

Linear Landscapes

by

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SCHOOL OF ARCHITECTURE

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ABSTRACT

A recreational urban trail runs through the city of Fredericton, New Brunswick with little interaction between adjacent buildings or the parallel riverfront of the Saint John River. As the two defining landscape elements extending throughout the city, the river and greenway, elements designed to link the two will become part of the same city-wide language. The potential for connections creates an opportunity for new public spaces: architecture which can extend the trail to physically bridge and support water and land recreation.

The design will culminate with two reciprocal sites along opposite edges of the river that provide both functional and experiential public spaces for recreational river and trail users. The strategies made to enhance these formerly neglected or private spaces are designed with the intent that any point along the vast trail network could be similarly adapted.

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Finally, to Jay, your unwavering tolerance and love throughout this experience has kept me sane. Thank you.

CHAPTER 1: INTRODUCTION

Thesis Question

How can the extended urban trail reconnect architecture to land and water recreation?

This study will examine how the main naturally occurring landscape feature in Fredericton, the Saint John River, and the man made landscape element of the trail network can be linked together in a way that creates opportunity for new public architecture. The design must address the importance of an urban trail network and the relationship to adjacent architecture and landscape elements. With a predominantly pedestrian user group, the trail's surroundings must adapt to this human experience in contrast to neighbouring automobile dominant roadways. The success of this study will be in whether the proposed design moves can be developed into a typology that transcends site specificity, developing an identifiable trail architecture that could easily be found at any point along this pathway.

Two sites will be addressed for this purpose: a piece of partially demolished infrastructure, the former Carleton Street Bridge piers; and an underused former private recreation site, the Fredericton Yacht Clubhouse grounds. These sites have in common the potential to revitalize two spaces both along the riverfront and trail by creating opportunity for public program and give back to the community by adapting their design and program to the adjacent trail and user group.

The City of Fredericton

Fredericton, New Brunswick is a remarkably walkable city, due in large part to the established 80km walking and cycling trail system that the city has nurtured and developed. Until recently, neighbourhoods and services have been concentrated in the downtown centre, its counterpart across the Saint John River, and a few well-established subdivisions, most of which have some sort of relationship to the trail network.

A majority of the trail was once part of the rail network, and the properties that run along the many sections of the trail reflect this industrial origin. Warehouses, repair shops, parking lots and general low density commercial buildings still populate the trail's edge. As the trail is an obvious amenity, it is important to examine these spaces for opportunities to reclaim them for the community, just as the Trans-Canada Trail has reclaimed the abandoned rail lines for the public.

This trail network stretches across Canada to eventually create the longest continuous recreational trail system in the world, suggesting that elements of this thesis may be relevant and adaptable to many other communities across Canada as cities attempt to reuse former industrial land. A green corridor through a city today would be nearly impossible to create with contemporary planning methods. However, we can take advantage of industrial infrastructure of this sort and ensure its future use.

That the conversion of industrial rail lines into public space was embraced nationwide also says something about how communities can envision their future. Industry may be waning, but as these sites grow more urban, and are repurposed as such, it is important to also reclaim space for further sustainable developments and public recreational use.

The landscape of Fredericton and its outlying areas predominantly centre around the Saint John River. Likewise, the city has extended the walking paths from the former rail lines to follow the more populated edges of the river. Prior to the 1986 construction of a hydroelectric dam north of the city in Mactaquac, the Saint John River historically served as one of the main industrial waterways for the province, especially for logging activities. Presently, the river is mostly used for recreational purposes, with two wharves for power boats, a sailboat yard and launch, a rowing club with public rentals, a leisure ferry, and several public access ramps.

While the dam regulates most of the daily fluctuations in river flow, the annual spring thaw from northern New Brunswick, Québec and Maine always threatens the low-lying plains of the city. While the mean water height may vary between 1m and 2m, April and May typically see the waters rise 5m to 6m.¹ The 30-year flood, which was experienced again in 2008, rose

¹ Environment Canada, *The Water Survey of Canada*. <http://www.wsc.ec.gc.ca/applications/H2O/report-eng.cfm?yearb=&yeare=&station=01AK003>



Typical length of walking trail on a former rail cut.



Bill Thorpe Walking Bridge, former train bridge converted for non-motorized recreation use in 1997. Spans 0.6km across Saint John River.

over 8m to cause significant damage and restrictions for residents.

The city has developed several studies and master plans for the walking and cycling routes through the city with great success: the trails are well used and cycling awareness has improved.² Fredericton is not yet in danger of losing these amenities. Because the city is addressing these issues and the population is receptive, architectural intervention can now be made to solidify these secondary arteries as significant thoroughfares. To do this, the design of architecture that directly extends from the trail must aim to serve a pedestrian, cycling and boating user.



The Green, a public space along the waterfront in downtown Fredericton. Pictured above, the Fredericton Lighthouse, a popular tourist attraction, and the walking bridge beyond. The walking trail along the waterfront is typically not cleared in the winter due to proximity to normal sidewalks. Instead, the trail can be used for cross-country skiing and snowshoeing activities.

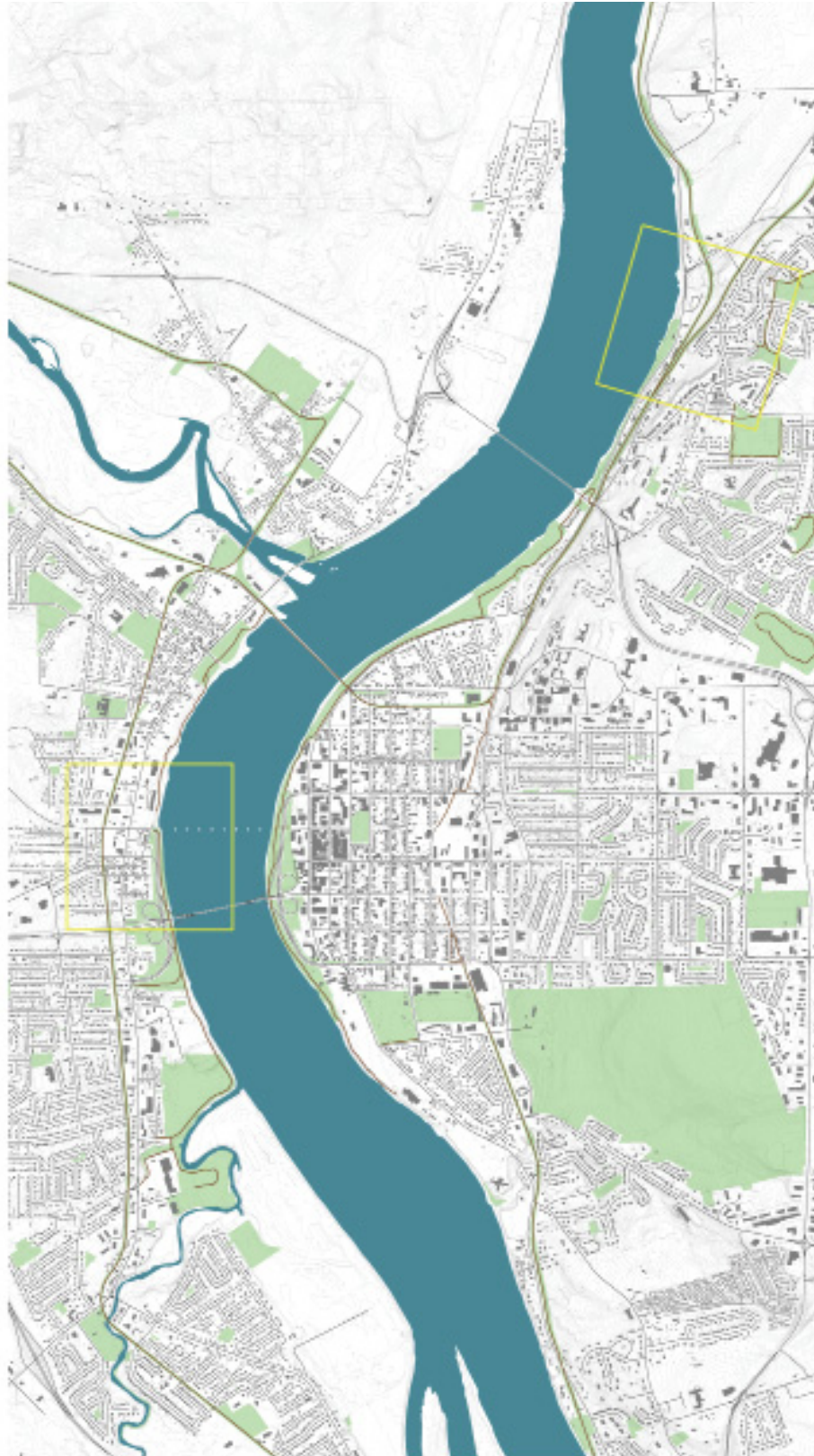


A cyclist rides behind the Beaverbrook Art Gallery along The Green, with lighthouse dock and Carleton Piers beyond.

² SGE Acres Limited and Marshall Macklin Monaghan, *Trail/Bikeways Master Plan*, prepared for the City of Fredericton, (September 2007), 2.35-2.37.



City plan with extent of trail network. Sites are indicated by yellow squares. Map and section based on data acquired from the City of Fredericton.



City plan in context to density and river. Sites are indicated by yellow squares. Map and section based on data acquired from the City of Fredericton .



Section through the Fredericton river valley depicting the Bill Thorpe Walking Bridge over the Saint John River.

CHAPTER 2: DESIGN INTENTIONS

There is very little evidence of architecture addressing the trail. The buildings that once existed along the train tracks either face away from the trail or are lined with fencing. Buildings erected since the trail conversion fill in any space between the building and the trail with parking lots or concealed by fencing. Rather than converting the land along this new greenway from unwelcoming pavement to inaccessible private residences, design should be attempting to create reasons to deviate from the path onto formerly unwelcome and underused sites.

For the recreational user, there is excellent infrastructure in place: the trails are presently undergoing paving which addresses issues for cyclists, wheelchairs and strollers, and aids in wintertime thaw; the trail provides unique scenery and vantage points overlooked by traditional streets by traversing through commercial, residential and urban forest settings virtually isolated from automobile hazards, and the trail connects most recreation facilities in the city to each other and the community. Taking the two key landscape components found in the city, the river and the trail, and using an extension of the path to connect the two programs will be the key in generating new architecture for the public.

The logistics of building so close to the annual flood plane will be addressed through the design. Both will be year-round structures which can withstand the ice flows, and will be designed with materials in mind to be partially submerged and still accessible.

The sites that will benefit the most from the trail will be those that currently exist without a public purpose. This thesis will examine if careful connections from the trail to a building or program can make a once private or unused site relevant to the community.

Existing Conditions

The main feature of the trail is the path itself. It is newly paved asphalt (transitioning from hard-packed gravel) and serves as its own wayfinding device throughout the city. The path is spacious, either open along the waterfront or enclosed in a corridor of buildings and trees wide enough for former train passage.

To connect the trail to its adjacent architecture, a similarly familiar floor element must be used to indicate a change in direction and activity. This element must be a visual and tactile material change in order to distinguish itself from the trail. The goal is not to keep adding paths every which way in order to create connections to the community, but structured and visual design cues that indicate that there is a building or activity nearby that is specifically there to draw activity from the trail.

This new path is both a physical and implied bridging element between the trail and adjacent architecture. Just like a regular city street, this element will create an intersection with the trail, letting the user decide whether to “turn the corner”.



Newly paved trail section as it meanders between a residential and commercial area of town.

The materiality chosen for the design purposes of this study is a wooden planked structure that can become flush with the trail for optimum accessibility and then gradually slope away from the ground to a level boardwalk on piles that can bridge topographical changes between trail and architecture with minimal ground impact.

This wooden trail extension can vary between definitions as bridge, pier and pathway to provide a variety of design methods to create transition spaces for the program.

This material choice has a precedence in the current bridging elements along the trail. The Bill Thorpe Walking Bridge that spans the Saint John River and a pedestrian overpass at St. Anne's Point both use wood floor structures to bridge these spaces.



Wood deck of a former train crossing over the Nashwaak River, at its tributary towards the Saint John River.



St. Anne's Point Pedestrian Overpass, looking north towards Carleton Piers.



Wood deck of the Bill Thorpe Walking Bridge.

CHAPTER 3: SITES

Carleton Piers | Reclaiming Forgotten Infrastructure for the Public

Along the north side of the Saint John River, the walking trail follows the shoreline with one exception, where the trail ends on each side of a 1km square piece of land. This property is part of the Maliseet St. Mary's First Nation and serves historically as their water access. Presently, there is no dock in place to do so, and the oversight diminishes the site's significance.

Directly adjacent to the site finds the remains of the Carleton Street Bridge, demolished in 1982, with piers extending out towards the downtown of Fredericton. All that remains on land is the ramp leading up to the river's edge, encircled by ornate rails and slowly being overgrown with foliage.

The trail on this site came to be to provide public recreation along the river's edge; there is a rail cut



Overgrowth on Carleton Bridge ramp.

near the site, but does not directly pass through. The area, Devon, is largely mixed use residential and commercial, but not to the same density as downtown Fredericton.

As an endpoint before the trail officially takes a pause at the St. Mary's First Nation site, there is an opportunity to mark it with a program that can offer both neighbourhood water access and a public gathering space, while also providing much needed trail amenities such as restrooms, water fountains and small watercraft storage.

The trail in its current state, unfinished in this section, runs precariously close to a dangerous curve at a highway off-ramp. It is routine to see cars off the road onto the path along this portion of the trail, especially in winter months. Creating a visible pedestrian space will slow motorists down and make this portion of the trail safer.



Dangerous curve as it approaches the unfinished walking trail.



Existing piers from the former Carleton Street Bridge, as seen from the south side of the river looking towards the site.



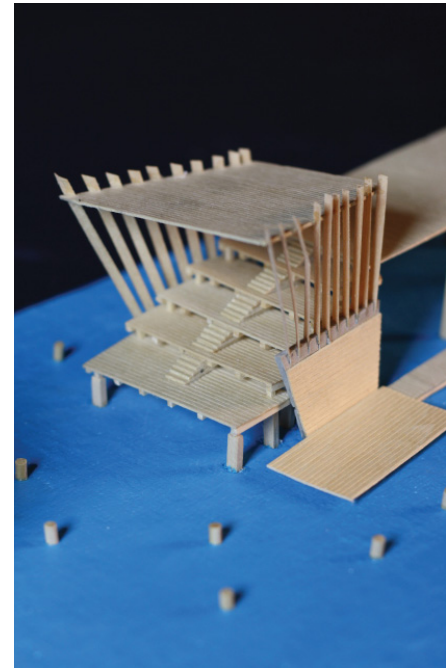
Current St. Mary's water access, a man-made footpath down the embankment.



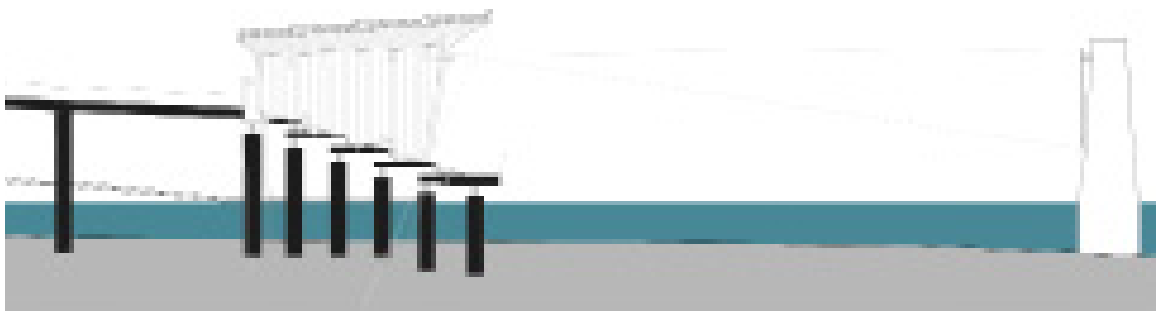
Map based on data acquired from the City of Fredericton.

The first design element would be to extend the trail, as it ends at the pier, up along the street, creating a visible pedestrian walkway to the next street. The path element would connect the trail to the bridge ramp by running a boardwalk up and over the edge, ramping slowly towards the first pier. At the end of this boardwalk, an open-air pavilion provides shelter and seating as the structure steps down into the water. This space becomes a small amphitheatre for a screen placed on the face of the first pier which will be used to screen outdoor films. Piles in the water surrounding the pavilion provide spaces for watercraft to moor during summer screenings.

Adjacent to the pier on land, a small structure cantilevers over the embankment providing a cafe, end-of route services, public washrooms and, on the lower level, small craft storage and rentals for the public and neighbouring St. Mary's community. Between the pier and structure, a ramp will descend between, following the grade down to the water to provide public dock access.



Model detail of amphitheatre.



Detail of section through amphitheatre.

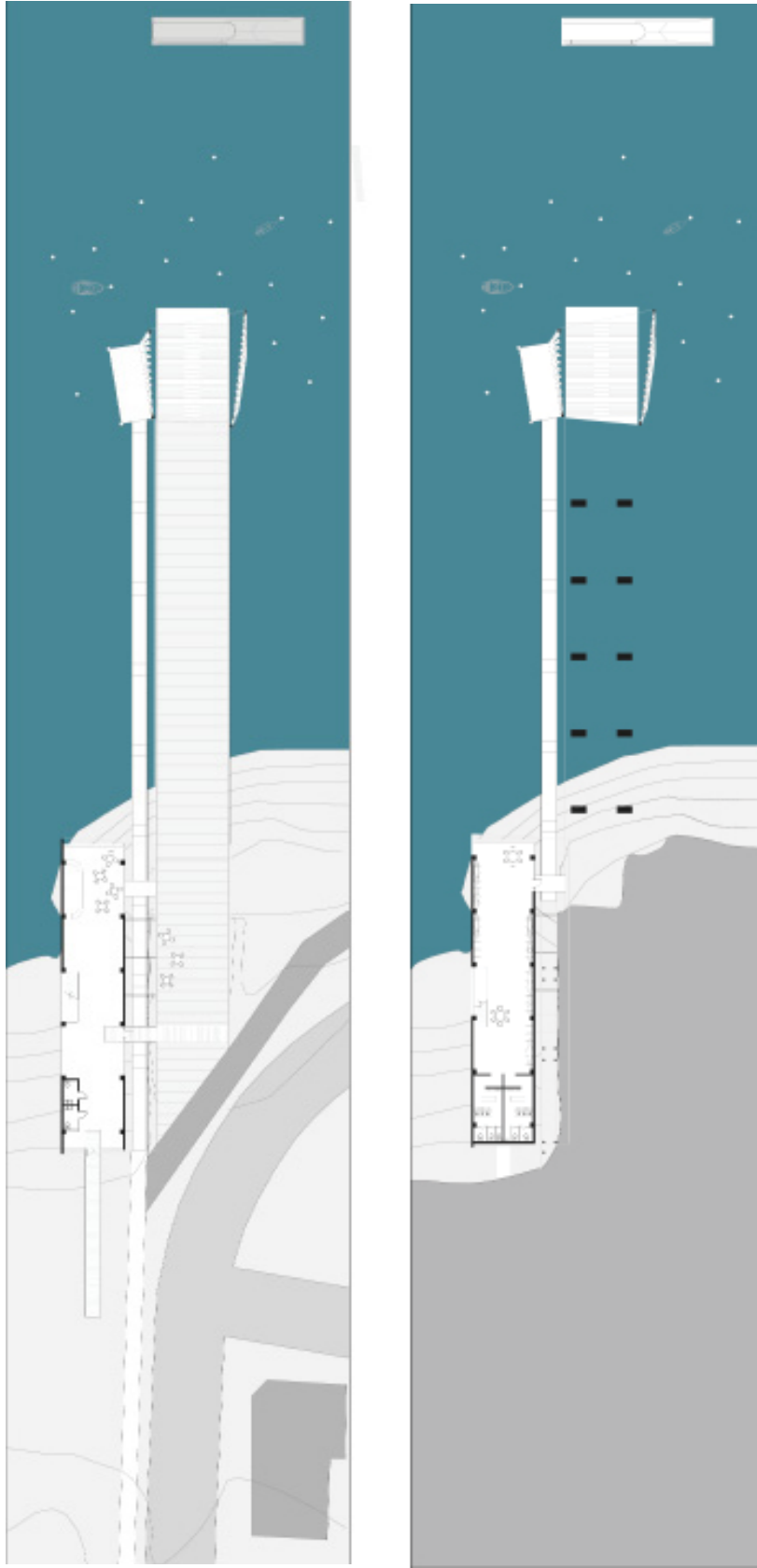
The two pavilions will reference each other with their use of steel structure for year-round integrity, and wooden roof and wall structures that reference towards each other to envelop and direct the visual spaces between.

While the building sits above the 30-year flood line, the amphitheatre is designed to allow for submersion to varying degrees annually; a gap between each riser allows water flow and the illusion of floating as the water rises.



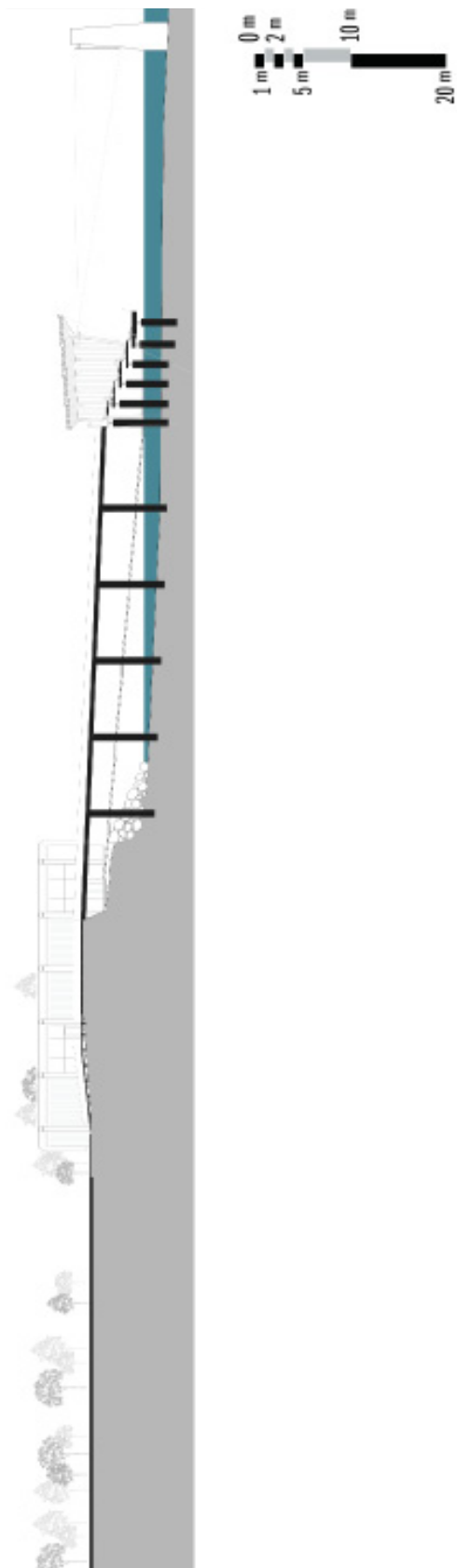
Top: Main level floor plan detail, depicting bridging connections to pier.

Bottom: Lower level floor plan with boat storage along walls.

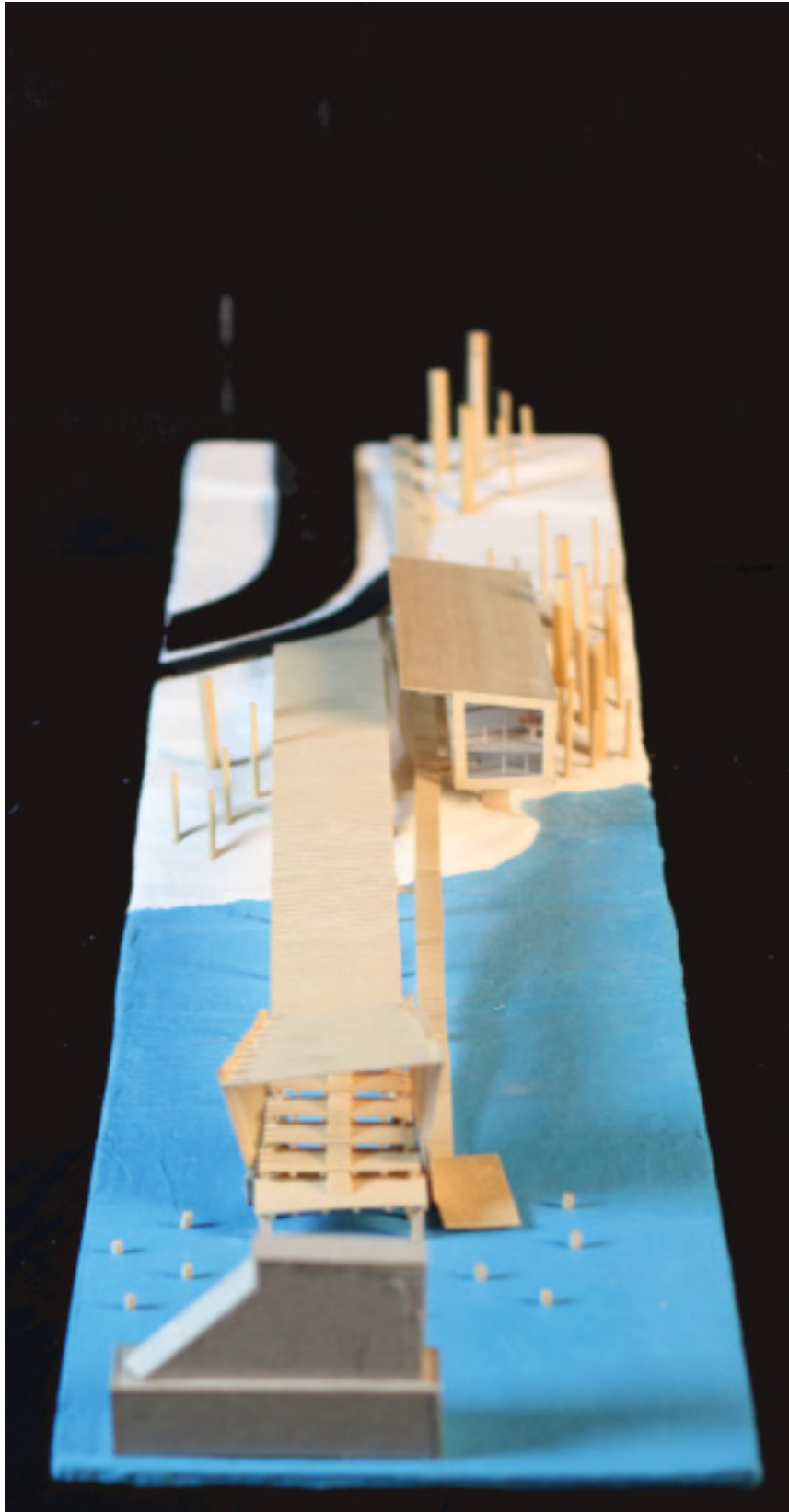


Top: Main floor plan depicting cafe and outdoor amphitheatre.

Bottom: Lower floor plan depicting boat storage area and ramp down to river.



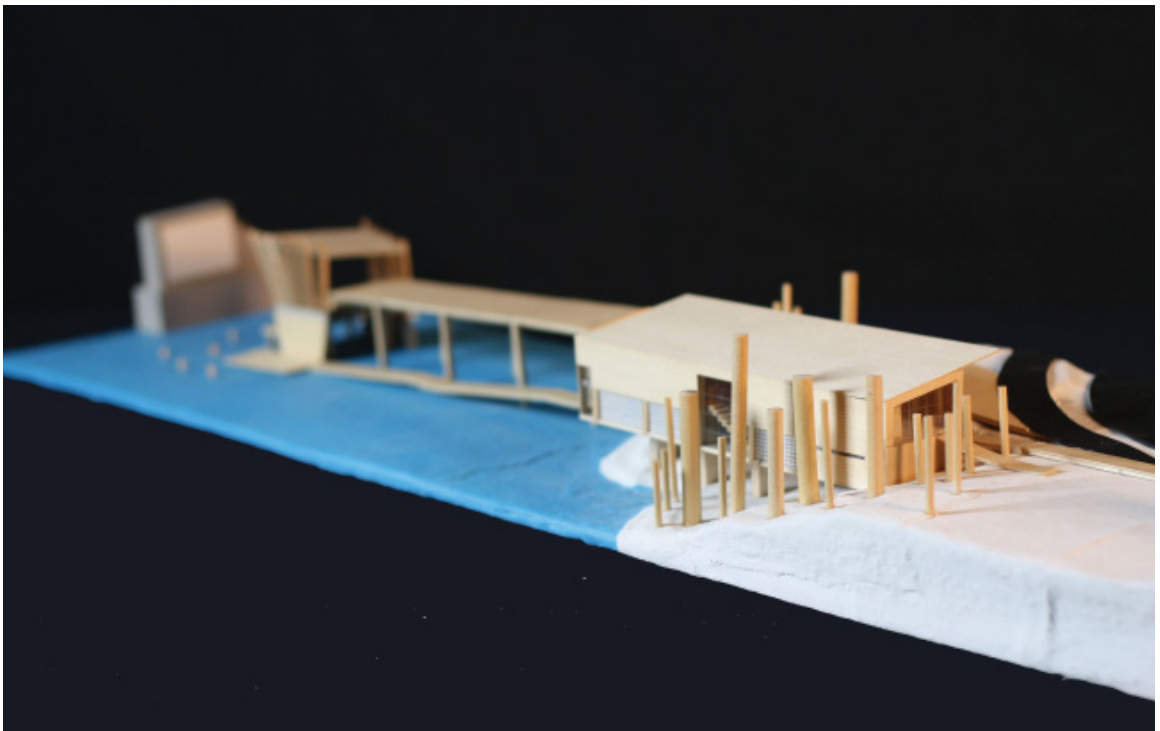
Section of pier extension through theatre.



Site model. Original at 1:200 scale.



Model of how trail merges with new boardwalk section and extends down to river between pier and boat storage.



Model of cantilever through the trees.

Fredericton Yacht Club | Reclaiming Private Recreation Space for the Public

The second site is the former Fredericton Yacht Club, which lies next to the current functioning yacht storeyard, but is no longer used for its original purpose. Situated on the river side of the Lincoln Road, two pedestrian trails follow the road on the opposite side, one along the river and one rising up the hill towards the Southwood Park subdivision. Both of these trails were part of the rail network, heading to Saint John and Fredericton Junction respectively. The site of the present day yacht club was once that of the former Victoria saw mill.

The Fredericton Yacht Club has held the lease on the site for the past 50 years from the city. In that time they have developed a strong presence in the river boating community. Part of the original lease included the adjacent recreational building, but in 1986 the building was no longer in use and the city repurchased it for a 14 year lease from the



Fredericton Yacht Club from the Lincoln Road, with its current occupants, a dentist office.



Fredericton Yacht Club with hill beyond as seen from the Saint John River.

Fredericton Yacht Club.³ The site became a Chinese family restaurant and was renewed another 10 years in 2000. This establishment closed when the owner passed, and as of May 1st, 2010 the building has been leased by the city to a dental office.⁴

Nevertheless, the Fredericton Yacht Club is interested in reclaiming the building for public use and access to water recreation. A 2008 report to the City of Fredericton outlined their vision of expanding their facilities to provide more community access.⁵ As the club currently has a very “do-it-yourself” atmosphere, the inclusion of the public would not be a large stretch in creating additional docks and storage facilities.

The club has already considered improving access to the public, and has determined that a direct connection with the pedestrian trail would provide that. There is currently a footpath from the main trail extending to cross Lincoln Road to the yacht club, but no crosswalk exists.⁶



Current footpath extending from trail down to Lincoln Road and Saint John River.

3 Fredericton Yacht Club, “Fredericton Yacht Club Report to the City of Fredericton on the Highest and Best Use of the Waterfront Property in the Vicinity of the Fredericton Yacht Club,” (Fredericton, NB, 22 March 2008), 3.

4 City of Fredericton, “Minutes of a Regular Meeting of Fredericton City Council,” (Fredericton, NB, 8 February 2010), 7.

5 Fredericton Yacht Club, “Fredericton Yacht Club Report,” 8.

6 Ibid., 9.



Map based on data acquired from the City of Fredericton.

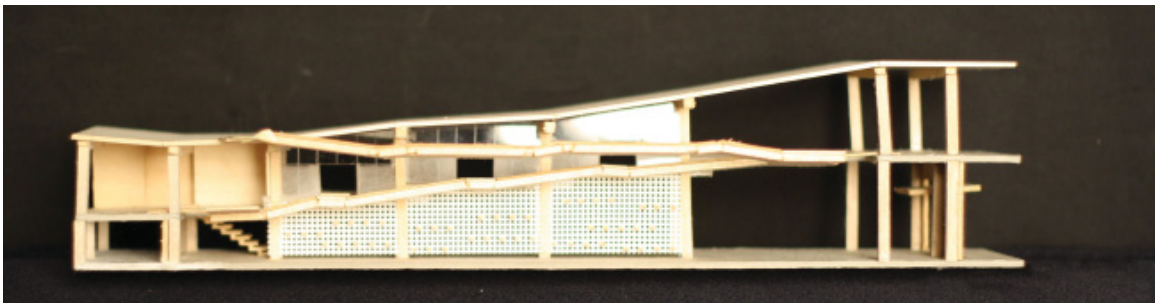
The proposed design extends a pedestrian bridge from the hillside landscape of the walking trails, down to the waterfront for boat access. To do so, the strategy creates an extension of the current trail experience by ramping the bridge along and through a new public community centre on the site. As the trail progresses and switches back towards land within the building, and again towards the river, spaces are created that are both public and private. Keeping the path structure separate from the program spaces by way of deliberate bridging elements, the path can be experienced without interfering with all elements of the building.



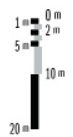
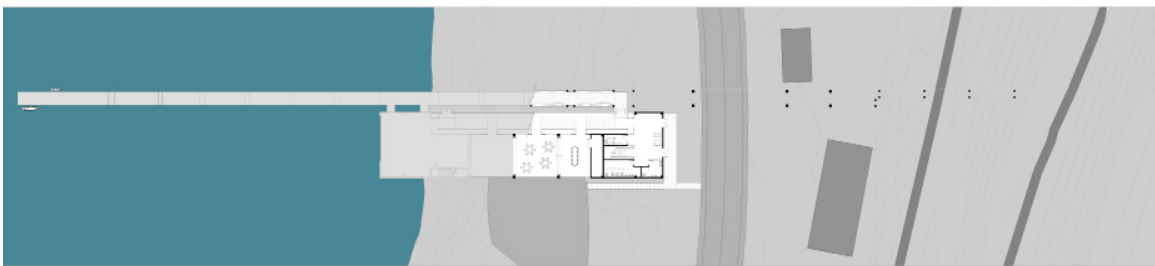
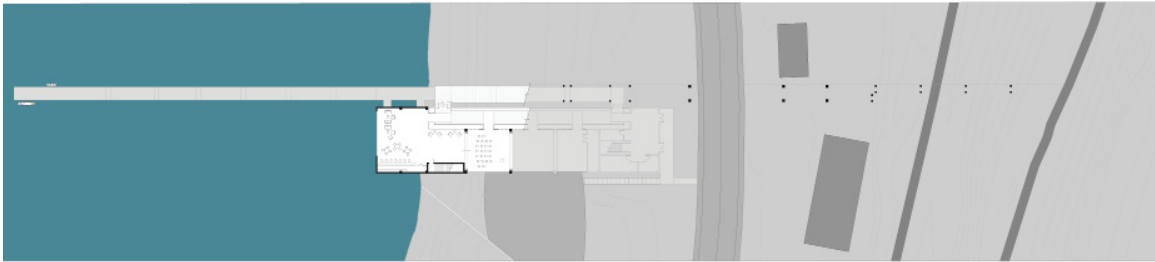
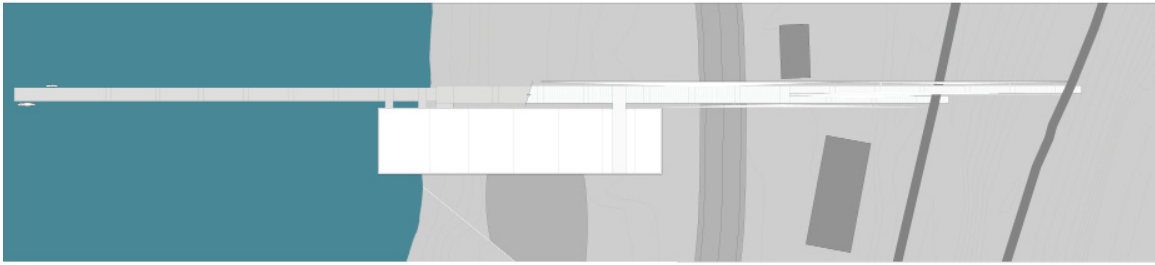
Model detail of where pedestrian bridge connects to pathway through the woods.

The interior community spaces will include a reception hall, classrooms, locker rooms and storage, a kitchen, and permanent watercraft storage.

Entering the building by way of the pedestrian bridge, one would descend slowly past the roof where there is access to a roof-top garden space. Staying on the ramp, the user reaches the top floor entrance as the roof slopes upwards. Entering the building, the ramp remains a separate entity from the program within, with bridging elements jutting off to gain access to the adjacent reception hall and classrooms. The ramp switches back and descends back towards the land, plateauing at ground level, with access to the main lobby area, before leaving the interior space and switching back towards the river on the exterior of the building. This space is semi-enclosed by way of the ramp overhead, with screen support structure for storing small watercraft during seasonal use. The ramp follows the exterior of the building again before reaching a landing that bridges into the lower level boat storage and locker area. The ramp continues all the way to the river dock at this point.



Section model through building, showing how the ramp meets each room on each floor level. Mesh wall with dowels represents the boat storage wall and its adaptable configurations.

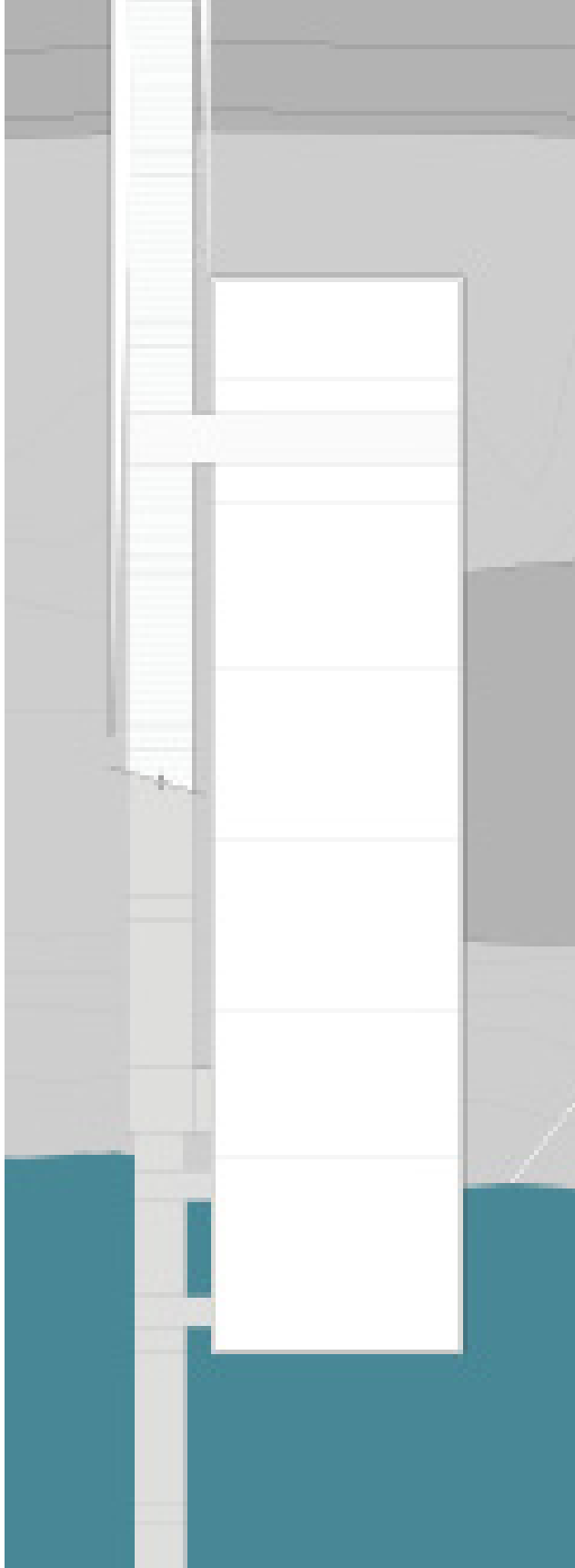


Top: Roof Plan and pedestrian bridge as it ramps up towards the trails on the hill.

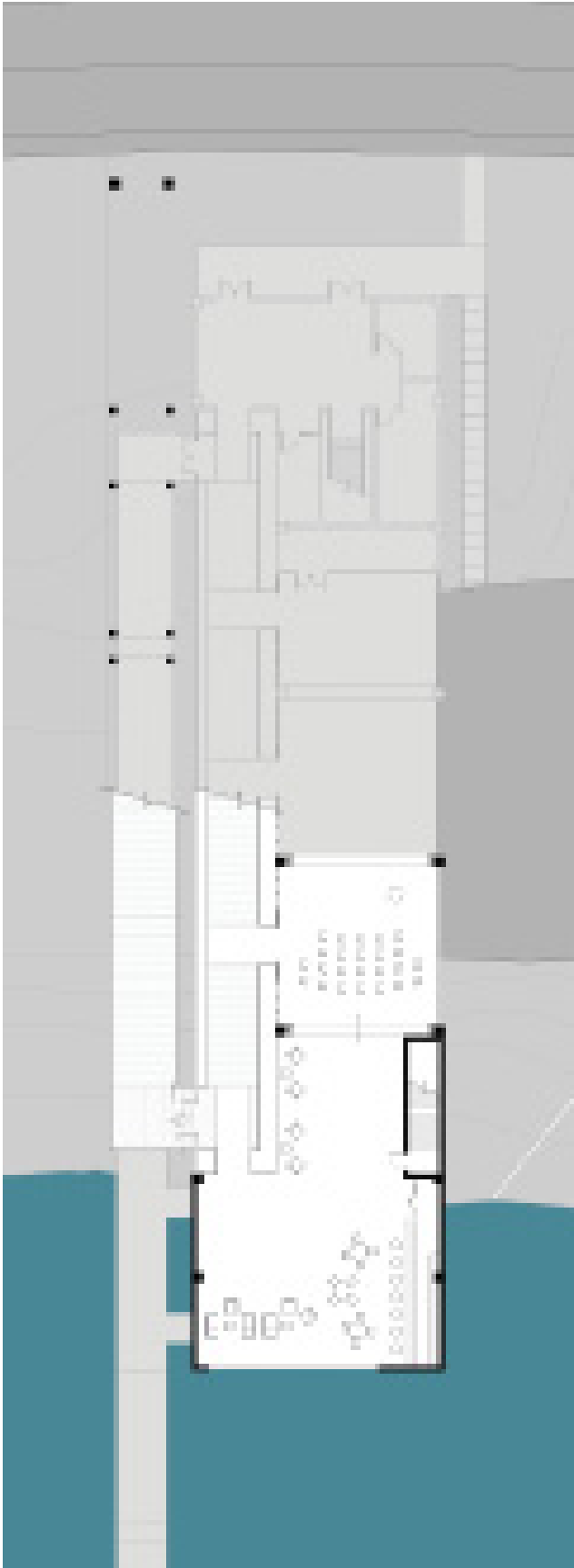
Upper Middle: Second Floor Plan as the pedestrian bridge enters the building and begins to ramp down past the reception hall area to the classrooms.

Lower Middle: First Floor Plan where classrooms ramp down to ground floor entry and the pathway exits to the exterior of the building.

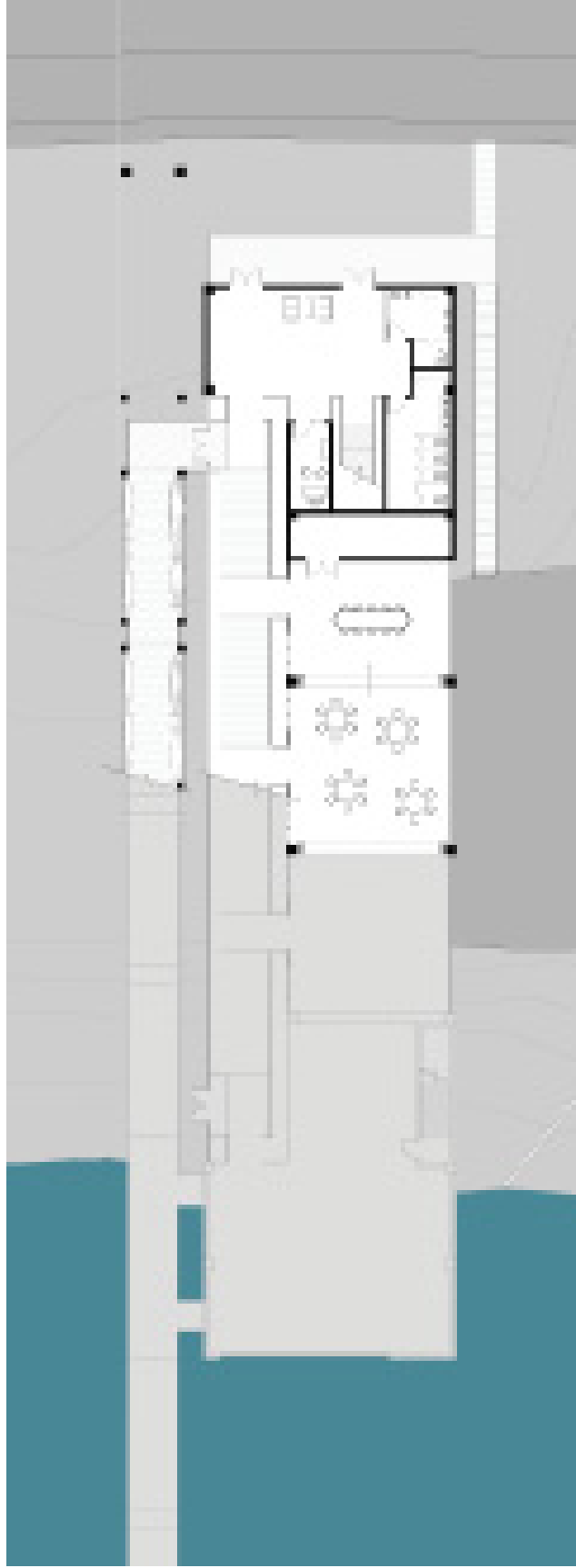
Bottom: Basement Plan and ramp down to river, with parking lot access and the majority of the boat storage area.



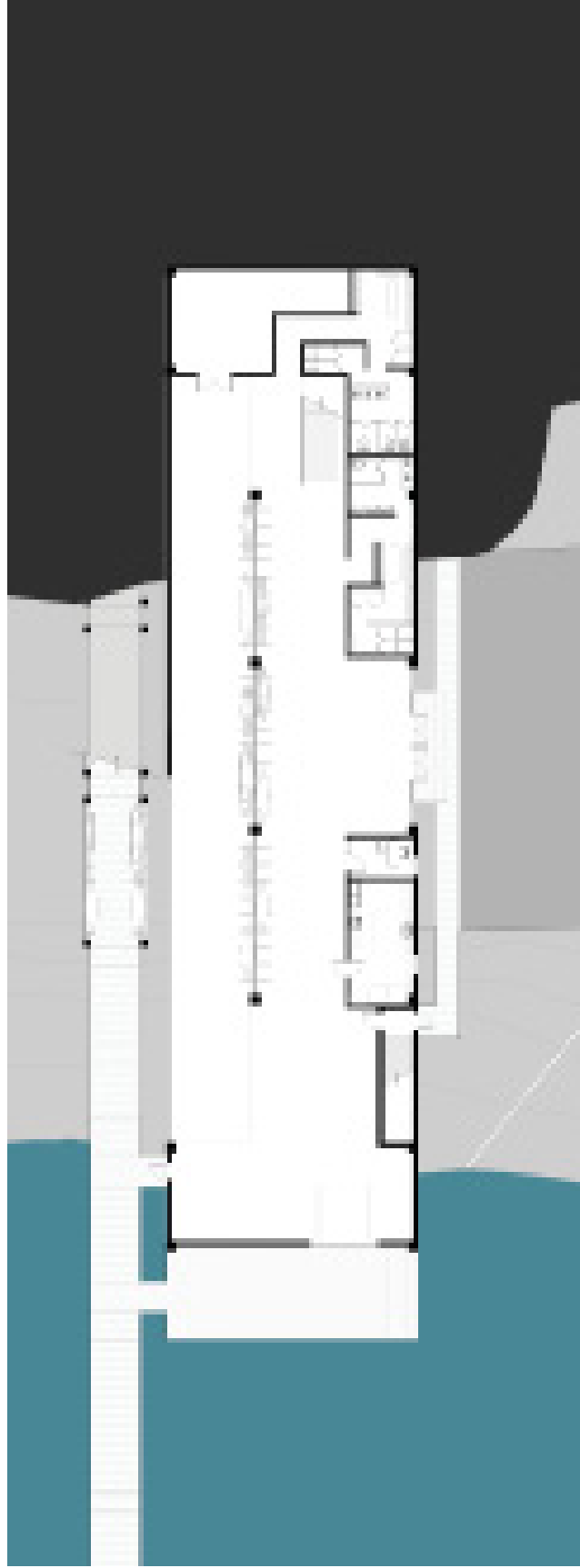
Detail of Roof Plan with pedestrian bridge.



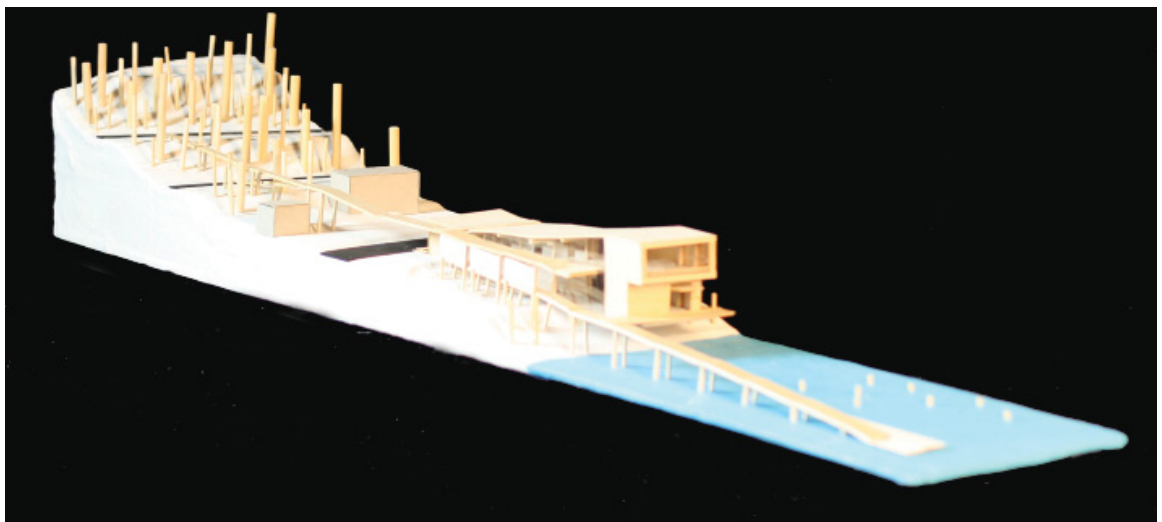
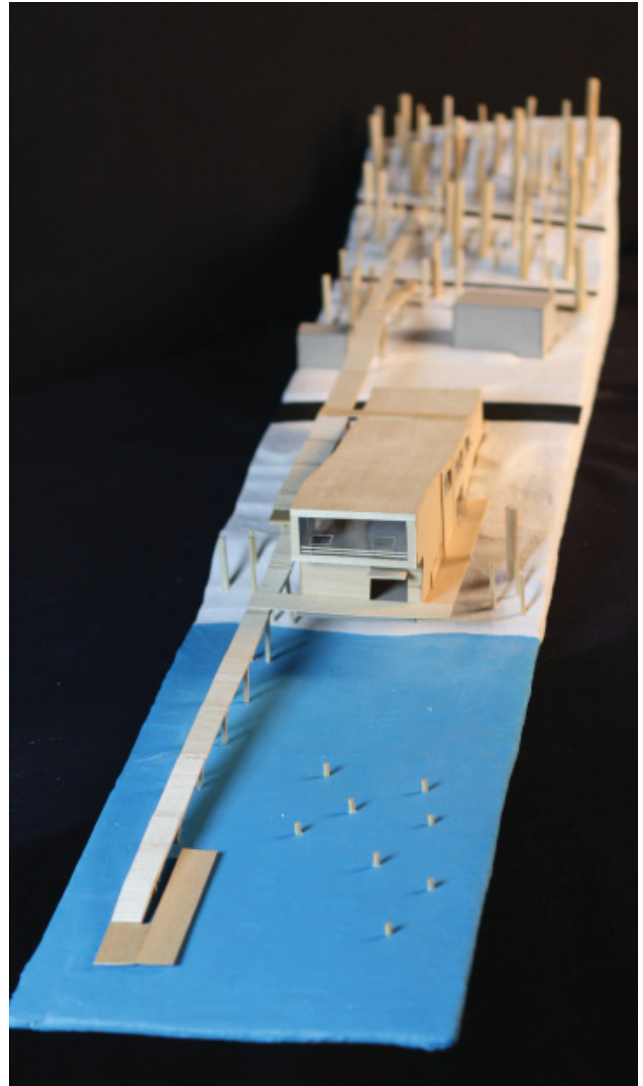
Detail of Second Floor Plan as the pedestrian bridge enters the building along the exterior wall, and ramps down past the reception area and classroom.



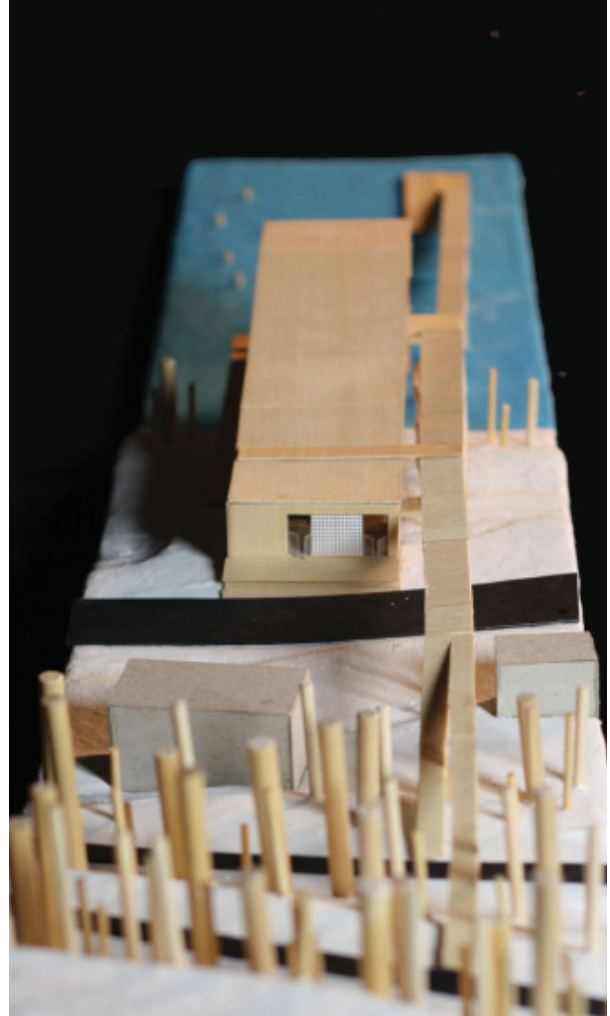
Detail of First Floor Plan as the ramp descends past two more classrooms to the ground level lobby at Lincoln Road. As the ramp exits the building and begins to switchback towards the river, seasonal exterior boat storage is found in the enclosing space between the upper pedestrian bridge and the lower ramp structure.



Detail of Basement Floor Plan as the ramps follows along the exterior of the building down to the water. Inside, year-round boat storage, kitchen and locker facilities.



Site model. Original 1:200 scale.



Detail of building model as seen looking down the hill towards the river.



Detail of building model showing boat storage (behind screen) between where the ramps enter the building on the top floor and leave on the main floor.

Design Elements

The main design element used to create correlation between the two buildings will be the wooden path extension through and adjacent to the new architecture, connected primarily by a bridging element to demonstrate the separation between the public path and semi-private program spaces within the architecture that change with time, season and user group.

The thresholds created by extending the wooden “boardwalk” or “pier” element across the trail creates an intersection, indicating a continuation of activity and journey.

A sense of long linear trajectories will be accentuated by wall and roof elements that continue the sense of wooded enclosure from various points along the rail cut.

Perforated or latticed wall elements represent transparency within the building to key program areas, specifically the boat storage areas. These holes in the wall makeup will lend themselves to creating a network of shelf spaces for protruding rods that will be used to configure boat storage shelves.

CHAPTER 4: CONCLUSION

The study of the city of Fredericton in relation to its recreation landscape has found a connection between river and trail recreation, but by no means are the designs dependent on the program. For Fredericton, these activities bring the city to life and get users outside, but the design elements - the bridging extension, trail intersections, screening walls - could theoretically be applied to any portion of trail that wished to make a connection to new or existing architecture.

While the riverfront program was a means to develop a design based on these trail connecting strategies, the design could easily be applied to inland sites. The design calls for an extended path element that intersects with the trail and bridges some physical or perceived threshold towards its surrounding architecture, thereby creating a new connection to the community.

In the time frame in which this thesis was developed, noticeable changes have already begun to emerge in Fredericton's trail landscape, specifically along the riverfront. More buildings are connecting directly to the trail by way of patios or storefront entrances, which is a passive step in the right direction.

Further study would benefit from applying these elements and guidelines to inland sites, finding the in-between spaces within an urban trail setting and promoting new methods of connecting with the community.

APPENDIX A: A BRIEF HISTORY OF RAILROADS IN FREDERICTON

A significant portion of the trail system was once the rail system that serviced the town, which was converted to a walking trail through the Trans-Canada Trail program. The Fredericton Railway, completed in 1869,⁷ marked the first connection from the capital city to the fledgling rail network building up across the province during the 19th century. This route was referred to as the Fredericton Branch Line, and served the Western Extension of the European and North American Railway, which had connected Saint John to Shediac in 1860. This original track ran from the Westmoreland Street wharf southward 22 miles towards Hartt's Mills, which subsequently became Fredericton Junction.

A few miles north of Fredericton in present day Marysville, Alexander "Boss" Gibson, a local industrialist, lobbied for a rail extension to connect his town and business to Edmundston via the upper Saint John River Valley. Completed in 1878, this route became the New Brunswick Railway.⁸

The national rail lines were looking to expand to the east and secure access to the Atlantic Ocean. The Canadian Pacific Railway (CPR) constructed the "Short Line" in 1889,⁹ finally connecting western New Brunswick to Montreal and subsequently the Upper Canada markets. Fredericton had hoped to entice

⁷ David Nason, *Railways of New Brunswick* (Fredericton, NB: New Ireland Press, 1992), 67.

⁸ *Ibid.*, 44.

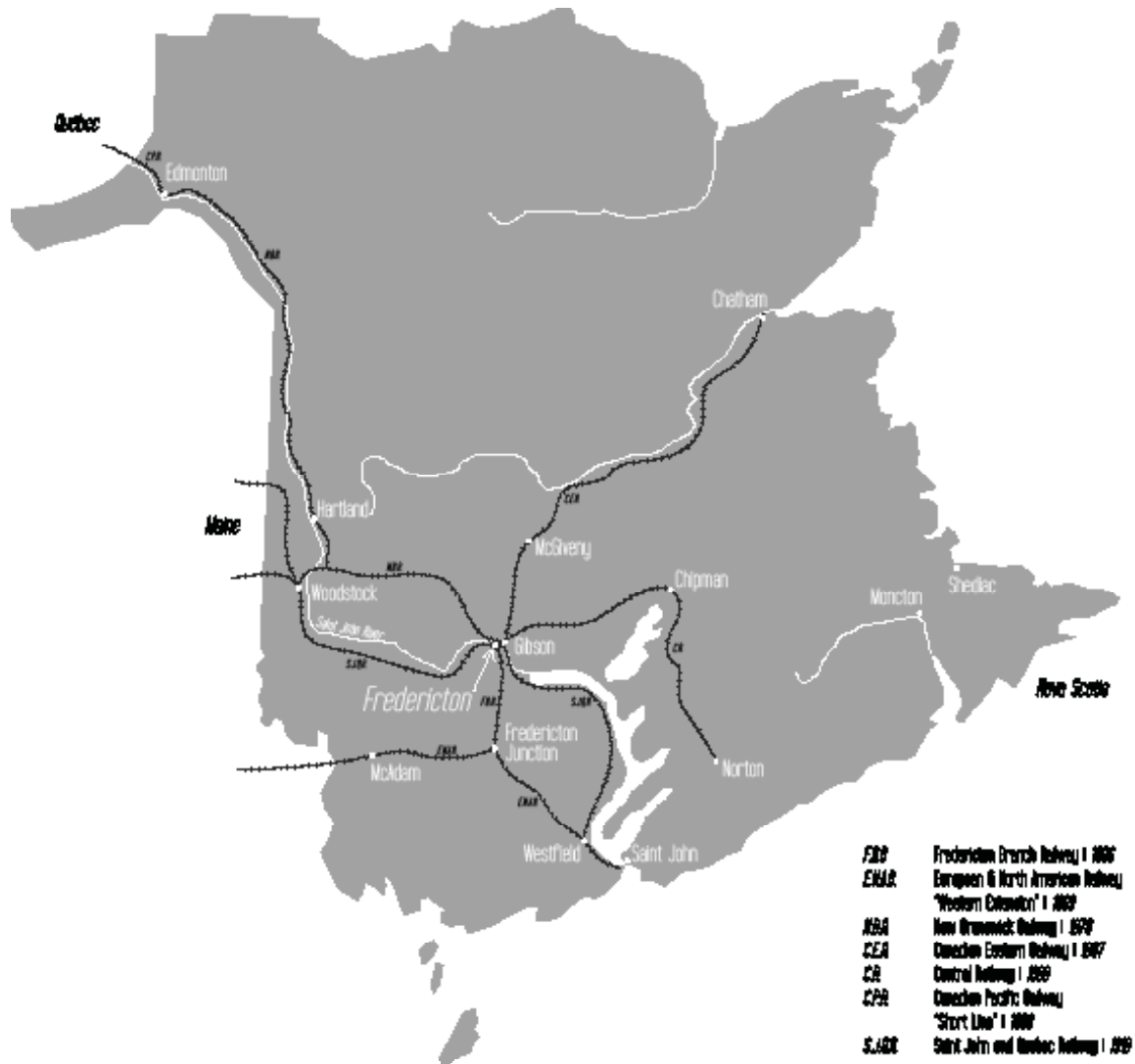
⁹ *Ibid.*, 47.

CPR to create a shortcut to Halifax by creating a connection between the Fredericton Branch line and the New Brunswick Railway, still separated by the Saint John River, thereby bypassing rival Saint John. The city race track was relocated to accommodate the proposed downtown route, but the deal was never made. Nevertheless, the idea to connect the two rail lines remained, and in 1888 the northside and southside of the Saint John River were bridged.¹⁰

Eventually, the regional routes amalgamated into the national lines; CPR took over the south route to Fredericton Junction, northwest to McAdam, and east to Chipman, while Canadian National Railways (CN) claimed the Fredericton Railway Bridge and the northern and eastern routes to McGiveny and Hartland.¹¹

¹⁰ Ibid., 96.

¹¹ "Undated Fredericton Map" Environment & Sustainable Development Research Centre, University of New Brunswick, Fredericton website. <http://www.unb.ca/enviro/images/R5656-10-9-30.JPG>



Historical New Brunswick rail lines with direct connections to Fredericton. Dates indicate year of completion. Image by author using an amalgamation of several route maps in David Nason's *Railways of New Brunswick*. N.T.S.

APPENDIX B: DESIGN PRECEDENTS

The High Line | New York, New York

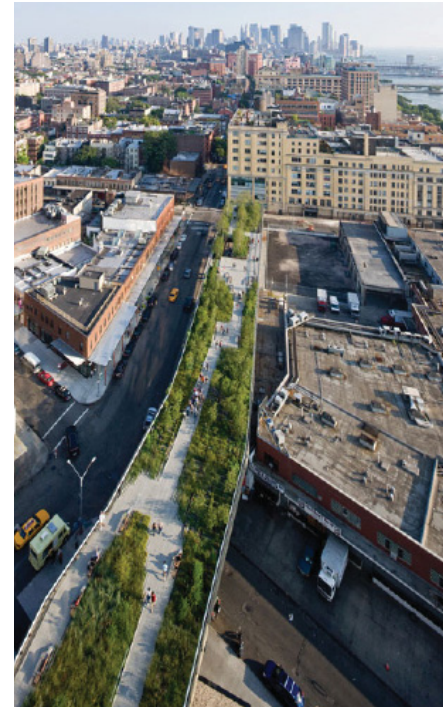
The High Line in New York City is a unique example of a railroad conversion to public trail. Abandoned 30 years ago, the elevated rail is a reminder of how resilient nature is in reclaiming urban ruins. Over the years, seeds landed and managed to grow wild among the tracks,¹² creating diverse microclimates in between high-rises.

Conceived by Diller, Scofidio & Renfro of New York City, with James Corner Field Operations, the High Line is designed to create new perceptions of the city while constantly changing the landscape experience to reflect the passage between buildings and their respective vegetation. Access to the park is controlled by four points, which may initially seem as a hindrance, but this space is one for reflection and enjoyment, rather than one to pass through.¹³

The park changes at nearly every one of its 20 blocks, but keeps strong design elements in place to maintain unity. The variety of the landscape proves the defining factor for each successive design move, as the designers were careful not to change the existing habitats. The procession describes transitions between woodland, grasslands, thicket, water, lawn, flyover and field. The stairs are the main entry points and are classified as “slow stairs” to give

¹² Ellen Gamerman, “Creating: Elizabeth Diller, Architect: Picturing Failure, Sketching Dreams,” *The Wall Street Journal* (9 October 2010), C11.

¹³ Nicolai Ouroussoff, “On High, A Fresh Outlook,” *The New York Times* (10 June 2009), 1.



Aerial view of Phase 1 of The High Line park in New York City. (Image: Diller Scofidio & Renfro, “The High Line”).

the user pause and time to transition from Manhattan proper to the relative tranquility of the High Line. The elevation, 30 feet, provides numerous platforms for viewing out, as well as creating spaces the public can inhabit below the rail deck.

The walkways that replaced the rail ties are planked with tapered edges, allowing growth to continue between the cracks. Seating is integrated into the pathways by peeling up the planks to sitting height.¹⁴

¹⁴ "The High Line Design," <http://www.thehighline.org/design/high-line-design>

Toronto Waterfront Development | Toronto, Ontario

The Toronto waterfront is currently being redeveloped by West 8 Urban Design & Landscape Architects to provide more access for the public. At various points where the street meets the waters of Lake Ontario, WaveDecks are being designed as public spaces. Inspired by the sinuous waves found along Ontario shorelines, these wooden boardwalks create varying instances for sitting or walking as the pathways rise and fall at different points and provide new vantage points and experiences.¹⁵ As part of a larger development plan to create an uninterrupted pedestrian route along the waterfront, the site will eventually have six bridges connecting the four WaveDecks.¹⁶

The sites provide adaptable spaces that can change with user need, and promote water and land recreation in the urban core of Toronto.



Spadina WaveDeck (Image: West 8 Urban Design).



Rees WaveDeck with kayaks. (Image: West 8 Urban Design).

¹⁵ West 8 Urban Design & Landscape Architects, "Spadina WaveDeck," http://www.west8.nl/projects/infrastructure/spadina_wavedeck

¹⁶ Lisa Rochon, "A new wave for Toronto's waterfront; The seating and handrail are awkward. But there's magic in the latest addition to the shoreline, The Globe's architecture critic writes," *The Globe and Mail* (20 September 2008), M3.

In Context to Fredericton

Within dense urban contexts such as Toronto and Manhattan, the creation of a design typology, such as the change in elevation, wooden walkways and pedestrian-only access, humanizes former industrial spaces. While the population and infrastructure of these metropolises are not comparable to Fredericton (85,688 city / 124,172 metro),¹⁷ the projects are examples of public design initiatives that won over private development in the city centres. For a city the size of Fredericton, the groundwork for a lasting and strong public pedestrian infrastructure will facilitate densification of the urban core, rather than further disconnecting the trail from its urban surroundings.

¹⁷ Tourism Fredericton, Visitor Information. <http://www.tourismfredericton.ca/en/visitorinformation/index.asp>.

APPENDIX C: PROGRAM PRECEDENTS

St Mary's Boat Club | Halifax, Nova Scotia

Originally built in 1905 and extensively renovated in 1991, the St. Mary's Boat Club has been a staple in water recreation along the Northwest Arm of Halifax for the past century.¹⁸ Operated by the city, the site is open to the public for rentals and instruction. The Halifax Rowing Club also uses the building as their headquarters.

Hidden out of the way in a public park off the main roads, the boathouse is found protruding onto the water for direct access. The lower level provides all the boat storage and three large docks. The upper floor is surrounded by a veranda which complements the public reception hall inside.

Similar to the Fredericton Yacht Club, the St. Mary's Boat Club was a formerly private space that has been successfully adapted to a public recreation space in Halifax. It also is one of the few public access points to the waterfront on the peninsula side of the Northwest Arm.



Side view of the St. Mary's Boat Club. Built almost entirely in the Northwest Arm, access to the reception hall (*top*) is by bridge, with the piers and storage accessed by stairs down the embankment.

¹⁸ Halifax Regional Municipality, "St. Mary's Boat Club," <http://www.halifax.ca/smbc/index.html>

Harry Parker Boathouse and Ruth W. Somerville Sculling Pavilion | Watertown, Massachusetts

Along the Charles River in Boston, Massachusetts, there is a long tradition of rowing. While popular, it is also perceived as an elite sport due to historical ties with the private collegiate system.¹⁹ Community Rowing Inc., the oldest and among the largest public rowing clubs in the United States, has aimed to change that with the development of their new facility, which will house the organization's headquarters.

In contrast to the nine other boathouses along the Charles River, many which strive to emulate the upper class Victorian styles of Harvard's Newell and Weld boathouses, the Harry Parker Boathouse and Ruth W. Somerville Sculling Pavilion are

¹⁹ Christina Pazzanese, "Project to Bring Rowing to Public," *The Boston Globe* (22 July 2007), 1.



Harry Parker Boathouse with users storing boats. Pedestrian trail is shown in bottom right. Mechanical exterior walls can be seen allowing air circulation. (Image: Campbell, N.4.)

described ,as “fresh, new, democratic”.²⁰ Design firm Anmahian Winton Architects took cues from traditional barn techniques for storing and drying in the boathouse; the mechanically operated outer walls allow air circulation similar to hinged planks on tobacco barns.²¹ The adjacent sculling pavilion provides a more literal transparency to the public with its walls of glass.

Programmatically, the site is run by the non-profit Community Rowing club who provide instructors for various skill levels. The boathouse houses 66 large boats while the glass pavilion holds 70 of the smaller boats. The boathouse also has a repair bay, a large reception area with kitchen for training and community use, locker room and weight room facilities and various classrooms and meeting spaces. Four floating docks with ramps are set in the river, along with a small marina area to hold motorboats for safety and instructor use.²²

The success of the project lies in careful attention to the site and its users. Unlike the other boathouses along the Charles River, the buildings are set back from the water in order to keep the existing recreational trail intact along the shoreline. The site becomes fully accessible to the public, with the docks available for anyone to launch kayaks and canoes or to fish.²³

²⁰ Robert Campbell, “Boathouse is a Model of Form and Function,” *The Boston Globe*, (7 December 2008), N.4.

²¹ Ibid., N.4.

²² Pazzanese, “Project to Bring Rowing,” 1.

²³ Ibid.



Wall treatment inspiration for air flow porosity and texture. (Image: Anmahian Winton Architects).

REFERENCES

- Anmahian Winton Architects. "Community Rowing, Boathouse." <http://www.anmahian-winton.com>.
- Campbell, Robert. "Boathouse is a Model of Form and Function." *The Boston Globe*, 7 December 2008, N.4.
- City of Fredericton. "Minutes of a Regular Meeting of Fredericton City Council." 8 February 2010.
- City of Fredericton. *City of Fredericton Municipal Plan*. January 2007.
- Diller Scofidio & Renfro. "The High Line." <http://www.dsny.com>.
- Environment Canada. *The Water Survey of Canada*. <http://www.wsc.ec.gc.ca/applications/H2O/report-eng.cfm?yearb=&yeare=&station=01AK003>.
- Fredericton Yacht Club. "Fredericton Yacht Club Report to the City of Fredericton on the Highest and Best Use of the Waterfront Property in the Vicinity of the Fredericton Yacht Club." 22 March 2008.
- Gamerman, Ellen. "Creating: Elizabeth Diller, Architect: Picturing Failure, Sketching Dreams." *The Wall Street Journal*. 9 October 2010, C11.
- Halifax Regional Municipality. "St. Mary's Boat Club." <http://www.halifax.ca/smbc/index.html>.
- The High Line. "The High Line Design." <http://www.thehighline.org/design/high-line-design>.
- Nason, David. *Railways of New Brunswick*. Fredericton, NB: New Ireland Press, 1992.
- Ouroussoff, Nicolai. "On High, A Fresh Outlook." *The New York Times*. 10 June 2009, 1.
- Pazzanese, Christina. "Project to Bring Rowing to Public." *The Boston Globe*. 22 July 2007, 1.
- Rochon, Lisa. "A new wave for Toronto's waterfront; The seating and handrail are awkward. But there's magic in the latest addition to the shoreline, The Globe's architecture critic writes." *The Globe and Mail*. 20 September 2008.M3.
- SGE Acres Limited and Marshall Macklin Monaghan. "Trail/Bikeways Master Plan: prepared for the City of Fredericton." September 2007.
- Southworth, Michael. "Designing the Walkable City." *Journal of Urban Planning and Development* 131, No. 4, (December 2005): 246-257.
- Tourism Fredericton. "Visitor Information." <http://www.tourismfredericton.ca/en/visitorinformation/index.asp>.

University of New Brunswick. "Undated Fredericton Map." Environment & Sustainable Development Research Centre. <http://www.unb.ca/enviro/images/R5656-10-9-30.JPG>.

West 8 Urban Design & Landscape Architects. "Spadina WaveDeck." http://www.west8.nl/projects/infrastructure/spadina_wavedeck.