

**MOBILIZING CREATIVE ENTREPRENEURSHIP:
THE DESIGN OF A CULTURAL INFRASTRUCTURE ON THE
HALIFAX WATERFRONT**

by

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at

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DEDICATION

To my mom, Joanne, for always believing in me and encouraging to me to follow my dreams.

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ABSTRACT

Rising commercial rents in downtown Halifax combined with a freeze on federal arts funding are forcing artists to leave the city in search of affordable and accessible workspace. Essential to the cultural and economic growth of the city, artists desperately need space where they can continue to develop their work and grow their professional practice. The Halifax waterfront, which remains largely vacant since major industries shifted away from the area, provides an opportunity to create a new and unique cultural space in the heart of the city.

This thesis examines the design of a cultural infrastructure on the Halifax waterfront to support the local creative community and to further enable connection, production and networking among creators and the public. By examining the transformation of the waterfront from its founding to its current condition, a strategy of uncovering the inherent qualities of place to inform new development is explored.

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To my wife, Andrea, thank you for your enduring patience and support.

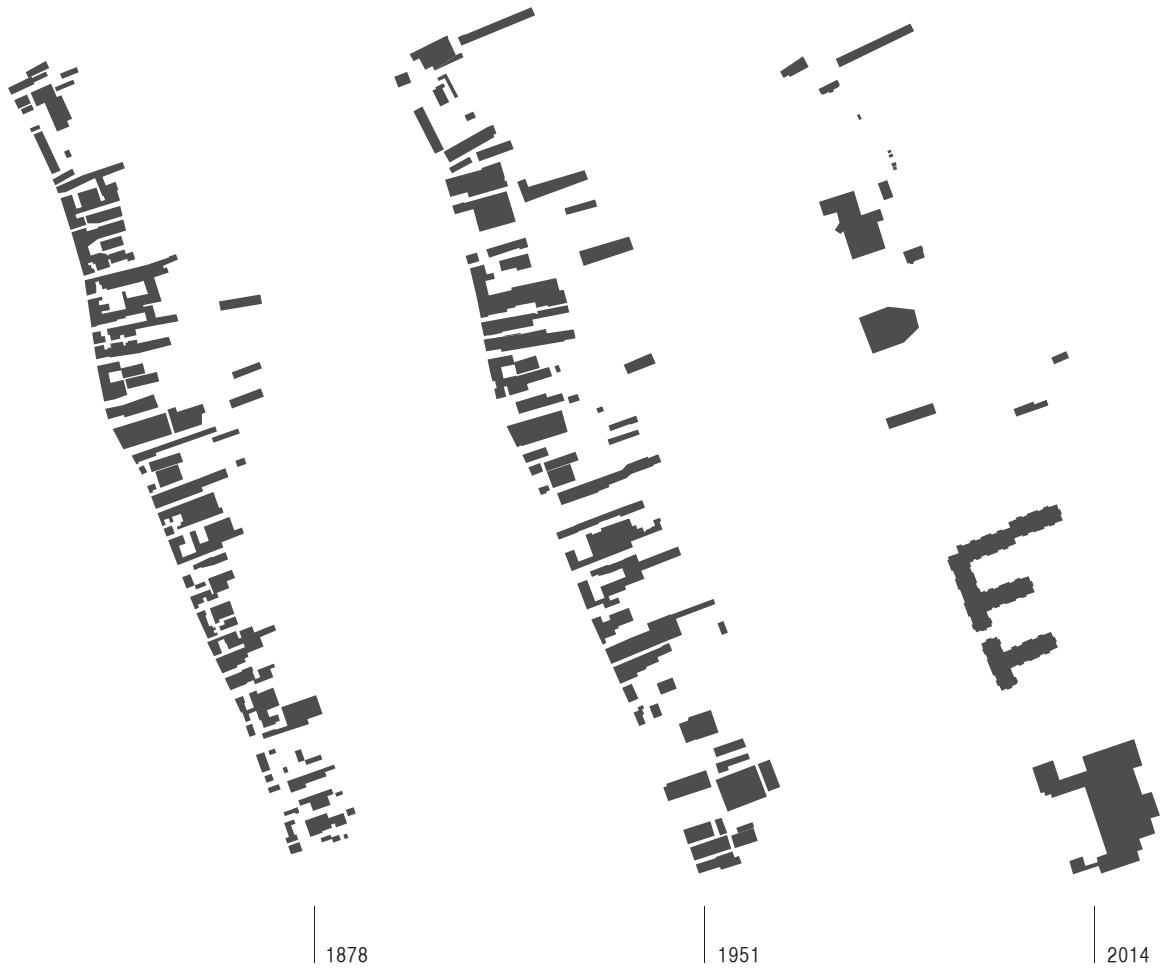
Halifax waterfront,
early 19th century
(Nova Scotia Archives)



CHAPTER 1: INTRODUCTION

Decentralization of Industry

From its founding until the middle of the 20th century, the Halifax waterfront was the center of the city's commercial and civic life and the main driving force behind its development. Settled as a British colonial outpost by Cornwallis in 1749, the city grew outward from the edge of its great harbour, flourishing during an era of diverse maritime enterprise. Because of its close proximity to the American colonies and the West Indies, the port of Halifax was afforded many opportunities for trade and commerce (Frost 2008, 9). During the Age of Sail, Halifax's waterfront was densely built up with a system of finger piers and accompanying storage warehouses. Stretching from Morris Street in the city's south end to Richmond Street in the north end, the shoreline was dominated by as many as 180 wharves (Frost 2008, 31). As vessels became larger, however, port activity slowly shifted away from the vast finger pier system in heart of the downtown outward to the fringes of the city. Large, deep water terminals were built to the north and south of the city's downtown to accommodate larger ships. The onset of containerization during the 1970s resulted in the



A comparison of built density on the Halifax waterfront shows the effects of industry decentralization

construction of two large container facilities: the Halterm facility near Point Pleasant Park and the Fairview Cove facility at the most northern point of the peninsula. These developments marked the final transition of industry away from the waterfront downtown in Halifax.

Waterfront Redevelopment

As industry shifted away from the Halifax waterfront the area slowly fell into decline. The many warehouses were left empty and the vast collection of finger piers were rotting away (Frost 2008, 163). By the 1960s, a series of urban renewal projects were planned for the waterfront, including a controversial harbourside freeway extension project that was never completed (Buggey 1971, 2). A number of large commercial and residential complexes were built throughout the downtown and along the waterfront in an effort to revitalize the area. Unfortunately, rather than preserving and repurposing the warehouse buildings on the waterfront, many of them were destroyed in favor of new developments. Only a small collection of these buildings were saved from destruction (see Historic Properties).

Halifax has struggled to successfully re-stitch its post industrial waterfront back into the fabric of the city. Today, vacant land and expansive parking lots cover much of the area. Recent developments have become increasingly privatized, consisting mainly of 'high-end' residential programs, providing very little or no public space. And while the harbourside boardwalk is publicly accessible and hosts a number of festivals and events it is heavily programmed to support tourism and provides only seasonal use. The waterfront is greatly underutilized and needs to be redeveloped to support additional public programming and activities throughout the year.



Halifax peninsula showing the central portion of the waterfront (left)

Parking lots and vacant land on the central waterfront (right)
(Google 2014)

Boat-building on the
Halifax waterfront
(Nova Scotia Archives)



Culture of Making

The Halifax waterfront has long been a vibrant and lively place for the making and exchange of goods. At its height during the mid to late 19th century, the waterfront was home to merchants and shipping men known around the world (Buggiey 1968, 5). From sail making and shipbuilding, to lobster packing and the lumber trade, the waterfront was a place bustling with activity.

Today, downtown Halifax supports a number of public and private arts and cultural institutions, including the Nova Scotia College of Art & Design, the Nova Scotia Community College, the Centre for Arts & Technology, the Nova Scotia Centre for Craft & Design and Dalhousie University. Each year, these institutions attract thousands of local and foreign students who are important to the future creative and economic growth of the city.

Recently, however, new graduates and artists have been forced to leave the city to find workspace that is both accessible and affordable. Balancing school debt and the costs of establishing a practice, artists simply cannot afford the high cost of workspace in downtown Halifax. Financial incentives

and support from other regions further entice this community to move away, even if they wish to remain. Recognizing the economic and cultural benefits of retaining and developing local creative talent, the city of Halifax launched the Emerging Artist Studios Pilot Project in 2010. Developed in partnership with the Nova Scotia College of Art & Design and the Halifax Port Authority, the project aimed to provide “places of opportunity” to allow emerging artists to develop their skills and grow their professional practice (HRMCA 2010, 2). While successful, the project’s duration was only short term. For the long term survival of its arts and cultural community, the city recognizes the need to create “new and unique cultural spaces and hubs of creativity that can foster innovation and vibrancy”.

This thesis examines the design of a cultural infrastructure on the Halifax waterfront to support the local creative community and to further enable connection, production and networking among creators and the public. By examining the transformation of the waterfront from its founding to its current condition, a strategy of uncovering the inherent qualities of place to inform new development is explored.

Thesis Question

How might the design of a cultural infrastructure on the Halifax waterfront support the local creative community and further enable connection among creators and the public?

CHAPTER 2: WATERFRONT EXPLORATION

Every new work of architecture intervenes in a specific historical situation. It is essential to the quality of the intervention that the new building should embrace qualities which can enter into a meaningful dialogue with the existing situation. (Zumthor 2010, 18)

To identify and understand the unique characteristics, features and elements of the Halifax waterfront, the area was examined from its very beginnings in the late 18th century to its current condition. This investigation or reading of place included studying the natural and urban environment, building types and forms as well as tectonics and materiality. Information was gathered from a variety of sources including historic photographs and maps, literature reviews, in-person discussions, and direct observation. This investigation was an exploratory process which began with no preconceived notions about what would be found or what the outcome would be. The result is a series of observations that can be applied to or inform architectural design strategies at a variety of scales (city, building, and human). These observations were documented using a variety of techniques including photography, physical modelling, notes, sketches and drawings.

This approach to exploring the unique character and qualities of the place relates to the work of contemporary regionalist architects who carefully consider both the geographical and cultural context of a site. Early proponents of this locally-driven architecture include Kenneth Frampton, Juhani Pallasmaa and Glenn Murcutt.

Aerial view of the Halifax waterfront, early 19th century (Buggey 1972, 53)



Urban Form

The Spatial Relationship of the Buildings to each other, to the Harbour, and to the Street

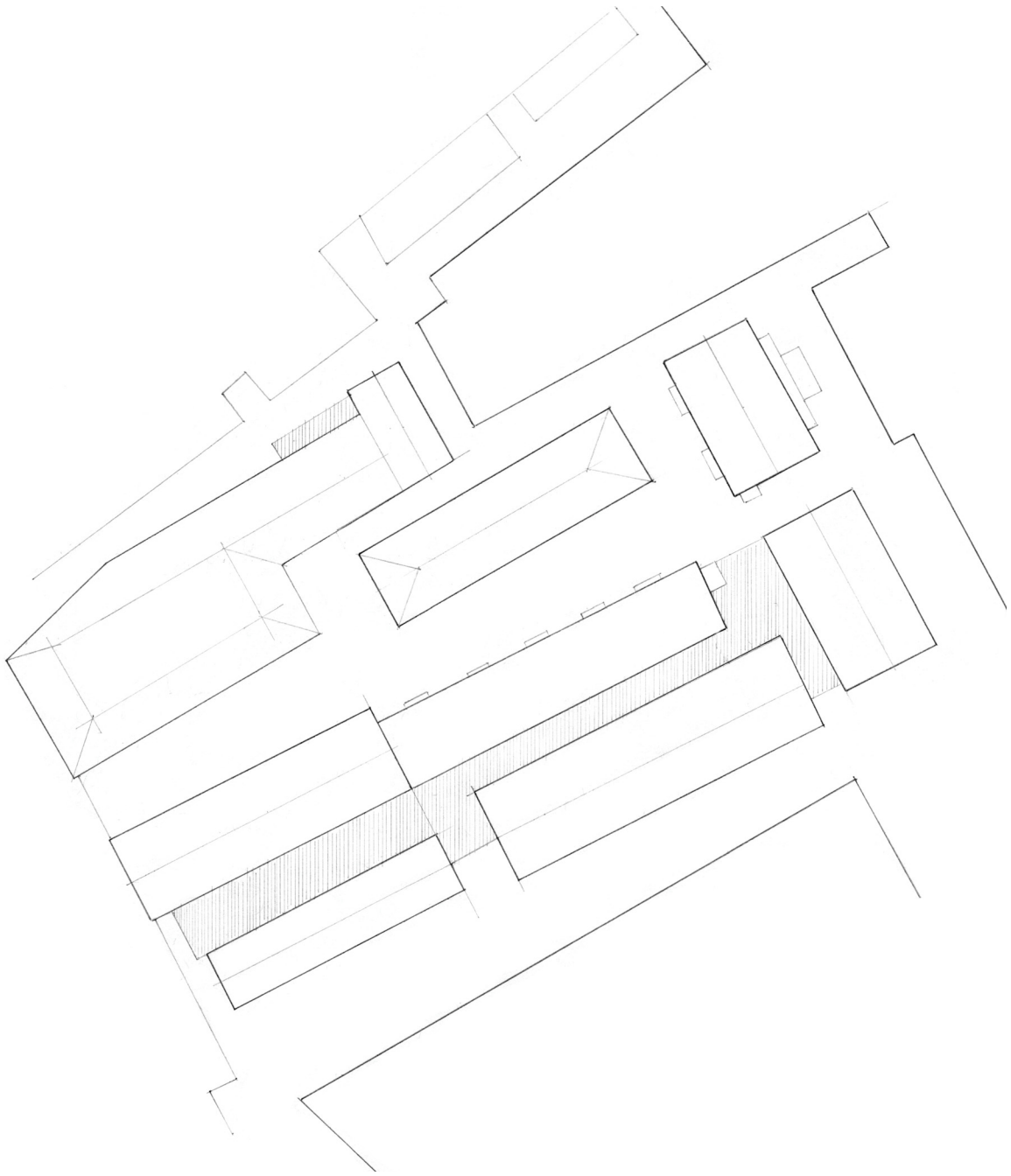
Until the later part of the 20th century the Halifax waterfront was densely built up with stone and wooden buildings that served a variety of commercial and civic purposes. Tightly grouped together, the buildings consisted of simple, rectangular massing with minimal exterior detailing. The open and undeveloped areas between the buildings, although most likely not by design, contained a variety of contrasting sheltered spaces: long and narrow passageways that framed views outward toward the harbour, and larger open areas mostly enclosed but accessible both from the street and the waterfront. The buildings maintained a relatively hard edge along the street and became increasingly fragmented towards the water. While most of downtown Halifax was organized and built up according to a strict orthogonal grid where the buildings were oriented both north-south and east-west, the waterfront buildings, as well as the finger pier system, maintained a predominantly east-west relationship with the harbour.

Historic Properties, looking east, early 19th century (Buggey 1972, 28)

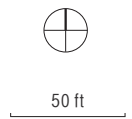


Historic Properties

A series of urban renewal projects in the 1960s destroyed many of the warehouse-type buildings constructed on the Halifax waterfront during the early part of the 19th century. Controversy surrounding a proposed harbourside freeway project, however, prevented the destruction of this collection of seven stone and wood buildings (Buggey 1972, 2). Restored to their original condition in the early 1970s, the buildings now serve as monument to the waterfront's historic past. Beginning at Lower Water Street, the buildings extend eastward toward the harbour creating a series of narrow passageways in between (see site plan). The two and three-storey buildings are offset from each other, creating an unfolding and revealing experience as one moves through the in between spaces. Glimpses of the harbour, framed by the buildings, are found as one continues toward the water. Transverse pathways (north-south) provide some porosity to the otherwise linear (east-west) passageways. The narrowness of the passageways, approximately 40-50 feet wide, combined with the height of the buildings, forces one's attention upwards to the sky.



Site plan of Historic Properties



Warehouse building on
Upper Water Street
(Nova Scotia Archives)



Buildings & Facades

Warehouse-style Buildings on the Halifax Waterfront

The warehouse-type buildings that occupied much of the Halifax waterfront during the 19th and 20th centuries were built by merchants and trading and shipping companies. These functionally designed buildings consisted of simple rectangular massing with minimal exterior detailing. Built with heavy wooden timber frames and clad with stone or wood, the building facades often contained sets of wooden loading doors that marked the main divisions of the buildings. Organized neatly along the ground floor, the loading doors provided large access points for the movement of materials in and out of the buildings. Dormers or overhangs containing a hoist, vertically aligned with the loading doors, permitted the movement of materials to upper stories. Smaller windows regularly placed in horizontal and vertical bands allowed light to reach the interior. Designed to be robust and adaptable to accommodate a variety of tenants and uses, the buildings were altered and added to as their tenants required (Buggey 1972, 15).

Spatial qualities found
within the pier structure



Pier Structure

Along with the buildings on the waterfront, the pier system too has changed dramatically since the later part of the 20th century. During the Age of Sail the pier system was densely built up, extending out into the harbour, to accommodate the long and narrow wooden ships. As the vessels grew larger - steamers, tall ships, luxury liners, cargo ships - these smaller piers became obsolete and since then have either rotted away or been removed. Only a handful of the original 'finger' piers still exist today. Typically, these piers were constructed with heavy timber in a regular sequence of round piles and rectangular spanning members. Cross-bracing and wooden planking provided additional lateral stability.

The hidden spaces found within the existing pier system along the Halifax waterfront were explored. These long linear spaces are rich with shimmering qualities of light and changing tidal

flow. The regular grid of heavy timber create a strong presence of structure that clearly define the linear spatial organization.

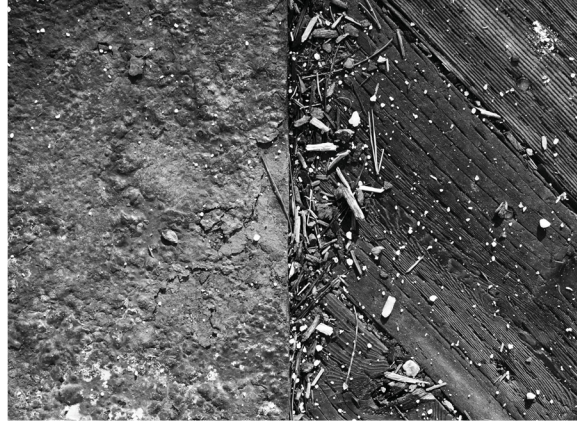
The piers are typically clad with vertically placed wooden boards. Gaps between these boards create a dramatic lighting condition within the interior space; a regular sequence of shadow and light. This cladding also provides a level of transparency between the exterior and interior spaces.

Floating dock on the
Halifax waterfront



Floating Docks

In addition to the pier system along the Halifax waterfront, which now exists as a public boardwalk running parallel to the shoreline, floating docks were built to provide direct access to the harbour. Consisting of a wooden platform attached to a buoyant foundation, these docks, unlike the pier, move with the changing tidal flows and movements of the harbour water. To prevent the docks from simply floating away, they are connected to the pier to restrict their horizontal movement. While the pier and the smaller floating docks are constructed predominantly of wood, the connections between these two elements are metal. Metal posts are attached to the pier structure to guide the vertical movement of the floating docks.



Floating dock images illustrating metal guidance posts and connection detail (left)

Metal plate threshold between wooden pier and floating dock (right)

The floating docks attach to these vertical posts with a loosely fitting metal connector that restricts most horizontal movement. Access to the floating docks from the pier is achieved with a single flight of metal stairs or a ramp that rolls horizontally as the floating docks move vertically. Large metal plates fastened to the wooden decking of the pier and the floating docks prevent the wood from becoming damaged as the stair moves. These metal plates also act as thresholds, clearly defining the transition between the two elements.

Enclosed Floating Docks

During the Napoleonic Wars in the early part of the 19th century, many prominent businessmen in Halifax were known to be involved in the privateering trade, including Enos Collins (Buggey 1968, 6). Best known for his ownership of the privateer schooner the Liverpool Packet, the most successful privateer ship to ever sail out of a Canadian port, Collins owned a series of warehouse buildings on the Halifax waterfront. Prized goods obtained through privateering, mostly from American frigates, were stored in these warehouses until they were later auctioned off. In an effort to protect these valuable goods in the event of a flood or storm surge, the floors were built independently from the building envelope. Much like an enclosed floating dock, the floors could float upwards within the building envelope as water levels rose.

Coiled utility lines
connected to the pier
structure on the Halifax
waterfront



Service Elements

A variety of plug-in units and coiled utility lines exist along the waterfront to service boats. These flexible lines provide utilities including water, electrical, fuel and waste removal to boats as they come ashore. Often color coded to signify their use, these lines are attached directly to the pier structure and extend down to the floating docks where they are accessible to boat owners.

CHAPTER 3: PROGRAM DEVELOPMENT

Arts and Cultural

A large arts and cultural community exists in downtown Halifax that is supported by a number of well known public and private institutions, including the Nova Scotia College of Art & Design, the Nova Scotia Community College, the Centre for Arts & Technology, the Nova Scotia Centre for Craft & Design and Dalhousie University (see complete list in appendix). These institutions attract thousands of local and foreign students each year who contribute significantly to both the creative and economic growth of the city.

Recently, however, this community has declined as recent graduates and artists have been forced to leave the city to find workspace that is both accessible and affordable. Balancing school debt and the costs of establishing a practice, artists simply cannot afford the high cost of workspace in downtown Halifax. Financial incentives and support from other regions further entice this community to move away, even if they wish to remain. Recognizing the economic and cultural benefits of retaining and developing local creative talent, the city of Halifax launched the Emerging Artist Studios Pilot Project in 2010. Developed in partnership with the Nova Scotia College of Art & Design and the Halifax Port Authority, the project aimed to provide “places of opportunity” to allow emerging artists to develop their skills and grow their professional practice (HRMCA 2010, 2). While successful, the project’s duration was only short term. For the long term survival of its arts and cultural community the city recognizes the need to create “new and unique cultural spaces and hubs of creativity that can foster innovation and vibrancy”. Based on the conclusions of this study the development of an arts facility to provide artists

with accessible and affordable workspace will be explored.

Art Incubators

Art exhibition, 401
Richmond Street West
(Urban Space 2014)



401 Richmond Street West, Toronto, Ontario

Throughout the building, partnerships and alliances develop and reap rewards...the building is essentially a “village in a box”...everywhere there is a sense that the people here are doing things they care about, that they know each other and that they want to do business with each other. (Cochrane 1998, 1)

Aware of the need for affordable workspace in Toronto’s downtown core, architect Margaret Zeidler took an aging warehouse building and transformed it into a thriving cultural and commercial centre. Today the building has an eclectic tenant base that reflects the “variety of artistic practices and entrepreneurial endeavours taking place in Toronto’s cultural centre” (Urban Space 2014). 401 Richmond is home to 12 art galleries and artist-run centres, fashion designers, film makers, jewelers, architects, animators, healers, communications specialists, graphic artists, milliners, charitable organizations and even a Spanish dance school. Inspired by the work of Jane Jacobs who preached the importance of diversity within a community in her book, *Death and Life of Great American*

Cities (1961), Zeidler sought to create a place where a vibrant mix of tenants could come together and collaborate on projects; a place that supports and fosters both business and creativity. The physical infrastructure also includes a cafe and gathering place, an arts-enriched early learning centre, community courtyard, and a roof garden.

Artist talk, Distillery Studios
(Toronto Artscape 2011)



Distillery Studios, Toronto, Ontario

The Distillery District represented an extraordinary opportunity to demonstrate how the arts can act as a catalyst for change in the regeneration of an abandoned industrial area. (Toronto Artscape 2011)

The Distillery Studios were completed in 2003 by Artscape, a well-known cultural organization based in Toronto whose mission is to “unlock the creative potential of people and places to build vibrant, resilient and inclusive communities” (Toronto Artscape 2011). As part of the Distillery District revitalization in downtown Toronto’s east end, the project consists of two former warehouse buildings that were transformed to contain a variety of work and retail studios, offices, and rehearsal and performance spaces. The objective was to create a dynamic environment that would encourage interaction and shared resources between tenants, enhance public visitation to the site and provide basic services and amenities at a low cost. The

result is a vibrant and unique environment for working artists, with a diverse mix of organizations and individual tenants.

Gallery opening event,
Distillery Studios (Toronto
Artscape 2011)



Public Engagement

In addition to bringing together a diverse mix of artists and creative practitioners in a vibrant and collaborative environment, the previously discussed projects have also successfully engaged with the public by organizing a variety of programs and events. These include gallery openings and exhibitions, live performances, film festivals, artist talks, workshops, screenings and various art installations. More intimate events like “Artists Open Studio” organized at 401 Richmond Street West invite visitors into the workspaces of artists offering a chance for visitors to directly engage with artists and to see their work where they create it. To accommodate these public activities, a variety of dedicated social and event spaces are provided including cafes, exhibition space, courtyards and roof gardens. Event and exhibition listings are actively promoted throughout the surrounding communities to encourage public involvement.

On-lookers gather in front of Nova Scotian Crystal



Nova Scotian Crystal

Located on the Halifax waterfront, Nova Scotian Crystal is the only producer of mouth-blown and hand-cut crystal in Canada. It is a popular destination for tourists and interested passersby who gather in front of its workshop to watch glass-blowers as they create a variety of crystal products. The popularity and success of this interface with the public, through the display of the processes of making, supports the idea of creating other similarly based programs and experiences on the Halifax waterfront.

Program Components

Based on an analysis of the different programs and facilities offered at the existing arts and cultural institutions in downtown Halifax (see Appendix 1), the programmatic components of the arts facility were developed. To accommodate a wide range of users, the facility will offer a variety of different programs and services:

(1) Media Arts

graphic design, photography, film, audio recording, print shop

(2) Technology

wood shop, fabrication and digital fabrication

(3) Culinary Arts

baking, pastry, cooking and kitchen garden

(4) Crafts

ceramics, jewelry, metalsmithing, textile, fashion, and glass

(5) Fine Arts

sculpture, painting and drawing, and print making

(6) Service and Support

library, safety and security, service centre, and supply store

Additional amenity space, serving both artists and the public, will also be provided including a restaurant, cafe, and gallery and exhibition space.

Program components of
the proposed arts facility
(NSCAD University 2014)

Media Arts



Technology



Culinary Arts



Craft



Fine Arts



Service & Support



CHAPTER 4: SITE

The site is located at the intersection of Lower Water Street and Morris Street on the Halifax waterfront. Sloping down sharply from Lower Water Street the site extends outward to the northeast towards the harbourfront boardwalk.

Rectangular in shape (390 feet by 185 feet), the site's long axis runs perpendicular to the harbour with water frontage to the northeast and partially to the northwest. The site is currently used as a publicly accessible parking lot and has no built structures. It is enclosed by several neighboring large scale developments: to the north is Bishop's Landing, a multi-unit condominium complex; to the south is the Nova Scotia Power office building - the former Halifax Power Plant built in the 1950s; to the west is Waterfront Place, a multi-unit condominium building.

University Avenue-Morris Street

This prominent axis extends from the site transversely across the peninsula of Halifax, east to west, and contains a number of important nodes in the city. At its most westerly point lies Dalhousie University's main campus with its clock tower as a recognizable marker. From here University Avenue extends eastward, passing by the largest hospital in the city and through an important section of green space which includes Victoria Park, the Public Gardens and the Halifax Common. Turning into Morris Street as it intersects South Park Street, the axis continues eastward passing through several blocks of single family dwellings and small businesses. As Morris Street intersects Queen Street, the land begins to slope downward and an uninterrupted view of the harbour is found. From here the axis extends to its most easterly point where it meets the shoreline of the Halifax Harbour - the site lies just to the north.

Harbourfront Walk

Beginning in front of the Nova Scotia Power building, directly adjacent to the site, this 4km long stretch of boardwalk extends north along the shoreline of the Halifax Harbour ending at Casino Nova Scotia. The boardwalk hosts a number of festivals and events attracting thousands of visitors and tourists to the area each year. The cruise ship terminal, located on the southern end of the boardwalk, attracts over a 100 ships annually with over 250,000 visitors in 2013 (Port of Halifax 2012). While the area contains a variety of shops, restaurants and bars that cater to visitors and tourists, the harbourfront contains very few dedicated public amenity spaces until recently. Because of this harbourfront activity is seasonal, peaking during the spring and summer seasons. The addition of the Halifax Farmer's Market, which recently relocated to the Halifax Seaport at the southern end of the boardwalk, has begun to reverse this trend of seasonal use as it supports business throughout the year.

Lower Water Street

Water Street... is perhaps the city's most historic feature. It both commemorates the city's prehistoric geography, and is a monument to the initial exertions of its more recent founders. (Devlin 1978, 1)

Water Street has long served as the "binding link" between Halifax and its harbour (Devlin 1978, 2). As the streets and city blocks gradually developed on its west side, and as wharves and industry extended into the harbour on its east side, Water Street attached the two halves forming the city's first roadway. Early on in the city's development rights of way were established to ensure access to the harbour from Water Street. Beginning with a public dock at the harbour's edge and extending perpendicular to Water Street, these access routes

Halifax waterfront on the east side of the peninsula



Perpendicular and parallel axes of the site





Morris Street extending east toward the harbour (top)

Intersection of Lower Water Street and Morris Street, looking north (bottom)

would eventually form the main streets of the city's downtown. Morris, Salter, Prince and George Streets, which still exist today, all originated as access routes from the harbour to Water Street. Today, this distinctive relationship between the harbour, waterfront and town has, for the most part, been lost.

Climate

Wind

The frequency of winds experienced on the Halifax waterfront were analyzed to determine their impact on the proposed development. During the cold winter and fall months winds come predominantly from the north-west. During the warmer summer and spring months the wind direction shifts to the south-west. When comparing wind speed and distribution the north-westerly winds experienced during the winter and fall months are strongest, while the south-westerly winds experienced during the summer and spring months are lighter.

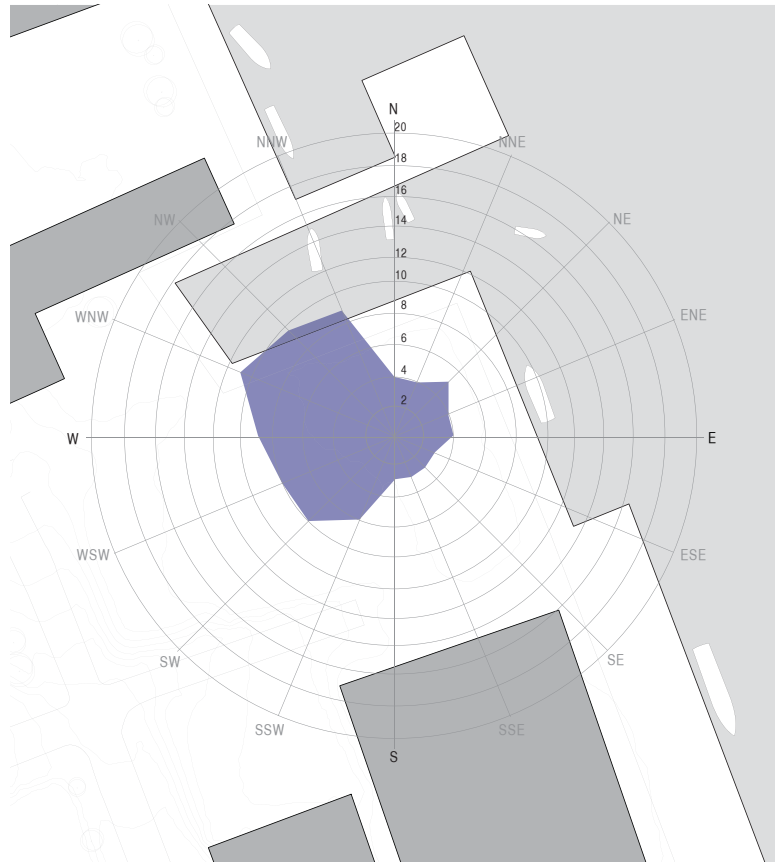
Sun

The sun path diagram for Halifax shows that the sun's highest point in the sky is 68° during the summer solstice and 22° during the winter solstice.

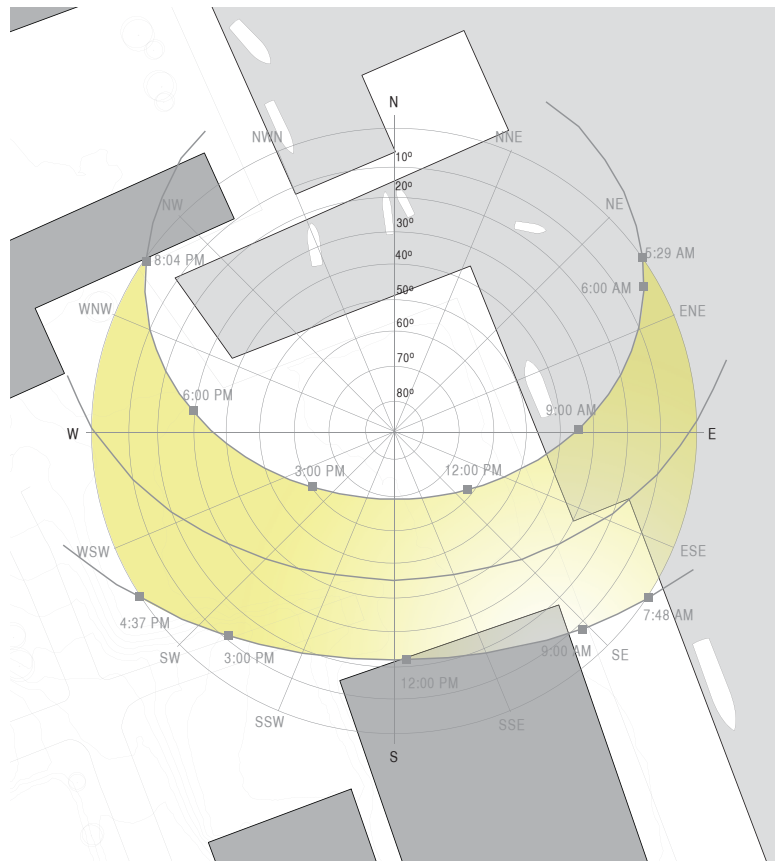
Views

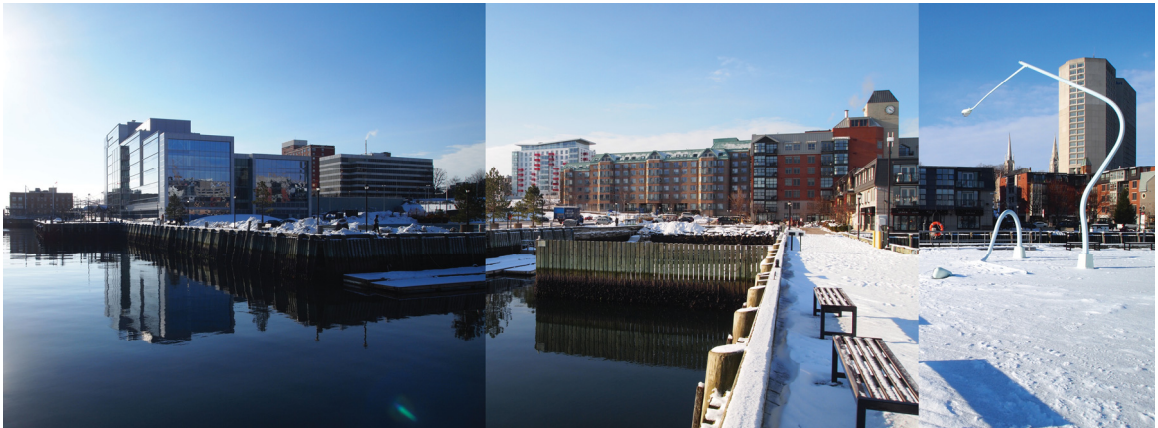
Located directly on the Halifax Harbour, the site enjoys uninterrupted views of the harbour and the neighboring city of Dartmouth across the water. To the south-east, views of both George's Island and McNabs Island can be seen. The photographic analysis that follows documents other specific view corridors looking both to and from the site.

Distribution of winds during the fall and winter months (Windfinder 2014)



Sun path diagram showing both the winter and summer solstices (Gaisma 2014)





A small inlet adjacent
to the site, looking east
toward the harbour (top)

Context of the site on the
waterfront, looking west
toward the site (bottom)



View from the south west
corner of the site, looking
north east (top)

Extension of Morris Street
toward the harbour,
looking east (bottom)

CHAPTER 5: DESIGN

Site

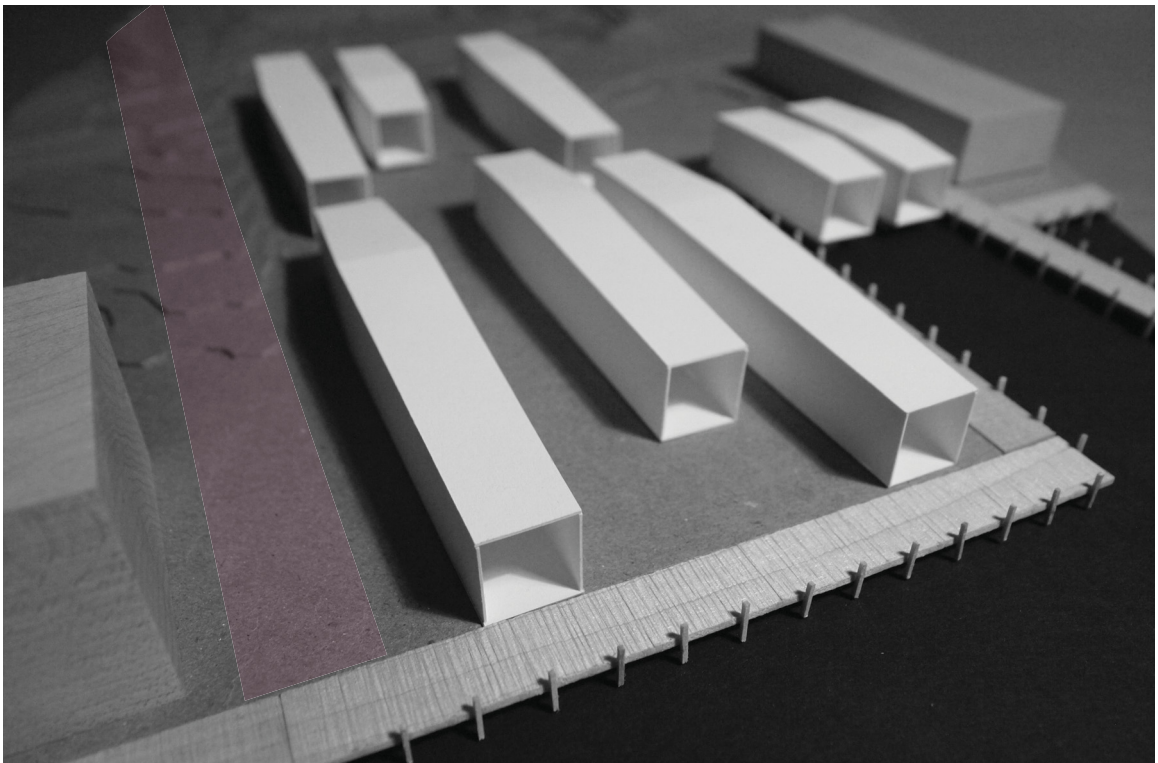
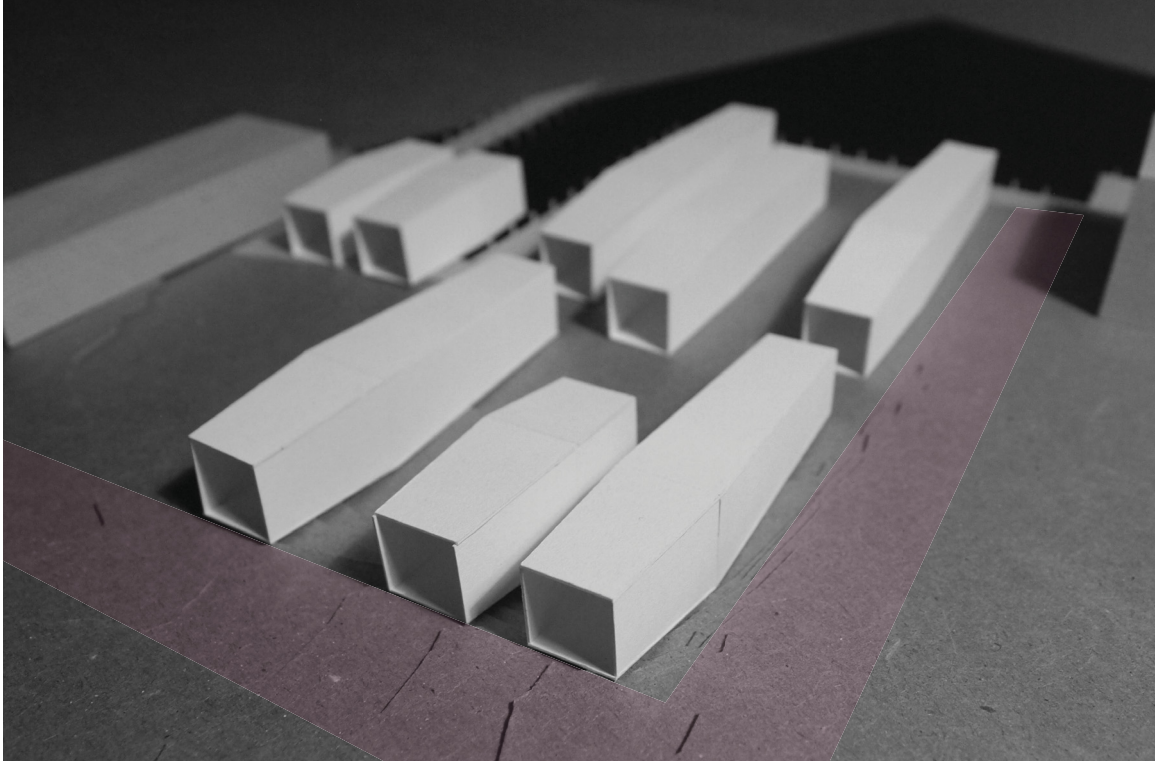
The proposed design distributes the program across the entire site in a series of long and narrow buildings oriented on an east-west axis. Referring to the densely built up fabric found on the Halifax waterfront during the later part of the 19th century, a variety of contrasting outdoor spaces are created: long and narrow passageways framing views outward toward the harbour, and larger open areas mostly enclosed but accessible both from the street and the waterfront. By celebrating the spaces in between the buildings an engaging experience is created for visitors and users as they inhabit or circulate through the site. Here, visitors are immersed in the sights and sounds of a vibrant arts community on the edge of the Halifax Harbour. Sheltered from the harsh maritime climate, these passageways also provide space for the movement of materials in and out of the buildings. Each building contains a separate program and is positioned on the site to maximize its functional and environmental requirements.

Media Arts

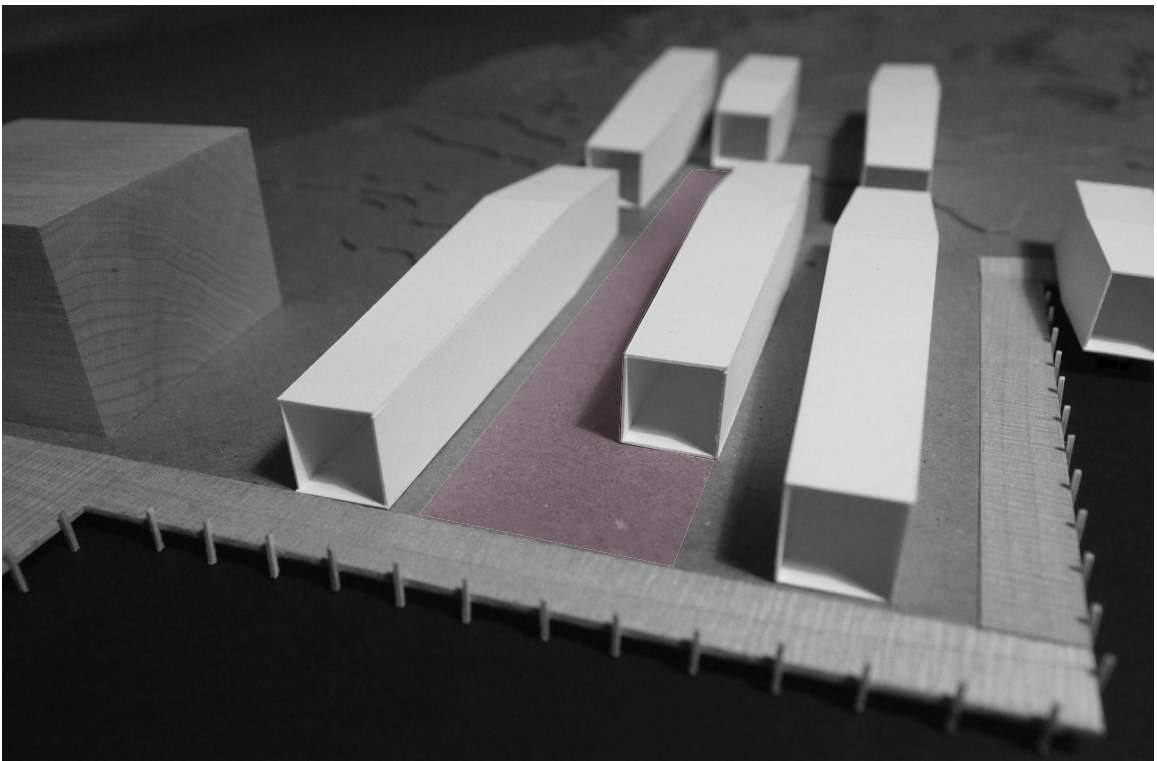
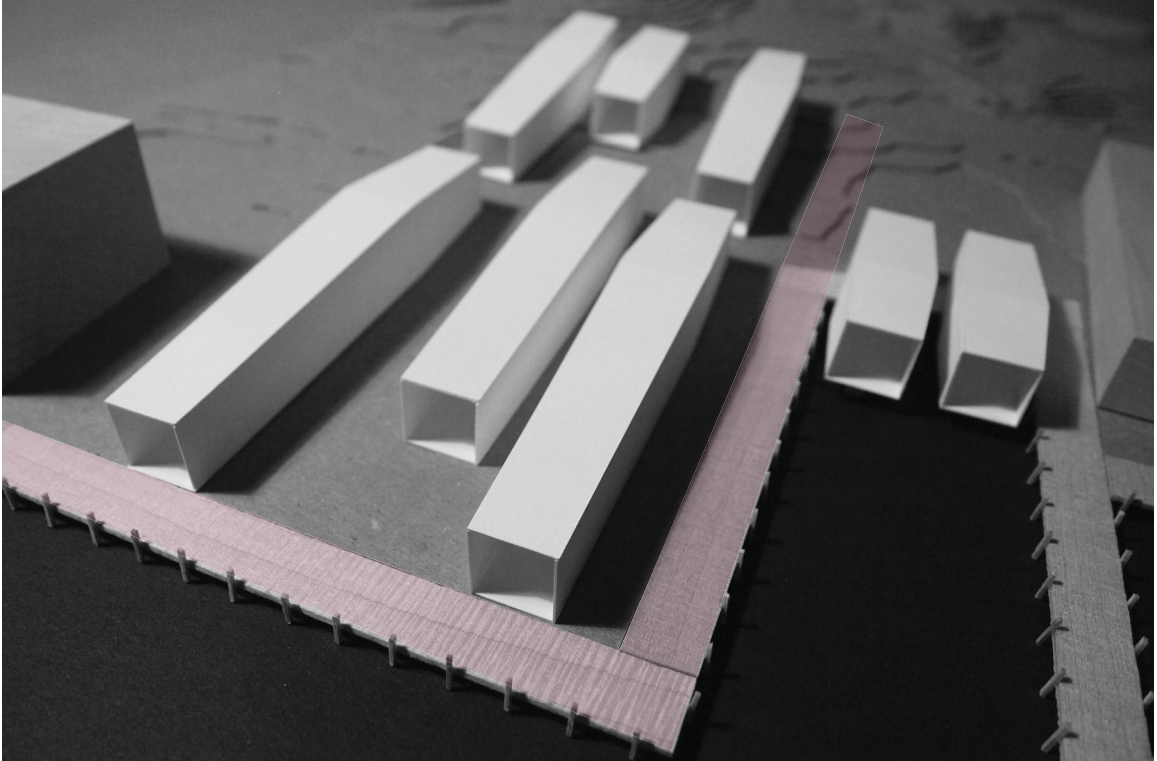
Positioned on the southwest corner of the site the building extends eastward toward the harbour continuing the University Avenue/Morris Street axis adjacent the site. The west-facing portion of the building rises up with the steep topography of the site to directly engage Lower Water Street. The east-facing portion of the building sits below the street, sheltering it from external noise.



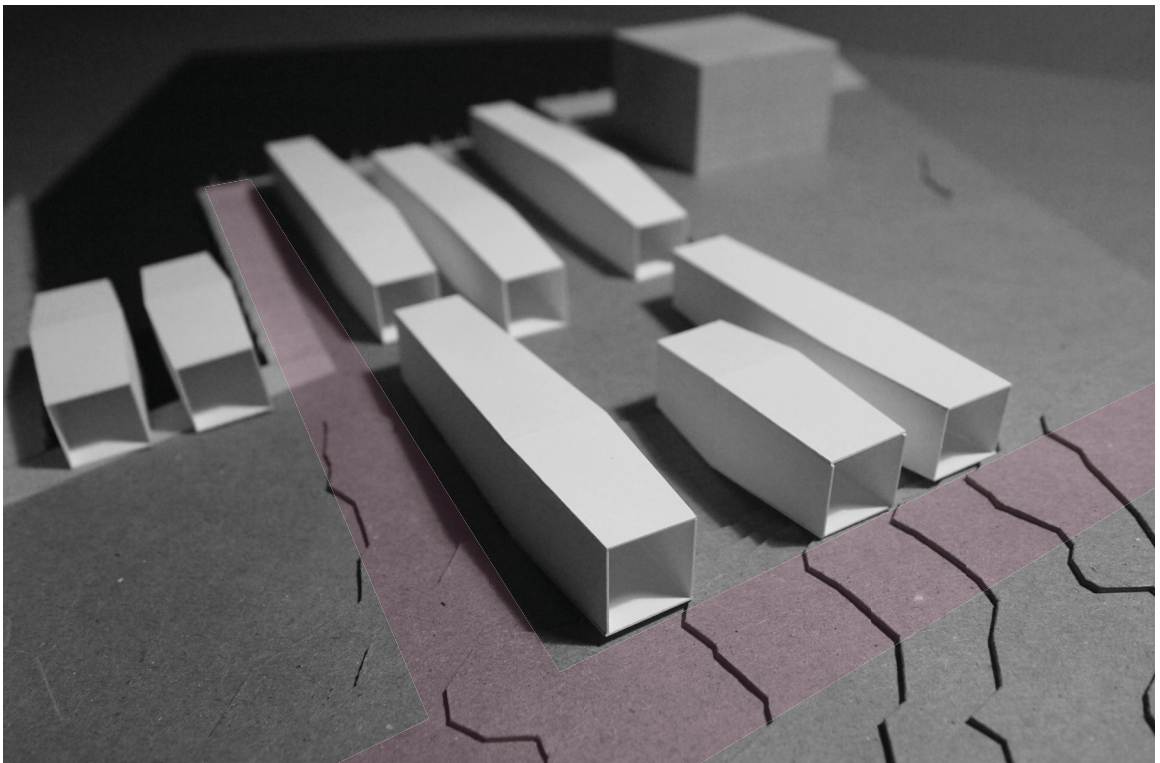
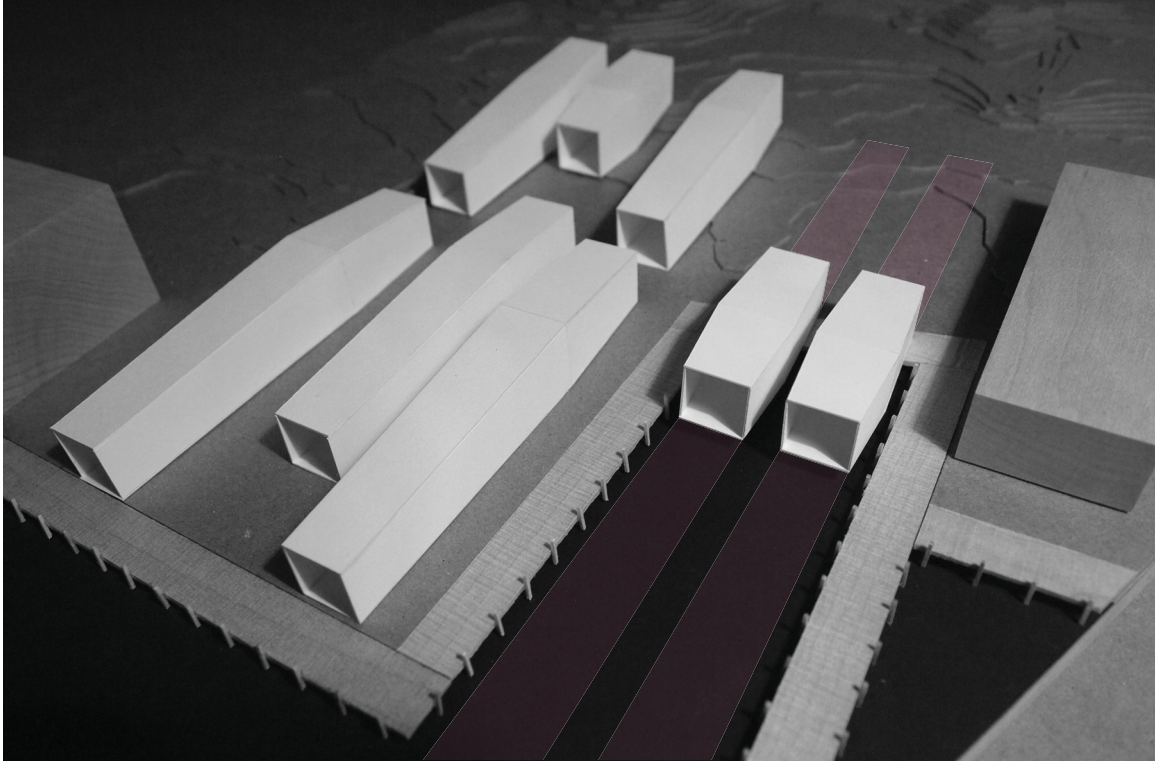
Site plan showing the east-west orientation of the buildings



Media Arts and cafe (top)
Technology (bottom)



Culinary Arts and restaurant (top)
Fine Arts and Craft (bottom)



Galleries (top)
Service and Support (bottom)

Technology

Positioned on the southeast corner of the site, the building extends eastward toward the harbour continuing the University Avenue/Morris Street axis adjacent to the site and engaging the harbourfront boardwalk to the east.

Culinary Arts and Restaurant

Positioned along the northeastern edge of the site, bordering the harbourfront boardwalk, the building contains the culinary arts facility and a restaurant. The restaurant is located in the eastern portion of the building to provide views of the harbour and to directly engage the boardwalk. The culinary arts facility, which serves the restaurant, is located in the western portion of the building. Here, the building connects to the inner courtyard which contains a kitchen garden.

Craft and Fine Arts

Positioned in the center of the site the building encloses the public plaza opening from the boardwalk. To the west, the building encloses a more private courtyard space. Contrasting passageways (narrow and wide) are created along the long axis of the building.

Service and Support

Positioned on the northwest corner of the site the building extends eastward toward the harbour defining an inner courtyard to the south. The building subtly rises up with the gradual topography of the site to engage Lower Water Street. A large passageway is created in between to the service and support building and the cafe.

Galleries

Separate from the rest of the buildings, the galleries are positioned on the edge of the northern boardwalk and extend outward into the harbour.

Cafe

Positioned on the southwest corner of the site, the west-facing portion of the building rises up with the steep topography of the site to directly engage Lower Water Street. The east-facing portion of the building borders the inner courtyard to the east. A narrow passageway is created in between the cafe and media arts building.

Exterior Spaces

A 'market street' is created in between the craft and fine arts building and the technology building. This large outdoor passageway is a place where artists can set up displays to showcase their work for sale.

An internal courtyard provides a more private outdoor space located in the center of the site. Enclosed by the surrounding buildings, it contains a growing garden to supply the culinary arts facility, a sculpture garden and outdoor exhibition space where informal events and gatherings can take place.

A public plaza opening from the boardwalk overlooks the harbour to the west. Sheltered from north-westerly winds by the surrounding buildings, the plaza provides public amenity space to support the many waterfront festivals that occur each year.

Ground Surface Materials

(1) Granite setts; the main paving material for the exterior spaces on the site. This hard surface has long been used along the waterfront and throughout downtown Halifax (Bugghey 1972, 13). The stone can be quarried locally and it is durable enough to withstand the labile maritime climate.

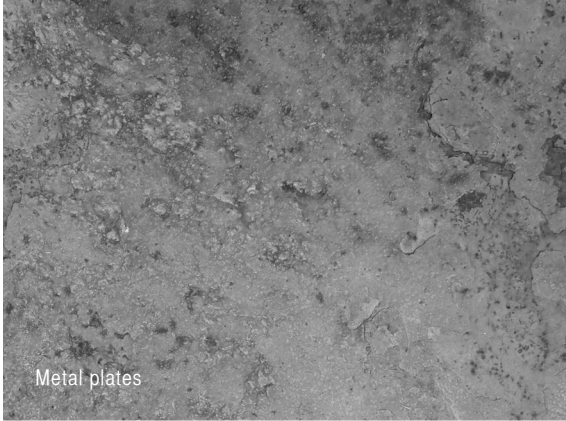
(2) Granite slabs; used for the exterior stairs as one enters the site from Lower Water Street. Much like the granite setts the stone can be quarried locally and it is durable enough to withstand the labile maritime climate.

(3) Wood planks; the surrounding boardwalk is covered with diagonally placed wood planks. The regularity and smoothness of the wood surface contrasts the irregular and unevenness of the granite setts found on the site. This contrast in surface quality creates a threshold as visitors and artists pass between the two areas.

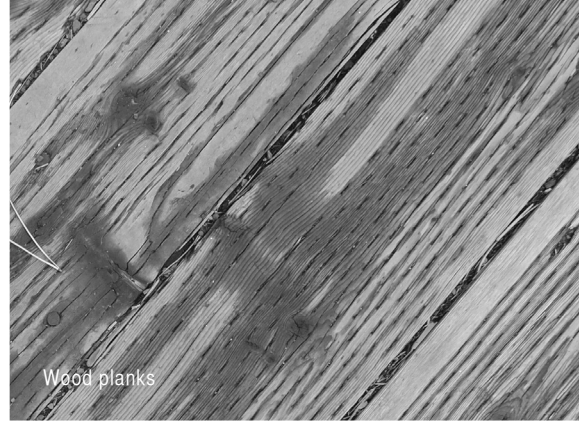
(4) Metal plates; much like the metal extensions found along the waterfront that serve as a threshold between the pier and floating docks (see Floating Docks), large metal plate hoops serve to define entry points into the buildings.

Sun

The proposed design consists of a series of long and narrow buildings oriented primarily on an east-west axis. With the long axis facing north-south the relatively shallow depth of plan provides good light penetration throughout the interior. Given this arrangement, opportunities for passive-solar energy strategies also exist. The low height of the buildings reduces the shadow path on the outdoor spaces, especially during the winter months when the sun is lowest in the sky.



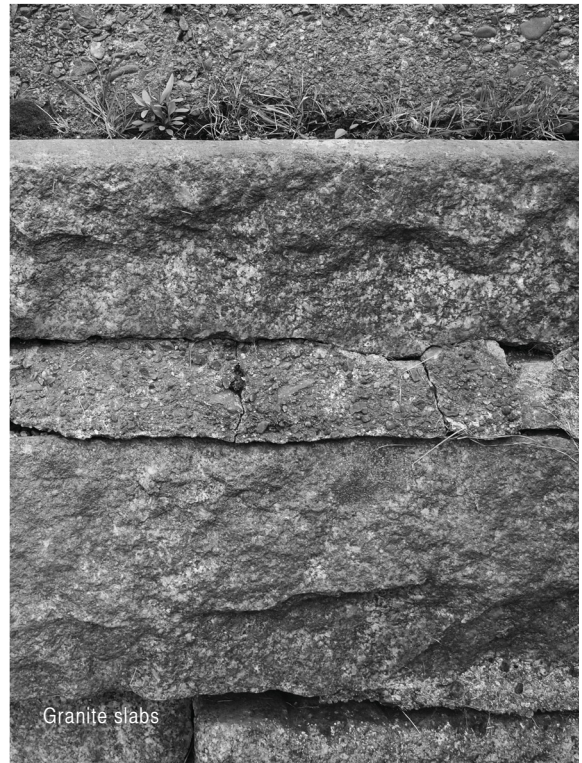
Metal plates



Wood planks



Granite setts



Granite slabs

Exterior ground surface materials

Wind

The design proposal creates a series of sheltered outdoor spaces which provide refuge from the harsh maritime climate. Oriented on an east-west axis, the buildings block the strong north-westerly winds during the winter and fall months.

Buildings

Spatial Organization

The buildings are organized in a series of work and social spaces. The social spaces link together the work spaces and also connect the buildings to the exterior (see Floors Plans).

A large open passageway forms a circulation spine connecting the work spaces together. This passageway becomes the social dimension of each building, providing artists and the public a place to gather and interact. Large access points contained throughout the passageway permit the movement of materials between the interior and exterior. Extending to the east and west, the passageway opens to large exhibition and event spaces held at the ends of each building. These spaces connect directly with the main exterior elements (boardwalk, street, courtyard, plaza) of the project to encourage public interaction.

Flexible studio spaces, combined with dedicated workshop spaces, provide areas for artists to work independently or together. Depending on the spatial requirements of an artist, the flexible studio spaces can be reconfigured to provide more or less space. Screening elements between the work and social spaces permit varying degrees of privacy and openness, as well as sunshading (see Interior Screens). The spatial qualities of the workspaces are consistent with the findings of a study



- 1 media arts
- 2 technology
- 3 culinary arts
- 4 fine arts & craft
- 5 service & support
- 6 restaurant
- 7 gallery
- 8 cafe

Floor Plans



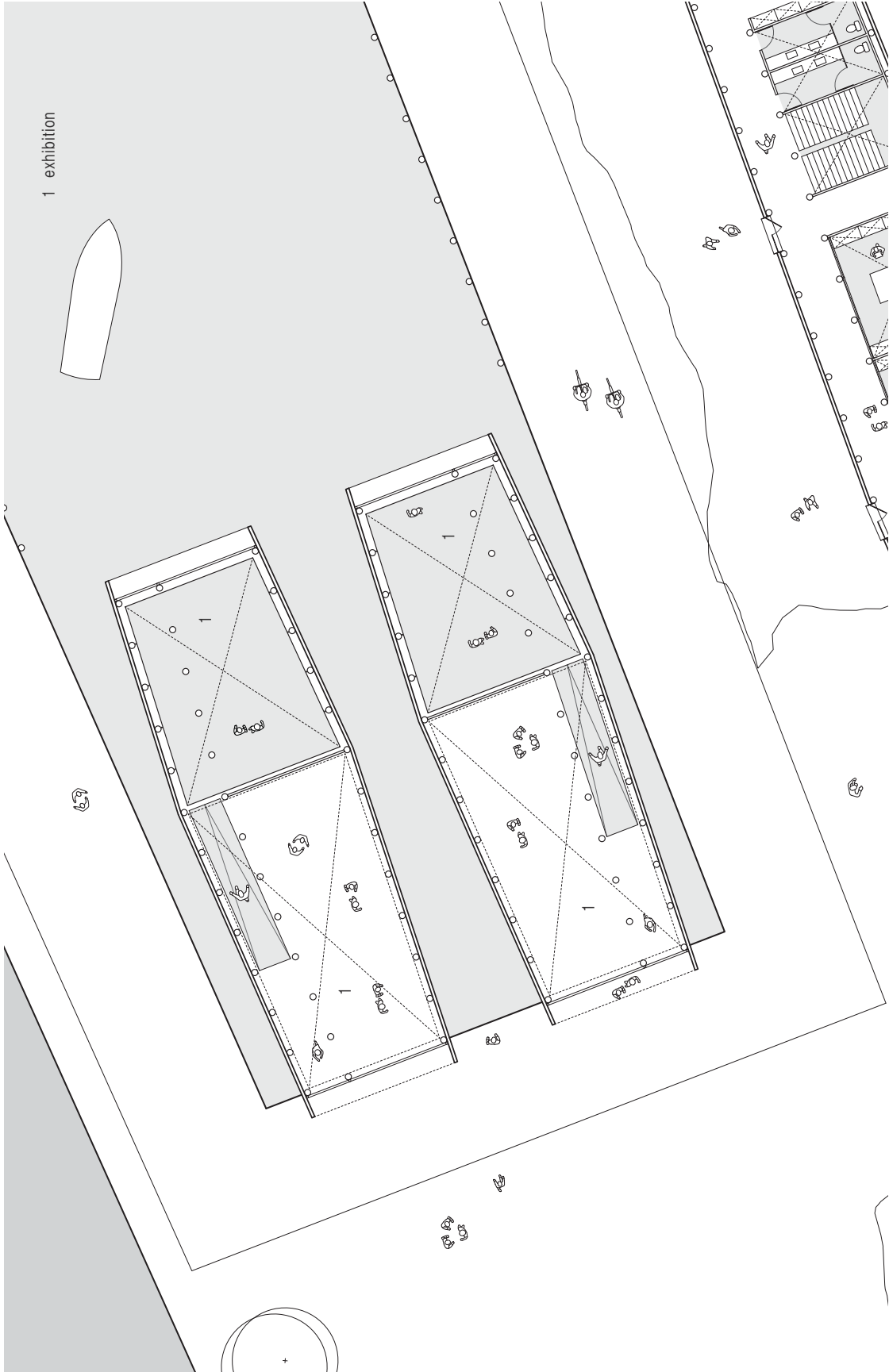
Media Arts and Cafe

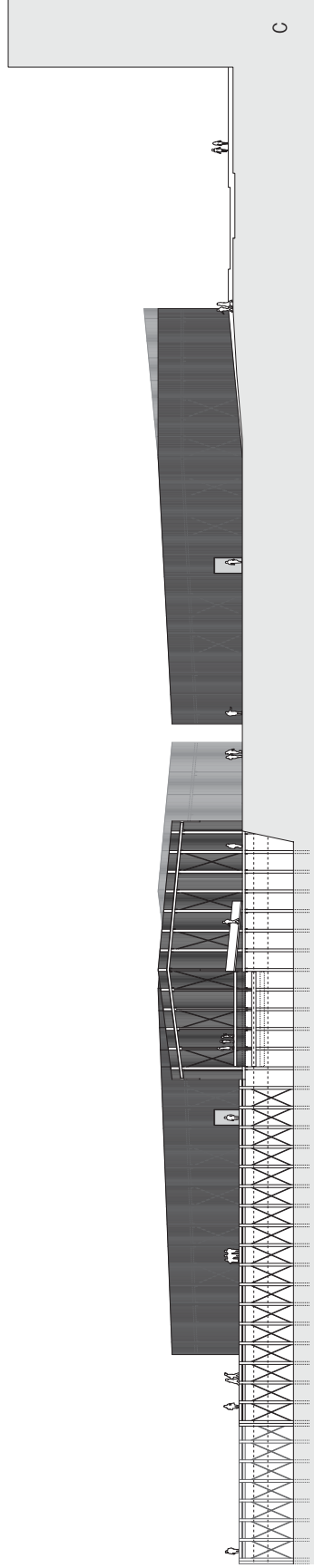
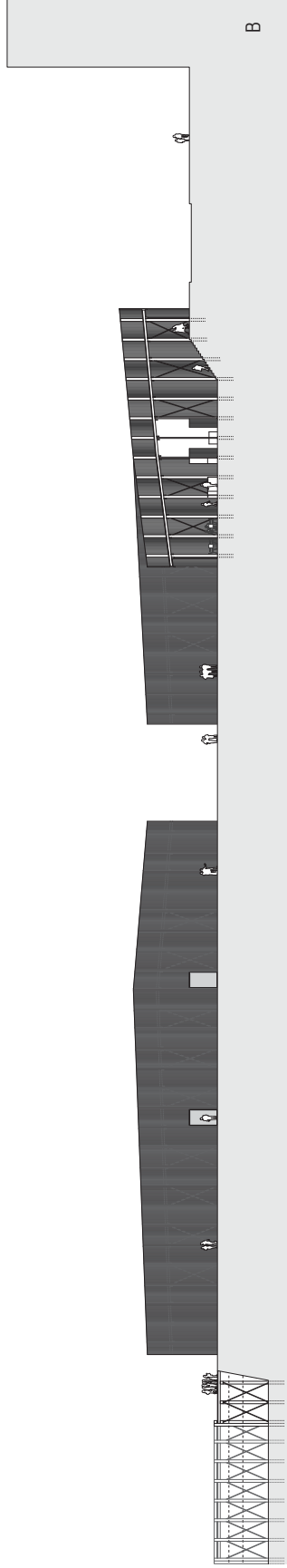
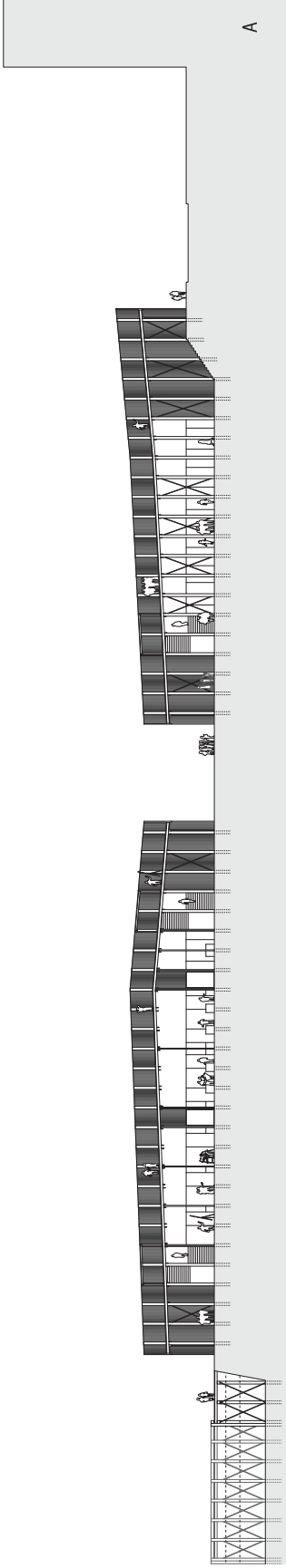




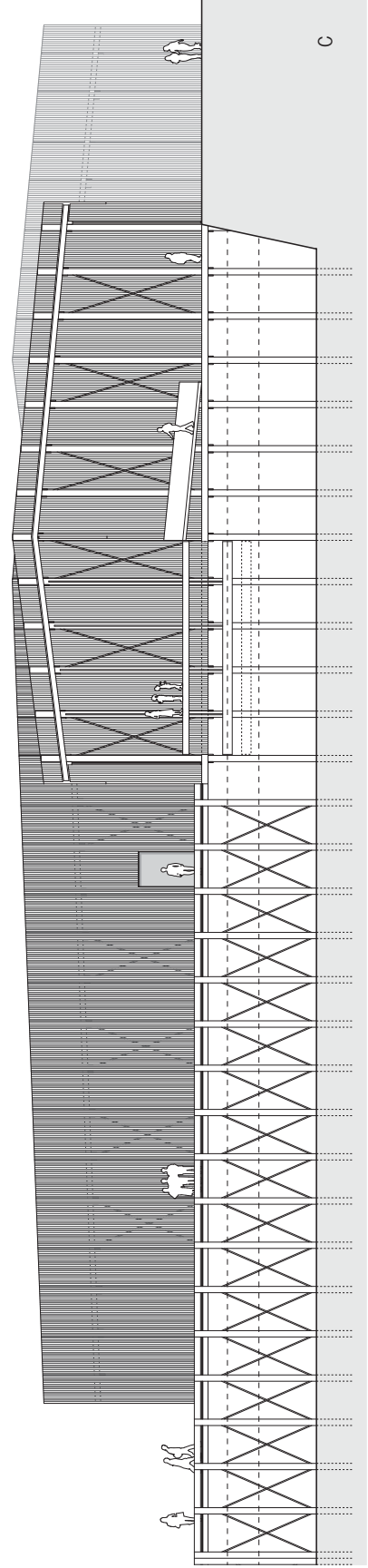
Culinary Arts and Fine Arts



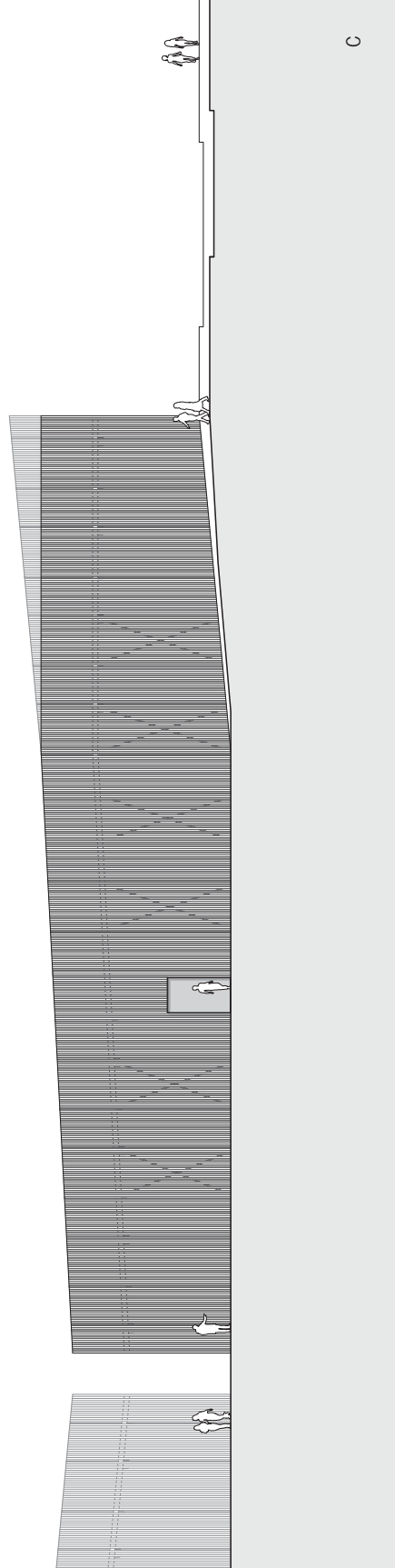
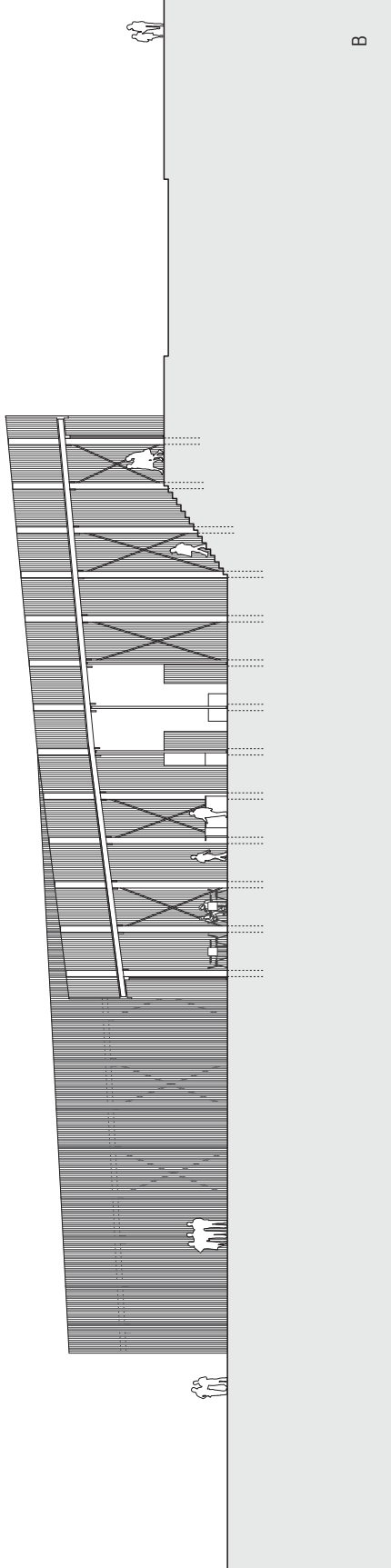


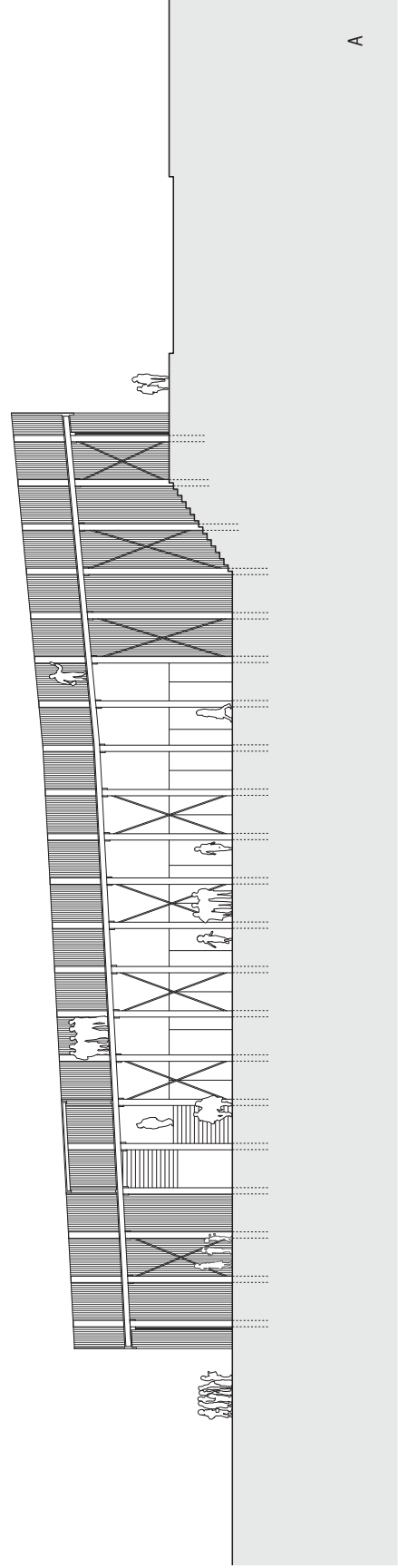
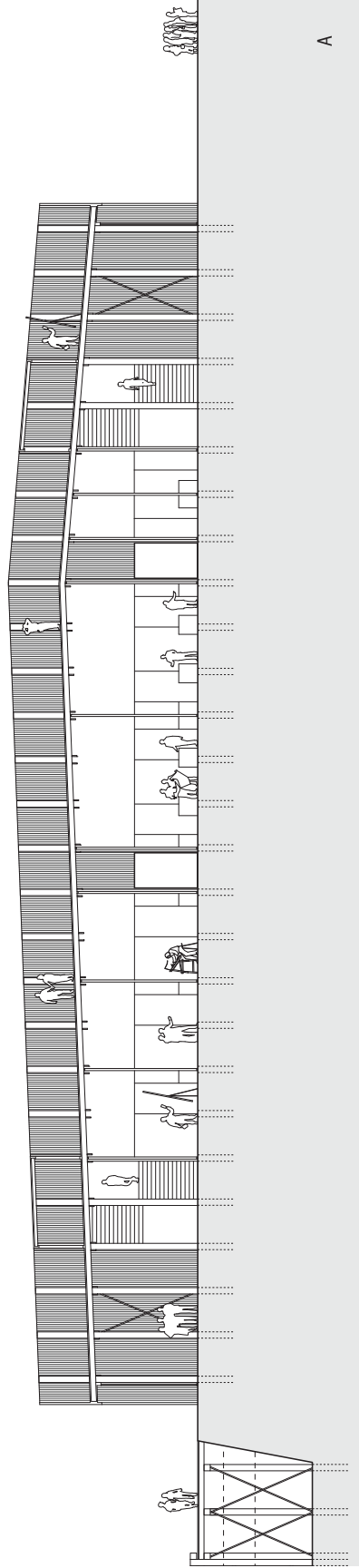


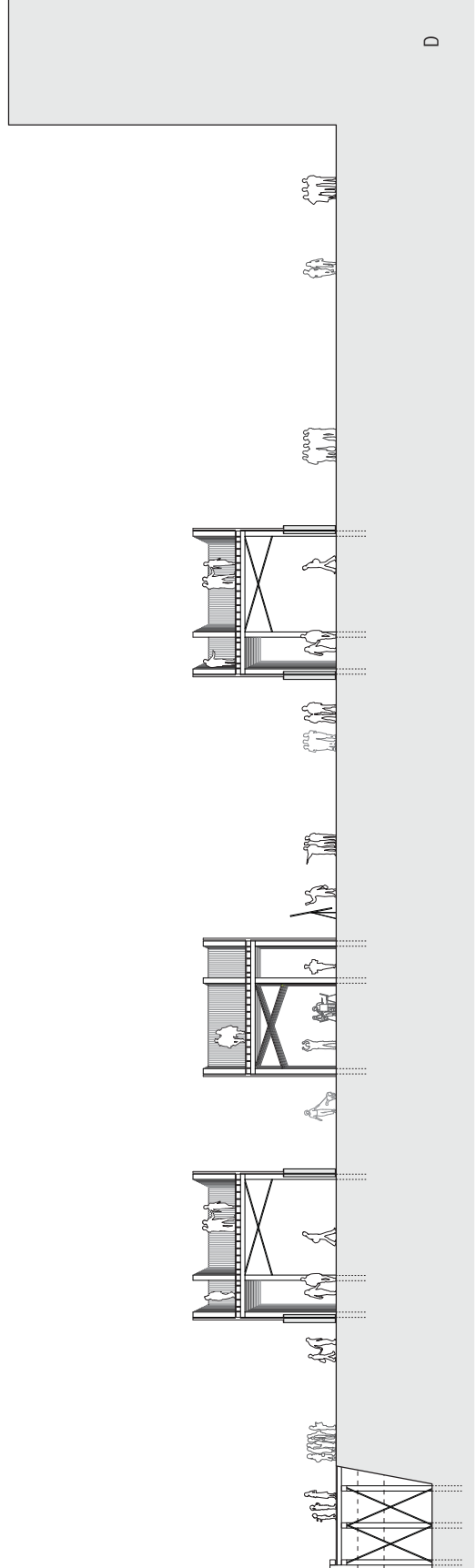
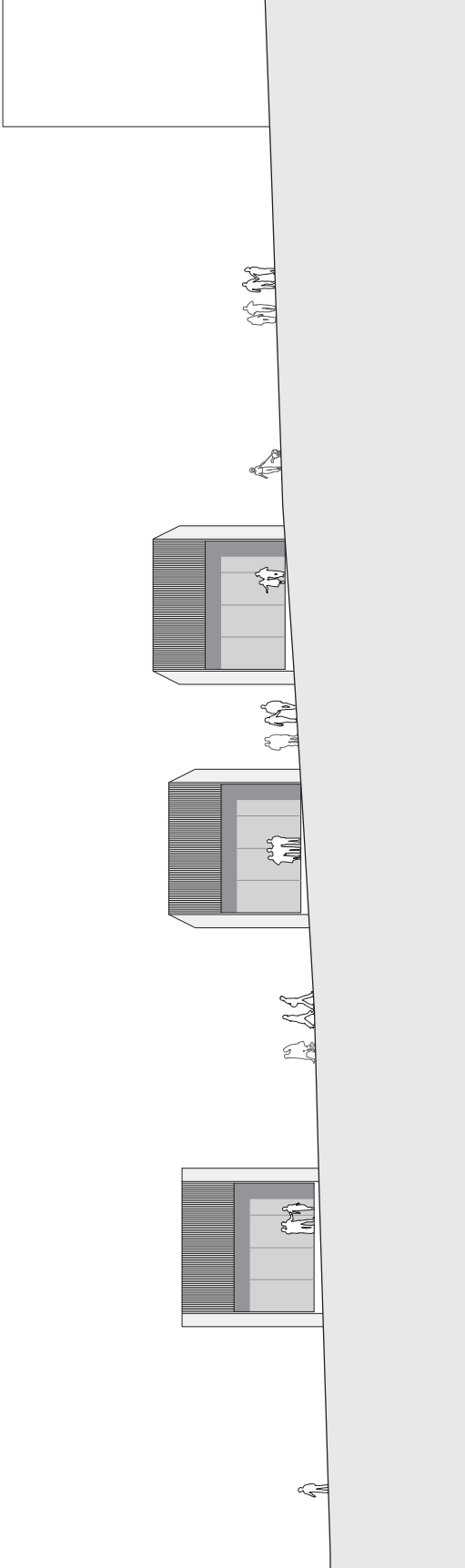
Longitudinal Sections



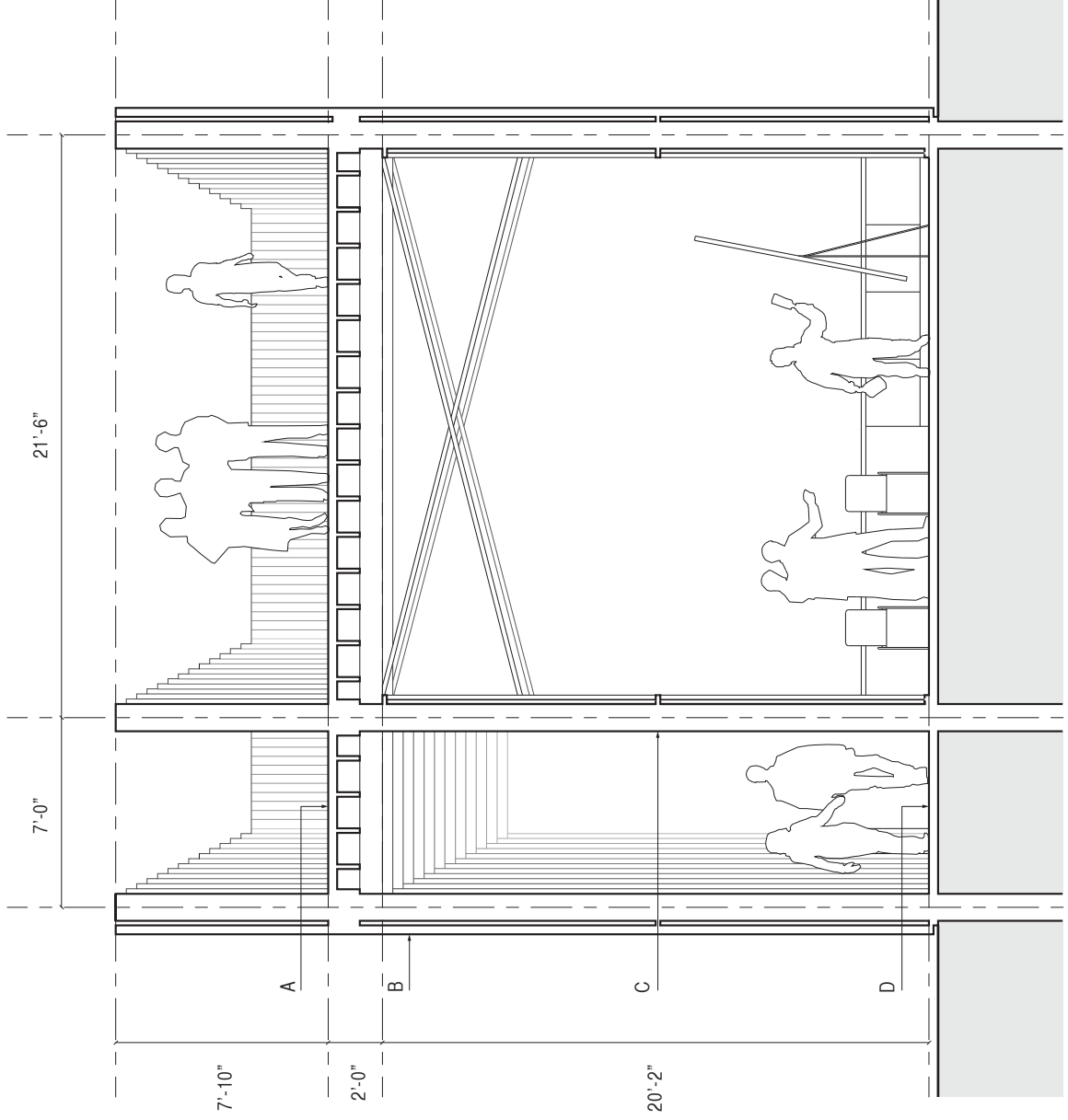
Longitudinal Sections







Transverse Sections



A Roof Assembly

- + waterproof membrane
- + rigid insulation
- + wood board sheathing
- + exposed wood rafters

B Exterior Wall Assembly

- + 2x4 vertical wood board
- + clear lexan panels
- + 2x4 vertical wood board
- + horizontal strapping
- + 1" diameter wood pile

C Interior Wall Assembly

- + 2x4 wood sliding panel system
- + 1" diameter wood pile

D Floor Assembly

- + 4" concrete slab on grade
- + vapour barrier
- + rigid insulation
- + compacted gravel base

conducted by Artscape in 2008 which found that artists prefer raw workable space, natural light, and room to expand.

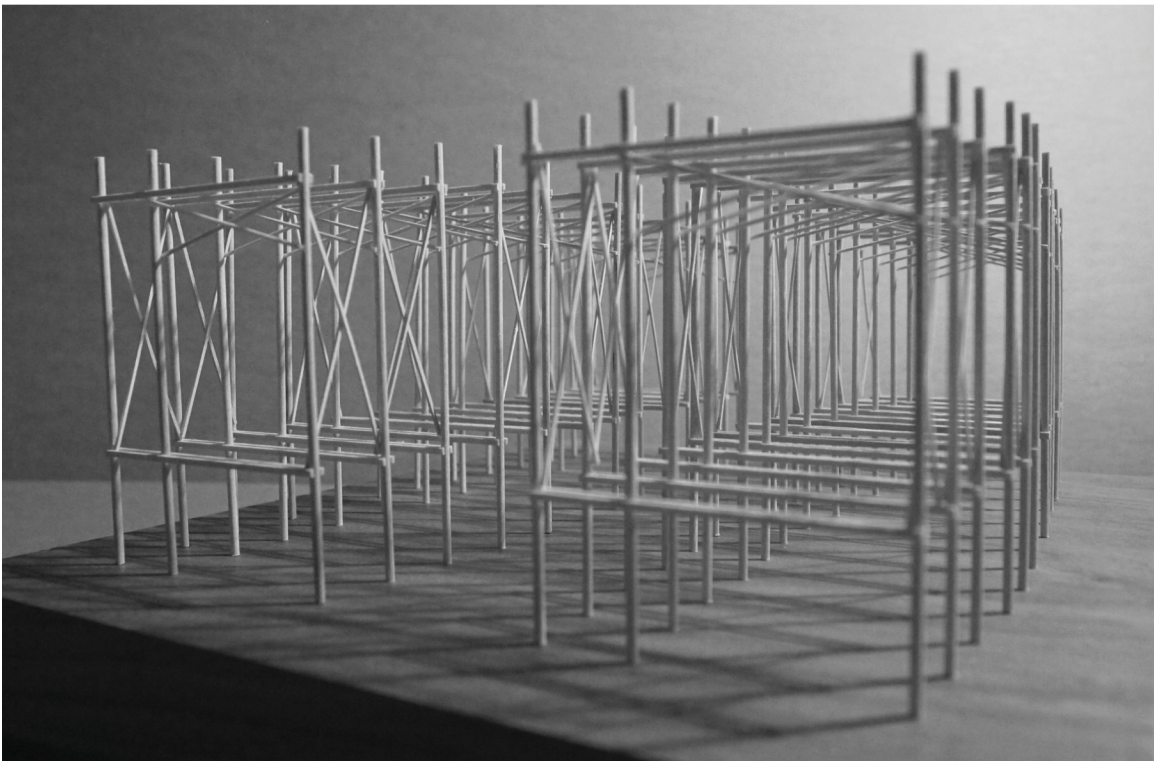
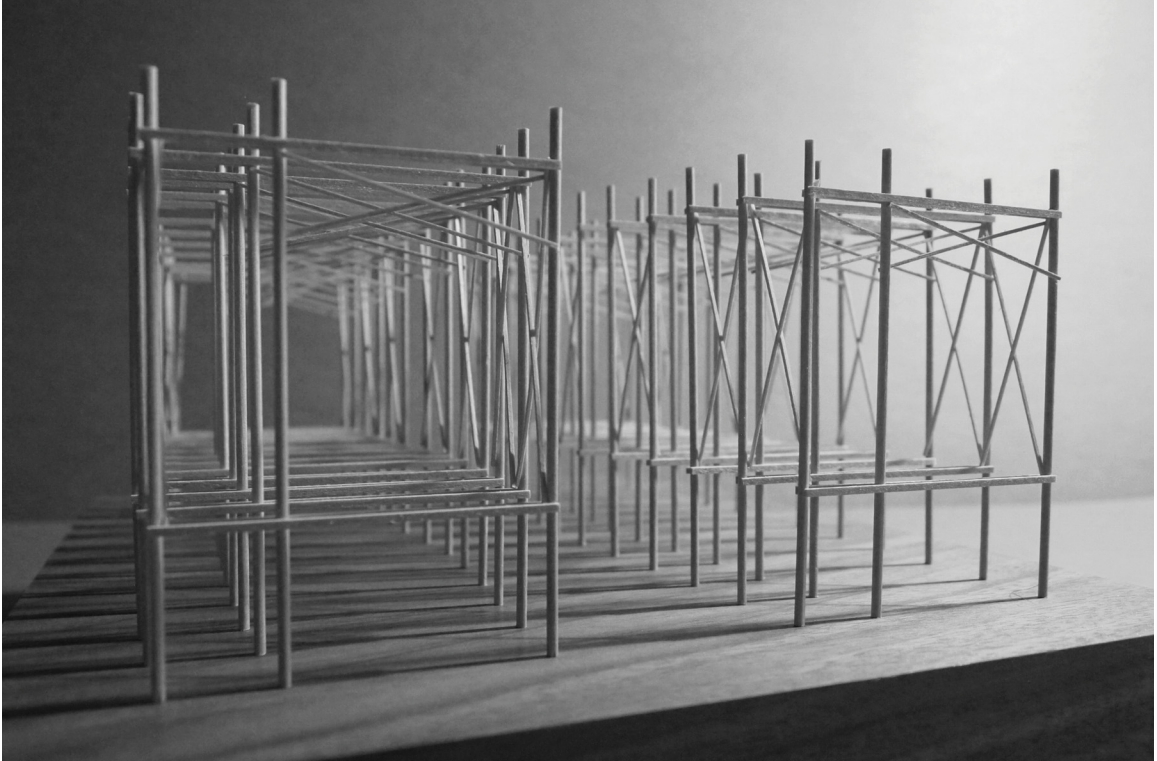
Hidden roof terraces, extending the length of each building, add another dimension to this project. Accessed from stairs on the interior, the roof terraces provide additional work and social spaces. In contrast to the interior spaces and exterior 'in between' spaces which establish a strong connection with the ground and the sea, the roof terraces connect artists with the sky. The outer walls extend vertically to reinforce this connection with the sky.

Tectonics and Form

Inspired by the timber construction of the surrounding pier, the buildings consist of a regular sequence of timber frames made from circular columns and rectangular spanning members. Cross-bracing and secondary structure for the roof provide additional lateral stability. The heavy timber creates a strong presence of structure on the interior that clearly defines the linear spatial organization.

To provide water drainage on the roof, the square-shaped frames grow proportionally from one end of the building, reach a high point and then descend to the other end. The resulting elongated and slanted form of the buildings take on a life-like quality. As a group, the buildings bring to mind images of seals lying flat on a rocky shore, an identifiable image in the Maritimes.

The tectonic expression of the buildings is consistent with their function; much like the art work and processes of making displayed within, the buildings also display how they are constructed. One can visualize the exposed structure



Wood frame models, gallery buildings

responding and reacting to the harsh maritime climate, allowing its users to become more in tune with the place.

Galleries

Unlike the other buildings positioned on the land, the galleries extend out into the sea. Accessible from the boardwalk, the galleries contain a large open area for the display and exhibition of a variety of artwork. Separate from the main exhibition space, an open colonnade leads to a sculpture display area located at the west end of the buildings. Inspired by the warehouse buildings found on the Halifax waterfront during the 19th century, this room contains a floating floor that moves with the changing tidal cycles of the harbour. As the floor rises, ones viewing experience of a hanging sculpture is altered. Visitors also develop a heightened experience of their surrounding environment; one can feel the wake of a passing boat as the floor undulates beneath, one can hear the sounds of the water crashing into the rocky shoreline below.

Services

Inspired by the plug-in units and coiled utility lines that service boats along the waterfront, the service strategy for the buildings creates a flexible system with moving parts in an effort to maximize versatility and freedom of use. The color coded system allows artists to plug into whichever service they require with a flexible connection. Much like the buildings exposed structural system, the service system is expressed and put on display.



Wooden facade with metal thresholds



Interior screen detail

Elements

Much like experiencing the Halifax waterfront during its rich industrial past, the processes of making are displayed for the public to view. To facilitate this interaction between artists and the public, a variety architectural strategies were developed.

Facades

The building facades were designed to provide a balance of transparency and privacy for both the artists and the public. To achieve this, a screen consisting of the vertically placed wooden boards with transparent polycarbonate sheets sandwiched in between was developed. Inspired by the cladding found on the surrounding pier, each vertically placed board is offset by the same dimension to create a regular sequence of solid and void. This system creates a dramatic lighting condition as light passes through it; a regular sequence of light and shadow. The transparent polycarbonate sheets are light weight and 20-50 times stronger than glass. Polycarbonate also provides a higher insulation value than glass and is much easier to cut and install.

Interior Screens

A screening system was developed to allow artists the ability to modulate their work spaces based on their requirements for privacy, openness and light. This system consists of a wooden frame with a series of interchangeable sliding panels. At the building scale this individually tailored screening system becomes a signature element; a rich mosaic of color and light. Depending on the spatial requirements of an artist, the screens can reconfigured within the buildings modular bay system to provide more or less space; studio spaces can be expanded or reduced by a bay unit.

Thresholds & Transitions

To permit the movement of materials into and out of the buildings, large loading doors were developed. Referring to the large metal plates that provide access to floating docks along the pier, the loading doors are defined by large metal hoops that penetrate into the buildings. These metal hoops signify entry and act as a threshold, clearly defining the transition between the interior and exterior. As one passes through this threshold, the sound and feel of the metal is experienced. Over time, this manufactured material oxidizes in the wet and salty maritime air, taking on a rich reddish brown coloration, a sharp contrast to the weathered wooden facade.

Stair elements that provide access to the hidden roof terrace, which mark the transition between the ground and sky, are also made with metal. As one ascends the stairs to the roof, the sounds of footsteps reverberate through the metal and the temperature of the metal railing is felt.

Floating Floors

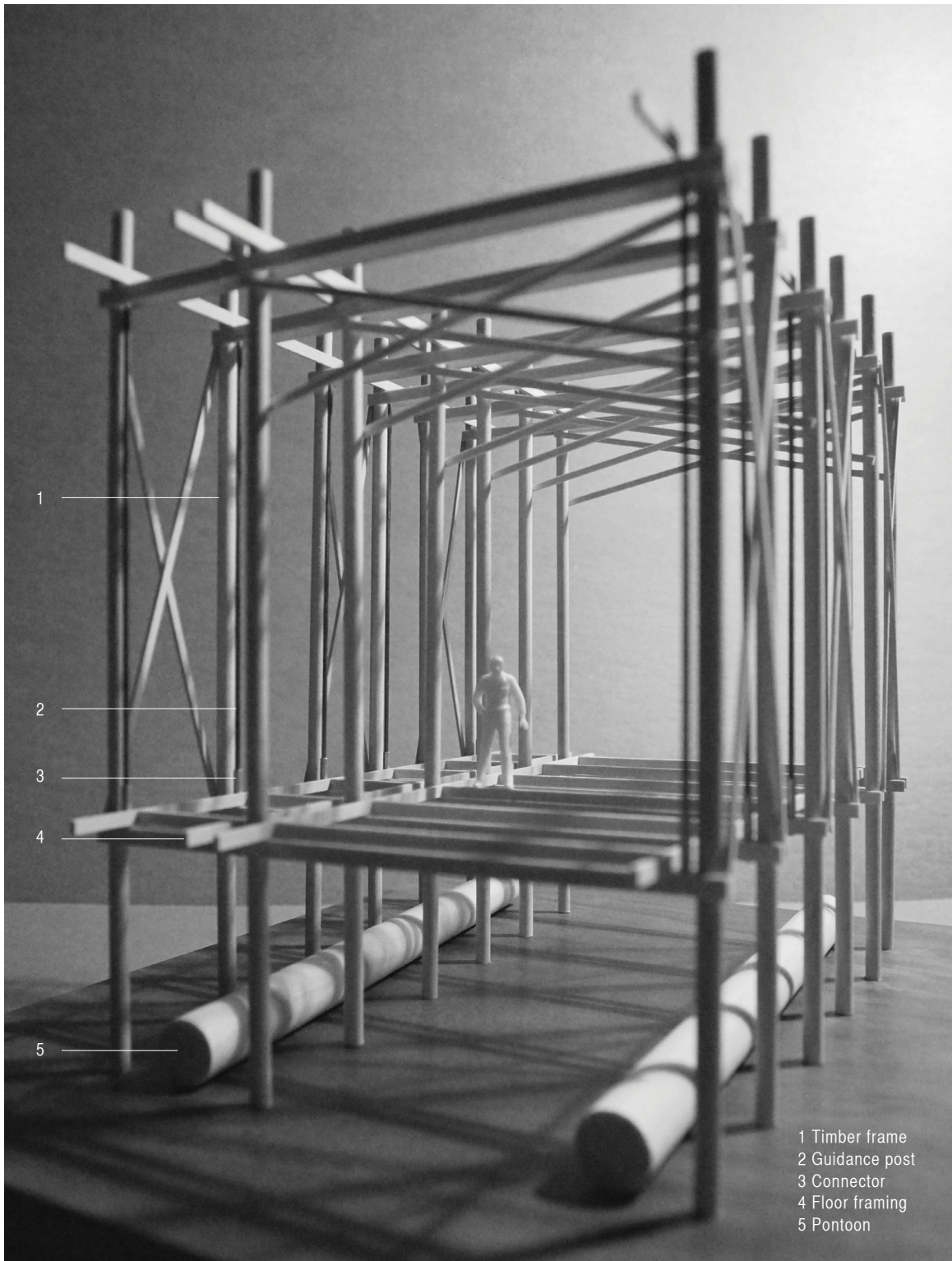
As previously described (see Galleries), the galleries each contain a floating floor which provide visitors with a continually changing viewing experience. This floor system, much like the floating docks found on the waterfront, consists of a wooden platform attached to a buoyant foundation. To restrict their horizontal movement, the floors are connected to the buildings structure. While the floor and building structure are constructed of wood, the connections between these two elements are metal. Metal posts are attached to the heavy timber structure to guide the vertical movement of the floating floors. The floors attach to these vertical posts with a loosely fitting metal connector that restricts most horizontal movement.



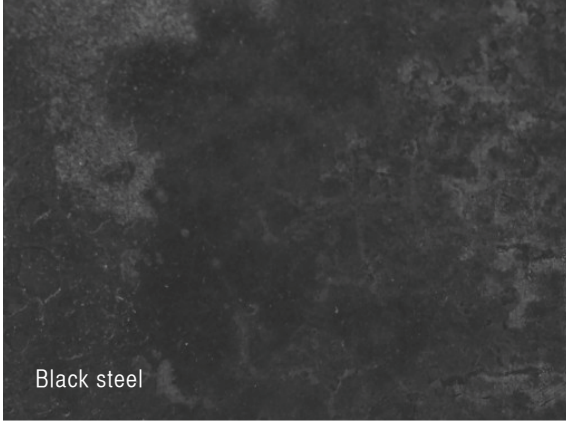
Exhibition area with metal stair in background



Metal stair



Sectional model showing floating floor with pontoons



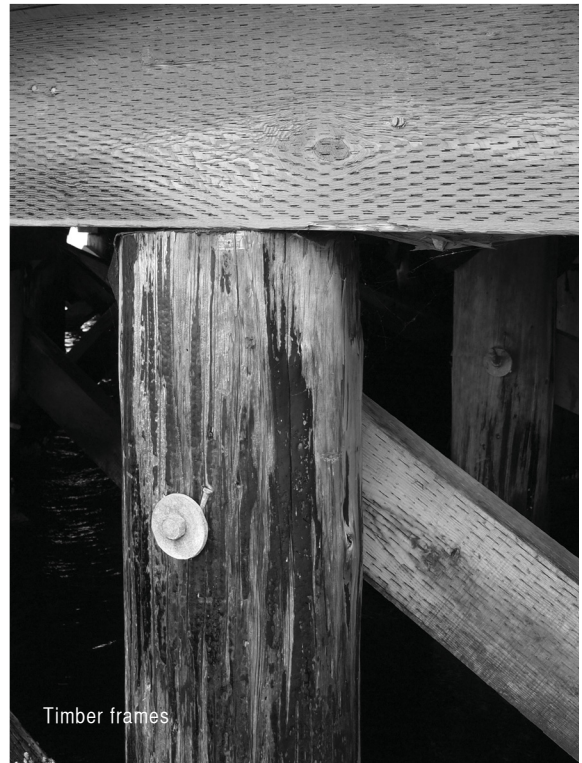
Black steel



Concrete



Wood boards



Timber frames

Interior materials

As the floor floats upward, one can hear the sounds of the metal connections between the floor and the posts.

Access to the floating floor is achieved with a metal ramp that extends into the colonnaded area in the galleries. The ramp rolls horizontally as the floor moves vertically. Large metal plates fastened to the wooden floors in the galleries prevent the wood from becoming damaged as the ramp moves back-and-forth.

CHAPTER 6: CONCLUSION

By providing a diversity of programming and flexible spatial conditions, this new cultural facility located in the heart of the city has the potential to create a vibrant and dynamic environment, bringing together a diverse mix of artists and creative practitioners. Unlike the majority of recent developments along the waterfront, this project addresses the current needs of the community by establishing a permanent facility dedicated to supporting the development and advancement of arts and cultural activities in downtown Halifax - activities that are critically important to the life and vitality of the city.

A variety of architectural strategies were developed to encourage public visitation through the site, including program, orientation, spatial arrangement, porosity, and envelop. By creating an engaging experience and allowing for the interaction of artists and the public, the facility promotes the works and activities of its users.

Through a study of the waterfront from its founding to its current condition, a strategy of uncovering the inherent qualities of place to inform new development was explored. Each element of the project was developed through a careful and thorough reading of the place. Finnish architect Juhani Pallasmaa writes about the importance of creating architecture that develops a strong relationship with its place:

Profound buildings engage in a conversation with the past and with other buildings; they express their greatfulness to precursors, revalorize the essence of preceding works, and open up new horizons. In fact, the caliber of a building can be judged by the intensity and meaningfulness of this dialogue across time. (Pallasmaa 2011, 9).

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APPENDIX 1: ARTS AND CULTURAL INSTITUTIONS

Programs and Services

Nova Scotia Community College <i>Waterfront Campus</i>	applied arts & new media graphic design + print production photography recording arts screen arts business baking & pastry cooking culinary arts trades & technology cabinet making carpentry machining metal fabrication welding
NSCAD University <i>Granville Campus</i> <i>Academy Building</i> <i>Port Campus</i>	media arts photography film intermedia craft ceramics jewelry metalsmithing textile fashion fine arts sculpture painting print making drawings
Nova Scotia Centre for Craft & Design	glass studio jewelry studio wood studio pottery studio weaving studio

Dalhousie University
Sexton Campus

architecture and planning

wood shop
wet lab
computer labs
photography studio
design studio
exhibition room
printing lab
digital fabrication
classrooms
administrative offices

engineering

metal shop

design & technology library

Centre for Arts & Technology

audio recording studio
photography & film studio
fashion design
computer labs

Zwicker's Gallery
Studio 21 Fine Art
Gallery Page & Strange
Argyle Fine Art
Khyber Centre for Arts
Art Gallery of Nova Scotia

exhibition space
sales & rental
cafe & restaurant
classrooms
administrative space

Neptune Theatre

set production
wood shop

Nova Scotian Crystal

glass blowing
exhibition & sales

Breakhouse Inc.

multi-use production shop

APPENDIX 2: PUBLIC INTERFACE

Case Studies

Kitchen labs open to the street, GBC Centre for Hospitality and Culinary Arts (Kearns Mancini 2014)



GBC Centre for Hospitality and Culinary Arts Toronto, Ontario

This three storey, in-fill addition and interior renovation of the George Brown Chef School in downtown Toronto, transformed a 1980s building into “showcase for innovation in culinary education” (Kearns Mancini 2014). Designed by Kearns Mancini Architects and completed in 2008, a two-storey glass facade exposes four kitchen labs to the street permitting passersby a view of the student chefs as they create their culinary works. The interaction and level of engagement between the creator and the public is of interest to this thesis work. Here, the creators are exposed to the street through a wall of clear glass. But is this high level of transparency necessary to establish a strong connection between the creators and the public? Perhaps this relationship, which seems to be purely visual, could be achieved through other or a combination of architectural and programmatic strategies.

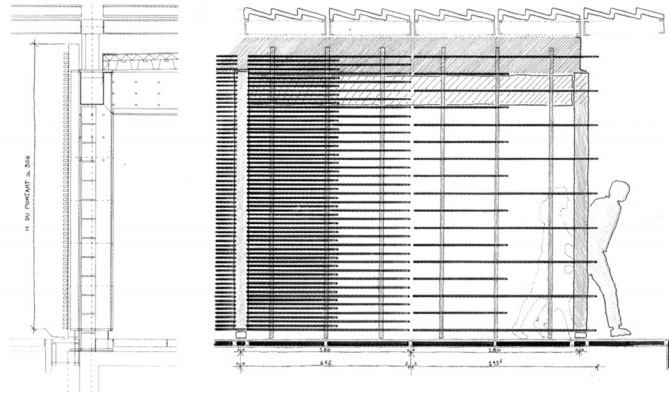
Transparency between interior and exterior, Palo Verde Library and Maryvale Community Center (Wendell Burnette 2014)



***Palo Verde Library and Maryvale Community Center
Phoenix, Arizona***

Designed by Wendell Burnette Architects in Phoenix, Arizona, this multi-use facility includes a public library, auditorium, community centre and outdoor park area. Carefully positioned on the site to maintain the existing park-like conditions, the buildings form an intimate passageway in between. Comprised of metal clad blocks resting on 8-foot high bands of glass, a transparency is created that allows people passing by to interact with the activity inside (Wendell Burnette 2014). By creating an engaging experience for users as they inhabit or circulate through these in between spaces the project successfully integrates with its surrounding context. This strategy of creating protected or sheltered outdoors spaces between buildings is not unlike the densely built up fabric found on the Halifax waterfront during the 19th century, a compelling strategy given the harsh maritime climate.

Study of the external walls using differing densities of wood slats (Buchanan 1995)



JM Tjibaou Cultural Centre, Noumea, New Caledonia

This project consists of a series of curving cage-like structures of wooden ribs and slats inspired by traditional forms. Designed by the Renzo Piano Building Workshop, the cladding system, which refers to the texture of traditional woven construction, consists of wooden slats of different widths and spacings to modulate such things as views in and out, sunshading and airflow (Buchanan 1995, 190).