# Why Architecture: The Intersection of Architectural Education and the City

by

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## **ABSTRACT**

This thesis questions the potential relationship between a school of architecture and the public. Redefining the role of architecture education as advocacy for better designed cities, a new dialogue between the public and architecture will flourish. The ideas produced within a porous school will filter out into the city, changing it for the better. The thesis question was investigated through the adaptive reuse of the former Royal Alberta Museum, a Canadian Centennial Building contributing to the national effort to define itself through the use of architecture. Identifying the former exhibition volumes as the school, and introducing a perpendicular indoor street creates a moment to celebrate the intersection of architecture and the public. This monument once containing static artifacts, is reimagined as a dynamic exposition of architectural ideas. This school envisions engaging the public to discuss architecture, aspiring to empower its citizens to ameliorate the future of the city.

## **ACKNOWLEDGEMENTS**

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## **CHAPTER 1: INTRODUCTION**

Architecture must address the city even when the city has no goal for architecture. For the city is ultimately the only object for and method of architectural investigation: decisions about the form of the city are the only way to answer the question, Why Architecture?<sup>1</sup>

## Why Architecture

An architecture education consists of a design methodology applied to the dynamic relationship between humans and our built environment. It uses the universal language of drawings, making, and visual representation to study and convey ideas. Students of architecture embark on a lifelong study of how our built environments are a response to shifting values of the current society. During the formal education, architecture educators attempt to advance the understanding of present culture by establishing manifestos of beliefs—either by embracing the zeitgeist of the time, or by challenging the way we think about making space. From the spread of influence of the Beaux-Art tradition from Paris, to the Bauhaus' many iterations in Germany, to the technology driven program at MIT's campus, these curriculums built their reputations establishing or challenging what is, and what will be. The pedagogy of these institutions have influenced the way we design buildings, and in turn the way our cities are built. Focusing a design education on the study and development of the built environment, architects attempt to be both interpreters of the metropolis as well as optimistic conjecturers of the future city.

The power of an architectural idea can live on creased paper, glow bright on a screen or appear from the folds of card to help us visualize and apply a lens of analysis over our built environments. While introducing Delirious New York, Rem Koolhaas described the architecture of the city as a weathered monument where "...each block is covered with several layers of phantom architecture in the form of past occupancies, aborted projects and popular fantasies that provide alternative images to the New York that exists." During the study of architecture, these alternatives are abstracted, analyzed, stylized and then

<sup>1</sup> Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge: MIT Press, 2011), 46

<sup>2</sup> Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan* (New York: Oxford University Press, 1978), 294.

represented to convey that most powerful thing: an idea. These provocative ideas of the city help illustrate societal hypocrisies and trends with the goal to help us question and understand how we live. Where a local school of architecture exists, the potential to test alternative realities are explored and are shared with the city through public lectures, special events and published work. In these cities, the school of architecture engages ever so slightly the city into a dialog concerning what it is and what it could become. Where architecture schools exist, graduates question and intervene in its urban manifestation, and where it does not, the city changes with less awareness of what it could become. A critical thinking hub producing locally trained architects questioning and proposing alternatives to what is currently built will inevitably enhance a city as the conjured ideas become a part of the discourse as to how a city evolves and adds layers. A school of architecture focused on actively sharing the ideas and visualisations produced with the public would enhance the design literacy of its citizens. In turn, this would allow for an open and meaningful dialogue about our cities that results in bettering the quality of its design.



Image 01 A surreal approach to Edmonton's architecture via the North Saskatchewan river

### Why Edmonton

Considering Canada's largest metropolitan cities with a population over a million, Edmonton, which ranks sixth overall, is the only city to not benefit from a school of architecture. There exists a history of an architecture school in Edmonton, where in 1931 Cecil Burgess, appointed Architectural Consultant of the University of Alberta, developed a Bachelor of Science in Architecture. Unfortunately the program was short lived and was abandoned in 1940 when Cecil retired from the university<sup>3</sup>, and since then a void remains in the provincial capital. Edmonton is located in the prairie province of Alberta bounded by the Rocky Mountains and the central plains of Canada. The city was a meeting place for the First Nations bands of the plains, a major trading post to the North West Territories, and eventually a major industrial hub supporting oil extraction in the Northern areas of the province. The modern layers of Edmonton are the results of a boom town that has attracted a diverse population willing to cope with the cold climates in exchange for employment prosperity. The oil boom that followed the post-war years brought prosperity and the desire to become a modern city. Edmonton looked abroad at current trends with the aspiration to bring international styles to the municipality. Architects in the city embraced ideas of modernism, the skyscraper, as well as the international, Art Deco and Brutalist building styles. 4 The city is still a relatively young metropolis that has neglected both its post-colonial and modern history. With the redevelopment of the city's core, adding a rush of public buildings and medium density residences, some of the city's history could fall victim, and be entirely replaced by new construction. The school of architecture in Edmonton will enter into a dialogue with its citizens by exhibiting ideas of architecture and good design. Considering this opportunity, the ideal site for a school in the city became evident with the current availability of the former Royal Alberta Museum, a Centennial project embodying a deep narrative of place. This thesis questions the relationship between a school of architecture and the public by colliding both worlds

<sup>3 &</sup>quot;Overview of the Practice of Architecture in Edmonton 1930 | 1969," *David Murray & Marianne Fedori*, accessed September 15, 2017, http://capitalmodernedmonton.com/essay-david-murray-marianne-fedori/.

<sup>4 &</sup>quot;The Post War Years: 1946-1970," *Edmonton's Architectural Heritage*, accessed September 16, 2017, http://www.edmontonsarchitecturalheritage.ca/time-periods/the-post-war-years/.

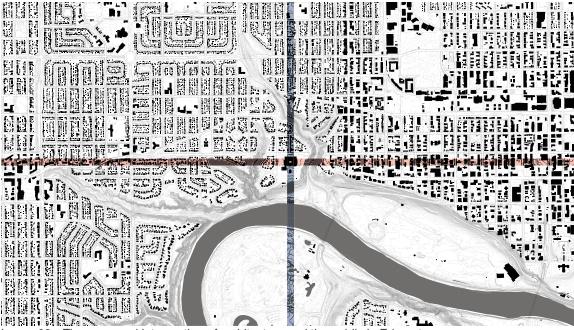


Image 02 The proposed intersection of architecture and the public in Edmonton

within a charged monument of modern architecture. The moments created by allowing public circulation through the core of the school challenges the divide between a private school of architecture and the public that would benefit from its investigations. The literal intersection between these agents creates a physical space where the value of architecture is displayed for the benefit of the city, all while engaging the local community through the act of displaying architecture that could be.

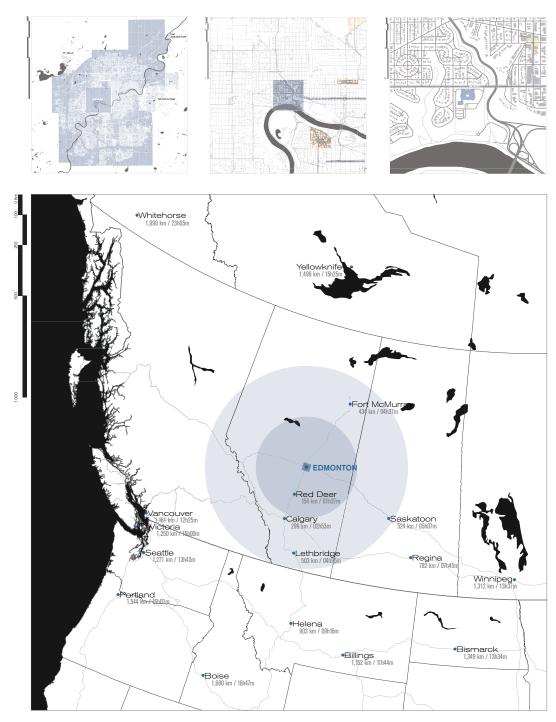


Image 03 Situating Edmonton Map 01 of 04: North-West North America highlighting Edmonton's proximity to western cities

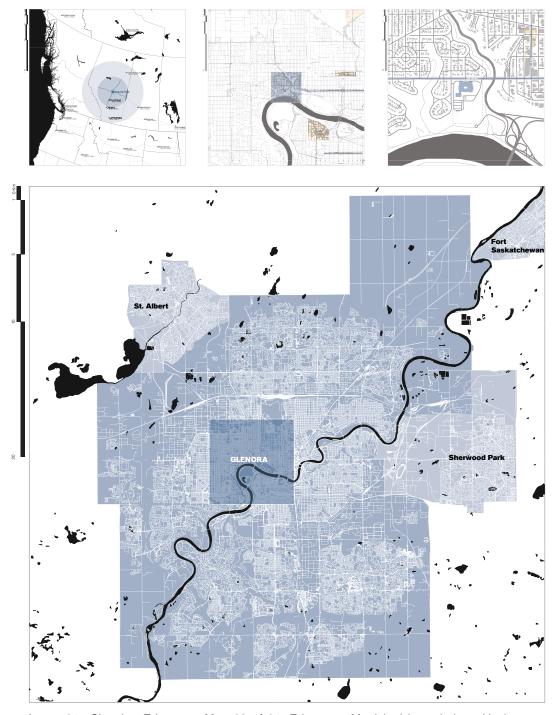


Image 04 Situating Edmonton Map 02 of 04: Edmonton Municipal boundaries with the area surrounding the site highlighted

## **CHAPTER 2: LEARNING ARCHITECTURE**

#### What Makes an Influential School of Architecture

There is an ethical responsibility for architects to use their skills, and through the process of design: "...engage the culture and society from which it is produced and from the resources that exists there, with the goal of providing an appropriate and necessary addition to the welfare of individuals and the larger social, economic and environmental community to which it belongs." Architecture is therefore one way by which we can enhance our humanity. The city benefits from having a school of architecture because of two major outputs: the trained individuals (both students and faculty) as well as the ideas and products developed during the process of exploration each semester. Students learn how to affect change in the context of where they are learning, and the work produced has the potential to redefine the city by providing a glimpse into a reality that could be. Cities can and will exist without architects; however, what is definitive is that the study of architecture manifests drawings, models and other media that pique our curiosity, as they give us insight into to how we can create better cities.

Most metropolitan cities across the world benefit from an iterative legacy of architectural heritage to present the public with examples of thoughtful and integrated design. Where the built legacy lacks, institutions dedicated to architecture and good design could serve as guide to the public. Unfortunately most work produced at schools of architecture by students and faculty does not often make it into the public discourse. At each school, the faculty structures the curriculum to support their own design philosophies and values. It is their ongoing task to constantly adapt teaching programs as societies change. There is, however, ample power in the architecture and the physical organization of spaces of the building to embody and promote the values of the institution. The case studies presented were used primarily as investigations of the urban conditions of influential schools of architecture to test the peri-urban location of the Royal Alberta Museum. During the

<sup>5</sup> Michael LaCoste, Design Denied: The Dynamics Withholding Good Design and its Ethical Implications (Chicago: Archeworks, 2005), 14.

studies, the qualities and values that made these pedagogies influential helped frame the values that were embodied in the design of the Edmonton Architecture Lab. The maps are all presented at the same scale and demonstrate the variability of the urbanity of a school of architecture.

#### The Bauhaus 1925-1932

Dessau was the second location of the Bauhaus but is where the school started to develop its architecture programme. Designed by Walter Gropius, the Bauhaus tested the school's ambition of designing objects at every scale, from the simplest utensil to scale of the building itself. The school hosted work, live, eat, play, sport, performance and party under one complex to provide all the elements of life so that students could learn to shape the built world. The Bauhaus played a small role in shaping Dessau as it was commissioned to design a few projects within the city during its short existence. The school was designed with a vehicular street running under a connecting section, conceived as a counterpoint to traditional architectural composition where a building is approached on its central axis highlighting a symmetrical facade.

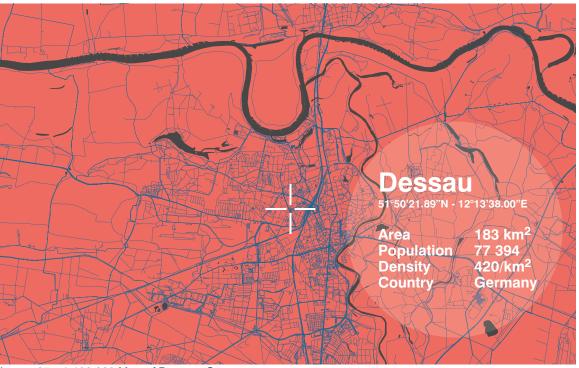


Image 05 1:100 000 Map of Dessau, Germany

<sup>6</sup> Magdalena Droste, Bauhaus, 1919-1933 (Toronto: Taschen, 2006), 120-137.



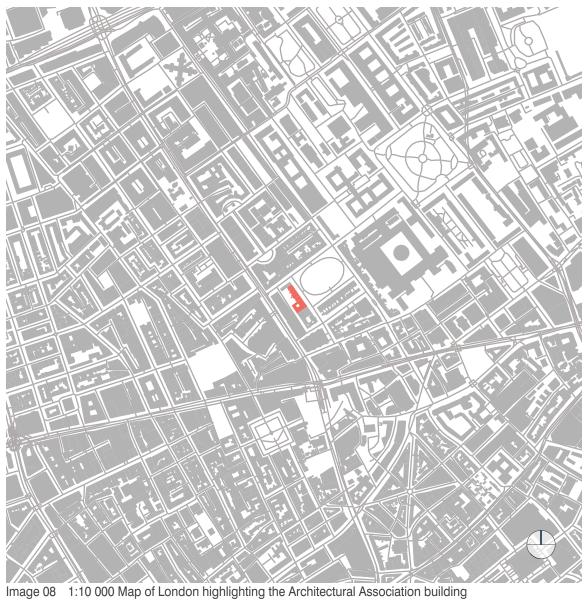
#### The Architecture Association 1971-1990

The era of the AA that was of most interest was when Alvin Boyarsky presided as chairman of the school. Leading up to his position as cultural leader and provocateur, he organized the IID summer sessions gathering students, architects and other complimentary experts to participate in lectures, workshops and operated as a "marketplace for exchange of ideas". The AA focused its energy on creating drawings and publishing the work produced at the school in the attempt to catalyze a change in the architectural culture by becoming a societal critique. This charged era at the AA encouraged questioning the norms of society by harnessing the power of drawing and publications to disseminate architectural ideas.



Image 07 1:100 000 Map of London, England

<sup>7</sup> Irene Sunwoo, "'Well-Laid Table' to the 'Marketplace:' The Architectural Association Unit System," *Journal of Architectural Education* 65, no. 2 (2012): 31.



#### Faculty of Architecture of the University of Porto

Porto's School of Architecture site is located in what appears to be the urban core; however, it has a peri-urban seclusion from its surroundings. This school, based on the concept of the atelier, was conceived by Álvaro Siza Vieira between 1985-1992. This followed a revolution in Portugal that saw architects becoming social advocates for the right to reasonable living space. The socially engaged work of architects in the country changed the way that the architect was perceived within society. The FAUP was conceived as separate buildings unified by a similar treatment of their facade. The idea behind separating the buildings and program was that most of the learning happened in the interstitial spaces between formal rooms like the auditorium and studio. The in-between spaces are in their nature public spaces open to the city. This idea of learning in the voids has tremendous potential to engage the public in these areas.

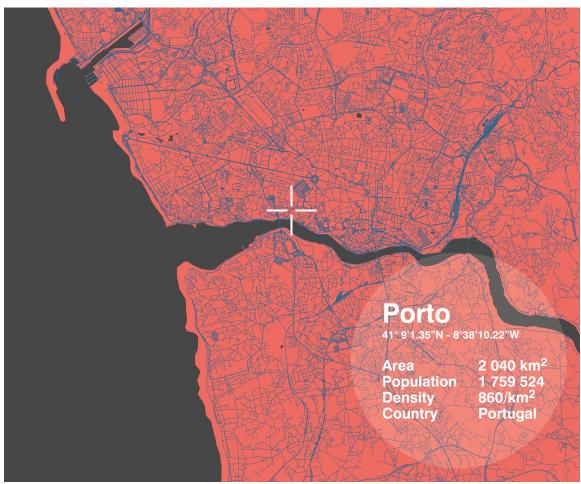


Image 09 1:100 000 Map of Porto, Portugal



Image 10 1:10 000 Map of Porto highlighting Faculty of Architecture of the University of Porto

#### **Rural Studio**

Rural Studio is not a formal architecture school; however, there were valuable lessons to be gathered from this approach of learning architecture. The individual student studios are located in Newbern and a converted barn is used as the main studio space. Samuel Mockbee brought architecture education directly to communities in rural Alabama to participate in the design process. Students applied creative solutions to enhance the living conditions of community members. Rural Studio therefore had an intimate relationship with the community it served and the manifestations of the rural studio setting demonstrated their belief that "...the architectural profession has an ethical responsibilty to help improve the living conditions for the poor."8

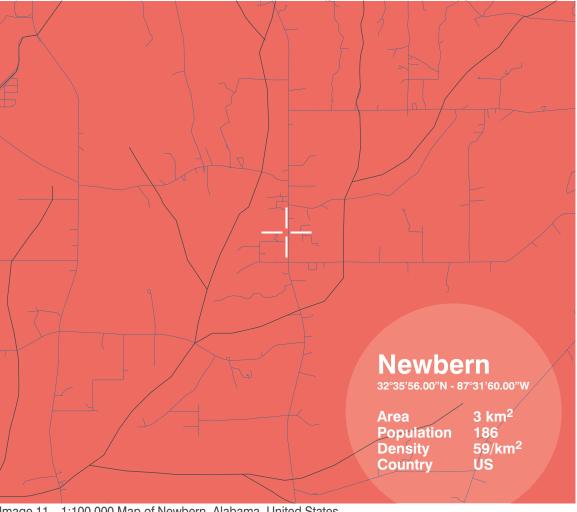


Image 11 1:100 000 Map of Newbern, Alabama, United States

<sup>8</sup> Andrea Oppenheimer Dean, Proceed and be Bold Rural Studio After Samuel Mockbee (New York: Princeton Architectural Press, 2005), 1.

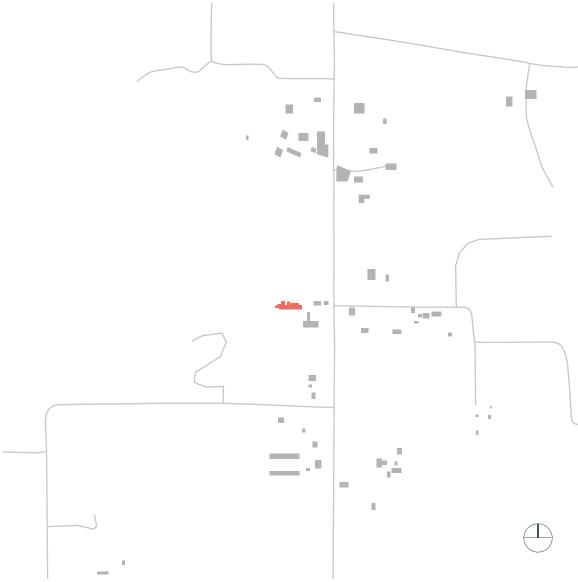


Image 12 1:10 000 Map of Newbern highlighting the Auburn Rural Studio

#### **Cornell AAP Architecture Art Planning 2011**

The cantilevered glazed studios over University Avenue gesture out from the existing historic building to meet the public at the street. This invites the curiosity of passing public to glance in at the activity of the school. Curved concrete features which define circulation and space on the inside traverse the glass curtain walls providing brief moments for the pedestrians to peer into the design process of the studios. This relatively recent architecture school deliberately reaches out to expose the activity of the school to the public. It was less evident as to the interior permeability of the public; however, the outward gestures of the building offers examples of how a school of architecture can begin to become more porous.

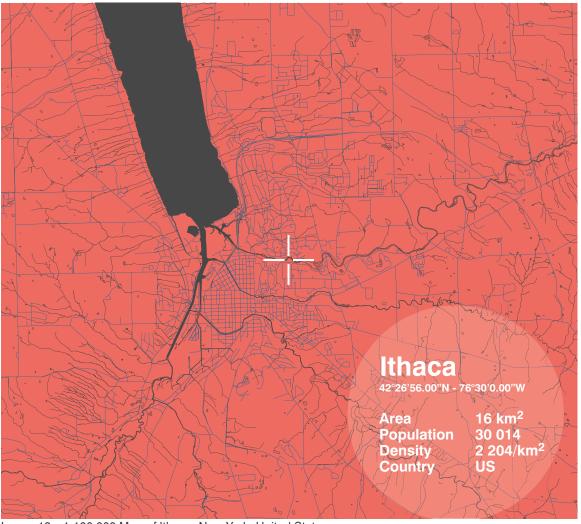


Image 13 1:100 000 Map of Ithaca, New York, United States

<sup>9 &</sup>quot;Milstein Hall at Cornell University / OMA," *Archdaily*, accessed February 8, 2018, https://www.archdaily.com/179854/milstein-hall-at-cornell-university-oma-2.



#### **Canadian Architecture School Studies**

Architecture pedagogies apply design methods and principles towards the specific purpose of architecture. The history of place is important to the appropriation of an institution within the cultural context of a city and shapes the physical space of the architecture school. Yet, there are essential program areas that are required and found in most schools of architecture, most often hidden from the public. The studios are the creative hub of the school where students have a space to work digitally and physically on elements to support their architectural investigations. Metal, wood and digital fabrication workshops support the physical investigations and representation of projects. As the tradition of physical drawings persists in the digital age, a print shop is an invaluable service and should operate on site to support students. The academic and institutional character of the school require a library and media lab to provide access to the theoretical aspect of the topic and support the learning process. A lecture hall provides a place for formal lectures either by faculty or invited guests and could hold the entire student population, faculty and a limited amount of external individuals at one time for special events. A cafe and common student areas are necessary to support the long hours spent in the studios and provide social gathering spaces. Gallery and exhibition spaces are where the work is arranged for review sessions and offer an additional benefit, often omitted in some school of architecture, as an exhibition of ideas to learn from by other students, faculty, the profession and the public at large. Offices and administration areas for the faculty are required to house the personnel operating the educational component of the school.

In order to better understand the programmatic requirements of a school of architecture, four Canadian schools were investigated in further detail to understand the required program space for the Edmonton School of Architecture. The architecture programs at Dalhousie University, the University of Waterloo, Laurentian University and University of Toronto were chosen for this purpose. These programs were selected in part for their reputation and partially to have a diversity of programs to investigate. The first comparable

feature is that all four schools incorporate an adaptive reuse of an existing building. Equally, I believe that the integrated work terms are an invaluable enhancement to the academic curriculum; therefore the impacts of the work terms at Dalhousie, Waterloo and Laurentian, who each adopt this tradition in different ways, was considered. As the location and way of communicating the work produced at a school became of further interest, the relationship of the exhibition spaces and the program were closely looked at in each case study. The barriers of access to the public were considered and the desire to have the main exhibition space publicly accessible became a focus of the design process. The importance of sharing and publishing the work produced by students and faculty is required to have architecture, and the value it brings to a society, enter into the public discourse to positively effect change in our built environment.

One of the most important aspects of contemporary design culture is the maximizing of the way in which work and ideas are disseminated through online media, thus providing a public space that links academia and the architectural profession to other disciplines. From the start of their education, students should be encouraged to post their work. The main benefit of this is that they began to feel that their work is part of a dialogue within a wider design community, and to operate in collective, collaborative and supportive ways that will become essential as they move from being students to design practitioners.<sup>10</sup>

<sup>10</sup> Neil Spiller and Nic Clear, Educating Architects: How Tomorrow's Practitioners Will Learn Today (London: Thames & Hudson, 2014), 98.

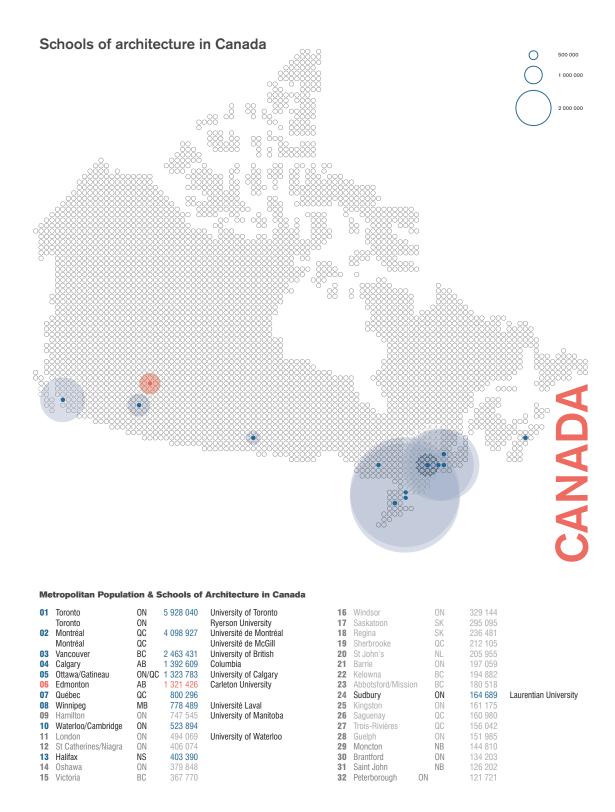


Image 15 Map of the schools of architecture in Canada with metropolitan population data from *Statistics Canada Census*, 2016

#### **Dalhousie University**

Dalhousie University is about to undergo major modernizations; however, the existing space analyzed was last updated by Mackay Lyons Architects in 2002. One aspect to note is the connected studios that allow for active sharing of work and techniques between students of various levels. Knowledge sharing occurs in fluid ways as students witness and experience the process of their colleagues work flow on a daily basis. The relationship between the exhibition space and the city street is removed, and multiple barriers exist which include the set back of the classic building, to the stairs in the main lobby which hide the room, and the work, from the public.

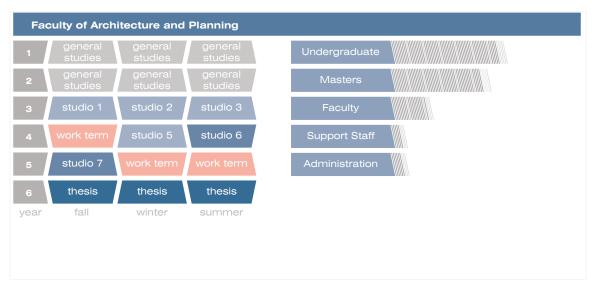
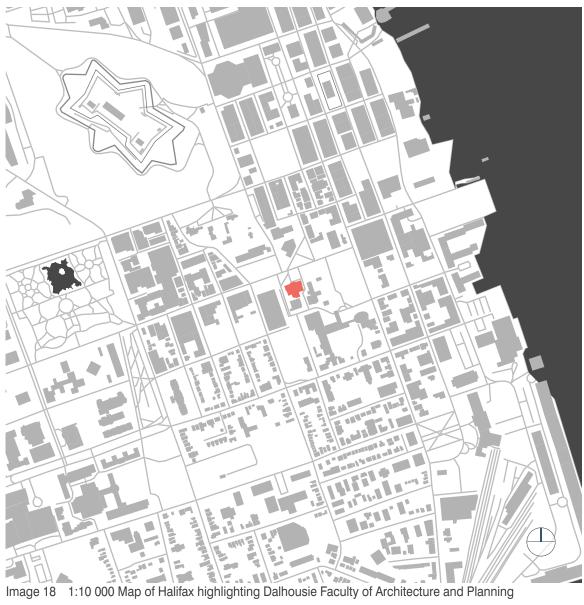


Image 16 Dalhousie University architecture school program summary



Image 17 1:100 000 Map of Halifax, Nova Scotia



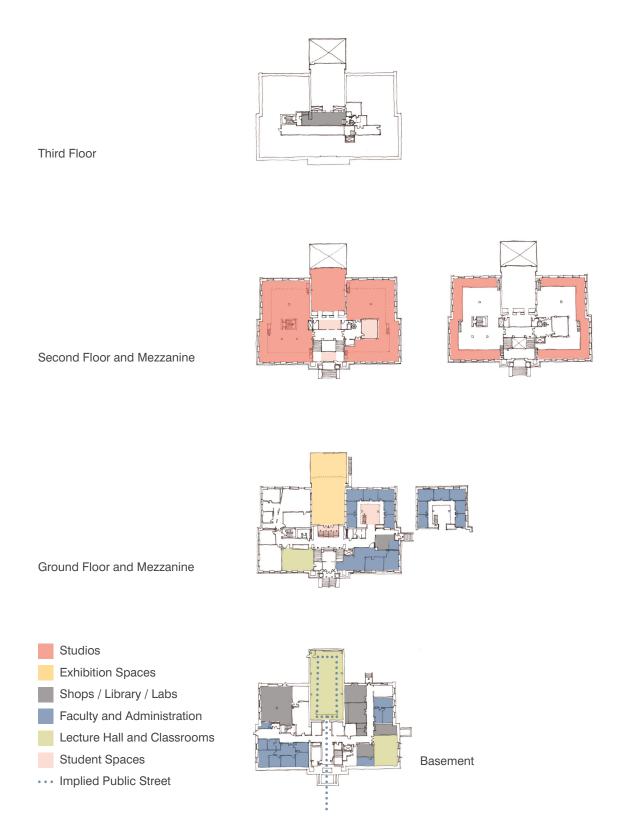


Image 19 Dalhousie school of architecture program

#### **University of Waterloo**

The Waterloo School of Architecture building was updated in 2004 by LGA Architectural Partners. The riverbank setting of the school was located in Cambridge instead of the Waterloo University campus. The exhibition and gallery space are located on the ground level and potentially easily accessible to the public. The exhibition space does appear to have a secondary entrance, apart from the primary entrance observed on the central axis of the building. The three story atrium space of the primary entrance can be used to exhibit work and provides the first impression of the activity contained within the school. The undergraduate and graduate studios are unfortunately separated.

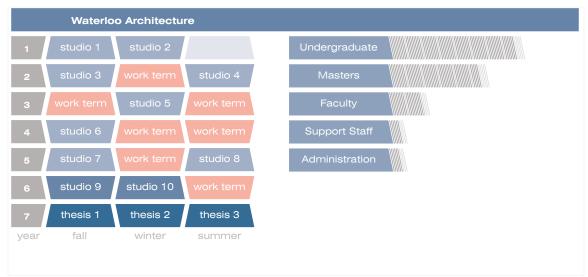


Image 20 University of Waterloo architecture school program summary

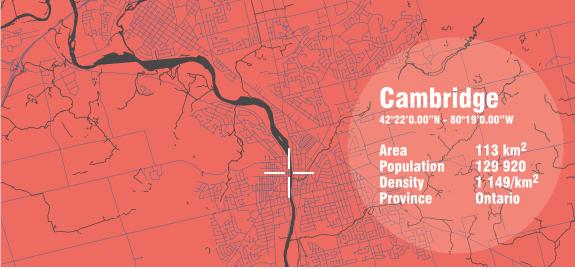


Image 21 1:100 000 Map of Kitchener/Waterloo/Cambridge, Ontario





Image 23 Waterloo school of architecture program

#### **Laurentian University**

The McEwan School of Architecture at Laurentian University is Canada's newest school and is currently undergoing accreditation. The school was designed by LGA Architectural Partners and completed in 2017. Their unique tri-cultural (English, French and First Nations) approach resulted in unique spaces like the cultural room and an office for an elder in residence. The exhibition space of the school is located in the sunken corner of the building adjacent to the street. This allows pedestrians and public the ability to look into the work on display during review sessions. The sunken character of the space also allows viewing to feel less obtrusive providing a birds eye view into the space.

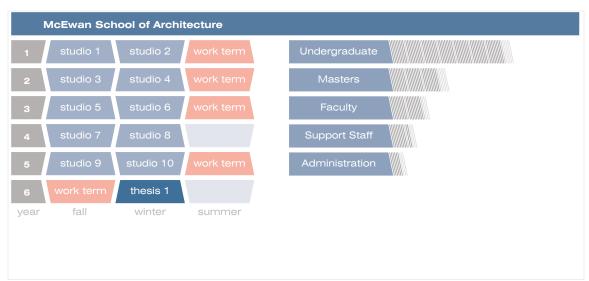


Image 24 Laurentian University architecture school program summary

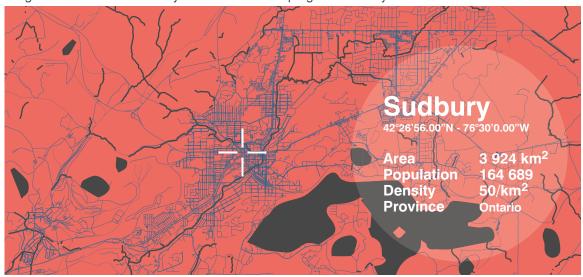


Image 25 1:100 000 Map of Sudbury, Ontario





Image 27 Laurentian school of architecture program

#### **University of Toronto**

The University of Toronto's new building at the One Spadina campus was completed in 2017 by NADAAA. The new building, the program's larger size and location within the largest Canadian city was worth investigating in closer detail. It is important to note that their program is proportionally larger and would educate more students than anticipated at the Edmonton school. An internal East-West street running through the building on the ground level, along the main lecture hall and the student spaces and shops, helped support the idea of integrating a street within a school of architecture.

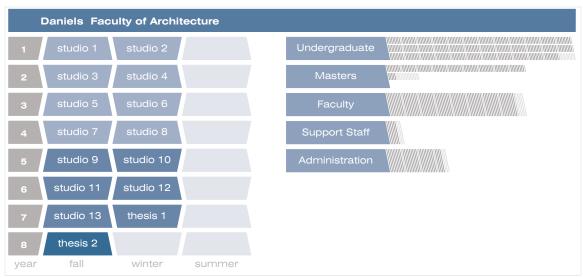
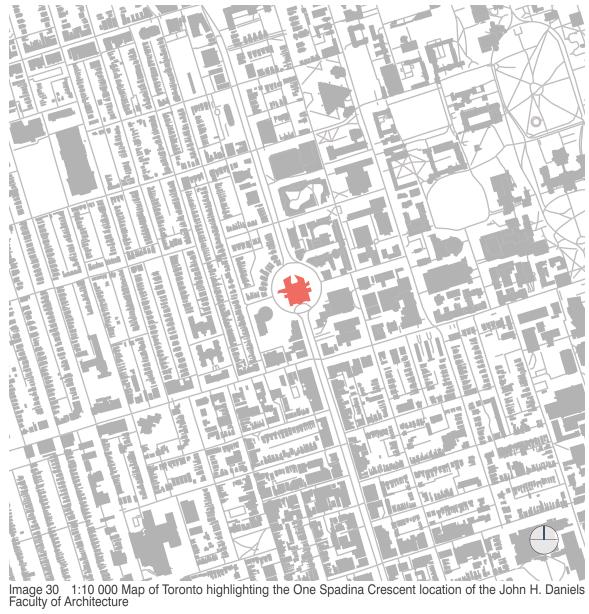


Image 28 University of Toronto architecture school program summary



Image 29 1:100 000 Map of Toronto, Ontario



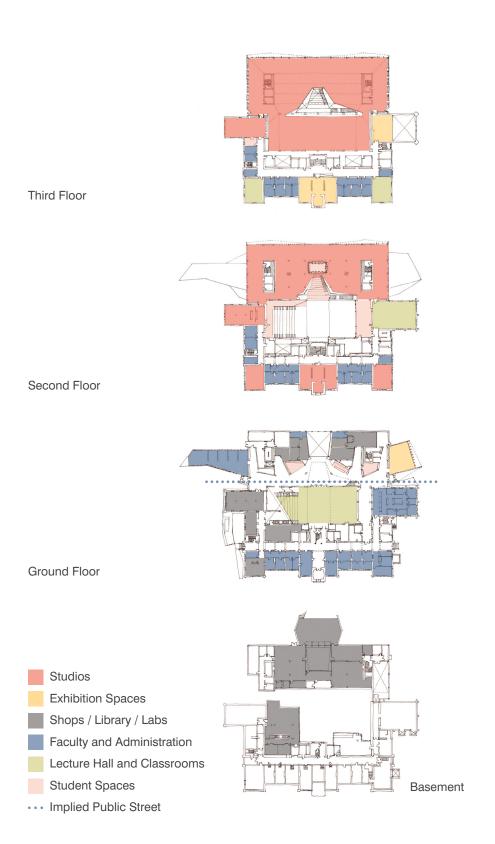


Image 31 University of Toronto school of architecture program

#### **Edmonton Architecture Lab**

Creating a meaningful moment to connect the public street with the exhibition space of the school as well as allowing the public a glimpse into the process of design could solidify the place of the architect in the development of the Edmonton. The studio requirements informed the proposed program schedule and helped determine that four studios were required to hold all the overlapping cohorts. The program was designed to host one work term per year of study as way to balance the academic learning and the practical experience to balance the student's education. The numbers that would be admitted were based on Dalhousie's, Waterloo's and Laurentian's model.

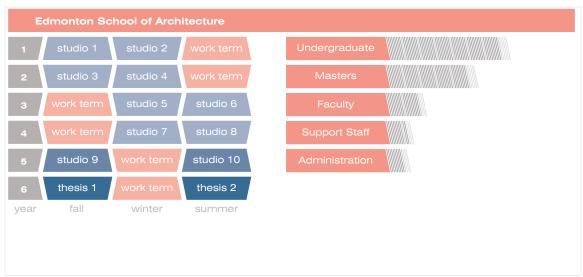


Image 32 Proposed Edmonton architecture school program summary

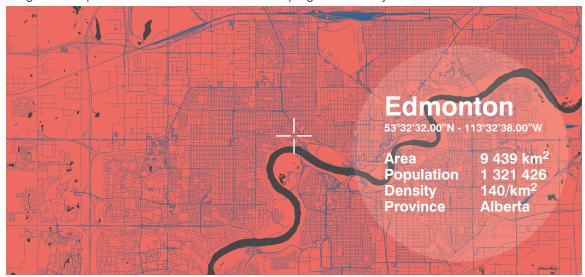


Image 33 1:100 000 Map of Edmonton, AB



Image 34 1:10 000 Map of Edmonton highlighting the location of the Edmonton Architecture Lab

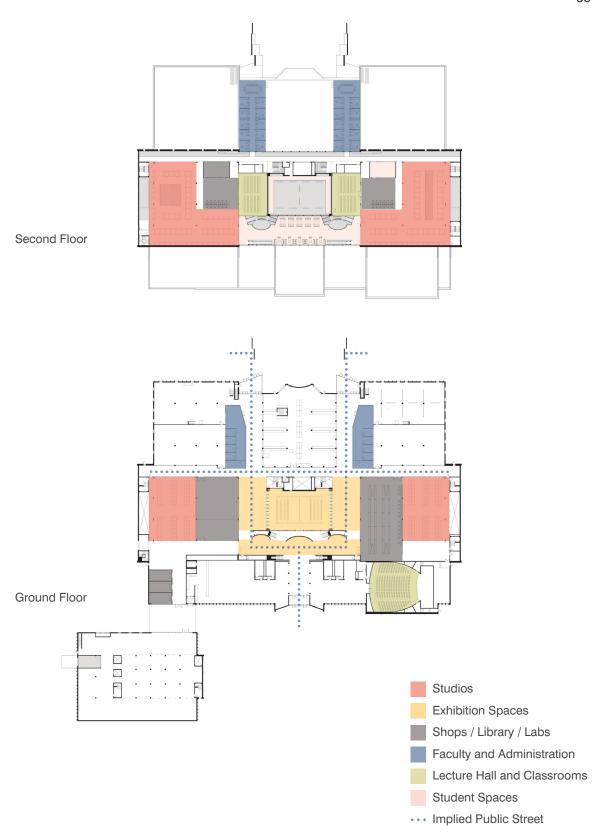


Image 35 Edmonton school of architecture program

# CHAPTER 3: CULTURE AND IDENTITY THROUGH ARCHITECTURE

#### The Thirteen Centennial Memorial Fund Buildings

The Provincial Museum of Alberta was completed in 1967 as one of thirteen special projects to celebrate the centennial of Canada's Confederation under a grant initiative titled the Confederation Memorial Program<sup>11</sup>. Each province and territory was awarded funding to realize a major cultural project. The reason this was significant was because there was a deliberate commission of architecture to help build and define Canada's young identity. When addressing the 53rd annual assembly of the RAIC, Prime Minister John Diefenbaker stated,

I'm going to make one request of you this evening and it is this. In a few short years, this nation will be celebrating its Centennial. National and local committees have been set up to make the best allocation they can of available means for the effective marking of this anniversary in a manner of keeping with Canada's history, her traditions and the greatness of her destiny. I ask that you, the members of this profession, should play a most important part, and I ask you to do that and to present to the centennial committee as soon as possible your views and suggestions for this celebration; something to touch the hearts of Canadians, something to represent the unity of our country, something to embody the paradox of two great national stocks which joined together to make Confederation possible, something that will represent the tremendous contributions of persons from all races and creeds who have come to Canada from all parts of the world. 12

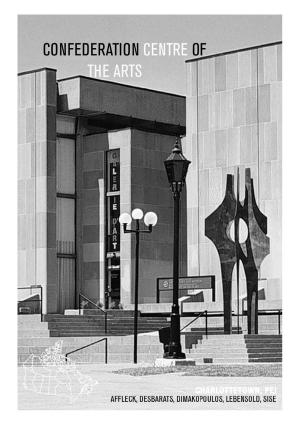
These projects were funded with the ambition that architecture would embody the values that Canada wanted to promote by building significant legacy projects, in most instances, in each provincial and territorial capital. The Federal and Provincial Governments used architecture, more specifically the qualities of modernist monumental style, to express to the world that Canada was a modern and progressive country. <sup>13</sup> The unified applications of the use of concrete, high quality materials, and explorations of the architectural qualities of mass makes these projects incredibly valuable to understand the architectural history

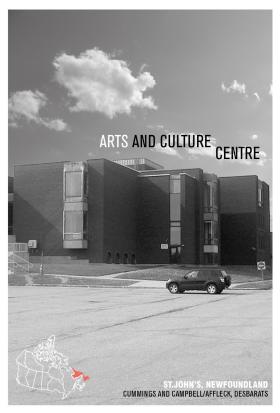
<sup>11</sup> Peter H. Aykroyd, The Anniversary Compulsion Canada's Centennial Celebration, a Model Mega-Anniversary (Dundurn Press, 1992), 84.

Marco Polo and Colin Ripley, Architecture and National Identity: The Centennial Projects 50 Years on = Architecture Et Identité Nationale: Les Projets Du Centenaire, 50 Ans Plus Tard (Dalhousie Architectural Press, 2014), 7.

<sup>13</sup> Ron Kelland, "Statement of Significance - Provincial Museum and Archives of Alberta Building Edmonton (Glenora)" *Government of Alberta*, Alberta Culture and Tourism, Historic Resources Management Branch, (2015), 1-2.

of modern Canada. By aligning the architectural qualities of these projects across the country, they united the aspirations of a young and diverse nation starting to define its own identity. The following three pages contain images of the thirteen projects built as a result of the Centennial Memorial Fund.







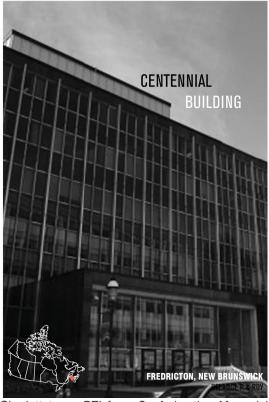
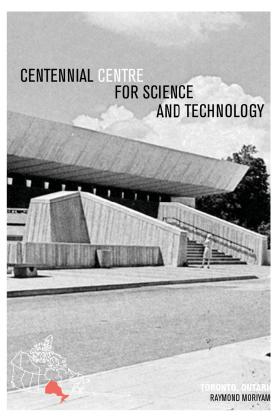


Image 36 Memorial Centennial Fund projects for Charlottetown, PEI from *Confederation Memorial Projects*, 2018; St. John's, NF from *Confederation Memorial Projects*, 2018; Halifax, NS; and Fredericton, NB from Philip *Droste/CBC*, 2018.





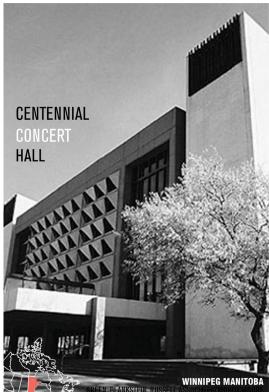
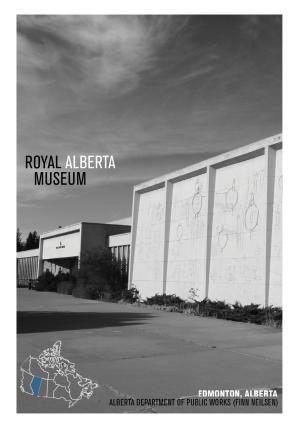
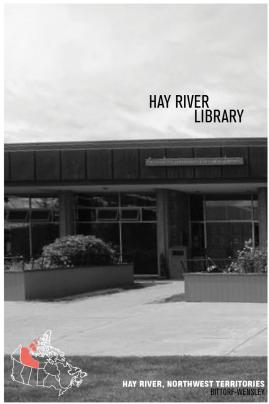




Image 37 Memorial Centennial Fund projects for Québec, QC from Québec Original, 2018; Winnipeg, MB from Archiseek, 2018; Toronto, ON from Confederation Memorial Projects, 2018; and Saskatoon & Regina, SK from Confederation Memorial Projects, 2018.







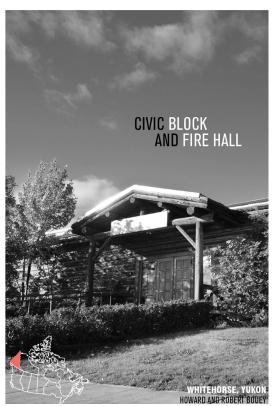


Image 38 Memorial Centennial Fund projects for Edmonton, AB; Hay River, NWT from Confederation Memorial Projects, 2018; Victoria, BC from Travelousness, 2018; and Whitehorse, YK from Heritage Yukon, 2018.

#### The Former Royal Alberta Museum and Archives

Initially called the Provincial Museum of Alberta, the former Royal Alberta Museum and Archives Building resides on the public land established for Government House, a Jacobean revival style mansion and heritage building located in the neighbourhood of Glenora. Government House was the former residence of the Lieutenant Governor of the Province, the representative of the Queen provincially. The experimentation with the Brutalist style would characterize the provincial government buildings of the 1970s in Edmonton. High quality stone was sourced from the other provinces for the project, notably Thunderstone slate from Alberta, Tyndall stone from Manitoba, Tweed Pearl Marble from Ontario and Black Granite from Québec. Most of the exterior is clad in Tyndall stone and has a variety of finishes applied, as well as a replication of the Writing-On-Stone petroglyphs on the auditorium facade. 14

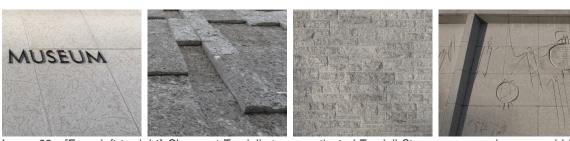


Image 39 [From left to right] Clean cut Tyndall stone, rusticated Tyndall Stone, uncoursed square rubble Tyndall stone, and petroglyphs on Tyndall stone



Image 40 [From left to right] Tweed Pearl Marble, Black Granite, Terrazzo floors, and solid oak doors and trim with brass hardware

The museum is locally known as the RAM and was Alberta Public Works most significant project in the province for the occasion. In 2015, the new Royal Alberta Museum was built and kept the same name as the original. The museum was replaced to accommodate an

<sup>14</sup> Ron Kelland, "Statement of Significance - Provincial Museum and Archives of Alberta Building Edmonton (Glenora)" *Government of Alberta*, Alberta Culture and Tourism, Historic Resources Management Branch, (2015), 1-2.

expanding collection too large to be held at the former museum. As this is being written, the static artifacts are migrating to the new building and the future of the former museum and site are uncertain. As the Government of Alberta is trying to find an appropriate use for this iconic building, this modern architectural gem is too young to be recognized as a heritage building. This allows the opportunity to be reorganized and transformed to become the ideal location to host Edmonton's school of architecture. The architectural qualities of this building offer the potential to become an exceptional learning tool. The original building was conceived as a solid fortress protecting the valuable artifacts housed inside, filtering people and light in order to control the interior environmental qualities. The high level of thought in the design from the choice of site, to the use of rich materials provides an ideal example of thoughtful urban interventions and a physical monument to the history and significance of the place. This exemplifies the aspirations that good architecture and design attempt to achieve. I will argue that through an adaptation of the current space, this specific building will achieve all of these characteristics and root itself as the intersection between the city of Edmonton and its future professional architects.



Image 41 Government house located on the left facing the Alberta Provincial Museum

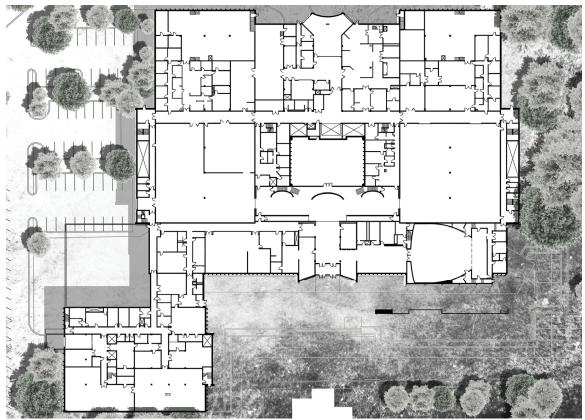


Image 42 Existing first floor plan of Royal Alberta Museum

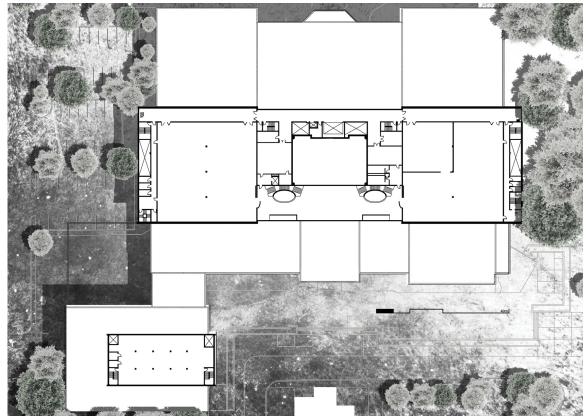


Image 43 Existing second floor plan of Royal Alberta Museum

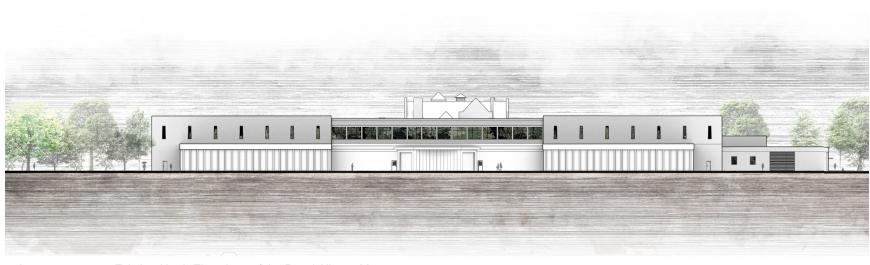


Image 44 1:700 Existing North Elevations of the Royal Alberta Museum

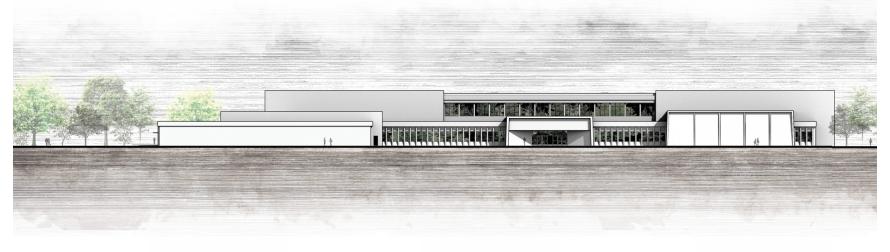


Image 45 1:700 Existing South Elevations of the Royal Alberta Museum



Image 46 1:700 Existing East Elevations of the Royal Alberta Museum

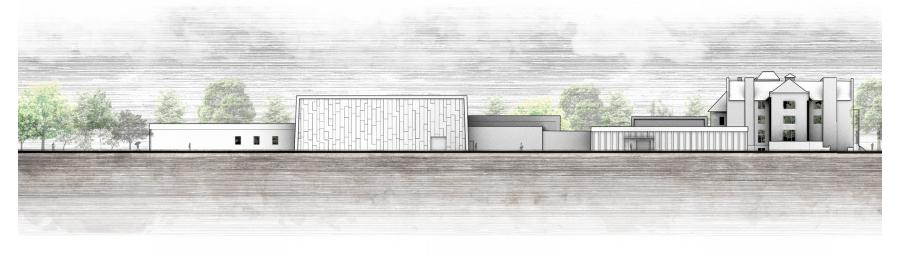


Image 47 1:700 Existing West Elevations of the Royal Alberta Museum



Image 48 Petroglyph on exterior auditorium wall



Image 49 Rusticated Tyndall stone from archives building

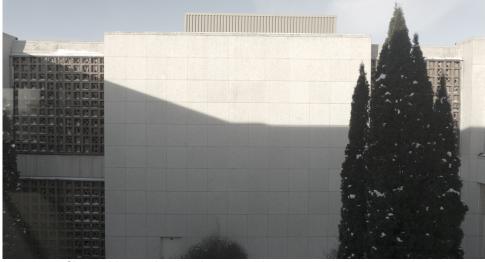


Image 50 Clay architectural screen in courtyard



Image 51 Main Lobby to be maintained as the river valley entrance



Image 52 Auditorium lobby to be maintained



Image 53 Second floor lobby to be converted to public student lounge



Image 54 Existing auditorium with oak wall panels to be kept in the project



Image 55 First floor East exhibition space, keeping the existing internal structural columns and steel roof joists in the project



Image 56 Second floor North corridor to freight elevator, with the exterior view of where the proposed faculty offices will be located

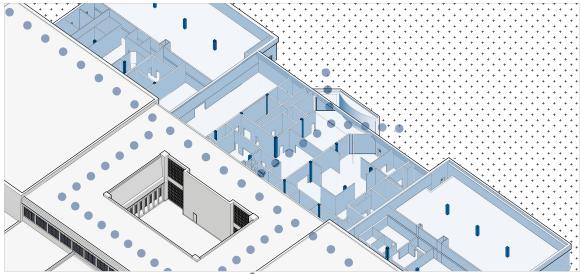


Image 57 Laboratories and Storage (4123 m²) walls stripped to structure to allow new public North entry

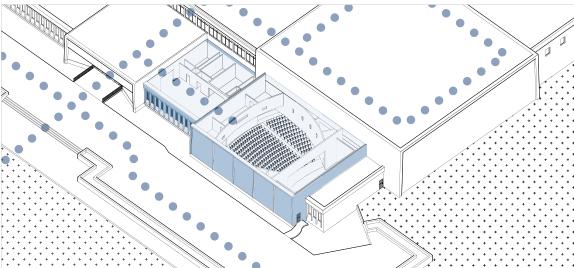


Image 58 Auditorium Lobby (253 m²) and Auditorium (497 m²) to be kept for existing qualities

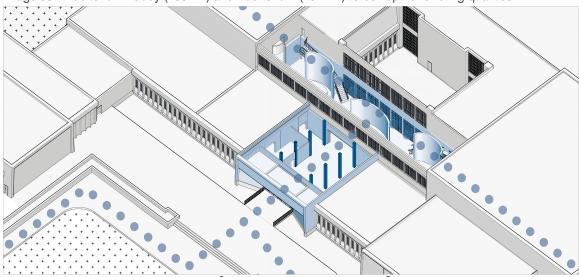


Image 59 Main entrance Lobby (300 m²) and Exhibition Lobby (490 m²) as the new river valley entrance

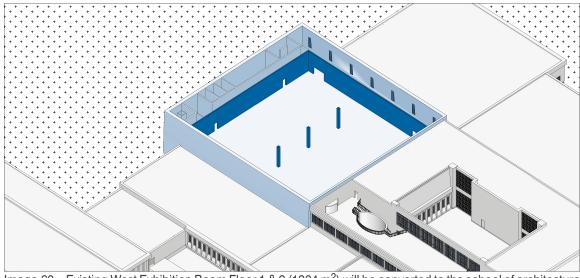


Image 60 Existing West Exhibition Room Floor 1 & 2 (1304 m<sup>2</sup>) will be converted to the school of architecture



Image 61 Open Air Courtyard (345 m²) to be the exhibition space and enclosed for year round accessibility

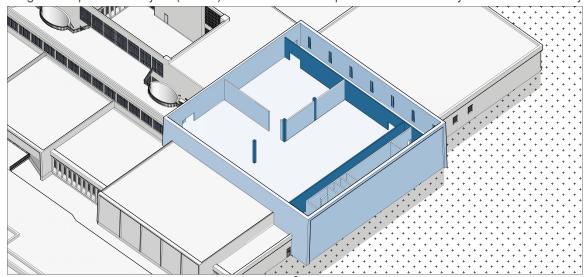


Image 62 East Exhibition Room Floor 1 & 2 (1304 m²) will be converted to the school of architecture

#### **CHAPTER 4: THE SITE**

#### The City of Edmonton

In 1949 Edmonton Architect Gordon Wynn stated that "There is more opportunity in Edmonton than anywhere else in Canada. The Architect will need to play a big part in the development of this area" 15. This could well be restated to describe the current state of the city. Edmonton has been rebranding itself as a winter city and extending the summer festival season into the cold winter months. The city has done extensive work to develop a long-term vision in regards to where it wants to be by 2040 through a series of municipal planning documents. In the The Way Ahead, it claims that "Edmonton is a city of design - urban design, architectural design and environmental design... The city has grown up; now we are building smarter." 16 Much of the built success that the city has been recognized for is a result of a dedicated planning and policy development that has set the foundations for a well designed city. As it continues to add layers to its mature neighbourhoods and sprawl out in every allowable direction, it is important for a young Canadian city developing into its own, to guestion the process of urban layering, expansion and renewal. The mature and historic neighbourhoods in Edmonton have a rigorous perpendicular grid of streets and avenues oriented to the cardinal directions which balances the meandering North Saskatchewan River valley. With the redevelopment of the city's core and a rush of new public buildings and medium density residences, some of the city's young history could fall victim and be entirely replaced by new construction. A school of architecture that can mediate and offer a critical lens for the reasons questioning this type of growth will strengthen the locality of architectural investigations in the city.

<sup>15</sup> David Murray & Marianne Fedori, "Overview of the Practice of Architecture in Edmonton 1930 | 1969," accessed September 15, 2017, http://capitalmodernedmonton.com/essay-david-murray-marianne-fedori/.

<sup>16</sup> The City of Edmonton, "City of Edmonton Strategic Planning - the Way Ahead," 2014, https://www.edmonton.ca/city\_government/documents/The\_Way\_Ahead\_(Final-Web).pdf.

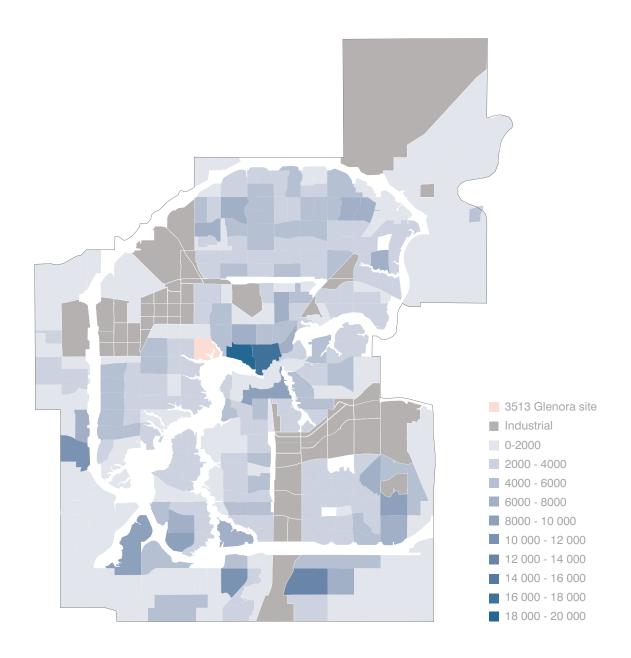


Image 63 Edmonton's population density map by neighborhood

#### The North Saskatchewan River Valley

Institutions of provincial stature reach out to the valley like the Alberta Legislature, the University of Alberta and what used to be the Royal Alberta Museum and Archive. The river valley extends a strip of park space from the Southwest to the Northeast corners of the city. Taking advantage of the defining geographic feature of Edmonton, the lush and extensive river valley buffers the center with a belt of connected park space. This was the original street of the city as the First Nations bands settled around its edges of what would be the first neighbourhood of Edmonton<sup>17</sup>. The trail system is accessible only by pedestrians and cyclists and runs along most of the length of the river. The stunning views afforded by the connected park space are an experience that define the city and any intervention in the valley must respect the public nature of this space. Currently the pedestrian trails that lead into the valley from the RAM site have been abandoned and the site is disconnected from the river below. By reconnecting the museum site with the river, the river valley could become another public street that extends the length of the river and brings pedestrians into the program spaces that are on site.

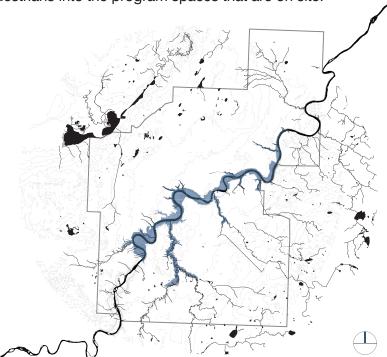


Image 64 Edmonton's River Valley defining the city

<sup>17</sup> Rob Shields, Dianne Gillespie and Kieran Moran, Edmonton, *Amiskwaciy: Suburbs for Settlers.* (University of Alberta, City Region Studies Centre, Faculty of Extension, 2015), 7

#### The Glenora Neighbourhood

The publicly owned lands of the former museum and Government House stand proudly on the edge of many features that characterize the best of what Edmonton has to offer. The peri-urban neighbourhood of Glenora is within the interstitial zone between the central core, an inner-city mature neighbourhood and the North Saskatchewan River Valley. This location will help students mediate the questions of density and the sprawling city that exists, all while having access to the North Saskatchewan valley to offer a reprieve from the busy city. The site is also located equidistant from Edmonton's three leading academic institutions: the University of Alberta, Grant MacEwan University and the Northern Alberta Institute of Technology. Currently Edmonton does have a thriving arts and design community; however, it is missing a school of architecture to challenge its development and suggest novel, creative and beautiful alternatives to the built history it is currently constructing. Glenora is also located in proximity to the Gallery District of 124 Street located across the small ravine, connected by a vehicle and pedestrian bridge. This relatively new busy street has restaurants and businesses to support the high concentration of art galleries. From the site, there is access to one of the world's longest preserved urban parks, the option to enter the hub of the city, or the tranquil alternative of a stroll through a mature neighbourhood, diverse with housing prototypes. The city is sprawling outward, encroaching ever more towards the smaller community cities that surround it, all the while increasing the density of the urban core. The former Royal Alberta Museum site represents the character of the city; the thesis argues that a highly urban site is not necessarily the appropriate location to study architecture in an unencumbered sprawling city. Pier Aureli describes the city as an archipelago of elements that together consist a whole 18. As a city sprawls, new micro-centers are formed where complex networks of communities develop. The peri-urban location of the site will allow critical perspective from traditional city center, and allows access to a diversity of urban types to study the city, architecture and design. The site is the ideal location to test how a school of architecture in Edmonton can be a response to the city, and host a missing dialogue with the public.

<sup>18</sup> Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge: MIT Press, 2011), 42.



Image 65 Situating Edmonton Map 03 of 04: The Royal Alberta Museum building centered, within the Glenora site, highlighting the relationship to Edmonton's academic institutions and major streets



Image 66 Situating Edmonton Map 04 of 04: The Former Royal Alberta Museum site boundary into the North Saskatchewan River valley with the galleries on 124 Street highlighted in yellow

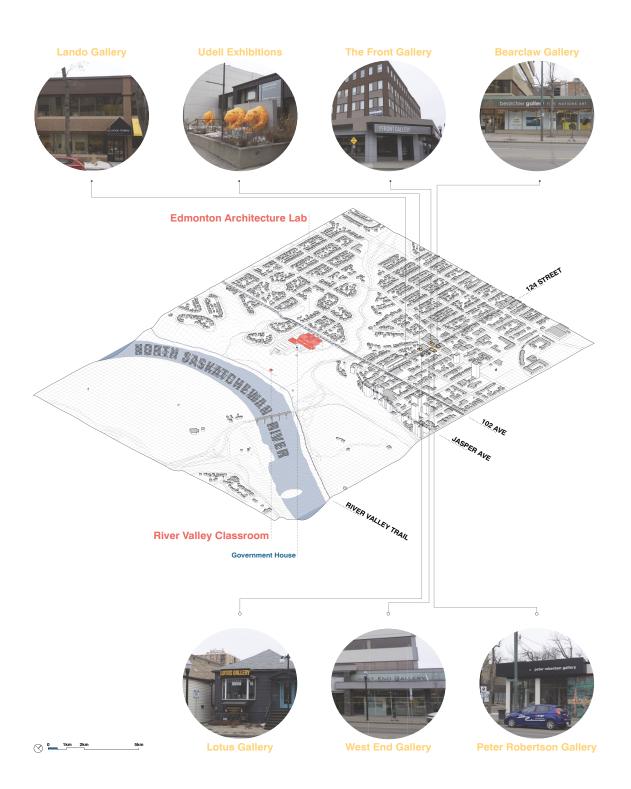


Image 67 Site Axonometric highlighting relationship with the 124 Street art galleries within the Gallery District



Image 68 Site Axonometric highlighting relationship with the river valley classroom, and the 124 Street art galleries

#### **CHAPTER 5: PROGRAM DEVELOPMENT**

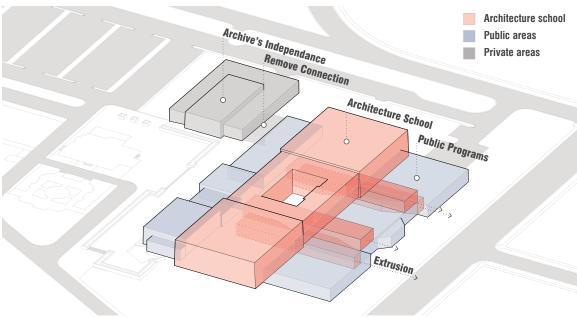


Image 69 Diagram of initial program development

#### **Organizing Mass**

As many of the case studies exemplified, there was incredible value in choosing to adapt an existing building and highlight the existing architectural qualities. The first challenge with the design was dealing with the 14 864 m² of program space within the museum and archives building. The building is larger than is needed to host a school of architecture; therefore, segmenting the mass was the first step to organize the new program. This started by removing the appendage hallway linking the museum to the archives building. This move clarified and strengthened the plan organization of the museum by isolating the appendage volume of the archives building. The program studies of the Canadian architecture schools informed the decision to isolate the central volume containing the four exhibition halls as an appropriate size to hold the school of architecture. Defining the school in the central volume, and establishing complimentary program on the Northern and Southern strips of the building would enhance the study of architecture and offer destinations to draw the public through the building. Defining a hard edge between the school of architecture and the public realm did not support the desire to create a positive interaction between the educational program and the public realm; therefore, program

spaces that include the faculty, administration and business offices were pulled out from the central volume. This allowed for these elements to meet the public within the building and welcome the city into the school. The extension of the faculty offices onto the Northern waffle slab roof also can also be taken as a metaphor for the relationship between the public and faculty, where the public street below is supporting the research



Image 70 Existing monolithic North elevation



Image 71 Perspective approach to the North entrance where the fins from the new roof playfully express the creative hub housed inside, and contrast the mass of the existing elevation inviting the public within

#### **Evolution Through Contrast**

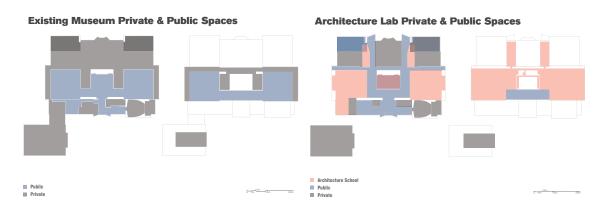


Image 72 Diagram existing and new public, private and architecture school areas

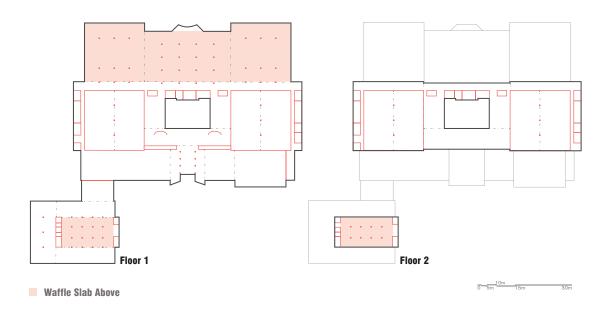
The second element of the existing building that needed to be reimagined was how the North Elevation currently turns its back to the city and the community. The existing solidity of the elevations exemplify the original design intentions of the museum as a jewel box. Studying the public private divide of the existing museum makes this organization understandable; however, to provide a new public use for this structure, the once private labs and storage of the North end of the museum needed to be opened up to allow the public into the building. Throughout the drawings presented, red is consistently used to indicate elements of the architecture school, while blue is used to indicate the public. This solidity and mass needed to be thoughtfully punctured to have the school of architecture reach out to the city, and through the fissure, invite the public into the hearth of the school. The monumental qualities of the existing elevations are a part of the character of the building and any intervention should not destroy this quality. It was decided that any new opening in the mass needed to be light and contrast the existing solidity of the building. The new additions offer little chaos contrasting the order established by the orthogonal rigidity of the existing elevations. The new skylight and the roof of the faculty offices escape the rigid elevations to express a porous and playful addition. This contrast also differentiates the old from the new. In terms of adaptive reuse philosophies, my values are aligned with the masterful way Carlo Scarpa respectfully maintains the elements of the past, while enhancing them through thoughtful intersection of the new additions.

This brings together the old and the new, but clearly defines them from one another. <sup>19</sup> In Scarpa's design of the *Museo Civico di Castelvecchio* in Verona, the existing building's architectural features are destinations that you are guided to by the new interventions. Architecture and our built history are more than artifacts to be preserved as if time did not weather and change our built environment. The approach of bridging the existing with the new, without completely removing the characters of mass were principles considered during the design process. Equally, the choice to expose the existing structure, and where needed, introduce new precast concrete structural elements were deliberate attempts to maintain the qualities of mass of the building. Instead of changing the material palette entirely, the existing building's cast in place concrete elements are reimagined using modern concrete techniques of precast structural elements. Above all, these spaces need to be functional for the current generation to allow a place and the opportunity to understand and discuss the value of architecture. As Scarpa stated "restoration is more than simply repairing old parts of buildings; what is most essential is to give the building a new lease on life, so that it can go on living today and tomorrow."<sup>20</sup>

<sup>19</sup> Ellen Braae, Beauty Redeemed: Recycling Post-Industrial Landscapes (Risskov: IKAROS Press, 2015), 247.

<sup>20</sup> Ibid., 247.

# **Existing Museum Structure**



### **Architecture Lab Structure**

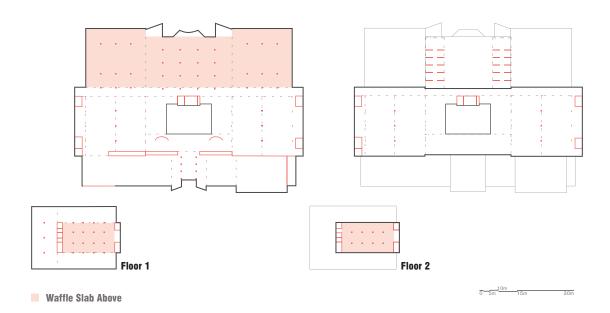


Image 73 Diagram Existing and New Structure

#### **Engaging the Public with Architecture**

Many of the influential schools of architecture were able to transcend the insular nature of architectural education to become cultural provocateurs. This is achieved by sharing the volumes of work created at the school with the public through publications and events, allowing the work to transcend outside of the architectural realm. At the AA "The lectures and exhibitions were part of a carefully orchestrated series of pieces to build an architecture culture in London. They were supplemented with a series of publications, many of which were also exhibition catalogues."21 Drawings in architecture include a broad category of media types where graphic composition and technical information are used to distill and vividly express ideas. Beyond the two dimensional graphics, there is also a craft needed to assemble models, build prototypes or explore new building technologies and tools. These practices all contribute to the design process and architectural education that the general public does not often have access to or inquire about.

For the Edmonton Architecture Lab, increasing the interior porosity of the monolithic building creates a new inviting public hub where Edmontonians can participate in the display of work and the process of making. The building invites Edmontonians into the hearth of the building where there would constantly be new work displayed by students and faculty. This constant fresh body of work would demonstrate architecture's value in contributing to the culture of the city. By creating opportunities for the public to meander through the school and observe work, everyone in the city has the opportunity to take part in the conversation that happens every term within the schools. The natural osmosis of ideas filtering out into the public exhibitions would help ignite the potential that currently lays dormant in the city. At the Architecture Association [AA], Alvin Boyarsky, stated that what he wanted at the AA was to "create a very rich compost for students to develop and grow from, and fight the battle with the drawings on the wall. We're in pursuit of architecture, we discuss it boldly, we draw it as well as we can and exhibit it." <sup>22</sup> In order to value the profession and the work that architects can contribute to the city, a new porous Nat Chard, "CREATING A SCENE Alvin Boyarsky and the Architectural Association," Border

Crossings 35, no 2 (2016): 48-49. 22 Ibid., 48.

school that engages citizens in dialogue will change the way architecture is perceived and practiced. This will allow the opportunity to learn from, as well as, share local experience and knowledge with faculty and future architects to work together to improve the built environment.



Image 74 Perspective from the river valley classroom pavilion where less formal classes and teaching opportunities can occur

## **CHAPTER 6: DESIGN**

#### **Edmonton Architecture Lab**

With the static artifacts moved to the new museum, the Edmonton Architecture Lab has the new purpose to showcase dynamic work produced by students and faculty. The existing interior partitions and structure needed to be redesigned to increase the visual porosity of the space. The interior walls were removed to expose the existing structural columns. The CMU bearing walls of the exhibition spaces were replaced with a new system of columns and beams to allow for glass curtain walls to define the physical boundary between the public street and the programs of the architecture school that require controlled access. The choice of using glass was to create an edge that maintained visual porosity between the School of Architecture and the public realm. At the North entrance, the public street is bordered by the architecture school offices and the artist in residence studios, allowing a dynamic embrace from both the architectural and public programs. These studios would be used by artists, craftsmen and other specialist that require the working space in exchange for sharing the knowledge of their craft with students and faculty from the school. The working spaces of the wood shop and the library were located on the edge of the interior street running North - South to showcase the activity of these spaces. Starting in the North East corner and moving clockwise, the permanent gallery, the auditorium, the cafe and the gym are located at the corners of the building encouraging the flow of people through the interior street to access these public spaces. The former archives building was imagined to be stripped down to its structure and used as an experimental living laboratory where students and faculty could build and test typologies of living spaces. The secondary benefits of the living lab would be that this use could be a potential source of income for the school, to rent the finished units out to visitors, as well as used as a learning tool to physically explore the space required to dwell. The virtual reality lab and mock up lab located adjacent to the administration and business offices were conceived as other test spaces, managed by the business offices, and used by the school to engage other business from the city to collaborate with the school.

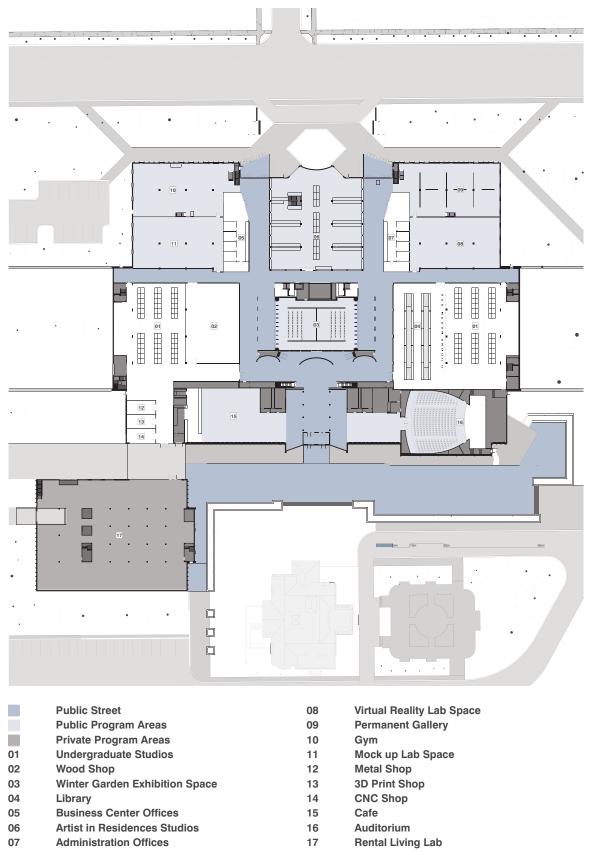


Image 75 First floor plan with key spaces identified and the public street highlighted in blue

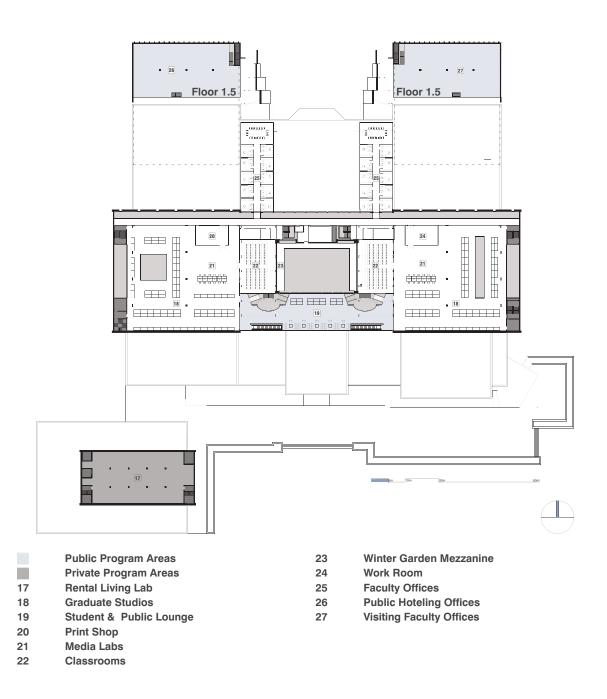


Image 76 Second floor plan with key spaces identified

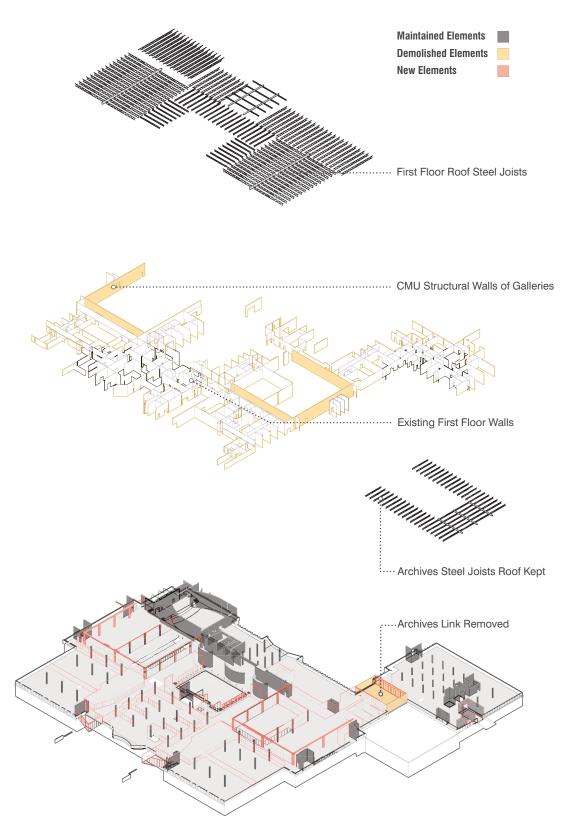


Image 77 Isometric diagram exhibiting existing and new elements of the first floor

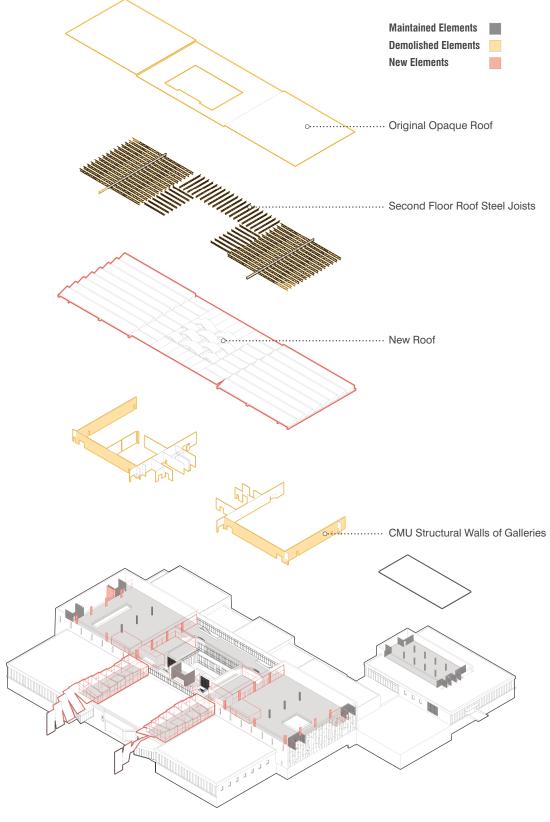


Image 78 Isometric diagram exhibiting existing and new elements of the second floor

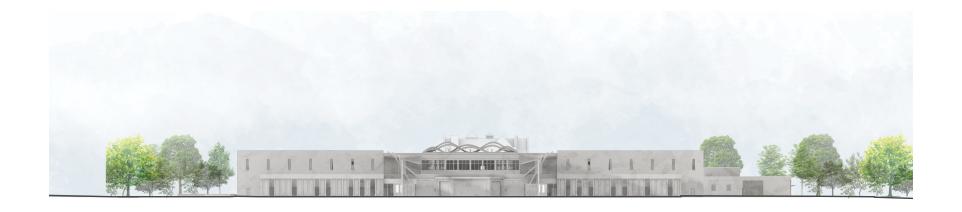


Image 79 Design North elevation



Image 80 Design South elevation

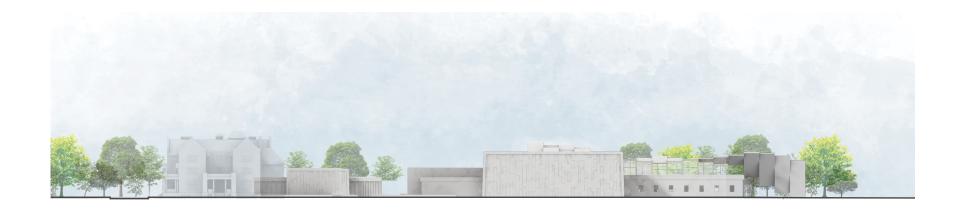


Image 81 Design East elevation

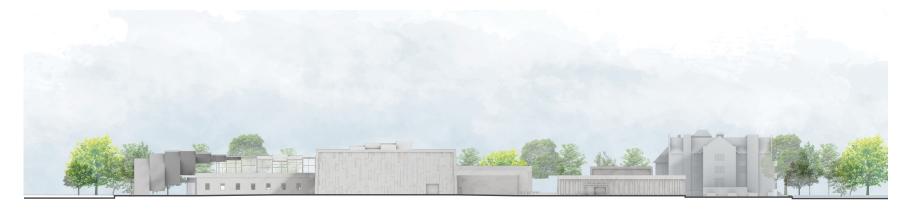


Image 82 Design West elevation 72

### The Street and Central Square

At its core, this thesis investigates the results of mediating a public street through a school of architecture. Establishing a new entrance on the North elevation, the expressive roof guide pedestrians from the city and residential neighbourhoods into the new programmatic spaces. Students of architecture study how to design buildings for the public, however, architecture schools remain isolated from this same public; creating a disconnect between was is taught and the ambition of shaping cities' built environment. It is equally important for the public to understand the role of the architect within society. For these reasons, exposing the process of learning architecture along the edge of the public corridor reveals the intentions of architecture. The solid wall hiding the activities of the school, which contributed to a general misunderstanding of architecture, is now accessible. Activities of the school become the working shop fronts that pedestrians pass by daily. Once the public glimpse at the quality of work produced, our natural human curiosity will continue to draw people in to experience the ever-changing work on display.

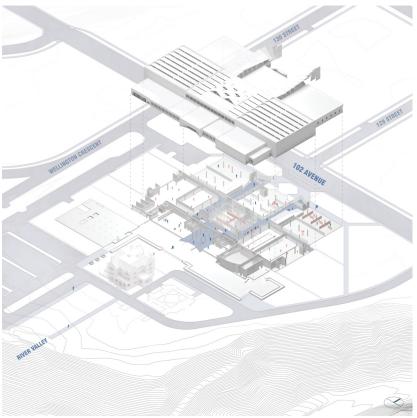


Image 83 Axonometric highlighting the public street

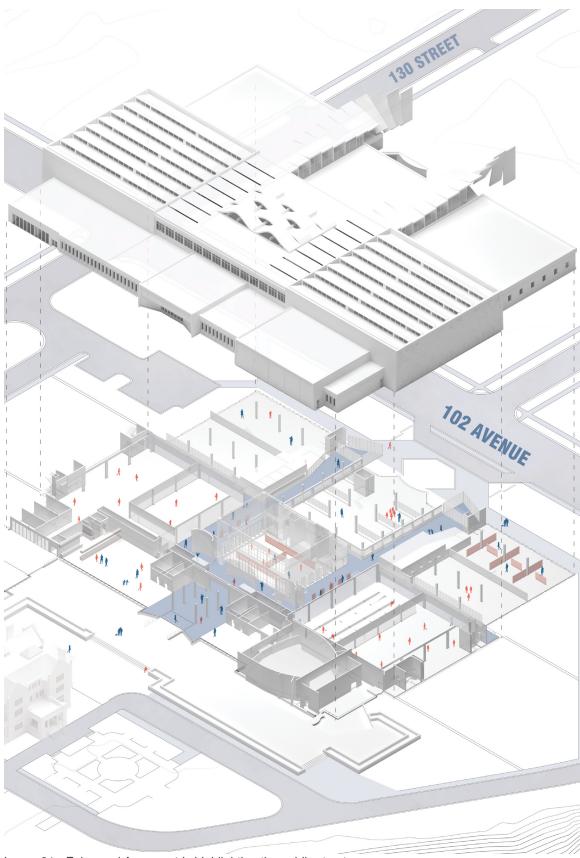


Image 84 Enhanced Axonometric highlighting the public street

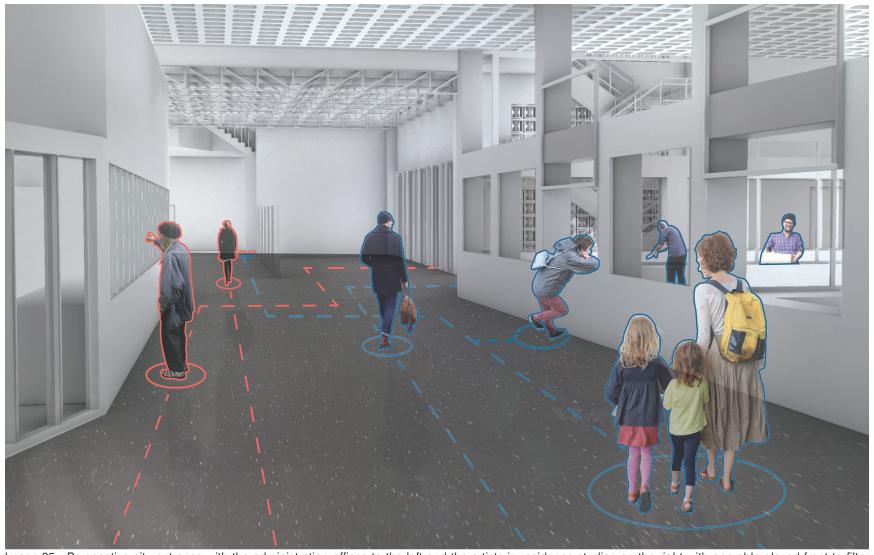


Image 85 Perspective city entrance with the administration offices to the left and the artists in residence studios on the right with operable glazed front to filter interactions with the public



Image 86 Path through along the street viewing moveable plinths outside the winter garden and main exhibition space



Image 87 The original curved marble walls at the river valley entrance are re purposed as display areas for student and faculty work



Image 88 The rich materials of the river valley entrance are kept and continue to welcome the public into the building

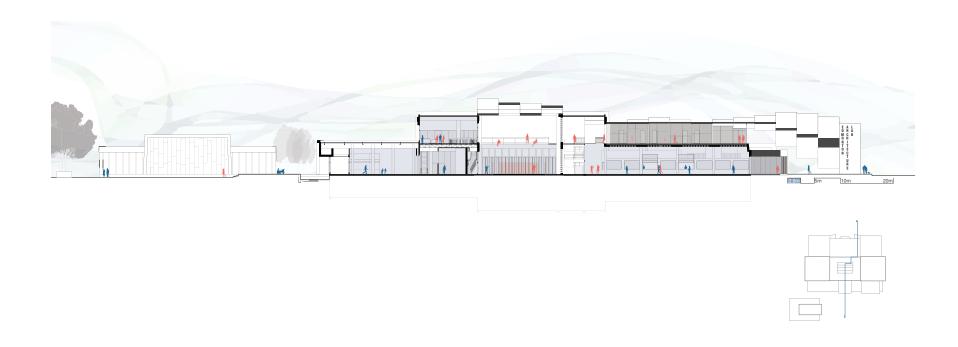
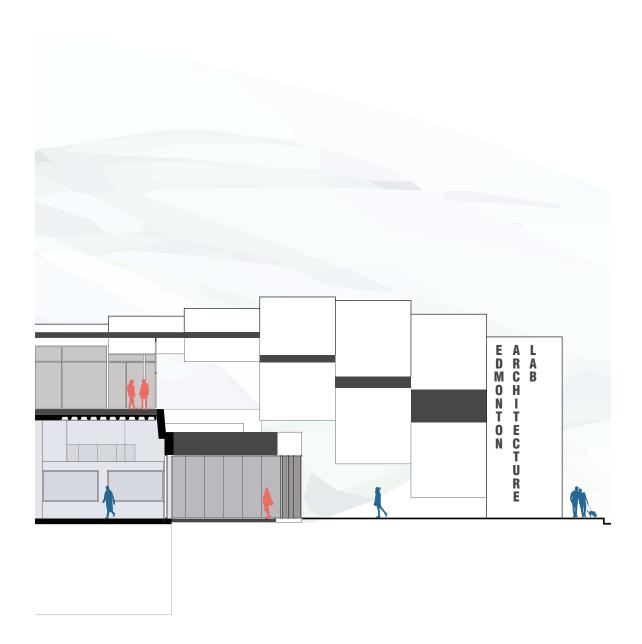


Image 89 1:700 North South section



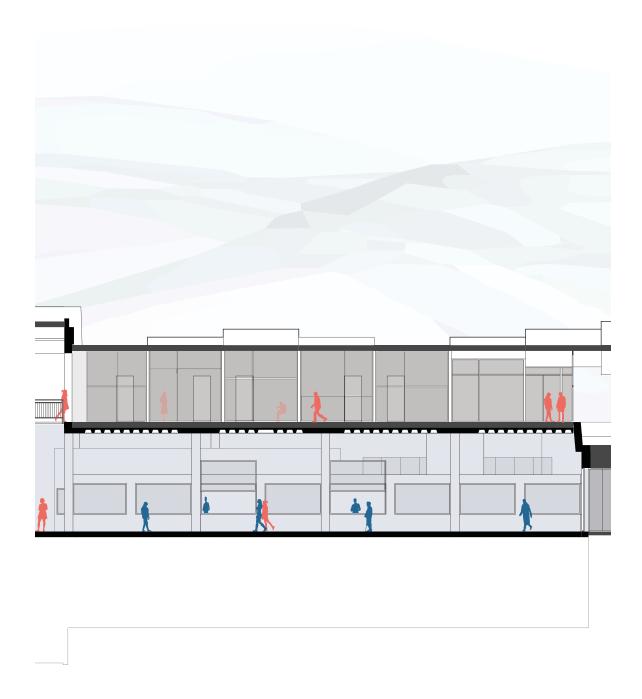


Image 91 1:200 North South Section; The faculty offices on the second floor and the artist in residence studio along the public street



Image 92 1:200 North South Section; The expressive ribbons of the roof of the winter garden celebrate the space and allow for its use throughout the year. Also visible are the architectural screens that filter light from the winter garden into a private circulation stair of the architecture school

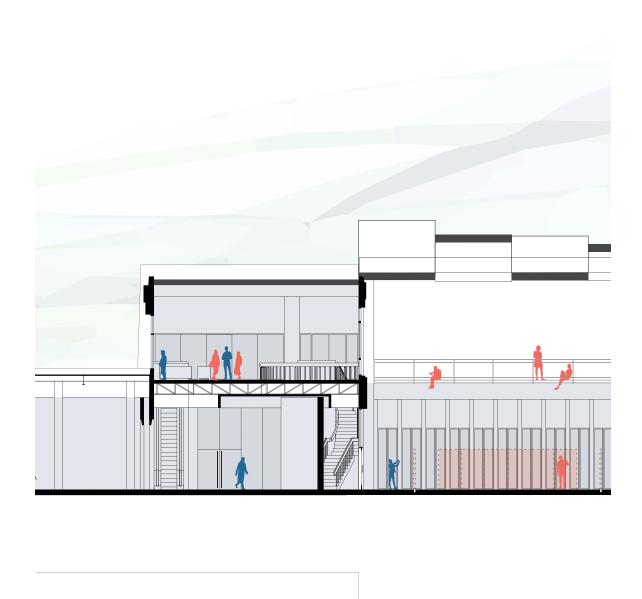


Image 93 1:200 North South Section; The second floor lobby and river valley lobby, which are covered in beautiful marble and granite remain public spaces to be enjoyed by all

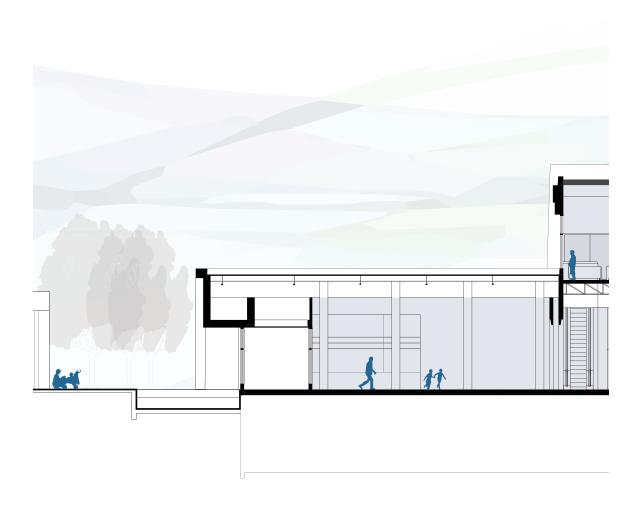


Image 94 1:200 North South Section; the river valley lobby mediates the cafe on the Southwest corner and the auditorium on the Southeast corner

#### The Public Intersection with Architecture

Deciding to enclose the central courtyard with a new skylight transforms this space into a winter garden. Enclosing this space with a playful roof embraces Edmonton's identity as a winter city by allowing this room to be used throughout the year. Light permeates into the central volume and glows bright, both from within, and outwardly to the city in the evening. The windows of the first floor looking into the courtyard are replaced with glass doors that can alter the porosity of this central space as its use varies from formal review space, to an exposition gallery, or even to a social gathering venue. During formal reviews, the doors can be closed to control sound, yet the visual connection of the space remains. The public are encouraged to meander through the space to view the refined drawings on display. The grain of the street intersects perpendicularly to the grain of the architecture school resulting in a moment in the central courtyard where both can now meet and engage each other. Locating the exhibition space in the central courtyard reinforces the core idea of the school as a place to share ideas produced by students and faculty to filter out ideas of architecture into the public consciousness of the city.



Image 95 Perspective of the winter garden and exhibition space, where the public and architecture meet



Image 96 Public Perspective along the East Avenue Looking into the library mapping the paths of the public and the architecture school



Image 97 Public Perspective along the West Avenue Looking into the library mapping the paths of the public and the architecture school

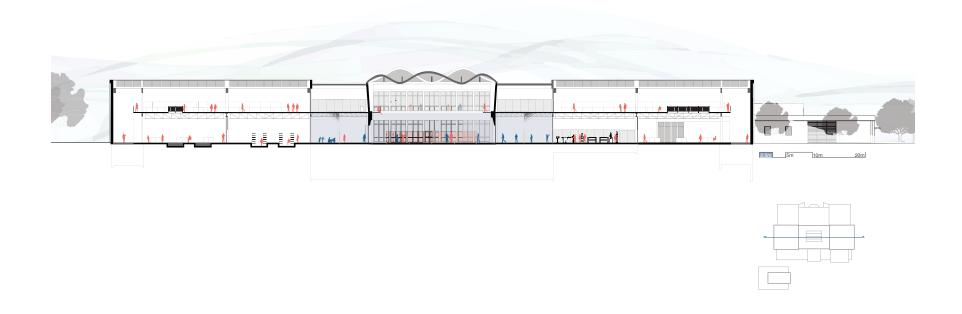


Image 98 1:700 East West section

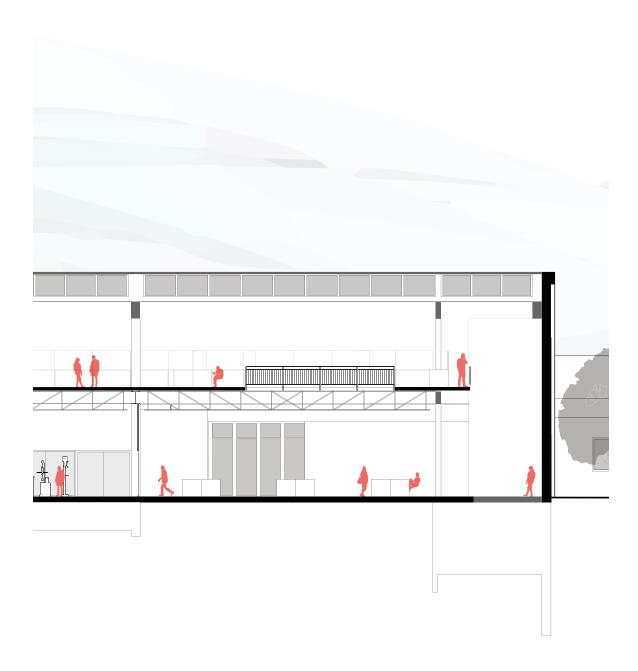


Image 99 1:200 East West section; Connection between the West undergraduate and graduate studios

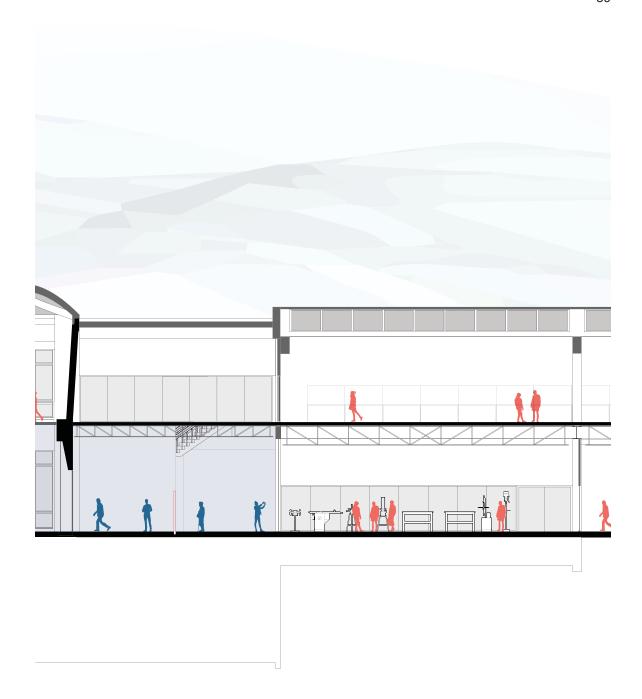
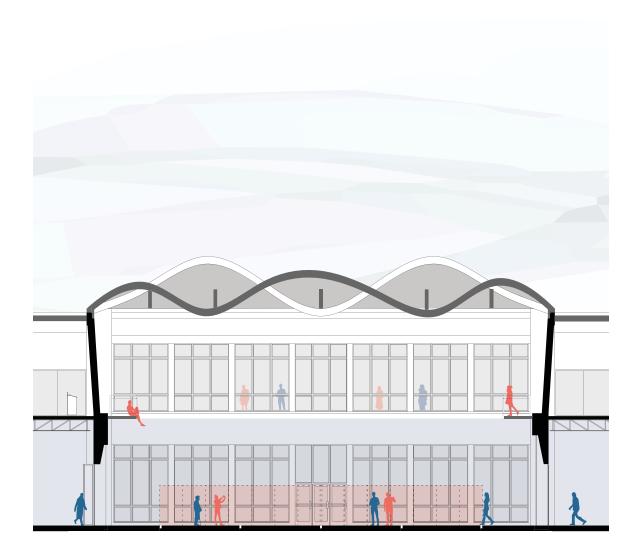


Image 100 1:200 East West section; Edge of the public street and the wood shop



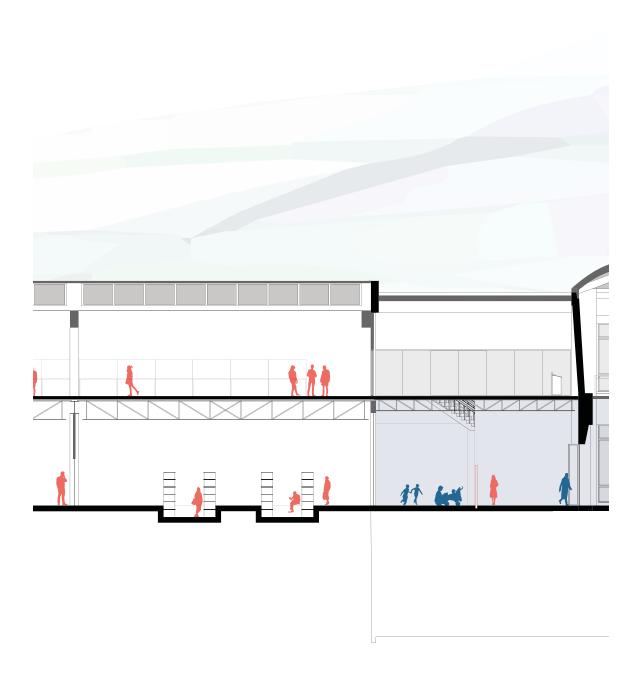
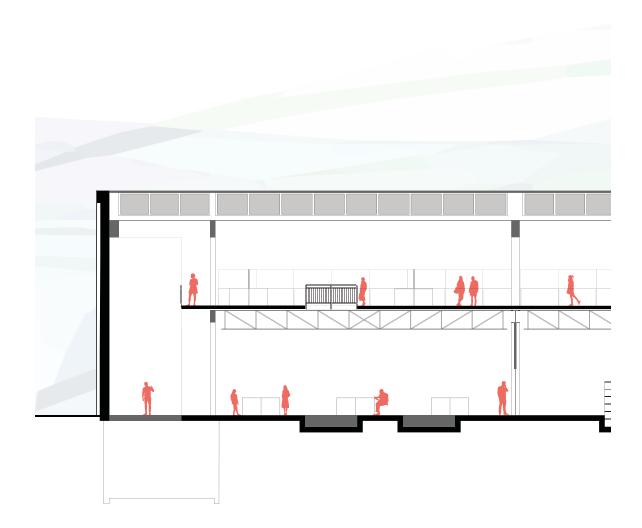


Image 102 1:200 East West section; Edge of the public street and the library



### **Connecting People and Program**

Locating the studios at either end of the school offered some privacy from the public street at the expense of secluding studios from one another. To lessen this effect, parts of the floor slab of the second storey studios were removed to connect them to the first storey studios, as well as to the public street below. This was essential to create some connection between these spaces that would otherwise be isolated from each other. As the students move through the program, they move between the East and West ends, and eventually up into the second floor graduate studios. To balance the retreat of the studios to the ends of the building, communal spaces like the shops, library and public student lounge were placed in the center surrounding the winter garden and exhibition space to draw activity out from the studios. Contributing to the desire to have a light but expressive alteration to the exterior elevations, the second story roof was replaced by a sunken saw tooth roof. This allows for light to flood the upper studios and filter through the voids in the floor slab. Proceeding this way removed the need to puncture the stone work of the elevations, maintaining the original qualities of mass of the exterior.



Image 104 Student lounge located on the second floor is a public space to work and mediate the activity of the school and the public realm



Image 105 The graduate studios have the benefit of the new saw tooth roof flooding the space with light



Image 106 The undergraduate studios below receive filtered light from the sawtooth roof through openings in the floor slab

### **CHAPTER 7: CONCLUSION**

By introducing a public street through the building, the school of architecture provides a place for the city to experiment and propose hypotheses to improve our built environment. Allowing the public into the inner sanctum of architectural education will change the relationship society has with the subject, and eventually with the profession, as the meaningful dialogue that occurs at the school will shape current culture. This would enhance the trend where "Schools are in a position to lead architectural culture again—this time in a return of architectural culture understood as a world of ideas and cultural production so great and engaged that it can be seen to provide a context larger than the architectural profession as it is currently understood."<sup>23</sup> In Edmonton, the site of the former Royal Alberta Museum brings together the city, dwelling, and the landscape; three elements that are intrinsic to Edmonton and are found on the site in Glenora. The school of architecture is sensitive too, and highlights the qualities of where it is from, to help students and the public learn about architecture. The Provincial museum was built with the ambition to demonstrate to the world that Edmonton was a modern city of international calibre. Repurposing the museum into a school of architecture maintains the initial ambitions of the museum to use architecture to build a monument to the culture of the city, while maintaining the public nature of the building. The location of the structure of the building was unchanged, however a new system of columns and beams was needed to allow for the interior glazed walls to define the edge of the school, while allowing visual connection into the work environment of the school. Increasing the openings of the North facade and extending the roof of the faculty offices out towards the street where they lightly reach out to meet the path of pedestrians and act as guiding arms inviting the public within. The module of the roof fins could be taken further and used as a marker, relating back to the new school at various corners of city. Connecting the studios within the school is important to allow for the opportunity to share ideas and elevate the quality of work being produced. The public street allows for the daily activity of the city to find its

Neil Spiller and Nic Clear, *Educating Architects: How Tomorrow's Practitioners Will Learn Today* (London: Thames & Hudson, 2014), 52.

way into the school and engage with the students and faculty as to how a city benefits from architecture. By engaging and inviting the public into the school, the aspiration is that you could approach any Edmontonian that has visited the Edmonton Architecture Lab and have them ask you, why not architecture?

## **APPENDIX**

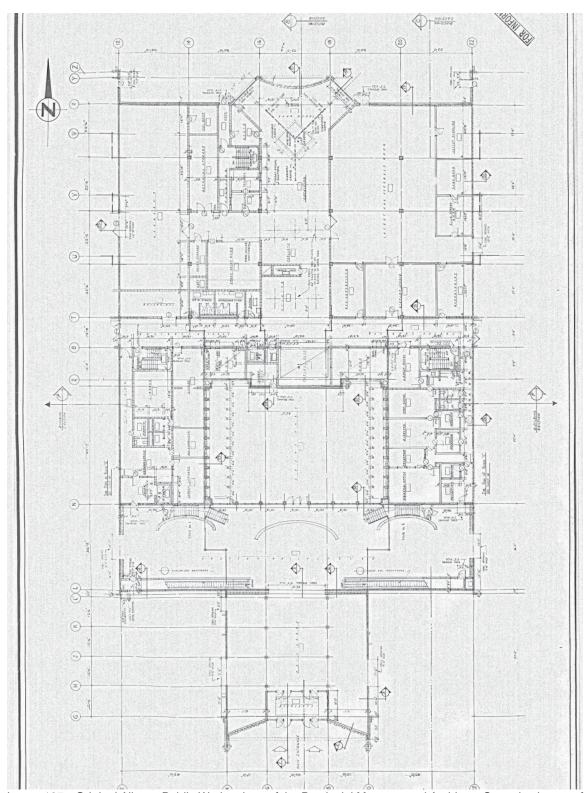


Image 107 Original Alberta Public Works plans of the Provincial Museum and Archives; Central volumes of main floor from Alberta Infrastructure Technical Services Branch Archives

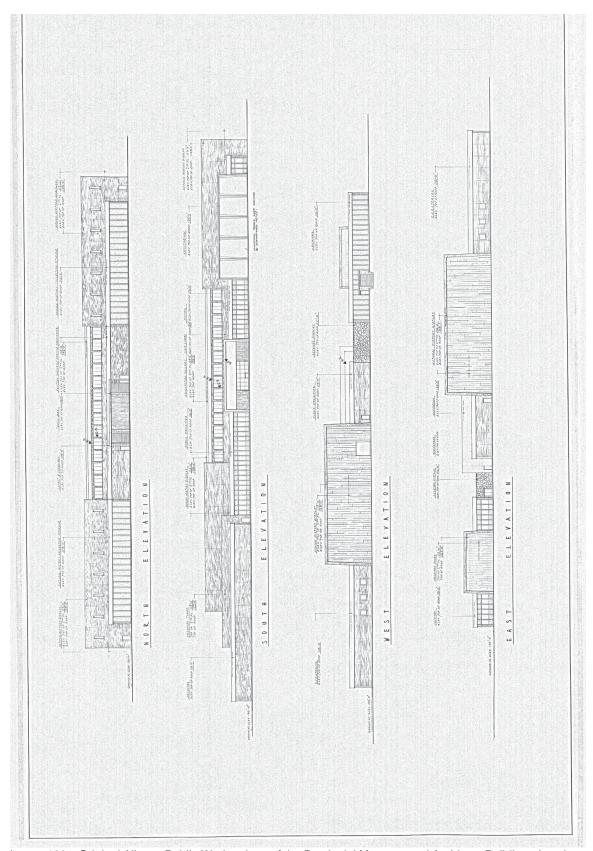


Image 108 Original Alberta Public Works plans of the Provincial Museum and Archives; Building elevations from Alberta Infrastructure Technical Services Branch Archives

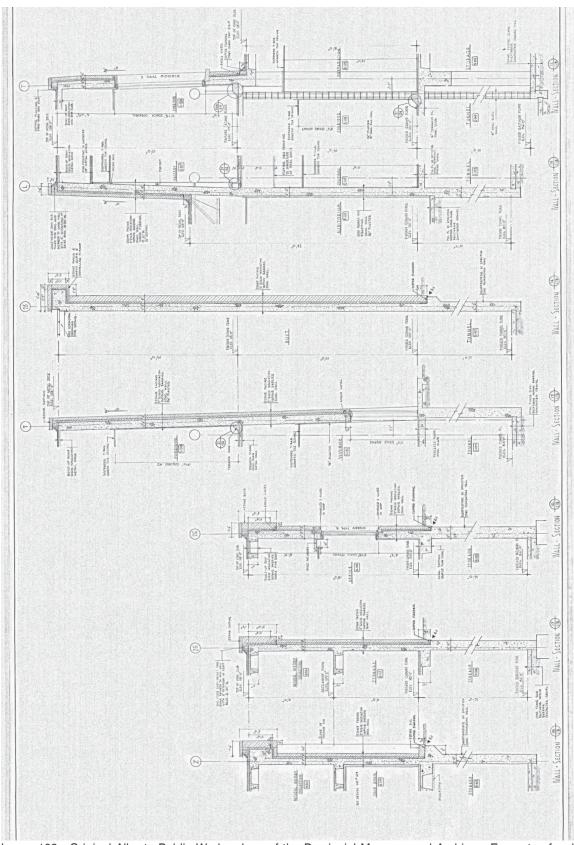


Image 109 Original Alberta Public Works plans of the Provincial Museum and Archives; Excerpts of wall sections from Alberta Infrastructure Technical Services Branch Archives

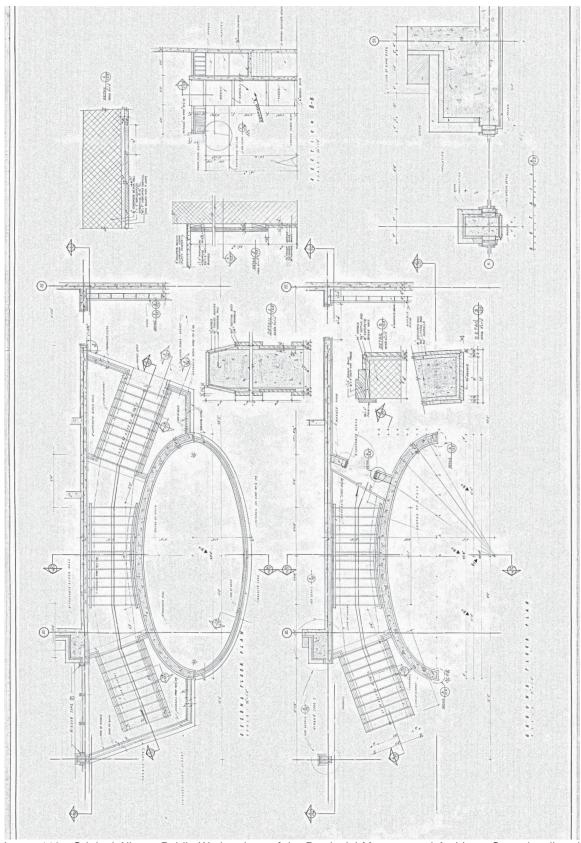


Image 110 Original Alberta Public Works plans of the Provincial Museum and Archives; Curved wall and stair plan details from Alberta Infrastructure Technical Services Branch Archives

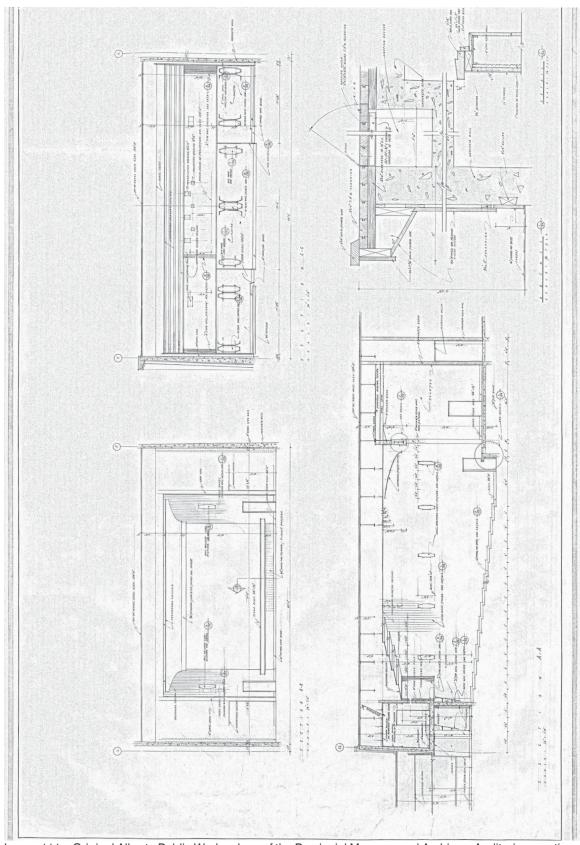
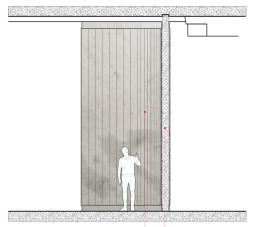


Image 111 Original Alberta Public Works plans of the Provincial Museum and Archives; Auditorium sections from Alberta Infrastructure Technical Services Branch Archives



# ONTARIO TWEED PEARL MARBLE CONCRETE STRUCTURE

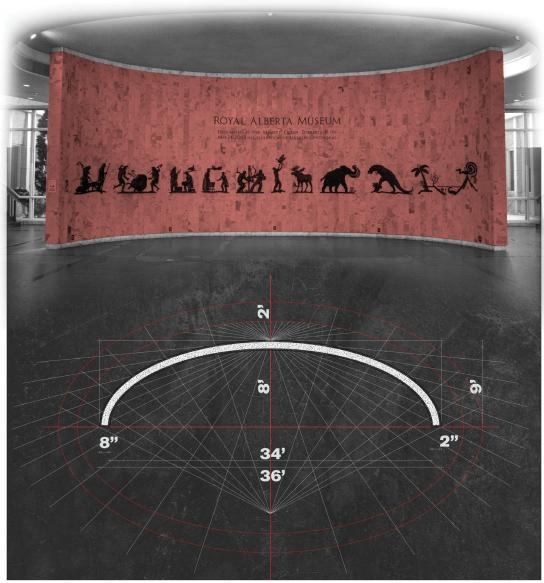


Image 112 Feature curved wall analysis

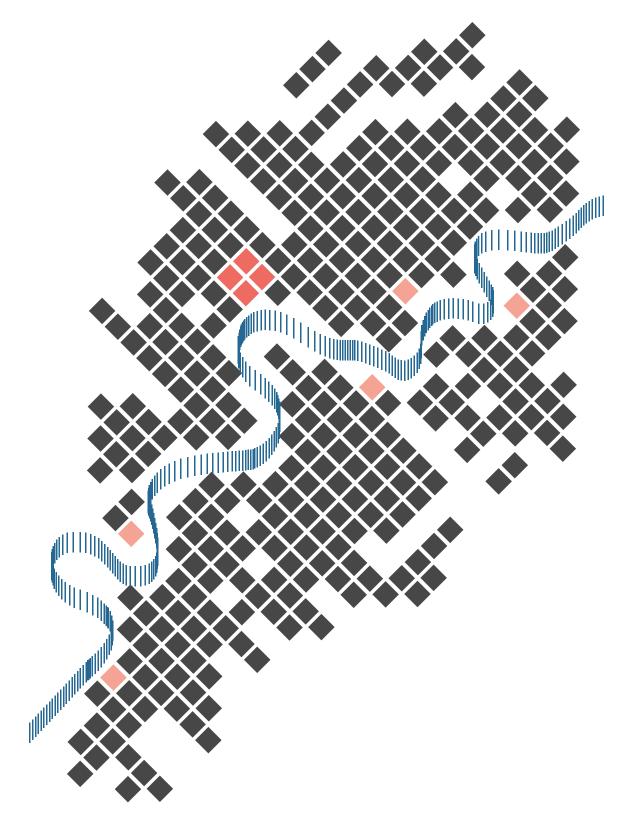


Image 113 Abstract representation of the ordered grid of the city, the fluid river breaking the order and how this system could encourage displaced interactions if the relationship between the architecture school and the public were pushed outside the boundaries of the site

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