

**MONUMENT IN THE VALLEY:  
AN ADAPTIVE REUSE STRATEGY FOR THE NOVA SCOTIA  
TEXTILES LIMITED MILL OF WINDSOR, NOVA SCOTIA**

by

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Submitted in partial fulfilment of the requirements  
for the degree of Master of Architecture

at

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## **DEDICATION**

To my parents for all of your love and support.

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## **ABSTRACT**

This thesis addresses the revitalization of the former Nova Scotia Textiles Limited mill in Windsor, Nova Scotia, Canada. Windsor is a small town that lies along the confluence of the Avon and St. Croix River shores, off the Bay of Fundy, and is the gateway to the Annapolis Valley region. This abandoned textile mill serves as a monument in the landscape while also holding a special part in the identity of the town's historic industrial past.

This thesis proposes to establish a meaningful connection between the textile mill and the community, as well as with the phenomenal Fundy landscape by means of a regional interpretive center. Commercial, institutional and recreational facilities ensure year-round stability for the site. A context-based approach links the architectural intervention to the dynamic layers of building, site and tidal landscape beyond.

## **ACKNOWLEDGEMENTS**

I would like to thank Roger Mullin, Ted Cavanagh, and Maria Elisa Navarro Morales for your collective guidance and criticism.

From the Town of Windsor, I would like to thank the Windsor-West Hants Planning Department for supplying me with base drawings of the town as well as Scott Burgess who spent an afternoon showing me around and sharing his knowledge of the mill. From the Annapolis Valley region I would like to thank Beacon Hill Design for supplying me with base drawings of the mill.

I would like to thank my friends, near and far. Without you I would not have kept afloat. This thesis is a little part of each and every one of you who took the time to listen to me day and night and help me right up to the end.

Finally, I would like to thank my parents for my education experience, whom without would not have been possible. Thank you for always believing in me and cheering me on.

## CHAPTER 1: INTRODUCTION

### Thesis Question

How can an abandoned textile mill be redesigned to reconnect the local landscape, culture and community?

### Art: Culture in Community

Art is not limited to precious objects and a refined form of expression, rather it includes the everyday life practices and routine acts of communities. In this sense, art is deeply rooted in every culture that exists around the world. However, when art is introduced into a community in a formal way it has the ability to foster positive change and profoundly affect both the economic and social aspects of its community (Borrupt 2006, 5).

Art and cultural organizations that support community involvement and participation, increase the potential for people to understand themselves and change how they see the world, and bolster community pride and identity. [T]he arts serve to improve derelict buildings, preserve cultural heritage, transmit values and history, bridge cultural, ethnic, and racial boundaries, and stimulate economic development. (Borrupt 2006, 13)

There are a number of examples of cultural projects where communities of varying sizes and regions exemplify revitalization through the arts. A common thread among such places is that they have both seasonal and permanent activities with some more organized than others. “It is important to develop regular activities that encourage casual visits rather than organized events alone to promote steady use of the art space and reinforce its role as a community center” (Grodach 2010, 490). “The ability of art spaces to realize such outcomes is linked to their role as a form of public space” (Grodach 2010, 475). Several examples of these kinds of projects linked with industrial building conversions are explored in case studies further along.

Further, the direct farmer-to-consumer exchange or artisan-to-consumer experience is what builds trust and networks amongst communities. The inclusion of commercial activities such as markets, restaurants and specialty shops into cultural spaces attracts more users and develops a synergistic effect that generates more interest and support than each would alone (Bianchini 1988, 16).



## CHAPTER 2: GEOGRAPHIC AND HISTORIC CONTEXT

### Landscape and Phenomena

phenomenon

1. a fact, occurrence, or circumstance observed or observable in nature, especially one whose cause or explanation is in question.
2. something that is impressive or extraordinary.

(Dictionary.com 2013)



Shorebirds moving around Minas Basin mudflats, photograph by Donald Sam. (Nova Scotia Department of Natural Resources 2006)



Receding tide in Cheverie, NS.



Avon River and St. Croix River area.

Natural phenomena occur around the world in many forms and may be categorized into geologic, meteorologic, and oceanographic. Examples of phenomena in this area vary widely to include erosion, migration, sunrise, tides, weather, etc. They can occur in an instant or over long periods of time. They fascinate our minds and captivate our attention, often leaving us mesmerized or inclined to document them.

Man's relationship to the space around him is an ever-changing experience. The water's edge is an example of a temporal boundary that changes over time and space. To see the world from a phenomenological perspective is to bridge the gap between being and being-in-the-world; by perception, such as seeing, hearing and touching, by bodily actions and movements, and intentionality, emotion, and awareness (Tilley 1994, 11). Architecture that can strengthen this phenomenological experience or heighten the feeling of the space you are in does so by contrast.

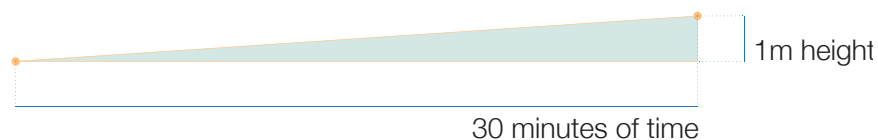
### Bay of Fundy Landscape

The Bay of Fundy is located between the American state of Maine and Nova Scotia and New Brunswick on the Canadian Atlantic coast. It has the highest tidal range in the world, with tides that reach up to 16m as compared to a 1m range for average world tides. The strong currents have several effects on the tidal landscape. They

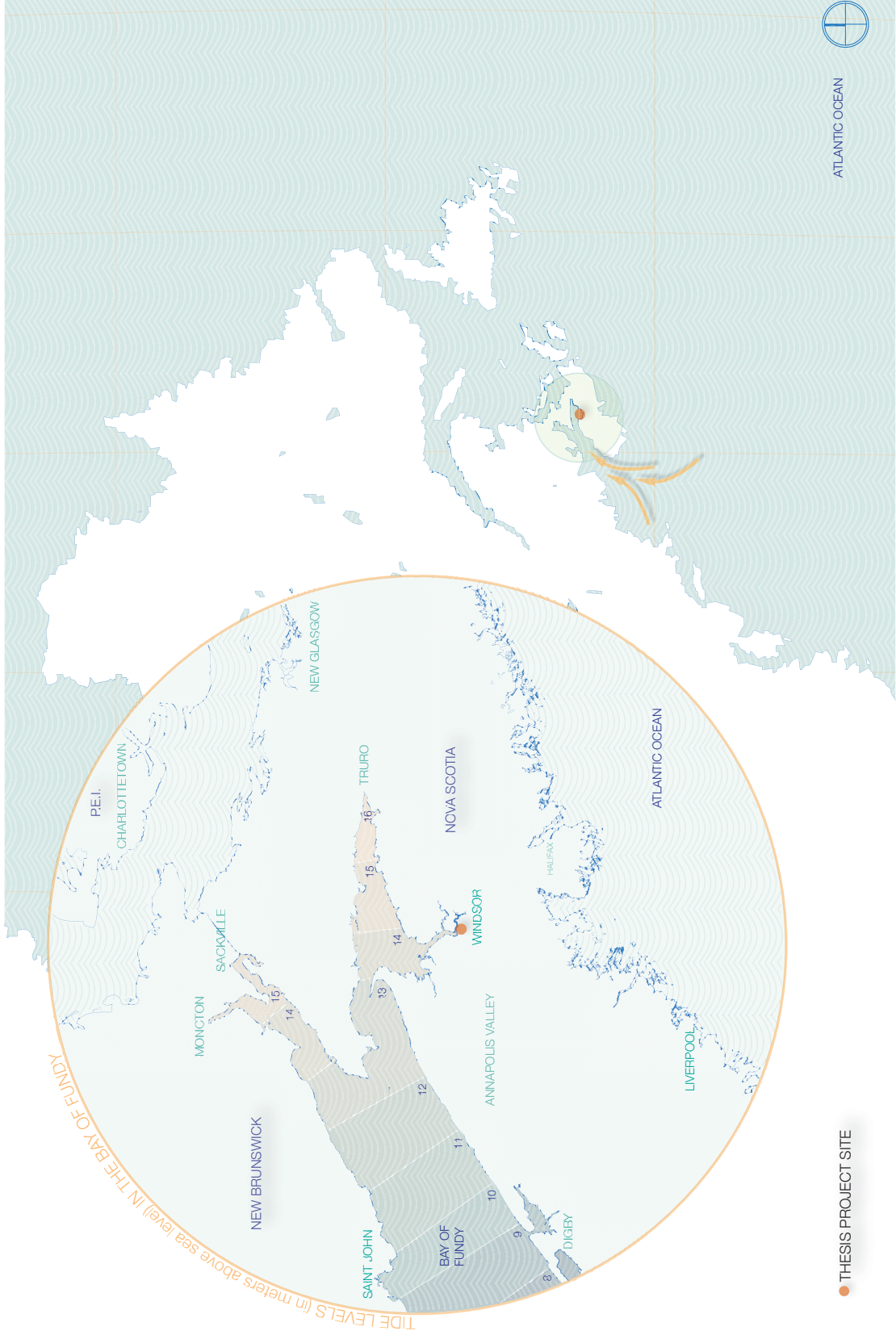
erode the landscape creating spectacular cliffs and sea stacks. The currents also stir up nutrients that lie on the ocean floor, mud flats and salt water marshes providing food for a diverse range of animals, birds and fish (Amusing Planet: Kaushik 2012).

## Tides

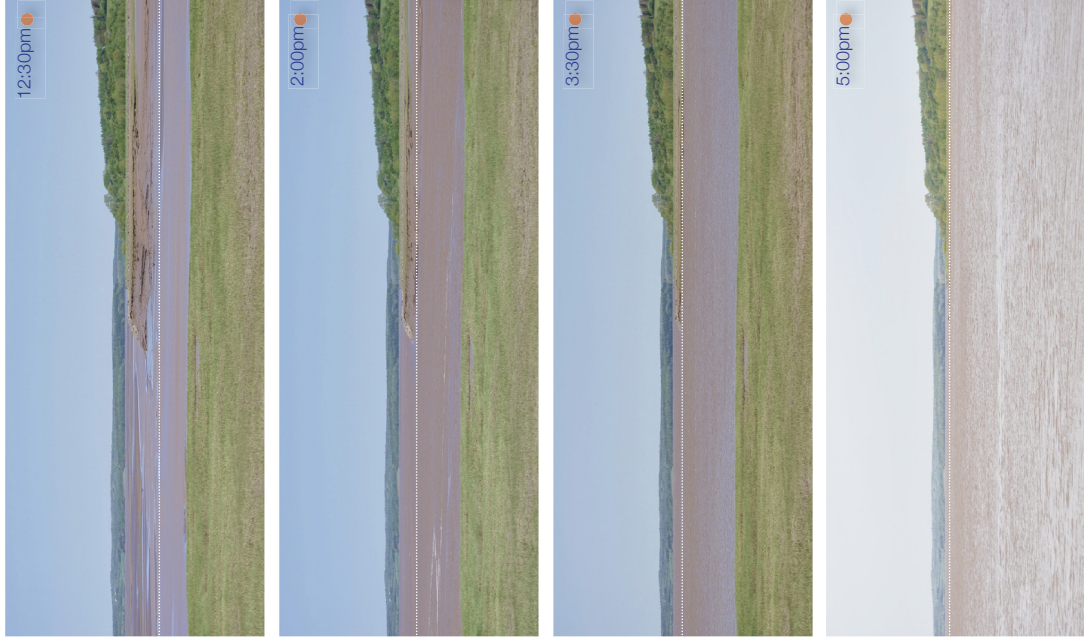
The funnel shape and large size of the Bay of Fundy allows for more water than that of the world's combined freshwater rivers to flow in and out of the bay during each tidal cycle. On average, it takes six hours and thirteen minutes for the water to rise from low to high tide in a cycle, with two low tides and two high tides per day. This has a great affect on fishing, transportation, etc. because much of the bay empties out for approximately half of every day and water oriented industry has to be timed accordingly. Finally, the tide levels vary slightly in conjunction with the lunar cycle, as they are a reflection of the moon's gravitational pull on Earth. This phenomenon brings people out from around the world to experience the change of the tidal landscape first hand (Amusing Planet: Kaushik 2012).



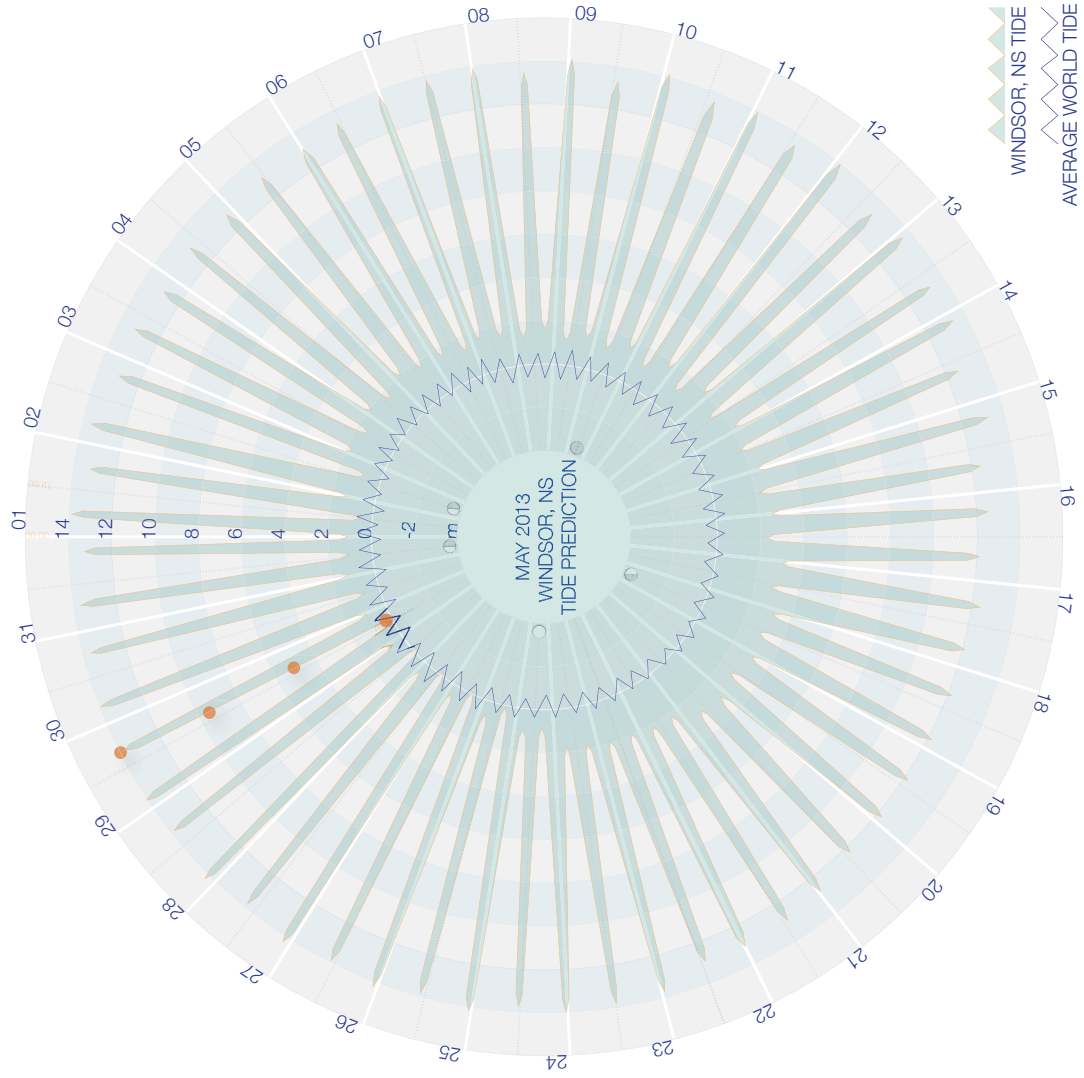
Tidal flow diagram for the Avon River and St. Croix River area.



Tide levels in the Bay of Fundy. (Data from Bay of Fundy 2013)



Tide levels at the confluence of the Avon and St. Croix rivers in Windsor, NS on May 29, 2013.



Tide prediction for Windsor, NS in May 2013. (Data from Tide Forecast 2013)

## Sandpiper Migration

The Bay of Fundy is an important shorebird migration stopover area within the world. More than twenty different species of shorebirds pass through the Fundy region each year. Seventy-five per cent of the world's population of semipalmated sandpipers migrate from northern Canada down to South America with their feeding and roosting sites located in the upper Bay of Fundy, making them the most prevalent species of shorebird in the region. They begin migration in early summer and can be seen between July and October feeding on the rich supply of mud shrimp, mud worms, snails, etc. that live in the mudflats in preparation for their long non-stop flight to their wintering grounds. This phenomenon brings people out to the region to experience the spectacular aerial flight displays (Nova Scotia Department of Natural Resources: Sam and Parsons).



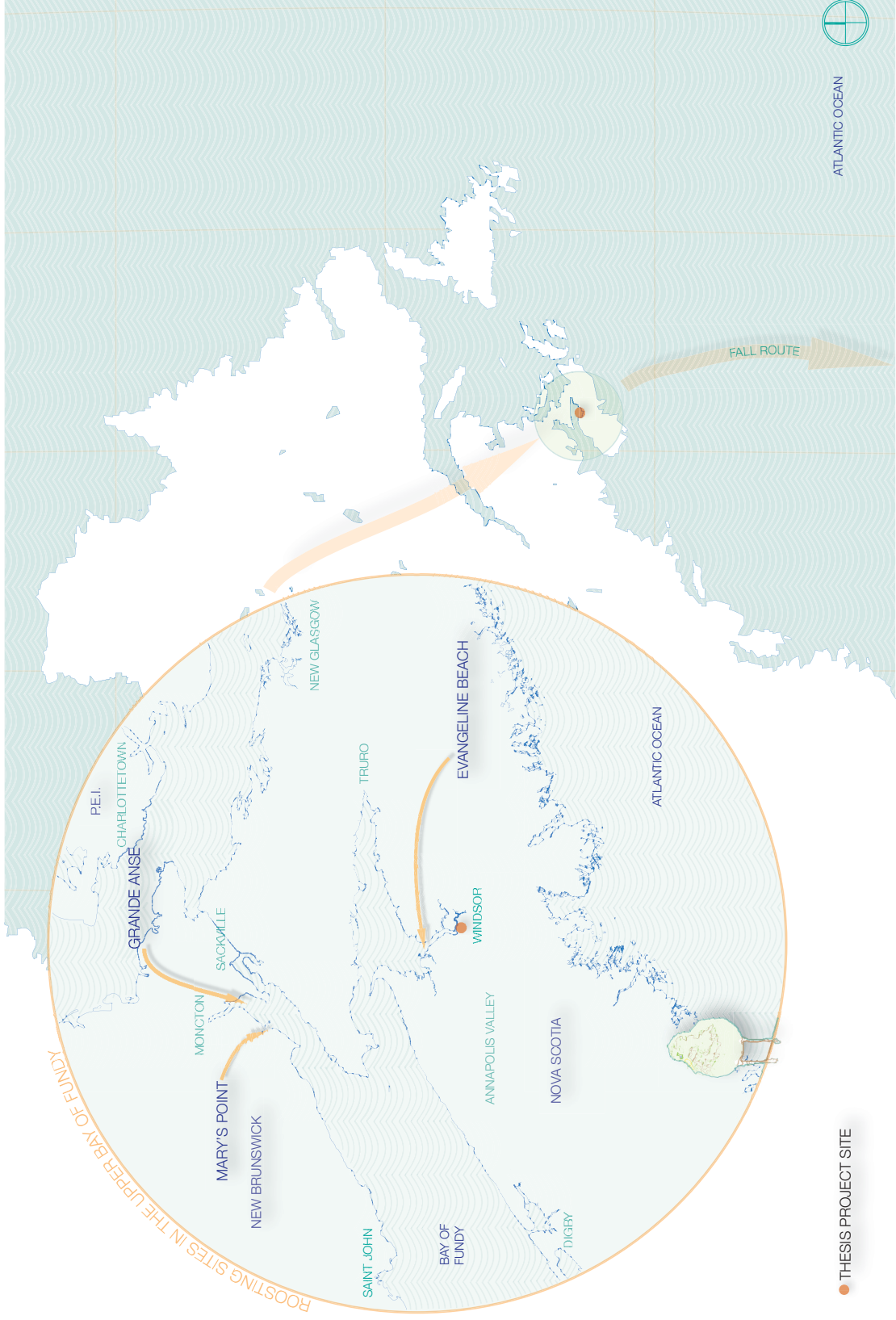
Fall migration, 2011, photograph by Guy L Brun. (National Geographic 2011)



Semipalmated sandpipers. (Nova Scotia Department of Natural Resources 2006)



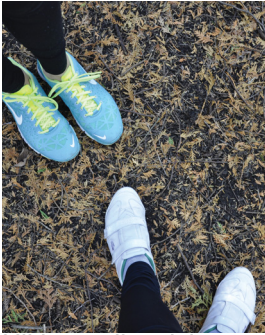
Annual migration routes of the semipalmated sandpipers. (Data from Nova Scotia Department of Natural Resources 2006)



Roosting sites in the upper Bay of Fundy. (Data from Nova Scotia Department of Natural Resources 2006)

## Annapolis Valley Region

The Annapolis Valley region lies along the southern shore of the Bay of Fundy between two parallel mountain ranges and its northeastern part forms the western shore of the Minas Basin. It stretches from Digby at its west end to Windsor at its east end and is home to about 100 000 Nova Scotians (Wikimedia Foundation 2012).



Hiking trail activity.



Market in Greenwich, NS.



Apples in an orchard in Greenwich, NS.



Ross Creek Center for the Arts, Canning, NS.

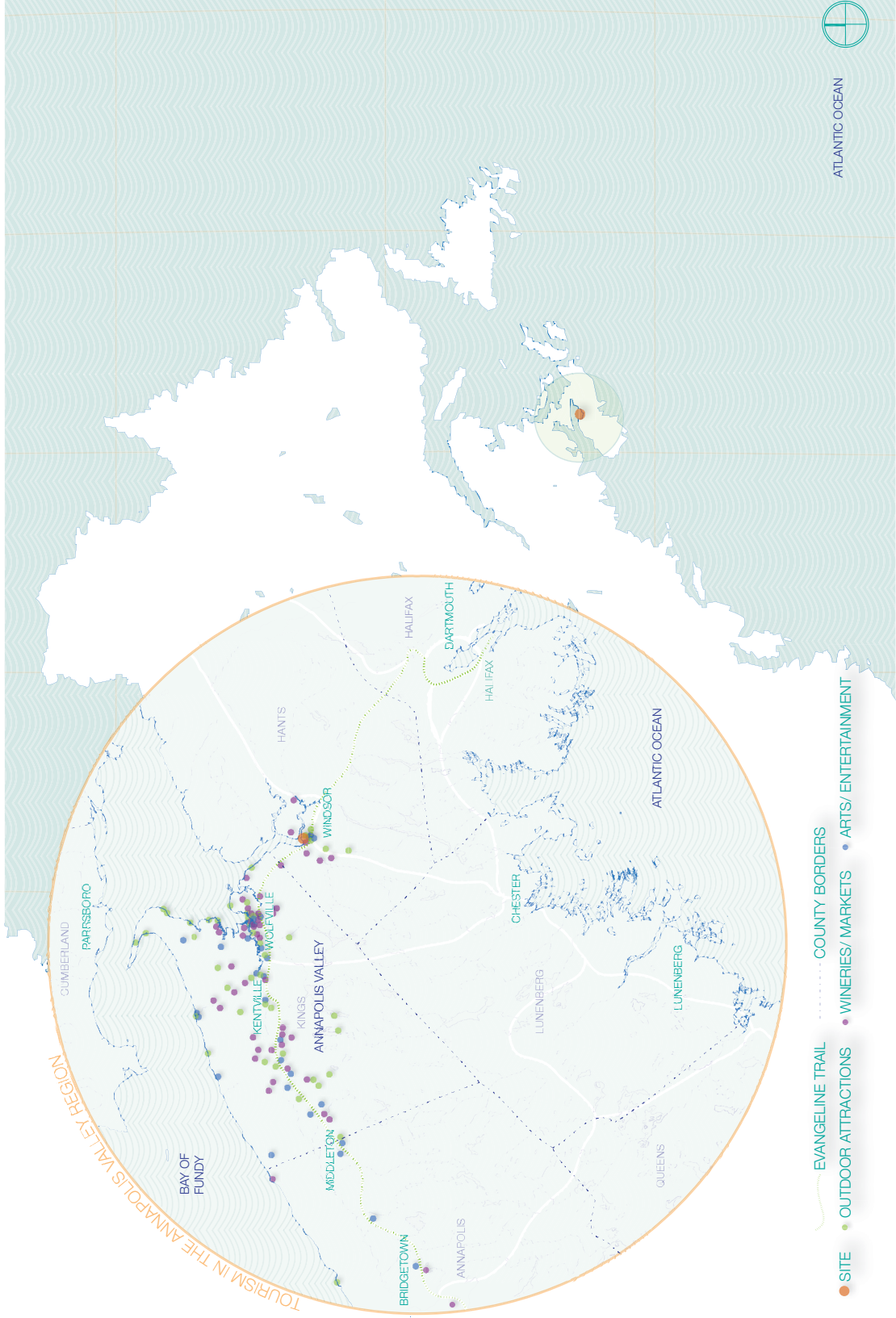
The region welcomes many visitors each year to explore its spectacular geographic features, enjoy the produce of its fertile land and celebrate its rich culture. Outdoor attractions include the Evangeline Trail, beaches, hiking trails, golf courses and water sports such as tidal bore rafting. There are countless farms in this region, with estimates of up to 1000, including vegetable, fruit with a focus on apple orchards, and vineyards as well as honey and other specialty farms. Many small scale markets and vendors are spread across the region. Acadia University contributes to the region's academic community. Arts and entertainment are also abundant in the region with many artist studios, theaters and museums throughout. The region is known for hosting many fairs and festivals, including the annual Annapolis Valley Apple Blossom Festival in late May and early June that is now in its eighth decade of celebration (Annapolis Valley, Nova Scotia Travel and Tourism Information 2012).

WINDSOR, NS



View of the Annapolis Valley from the Look Off, Canning, NS. September 2012.





Tourism in the Annapolis Valley region. (Data from Annapolis Valley, Nova Scotia Travel and Tourism Information 2012)

## Windsor, Nova Scotia

Set amongst other small towns in the region, the Town of Windsor shares the picturesque tidal landscape and farming country with a culture rooted in harvesting the land as well as crafting and manufacturing goods dating back over 250 years. It lies south of the confluence of the Avon and St. Croix River shores, off of the Bay of Fundy.



Shippbuilding  
in Windsor, NS.  
(Government of Nova  
Scotia: Graham)



D.A.R. Station,  
Windsor, NS.  
(Government of Nova  
Scotia)



High Tide at Windsor,  
NS. (Government of  
Nova Scotia)

### A Historic and Industrial Past

The township of Windsor was incorporated in 1764 with the 200+ settlers who were an 'influential collection of politicians, merchants and officers from Halifax and abroad' (Smith, Harvie and Kinsman 1977, 12). This population had grown after the expulsion of the Acadians who originally settled on the land. The town had established King's college which drew in a population of respectable citizens and it was also considered a place of importance within the region because of its weekly public markets, rich fertile ground, good road to Halifax, Fort Edward and numerous churches. Lumber was an available and extremely versatile commodity thus much of the town was built with it, referring to the architecture of the town as 'timber architecture' (Smith, Harvie and Kinsman 1977, 100).

Between 1840-1890 the main factors to Windsor's economy were agriculture, shipping and shipbuilding. Windsor has a rich history linking its people to the waterways. The shipbuilding industry was reborn in the early 1810s, after being lost from the Acadian settler's past which were said to have built ships in the region beginning in the 1760s (Smith, Harvie and Kinsman 1977, 80). As steamers began to sail the oceans in the late 1800s the market for sailing ships declined and Windsor's leading industry changed. Up to this point the water's edge was an important place for the town as transportation was primarily by boat, however the roads and rail

began to have increased significance as improved transportation developed on land. The first significant business to develop after the decline of shipbuilding was the Windsor Furniture Factory, established in 1871 which employed around one hundred workers. Other developing industries of Windsor were the fertilizer plant, gypsum plant, tannery and cheese factory (Smith, Harvie and Kinsman 1977, 56). At this same time the textile industry was flourishing across Canada and by 1883 the Windsor Cotton Mill Co built a local textile mill near the riverbanks which employed about two hundred people (Loomer 1996, 245-6).

By 1961 the Town of Windsor's population had peaked at 3800 residents. The causeway built in 1969 has significantly altered the way that people and goods move through the region as well as the immediate tidal landscape. Focus departed from the waterways and moved on land to the developed roads and railway routes. The Dominion Atlantic Railway line was rerouted and eventually shut down as Highway 101 became the primary transportation route through Windsor. Further, the causeway stopped the Avon and St. Croix Rivers from flowing south into what now is the contained Lake Pesaquid (van Proosdji and Townsend 2006, 1859).



Historic wharf area is highlighted; overlaid onto current city plan.  
(Map data from Windsor Planning Department 2012)

## The City of Today

Currently Windsor has a population of about 3700 people, of which more than a third are fifty years of age or older. The town refers to itself as the Gateway to the Annapolis Valley and lies 66 km northwest of Halifax. 'The economy of Windsor and surrounding area is, for the most part, centered on agriculture, the mining and export of gypsum, stone monument manufacturing, and service industries.



Intersection in downtown Windsor.



Howard Dill's Farm.



Fort Edward.



Neighbourhood street in Windsor, NS.

The culture and community of the town of Windsor has unique attributes to be explored and celebrated. It attracts visitors to historic artifacts and local events including the site of The Birthplace of Hockey, Fort Edward, the annual Windsor-West Hants Summer Fest, the Hants County Exhibition, Howard Dill's Giant Pumpkins and the Mermaid Theatre of Nova Scotia (Town of Windsor 2012).

The salt marsh seaward of the causeway has densified and become significantly greener than the red mud flats it once was as sediment and other particles accumulate. In recent years the Town of Windsor has decided to return focus to its shoreline and released a proposal to develop the boardwalk, skate park, etc. to reconnect the community with the waterfront landscape.



Aerial photographs documenting the greening of the saltmarsh seaward of the causeway from 1973, 1992 and 2003 respectively. The thesis project site is circled. (Nova Scotia Government. 1973-2003)

NOVA SCOTIA  
TEXTILES LIMITED



View of Windsor, NS from exit 5 off Highway 101. September 2012.



Windsor, Nova Scotia. (Map data from Windsor Planning Department 2012)



Circulation for Windsor, Nova Scotia. (Map data from Windsor Planning Department 2012)





Zoning for Windsor, Nova Scotia. (Data from Town of Windsor 2010 and Windsor Planning Department 2012)



Points of interest for Windsor, Nova Scotia. (Map data from Windsor Planning Department 2012)

## CHAPTER 3: THE TEXTILE MILL

### Early Industrial Architecture

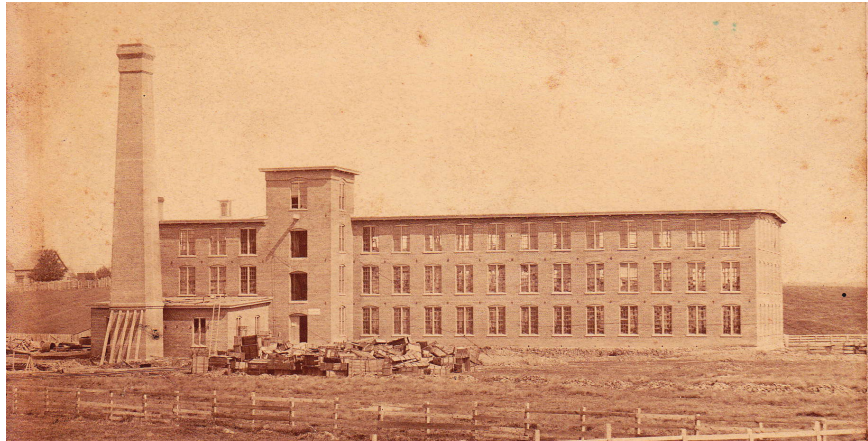
It is important to look at the textile mill, a model of early industrial architecture, to understand its defining features. “As one of the first industries to introduce mechanized production in a factory setting, the textile industry came to symbolize Canada’s development as an industrial nation” (McCullough 1992, 5). The mill design begins with the requirements of the power-driven machinery for which it was built to contain. The rectangular multi-story form was the basic unit for English industrial architecture that dates back to the eighteenth century. The mill’s width was determined by two factors. First, the lateral dimension of the floor area was limited by the proportional ratio to ceiling height permitting adequate light to reach the central working area. Second, the machines were located as close to the prime mover as possible and the wooden shafts determined the maximum length of the interior space which could be utilized (Pierson 1949, 6). Additionally, the construction was utilitarian and based on traditional methods characteristic of England at that time. Initially the masonry walls supported heavy timber frames, but as technology developed iron framing was used and preferred for its fireproof properties. These long narrow floors were stacked on top of one another for greatest efficiency, thus resulting in a brick block building that was several stories high and punched with a regular grid of windows. The dimensions usually ran around 27m wide by 91m long. Often located next to rivers and lakes for proximity to their power source, these mills were built in picturesque environments. Additions were characteristically piecemeal adjustments, expanding wherever land was available (Pierson 1949, 7, 13). In the late 1800s, textile mills were built in Yarmouth and Windsor, Nova Scotia following the model of early industrial architecture of England.

## Monument in The Valley: Nova Scotia Textiles Limited

Built in 1883, this mill had grown to double in size and it employed about two hundred people by the 1950s. Along with its monumental scale and proximity to the tidal landscape it has a rich history of its own and shares an important role in the economy of Windsor's past.



Past mill workers.  
(Nova Scotia  
Historical Society)



Dominion Cotton Company mill, Windsor, NS. c. 1883.  
(Nova Scotia Historical Society)



Heavy timber post  
connection.



Structural steel  
connection.

The former Nova Scotia Textiles Limited mill in Windsor, Nova Scotia compares closely with the traditional methods of mill construction. The site lies in a low area and in proximity to the confluence of the Avon and St. Croix Rivers, remaining close to its source of water for both power and export. It lies directly north of highway 101 at exit 6. Although there are direct views of the mill and its surrounding site from Highway 101, down on the site it manages to exist in a relative state of isolation due to its bounding roadways of various scales and surrounding vegetation. The three story mill is built of local masonry and the oldest portions are supported by heavy timber framing, a resource that was plentiful in the region. Additions to the mill after 1900 are supported by steel framing, which may have been preferred for its fireproofing properties, as the town burnt down in a devastating fire in 1897. Its masonry walls are punctuated by a regular grid of tall windows. The mill as

it remains today is predominantly 23m wide by 99m long. It has many scars left from the additions, infills and demolitions that have occurred over time and with that it holds a certain richness and charm with its materiality and porosity.



Building scars on west facade.



Signage on west facade of the mill.



Small support buildings on site.

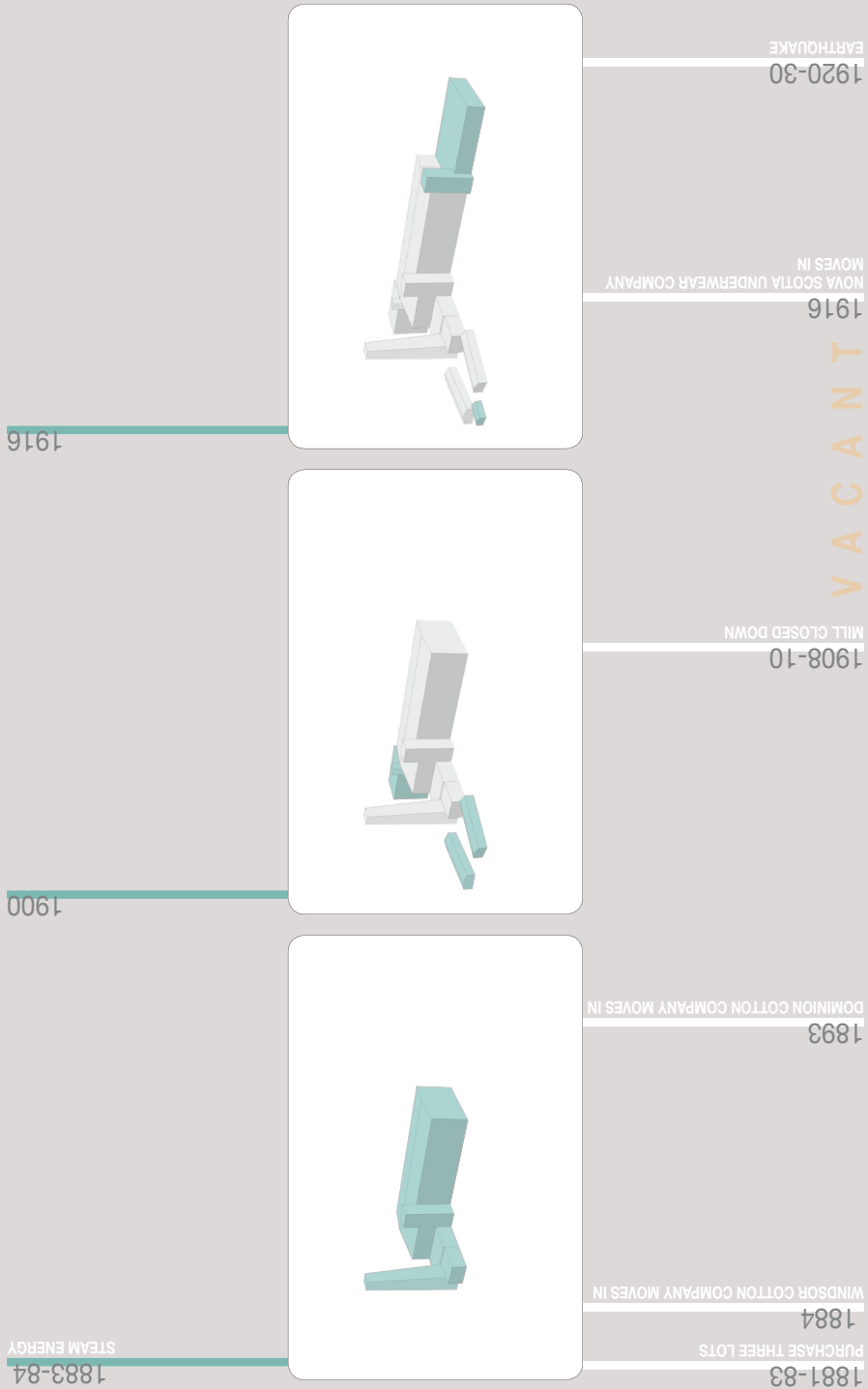


Abandoned cart inside mill.

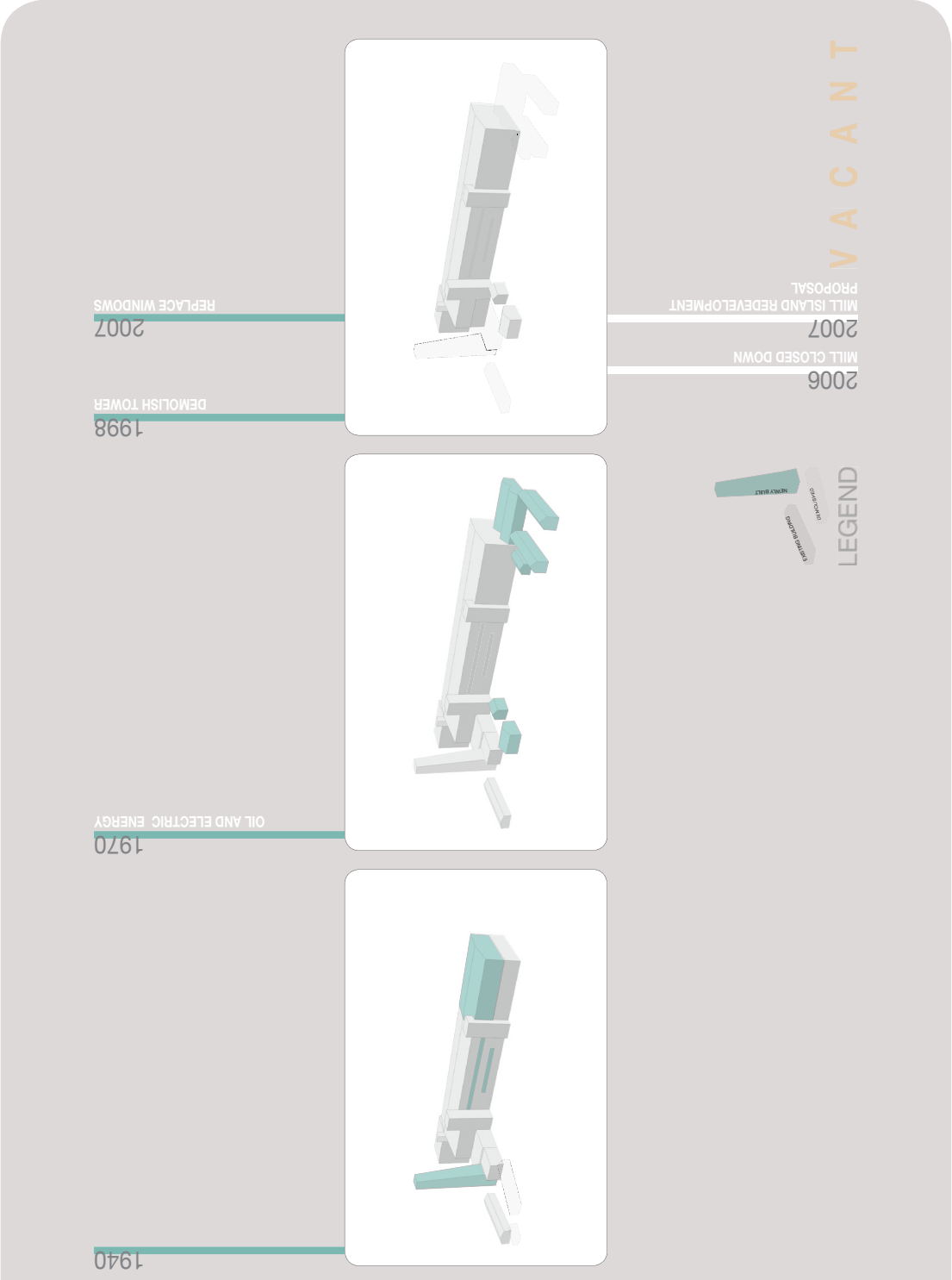
The exterior wall of the Nova Scotia Textiles Limited mill, like many other early industrial buildings, serves as a billboard. The former company names “Nova Scotia Textiles Limited” and “Windsor Wear” are boldly painted in white on black bands along the west facade. This reflects early methods of company marketing and brand identity that were emerging in the early 1900s. Also, on the site there are several small support buildings and landscape features. In case a fire ever broke out in the mill a quick and large supply of water would be needed to extinguish it. The pump house is a small approximately 4m x 7m building that once housed the water pump and is located 17m from the west facade of the mill. Connected by underground pipes to the south end of the pump house was the water in the reservoir. The reservoir runs parallel to the mill and is approximately 21m x 32m in size. The supply of water stored here was exchanged and used in the treatment and processing of the textiles. On the west side of the pump house is the workshop. This approximately 7.5m x 9m building was the site for repairs to many of the mill’s machinery and tools.

This textile mill saw periods of growth, exchange of hands, and witnessed short periods of vacancy, however by 2006 it was closed due to the popularity of product outsourcing to foreign countries. The textile mill saw a glimpse of a brighter future with a redevelopment proposal launched in 2006 and work began shortly after to replace its windows, however, work ceased by 2007 and it remains abandoned today.

# NOVA SCOTIA TEXTILES LIMITED MILL TIMELINE



PART ONE: Nova Scotia Textiles Limited mill timeline illustrating the past 130 years, including ownership, expansions and other major changes.

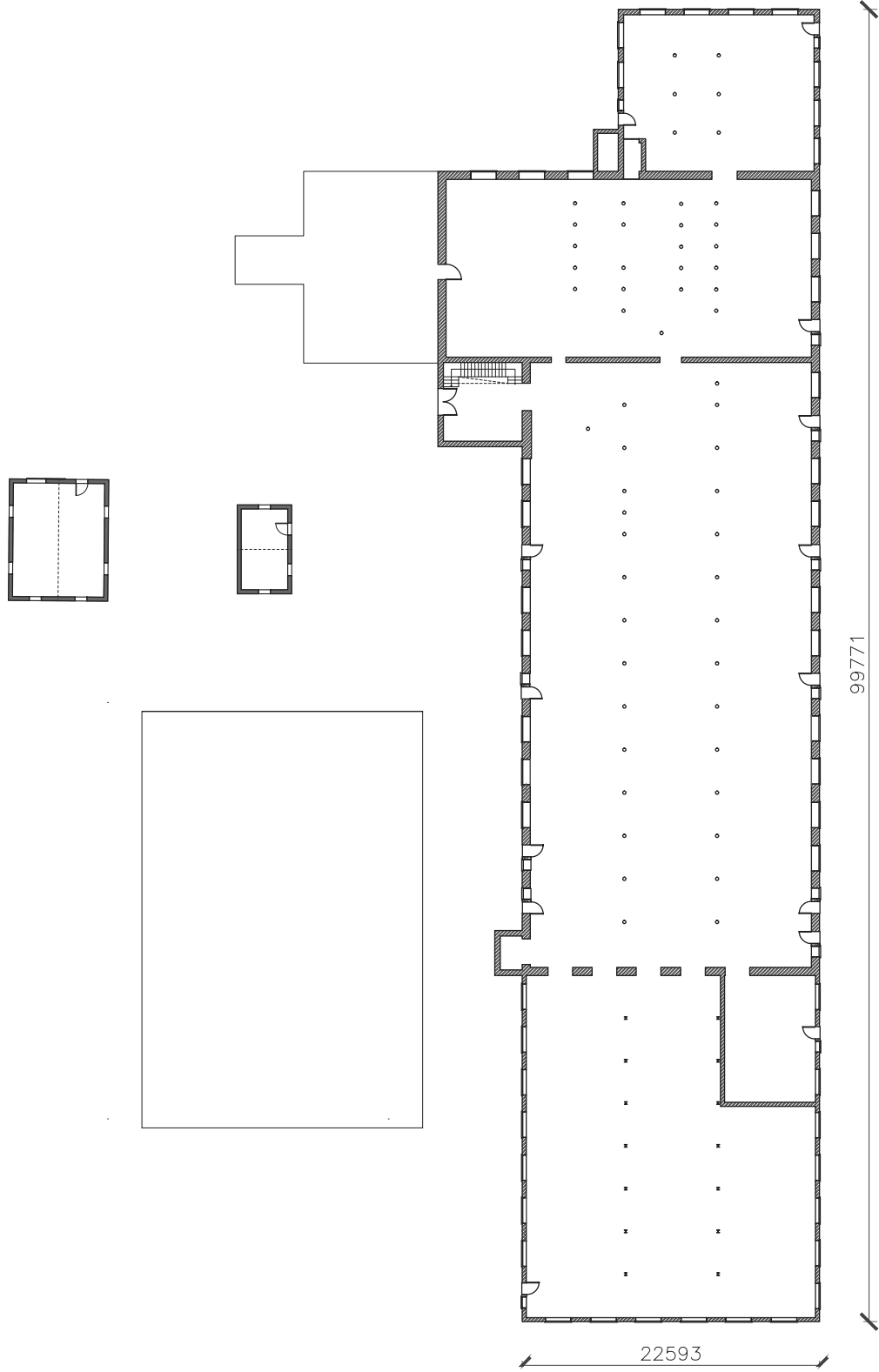


PART TWO: Nova Scotia Textiles Limited mill timeline illustrating the past 130 years, including ownership, expansions and other major changes.



View of the Nova Scotia Textiles Limited mill from Fort Edward in Windsor, NS. September 2012.



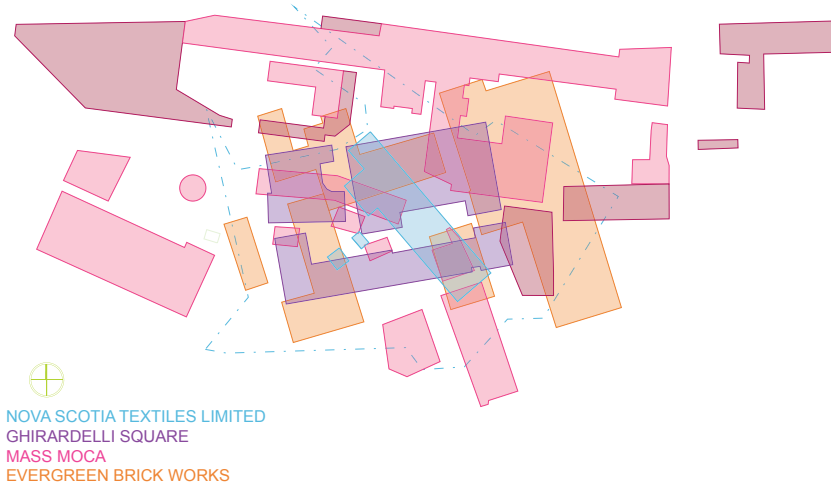


Existing Ground Floor Plan. Scale 1:500.

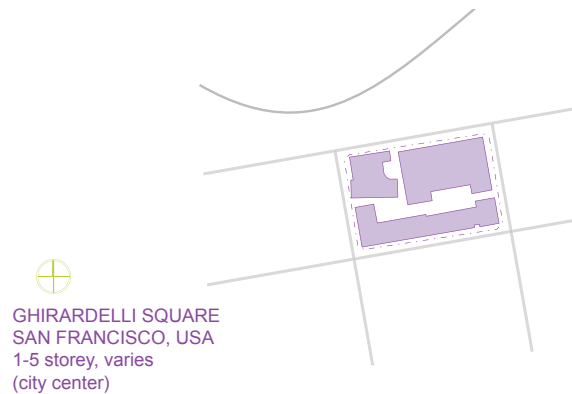
## Mill Conversions

Today the remaining textile mills across Canada illustrate the richness and diversity of this industry, however many of the brick, stone and concrete examples have disappeared. For many of the examples that do survive, they are recognized as significant landmarks in the history of their communities. “There was considerable irony in the fact that structures that would once have been demolished in the interest of urban beautification were now seen as bulwarks against the ‘blight’ of urban redevelopment” (McCullough 1992, 5).

Such buildings are important in the architectural fabric of their local communities and it is important to keep and revitalize them for contemporary use. Although the regular grid and open plan layout of the textile mill provide its interior space with an excellent opportunity to be reused in a variety of new ways, it is not the only building type appropriate for reuse as many other industrial, cultural and institutional buildings have adapted to change over the years as well. The early rehabilitation of industrial monuments in North America began in the 1960s. The movement to preserve, rehabilitate, and reuse industrial buildings was inspired by speculators, architects, city officials, and citizen’s associations. The recession in the 1970s also played a role in the architect’s initiatives.



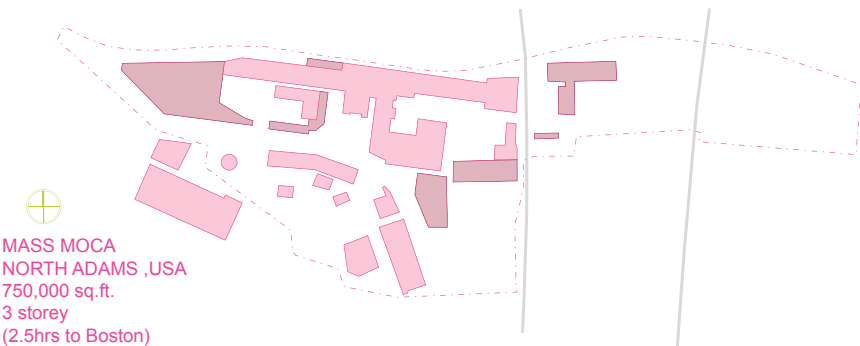
Nova Scotia Textiles Limited (blue) compared with conversion examples.



GHIRARDELLI SQUARE  
SAN FRANCISCO, USA  
1-5 storey, varies  
(city center)

### Ghirardelli Square.

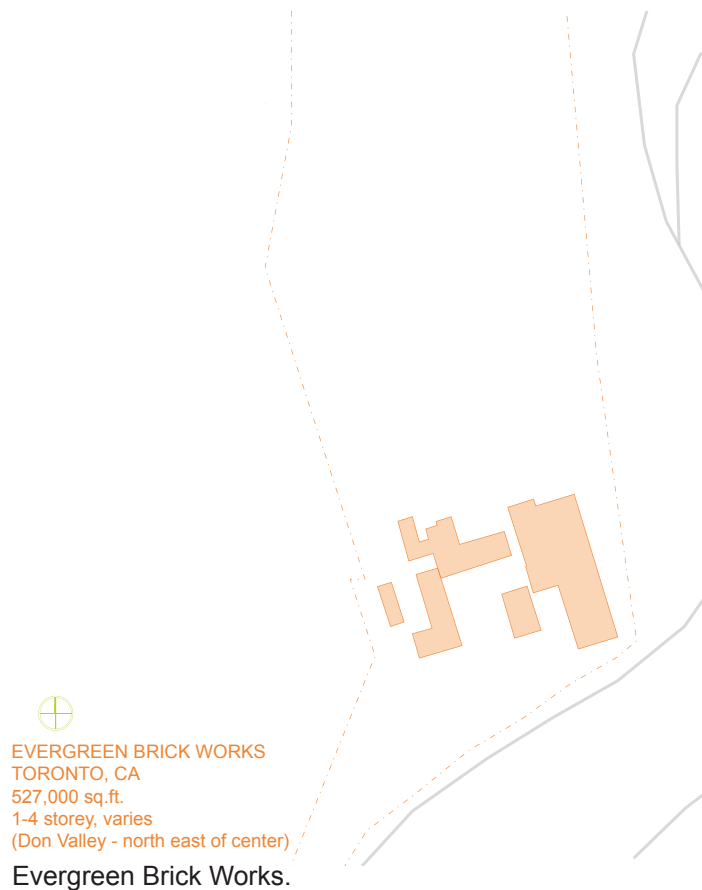
The first experiment of the industrial heritage movement in North America was Ghirardelli Square in San Francisco in the late 1960s. This successful example converted the existing spaces of the chocolate factory (originally a wool factory) into apartments and its lower level was given over to commercial use (Bergeron and Pontois 2000, 246). It has become a vibrant destination spot that is celebrated in the city's Fisherman's Wharf area.



MASS MOCA  
NORTH ADAMS, USA  
750,000 sq.ft.  
3 storey  
(2.5hrs to Boston)

### Massachusetts Museum of Contemporary Art.

Massachusetts Museum of Contemporary Art (MASS MoCA) in North Adams, MA is a non-profit cultural institution. In 1999 it was launched as a place to foster and present new work in all media, phases of production, and position the arts as a vibrant catalyst for community revitalization. It is housed on thirteen acres in a former textile print company's twenty-six mills which were built between 1860-1890 (Borup 2006, 58). MASS MoCA includes renovated interior space for exhibitions, performing arts, and leasing as well as exterior courtyard spaces for summer events.



The Evergreen Brick Works of Toronto's Don Valley is a recent example (2010) of the adaptive reuse of buildings from an industrial past. This project incorporates the reuse of pavilion and warehouse spaces with the addition of a new structure. Although it was not a textile mill, the site was home to the former Don Valley Brick Works brick manufacturing plant, and the series of buildings on site have been transformed into a successful community environmental center. "The updated plan makes the most of the site's unique cultural and architectural heritage" (Evergreen Brick Works 2012).

In the 1980s in Toronto many of the downtown area industrial buildings were converted into mixed use spaces primarily for offices and retail. Today they are highly desirable spaces because of the wonderful qualities of light, high floor to ceiling heights, and flexible open plan layouts that exist in these spaces.

The examples listed suggest the diversity apparent to the reuse of these flexible industrial spaces. The strategy for reuse is selected based on a variety of factors; to strengthen and enhance the existing fabric, conform to higher technical standards, to save sound but underutilized buildings from demolition, and are often paired with the intention of community revitalization.



## **CHAPTER 4: DESIGN METHOD**

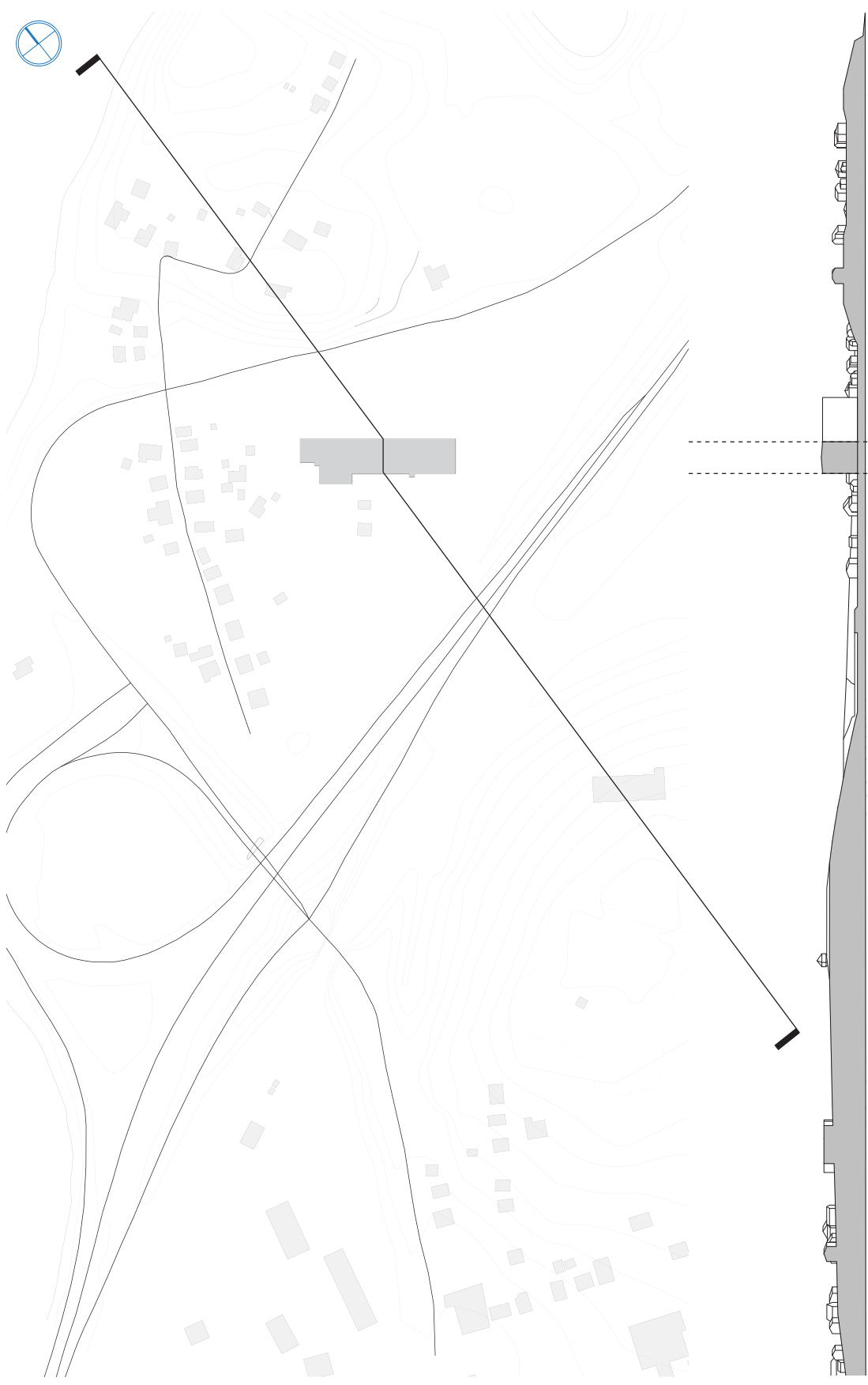
### **Site and Program Strategy**

There is a compelling contrast between the dynamic variance of the tidal landscape and the constant structural strategy of the industrial monument. Working with these two strong elements logically suggested an analysis of the site and the existing built form.

### **Mapping The Site**

On the following pages are three different site studies.

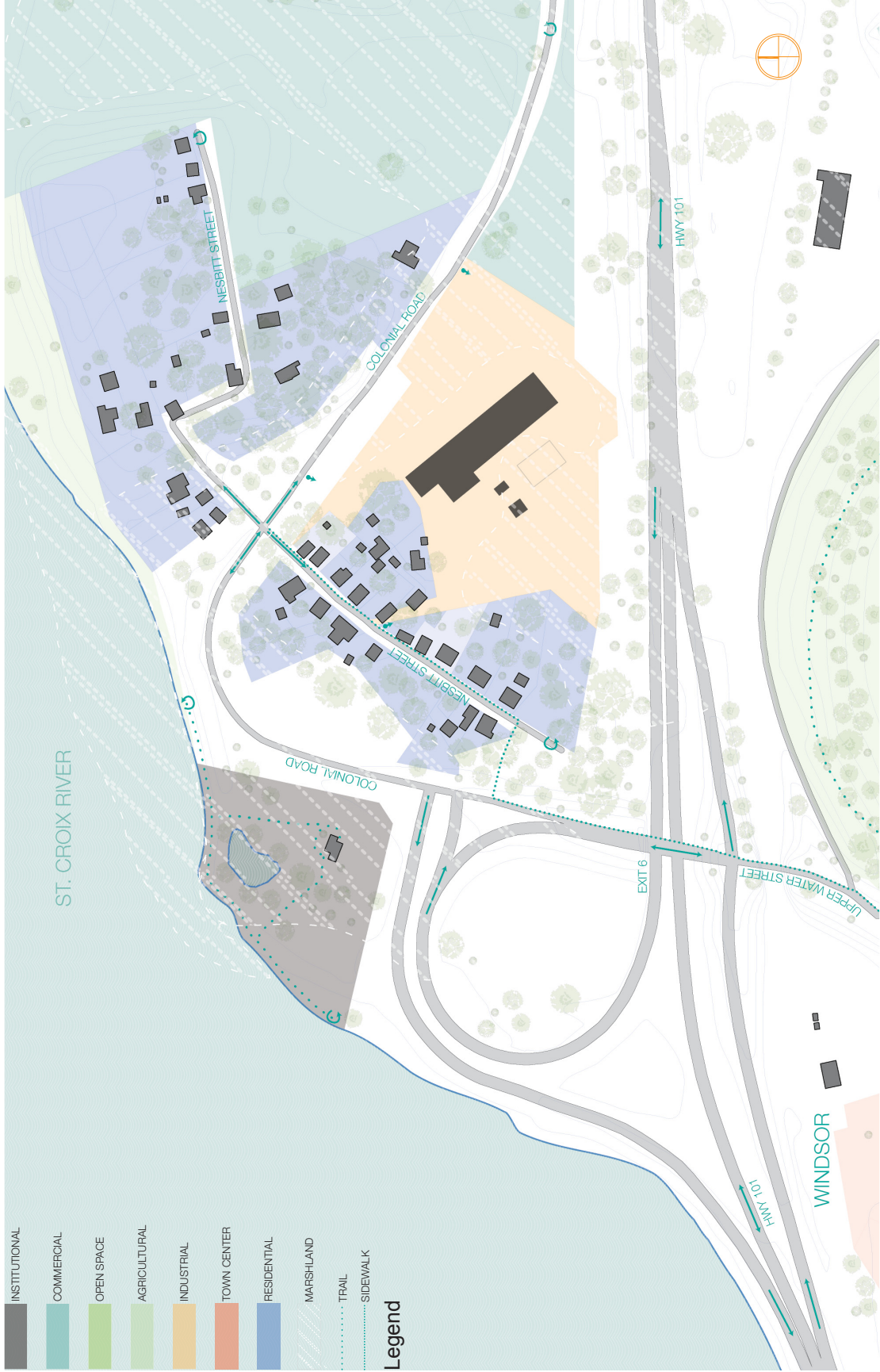
The city scale site section explores the topography through the town, Fort Edward, Highway 101, Nova Scotia Textiles Limited mill site, Nesbitt Island and the Fundy shore condition. This section clearly expresses the mill site's low lying nature as compared with the surrounding city. It also illustrates the mill's monumental scale in comparison to the surrounding buildings.



Site section through the town, Fort Edward, Highway 101, site, Nesbitt Island and the Fundy shore.  
(Map data from Windsor Planning Department 2012) NTS.

The following illustration shows data mapped onto the site and its surrounding neighbourhood area. Zoning for the local neighbourhood is colour blocked to show the different pockets of use. The direction of road travel is noted to show the traffic flow in and out of the neighbourhood. Existing access points into the mill site are noted. Existing sidewalks and trails are marked and these lines connect back to the city center and the existing path networks.

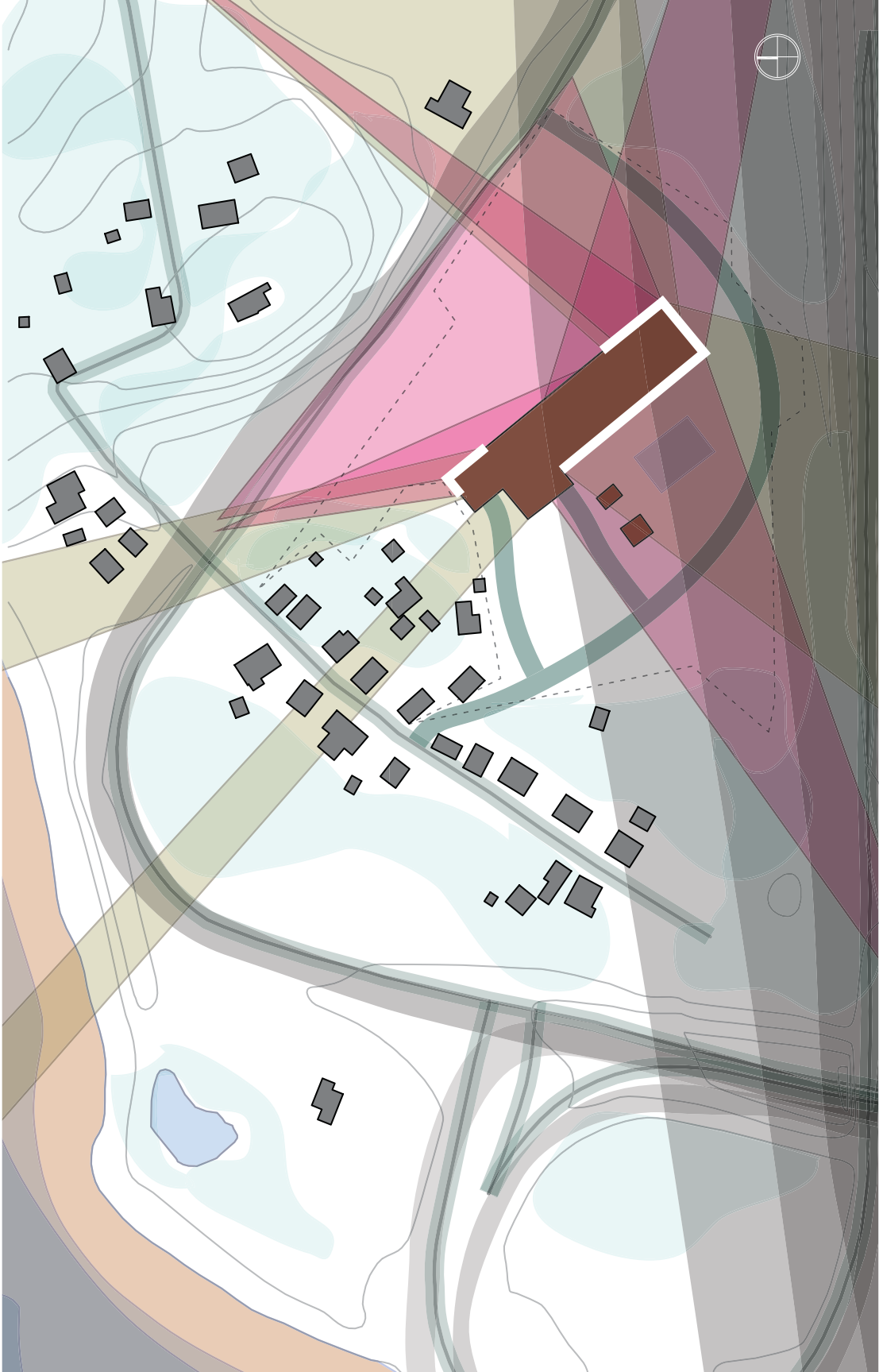




Data mapping on the site and its surrounding area. (Map data from Windsor Planning Department 2012) NTS

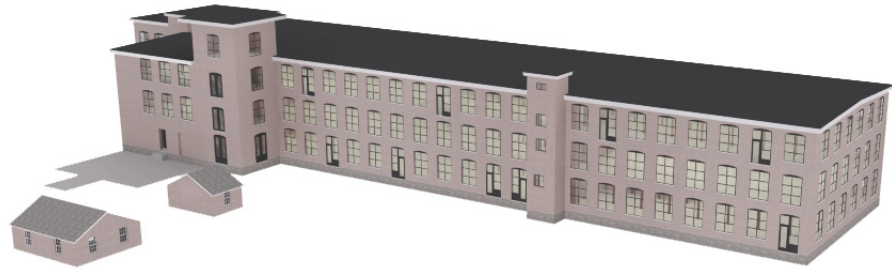
The observational site layers and flows study represents timed studies. Sitting high up on the Fort Edward hill across from the mill and its neighbourhood, each observation was recorded and abstracted for this document.

- Circulation: The paths are marked in turquoise lines. Roads are marked with black lines.
- Noise: Based on observing rustling trees and vehicular movement, they are represented as irregular shaped green orbs and wide grey bands respectively. (note: no one was on foot during this study)
- Shore edge: Orange and blue wave lines suggest the edges of the temporal boundary.
- Views: The best views into the site from outside are recorded as pink projections. The best views out from within the building to the landscape and local features are recorded as tan projections. Their overlaps are marked in white on the mill.



Observational site layers and flows study. (Map data from Windsor Planning Department 2012) NTS

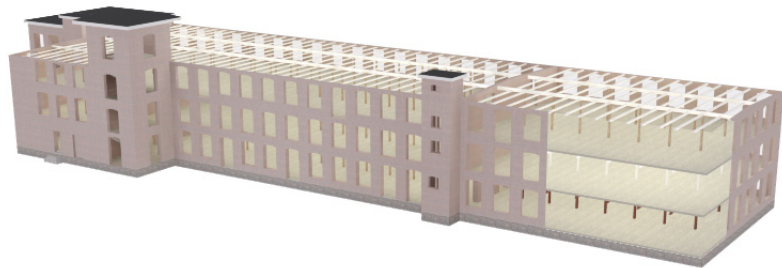
## Mapping The Built Form



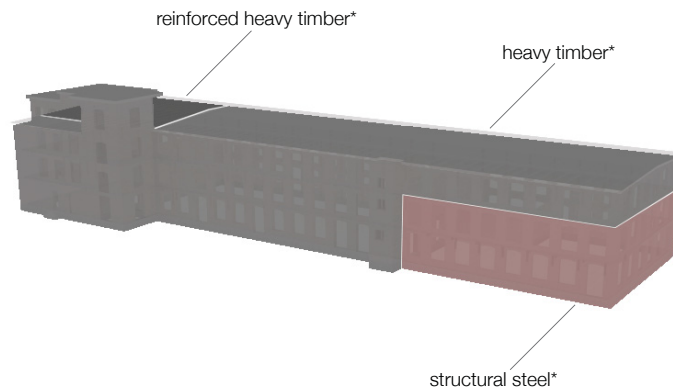
Existing Nova Scotia Textiles Limited mill.

On the following pages the mill is studied in several areas.

The structure is identified and the different structural zones are diagrammed below.



Structure, with brick partially removed to show interior.



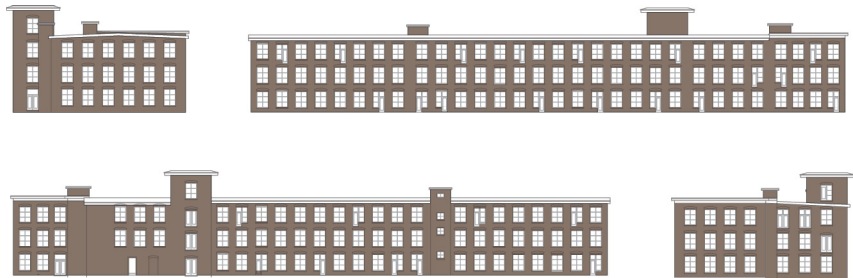
\*with load bearing masonry

Different structural zones within the building.

The fenestration pattern is studied and the porosity of the skin is determined.

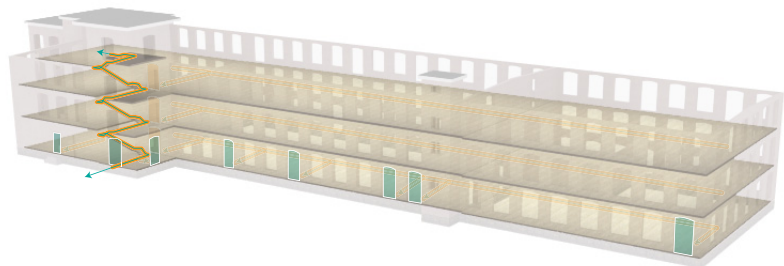


Fenestration.

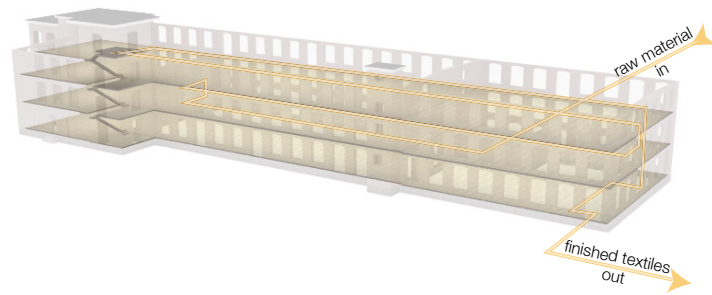


Fenestration study, porosity ratio is 3:1.

The circulation and exits are located and diagrammed. Also, the previous path of processing textiles is diagrammed indicating where the supply of raw materials entered in and where the finished textiles exit the mill.



Circulation and exits, west facade.



Circulation path of processing textiles, during mill operation.

### Program Strategy

Introducing a regional interpretive center into the community is the proposed link to reestablishing a meaningful connection between the textile mill and the community as well as with the Fundy landscape. Providing different forms of public space, both inside and outside of the mill, will reinforce its significance within the community. Commercial, institutional and recreational facilities ensure year-round stability for the site and will provide both economic and social benefits to the greater community.

The proposed programs are: interpretive center, regional art gallery, community center, market and restaurant. This proposal also includes outdoor trails and landscape features.



Current Tourism Information Center, Fall 2012.



Tourists viewing the rivers directly north of the site, Fall 2012.

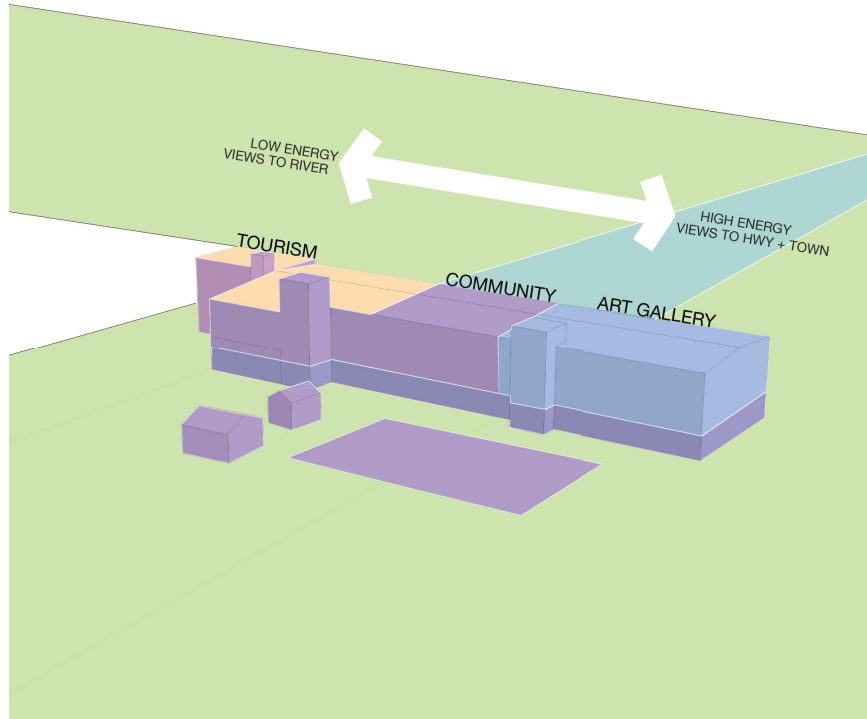


Diagram of program distribution.

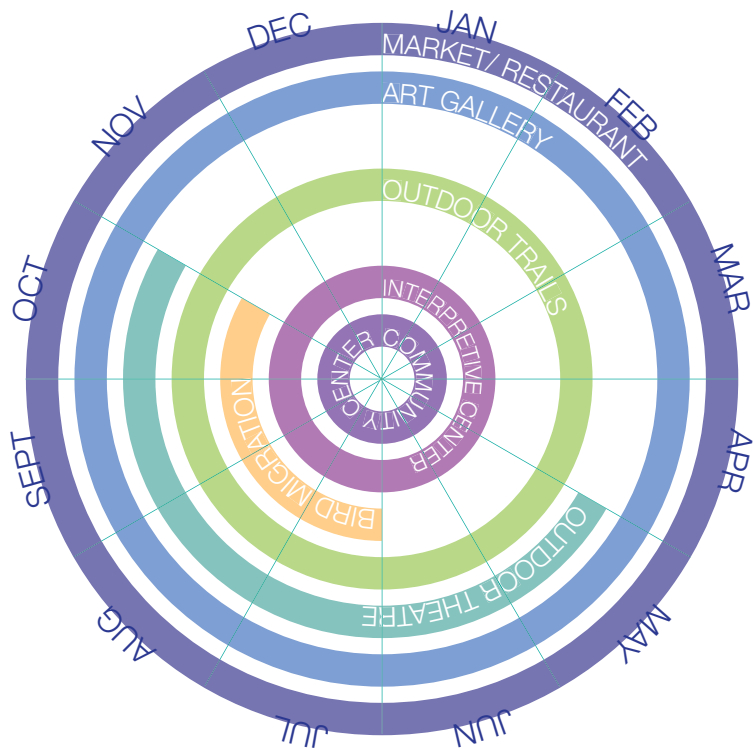


Diagram of seasonal programming.

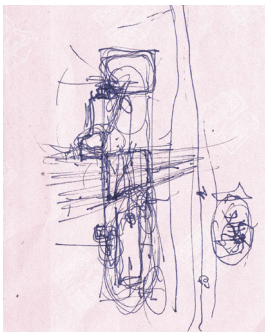
## Design Exploration

### The Building

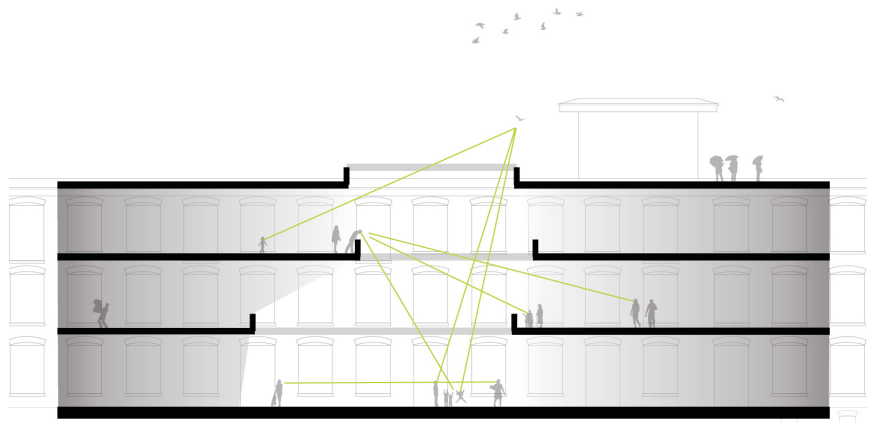
The porous skin, regular grid and open plan layout of the existing textile mill provide its interior spaces with wonderful moderated qualities of light and horizontal visual connections. These qualities present an excellent opportunity for the mill to be reused for a variety of contemporary uses. However, the mill currently has two lifts and only one stairwell to connect the spaces vertically. These solid floor plates work well for machines in a factory, but they do not easily support interaction between floors in a community setting.

Carving space within the interior of the mill expands the scales of porosity within the building while also creating dynamic vertical interactive and visual connections between floors.

The courtyard space explores the use of this strategy and dynamic qualities of light and interaction are apparent. This new space not only connects people with one another from floor to floor, but further connects them to an experience outside of the mill to the land and to the sky.

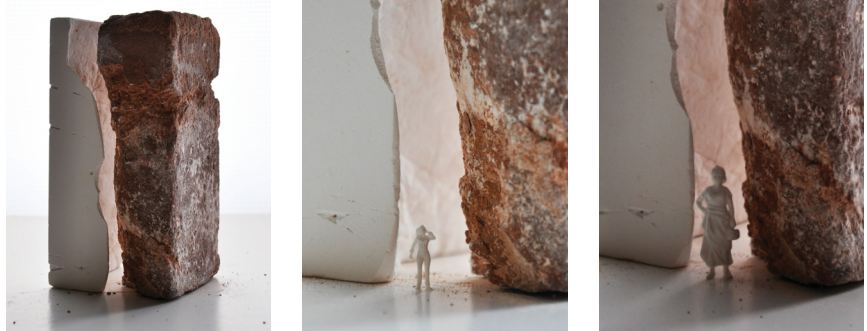


Conceptual sketch, in plan.



Conceptual building section illustrating interactive and visual connections.





Model exploring light, scale and textural contrast of the in-between space between old and new.



The space between the existing masonry wall and new structure by the courtyard.

### The Landscaped Site

The phenomenal tidal landscape of this site and area provides a rich canvas to work with. On the site are bushes and trees as well as low lying pockets with bull rushes and wild grasses, while just north of the site are the tidal mudflats and Bay of Fundy shores.

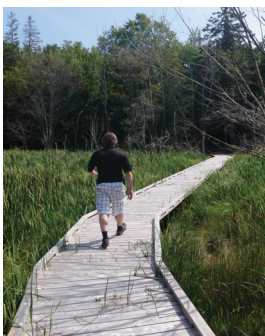
The experience of being set within each of these conditions in the landscape as opposed to being beside them can make the difference between learning from the landscape and simply viewing it.

Carving space in the earth, which engages the tidal flow to move into the thesis project site, is one strategy for linking the tidal landscape to the existing mill. By providing a path or step that sinks down into this new tidal canal, a visitor has the opportunity to further experience being within the phenomenal landscape.

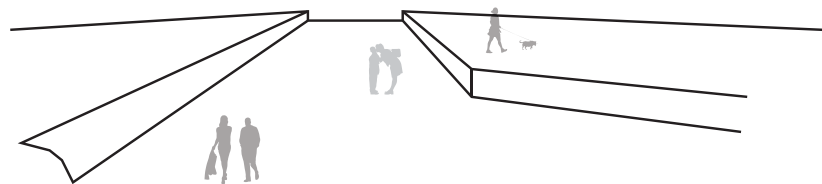
Floating above the ground, within the wild grasses on the mill site, is an alternate strategy of bringing the visitor to an experience of being within the natural landscape.



Moses Bridge.  
(ArchDaily: RO&AD  
Architecten 2011)



Boardwalk over  
marshland, Cheverie,  
NS.



Landscape architecture studies exploring the tidal canal and front court possibilities.



Tidal canal exploration.



Boardwalk experiential condition of walking within the wild grasses.

## CHAPTER 5: DESIGN

The experience of this place begins on arrival to the surrounding area, before the visitor reaches the regional interpretive center.

The proposed tidal canal, which is part of the trail extension, is carved into the landscape from the Fundy shore to feature the rise and fall of the tides. It makes its way southward to the thesis project site where it bends, widens and opens up to the landscaped plaza at the main entrance. Visitors can walk along the existing trails and connect to the proposed trail extensions to enter the site on either the East or West sides, or arrive by vehicle and park on site on the East side.

The main entrance of the proposal is the same starting point that the raw materials entered in for textile processing during its former industrial use. However, the new entrance is opened up for better accessibility and this increased porosity is achieved with a glass curtain wall system.



Roof signage at night.



Main entrance of the regional interpretive center.

Once inside the building, the new courtyard space is revealed and the division of program is apparent. The restaurant/ venue space and art galleries are stacked on the South end. Their angled partition walls frame views out to significant landmarks in the city such as Fort Edward. The market, interpretive center, educational center and roof viewing deck are all stacked on the North end of the building where they relate to quiet landscape views.

Three new stairwell cores improve the flow throughout the entire building. The core adjacent to the courtyard becomes a secondary feature object. Catwalks cross through the courtyard on the second and third floors to provide additional circulation through the building and they also provide interesting vantage points down to the end of the tidal canal or up to the sky.

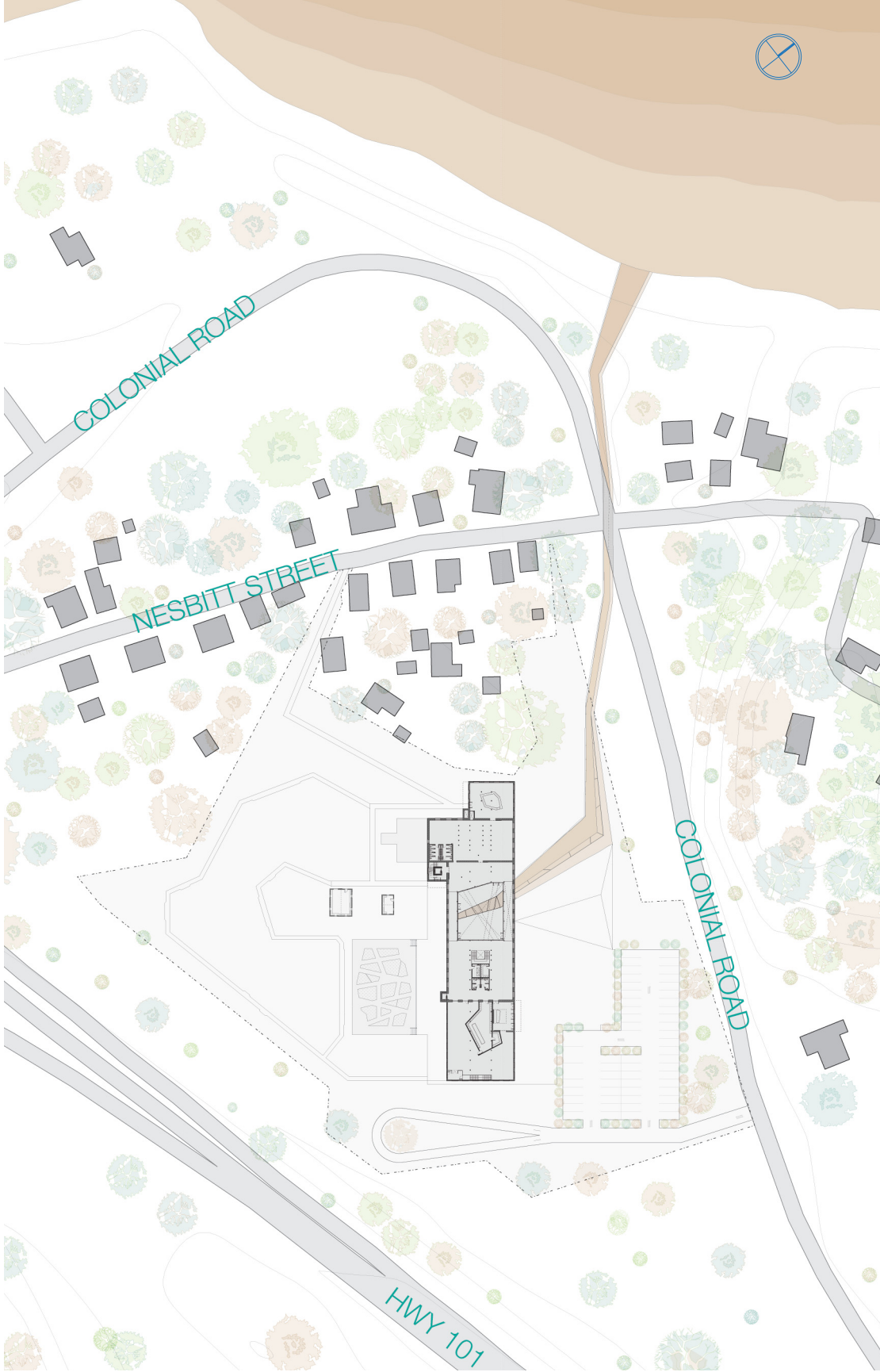
The existing mill has depth and richness in the layers and scars that are evident in the thick load bearing masonry walls, wood floors, and various structural members. To enhance their collective richness, the new structure, partitions and wall systems are sleek and 'light footed' by contrast. A reveal detail is carried throughout the project and applied along joints between old and new on the floors and walls.



The roof top viewing deck, during sandpiper migration season.



City scale model, built at a scale of 1:5000. Inset, focused view of thesis site area.

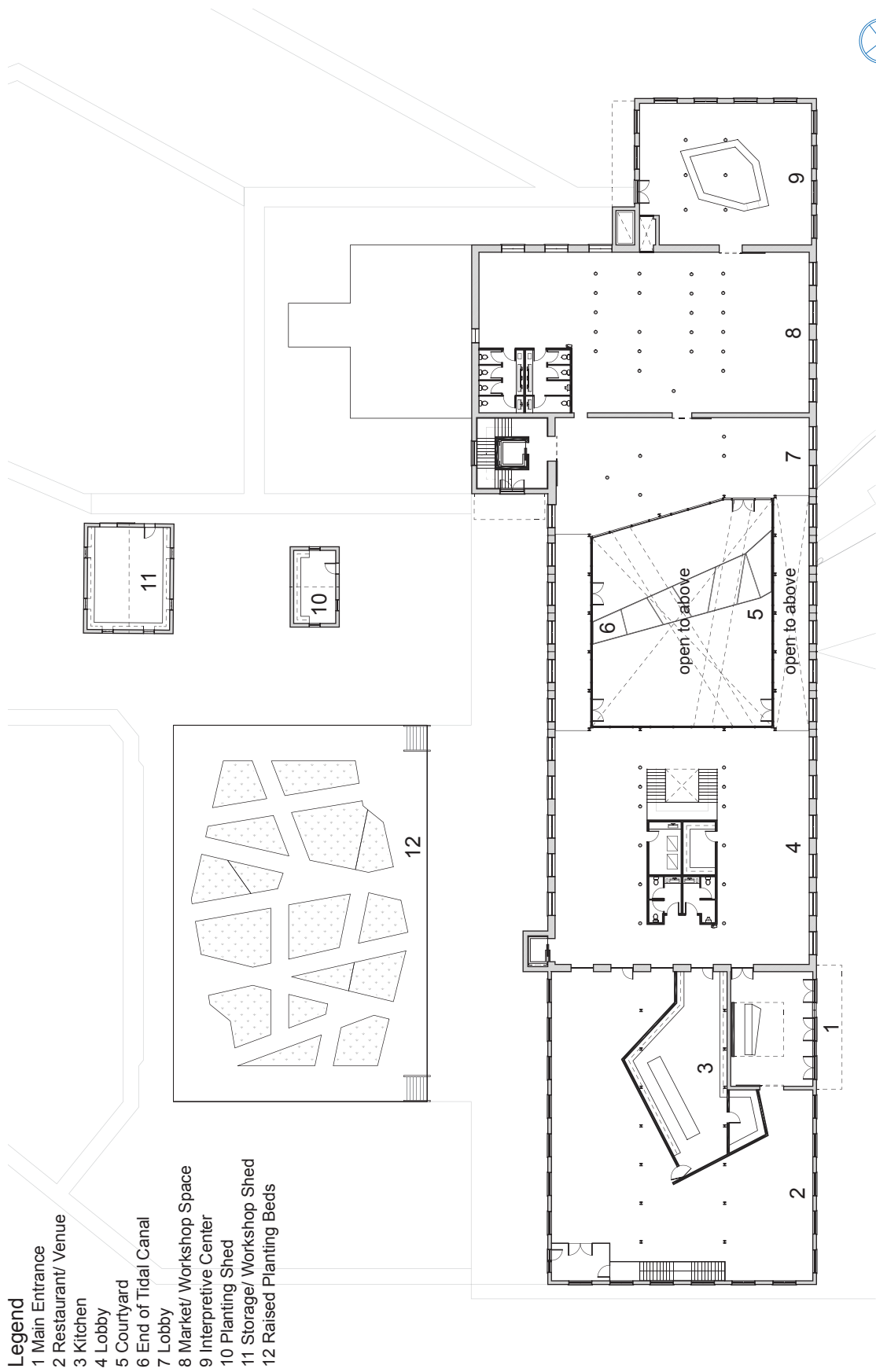


Site Plan. Scale 1:2000. (Map data from Windsor Planning Department 2012)



Site model, built at a scale of 1:500. Inset, focused view of the tidal canal.





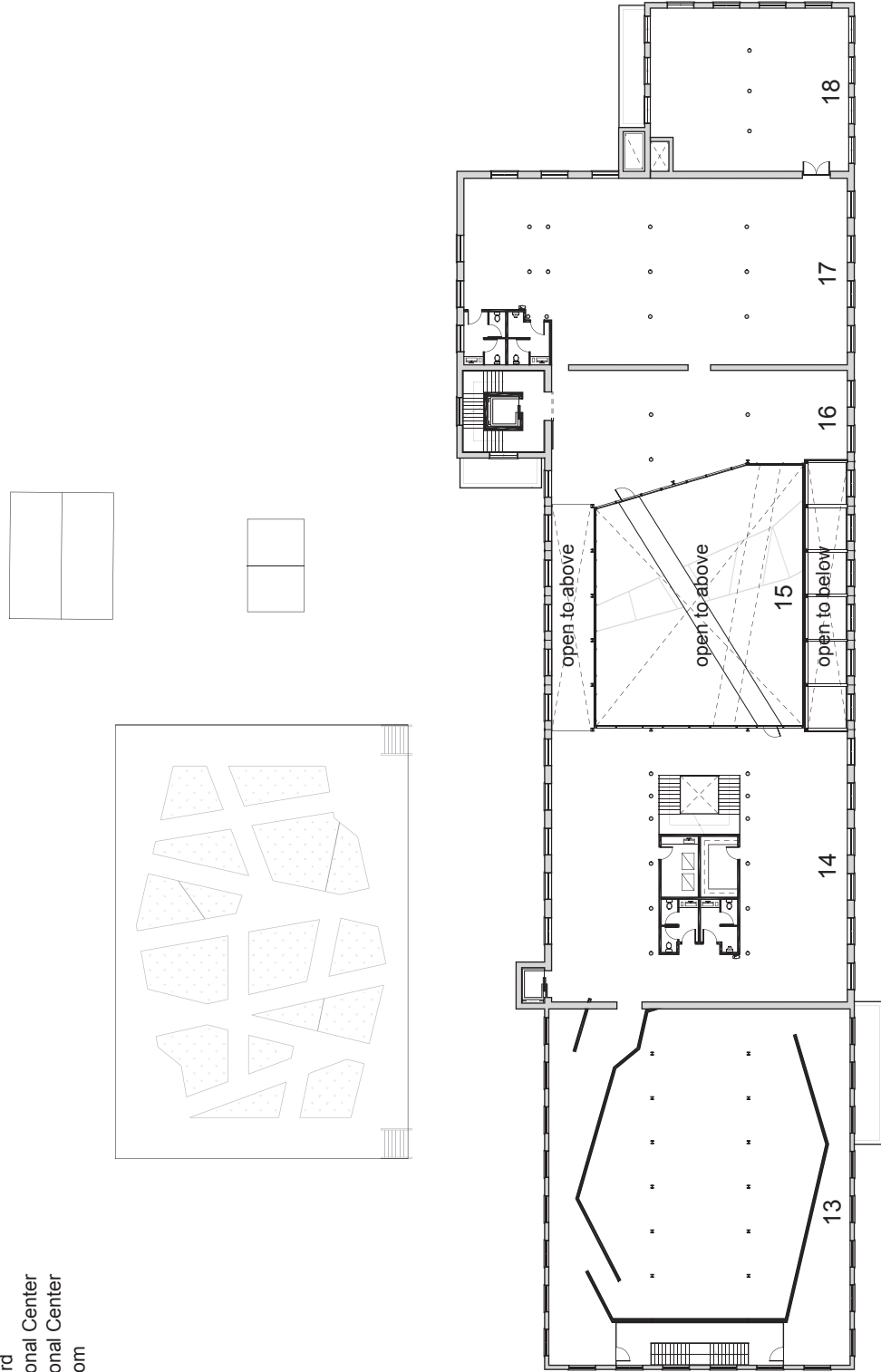
**Legend**

- 1 Main Entrance
- 2 Restaurant/ Venue
- 3 Kitchen
- 4 Lobby
- 5 Courtyard
- 6 End of Tidal Canal
- 7 Lobby
- 8 Market/ Workshop Space
- 9 Interpretive Center
- 10 Planting Shed
- 11 Storage/ Workshop Shed
- 12 Raised Planting Beds

Ground Floor Plan. Scale 1:500.

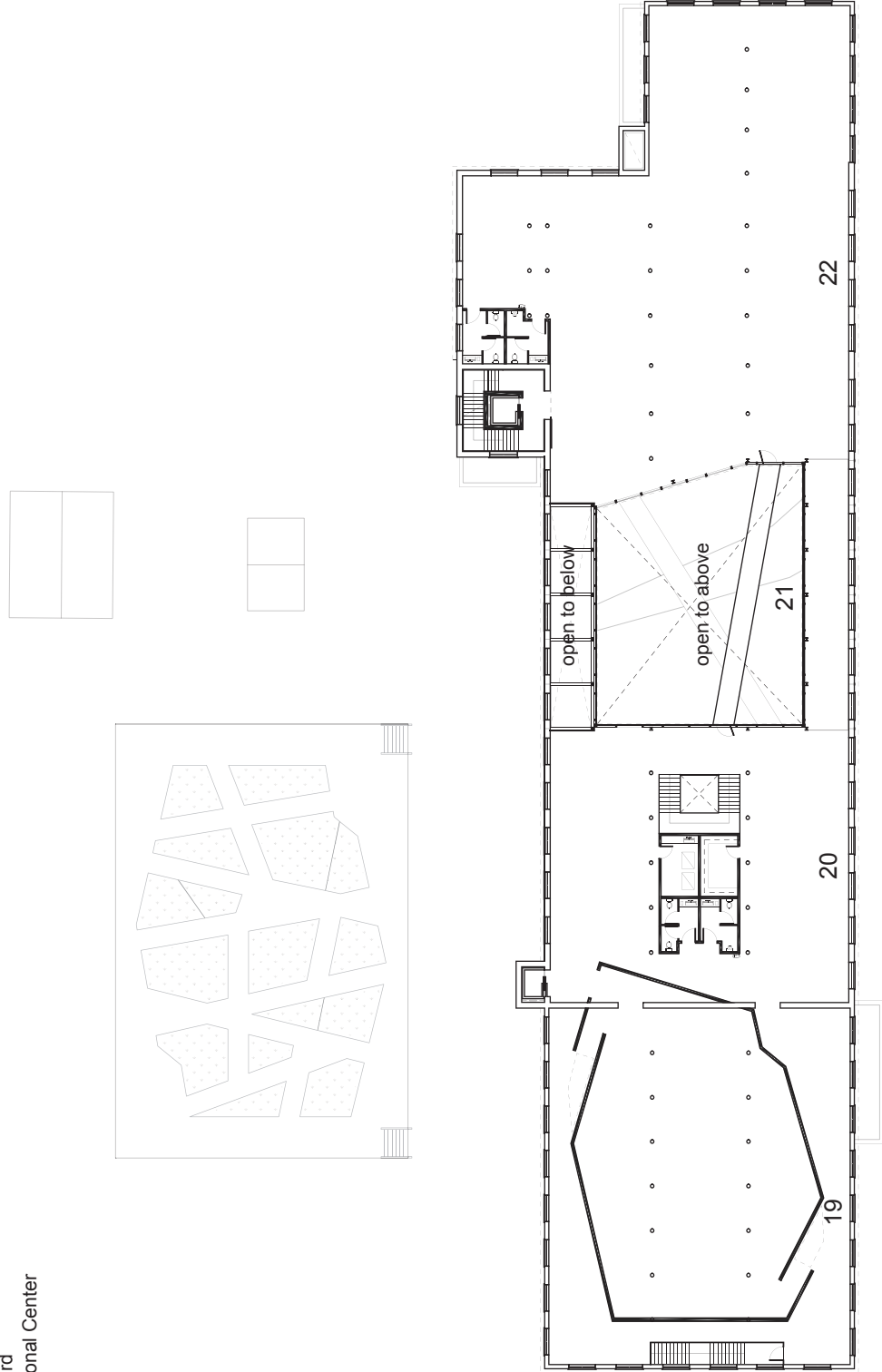


- Legend
- 13 Art Gallery
- 14 Art Gallery
- 15 Courtyard
- 16 Educational Center
- 17 Educational Center
- 18 Classroom



Second Floor Plan. Scale 1:500.

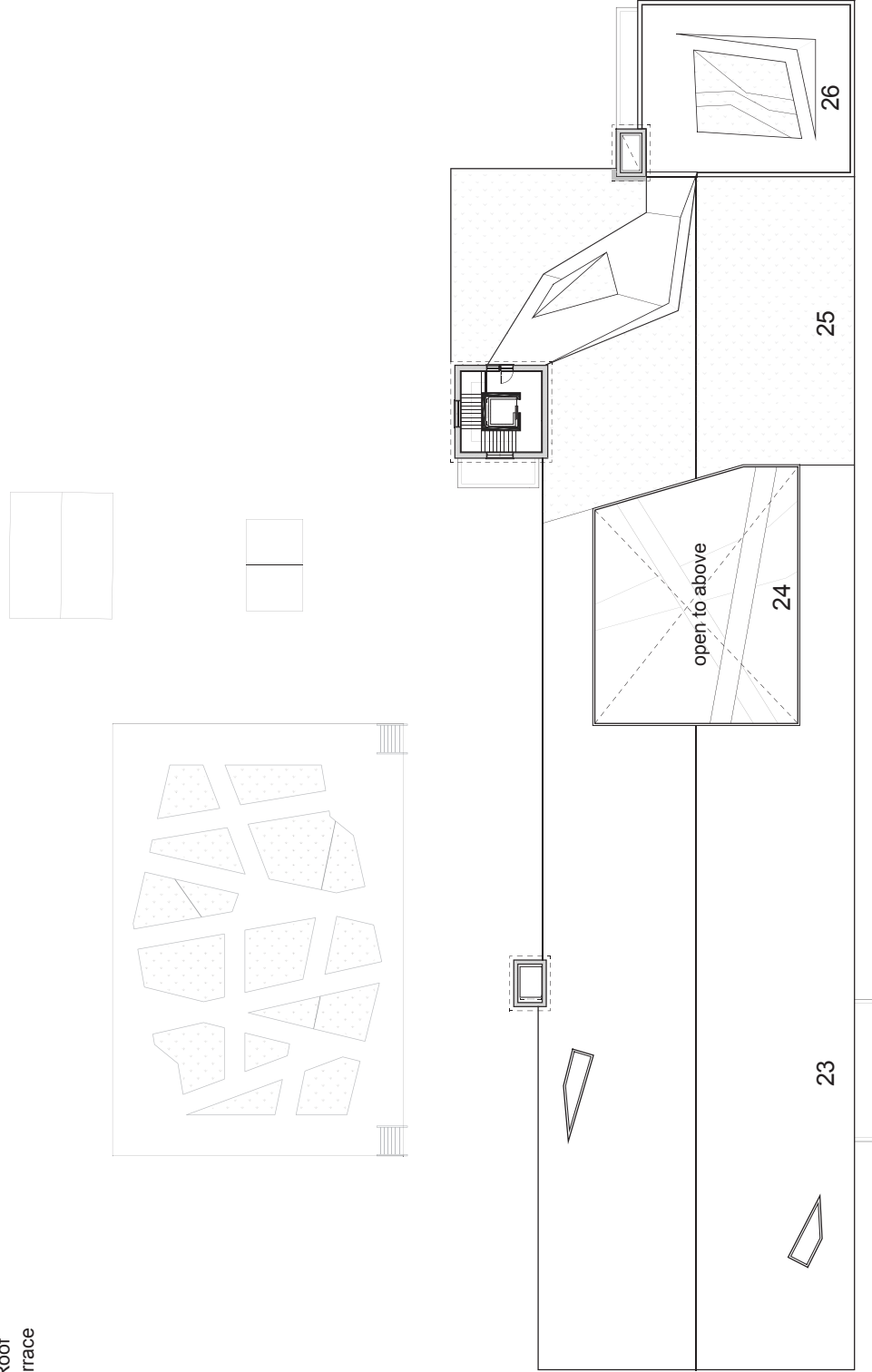
- Legend
- 19 Art Gallery
- 20 Art Gallery
- 21 Courtyard
- 22 Educational Center



Third Floor Plan. Scale 1:500.

Legend

- 23 Roof
- 24 Courtyard
- 25 Green Roof
- 26 Roof Terrace

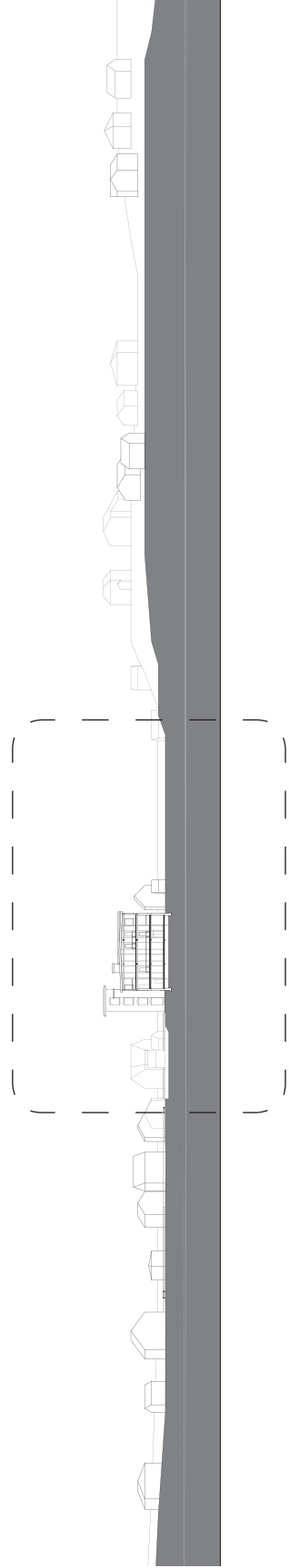


Roof Plan. Scale 1:500.





Key plan for section A-A, Scale 1:15000.



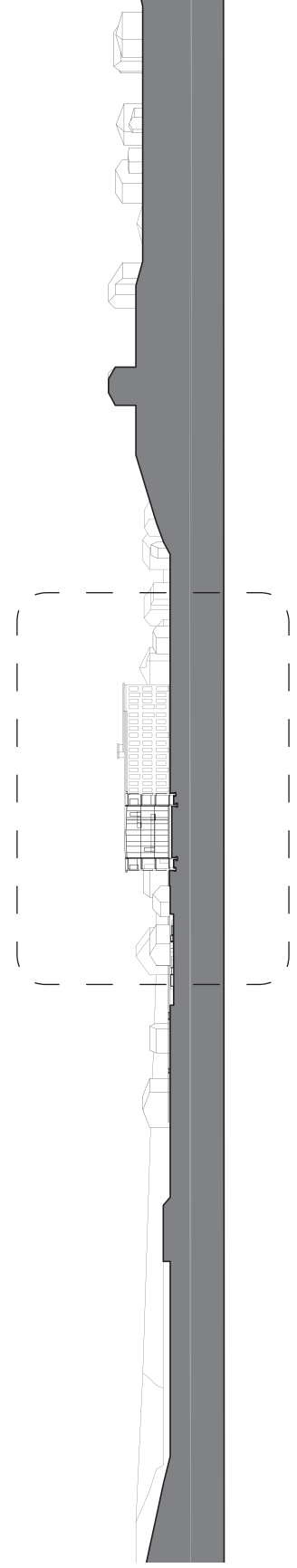
Section A-A. Scale 1:2000.



Section A-A. Scale 1:500.



Key plan for section B-B, Scale 1:15000.

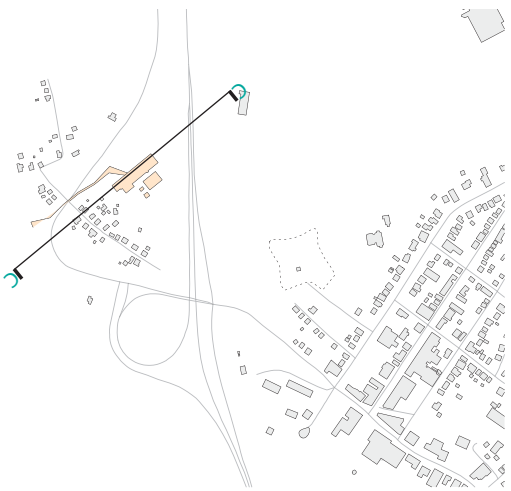


Section B-B. Scale 1:2000.

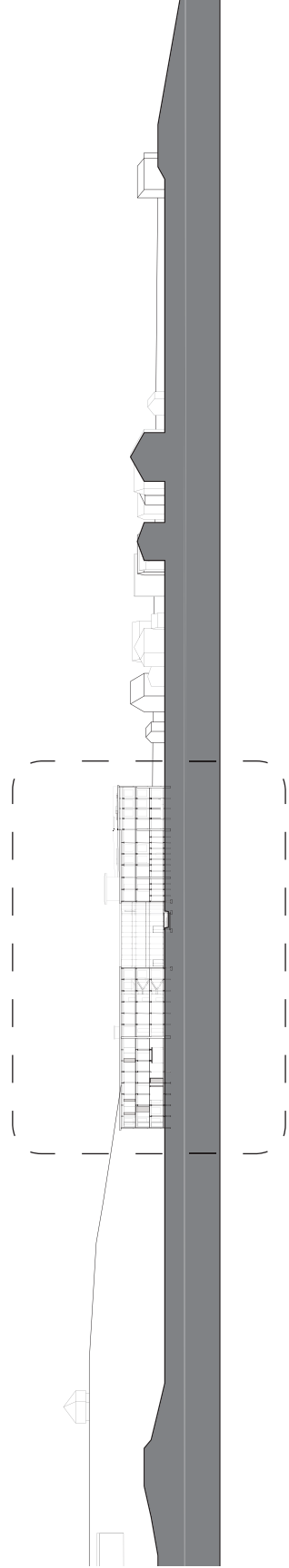


Section B-B. Scale 1:500.





Key plan for section C-C, Scale 1:15000.



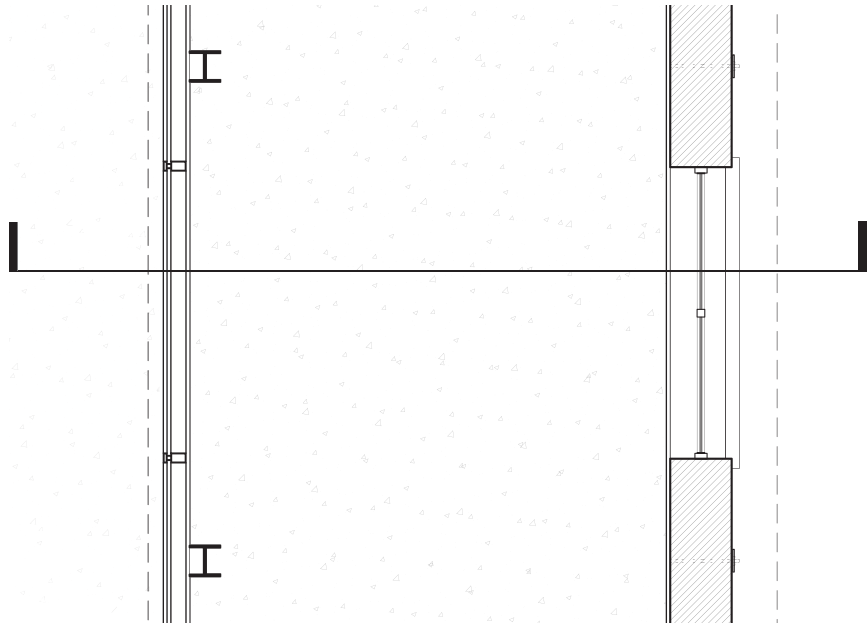
Section C-C. Scale 1:2000.



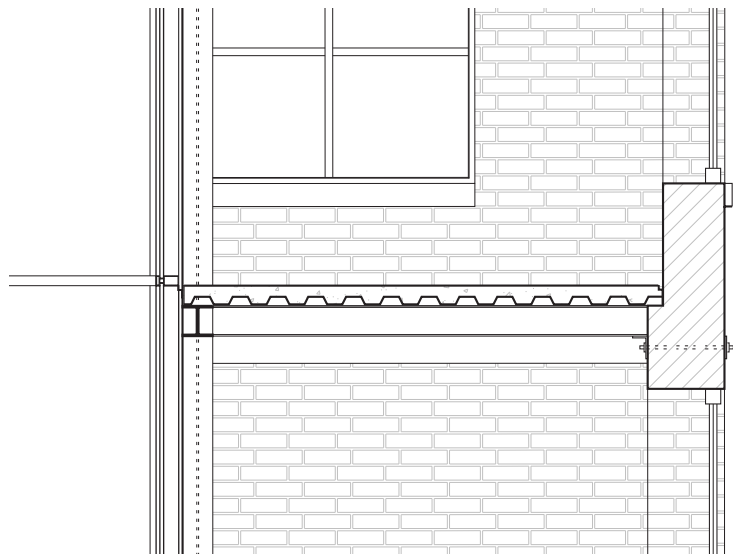
Section C-C. Scale 1:500.

## The Courtyard Wall

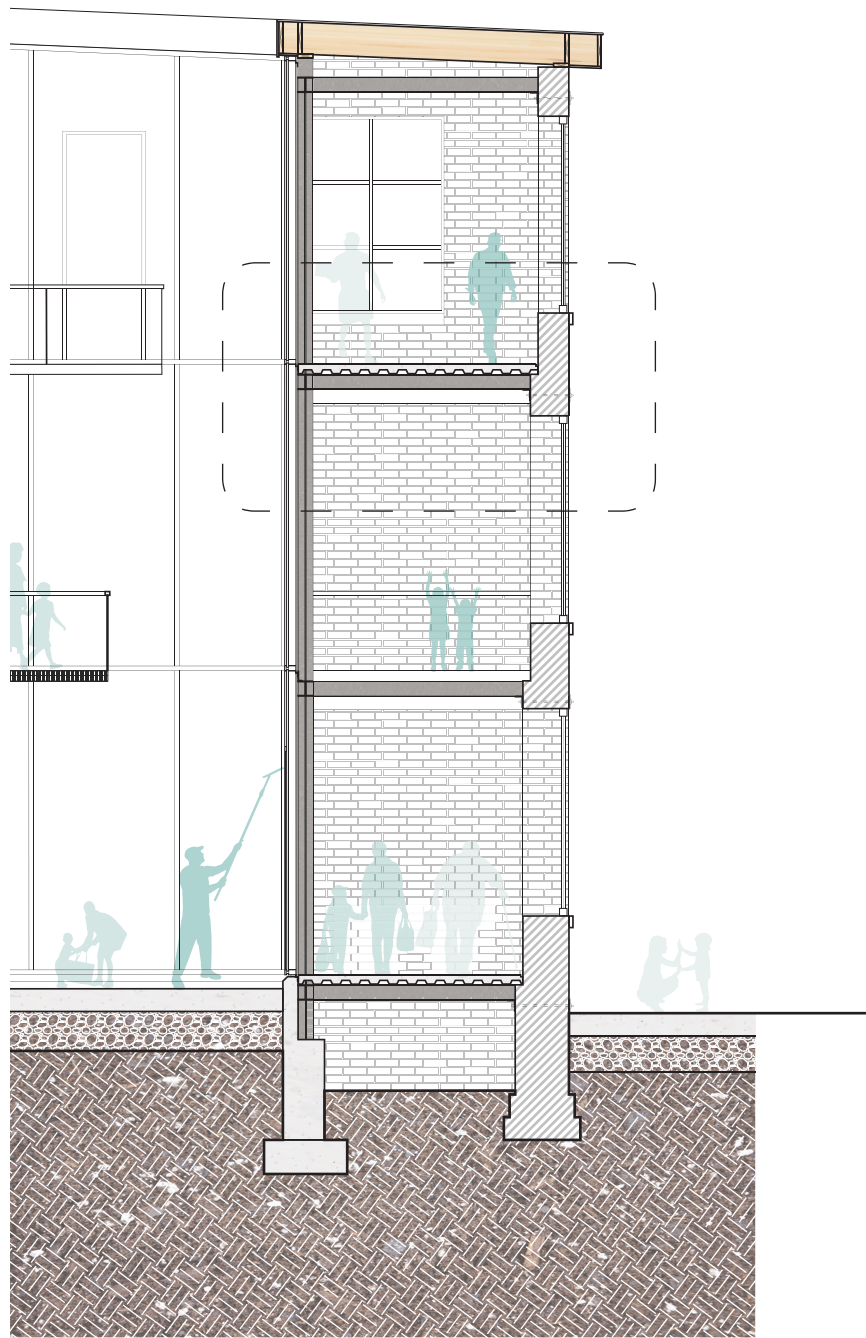
The building is stripped of its floors, roof and heavy timber structure in the area where the tidal canal meets the building. A new steel structure is erected to tie back to the masonry walls and to support both the new curtain wall system and corridors. The interior corridors are finished with polished concrete topping on metal deck, while the exterior catwalks are kept relatively light and transparent with the use of metal grates.



Typical plan of new courtyard wall and existing wall. Scale 1:50.



Typical section through new courtyard wall and existing wall. Scale 1:50.

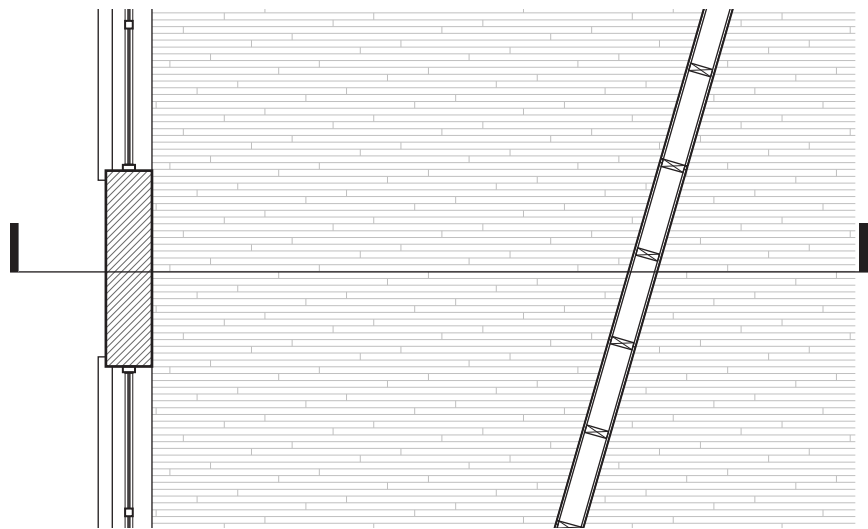




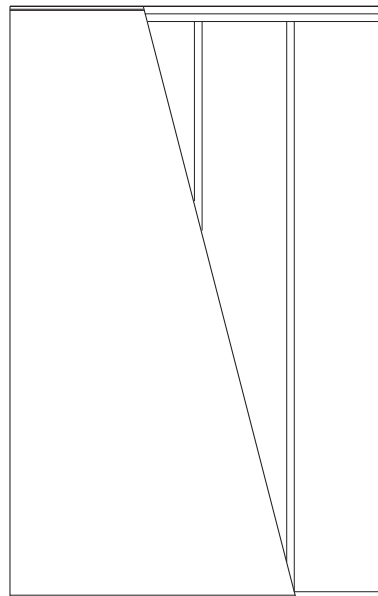
Ground floor by the new courtyard.

## The Partition Wall

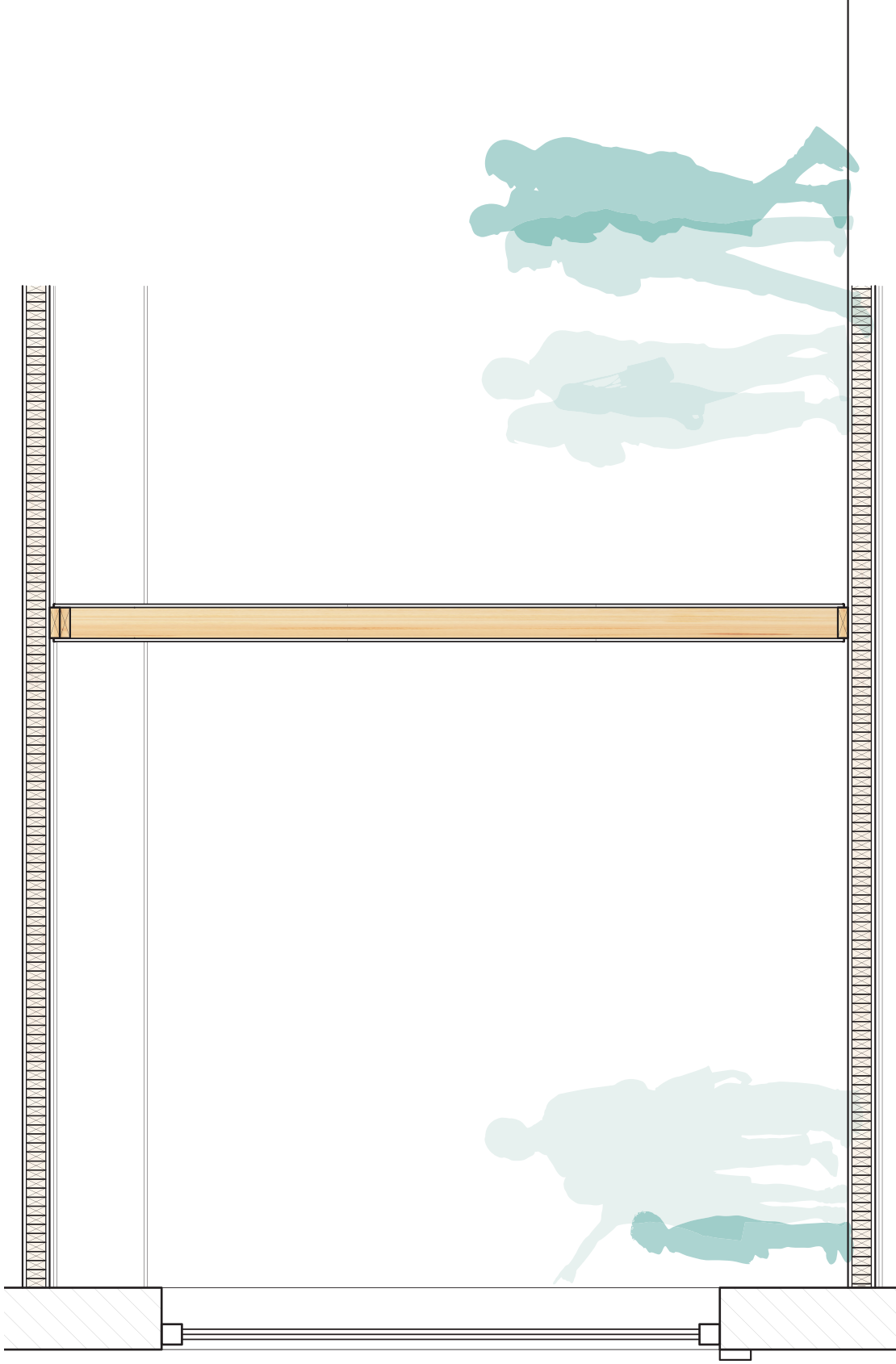
The partition wall is used in a variety of spaces, anywhere where new interior walls are constructed. A typical partition wall is clad in gypsum, however certain feature walls are clad in a wooden board option. Remaining constant throughout the wall type is the reveal detail, which runs horizontally along the top and bottom of the wall with a 19 mm gap. This is meant to emphasize its lightness and difference from the existing load bearing masonry walls.



Typical plan of new partition wall. Scale 1:50.



Typical elevation of new partition wall. Scale 1:50.



Section through existing masonry wall and new partition wall. Scale 1:30.

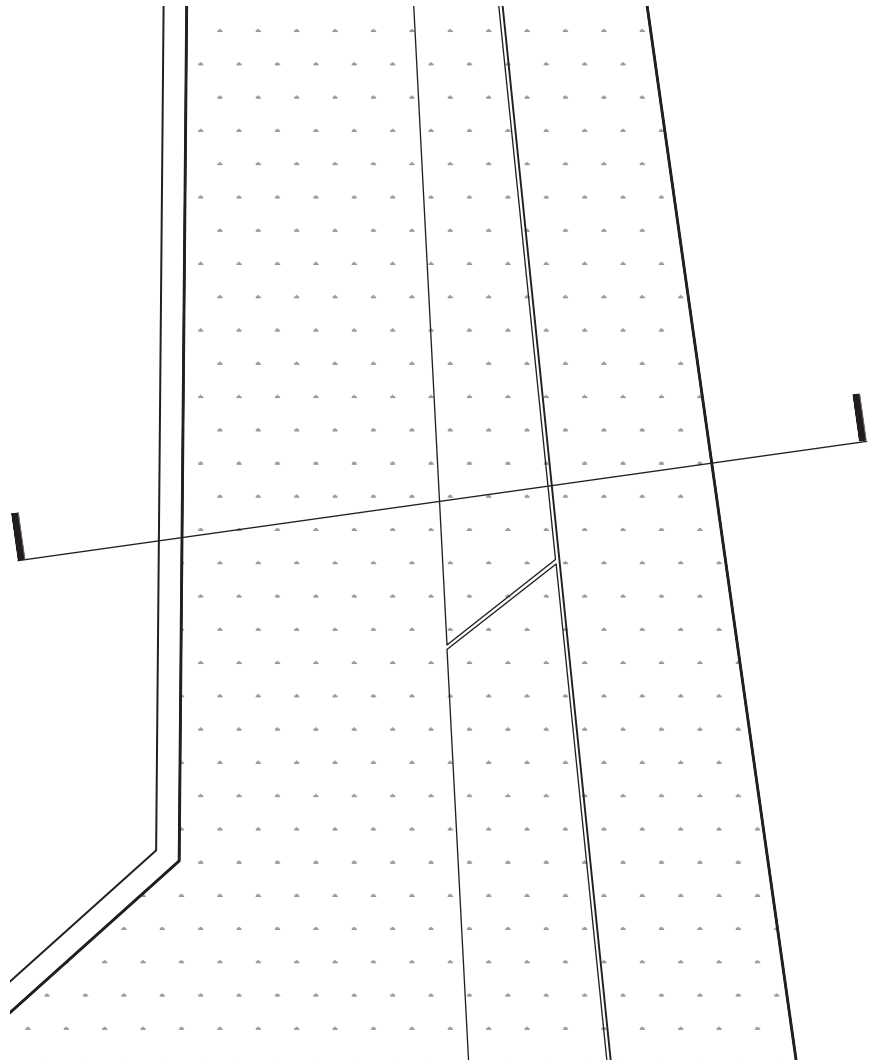


Art gallery space, with view to Fort Edward.

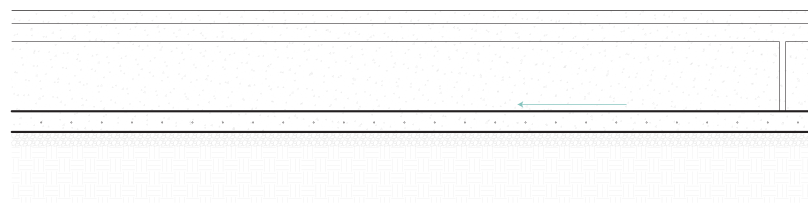


## The Wide Tidal Canal

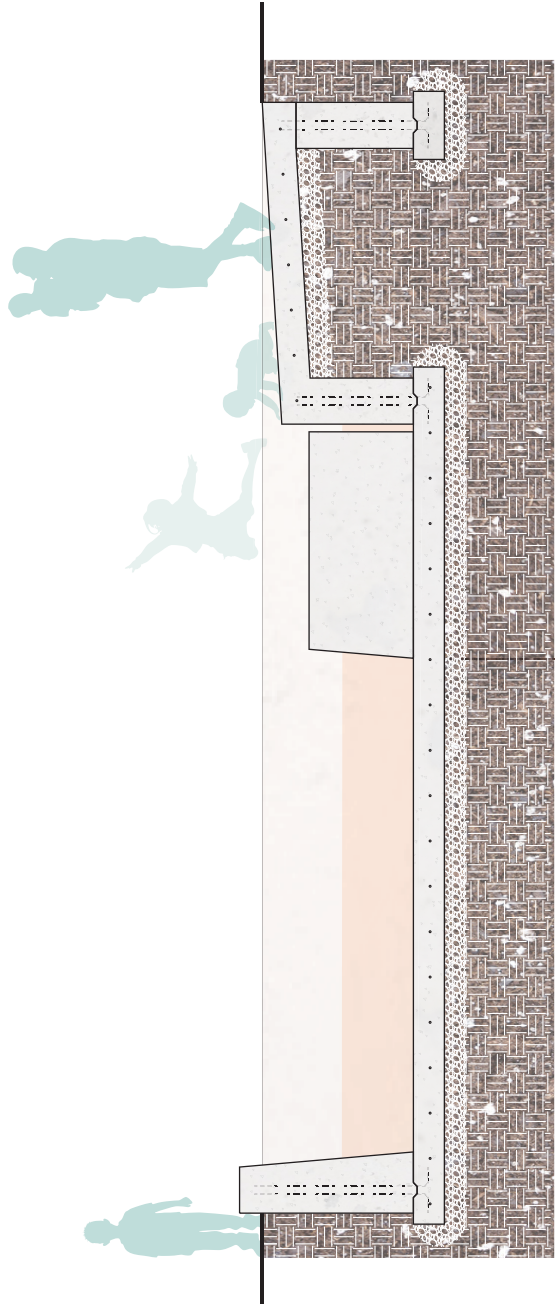
The wide tidal canal is situated on the property and leads up to the building. It bends as it progressively widens and opens itself up to the landscaped plaza. The wide tidal canal features a continuous step along with incorporating blocks which step down further and allow the visitor to experience the effect from a lower vantage point.



Plan of wide tidal canal. Scale 1:100.



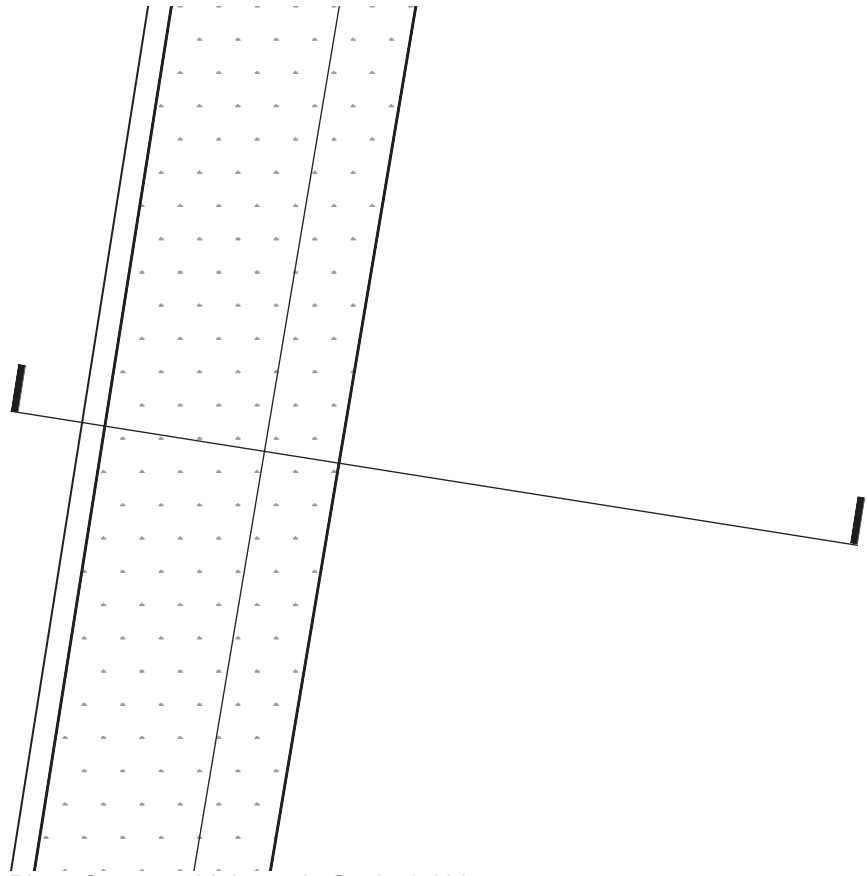
Typical elevation of wide tidal canal. Scale 1:75.



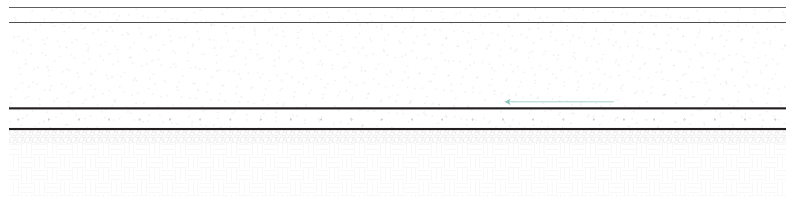
Section through wide tidal canal. Scale 1:50.

## The Narrow Tidal Canal

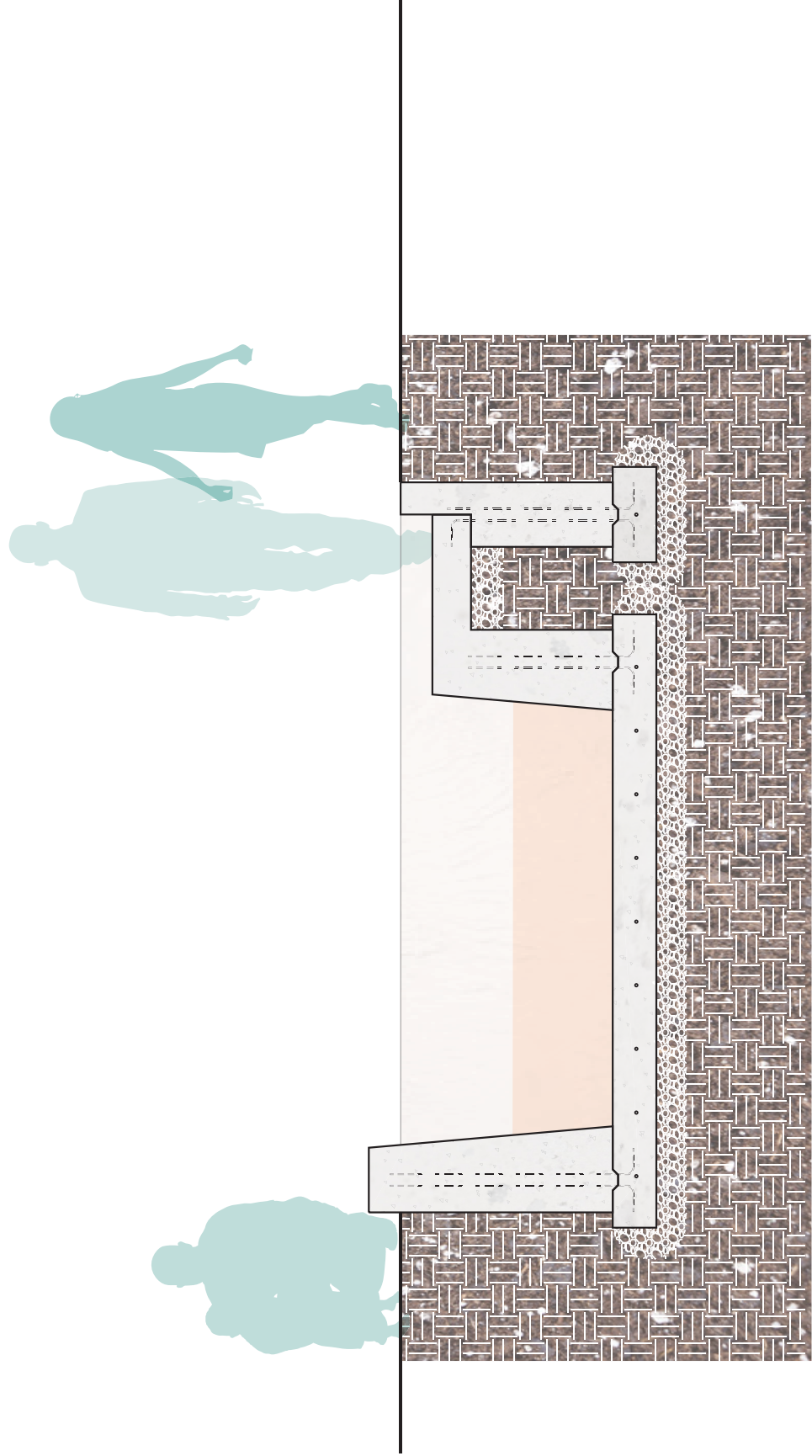
The narrow tidal canal is situated off of the property and connects the wide tidal canal to the Fundy shore. Together they bend six times marking each hour of the rise and fall of the tides. The narrow tidal canal incorporates a continuous step down which allows the visitor to experience the effect from a lower vantage point. This canal type has a grate over the road at the intersection of Colonial Road and Nesbitt Street.



Plan of narrow tidal canal. Scale 1:100.



Typical elevation of narrow tidal canal. Scale 1:75.



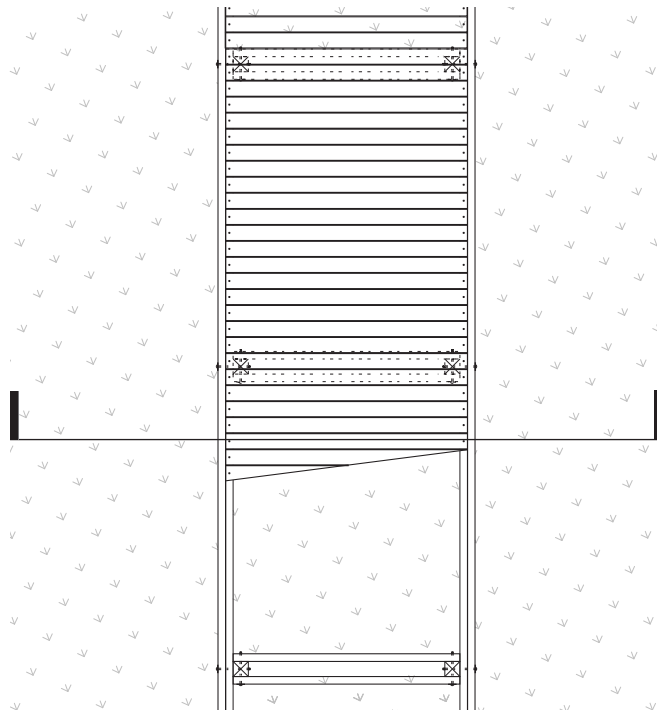
Typical section through narrow tidal canal. Scale 1:30.



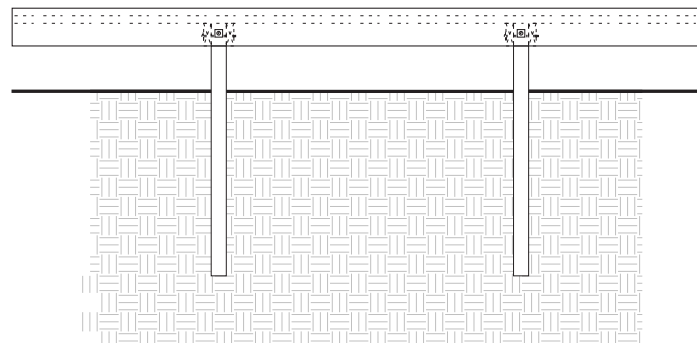
The courtyard, including a view of the end of the tidal canal during high tide.

## The Boardwalk

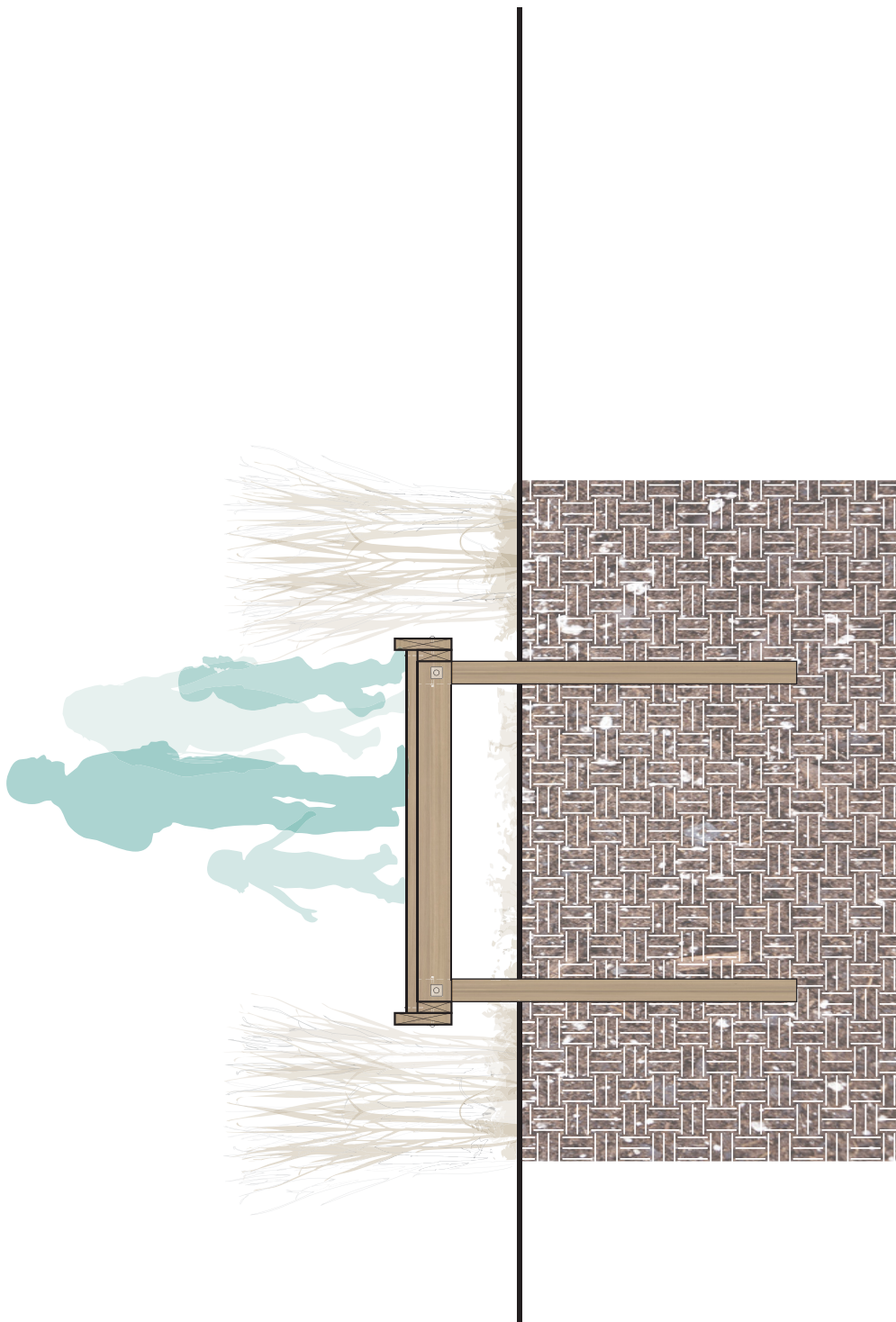
On the west side of the property, meandering through the overgrown grasses is a raised boardwalk. It links back to the city's existing trail network. It appears light and allows the visitor to feel like they are floating above the natural terrain. Two sizes have been designed across the site. The primary boardwalk width is 1320 mm, while feature resting and viewing spaces are widened to 1700 mm.



Plan of boardwalk, at wide point. Scale 1:50.



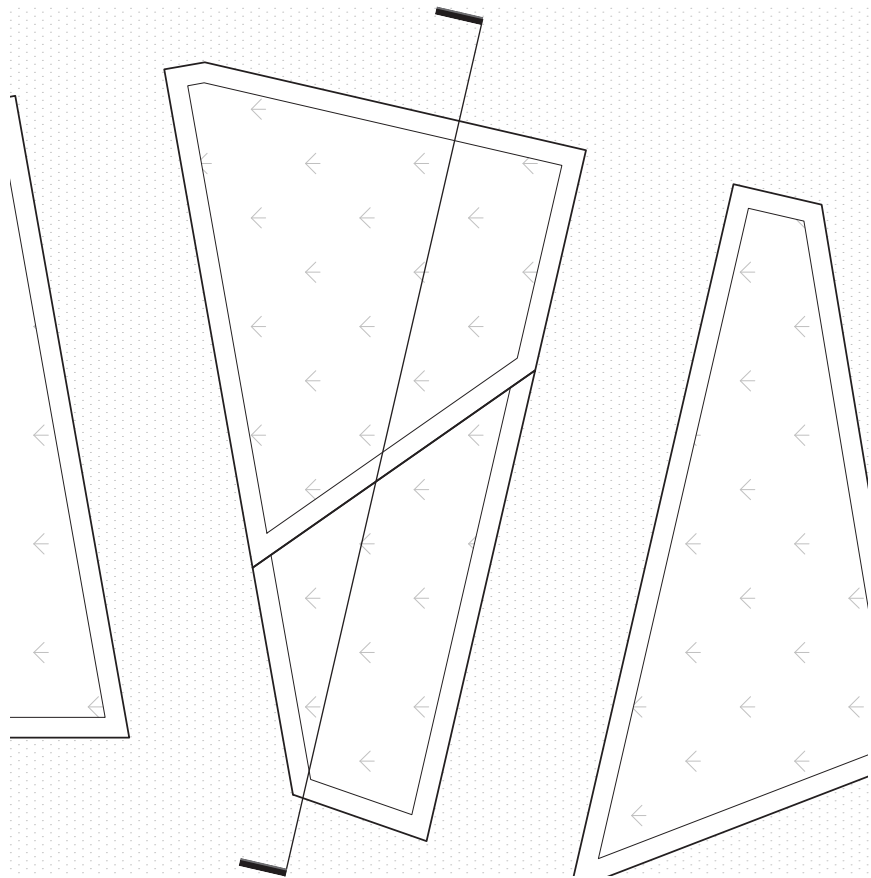
Typical elevation of boardwalk. Scale 1:50.



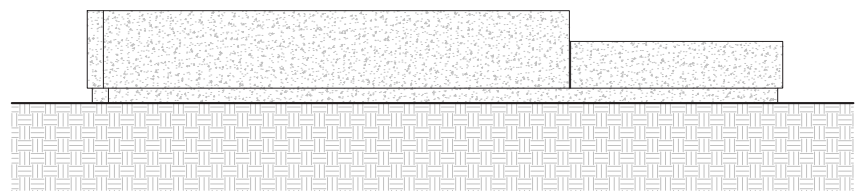
Section through boardwalk, at wide point (1.7 m versus typical 1.32 m width). Scale 1:30.

## The Raised Planting Beds

On the west side of the property, down in the former reservoir pond are new raised planting beds. They allow visitors to explore and learn techniques of growing produce that links back to the region's agricultural economy. The planting beds are raised to prevent contamination of soil in response to the past chemical contamination of the reservoir pond site. Continuous throughout the design is the reveal detail where the planter meets the ground. It allows the concrete planters to appear lighter in their relationship to the ground and for people's feet to tuck underneath.

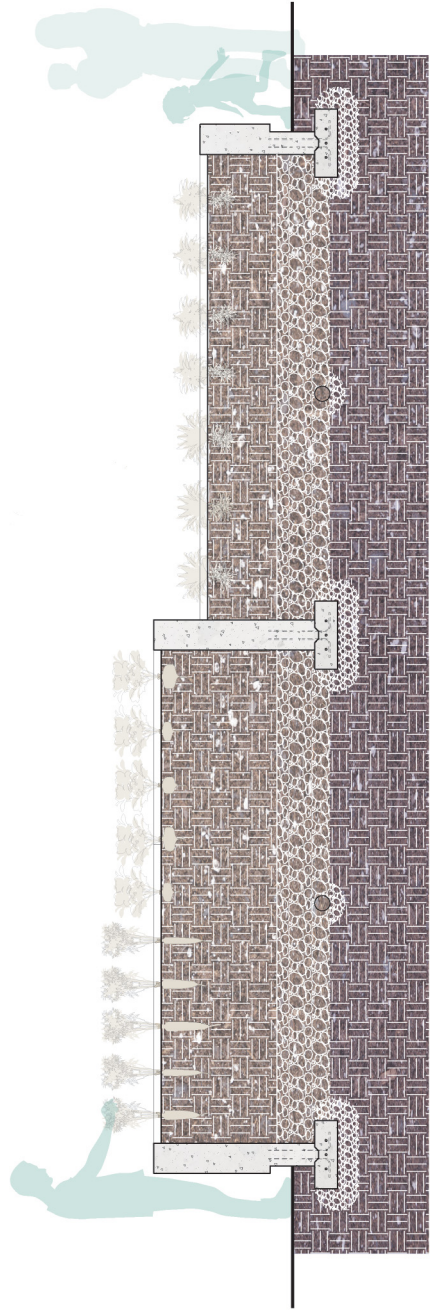


Plan of raised planting beds Scale 1:30.



Typical elevation of raised planting beds. Scale 1:75.





Section through raised planting beds. Scale 1:50.

## CHAPTER 6: CONCLUSION

The purpose of this thesis was to reconnect an abandoned textile mill to its local landscape, culture and community. Nova Scotia is located along the phenomenal Bay of Fundy, which has a compelling and dynamic landscape. This area is also rich in arts, culture and a significant industrial history. By selecting the former Nova Scotia Textiles Limited mill of Windsor as a site, and proposing a program that supports seasonal activities, it was hoped that my architectural interventions would re-establish the significance of the mill in the twenty-first century, while also reconnecting the town of Windsor to its phenomenal tidal context.

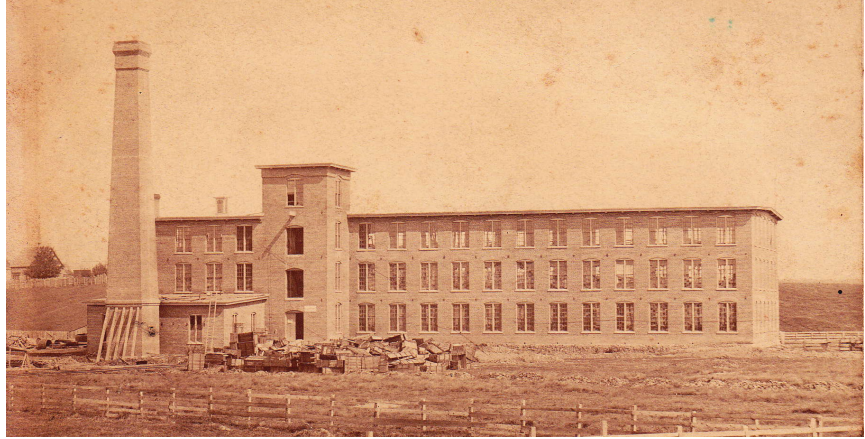
The town of Windsor has a significant industrial history spanning the last 250 years including shipbuilding, shipping, and manufacturing goods and textiles. However, a significant decline in manufacturing over the last few decades has encouraged the Town of Windsor to redefine their economy for the twenty-first century. The steady growth of the tourism industry, combined with the long-standing agricultural stability of this region, has created a convincing case for the proposal of a regional interpretive center. The mill's ideal location at the gateway to the Annapolis Valley allows it to become a monument to both the industrial history of Windsor as well as its contemporary identity.

The proposed design for the regional interpretive center has demonstrated connections with the dynamic layers of building, site and tidal landscape. The courtyard connects visitors physically and perceptually from floor to floor within the building while providing a connection to the natural outdoor environment. The gallery walls direct the visitor's views out to significant local landmarks while experiencing the space in between the new and old. Within these walls, the visitor is enveloped in the art and culture of the Atlantic

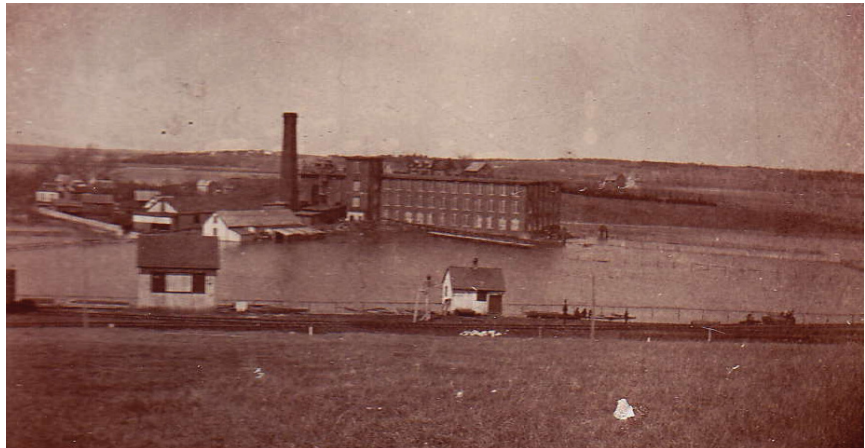
region. The tidal canals and other outdoor pathways connect visitors both physically and perceptually to the landscape and natural phenomenon of the Bay of Fundy while also acknowledging the existing pathways and networks of Windsor.

## APPENDIX

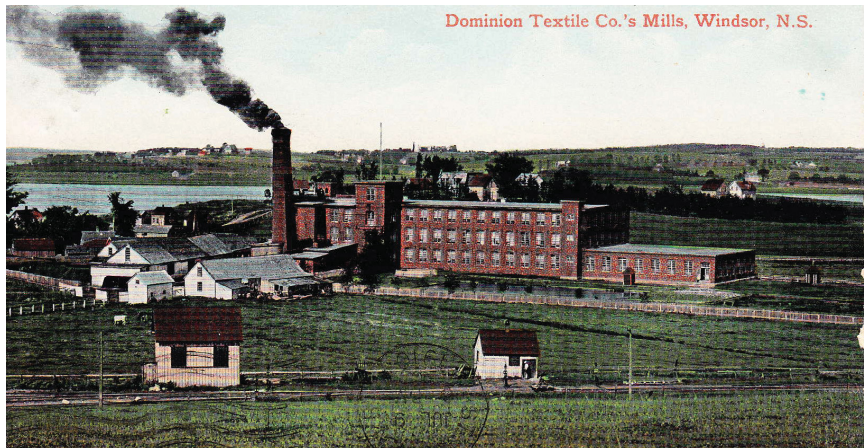
### Timeline



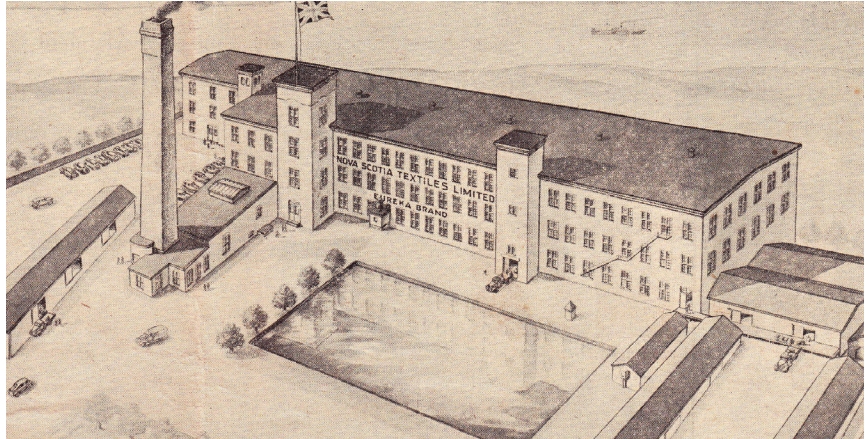
1883-84. (Nova Scotia Historical Society)



May 1, 1900. (Nova Scotia Historical Society)



1910. (Nova Scotia Historical Society)



1936. (Nova Scotia Historical Society)



1998. (Nova Scotia Historical Society)



Fall 2012.

# Photographic Study



Site and surrounding area photograph study.

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