPDATE

Santee Smith named McMaster's next Chancellor
Santee Smith, a renowned artist, dancer, choreographer and two-time McMaster graduate will be the university's next Chancellor. The Senate approved a unanimous recommendation from the selection committee tasked with nominating a candidate for this leadership role. The appointment will take effect on September 1, 2019.

Santee is an internationally recognized leader in the performing arts and is from the Kahnyen'kehàka (Mohawk) Nation, Turtle Clan from Six Nations of the Grand River, Ontario. She is one of Canada's leading dance artists, artistic directors/producers, choreographers and designers, holding McMaster degrees in physical education and psychology, along with a Master of Arts in dance from York University.

McMaster Alumni named to Order of Canada
Four McMaster alumni have been named members of the Order, after being included in Governor General Julie Payette's new year's list.

The recipients are:
- Thomas Dignan, Health Sciences '81
- Kevin Dancey, Math and Economics '72
- Dr. Arthur Slutsky, Health Sciences '76
- Ron Foxcroft, Honorary Doctorate '01

Research

McMaster's Start-Up Incubator to receive $1.2 million from FedDev Ontario
The Government of Canada, through FedDev Ontario, is providing McMaster with $1.2 million to expand The Forge, a collaborative makerspace where entrepreneurs can access advanced equipment to design and build innovative new products.

NEUDOSE Satellite Project passes CSA milestone
A team of student and faculty researchers from McMaster, who have designed and built a satellite to be launched into deep space, have reached a major milestone.

Members of the team – which includes nearly 70 undergraduate and graduate students from nearly every Faculty on campus – met with CSA delegates to present and update their mission concept, the culmination of six months of work. The successful presentation allows the team to advance into the satellite's development phase. The satellite was chosen by the Canadian Space Agency (CSA) in May of last year as one of 15 proposals from across the country to participate in the Canadian CubeSat Project.

Physicists pinpoint a simple mechanism that makes bacteria resistant to Antibiotics
Physicists at McMaster have for the first time identified a simple mechanism used by potentially deadly bacteria to fend off antibiotics, a discovery which is providing new insights into how germs adapt and behave at a level of detail never seen before.

McMaster helps provide new insight on Gene Mutations associated with Autism
Karun Singh, a McMaster scientist, has co-led new research which suggests increased activity in neurons that are deficient in two genes could cause autism-related characteristics in humans.

Teaching and Learning

Transforming Undergraduate Education at the DeGroote School of Business
A significant gift will enable the University to plan and build the McLean Centre for Collaborative Discovery at the DeGroote School of Business, over what is now the Innis Library. The building is being specifically designed to facilitate a new and evolving model of teaching business to students from all Faculties.

The gift comes from the McLean family, which has a special affinity for McMaster, with three generations of the family having studied at McMaster.

Science Students explore the Power of Storytelling
With help from artists, storytellers and other experts, McMaster Life Sciences students recently learned to look beyond traditional forms of science communication to explore the power of narrative and try their hand at creating science-based stories of their own. This forms part of LIFESCI 4L03: Science and Storytelling, an innovative new course offered for the first time this fall by McMaster's School of Interdisciplinary Science.

McMaster launches collaborative PhD program with the University of Rome and the University of Hong Kong
In an agreement spanning North America, Europe and Asia, McMaster University, the University of Rome (La Sapienza) and the University of Hong Kong have introduced a new collaborative PhD program in the chemistry of food and nutrition. Over the term of the agreement, at least 30 PhD candidates will be completing their graduate work between the three universities, moving freely between them, and being supervised by professors at all three institutions.

DeGroote finishes First at 2019 MBA Games in Toronto
The DeGroote School of Business has won the 2019 MBA Games hosted at Ryerson University's Ted Rogers School of Management. The DeGroote team, led by co-chairs Lana Perisic and Chinomso Nwamadi, was presented with the coveted Queen's Cup as the top overall school in the annual national competition.

Global and Community Engagement

McMaster becomes Host University for Academics Without Borders
Academics Without Borders, a Canada-based non-profit organization that helps universities in the developing world enhance the quality of their programs and research, has found a base at McMaster. Through the Office of International Affairs, the collaboration with McMaster will give Academics Without Borders access to office and meeting space, a part-time staff person and

a variety of other resources, and will support the University's work to foster global citizenship on and beyond our campus and develop an active orientation to the challenges of the world.

Helping Students develop a Global Perspective
The Student Success Centre has expanded its International Student Services division and developed a new position to support student mobility and settlement of international students in the Hamilton community. Lajipe Sanwoolu, who attended McMaster University as an international student and went on to work in Alberta, Manitoba and Nigeria, has returned to McMaster University in the role of Immigration and Mobility Advisor.

Preserving the Legacy of a Jamaican Cultural Icon
The Jamaican Canadian community has honoured McMaster University Library for its commitment to preserving the legacy of one of Jamaica's most important and beloved cultural icons – Louise Bennett-Coverley, better known as "Miss Lou."

McMaster University Librarian, Vivian Lewis, accepted the award, which recognizes the Library's stewardship of the extensive Miss Lou Archive, at a recent event in Toronto hosted by the Jamaican Canadian Association.

McMaster Students and Faculty recognized at annual John C. Holland Awards
Two McMaster students and one faculty member have won John C. Holland Awards, which celebrate the contributions of African Canadians to the economic, cultural and social life of Hamilton. Sonia Igboanugo is a student in the Biomedical Discovery and Commercialization program, Salsabil Sarhan is a student in the Faculty of Social Sciences, and Mark John Stewart teaches strategic management in the Master of Communication Management program.

Global Health student Serena Tejpar named one of Southwestern Ontario YMCA's Young Women of Excellence
McMaster University MSc Global Health student Serena Tejpar has been named one of this year's YMCA Young Women of Excellence. She is among eight London women being recognized by the YMCA of Southwestern Ontario for their contribution to the community with the annual Women of Excellence awards.

Alumna wins 2018 Fitness Instructor Specialist of the Year
A Psychology graduate who developed a culturally-sensitive online fitness program has won the 2018 Fitness Instructor Specialist of the Year at the World Fitness Expo in Toronto. As a student, Amina Khan initially faced challenges finding a fitness and diet regime that also catered to her Muslim identity and beliefs, and felt that women of colour, and those who wear headscarves, were being excluded from the fitness industry. The result was Amanah Fitness, which now serves more than 50,000 members of diverse communities.

Agenda Item 11.b.

MINUTE OF APPRECIATION

Donald M. Green, LL.D (Hons)

It is with great sadness that the Board of Governors of McMaster University notes the passing of Dr. Donald M. Green.

Dr. Green was born in Hamilton, Ontario in 1932 and graduated from Ryerson Polytechnic University in mechanical engineering. He has held executive or governance roles in many enterprises and gave generously of his time to public service. In 1980, Don was awarded the Order of Canada, the highest civilian honour bestowed on Canadians.

Dr. Green joined the University's Board and served as a committee member for the Changing Tomorrow, Today Campaign. He was named Vice Chair of the Board and then Chair in 2006. He would serve as a cabinet member for The Campaign for McMaster University 2006-2010. In 2008, he received an honorary Doctorate of Law from McMaster.

As an expression of our regard for the contributions of Dr. Donald M. Green to McMaster University, it is moved that this Minute of Appreciation be recorded in the permanent minutes of the Board of Governors and a copy sent to his family.

Board of Governors
March 7, 2019

UNIVERSITY SECRETARIAT
- Board of Governors
- Senate

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REPORT TO THE BOARD OF GOVERNORS FROM THE SENATE

At its meeting on February 13, 2019, the Senate approved an amendment to Item 42 of the Tenure and Promotion Policy. The amendment was also approved by the Committee on Appointments. Details of the amendment are contained in Attachment I of the circulated report.

It is now recommended,

that the Board of Governors approve the amendment of Item 42 of the Tenure and Promotion Policy, as contained in the report from the Senate.

Board of Governors: FOR APPROVAL
March 7, 2019

MOTION: To amend Item 42 of the Tenure & Promotion Policy as described below.

RATIONALE: In the previous version, the materials considered by the department (i.e., the external reviewers' letters) were released to the faculty member only after the faculty member requested to be reconsidered. But in most cases, their decision as to whether to request reconsideration would depend on having viewed the materials. The revision allows them to request the materials first and then decide whether to request reconsideration.

42.

a. The Chair shall notify every candidate for re-appointment, tenure, or permanence of the Departmental recommendation in his or her case on or before October 1, and shall similarly notify every eligible candidate for promotion no later than December 1.

b. A faculty member who believes that he or she has been unfairly treated because (i) he or she was not considered for tenure, permanence, and/or promotion by the Department, or (ii) he or she has been considered but no recommendation is being made, or (iii) an inappropriate recommendation is being made to the Faculty Tenure and Promotion Committee, may ~~request to be considered or reconsidered~~ view a copy of the material considered by the Departmental Committee, along with a copy of the Committee recommendation to the Faculty Committee by making a submission in writing to the Department Chair no later than October 7 (December 7 in the case of a faculty member being considered for promotion to Professor). It shall be the responsibility of the Chair of the Department to ensure that the confidentiality of the material is maintained. To this end, only unattributed copies of the originals of any external or internal letters of reference shall be provided. Any other written assessments shall be similarly redacted to maintain confidentiality.

c. ~~Upon receiving such a request, the Chair shall discuss the matter with the faculty member concerned, and shall provide him or her with a copy of the material considered by the Departmental Committee, along with a copy of the Committee recommendation to the Faculty Committee. It shall be the responsibility of the Chair of the Department to ensure that the confidentiality of the material is maintained. To this end, only unattributed copies of the originals of any external or internal letters of reference shall be provided. Any other written assessments shall be similarly redacted to maintain confidentiality.~~ Having viewed the material considered by the Departmental Committee and the Committee recommendation to the Faculty Committee, the faculty member may request to be reconsidered. ~~desires it,~~ In this case, there shall be a meeting of the Departmental Committee to consider or re-consider the case. The faculty member shall have the right to appear before this Committee and make submissions thereto; the faculty member may be accompanied by a faculty colleague acting as an advisor.

d. If, following such consideration of his or her case, the faculty member remains unsatisfied, he or she may convey this information, in writing, to the Faculty Dean, who shall apprise the Faculty Tenure and Promotion Committee of the case (see clause 50(c) below).

UNIVERSITY SECRETARIAT
- Board of Governors
- Senate

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REPORT TO THE BOARD OF GOVERNORS FROM THE EXECUTIVE AND GOVERNANCE COMMITTEE

i. Updates to Banking, Safekeeping, Securities & Borrowing Resolutions

On February 28, 2019, the Executive and Governance Committee reviewed and approved for recommendation to the Board of Governors, updates to the Banking, Safekeeping, Sale of Securities, Borrowing, and Directions to CIBC Mellon Global Securities Resolutions by electronic vote. The material was also approved by the Planning and Resources Committee. Details of the proposed updates are contained in Attachment I of the circulated report.

It is now recommended,

that the Board of Governors approve in principle, the attached Banking, Safekeeping, Sale of Securities, Borrowing, and Directions to the CIBC Mellon Global Securities Services Company resolutions, and amendment to the University By-laws.

ii. Revisions to Appendix E - Resolution Respecting the Execution of Instruments by McMaster University

On February 28, 2019 the Executive and Governance Committee approved for recommendation to the Board of Governors, revisions to Appendix E – Resolution Respecting the Execution of Instruments by McMaster University by electronic vote. The material was also approved by the Planning and Resources Committee. Details of the proposed revisions are contained in Attachment II of the circulated report.

It is now recommended,

that the Board of Governors approve in principle, the attached revisions to Appendix E Resolution Respecting the Execution of Instruments by McMaster University.

Board of Governors: NOTICE OF MOTION
March 7, 2019

Attachment I

McMaster University

Steven Moore, MBA, CPA, CGA, CFA, CIPM, CTP
Treasurer

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Date: November 13, 2018

To: Planning and Resources Committee

From: Treasurer

Subject: Banking, Safekeeping, Securities & Borrowing Resolutions – updates

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I am recommending updates to the Banking, Safekeeping, Sale of Securities, Borrowing, and Directions to CIBC Mellon Global Securities Services Company Resolutions as follows:

- Update the titles of signing officers to reflect new titles that have evolved since the last resolution update:
  - Remove: Director of Finance
  - Add: Controller and Executive Director, Strategic Projects Financial Affairs

A copy of the new Banking, Safekeeping, Sale of Securities, Borrowing, and Directions to the CIBC Mellon Global Securities Services Company resolutions which shows the changes highlighted has been attached to this memo.

It is recommended:

That the Planning and Resources Committee approves, for recommendation to the Executive and Governance Committee, the attached Banking, Safekeeping, Sale of Securities, Borrowing, and Directions to the CIBC Mellon Global Securities Services Company resolutions for recommendation to the Board, and amendment to the University By-laws.

Planning and Resources Committee – **FOR APPROVAL**
November 21, 2018

Appendix B

BANKING RESOLUTION

The Board hereby resolves:

1. THAT the banking business of the University, or any part thereof, may be transacted with any one or more of the banks or other corporations (hereinafter referred to as "institutions") named in Schedule 1 hereto.

2. THAT all such banking business may be transacted on the University's behalf by the Planning and Resources Committee of the Board.

3. THAT the Planning and Resources Committee further delegate to any officer holding the position and having the title listed in Schedule 2 authority to transact any part or parts of such banking business on behalf of the University, subject to the limitations of such authority as may be imposed in such instructions.

4. THAT in this resolution the expression "banking business" includes, without limitation, the operation of the University's accounts; the making, signing, drawing, accepting, endorsing, negotiating, lodging, depositing or transferring of any cheques, promissory notes, drafts, acceptances, bills of exchange and orders for the payment of money; the giving of receipts for and orders relating to any property of the University; the execution of any agreement relating to any such banking business and defining the rights and powers of the parties thereto; and the authorizing of any officer of such institution to do any act or thing on the University's behalf to facilitate such banking business.

5. THAT this resolution and any instructions given pursuant to paragraph 3 hereof to any institution shall remain in force until written notice to the contrary shall have been given to such institution.

6. THAT this resolution shall, from the time of its communication to any institution, supersede any previous resolutions and instructions respecting the transaction of banking business between the University and such institutions.

Schedule 1: McMASTER UNIVERSITY BANKS

Canadian Imperial Bank of Commerce
Bank of Montreal
National Bank of Canada
Bank of Nova Scotia
Royal Bank of Canada
TD Canada Trust

Schedule 2: McMASTER UNIVERSITY AUTHORIZED BANK SIGNERS

The primary currencies used by the University are the Canadian dollar and U.S. dollar. For the purposes of amounts noted in Schedule 2, limits are applicable to either currency.

(1) With respect to bank accounts held at institutions noted in Schedule 1 above:

(a) Cheques up to $100,000.00 require any one of the following signatures:

- President and Vice- Chancellor
- Vice-President (Administration)
- Associate Vice-President (Students and Learning) and Dean of Students
- Assistant Vice-President (Administration) and CFO
- Assistant Vice-President and Chief Human Resources Officer (payroll account(s) only)
- ~~Director of Finance~~
- Controller
- Executive Director, Strategic Projects Financial Affairs
- Treasurer
- Senior Manager, Accounting & Financial Reporting
- Manager, Financial Reporting
- Manager, Financial Affairs Business Office
- Senior Investment Accounting Analyst
- Senior Investment Analyst
- Senior Accountant
- Director, HR Services and Systems (Payroll Account(s) only)
- Senior Manager, HR Projects, Analytics and Payroll (Payroll Account(s) only)
- Senior HR Payroll Analyst (Payroll account(s) only)

(b) Cheques over $100,000.00 require any two of the signatures in (a).

(c) The following facsimile signatures are acceptable on cheques drawn on any account, however, when a second signature is required by virtue of the amount being over $100,000.00, the second signature must be any one of the signatures in (a) applied manually:

- President and Vice Chancellor
- Vice-President (Administration)

(d) All electronic payment services, such as Wires, EFTs, Bill payments and Government Payments require electronic approvals as follows:

(i) System generated batch payments up to $12,000,000.00 require electronic approval from any one of the positions listed in (a) above; over $12,000,000.00 require electronic approval from any two of the positions listed in (a) above.

(ii) All other payments up to $100,000.00 require electronic approval from any one of the positions listed in (a) above; over $100,000.00 require electronic approval from any two of the positions listed in (a) above.

(e) All bank transfers between bank accounts held by McMaster require any one of the following signatures or electronic approvals:

- President and Vice-Chancellor
- Vice-President (Administration)
- Assistant Vice-President (Administration) and CFO
- ~~Director of Finance~~
- Controller
- Executive Director, Strategic Projects Financial Affairs
- Treasurer
- Senior Manager, Accounting & Financial Reporting
- Manager, Financial Reporting
- Senior Investment Accounting Analyst
- Senior Investment Analyst
- Senior Accountant
- Investment Operations Analyst
- Financial Analyst – Trust Funds

(2) Foreign electronic payments:

(a) Up to $100,000.00 require any one of the following signatures and/or electronic approvals:

- President and Vice- Chancellor
- Vice-President (Administration)
- Assistant Vice-President (Administration) and CFO
- ~~Director of Finance~~
- Controller
- Executive Director, Strategic Projects Financial Affairs
- Treasurer
- Senior Manager, Accounting & Financial Reporting
- Manager, Financial Reporting
- Senior Investment Accounting Analyst
- Senior Investment Analyst
- Senior Accountant

(b) Over $100,000.00 require any two of the signatures or electronic approvals in (a).

Appendix C

SAFEKEEPING RESOLUTION

The Board hereby resolves:

1. THAT the CIBC Mellon Global Securities Services Company (and certain of its Affiliates) be and it is hereby authorised on behalf of McMaster University:

   (a) to receive for safekeeping such property including such securities as may from time to time be delivered for such purpose to any office, branch or agency of the Bank;

   (b) to cause any such securities which are capable of registration to be registered in the name of the University, or, when instructed, in the name of the Bank's nominee;

   (c) to hold, deliver, sell, exchange or otherwise dispose of or deal with any or all such property including such securities pursuant to such written instructions as may be given from time to time by or on behalf of the University to the Bank by any two of the Chair of the Board of Governors, the Vice-Chair(s) of the Board of Governors, the Chair of the Planning and Resources Committee of the Board of Governors, the President, the Vice-President (Administration)~~,~~ the Assistant Vice-President (Administration), ~~the Director of Finance~~, the Controller, the Executive Director, Strategic Projects Financial Affairs, Treasurer or one of the aforementioned together with the Senior Investment Accounting Analyst or Senior Investment Analyst are hereby authorised to give the said Bank instructions from time to time as aforesaid;

   (d) notwithstanding the foregoing, any delivery to this University of any such property including such securities shall be made only to and against the written receipt of any two of the Chair of the Board of Governors, the Vice-Chair(s) of the said Board of Governors, the Chair of the Planning and Resources Committee of the said Board of Governors, the President, the Vice-President (Administration);

   (e) to transfer any such property including any such securities to another office, branch or agency of the Bank than the office, branch or agency of the Bank to which or to whom such property was originally delivered, but the Bank shall immediately notify the Assistant Vice-President (Administration) of the University in writing of any such transfer;

   (f) to detach on maturity the coupons, if any, from the securities and to complete as agent of the University any ownership certificates in connection therewith and to surrender any securities against receipt of moneys payable at maturity or upon redemption thereof; but the Bank is not obliged to examine lists of drawn and redeemed bonds or notices relating to coupons or dividends or to advise the undersigned of the expiry of rights or warrants in connection with the securities;

   (g) to obtain and receive payment of any moneys, whether on account of principal or revenues, in respect of any such securities, and to place the moneys so received in respect of the securities or any rights pertaining thereto to the credit of the University at the Westdale Hamilton Branch of the Bank, Deposit Account or to deal

with such moneys in accordance with the written instructions of any two of the persons mentioned in paragraph (c).

2. The University agrees that the responsibility of the Bank in respect of any or all such property including such securities and proceeds shall be to exercise such due and proper care with respect to such property including such securities and proceeds as if such property including such securities and proceeds were the property of the Bank.

3. The University undertakes to pay to the Bank the agreed safekeeping charges for its services hereunder which the Bank is hereby authorised to debit to any account of the University with the Bank.

4. This resolution shall take effect on the XXXX, 2019 ~~1st day of July, 2017~~ and from that date shall supersede a resolution passed by the Board of Governors of the University on the 1st day of July, 2017 ~~16th day of June 2005~~ and shall remain in force and effect as regards each office, branch or agency of the Bank having in its custody any of such property including such securities of the University until notice in writing abrogating or modifying this agreement is received by such office, branch or agency of the Bank.

The Board further resolves:

That McMaster University may enter into a Safekeeping Agreement with the CIBC Mellon Global Securities Services Company (and certain of its Affiliates), in accordance with the provisions of the foregoing resolution.

Board of Governors
~~June 8, 2017~~XXXX, 2019

Appendix D

RESOLUTION FOR THE SALE OF SECURITIES

The Board hereby resolves:

1. THAT any two of the Chair of the Board of Governors, the Vice-Chair(s) of the Board of Governors, the Chair of the Planning and Resources Committee of the Board of Governors, the President, the Vice-President (Administration), the Assistant Vice-President (Administration), ~~the Director of Finance,~~ the Controller, the Executive Director, Strategic Projects Financial Affairs, Treasurer or one of the aforementioned together with the Senior Investment Accounting Analyst or the Senior Investment Analyst of this University be, and they hereby are, fully authorised and empowered to transfer, convert, endorse, sell, assign, set over and deliver any and all shares of stock, bonds, debentures, notes, subscription warrants, stock purchase warrants, evidence of indebtedness, or other securities now or hereafter standing in the name of or owned by this University, and to make, execute and deliver, under the corporate seal of this University or otherwise, any and all written instruments of assignment and transfer necessary or proper to effectuate the authority hereby conferred.

2. AND FURTHER that there shall be annexed to any instrument of assignment and transfer, executed pursuant to and in accordance with the foregoing resolution, a certificate of the Secretary of the Board, Vice-President (Administration) or Assistant Vice-President (Administration) of this University in office at the date of such certificate, and such certificate shall set forth these resolutions and shall state these resolutions are in full force and effect, and shall also set forth the names of the persons who are then officers of this University, then all persons to whom such instrument with the annexed certificate shall thereafter come shall be entitled without further inquiry or investigation and regardless of the date of such certificate to assume and to act in reliance upon the assumption that the shares of stock or other securities named in such instrument were theretofore duly and properly transferred, endorsed, sold, assigned, set over and delivered by this University, and that with respect to such securities the authority of these resolutions and of such officers is still in full force and effect.

Appendix F

**RESOLUTION RESPECTING DIRECTIONS TO
THE CIBC MELLON GLOBAL SECURITIES SERVICES COMPANY
BY McMASTER UNIVERSITY**

The Board hereby resolves:

1. a) THAT directions or approvals given by the University under or pursuant to Section 4 of the Master Trust Agreement between McMaster University and CIBC Mellon Trust Company dated July 1, 2000, the Participating Trust Agreement for the Contributory Pension Plan for Salaried Employees of McMaster University including McMaster Divinity College dated July 1, 2000, the Participating Trust Agreement for the Contributory Pension Plan for Salaried Employees of McMaster University including McMaster Divinity College 2000 dated July 1, 2000 and the Trust and Custodial Services Agreement for the Contributory Pension Plan for Hourly-rated Employees dated June 30, 1999; and

   b) THAT directions or approvals given by the University under or pursuant to Section 4 of the Custodial Services Agreements between McMaster University and the CIBC Mellon Global Securities Services Company (and certain of its Affiliates) dated June 30, 1999 for the Investment Pool, which includes the General Trust and Endowment Funds and certain other restricted funds

shall be given on behalf of the University by any two of the President, the Vice-President (Administration), the Assistant Vice-President (Administration), ~~the Director of Finance~~the Controller, the Executive Director, Strategic Projects Financial Affairs, the Treasurer or one of the aforementioned together with one of the Assistant Vice-President and Chief Human Resources Office, Director, HR Services and Systems, Senior Manager, HR Projects, Analytics and Payroll, Senior Manager, Total Rewards, , the Senior Investment Accounting Analyst or the Senior Investment Analyst.

2. THAT this resolution shall take effect on the ~~7st day of June, 2018~~XXXX, 2019.

Board of Governors
~~June 7, 2018~~XXXX, 2019

Appendix G

BORROWING RESOLUTION

The Board hereby resolves:

1. THAT the powers contained in clause 1 (a) of By-Law Number 3 being a by-law respecting the borrowing of money, the issuing of securities and the securing of liabilities by the University, be and they are hereby delegated to any two of the Chair of the Board, the Vice-Chair(s) of the Board, the Chair of the Planning and Resources Committee, the President, the Vice-President (Administration), the Assistant Vice-President (Administration), ~~the Director of Finance~~the Controller, the Executive Director, Strategic Projects Financial Affairs, the Treasurer for amounts up to $100,000. For amounts in excess of $100,000 these same powers are delegated to any two of the Chair of the Board, the Vice-Chair(s) of the Board, the Chair of the Planning and Resources Committee; or one of the aforementioned together with one of the President or the Vice-President (Administration).

2. THAT this resolution shall take effect on the XXXX, 2019 ~~1st day of July, 2017~~ and from that date shall supersede a resolution passed by the Board of Governors on the 1st day of July, 2017. ~~18th day of December, 2008.~~

Board of Governors
~~June 8, 2017~~XXXX,2019

Appendix B

BANKING RESOLUTION

The Board hereby resolves:

1. THAT the banking business of the University, or any part thereof, may be transacted with any one or more of the banks or other corporations (hereinafter referred to as “institutions”) named in Schedule 1 hereto.

2. THAT all such banking business may be transacted on the University's behalf by the Planning and Resources Committee of the Board.

3. THAT the Planning and Resources Committee further delegate to any officer holding the position and having the title listed in Schedule 2 authority to transact any part or parts of such banking business on behalf of the University, subject to the limitations of such authority as may be imposed in such instructions.

4. THAT in this resolution the expression "banking business" includes, without limitation, the operation of the University's accounts; the making, signing, drawing, accepting, endorsing, negotiating, lodging, depositing or transferring of any cheques, promissory notes, drafts, acceptances, bills of exchange and orders for the payment of money; the giving of receipts for and orders relating to any property of the University; the execution of any agreement relating to any such banking business and defining the rights and powers of the parties thereto; and the authorizing of any officer of such institution to do any act or thing on the University's behalf to facilitate such banking business.

5. THAT this resolution and any instructions given pursuant to paragraph 3 hereof to any institution shall remain in force until written notice to the contrary shall have been given to such institution.

6. THAT this resolution shall, from the time of its communication to any institution, supersede any previous resolutions and instructions respecting the transaction of banking business between the University and such institutions.

Schedule 1: McMASTER UNIVERSITY BANKS

Canadian Imperial Bank of Commerce
Bank of Montreal
National Bank of Canada
Bank of Nova Scotia
Royal Bank of Canada
TD Canada Trust

Schedule 2: McMASTER UNIVERSITY AUTHORIZED BANK SIGNERS

The primary currencies used by the University are the Canadian dollar and U.S. dollar. For the purposes of amounts noted in Schedule 2, limits are applicable to either currency.

(1) With respect to bank accounts held at institutions noted in Schedule 1 above:

(a) Cheques up to $100,000.00 require any one of the following signatures:

- President and Vice- Chancellor
- Vice-President (Administration)
- Associate Vice-President (Students and Learning) and Dean of Students
- Assistant Vice-President (Administration) and CFO
- Assistant Vice-President and Chief Human Resources Officer (payroll account(s) only)
- Controller
- Executive Director, Strategic Projects Financial Affairs
- Treasurer
- Senior Manager, Accounting & Financial Reporting
- Manager, Financial Reporting
- Manager, Financial Affairs Business Office
- Senior Investment Accounting Analyst
- Senior Investment Analyst
- Senior Accountant
- Director, HR Services and Systems (Payroll Account(s) only)
- Senior Manager, HR Projects, Analytics and Payroll (Payroll Account(s) only)
- Senior HR Payroll Analyst (Payroll account(s) only)

(b) Cheques over $100,000.00 require any two of the signatures in (a).

(c) The following facsimile signatures are acceptable on cheques drawn on any account, however, when a second signature is required by virtue of the amount being over $100,000.00, the second signature must be any one of the signatures in (a) applied manually:

- President and Vice Chancellor
- Vice-President (Administration)

(d) All electronic payment services, such as Wires, EFTs, Bill payments and Government Payments require electronic approvals as follows:

(i) System generated batch payments up to $12,000,000.00 require electronic approval from any one of the positions listed in (a) above; over $12,000,000.00 require electronic approval from any two of the positions listed in (a) above.

(ii) All other payments up to $100,000.00 require electronic approval from any one of the positions listed in (a) above; over $100,000.00 require electronic approval from any two of the positions listed in (a) above.

(e) All bank transfers between bank accounts held by McMaster require any one of the following signatures or electronic approvals:

- President and Vice-Chancellor
- Vice-President (Administration)
- Assistant Vice-President (Administration) and CFO
- Controller
- Executive Director, Strategic Projects Financial Affairs
- Treasurer
- Senior Manager, Accounting & Financial Reporting
- Manager, Financial Reporting
- Senior Investment Accounting Analyst
- Senior Investment Analyst
- Senior Accountant
- Investment Operations Analyst
- Financial Analyst – Trust Funds

(2) Foreign electronic payments:

(a) Up to $100,000.00 require any one of the following signatures and/or electronic approvals:

- President and Vice- Chancellor
- Vice-President (Administration)
- Assistant Vice-President (Administration) and CFO
- Controller
- Executive Director, Strategic Projects Financial Affairs
- Treasurer
- Senior Manager, Accounting & Financial Reporting
- Manager, Financial Reporting
- Senior Investment Accounting Analyst
- Senior Investment Analyst
- Senior Accountant

(b) Over $100,000.00 require any two of the signatures or electronic approvals in (a).

Board of Governors
XXXX, 2019

Appendix C

SAFEKEEPING RESOLUTION

The Board hereby resolves:

1. THAT the CIBC Mellon Global Securities Services Company (and certain of its Affiliates) be and it is hereby authorised on behalf of McMaster University:

   (a) to receive for safekeeping such property including such securities as may from time to time be delivered for such purpose to any office, branch or agency of the Bank;

   (b) to cause any such securities which are capable of registration to be registered in the name of the University, or, when instructed, in the name of the Bank's nominee;

   (c) to hold, deliver, sell, exchange or otherwise dispose of or deal with any or all such property including such securities pursuant to such written instructions as may be given from time to time by or on behalf of the University to the Bank by any two of the Chair of the Board of Governors, the Vice-Chair(s) of the Board of Governors, the Chair of the Planning and Resources Committee of the Board of Governors, the President, the Vice-President (Administration)the Assistant Vice-President (Administration), the Controller, the Executive Director, Strategic Projects Financial Affairs, Treasurer or one of the aforementioned together with the Senior Investment Accounting Analyst or Senior Investment Analyst are hereby authorised to give the said Bank instructions from time to time as aforesaid;

   (d) notwithstanding the foregoing, any delivery to this University of any such property including such securities shall be made only to and against the written receipt of any two of the Chair of the Board of Governors, the Vice-Chair(s) of the said Board of Governors, the Chair of the Planning and Resources Committee of the said Board of Governors, the President, the Vice-President (Administration);

   (e) to transfer any such property including any such securities to another office, branch or agency of the Bank than the office, branch or agency of the Bank to which or to whom such property was originally delivered, but the Bank shall immediately notify the Assistant Vice-President (Administration) of the University in writing of any such transfer;

   (f) to detach on maturity the coupons, if any, from the securities and to complete as agent of the University any ownership certificates in connection therewith and to surrender any securities against receipt of moneys payable at maturity or upon redemption thereof; but the Bank is not obliged to examine lists of drawn and redeemed bonds or notices relating to coupons or dividends or to advise the undersigned of the expiry of rights or warrants in connection with the securities;

   (g) to obtain and receive payment of any moneys, whether on account of principal or revenues, in respect of any such securities, and to place the moneys so received in respect of the securities or any rights pertaining thereto to the credit of the University at the Westdale Hamilton Branch of the Bank, Deposit Account or to deal

with such moneys in accordance with the written instructions of any two of the persons mentioned in paragraph (c).

2. The University agrees that the responsibility of the Bank in respect of any or all such property including such securities and proceeds shall be to exercise such due and proper care with respect to such property including such securities and proceeds as if such property including such securities and proceeds were the property of the Bank.

3. The University undertakes to pay to the Bank the agreed safekeeping charges for its services hereunder which the Bank is hereby authorised to debit to any account of the University with the Bank.

4. This resolution shall take effect on the XXXX, 2019 and from that date shall supersede a resolution passed by the Board of Governors of the University on the 1st day of July, 2017 and shall remain in force and effect as regards each office, branch or agency of the Bank having in its custody any of such property including such securities of the University until notice in writing abrogating or modifying this agreement is received by such office, branch or agency of the Bank.

The Board further resolves:

That McMaster University may enter into a Safekeeping Agreement with the CIBC Mellon Global Securities Services Company (and certain of its Affiliates), in accordance with the provisions of the foregoing resolution.

Board of Governors
XXXX, 2019

Appendix D

RESOLUTION FOR THE SALE OF SECURITIES

The Board hereby resolves:

1. THAT any two of the Chair of the Board of Governors, the Vice-Chair(s) of the Board of Governors, the Chair of the Planning and Resources Committee of the Board of Governors, the President, the Vice-President (Administration), the Assistant Vice-President (Administration), the Controller, the Executive Director, Strategic Projects Financial Affairs, Treasurer or one of the aforementioned together with the Senior Investment Accounting Analyst or the Senior Investment Analyst of this University be, and they hereby are, fully authorised and empowered to transfer, convert, endorse, sell, assign, set over and deliver any and all shares of stock, bonds, debentures, notes, subscription warrants, stock purchase warrants, evidence of indebtedness, or other securities now or hereafter standing in the name of or owned by this University, and to make, execute and deliver, under the corporate seal of this University or otherwise, any and all written instruments of assignment and transfer necessary or proper to effectuate the authority hereby conferred.

2. AND FURTHER that there shall be annexed to any instrument of assignment and transfer, executed pursuant to and in accordance with the foregoing resolution, a certificate of the Secretary of the Board, Vice-President (Administration) or Assistant Vice-President (Administration) of this University in office at the date of such certificate, and such certificate shall set forth these resolutions and shall state these resolutions are in full force and effect, and shall also set forth the names of the persons who are then officers of this University, then all persons to whom such instrument with the annexed certificate shall thereafter come shall be entitled without further inquiry or investigation and regardless of the date of such certificate to assume and to act in reliance upon the assumption that the shares of stock or other securities named in such instrument were theretofore duly and properly transferred, endorsed, sold, assigned, set over and delivered by this University, and that with respect to such securities the authority of these resolutions and of such officers is still in full force and effect.

Board of Governors
XXXX, 2019

Appendix F

**RESOLUTION RESPECTING DIRECTIONS TO
THE CIBC MELLON GLOBAL SECURITIES SERVICES COMPANY
BY McMASTER UNIVERSITY**

The Board hereby resolves:

1. a) THAT directions or approvals given by the University under or pursuant to Section 4 of the Master Trust Agreement between McMaster University and CIBC Mellon Trust Company dated July 1, 2000, the Participating Trust Agreement for the Contributory Pension Plan for Salaried Employees of McMaster University including McMaster Divinity College dated July 1, 2000, the Participating Trust Agreement for the Contributory Pension Plan for Salaried Employees of McMaster University including McMaster Divinity College 2000 dated July 1, 2000 and the Trust and Custodial Services Agreement for the Contributory Pension Plan for Hourly-rated Employees dated June 30, 1999; and

   b) THAT directions or approvals given by the University under or pursuant to Section 4 of the Custodial Services Agreements between McMaster University and the CIBC Mellon Global Securities Services Company (and certain of its Affiliates) dated June 30, 1999 for the Investment Pool, which includes the General Trust and Endowment Funds and certain other restricted funds

shall be given on behalf of the University by any two of the President, the Vice-President (Administration), the Assistant Vice-President (Administration), the Controller, the Executive Director, Strategic Projects Financial Affairs, the Treasurer or one of the aforementioned together with one of the Assistant Vice-President and Chief Human Resources Office, Director, HR Services and Systems, Senior Manager, HR Projects, Analytics and Payroll, Senior Manager, Total Rewards, , the Senior Investment Accounting Analyst or the Senior Investment Analyst.

2. THAT this resolution shall take effect on the XXXX, 2019.

Board of Governors
XXXX, 2019

Appendix G

BORROWING RESOLUTION

The Board hereby resolves:

1. THAT the powers contained in clause 1 (a) of By-Law Number 3 being a by-law respecting the borrowing of money, the issuing of securities and the securing of liabilities by the University, be and they are hereby delegated to any two of the Chair of the Board, the Vice-Chair(s) of the Board, the Chair of the Planning and Resources Committee, the President, the Vice-President (Administration), the Assistant Vice-President (Administration), the Controller, the Executive Director, Strategic Projects Financial Affairs, the Treasurer for amounts up to $100,000. For amounts in excess of $100,000 these same powers are delegated to any two of the Chair of the Board, the Vice-Chair(s) of the Board, the Chair of the Planning and Resources Committee; or one of the aforementioned together with one of the President or the Vice-President (Administration).

2. THAT this resolution shall take effect on the XXXX, 2019 and from that date shall supersede a resolution passed by the Board of Governors on the 1st day of July, 2017.

Board of Governors
XXXX,2019

Attachment II

McMaster University

Deidre ("Dee") L. Henne
AVP (Administration) & CFO

One James North, Rm 414
Hamilton, Ontario, Canada
L8R 2K3

Phone: 905.525.9140, Ext. 23083
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January 18, 2019

To: Planning and Resources Committee

From: AVP (Administration) & Chief Financial Officer

Re: Revisions to Appendix E - Resolution Respecting the Execution of Instruments by McMaster University

---

Background
In accordance with the 1976 McMaster University Act, Section 9, the Board is responsible for the management and control of the University's conduct with respect to property, revenues, business and affairs. Appendix E is the Board resolution to designate who is authorized to sign deeds, transfers, assignments, contracts, obligations, agreements or other documents on behalf of the University.

Each year the Financial Affairs office undertakes a review of Appendix E, engaging Vice-Presidents and key AVP stakeholders, to identify if amendments are needed due to title changes or meet evolving business needs. Enclosed is a copy of the redlined Appendix E and a clean copy. The key recommended changes include:

- Title adjustments reflecting role title changes occurring over the course of the past 12 months;
- Role additions to the Capital related charts to ensure reasonable back-up support exists when approvals are needed;
- Removal of the chart A.4 footer for change-order authority by adopting the main body of chart A.4 for change-orders (resulting in enhanced alignment with existing signatories and added role back-ups);
- Unit-level approval threshold modification from $50,000 to $100,000

Unit level approval change
We are recommending an increase in the unit level for the following reasons:

1. aligning unit level authority up to the level defined within *Broader Public Sector Accountability Act* for institutional policy application
2. consistency with other research intensive comparator institutions (McGill, Western, Queen's, see details in Appendix 1)
3. It will enable efficiencies within the departments allowing unit level owners, often Directors, to procure items in accordance with the Strategic Procurement policy and the *Broader Sector Accountability Act* without the need for an additional more senior signatory for items between $50,000 and $100,000. These efficiencies, if approved, will be incorporated into the implementation of MacBuy, which applies approval workflows and will be used by the procurement system for requisitions and purchase orders.

This increase affects over 1,000 staff using the system. We do not regard this change to increase any material risk for reasons noted below:

Further Explanation Regarding Threshold Change
At McMaster, unit budgets are managed by unit level Managers, Directors, or higher-level roles. Each unit reports up to an area envelope owner being a Vice-President or the President, who according to our Act and By-laws are ultimately accountable for their budget portfolio to Budget Committee (as delegated by the President).

The unit level owner reports budget and actual results (and explains variances) in a pre-defined budget template. At McMaster, variances for revenue and expense segments greater than $100,000 or 10% must be explained to budget committee (a segment represents operating allocation, other revenues, recoveries, salaries, benefits, and other expenses).

The budget templates completed by unit level owners are reviewed by the Budgeting Services department for completeness along with the respective area Vice-President portfolio owner prior to submission to Budget Committee for formal receiving. Budget templates are also shared with Deans and Directors of Finance and Administration who participate in a Budget Committee conference. The conference attendees are able to ask broad review questions of the unit level owners during the conference allowing for real-time responses before each area budget, projections, and actuals are received by the Budget Committee.

Further Information Regarding MacBuy
MacBuy is an electronic shopping cart tool that will load Strategic Procurements' pre-negotiated approved vendor contracts and pricing schedules into the shopping system. The loaded items are considered "best" negotiated prices, most of which occur using an Ontario-wide or other collaborative negotiation process. Adjusting the approval threshold allows workflow for items less than $100,000 to be entered by an approved shopper, requisitioner, or requisitioner/approver, which is then flowed to the unit level leader (manager, director, or higher) for workflow approval before the requisition request is converted into a purchase order by Strategic Procurement.

The MacBuy system provides increased pricing controls to the University and requires all requisition activity above $10,000 to occur within this price-controlled environment. The MacBuy system includes built in analytics that informs Strategic Procurement of volumes by product item, which allows McMaster to negotiate better pricing deals in the future by focusing our deepest discounts onto the line items units need the most.

Increasing the threshold from $50,000 to $100,000 is recommended for its administrative efficiency and based on the fact that MacBuy prices available to unit level owners have been pre-negotiated and loaded into MacBuy by Strategic Procurement. For Limited Tendering Forms (LTFs) the process includes further one-up envelope approval and AVP (Administration) and Chief Financial Officer authorization.

With MacBuy, the budget oversight processes remain in place and unchanged. Continuous internal audits (quarterly) examining procurement processes will remain in place as well. Internal audits, since the implementation of Mosaic, have found controls adequate without issues identified or further management recommendations. Finally, the annual external audit processes will remain in place and no management letter points have been raised with respect to procurement processes since Mosaic.

Conclusion on Threshold
In order to improve McMaster's administrative efficiencies and align thresholds to *BPSAA,* thresholds by which "house-rules" apply ($100,000 or less) without increased compliance or spend risk, the unit level threshold is recommended to move from $50,000 to $100,000.

Recommendation
That the Planning and Resources Committee, approve for recommendation to the Board of Governors, the attached revisions to Appendix E Resolution Respecting the Execution of Instruments by McMaster University.

Appendix 1: University thresholds for Comparable Higher Education Institutions (defined as large Universities with high research Intensity)

McGill:

Vice Presidents (VPs) are authorized to executed contracts up to $4M, VPs can delegate procurement/signing authority to Grade 7 or above level employees for amount $100,000 or less. The Provost, Secretariat, Counsel are able to sign/buy $2M or less, with same delegation ability for $100,000 or less. Similar to McMaster, signing officers may delegate to individuals/unit leads within their.

For more information, refer to McGill's website: https://mcgill.ca/secretariat/files/secretariat/appendix_a_signing_policy_may_2018.pdf

Queens University:

Signing authorities for up to $100,000 are delegated to the Department Head or Area Director levels.

Purchase of Goods and Services Contracts (Excluding Real Property)

This category includes purchase agreements with third parties from all sources of funds, including Research. These Contracts include **purchase orders for goods and services** including consulting services, marketing services, outside legal services, equipment leases, IT and software licenses, and maintenance agreements/ warranties. Purchase of all Goods and Services must comply with Queen's Procurement Policy.

In cases where a Contract to purchase the good or service has not been signed in accordance with the matrix below, the applicable Signing Officer in the matrix below must approve the payment.

RELATED PROCEDURE: Purchase of Goods and Services Contracts (including Construction)

Contract Value (Exclusive of tax)	Approval required prior to Contract execution	Signing Officer - Non-Research Funds Column A	Signing Officer - Research Funds
up to $10,000	Not applicable	Administrator responsible for Budget designated by Dean / Department Head / Director of Area	Principal Investigator (PI) or designate
up to $100,000	Not applicable	Department Head or Director of Area	PI or designate
up to $500,000	Director, Strategic Procurement Services (SPS), or designate	Dean or designate or Associate Dean or Vice-Provost or Associate Vice-Principal of Area	Column A + PI or designate
up to $1,000,000	Director, SPS	Vice-Principal of Area or Associate Vice-Principal (Finance)	Column A + PI
up to $5,000,000	Director, SPS	Vice-Principal of Area or Vice-Principal Finance and Administration	Column A + PI
Over $5,000,000	Director, SPS + Board of Trustees	Principal, jointly with Vice-Principal of Area and Vice-Principal Finance and Administration	Column A + PI

University of Toronto:

No threshold dollar amount is defined in the University's Execution of Instruments by-law, instead reference is "if within the unit's budget" roles identified for the approval are head of unit and above (same us ours). Reference to the purchasing policy identifies required number of quotes by threshold, but does not defined further approval levels by role, relevant excerpt below:

> (1) Specific classes of contracts and documents in the normal course of business and consistent with university policies and procedures not requiring signature under seal may also be approved and signed as follows:
>
> (a) Agreements in the normal course of business for the purchase of goods or services for a budget unit, using that unit's funds, and conforming to the requirements of the University's Purchasing Policy and other relevant policies, may be approved and signed by the Principal, Dean, Vice-Dean, Associate Dean, Director, Chair or other head of the budget unit or by their designate given written authority to make such purchases by the Principal, Dean, Vice-Dean, Associate Dean, Director, Chair or other head of the budget unit. All capital leases (i.e. those with purchase commitments) are reviewed by the Procurement Services Department, which retains executed copies of the documents.

University of British Columbia:

Authority is at the unit level (head) up to $75,000, further details would require contacting them since their policies are not public.

Appendix E

RESOLUTION RESPECTING THE EXECUTION OF INSTRUMENTS BY McMASTER UNIVERSITY

I JURISDICTION AND PURPOSE

1. The 1976 Act, Section 9, vests in the Board the government, conduct, management, and control of the University and of its property, revenues, business and affairs. In Board By-law No. 5, the Board has authorised officers of the University to sign deeds, transfers, assignments, contracts and obligations on behalf of the University.

2. The purpose of this resolution is to designate clearly which persons are authorised to sign deeds, transfers, assignments, contracts, obligations, agreements or documents on behalf of the University when such documents have been approved by the appropriate body or official of the University. These include all documents related to the University receiving money, to the purchase or lease of goods and services and to agreements having no financial commitment.

3. All dollar amounts cited in this document are exclusive of duties, taxes and shipping charges. Contracts that span over a period of greater than one (1) year should not be broken down into annual amounts when assessing the appropriate level of contract execution.

4. This resolution shall not apply to the signing on behalf of the University of the certificates and other academic documents arising from the actions of the Senate in accordance with the 1976 Act, Section 13.

II RESPONSIBILITIES AND CONFLICT OF INTEREST

1. Persons with signing authority have the responsibility to exercise their authority in the manner of a prudent University administrator. Where the commitment involves Real Estate, the Vice-President (Administration) shall review the documents. Depending upon the nature and complexity of the agreement to be signed, the responsibility of persons with signing authority shall include an assessment of some or all of the following:

a) the ability of the University to meet any financial obligations resulting from the agreement;

b) the ability of the other party(ies) to meet its (their) obligations;

c) compliance with labour legislation, employee collective agreements, sponsor guidelines, tax legislation, other legislative and regulatory requirements, and applicable University policies;

d) whether all approvals required by any applicable policy or practice have been obtained for the contract;

e) whether terms and conditions of the contract should be reviewed by Strategic Procurement;

f) in association with the Vice-President (Administration), whether legal advice is needed;

g) the financial and other benefits that are expected to flow to the University as a result of the contract;

h) whether the overhead rate, if any, included in the contract is consistent with University guidelines;

i) the provisions regarding intellectual property requirements, physical, bodily injury and personal injury indemnities, and environmental liabilities.

2. Persons designated or appointed under this resolution shall not exercise their signing authority in circumstances where conflicts of interest exist or could be seen to exist; in addition, such persons shall inform their immediate supervisor when such circumstances exist. [Persons designated or appointed under this resolution are referred to "Conflict of Interest Policy for Employees" (2012), the "Statement on Conflict of Interest in Research" (2009) and "Statement of Ethics for Senior Executive Officers" (1990).]

3. One of the original signed contracts (if retained by the University) must be deposited with the Vice-President (Administration) or be maintained in a location approved by the Vice-President (Administration).

4. Vice Presidents must ensure a register of contractual documents pertaining to their portfolio is maintained, excluding documents for the purchase of goods and services which are maintained by Strategic Procurement.

That register is to include:

a) a list of contractual documents signed by the appropriate individuals and the corresponding execution date;

b) the name of any other party or parties signing the documents and their respective execution dates;

c) a brief description of the subject matter contained in the documents;

d) the effective start and termination date and the actual or estimated amount of each contractual obligation.

III RESOLUTION

The Board hereby resolves:

1. That each of the following University officers be and is hereby authorised, where required, to affix the corporate name and seal of the University on all deeds, transfers, assignments, contracts, obligations or documents on behalf of the University, provided that the agreement has been signed in accordance with the provisions of this policy: the Chair of the Board, the Vice-Chair(s) of the Board, the Chair of the Planning and Resources Committee, the Secretary of the Board, the President, the Provost, the Vice-President (Administration), the Dean and Vice-President (Health Sciences), the Vice-President (Research) and the Vice-President (University Advancement).

2. Notwithstanding provisions found elsewhere in this resolution, any contract or agreement to which the corporate seal is to be affixed must include the signature of an officer authorised by the Board of Governors to affix to seal.

3. The personnel authorised to execute contracts and agreements relating to the operation and development of the University and to bind the University to the terms thereof shall depend on the dollar amount of such contracts and agreements, the subject matter of such contracts and agreements as set out below and whether or not the University is receiving or paying out money under the contract or agreement. For agreements that span over a period of greater than one (1) year, dollar amounts, including annual maintenance fees, should be aggregated across all years and should not be broken down into per annum amounts when assessing the proper authorisation required.

Authority Matrices

Contracts

Signing authority for contracts and agreements above $~~5~~100,000, and to bind the University to the terms thereof, must be executed by a minimum of two approvers from the charts below, one of whom must be from the highest level.

No contract over $10,000 for the purchase of goods or services may be released until approved through the University's enterprise electronic system using the charts below.

Where a purchase represents a renewal the thresholds below apply to the total cost of the previous term(s) and new term.

Purchase requisitions related to the purchase or lease by the University of Goods and Services and/or Real Estate will be approved in the electronic system by the authorities given in the charts below.

A.1 All Funds: excluding the Research Fund (see A.2) and Capital Fund (see A.3 and A.4)

	Department and/or Project Holder **(Account Holder)**	**Only for Technology –Chief Technology Officer** **(Hardware or software related goods or services)**	**One of area: AVP^, Dean, VP**	**Following Planning and Resources Committee Approval:** **One of: AVP(Administration) and Chief Financial Officer, VP(Administration), Provost, President**	**Following Board of Governors Approval: One of:** **VP(Administration), Provost, President, Board Secretary, Board Chair**
< $~~5~~100,000	X				
$~~5~~100,000 up to $ $1,999,999	X	X	X		
$2,000,000 up to $9,999,999	X	X		X	
Over $10,000,000	X	X			X
			Additional Signature must be at least one level up from 1st	The individual approving signs to confirm Board/Committee approval.	

AVP^ signing officers include: Assistant Vice-President, Associate Vice-President, Vice-Provost, Registrar, University Librarian, Treasurer, Director of Faculty Administration, ~~,~~ Director of Research Finance ~~and~~ Administration~~.~~, Associate Dean of Education Services (Faculty of Health Sciences), and Controller.

A.2 Research Fund

	Project Holder (Account Holder)	Secondary Research Office (Central/ FHS-HRS)	Only for Technology – Chief Technology Officer (Hardware or software related goods or services)	One of: AVP*△, VP	Following Planning and Resources Committee Approval: One of: AVP(Administration) and Chief Financial Officer , Area VP, VP(Administration), Provost, President	Following Board of Governors Approval: One of: VP(Administration), Provost, President, Board Secretary, Board Chair
< $5100,000	X	X				
$5100,000 up to $1,999,999	X	X	X	X		
$2,000,000 up to $9,999,999	X	X	X		X	
Over $10,000,000	X	X	X			X
				Additional Signature must be at least one level up from 1st		
					The individual approving signs to confirm Board/Committee approval.	

AVP*△ signing officers include: Associate Vice-President (Research), Assistant Vice-President, Research Administration, Associate Dean, Health Sciences (Research), Director of Research Finance Administration ~~and Finance for University Research Envelope~~, Assistant Vice-President ~~and Chief Administrative Officer~~ (Faculty of Health Sciences), and Assistant Dean, Research Infrastructure.

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A.3 Capital Fund *(Project Approval)*

	One of, Director of Design and Construction, Director of Maintenance	AVP (Facilities Services) or VP ~~(Administration)~~Director, Design and Construction	VP (Administration) or AVP (Administration) and Chief Financial Officer	Following Planning and Resources Committee Approval: One of: AVP(Administration) and Chief Financial Officer, Provost, or President.	Following Board of Governors Approval: One of: Provost, President, Board Secretary, Board Chair
< $5100,000	X				
$5100,000 up to $499,999	X	X			
$500,000 up to $1,999,999	X	X	X		
$2,000,000 up to $9,999,999	X	X		X	
Over $10,000,000	X	X			X
Cumulative cost overruns exceeding the lesser of (i) 25% of the original approved overall project budget, or (ii) $500,000, require re-approval by the highest original approver. *		Additional Signature must be at least one level up from 1st		The individual approving signs to confirm Board/Committee approval.	

*N.B. If cost overruns result in a total revised value that coincides with a higher approval threshold, then the approval of the higher level approver must also be obtained.
*Cost overruns on Board or Planning and Resources Committee approved projects will be reported to the Planning and Resources Committee at its next meeting.

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A.4 Capital Fund ***(Award of Purchase Orders/Contracts) including Professional Consultants****

	One of, Director of Design and Construction, or, Director of Maintenance	**AVP (Facilities Services) or Director, Design and Construction ~~VP (Administration)~~**	**VP (Administration) or AVP (Administration) and Chief Financial Officer**	**Following Planning and Resources Committee Approval:** **One of: AVP(Administration) and Chief Financial Officer, Provost, or President.**	**Following Board of Governors Approval:** **One of: Provost, President, Board Secretary, Board Chair**
< $~~5~~100,000	X				
$~~5~~100,000 up to $499,999	X	X			
$500,000 up to $1,999,999	X	X	X		
$2,000,000 up to $9,999,999	X	X		X	
Over $10,000,000	X	X			X

Change Orders to existing Contracts/Purchase Orders which do not increase the approved Overall Project Budget require approval ~~as following:~~

~~1) Individual Change Order of value less than $50,000 to be approved by Director of Design and Construction.~~

~~2) Individual Change Order > $50,000 up to $499,999 to be approved by Assistant Vice-President and Chief Facility Officer.~~

~~3) Individual Change Order > $500,000 up to $1,999,999 to be approved by Vice-President (Administration).~~

~~4) Individual Change Order > $2,000,000 up to $9,999,999 to be approved by the Planning and Resources Committee.~~

~~Individual Change Order > $10,000,000 to be approved by the Board of Governors, following Planning and Resources Committee endorsement.~~ in accordance with the thresholds and roles noted above.

~~5)~~

~~Change orders that cumulatively add up to more than the approved overall project budget but do not result in an increase to overall project budget are to be advised to the next level approver for review.~~ If change orders, alone or cumulatively, result in an increase to the overall project budget, approval for the increased overall project budget must be sought subject to cost overrun approval limits.

* Includes Architects, Engineers, Design Consultants and Construction Managers.

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In no case may a signing officer sign as first approver and highest approver. The minimum two signatures must be different individuals.

All purchases of goods and services and leases must be executed using the duly authorised processes developed and supported by the d~~D~~epartment of Strategic Procurement.

All Investments must be executed by the Treasurer, using the duly authorized processes of the appropriate committees of the Board of Governors.

B. Human Resources

1. Employment related contracts will follow collective agreement provisions as ratified by the Board of Governors, or defined salary policies or guidelines, such as the applicable policies governing compensation discussions for members of the McMaster University Faculty Association, and the terms of reference of the Human Resources Committee of the Board of Governors.

2. This policy does not restrict remittance to the Receiver General as required by law for Payroll. This includes remittances such as Canada Pension Plan, Employment Insurance premiums, Income Tax, Employer Health Tax or other contributions as may be required by Federal or Provincial legislation.

3. This policy does not restrict remittance for monthly or quarterly payments to approved employee benefit and insurance providers (such as Health, Dental, Group RRSP, Group Life Insurance, Pension, Post-Retirement benefits, and liability insurance plans) for delivery of contracted services. Approval of benefit, benefit administration, and insurance contracts awarded through the Request for Proposal process will follow the charts in this policy.

C. For All Non-Competitive Consulting Services (as defined by the Broader Public Sector Procurement Directive)

i. Up to $999,999

Shall be executed by the Approvers identified in the appropriate chart in Section A above and the President,

ii. $1,000,000 and Over

Shall be executed by the approvers identified in the appropriate chart in Section A above after approval has been given by the Board of Governors or by its Executive and Governance Committee.

D. For All Agreements where the University is Receiving Donations, Bequests or Gifts (see Gift Acceptance Policy (2011))

i. Over $1,000,000~~.00~~,

Shall be executed by the President and the Vice-President, University Advancement.

ii. Less than $1,000,000,

Shall be executed by the Vice-President, University Advancement.

iii. Acceptance of any gift that involves a proposal to name is conditional upon final approval of the naming by the Board of Governors.

E. For All other Agreements, not involving Research and Intellectual Property, where the University is Receiving Money, or where the Agreement Does Not Deal with the Payment by Either Party of Money

i. Under $2,000,000.00 or where the agreement does not deal with the payment by either party of money

Shall be executed by two (2) of the officers as identified in the charts in Section A, one of whom must be an identified Dean, AVP^ or Vice President of the University, and the second must be a Vice-President or the President.

ii. Over $2,000,000 and less than $10,000,000

Shall be executed by one of the officers identified in the charts in Section A, after approval has been given by the Planning and Resources Committee of the Board of Governors.

iii. $10,000,000 and over

Shall be executed by one (1) of the officers designated in section III.1, after approval has been given by the Board of Governors or by its Executive and Governance Committee.

F. Research And Intellectual Property: For All Agreements, Involving Research And Intellectual Property, Or Resulting From A Peer Or Merit Review Process Where

- **The University Is Receiving Money;**
- **The University Is Transferring Funds To A Collaborating Partner Institution; or**
- **The Agreement Does Not Deal With The Payment By Either Party Of Money**

i. Under $2,000,000, including where the agreement does not deal with the payment by either party of money

only one signature is required, from the chart F.1. below.

ii. $2,000,000 and over

In the case of agreements involving research funding that result from a peer or merit review process, authority is delegated to two (2) of the officers designated in section III.1.

In the case of where receipt of research funds requires the expenditure of incremental McMaster cash specific to the proposed research, approval for this incremental cash contribution will follow the charts in Section A.

F.1.

	One of AVP^, VP	Two (2) of the signing officers designated in Section III.1
Under $2,000,000	X	
$2,000,000 and over		X

AVP^ signing officers include: Executive Director of the McMaster Industry Liaison Office, , Associate Vice-President (Research), Associate Dean Health Sciences (Research), Director, Health Research Services, Director, Research Office for Administration, Development and Support, and Assistant Vice-President, Research Administration.

IV COMMENCEMENT

1. This resolution shall take effect on 7xth day of June, 201x8 and from that date shall supersede a Board of Governors' resolution that took effect on the 1st day of July, 2017.

Related Policies

Strategic Procurement
http://www.mcmaster.ca/bms/policy/purchase/SP-01.pdf

Internal Audit Department Policy Statement
http://www.mcmaster.ca/policy/General/BusOp/IntAuditPolicy.pdf

Construction And Maintenance Projects Policy
http://www.mcmaster.ca/policy/General/BusOp/ApprovalAuthoritiesConstructionMaintenance.pdf

Statement of Ethics for Senior Executive Officers
http://www.mcmaster.ca/policy/Governance/Other/Ethics%20Statement%20for%20Senior%20Executives.pdf

Statement on Conflict of Interest in Research
http://www.mcmaster.ca/policy/faculty/Research/StatementOnConflictOfInterestInResearch.pdf

Conflict of Interest Policy for Employees
http://www.mcmaster.ca/policy/Employee/Conflict_of_Interest_Policy.pdf

Gift Acceptance Policy
http://www.mcmaster.ca/policy/advancement/GiftAcceptancePolicy.pdf

Intellectual Property Policy
http://milo.mcmaster.ca/policies/ip-policy

Board of Governors Meeting Dates
http://www.mcmaster.ca/univsec/bog/schedules.cfm

Board of Governors
June 7, 2018

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UNIVERSITY SECRETARIAT
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REPORT TO THE BOARD OF GOVERNORS FROM THE PLANNING AND RESOURCES COMMITTEE

i. 2018 Salaried Pension Plan Valuations

On February 14, 2019, the Planning and Resources Committee reviewed and approved for recommendation to the Board of Governors, the 2018 salaried pension plan valuations. The material was also approved by the Pension Trust Committee. Details of the actuarial valuations are contained in Attachment I of the circulated report.

It is now recommended,

that the Board of Governors approve the results of the Actuarial Valuation for Funding Purposes as at July 1, 2018 for the Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College (Plan 2000) and the Actuarial Valuation for Funding Purposes as at July 1, 2018 for the Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College (Original Plan) and be filed with the Financial Services Commission of Ontario and the Canada Revenue Agency.

ii. Contributory Pension Plan for Hourly-Rated Employees of McMaster University Including McMaster Divinity College

At its meeting on February 14, 2019, the Planning and Resources Committee reviewed and approved, for recommendation to the Board of Governors, the Hourly Plan text restatement, effective January 1, 2019. The plan text restatement and summary of changes are included in the circulated materials.

It is now recommended,

that the Board of Governors approve the Contributory Pension Plan for Hourly-Rated Employees of McMaster University Including McMaster Divinity College (Amended and restated effective January 1, 2019), as contained in the attachment.

Board of Governors: FOR APPROVAL
March 7, 2019

Attachment I

Deidre ("Dee") L. Henne
AVP (Administration) & CFO

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February 4, 2019

To: Planning and Resources Committee

From: AVP (Administration) & CFO, Treasurer

Subject: **2018 Salaried Pension Plan Valuations**

Background

The Ontario Pension Benefits Act and Regulations thereunder requires McMaster University to submit an actuarial valuation for the Contributory Pension Plan for Salaried Employees of McMaster University Including Divinity College (Plan 2000) and the Contributory Pension Plan for Salaried Employees of McMaster University Including Divinity College (Original Plan) (together known as "the Salaried Pension Plans") no later than every three years. The legislative filing requirements were met by filing actuarial valuations as at July 1, 2017 in March 2018.

However, in April 2018 the Ontario Pension Benefits Act Regulation 250/18 was enacted for all plans filed on or after January 1, 2018. The Act formalized into law a number of anticipated changes to defined pension plan funding framework. As a result, of the funding rule changes, the University actuary, Mercer, was asked to prepare a summary analysis of optional early filing for the Salaried Pension Plans valuations as at July 1, 2018 to incorporate the Act changes compared to maintaining the July 1, 2017 filing. Subsequent to the review, the Pension Trust Committee agreed that the optional early valuation filing should proceed.

Regulatory Update

On April 18, 2018, the Ontario Ministry of Finance announced the finalization of Regulation 250/18 of the Pension Benefit Act which included the new funding rules for single-employer pension plans registered in Ontario. Management and Pension Trust Committee evaluated the net favourable impact of the new funding rules. As such, McMaster has elected to file the salaried plans at July 1, 2018 in order to apply the new funding rules early, rather than the normal three-year filing cycle. This election means that the next filing for the salaried plans will be in three years or July 1, 2021.

Benefits of Filing July 1, 2018 Valuations

At the December 2018 meeting, the Pension Trust Committee determined that it would be advantageous to file the actuarial valuations based on July 1, 2018 valuation date due to the benefits noted below:

- Improvement in the funded status of the Plan since the last valuation is captured and extends contribution certainty to 2021 under the new rules making explanations about the current status of the plan more transparent applying the current regulations;
- Reduction in fees payable to the Pension Benefits Guarantee Fund ("PBGF"), which is the provincial benefit plan insurance fund, savings to McMaster are $4.6 million for 2019 and 2020 which are foregone if the July 1, 2018 filing does not occur; and
- Elimination of solvency payments because McMaster's plans meet the new solvency funding threshold of 85%.

2018 Valuation Reports

The Salaried Pension Plans draft valuation reports reflect the amendments to the Regulations to *the Pension Benefits Act (Ontario)*.

The draft valuation reports for the Salaried Pension Plans and associated valuation assumptions have been reviewed and approved by the Pension Trust Committee at the January 22, 2019 meeting. The detailed and summary valuation results for the Salaried Pension Plans are attached to this memo as Appendix A. Mercer Memo – Summary Actuarial Reports for Plan 2000 and Original Plan, Appendix B. Actuarial Valuation - Plan 2000 and Appendix C. Actuarial Valuation - Original Plan.

The valuation results for the Salaried Pension Plans have been prepared by our actuary, Mercer, and reviewed by Management to ensure that the assumptions agreed to at the Pension Trust Committee have been incorporated into the valuation, and that the underlying data provided by Human Resources regarding plan members is accurate and appropriate, and the summary of plan provisions is accurate.

The valuations are due to be filed with the Financial Services Commission of Ontario (FSCO) and the Canada Revenue Agency (CRA) by March 31, 2019.

Funding Status

Management expects the funding requirements associated with the updated Salaried Pension Plans valuations to be manageable. The updated Salaried Pension Plans valuations result in lower total funding requirements for the University over the next three-year period as a consequence of the improved funded position, and the application of the updated rules. The new rules will require McMaster to begin contributing to a Provision for Adverse Deviation (PfAD), however overall net required payments are lower than the previous July 1, 2017 filing. The following summarizes the University's Salaried Pension Plans valuation funding status at July 1, 2018:

- The funded status on a going concern basis of the Salaried Pension Plans improved relative to the previous valuation as at July 1, 2017. Plan 2000's going concern funded status improved to a surplus, before PfAD of $90.9 million from a $30.8 million going concern funding deficit in 2017. After giving consideration to the new funding requirements associated with the PfAD, the going concern shortfall is $143.4 million.

- The Original Plan's going concern surplus before PfAD, improved to $0.9 million relative to $0.5 million as at July 1, 2017. After taking into consideration the funding requirements associated with the PfAD, the going concern funding excess reduces to $0.6 million.

- The improvement in the going concern position was largely due to stronger investment returns relative to the growth in liabilities. The benefit of stronger markets is partially offset by the new requirements for the Salaried Pension Plans to hold provisions for adverse deviation (PfAD).

- Based on the updated assumptions, Plan 2000 reported a $197.2 million solvency deficit versus a $342.1 million solvency deficit in 2017. The Original Plan valuation solvency surplus is $153 thousand versus $174 thousand solvency deficiency at July 1, 2017. The improvement in the Salaried Pension Plans solvency position was primarily attributable to the strong investment performance, and the rise in the level of interest rates.

- The University's current service cost (inclusive of PfAD) as a percentage of employee contributions increased from 118% to 123% for Plan 2000, and declined from 281% to 280% for the Original Plan. The increased requirements for Plan 2000 was due primarily to the PfAD, which was partially offset by the increase in the member contribution rates for certain groups under Plan 2000 and assumption changes. For the Original Plan, the impact of the PfAD was fully offset by the increase in the member contribution rate.

Funding Status Continued…

- The estimated pension solvency payment in 2018/19 for Plan 2000 is $0 ($15.4 million based on the July 1, 2017 valuation report).

- The estimated minimum total annual funding requirement (service cost and special payments) for Plan 2000 is $41.2 million in 2018/19 ($50.9 million based on the July 1, 2017 valuation report), increasing to $54 million in 2019/20 ($51.1 million based on the July 1, 2017 valuation report).

- The estimated minimum total annual payment obligation for the Original Plan is $78 thousand in 2018/19 ($142 thousand based on the July 1, 2017 valuation report), increasing to $115 thousand in 2019/20 ($142 thousand based on the July 1, 2017 valuation report).

- The annual PBGF fees declines to $1.7 million per year from approximately $4 million[1] per year based on July 1, 2017 valuation.

The Pension Trust Committee discussed the results with its actuary, Mercer, and recommends to the Planning and Resources Committee that the 2018 Actuarial Valuation Reports for the Salaried Pension Plans be submitted to FSCO and the CRA.

Recommendation

That the Planning and Resources Committee approve, for recommendation to the Board of Governors, that the results of the Actuarial Valuation for Funding Purposes as at July 1, 2018 for the Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College (Plan 2000) and the Actuarial Valuation for Funding Purposes as at July 1, 2018 for the Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College (Original Plan) and be filed with the Financial Services Commission of Ontario and the Canada Revenue Agency.

[1] Applicable until July 1, 2020 Valuation date

Appendix A. Mercer Memo – Summary Actuarial Reports for Plan 2000 and Original Plan

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MEMO

TO: Planning and Resources Committee, McMaster University

DATE: 4 February 2019

FROM: Chad Spence, FSA, FCIA, CFA

SUBJECT: Actuarial Valuation Results as at July 1, 2018

The attached exhibits provide summarized results of the funding valuations of the Salaried Plan 2000 and the Original Plan as at July 1, 2018. The assumptions used to prepare these valuation results are summarized in Exhibit G and Exhibit H.

EXHIBIT A

Plan 2000
Summary of Funding Valuation Results ($000)

	JULY 1, 2018	JULY 1, 2017
Going Concern Basis		
Market value of assets	$2,063,331	$1,903,823
Asset smoothing adjustment	(72,849)	(75,152)
In-transit contributions (payments)	(6,926)	(87)
Net assets	$1,983,556	$1,828,584
Going concern liabilities	1,892,602	1,859,365
Provision for adverse deviations	234,374	N/A
Funding excess (shortfall)	($143,420)	($30,781)
Solvency Basis		
Market value of assets	$2,063,331	$1,903,823
In-transit contributions (payments)	(6,926)	(87)
Reserve for wind-up expenses	(900)	(900)
Net assets	$2,055,505	$1,902,836
Solvency liabilities	$2,252,753	$2,244,977
Surplus (shortfall) on a solvency basis	($197,248)	($342,141)
Solvency ratio	91%	85%

	JULY 1, 2018	JULY 1, 2017
Wind-up Basis		
Net assets	$2,055,505	$1,902,836
Wind-up liabilities	$2,252,753	$2,244,977
Wind-up surplus (deficit)	($197,248)	($342,141)
Transfer Ratio	0.91	0.85
Current Service Cost (year following valuation date)		
Total current service cost	$56,413	$55,096
Estimated member contributions	(28,481)	(25,242)
Estimated University current service cost	$27,932	$29,854
Provision for adverse deviations ("PfAD") in respect of current service cost	$7,228	N/A
Total	$35,160	$29,854
University current service cost and PfAD expressed as a percentage of member contributions	123%	118%
Estimated maximum eligible employer contribution	$232,408	$371,943
Next required valuation date	July 1, 2021	July 1, 2020

Plan 2000 Minimum Special Payments ($000)

	JULY 1, 2018	JULY 1, 2017
2017/18	-	$6,028
2018/19	$6,028	$21,414
2019/20	$18,885	$21,414
2020/21	$18,885	-

EXHIBIT B

Plan 2000
Reconciliation of Going-Concern Funded Status ($000)

Funding excess (shortfall) as at previous valuation		$(30,781)
Interest on funding excess (funding shortfall) at 5.60% per year		(1,724)
Employer's special payments, with interest		30,730
Expected funding excess (funding shortfall)		($1,775)
Net experience gains (losses):		
– Net investment return (market basis)	$51,239	
– Impact of asset smoothing	6,512	
– Increases in pensionable earnings	3,806	
– Increases in YMPE/maximum pension	5,964	
– Indexation	(4,452)	
– Mortality	(1,156)	
– Retirement	6,177	
– Termination	(2,050)	
– Interest on employee contributions	(7,405)	
Total experience gains (losses)		58,635
Impact of change in post-retirement pension increase assumption		14,111
Impact of change in interest rates for determining commuted values		3,177
Inclusion of provision for adverse deviations in respect of the going concern liabilities		(234,374)
Refinements to valuation method[1]		21,726
Net impact of other elements of gains and losses		(4,920)
Estimated funding excess (shortfall) as at current valuation		($143,420)

[1] Release prior conservatism in the valuation for deferred members to reflect additional information available on these members, as well as updating the form of pension payable for some pensioners

Exhibit C
Plan 2000
Summary of Membership Data

	JULY 1, 2018
Active Members – Full-time	
Number	3,301
Average pensionable earnings	$94,578
Accumulated Contribution with Interest	$343,817,997
Average years of pensionable service	12.2
Average age	47.2
Active Members – Part-time[2]	
Number	311
Average pensionable earnings	$64,978
Accumulated Contribution with Interest	$14,074,902
Average years of pensionable service	7.5
Average age	46.4
Deferred Pensioners	
Number	916
Total annual pension	$4,383,976
Average annual pension	$4,786
Average age	51.0
Pensioners and Survivors	
Number	2,245
Total annual pension	$75,025,172
Average annual pension	$33,419
Average age	73.9

[2] For this valuation, members were classified as part-time if they were identified in McMaster's HR system as working a schedule that is less than full-time at the valuation date. The previous valuation classified members as being part-time if they accrued less than a full year of service in the year prior to the valuation date (provided they were not new hires).

EXHIBIT D

Original Plan
Summary of Funding Valuation Results ($000)

	JULY 1, 2018	JULY 1, 2017
Going Concern Basis		
Market value of assets	$4,060	$3,634
Asset smoothing adjustment	(91)	(107)
In-transit contributions (payments)	(7)	4
Net assets	$3,962	$3,531
Going concern liabilities	$3,011	$3,033
Provision for adverse deviations	369	N/A
Funding excess (shortfall)	$582	$498
Solvency Basis		
Market value of assets	$4,060	$3,634
In-transit contributions (payments)	(7)	4
Reserve for wind-up expenses	(75)	(60)
Net assets	$3,978	$3,578
Solvency liabilities	$3,825	$3,752
Surplus (shortfall) on a solvency basis	$153	($174)
Solvency ratio	106%	97%
Wind-Up Basis		
Net assets	$3,978	$3,578
Wind-up liabilities	3,825	3,752
Wind-up surplus (deficit)	$153	($174)
Transfer Ratio	1.06	0.97

	JULY 1, 2018	JULY 1, 2017
Current Service Cost (year following valuation date)		
Total current service cost	$117	$116
Expense provision	25	25
Estimated member contributions	(41)	(37)
Estimated University current service cost	$101	$104
University current service cost expressed as a percentage of member contributions	246%	281%
Provision for adverse deviations ($)	$14	N/A
Provision for adverse deviations (%)	34%	N/A
Total Estimated University current service cost	$115	$104
Total University current service cost expressed as a percentage of member contributions	280%	281%
Minimum special payments	$0	$0[3]
Estimated minimum employer contribution	$78	$104
Estimated maximum eligible employer contribution	$115	$278
Next required valuation date	July 1, 2021	July 1, 2020

[3] Increasing to $38,124 for 2018/19 and subsequent plan years

EXHIBIT E

Original Plan
Reconciliation of Going-Concern Funded Status ($000)

Funding excess (shortfall) as at previous valuation		$498
Interest on funding excess (funding shortfall) at 5.60% per year		28
Employer's special payments, with interest		13
Expected funding excess (funding shortfall)		$539
Net experience gains (losses):		
– Net investment return (market basis)	$57	
– Increases in pensionable earnings	55	
– Retirement	70	
– Impact of asset smoothing	22	
Total experience gains (losses)		204
Impact of change in post-retirement pension increase assumption		17
Inclusion of provision for adverse deviations in respect of the going concern liabilities		(369)
Refinements to valuation method[4]		166
Net impact of other elements of gains and losses		25
Estimated funding excess (shortfall) as at current valuation		$582

[4] Release prior conservatism in the valuation for deferred members to reflect additional information available on these members.

EXHIBIT F

Original Plan
Summary of Membership Data

	JULY 1, 2018
Active Members	
Number	3
Total limited salary	*
Average limited salary	*
Average years of pensionable service	23.8
Average age	61.6
Deferred Pensioners	
Number	30
Total annual pension	$12,030
Average annual pension	$401
Average age	58.7
Pensioners and Survivors	
Number	1
Total annual basic pension	*
Average annual basic pension	*
Average age	*

* suppressed to preserve confidentiality

EXHIBIT G

Summary of Solvency Assumptions

ASSUMPTION	
Discount rate for wind-up liabilities	
Lump sum settlements	2.9% per year for 10 years, 3.2% per year thereafter
Annuity purchases	3.10% per year
Mortality table	Lump sum basis: CPMRPP2014 combined mortality table with generational mortality improvement scale CPM-B Annuity purchase basis: 85% of rates from CPMRPP2014 Public sector mortality table with generational mortality improvement scale CPM-B
Form of payment election	70% of active and deferred vested members age 55 and older, 50% of active and deferred vested members under age 55 and all retired members are assumed to be settled through an annuity purchase
Retirement age:	Age that maximizes value
Marital status	Same as assumed for going concern valuation
Maximum pension limit	$2,944.44 per year of service increasing by 2.58% per year for 10 years and 2.79% per year thereafter
Reserve for wind-up expenses	Plan 2000: $900,000 Original Plan: $75,000

EXHIBIT H

Summary of Going Concern Assumptions

ASSUMPTION			
Discount rate:	5.6%		
ITA limit / YMPE increases:	3.0%		
Pensionable earnings increases:	Unifor: 3.0% per year TMG: 3.0% per year MUFA: 4.0% per year Clinicians: 4.0% per year		
Post retirement pension increases:	**Year**	**Unifor Hired on or After May 1, 2010**	**Others**
	2019	1.89%	1.89%
	2020	2.00%	2.00%
	2021	1.47%	1.97%
	2022	2.24%	2.03%
	2023	1.14%	1.64%
	2024 onwards	0.60%	1.10%
Interest on employee contributions:	5.6% per year		
Retirement rates:	**Plan 2000:** 15% where first eligible for an unreduced pension, 10% retire at each age thereafter up to age 64, 20% retire at age 65 50% retire at each of age 56-69, remainder retire at age 70 **Original Plan:** 15% retire when first eligible for an unreduced pension, remainder retire at age 65		

ASSUMPTION	
Termination rates (Plan 2000 only):	**Age** / **Rate** Under 25 — 15.0% 25 — 13.0% 30 — 8.0% 35 — 5.5% 40 — 3.5% 45 — 3.0% 50 — 3.0% 55 and older — 0% 15% of termination are assumed to be involuntary without cause
Mortality rates:	85% of rates from 2014 CPM Public Sector Mortality Table
Mortality improvements:	Fully generational using Scale CPM-B
Disability rates:	None
Marital status:	**Plan 2000:** 85% married at pension commencement Males 3 years older **Original Plan:** Actual
Settlement Assumption	**Plan 2000:** 95% of terminations prior to age 55 and 5% of terminations on or after 55 are assumed to elect to receive a lump sum transfer. The commuted value basis in effect at their date of transfer is assumed to be the commuted value basis in effect for July 1, 2018, which is a follows: Interest rates: 2.9% per year for 10 years, 3.2% per year thereafter Mortality table: CPMRPP2014 Combined Mortality Table with generational improvement scale CPM-B (50% male/50% female) **Original Plan:** All active members are assumed to elect a monthly pension upon retirement.

APPENDIX I - IMPORTANT NOTICES

Mercer has prepared this report exclusively for McMaster University to present funding valuation results as at July 1, 2018. This report is intended to facilitate McMaster University's decision making relating to the July 1, 2018 funding valuations for Plan 2000 and the Original Plan. This report may not be used or relied upon by any other party or for any other purpose; Mercer is not responsible for the consequences of any such other use. Its content may not be modified, incorporated into or used in other material, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's permission.

All parts of this report, including any documents incorporated by reference, are integral to understanding and explaining its contents; no part may be taken out of context, used or relied upon without reference to the report as a whole.

The results presented herein are preliminary and subject to change. This report is not a substitute for a formal valuation report.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security and/or benefit-related issues should not be made solely on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic and societal factors, including financial scenarios that assume future sustained investment losses.

McMaster University is responsible for selecting the plans' funding policy (including margins, if any, for adverse deviations in the going concern valuation), the actuarial and asset valuation methods in the going concern valuation, and other methodologies permitted by legislation for the solvency valuation.

The actuarial assumptions used in the going concern valuation reflect the actuary's best estimate. McMaster University is responsible for reviewing the going concern valuation assumptions referenced and advising Mercer as to any information it deems worthy of consideration in the determination of such assumptions.

To prepare the results in this report, actuarial assumptions are used to model a single scenario from a range of possibilities for each valuation basis. The results based on that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. Different assumptions or scenarios within the range of possibilities may also be reasonable, and results based on those assumptions would be different. Furthermore, actuarial assumptions may be changed from one valuation to the next because of changes in regulatory and professional requirements, developments in case law, plan experience, changes in expectations about the future and other factors. The assumptions used for the valuation are described in Exhibits G and H of this report.

Mercer has used and relied on the membership data as supplied by McMaster University. If the data supplied are not sufficient and reliable for its intended purpose, the results of our calculation may differ significantly from the results that would be obtained with such data. Although Mercer has reviewed the suitability of the data for its intended use in accordance with accepted actuarial practice in Canada, Mercer has not verified or audited any of the data or information provided. Statistics on, reconciliation of and distribution of the membership data are provided in this letter.

Mercer has used and relied on the plan documents, including amendments, and interpretations of plan provisions, supplied by McMaster University. If any plan provisions supplied are not accurate and complete, the results of any calculation may differ significantly from the results that would be obtained with accurate and complete information. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and the results of estimates under each of the different interpretations could vary.

We used financial data set out in the CIBC Mellon financial statements as of the valuation date without further audit. Customarily, this information would not be verified by a plan's actuary. We have reviewed the information for internal consistency and general reasonableness.

Funding calculations reflect our understanding of the requirements of Ontario's legislation, the Income Tax Act and related regulations that are effective as of the valuation date. Mercer is not a law firm, and this analysis is not intended to be a legal opinion. You should consider securing the advice of legal counsel with respect to any legal matters related to this document and any attachments.

The plan administrator is solely responsible for selecting the plan's investment policies, asset allocations and individual investments.

Appendix B. Actuarial Valuation - Plan 2000

HEALTH WEALTH CAREER

THE CONTRIBUTORY PENSION PLAN FOR SALARIED EMPLOYEES OF MCMASTER UNIVERSITY INCLUDING MCMASTER DIVINITY COLLEGE 2000

REPORT ON THE ACTUARIAL VALUATION FOR FUNDING PURPOSES AS AT JULY 1, 2018

JANUARY 2019

Financial Services Commission of Ontario Registration Number: 1079920
Canada Revenue Agency Registration Number: 1079920

DRAFT

MAKE TOMORROW, TODAY MERCER

Note to reader regarding actuarial valuations:

This valuation report may not be relied upon for any purpose other than those explicitly noted in the Introduction, nor may it be relied upon by any party other than the parties noted in the Introduction. Mercer is not responsible for the consequences of any other use. A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a pension plan's future financial condition or its ability to pay benefits in the future. If maintained indefinitely, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the amount of plan expenses, and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date. The content of the report may not be modified, incorporated into or used in other material, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's permission. All parts of this report, including any documents incorporated by reference, are integral to understanding and explaining its contents; no part may be taken out of context, used, or relied upon without reference to the report as a whole.

To prepare the results in this report, actuarial assumptions are used to model a single scenario from a range of possibilities for each valuation basis. The results based on that single scenario are included in this report. However, the future is uncertain and the Plan's actual experience will differ from those assumptions; these differences may be significant or material. Different assumptions or scenarios within the range of possibilities may also be reasonable, and results based on those assumptions would be different. Furthermore, actuarial assumptions may be changed from one valuation to the next because of changes in regulatory and professional requirements, developments in case law, plan experience, changes in expectations about the future, and other factors.

The valuation results shown in this report also illustrate the sensitivity to one of the key actuarial assumptions, the discount rate. We note that the results presented herein rely on many assumptions, all of which are subject to uncertainty, with a broad range of possible outcomes, and the results are sensitive to all the assumptions used in the valuation.

Should the Plan be wound up, the going concern funded status and solvency financial position, if different from the wind-up financial position, become irrelevant. The hypothetical wind-up financial position estimates the financial position of the Plan assuming it is wound up on the valuation date. Emerging experience will affect the wind-up financial position of the Plan assuming it is wound up in the future. In fact, even if the Plan were wound up on the valuation date, the financial position would continue to fluctuate until the benefits are fully settled.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security, and/or benefit-related issues should not be made solely on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic, and societal factors, including financial scenarios that assume future sustained investment losses.

Funding calculations reflect our understanding of the requirements of the Pension Benefits Act (Ontario), the Income Tax Act, and related regulations that are effective as of the valuation date. Mercer is not a law firm, and the analysis presented in this report is not intended to be a legal opinion. You should consider securing the advice of legal counsel with respect to any legal matters related to this report.

CONTENTS

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SUMMARY OF RESULTS

(000'S)	01.07.18	01.07.17
Going Concern Financial Status		
Smoothed value of assets	$1,983,556	$1,828,584
Going concern funding liabilities	$1,892,602	$1,859,365
Provision for adverse deviations in respect of the going concern liabilities	$234,374	N/A
Funding excess (shortfall)	($143,420)	($30,781)
Hypothetical Wind-up Financial Position		
Wind-up assets	$2,055,505	$1,902,836
Wind-up liability	$2,252,753	$2,244,977
Wind-up excess (shortfall)	($197,248)	($342,141)
Transfer ratio	91%	85%
Next required valuation date	July 1, 2021	July 1, 2020

(000'S)	2018/2019	2017/2018
Funding Requirements in the Year Following the Valuation [1]		
Total current service cost	$56,413	$55,096
Estimated members' required contributions	($28,481)	($25,242)
Estimated University's current service cost	$27,932	$29,854
Provision for adverse deviations in respect of current service cost	$7,228	N/A
Total	$35,160	$29,854
University's current service cost and provision for adverse deviations in respect of the current service cost expressed as a percentage of members' required contributions	123%	118%
Minimum special payments[2]	$6,028	$6,028
Estimated minimum University contribution	$41,188	$35,882
Estimated maximum eligible University contribution	$232,408	$371,943

[1] Provided for reference purposes only. Contributions must be remitted to the Plan in accordance with the Minimum Funding Requirements and Maximum Eligible Contributions sections of this report.

[2] Special payments with respect to the first year following the valuation date only. The full special payment schedule is outlined in Appendix A.

2
INTRODUCTION

TO MCMASTER UNIVERSITY

At the request of McMaster University, we have conducted an actuarial valuation of The Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College 2000 (the "Plan"), sponsored by McMaster University (the "University"), as at the valuation date, July 1, 2018. We are pleased to present the results of the valuation.

PURPOSE

The purpose of this valuation is to determine:

- The funded status of the Plan as at July 1, 2018 on going concern, hypothetical wind-up, and solvency bases;
- The minimum required funding contributions from July 1, 2018, in accordance with the *Pension Benefits Act (Ontario)* (the "Act"); and
- The maximum permissible funding contributions from July 1, 2018, in accordance with the *Income Tax Act.*

The information contained in this report was prepared for the internal use of the University, and for filing with the Financial Services Commission of Ontario and with the Canada Revenue Agency, in connection with our actuarial valuation of the Plan. This report will be filed with the Financial Services Commission of Ontario and with the Canada Revenue Agency. This report is not intended or suitable for any other purpose.

In accordance with pension benefits legislation, the next actuarial valuation of the Plan will be required as at a date not later than July 1, 2021, or as at the date of an earlier amendment to the Plan.

TERMS OF ENGAGEMENT

In accordance with our terms of engagement with McMaster University, our actuarial valuation of the Plan is based on the following material terms:

- It has been prepared in accordance with applicable pension legislation and actuarial standards of practice in Canada.

- As instructed by the University, we have not reflected a margin for adverse deviations in the going concern valuation in excess of the provision for adverse deviations prescribed by the Act.
- We have reflected the University's decisions for determining the solvency funding requirements, summarized as follows:
  - The same plan wind-up scenario was hypothesized for both hypothetical wind-up and solvency valuations.
  - Although permissible, no benefits were excluded from the solvency liabilities.
  - The solvency financial position was determined on a market value basis.

  See the Valuation Results - Solvency section of the report for more information.

EVENTS SINCE THE LAST VALUATION AT JULY 1, 2017

Pension Plan

There have been no special events since the last valuation date.

This valuation reflects the provisions of the Plan as at July 1, 2018. Since the date of the last valuation, the Plan was amended to provide special adjustments to required contributions for certain employee classes in situations where the University's contributions for any month are below certain thresholds. The Plan was also amended to increase required contributions for various employee classes as a result of recent negotiations and other decisions. The Plan text was restated effective January 1, 2019 to incorporate these and other amendments since the last statement of the Plan and to incorporate legislative changes and to make other housekeeping changes. All amendments have been reflected in this valuation. We are aware of one pending definitive amendment coming into effect during the period covered by this report – see the Subsequent Events section below for details. The Plan provisions are summarized in Appendix F.

Assumptions

We have used the same going concern valuation assumptions and methods as were used for the previous valuation, except for the following:

	CURRENT VALUATION	PREVIOUS VALUATION
Post-retirement pension increases:	Unifor Hired on or After May 1, 2010 **Year** / **Rate** 2019 / 1.89% 2020 / 2.00% 2021 / 1.47% 2022 / 2.24% 2023 / 1.14% 2024 onwards / 0.60% Other **Year** / **Rate** 2019 / 1.89% 2020 / 2.00% 2021 / 1.97% 2022 / 2.03% 2023 / 1.64% 2024 onwards / 1.10%	Unifor Hired on or After May 1, 2010 **Year** / **Rate** 2018 / 1.46% 2019 / 2.00% 2020 / 1.52% 2021 / 0.99% 2022 / 1.79% 2023 onwards / 0.70% Other **Year** / **Rate** 2018 / 1.46% 2019 / 2.00% 2020 / 2.00% 2021 / 1.49% 2022 / 2.29% 2023 onwards / 1.20%
Portability – basis for determining commuted values	Interest rates: 2.9% per year for 10 years; 3.2% per year thereafter	Interest rates: 2.3% per year for 10 years; 3.3% per year thereafter

A summary of the going concern methods and assumptions is provided in Appendix C.

The hypothetical wind-up and solvency assumptions have been updated to reflect market conditions at the valuation date. A summary of the hypothetical wind-up and solvency methods and assumptions is provided in Appendix D.

Regulatory Environment and Actuarial Standards

There have been a number of changes to the Act and regulations which impact the funding of the Plan.

On December 14, 2017, Bill 177, Stronger, Fairer Ontario Act, 2017 received Royal Assent. Bill 177 contained amendments to the Act to enable the new funding framework previously announced by the Government of Ontario in May, 2017. The new funding framework changed minimum funding requirements from both a going concern and solvency perspective. The regulations to the Act supporting the new funding rules were published on April 20, 2018 with effect from May 1, 2018. Valuation reports with effect on or after December 31, 2017 that are filed on or after May 1, 2018 reflect the new rules. The amended regulations also allow for a transition from the funding rules that applied immediately before May 1, 2018 to the new funding rules over a three-year phase-in period starting in the first year following the valuation date of this report.

The funding relief measures that were introduced for pension plans in the broader public sector have also been amended. In general, the new funding framework applies for valuation dates on and after December 31, 2017 to broader public sector pension plans that received solvency funding relief. However, for these plans, the additional restrictions on funding of benefit improvements and contribution holidays contained in the solvency funding relief rules that apply for a prescribed period have been retained.

SUBSEQUENT EVENTS

We have been notified that the University has negotiated an increase to employee contribution rates for the MUALA employee group of the Plan effective from August 1, 2019. This change has been reflected in the valuation. After checking with representatives of the University, to the best of our knowledge there have been no other events subsequent to the valuation date which, in our opinion, would have a material impact on the results of the valuation. Our valuation reflects the financial position of the Plan as of the valuation date and does not take into account any experience after the valuation date.

IMPACT OF CASE LAW

This report has been prepared on the assumption that all claims on the Plan after the valuation date will be in respect of benefits payable to members of the Plan determined in accordance with the Plan terms and that all Plan assets are available to provide for these benefits. It is possible that court and regulatory decisions and changes in legislation could give rise to additional entitlements to benefits under the Plan and cause the results in this report to change. By way of example, we bring your attention to the following decisions:

- The Ontario Court of Appeal's 2003 decision in *Aegon Canada Inc. and Transamerica Life Canada versus ING Canada Inc.* restricted the use of original plan surplus where two or more pension plans were merged.

- The Supreme Court of Canada's 2004 decision in *Monsanto Canada Inc. versus Superintendent of Financial Services* upheld the requirement, with retroactive effect, to distribute surplus on partial plan wind-up under the *Pension Benefits Act (Ontario).*

We are not in a position to assess the impact that such decisions or changes could have on the assumption that all plan assets on the valuation date are available to provide for benefits determined in accordance with the Plan terms. If such a claim arises subsequent to the date of this report, the consequences will be dealt with in a subsequent report. We are making no representation as to the likelihood of such a claim.

3
VALUATION RESULTS – GOING CONCERN

FINANCIAL STATUS

A going concern valuation compares the relationship between the value of Plan assets and the present value of expected future benefit cash flows in respect of accrued service, assuming the Plan will be maintained indefinitely.

The results of the current valuation, compared with those from the previous valuation, are summarized as follows:

(000'S)	01.07.18	01.07.17
Assets		
Market value of assets	$2,056,405	$1,903,736
Asset smoothing adjustment	($72,849)	($75,152)
Smoothed value of assets	$1,983,556	$1,828,584
Going concern funding target		
Going concern liabilities:		
• Active members	$882,404	$877,132
• Pensioners and survivors	$966,090	$935,184
• Deferred pensioners	$44,108	$47,049
• Subtotal	$1,892,602	$1,859,365
Provision for adverse deviations in respect of going concern liabilities as prescribed by the Act	$234,374	N/A
Total	$2,126,976	$1,859,365
Funding excess (shortfall)[3]	($143,420)	($30,781)

[3] Funding excess (shortfall) may or may not be equal to the going concern excess (unfunded liability) as described in the Act. Details of the going concern excess (unfunded liability) are provided in Appendix A.

The going concern liabilities at July 1, 2018 do not include an additional margin for adverse deviations beyond the provision for adverse deviations prescribed by the Act.

RECONCILIATION OF FINANCIAL STATUS (000'S)

Funding excess (shortfall) as at previous valuation		($30,781)
Interest on funding excess (shortfall) at 5.60% per year		($1,724)
University's special payments, with interest		$30,730
Expected funding excess (shortfall)		($1,775)
Net experience gains (losses)		
• Net investment return	$51,239	
• Impact of asset smoothing	$6,512	
• Increases in pensionable earnings	$3,806	
• Increases in YMPE/maximum pension	$5,964	
• Indexation	($4,452)	
• Mortality	($1,156)	
• Retirement	$6,177	
• Termination	($2,050)	
• Interest on employee contributions	($7,405)	
Total experience gains (losses)		$58,635
Impact of changes in assumptions		
• Post-retirement pension increase assumption	$14,111	
• Interest rates for determining commuted values	$3,177	
Total assumption changes impact		$17,288
Change in provision for adverse deviations in respect of the going concern liabilities		($234,374)
Refinements to valuation method		$21,726
Net impact of other elements of gains and losses		($4,920)
Funding excess (shortfall) as at current valuation		($143,420)

CURRENT SERVICE COST

The current service cost is an estimate of the present value of the additional expected future benefit cash flows in respect of pensionable service that will accrue after the valuation date, assuming the Plan will be maintained indefinitely. A provision for adverse deviations in respect of the current service cost is determined in accordance with the Act.

The current service cost and the provision for adverse deviations in respect of the current service cost, during the year following the valuation date, compared with the corresponding values determined in the previous valuation, is as follows:

(000'S)	2018/2019	2017/2018
Total current service cost	$56,413	$55,096
Estimated members' required contributions	($28,481)	($25,242)
Estimated University's current service cost	$27,932	$29,854
University's current service cost expressed as a percentage of members' required contributions	98%	118%
Provision for adverse deviations in respect of the current service cost (based on the percentage defined in Appendix A)		
• As a dollar amount per year	$7,228	N/A
• As a percentage of members' required contributions	25%	N/A
University's current service cost and provision for adverse deviations in respect of current service cost		
• As a dollar amount per year	$35,160	$29,854
• As a percentage of members' required contributions	123%	118%

The key factors that have caused a change in the University's current service cost excluding the provision for adverse deviations since the previous valuation are summarized in the following table:

University's current service cost as at previous valuation	118%
Demographic changes	0%
Plan amendment to increase member contributions	(18%)
Changes in assumptions	(2%)
University's current service cost as at current valuation	98%

DISCOUNT RATE SENSITIVITY (000'S)

The following table summarizes the effect on the going concern funding target and current service cost shown in this report of using a discount rate which is 1% lower than that used in the valuation. The effect of a change in the discount rate on the provision for adverse deviations[4] is not shown in the table below.

SCENARIO	VALUATION BASIS	REDUCE DISCOUNT RATE BY 1%
Going concern funding liabilities	$1,892,602	$2,148,800
Current service cost		
Total current service cost	$56,413	$66,357
Estimated members' required contributions	($28,481)	($28,481)
Total University's current service cost	$27,932	$37,876

[4] The provision for adverse deviations of 13.8% in respect of the current service cost and going concern liabilities.

4

VALUATION RESULTS – HYPOTHETICAL WIND-UP

FINANCIAL POSITION

When conducting a hypothetical wind-up valuation, we determine the relationship between the respective values of the Plan's assets and its liabilities assuming the Plan is wound up and settled on the valuation date, assuming benefits are settled in accordance with the Act and under circumstances consistent with the hypothesized scenario on the valuation date. More details on such scenario are provided in Appendix D.

The hypothetical wind-up financial position as of the valuation date, compared with that at the previous valuation, is as follows:

(000'S)	01.07.18	01.07.17
Assets		
Market value of assets	$2,056,405	$1,903,736
Termination expense provision	($900)	($900)
Wind-up assets	$2,055,505	$1,902,836
Present value of accrued benefits for:		
• Active members	$1,113,978	$1,129,481
• Pensioners and survivors	$1,076,952	$1,058,018
• Deferred pensioners	$61,823	$57,478
Total wind-up liability	$2,252,753	$2,244,977
Wind-up excess (shortfall)	($197,248)	($342,141)
Transfer Ratio	91%	85%

WIND-UP INCREMENTAL COST

The wind-up incremental cost is an estimate of the present value of the projected change in the hypothetical wind-up liabilities from the valuation date until the next scheduled valuation date, adjusted for the benefit payments expected to be made in that period.

The hypothetical wind-up incremental cost determined in this valuation, compared with the corresponding value determined in the previous valuation, is as follows:

(000'S)	01.07.18	01.07.17
Number of years covered by report	3 years	3 years
Total hypothetical wind-up liabilities at the valuation date (A)	$2,252,753	$2,244,977
Present value at the valuation date of projected hypothetical wind-up liability at the next required valuation (including expected new entrants) plus expected benefit payments until the next required valuation (B)	$2,506,892	$2,533,789
Hypothetical wind-up incremental cost (B – A)	$254,139	$288,812

The incremental cost is not an appropriate measure of the contributions that would be required to maintain the financial position of the Plan on a hypothetical wind-up basis unchanged from the valuation date to the next required valuation date, if actual experience is exactly in accordance with the going concern valuation assumptions. This is because it does not reflect the fact that the expected return on plan assets (based on the going concern assumptions) is greater than the discount rate used to determine the hypothetical wind-up liabilities.

DISCOUNT RATE SENSITIVITY (000'S)

The following table summarizes the effect on the hypothetical wind-up liabilities shown in this report of using a discount rate which is 1% lower than that used in the valuation:

SCENARIO	VALUATION BASIS	REDUCE DISCOUNT RATE BY 1%
Total hypothetical wind-up liability	$2,252,753	$2,588,334

5
VALUATION RESULTS – SOLVENCY

OVERVIEW

The Act also requires the financial position of the Plan to be determined on a solvency basis. The financial position on a solvency basis is determined in a similar manner to the Hypothetical Wind-up Basis, except for the following:

EXCEPTIONS	REFLECTED IN VALUATION BASED ON THE TERMS OF ENGAGEMENT
The circumstance under which the Plan is assumed to be wound up could differ for the solvency and hypothetical wind-up valuations.	The same circumstances were assumed for the solvency valuation as were assumed for the hypothetical wind-up valuation.
Certain benefits can be excluded from the solvency financial position. These include: (a) any escalated adjustment (e.g. indexing), (b) certain plant closure benefits, (c) certain permanent layoff benefits, (d) special allowances other than funded special allowances, (e) consent benefits other than funded consent benefits, (f) prospective benefit increases, (g) potential early retirement window benefit values, and (h) pension benefits and ancillary benefits payable under a qualifying annuity contract.	No benefits were excluded from the solvency liabilities shown in this valuation.
The financial position on the solvency basis needs to be adjusted for any Prior Year Credit Balance.	Not applicable.
The solvency financial position can be determined by smoothing assets and the solvency discount rate over a period of up to 5 years.	Smoothing was not used.
The benefit rate increases coming into effect after the valuation date can be reflected in the solvency valuation.	Not applicable.

FINANCIAL POSITION

The financial position on a solvency basis, compared with the corresponding figures from the previous valuation, is as follows:

(000'S)	01.07.18	01.07.17
Assets		
Market value of assets	$2,056,405	$1,903,736
Termination expense provision	($900)	($900)
Net assets	$2,055,505	$1,902,836
Liabilities		
Total hypothetical wind-up liabilities	$2,252,753	$2,244,977
Difference in circumstances of assumed wind-up	$0	$0
Value of excluded benefits	$0	$0
Liabilities on a solvency basis	$2,252,753	$2,244,977
Surplus (shortfall) on a solvency basis	($197,248)	($342,141)
Transfer Ratio	91%	85%

6
MINIMUM FUNDING REQUIREMENTS

The Act prescribes the minimum contributions that McMaster University must make to the Plan. The minimum contributions in respect of a defined benefit component of a pension plan are comprised of going concern current service cost, the provision for adverse deviations in respect of the current service cost and special payments to fund any funding shortfall or solvency shortfall that exceeds the level as set out under the Act.

On the basis of the assumptions and methods described in this report, no special payments are required. However, since the available actuarial surplus is zero, the Act requires the University to contribute the current service cost including the provision for adverse deviations. The determination of the provision for adverse deviations is shown in Appendix A. On the basis of the assumptions and methods described in this report, the rule for determining the minimum required University monthly contributions, as well as an estimate of the employee and University contributions, from the valuation date until the next required valuation are as follows:

	UNIVERSITY'S CONTRIBUTION RULE		
Period beginning	Monthly current service cost[5]	Provision for adverse deviations[4]	Monthly special payments
July 1, 2018	98%	25%	$502,338
July 1, 2019	98%	25%	$1,573,773
July 1, 2020	98%	25%	$1,573,773

[5] Expressed as a percentage of members' required contributions.

Period beginning	Monthly Employee Contribution	ESTIMATED UNIVERSITY'S CONTRIBUTIONS		
		Minimum monthly special payments	Monthly current service cost and provision for adverse deviations[6]	Minimum monthly contributions
July 1, 2018	$2,373,000	$502,338	$2,930,000	$3,432,338
July 1, 2019	$2,373,000	$1,573,773	$2,930,000	$4,503,773
August 1, 2019	$2,374,000	$1,573,773	$2,929,000	$4,502,773
July 1, 2020	$2,374,000	$1,573,773	$2,929,000	$4,502,773

The estimated employee contributions and University current service cost have been adjusted starting with the period beginning August 1, 2019 to reflect the negotiated increase in employee contributions for the MUALA employee group effective August 1, 2019. The estimated contribution amounts above are based on projected active members' required contributions. Therefore, the actual University's current service cost and provision for adverse deviations in respect of the current service cost may be different from the above estimates and, as such, the contribution requirements should be monitored closely to ensure contributions resume in accordance with the Act.

Appendix A includes details on the determination of the provision for adverse deviations.

OTHER CONSIDERATIONS

Differences Between Valuation Bases

There is no provision in the minimum funding requirements to fund the difference between the hypothetical wind-up and reduced solvency shortfalls, if any.

In addition, although minimum funding requirements do include a requirement to fund the going concern current service cost and a provision for adverse deviations in respect of the current service cost, there is no requirement to fund the expected growth in the hypothetical wind-up or solvency liability after the valuation date, which could be greater.

Timing of Contributions

Funding contributions are due on a monthly basis. Contributions for current service cost and the provision for adverse deviations including the expense allowance must be made within 30 days following the month to which they apply. Special payment contributions must be made in the month to which they apply.

[6] The provision for adverse deviations in respect of the current service cost is estimated to be $602,000 per month for each period.

Retroactive Contributions

The University must contribute the excess, if any, of the minimum contribution recommended in this report over contributions actually made in respect of the period following the valuation date. This contribution, along with an allowance for interest, is due no later than 60 days following the date this report is filed.

Payment of Benefits

The Act imposes certain restrictions on the payment of lump sums from the Plan when the transfer ratio revealed in an actuarial valuation is less than one. If the transfer ratio shown in this report is less than one, the Plan administrator should ensure that the monthly special payments are sufficient to meet the requirements of the Act to allow for the full payment of benefits, and otherwise should take the prescribed actions.

Additional restrictions are imposed when:

- The transfer ratio revealed in the most recently filed actuarial valuation is less than one and the administrator knows or 'ought to know' that the transfer ratio of the Plan has declined by 10% or more since the date the last valuation was filed.
- The transfer ratio revealed in the most recently filed actuarial valuation is greater than or equal to one and the administrator knows or 'ought to know' that the transfer ratio of the Plan has declined to less than 0.9 since the date the last valuation was filed.

As such, the administrator should monitor the transfer ratio of the Plan and, if necessary, take the prescribed actions.

Letters of Credit

Minimum funding requirements in respect of required special payments that otherwise require monthly contributions to the pension fund may be met, in the alternative, by establishing an irrevocable letter of credit subject to the conditions established by the Act. Required solvency special payments in excess of those met by a letter of credit must be met by monthly contributions to the pension fund.

7
MAXIMUM ELIGIBLE CONTRIBUTIONS

The *Income Tax Act* (the "ITA") limits the amount of employer contributions that can be remitted to the defined benefit component of a registered pension plan.

In accordance with Section 147.2 of the ITA and *Income Tax Regulation* 8516, for a plan which is underfunded on either a going concern or on a hypothetical wind-up basis, the maximum permitted contributions are equal to the employer's current service cost, including the provision for adverse deviations in respect of the current service cost and the explicit expense allowance if applicable, plus the greater of the going concern funding shortfall and hypothetical wind-up shortfall.

For a plan which is fully funded on both going concern and hypothetical wind-up bases, the employer can remit a contribution equal to the employer's current service cost, including the provision for adverse deviations in respect of the current service cost and explicit expense allowance if applicable, as long as the surplus in the plan does not exceed a prescribed threshold. Specifically, in accordance with Section 147.2 of the ITA, for a plan which is fully funded on both going concern and hypothetical wind-up bases, the plan may not retain its registered status if the employer makes a contribution while the going concern funding excess exceeds 25% of the going concern funding target.

Notwithstanding the above, any contributions that are required to be made in accordance with pension benefits legislation are eligible contributions in accordance with Section 147.2 of the ITA and can be remitted.

SCHEDULE OF MAXIMUM CONTRIBUTIONS

The University is permitted to fully fund the greater of the going concern and hypothetical wind-up shortfalls, as well as make current service cost contributions including the provision for adverse deviations in respect of the current service cost. The portion of this contribution representing the payment of the hypothetical wind-up shortfall can be increased with interest at 3.04% per year from the valuation date to the date the payment is made, and must be reduced by the amount of any deficit funding made from the valuation date to the date the payment is made.

Assuming the University contributes the greater of the going concern and the hypothetical wind-up shortfall of $197,248,000 as of the valuation date, the rule for determining the estimated maximum eligible annual contributions, as well as an estimate of the maximum eligible contributions until the next valuation, are as follows:

	UNIVERSITY'S CONTRIBUTION RULE		ESTIMATED UNIVERSITY'S CONTRIBUTIONS
Year beginning	Monthly current service cost including provision for adverse deviation[7]	Deficit Funding	Monthly current service cost
July 1, 2018	123%	N/A	$2,930,000
July 1, 2019	123%	N/A	$2,930,000
August 1, 2019	123%	N/A	$2,929,000
July 1, 2020	123%	N/A	$2,929,000

The employer's current service cost and provision for adverse deviations in respect of the current service cost shown in the above table was estimated based on projected members' required contributions. The actual employer's current service cost and provision for adverse deviations will be different from these estimates and, as such, the contribution requirements should be monitored closely to ensure compliance with the ITA.

[7] Expressed as a percentage of members' required contributions.

8
ACTUARIAL OPINION

In our opinion, for the purposes of the valuations,

- The membership data on which the valuation is based are sufficient and reliable.
- The assumptions are appropriate.
- The methods employed in the valuation are appropriate.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada. It has also been prepared in accordance with the funding and solvency standards set by the Pension Benefits Act (Ontario).

DRAFT

Chad Spence
Fellow of Society of Actuaries
Fellow of the Canadian Institute of Actuaries

Date

DRAFT

Angelita Graham
Fellow of Society of Actuaries
Fellow of the Canadian Institute of Actuaries

Date

APPENDIX A

SPECIAL PAYMENTS AND PRESCRIBED DISCLOSURE

SPECIAL PAYMENTS

The present values as at July 1, 2018 of the monthly special payments determined in the previous valuation are as follows:

Present Value of Monthly Special Payments
Determined from July 1, 2017 Valuation

TYPE OF DEFICIT	START DATE	SPECIAL PAYMENT	END DATE	PRESENT VALUE OF REMAINING PAYMENTS AS AT 01.07.18	
				GOING CONCERN BASIS[8]	SOLVENCY BASIS[9]
Going concern	July 1, 2015	$502,338	June 30, 2023	$26,323,000	$27,957,000
Solvency	July 1, 2018	$1,282,135	June 30, 2025		$95,635,000
Total				$26,233,000	$123,592,000

The valuation revealed a going concern unfunded liability of $137,567,000. In accordance with the Regulation, the going concern unfunded liability must be amortized over a period not exceeding 10 years, beginning 12 months after July 1, 2018. In addition, the special payment set out for the 2018/19 plan year as identified in the prior valuation report to fund any going concern unfunded liability or plan amendments, must continue to be made in the 2018/19 plan year.

[8] Calculation only considers going concern special payments and is based on a going concern discount rate.

[9] Calculation considers both solvency and going concern special payments (six years only) and is based on the average solvency discount rate.

Since the solvency excess ($231,599,000) is greater than or equal to the present value of the special payments set out in the prior valuation report to fund any reduced solvency deficiency, consolidated prior solvency deficiencies, or solvency deficiency, the solvency special payments revealed in the previous valuation are no longer required.

As such, special payments must be made as follows:

TYPE OF PAYMENT	START DATE	END DATE	MONTHLY SPECIAL PAYMENT	PRESENT VALUE GOING CONCERN BASIS[10]
Prior going concern over 1 year	July 1, 2018	June 30, 2019	$502,338	$5,853,000
New going concern	July 1, 2019	June 30, 2029	$1,573,773	$137,567,000
Total				$143,420,000

TRANSITIONAL RULES

Transitional rules under the Act state that any increase in contributions caused by the new funding rules above what the old funding rules determined under the Regulations in effect immediately before May 1, 2018 would have required can be phased-in over the three-year period following the first report filed under the new framework, with no requirement for an increase in the first year.

The minimum funding requirements that would have been required in each of plan years 2018/2019, 2019/2020 and 2020/2021 under the old funding rules would have been higher than minimum funding requirements under the new funding rules. As such, the transitional rules have no impact on the minimum funding requirements.

[10] Calculation only considers going concern special payments and is based on a going concern discount rate.

DEFINITIONS

The Act defines a number of terms as follows:

DEFINED TERM	DESCRIPTION		RESULT
Going concern assets	Total smoothed value of assets plus the sum of the following:		$1,989,409,000
	(a) the present value of special payments in respect of any past service unfunded liability identified in a previously filed report	$0	
	(b) the present value of special payments in respect of any plan amendment that increases going concern liabilities	$0	
	(c) present value of special payments in respect of going concern unfunded liabilities identified in a previously filed report that are scheduled for payment within one year of the date of this report	$5,853,000	
Going concern excess / (unfunded liability)	The amount by which the Going Concern Assets exceed the sum of the following:		($137,567,000)
	(a) the going concern liabilities		
	(i) liabilities excluding the value of escalated adjustments	$1,698,365,000	
	(ii) liabilities in respect of escalated adjustments	$194,237,000	
	(b) the provision for adverse deviations in respect of the going concern liabilities excluding the value of escalated adjustments	$234,374,000	
	(c) Prior Year Credit Balance	$0	
Going concern funded ratio	The ratio of: (a) Total smoothed value of assets (excluding letters of credit) less the Prior Year Credit Balance; to (b) going concern liabilities		105%
Prior Year Credit Balance	Accumulated excess of contributions made to the pension plan in excess of the minimum required contributions (note: only applies if the University chooses to treat the excess contributions as a Prior Year Credit Balance).		$0
Solvency Assets	Market value of assets including accrued or receivable income and excluding the value of any qualifying annuity contracts.		$2,056,405,000

DEFINED TERM	DESCRIPTION	RESULT
Solvency Asset Adjustment	The sum of:	
	(a) the difference between smoothed value of assets and the market value of assets	$0
	(b) the present value of going concern special payments required to liquidate any past service unfunded liability	$0
	(c) the present value of going concern special payments identified in July 1, 2017 valuation and scheduled for payment between July 1, 2018 and June 30, 2019	$5,931,000
	(d) the present value of going concern special payments (identified in this report) that are scheduled for payment within 6 years following the valuation date	$85,003,000
	(e) the present value of any previously scheduled solvency special payments (excluding those identified in this report)	$0
	(f) the total value of all letters of credit in respect of the special payments due before the valuation date, subject to the limit of 15% of solvency liabilities	$0
		$90,934,000
Solvency Liabilities	Liabilities determined as if the plan had been wound up on the valuation date, including liabilities for plant closure benefits or permanent layoff benefits that would be immediately payable if the employer's business were discontinued on the valuation date of the report, but, if elected by the plan sponsor, excluding liabilities for,	$2,252,753,000
	(a) any escalated adjustment,	
	(b) excluded plant closure benefits,	
	(c) excluded permanent layoff benefits,	
	(d) special allowances other than funded special allowances,	
	(e) consent benefits other than funded consent benefits,	
	(f) prospective benefit increases,	
	(g) potential early retirement window benefit values, and	
	(h) pension benefits and ancillary benefits payable under a qualifying annuity contract.	
Solvency Liability Adjustment	The amount by which Solvency Liabilities are adjusted as a result of using a solvency valuation interest rate that is the average of market interest rates calculated over the period of time used in the determination of the smoothed value of assets.	$0

DEFINED TERM	DESCRIPTION	RESULT
Solvency Deficiency	The amount, if any, by which the sum of:	
	(a) the Solvency Liabilities	$2,252,753,000
	(b) the Solvency Liability Adjustment	$0
	(c) the Prior Year Credit Balance	$0
		$2,252,753,000
	Exceeds the sum of	
	(d) the Solvency Assets net of estimated termination expenses[11]	$2,055,505,000
	(e) the Solvency Asset Adjustment	$90,934,000
		$2,146,439,000
		$106,314,000
Reduced Solvency Deficiency / (Solvency Excess)	The amount by which the sum of:	
	(a) 85% of the Solvency Liabilities	$1,914,840,000
	(b) 85% of the Solvency Liability Adjustment	$0
	(c) the Prior Year Credit Balance	$0
		$1,914,840,000
	Exceeds the sum of:	
	(d) the Solvency Assets net of estimated termination expenses[8]	$2,055,505,000
	(e) the Solvency Asset Adjustment	$90,934,000
		$2,146,439,000
		($231,599,000)
Transfer Ratio	The ratio of: (a) Solvency Assets minus the lesser of the Prior Year Credit Balance and the minimum required employer contributions including the provision for adverse deviations until the next required valuation; to (b) the sum of the Solvency Liabilities and liabilities for benefits, other than benefits payable under qualifying annuity contracts that were excluded in calculating the Solvency Liabilities.	91%

[11] In accordance with accepted actuarial practice, for purposes of determining the financial position, the market value of plan assets was reduced by a provision for estimated termination expenses payable from the Plan's assets that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

DEFINED TERM	DESCRIPTION	RESULT
Solvency Ratio	The ratio of: (a) Solvency Assets related to defined benefits and ancillary benefits plus the total amount of any letters of credit minus the Prior Year Credit Balance (b) the sum of the Solvency Liabilities related to defined benefits and ancillary benefits	91%

PROVISION FOR ADVERSE DEVIATIONS

The provision for adverse deviations has been established in accordance with regulations taking into account the following parameters:

DEFINED AMOUNT		RESULTS
Fixed Income Component (L)	The sum of the Plan's target allocation of assets (excluding those allocated to annuity contacts and meeting the minimum rating requirement) as described in the regulations according to the investment policy applicable at the valuation date: **Investment** — **Target** Universe bonds — 15.0% Long-term bonds — 15.0% Real return bonds — 5.0%	35.0%
Alternative Investment Component (M)	The sum of the Plan's target allocation of assets (excluding those allocated to annuity contacts) meeting requirements as described in the regulations according to the investment policy applicable at the valuation date: **Investment** — **Target** Real assets — 1.0%	1.0%
Investment Component (N)	Plan's target asset allocation for mutual, pooled or segregated funds	0.0%
Investment Component Fixed Income % (P)	Portion of Investment Component (N) that is allocated to investment categories accounted for in Fixed Income Component (L)	0.0%

Investment Component Alternative Investment % (Q)	Portion of Investment Component (N) that is allocated to investment categories accounted for in Alternative Income Component (M)	0.0%
Annuity Contract Allocation (R)	Annuity contracts that have been purchased from an insurance University and excluded from the Fixed Income Component (L) and Alternative Investment Component (M)	0.0%

Combined Target Asset Allocation for Fixed Income Assets (J)			
Sum of			
• Fixed Income Component (L)	35.0%		
• 0.5 x Alternative Investment Component (0.5 x M)	0.5%		
• Investment Component x Investment Component Fixed Income % (N x P)	0.0%		
• 0.5 x Investment Component x Investment Component Alternative Investment % (0.5 x N x Q)	0.0%		
		35.5%	
Divided by			
• 100% - Annuity Contract Allocation (100% - R)		100.0%	
Combined Target Asset Allocation for Fixed Income Assets			**35.5%**

Combined Target Asset Allocation for Non-Fixed Income Assets (K)	
100% – Combined Target Asset for Fixed Income Assets (100% - J)	**64.5%**

Duration of going concern liabilities at valuation date	
= (F - G) / (G x 0.01) where,	13.54
G = going concern liabilities at valuation date established using the discount rate determined for this valuation	$1,892,602,000
F = going concern liabilities established using the discount rate minus 1%	$2,148,800,000

Benchmark Discount Rate (E)	
Base rate	0.50%
Effective yield from CANSIM Series V39056 (H)	2.19%
1.5% x Combined Target Asset Allocation for Fixed Income Assets (1.5% x J)	0.53%
5.0% x Combined Target Asset Allocation for Non-Fixed Income Assets (5.0% x K)	3.22%
Benchmark Discount Rate	6.44%

Provision for Adverse Deviations			
(A)	5.0% for a closed plan and 4.0% for a Plan that is not a closed plan		5.0%
(B)	Provision based on Combined Target Asset Allocation for Non-Fixed Income Assets		8.8%
(C)	Greater of zero and the		
	• Duration of going concern liabilities at valuation date	13.54	
	Multiplied by the excess of:		
	– Going concern valuation gross discount rate net of active investment management fees (D), less	5.6%	
	– Benchmark Discount Rate (E)	6.5%	0.0%
Provision for Adverse Deviations (A + B + C)			13.8%

The available actuarial surplus that may be used according to the Act is established as follows:

Available actuarial surplus (000's)			
Excess of			
• Assets determined on basis of going concern valuation including accrued and receivable income but excluding the value of any letters of credit		$1,983,556	
Over			
• Going concern liabilities	$1,892,602		
• Provision for adverse deviations in respect of the going concern liabilities	$234,374		
• Prior Year Credit Balance	$0	$2,126,976	
		$0	(a)
Excess of			
• Solvency assets		$2,056,405	
Over			
• Solvency liabilities x 105%		$2,365,391	
		$0	(b)
The available actuarial surplus = the lesser of a) and b) above		$0	

TIMING OF NEXT REQUIRED VALUATION

In accordance with the Act the next valuation of the Plan would be required at an effective date within one year of the current valuation date if:

- The ratio of solvency assets to solvency liabilities is less than 85%.
- The University elected to exclude plant closure or permanent lay-off benefits under Section 5(18) of the regulations, and has not rescinded that election.

Otherwise, the next valuation of the Plan would be required at an effective date no later than three years after the current valuation date.

Accordingly, the next valuation of the Plan will be required as of July 1, 2021.

PENSION BENEFITS GUARANTEE FUND (PBGF) ASSESSMENT

A PBGF assessment is required to be paid under Section 37 of the Act. The PBGF assessment base is derived as follows:

Solvency assets	$2,056,405,000	(a)
PBGF liabilities	$2,252,753,000	(b)
Solvency liabilities	$2,252,753,000	(c)
Ontario asset ratio	100.00%	(d) = (b) ÷ (c)
Ontario portion of the fund	$2,056,405,000	(e) = (a) x (d)
PBGF assessment base	$196,348,000	(f) = max(0, (b) – (e))
Amount of additional liability for plant closure and/or permanent layoff benefits which is not funded and subject to the 2% (3% for years after 2018) assessment pursuant to s.37(4)	$0	(g)

APPENDIX B

PLAN ASSETS

The pension fund is held by CIBC Mellon Trust Company. In preparing this report, we have relied upon the auditors' report prepared by KPMG without further audit. Customarily, this information would not be verified by a plan's actuary. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

RECONCILIATION OF MARKET VALUE OF PLAN ASSETS

The pension fund transactions since the last valuation are summarized in the following table:

(000'S)	JULY 1,2017 TO JULY 1, 2018
July 1, 2017	$1,903,823
PLUS	
Members' contributions	$24,728
University's contributions	$59,090
Transfers to the Plan	$280
Investment earnings	$163,950
	$248,048
LESS	
Pensions paid	$73,106
Lump-sums paid	$9,382
Administration and investment fees	$6,052
	$88,540
July 1, 2018	$2,063,331
Gross rate of return[12]	8.62%
Rate of return net of expenses[11]	8.29%

[12] Assuming mid-period cash flows.

The market value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

	CURRENT VALUATION	PREVIOUS VALUATION
Market value of assets	$2,063,331	$1,903,823
In-transit amounts		
• Benefit payments	($6,926)	($87)
Market value of assets, adjusted for in-transit amounts	$2,056,405	$1,903,736

We have tested the pensions paid, the lump-sums paid, and the contributions for consistency with the membership data for the Plan members who have received benefits or made contributions. The results of these tests were satisfactory.

INVESTMENT POLICY

The plan administrator has adopted a statement of investment policy and procedures. This policy is intended to provide guidelines for the manager(s) as to the level of risk that is consistent with the Plan's investment objectives. A significant component of this investment policy is the asset mix.

The plan administrator is solely responsible for selecting the Plan's investment policies, asset allocations, and individual investments.

The constraints on the asset mix and the actual asset mix at the valuation date are provided for information purposes:

	INVESTMENT POLICY			ACTUAL ASSET MIX AS AT JULY 1, 2018
	Minimum	Target	Maximum	
Canadian equities	16%	20%	24%	19.9%
U.S. equities	17%	22%	27%	26.3%
International equities	17%	22%	27%	24.6%
Real estate and infrastructure	0%	1%	10%	1.0%
Bonds	20%	35%	50%	27.9%
Cash and cash equivalents	0%	0%	10%	0.3%
		100%		100.0%

Because of the mismatch between the Plan's assets (which are invested in accordance with the above investment policy) and the Plan's liabilities (which tend to behave like long bonds) the Plan's financial position will fluctuate over time. These fluctuations could be significant and could cause the Plan to become underfunded or overfunded even if the University contributes to the Plan based on the funding requirements presented in this report.

APPENDIX C

METHODS AND ASSUMPTIONS – GOING CONCERN

VALUATION OF ASSETS

For this valuation, we have used an adjusted market-value method to determine the smoothed value of assets. Under this method, investment experience gains (losses) (actual versus the expected investment return on assets, net of expenses) arising during a given year are spread on a straight-line basis over 5 years in accordance with the schedule shown in the following table:

YEAR	PERCENTAGE OF GAINS (LOSSES) UNRECOGNIZED
2017/2018:	80%
2016/2017:	60%
2015/2016:	40%
2014/2015:	20%
before 2014:	0%

The asset values produced by this method are related to the market value of the assets, with the advantage that, over time, the market-related asset values will tend to be more stable than market values. To the extent that more investment experience gains than losses will arise over the long term, the smoothed value will tend to be lower than the market value.

The smoothed value of the assets at July 1, 2018 was derived as follows:

(000'S)		
Market value of assets		$2,063,331
LESS		
Unrecognized investment gains/(losses)	2017/2018: $51,239 x 80% =	$40,991
	2016/2017: $88,253 x 60% =	$52,952
	2015/2016: ($71,987) x 40% =	($28,795)
	2014/2015: $38,504 x 20% =	$7,701
		$72,849
Smoothed value of assets		$1,990,482

The smoothed value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

(000'S)	CURRENT VALUATION	PREVIOUS VALUATION
Smoothed value of assets	$1,990,482	$1,828,671
In-transit amounts		
• Benefit payments	($6,926)	($87)
Smoothed value of assets, adjusted for in-transit amounts	$1,983,556	$1,828,584

GOING CONCERN FUNDING TARGET

Over time, the real cost to the employer of a pension plan is the excess of benefits and expenses over member contributions and investment earnings. The actuarial cost method allocates this cost to annual time periods.

For purposes of the going concern valuation, we have continued to use the projected unit credit actuarial cost method. Under this method, we determine the present value of benefit cash flows expected to be paid in respect of service accrued prior to the valuation date, based on projected final average earnings. This is referred to as the funding target.

The funding excess or funding shortfall, as the case may be, is the difference between the market or smoothed value of assets and the funding target. A funding excess on a market value basis indicates that the current market value of assets and expected investment earnings are expected to be sufficient to meet the cash flows in respect of benefits accrued to the valuation date as well as expected expenses – assuming the plan is maintained indefinitely. A funding shortfall on a market value basis indicates the opposite – that the current market value of the assets is not expected to be sufficient to meet the plan's cash flow requirements in respect of accrued benefits, absent additional contributions.

As required under the Act, a funding shortfall and the provision for adverse deviations must be amortized over no more than 10 years through special payments beginning one year after the valuation date. A funding excess may, from an actuarial standpoint, be applied immediately to reduce required employer current service contributions unless precluded by the terms of the plan or by legislation.

The actuarial cost method used for the purposes of this valuation produces a reasonable matching of contributions with accruing benefits. Because benefits are recognized as they accrue, the actuarial cost method provides an effective funding target for a plan that is maintained indefinitely.

Current Service Cost

The current service cost is the present value of projected benefits to be paid under the plan with respect to service expected to accrue during the period until the next valuation.

The University's current service cost is the total current service cost reduced by the members' required contributions.

The University's current service cost has been expressed as a percentage of the members' required contributions to provide an automatic adjustment in the event of fluctuations in membership and/or pensionable earnings.

Under the projected unit credit actuarial cost method, the current service cost for an individual member will increase each year as the member approaches retirement. However, the current service cost of the entire group, expressed as a percentage of the members' required contributions, can be expected to remain stable as long as the average age distribution of the group remains constant.

ACTUARIAL ASSUMPTIONS – GOING CONCERN BASIS

The present value of future benefit payment cash flows is based on economic and demographic assumptions. At each valuation we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise them, if necessary. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations.

The table below shows the various assumptions used in the current valuation in comparison with those used in the previous valuation.

ASSUMPTION	CURRENT VALUATION	PREVIOUS VALUATION
Discount rate:	5.60%	5.60%
Margin for adverse deviations:	0.00%	0.10%
Explicit expenses:	$0	$0
Inflation:	2.00%	2.00%

ASSUMPTION	CURRENT VALUATION	PREVIOUS VALUATION
ITA limit / YMPE increases:	3.00%	3.00%
Pensionable earnings increases:	Unifor members 3.0% per year TMG members 3.0% per year MUFA members 4.0% per year Clinical Faculty members 4.0% per year	Unifor members 3.65% in 2018; 3.0% per year thereafter TMG members 4.0% in 2018; 3.0% per year thereafter MUFA members 4.6% in 2018; 4.0% per year thereafter Clinical Faculty members 4.0% per year
Post-retirement pension increases:	Unifor Hired on or After May 1, 2010 **Year** / **Rate** 2019 / 1.89% 2020 / 2.00% 2021 / 1.47% 2022 / 2.24% 2023 / 1.14% 2024 onwards / 0.60% Other **Year** / **Rate** 2019 / 1.89% 2020 / 2.00% 2021 / 1.97% 2022 / 2.03% 2023 / 1.64% 2024 onwards / 1.10%	Unifor Hired on or After May 1, 2010 **Year** / **Rate** 2018 / 1.46% 2019 / 2.00% 2020 / 1.52% 2021 / 0.99% 2022 / 1.79% 2023 onwards / 0.70% Other **Year** / **Rate** 2018 / 1.46% 2019 / 2.00% 2020 / 2.00% 2021 / 1.49% 2022 / 2.29% 2023 onwards / 1.20%
Interest on employee contributions:	5.60%	5.60%

ASSUMPTION	CURRENT VALUATION	PREVIOUS VALUATION
Retirement rates:	15% retire when first eligible for an unreduced pension, 10% retire at each age thereafter up to age 64, 20% retire at age 65, 50% retire at each of the ages 66-69, remainder retire at age 70	15% retire when first eligible for an unreduced pension, 10% retire at each age thereafter up to age 64, 20% retire at age 65, 50% retire at each of the ages 66-69, remainder retire at age 70
Termination rates:	**Age** / **Rate** Under 25 / 15.0% 25 / 13.0% 30 / 8.0% 35 / 5.5% 40 / 3.5% 45 / 3.0% 50 / 3.0% 55 and older / 0.0% 15% of terminations are assumed to be involuntary without cause	**Age** / **Rate** Under 25 / 15.0% 25 / 13.0% 30 / 8.0% 35 / 5.5% 40 / 3.5% 45 / 3.0% 50 / 3.0% 55 and older / 0.0% 15% of terminations are assumed to be involuntary without cause
Mortality rates:	85% of the rates of the 2014 Public Sector Canadian Pensioners Mortality Table (CPM2014Publ)	85% of the rates of the 2014 Public Sector Canadian Pensioners Mortality Table (CPM2014Publ)
Mortality improvements:	Fully generational using CPM Improvement Scale B (CPM-B)	Fully generational using CPM Improvement Scale B (CPM-B)
Disability rates:	None	None
Eligible spouse at retirement:	85%	85%
Spousal age difference:	Male 3 years older	Male 3 years older

ASSUMPTION	CURRENT VALUATION	PREVIOUS VALUATION
Portability	95% of terminations prior to age 55 and 5% of terminations on or after 55 are assumed to receive a lump sum transfer. The commuted value basis in effect at their date of transfer is assumed to be the commuted value basis in effect for July 2018, which is as follows: Interest rates: 2.9% per year for 10 years; 3.2% per year thereafter Mortality table: 100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B	95% of terminations prior to age 55 and 5% of terminations on or after 55 are assumed to receive a lump sum transfer. The commuted value basis in effect at their date of transfer is assumed to be the commuted value basis in effect for July 2017, which is as follows: Interest rates: 2.3% per year for 10 years; 3.3% per year thereafter Mortality table: 100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B

The assumptions are best estimates and do not include a margin for adverse deviations, except for the discount rate in the previous valuation.

Pensionable Earnings

The benefits ultimately paid will depend on each member's final average earnings. To calculate the pension benefits payable upon retirement, death, or termination of employment, we have taken rate of pay on July 1, 2018 and assumed that such pensionable earnings will increase at the assumed rate.

RATIONALE FOR ASSUMPTIONS

A rationale for each of the assumptions used in the current valuation is provided below.

DISCOUNT RATE

We have discounted the expected benefit payment cash flows using the expected investment return on the smoothed value of the fund net of fees and less a margin for adverse deviations. Other bases for discounting the expected benefit payment cash flows may be appropriate, particularly for purposes other than those specifically identified in this valuation report.

The discount rate is comprised of the following:

- Estimated returns for each major asset class consistent with market conditions on the valuation date, the expected time horizon over which benefits are expected to be paid, and the target asset mix specified in the Plan's investment policy.
- Additional returns assumed to be achievable due to active investment management strategy, equal to the fees related to such active investment management strategy. Such fees were determined by the difference between the provision for total investment expenses and the hypothetical fees that would be incurred for passive management of all assets.
- Implicit provision for non-investment and passive investment expenses.

The discount rate was developed as follows:

Assumed investment return	5.82%
Allowance for administrative, actuarial and passive investment management fees	(0.20%)
Rounding	(0.02%)
Net discount rate	5.60%

EXPENSES

The assumption is based on the average amount of investment and administrative expenses over the last 3 years.

INFLATION

The inflation assumption of 2% is based on the mid-point of the Bank of Canada's inflation target range of between 1% and 3%.

INCOME TAX ACT PENSION LIMIT AND YEAR'S MAXIMUM PENSIONABLE EARNINGS

The assumption is based on historical real economic growth and the underlying inflation assumption.

PENSIONABLE EARNINGS

The assumption is based on general wage growth assumptions increased by our best estimate of future merit and promotional increases over general wage growth considering the University's expectations.

POST-RETIREMENT PENSION INCREASES

The assumption is based on the Plan formula, as well as the future investment return and inflation assumption above.

RETIREMENT RATES

The assumption is based on experience over the years 2002 to 2008. Subsequent experience has been consistent with these rates.

TERMINATION RATES

Use of a different assumption would not have a material impact on the valuation.

MORTALITY RATES

The assumption for the mortality rates is based on the Canadian Pensioners' Mortality (CPM) study published by the Canadian Institute of Actuaries in February 2014.

Due to the size of the Plan, specific data on plan mortality experience is insufficient to determine the mortality rates. The CPM mortality rates from the public sector have been adjusted after considering plan-specific characteristics, such as the type of employment, the industry experience, the pension and employment income for the plan members, and data in the CPM study.

There is broad consensus among actuaries and other longevity experts that mortality improvement will continue in the future, but the degree of future mortality improvement is uncertain. Two mortality improvement scales were recently published by the Canadian Institute of Actuaries (CIA) and may apply to Canadian pension valuations:

- The Canadian Pensioners Mortality (CPM) study published in February 2014 included CPM Improvement Scale B (CPM-B) which is also used for commuted value calculations.
- A report released by the Task Force on Mortality Improvement on September 20, 2017 includes an analysis of the rate of mortality improvement for the Canadian population and provides for mortality improvement scale MI-2017 to be considered for the purpose of reflecting future mortality improvement in Canadian actuarial work, while acknowledging that it might be appropriate to use alternative mortality improvement assumptions to reflect the nature of the work.

The CIA Committee on Pension Plan Financial Reporting published a revised version of the Educational Note on the Selection of Mortality Assumptions for Pension Plan Valuations on December 21, 2017. The Educational Note indicates that given the recent publication of the CPM-B and MI-2017 improvement scales and the similar data sets used in their development, it may be appropriate to use either scale in the absence of credible information to the contrary, such as the publication of a successor scale by the CIA.

For the present valuation, we have continued to use the CPM-B scale, which is a reasonable outlook for future mortality improvement.

Based on the assumption used, the life expectancy of a member age 65 at the valuation date is 24.1 years for males and 25.9 years for females.

INTEREST ON EMPLOYEE CONTRIBUTIONS

The assumption is based on Plan terms and the underlying investment return assumption.

DISABILITY RATES

Use of a different assumption would not have a material impact on the valuation.

ELIGIBLE SPOUSE

The assumption is based on an industry standard for non-retired members (actual status used for retirees).

SPOUSAL AGE DIFFERENCE

The assumption is based on an industry standard showing males are typically 3 years older than their spouse.

APPENDIX D

METHODS AND ASSUMPTIONS – HYPOTHETICAL WIND-UP AND SOLVENCY

HYPOTHETICAL WIND-UP BASIS

The Canadian Institute of Actuaries requires actuaries to report the financial position of a pension plan on the assumption that the plan is wound up on the effective date of the valuation, with benefits determined on the assumption that the pension plan has neither a surplus nor a deficit.

To determine the actuarial liability on the hypothetical wind-up basis, we have valued those benefits that would have been paid had the Plan been wound up on the valuation date, with all members fully vested in their accrued benefits including, however, the impact of plan amendments with an effective date before the next scheduled valuation which have been reflected in the going concern valuation results.

The Standards of Practice of the Canadian Institute of Actuaries require that the scenario upon which the hypothetical wind-up valuation is based be postulated. However, there are no benefits under the Plan contingent upon the circumstances of the plan wind-up or contingent upon other factors. Therefore, it was not necessary to postulate a scenario upon which the hypothetical wind-up valuation is made. No benefits payable on plan wind-up were excluded from our calculations. The plan wind-up is assumed to occur in circumstances that maximize the actuarial liability.

Upon plan wind-up, members are given options for the method of settling their benefit entitlements. The options vary by eligibility and by province of employment, but in general, involve either a lump sum transfer or an immediate or deferred pension.

The value of benefits assumed to be settled through a lump sum transfer is based on the assumptions described in Section 3500 – *Pension Commuted Values* of the Canadian Institute of Actuaries' Standards of Practice applicable for July 1, 2018.

Benefits provided as an immediate or deferred pension are assumed to be settled through the purchase of annuities based on an estimate of the cost of purchasing annuities.

We have estimated the cost of settlement through purchase of annuities in accordance with the *Canadian Institute of Actuaries Educational Note: Assumptions for Hypothetical Wind-up and Solvency Valuations with Effective Dates Between June 30, 2018 and December 30, 2018 (the "Educational Note").*

The Educational Note provides guidance on estimating the cost of annuity purchases assuming a typical group of annuitants. That is, no adjustments for sub- or super-standard mortality are considered. However, it is expected that insurers will consider plan experience and certain plan-specific characteristics when determining the mortality basis for a particular group. The Educational Note states that the actuary would be expected to make an adjustment to the regular annuity purchase assumptions where there is demonstrated substandard or super-standard mortality or where an insurer might be expected to assume so. In such cases, the actuary would be expected to make an adjustment to the mortality assumption in a manner consistent with the underlying annuity purchase basis. Given the uncertainty surrounding the actual mortality basis that would be typical of a group annuity purchase, it is reasonable to assume that there is a range of bases that can be expected not to be materially different from the actual mortality basis. Therefore, an adjustment to the regular annuity purchase assumptions would be warranted when the plan's assumed basis falls outside that range. In this context, we have determined that an adjustment to the mortality rates used in the regular annuity purchase assumptions is required.

We have not included a margin for adverse deviation in the solvency and hypothetical wind-up valuations.

The assumptions are as follows:

Form of Benefit Settlement Elected by Member	
Lump sum:	70% of active members and deferred vested members under age 55, and 50% of active members and deferred vested members over age 55, elect to receive their benefit entitlement in a lump sum
Annuity purchase:	All remaining members are assumed to elect to receive their benefit entitlement in the form of a deferred or immediate pension. These benefits are assumed to be settled through the purchase of deferred or immediate annuities from a life insurance University.
Basis for Benefits Assumed to be Settled through a Lump Sum	
Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B
Interest rate:	2.90% per year for 10 years, 3.20% per year thereafter
Basis for Benefits Assumed to be Settled through the Purchase of an Annuity	
Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B
Adjustment to mortality rates:	Above mortality rates reduced by 15% to reflect super-standard mortality
Interest rate:	3.10% per year based on a duration of 14.06 years determined for the liabilities assumed to be settled through the purchase of an annuity.

Retirement Age	
Maximum value:	Members are assumed to retire at the age which maximizes the value of their entitlement from the Plan, based on the eligibility requirements which have been met at the valuation date
Grow-in:	The benefit entitlement and assumed retirement age of Ontario members whose age plus service equals at least 55 at the valuation date reflect their entitlement to grow into early retirement subsidies
Other Assumptions	
Special payments:	Discounted at the average interest rate of 3.00% per year
Final average earnings:	Based on actual pensionable earnings over the averaging period
Family composition:	Same as for going concern valuation
Maximum pension limit:	$2,944.44 increasing at 2.58% per year for 10 years, 2.79% per year thereafter
Termination expenses:	$900,000

To determine the hypothetical wind-up position of the Plan, a provision has been made for estimated termination expenses payable from the Plan's assets in respect of actuarial and administration expenses that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Because the settlement of all benefits on wind-up is assumed to occur on the valuation date and is assumed to be uncontested, the provision for termination expenses does not include custodial, investment management, auditing, consulting, and legal expenses that would be incurred between the wind-up date and the settlement date or due to the terms of a wind-up being contested.

Expenses associated with the distribution of any surplus assets that might arise on an actual wind-up are also not included in the estimated termination expense provisions.

In determining the provision for termination expenses payable from the Plan's assets, we have assumed that the plan sponsor would be solvent on the wind-up date. We have also assumed, without analysis, that the Plan's terms as well as applicable legislation and court decisions would permit the relevant expenses to be paid from the Plan.

Although the termination expense assumption is a best estimate, actual fees incurred on an actual plan wind-up may differ materially from the estimates disclosed in this report.

INCREMENTAL COST

In order to determine the incremental cost, we estimate the hypothetical wind-up liabilities at the next valuation date. We have assumed that the cost of settling benefits by way of a lump sum or purchasing annuities remains consistent with the assumptions described above. Since the projected hypothetical wind-up liabilities will depend on the membership in the Plan at the next valuation date, we must make assumptions about how the Plan membership will evolve over the period until the next valuation.

We have assumed that the Plan membership will evolve in a manner consistent with the going concern assumptions as follows:

- Members terminate, retire, and die consistent with the termination, retirement, and mortality rates used for the going concern valuation.
- Pensionable earnings, the Income Tax Act pension limit, and the Year's Maximum Pensionable Earnings increase in accordance with the related going concern assumptions.
- To accommodate for new entrants to the Plan, we have added to the projected liability an amount equal to three times the liability of new entrants that have joined the Plan since the previous valuation. The demographics and earnings of the new entrants are consistent with the new entrants hired over the past year.
- Active members accrue pensionable service in accordance with the terms of the Plan.

SOLVENCY BASIS

In determining the financial position of the Plan on the solvency basis, we have used the same assumptions and methodology as were used for determining the financial position of the Plan on the hypothetical wind-up basis.

The solvency position is determined in accordance with the requirements of the Act.

APPENDIX E

MEMBERSHIP DATA

ANALYSIS OF MEMBERSHIP DATA

The actuarial valuation is based on membership data as at July 1, 2018, provided by McMaster University.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. These tests were applied to membership reconciliation, basic information (date of birth, date of hire, date of membership, gender, etc.), pensionable earnings, credited service, contributions accumulated with interest, and pensions to retirees and other members entitled to a deferred pension. Contributions, lump sum payments, and pensions to retirees were compared with corresponding amounts reported in financial statements. The results of these tests were satisfactory.

If the data supplied are not sufficient and reliable for its intended purpose, the results of our calculation may differ significantly from the results that would be obtained with such data. Although Mercer has reviewed the suitability of the data for its intended use in accordance with accepted actuarial practice in Canada, Mercer has not verified or audited any of the data or information provided.

Plan membership data are summarized below. For comparison, we have also summarized corresponding data from the previous valuation.

	01.07.18	01.07.17
Active Members		
Full-time		
Number	3,301	3,119
Average pensionable earnings for the following year	$94,578	$93,850
Average years of pensionable service	12.2	12.3
Average age	47.2	47.4
Accumulated contributions with interest	$343,817,997	$302,331,519
Part-time		
Number	311	510
Average pensionable earnings for the following year	$64,978	$68,507
Average years of pensionable service	7.5	9.1
Average age	46.4	46.0
Accumulated contributions with interest	$14,074,902	$24,191,872
Deferred Pensioners		
Number	916	913
Average annual lifetime pension	$4,786	$4,223
Average age	51.0	50.2
Pensioners and Survivors		
Number	2,245	2,157
Total annual lifetime pension	$75,025,172	$70,960,003
Total annual temporary pension	$462,018	$462,018
Average annual lifetime pension	$33,419	$32,898
Average age	73.9	73.7

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

	ACTIVES	DEFERRED PENSIONERS	PENSIONERS AND SURVIVORS	TOTAL
Total at 01.07.17	3,629	913	2,157	6,699
New entrants	261			261
Rehires	9	(9)		0
Terminations:				
• Transfers/lump sums	(89)	(58)	(1)	(148)
• Deferred pensions	(85)	85		0
Deaths	(6)	(2)	(59)	(67)
Retirements	(107)	(10)	117	0
Beneficiaries			27	27
Data adjustments		(3)	4	1
Total at 01.07.18	3,612	916	2,245	6,773

The distribution of the active members by age and pensionable service as at the valuation date is summarized as follows:

	YEARS OF PENSIONABLE SERVICE									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
Under 25	26 $49,545									26 $49,545
25 to 29	212 $53,652	8 $63,357								220 $54,005
30 to 34	244 $65,414	112 $63,206	10 $65,958							366 $64,820
35 to 39	209 $75,613	141 $81,326	80 $72,942	4 $93,218						434 $77,139
40 to 44	151 $74,935	145 $100,227	124 $102,112	60 $80,914	2 *					482 $90,197
45 to 49	99 $78,793	106 $91,488	147 $102,797	126 $119,455	39 $83,443	10 $91,235				527 $98,344
50 to 54	58 $67,666	92 $81,005	149 $95,585	147 $127,018	55 $126,401	56 $76,866	18 $80,722	1 *	1 *	577 $99,012
55 to 59	42 $74,569	75 $82,170	111 $90,975	107 $110,688	52 $121,120	69 $122,681	53 $99,739	15 $64,238	2 *	526 $99,580
60 to 64	21 $92,473	36 $100,055	50 $88,938	52 $121,868	32 $99,051	55 $130,960	51 $157,462	19 $103,017	6 $91,488	322 $115,644
65 to 70	6 $155,908	6 $101,643	13 $113,582	15 $116,792	6 $162,090	21 $150,889	24 $180,179	20 $163,220	2 *	113 $147,639
70+		1 *	3 $182,250	3 $112,611			5 $170,963	3 $186,962	4 $199,380	19 $174,029
Total	1,068 $68,821	722 $84,930	687 $94,729	514 $115,216	186 $111,595	211 $113,997	151 $132,112	58 $117,381	15 $114,875	3,612 $92,029

** For individual cells with information on two members or less, the average earnings are not disclosed for confidentiality reasons*

The distribution of the inactive members by age as at the valuation date is summarized as follows:

	DEFERRED PENSIONERS			PENSIONERS AND SURVIVORS	
Age	Number	Average Pension		Number	Average Pension
Under 25					
25 - 29	20	$495			
30 - 34	38	$1,526			
35 - 39	100	$3,037			
40 - 44	104	$4,077			
45 – 49	130	$4,478		1	*
50 – 54	189	$5,869		7	$24,615
55 – 59	150	$7,247		92	$31,330
60 – 64	126	$5,493		264	$31,478
65 – 69	43	$1,992		454	$32,072
70 – 74	11	$1,756		506	$37,113
75 – 79	4	$2,458		347	$37,871
80 – 84	1	*		264	$33,272
85 – 89				178	$29,181
90 – 94				90	$27,512
95 – 99				40	$15,527
100 +					
Total	916	$4,786		2,245	$33,419

** For individual cells with information on two members or less, the average pension is not disclosed for confidentiality reasons*

APPENDIX F

SUMMARY OF PLAN PROVISIONS

Mercer has used and relied on the Plan documents, including amendments and interpretations of Plan provisions, supplied by McMaster University. If any Plan provisions supplied are not accurate and complete, the results of any calculation may differ significantly from the results that would be obtained with accurate and complete information. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and the results of estimates under each of the different interpretations could vary.

This valuation is based on the plan provisions in effect on July 1, 2018. Since the previous valuation, the Plan was amended to provide special adjustments to required contributions for certain employee classes in situations where the University's contributions for any month are below certain thresholds. The Plan was also amended to increase required contributions for various employee classes as a result of recent negotiations and other decisions.

The following is a summary of the main provisions of the Plan in effect on July 1, 2018. This summary is not intended as a complete description of the Plan.

Eligibility for Membership	Full-time employees may elect to join the Plan immediately but are required to join on the July 1st following completion of six month's employment. Part-time employees who either earn at least 35% of the YMPE or work for at least seven hundred hours in each of the two preceding consecutive calendar years for the University are eligible and are required to join under the same criteria as above. All members of the Plan (active and inactive) as of July 1, 2000 and new employees who joined the Original Plan between July 1, 2000 and December 31, 2000 have been transferred to this Plan if they voted in favour of the Surplus Sharing Agreement. In addition, members who joined the Original Plan between January 1, 2001 and January 14, 2003 have been transferred to this Plan following the approval of the asset transfer by the Financial Services Commission of Ontario. The Plan was completely closed to new SAAO employees or TMG employees who were hired after June 16, 2009 and to MUALA (Librarians) hired after March 16, 2010.

Employee Contributions

Effective at the dates and for the periods shown in the table below member required contribution rates for specific member groups as follows:

Class of Member	Period	Contribution Rate below/above YMPE
A.1 Faculty Members	July 1, 2013 to June 30, 2018 July 1, 2018 onwards	7.0% / 10.0% 8.0% / 11.0%
A.2 TMG Members	July 7, 2013 to July 28, 2018 July 29, 2018 onwards	7.0% / 10.0% 8.0% / 11.0%
SAAO Members	July 7, 2013 to July 28, 2018 July 29, 2018 onwards	7.0% / 10.0% 8.0% / 11.0%
B. Librarians	July 1, 2013 to June 30, 2018 July 1, 2018 onwards	7.0% / 10.0% 8.0% / 11.0%
C.1 Unifor Local 5555 Members hired prior to May 1, 2010	Jan. 14, 2018 to Apr. 30, 2018 May 1, 2018 to Dec. 31, 2022 Jan. 1, 2023 onwards	7.646% / 10.646% 8.646% / 11.646% 8.59% / 11.59%
C.2 Unifor Local 5555 Members hired after to May 1, 2010	Sept. 14, 2014 to Jan. 13, 2018 Jan. 14, 2018 to Dec. 31, 2022 Jan. 1, 2023 onwards	7.56% / 10.56% 7.646% / 10.646% 7.59% / 10.59%
D1. Members who are employees of: • McMaster Association of Part Time Students • McMaster University Faculty Association • Divinity College • Members who are non-union employees of Regional Medical Associates of Hamilton	July 27, 2014 onwards	7.00% / 10.00%
D2. Members who are employees of: • McMaster Children's Centre Inc. • Divinity College • Members who are non-union employees of Regional Medical Associates of Hamilton	July 28, 2018 onwards	8.0% / 11.0%

Employee Contributions (continued)

Class of Member	Period	Contribution Rate below/above YMPE
E. Members who are union employees of Regional Medical Associates of Hamilton	Sept. 14, 2014 to Jan. 13, 2018 Jan. 14, 2014 to Apr. 30, 2018 Jan. 1, 2023 onwards	7.56% / 10.56% 7.646% / 10.646% 8.59% / 11.59%
F. Full-time clinical faculty members of the Faculty of Health Sciences who must maintain membership in the Regional Medical Associate of Hamilton	Feb. 2, 2014 to July 28, 2018 July 29, 2018 onwards	7.0% / 10.0% 8.0% / 11.0%
G. Other Members (not included above)	July 27, 2014 to July 28, 2018 July 29, 2018 onwards	7.0% / 10.0% 8.0% / 11.0%
H. MUALA Members	July 1, 2016 to July 31, 2019 Aug. 1, 2019 onwards	7.00% / 10.00% 8.0% / 11.0%

Member required contributions are limited to the contribution arising when the applicable employee contribution rate is applied to the Maximum Annual Salary under the Plan. The Maximum Annual Salary is the salary rate that produces an annual pension amount equal to the maximum pension limit under the *Income Tax Act* for that year.

Retirement Dates

Normal retirement is the first day of the month coincident with, or prior to the member's 65th birthday. However, a member may normally elect to retire immediately on attaining age 65.

Effective February 1, 2014 the number of points required to retire early and receive an unreduced pension and a bridge benefit is amended for members who are not Faculty Members. The number of points required is as follows:

Class	Retirement Date	Points Required
SAAO Members and TMG Members who are employees on June 30, 2006 and who retire on or after July 1, 2006	July 1, 2006 to December 31, 2011	80
	January 1, 2012 to December 31, 2012	81
	January 1, 2013 to December 31, 2013	82
	January 1, 2014 to December 31, 2014	83
	January 1, 2015 to December 31, 2015	84
	January 1, 2016 onwards	85
MUALA Members who are employees on March 15, 2010 and who retire on or after March 16, 2010	April 1, 2010 to December 31, 2011	80
	January 1, 2012 to December 31, 2012	81
	January 1, 2013 to December 31, 2013	82
	January 1, 2014 to December 31, 2014	83
	January 1, 2015 to December 31, 2015	84
	January 1, 2016 onwards	85

Retirement Dates (continued)

Class	Retirement Date	Points Required
Faculty Members who are employees on June 30, 2006 and who retire on or after July 1, 2006 And Librarians who are employees on June 15, 2006 and who retire on or after June 16, 2006	July 1, 2006 to December 31, 2011	80
	January 1, 2012 to December 31, 2012	81
	January 1, 2013 to December 31, 2013	82
	January 1, 2014 to December 31, 2014	83
	January 1, 2015 to December 31, 2015	84
	January 1, 2016 to December 31, 2018	85
	January 1, 2019 to December 31, 2019	86
	January 1, 2020 to December 31, 2020	87
	January 1, 2021 to December 31, 2021	88
	January 1, 2022 to December 31, 2022	89
	January 1, 2023 onwards	90
SAAO and TMG Members who become Employees on or after July 1, 2006		85
Faculty Members who become Employees on or after July 1, 2006 and Librarians who become Employees on or after June 16, 2006	July 1, 2006 to December 31, 2018	85
	January 1, 2019 to December 31, 2019	86
	January 1, 2020 to December 31, 2020	87
	January 1, 2021 to December 31, 2021	88
	January 1, 2022 to December 31, 2022	89
	January 1, 2023 onwards	90

Retirement Dates (continued)

Class	Retirement Date	Points Required
Members who are employees of: • McMaster Association of Part Time Students • McMaster Children's Centre Inc. • McMaster University Faculty Association • Divinity College and Members who are non-union employees of Regional Medical Associates of Hamilton	July 1, 2006 to December 31, 2011	80
	January 1, 2012 to December 31, 2012	81
	January 1, 2013 to December 31, 2013	82
	January 1, 2014 to December 31, 2014	83
	January 1, 2015 to December 31, 2015	84
	January 1, 2016 onwards	85
Unifor Local 5555 member and Members who are union employers or Regional Medical Association of Hamilton	Age + plan participation equals at least 80. Members who are newly hired by the University on or after May 1, 2010 and in respect of service as a Unifor Local 5555 Member only, the unreduced early retirement date is the first day of any month coincident with or following the date on which the Member, has (1) attained age 60, and (2) the sum of the Member's age and years and participation in the Plan equals at least 80.	
Full-time clinical faculty members of the Faculty of Health Sciences who must maintain membership in the Regional Medical Associates of Hamilton	Prior to February 1, 2014	80
	February 1, 2014 to December 31, 2014	81
	January 1, 2015 to December 31, 2015	82
	January 1, 2016 to December 31, 2016	83
	January 1, 2017 to December 31, 2017	84
	January 1, 2018 onwards	85

Retirement Dates (continued)

Class	Retirement Date	Points Required
Other Members (not included above) who are employees on June 30, 2007 and who retired on or after July 1, 2007	July 1, 2006 to December 31, 2011	80
	January 1, 2012 to December 31, 2012	81
	January 1, 2013 to December 31, 2013	82
	January 1, 2014 to December 31, 2014	83
	January 1, 2015 to December 31, 2015	84
	January 1, 2016 onwards	85
Other Members (not included above) who become Employees on or after July 1, 2007		85

Pension Benefits	**Members other than Unifor Local 5555 Members hired on or after May 1, 2010** The amount of annual payable to a member at his unreduced retirement age will be: a) 1.4% of Best Average Salary up to the Average Year's Maximum Pensionable Earnings times years of pensionable service, plus b) 2.0% of Best Average Salary in excess of the Average Year's Maximum Pensionable Earnings times years of pensionable service. Best Average Salary means the annualized average of the 48 highest months of earnings while a Plan participant. Average Year's Maximum Pensionable Earnings means the pro-rated average Yearly Maximum Pensionable Earnings, in the same 48 months as are used to calculate Best Average Salary. Pensions in payment will be increased from January 1st each year on a pro-rated basis (using the number of months the pensioner has been retired in the twelve months) by the excess over 4.5% of the average annual rate of return earned on the assets of the Plan over the previous five Plan Years, subject to a maximum of that year's rate of increase in the Consumer Price Index. Effectively July 1, 1997, if there is any year where the percentage calculated under the excess interest formula exceeds the rate of increase in the Consumer Price Index, the excess will be used to provide a supplementary increase to the pensions in pay for which the annual pension increase in any of the three previous years was based on the excess interest formula, provided that the supplementary increase will be limited to 100% of CPI increases in each of the three preceding years. In addition, members on LTD will have their salary adjusted each July 1st by the percentage increase applied to pensions in payment. This increase will be applied from the later of July 1, 1990 or the July 1st following disability. A member may retire early with a reduced pension at any time during the 10-year period preceding his normal retirement date. The reduction will be 0.5% for each month by which actual retirement precedes age 65. A member may retire early with an unreduced pension once they have attained the criteria set out in the table above. A member may postpone his actual retirement and commencement of pension (with University consent prior to December 12, 2006), but in any event his pension shall commence no later than the 1st of December of the year of attainment of age 71. The member will continue to make contributions and their benefits under the Plan will continue to accrue until such postponed retirement date.

Pension Benefits (continued)	**Unifor Local 5555 Members hired on or after May 1, 2010** The amount of annual pension payable to a member at his unreduced retirement age will be: a) 1.0% of Best Average Salary up to the Average Year's Maximum Pensionable Earnings times years of pensionable service, plus b) 1.6% of Best Average Salary in excess of the Average Year's Maximum Pensionable Earnings times years of pensionable service. Best Average Salary means the annualized average of the 60 highest months of earnings while a Plan participant. Average Year's Maximum Pensionable Earnings means the pro-rated average Yearly Maximum Pensionable Earnings, in the same 60 months as are used to calculate Best Average Salary. Pensions in payment will be increased from January 1st each year on a pro-rated basis (using the number of months the pensioner has been retired in the twelve months) by the excess over 5.0% of the average annual rate of return earned on the assets of the Plan over the previous five Plan Years, subject to a maximum of that year's rate of increase in the Consumer Price Index. If there is any year where the percentage calculated under the excess interest formula exceeds the rate of increase in the Consumer Price Index, the excess will be used to provide a supplementary increase to the pensions in pay for which the annual pension increase in any of the three previous years was based on the excess interest formula, provided that the supplementary increase will be limited to 100% of CPI increases in each of the three preceding years. A member may retire early with a reduced pension at any time during the 10-year period preceding his normal retirement date. The reduction will be 0.5% for each month by which actual retirement precedes age 65. A member may retire early with an unreduced pension once they have attained the criteria set out in the table above. A member may postpone his actual retirement and commencement of pension, but in any event his pension shall commence no later than the 1st of December of the year of attainment of age 71. The member will continue to make contributions and their benefits under the Plan will continue to accrue until such postponed retirement date.
Bridge Benefits	Effective July 1, 1997, members who retire early and have attained the requisite number of points to receive an unreduced pension will receive a bridge benefit equal to $19.00 per month per year of credited service accrued to June 30, 1996 to a maximum of 20 years of service. The bridge benefit is payable from the later of the member's early retirement date and age 60 and ceases payment on attainment of age 65 or death, if earlier.
Minimum Benefits	If the member's total Required Contributions plus net interest are greater than 50% of the commuted value of a member's retirement and bridge pensions, the excess amount will be refunded to the member as a lump sum payment. In addition, the member will receive a refund of his voluntary contributions with interest, if any.
Maximum Benefits	The total annual pension payable from the Plan upon retirement, death or termination of employment cannot exceed the lesser of: • 2% of the average of the best three consecutive years of total compensation paid to the member by the University, multiplied by total credited service; and • $2,944.44 or such other maximum permitted under the Income Tax Act, multiplied by the member's total credited service. The maximum pension is determined at the date of pension commencement.

Death Benefits	**Pre-retirement:** On the death of a member prior to retirement, his beneficiary or estate is entitled to receive a death benefit equal to his required contributions accrued to December 31, 1986 accumulated with net interest on the fund, and his beneficiary or estate shall receive the commuted value of the member's pension accrued after December 31, 1986, plus any required contributions made after December 31, 1986, accumulated with net interest on the fund, in excess of 50% of the commuted value. In addition, his beneficiary or estate will receive a refund of his voluntary contributions with interest, if any. **Post retirement:** The benefit is payable for life, but guaranteed for seven years in any event. In the case of a member with a spouse, 50% of the benefit is continued to the spouse for life and at least the remainder of the guaranteed seven years' payments will be made. There is no required adjustment in respect of this surviving spouse's benefit. Prior to July 1, 1997, the normal form of benefit was as described above with a five-year guarantee in place of the seven-year guarantee. Alternative forms of pension are available in actuarial equivalent amounts and for members who have a spouse and who retire after December 31, 1987, the automatic form of pension will be an actuarially reduced benefit which continues 60% of the pension to a surviving spouse for life.
Termination Benefits	If a Member terminates employment prior to retirement, he may elect to receive one of the following: 1) A refund of his required contributions, with Net Interest on the Fund. 2) A transfer of the greater of twice his Required Contributions plus Net Interest and the commuted value of his deferred pension to another locked-in registered pension vehicle. 3) A deferred pension, payable at Normal Retirement Date, equal to the pension earned to the date of termination. * Unifor Local 5555 members hired on or after May 1, 2010 and Faculty members or Librarians hired after July 1, 2013 will not be entitled to option b). However such member will be entitled to transfer the commuted value of his deferred pension to another locked-in registered pension vehicle. In addition, a member is entitled to a refund of the excess of his Required Contributions plus Net Interest over 50% of the commuted value of the deferred pension described in 3) above. The excess is measured separately for required contributions with interest and pension benefits accrued before and after January 1, 1987. In addition, a member is entitled to a refund of his voluntary contributions with Net Interest, if any.

APPENDIX G

UNIVERSITY CERTIFICATION

With respect to the Report on the Actuarial Valuation for Funding Purposes as at July 1, 2018 of The Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College, I hereby certify that, to the best of my knowledge and belief:

- The valuation reflects the terms of the University's engagement with the actuary described in Section 2 of this report, particularly the requirement to not reflect a margin for adverse deviations in the going concern valuation.
- A copy of the official Plan documents and of all amendments made up to July 1, 2018 was provided to the actuary and is reflected appropriately in the summary of plan provisions contained herein.
- The asset information summarized in Appendix B is reflective of the Plan's assets.
- The membership data provided to the actuary included a complete and accurate description of every person who is entitled to benefits under the terms of the Plan for service up to July 1, 2018.
- All events subsequent to July 1, 2018 that may have an impact on the Plan have been communicated to the actuary.

Date

Signed

Name

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MARSH & McLENNAN COMPANIES

Appendix C. Actuarial Valuation - Original Plan

HEALTH WEALTH CAREER

THE CONTRIBUTORY PENSION PLAN FOR SALARIED EMPLOYEES OF MCMASTER UNIVERSITY INCLUDING MCMASTER DIVINITY COLLEGE

REPORT ON THE ACTUARIAL VALUATION FOR FUNDING PURPOSES AS AT JULY 1, 2018

JANUARY 2019

Financial Services Commission of Ontario Registration Number: 0215400
Canada Revenue Agency Registration Number: 0215400

DRAFT

MAKE TOMORROW, TODAY MERCER

Note to reader regarding actuarial valuations:

This valuation report may not be relied upon for any purpose other than those explicitly noted in the Introduction, nor may it be relied upon by any party other than the parties noted in the Introduction. Mercer is not responsible for the consequences of any other use. A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a pension plan's future financial condition or its ability to pay benefits in the future. If maintained indefinitely, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the amount of plan expenses, and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date. The content of the report may not be modified, incorporated into or used in other material, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's permission. All parts of this report, including any documents incorporated by reference, are integral to understanding and explaining its contents; no part may be taken out of context, used, or relied upon without reference to the report as a whole.

To prepare the results in this report, actuarial assumptions are used to model a single scenario from a range of possibilities for each valuation basis. The results based on that single scenario are included in this report. However, the future is uncertain and the Plan's actual experience will differ from those assumptions; these differences may be significant or material. Different assumptions or scenarios within the range of possibilities may also be reasonable, and results based on those assumptions would be different. Furthermore, actuarial assumptions may be changed from one valuation to the next because of changes in regulatory and professional requirements, developments in case law, plan experience, changes in expectations about the future, and other factors.

The valuation results shown in this report also illustrate the sensitivity to one of the key actuarial assumptions, the discount rate. We note that the results presented herein rely on many assumptions, all of which are subject to uncertainty, with a broad range of possible outcomes, and the results are sensitive to all the assumptions used in the valuation.

Should the Plan be wound up, the going concern funded status and solvency financial position, if different from the wind-up financial position, become irrelevant. The hypothetical wind-up financial position estimates the financial position of the Plan assuming it is wound up on the valuation date. Emerging experience will affect the wind-up financial position of the Plan assuming it is wound up in the future. In fact, even if the Plan were wound up on the valuation date, the financial position would continue to fluctuate until the benefits are fully settled.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security, and/or benefit-related issues should not be made solely on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic, and societal factors, including financial scenarios that assume future sustained investment losses.

Funding calculations reflect our understanding of the requirements of the Pension Benefits Act (Ontario), the Income Tax Act, and related regulations that are effective as of the valuation date. Mercer is not a law firm, and the analysis presented in this report is not intended to be a legal opinion. You should consider securing the advice of legal counsel with respect to any legal matters related to this report.

CONTENTS

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SUMMARY OF RESULTS

	01.07.18	01.07.17
Going Concern Financial Status		
Smoothed value of assets	$3,962,000	$3,531,000
Going concern funding liabilities	$3,011,000	$3,033,000
Provision for adverse deviations in respect of the going concern liabilities	$369,000	N/A
Funding excess (shortfall)	$582,000	$498,000
Hypothetical Wind-up Financial Position		
Wind-up assets	$3,978,000	$3,578,000
Wind-up liability	$3,825,000	$3,752,000
Wind-up excess (shortfall)	$153,000	($174,000)
Transfer ratio	106%	97%
Next required valuation date	July 1, 2021	July 1, 2020

	2018/2019	2017/2018
Funding Requirements in the Year Following the Valuation [1]		
Total current service cost	$117,000	$116,000
Estimated members' required contributions	($41,000)	($37,000)
Estimated University's current service cost	$76,000	$79,000
Expense allowance	$25,000	$25,000
Provision for adverse deviations (PfAD) in respect of current service cost	$14,000	N/A
Total	$115,000	$104,000
University's current service cost plus PfAD expressed as a percentage of members' required contributions	280%	281%
Minimum special payments	$0	$0[2]
Estimated minimum University contribution	$78,000[3]	$104,000
Estimated maximum eligible University contribution	$115,000	$278,000

[1] Provided for reference purposes only. Contributions must be remitted to the Plan in accordance with the Minimum Funding Requirements and Maximum Eligible Contributions sections of this report.

[2] Special payments with respect to July 1, 2017 to July 1, 2018. The full special payment schedule is outlined in Appendix A.

[3] Assumes that the prescribed application to FSCO will be made to use available actuarial surplus as a contribution holiday.

2
INTRODUCTION

TO MCMASTER UNIVERSITY

At the request of McMaster University, we have conducted an actuarial valuation of The Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College (the "Plan"), sponsored by McMaster University (the "University"), as at the valuation date, July 1, 2018. We are pleased to present the results of the valuation.

PURPOSE

The purpose of this valuation is to determine:

- The funded status of the Plan as at July 1, 2018 on going concern, hypothetical wind-up, and solvency bases;
- The minimum required funding contributions from July 1, 2018, in accordance with the *Pension Benefits Act (Ontario)* (the "Act"); and
- The maximum permissible funding contributions from July 1, 2018, in accordance with the *Income Tax Act.*

The information contained in this report was prepared for the internal use of the University, and for filing with the Financial Services Commission of Ontario and with the Canada Revenue Agency, in connection with our actuarial valuation of the Plan. This report will be filed with the Financial Services Commission of Ontario and with the Canada Revenue Agency. This report is not intended or suitable for any other purpose.

In accordance with pension benefits legislation, the next actuarial valuation of the Plan will be required as at a date not later than July 1, 2021, or as at the date of an earlier amendment to the Plan.

TERMS OF ENGAGEMENT

In accordance with our terms of engagement with McMaster University, our actuarial valuation of the Plan is based on the following material terms:

- It has been prepared in accordance with applicable pension legislation and actuarial standards of practice in Canada.
- As instructed by the University, we have not reflected a margin for adverse deviations in the going concern valuation in excess of the provision for adverse deviations prescribed by the Act.
- We have reflected the University's decisions for determining the solvency funding requirements, summarized as follows:
  - The same plan wind-up scenario was hypothesized for both hypothetical wind-up and solvency valuations.
  - Although permissible, no benefits were excluded from the solvency liabilities.
  - The solvency financial position was determined on a market value basis.

  See the Valuation Results - Solvency section of the report for more information.

EVENTS SINCE THE LAST VALUATION AT JULY 1, 2017

Pension Plan

This valuation reflects the provisions of the Plan as at July 1, 2018. Since the date of the last valuation, the Plan was amended effective July 1, 2017 to provide a special adjustment to required Faculty member contributions in situations where the University's contributions for any month are below certain thresholds. Effective July 1, 2018, Faculty member contributions were increased from 7.0% of salary up to the year's maximum pensionable earnings ("YMPE") and 10.0% above the YMPE to 8.0% of salary up to the YMPE and 11.0% above the YMPE. The Plan text was restated effective January 1, 2019 to incorporate these and other amendments since the last statement of the Plan and to incorporate legislative changes and to make other housekeeping changes. We are not aware of any pending definitive or virtually definitive amendments coming into effect during the period covered by this report.

The Plan provisions are summarized in Appendix F.

Assumptions

We have used the same going concern valuation assumptions and methods as were used for the previous valuation, except for the following:

	CURRENT VALUATION		PREVIOUS VALUATION	
Post-retirement pension increases:	**Year**	**Rate**	**Year**	**Rate**
	2019	1.89%	2018	1.46%
	2020	2.00%	2019	2.00%
	2021	1.97%	2020	2.00%
	2022	2.03%	2021	1.49%
	2023	1.64%	2022	2.29%
	2024 onwards	1.10%	2023 onwards	1.20%

A summary of the going concern methods and assumptions is provided in Appendix C.

The hypothetical wind-up and solvency assumptions have been updated to reflect market conditions at the valuation date. A summary of the hypothetical wind-up and solvency methods and assumptions is provided in Appendix D.

Regulatory Environment and Actuarial Standards

There have been a number of changes to the Act and regulations which impact the funding of the Plan.

On December 14, 2017, Bill 177, Stronger, Fairer Ontario Act, 2017 received Royal Assent. Bill 177 contained amendments to the Act to enable the new funding framework previously announced by the Government of Ontario in May, 2017. The new funding framework changed minimum funding requirements from both a going concern and solvency perspective. The regulations to the Act supporting the new funding rules were published on April 20, 2018 with effect from May 1, 2018. Valuation reports with effect on or after December 31, 2017 that are filed on or after May 1, 2018 reflect the new rules. The amended regulations also allow for a transition from the funding rules that applied immediately before May 1, 2018 to the new funding rules over a three-year phase-in period starting in the first year following the valuation date of this report.

SUBSEQUENT EVENTS

After checking with representatives of the University, to the best of our knowledge there have been no events subsequent to the valuation date which, in our opinion, would have a material impact on the results of the valuation. However, since the valuation date, there have been significant fluctuations in the financial markets, which will have led to a deterioration of the funded position of the Plan since the valuation date. Our valuation reflects the financial position of the Plan as of the valuation date and does not take into account any experience after the valuation date.

IMPACT OF CASE LAW

This report has been prepared on the assumption that all claims on the Plan after the valuation date will be in respect of benefits payable to members of the Plan determined in accordance with the Plan terms and that all Plan assets are available to provide for these benefits. It is possible that court and regulatory decisions and changes in legislation could give rise to additional entitlements to benefits under the Plan and cause the results in this report to change. By way of example, we bring your attention to the following decisions:

- The Ontario Court of Appeal's 2003 decision in *Aegon Canada Inc. and Transamerica Life Canada versus ING Canada Inc.* restricted the use of original plan surplus where two or more pension plans were merged.
- The Supreme Court of Canada's 2004 decision in *Monsanto Canada Inc. versus Superintendent of Financial Services* upheld the requirement, with retroactive effect, to distribute surplus on partial plan wind-up under the *Pension Benefits Act (Ontario).*

We are not in a position to assess the impact that such decisions or changes could have on the assumption that all plan assets on the valuation date are available to provide for benefits determined in accordance with the Plan terms. If such a claim arises subsequent to the date of this report, the consequences will be dealt with in a subsequent report. We are making no representation as to the likelihood of such a claim.

3
VALUATION RESULTS – GOING CONCERN

FINANCIAL STATUS

A going concern valuation compares the relationship between the value of Plan assets and the present value of expected future benefit cash flows in respect of accrued service, assuming the Plan will be maintained indefinitely.

The results of the current valuation, compared with those from the previous valuation, are summarized as follows:

	01.07.18	01.07.17
Assets		
Market value of assets	$4,053,000	$3,638,000
Asset smoothing adjustment	($91,000)	($107,000)
Smoothed value of assets	$3,962,000	$3,531,000
Going concern funding target		
Going concern liabilities:		
• Active members	$2,810,000	$2,637,000
• Pensioners and survivors	$23,000	$24,000
• Deferred pensioners	$178,000	$372,000
• Subtotal	$3,011,000	$3,033,000
Provision for adverse deviations in respect of going concern liabilities as prescribed by the Act	$369,000	N/A
Total	$3,380,000	$3,033,000
Funding excess (shortfall)[4]	$582,000	$498,000

[4] Funding excess (shortfall) may or may not be equal to the going concern excess (unfunded liability) as described in the Act. Details of the going concern excess (unfunded liability) are provided in Appendix A.

The going concern liabilities at July 1, 2018 do not include an additional margin for adverse deviations beyond the provision for adverse deviations prescribed by the Act.

RECONCILIATION OF FINANCIAL STATUS

Funding excess (shortfall) as at previous valuation		$498,000
Interest on funding excess (shortfall) at 5.60% per year		$28,000
University's special payments, with interest		$13,000
Expected funding excess (shortfall)		$539,000
Net experience gains (losses)		
• Net investment return	$57,000	
• Increases in pensionable earnings	$55,000	
• Retirement	$70,000	
• Impact of asset smoothing	$22,000	
Total experience gains (losses)		$204,000
Impact of change in post-retirement pension increase assumption		$17,000
Change in provision for adverse deviations in respect of the going concern liabilities		($369,000)
Refinements to valuation method		$166,000
Net impact of other elements of gains and losses		$25,000
Funding excess (shortfall) as at current valuation		$582,000

CURRENT SERVICE COST

The current service cost is an estimate of the present value of the additional expected future benefit cash flows in respect of pensionable service that will accrue after the valuation date, assuming the Plan will be maintained indefinitely. A provision for adverse deviations in respect of the current service cost is determined in accordance with the Act.

The current service cost and the provision for adverse deviations in respect of the current service cost, during the year following the valuation date, compared with the corresponding values determined in the previous valuation, is as follows:

	2018/2019	2017/2018
Total current service cost excluding expense allowance	$117,000	$116,000
Estimated members' required contributions	($41,000)	($37,000)
Estimated University's current service cost excluding expense allowance	$76,000	$79,000
Expense allowance	25,000	$25,000
Total estimated University's current service cost	$101,000	$104,000
University's current service cost expressed as a percentage of members' required contributions	246%	281%
Provision for adverse deviations in respect of the current service cost (based on the percentage defined in Appendix A)		
• As a dollar amount per year	$14,000	N/A
• As a percentage of members' required contributions	34%	N/A
University's current service cost and provision for adverse deviations in respect of current service cost		
• As a dollar amount per year	$115,000	$104,000
• As a percentage of members' required contributions	280%	281%

The key factors that have caused a change in the University's current service cost excluding the provision for adverse deviations since the previous valuation are summarized in the following table:

University's current service cost as at previous valuation	281%
Demographic changes	5%
Plan amendment to increase member contributions	(38%)
Changes in assumptions	(2%)
University's current service cost as at current valuation	246%

DISCOUNT RATE SENSITIVITY

The following table summarizes the effect on the going concern funding target and current service cost shown in this report of using a discount rate which is 1% lower than that used in the valuation. The effect of a change in the discount rate on the provision for adverse deviations is not reflected.

SCENARIO	VALUATION BASIS	REDUCE DISCOUNT RATE BY 1%
Going concern funding liabilities	$3,011,000	$3,476,000
Current service cost		
Total current service cost excluding expense allowance	$117,000	$136,000
Estimated members' required contributions	($41,000)	($41,000)
Estimated University's current service cost excluding expense allowance	$76,000	$95,000
Expense allowance	$25,000	$25,000
Total University's current service cost	$101,000	$120,000

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VALUATION RESULTS – HYPOTHETICAL WIND-UP

FINANCIAL POSITION

When conducting a hypothetical wind-up valuation, we determine the relationship between the respective values of the Plan's assets and its liabilities assuming the Plan is wound up and settled on the valuation date, assuming benefits are settled in accordance with the Act and under circumstances consistent with the hypothesized scenario on the valuation date. More details on such scenario are provided in Appendix D.

The hypothetical wind-up financial position as of the valuation date, compared with that at the previous valuation, is as follows:

	01.07.18	01.07.17
Assets		
Market value of assets	$4,053,000	$3,638,000
Termination expense provision	($75,000)	($60,000)
Wind-up assets	$3,978,000	$3,578,000
Present value of accrued benefits for:		
• Active members	$3,583,000	$3,332,000
• Pensioners and survivors	$26,000	$26,000
• Deferred pensioners	$216,000	$394,000
Total wind-up liability	$3,825,000	$3,752,000
Wind-up excess (shortfall)	$153,000	($174,000)
Transfer Ratio	106%	97%

WIND-UP INCREMENTAL COST

The wind-up incremental cost is an estimate of the present value of the projected change in the hypothetical wind-up liabilities from the valuation date until the next scheduled valuation date, adjusted for the benefit payments expected to be made in that period.

The hypothetical wind-up incremental cost determined in this valuation, compared with the corresponding value determined in the previous valuation, is as follows:

	01.07.18	01.07.17
Number of years covered by report	3 years	3 years
Total hypothetical wind-up liabilities at the valuation date (A)	$3,825,000	$3,752,000
Present value at the valuation date of projected hypothetical wind-up liability at the next required valuation plus expected benefit payments until the next required valuation (B)	$4,287,000	$4,355,000
Hypothetical wind-up incremental cost (B – A)	$462,000	$603,000

The incremental cost is not an appropriate measure of the contributions that would be required to maintain the financial position of the Plan on a hypothetical wind-up basis unchanged from the valuation date to the next required valuation date, if actual experience is exactly in accordance with the going concern valuation assumptions. This is because it does not reflect the fact that the expected return on plan assets (based on the going concern assumptions) is greater than the discount rate used to determine the hypothetical wind-up liabilities.

DISCOUNT RATE SENSITIVITY

The following table summarizes the effect on the hypothetical wind-up liabilities shown in this report of using a discount rate which is 1% lower than that used in the valuation:

SCENARIO	VALUATION BASIS	REDUCE DISCOUNT RATE BY 1%
Total hypothetical wind-up liability	$3,825,000	$4,419,000

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VALUATION RESULTS – SOLVENCY

OVERVIEW

The Act also requires the financial position of the Plan to be determined on a solvency basis. The financial position on a solvency basis is determined in a similar manner to the Hypothetical Wind-up Basis, except for the following:

EXCEPTIONS	REFLECTED IN VALUATION BASED ON THE TERMS OF ENGAGEMENT
The circumstance under which the Plan is assumed to be wound up could differ for the solvency and hypothetical wind-up valuations.	The same circumstances were assumed for the solvency valuation as were assumed for the hypothetical wind-up valuation.
Certain benefits can be excluded from the solvency financial position. These include: (a) any escalated adjustment (e.g. indexing), (b) certain plant closure benefits, (c) certain permanent layoff benefits, (d) special allowances other than funded special allowances, (e) consent benefits other than funded consent benefits, (f) prospective benefit increases, (g) potential early retirement window benefit values, and (h) pension benefits and ancillary benefits payable under a qualifying annuity contract.	No benefits were excluded from the solvency liabilities shown in this valuation.
The financial position on the solvency basis needs to be adjusted for any Prior Year Credit Balance.	Not applicable.
The solvency financial position can be determined by smoothing assets and the solvency discount rate over a period of up to 5 years.	Smoothing was not used.
The benefit rate increases coming into effect after the valuation date can be reflected in the solvency valuation.	Not applicable.

FINANCIAL POSITION

The financial position on a solvency basis, compared with the corresponding figures from the previous valuation, is as follows:

	01.07.18	01.07.17
Assets		
Market value of assets	$4,053,000	$3,638,000
Termination expense provision	($75,000)	($60,000)
Net assets	$3,978,000	$3,578,000
Liabilities		
Total hypothetical wind-up liabilities	$3,825,000	$3,752,000
Difference in circumstances of assumed wind-up	$0	$0
Value of excluded benefits	$0	$0
Liabilities on a solvency basis	$3,825,000	$3,752,000
Surplus (shortfall) on a solvency basis	$153,000	($174,000)
Transfer Ratio	106%	97%

6
MINIMUM FUNDING REQUIREMENTS

The Act prescribes the minimum contributions that McMaster University must make to the Plan. The minimum contributions in respect of a defined benefit component of a pension plan are comprised of going concern current service cost, the provision for adverse deviations in respect of the current service cost and special payments to fund any funding shortfall or solvency shortfall that exceeds the level as set out under the Act.

On the basis of the assumptions and methods described in this report, the Plan has a funding excess on a going concern basis inclusive of the provision for adverse deviations, and the transfer ratio is greater than 105%. Under these circumstances, the Act does not require the employer to contribute to the Plan until the available actuarial surplus has been applied towards the University's current service cost provided that the prescribed application is made to FSCO. Details on the determination of the provision for adverse deviations and on the available actuarial surplus are shown in Appendix A.

Once the available actuarial surplus has been so applied, monthly employer contributions must resume. On the basis of the assumptions and methods described in this report, the rule for determining the minimum required employer monthly contributions, as well as an estimate of the employee and employer contributions, from the valuation date until the next required valuation are as follows:

	UNIVERSITY'S CONTRIBUTION RULE		
Period beginning	Monthly current service cost[5]	Provision for adverse deviation[4]	Explicit monthly expense allowance
July 1, 2018	246%	34%	$2,083
July 1, 2019	246%	34%	$2,083
July 1, 2020	246%	34%	$2,083

[5] Expressed as a percentage of members' required contributions.

		ESTIMATED UNIVERSITY'S CONTRIBUTIONS			
Period beginning	Monthly Employee Contribution	Provision for adverse deviations	Monthly current service cost and provision for adverse deviation and expense allowance	Available actuarial surplus applied[6]	Minimum monthly contributions
July 1, 2018	$3,417	$1,167	$9,584	$9,584	$0
October 1, 2018	$3,417	$1,167	$9,584	$7,998	$1,586
November 1, 2018	$3,417	$1,167	$9,584	$0	$9,584
July 1, 2019	$3,417	$1,167	$9,584	$0	$9,584
July 1, 2020	$3,417	$1,167	$9,584	$0	$9,584

The estimated contribution amounts above are based on projected active members' required contributions. Therefore, the actual University's current service cost and provision for adverse deviations in respect of the current service cost may be different from the above estimates and, as such, the contribution requirements should be monitored closely to ensure contributions resume in accordance with the Act.

Appendix A includes details on the determination of the provision for adverse deviations.

OTHER CONSIDERATIONS

Differences Between Valuation Bases

There is no provision in the minimum funding requirements to fund the difference between the hypothetical wind-up and reduced solvency shortfalls, if any.

In addition, although minimum funding requirements do include a requirement to fund the going concern current service cost and a provision for adverse deviations in respect of the current service cost, there is no requirement to fund the expected growth in the hypothetical wind-up or solvency liability after the valuation date, which could be greater.

Timing of Contributions

Funding contributions are due on a monthly basis. Contributions for current service cost and the provision for adverse deviations including the expense allowance must be made within 30 days following the month to which they apply. Special payment contributions must be made in the month to which they apply.

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[6] Notwithstanding the available actuarial surplus in the Plan, the terms of the Plan may require the University to make current service cost contributions.

Retroactive Contributions

The University must contribute the excess, if any, of the minimum contribution recommended in this report over contributions actually made in respect of the period following the valuation date. This contribution, along with an allowance for interest, is due no later than 60 days following the date this report is filed.

Payment of Benefits

The Act imposes certain restrictions on the payment of lump sums from the Plan when the transfer ratio revealed in an actuarial valuation is less than one. If the transfer ratio shown in this report is less than one, the plan administrator should ensure that the monthly special payments are sufficient to meet the requirements of the Act to allow for the full payment of benefits, and otherwise should take the prescribed actions.

Additional restrictions are imposed when:

- The transfer ratio revealed in the most recently filed actuarial valuation is less than one and the administrator knows or 'ought to know' that the transfer ratio of the Plan has declined by 10% or more since the date the last valuation was filed.
- The transfer ratio revealed in the most recently filed actuarial valuation is greater than or equal to one and the administrator knows or 'ought to know' that the transfer ratio of the Plan has declined to less than 0.9 since the date the last valuation was filed.

As such, the administrator should monitor the transfer ratio of the Plan and, if necessary, take the prescribed actions.

Letters of Credit

Minimum funding requirements in respect of required special payments that otherwise require monthly contributions to the pension fund may be met, in the alternative, by establishing an irrevocable letter of credit subject to the conditions established by the Act. Required solvency special payments in excess of those met by a letter of credit must be met by monthly contributions to the pension fund.

7
MAXIMUM ELIGIBLE CONTRIBUTIONS

The *Income Tax Act* (the "ITA") limits the amount of employer contributions that can be remitted to the defined benefit component of a registered pension plan.

In accordance with Section 147.2 of the ITA and *Income Tax Regulation* 8516, for a plan which is underfunded on either a going concern or on a hypothetical wind-up basis, the maximum permitted contributions are equal to the employer's current service cost, including the provision for adverse deviations in respect of the current service cost and the explicit expense allowance if applicable, plus the greater of the going concern funding shortfall and hypothetical wind-up shortfall.

For a plan which is fully funded on both going concern and hypothetical wind-up bases, the employer can remit a contribution equal to the employer's current service cost, including the provision for adverse deviations in respect of the current service cost and explicit expense allowance if applicable, as long as the surplus in the plan does not exceed a prescribed threshold. Specifically, in accordance with Section 147.2 of the ITA, for a plan which is fully funded on both going concern and hypothetical wind-up bases, the plan may not retain its registered status if the employer makes a contribution while the going concern funding excess exceeds 25% of the going concern funding target.

Notwithstanding the above, any contributions that are required to be made in accordance with pension benefits legislation are eligible contributions in accordance with Section 147.2 of the ITA and can be remitted.

SCHEDULE OF MAXIMUM CONTRIBUTIONS

Since the surplus does not exceed 25% of the going concern funding target, the University may make monthly contributions of up to 280% of required member contributions until the next valuation.

8
ACTUARIAL OPINION

In our opinion, for the purposes of the valuations,

- The membership data on which the valuation is based are sufficient and reliable.
- The assumptions are appropriate.
- The methods employed in the valuation are appropriate.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada. It has also been prepared in accordance with the funding and solvency standards set by the Pension Benefits Act (Ontario).

DRAFT

Chad Spence
Fellow of Society of Actuaries
Fellow of the Canadian Institute of Actuaries

Date

DRAFT

Angelita Graham
Fellow of Society of Actuaries
Fellow of the Canadian Institute of Actuaries

Date

APPENDIX A

PRESCRIBED DISCLOSURE

SPECIAL PAYMENTS

As the Plan does not have a funding shortall and there is a solvency excess, no special payments are required.

The present values as at July 1, 2018 of the monthly special payments determined in the previous valuation are as follows:

Present Value of Monthly Special Payments Determined from July 1, 2017 Valuation

TYPE OF DEFICIT	START DATE	SPECIAL PAYMENT	END DATE	PRESENT VALUE OF REMAINING PAYMENTS AS AT 01.07.18	
				GOING CONCERN BASIS[7]	SOLVENCY BASIS[8]
Solvency	July 1, 2018	$3,177	June 30, 2023	$0	$177,000

Since the solvency excess, $727,000, is greater than or equal to the present value of the special payments set out in the prior valuation report to fund any reduced solvency deficiency or consolidated prior solvency deficiencies, the solvency special payments revealed in the previous valuation are no longer required.

TRANSITIONAL RULES

Transitional rules under the Act state that any increase in contributions caused by the new funding rules above what the old funding rules determined under the Regulations in effect immediately before May 1, 2018 would have required can be phased-in over the three-year period following the first report filed under the new framework, with no requirement for an increase in the first year.

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[7] Calculation only considers going concern special payments and is based on a going concern discount rate.

[8] Calculation considers both solvency and going concern special payments (six years only) and is based on the average solvency discount rate.

The minimum funding requirements that would have been required in each of years 2018, 2019 and 2020 under the old funding rules would have been higher than minimum funding requirements under the new funding rules. As such, the transitional rules have no impact on the minimum funding requirements.

DEFINITIONS

The Act defines a number of terms as follows:

DEFINED TERM	DESCRIPTION		RESULT
Going concern assets	Total value of assets plus the sum of the following:		$3,962,000
	(a) the present value of special payments in respect of any past service unfunded liability identified in a previously filed report	$0	
	(b) the present value of special payments in respect of any plan amendment that increases going concern liabilities	$0	
	(c) present value of special payments in respect of going concern unfunded liabilities identified in a previously filed report that are scheduled for payment within one year of the date of this report	$0	
Going concern excess / (unfunded liability)	The amount by which the Going Concern Assets exceed the sum of the following:		$582,000
	(a) the going concern liabilities		
	(i) liabilities excluding the value of escalated adjustments	$3,011,000	
	(ii) liabilities in respect of escalated adjustments	$0	
	(b) the provision for adverse deviations in respect of the going concern liabilities excluding the value of escalated adjustments	$369,000	
	(c) Prior Year Credit Balance	$0	
Going concern funded ratio	The ratio of: (a) Total value of assets (excluding letters of credit) less the Prior Year Credit Balance; to (b) going concern liabilities		117%

Prior Year Credit Balance	Accumulated excess of contributions made to the pension plan in excess of the minimum required contributions (note: only applies if the University chooses to treat the excess contributions as a Prior Year Credit Balance).	$0
Solvency Assets	Market value of assets including accrued or receivable income and excluding the value of any qualifying annuity contracts.	$4,053,000
Solvency Asset Adjustment	The sum of:	
	(a) the difference between smoothed value of assets and the market value of assets	$0
	(b) the present value of going concern special payments required to liquidate any past service unfunded liability	$0
	(c) the present value of going concern special payments identified in July 1, 2017 valuation and scheduled for July 1, 2018 – June 30, 2019	$0
	(d) the present value of going concern special payments (identified in this report) that are scheduled for payment within 6 years following the valuation date	$0
	(e) the present value of any previously scheduled solvency special payments (excluding those identified in this report)	$177,000
	(f) the total value of all letters of credit in respect of the special payments due before the valuation date, subject to the limit of 15% of solvency liabilities	$0
		$177,000
Solvency Liabilities	Liabilities determined as if the plan had been wound up on the valuation date, including liabilities for plant closure benefits or permanent layoff benefits that would be immediately payable if the employer's business were discontinued on the valuation date of the report, but, if elected by the plan sponsor, excluding liabilities for,	$0
	(a) any escalated adjustment,	
	(b) excluded plant closure benefits,	
	(c) excluded permanent layoff benefits,	
	(d) special allowances other than funded special allowances,	
	(e) consent benefits other than funded consent benefits,	
	(f) prospective benefit increases,	
	(g) potential early retirement window benefit values, and	
	(h) pension benefits and ancillary benefits payable under a qualifying annuity contract.	

Solvency Liability Adjustment	The amount by which Solvency Liabilities are adjusted as a result of using a solvency valuation interest rate that is the average of market interest rates calculated over the period of time used in the determination of the smoothed value of assets.	$0
Solvency Deficiency	The amount, if any, by which the sum of:	
	(a) the Solvency Liabilities	$3,825,000
	(b) the Solvency Liability Adjustment	$0
	(c) the Prior Year Credit Balance	$0
		$3,825,000
	Exceeds the sum of	
	(d) the Solvency Assets net of estimated termination expenses[9]	$3,978,000
	(e) the Solvency Asset Adjustment	$177,000
		$4,155,000
		$0
Reduced Solvency Deficiency / (Solvency Excess)	The amount by which the sum of:	
	(a) 85% of the Solvency Liabilities	$3,251,000
	(b) 85% of the Solvency Liability Adjustment	$0
	(c) the Prior Year Credit Balance	$0
		$3,251,000
	Exceeds the sum of:	
	(d) the Solvency Assets net of estimated termination expenses[8]	$3,978,000
	(e) the Solvency Asset Adjustment	$0
		$3,978,000
		($727,000)
Transfer Ratio	The ratio of: (a) Solvency Assets minus the lesser of the Prior Year Credit Balance and the minimum required employer contributions including the provision for adverse deviations until the next required valuation; to (b) the sum of the Solvency Liabilities and liabilities for benefits, other than benefits payable under qualifying annuity contracts that were excluded in calculating the Solvency Liabilities.	106%

[9] In accordance with accepted actuarial practice, for purposes of determining the financial position, the market value of plan assets was reduced by a provision for estimated termination expenses payable from the Plan's assets that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Solvency Ratio	The ratio of: (a) Solvency Assets related to defined benefits and ancillary benefits plus the total amount of any letters of credit minus the Prior Year Credit Balance (b) the sum of the Solvency Liabilities related to defined benefits and ancillary benefits	106%

PROVISION FOR ADVERSE DEVIATIONS

The provision for adverse deviations has been established in accordance with regulations taking into account the following parameters:

DEFINED AMOUNT		RESULTS
Fixed Income Component (L)	The sum of the Plan's target allocation of assets (excluding those allocated to annuity contacts and meeting the minimum rating requirement) as described in the regulations according to the investment policy applicable at the valuation date: **Investment** — **Target** Universe bonds — 15.0% Long-term bonds — 15.0% Real return bonds — 5.0%	35.0%
Alternative Investment Component (M)	The sum of the Plan's target allocation of assets (excluding those allocated to annuity contacts) meeting requirements as described in the regulations according to the investment policy applicable at the valuation date: **Investment** — **Target** Real assets — 1.0%	1.0%
Investment Component (N)	Plan's target asset allocation for mutual, pooled or segregated funds	0.0%
Investment Component Fixed Income % (P)	Portion of Investment Component (N) that is allocated to investment categories accounted for in Fixed Income Component (L)	0.0%
Investment Component Alternative Investment % (Q)	Portion of Investment Component (N) that is allocated to investment categories accounted for in Alternative Income Component (M)	0.0%

Annuity Contract Allocation (R)	Annuity contracts that have been purchased from an insurance University and excluded from the Fixed Income Component (L) and Alternative Investment Component (M)	0.0%

Combined Target Asset Allocation for Fixed Income Assets (J)			
Sum of			
• Fixed Income Component (L)	35.0%		
• 0.5 x Alternative Investment Component (0.5 x M)	0.5%		
• Investment Component x Investment Component Fixed Income % (N x P)	0.0%		
• 0.5 x Investment Component x Investment Component Alternative Investment % (0.5 x N x Q)	0.0%		
		35.5%	
Divided by			
• 100% - Annuity Contract Allocation (100% - R)		100.0%	
Combined Target Asset Allocation for Fixed Income Assets			**35.5%**

Combined Target Asset Allocation for Non-Fixed Income Assets (K)	
100% – Combined Target Asset for Fixed Income Assets (100% - J)	**64.5%**

Duration of going concern liabilities at valuation date	
= (F - G) / (G x 0.01) where,	15.43
G = going concern liabilities at valuation date established using the discount rate determined for this valuation	$3,011,000
F = going concern liabilities established using the discount rate minus 1%	$3,475,500

Benchmark Discount Rate (E)	
Base rate	0.50%
Effective yield from CANSIM Series V39056 (H)	2.19%
1.5% x Combined Target Asset Allocation for Fixed Income Assets (1.5% x J)	0.53%
5.0% x Combined Target Asset Allocation for Non-Fixed Income Assets (5.0% x K)	3.22%
Benchmark Discount Rate	6.44%

Provision for Adverse Deviations			
(A)	5.0% for a closed plan and 4.0% for a Plan that is not a closed plan		5.0%
(B)	Provision based on Combined Target Asset Allocation for Non-Fixed Income Assets		8.8%
(C)	Greater of zero and the		
	• Duration of going concern liabilities at valuation date	15.4	
	Multiplied by the excess of:		
	– Going concern valuation gross discount rate net of active investment management fees (D), less	5.6%	
	– Benchmark Discount Rate (E)	6.5%	0.0%
Provision for Adverse Deviations (A + B + C)			13.8%

The available actuarial surplus that may be used according to the Act is established as follows:

Available actuarial surplus			
Excess of			
• Assets determined on basis of going concern valuation including accrued and receivable income but excluding the value of any letters of credit		$3,962,000	
Over			
• Going concern liabilities	$3,011,000		
• Provision for adverse deviations in respect of the going concern liabilities	$369,000		
• Prior Year Credit Balance	$0	$3,380,000	
		$582,000	(a)
Excess of			
• Solvency assets		$4,053,000	
Over			
• Solvency liabilities x 105%		$4,016,250	
		$36,750	(b)
The available actuarial surplus = the lesser of a) and b) above		$36,750	

TIMING OF NEXT REQUIRED VALUATION

In accordance with the Act the next valuation of the Plan would be required at an effective date within one year of the current valuation date if:

- The ratio of solvency assets to solvency liabilities is less than 85%.
- The employer elected to exclude plant closure or permanent lay-off benefits under Section 5(18) of the regulations, and has not rescinded that election.

Otherwise, the next valuation of the Plan would be required at an effective date no later than three years after the current valuation date.

Accordingly, the next valuation of the Plan will be required as of July 1, 2021.

PENSION BENEFITS GUARANTEE FUND (PBGF) ASSESSMENT

A PBGF assessment is required to be paid under Section 37 of the Act. The PBGF assessment base is derived as follows:

Solvency assets	$4,053,000	(a)
PBGF liabilities	$3,825,000	(b)
Solvency liabilities	$3,825,000	(c)
Ontario asset ratio	100.00%	(d) = (b) ÷ (c)
Ontario portion of the fund	$4,053,000	(e) = (a) x (d)
PBGF assessment base	$0	(f) = max(0, (b) – (e))
Amount of additional liability for plant closure and/or permanent layoff benefits which is not funded and subject to the 2% (3% for years after 2018) assessment pursuant to s.37(4)	$0	(g)

APPENDIX B

PLAN ASSETS

The pension fund is held by CIBC Mellon Trust Company. In preparing this report, we have relied upon the auditors' report prepared by KPMG without further audit. Customarily, this information would not be verified by a plan's actuary. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

RECONCILIATION OF MARKET VALUE OF PLAN ASSETS

The pension fund transactions since the last valuation are summarized in the following table:

	JULY 1,2017 TO JULY 1, 2018
July 1, 2017	$3,638,000
PLUS	
Members' contributions	$38,000
University's contributions	$121,000
Investment earnings	$319,000
	$478,000
LESS	
Pensions paid	$2,000
Lump-sums paid	$0
Administration and investment fees	$54,000
	$56,000
July 1, 2018	$4,060,000
Gross rate of return[10]	8.65%
Rate of return net of expenses[10]	7.13%

[10] Assuming mid-period cash flows.

The market value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

	CURRENT VALUATION	PREVIOUS VALUATION
Market value of invested assets	$4,060,000	$3,634,000
In-transit amounts		
• Members' contributions	$0	$4,000
• University's contributions	$0	$14,000
• Expenses	($0)	($14,000)
• Benefit payments	($7,000)	($0)
Market value of assets adjusted for in-transit amounts	$4,053,000	$3,638,000

We have tested the pensions paid, the lump-sums paid, and the contributions for consistency with the membership data for the Plan members who have received benefits or made contributions. The results of these tests were satisfactory.

INVESTMENT POLICY

The plan administrator has adopted a statement of investment policy and procedures. This policy is intended to provide guidelines for the manager(s) as to the level of risk that is consistent with the Plan's investment objectives. A significant component of this investment policy is the asset mix.

The plan administrator is solely responsible for selecting the Plan's investment policies, asset allocations, and individual investments.

The constraints on the asset mix and the actual asset mix at the valuation date are provided for information purposes:

	INVESTMENT POLICY			ACTUAL ASSET MIX AS AT JULY 1, 2018
	Minimum	Target	Maximum	
Canadian equities	16%	20%	24%	19.9%
U.S. equities	17%	22%	27%	26.3%
International equities	17%	22%	27%	24.6%
Real estate and infrastructure	0%	1%	10%	1.0%
Bonds	20%	35%	50%	27.9%
Cash and cash equivalents	0%	0%	10%	0.3%
		100%		100.0%

Because of the mismatch between the Plan's assets (which are invested in accordance with the above investment policy) and the Plan's liabilities (which tend to behave like long bonds) the Plan's financial position will fluctuate over time. These fluctuations could be significant and could cause the Plan to become underfunded or overfunded even if the University contributes to the Plan based on the funding requirements presented in this report.

APPENDIX C

METHODS AND ASSUMPTIONS – GOING CONCERN

VALUATION OF ASSETS

For this valuation, we have used an adjusted market-value method to determine the smoothed value of assets. Under this method, investment gains (losses) (actual versus the expected investment return on assets, net of expenses) arising during a given year are spread on a straight-line basis over 5 years in accordance with the schedule shown in the following table:

YEAR	PERCENTAGE OF GAINS (LOSSES) UNRECOGNIZED
2017/2018:	80%
2016/2017:	60%
2015/2016:	40%
2014/2015:	20%
before 2014:	0%

The asset values produced by this method are related to the market value of the assets, with the advantage that, over time, the market-related asset values will tend to be more stable than market values. To the extent that more investment gains than losses will arise over the long term, the smoothed value will tend to be lower than the market value.

The smoothed value of the assets at July 1, 2018 was derived as follows:

Market value of assets		$4,060,000
LESS		
Unrecognized investment gains/(losses)	2017/2018: $57,000 x 80% =	$46,000
	2016/2017: $154,000 x 60% =	$92,000
	2015/2016: ($128,000) x 40% =	($51,000)
	2014/2015: $21,000 x 20% =	$4,000
		$91,000
Smoothed value of assets		$3,969,000

The smoothed value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

	CURRENT VALUATION	PREVIOUS VALUATION
Smoothed value of assets	$3,969,000	$3,527,000
In-transit amounts		
• Members' contributions	$0	$4,000
• University's contributions	$0	$14,000
• Expenses	($0)	($14,000)
• Benefit payments	($7,000)	($0)
Smoothed value of assets, adjusted for in-transit amounts	$3,962,000	$3,531,000

GOING CONCERN FUNDING TARGET

Over time, the real cost to the employer of a pension plan is the excess of benefits and expenses over member contributions and investment earnings. The actuarial cost method allocates this cost to annual time periods.

For purposes of the going concern valuation, we have continued to use the projected unit credit actuarial cost method. Under this method, we determine the present value of benefit cash flows expected to be paid in respect of service accrued prior to the valuation date, based on projected final average earnings. This is referred to as the funding target.

The funding excess or funding shortfall, as the case may be, is the difference between the market or smoothed value of assets and the funding target. A funding excess on a market value basis indicates that the current market value of assets and expected investment earnings are expected to be sufficient to meet the cash flows in respect of benefits accrued to the valuation date as well as expected expenses – assuming the plan is maintained indefinitely. A funding shortfall on a market value basis indicates the opposite – that the current market value of the assets is not expected to be sufficient to meet the plan's cash flow requirements in respect of accrued benefits, absent additional contributions.

As required under the Act, a funding shortfall and the provision for adverse deviations must be amortized over no more than 10 years through special payments beginning one year after the valuation date. A funding excess may, from an actuarial standpoint, be applied immediately to reduce required employer current service contributions unless precluded by the terms of the plan or by legislation.

The actuarial cost method used for the purposes of this valuation produces a reasonable matching of contributions with accruing benefits. Because benefits are recognized as they accrue, the actuarial cost method provides an effective funding target for a plan that is maintained indefinitely.

Current Service Cost

The current service cost is the present value of projected benefits to be paid under the plan with respect to service expected to accrue during the period until the next valuation.

The University's current service cost is the total current service cost reduced by the members' required contributions.

The University's current service cost has been expressed as a percentage of the members' required contributions to provide an automatic adjustment in the event of fluctuations in membership and/or pensionable earnings.

Under the projected unit credit actuarial cost method, the current service cost for an individual member will increase each year as the member approaches retirement. However, the current service cost of the entire group, expressed as a percentage of the members' required contributions, can be expected to remain stable as long as the average age distribution of the group remains constant.

ACTUARIAL ASSUMPTIONS – GOING CONCERN BASIS

The present value of future benefit payment cash flows is based on economic and demographic assumptions. At each valuation we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise them, if necessary. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations.

The table below shows the various assumptions used in the current valuation in comparison with those used in the previous valuation.

ASSUMPTION	CURRENT VALUATION	PREVIOUS VALUATION
Discount rate:	5.60%	5.60%
Margin for adverse deviations in discount rate:	0.00%	0.10%
Explicit expenses:	$25,000	$25,000
Inflation:	2.00%	2.00%
ITA limit / YMPE increases:	3.00%	3.00%
Pensionable earnings increases:	**MUFA members** 4.0% per year **Clinical Faculty members** 4.0% per year	**MUFA members** 4.6% in 2018; 4.0% per year thereafter **Clinical Faculty members** 4.0% per year thereafter

ASSUMPTION	CURRENT VALUATION		PREVIOUS VALUATION	
Post-retirement pension increases:	**Year**	**Rate**	**Year**	**Rate**
	2019	1.89%	2018	1.46%
	2020	2.00%	2019	2.00%
	2021	1.97%	2020	2.00%
	2022	2.03%	2021	1.49%
	2023	1.64%	2022	2.29%
	2024 onwards	1.10%	2023 onwards	1.20%
Interest on employee contributions:	5.60%		5.60%	
Retirement rates:	15% retire when first eligible for an unreduced pension, remainder retire at age 65		15% retire when first eligible for an unreduced pension, remainder retire at age 65	
Termination rates:	None		None	
Mortality rates:	85% of the rates of the 2014 Public Sector Canadian Pensioners Mortality Table (CPM2014Publ)		85% of the rates of the 2014 Public Sector Canadian Pensioners Mortality Table (CPM2014Publ)	
Mortality improvements:	Fully generational using CPM Improvement Scale B (CPM-B)		Fully generational using CPM Improvement Scale B (CPM-B)	
Disability rates:	None		None	
Eligible spouse at retirement:	Actual marital status		Actual marital status	
Spousal age difference:	Actual		Actual	

The assumptions are best estimates and do not include a margin for adverse deviations, except for the discount rate in the previous valuation.

Pensionable Earnings

The benefits ultimately paid will depend on each member's final average earnings. To calculate the pension benefits payable upon retirement, death, or termination of employment, we have taken rate of pay on July 1, 2018 and assumed that such pensionable earnings will increase at the assumed rate.

RATIONALE FOR ASSUMPTIONS

A rationale for each of the assumptions used in the current valuation is provided below.

DISCOUNT RATE

We have discounted the expected benefit payment cash flows using the expected investment return on the smoothed value of the fund net of fees and less a margin for adverse deviations. Other bases for discounting the expected benefit payment cash flows may be appropriate, particularly for purposes other than those specifically identified in this valuation report.

The discount rate is comprised of the following:

- Estimated returns for each major asset class consistent with market conditions on the valuation date, the expected time horizon over which benefits are expected to be paid, and the target asset mix specified in the Plan's investment policy.
- Additional returns assumed to be achievable due to active investment management strategy, equal to the fees related to such active investment management strategy. Such fees were determined by the difference between the provision for total investment expenses and the hypothetical fees that would be incurred for passive management of all assets.
- Implicit provision for non-investment and passive investment expenses.

The discount rate was developed as follows:

Assumed investment return	5.82%	
Allowance for administrative, actuarial and passive investment management fees	(0.20%)	
Rounding	(0.02%)	
Net discount rate	5.60%	

EXPENSES

The assumption is based on the average amount of investment and administrative expenses over the last 3 years.

INFLATION

The inflation assumption is based on the mid-point of the Bank of Canada's inflation target range of between 1% and 3%.

INCOME TAX ACT PENSION LIMIT AND YEAR'S MAXIMUM PENSIONABLE EARNINGS

The assumption is based on historical real economic growth and the underlying inflation assumption.

PENSIONABLE EARNINGS

The assumption is based on general wage growth assumptions increased by our best estimate of future merit and promotional increases over general wage growth considering the University's expectations.

POST-RETIREMENT PENSION INCREASES

The assumption is based on the Plan formula, as well as the future investment return and inflation assumption above.

RETIREMENT RATES

The assumption is based on experience over the years 2002 to 2008. Subsequent experience has been consistent with these rates.

TERMINATION RATES

Use of a different assumption would not have a material impact on the valuation.

MORTALITY RATES

The assumption for the mortality rates is based on the Canadian Pensioners' Mortality (CPM) study published by the Canadian Institute of Actuaries in February 2014.

Due to the size of the Plan, specific data on plan mortality experience is insufficient to determine the mortality rates. The CPM mortality rates from the public sector have been adjusted after considering plan-specific characteristics, such as the type of employment, the industry experience, the pension and employment income for the plan members, and data in the CPM study.

There is broad consensus among actuaries and other longevity experts that mortality improvement will continue in the future, but the degree of future mortality improvement is uncertain. Two mortality improvement scales were recently published by the Canadian Institute of Actuaries (CIA) and may apply to Canadian pension valuations:

- The Canadian Pensioners Mortality (CPM) study published in February 2014 included CPM Improvement Scale B (CPM-B) which is also used for commuted value calculations.
- A report released by the Task Force on Mortality Improvement on September 20, 2017 includes an analysis of the rate of mortality improvement for the Canadian population and provides for mortality improvement scale MI-2017 to be considered for the purpose of reflecting future mortality improvement in Canadian actuarial work, while acknowledging that it might be appropriate to use alternative mortality improvement assumptions to reflect the nature of the work.

The CIA Committee on Pension Plan Financial Reporting published a revised version of the Educational Note on the Selection of Mortality Assumptions for Pension Plan Valuations on December 21, 2017. The Educational Note indicates that given the recent publication of the CPM-B and MI-2017 improvement scales and the similar data sets used in their development, it may be appropriate to use either scale in the absence of credible information to the contrary, such as the publication of a successor scale by the CIA.

For the present valuation, we have continued to use the CPM-B scale, which is a reasonable outlook for future mortality improvement.

Based on the assumption used, the life expectancy of a member age 65 at the valuation date is 24.1 years for males and 25.9 years for females.

INTEREST ON EMPLOYEE CONTRIBUTIONS

The assumption is based on Plan terms and the underlying investment return assumption.

DISABILITY RATES

Use of a different assumption would not have a material impact on the valuation.

ELIGIBLE SPOUSE

Due to the small plan size, the actual marital status was used.

SPOUSAL AGE DIFFERENCE

Due to the small plan size, the actual spouse age difference was used.

APPENDIX D

METHODS AND ASSUMPTIONS – HYPOTHETICAL WIND-UP AND SOLVENCY

HYPOTHETICAL WIND-UP BASIS

The Canadian Institute of Actuaries requires actuaries to report the financial position of a pension plan on the assumption that the plan is wound up on the effective date of the valuation, with benefits determined on the assumption that the pension plan has neither a surplus nor a deficit.

To determine the actuarial liability on the hypothetical wind-up basis, we have valued those benefits that would have been paid had the Plan been wound up on the valuation date, with all members fully vested in their accrued benefits including, however, the impact of plan amendments with an effective date before the next scheduled valuation which have been reflected in the going concern valuation results.

The Standards of Practice of the Canadian Institute of Actuaries require that the scenario upon which the hypothetical wind-up valuation is based be postulated. However, there are no benefits under the Plan contingent upon the circumstances of the plan wind-up or contingent upon other factors. Therefore, it was not necessary to postulate a scenario upon which the hypothetical wind-up valuation is made. No benefits payable on plan wind-up were excluded from our calculations. The plan wind-up is assumed to occur in circumstances that maximize the actuarial liability.

Upon plan wind-up, members are given options for the method of settling their benefit entitlements. The options vary by eligibility and by province of employment, but in general, involve either a lump sum transfer or an immediate or deferred pension.

The value of benefits assumed to be settled through a lump sum transfer is based on the assumptions described in Section 3500 – *Pension Commuted Values* of the Canadian Institute of Actuaries' Standards of Practice applicable for July 1, 2018.

Benefits provided as an immediate or deferred pension are assumed to be settled through the purchase of annuities based on an estimate of the cost of purchasing annuities.

We have estimated the cost of settlement through purchase of annuities in accordance with the *Canadian Institute of Actuaries Educational Note: Assumptions for Hypothetical Wind-up and Solvency Valuations with Effective Dates Between June 30, 2018 and December 30, 2018 (the "Educational Note").*

The Educational Note provides guidance on estimating the cost of annuity purchases assuming a typical group of annuitants. That is, no adjustments for sub- or super-standard mortality are considered. However, it is expected that insurers will consider plan experience and certain plan-specific characteristics when determining the mortality basis for a particular group. The Educational Note states that the actuary would be expected to make an adjustment to the regular annuity purchase assumptions where there is demonstrated substandard or super-standard mortality or where an insurer might be expected to assume so. In such cases, the actuary would be expected to make an adjustment to the mortality assumption in a manner consistent with the underlying annuity purchase basis. Given the uncertainty surrounding the actual mortality basis that would be typical of a group annuity purchase, it is reasonable to assume that there is a range of bases that can be expected not to be materially different from the actual mortality basis. Therefore, an adjustment to the regular annuity purchase assumptions would be warranted when the plan's assumed basis falls outside that range. In this context, we have determined that an adjustment to the mortality rates used in the regular annuity purchase assumptions is required.

We have not included a margin for adverse deviation in the solvency and hypothetical wind-up valuations.

The assumptions are as follows:

Form of Benefit Settlement Elected by Member	
Lump sum:	70% of active members and deferred vested members under age 55, and 50% of active members and deferred vested members over age 55, elect to receive their benefit entitlement in a lump sum
Annuity purchase:	All remaining members are assumed to elect to receive their benefit entitlement in the form of a deferred or immediate pension. These benefits are assumed to be settled through the purchase of deferred or immediate annuities from a life insurance University.
Basis for Benefits Assumed to be Settled through a Lump Sum	
Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B
Interest rate:	2.90% per year for 10 years, 3.20% per year thereafter
Basis for Benefits Assumed to be Settled through the Purchase of an Annuity	
Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B
Adjustment to mortality rates:	Above mortality rates reduced by 15% to reflect super-standard mortality
Interest rate:	3.10% per year based on a duration of 14.06 years determined for the liabilities assumed to be settled through the purchase of an annuity.

Retirement Age	
Maximum value:	Members are assumed to retire at the age which maximizes the value of their entitlement from the Plan, based on the eligibility requirements which have been met at the valuation date
Grow-in:	The benefit entitlement and assumed retirement age of Ontario members whose age plus service equals at least 55 at the valuation date reflect their entitlement to grow into early retirement subsidies
Other Assumptions	
Special payments:	Discounted at the average interest rate of 3.00% per year
Final average earnings:	Based on actual pensionable earnings over the averaging period
Family composition:	Same as for going concern valuation
Maximum pension limit:	$2,944.44 increasing at 2.58% per year for 10 years, 2.79% per year thereafter
Termination expenses:	$75,000

To determine the hypothetical wind-up position of the Plan, a provision has been made for estimated termination expenses payable from the Plan's assets in respect of actuarial and administration expenses that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Because the settlement of all benefits on wind-up is assumed to occur on the valuation date and is assumed to be uncontested, the provision for termination expenses does not include custodial, investment management, auditing, consulting, and legal expenses that would be incurred between the wind-up date and the settlement date or due to the terms of a wind-up being contested.

Expenses associated with the distribution of any surplus assets that might arise on an actual wind-up are also not included in the estimated termination expense provisions.

In determining the provision for termination expenses payable from the Plan's assets, we have assumed that the plan sponsor would be solvent on the wind-up date. We have also assumed, without analysis, that the Plan's terms as well as applicable legislation and court decisions would permit the relevant expenses to be paid from the Plan.

Although the termination expense assumption is a best estimate, actual fees incurred on an actual plan wind-up may differ materially from the estimates disclosed in this report.

INCREMENTAL COST

In order to determine the incremental cost, we estimate the hypothetical wind-up liabilities at the next valuation date. We have assumed that the cost of settling benefits by way of a lump sum or purchasing annuities remains consistent with the assumptions described above. Since the projected hypothetical wind-up liabilities will depend on the membership in the Plan at the next valuation date, we must make assumptions about how the Plan membership will evolve over the period until the next valuation.

We have assumed that the Plan membership will evolve in a manner consistent with the going concern assumptions as follows:

- Members terminate, retire, and die consistent with the termination, retirement, and mortality rates used for the going concern valuation.
- Pensionable earnings, the Income Tax Act pension limit, and the Year's Maximum Pensionable Earnings increase in accordance with the related going concern assumptions.
- Active members accrue pensionable service in accordance with the terms of the Plan.

SOLVENCY BASIS

In determining the financial position of the Plan on the solvency basis, we have used the same assumptions and methodology as were used for determining the financial position of the Plan on the hypothetical wind-up basis.

The solvency position is determined in accordance with the requirements of the Act.

APPENDIX E

MEMBERSHIP DATA

ANALYSIS OF MEMBERSHIP DATA

The actuarial valuation is based on membership data as at July 1, 2018, provided by McMaster University.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. These tests were applied to membership reconciliation, basic information (date of birth, date of hire, date of membership, gender, etc.), pensionable earnings, credited service, contributions accumulated with interest, and pensions to retirees and other members entitled to a deferred pension. Contributions, lump sum payments, and pensions to retirees were compared with corresponding amounts reported in financial statements. The results of these tests were satisfactory.

If the data supplied are not sufficient and reliable for its intended purpose, the results of our calculation may differ significantly from the results that would be obtained with such data. Although Mercer has reviewed the suitability of the data for its intended use in accordance with accepted actuarial practice in Canada, Mercer has not verified or audited any of the data or information provided.

Plan membership data are summarized below. For comparison, we have also summarized corresponding data from the previous valuation.

	01.07.18	01.07.17
Active Members		
Number	3	3
Total pensionable earnings for the following year	*	*
Average pensionable earnings for the following year	*	*
Average years of pensionable service	23.8	22.4
Average age	61.6	60.6
Accumulated contributions with interest	*	*
Deferred Pensioners		
Number	30	32
Total annual pension	$12,030	$12,311
Average annual pension	$401	$385
Average age	58.7	58.3
Pensioners and Survivors		
Number	1	1
Total annual lifetime pension	*	*
Average annual lifetime pension	*	*
Average age	*	*

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

	ACTIVES	DEFERRED PENSIONERS	PENSIONERS AND SURVIVORS	TOTAL
Total at 01.07.17	3	32	1	36
New entrants				
Terminations:				
• Transfers/lump sums				
• Deferred pensions				
Deaths				
Retirements/ Cash outs		(2)		(2)
Beneficiaries				
Total at 01.07.18	3	30	1	34

The distribution of the active members by age and pensionable service as at the valuation date is summarized as follows:

	YEARS OF PENSIONABLE SERVICE							
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 +	Total
Under 55								
55 to 59				1	1			2
60 to 64								
65 +						1		1
Total				1	1	1		3

The distribution of the inactive members by age as at the valuation date is summarized as follows:

	DEFERRED PENSIONERS			PENSIONERS AND SURVIVORS	
Age	Number	Average Pension		Number	Average Pension
Under 45	5	193			
45 – 49	5	218			
50 – 54	4	224			
55 – 59	5	751			
60 – 64	2	614			
65 – 69	3	791			
70 – 74	3	90		1	*
75 – 79	1	*			
80 – 84					
85 – 89					
90 – 94					
95 – 99	1	*			
100 +	1	*			
Total	30	401		1	*

APPENDIX F

SUMMARY OF PLAN PROVISIONS

Mercer has used and relied on the plan documents, including amendments and interpretations of plan provisions, supplied by McMaster University. If any plan provisions supplied are not accurate and complete, the results of any calculation may differ significantly from the results that would be obtained with accurate and complete information. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and the results of estimates under each of the different interpretations could vary.

This valuation is based on the plan provisions in effect on July 1, 2018. Since the date of the last valuation, the Plan was amended effective July 1, 2017 to provide a special adjustment to required Faculty member contributions in situations where the University's contributions for any month are below certain thresholds. Effective July 1, 2018, Faculty member contributions were increased from 7.0% of salary up to the year's maximum pensionable earnings ("YMPE") and 10.0% above the YMPE to 8.0% of salary up to the YMPE and 11.0% above the YMPE. The following is a summary of the main provisions of the Plan in effect on July 1, 2018. This summary is not intended as a complete description of the Plan.

Eligibility for Membership	Members who joined the Plan between January 1, 2001 and January 14, 2003 have been transferred to the Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College 2000 ("Plan 2000") following the approval of the asset transfer by the Financial Services Commission of Ontario. No new entrants are permitted after January 14, 2003.
Employee Contributions	Effective at the dates and for the periods shown in the table below member required contribution rates for specific member groups as follows:

Contribution Rate below/above YMPE	Faculty Members
4.25% / 5.75%	July 1, 2006 to June 30, 2007
5.0% / 6.5%	July 1, 2007 to July 1, 2011
5.75% / 7.65%	July 2, 2011 to June 30, 2012
6.5% / 8.75%	July 1, 2012 to June 30, 2013
7.0% / 10.0%	July 1, 2013 to June 30, 2018
8.0% / 11.0%	July 1, 2018 forward

Employee Contributions (continued)

Contribution Rate below/above YMPE	Non Faculty Members
3.5% / 5.0%	July 1, 2006 to June 30, 2009
5.5% / 7.0%	July 1, 2009 to February 1, 2014
7.0% / 10.0%	February 2, 2014 forward

Member required contributions are limited to the contribution arising when the applicable employee contribution rate is applied to the Maximum Annual Salary under the Plan. The Maximum Annual Salary is the salary rate that produces an annual pension amount equal to the maximum pension limit under the *Income Tax Act* for that year.

Retirement Dates

Normal retirement is the first day of the month coincident with, or prior to the member's 65th birthday. However, a member may normally elect to retire immediately on attaining age 65.

Effective February 1, 2014 the number of points required to retire early and receive an unreduced pension and a bridge benefit is amended for members who are not Faculty Members. The number of points required is as follows:

RETIREMENT DATE	POINTS REQUIRED
Prior to February 1, 2014	80
February 1, 2014 to December 31, 2014	81
January 1, 2015 to December 31, 2015	82
January 1, 2016 to December 31, 2016	83
January 1, 2017 to December 31, 2017	84
January 1, 2018 forward	85

Retirement Dates (continued)

Effective July 1, 2006 the number of points required to retire early and receive an unreduced pension and a bridge benefit is amended for Faculty Members. The number of points required is as follows:

RETIREMENT DATE	POINTS REQUIRED
July 1, 2008 to December 31, 2011	80
January 1, 2012 to December 31, 2012	81
January 1, 2013 to December 31, 2013	82
January 1, 2014 to December 31, 2014	83
January 1, 2015 to December 31, 2015	84
January 1, 2016 to December 31, 2018	85
January 1, 2019 to December 31, 2019	86
January 1, 2020 to December 31, 2020	87
January 1, 2021 to December 31, 2021	88
January 1, 2022 to December 31, 2022	89
January 1, 2023 forward	90

A member may retire early with a reduced pension at any time during the 10-year period preceding his normal retirement date. The reduction will be 0.5% for each month by which actual retirement precedes age 65.

A member may postpone his actual retirement and commencement of pension (with University consent prior to December 12, 2006), but in any event his pension shall commence no later than the 1st of December of the year of attainment of age 71. He will continue to make contributions and his benefits under the Plan will continue to accrue until such postponed retirement date.

Pension Benefits	The amount of annual pension payable to a member at his unreduced retirement age will be: (a) 1.4% of Best Average Salary up to the Average Year's Maximum Pensionable Earnings times years of pensionable service, plus (b) 2.0% of Best Average Salary in excess of the Average Year's Maximum Pensionable Earnings times years of pensionable service. Best Average Salary means the annualized average of the 48 highest months of earnings while a Plan participant. Average Year's Maximum Pensionable Earnings means the pro-rated average Yearly Maximum Pensionable Earnings, in the same 48 months as are used to calculate Best Average Salary. Pensions in payment will be increased from January 1st each year on a pro-rated basis (using the number of months the pensioner has been retired in the twelve months) by the excess over 4.5% of the average annual rate of return earned on the assets of the Plan over the previous five Plan Years, subject to a maximum of that year's rate of increase in the Consumer Price Index. Effective July 1, 1997, if there is any year where the percentage calculated under the excess interest formula exceeds the rate of increase in the Consumer Price Index, the excess will be used to provide a supplementary increase to the pensions in pay for which the annual pension increase in any of the three previous years was based on the excess interest formula, provided that the supplementary increase will be limited to 100% of CPI increases in each of the three preceding years. In addition, members on LTD will have their salary adjusted each July 1st by the percentage increase applied to pensions in payment. This increase will be applied from the later of July 1, 1990 or the July 1st following disability.
Bridge Benefits	Faculty members who first attain 80 points between July 1, 1996 and December 31, 1996 and who elect to retire on December 31, 1996, will receive a bridge benefit equal to the greater of $7,500 or $249.29 per year of credited service. The bridge benefit is payable from the member's early retirement date and ceases at age 65 or death, if earlier. Faculty members who first attain 80 points prior to July 1, 1996 and who elect to retire between July 1, 1996 and June 30, 1997 or who first attain 80 points between July 1, 1996 and December 31, 1996 and who elect to retire between January 1, 1997 and June 30, 1997, will receive a bridge benefit equal to $249.29 per year of credited service. The bridge benefit is payable from the member's early retirement date and ceases at age 65 or death if earlier. Staff members who retire at the request of the University between June 30, 1996 and December 31, 1996 and who have attained 80 points will receive a bridge benefit equal to $249.29 per year of credited service. The bridge benefit is payable from the member's early retirement date and ceases at age 65 or death, if earlier. Effective July 1, 1997, members who retire early and have attained the unreduced early retirement criteria will receive a bridge benefit equal to $19.00 per month per year of credited service accrued to June 30, 1996 to a maximum of 20 years of service. The bridge benefit is payable from the later of the member's early retirement date and age 60 and ceases payment on attainment of age 65 or death, if earlier.

Minimum Benefits	If the member's total Required Contributions plus net interest are greater than 50% of the commuted value of a member's retirement and bridge pensions, the excess amount will be refunded to the member as a lump sum payment. In addition, the member will receive a refund of his voluntary contributions with interest, if any.
Early Retirement Pension	If a member retires early, the member will be entitled to a pension that is calculated the same way as for a normal retirement. The basic pension payable, however, will be reduced by a given percentage for each month before the normal retirement date, as follows: • For the first 36 months: 0.5% per month • For the next 36 months: 0.4167% per month • For the remaining 48 months: 0.25% per month
Maximum Benefits	The total annual pension payable from the Plan upon retirement, death or termination of employment cannot exceed the lesser of: • 2% of the average of the best three consecutive years of total compensation paid to the member by the University, multiplied by total credited service; and • $2,944.44 or such other maximum permitted under the Income Tax Act, multiplied by the member's total credited service. The maximum pension is determined at the date of pension commencement.
Death Benefits	Pre-retirement: On the death of a member prior to retirement, his beneficiary or estate is entitled to receive a death benefit equal to his required contributions accrued to December 31, 1986 accumulated with net interest on the fund, and his beneficiary or estate shall receive the commuted value of the member's pension accrued after December 31, 1986, plus any required contributions made after December 31, 1986, accumulated with net interest on the fund, in excess of 50% of the commuted value. In addition, his beneficiary or estate will receive a refund of his voluntary contributions with interest, if any. Post retirement: The benefit is payable for life, but guaranteed for seven years in any event. In the case of a member with a spouse, 50% of the benefit is continued to the spouse for life and at least the remainder of the guaranteed seven years' payments will be made. There is no required adjustment in respect of this surviving spouse's benefit. Prior to July 1, 1997, the normal form of benefit was as described above with a five-year guarantee in place of the seven-year guarantee. Alternative forms of pension are available in actuarial equivalent amounts and for members who have a spouse and who retire after December 31, 1987, the automatic form of pension will be an actuarially reduced benefit which continues 60% of the pension to a surviving spouse for life.

Termination Benefits	If a Member terminates employment prior to retirement, he may elect to receive one of the following: 1) A refund of his required contributions, with Net Interest on the Fund. 2) A transfer of the greater of twice his Required Contributions plus Net Interest and the commuted value of his deferred pension to another locked-in registered pension vehicle. 3) A deferred pension, payable at Normal Retirement Date, equal to the pension earned to the date of termination. A Member who has met the minimum locking-in criteria under the *Pension Benefits Act (Ontario)*, determined separately for service and benefits before and after January 1, 1987, may elect only 2) or 3). Such member may, however, receive a return of Required Contributions with Net Interest prior to January 1, 1965 subject to a 5% withdrawal charge. In addition, a member is entitled to a refund of the excess of his Required Contributions plus Net Interest over 50% of the commuted value of the deferred pension described in 3) above. The excess is measured separately for required contributions with interest and pension benefits accrued before and after January 1, 1987. In addition, a member is entitled to a refund of his voluntary contributions with Net Interest, if any.

APPENDIX G

UNIVERSITY CERTIFICATION

With respect to the Report on the Actuarial Valuation for Funding Purposes as at July 1, 2018 of The Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College, I hereby certify that, to the best of my knowledge and belief:

- The valuation reflects the terms of the University's engagement with the actuary described in Section 2 of this report, particularly the requirement to not reflect a margin for adverse deviations in the going concern valuation.
- A copy of the official Plan documents and of all amendments made up to July 1, 2018 was provided to the actuary and is reflected appropriately in the summary of plan provisions contained herein.
- The asset information summarized in Appendix B is reflective of the Plan's assets.
- The membership data provided to the actuary included a complete and accurate description of every person who is entitled to benefits under the terms of the Plan for service up to July 1, 2018.
- All events subsequent to July 1, 2018 that may have an impact on the Plan have been communicated to the actuary.

Date

Signed

Name

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MARSH & McLENNAN COMPANIES

Contributory Pension Plan for Hourly-Rated Employees of McMaster University Including McMaster Divinity College
2019 Restatement - Summary of Proposed Changes

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
Throughout	Retirement Dates		Add the terms “Early Retirement Date”, “Normal Retirement Date”, Postponed Retirement Date” and “Special Early Retirement Date” to the definitions section as those terms are used throughout the Plan	Housekeeping
Throughout	Cross-references to Entire Sections	Various plan provisions cross-reference “Section __” of the Plan, in reference to an entire Article of the Plan	Change such cross-references to “Article __” of the Plan to accord with how the Plan is structured (“Section” is used to refer to a specific provision within an Article of the Plan, such as Section 8.01)	Housekeeping
Throughout	“retire”	Various plan provisions use the term “retire”, which does not have a precise meaning	Replace references to “retire” and similar terms, with references to “elect to commence receiving a pension”, “commences payment of a pension under this Plan” and similar phrases	Housekeeping
1.09 – 1.12	Context	These provisions set out the context for the restatement and to whom it applies	Update sections 1.09 – 1.12 to refer to the context for the 2019 restatement rather than the 2014 restatement	Housekeeping
2.03 (New)	Definition of “Administrator”		Add the term “Administrator” to the definitions section; this term is defined in Section 13.01(a) and used throughout the Plan but omitted from the definitions section	Housekeeping
2.03	Definition of “Average YMPE”	“Average YMPE” is calculated during the Member’s period of “Best Average Earnings”. However, the definition is silent with respect to computation of “Average YMPE” where the Member has multiple periods which yield the same “Best Average Earnings”	Confirm that, where the “Best Average Earnings” computation yields the same amount in respect of two or more 5-year periods (i.e., when earnings remain constant for more than 5 years), the Member’s Average YMPE is determined based on the most recent of such periods	Align with Administrative Practice

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
2.05	Definition of “Best Average Earnings”	Definition contemplates how “Best Average Earnings” is calculated where the Member has taken leaves of absence with or without pay	Delete unclear language in the “Best Average Earnings” definition and replace it with improved language at new Section 11.07(b), which addresses leaves of absence without pay Replace incorrect reference to “Regular Annual Salary” with reference to “Regular Annual Earnings”	Housekeeping Housekeeping
2.08	Definition of “Continuous Service”	Continuous Service is defined to include periods of annual vacation, lay-off and approved leave of absence granted by the University, and states that “Such periods of lay-off and leave of absence shall not exceed one (1) year”	Clarify that this definition does not limit the length of lay-offs/leaves to one year; rather, the definition states that lay-offs/leaves longer than one year are not recognized as “Continuous Service” except to the extent required by applicable law	Clarity/Legislative Compliance
2.10	Definition of “Employee”		Amend the definition of “Employee” to reflect succession by Unifor Local 5555 as bargaining agent for operations and maintenance staff formerly represented by The Building Union of Canada effective August 16, 2018	Housekeeping (supersedes the changes to the “Employee” definition in Amendment #1 to the January 1, 2014 Restatement)
2.14	Definition of “Income Tax Act”		Insert the proper statutory and regulatory references to the *Income Tax Act* and *Income Tax Regulations*	Housekeeping
2.17	Definition of “Pension Benefits Act”		Insert the proper statutory reference to the *Pension Benefits Act*	Housekeeping

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
2.21	Definition of "Regular Annual Earnings"	Calculation of "Regular Annual Earnings" contemplates paid and unpaid leaves of absence	Clarify how "Regular Annual Earnings" are calculated during unpaid leaves and periods of reduced pay, and application of income tax limits on deemed earnings	Clarity/Legislative Compliance
2.24	Definition of "Spouse"	Current definition reflects the definition of "spouse" in the *Pension Benefits Act* prior to the statutory definition being amended effective January 1, 2017	Conform definition with amended definition in the *Pension Benefits Act* effective January 1, 2017	Legislative Compliance
2.30 (New)	Definition of "Suspended Member"		Add definition of "Suspended Member" to facilitate clarification of treatment of non-accruing Members (see Sections 3.04 and 3.05 below)	Housekeeping
2.25	Definition of "Total Disability"		Clarify that "Total Disability" is determined in accordance with University policy, which provides for assessment of Total Disability status after ten (10) days of absence	Align with Administrative Practice
3.02, 3.03	Eligibility to Join Plan	Although Sections 3.02 and 3.03 read as if new Plan entrants are permitted, new Plan entrants are not permitted by virtue of the definition of "Employee" having been closed	Confirm that new Plan entrants are not permitted by aligning Section 3.02 with the definition of "Employee" and deleting Section 3.03	Housekeeping
3.04	Participation While a Member of Another University Plan	Plan does not permit simultaneous accrual in this Plan and any other pension plan of the University	Clarify that "Suspended Members" are permitted to remain Members of this Plan (as non-accruing members) while accruing in another pension plan of the University	Housekeeping
3.05	No Loss of Membership	The membership of a part-time Employee in the Plan is not terminated, even though his annual hours or earnings subsequently fall below the threshold required for part-time Employees to join the Plan	Broaden provision to confirm that, where a Member transfers from Plan-eligible employment to Plan-ineligible employment, the Member remains in the Plan as a "Suspended Member" pending settlement of his benefit upon termination of University employment	Housekeeping
3.06	Re-Employment		Amend provision to reflect the fact that the Plan is closed to new Members such that re-employed Former Members are not eligible to join	Housekeeping

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
4.01(a)	Accrual of Credited Service		Clarify that Credited Service accrues in respect of periods of Continuous Service during which contributions are made to the Plan by or on behalf of a Member	Clarity
4.01(b)	Limit on Accrual of Credited Service During Unpaid Leave	Plan reflects 5-year limit on pension accrual during unpaid leaves (plus 3 years for "periods of parenting")	Conform Plan language to *Income Tax Regulations* definition of "period of parenting"	Housekeeping
6.01(b), 6.01(c)	Increases to Amount of Pension		Clarify that the 1992, 1999 and 2001 benefit increases are not additive	Housekeeping
6.02(b)	Early Retirement Benefit		Clarify that the phrase "early retirement benefit" refers to the benefit contemplated under Section 6.02(a)	Clarity
6.04(a)	Maximum Pension	The maximum pension formula refers to the DB dollar limit under the *Income Tax Act* for 2013	Update the dollar limit to refer to the DB dollar limit for 2018	Housekeeping
6.10	Combined Bridging and Pension Maximum	The maximum pension formula refers to the DB dollar limit under the *Income Tax Act* for 2013	Update the dollar limit to refer to the DB dollar limit for 2018	Housekeeping

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
7.03(b),(c), (d) and (e)	Optional Forms of Pension	The headings for Sections 7.03(b), (c), (d) and (e) use outdated terminology for the types of pensions described in these Sections "Joint and survivor" and "joint and survivor reducing on first death" optional forms of pension contemplate that the Member may designate a Spouse or Former Spouse as joint annuitant	The headings for Sections 7.03(b), (c), (d) and (e) are updated to reflect the terminology currently used in Plan communications for the types of pensions described in these Sections. References to outdated terminology in Sections 7.02 and 7.05 are correspondingly updated Clarify that a Member may only designate a current Spouse, but not a Former Spouse, as joint annuitant under these optional forms of pension	Housekeeping Legislative Compliance
7.05	Joint and Last Survivor Election Cancellation	Where the contingent annuitant under a "joint and survivor" or "joint and survivor reducing on first death" pension dies prior to commencement of the pension, the Member will be permitted to elect another form of pension	Clarify that the opportunity to elect another form of pension will apply to all forms of pension with a contingent annuitant	Housekeeping
7.07	Acquiring a Spouse After Retirement	Where a Member in receipt of a life only pension acquires a Spouse post-retirement, the Member may elect to convert the pension into a pension with a survivor benefit	Clarify that the option to convert a life only pension also applies to a Member who, at the time of retirement, had a Spouse who waived the survivor pension and the Member acquired a different Spouse in retirement. Clarify that this option applies irrespective of whether the pension in pay is payable in the normal form or an optional form for Members without a Spouse	Clarity

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
8.01	Member Required Contributions			Incorporation of Amendment #2 to the January 1, 2014 Restatement (which supersedes in its entirety the change to Section 8.01 made by Amendment #1)
		Historical contribution rates since July 1, 1989 are set out at Section 8.01	Move historical contribution rates to Appendix 1. Doing so will simplify future amendments to Section 8.01 (since the historical contribution rates will not need to be carried forward)	Housekeeping
		Prior to Amendment #2 to the January 1, 2014 restatement, Section 8.01 contained language providing for the proration of contributions by Members employed on a part-time basis	Restore contribution proration language inadvertently deleted by Amendment #2	Housekeeping
			Incorporate contribution rate for Parking and Transit Services effective July 14, 2019 (ratified October 18, 2018)	Bargained Change
8.02	Contributions by the University	Current provisions reflect the defined benefit funding rules set out in the regulations under the *Pension Benefits Act* prior to new rules coming into force on May 1, 2018	Update the University contribution provision to reflect the current defined benefit funding rules	Legislative Compliance
			Amend the Plan to confirm that Section 8.02 neither expands nor restricts any authority the University might otherwise have to use surplus toward its contribution obligation, and that contributions must comply with the *Income Tax Act*	Clarity

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
8.04	Deposit of Contributions	Current provision unnecessarily specifies the timing of various types of University contributions (normal cost contributions, special payments to amortize an unfunded liability)	Amend the provision to generally require contributions to be remitted when required under the *Pension Benefits Act*, which captures other types of employer contributions and avoids the need to amend this provision should the regulatory requirements change	Housekeeping
9	Transfers from Other Pension Plans	Article 9 contemplates transfers of benefits into the Hourly Plan from the Salaried Plan (9.01, 9.03 and 9.04), as well as transfers of benefits from the Hourly Plan to the Salaried Plan (9.02)	Consistent with the fact that the Hourly Plan is closed to new members, delete Sections 9.01, 9.03 and 9.04 since transfers of benefits into the Hourly Plan are no longer possible	Housekeeping
10.01(c)	Refund of Contributions with Interest to Unvested Members on Termination		Delete this provision, which is no longer operative given the *Pension Benefits Act* having been amended to require immediate vesting effective July 1, 2012	Housekeeping
10.01	Termination Options	Currently, there is no default election where a Member fails to provide direction with respect to settlement of the Member's benefit on termination of employment	Amend the Plan to specify that, where a Member fails to make an election with respect to settlement of the Member's benefit on termination of employment, the default election is a deferred pension commencing on the Member's Normal Retirement Date	Align to New Administrative Practice

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
10.02(b)	Termination Benefits – Excess Contributions	Section 10.02(a) provides for payment to a terminating Member of an amount equal to the amount by which twice the Member's contributions with interest (2XCWI) exceed the commuted value (CV) of the Member's pension Section 10.02(b) provides for a refund of the Member's excess contributions (i.e., the amount by which the Member's contributions with interest exceed 50% of the CV of the Member's pension ("Excess Contributions"))	To ensure compliance with income tax rules and to align with administrative practice, confirm that the refund of Excess Contributions is available when the member elects a lump sum transfer (not a monthly pension) and is an alternative to, not in addition to, the payment of 2XCWI	Legislative Compliance/Align with Administrative Practice
10.03	Termination Prior to Age 55	Currently, the Plan provides that a Member who terminates prior to age 55 can commence receiving a pension on the first day of any month coincident or following attainment of age 55, and that such early retirement pension is the actuarial equivalent of the pension commencing on the Member's normal retirement date	Amend the Plan to clarify that the early retirement pension is unreduced if the Member has attained his/her Special Early Retirement Date	Clarity
10.04	Termination at or After Age 55	Currently, the Plan is unclear as to whether the portability option (CV transfer) is available to Members who terminate at or after age 55	Amend the Plan to clarify the options available to a Member who terminates employment at or after age 55, which are an immediate or a deferred pension (but not a portability transfer)	Clarity
10.06	Grow-In Benefits	Eligibility for grow-in benefits requires that the Member's age and years of Continuous Service **or Credited Service** equal 55 or more on the effective date of the terminating event	Changes align this provision with the *Pension Benefits Act*	Legislative Compliance
11.03	Earnings During Disability Period	For the purpose of disability accrual, the current Plan language deems the Member's Regular Annual Earnings to be the rate received by the Member immediately before the period of Total Disability	Administrative practice has been to recognize in the pensionable earnings of disabled Plan members earnings increases applied to the relevant employee group generally	Align with Administrative Practice

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
11.04	Average YMPE Entitlement	Where a disabled Member's earnings are frozen at pre-disability levels but the YMPE increases, the Member accrues more of his/her benefit at the "lower deck" accrual rate (1.4%) and less at the "upper deck" accrual rate (2%). Section 11.04 contains a special "Average YMPE" calculation which appears to have been intended to mitigate shrinkage of disabled Members' benefits due to Section 11.03, which deems disabled Members' pensionable earnings to be their pre-disability earnings rate. In practice, however, the pensionable earnings of disabled Plan members has included earnings increases applied to the relevant employee group generally	Since administrative practice has been to apply earnings increases to disabled Members' pensionable earnings, Section 11.04 is unnecessary and is deleted Cross-references to the deleted Section 11.04 are correspondingly deleted (see Sections 6.09(c), 6.10, 11.02, 11.04 (formerly 11.05) and 11.05 (formerly 11.06))	Align with Administrative Practice
11.07	Credited Service During Leave of Absence	Currently, the Plan is silent with respect to whether a Member is permitted to continue contributions and benefit accruals during paid and unpaid leaves	Amend the Plan to confirm that paid leaves are pensionable, while unpaid leaves are pensionable at the Member's election subject to existing limitations on accrual during unpaid leaves that are not protected leaves under the *Employment Standards Act, 2000* or other applicable legislation, such as the *Workplace Safety Insurance Act, 1997*. Existing limitations on accrual during "unprotected" leaves are found in paragraph (c) of Section 11.07	Incorporation of Amendment #2 to the January 1, 2014 Restatement (which supersedes in its entirety the change to Section 11.07 made by Amendment #1) Clarity

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
12.01, 12.02(a), 12.02(b)	Value of Death Benefit Prior to Retirement	Consistent with the *Pension Benefits Act*, the Plan provides that a Member's pre-retirement death benefit (PRDB) is payable to a Member's designated beneficiary or, absent one, the Member's estate where the Member does not have a Spouse	Clarify that the PRDB could also be payable to the Member's designated beneficiary or estate where the Member does have an eligible Spouse but the Spouse has waived entitlement	Legislative Compliance
12.02(b)	Death Benefits – Excess Employee Contributions	Section 12.02(a) provides for payment of an amount equal to the amount by which twice the Member's contributions with interest (2XCWI) exceed the commuted value (CV) of the Member's pension Section 12.02(b) provides for a refund of the Member's excess contributions (i.e., the amount by which the Member's contributions with interest exceed half the CV of the Member's pension ("Excess Contributions"))	To ensure compliance with income tax rules and to align with administrative practice, confirm that the refund of Excess Contributions is an alternative to, not in addition to, the payment of 2XCWI	Legislative Compliance/Align with Administrative Practice
12.04	Death Benefit Payable to Spouse		Clarify that former Spouses are not entitled to the PRDB and, therefore, cannot waive such entitlement	Legislative Compliance
12.05	Designation of Beneficiary	The current provision suggests that a Spouse's presumptive rights under the *Pension Benefits Act* to receive a survivor pension upon the Member's retirement, or to receive a pre-retirement death benefit, arise by virtue of being a "Beneficiary", which is incorrect and could be misleading	Clarify the Plan to confirm that a surviving Spouse's statutory rights under the *Pension Benefits Act* are distinct from the rights of a designated beneficiary	Clarity
12.06	Death Benefit After Retirement	The current provision states that, upon the death of a Member, whatever amounts are payable under the form of pension that the Member was receiving, will be paid	Delete this provision, as it does not provide any further guidance in terms of what amounts, if any, are payable upon the Member's death under a particular form of pension described in Section 7	Housekeeping

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
13.03, 13.04	Notice of Plan Amendment, Written Explanation of Plan Provisions	The headings of Sections 13.03 and 13.04 are reversed These provisions also unnecessarily contain specifics with respect to the prescribed disclosure requirements, which are subject to change	Reverse the headings for these sections to accord with the content of the provisions and omit unnecessary specifics so that the provisions need not be amended each time the prescribed requirements change	Housekeeping
13.05	Annual Statements	The current provision refers only to the benefit statements required to be provided to active members annually; it does not contemplate benefit statements required to be provided to inactive members (deferred vested members and pensioners) every two years	Update the provision to capture both types of periodic benefit statements required to be provided under the *Pension Benefits Act*	Legislative Compliance
13.07	Documents Provided for Inspection	The current provision attempts to capture the requirements in the *Pension Benefits Act* and related regulations with respect to certain interested parties' right to inspect certain Plan documents and to request copies of such documents The current provision does not comprehensively capture the requirements	Since the requirements of the *Pension Benefits Act* and its related regulations must be complied with in any event, generalize the Plan language to incorporate the requirements of the Act and regulations, rather than attempt to mirror the provisions of the Act and regulations. Omitting unnecessary specifics avoids having to amend the Plan each time the prescribed requirements change	Legislative Compliance/Clarity
14.05	Fees and Expenses	The current provision incorrectly and unnecessarily refers to fees and expenses "incurred by" organizations other than McMaster University, followed by a list of types of plan administration fees and expenses	Amend the provision to reflect that administrative fees and expenses are incurred to, not "by", the service providers in respect of the listed services. The list of types of services is amended to include other common types of services the fees for which are charged to the Plan	Clarity
16.01	Non-Alienation of Benefits	Per the *Pension Benefits Act*, a former spouse may acquire an interest in a Member's pension benefit in satisfaction of a court order under the *Family Law Act* or a domestic contract	Clarify that, per the *Pension Benefits Act*, a former spouse may also acquire an interest in a pension benefit under a family arbitration award. Language mirroring the Salaried Plan is added to the provision to avoid revocation of the Plan's registration	Legislative Compliance

Section in Current Plan Text	Topic	Description of Current Terms	Proposed Change	Reason for Change
16.04	Information To Be Provided Before University Pays Benefits	The current provision attempts to list the specific information and documents that are required to be provided by certain payees prior to payment of benefits. The information and documents specified are not accurate or complete; this information may vary depending on circumstances	Generalize the provision to contemplate that the information and documents requested will be those required to confirm the payee's entitlement and calculate and pay the benefit	Align to Administrative Practice
16.05	Small Benefit Commutation	The current provision contemplates that small pensions may, in the University's discretion, be paid less frequently than monthly, or settled in a single lump sum	Amend the small benefit provision so that (1) it applies to small pensions payable to Members and surviving Spouses; and (2) commutation and settlement in a single lump sum is mandatory rather than discretionary. This approach is common, and avoids the cost associated with administering small benefits, which are often "stranded". Members and surviving Spouses often prefer to receive small pensions in a single lump sum	Align to New Administrative Practice
16.06	Transfer of Lump Sum to Registered Retirement Savings Arrangement		As required by the *Pension Benefits Act*, add a general provision permitting the transfer of lump sum payments to a registered retirement savings arrangement	Legislative Compliance

January 1, 2019

CONTRIBUTORY PENSION PLAN FOR
HOURLY-RATED EMPLOYEES OF McMASTER UNIVERSITY
INCLUDING McMASTER DIVINITY COLLEGE
(Amended and Restated as at January 1, 2019)

Registration No. 0215418

CERTIFIED to be a true and complete copy of the text of the Contributory Pension Plan for Hourly-Rated Employees of McMaster University Including McMaster Divinity College (As Amended and Restated Effective January 1, 2019)

Signature: _____
Name: Roger Couldrey
Title: Vice-President (Administration)
Date:

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ARTICLE 1 - INTRODUCTION

1.01 The Non-Contributory Pension Plan for Hourly-Rated Employees of the University was established as of July 1, 1962 for the provision of pension benefits to hourly-rated employees of the University.

1.02 This Plan was originally funded under Contract No. GA3158 issued by the Manufacturers Life Insurance Company. University contributions to Contract No. GA3158 were suspended as of June 30, 1971 after which date contributions have been deposited in the Fund for the provision of such benefits.

1.03 Effective July 1, 1979, this Plan was revised and renamed the Contributory Pension Plan for Hourly-Rated Employees of McMaster University Including McMaster Divinity College. Employee contributions to this Plan commenced as of July 1, 1979 and retirement benefits were based on a career benefit plan.

1.04 Effective January 1, 1986 this Plan was revised to provide for retirement benefits based on a final average benefit formula. Benefits accrued under this Plan at December 31, 1985 were increased by one-third for active Members and were frozen. The final average formula applies only to service after December 31, 1985. Pensions to retirees and to terminated employees with vested benefits were also increased by one-third effective January 1, 1986.

1.05 Effective July 1, 1989, the benefits accrued under this Plan at December 31, 1985 were further increased, for all active Members, by 20%, and for all pensioners by 10%.

1.06 Effective July 1, 1992, the benefits accrued under this Plan at December 31, 1985 were further increased, for all pensions in payment as of June 30, 1992, by 8%. At the same time, the benefits accrued under this Plan at December 31, 1985 were further increased, for all active Members, by 8%.

1.07 Effective from January 1, 1988 this Plan has been administered in accordance with the *Pension Benefits Act*.

1.08 Benefits provided under the provisions of Contract No. GA3158 for service prior to July 1, 1971 will continue to be a portion of the benefits provided under this Plan, either by direct payment by the Manufacturers Life Insurance Company to the retired employee or by the transfer of assets from the Manufacturers Life Insurance Company to the Fund, and the payment of all benefits from the Fund.

1.09 This Plan was amended and restated to incorporate amendments made to date, to reflect changes required or permitted under the *Pension Benefits Act* and to clarify certain provisions.

1.10 This Plan as set out in this restated text consolidates all amendments to this Plan made since the last restatement effective January 1, 2014, and is restated as at January 1, 2019.

1.11 This restatement shall not operate in any way to reduce or otherwise adversely affect a Member's entitlements accrued under this Plan up to December 31, 2018.

1.12 This restatement as of January 1, 2019 shall not operate in any way to enlarge upon the rights and entitlements for individuals who terminated participation in this Plan prior to January 1, 2019, except as may be required by the *Pension Benefits Act* and the *Income Tax Act*.

ARTICLE 2 - DEFINITIONS

The following words and phrases shall, for the purposes of this Plan, have the respective meaning given below, unless the context clearly requires a different meaning.

2.01 ***Actuarial Equivalent*** means a pension of an equal present value computed using actuarial tables and such other methods and assumptions as may be adopted by the University on the recommendation of the Actuary for the purposes of this Plan, subject to any requirements of the *Pension Benefits Act* and the *Income Tax Act*.

2.02 ***Actuary*** means a person or firm, who is, or one of whose members is, a Fellow of the Canadian Institute of Actuaries, and who is appointed by the University for purposes of this Plan.

2.03 ***Administrator*** means the administrator of the Plan as defined in Section 13.01(a).

2.04 ***Average YMPE*** means twelve (12) times the monthly average of the Year's Maximum Pensionable Earnings as defined in the Canada Pension Plan during the thirty-six (36) months preceding the date at which a determination is required. For this purpose, the YMPE in effect for each month in a Plan Year shall be the YMPE in effect on July 1 of such Plan Year. Where the Member's Credited Service exceeds thirty-six (36) months, the computation shall utilize the same months of Credited Service used for the calculation of the Best Average Earnings, utilizing the highest thirty-six (36) months of the Best Average Earnings, provided that, where the "Best Average Earnings" computation in Section 2.06 yields the same amount in respect of two or more sixty (60)-month periods of Credited Service, the Member's Average YMPE shall be determined based on the most recent of such sixty (60)-month periods.

2.05 ***Beneficiary*** means a beneficiary designated by a Member in accordance with Section 12.05.

2.06 ***Best Average Earnings*** is computed by first dividing the Regular Annual Earnings earned by the Member while participating in this Plan by twelve (12) and then

determining twelve (12) times the average of the highest sixty (60) months of earnings, which months need not be consecutive. For Members who terminate employment with the University before having completed five (5) years of Credited Service, Best Average Earnings shall be computed as above, but using the average of the number of years of Credited Service.

2.07 ***Commuted Value*** means, in relation to benefits that a person has a current or future entitlement to receive, a lump sum amount which is the actuarial present value of those benefits, computed at the rate of interest and using the actuarial tables adopted by the University on the recommendation of the Actuary, subject to any requirements of the *Pension Benefits Act* and the *Income Tax Act*.

2.08 ***Consumer Price Index*** means the seasonally adjusted Canada All-items Consumer Price Index as published by Statistics Canada under the authority of the *Statistics Act*, Statutes of Canada.

2.09 ***Continuous Service*** means unbroken employment with the University as shown by the University records and shall include periods of annual vacation, lay-off and approved leave of absence granted by the University (provided that periods of lay-off and leave of absence in excess of one (1) year shall not be recognized as Continuous Service except to the extent required by applicable law).

2.10 ***Credited Service*** means that portion of a Member's period of Continuous Service with the University which is counted for benefit purposes in accordance with the provisions of Article 4 hereof.

2.11 ***Early Retirement Date*** has the meaning ascribed in Section 5.02.

2.12 ***Employee*** means an individual who:

(a) is employed by the University on a full-time hourly rated basis and who is a member of one of the following bargaining units:

(i) Operations and Maintenance, Unifor and its Local 5555 (or its predecessors prior to August 16, 2018), provided that the following individuals shall be excluded:

(A) to the extent permitted by the *Pension Benefits Act* as at April 2006, any individual hired in the classification of "Cleaner" and any individual who is a member of the casual bargaining unit represented by Unifor and its Local 5555 (or its predecessors), and

(B) all individuals who became members of Unifor and its Local 5555 (or its predecessors prior to August 16, 2018) on or after October 1, 2007, except any such individual who is a Member at such time accruing Credited Service at such time;

(ii) Machinists, Service Employees International Union ("SEIU") Local 2 BGPWU, provided that the following individuals shall be excluded:

(A) all individuals who became members of Machinists, SEIU Local 2 BGPWU on or after April 1, 2009, except such individual who is a Member at such time accruing Credited Service at such time;

(iii) Operating Engineers, The International Union of Operating Engineers, Local 772, C.F.L. - A.F.L. - C.I.O., provided that the following individuals shall be excluded:

(A) all individuals who became members of the Operating Engineers, The International Union of Operating Engineers, Local 772, C.F.L. - A.F.L. - C.I.O. on or after December 1, 2008, except any such individual who is a Member at such time accruing Credited Service at such time;

(iv) Hospitality Services, Service Employees International Union ("SEIU") Local 2 BGPWU, provided that the following individuals shall be excluded:

(A) all individuals who became members of Hospitality Services, SEIU Local 2 BGPWU on or after January 1, 2008, except any such individual who is a Member at such time accruing Credited Service at such time;

(v) Security Services, Unifor and its Local 5555, provided that the following individuals shall be excluded:

(A) all individuals who became members of Security Services, Unifor and its Local 5555 on or after July 1, 2008, except any such individual who is a Member at such time accruing Credited Service at such time; and

(vi) Parking and Transit Services, Unifor and its Local 5555, provided that the following individuals shall be excluded:

(A) all individuals who became members of Parking and Transit Services, Unifor and its Local 5555 on and after March 16, 2010, except any such individual who is a Member at such time accruing Credited Services at such time;

(b) is employed by the University for a minimum of twenty-four (24) hours per week for Hospitality Services, Service Employees International Union ("SEIU") Local 2 BGPWU, provided that the following individuals shall be excluded:

(i) all individuals who became members of Hospitality Services, SEIU Local 2 BGPWU on or after January 1, 2008, except any such individual who is a Member at such time accruing Credited Service at such time; or

(c) on and after January 1, 1988 is employed by the University on a part-time hourly rated basis, is an Employee as defined under (a) or (b) above, and has earned at least 35% of the YMPE or has worked at least 700 hours in each of the two previous consecutive calendar years of employment by the University.

2.13 ***Financial Carrier*** means the trust company or insurance company appointed from time to time to receive and hold monies pursuant to this Plan. Subject to the terms of this Plan the Financial Carrier shall operate according to a trust agreement or an insurance contract, whichever is appropriate, between itself and the University.

2.14 ***Former Member*** has the meaning ascribed in Article 10.

2.15 ***Fund*** means the funds, securities and other assets held by the Financial Carrier in respect of this Plan.

2.16 ***Income Tax Act*** means the *Income Tax Act*, R.S.C., 1985, c. 1 (5th Supp.), and the *Income Tax Regulations*, C.R.C., c. 945, each as amended or replaced from time to time.

2.17 ***Member*** means an Employee who has elected to join this Plan in accordance with Article 3, and who continues to be entitled to benefits under this Plan.

2.18 ***Net Interest on the Fund*** means interest on required contributions from the date the contribution is made by the Employee to the last day of the month in which payment is made from the Fund. Such interest is credited at the end of each Plan Year and at termination based on the Average Annual Rate of Return determined by the following formula:

Average Annual Rate of Return = (Sum of the Annual Rates of Return for each of the current and previous four (4) Plan Years) ÷ 5

where,

$$\text{Annual Rate of Return} = \frac{\text{Net Income}}{\text{½ (Market Value of Fund at beginning of Plan Year plus Market Value at end of Plan Year less Net Income)}}$$

and,

"Net Income" equals the sum of interest, dividends, net realized gains and net unrealized gains during this Plan Year less the sum of actuarial, investment, investment counsellor, trustee, audit and other administrative expenses applicable to this Plan or Fund.

In respect of required contributions, such interest credited pursuant to this Section 2.18 shall be the greater of 0% and the Average Annual Rate of Return.

2.19 ***Normal Retirement Date*** has the meaning ascribed in Section 5.01.

2.20 ***Pension Benefits Act*** means the *Pension Benefits Act*, R.S.O. 1990, c. P.8 and the regulations thereunder, all as amended or replaced from time to time.

2.21 ***Pensioner*** means a Member who has commenced monthly pension payments from the Fund in accordance with Article 6 and includes any other individual who commences to receive monthly pension payments from the Fund.

2.22 ***Plan*** means this Contributory Pension Plan for Hourly-Rated Employees of McMaster University Including McMaster Divinity College, as amended and restated from time to time.

2.23 ***Plan Year*** means the twelve (12) month period beginning July 1st and ending the following June 30th, or any such twelve (12) month period as may be adopted by the University from time to time.

2.24 ***Postponed Retirement Date*** has the meaning ascribed in Section 5.04.

2.25 ***Regular Annual Earnings*** shall be calculated by multiplying the Member's hourly rate of earnings effective as at the beginning of each Plan Year by the regular annual hours. With respect to a part-time Employee or an individual who becomes an Employee by virtue of Section 2.12(b) the hourly rate of earnings effective at the beginning of each Plan Year will be adjusted to the equivalent full-time hourly rate. With respect to periods of Credited Service during which the Member's pay from the University is reduced, or the Member does not receive any pay from the University, the Member will be deemed to receive an additional amount of pay such that the Member's Regular Annual Earnings will be the rate of earnings the Member was receiving immediately preceding that period. However, the earnings deemed received by a Member during the Member's participation in this Plan shall not exceed the amount permitted for this purpose by the *Income Tax Act*.

2.26 ***Retirement Committee*** means the group of people as determined in Section 13.01 of this Plan.

2.27 ***Salaried Plan*** means the Contributory Pension Plan for Salaried Employees of McMaster University Including McMaster Divinity College 2000, as amended or restated from time to time.

2.28 ***Special Early Retirement Date*** has the meaning ascribed in Section 5.03.

2.29 ***Spouse*** means, in relation to an individual, a person who, at the time a determination of spousal status is required,

(a) is legally married to the individual, provided that the individual is not living separate and apart from that person; or

(b) not being legally married to the individual, has cohabited with the individual in a conjugal relationship,

(i) continuously throughout the immediately preceding one (1) year period; or

(ii) in a relationship of some permanence, if they are the parents of a child as set out in the *Children's Law Reform Act*, R.S.O. 1990, c. C.12.

Notwithstanding the foregoing, an individual, for the purposes of this Plan, is considered to have only one Spouse on the date any benefit entitlement is determined.

2.30 ***Suspended Member*** means a Member in respect of whom settlement of the Member's accrued benefit entitlement under this Plan is suspended pending termination of the Member's employment with the University, in accordance with Section 3.04.

2.31 ***Total Disability*** means a disability which is determined to exist by the University in accordance with its administrative practices from time to time, based on the written report of a medical doctor licensed to practice in Canada, in respect of which the Member is deemed unable to perform the duties for which he was employed immediately before the commencement of the disability.

2.32 ***University*** means McMaster University, including McMaster Divinity College, and such affiliated or associated corporations as may be designated by McMaster University from time to time.

2.33 ***YMPE*** means the Year's Maximum Pensionable Earnings as defined in the Canada Pension Plan.

Unless the context requires otherwise, reference in this Plan to the masculine includes the feminine and vice versa, and a word importing the singular includes the plural and vice versa. Where reference is made in this Plan to Section(s), it shall mean Articles, and subsections of this Plan unless specifically stated otherwise.

ARTICLE 3 - ELIGIBILITY

3.01 Plan Members On December 31, 1991

Each Member who was a Member of this Plan on December 31, 1991 automatically continued as a Member of this Plan for service on and after January 1, 1992.

3.02 Plan is Closed to New Members

This Plan is closed to new Members. Without limiting the foregoing, no Employee was eligible to become a Member on or after the applicable date indicated in the following table:

Employee Group	Plan Closed to New Members Effective as of:
Operations and Maintenance (Paragraph 2.12(a)(i))	The date indicated in clause 2.12(a)(i)(A) or 2.12(a)(i)(B), as applicable
Machinists (Paragraph 2.12(a)(ii))	April 1, 2009
Operating Engineers (Paragraph 2.12(a)(iii))	December 1, 2008
Hospitality Services (Paragraph 2.12(a)(iv))	January 1, 2008
Security Services (Paragraph 2.12(a)(v))	July 1, 2008
Parking and Transit Services (Paragraph 2.12(a)(vi))	March 16, 2010
Hospitality Services (Paragraph 2.12(b))	January 1, 2008
Part-Time Hourly Employees (Paragraph 2.12(c))	The date applicable to full-time hourly rated Employees in the relevant bargaining unit described in paragraph 2.12(a) or 2.12(b), as applicable

For greater certainty, a Suspended Member shall not be permitted to re-commence contributions and benefit accruals under this Plan on or after the Plan closure date for the

Employee group in which the Employee is employed when contributions and benefit accruals are proposed to be re-commenced, as indicated in the foregoing table.

3.03 Participation While a Member of Another University Plan

No Employee, other than a Suspended Member, may be a Member of this Plan while a participant of any other pension plan of the University.

3.04 No Loss of Membership

A Member's participation in this Plan shall not be terminated while he remains an Employee. In addition, once an Employee becomes a Member, he shall not cease to be a Member merely because he earns less than 35% of the YMPE or works less than seven hundred (700) hours in a calendar year. Notwithstanding the foregoing, where a Member transfers from a class of employment that qualifies him as an Employee under Section 2.12 (in this Section 3.04, "Plan-Eligible Employment") to a class of employment with the University that is not Plan-Eligible Employment, subject to Section 9.01, such Member shall cease to accrue benefits under this Plan but settlement of such Member's accrued benefit entitlement under this Plan shall be suspended pending termination of the Member's employment with the University, as applicable.

3.05 Re-Employment

This Plan is closed to new Members. A Member who terminates employment with the University and is re-employed shall not be eligible for membership under this Plan.

ARTICLE 4 - CREDITED SERVICE

4.01 Determination of Credited Service

(a) Credited Service shall be the period of years and partial years of Continuous Service with the University starting from the date on which an Employee as defined in Section 2.12 becomes a Member of this Plan in accordance with Article 3 to the date on which the Member terminates from this Plan in respect of which contributions are made to this Plan by or on behalf of the Member in accordance with Section 8.01 (including, for greater certainty, partial calendar months of such Continuous Service). Credited Service shall be determined from the records of the University.

(b) In respect of periods of unpaid absence after December 31, 1990, the aggregate of Credited Service granted under Section 11.06(b) is limited to a maximum full-time equivalent of five (5) years, plus an additional three (3) years credited in respect of any "period of parenting" as defined in paragraph 8507(3)(b) of the *Income Tax Regulations*.

4.02 Adjustment of Credited Service

For any period of Continuous Service in which the Employee works less than full time, Credited Service shall be adjusted so that the proportion of the total years and partial years of the uninterrupted participation equals the proportion that hours worked as a part-time Employee bears to the full-time workload. For any period of absence for which Credited Service is granted, the hours the Member would have worked had the Member been actively employed on the same part-time basis that was in effect immediately before the absence are included in the determination of the ratio.

4.03 Limitation on Credited Service

No service with the University that is included in the calculation of a pension benefit under any other pension plan of the University may be included in Credited Service under this Plan.

ARTICLE 5 - RETIREMENT DATE

5.01 Normal Retirement Date

Normal Retirement Date is the first day of the month next following the date the Member attains age sixty-five (65).

5.02 Early Retirement Date

Early Retirement Date is the first day of any month during the ten (10) year period preceding the Normal Retirement Date.

5.03 Special Early Retirement Date

Special Early Retirement Date is the first day of the month coincident with or next following the date the total of the Member's age and years of Credited Service equals at least eighty (80).

5.04 Postponed Retirement Date

A Member who continues employment with the University on or after December 12, 2006 beyond the Member's Normal Retirement Date shall be considered to have elected to commence receiving a pension on the Member's Postponed Retirement Date as defined below. During the period of postponement, the Member shall continue to contribute and pension benefits shall continue to accrue under this Plan until the Member's Postponed Retirement Date.

Postponed Retirement Date, for purposes of this Plan, is the earlier of:

(a) the first day of the month following the date the Member terminates employment with the University after the Member's Normal Retirement Date; and

(b) the first day of December of the year the Member attains age seventy-one (71) or such other date as may be prescribed for this purpose by the *Income Tax Act*.

A Member whose Postponed Retirement Date is that described in (b) above shall cease to contribute and to earn pension benefits under this Plan as of that date, notwithstanding that the Member continues to earn employment income from the University beyond his Postponed Retirement Date.

ARTICLE 6 - AMOUNT OF PENSION

6.01 Normal, Special Early and Postponed Retirement Benefit

(a) The amount of annual pension payable in equal monthly installments to a Member from his Normal Retirement Date, Special Early Retirement Date or Postponed Retirement Date shall be the sum of:

(i) his annual pension accrued to December 31, 1985 (based on the Plan provisions in effect on December 31, 1985) multiplied by the product of 1.333 and 1.20;

plus

(ii) 1.4% of his Best Average Earnings up to the Average YMPE, multiplied by his years of Credited Service earned after December 31, 1985;

plus

(iii) 2.0% of his Best Average Earnings in excess of the Average YMPE, multiplied by his years of Credited Service earned after December 31, 1985.

(b) For pensions the payment of which commences on or after July 1, 1992 and prior to July 1, 1999, the pension determined under clause (i) of Section 6.01(a) shall be increased by a further 8%.

(c) For pensions the payment of which commences on or after July 1, 1999 and prior to July 1, 2001, the pension determined under clause (i) of Section 6.01(a) shall be increased by a further 20%.

(d) For pensions the payment of which commences on or after July 1, 2001, the pension determined under clause (i) of Section 6.01(a) shall be increased by a further 1.5%.

(e) Notwithstanding Sections 6.01(a), (b), (c) and (d), the aggregate increases provided for in those sections shall not exceed the increase warranted by the increase in the Consumer Price Index from January 1, 1986 to the date of the increase.

6.02 Early Retirement Benefit

(a) Each Member whose employment with the University is terminated during the ten (10) year period preceding the Normal Retirement Date shall elect, prior to the date upon which his pension commences,

(i) to receive an annual pension benefit payable in equal monthly installments commencing at the Normal Retirement Date in an amount equal to the amount determined under Section 6.01 based on his Credited Service to the date of termination of service with the University; or

(ii) to receive an annual pension benefit payable in equal monthly installments commencing on the first day of any month after the month in which the Member elects to commence his pension under this Plan up to the Member's Normal Retirement Date, in an amount equal to the amount determined under Section 6.01 based on his Credited Service to the date of termination of service with the University, less the sum of:

(A) 0.5% of that benefit for each month, if any, that the pension commencement date precedes the Member's attaining age sixty (60); and

(B) 0.25% of that benefit for each month, to a maximum of sixty (60) months, that the pension commencement date precedes the Member's attaining the Normal Retirement Date.

(b) The value of the early retirement benefit provided for under Section 6.02(a) must be at least the Actuarial Equivalent of the Member's benefit that would be

payable at the Normal Retirement Date, provided that the amount payable shall not exceed the amount of the monthly pension benefit starting payment at the Normal Retirement Date, reduced by 0.25% for each month by which the pension commencement date precedes the earliest of the date on which:

(i) the Member will attain age sixty (60);

(ii) the Member's age plus Continuous Service would have equaled eighty (80); and

(iii) the Member would have completed thirty (30) years of Continuous Service.

For purposes of this Section 6.02(b), Continuous Service shall not include periods of lay-off.

(c) A Member to whom Section 6.02(a) applies cannot elect to commence to receive a pension prior to the date the application is received by the University.

6.03 Excess Employee Contributions

In addition to the benefit payable under Section 6.01 or 6.02, as applicable, the amount, if any, by which the Member's required contributions accumulated with Net Interest on the Fund exceeds 50% the Commuted Value of any pension benefit payable under this Article 6 and other benefits accrued or granted to or in respect of the Member shall be paid to the Member as soon as practicable following the date of termination of service with the University.

6.04 Maximum Pension

Notwithstanding any other provision of this Plan to the contrary, the maximum annual pension payable to a Member under this Plan determined at the time of pension commencement, in the form of pension to be paid to the Member and any portion of the Member's pension payable to a Member's Spouse or former Spouse as a result of a

breakdown of spousal relationship, shall not exceed the years of Credited Service of the Member, multiplied by the lesser of:

(a) $2,944.44 for the year 2018 or such greater amount prescribed for this purpose by the *Income Tax Act;* and

(b) 2% of the average of the Member's best 3 consecutive years' compensation, as defined by the *Income Tax Act*, from the University;

reduced, by 0.25% for each month by which the pension commencement date precedes the earliest of the day on which:

(a) the Member would attain age sixty (60);

(b) the Member's age plus Continuous Service, not including periods of layoff or temporary suspension of employment, would have equaled eighty (80); or

(c) the Member would have completed thirty (30) years of Continuous Service, not including periods of layoff or temporary suspension of employment.

This Section 6.04 does not apply to that portion, if any, of the pension derived from a Member's excess contributions.

For the purposes of this Section 6.04, a Member's Credited Service before January 1, 1992 is limited to thirty-five (35) years.

6.05 Pension Adjustment

In no event shall the benefit accrued by a Member in a Plan Year under Section 6.01 result in a pension adjustment, as defined by the *Income Tax Act*, for the Member in excess of the limits for the year prescribed by the *Income Tax Act*.

6.06 Annual Pension Increase

(a) On January 1 of each year, pensions in pay from this Plan are increased utilizing the pensioner reserve method as described below:

The percentage increase shall be the lesser of:

(i) the percentage by which the Average Annual Rate of Return determined by the following formula exceeds 6.0%,

Average Annual Rate of Return = (Sum of the Annual Rates of Return for each of the previous 5 Plan Years) ÷ 5

where,

$$\text{Annual Rate of Return} = \frac{\text{Net Income}}{\text{½ (Market Value of Fund at beginning of Plan Year plus Market Value at end of Plan Year less Net Income)}}$$

and,

"Net Income" equals the sum of interest, dividends, net realized gains and net unrealized gains during this Plan Year less the sum of actuarial, investment, investment counsellor, trustee, audit and other administrative expenses applicable to this Plan or Fund; and

(ii) the percentage annual increase in the average Consumer Price Index during the twelve (12) month period that ended on the immediately preceding June 30.

(b) Pensions in pay on January 1 of each year shall be increased by the percentage determined in Section 6.06(a) multiplied by a fraction, the numerator of which is the number of months (maximum 12) the pension was in pay during the previous Plan Year and the denominator of which is twelve (12).

(c) Notwithstanding Sections 6.06(a) and (b), pension increases shall not exceed the maximum amount permitted under the *Income Tax Act* and, for Members who commenced payment of a pension under this Plan before attaining age sixty (60) and before January 1, 1992, under Information Circular 72-13R8 as issued by Canada Revenue Agency and as amended from time to time.

(d) Notwithstanding the provisions of Sections 6.06(a) and 6.06(b), the increase to pensions in pay effective January 1, 2003 will be calculated using the same method but using 50% of the percentage determined in subsection 6.06(a)(i) and using the percentage increase in the average Consumer Price Index between the periods (1) January 1, 2001 to December 31, 2001 and (2) July 1, 2001 to June 30, 2002.

6.07 Pension Increase

Pensions paid from the Fund may be increased as negotiated with the bargaining units and as set out in Schedule A, provided such increases are warranted by increases in the Consumer Price Index after the benefits commence to be paid and subject to the limit in Section 6.06(c) above.

6.08 Bridging Benefit

Subject to Sections 6.09 and 6.10:

(a) a Member who commences payment of a pension under this Plan on or after July 1, 2001:

(i) pursuant to Section 5.03, is entitled to receive, in addition to the benefit provided under Section 6.01, an annual bridging benefit payable in equal monthly installments in an amount equal to $12 per month for each year of Credited Service prior to July 1, 2001, payable from the later of: the Member's pension commencement date and the first day of the month coincident with or next following the date on which the Member attains

age sixty (60), and ceasing with the payment immediately preceding or coincident with the earlier of the Member's Normal Retirement Date and the date of his death; or

(ii) pursuant to Section 5.02, is entitled to receive, in addition to the benefit provided under Section 6.02, a bridging benefit as set forth in Section 6.08(a)(i) but reduced by 0.25% for each month by which the date on which the bridging benefit commences to be paid, precedes the Member's Normal Retirement Date.

(b) a Member who commenced payment of a pension under this Plan prior to July 1, 2001:

(i) pursuant to Section 5.03, is entitled to receive, in addition to the benefit provided under Section 6.01, an annual bridging benefit payable in equal monthly installments in an amount equal to $12 per month for each year of Credited Service prior to July 1, 1999, payable in equal monthly installments from the later of July 1, 2001 and his attaining age sixty (60) and ceasing with the payment immediately preceding or coincident with the earlier of the Member's Normal Retirement Date and the date of his death; or

(ii) pursuant to Section 5.02, is entitled to receive, in addition to the benefit provided under Section 6.02, a bridging benefit as set forth in Section 6.08(b)(i) but reduced by 0.25% for each month by which the date of pension commencement precedes the Member's Normal Retirement Date.

6.09 Maximum Bridging Benefit

The monthly bridging benefit payable under Section 6.08 shall not exceed the amount of benefits payable to the Member under the Canada Pension Plan and under the *Old Age Security Act* assuming the Member is:

(a) sixty-five (65) years of age at the date of pension commencement;

(b) entitled to receive the maximum Old Age Security benefits; and

(c) entitled to that proportion, not exceeding 1, of the maximum benefits payable under the Canada Pension Plan that the total of the Member's remuneration for the three (3) calendar years in which the remuneration is highest bears to the total of the YMPE for those three (3) years,

reduced proportionately in the case of a Member who has completed less than ten (10) years of Credited Service as at that date and further reduced by 0.25% for each month by which the Member's pension commencement date precedes his attaining age sixty (60).

Notwithstanding the foregoing, in no event shall the monthly bridging benefit be paid for a period greater than sixty (60) months.

6.10 Combined Bridging and Pension Maximum

Where a Member receives a bridging benefit pursuant to Section 6.08, for the year in which the bridging benefit is initially paid, the annual combined bridging benefit plus the pension benefit to which Section 6.04 is applicable, both for Credited Service after 1991, shall not exceed the amount determined by the formula:

$$(A \times B) + (0.25 \times C) \times \frac{D}{35}$$

where

A is $2,944.44 for the year 2018 or such greater amount permitted under the *Income Tax Act* for the calendar year in which the benefits commence to be paid;

B is the Member's Credited Service after 1991;

C is the average of the YMPE for the year in which the benefits commence to be paid and for each of the two (2) preceding calendar years; and

D is the lesser of 35 and the amount determined for B.

6.11 Supplementary Pension Increase

(a) If in any year after 2001, the percentage calculated in Section 6.06(a)(i) (the "Excess Interest Formula") exceeds the percentage calculated in Section 6.06(a)(ii) (the "CPI Formula"), such excess will be used to provide a supplementary increase to the annual amount of those pensions in pay from this Plan which had their annual pension increase (as calculated in Section 6.06(a)(i)) in any of the three (3) previous calendar years based on the Excess Interest Formula.

(b) The supplementary increase shall be the lesser of:

(i) the percentage increase described in Section 6.11(a) by dividing (1 + the Excess Interest Formula) by (1 + the CPI Formula); and

(ii) the increase necessary to produce an annual pension that would result from granting increases based on the CPI Formula in each of the three previous years (starting with the year three (3) years previous) in which a lower increase (including any previous supplementary increases) has been provided and shall be applied after the increase in Section 6.06 has been determined.

(c) Notwithstanding Sections 6.11(a) and (b) above, supplementary pension increases shall not exceed the maximum amount permitted under the *Income Tax Act* and, for Members who commenced payment of a pension under this Plan before attaining age sixty (60) and before January 1, 1992, under Information Circular 72-13R8 as issued by the Canada Revenue Agency as amended from time to time.

6.12 Commencement and Duration of Pensions

Except as otherwise provided for in this Plan, the payment of pension benefits to a Member shall commence on the applicable commencement date specified in this Plan and shall be payable on the first day of each month thereafter during the remaining lifetime of the Member, with the last payment to the Member being made on the first day of the month in which the Member dies, subject always to the terms of the normal form or any optional form of pension applicable to the Member pursuant to Article 7.

ARTICLE 7 - FORM OF PAYMENT OF PENSION BENEFITS

7.01 Normal Form of Benefit - Single Member

A Member who does not have a Spouse at the time pension payments begin shall receive a retirement pension from this Plan, payable for the life of the Member in monthly installments, commencing on the Member's retirement date, or later pension commencement date determined in accordance with Section 6.12, and is payable in equal monthly installments thereafter during the Member's lifetime, with a guarantee that if the Member dies before 120 monthly payments are made, that number of the one hundred and twenty (120) monthly payments remaining unpaid shall continue to be paid to the Beneficiary until all remaining monthly payments have been made or, at the election of the Beneficiary, the Commuted Value of the remaining payments shall be paid in a lump sum cash payment. If there is no such Beneficiary, the Commuted Value of the remaining payments shall be paid in a lump sum cash payment to the estate of the Member.

7.02 Legislative Form of Benefit - Member With a Spouse

(a) A Member who has a Spouse at the time pension payments begin shall receive a monthly retirement pension in the form of a joint and survivor annuity payable from the Member's pension commencement date, in equal monthly installments to the first day of the month in which the Member dies, with 60% of the monthly amount continuing to be paid thereafter to the surviving Spouse of the Member ceasing on the first day of the month in which the Spouse dies.

(b) Such pension as described above shall have the Actuarial Equivalent value of the normal form of benefit to which the Member is entitled under Section 7.01.

(c) The Member and his Spouse entitled to this benefit may waive this entitlement by delivering to the University a written waiver in a form prescribed under the *Pension Benefits Act*.

Such waiver shall be submitted to the University along with the form of pension to be paid prior to the commencement of payment of the pension benefit.

7.03 Optional Forms of Pension

Subject to Section 7.02(c), at any time prior to the commencement of pension benefit payments, a Member may elect to receive one of the optional forms of pension described below in lieu of the normal form of benefit provided under Section 7.01 above. The optional forms of pension described below shall be the Actuarial Equivalent of the normal form of benefit to which the Member is entitled under Section 7.01 above.

(a) Life Only

A monthly pension payable for life only with no minimum guaranteed period.

(b) Life and Five (5) Years Guaranteed

A monthly pension payable for at least five (5) years and as long as the Member survives.

(c) Life and Ten (10) Years Guaranteed

A monthly pension payable for at least ten (10) years and as long as the Member survives.

(d) Joint and Survivor

A monthly pension payable for the life of the Member and continued after the Member's death to a joint annuitant in such amount that is permitted by the University, the *Pension Benefits Act* and the *Income Tax Act.* The Member may only designate as a joint annuitant his Spouse.

(e) Joint and Survivor Reducing on First Death

A monthly pension payable to the earlier of the death of the Member and the death of the Member's joint annuitant, and continuing to be paid thereafter for the life of the survivor in an amount that is permitted by the University, the *Pension* Benefits *Act* and the *Income Tax Act.* The Member may only designate as a joint annuitant his Spouse.

(f) Other Optional Forms

The University may adopt other optional forms of benefit consistent with rules and regulations affecting this Plan and may, in special circumstances and subject to the *Income Tax Act* and the *Pension Benefits Act*, permit other settlements.

7.04 Changes to Optional Form and Pension

A Member who has elected an optional form of benefit may change such election at any time prior to the commencement of pension benefit payments.

7.05 Cancellation of Election of Joint and Survivor, or Joint and Survivor Reducing on First Death Pension

In the event a member has elected, or is deemed to have elected, a pension payable in a joint and survivor, or joint and survivor reducing on first death form, and the named contingent annuitant dies after the election or deemed election is made but prior to the date the first instalment of such pension is due to be paid, the Member's election or deemed election shall be cancelled. In that event, the Member shall be administered the option to elect another form of pension and, if the Member does not make such an election, the Member's pension shall be payable in the normal form for a Member who does not have a Spouse.

7.06 Shortened Life Expectancy

In the event that a Member, Former Member or Pensioner becomes disabled to the extent that his life expectancy is likely to be considerably shortened within the meaning of the *Pension Benefits Act*, the University may, at the request of the Member, Former Member or Pensioner, vary the terms of payment of the pension to which the Member, Former Member or Pensioner is entitled, subject to the limitations of the *Income Tax Act*.

7.07 Acquiring a Spouse After Retirement

A Member who is receiving from the Fund a form of pension for a Member without a Spouse and who acquires a Spouse subsequent to pension commencement may elect no later than sixty (60) days following the date of acquiring a Spouse to have the pension benefit recalculated and paid in the form of a joint and survivor pension. Such pension shall be the Actuarial Equivalent value of the pension in pay and, subject to any reconciliation of benefits paid to the Member between the date on which the Member acquired a Spouse and the date on which the recalculated pension benefit amount commences, will commence to be paid from the first day of the month coincident with or next following the date upon which the Member acquired a Spouse. For greater certainty, the election contemplated in this Section 7.07 is available both to Members who did not have a Spouse on their pension commencement date under this Plan, and to Members who did have a Spouse on their pension commencement date under this Plan but in respect of whom a joint waiver was provided to the University in accordance with Section 7.02(c) and who acquired a different Spouse after their pension commencement date.

ARTICLE 8 - CONTRIBUTIONS

8.01 Member's Required Contributions

Each Member shall contribute to this Plan by regular payroll deduction, based on the class of Member and effective date, as follows:

Class of Member	Period	Employee Contribution Rate on Regular Annual Earnings	
		Up To YMPE	In Excess of YMPE
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(i) of this Plan ("**Operations and Maintenance**")	July 15, 2018 forward	7.00%	10.00%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(ii) of this Plan ("**Machinists**")	July 15, 2018 forward	7.00%	10.00%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(iii) of this Plan ("**Operating Engineers**")	July 15, 2018 forward	7.00%	10.00%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(iv) or 2.12(b) of this Plan ("**Hospitality Services**")	July 15, 2018 to April 6, 2019	7.00%	10.00%
	April 7, 2019 forward	8.00%	11.00%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(v) ("**Security Services**") of this Plan	July 15, 2018 forward	7.00%	10.00%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(vi) of this Plan ("**Parking and Transit Services**")	July 15, 2018 to July 13, 2019	7.00%	10.00%
	July 14, 2019 forward	8.00%	11.00%

provided, however, that a Member's contributions for any Plan Year shall not exceed the maximum amount permitted by the *Income Tax Act* for that Plan Year. Notwithstanding the foregoing, with respect to part-time Employees or for individuals who become

Employees by virtue of Section 2.12(c), Member contributions for any Plan Year shall be pro-rated by a ratio, the numerator of which is the Member's hours scheduled to be worked as a part-time Employee during the Plan Year and the denominator of which is the hours regularly scheduled to be worked as a full-time Employee.

Historical Member contribution rates since July 1, 1989 are set out in Appendix 1 to this Plan for reference purposes only.

8.02 Contributions by the University

Subject to Section 8.04, the University shall make payments for deposit in the Fund in such total amount as, based on the advice of the Actuary, is required to provide the normal cost of benefits currently accruing to Members in accordance with the provisions of this Plan, after taking into account the assets of the Fund, and all other relevant factors. The University shall also make contributions to the Fund in respect of:

(a) any going concern unfunded liability;

(b) the provision for adverse deviations in respect of the normal cost;

(c) a Plan amendment that increases going concern liabilities; and

(d) any reduced solvency deficiency under this Plan,

if, and in the manner, prescribed by the *Pension Benefits Act*, where terms used in this Section 8.02 have the meanings assigned to them under the *Pension Benefits Act* and its related regulations, provided that nothing in this Section 8.02 shall be construed to expand or restrict any authority the University may otherwise have or may otherwise acquire to apply surplus toward its contribution obligation under the Plan.

No contribution shall be made by the University to the Fund in accordance with this Section 8.02 unless it is an eligible contribution as defined by the *Income Tax Act*.

8.03 Minimum University Contribution

Effective July 1, 1999, the sum of:

(a) the University contributions to this Plan during the Plan Year; plus

(b) any lump sum payments to a Member during the Plan Year paid directly by the University consisting of the excess by which twice Member contributions with Net Interest on the Fund exceeds the sum of the Commuted Value of the pension accrued to the Member plus any related lump sum amount paid to the Member from this Plan;

shall, in no event, be less than the contributions made by the Members during this Plan Year.

8.04 Deposit of Contributions

The University shall pay into the Fund all sums received by the University from an Employee or deducted from an Employee's pay as the Employee's contribution to this Plan within the calendar month following the month the sum was received or deducted. The University's contributions shall be paid into the Fund as and when prescribed under the *Pension Benefits Act*.

8.05 University Contributions Must be Eligible Contributions

Notwithstanding Sections 8.02 and 8.03, no contribution shall be made by the University to the Fund unless it is an eligible contribution as defined by the *Income Tax Act*.

ARTICLE 9 - TRANSFERS TO THE SALARIED PLAN

9.01 Transfer From This Plan to the Salaried Plan

If an Employee who is entitled to benefits under this Plan is transferred to employment with the University in which he is eligible to participate under the Salaried Plan,

(a) the Commuted Value of the benefits to which that individual was entitled under this Plan as at the date of transfer shall be deposited to the fund for the Salaried Plan;

(b) upon completion of the transfer under (a) above, the individual shall have no entitlement to benefits under this Plan; and

(c) the pensionable service of the individual for purposes of the Salaried Plan shall include the individual's Credited Service under this Plan.

In no event shall the Member's Commuted Value be transferred from this Plan to the Salaried Plan pursuant to Section 9.01(a) unless the administrator of the Salaried Plan confirms that the commuted value of the benefits in respect of the pensionable service recognized under the Salaried Plan prior to the date of transfer will not be less than the Commuted Value amount transferred from this Plan to the Salaried Plan.

ARTICLE 10 - TERMINATION OF EMPLOYMENT

10.01 Value of Accrued Pension

Subject to Section 10.04 and Section 10.05 below, if the employment of a Member is terminated for any reason other than death or disability prior to his commencing receipt of a pension under this Plan, then he shall become a Former Member until full and final settlement of all entitlements under this Plan have been made as described in this Article 10, or until he becomes a Pensioner, and he may elect (a) or (b) below with respect to that portion of his entitlements not described in Section 10.02:

(a) to transfer an amount equal to the Commuted Value of the Member's pension to such other pension plan or retirement arrangement that may permit such transfers to be made provided that the transfer is made in the form and manner prescribed by the *Income Tax Act* and the *Pension Benefits Act*, and provided that the administrator of the plan to which money is transferred agrees in writing that the amount transferred shall be locked in to provide a life annuity under which payments shall not commence prior to the individual's Early Retirement Date under this Plan; or

(b) to receive a deferred pension equal to the pension accrued to the date of termination, payable in the normal form provided for under this Plan and commencing at the Normal Retirement Date.

Where the Member fails to make an election in accordance under this Section 10.01 within the period prescribed by the University for this purpose (which period shall comply with the *Pension Benefits Act*), the Member shall be deemed to elect the option provided for under Section 10.01(b) and the Member shall no longer be eligible to elect the option provided for under Section 10.01(a). Such deemed election shall apply to the amounts, if any, to which the Member is entitled under Section 10.02.

10.02 Excess Employee Contributions

(a) Where a Member elects a transfer in accordance with Section 10.01(a), the amount, if any, by which twice the Member's required contributions accumulated with Net Interest on the Fund exceeds the Commuted Value of any pension benefit payable under this Article 10 and other benefits accrued or granted to or in respect of the Member shall be paid as soon as practicable following the date of termination of service with the University, provided that:

(i) the amount is paid in the form and manner prescribed by the *Income Tax Act* and the *Pension Benefits Act*; and

(ii) the aggregate amount of current service contributions made by the Member in respect of a calendar year after 1990, does not exceed the lesser of:

(A) 9% of the aggregate of all amounts each of which is the Member's compensation for the year from the University, and

(B) the sum of $1,000 and 50% of the aggregate of all amounts each of which is the amount that would be the Member's pension adjustment as defined and determined under the *Income Tax Act* for the year.

(b) Except where the Member elects a transfer in accordance with Section 10.02(a), in addition to the benefit payable under Section 10.01, the amount, if any, by which the Member's required contributions accumulated with Net Interest on the fund exceeds 50% of the Commuted Value of any pension benefit payable under this Section 10.01 and other benefits accrued or granted to or in respect of him shall be paid to the Member as soon as practicable following the date of termination of service with the University.

10.03 Termination Prior to Age 55

A Member terminating prior to age 55 and electing a deferred pension under Section 10.01(b) is entitled to elect to commence receiving a pension on the later of the first day of any month coincident with or following the date the Member attains age 55, or on the Member's Special Early Retirement Date if applicable. Such pension shall not commence prior to the date the individual notifies the Administrator of such election. Such early retirement pension for a Member who had not attained their Special Early Retirement Date as at their date of termination of employment shall be the Actuarial Equivalent of the deferred pension to payable on the Member's Normal Retirement Date, subject to Section 6.02(b). If the Member had attained their Special Early Retirement Date as at their date of termination of employment, their early retirement pension shall be unreduced.

10.04 Termination at or After Age 55

A Member terminating at or after age 55 is entitled to receive an immediate or deferred pension benefit determined in accordance with Section 6.02. For greater certainty, a Member terminating in accordance with this Section 10.04 shall not be eligible to elect a transfer in accordance with Section 10.01(a).

10.05 Excess Transfer Amounts

Amounts transferred in accordance with Section 10.01(a) shall not exceed the maximum amount prescribed for this purpose by the *Income Tax Act.* The excess of the amount payable under Section 10.01(a), as applicable, plus Net Interest on the Fund, if any, over the amount transferable in accordance with the *Income Tax Act* will be paid directly to the Member as a lump sum cash payment.

10.06 Grow-in Benefits

Where a Member's employment has been terminated as a result of an "activating event", as that term is used in Section 74 of the *Pension Benefits Act*, as it may be modified and

renumbered from time to time, and the Member's combination of age plus years of Continuous Service or continuous membership in this Plan equals at least fifty-five (55) on the effective date of the terminating event, then such Member has the right, but only to the extent required by Section 74 of the *Pension Benefits Act*, to receive a pension commencing prior to Normal Retirement Date, calculated in accordance with Article 6, as modified by Section 74 of the *Pension Benefits Act*. The dates on which such a benefit can commence will be as provided for under the *Pension Benefits Act*.

For greater certainty, for purposes of entitlement to a bridging benefit under Section 6.08, the affected Member must have at least 10 years of Continuous Service.

ARTICLE 11 - DISABILITY AND LEAVE OF ABSENCE

11.01 Member Required Contributions During Disability

A Member is exempted from the requirement to make contributions to this Plan during a period of Total Disability.

11.02 Credited Service During Disability Period

Each year, or part thereof, during the period of Total Disability counts as a year, or part thereof, of Continuous Service and Credited Service for the Member as if he were not disabled, and the benefit is determined based on the provisions of this Plan, as modified by Section 11.03, that are in effect at the date specified in either Section 11.04 or 11.05.

11.03 Earnings During Disability Period

For the purpose of disability accrual as described in Section 11.02, the Member's Regular Annual Earnings are deemed to be equal to the rate of Regular Annual Earnings received by the Member immediately before the commencement of his period of Total Disability, subject to such periodic increases as would have applied to the Member had he remained actively employed in the same class of employment, as determined by the Administrator.

11.04 Disability Ending Before Normal Retirement

(a) If the Member ceases to be Totally Disabled and returns to active employment with the University within thirty (30) days of the date specified by the University, his pension is calculated based on the provisions of this Plan, as modified by Section 11.03, in effect as at the date of his subsequent termination or commencing payment of a pension under this Plan.

(b) If the Member ceases to be Totally Disabled and does not return to active employment with the University within thirty (30) days of the date specified by the University, he will be deemed to have terminated his employment for purposes of this Plan as of the date on which his Total Disability is deemed by the

University to have ceased and his pension is calculated based on the provisions of this Plan, as modified by Section 11.03, in effect as at the date of his deemed termination.

11.05 Disability Continuing Until Normal Retirement

A Member whose Total Disability continues until his Normal Retirement Date is deemed to elect to commence receipt of a pension under this Plan on his Normal Retirement Date and his pension is calculated based on the provisions of this Plan, as modified by Section 11.03, in effect as at the date of his pension commencement under this Plan.

11.06 Credited Service During Leave of Absence

(a) Leave with Pay

If a Member is granted a leave of absence with pay, contributions and benefit accruals shall continue.

(b) Leave without Pay

Subject to Section 11.06(c), where a Member goes on a leave of absence without pay that is approved by the University, the Member shall elect:

(i) to cease contributions and benefit accruals under this Plan in respect of the period of absence; or

(ii) to continue contributions and benefit accruals under this Plan in respect of the period of absence, in which case the Employee shall, in a form and manner acceptable to the University, remit contributions to the University in an amount equal to the Employee's required contribution calculated in accordance with Section 8.01 and, for purposes of this calculation, Regular Annual Earnings shall be that which would have been in effect had the individual remained an active Employee.

Such election shall be made in the form and manner prescribed by the University for this purpose from time to time (and, where practicable, prior to commencement of the leave).

(c) Notwithstanding Section 11.06(b) , and subject to Sections 11.01, 11.02 and 11.03, unless otherwise specifically negotiated under a collective bargaining agreement with the relevant bargaining unit, a Member who is an Employee by virtue of Sections 2.12(a)(ii), (iv), (v) or (vi) whose approved unpaid leave of absence is not a leave of absence in respect of which the *Employment Standards Act, 2000* or other applicable legislation requires that the Member be provided the option to continue to participate in this Plan, shall cease contributions and benefit accruals under this Plan in respect of the entire period of absence effective on the following dates:

(i) December 10, 2015, Machinists;

(ii) May 1, 2016, Hospitality Services;

(iii) October 26, 2015, Security Services; and

(iv) October 25, 2014, Parking and Transit Services.

ARTICLE 12 - DEATH BENEFITS

12.01 Value of Death Benefit Prior to Retirement

If a Former Member who is entitled to a deferred pension under Article 10 dies prior to the date his pension commences to be paid under this Plan, the Former Member's Spouse or, where no Spouse exists or the Spouse has waived entitlement, his designated beneficiary or estate, shall receive the Commuted Value of the pension accrued to the Member.

12.02 Excess Employee Contributions

(a) In addition to the benefit payable under Section 12.01, the amount, if any, by which twice the Member's required contributions accumulated with Net Interest on the Fund exceeds the amount payable under Section 12.01, shall be paid to the Member's Spouse or, where no Spouse exists or the Spouse has waived entitlement, to his designated beneficiary or estate, as soon as practicable following the date of the Member's death, provided that:

(i) the payment is made in the form and manner prescribed by the *Income Tax Act* and the *Pension Benefits Act*; and

(ii) the aggregate amount of current service contributions made by the Member in respect of a calendar year after 1990, does not exceed the lesser of:

(A) 9 per cent of the aggregate of all amounts each of which is the Member's compensation for the year from the University; and

(B) the sum of $1,000 and 50% per cent of the aggregate of all amounts each of which is the amount that would be the Member's pension adjustment as defined and determined under the *Income Tax Act* for the year.

(b) Except where an amount is paid under Section 12.02(a), in addition to the amount payable under Section 12.01 or the benefit payable under Section 12.03, as applicable, the amount, if any, by which the Member's required contributions accumulated with Net Interest on the Fund exceeds 50% of the Commuted Value of the pension accrued to the Member shall be paid to the Member's Spouse or, where no Spouse exists or the Spouse has waived entitlement, his designated beneficiary or estate, as soon as practicable following the date of the Member's death.

12.03 Spousal Election

In lieu of the lump sum payments under Sections 12.01 and 12.02, a Spouse is entitled to elect to receive an immediate or deferred annuity which is the Actuarial Equivalent of such lump sum payments or to transfer the Actuarial Equivalent to a registered retirement savings plan.

Where the Spouse elects an immediate or deferred annuity, such annuity must commence at any time prior to the end of the calendar year in which the Spouse attains age 71 or, if the Spouse has already attained age 71, within one (1) year after the death of the Member and end with the payment for the month in which the Spouse's death occurs.

12.04 Death Benefit Payable to Spouse

Notwithstanding Section 12.01 and 12.02, the death benefit is payable to the Member's Spouse unless the Spouse has completed and filed a waiver in the prescribed form, in which case the death benefit is payable to the Member's Beneficiary or, if none, to the Member's estate.

12.05 Designation of Beneficiary

(a) A Member may designate, by written notice delivered to the University, a beneficiary to receive any amounts payable under this Plan. Each such written notice shall be in such form and executed in such manner as determined by the

University, subject to all applicable laws. A Member may revoke or amend such designation, including after payment of the Member’s pension has commenced, in the same manner at any time, subject to any applicable laws governing the designation of beneficiaries.

(b) If a Member does not validly designate a Beneficiary, or the Beneficiary predeceases the Member, any benefits payable to the Member's Beneficiary will be paid in a lump sum to the estate of the Member.

(c) If a Beneficiary, as a result of a Member's death, is entitled to payments under this Plan and if the Beneficiary dies before receiving any or all of the payments dues to him, the Commuted Value of the remainder of the payments will be paid in a lump sum to the estate of the Beneficiary.

ARTICLE 13 - ADMINISTRATION OF THE PLAN

13.01 Responsibility for Administration

(a) The Administrator of this Plan shall be the University which shall be responsible for all matters relating to the administration, interpretation and operation of this Plan and the Fund.

(b) The Administrator shall determine all questions relating to the length of service, eligibility, early or postponed pension commencement, and all other matters with respect to administration of this Plan and shall conclusively decide all matters relating to the administration, interpretation and application of this Plan consistently, however, with the text of this Plan, the terms of the Manufacturers Life Insurance Company Contract No. GA3158 and the trust agreement.

(c) The University may, in its sole discretion, delegate certain of its responsibilities to the Retirement Committee.

(d) The Retirement Committee shall be comprised of representatives of the University and of representatives appointed by Members of this Plan; with the number of committee members to be set by the University, from time to time.

(e) The Retirement Committee shall receive all financial statements, including reports, from the investment managers, actuarial reports, any actuarial cost studies relating to this Plan, and any pertinent correspondence relating to this Plan's operations.

(f) The Retirement Committee shall review the actuarial reports and discuss the alternatives for allocation of any available surplus. Such alternatives will be communicated to the parties to the collective agreement between the University and the bargaining units.

13.02 Rules for Administration

The University may enact such rules and regulations relating to the administration and operation of this Plan as it may deem necessary to carry out properly the terms thereof and may amend such rules and regulations from time to time, as in its opinion may be required.

The Retirement Committee shall meet as frequently as is deemed necessary but not less frequently than once per year.

13.03 Written Explanation of Plan Provisions

The University shall provide each Employee with a written explanation of the terms and conditions of this Plan, together with an explanation of the rights and duties of the Employee, all in accordance with the requirements set out under the *Pension Benefits Act*.

13.04 Notice of Plan Amendment

The University shall provide notice of amendments to this Plan to such persons as are entitled to such notice all in accordance with the requirements set out under the *Pension Benefits Act*.

13.05 Periodic Benefit Statements

The University shall, as and when prescribed under the *Pension Benefits Act*, provide to each Member, Former Member and Pensioner a written statement containing the information prescribed under the *Pension Benefits Act* in respect of this Plan and the Member's pension benefits.

13.06 Termination Statements

When a Member of this Plan terminates employment or otherwise ceases to be a Member, the University shall give to the Member, or to any other person who as a result becomes entitled to a payment under this Plan, a written statement setting out the

information prescribed under the *Pension Benefits Act* in respect of the benefits, rights and obligations of the Member or other person.

13.07 Documents Provided for Inspection

(a) The University shall, upon request of a person entitled under the *Pension Benefits Act* to make such request, make available the documents and information in respect of this Plan and the Fund prescribed under the *Pension Benefits Act*. The University shall do so in the manner provided for under the *Pension Benefits Act*.

(b) An individual described in Section 13.07(a) is entitled to make such a request for inspection not more than once in a calendar year.

(c) The University shall permit the person making the inspection to make extracts from or to copy the prescribed documents and information. On request, the University shall provide the person making the inspection with copies of any of the prescribed documents or information upon payment to the University of a reasonable fee.

ARTICLE 14 - ADMINISTRATION OF THE FUND

14.01 Contributions to the Fund

All contributions to this Plan on or after July 1, 1979, together with credits and all other monies arising from Contract No. GA3158 or any other source, shall be deposited in the Fund for the payment of benefits under this Plan. The contributions made by the University shall not constitute an enlargement of the amount of any benefit to which a Member or the Member's beneficiaries may become entitled under the terms of this Plan, and shall not, at any time, create any right, title or interest in the assets of the University or the Fund, except those assets of the Fund required to provide the benefits defined, accrued and vested under this Plan.

14.02 Limitation on Investments

Investment of the Fund, other than Contract No. GA3158, shall be restricted to securities and loans of those classes permitted by the *Pension Benefits Act* and the *Income Tax Act* provisions affecting the investment of funds under registered pension plans.

14.03 Provision of Benefits

All benefits under this Plan shall be provided from the Fund either by direct payment of the benefits by the Manufacturers Life Insurance Company under Contract No. GA3158 or from any other fund of the Fund or by the purchase of an annuity contract of appropriate amount and form from a life insurance company licensed to do business in Canada.

14.04 Fund Administration

Subject to the terms of this Plan, the provisions of the *Pension Benefits Act*, the *Income Tax Act* and any other applicable legislation governing the administration, investment or maintenance of pension funds eligible for registration under the *Income Tax Act*, the Fund

shall be administered by the Financial Carrier in accordance with the trust agreement or insurance contract, whichever is appropriate.

14.05 Fees and Expenses

All normal and reasonable fees and expenses incurred in the administration of the Fund and Plan will be paid or reimbursed from the Fund, unless paid by the University, including:

Accounting
Actuarial
Audit
Custody of Assets
Legal Counsel
Trustee
Investment Consulting
Investment Management
Regulatory Fees and Filings

Payment of any fees or expenses from the Fund is subject to the provisions of the *Pension Benefits Act* and the *Income Tax Act.*

14.06 Currency

All payments made from this Plan shall be made in Canadian currency.

ARTICLE 15 - CHANGE OR DISCONTINUANCE OF THE PLAN

15.01 Continuation of this Plan

The University expects and intends to maintain this Plan in force indefinitely but necessarily reserves the right to amend or discontinue this Plan, either in whole or in part, at any time or times, subject always to the requirements of its contractual obligations to its Employees and its obligations under the collective agreement between the University and the bargaining units.

15.02 Amendment of Plan

(a) No amendment to this Plan shall operate to reduce the benefits which have accrued to Members of this Plan prior to the date of such amendment nor shall the University have the right or power to make any amendment which would cause or permit any portion of the contributions made prior to that date to be diverted for purposes other than the exclusive benefit of Members, their respective estates, beneficiaries or joint annuitants, in accordance with the provisions of this Plan, unless all benefits under this Plan have been fully provided for.

(b) Where an amendment results in a certifiable past service pension adjustment as defined by the *Income Tax Act* in respect of a Member, the amendment shall not apply to the Member prior to certification.

15.03 Discontinuance of Plan

Except as otherwise required or permitted by law, if this Plan is discontinued or wound-up in whole or in part, each Member affected by such discontinuance or wind-up shall, for the purposes of this Plan, be deemed to have terminated his employment with the University on the date of discontinuance or wind-up and shall receive a benefit in accordance with the provisions of this Plan, the *Pension Benefits Act*, and the *Income Tax Act* and the University shall not make further contributions to this Plan except those

which it is required to make under the provisions of the *Pension Benefits Act* and has not made in respect of benefits accrued under this Plan prior to the date of termination.

15.04 Wind-Up Surplus

If after provision for all accrued pension benefits under this Plan it should be found that assets remain in the Fund, such excess assets shall be used as the University may direct, provided that:

(a) the University obtains the prior written approval of the Canada Revenue Agency and the Financial Services Commission of Ontario;

(b) such excess arising from Member contributions and minimum University contributions in accordance with Section 8.03 shall be used to provide benefits to, or in respect of a Member that are in addition to benefits defined under this Plan, up to the maximum benefit permitted in accordance with Section 6.04, and this Plan shall at that time be amended to the extent necessary to provide for such additional benefits. The total benefit provided shall not be greater than the maximum benefit permitted to be paid under Section 6.04, and the portion of any such excess not used to provide benefits shall be refunded to the University to be used as the University may direct; and

(c) such excess after application of Section 15.04(b) shall revert to the University to be used as the University may direct.

ARTICLE 16 - GENERAL PROVISIONS

16.01 Non-Alienation of Benefits

No Member entitled to receive any pension benefit hereunder shall have any right, title, authority or power to assign, anticipate, alienate, transfer, mortgage, hypothecate, pledge, charge, commute, give as security or surrender, or otherwise encumber or dispose of such pension benefit or any interest therein, nor shall monies payable under this Plan be subject to attachment, execution, garnishment, sequestration, or other seizure whatsoever, except as allowed under the *Pension Benefits Act* in satisfaction of an order under the *Family Law Act*, R.S.O. 1990, a domestic contract as defined under Part IV of that Act or a family arbitration award made under the *Arbitration Act, 1991*, or unless a reduction in benefits is necessary in order to avoid revocation of the registration of the Plan.

16.02 No Right to Employment

This Plan shall not be construed to create or enlarge any right of any person to remain in the employment of the University.

16.03 No Enlargement of Rights

A Member shall have only such rights as are expressly provided by the terms of this Plan and any agreement between the University and a Financial Carrier shall not constitute an enlargement of any rights which a Member may have apart from the terms of this Plan.

16.04 Information To Be Provided Before University Pays Benefits

Payment of benefits shall not be made until the person entitled to payment of the benefits delivers to the University such information and other documents as the University may require to confirm the payee's entitlement and calculate and pay the benefit.

16.05 Small Benefit Commutation

Notwithstanding any other provisions of this Plan, in the event that:

(a) the annual pension payable at the Member's Normal Retirement Date is not more than 4% of the YMPE in year of the Member's termination or such other amount as may be prescribed under the *Pension Benefits Act*; or

(b) the annual survivor pension payable to the Spouse is not more than 4% of the YMPE in the year of the Member's death or such other amount as may be prescribed under the *Pension Benefits Act*; or

(c) the Commuted Value of the pension to which the Member is entitled is less than 20% of the YMPE in the year of the Member's termination or such other amount as may be prescribed under the *Pension Benefits Act*; or

(d) the Commuted Value of the survivor pension to which the Spouse is entitled is less than 20% of the YMPE in the year of the Member's death or such other amount as may be prescribed under the *Pension Benefits Act*,

the Commuted Value of the Member's pension, or the Spouse's survivor pension, as applicable, shall be paid in a single lump sum in full discharge of the University's obligations under this Plan. For greater certainty, commutation and payment of a Spouse's survivor pension under this Section 16.05 shall be effected only where the pension payable to the Member to which the survivor pension relates commenced to be paid on or after July 1, 2012.

16.06 Transfer of Lump Sum to Registered Retirement Savings Arrangement

If the person who is entitled to receive a lump sum payment under this Plan is the Member or the Member's Spouse or former Spouse, that person may elect to have that amount transferred directly on his behalf, subject to the maximum transfer limit prescribed under the *Income Tax Act*, to such other pension plan or retirement savings

arrangement that may permit such transfers to be made, provided the transfer is made in the form and manner prescribed under the *Pension Benefits Act* and the *Income Tax Act*.

16.07 University Records

Wherever the records of the University are used for the purposes of this Plan, such records shall be conclusive of the facts with which they are concerned, unless and until they are proven to be in error.

16.08 Severability

If any provision of this Plan is held to be invalid or unenforceable by a court of competent jurisdiction, its invalidity or unenforceability shall not affect any other provision of this Plan and this Plan shall be construed and enforced as if such provision had not been included therein.

16.09 Captions and Headings

The captions, headings and table of contents of this Plan are included for convenience of reference only and shall not be used in interpreting the provisions of this Plan.

16.10 Construction

(a) This Plan is intended to constitute an employee's pension plan qualified for registration under the *Income Tax Act* and the *Pension Benefits Act*.

(b) Any provision of the funding agreement that is inconsistent with the terms of this Plan shall, to the extent of the inconsistency, be of no force or effect.

(c) This Plan shall be governed and construed in accordance with the laws of the Province of Ontario.

SCHEDULE A – PENSION INCREASE

1. Pursuant to Section 6.07 and subject to the limits set forth in Sections 6.06 and 6.07, effective July 1, 1999, lifetime retirement benefits in pay at June 30, 1999 are increased such that the aggregate of all such increases granted in respect of the Member since the Member's date of pension commencement, shall equal the product of:

   (a) the amount of lifetime retirement benefit payable to the Member at his date of pension commencement; and

   (b) the rate of growth in the Consumer Price Index, as defined by the Income Tax Act, since the Member's date of pension commencement.

2. Pursuant to Section 6.07 and item 1 in this Schedule A, and subject to the limits set forth in Section 6.06 and 6.07, effective July 1, 2001, lifetime retirement benefits in pay at June 30, 2001 are increased by 1.5%.

APPENDIX 1 – HISTORICAL MEMBER CONTRIBUTION RATES (SINCE JULY 1, 1989)

Class of Member	Period	Employee Contribution Rate on Regular Annual Earnings	
		Up To YMPE	In Excess of YMPE
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(i) of this Plan ("**Operations and Maintenance**")	July 1, 1989 to March 3, 2012	3.50%	5.00%
	March 4, 2012 to September 1, 2012	4.50%	6.00%
	September 2, 2012 to March 2, 2013	5.50%	7.00%
	March 3, 2013 to February 15, 2014	6.00%	8.00%
	February 16, 2014 to July 14, 2018	6.50%	8.75%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(ii) of this Plan ("**Machinists**")	July 1, 1989 to March 3, 2012	3.50%	5.00%
	March 4, 2012 to September 1, 2012	4.50%	6.00%
	September 2, 2012 to March 2, 2013	5.50%	7.00%
	March 3, 2013 to February 15, 2014	6.00%	8.00%
	February 16, 2014 to July 14, 2018	6.50%	8.75%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(iii) of this Plan ("**Operating Engineers**")	July 1, 1989 to March 3, 2012	3.50%	5.00%
	March 4, 2012 to September 1, 2012	4.50%	6.00%
	September 2, 2012 to March 2, 2013	5.50%	7.00%
	March 3, 2013 to February 15, 2014	6.00%	8.00%
	February 16, 2014 to July 14, 2018	6.50%	8.75%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(iv) or 2.12(b) of this Plan ("**Hospitality Services**")	July 1, 1989 to March 3, 2012	3.50%	5.00%
	March 4, 2012 to September 1, 2012	4.50%	6.00%
	September 2, 2012 to March 2, 2013	5.50%	7.00%
	March 3, 2013 to February 15, 2014	6.00%	8.00%
	February 16, 2014 to July 14, 2018	6.50%	8.75%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(v) ("**Security Services**") of this Plan	July 1, 1989 to March 3, 2012	3.50%	5.00%
	March 4, 2012 to September 1, 2012	4.50%	6.00%
	September 2, 2012 to March 2, 2013	5.50%	7.00%
	March 3, 2013 to February 15, 2014	6.00%	8.00%
	February 16, 2014 to July 14, 2018	6.50%	8.75%
Members of this Plan who meet the definition of Employee pursuant to Section 2.12(a)(vi) of this Plan ("**Parking and Transit Services**")	July 1, 1989 to March 3, 2012	3.50%	5.00%
	March 4, 2012 to September 1, 2012	4.50%	6.00%
	September 2, 2012 to March 2, 2013	5.50%	7.00%
	March 3, 2013 to February 15, 2014	6.00%	8.00%
	February 16, 2014 to July 14, 2018	6.50%	8.75%

Dated this _____ day of _____, 2019

FOR THE UNIVERSITY	FOR OPERATING ENGINEERS, THE INTERNATIONAL UNION OF OPERATING ENGINEERS, LOCAL 772
	FOR PARKING AND TRANSIT SERVICES, UNIFOR AND ITS LOCAL 5555
	FOR SECURITY SERVICES, UNIFOR AND ITS LOCAL 5555
	FOR OPERATIONS AND MAINTENANCE, UNIFOR AND ITS LOCAL 5555
FOR HOSPITALITY SERVICES, THE SERVICE EMPLOYEES INTERNATIONAL UNION, LOCAL 2 BGPWU	FOR MACHINISTS, THE SERVICE EMPLOYEES INTERNATIONAL UNION, LOCAL 2 BGPWU

Health, Safety and Risk Management Report to the Board of Governors

Report 2018-5 for the period of November 16, 2018 - February 12, 2019

The Health, Safety and Risk Management (HSRM) unit of Human Resources Services incorporates Environmental and Occupational Health Support Services (EOHSS), Employee Health Services (EHS) and works in cooperation with the Organizational Development unit. Together, we strive to promote the health, safety, wellness and engagement of all McMaster employees.

Executive Summary

- The Ministry of Labour (MOL) was on campus for one occasion with no orders issued.
- McMaster has received notification of an adjustment of the WSIB rebate position for 2018 from $ 39,275.11 to $34.500 based on error originating at WSIB.
- Ontario Universities were successful with their active consultation with the MOL resulting in section amendment to the WHMIS 2015 Regulation. This amendment helps the Ontario Universities avoid costs estimated between $64 and $114 million.

1. Training and Loss Prevention Initiatives

- Updated legislation called WHMIS (Workplace Hazardous Materials Information System) 2015 included a three-year phased implementation that commenced in 2015. The final stage of this legislation takes effect on December 1, 2018. EOHSS continues to work on providing researchers with education tools/information in preparation for this final stage of implementation of WHMIS 2015. There are three components to this regulation including:
    - Training: WHMIS 2015 training is available online for all staff and faculty.
    - Safety Data Sheets: Safety Data Sheets (SDS) are required to be replaced with Material Safety Data Sheets (MSDS) for hazardous materials information and be readily accessible to all workers. These documents are available on the EOHSS webpage as well as from chemical suppliers.
    - Labelling of Hazardous Materials:
        - Suppliers of Hazardous Materials were required to ship chemicals using new supplier labels as of August 30, 2018.
        - All Hazardous chemicals purchased prior to this date were required to comply with new WHMIS 2015 requirements as of December 1, 2018. This would require existing inventory of chemicals to be relabelled. This requirement was problematic for Universities resulting in a series of discussions with the MOL to seek alternative solutions.
- Universities advocated and were successful in receiving a cost effective solution to comply with the WHMIS 2015 regulations. The regulatory amendment filed in January 2019 allows the Universities avoid costs of between $64M-$114M.
- The amended regulation allows for workplace labels to be added to existing containers bearing the WHMIS 1988 label. Existing supplier labels do not need to

be removed or covered. Workplace labels can be affixed anywhere on container. This method allows the preservation of existing valuable information on the current supplier labels that is useful for scientists and for health and safety purposes.

- EOHSS is now in progress along with the FHS safety office to providing researchers with education tools/information and instruction in order to implement this final stage of WHMIS 2015 related to labelling. Communication to the Deans and Faculties have begun and users of hazardous materials have been provided workplace labels in order to affix to all containers remaining from the WHMIS 1988 legislation. MOL is aware there is time needed to physically amend certain containers within the workplace.

- The recent edition of the Workplace Wellbeing Newsletter was released in February highlighting implementation instructions for recent WHMIS 2015 amendment, highlighting new slips and falls poster, weblink announcement change for Human Resources, along with announcing our Safety Video contest as part of the annual Safety and Health Week (formerly known as NAOSH week).

- EOHSS and EHS have been facilitating a six-part safety culture programming for Facility Services, with the goal of increasing a positive health and safety culture in the workplace. The program has included discussions including prevention, and enhancing the Facility Services safety culture. We have analyzed proper incident reporting and stressed the importance of completing fulsome accident investigations. We have highlighted the costs surrounding lost time and the necessity to offer modified duties immediately following the workplace injury/illness. The goal of this program is to reduce lost time and to increase the safety culture within the entire Facility Services team.

2. Government Relations and External Inspections/Audits

- The MOL was contacted to report a WSIB claim had been filed for a retired employee as it related to noise induced hearing loss. It is required to report these potential claims when notified by WSIB that it has been submitted under sec 52 of the OHSA. An MOL Inspector and an MOL Hygienist attended a meeting with EOHSS to review its noise control and hearing protection program. No orders were issued.

3. Employee Health Services Summary

3.1 Critical Injuries

There were no reports of critical injuries during this period as noted above.

3.2 Lost Time Update

The Employee Health Services Team (EHS) actively manages WSIB as well as salary continuance, sick leave, employee medical accommodation requests and long-term disability claims for the University. EHS continues to collaborate with departments and faculties to develop and maintain proactive strategies to help reduce lost time incurred by employees

throughout the University. The team remains focuses on supporting programming, education and processes with the goal of encouraging a positive health and safety culture, implementing early and safe return to work processes, prevention and a reduction of lost time days.

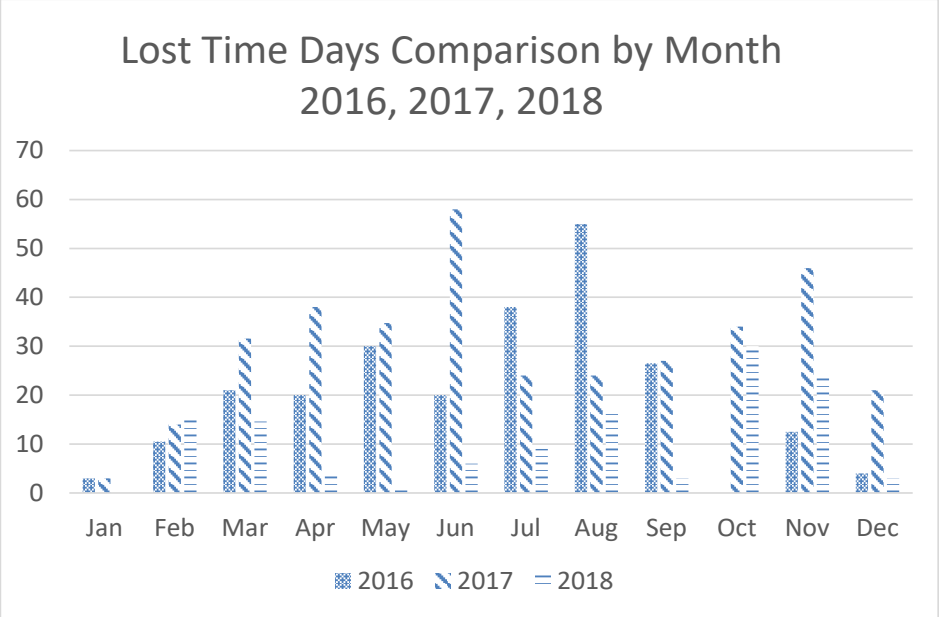
The chart below illustrates the number of WSIB approved lost time days and the number of lost time claims, over the past three years.

Jan. 1- Dec. 31 Year	# of Lost Time Days	Total # Approved Lost time Claims
2016	240	17
2017	355	17
2018	126	20

Year over Year WSIB Lost time

- In 2016, 2 claims accounted for 174.5 of the 240 lost time days, or 72.7% of the lost time.
- In 2017, 2 claims accounted for 273.75 of the 355 lost time days, or 77% of the lost time.
- In 2018, 2 claims accounted for 71 of the 126 lost time days or 56% of the lost time from January to October 31, 2018.

The graph below shows the number of Lost Time days by month year over year.



- In 2018, the number of claims increased, however the number of lost time days have decreased significantly. Employees who have been injured are being offered modified work and individuals are accepting the modified work and/or attending work with accommodations.

- The New Experimental Experience Rating (NEER) Status report for 2018 from the Workplace Safety and Insurance Board has been received. This report assesses McMaster University's performance based on our lost time and healthcare claim costs from 2017, 2016, 2015, and 2014. McMaster achieved an initial rebate of $ 39,275.11. However, WSIB reported an error on the report. The adjusted rebate for 2018 is $ 34, 509.02.

4. Workplace Wellness Initiatives

Organizational wellness is supported by addressing the thirteen psychosocial factors related to the National Standard of Canada for Psychological Health and Safety in the Workplace. Recent campus wellness activities include:

- Through the Healthy Workplace Committee:
  - offered caregiver workshops to employees to support their resiliency.
  - offered weekly Yoga classes; due to popularity, a second time was added. Both sessions sold out extremely quickly

  - partnered with the Student Wellness Centre to offer a week-long Thrive Week, which included events and activities such as a panel discussion about how personal and professional mistakes leaders to development, lunch-hour games, and workshops
  - offered lunch and learn workshops such as healthy eating, meditation and financial literacy

- Produced and distributed health promotion communications on topics such as supports for caregivers and psychological health and safety
- Coordinated wellness workshops for teams and departments through our partnership with EFAP
- Facilitated institutional changes related to amendments to the Smoke-Free Ontario Act
- Supported knowledge transfer across Ontario public health agencies through partnership and development of an education session with Tobacco Control Area Network and Leave the Pack Behind. Workshop to be presented in March at the Ontario Public Health Conference