2019/20

FIVE-YEAR CAPITAL PLAN

District Energy Plant
TABLE OF CONTENTS

EXECUTIVE SUMMARY and PRIORITIES ........................................................................................................ 3

BACKGROUND ............................................................................................................................................. 4

PLANNING ASSUMPTIONS .......................................................................................................................... 8

PROJECT DETAILS ....................................................................................................................................... 8

1) Completed Projects................................................................................................................................. 8
2) Projects Currently Under Construction ................................................................................................. 9
   District Energy Plant
   Student Housing and Dining Project .................................................................................................... 9
3) Capital Projects in Planning ..................................................................................................................... 10
   Addition to Engineering & Computer Science Building ........................................................................ 12
   National Centre for Indigenous Law
       - Addition to Fraser Building ........................................................................................................ 11
   Addition to Business and Economics Building ..................................................................................... 12
   Campus Renewal Program .................................................................................................................... 13

PLANNING ACTIVITIES .............................................................................................................................. 14

SUMMARY .................................................................................................................................................. 16

APPENDIX 1: Space Inventory Compared to Standards .............................................................................. 16
A. EXECUTIVE SUMMARY and PRIORITIES

The University of Victoria’s success is built on the provision of high-quality education and outstanding student experience, excellence in research and the conscious integration of research and teaching, within a diverse and welcoming environment. The university’s five-year capital plan reflects the academic priorities of the university as articulated in its Strategic Framework, its Planning and Budget Framework, the Indigenous Plan, the Campus Plan and our Institutional Accountability Plan and Report to the Ministry of Advanced Education, Skills and Training. One of the six key areas of our Strategic Framework is to cultivate an extraordinary academic environment that allows for the creation, dissemination and mobilization of knowledge. Our capital plan is a key planning document that outlines the university’s infrastructure needs, which are a vital component required to achieve this key goal.

Our top priorities include providing an exceptional student experience, both curricular and co-curricular, meeting existing and anticipated program demand, advancing research excellence, and fostering respect and reconciliation. The university’s five-year capital requirements for 2019/20 to deliver on these priorities include:

1. Addition to the Engineering and Computer Science Building:
   Thanks to significant support from this government, UVic will be welcoming an additional 500 FTE undergraduate students to our Computer Science and Engineering programs by 2022/23. Government has also committed to supporting that growth with a capital expansion. UVic’s top capital priority, therefore, is a project that includes an addition to our Engineering and Computer Science building and an adjacent high-bay structures lab estimated at $89.6, which is required to meet our new funded enrolment targets, in programs with some of the highest number of anticipated job openings of any in-demand occupations.

2. National Centre for Indigenous Law - An Addition to the Fraser Building:
   The addition will house UVic’s new dual degree program in Common Law and Indigenous Legal Orders (JD/JID), that welcomed its first cohort of students in Fall 2018, and will serve as a national centre for critical engagement for research and education in Indigenous Law. This program, funded by this government for 96 FTE JD/JID students, will have transformational effects in communities across Canada, realizing the Truth and Reconciliation Commission’s (TRC) hope that Indigenous and non-Indigenous peoples should live together in peace and prosperity. This project is a key step towards UVic’s goal of being a global leader in creating better opportunities for Indigenous students, entering respectful educational and research partnerships with Indigenous Communities, and directly responding to the TRC’s call to action 50. As well as the addition, the project includes renovations to the Fraser building for office and student gathering spaces. To realize this vision, UVic requires a $27.1M for the addition to the Fraser Building, including associated renovations costs. UVic has received a commitment of $9M from the Federal government in support of the project.

3. An addition to the Business and Economics Building:
   Student demand for Business programs, including entrepreneurship and innovation, has been very strong. UVic’s Peter B. Gustavson School of Business has expanded to meet this demand by creating two additional cohorts and expanding its BCom Minor program. Another UVic
capital priority, to accommodate this growth, is therefore an expansion to the existing Business and Economics building.

4. Addressing Deferred Maintenance and Seismic:

Renewal of the Fraser Building:
The quality of our academic programs is impacted by the condition of the facilities in which they are provided. In order to address pedagogical needs and provide the experience our students require to be ready for the job market, the university has developed a program of building renewal which addresses both deferred maintenance and seismic needs across campus. The next priority project in this ongoing renewal program is the Fraser Building, estimated at $27.1M. Some components of this renewal could be undertaken in conjunction with the addition noted above. During planning for the National Centre for Indigenous Law, the extent of renewal that would benefit from being undertaken at the same time will be determined.

Seismic Upgrading:
Over the course of the last few years, detailed planning was undertaken to develop seismic upgrade plans for several campus buildings. This work is now complete and seismic upgrades are complete for the Campus Security and Saunders buildings. As well, work has commenced on upgrading the MacLaurin D wing.

Facilities planning is continuous in order to address changes in student program demand and support services, as well as evolving research and teaching requirements to ensure they reflect societal need. To address these changing needs, the university undertakes planning activities that inform future capital requirements, both major capital and annual routine capital. Over the next few years this work will include reviewing space needs for the Faculty of Social Science, the Faculty of Science and the Faculty of Humanities. As well, work will be undertaken to plan for future expansion requirements beyond five years that take into account our strategic framework goal to promote more collaboration, partnerships and interdisciplinary approaches. This goal leads to thinking about and planning for more flexible, multipurpose shared space.

B. BACKGROUND

University facilities and infrastructure are a critical component of providing an extraordinary academic environment, for delivering on our commitment to making a vital impact and providing a hands-on experience, integrated with research-inspired teaching. The annual renewal of our five-year capital plan is therefore an important process that ensures that over the longer term, our physical assets will continue to support the realization of our institutional priorities and goals.

The Ministry of Advanced Education, Skills and Training (AEST) provides guidance in the development of capital priorities, both through the articulation of Provincial goals and priorities and through the development of post-secondary space and deferred maintenance standards/benchmarks. Provincial priorities align with university priorities, and include supporting the alignment of academic programs
to in-demand jobs, increasing affordable housing, reducing carbon, enhancing climate resiliency, incorporating wood first building design and the renewal of existing infrastructure. With respect to deferred maintenance, the AEST funded and implemented a province-wide system to assess levels of deferred maintenance. For overall space, AEST standards outline the total campus space that an institution should have, based on programs offered, enrolment levels, number of faculty and staff, library volumes, etc. University inventory is then compared to this standard to assess an overall space gap or shortfall. Capital planning reflects institutional needs, priorities and goals within this space gap context and projects are developed that address these institutional needs and goals, influenced by provincial government objectives and priorities.

The university, based on the AEST space standards, has a gap of 25,297 net assignable square metres (NASM). This is approximately 13% below standard, as outlined in appendix 1. Using this overall institutional assessment as a starting point, planning work is undertaken to confirm the priority projects for addressing the space pressures that result from the gaps in academic office space, maintenance space, student and central service space\(^1\) and laboratories, as noted in appendix 1. These space pressures are a consequence of overall student growth and from realignments and shifts in programs due to student demand.

UVic responds to changing student and societal demands by shifting (creating new) student FTEs to programs aligned with the provincial labour market outlook, including the most in-demand jobs. Thanks to significant support from government, our proactive approach will result in UVic welcoming an additional 500 FTE undergraduate students to our Computer Science and Engineering programs by 2022/23. Government has also committed to supporting this growth with a capital expansion. Much like the demand for Computer Science and Engineering, student demand for Business, including entrepreneurship and innovation, has been very strong. UVic’s Peter B. Gustavson School of Business has expanded by creating two additional cohorts.

Programs of requirements have been developed to address the needs of Computer Science and Engineering and Business. Based on this planning, it has been determined that their needs can be addressed through additions to current facilities that support these programs – an addition to the Engineering Computer Science Building and an addition to the Business and Economic Building.

Another priority building addition is to the Fraser Building. This addition will house the university’s new dual degree program in Common Law and Indigenous Legal Orders (JD/JID) and serve as a national centre for research and education in Indigenous Law. Indigenous peoples are increasingly exercising jurisdiction over their lands, resources, and affairs. In doing so, they seek to draw upon their own legal traditions and principles of social order. For enduring Indigenous self-government, there is a need to create strong institutions grounded in the communities they serve, run by individuals who have the skills to reason with Canadian law and Indigenous legal traditions. UVic has responded to this need through the creation of this dual degree program.

UVic welcomed its first cohort of students in the fall of 2018. This program, funded by the provincial government for 96 FTE JD/JID students, will have transformational effects in communities across

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\(^1\) Student and central services includes: food services, bookstore, AV/TV, data centre, student computer labs, health, student lounge space, student office and support space and general assembly such as galleries auditorium etc.
Canada, realizing the Truth and Reconciliation Commission’s hope that Indigenous and non-Indigenous peoples should live together in peace and prosperity. It also responds to both federal and provincial government commitments to recognize the rights and traditions of Indigenous Peoples and forge the nation-to-nation relationship. It is a key step towards UVic’s goal of being a global leader in creating better opportunities for Indigenous students, entering respectful educational and research partnerships with Indigenous Communities, and advancing respect, reconciliation and mutual understanding.

In addition to addressing academic priorities, another priority in the new strategic framework is to expand on-campus housing to address student demand and housing pressures in the community. As a destination university, students choose UVic for the quality and breadth of our programs and travel from across the province, Canada and the world to attend. The vast majority of our incoming class of 5,000 students are therefore new to Victoria and require accommodation. The university has an unmet on-campus housing need of ~1,500 beds and will be able to substantially respond to this demand through the construction of 620 incremental beds on campus. This additional capacity provides incremental revenues sufficient to fund the costs associated with the debt required for the expansion. This expansion will help alleviate pressure in the community for lower cost housing as more students live on campus. We are thankful to the Provincial Government for their support through approval in 2018 to borrow $122.7M that, combined with other will sources, will be sufficient to fund this needed expansion.

As well as housing, there are significant space pressures and delivery challenges with respect to the provision of appropriate Health Services for students. The current building where this program is located is inadequate in both size and functionality, and given its age and location can’t cost effectively be renovated to meet current Vancouver Island Health Authority requirements and student demand levels. To address the gaps and to better respond to the overall student physical and mental health needs, planning is currently underway to repurpose space within the Technology Enterprise Facility (TEF) made available through the relocation of Ocean Networks Canada to the newly renovated space at UVic’s Queenswood Ocean and Climate Campus. Renovations to TEF will enable the creation of a new Health and Wellness Centre for students, in close proximity to the Centre for Athletics, Recreation and Special Abilities (CARSA), thereby creating a wellness hub.

In 2007, the university started the process to assess campus renewal needs. The initial assessment was completed for the university’s six oldest buildings, as well as the university’s Athletics, Recreation and School of Exercise Science, Physical and Health Education facilities. Two projects emerged out of these assessments: the Renewal Program funded through the Knowledge Infrastructure Program (KIP), and CARSA, which included a program of renewal for the McKinnon Building. The KIP renewal project was completed in 2011 and the CARSA building and renewal to portions of McKinnon were completed in 2015 and 2016 respectively.

While the KIP renewal program addressed some deferred maintenance and infrastructure issues, overall the university’s infrastructure is aging and deferred maintenance issues need to be addressed. As noted above, the Ministry of Advanced Education, Skills and Training funded an assessment of the university’s deferred maintenance. This assessment work included looking at all academic buildings on campus to determine each building’s physical condition using an industry standard index called the
Facilities Condition Index or FCI. The overall FCI of our buildings at that time was 32%. An FCI number below 10 indicates that the buildings are generally in good condition and an FCI rating between 10 and 30 is considered poor. At that time, the investment that would have been required to address all deferred maintenance and capital renewal over the next five years was estimated at $361M. The VFA data is reviewed and updated annually, taking into account further aging of the buildings, pricing changes and any projects undertaken to address deferred maintenance. While government has increased annual funding available to address deferred maintenance through the Routine Capital program, the university’s FCI continues to increase. The university’s current FCI (January 2019) is 45%, with the value of the work required over the next five years (excluding seismic) estimated at $505M (excluding housing)\(^2\). Given the magnitude of these infrastructure issues, and the fact that these values will continue to grow over time, deferred maintenance continues to be a capital priority.

With all the above, it is critical that capital planning efforts over the next five years address expansion for academic program requirements to support government funded growth (computer science and engineering and JD/JID), as well as deferred maintenance in order to continue to address building renewal and seismic projects. The capital projects and projects in planning outlined in this document reflect the institutional priorities as articulated in our indigenous plan, our campus plan, our research plan and our planning and budget framework. All of these plans support the university’s overall key strategic priorities as articulated in its strategic framework:

- Cultivate an extraordinary environment;
- Advance research excellence and impact;
- Intensify dynamic learning;
- Foster respect and reconciliation;
- Promote sustainable futures; and
- Engage locally and globally.

In addressing the above goals, the university’s Sustainability Action Plan: Campus Operations, provides the following guidance that will inform specific project planning:

- Institutional greenhouse gas emissions reduction of 30%\(^3\) by 2019;
- Reduce campus electricity consumption intensity by 8%\(^3\) by 2019;
- Reduce campus natural gas consumption intensity by 12%\(^3\) by 2019;
- Develop systems that provide for the reduction, measurement and reporting of construction and demolition waste; and
- Ensure all new buildings and major renovation projects achieve the standard of LEED Gold or equivalent certification.

Capital priorities are reflected in annual fund raising goals and priorities established by the university as appropriate.

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\(^{2}\) Student housing deferred maintenance (estimated at $119M) is being addressed annually through a 10 year prioritized plan to undertake $82M in projects. These projects are all under $5.0M and are therefore not included in this plan.

\(^{3}\) Baseline of 2010
C. PLANNING ASSUMPTIONS

As noted above, the university experienced significant student growth during the first decade of this century. This growth was largely a result of substantial investments by the provincial government to increase post-secondary access in British Columbia. Over the most recent few years, the rate of growth has moderated, with domestic student enrolment growing modestly and international enrolment growing more significantly, though over a much smaller enrolment base. Such growth is not expected to continue and overall, the university over the next five years is expected to remain about the same size. Enrolment, however, is not distributed uniformly across the university – programs that have felt and will continue to feel the strongest pressure from rising international numbers and domestic shifts and realignments are Engineering and Computer Science, Business, and Economics. In addition and as noted earlier, government funding will support an increase in Engineering and Computer Science students and, in the fall of 2019, the university’s Law Program will continue to expand - welcoming its second cohort of students for the joint degree program in Common Law and Indigenous Legal Orders (JD/JID). These areas of growth reflect student demand, institutional priorities with respect to fostering respect and reconciliation, and alignment with provincial government priorities. The capital priorities outlined in this document have been developed to address the academic space pressures resulting from this growth.

During 2015/16 the university updated its campus plan. This plan sets out the long term vision for the campus, including complementary goals and guiding principles. Capital projects within this Five-Year Plan are developed within this overall long term framework.

D. PROJECT DETAILS

Capital projects fit into three categories: recently completed, currently under construction or in planning. While the focus of the five-year capital plan is projects in planning, the following section also outlines information on recently completed and current projects, in order to provide a comprehensive picture as well as to provide continuity between approved plans.

1) Successfully Completed Projects

The expansion to the Saunders complex was completed during 2018-19. This project included the construction of a new service building of ~530 square metres north of the current Saunders building. The budget was $4.7M and was funded by institutional capital funding. Another major project completed over the past year was the Petch renewal project. As noted above, addressing the university’s accumulated deferred maintenance is an institutional priority. As a step towards addressing renewal requirements multiple projects within the Petch Building were commenced in 2016/17. These projects included both deferred maintenance and functional requirements of the Faculty of Science. The budget totaled $20M and was funded by the Province. The last major project completed during 2018-19 was the renewal and renovations to Queenswood which now houses Ocean’s Network Canada. The total costs of the project were $9.9M and was funded through a combination of federal ($3.5M), provincial ($0.85) and UVic funding ($5.55M).
Also during 2018-19, there were several smaller scale projects completed, including:

- Post-disaster seismic upgrade to the Saunders complex to ensure the facility housing essential services will be available after an earthquake;
- Various projects aimed at supporting campus renewal, including roofing, elevators, building alarm monitoring systems (multiyear project), life safety upgrades etc.; and
- Phase 1 installation of energy transfer stations to increase the energy efficiency of the district energy system.

The above smaller projects were supported by the Provincial Government through their routine capital program, the funding of which has increased to ~$15M per year, including the university’s required contribution of 25%.

2) Projects Currently under Construction

There are two new building projects currently under construction as follows:

i) District Energy Plant

The university uses a district hot water heating loop to provide space heating and domestic hot water heating to 32 of its buildings. The heating loop is part of a campus heating system that can be fed by central boiler plants from different buildings. The objective of this project is to replace the boilers in the plant with modern, energy efficient, industrial-grade boilers in order to mitigate the risk of boiler failure, as well as reduce energy use and carbon emissions of the system. This project will transform the district heating system and improve system efficiency by allowing operating temperatures to be adjusted to meet the specific requirements of research and teaching labs, and ensure greater optimization and efficiency of the research environment. Replacement of the heat exchangers and controls in each building served by the district heating system will also be required to improve the system efficiency by allowing operating temperatures to be lowered. This project requires the construction of a new facility to house the new boiler plant to be built on parking lot 6 in the southwest portion of campus. The total budget for this project is $19.8M, funded by the Province, and will be completed in 2019.

ii) Student Housing and Dining Project

UVic is a destination university with over 75% of our students coming from outside of Victoria. A comprehensive student housing demand study was completed in 2013 (and updated in 2017), and found an immediate need for, at a minimum, a 600-bed facility. With this level of unmet need, combined with continued low vacancy rates within Greater Victoria, it is difficult for returning students to obtain housing (first year student have a housing guarantee). A program of requirements and massing work was completed in early
2018, which provides for 620 additional beds. Aside from the additional beds, the program also includes the requirement for a new dining facility in order to meet increased demand from the additional beds.

The project program will be achieved through the construction of two separate buildings. The first building, located along Ring Road, will contain 418 beds and the new dining facility. This will necessitate the removal of the current Margaret Newton and Emily Carr Buildings, both of which have significant deferred maintenance. The second building, located on the current Cadboro Commons site, will contain 364 new beds, two new classrooms, cultural support space and institutional conference and meeting space. The conference and meeting space is a required component of the project as the Cadboro Commons building currently contains the university’s conference and meeting spaces. The project was initially to be completed in two phases to allow for the completion of the new dining facility before deconstructing Cadboro Commons. The project will now be completed in a single phase through utilizing a modular dining solution to be located on parking lot B. This approach allows the project to be completed 16 months sooner than a two phase approach.

Project design is complete and early construction work started in May 2019 in order to be ready for groundbreaking in May 2020. The first building along ring road is expected to be complete in summer 2022, with the second building complete in spring 2023.

The approved project budget is $197.2M and is funded primarily from incremental housing and food revenue as a result of the additional 620 beds. Given the size of the project, university cash balances are not sufficient to proceed to construction; therefore, debt is required to move the project forward. The Ministry of Advanced Education, Skills & Training approved borrowing of $122.7M in fall 2018.

Aside from these expansion projects, as noted above, over the next year construction will commence on the new student health and wellness centre within the TEF building. The budget for this project is $6.3M, from institutional funds, and is expected to be complete in 2020/21.

3) Capital Projects in Planning

This section outlines the priority capital projects for the university for the coming five years. Ministry guidelines classify major capital projects into three categories:

I. New priority requests, which include new buildings or additions to current buildings;
II. Whole asset replacement and renewal projects, which are those projects where 50% or more of the asset is renovated; and
III. Student Housing.
With this categorization, some projects that would be considered major capital by the university given their size (over $5.0M) are now categorized as Major Maintenance and Rehabilitation (MMR). MMR projects are those projects, with no dollar limit, where the renovation is less than 50% of the asset value. These projects have a separate Ministry funding process from whole asset replacement and renewal, and are therefore not considered part of the five-year capital plan process. In order to provide a complete picture of significant capital priorities on campus, current university priorities with respect to MMR greater than $5.0M have been included below in their own section.

The following, in priority order, are the major capital projects for the campus:

1) **Addition to Engineering and Computer Science Building (category I – new priority)**

UVic has responded to changing student and societal demands for programs by shifting resources and programs to align with provincial labour market outlooks. To support this demand, UVic added a Civil Engineering program to the Faculty of Engineering which has a unique focus on training engineers to develop infrastructure with reduced environmental impacts, while continuing to meet social and economic needs of communities, cities and regions. Demand for computer science and engineering programs overall has been high, resulting in a decline in the percentage of students accepted and thereby increasing the high school grade point average cut-off for admission, resulting in decreased access for students. To meet this growing demand, government has committed to providing the university operating funding to support expansion by 500 FTEs. While operating funding is available to support the program, capital funding is necessary to be able to accommodate this level of growth.

An addition to the Engineering and Computer Science Building (ECSB) plus an adjacent high bay structure building will provide the space required to support this expansion. The addition will provide office, teaching and research space required to mount a world class teaching and research program. Such space includes design space, building science and materials labs, environmental labs and geotechnical labs. In order to undertake research and teaching with respect to structures, the adjacent building is required for the large volume high bay lab space required for the structures component of the civil program that cannot be accommodated within the building addition, given site constraints. The addition, to the south end of the current ECSB, would total ~5,450 square metres, with the high bay structures lab located south of the engineering lab wing totaling ~1,100 metres. Siting, programming and preliminary design work is complete and the project is ready to move forward once funding is secured.

**Project Funding**

The total cost for the addition to the ECSB and the high bay structure is $89.6M, including a fully built out lower level for the high bay structure. This project addresses one of the institutional space priorities - incremental space for the Faculty of Engineering. It is
expected to be supported primarily through funding from the Ministry of Advanced Education, Skills and Training together with philanthropic and university funding.

2) National Centre for Indigenous Law – An Addition to the Fraser Building (category I - new priority)

An addition to the Fraser Building would allow for the creation of the national centre for indigenous law. This national centre will house the university’s new dual degree program in Common Law and Indigenous Legal Orders, as well as serve as a centre for critical engagement for research and education in Indigenous Law. The program meets the demand for professionals who can work across Common and Indigenous Law in governance, resource management, child welfare and many other areas. It directly answers the Truth and Reconciliation Commission’s Call to Action 50 which states that, “to fund the establishment of Indigenous law institutes for the development, use, and understanding of Indigenous laws and access to justice in accordance with the unique cultures of Aboriginal peoples in Canada.” The program will help to forge a new relationship, and to recognize the rights identified in the United Nations Declaration on the Rights of Indigenous Peoples and the Tsilhqot’in Supreme Court decision. Students will graduate in four years with a dual JD/JID degree and a deep understanding of Indigenous law and governance, the knowledge and experience to pursue a career in common law, and a strong sense of how to create and manage institutions functioning across both spheres. The National Centre would be created through an addition to the south west side of the Fraser Building that will include classroom, office, ceremonial and gathering spaces.

Project Funding

The estimated cost for an addition to the Fraser Building is $27.1M. These costs are expected to be supported primarily through funding from the Ministry of Advanced Education, Skills and Training, the Government of Canada and philanthropic sources.

3) Addition to Business and Economics Building (category I – new priority)

Much like the demand for Computer Science and Engineering, student demand for Business, including entrepreneurship and innovation, has been very strong. UVic’s Peter B. Gustavson School of Business has expanded by creating two additional cohorts and expanding its BCom minor program. Like Engineering, Business graduates are in demand.

This project includes an addition to the current Business and Economics (BEC) building (on the north side of the building) to provide for additional capacity to address program growth and will provide incremental space for classroom and seminar spaces, academic offices and student support spaces. The preliminary planning for the building expansion indicates that the addition will be ~4,000 gross square metres.
Project Funding

The estimated cost for expansion is $25M. This project addresses one of the space priorities noted above, which includes incremental space for the Faculty of Business. It is expected to be funded through a combination of philanthropic sources, Ministry of Advanced Education, Skills and Training and university funding. Project timing will be dependent upon securing philanthropic and Ministry funding.

4) Campus Renewal Program (category II – whole asset replacement and renewal)

The university has undertaken a preliminary review of buildings on campus to identify next stage building renewal priorities. Projects identified considered the state of the current building condition in relation to preliminary seismic risk screening, as undertaken for the Gordon Head campus buildings in early 2012. With significant renewals in Petch completed over the last two years, the next major renewal projects are the Fraser and McPherson Library buildings. The Fraser project fits within the whole asset replacement category as the project costs are over 50% of the building’s value, and is therefore provided for in this plan, while the McPherson project will be a future project within Major Maintenance and Rehabilitation. These renewal projects will be completed in conjunction with seismic work where possible. Some or all of this project would ideally be completed in conjunction with the construction of the National Centre for Indigenous Law noted as priority 2 above, as it is an addition to the Fraser building. Planning will be undertaken in 2019/20 to determine which components can be included in the overall project and funding sources.

Project Funding

The projected budget for the Fraser Renewal is estimated at $27.1M and is expected to be funded primarily from the Ministry of Advanced Education, Skills and Training.

Major Maintenance and Rehabilitation Projects (MMR)

As noted previously, the Knowledge Infrastructure Program (KIP), funded by the federal and provincial governments, provided funding to undertake renewal and seismic work within six of our oldest buildings on campus. One of the requirements of the program was that the work had to be completed by a required deadline. Given the program time constraints, some seismic components could not be completed while still maintaining classes. As such, seismic work still needs to be completed for Clearihue, MacLaurin, Elliot Lecture Theatre and the University Centre Auditorium (the KIP buildings).

With respect to the remaining buildings on campus, a preliminary structural study has been completed that evaluated building risk during a seismic event affecting the campus. This information, in combination with the deferred maintenance assessment, will be used to develop future overall building renewal and seismic programs. In order to advance the seismic
program, during 2016/17, detailed planning work to tender-ready documentation, was completed for McPherson, MacLaurin, Petch, Campus Security, Saunders and the University Centre Auditorium. Seismic work has been completed for both Saunders and Campus Security buildings, and as part of the routine capital funding envelope from the Province, has started on MacLaurin D Wing. This project will be a multi-year project in order that teaching capacity can be maintained on campus.

The estimated budget to address all the seismic work in the McPherson library, Petch and University Centre totals ~$60M. Detailed cost estimates for Clearihue and Elliot Lecture Theatre have not yet been completed. These projects are expected to be funded primarily from the Ministry of Advanced Education, Skills and Training and will not proceed without this funding.

E. PLANNING ACTIVITIES

In order to ensure that institutional infrastructure and future five-year capital plans continue to reflect institutional needs and priorities, each year planning activities are undertaken to inform future capital development and planning. Over the next couple of years such planning activities are expected to include:

a) Academic and Non-Academic Support Needs

The current five-year capital plan has a number of expansion priorities that address needs within specific faculties to generally address space pressures resulting from student enrolment growth. We are hopeful that funding for the top two priority projects will be secured over the next year. As these projects move from planning to implementation it is important that planning for future capital requirements is started, as the timelines from project vision to project completion are often significant for capital projects.

One of the strategies in our Strategic Framework 2018-2023 is to promote more collaboration, partnerships and interdisciplinary approaches. This goal leads to thinking about and planning for more flexible, multipurpose shared space. Most of the current buildings on campus, however, are discipline based and have therefore been built to address particular needs. While this approach ensures that infrastructure for specific programs are addressed, current space planning and configurations generally don’t support well the above strategy.

In order to address this strategy we need to consider and plan space differently. In developing the next large expansion, project planning should include broad space type requirements that can be used across faculties and /or departments, and that can be built to provide for future flexibility. Planning should also consider that some of our current buildings were never intended to accommodate many of the current research requirements and trying to renovate to address these needs can be extremely costly. As a result, it may be better to build newer facilities and convert current spaces to other purposes.
In developing capital expansion based on space types, consideration can still be made for how these spaces can support the needs in various faculties with overall space pressures. The current capital plan is based on planning undertaken five years ago that analyzed overall space needs. This work indicated that the need was most acute for the Faculties of Engineering, Science, Social Sciences and Business. The current plan provides for additions to support Engineering and Business, and work over the last two years has provided some incremental space in the coming year for Social Sciences and Science. Given this, an updated needs assessment should be undertaken that can inform the overall space type planning process. This work can also consider specific needs such as regulatory requirements related to the storage of the university’s art collection, requirements for student common space, and space to support indigenous and other institutional priorities.

b) Alternative Fuel Options

While the primary purpose of the district energy plant project was to replace our aging infrastructure its completion along with the installation of associated energy transfer station installations has improved the overall efficiency of our district energy system. This efficiency will help to reduce our institutional carbon emissions and will help with getting us close to attaining our goal of a 30% greenhouse gas (GHG) reduction below 2010 levels. The new plant is a still powered by natural gas, and natural gas consumption accounts for ~90% of UVic’s GHG emissions. In order to fully realize our reduction goal and to move beyond it, the university needs to explore alternative energy sources. Over the next couple of years, in conjunction with the renewal of the sustainability action plan, alternative energy sources will be explored, including the potential use of bio-solids. While alternative energy sources will be explored, it is expected that the district energy plant will continue to play a critical role in heating the campus for the foreseeable future.

c) Space Optimization

Recognizing that program needs change over time and therefore so do the required associated resources and infrastructure, a review of the use and function of spaces on campus is a key component of space management. Over the last few years, space optimization studies were undertaken in the Faculty of Engineering, the Faculty of Fine Arts and the Library, which reviewed current use of space and potential reallocations that could occur to best meet overall program needs and priorities. This information has been used to make incremental and better overall use of space, as well as to inform overall longer term planning within the respective areas. Reviews are currently underway within the Faculty of Humanities and the Faculty of Social Sciences.

d) Future Parking Requirements

The student housing and dining project construction will commence in spring 2020, and over the next five years there could be significant additional construction activity should the priority expansion projects noted above also be approved. This level of construction activity, combined with growth in student, faculty and staff for these programs, will put
significant pressures on campus parking infrastructure. Work has already begun to look at options to not only manage through this period of high construction activity but to develop a longer term plan for parking. As part of this planning, we are also examining our transportation choices program as well as parking permit pricing.

F. SUMMARY

The University of Victoria’s five-year capital plan reflects the academic priorities of the university. As demonstrated in our own Planning and Budget Framework, our Institutional Accountability Plan and Report to the Ministry of Advanced Education, Skills and Training, our top priorities are to support all students; meet existing and anticipated program demand; and ensure our programs are of the highest quality. In order to support these institutional priorities, capital planning efforts over the next five years will need to address both academic program and student housing space (in progress) pressures through some expansion, health services pressures, as well as deferred maintenance requirements through renewal and seismic projects.

The above plan outlines the projects required or in process to support these important institutional goals. The top priority new projects are an addition to Engineering and Computer Science building, an addition to the Fraser building, an addition to the Business and Economics building and a campus building renewal program.

APPENDIX 1: Space Inventory Compared to Standards

<table>
<thead>
<tr>
<th>Space Category Number</th>
<th>Space Category Name</th>
<th>BC Space Standards Formula</th>
<th>Nov 1, 2018 Age Adjusted Inventory</th>
<th>NASM Surplus</th>
<th>NASM Shortfall</th>
<th>Inventory as a Percentage of BC Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Classrooms</td>
<td>17,468</td>
<td>15,978</td>
<td>1,490</td>
<td>91.5%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Undergraduate Labs</td>
<td>22,544</td>
<td>21,978</td>
<td>566</td>
<td>97.5%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Research Labs</td>
<td>22,660</td>
<td>21,078</td>
<td>1,582</td>
<td>93.0%</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Academic Offices</td>
<td>47,748</td>
<td>33,378</td>
<td>14,370</td>
<td>69.9%</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Administrative Offices</td>
<td>21,122</td>
<td>18,240</td>
<td>2,882</td>
<td>86.4%</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Library Stack/Study/Service</td>
<td>20,848</td>
<td>20,286</td>
<td>562</td>
<td>97.3%</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Recreation/Athletics</td>
<td>12,123</td>
<td>13,207</td>
<td>1,084</td>
<td>108.9%</td>
<td></td>
</tr>
<tr>
<td>7, 8, 11-15</td>
<td>Student and Central Services</td>
<td>27,320</td>
<td>22,064</td>
<td>5,256</td>
<td>80.8%</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Maintenance Space</td>
<td>3,333</td>
<td>3,661</td>
<td>328</td>
<td>109.8%</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL NASM: 195,166

195,166

169,869

25,297

87.0%