

**STAGING THE COMMONWEALTH GAMES:  
A CATALYST FOR THE REJUVENATION OF SHANNON PARK**

by  
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## **ABSTRACT**

Tufts' Cove has a varied history; as an Aboriginal seasonal encampment, a place of industry, military operations and a departure point for two bridges spanning the Bedford Basin. This influx of external influence has marked the gradual decline of numerous communities, small and large, and led to continuous abandonment by residents of the area.

In 2006, Shannon Park was proposed as the site for the 2014 Commonwealth Games; a proposition aborted in the following year. This most recent external influence proposed complete demolition of existing infrastructure to facilitate an athletes' village, stadium and a multi-sport triplex. The proposal's disregard of existing and proposed community amenities, such as a school and shops, suggested further abandonment of Tufts' Cove, and posited two important questions:

How might a Commonwealth Games Program rejuvenate an abandoned neighbourhood? Can the sporting facilities negotiate a civic scale with a design that serves the local community?

## **DEDICATION**

For my family and friends, especially my husband, Mathew Howard.

## Preface

Held every four years, the Commonwealth Games is a multinational, multi-sport event showcasing elite athletes from the Commonwealth of Nations. In 1930, Hamilton, Ontario, hosted the first such event, then known as the British Empire Games. The event assumed the current name of Commonwealth Games in 1978, and now boasts a typical attendance of around 5,000 athletes from 71 teams from 53 nations.<sup>19</sup>

In 2007 Halifax competed with Abuja, Nigeria, and Glasgow, Scotland, for the right to host the 2014 Commonwealth Games. To host the sporting event, the Halifax Commonwealth Games Committee had intended to upgrade some existing facilities, to construct others within existing permanent structures to serve on a temporary basis, and to construct new facilities to world-class standards. The facilities would be built in venue clusters that would allow the 6,000 expected athletes to experience an 'easy' games, with little transportation or accommodation barriers. At least half of the athletes would be able to walk to their competition venues and all athletes would be housed within walking distance of the Opening and Closing Ceremonies.<sup>20</sup>

Shannon Park, an abandoned military community located at Tufts' Cove on the eastern shore of the Halifax Harbour in North Dartmouth, was chosen as the site to house the centerpiece of the Games, the Commonwealth Park. Included in the bid was a new stadium for 25,000, a new multi-sport triplex featuring aquatic centre and field house, and an athletes' village. The latter would provide post-Games housing including 100 assisted-living units, 200 affordable housing units, and more than 900 open-market units (total 1200 units). Following the event, the stadium had intended to attract the Canadian Football League (CFL), while other sporting venues would form a national training centre for the Maritimes.<sup>21</sup>



Nova Scotia within Canada locator map.



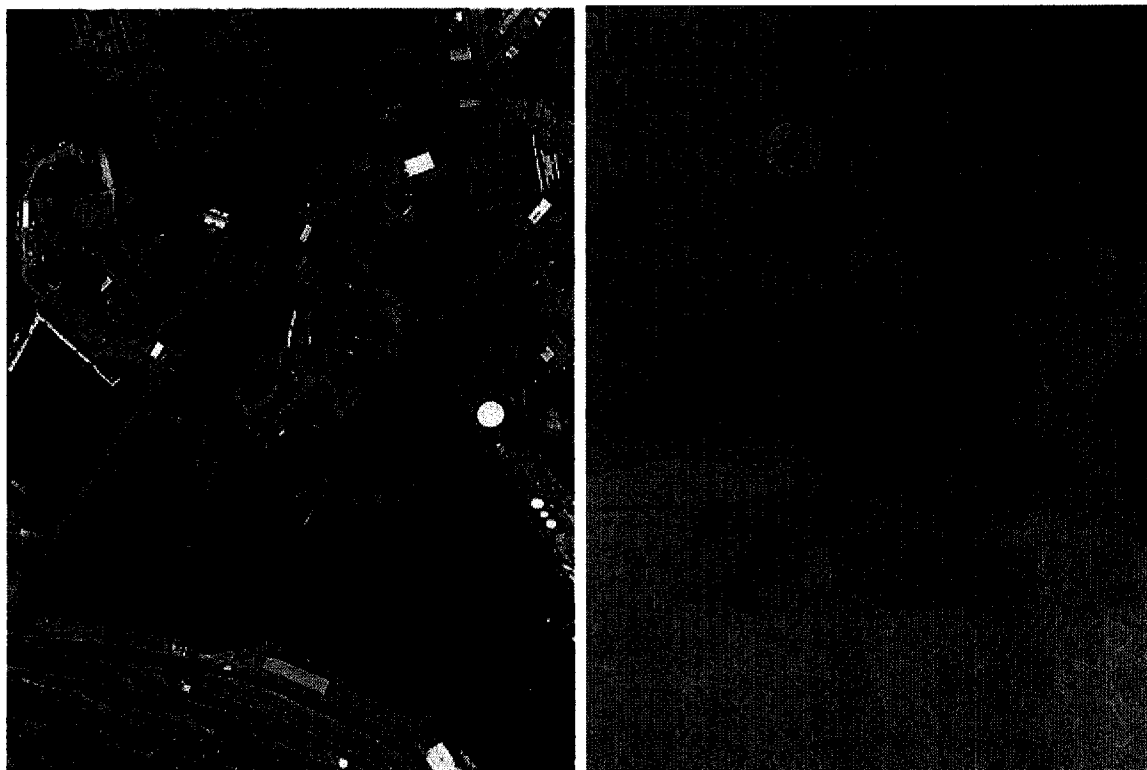
Tufts' Cove within Halifax locator map.

For their bid to redevelop Shannon Park, the Halifax Commonwealth Games Committee proposed complete demolition of all existing facilities and infrastructure. The scheme recommended a large boulevard aligning downtown Halifax with the Commonwealth Park via Tufts' Cove. The stadium and multi-sport triplex were located on either side of the boulevard with the athletes' village – 365 apartment units, 51 terrace units and 150 townhouse units<sup>22</sup> (total 566 units) – located on the waterfront. Complete disregard of existing infrastructure coupled with an absence of neighbourhood amenities (for example, a school), implied no long-term planning and further abandonment of the community at Shannon Park.

This thesis seeks to explore an alternative program for Commonwealth Games development at Shannon Park; one that seeks to counter the trend of isolation and abandonment of the site by ensuring its adaptability for both temporary external usage (the Games) and a permanent internal usage as a community.

Left: 2002 Aerial.

Right: Games Bid Scheme. From Fraser, *Games Facilities Could Top \$163.3m, A2*.

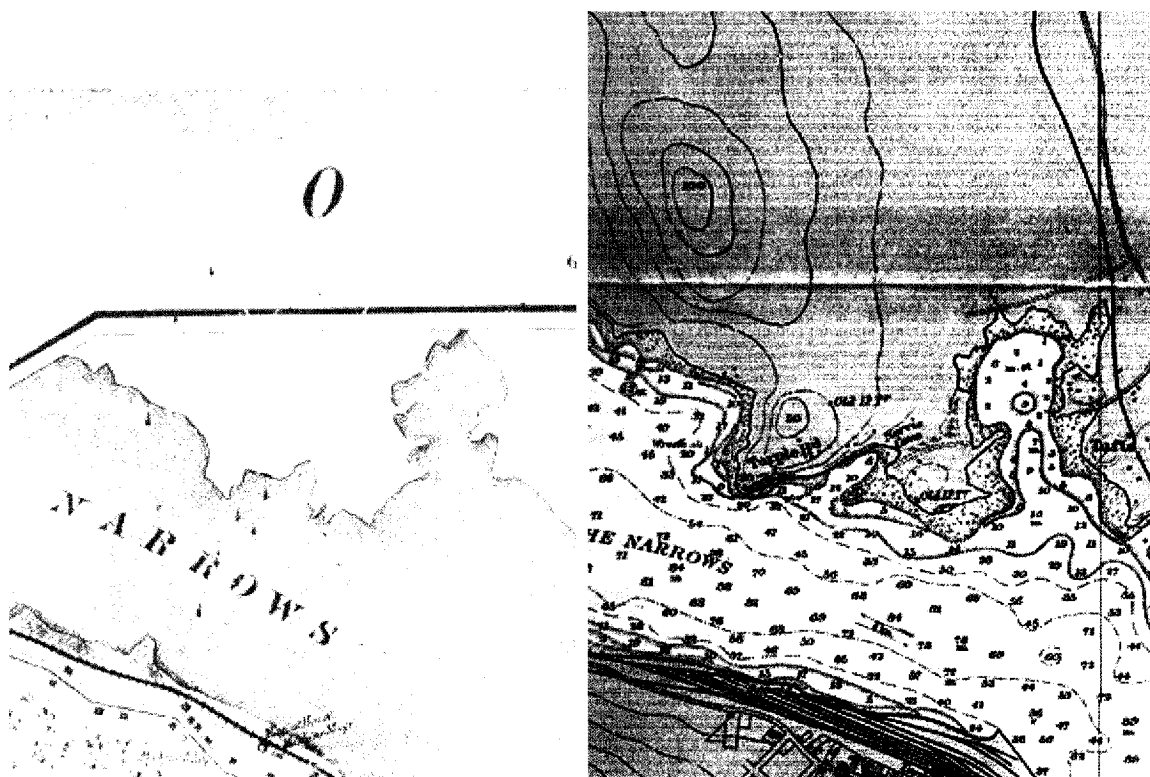


## Tufts' Cove

The cove is named for Gersham Tufts who arrived in Halifax in 1749 with Edward Cornwallis and received the land as part of a Crown Land Grant. Although the land had previously been occupied by the Mi'kmaq as a seasonal encampment, Gersham's children eventually settled the cove.<sup>1</sup>

Left: 1865 'Church Map.' From Church, *Topographical Township Map of Halifax County*.

Right: 1916 Hydrographic. From Admiralty, *Bedford Basin: Nova Scotia - South East Coast, Halifax Harbour*.

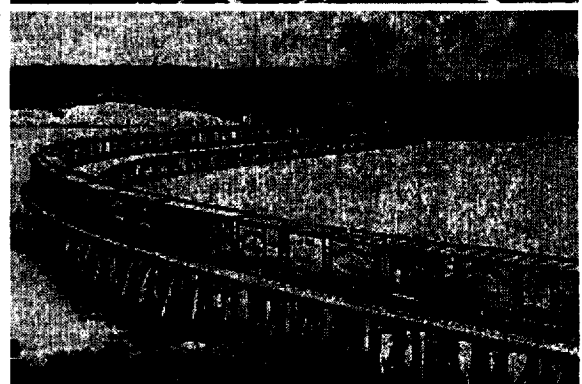


Coinciding with the construction of a sugar refinery at Woodside, Tufts' Cove provided a departure point for a wooden railway trestle constructed in 1885 (destroyed by a storm in 1888) connecting North Dartmouth to the Halifax peninsula.<sup>2</sup> By 1888, 15 families lived in Tufts' Cove<sup>3</sup>, a sufficient number to erect a two-room school house in 1890. The families traveled to Dartmouth on Windmill Road - named for a number of windmills - which also connected the evolving village at Bedford. Population increased, with many residents employed at the rope-works, established by the Stairs family in 1868, until the area was completely demolished in the 1917 Halifax Explosion, which occurred in the narrows just south of the cove.<sup>4</sup> In addition to hundreds of lives lost and the destruction of numerous buildings - the rope-works, the Richmond Refinery, the Oland Brewery - the Mi'kmaq encampment was completely wiped-out. The surviving Mi'kmaq settled in Shubenacadie.<sup>5</sup>

Pre-1917 - Mi'kmaq encampment. From Parker, *Historic Dartmouth: Reflections of Early Life*, 92.

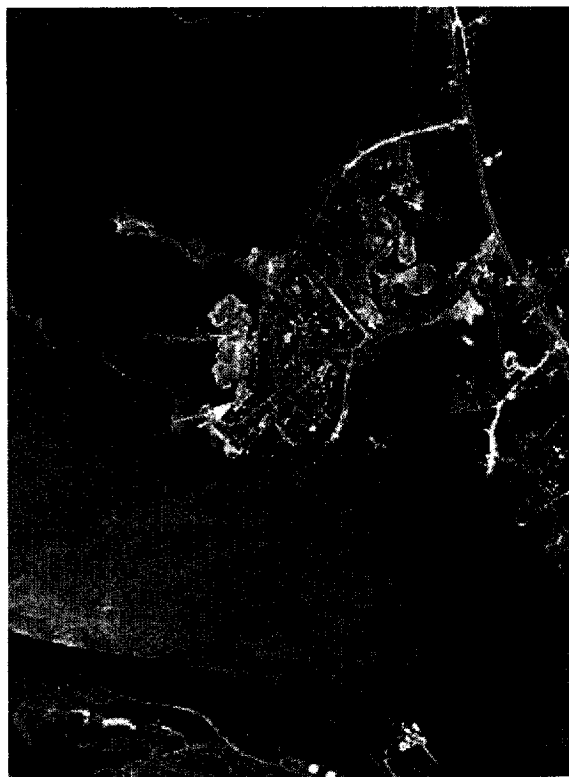


1885-88 - railway trestle. From Martin, *The Story of Dartmouth*, 74.





1931 Aerial.



1954 Aerial.

### **Shannon Park**

Following the Halifax Explosion, Tufts' Cove slowly redeveloped and by 1923 a regular bus service connected Tufts' Cove to Dartmouth. The same year, a ferry service linked the cove to the Halifax peninsula.<sup>6</sup> In the 1950s, the Royal Canadian Navy took possession of the site and developed a new housing complex, the first of several major developments which would drastically alter the cove and surrounding area.

The complex was named Shannon Park after the legendary 38-gun frigate, HMS Shannon, which challenged and defeated USS Chesapeake in 1813. The Department of National Defense (DND), had an interest in the site since 1911, owning it outright since 1949.<sup>7</sup> Shannon Park was officially opened in 1951 as a new quarters to house married members of the peacetime navy. The original plan comprised 521 self-contained apartments in 81 concrete buildings on 105-acres.<sup>8</sup>



With this influx of population, Tufts' Cove quickly developed as a town within a town. A school and two churches – the Protestant Church of the Redeemer and Roman Catholic Our Lady of Fatima Church – were completed in 1956,<sup>9</sup> and the following year a recreation centre was constructed to service the community at Shannon Park.<sup>10</sup> In 1958, the addition of a 200-unit naval complex at Wallace Heights coincided with the proposal for a nine-unit shopping mall.<sup>11</sup> The following year, in 1959, Tufts' Cove amalgamated with Dartmouth to form a town of 50,000.<sup>12</sup> In the 1960s, Shannon Park developed a suburban character: a new fire station in 1962, a skating rink in 1968,<sup>13</sup> and the eventual completion of Shannon Plaza with bowling alley (Shannon Lanes) shortly after.<sup>14</sup> As the community grew in the 1960s, so did the need to differentiate the near-identical streets, and ship names were chosen: Athabaskan Avenue, Algonquin Path, Cayuga Drive, Haida Circle, Huron Crescent, Iroquois Drive, Nootka Avenue, Sioux Road and Ojibway Lane.<sup>15</sup>

In 1962, the former Canadian Navy land west of Shannon Park was developed for the Bedford Institute of Oceanography (BIO), a major federal ocean research facility. The institute, which still inhabits the site today, consists of a series of interconnected buildings housing research labs and offices, as well as docks for the Canadian Coast Guard and MARCOM research vessels.

Left: Shannon Park advertisement. From Brookfield's, *Shannon Park: Home to 521 Families of the Royal Canadian Navy*, 14.

Right: Aerial view of Shannon Park. From Gurney, *Halifax Street Names*, 16.



In the mid-1960s, the area east of Tufts' Cove was partly destroyed to build the Nova Scotia Power Station, which served the separate communities of Halifax and Dartmouth and featured three 157-meter tall smokestacks. Over time, surrounding communities were abandoned due to rising pollution. In the 1990s, filters were installed on the smokestacks to limit the pollution, and in 2000, the plant was re-fitted to burn both oil and natural gas.<sup>16</sup>

In the late 1960s, the area west of Shannon Park became the construction site for the A. Murray MacKay Bridge. Completed in 1970, the bridge boasts a centre span height of 55-metres and tower height of 96-metres. Being built at the same time, the new circumferential Highway 111 divided the military communities of Wallace Heights and Shannon Park, and segregated the expanding institute at BIO. With additional traffic from the Halifax peninsula, the Industrial Park at Burnside evolved into a significant industrial district of Dartmouth, extending the already industrial character of the area.

1964 Aerial.



1969 Aerial.



When first constructed in 1951, Shannon Park housed 511 families and during the 1980s, the population peaked at over 700 families. Numbers have since dwindled, and by 2000, over 80 percent of the apartments were left vacant. This decline in occupancy partly resulted from the on-effects of major developments including the Power Plant, the MacKay Bridge, Circumferential Road, and Burnside Industrial Park, all of which acted to destroy surrounding communities and further isolate Shannon Park. A shifting population, smaller military and low mortgage rates were other contributing factors.<sup>17</sup>

The same year, in 2000, the Department of National Defense (DND) declared the site surplus land and began the process of selling Shannon Park to the Canada Lands Corporation, a federal Crown Corporation. Shannon Park officially closed in 2003. For future development, the Canada Lands Corporation will first offer the land to other federal departments, then to the Province and the municipality, and finally to the public.<sup>18</sup> Situated on valuable waterfront property, 440 habitable apartment-units and community facilities, including two churches and a school, await sale and probable redevelopment.

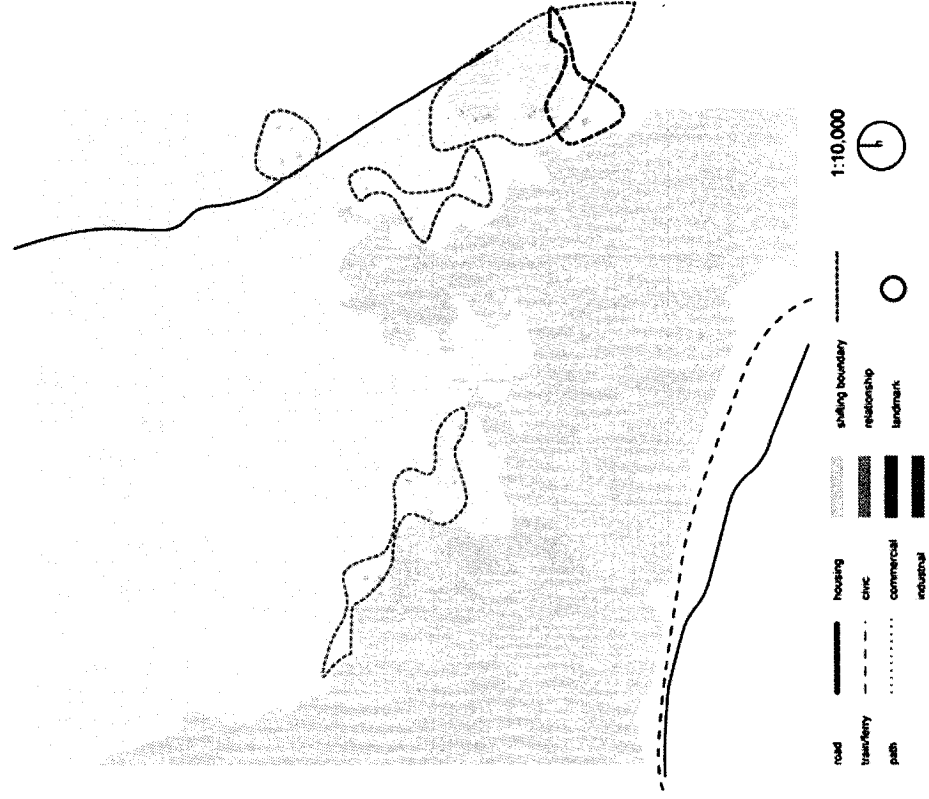


Shannon Park 2006.

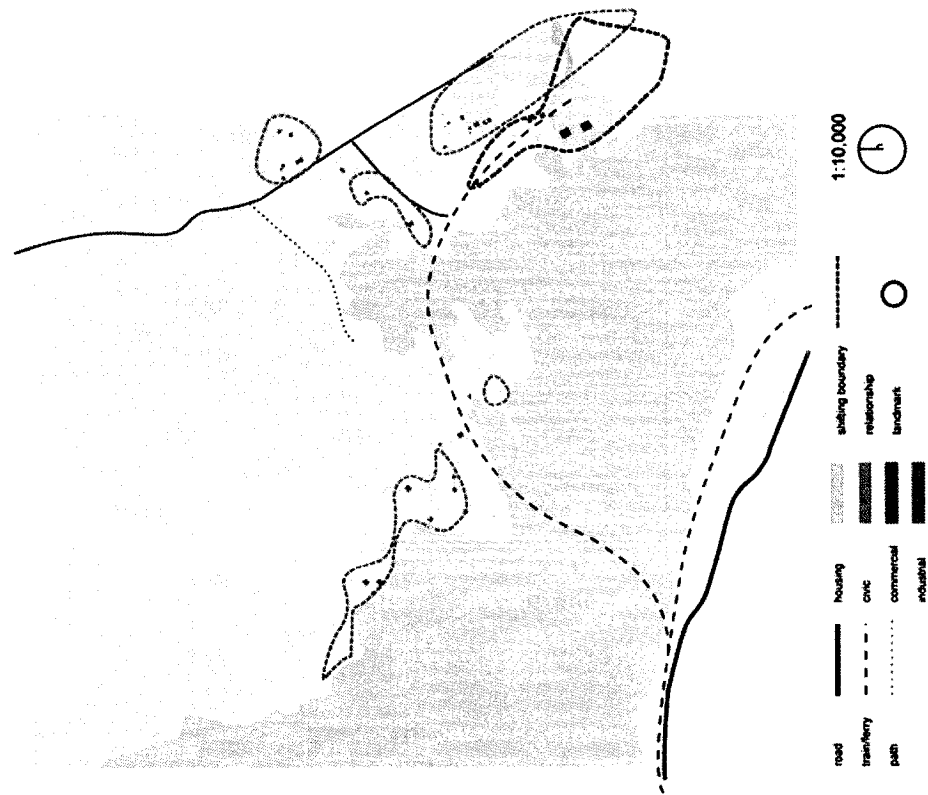
1700 - Mi'Kmaq seasonal encampment.



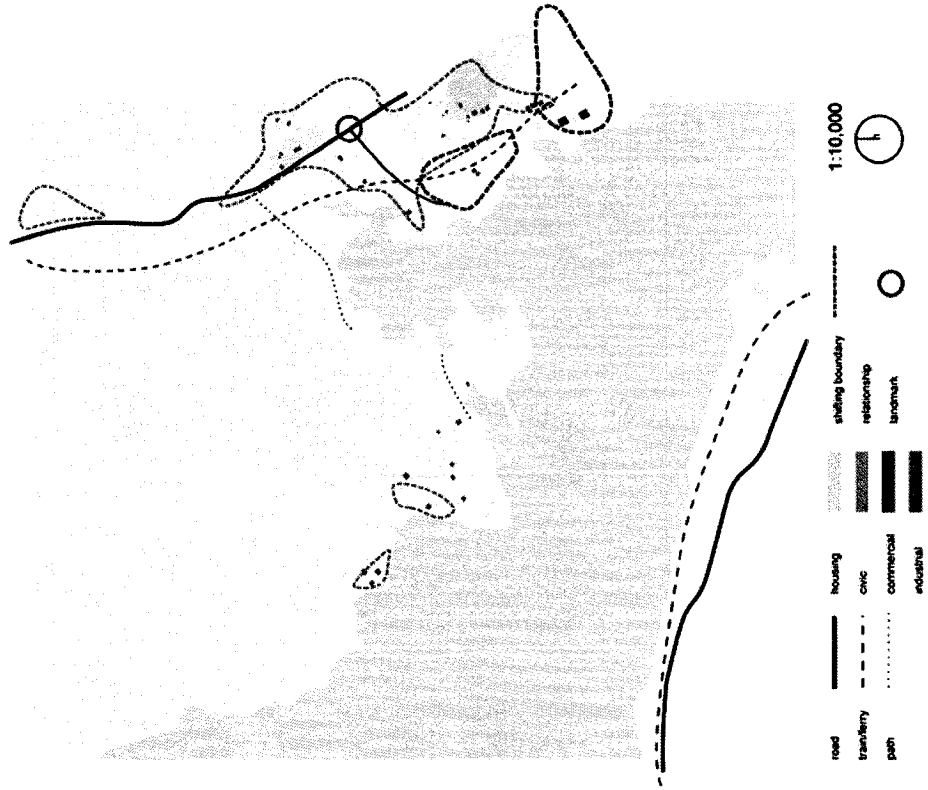
1750 – Gersham Tufts receives the land as part of a land grant.



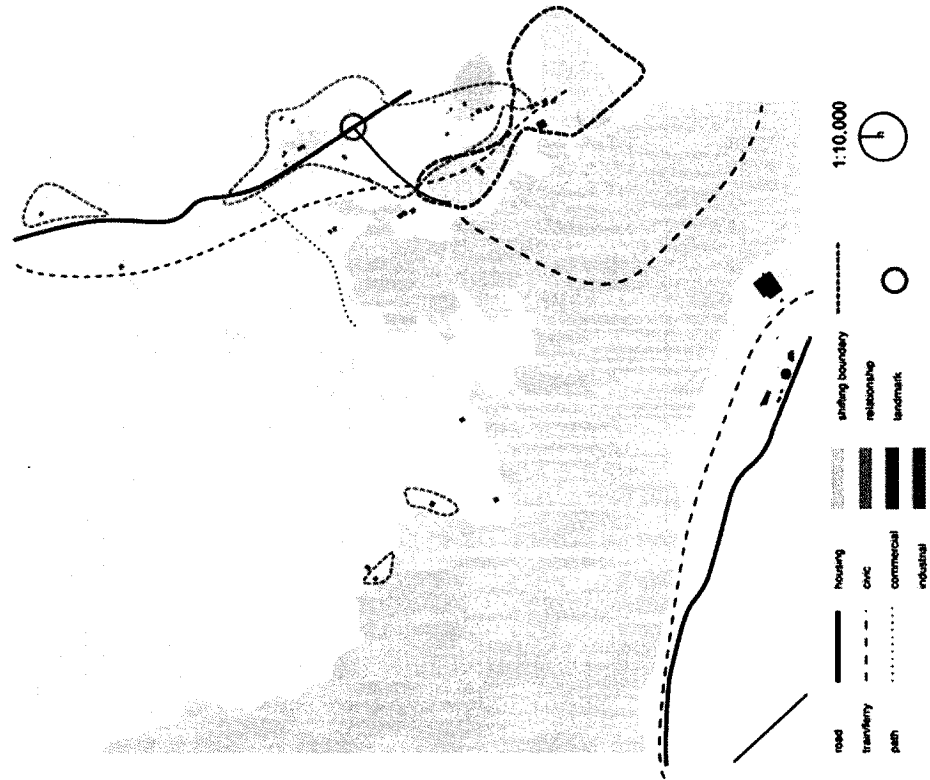
1880 – Railway trestle services the ropeworks sugar refinery and other industries along the harbour.



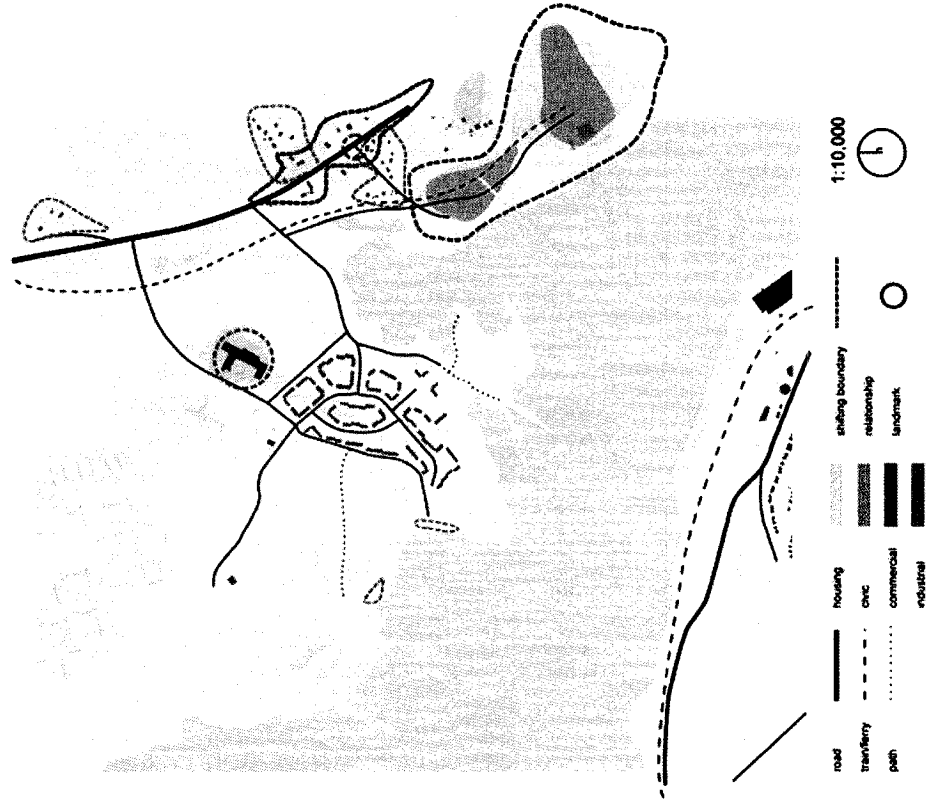
1890 – Tufts' Cove school serving the local community.



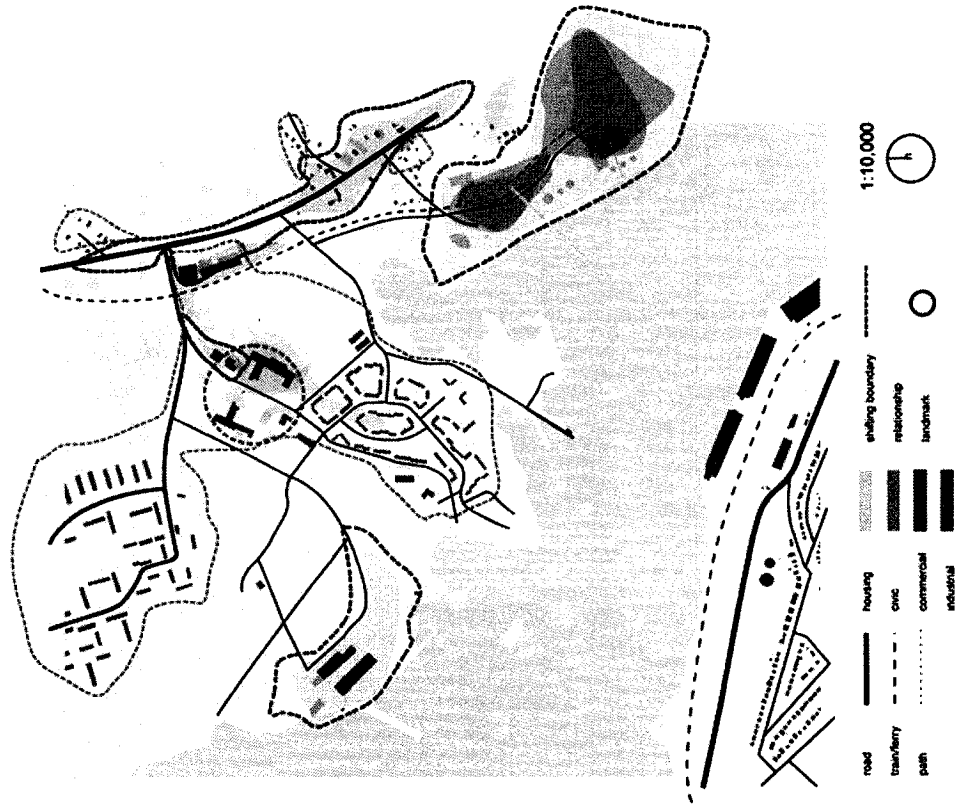
1920 – After the Halifax explosion.



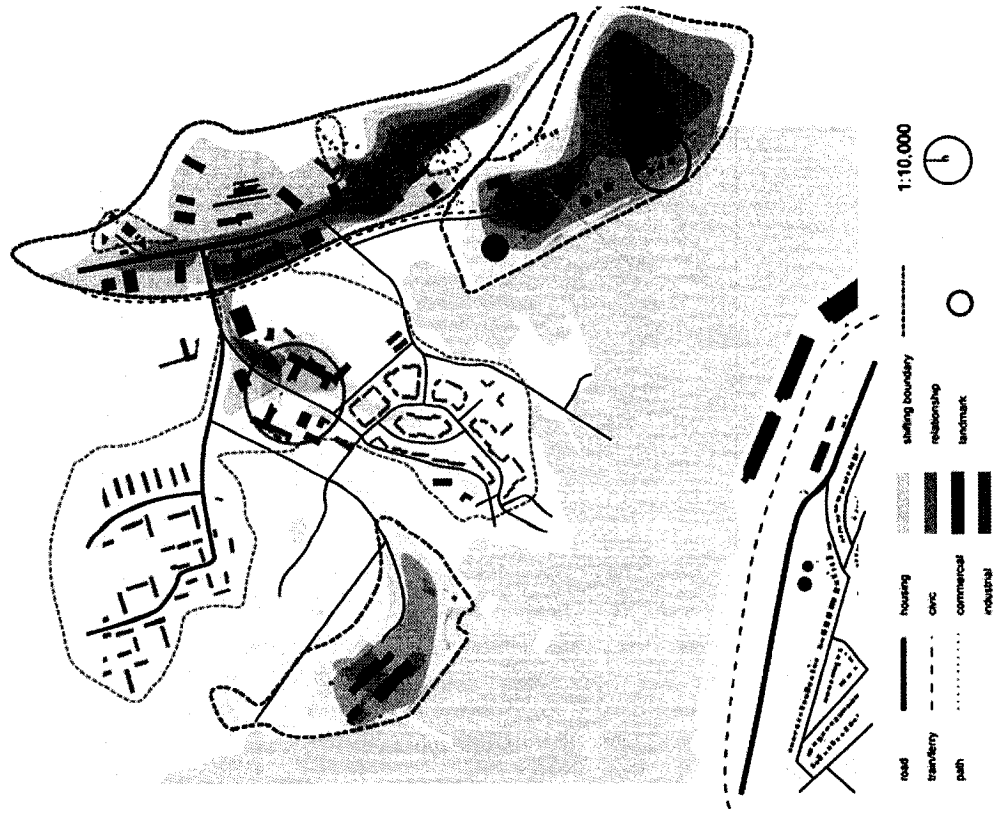
1950 – Shannon Park military housing.



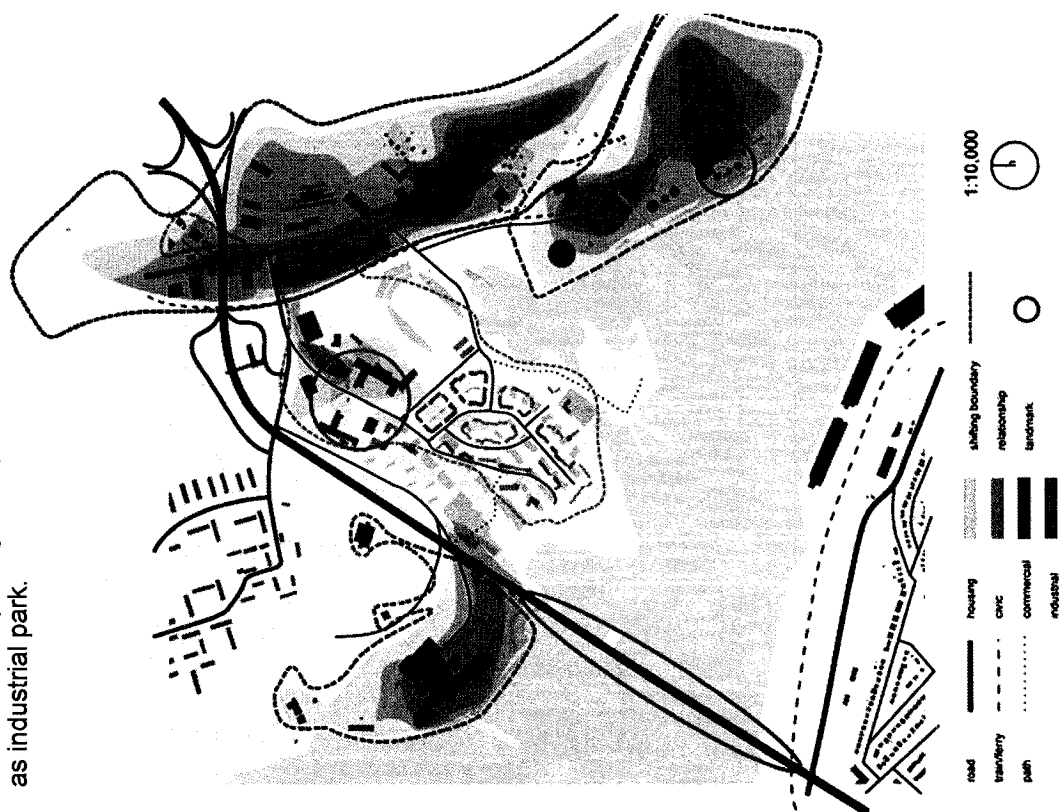
1960 – Wallace Heights military housing and the Bedford Institute of Oceanography (BIO).



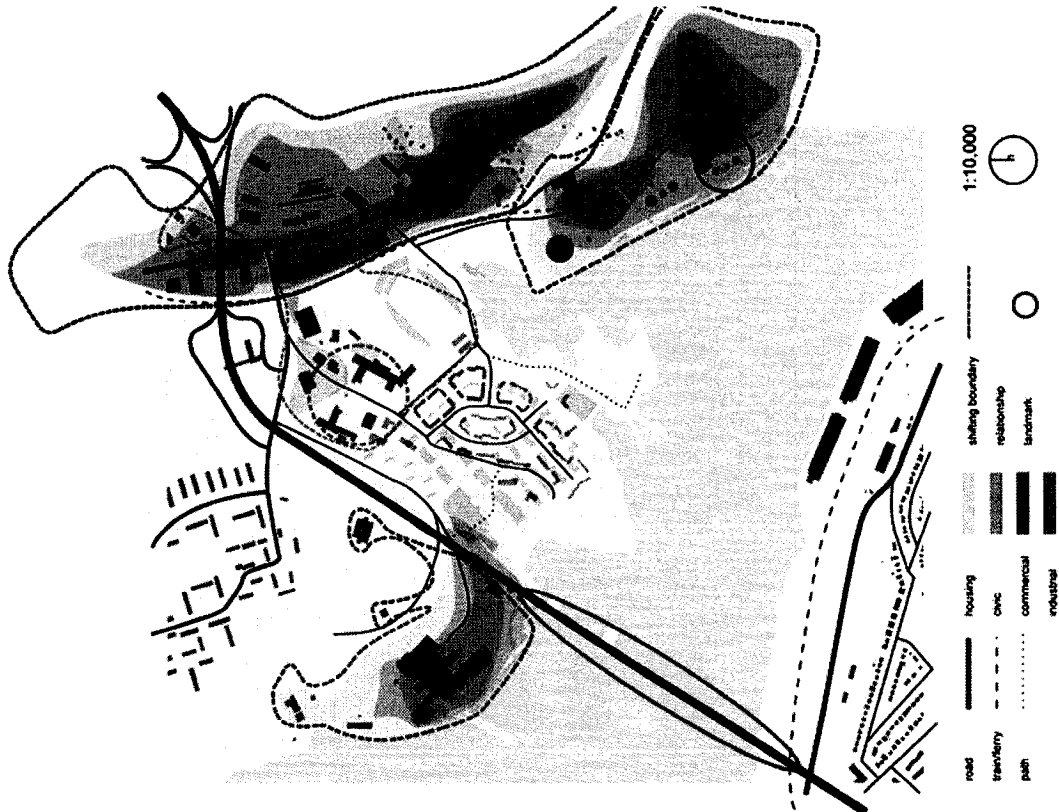
1965 – Nova Scotia Power extends industrial character of area.



1970 – MacKay Bridge completed and Burnside evolves as industrial park.



2000 – Shannon Park abandoned.





## **Thesis Question**

Considering Halifax's bid for the 2014 Commonwealth Games at Shannon Park, North Dartmouth, how could the site be adapted to mediate a temporary external usage (the Games) and a permanent internal usage as a community?

## Area of Study

Vacant land tends to evoke negative connotations: abandoned, unfashionable, empty and dangerous. Abandonment of a single building may trigger further abandonment, and eventually an entire neighbourhood may be left derelict. Maintenance of existing structures may be deferred, thereby creating potentially unsafe conditions, and unoccupied structures may be boarded-up, their isolation reinforced by chain-link fencing.<sup>23</sup> Whereas the public often perceives vacant land as a problem that requires correction, vacant sites can be attractive to the private sector where the likelihood of a strong return on investment exceeds the cost of cleanup and redevelopment.<sup>24</sup> In growing cities, vacant land and abandoned structures along waterfronts represent a resource of potentially developable land that may be harnessed to pursue a city's vision.<sup>25</sup>



Deferred maintenance at Shannon Park.



Limited access to waterfront at Shannon Park.

## The Waterfront

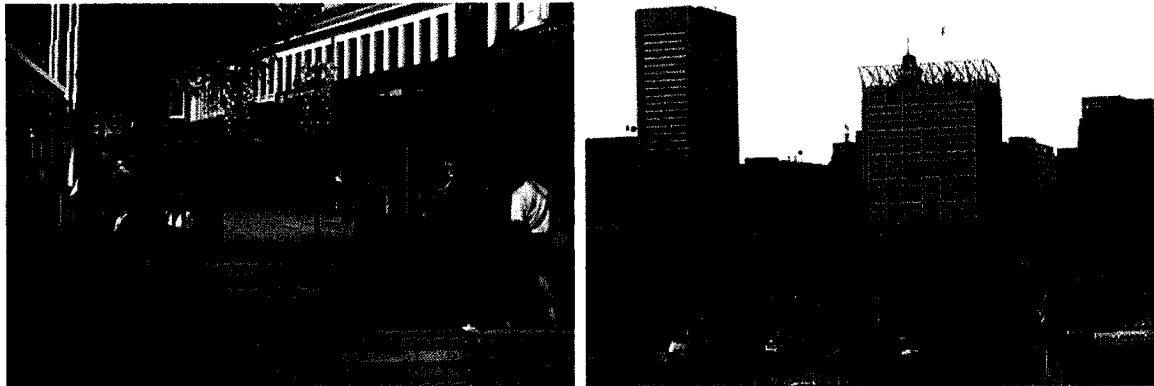
Waterfronts and the future of cities has been the topic of academic and professional interest since the 1960s, following the success of landmark waterfront rejuvenation projects including Baltimore's Inner Harbour and Boston's Quincy Market.

In Baltimore, the Inner Harbour, a former industrial wasteland, became the focus to 'return the shoreline to the people'. The project began with the construction of a waterside promenade which encouraged further investment – office buildings, a science centre, a marina and an aquarium – and eventually the refurbishment of adjacent derelict neighbourhoods.<sup>26</sup>

The Boston Port, following massive economic decline, became the site of a new government centre with public square and city hall. This encouraged refurbishment of the Quincy Market buildings along a 'Walkway to the Sea' via Columbus Park (on the site of former industrial sheds). These developments encouraged waterfront warehouses in the adjacent North end to be refurbished as condominiums.<sup>27</sup>

Left: Quincy Market Buildings, Boston. From Colquhoun, *Urban Regeneration*, 35.

Right: Inner Harbour, Baltimore. From Colquhoun, *Urban Regeneration*, 30-31.



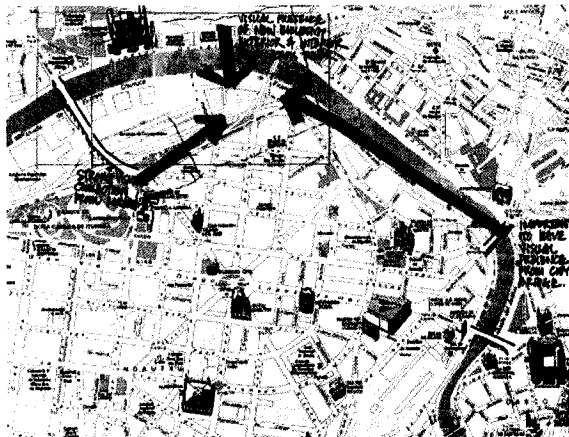
As the sites of former industrial operations, waterfronts are often the most degraded places in the city and also the most visible.<sup>28</sup> The availability of large tracts of waterfront land provide cities with opportunities to rethink contemporary space-making; waterfront development is crucial to the evolution of the city and to the quality of its urban expression.<sup>29</sup> Waterfronts have become associated with ways to recapture economic investment, to attract people back to deserted areas, and to forge a contemporary image of the city.

In *Complexity on the Urban Waterfront* (2001), Rinio Bruttomesso outlines a process by which waterfronts in post-industrial cities become rejuvenated. The first step, 're-composition', involves re-joining those vacant lands imbued with unusual and attractive new character. The second step, 'regeneration', re-examines and revitalizes urban zones through the re-launch of the rejuvenated waterfront. The re-launch redefines the role and image of the entire city. The final step, 'recovery', introduces new activities in abandoned or depressed zones.<sup>30</sup> A plurality of functions in relation to both its regeneration and the rest of the city, multiple activities in the redeveloped zone, and a co-presence of public and private ensure urban complexity.<sup>31</sup> By highlighting the waterfront, waterborne transport becomes accessible with potential to highlight urban and environmental features.

## Culture-Led Rejuvenation

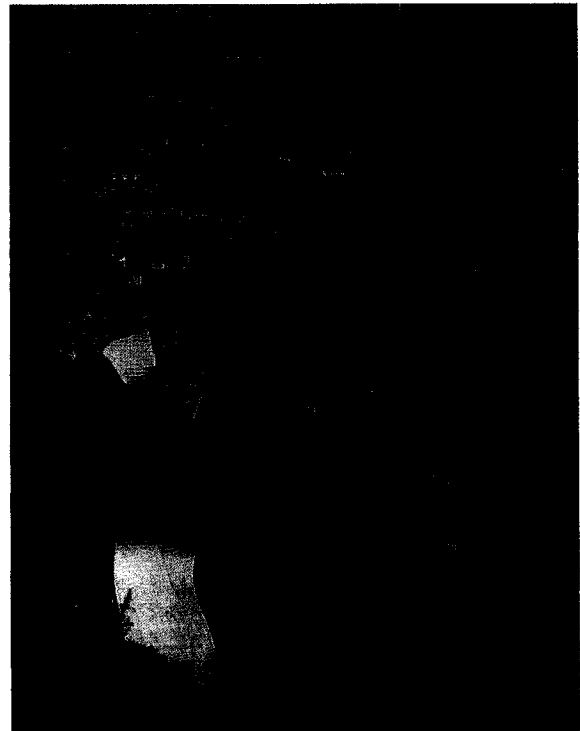
Urban rejuvenation reached its peak in North America from the late 1940s through to the early 1970s, often replacing demolished areas with freeways, expressways, housing projects, and vacant lots. Criticized by Jane Jacobs in *The Death and Life of Great American Cities* (1961), urban rejuvenation ultimately resulted in the creation of urban slums and urban sprawl, and in its original form has been deemed a failure by many urban planners and civic leaders. Urban rejuvenation has evolved into a policy based less on destruction and more on investment and refurbishment, and despite negative beginnings, continues to play an important role in cities worldwide.<sup>32</sup>

During the 1990s, the concept of culture-led rejuvenation gained ground with examples like Bilbao, where a new metro system by architect Sir Norman Foster and the Guggenheim Bilbao Museum by architect Frank Gehry were the focus for a new business district around the city's derelict dock area.<sup>33</sup> With the museum as a flagship project, waterfront urban rejuvenation was employed as a strategy to attract locals and tourists to the deserted core, to enhance the city's position in the global economy, and to forge a contemporary image of the city.



Above: Map of Bilbao with Gehry's notes. From Van Bruggen, *Frank O. Gehry: Guggenheim Museum Bilbao*, 23.

Right: Guggenheim Bilbao. From Van Bruggen, *Frank O. Gehry: Guggenheim Museum Bilbao*, 67.

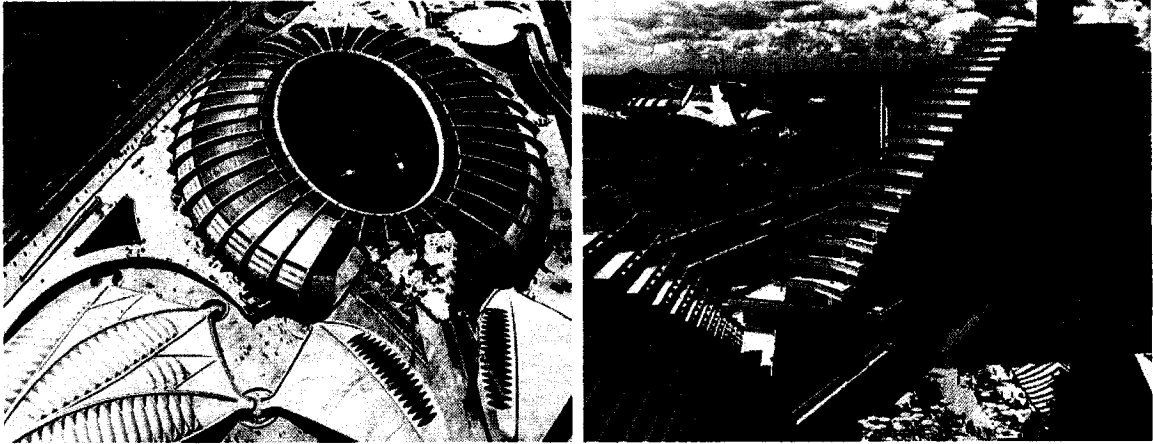


## International Sporting Events

Staging international cultural festivals such as World Expos, the Olympic Games, and the Commonwealth Games, has become a common strategy for gaining inward investment.<sup>34</sup> With proper planning, sporting and cultural festivals may provide a catalyst for major rejuvenation projects. While attracting tourists and creating employment, culture-led rejuvenation projects have the potential to boost a city's cultural sectors and forge a contemporary image of the city. It is precisely the allure of being able to group many different advantages into one package that makes international sporting events such a desirable activity.

Despite the prestige of hosting an international sporting event, culture-led rejuvenation projects are prone to severe problems. The sites for big-programs – museums, exhibition halls, convention centres and sporting stadiums – may be at odds with the scale and grain of the surrounding area. Event sites do not always convert easily to other uses: stadiums, especially those designed for large-scale sporting events, often struggle to find post-event users; athletes' villages do not always generate marketable or even desirable housing; and rejuvenated neighbourhoods often fail to match planners' expectations. The temptation to use international sporting events to 'fast track' major rejuvenation projects have overloaded many projects.

Partly as a result of the growing confidence in the prospects of undertaking large rejuvenation projects, the 1976 Olympic Games held in Montreal, Quebec, was a lavish affair with huge expenditure on iconic sporting and housing facilities.<sup>35</sup> The Olympic Stadium, designed by architect Roger Taillibert, featured a retractable roof operated by an immense tower, which remained incomplete during the Games and has never operated effectively.<sup>36</sup> The final cost of the stadium, estimated at \$1 billion, was officially paid off in October 2006, and Montreal's hosting the Games is generally regarded as cultural and political disaster. Despite the allure of new facilities, critical planning and sensitive architecture are essential to ensure an enduring legacy.



Left: Unfinished tower at Olympic Park, Montreal. From Gordonk, *Olympic Architecture: Building for the Summer Games*, 137.

Right: Montreal's Olympic Village. From Gordonk, *Olympic Architecture: Building for the Summer Games*, 144.

### Games Legacy

Historically, international cultural festivals have addressed social issues. The Great Exhibition of 1851 in London addressed a concern for the state of working-class housing;<sup>37</sup> in Montreal, architect Moshe Safdie designed Habitat '67, responding to the Montebello Symposium's aim to make significant statements about the design of housing and settlements.<sup>38</sup> The motto for Expo 2000 in Hanover, Germany, 'Man, Nature, Technology', focused on ecological stewardship; the plan incorporated a scheme for a settlement of 2,500 dwellings demonstrating new techniques of environmental sustainability.<sup>39</sup> By providing opportunities to address perceived social problems, international cultural festivals can have a social impact felt far beyond the event itself.

'Olympic Urbanism', a term used to describe the urban transformation that occurs in host cities, often implies adaptability for post-Games usage. The first notable transformation was the development of Amsterdam's 'City Olympique' for the 1928 Olympic Games. By integrating the Olympic facilities into the much broader city plan, Dutch city planners saw the potential for the Games to carry-out large-scale urban projects (while the athletes were housed on ships in the harbour).<sup>40</sup> For the 1960 and 1980 Summer Olympic Games, Rome and Moscow developed athletes' villages as self-contained residential areas with services and recreational facilities. To offset the costs of hosting the Games, both cities sold their Olympic Villages following the Games as private housing.<sup>41</sup> This strategy has become common practice among Olympic and Commonwealth Games host cities.

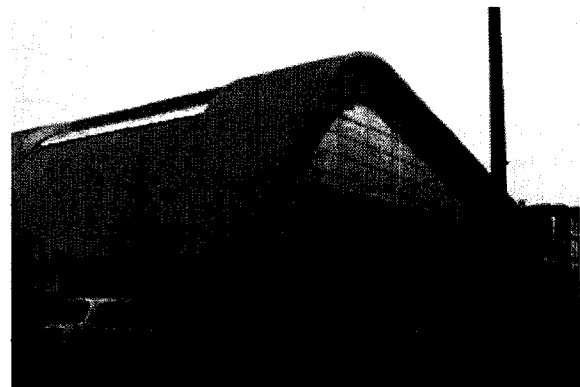
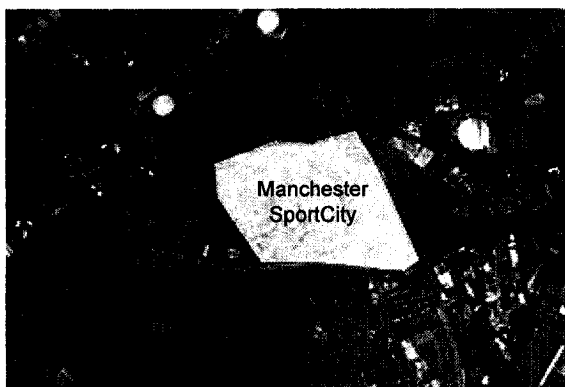
For the 2002 Commonwealth Games in Manchester, England, the Games acted as a catalyst for widespread redevelopment of the East of the city, an area which had remained derelict since the departure of heavy industry. The legacy includes a new commercial centre based around the stadium, 'SportCity', with shops, supermarkets and new housing. In the south of the city, the Manchester Aquatics Centre and upgrades to Belle Vue and Moss Side centres serve their local communities. In addition to providing new and refurbished amenities, the Games raised the reputation of Manchester worldwide, re-positioning it as a thriving, modern city successfully regenerated from an industrial past.

To host the 2006 Commonwealth Games, Melbourne, Australia, a former Olympic city, refurbished the Melbourne Cricket Ground and constructed few new sporting facilities. An athletes' village was created in the inner-city suburb of Parkville, and was later transformed into commercial housing with an eco-friendly image. The village has attracted controversy, with critics questioning whether the new, affluent suburb can accurately merit rejuvenation. Unlike Manchester, where facilities were developed to provide local amenities, the Games had little social effect on Melbourne.

With origins in the Commonwealth of Nations, the Games, with its core values of humanity, equality and destiny,<sup>42</sup> continue to play a role in nation building with particular emphasis on cities. Hosting the Commonwealth Games can provide developing cities with an opportunity to implement amenities where necessary. In this respect, North Dartmouth is a likely candidate to host the Games.

Left: *Manchester SportCity*, 2007 (cited February 21, 2007), available from [earth.google.com](http://earth.google.com).

Right: *Manchester Aquatics Centre*, 2006 (cited February 21, 2007), available from [http://en.wikipedia.org/wiki/Manchester\\_Aquatics\\_Centre](http://en.wikipedia.org/wiki/Manchester_Aquatics_Centre).

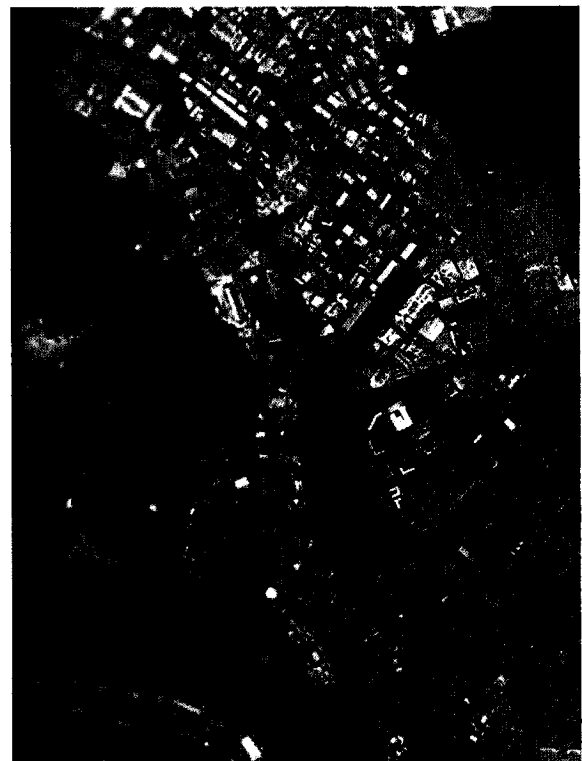


## Site Analysis

In *The Structure of the Ordinary*, N.J. Habraken argues that historically, ordinary environments were the background against which architects built the extraordinary; the new is identified in contrast to what is held in common. Habraken urges architects to undertake site analysis of the ordinary forms, spaces and patterns of change to reveal strategies to enhance the built environment.<sup>43</sup> The following is an analysis of the existing forms, spaces and patterns of change in North Dartmouth (the District) and Shannon Park (the Neighbourhood).

### Proximity

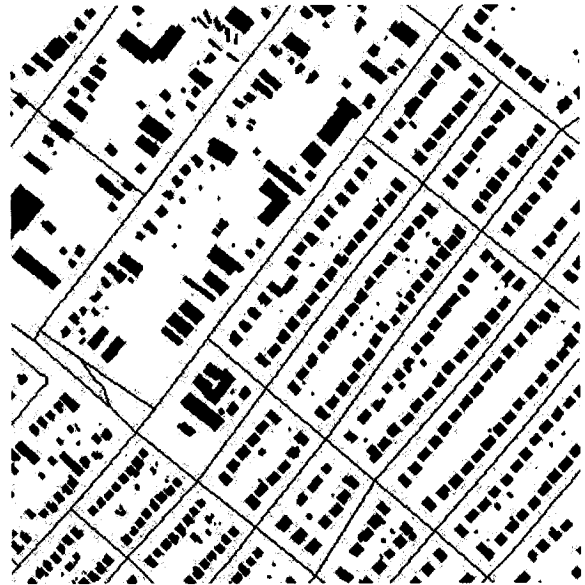
District 9, Albro Lake to Harbourview, is one of 23 districts comprising the Halifax Regional Municipality (HRM). It covers the former wards 4 and 5 of the former city of Dartmouth and includes the provincial riding of Dartmouth North. Demographically, Dartmouth North has a population of roughly 17,000 residents with a median age of 35-40 with a high level of education. Geographically it represents the neighbourhoods of Albro Lake, Brightwood, Burnside, Highfield Park/Crystal Heights, Landcaster Ridge, Wallace Heights, Tufts' Cove and Shannon Park.



Aerial of Dartmouth North;  
Shannon Park Highlighted.



Moving north from downtown Dartmouth along Victoria Road, the neighbourhoods of Brightwood and Albro Lake are similar demographically and in character. Both are lower to middle-income residential neighbourhoods comprised mostly of single-family homes. Brightwood is known for its golf course and country club, incidentally the largest green space in Dartmouth North, and Albro Lake borders the lake from which its name derives, and Golden Acres Park.



Albro Lake and Brightwood.  
Detail of housing fabric.



Typical street in Albro Lake.



Housing compromised by scale of industrial buildings.

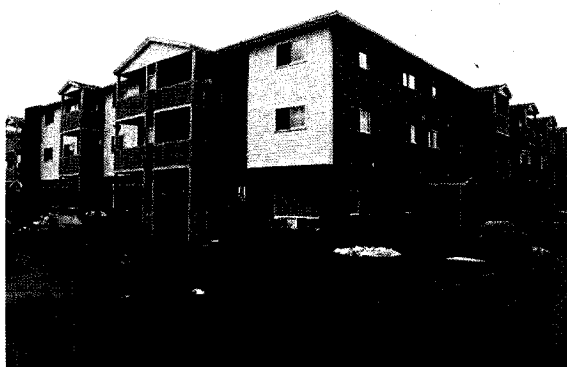
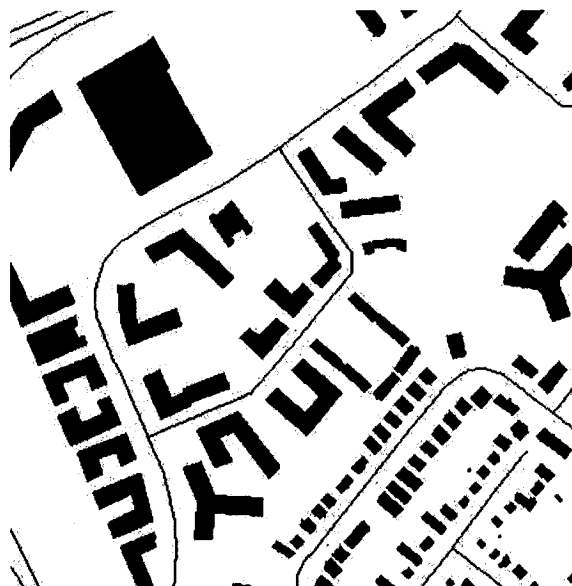
Further north, Highfield Park and Crystal Heights are lower-income residential neighbourhoods, comprised mostly of apartment buildings and low-income housing. More densely populated than Brightwood and Albro Lake, Highfield Park has become synonymous with crime and drug use. Geographically, it separates the North End of Dartmouth from Burnside Business Park.

Burnside was developed as an industrial park in the 1970s following the construction of the MacKay Bridge, and has since converted to a business park. Comprised mostly of low-rise office buildings and home to over 1,300 enterprises, over 30,000 people regularly work within the business park. There are several hotels oriented towards business travellers – Ramada, Future Inn and Comfort Inn - and Burnside is beginning a major expansion, including a large-scale commercial park named Dartmouth Crossing, in an effort to meet the retail and office needs of the HRM.

Right: Highfield Park, Crystal Heights and Burnside Business Park. Detail of housing fabric.

Below Left: Typical Housing at Highfield Park and Crystal Heights.

Below Right: Cooperative Housing at Highfield Park.



Further South, Tufts' Cove is a community segregated from the water by the Nova Scotia Power Plant, and physically divided by Windmill Road, the primary commercial strip in the area. Shannon Park is accessible via Windmill Road, with Burnside Business Park a 5-minute drive to the North, and downtown Dartmouth a 5-minute drive to the South. To the North-West, Shannon Park is bordered by the MacKay Bridge, the facilities of BIO and the former military neighbourhood of Wallace Heights, converted to a civilian community for over 200 in the 1990s. To the South, Shannon Park is bordered by Tufts' Cove, the narrows of Halifax Harbour and the Bedford Basin.

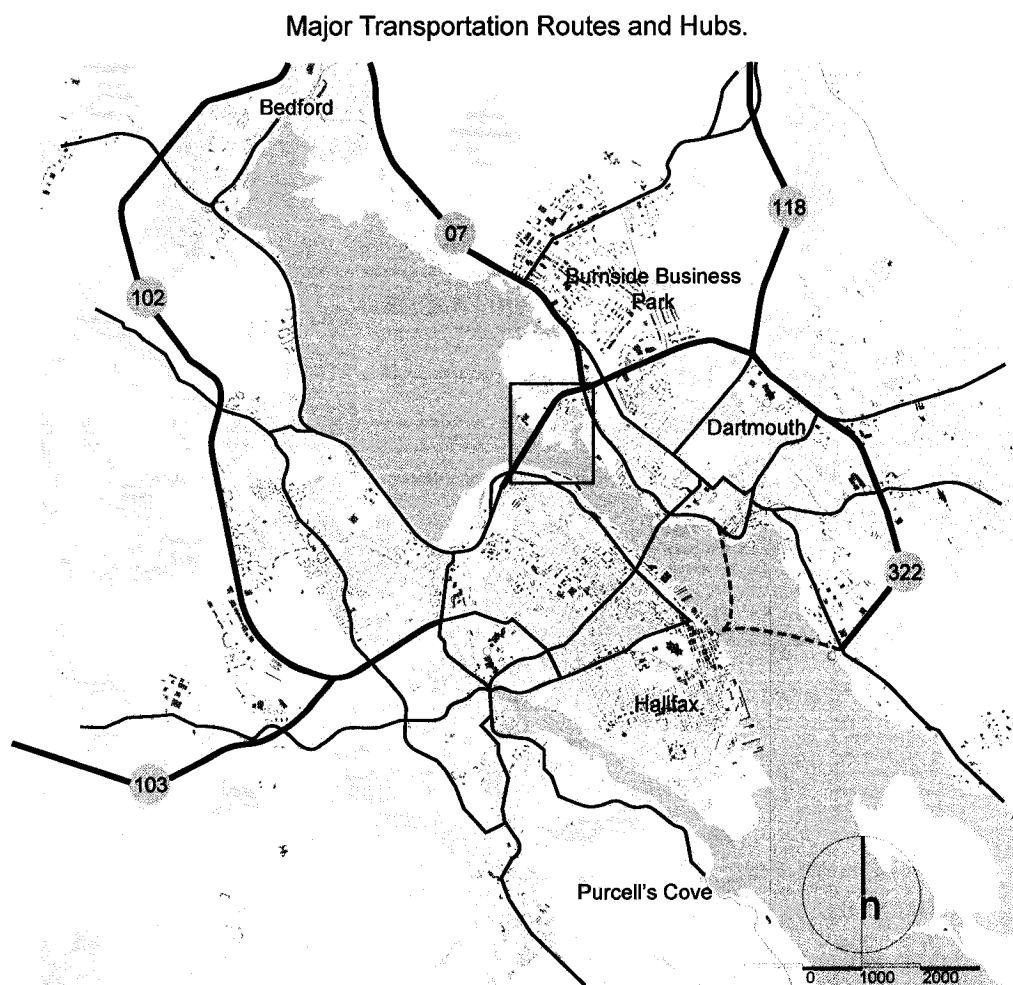
Right: Tufts' Cove and Wallace Heights. Detail of Wallace Heights housing fabric.

Below: Typical Housing at Wallace Heights.



## Access and Visibility

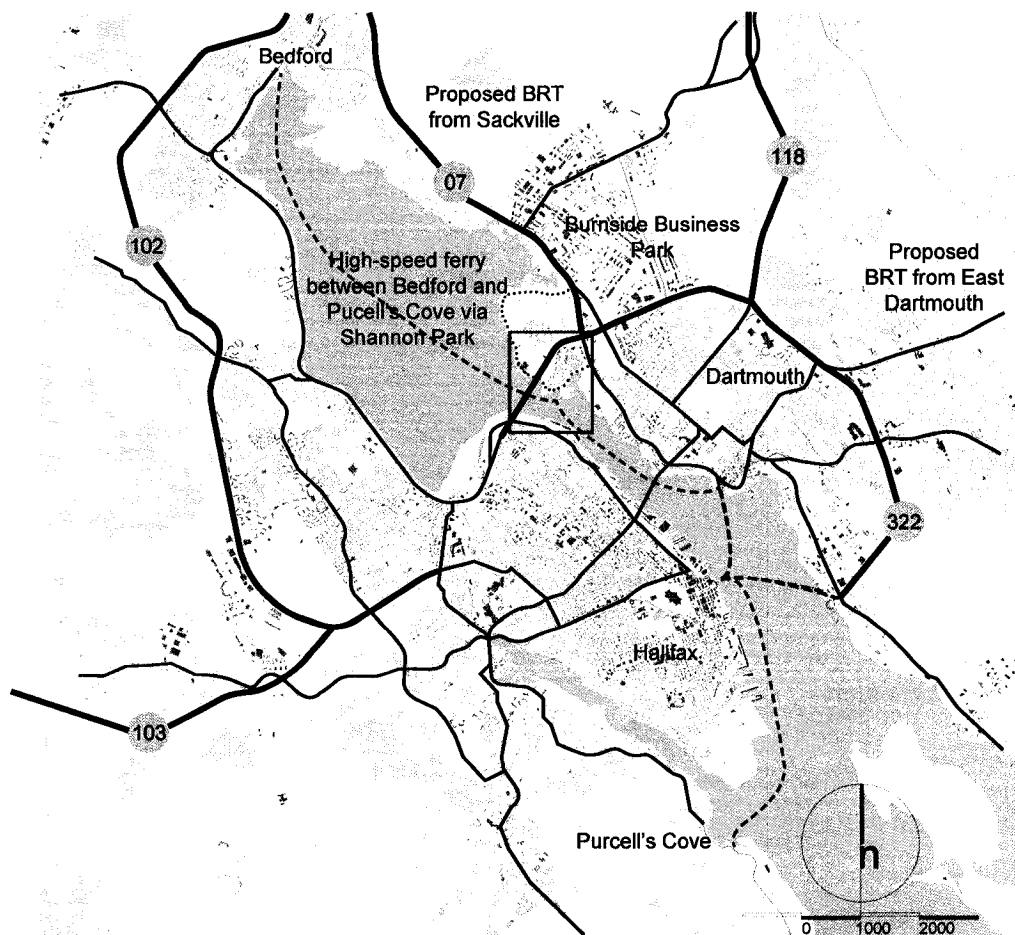
The construction of the MacKay Bridge in 1970 encouraged Burnside's development into a significant industrial park and established North Dartmouth as a bedroom community serving the Halifax peninsula. The division of program – industrial/commercial separate from residential – and the commute to Halifax has contributed to a dependency on vehicular transportation and the current suburban character of the district. North Dartmouth is car-oriented and car-dependent, with few public-transport options and little access for cyclists and pedestrians, who must negotiate a number of highways and arterial roads which intersect the district.



The Halifax Peninsula has traditionally functioned as the centre of activity, with the Bedford Basin reserved as a place of industry and military operations. Since the formation of the HRM in 1996, focus has shifted to the Bedford Basin, which links the various districts of the HRM as a sea corridor. Located at the narrowest point of the Basin and at the hinge between residential and industrial/commercial uses, North Dartmouth is emerging as a new centre within the HRM.

The *Halifax Waterfront Development and Harbour Plan*, part of the *HRM Draft Regional Plan*, combines the various uses of the harbour – seaport, transportation network, playground, place to live and ecosystem – into a comprehensive vision promoting new development and growth.<sup>44</sup> Within the plan, Shannon Park is identified as an area earmarked for multi-unit residential development and part of a coastal trail connecting BIO to Wright's Cove, with additional housing.<sup>45</sup> One of the principal recommendations is the addition of parks and trails integrated with transit services.

Projected Transportation Routes, Hubs and Waterfront Development.



## The Site

Shannon Park occupies a 105-acre waterfront site located at the narrows of Halifax Harbour. As earlier described, the property is bound by the MacKay Bridge to the North-West, the Canadian-National-Railway (CNR) and Windmill Road to the North-East, Tufts' Cove to the East and the Halifax Harbour narrows to the South. These edge conditions – shoreline, highway/railway, bridge – isolate Shannon Park from the surrounding area and adjacent communities. The MacKay Bridge physically disconnects the site from the government lands occupied by BIO; the Circumferential Road segregates the former military community at Wallace Heights.

Existing Site.

1:20,000





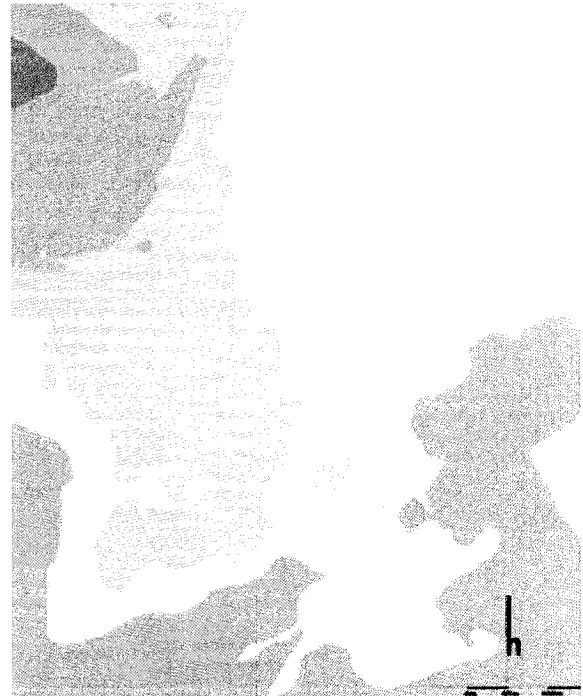
Existing site with boundaries.

Base Photo from Nova Scotia Geomatics Centre, *Photo 183, 2003, Halifax County.*

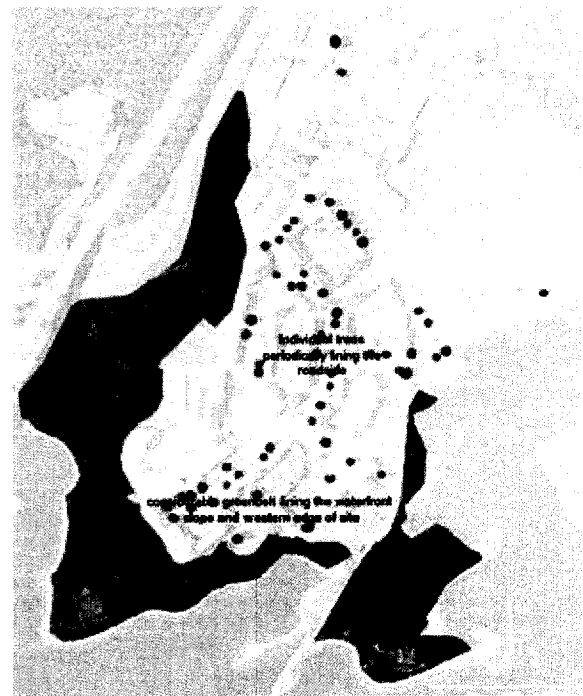
1:5000

Topographically, the site has two distinct features: a plateau, leveled for the creation of the military development in the 1950s; and the water's edge, several metres below the plateau which follows the original shoreline. There is little connection between the site and the water's edge. The embankment is forested, forming a partial greenbelt on the site's southern edge, and further isolating Shannon Park from the Bedford Basin.

Site Topography.  
Different shades represent 10m intervals.  
1:20,000



Site Planting.  
Forested embankment forms a partial greenbelt.  
1:20,000







Suburban character with various areas and uses.  
Base Photo from Nova Scotia Geomatics Centre, Photo 183, 2003, Halifax County.

1:5000

Density is suburban, with commercial, cultural and institutional buildings clustered on one portion of the site (Iroquois Drive) and residential buildings occupying another. Nootka Avenue serves the residential portion of the site; Iroquois Drive serves the commercial (a CANEX retail facility), cultural (a Catholic Church, a Protestant Church, an ice rink, a community centre) and institutional portion (a school with addition) of the site. The area between the two access roads is occupied by sporting fields, whose distance contributes to further isolation from neighbouring communities.

Following is a walk-through of the residential portion of the site addressing significant paths (vehicular and pedestrian), edge conditions (as previously outlined), nodes, landmarks and places of interest.



Iroquois Drive at the junction of Cayuga Drive.



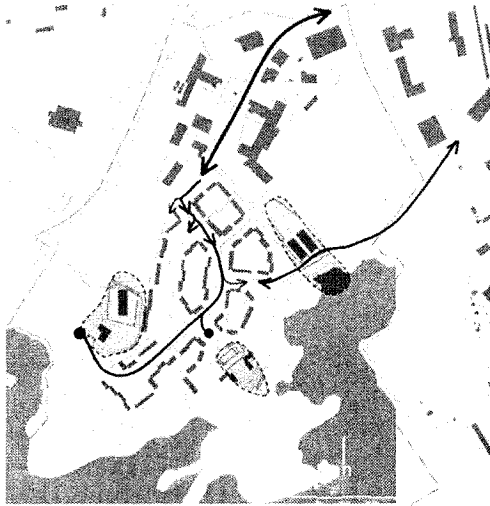
Cayuga Drive at Huron Crescent.



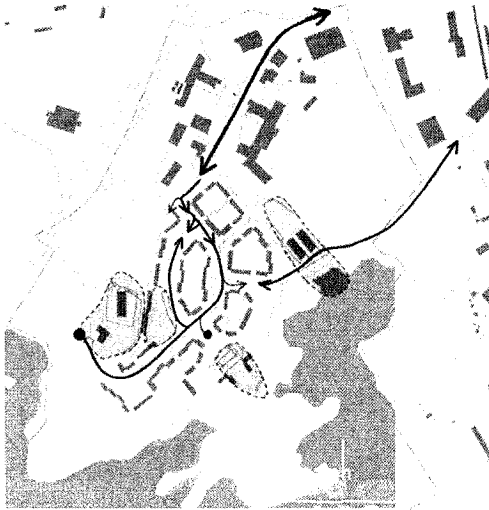
The termination of Cayuga Drive at a minor path, Athabaskan Avenue. The MacKay Bridge is visible in the background, and a derelict church on a significant wooded node in the foreground. A place for future development.



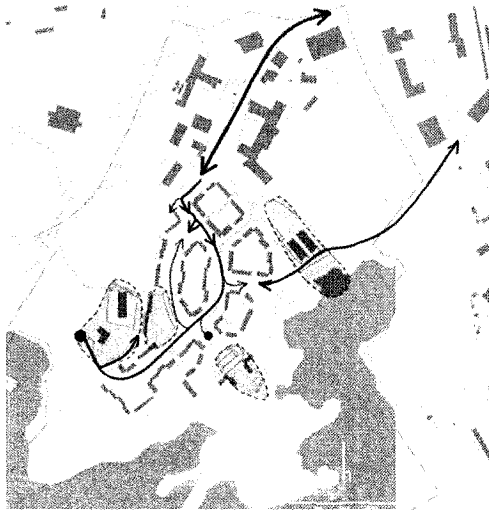
Cayuga Drive at Nootka Avenue. The site opens to Tufts' Cove with the Power Plant stacks visible in the background.



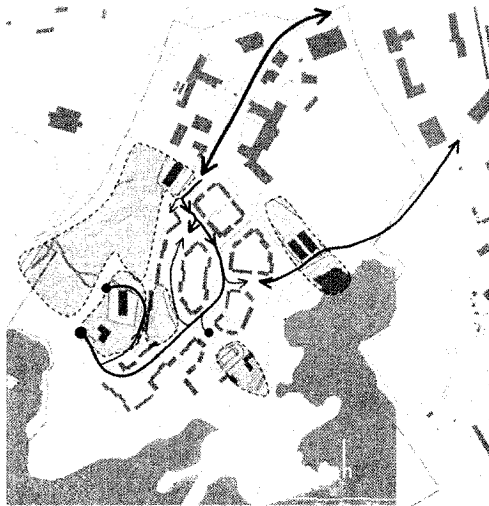
Haida Crescent. The Power Plant stacks are visible in the background, but there is little connection to the harbour.



A significant node at Cayuga Drive at Huron Crescent with some derelict housing.



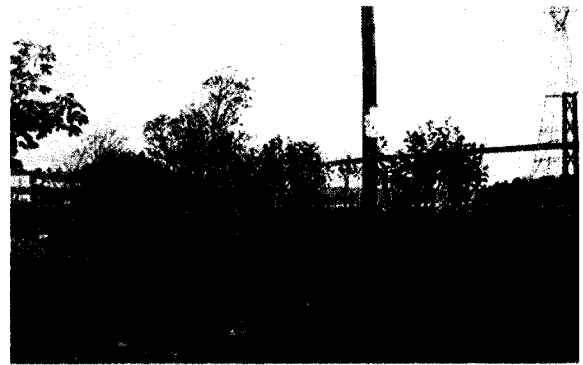
Athabaskan Avenue with the church and MacKay Bridge in the background. The housing forms a wall with no connection to the area west and Baffin Boulevard.



What may have once been a small path to Baffin Boulevard. Now heavily wooded.

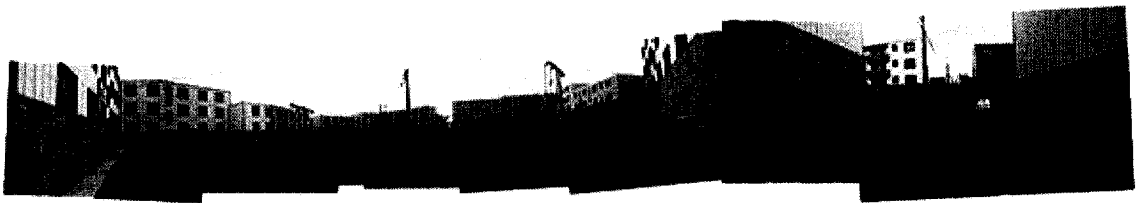


Athabaskan Avenue with view corridors where the housing breaks.

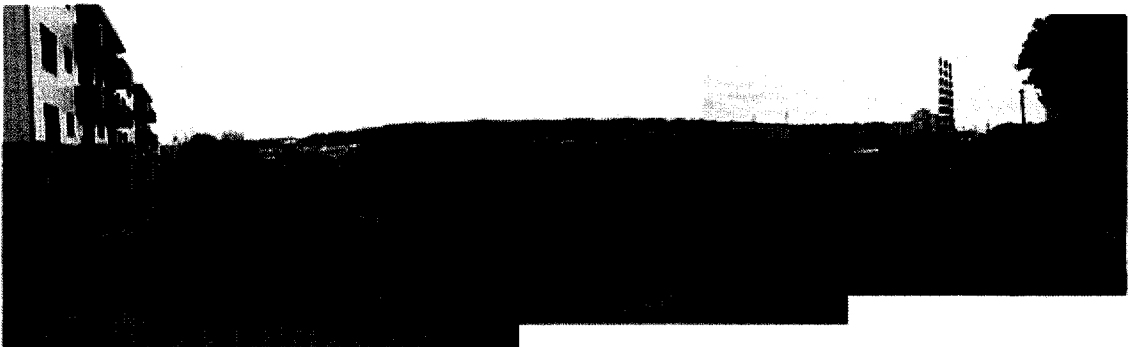


A former jetty off an un-named path.

Residents of Shannon Park lived in tract-housing – also called ‘cookie-cutter’ housing - where near-identical apartment buildings are multiplied. Apartment buildings are organized in clusters of common colour around public green spaces, or wards. The wards are accessible via a complex pedestrian network where some major paths – Algonquin Path and Ojibway Lane - have been given names.

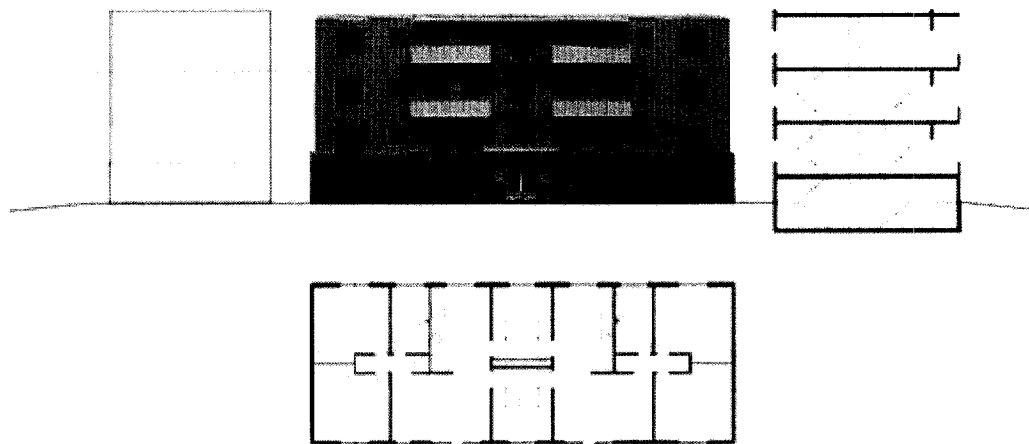


Typical ward.



Ojibway Lane.

Typical apartment buildings have 3-4 levels with two adjacent 2-bedroom apartment units per floor. The units are accessible via central stairwells with access to either the street or ward; the basement is reserved for communal space and utilities. Buildings are set-back from the street, with balconies on the street-side, and offer generous space for parking.



Typical Shannon Park Housing.

The apartment buildings are the distinguishing feature of Shannon Park. Repetitive and mundane, the tract housing contributes to a sense of disorientation as you meander through the site. While the power station smokestacks and the MacKay Bridge serve as distant landmarks used to navigate the site, an absence of local landmarks contribute to the labyrinthine experience and the isolated character of Shannon Park.



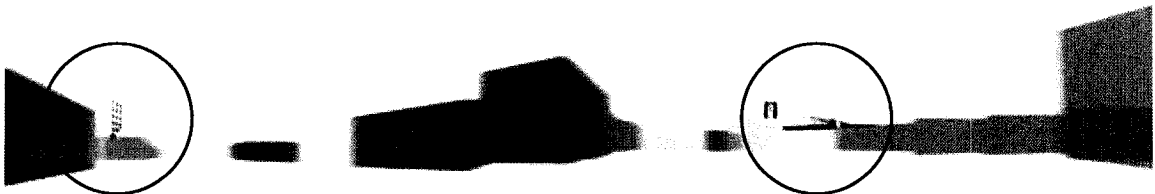
Cayuga Drive at Haida Crescent.



Repetition of Typical Apartment is Disorienting.



Experience of site as a labyrinth.



Landmarks become crucial to navigate the site.



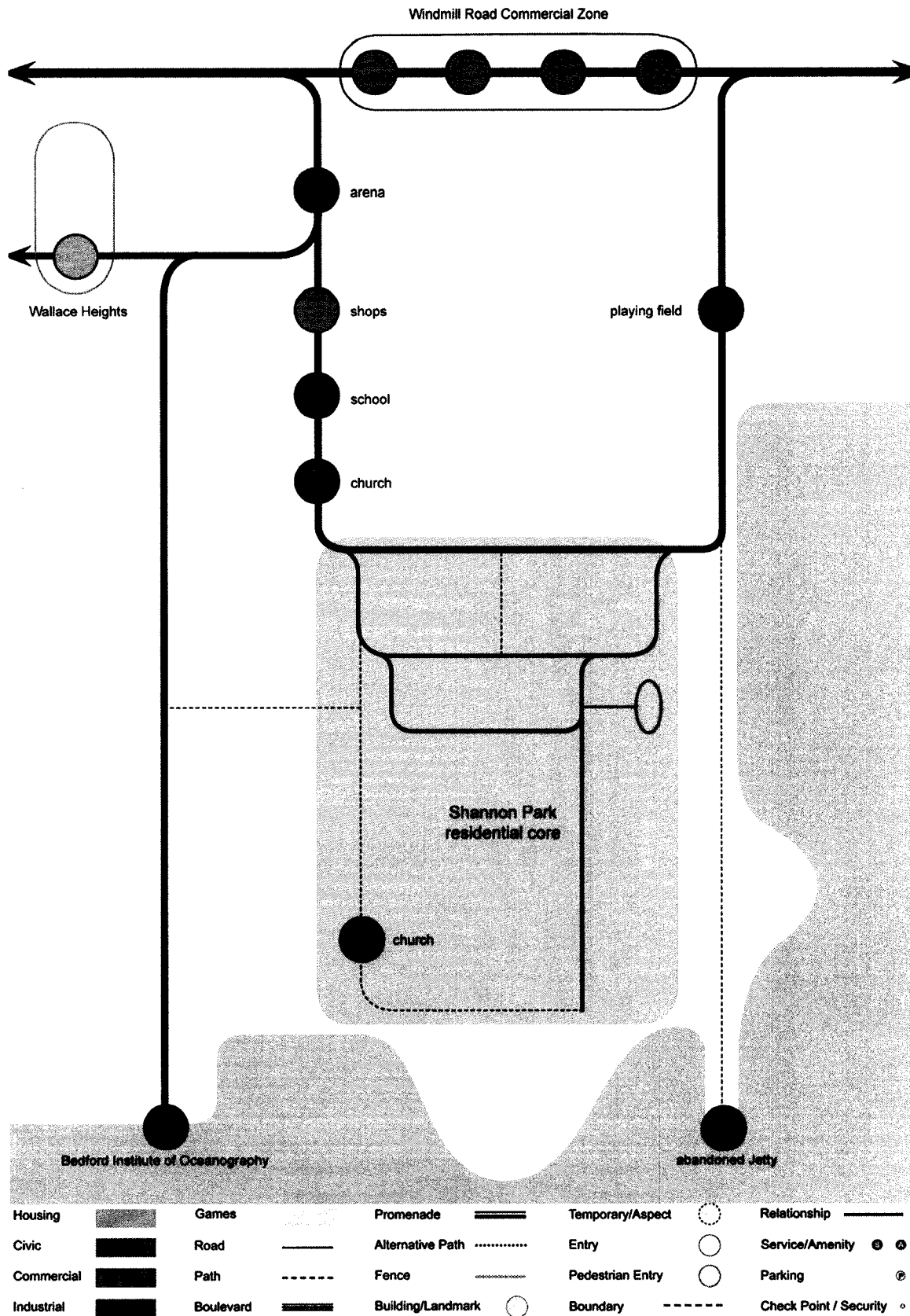


Diagram of Shannon Park with existing buildings and zones.

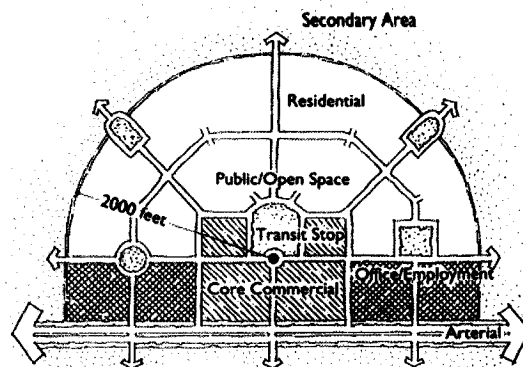
## **Design Strategy**

The creation of a Commonwealth District at Shannon Park necessitates transforming the site in its capacity for use, form and representative character, accessibility and network of facilities. The design strategy makes minor connections where possible, but otherwise accepts Shannon Park's isolation from surrounding communities as an opportunity to develop a centrally located alternative neighbourhood with sporting and cultural amenities. Although residents retain a strong sense of place and community, North Dartmouth is a district with few amenities. The site's proximity to current and potential transit routes and hubs - as well as to the commercial and employment centres of Burnside and Dartmouth Crossing - allows potential for redevelopment as a green neighbourhood. With the Games as a catalyst and by recognizing local values, Shannon Park may be redeveloped into a green community, providing world-class amenities and giving the people who work and live there a greater commitment to its future.

## **Commonwealth Park Analysis**

The development of a Commonwealth Park could transform Shannon Park into a walkable community, well connected to public transportation and the greater Halifax Regional Municipality. Also called the 'urban village' or 'complete neighbourhood', the walkable community can provide a foundation for sustainable urban form. Following a polycentric urban structure, in which a city is comprised of a network of distinct but overlapping neighbourhoods, each focused on a local centre, people can access on foot most of the facilities and services needed for day-to-day and weekly living activities: work, shopping, education and recreation.<sup>46</sup> Each neighbourhood is designed to provide a choice of route with the highest level of accessibility and connectivity for pedestrians and cyclists within a catchment of roughly 800-meters, in line with New Urbanism. Within these compact and walkable neighbourhoods, mobility does not generate a high demand for either public or private transport.

Diagram for TOD. From Girling and Helphand, *Yard, Street, Park: The Design of Suburban Open Space*, 199.



In *The Regional City: Planning for the End of Sprawl* (2001), Peter Calthorpe and William Fulton present a vision of urban development that folds the notion of neighbourhoods as 'pedestrian pockets' and transit-oriented developments (TOD) into a regional concept of contemporary urban form.<sup>47</sup> For their TOD, the region and its elements are conceived as a unit, integrating resource protection and the conservation of open space as guiding principles of neighbourhood design.<sup>48</sup> Environmental features, such as coastlines or forests, are conserved and integrated into centres and districts beyond their more traditional usage as borders or edges. Often, natural areas serve as pedestrian and bicycle corridors that connect varying types and scales of public space, and important environmental assets are protected in the process.<sup>49</sup> The relationships between open space, paths and land use make Calthorpe and Fulton's model a contemporary prototype for a green neighbourhood.

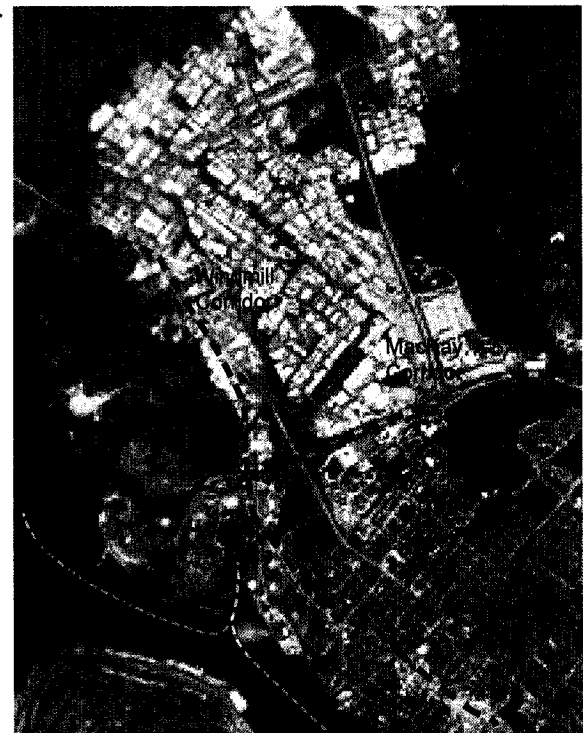
Due to the relative isolation of the site from the greater Halifax Regional Municipality, the community at Shannon Park has been prone to rely heavily on cars and vehicles for transportation. Re-imagining Shannon Park as a pedestrian-oriented neighbourhood, along the lines of Calthorpe and Fulton's model - with cultural, sporting and recreational amenities in a waterfront park setting and venues linked by existing green spaces and corridors - the site has the potential not only to widen residents' choices around transportation, but also to improve environmental and housing conditions.

Strategically located on the Bedford Basin, adjacent to the MacKay Bridge at the junction of two highways – Highway 101 to the North via Windmill Road and the Bedford Bypass, and the Circumferential Highway 111 connecting the Eastern communities (See Page 28) – Shannon Park is an ideal site for a future multi-modal transport hub.

Major corridors and centres within HRM.



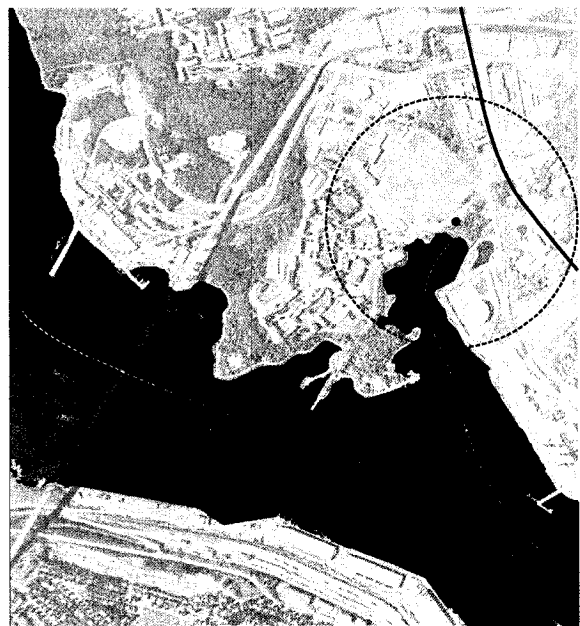
Centre with transport hub at junction of major transport corridors.



External to plans for the Commonwealth Games, the Halifax Regional Municipality has proposed a Bus Rapid Transit (BRT) system for North Dartmouth, under which Windmill Road will become a major transit corridor linking a series of regional centres. In addition to the BRT, which would function as a train along the Windmill Corridor, the street would be widened to accommodate cyclists and pedestrians as part of a green trail.<sup>50</sup> Had the city won the Commonwealth Games bid, the HRM had committed to building a terminal at Shannon Park for “fast ferries” en route to Bedford, with a vessel capacity of 350+ and a trip time of 6-minutes.<sup>51</sup> The Bedford Basin would function as a sea corridor linking various regional centres on both shores of the basin. Within Shannon Park, the BRT and ferry terminal would be combined and located at the junction of Windmill Road and Nootka Avenue, servicing the Windmill Corridor and Basin Corridor with added amenities, including a park-and-ride facility. The terminal would provide good access to Burnside and a viable option for those using the MacKay Bridge. Residents would have been encouraged to travel to the terminal by bicycle, as part of a developing Halifax Bike-Path Project, and along a multi-use trail between the Dartmouth and Woodside ferry terminals, an extension of the Dartmouth Harbour-front Trail Implementation Strategy.

With these strategies in place, Shannon Park could provide residents and visitors with several options for ecological transportation, as well as offering easily accessible, world-class sporting facilities to the rest of the city.

Location of the multi-modal transport hub within an 800-meter walking distance adjacent to Shannon Park. Access by Windmill Road corridor and by the Bedford sea corridor.



To house the expected 6,000 athletes within the Commonwealth Park, Shannon Park must reconfigure and expand its residential capacity as a small village. By designing the athletes' village first as a neighbourhood, the site will readily convert to its post-Games function as a community.

Neighbourhoods provide urban designers with an intimate scale of the urban whole to understand and to manipulate. Neighbourhood design follows a documented set of guidelines able to provide an objective set of criteria. In *The City Image and its Elements* (1960), urban planner Kevin Lynch presents his concept of how users perceive and organize spatial information as they navigate through cities. Lynch reports that users understand their environments in consistent and predictable ways by forming mental maps with five elements: paths (channels in which people travel), edges (boundaries), districts (sections of the city distinguished by character), nodes (focal points, intersections and loci), and landmarks (reference points).<sup>52</sup> Understanding how people perceive these elements allows designers to promote social cohesion through the design of legible neighbourhoods.

Neighbourhoods vary in physical size, shape, density and character. Following is a description of the neighbourhood domain, character and density which configure the athletes' village. The sporting facilities, along with the coastal promenade, form the primary edge of the neighbourhood.

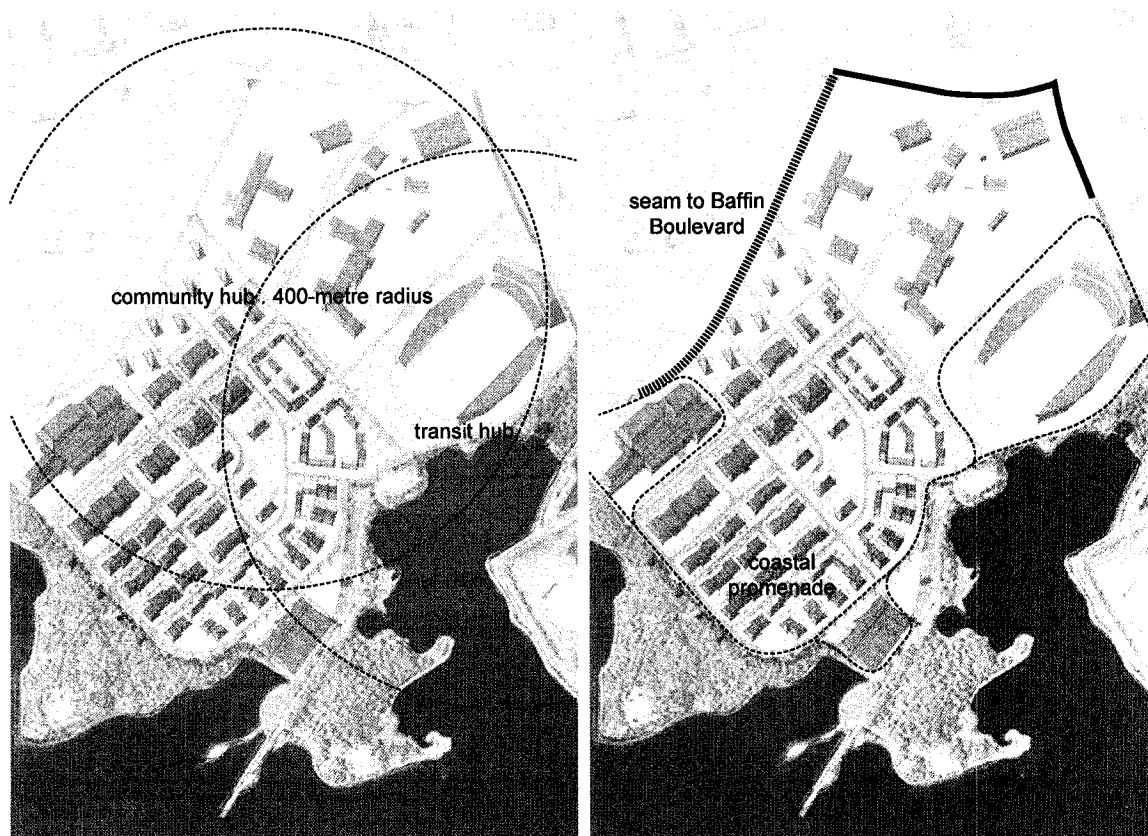
Rendering of Shannon Park as community.



## Domain and Edge

The physical size of a neighbourhood, or domain, is frequently defined as the distance that one can walk to services or to a transit stop, usually between five and ten minutes, or a 400 to 800-metre diameter.<sup>53</sup> Occupying 105-acres, Shannon Park would have two centres: the multi-modal transport-hub adjacent to the stadium, forming the more public use of the site; and the service centre organized around the school and representing the more private aspects of the neighbourhood.

The edge conditions – see Site Analysis - differentiate one neighbourhood from another. Nineteenth-century British urban theorist Ebenezer Howard, along with architects Raymond Unwin and Barry Parker, who gave physical form to Howard's theories, shaped their Garden City of Letchworth around a 'ward' and separated from others by a greenbelt.<sup>54</sup> At Shannon Park, the coastal promenade along which the sporting program is organized forms a partial greenbelt and the primary edge of the neighbourhood. Taken together, the domain and edge are the physical conditions of the site.



Neighbourhood domains.

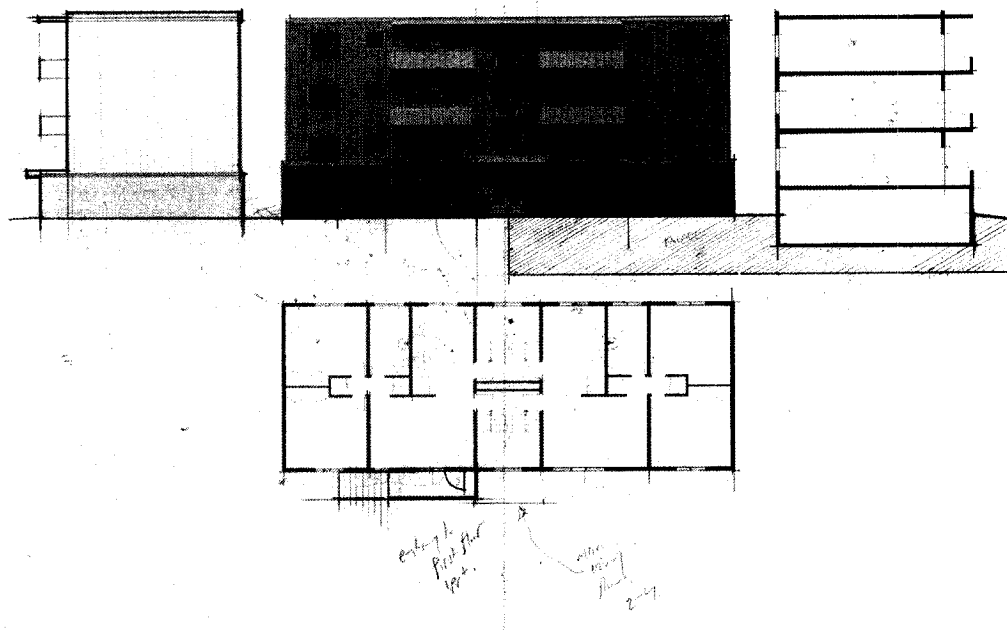
Neighbourhood edge conditions

1:20,000

## Character

In *The Neighbourhood, the District and the Corridor* (1994), New Urbanism planners Andrés Duany and Elizabeth Plater-Zyberk describe their ideal neighbourhood as having a distinct centre and an edge, a balanced mix of activities and an optimal size of 400-metres from centre to edge.<sup>55</sup> At Seaside, Florida, their benchmark project, Duany and Plater-Zyberk develop a plan and code as a graphic critique of regional towns. The plan reintroduces public space of street and square as the organizing principles of the town;<sup>56</sup> succinct codes regulate the size, placement, materials, and basic shape of buildings.<sup>57</sup> Within this scheme, the typical house homogenizes the fabric and assigns a proper hierarchy to public buildings. Borrowing from Duany and Plater-Zyberk, a series of street and path sections were developed as a tool to configure the neighbourhood at Shannon Park.

Typical Shannon Park Apartment revised to have ground access to first floor apartments.  
1:400

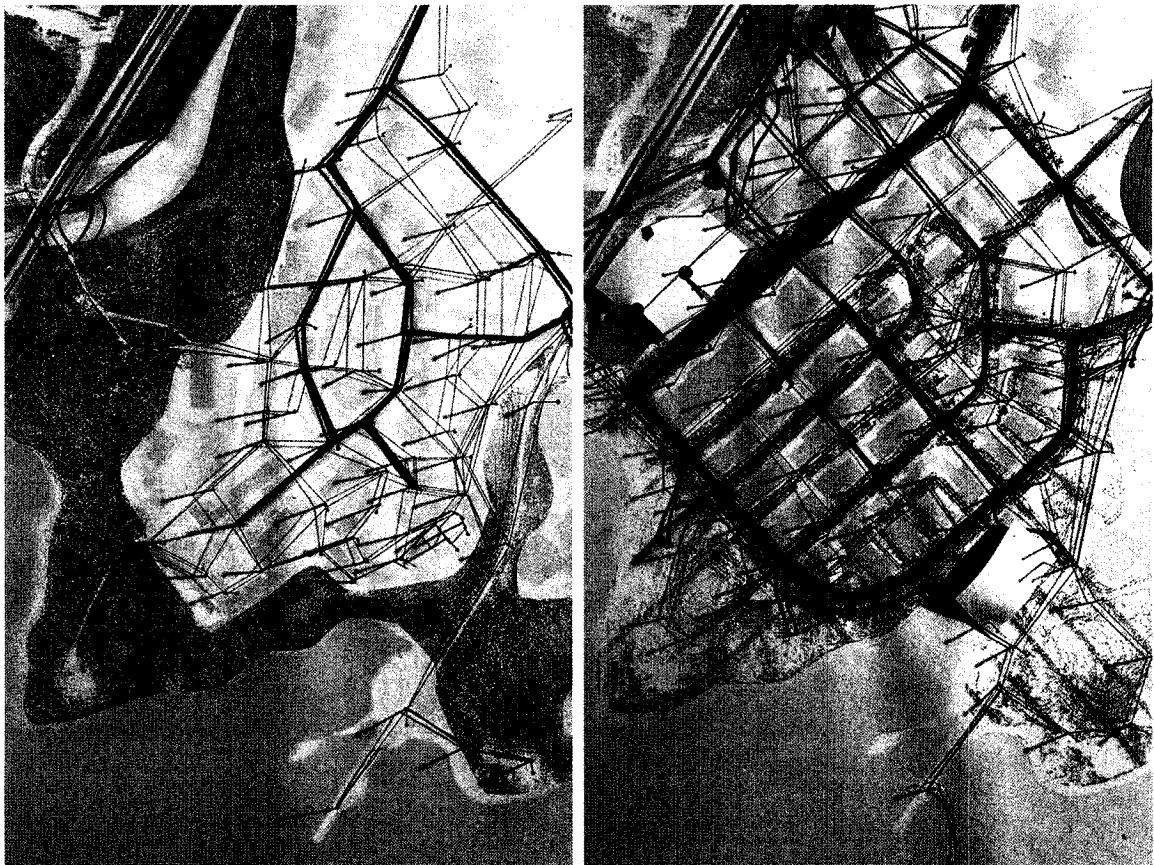




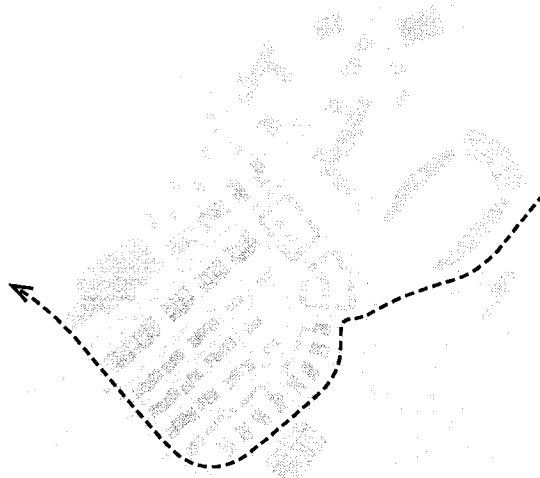
The athletes' village is configured based on the patterns already existing at Shannon Park, with the objective of building a new and legible neighbourhood on the foundation of the past. The existing housing and street patterns – the 1950s tract housing organized in clusters around wards – are preserved, where they merit renovation and contribute to a low-density park-setting. The tract-housing is adapted to serve an extended program, and clusters are completed where possible. Where the existing pattern is not viable, the placement of new paths and roads re-orientates the streets to the sea while reinforcing seams to adjacent communities, primarily Wallace Heights and BIO and the future trail to Wright's Cove. For the new layer, the function of the ward is extended as green paths oriented perpendicular to the coastal promenade. While the wards defined private space, the paths outline public space and prioritize movement.

Left: String Study of Existing Shannon Park Circulation.

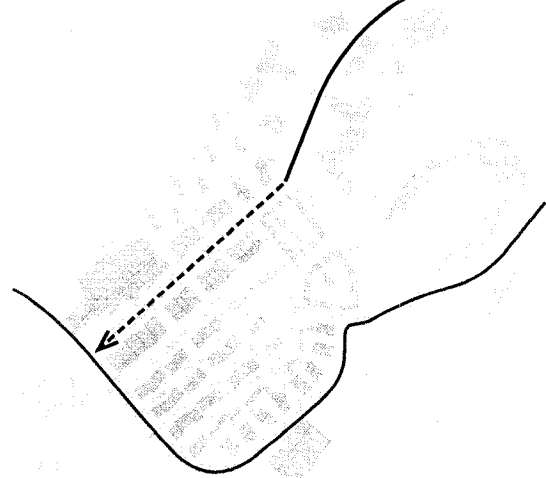
Right: String Study of Proposed Shannon Park Circulation.



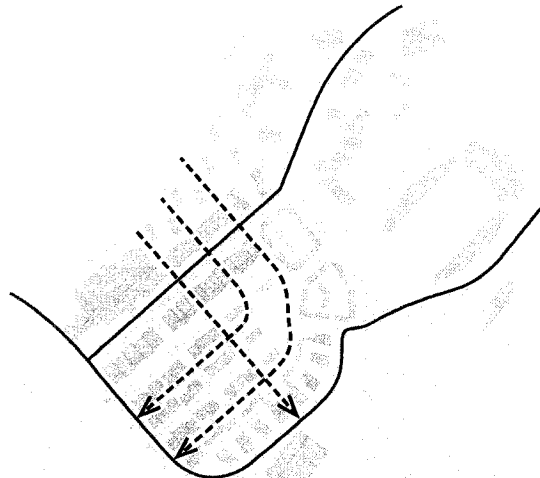
# Sequence of Design moves.



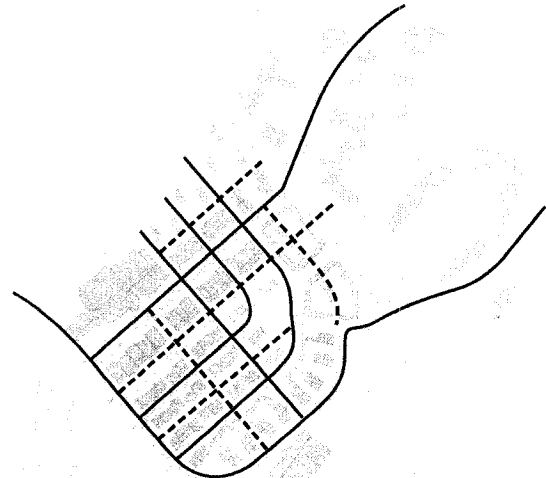
1. Coastal promenade as neighbourhood edge and connecting the sporting facilities.



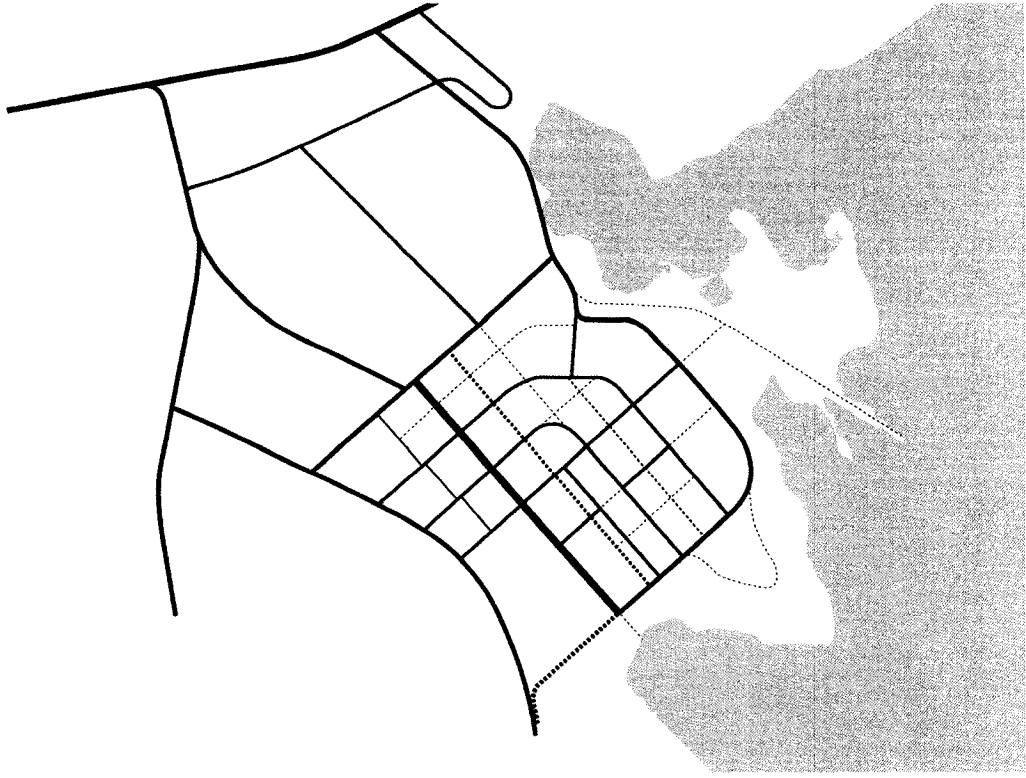
2. Community boulevard forming the commercial/ cultural spine of neighbourhood as an extension of Iroquois Drive.



3. Typical streets connect Baffin Boulevard to the coastal promenade, and re-oriented the neighbourhood to the harbour.

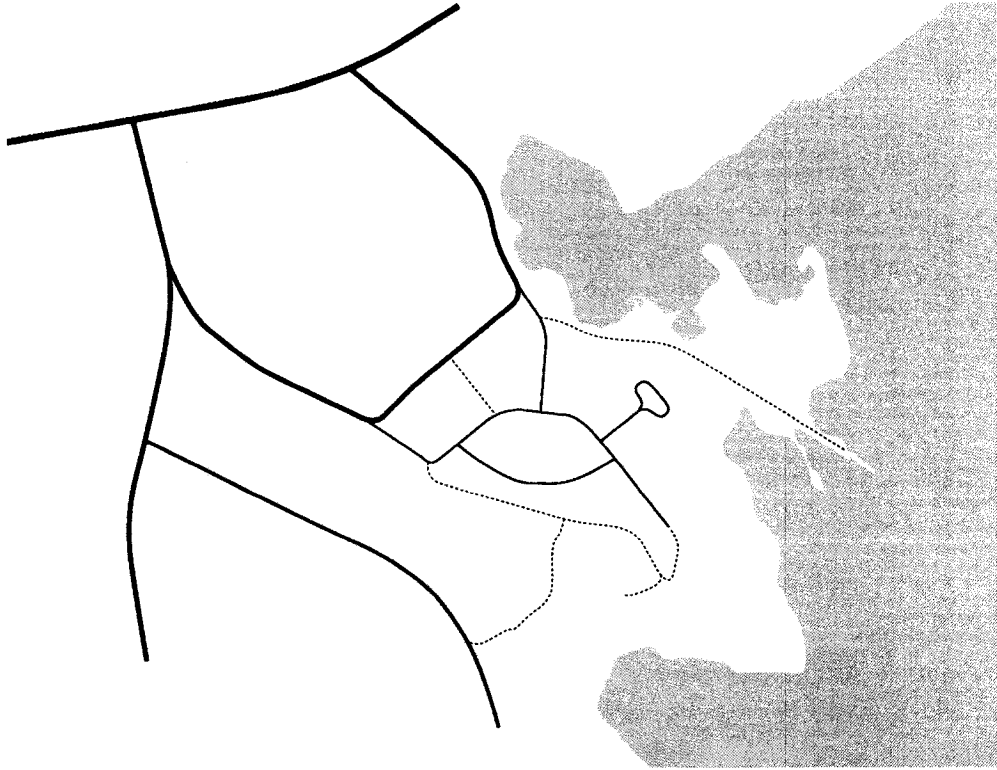


4. Pathways navigating the site giving choice of route to pedestrians and cyclists.



1:10000

Proposed Street and Path Diagram



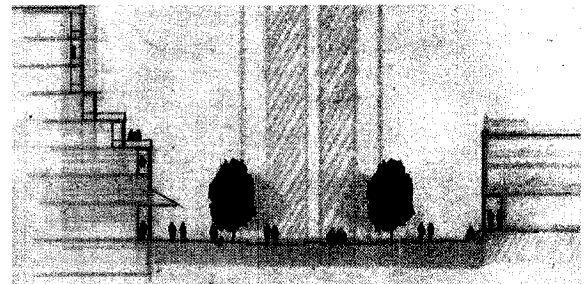
Existing Street and Path Diagram

The extended network of streets and paths provides the highest level of accessibility and connectivity for pedestrians and cyclists, while ensuring levels of privacy for the residents. Following Duany and Plater-Zyberk's model, five street types are utilized in the organization of the neighbourhood: The coastal promenade, community boulevard, typical street, street with generous path and typical path.

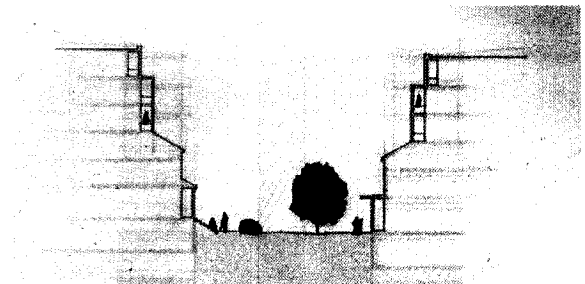
1. Coastal promenade



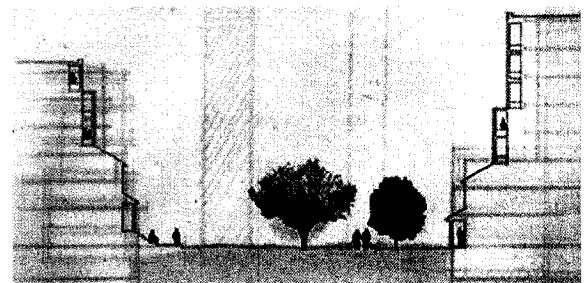
2. Community boulevard



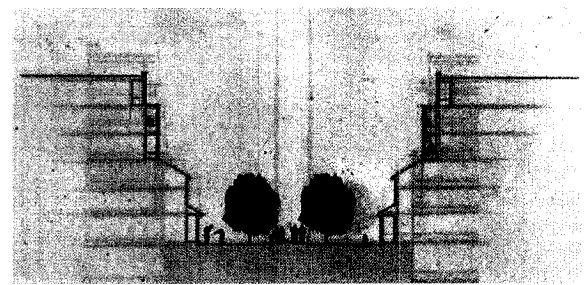
3. Typical Street



4. Street with generous path

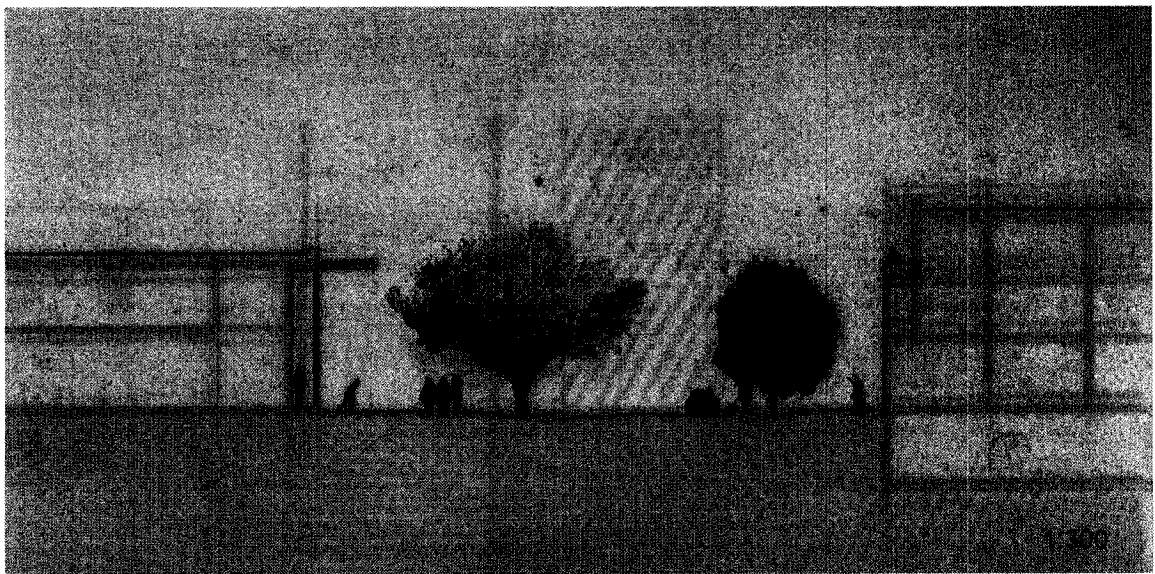
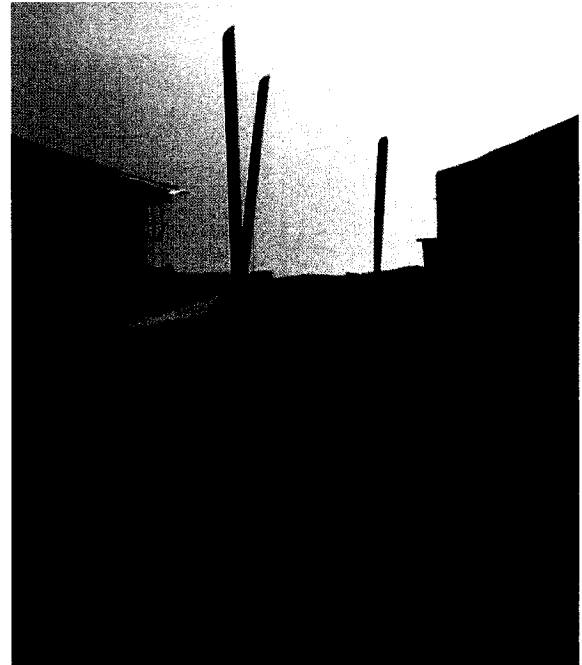
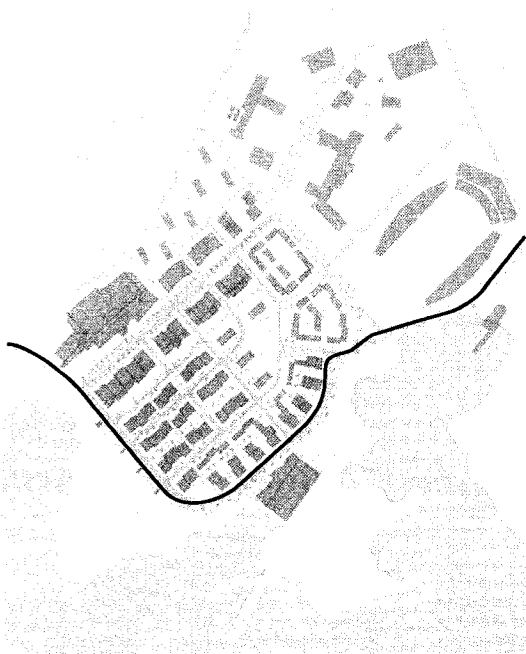


5. Typical path.



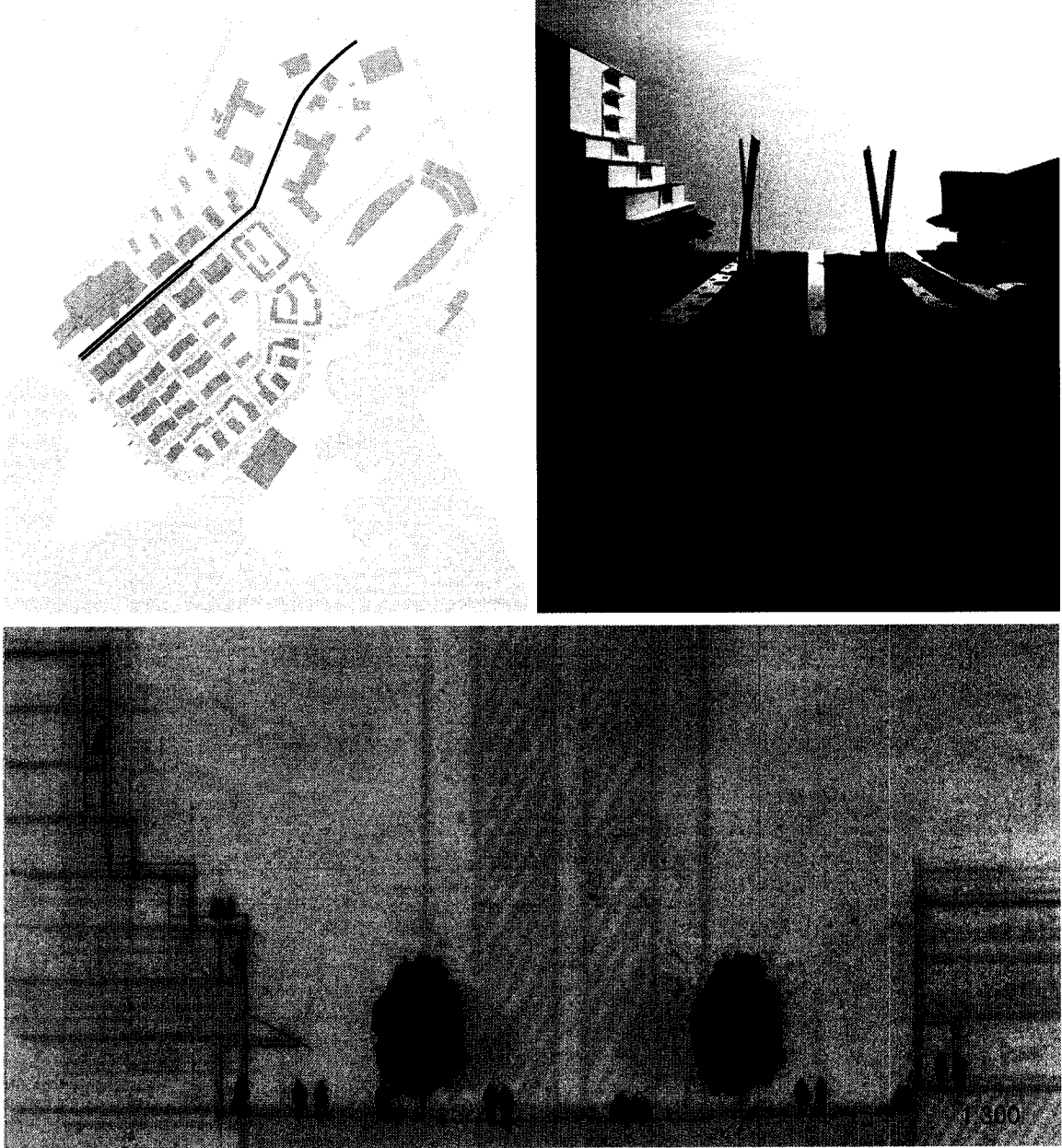
1. The coastal promenade meanders the perimeter of the embankment and combines typical street usage, including full vehicle access, with a considerable walking promenade. During the Games, the promenade would be reserved for full pedestrian use. In addition to the major sporting amenities which are dispersed along the promenade, small amenity pavilions mark the termination of perpendicular streets. Connecting the more public uses of the site – the sporting facilities and transport hub – while acting as a boundary between the neighbourhood and parkland, the coastal promenade forms the more public path through Shannon Park.

(Left) Locator map, (Right) Study Model, (Below) Cross Section.



2. The community service centre and hub on Iroquois Drive is extended as a community boulevard with commercial and cultural facilities – including the field house – combined with live-work units and apartment above. Iroquois Boulevard forms the commercial/cultural spine of the neighbourhood. During the Games, Iroquois Boulevard forms the International Zone including all necessary support for the visiting athletes. As recommended by New Urbanism and Smart Growth<sup>58</sup> movements, the community boulevard is surrounded with a flexible zoned area able to accommodate a fine-grained mix of residential and smaller-scale commercial uses.

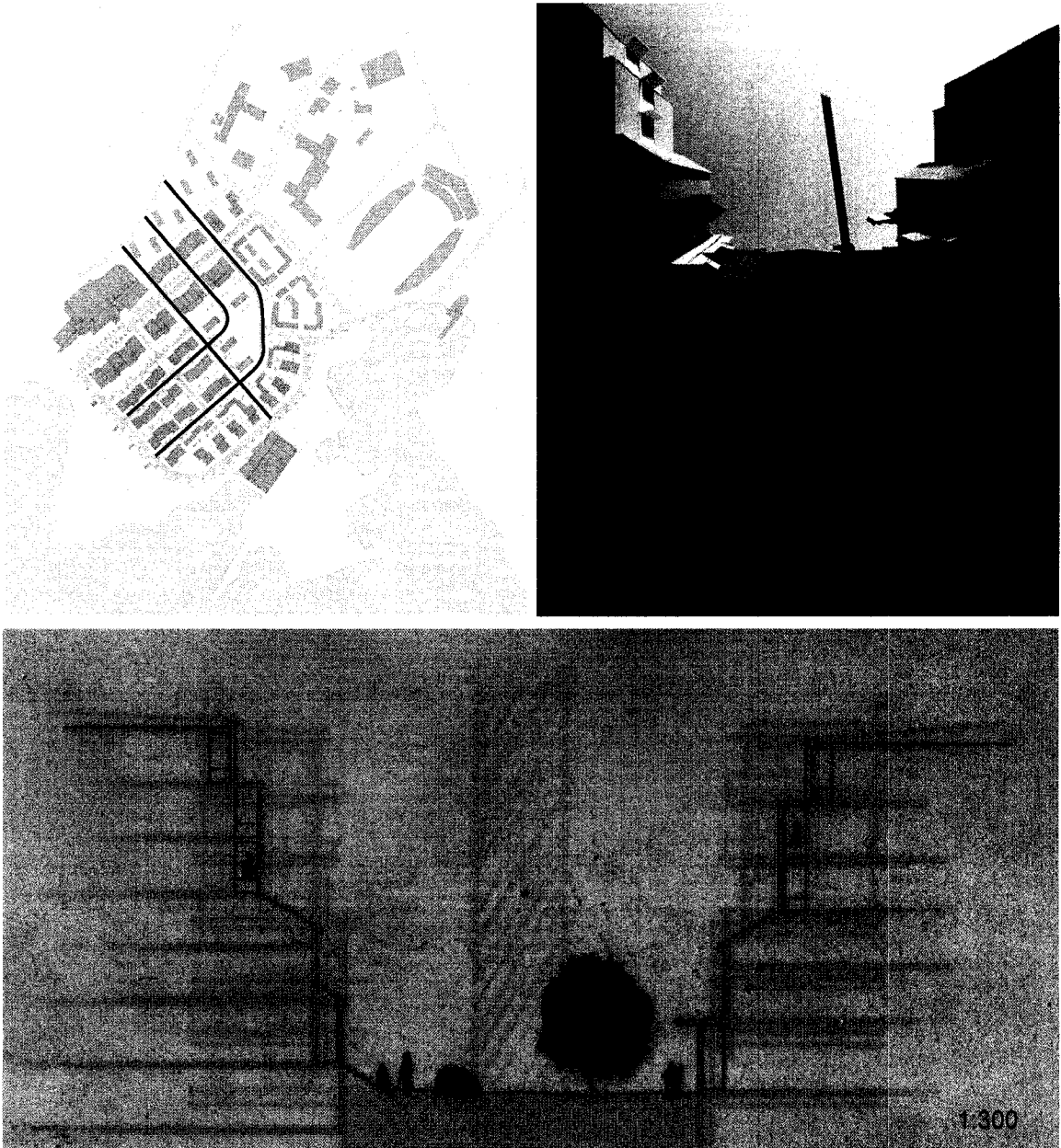
(Left) Locator map, (Right) Study Model, (Below) Cross Section.





3. The typical street, designed as a curve from Baffin Boulevard to the coastal promenade, is intended to discourage heavy traffic while permitting vehicular movement throughout the site.

(Left) Locator map, (Right) Study Model, (Below) Cross Section.



4. A street with generous path lies parallel to the community boulevard as a more quiet alternative for athletes and the community. The generous path is intended to act as an urban park running South-North from the coastal boulevard to the community hub and school.

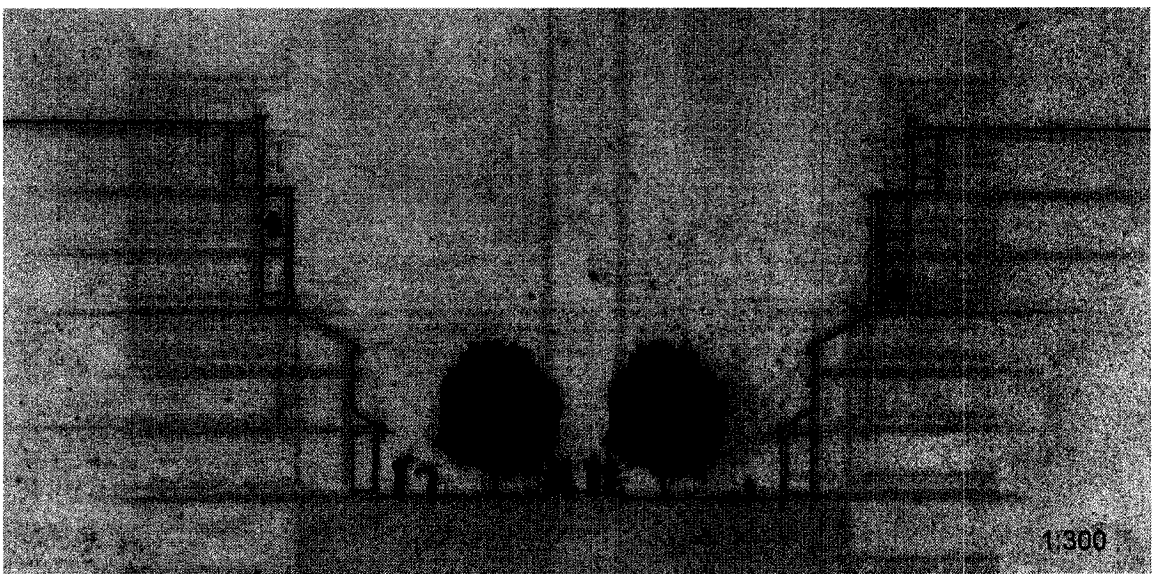
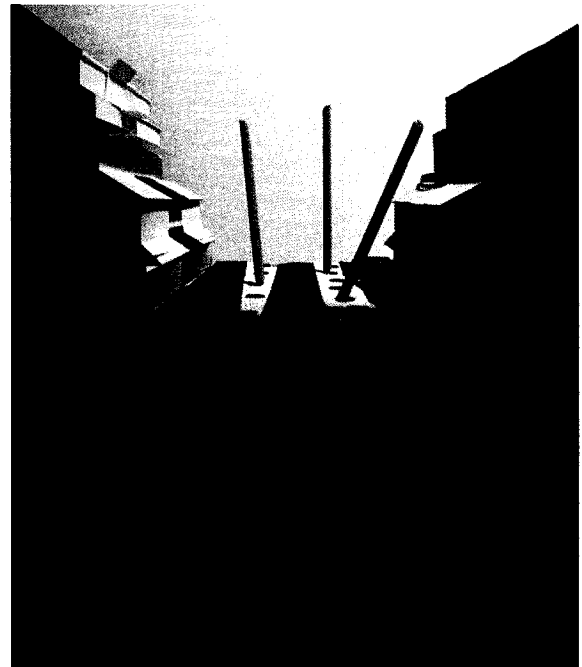
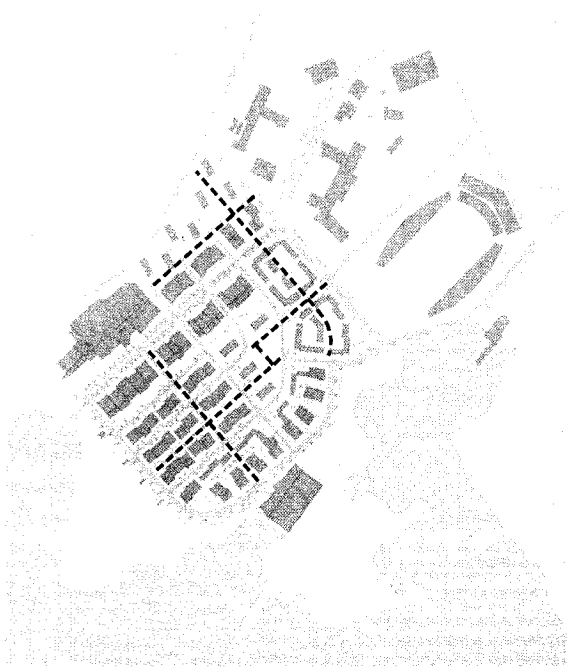
(Left) Locator map, (Right) Study Model, (Below) Cross Section.





5. The final type of street, a pedestrian path, is used to discourage vehicular traffic and encourage pedestrian and cyclist movement. These paths run both East-West, where they dissect streets, and South-North, as miniature versions of the generous path.

(Left) Locator map, (Right) Study Model, (Below) Cross Section.





Study Site Sections and Elevations.

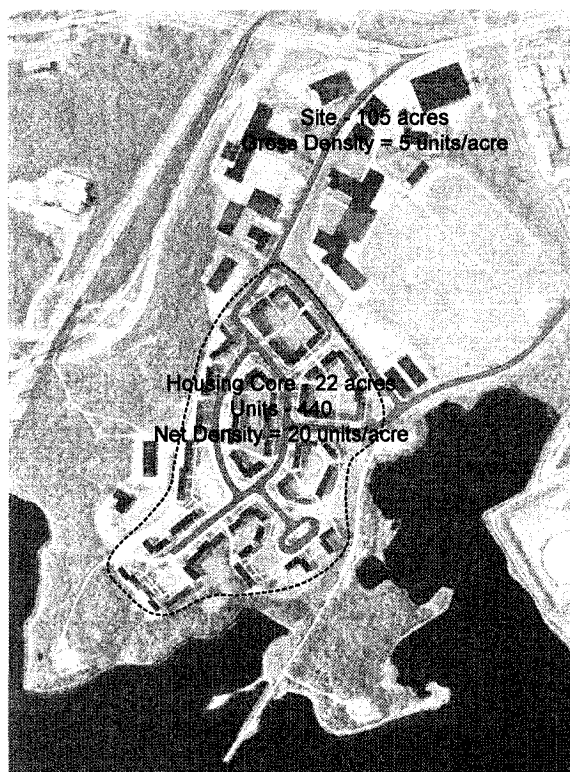
1:3000

## Density

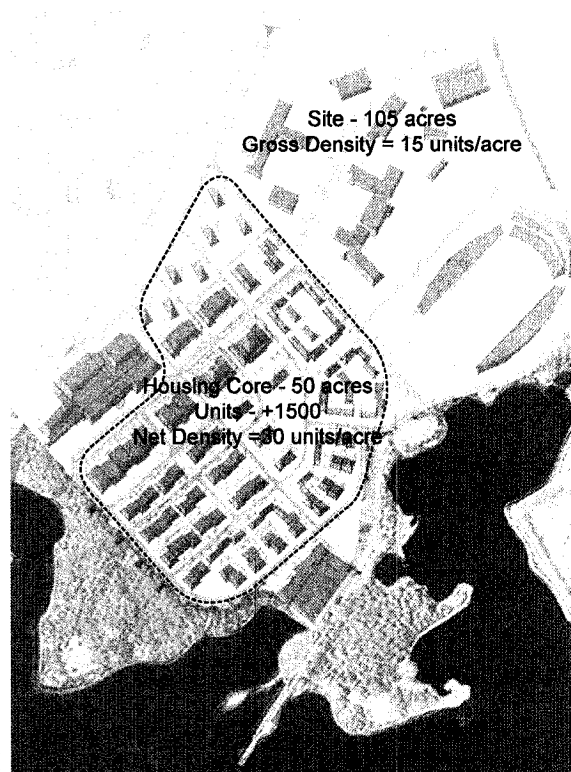
In *Towards an Urban Design Manifesto* (1987), Allan Jacobs and Donald Appleyard outline the physical elements necessary to encourage livable communities. Included is a minimum density of residential development at 15 dwelling units (30 – 60 people) per net acre of land.<sup>59</sup> More recently, New Urbanism planners recommend densities ranging between 15 – 30 units/net acre of land,<sup>60</sup> roughly four times higher than conventional low-density developments. Although a development is considered compact when densities exceed 6 units/net acre of land, at Shannon Park densities range between 15 – 30 units/net acre of land with a minimum of 1,500 units<sup>61</sup> to ensure a critical mass within a reasonable walking distance for local stores and services to thrive.<sup>62</sup>

A diverse mix of housing types and densities serving a broad cross-section of open-space, community meeting spaces and recreational facilities ensure a safe neighbourhood. Maximizing ground-oriented, low-rise forms of housing – townhouses – meets the threshold for compact neighbourhoods while providing amenities like ground-related entries, private or semi-private yards and opportunities to personalize the home and yard.<sup>63</sup>

Existing density at Shannon Park.



Proposed density at Shannon Park. 1:20,000



## ***Sporting Facilities***

Large sporting venues and facilities are often out of scale with the surrounding community, obstructing connections within the community itself and impeding accessibility. However, large sporting and recreational complexes have been successfully incorporated as part of rejuvenation strategies in many cities around the world, including Barcelona, Spain, and Sydney, Australia. These two cities offer distinct strategies for configuring an Olympic/Commonwealth Park.

As host of the 1992 Olympics, Barcelona used the Games as an opportunity for reconstruction following the end of the Franco regime. Rather than staging events in prime suburban locations, venues were constructed throughout the city centre, linked by rejuvenation projects in run-down industrial land. By deliberately dispersing sporting and housing complexes, the 'Barcelona Model'<sup>64</sup> transformed the entire city into an Olympic 'Mecca' with emphasis placed on improvements to transportation; the complexes were linked by a new outer-road system and updated metro.<sup>65</sup>

The athletes' village was conceived as an extension of the city's structure of roads and blocks, initially designed by Ildefons Cerda in 1859. Intended to be part of the city, the athletes' village has a legacy as housing for the people.<sup>66</sup> Between the new housing and the sea, the elimination of a highway re-connected the old port and marina to the rest of the city. As a raised coastal promenade, the new Park de Mar runs the entire length of the waterfront and protects the beach from coastal erosion. Other works included cleaning and enhancing the existing beaches, transforming the old port into a leisure and recreational area, removing an outfall sewer and improving drainage to prevent flooding.<sup>67</sup>

*The Growth and Development of Barcelona*  
 Stage 8: 1992 Olympic Games, 1992  
 (cited February 21, 2007),  
 available from [geographyfieldwork.com](http://geographyfieldwork.com)

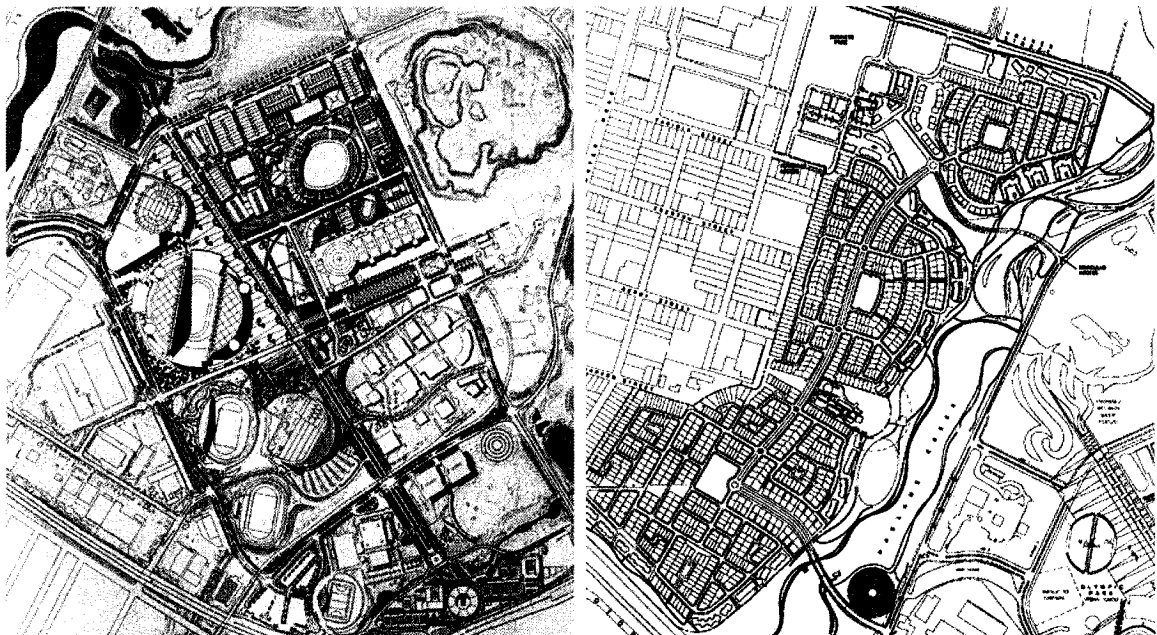


Sydney, Australia, host of the 2000 Olympic Games, offers a different strategy. Partly responding to the Centennial Olympic Park bombing during the 1996 Atlanta Olympics, the 2000 Olympic Games concentrated sports venues, support buildings and the athletes' village on a self-contained sports park and precinct at Homebush Bay, a satellite suburb of Sydney.<sup>68</sup> Homebush Bay, at various times had housed Sydney's racecourse, a salt-works, the British Commonwealth's largest abattoir, the state brickworks and a naval munitions store.

Heralded as the 'Green Games', the organizers focused attention on environmental consciousness, reflected in their choice of site, use of resources and design of facilities. The master plan for Homebush Bay established an urban core surrounded by Millennium Parklands. Within the urban core, a new Olympic boulevard housed two types of buildings: object and street edged buildings. Following an analogy of the city, the object buildings were the large sporting facilities, while other buildings were designed to reinforce the street edge. In response to concerns about large volumes of people, landscape architect George Hargreaves coordinated three layers – red (pedestrian), green (parks) and blue (water) – to ensure a balance between the large facilities and the public domain.<sup>69</sup>

Left: Sydney master plan. From Bingham-Hall, *Olympic Architecture: Building Sydney 2000*, 43.

Right: Sydney Olympic Village. From Bingham-Hall, *Olympic Architecture: Building Sydney 2000*, 212.



The athletes' village, accommodating 15,300 participants, comprised a mixed development of apartments and town houses arranged into three neighbourhoods designed to conform to ecologically sustainable guidelines. Provision of a school and commercial zone projected forward to the village's post-games future as a residential suburb of Sydney.<sup>70</sup>

The strategies employed by Barcelona and Sydney differ in the way they chose to negotiate the integration of Olympic facilities into the existing fabric of the city: The 'Olympic Mecca' of Barcelona, where venues, facilities and accommodation are dispersed throughout the city, placed importance on transportation infrastructure; and Sydney's 'Olympic Theme Park'<sup>71</sup>, where venues, facilities, and accommodation are all concentrated within a single district.

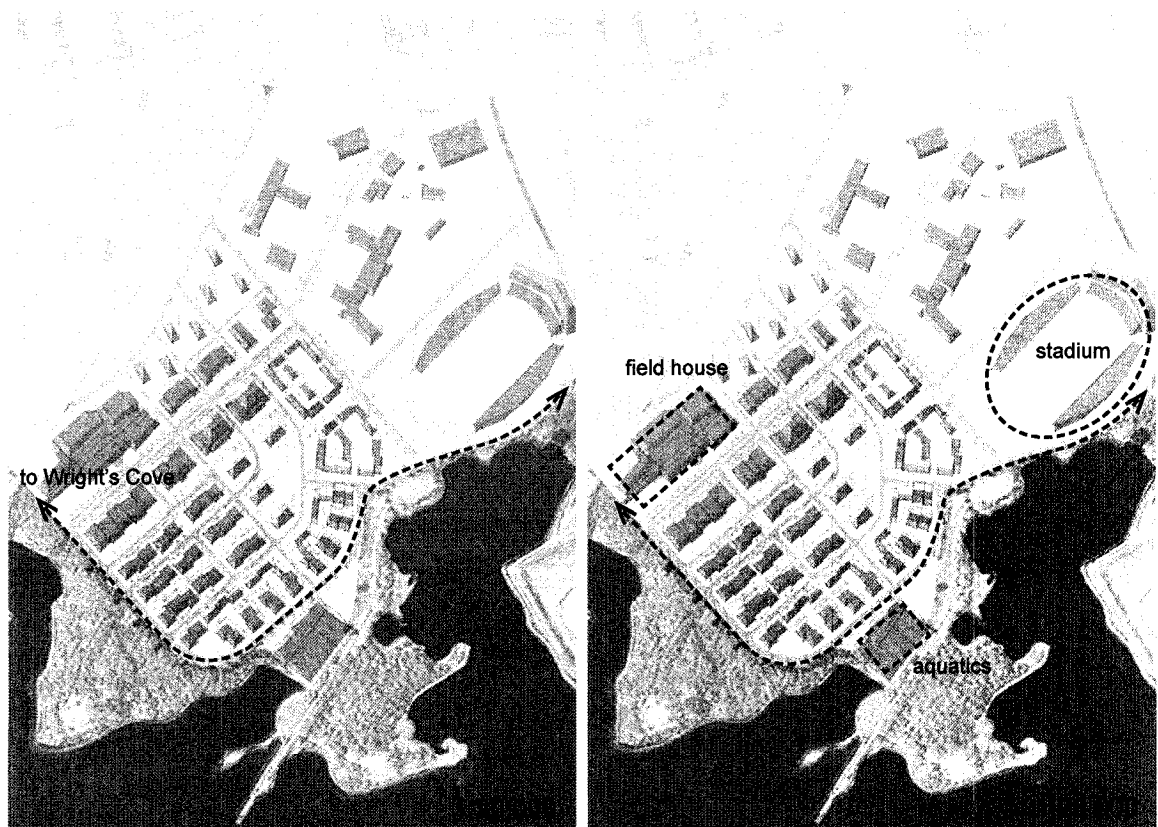
The design for Shannon Park proposed in this thesis would borrow from both models. Responding to the isolation of Shannon Park, and working within the broad parameters laid out by the Halifax Commonwealth Games Committee, the majority of venues, facilities and accommodation would be housed within the site, as was the case in Sydney, and connections between the site and adjacent communities would be configured where possible. Where the strategy for the site would echo that of Barcelona is in the Halifax Waterfront Development and Harbour Plan's proposal to develop Shannon Park as an area for multi-unit residential development as part of a coastal trail connecting BIO to Wright's Cove. At Shannon Park, the coastal trail would expand to form a coastal promenade similar to Barcelona's Park de Mar. The coastal promenade would follow the entire length of Shannon Park's natural embankment stretching from a multi-modal transport hub at the eastern edge to the community boulevard in the west.

The coastal promenade becomes a central element of the strategy for organizing the sporting program. Rather than group all the facilities within a single zone, the strategy borrows from the Barcelona 'Mecca Model' by deliberately dispersing the facilities – stadium, aquatic centre and field house - at 800-metre, or roughly 5-minute walking intervals along the promenade. Echoing the Olympic Boulevard at Homebush Bay, the coastal promenade constitutes an urban edge surrounded by parkland, with the athletes' village/neighbourhood contained within. Collectively, the large sporting facilities act as local and distant landmarks without impeding accessibility or obstructing connections within the site itself.

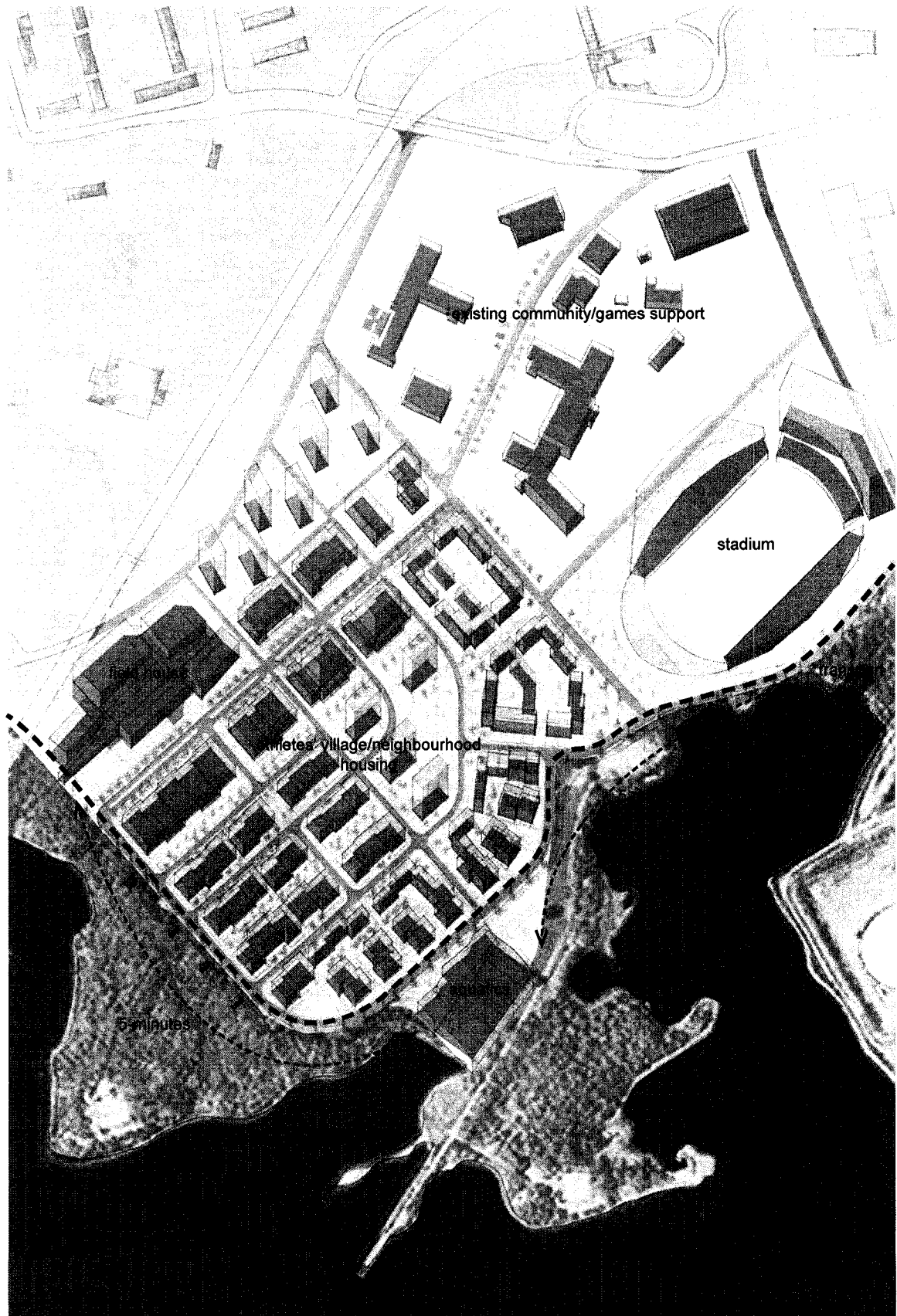
Placing the sporting facilities with geographic prominence and at major nodes accessible from the coastal boulevard represents a significant gesture in terms of integrating those facilities into the neighbourhood. Individually, the sporting facilities must negotiate a civic scale with a design that serves the local community in order to be adaptable for both temporary external usage (the Games) and a permanent internal usage as a community.

Left: Location of coastal trail navigating the Bedford Basin and connected BIO to Wright's Cove.

Right: Expanded coastal promenade with exploded athletic facilities.





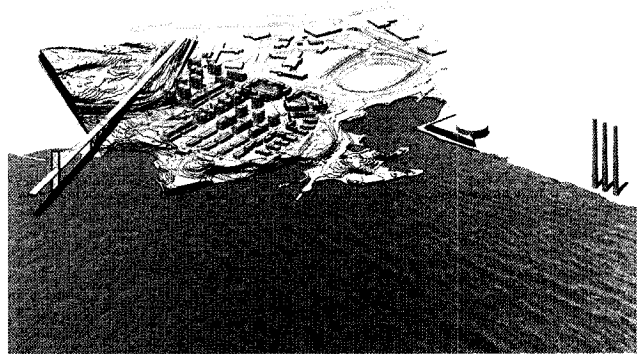


Suburban character with various areas and uses.

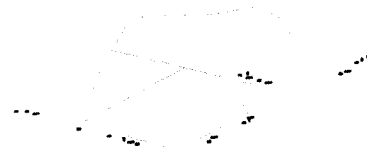
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## Design Proposition



Temporary Games Support



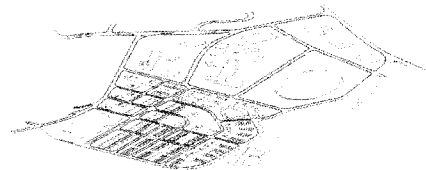
Permanent Games Facilities



Permanent Community Buildings



Street and Path Network



Existing Buildings



Site Adjacencies

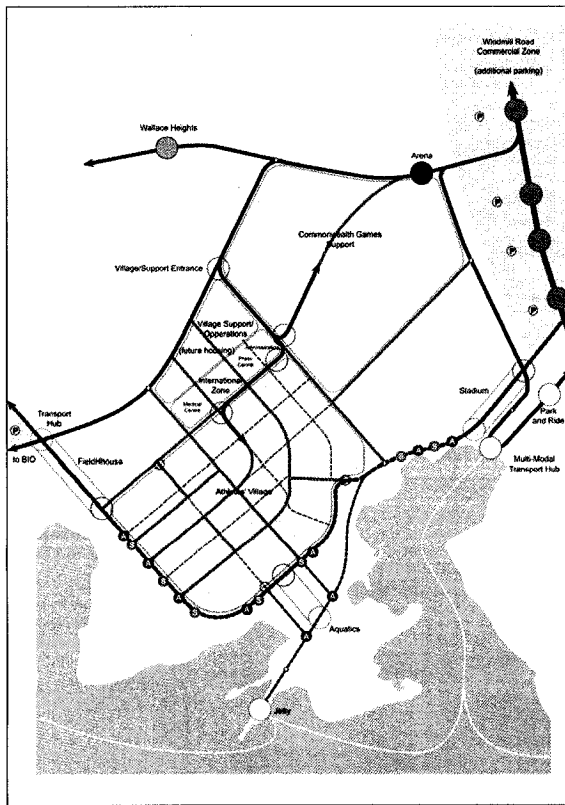


## Staging the Games

In its adaptation for use as the site of the Commonwealth Games, Shannon Park will be adapted into three core zones: The commercial/cultural portion of the site will provide Commonwealth Games venues and support, the proposed community boulevard will house a restricted 'International Zone', featuring services and amenities for athletes and a media centre, and an expanded residential portion will form the athletes' village.

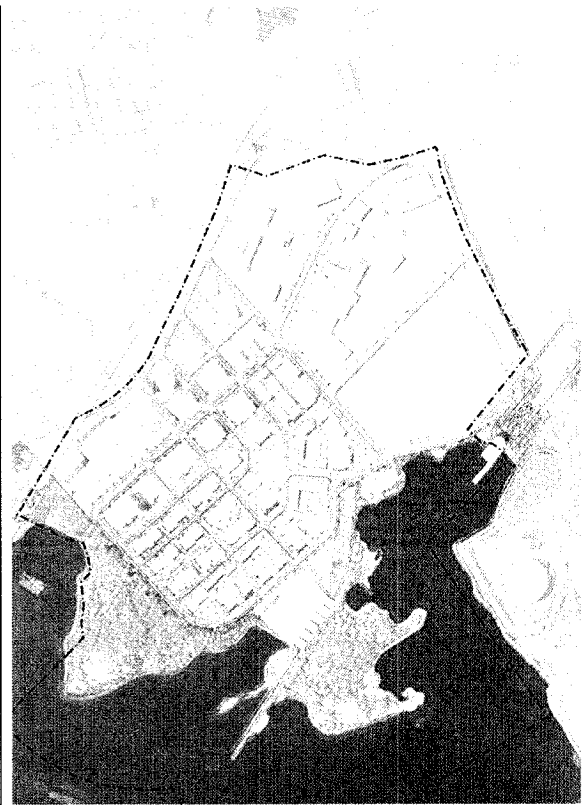
Restricting areas of the site is essential for security, emergency and utility purposes. Restricted areas, predominantly those used exclusively by athletes and officials, are surrounded by a specifically designed fence, broken by patrolled access points. Athletes, staff and officials have a separate vehicular access point than spectators, located off Baffin Boulevard. For security purposes, the athletes' village is only accessible through the International Zone. Games support, including surveillance, security and operational headquarters, lies adjacent to the athletes' village and fronts a major arterial road (Baffin Boulevard), providing free egress in the event of an emergency.

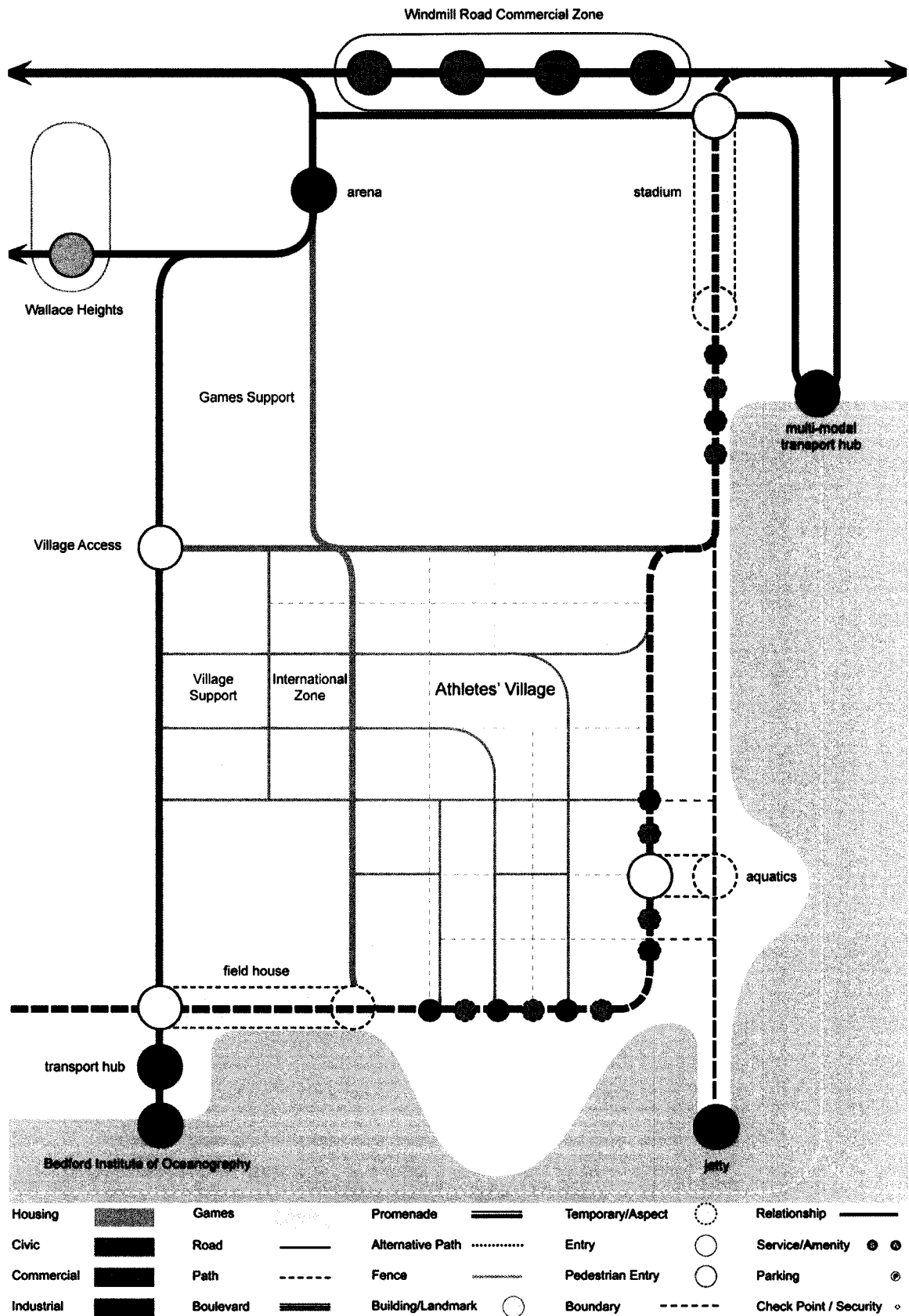
Games Diagram.



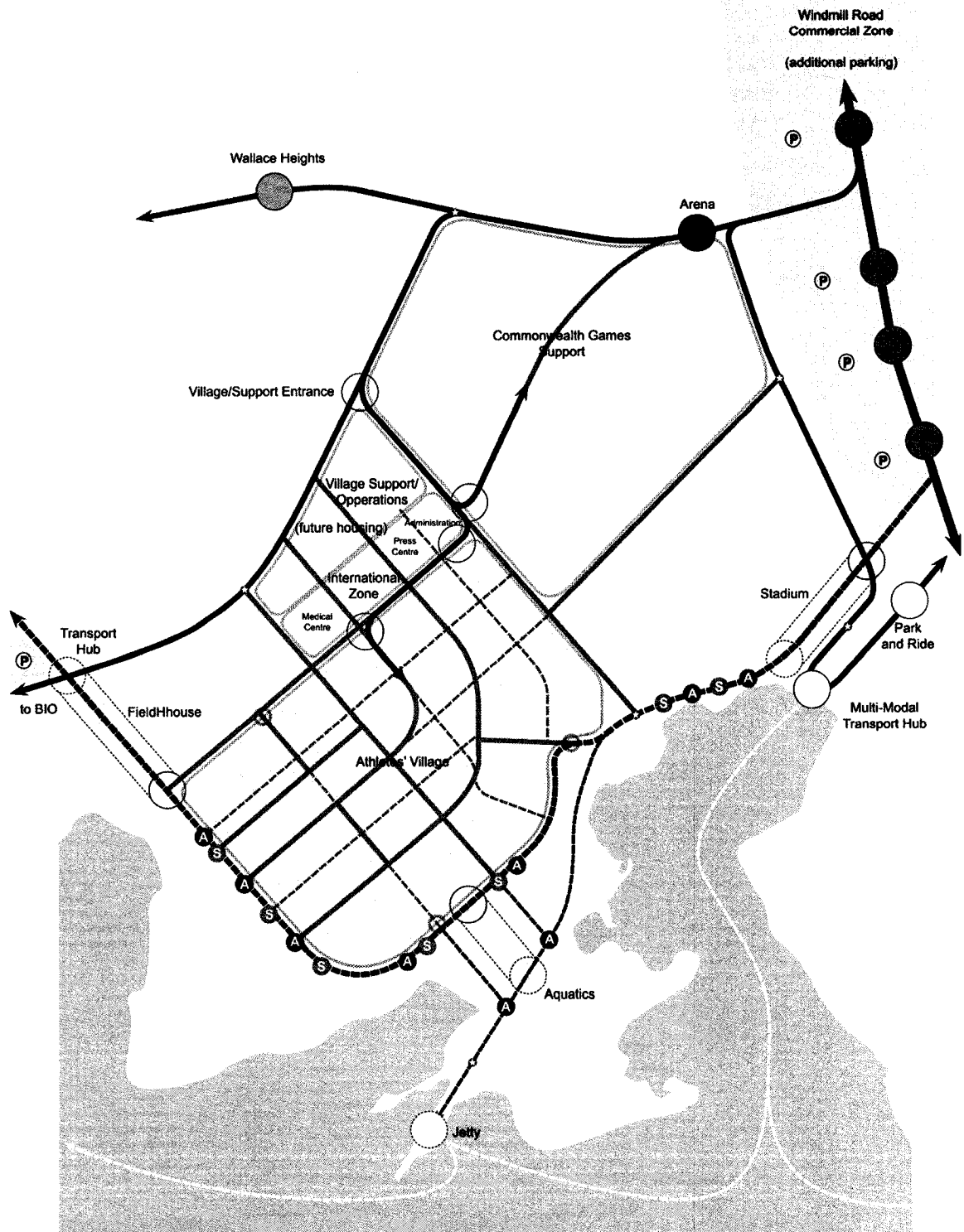
Games Plan.

1:20,000



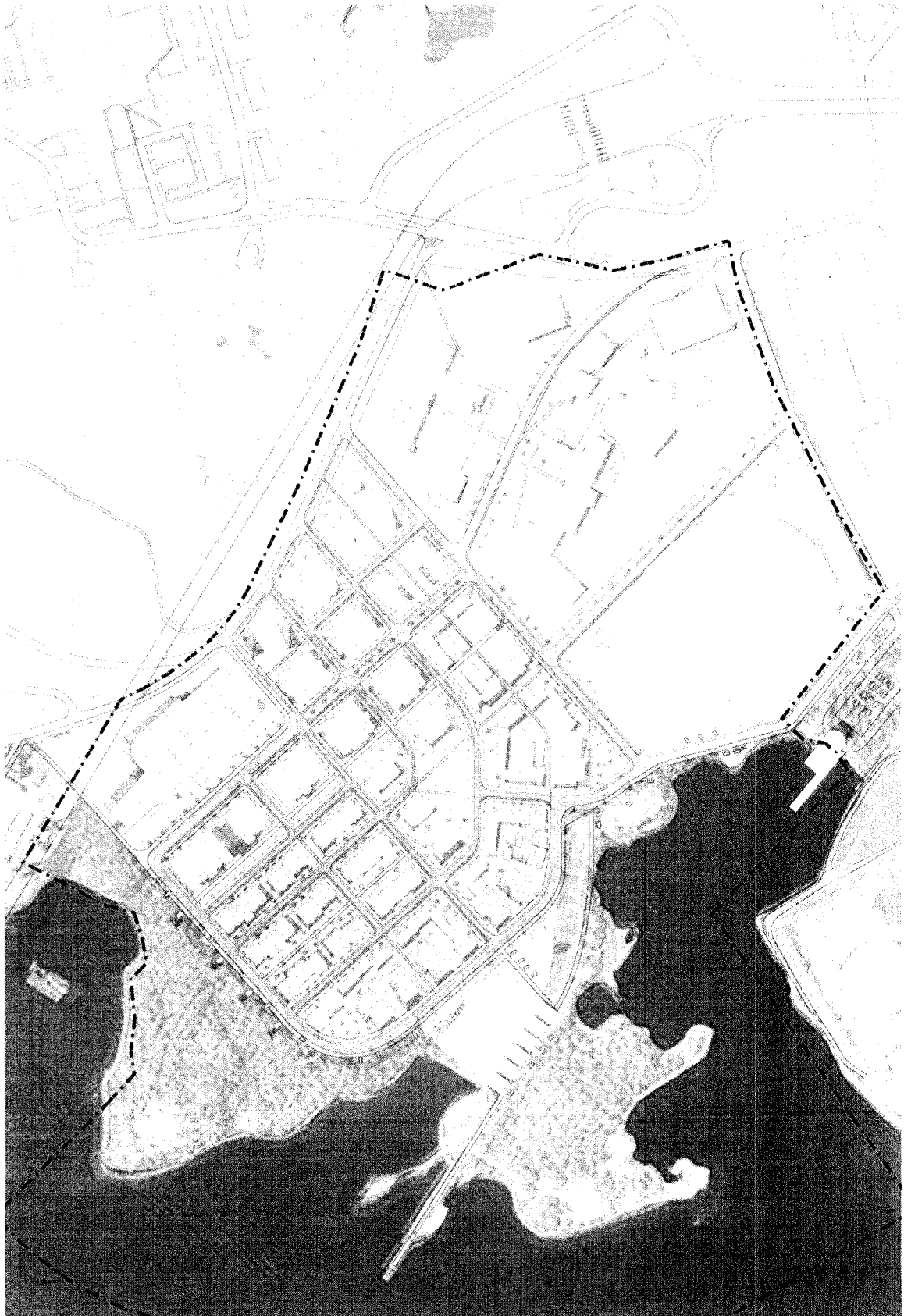


Study Diagram of Shannon Park configured during the Games.



Housing		Games		Promenade		Temporary/Aspect		Relationship	
Civic		Road		Alternative Path		Entry		Service/Amenity	
Commercial		Path		Fence		Pedestrian Entry		Parking	
Industrial		Boulevard		Building/Landmark		Boundary		Check Point / Security	

Diagram of Shannon Park configured during the Games.



Shannon Park Games Plan

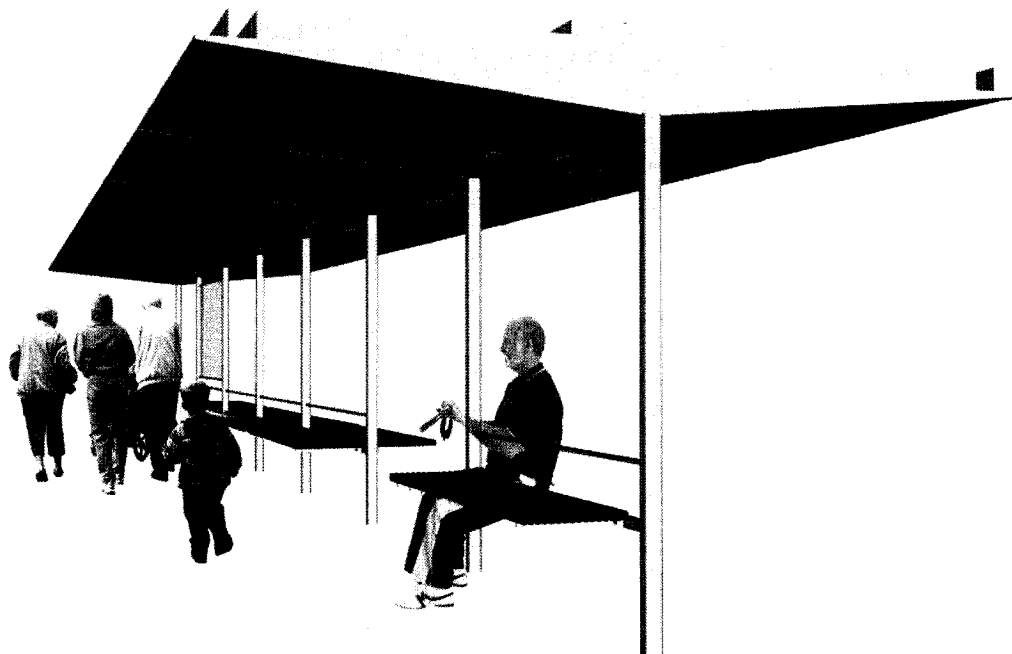
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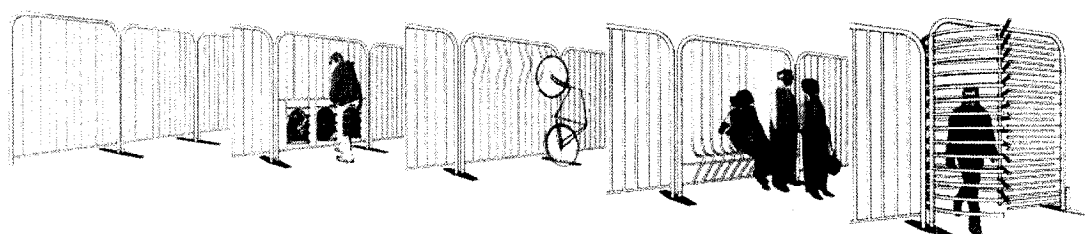
Spectators and visitors to the site arrive from the east or west, and movement throughout the site is channelled along the coastal promenade, which provides access to all of the sporting facilities, the waterfront and parkland, and the multi-modal transport hub to the far east. The far west of the coastal promenade houses a secondary transport hub, serviced by Baffin Boulevard, and limited only to public transportation and emergency vehicles throughout the duration of the Games.

The areas used by spectators and the restricted zones are separated by a modular steel fence, which permits visibility to either side, and is punctuated by amenities, including waste disposal units, benches, bike-racks and turnstile access points. The inclusion of amenities in the fence structure encourages use from either side, and the transparency of the fences allows for exchange between spectators and athletes, whilst limiting mobility and physical contact.

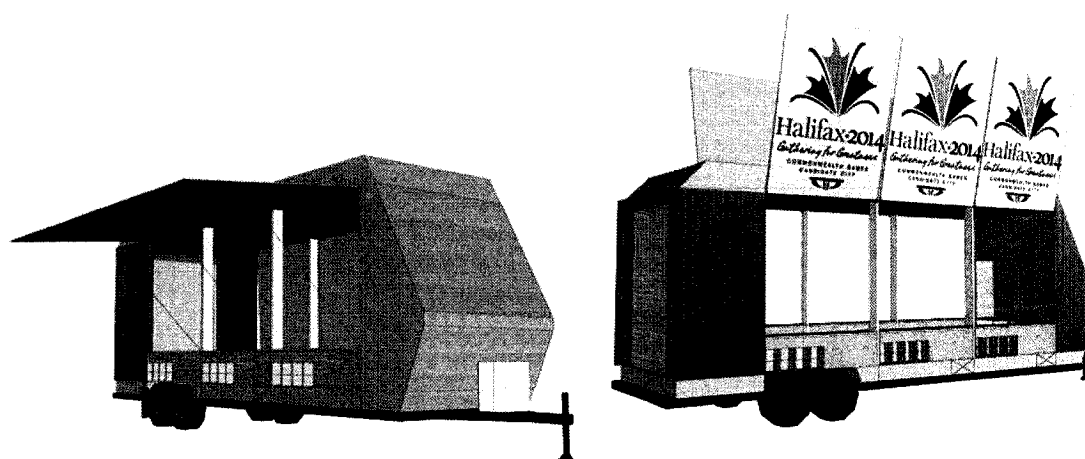
Similarly, temporary mobile structures house more considerable amenities, such as medical services, lavatories and drinking fountains, shops, cafes and information booths.

Permanent transport hub at Western Gate.

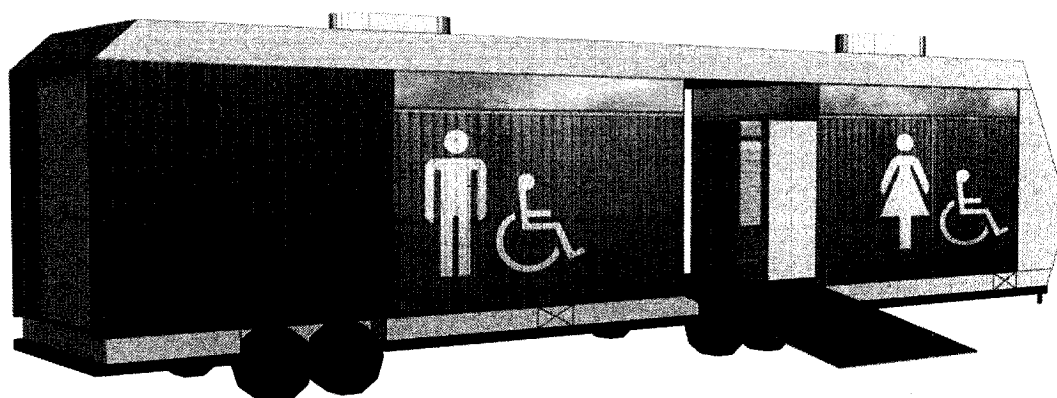




Modular fence with amenities.



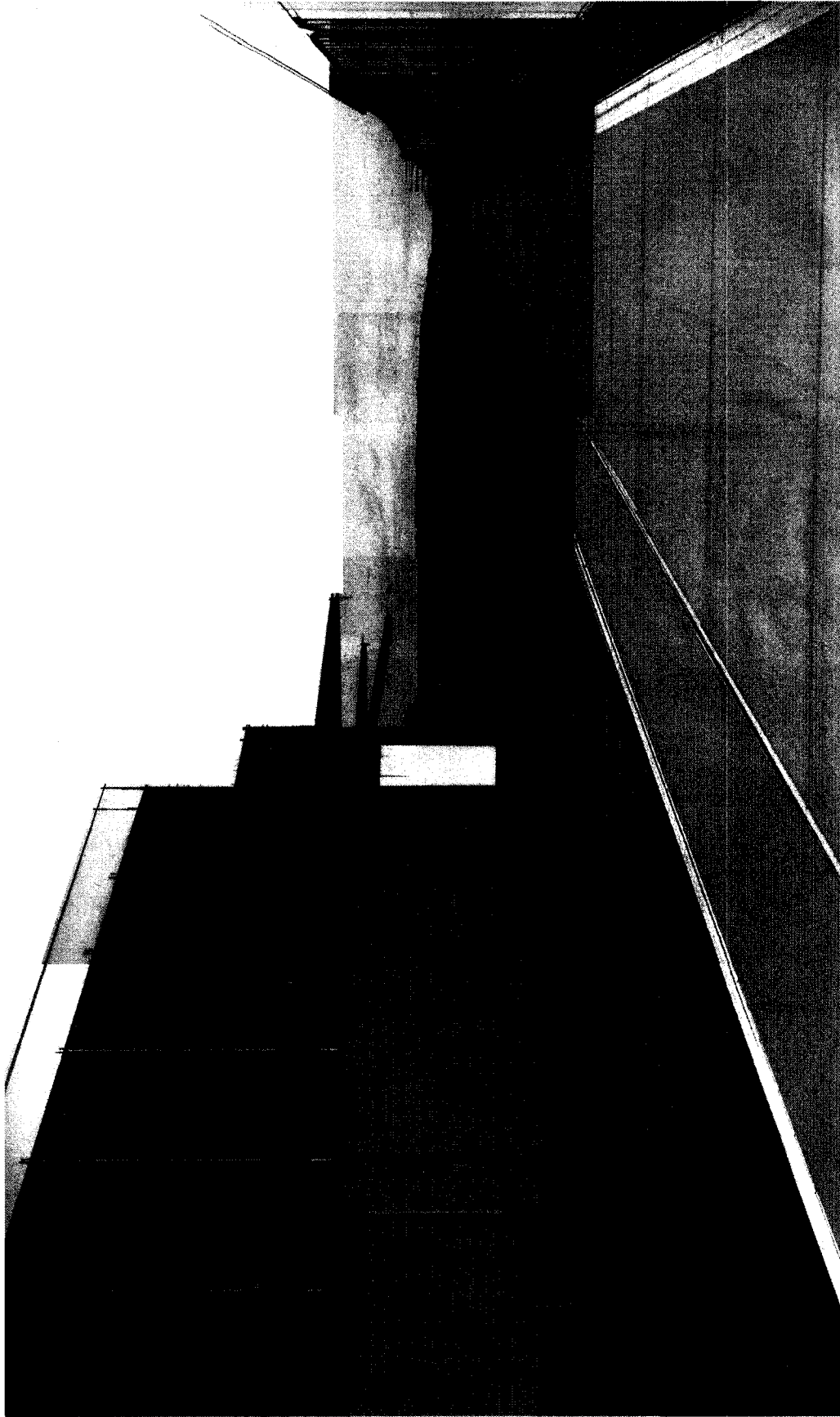
Mobile amenity facilities.



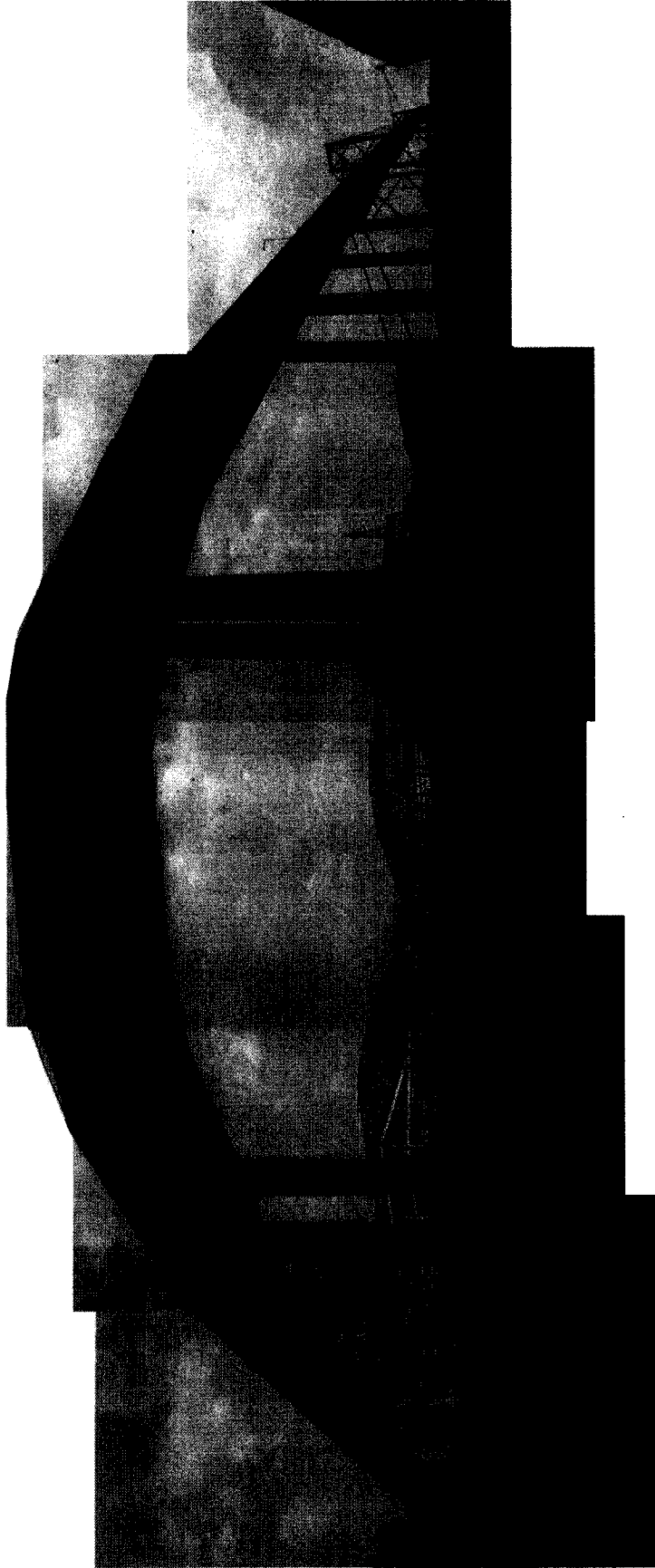


View of Stadium from Eastern transport hub with mobile amenity facilities in the foreground.





View of Aquatic Centre entrance with modular fence separating public and restricted area.

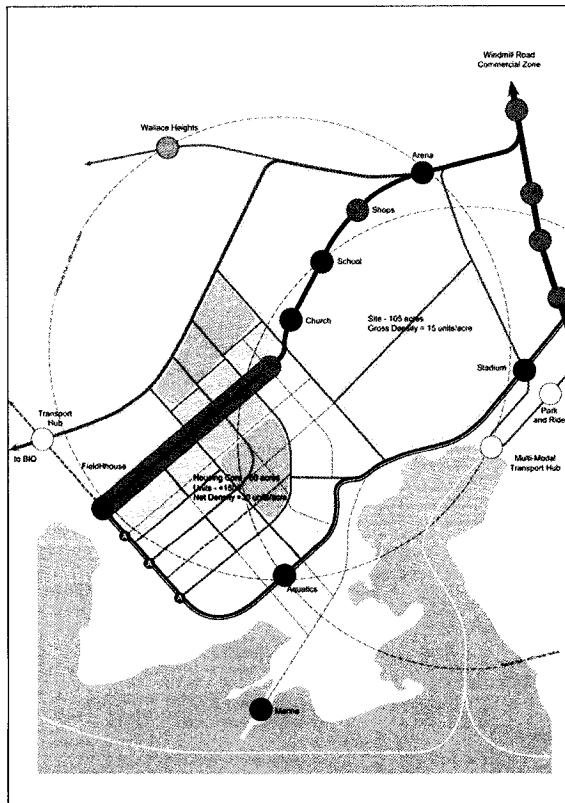


View of Field House from coastal promenade with MacKay Bridge in foreground.

## Games Legacy

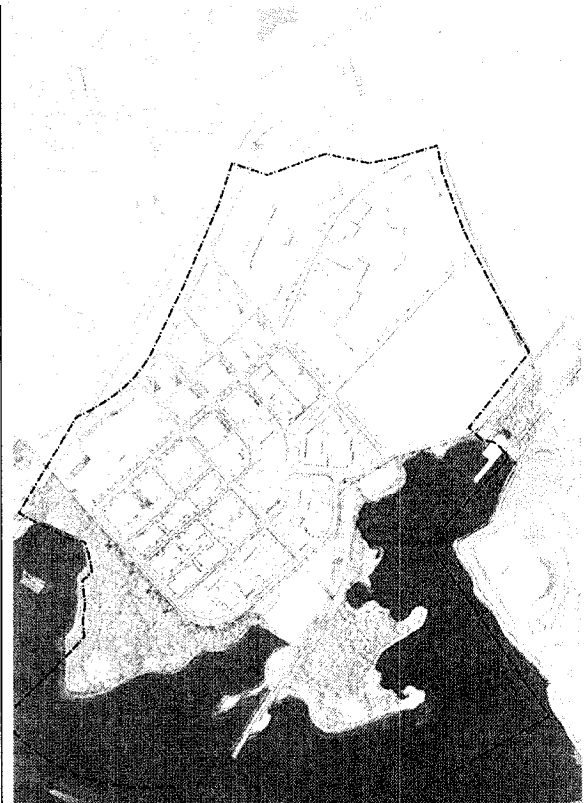
Elements fulfilling the unique requirements of the Commonwealth Games, such as modular fencing and mobile amenity facilities, are impermanent, and do not affect the long-term viability of the site as a community. Similarly, the division of the site into three core zones fits with the scheme of the neighbourhood without altering or marking the site in any permanent way. Conversely, those elements useful to the longevity of the remaining neighbourhood - including the transport hubs - are retained for the future and continued use of residents and visitors alike. By using temporal structures, and utilizing elements of the urban design that make the site successful as a neighbourhood, the proposed design strategy further negotiates for the site means of facilitating both temporary external usage and a permanent internal usage as a community.

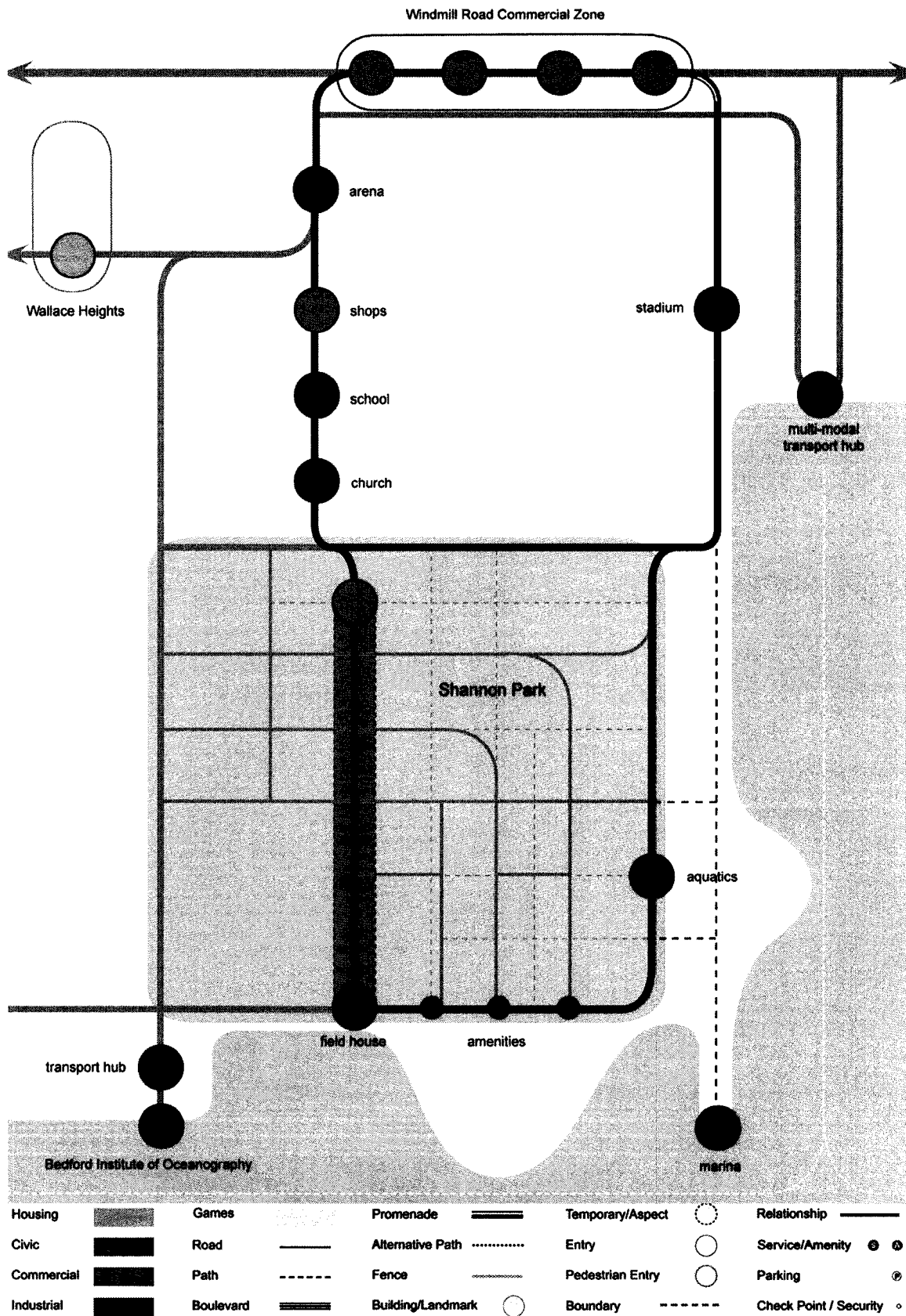
Games Diagram.



Games Plan.

1:20,000





Study Diagram of Shannon Park configured for a post-Games community.

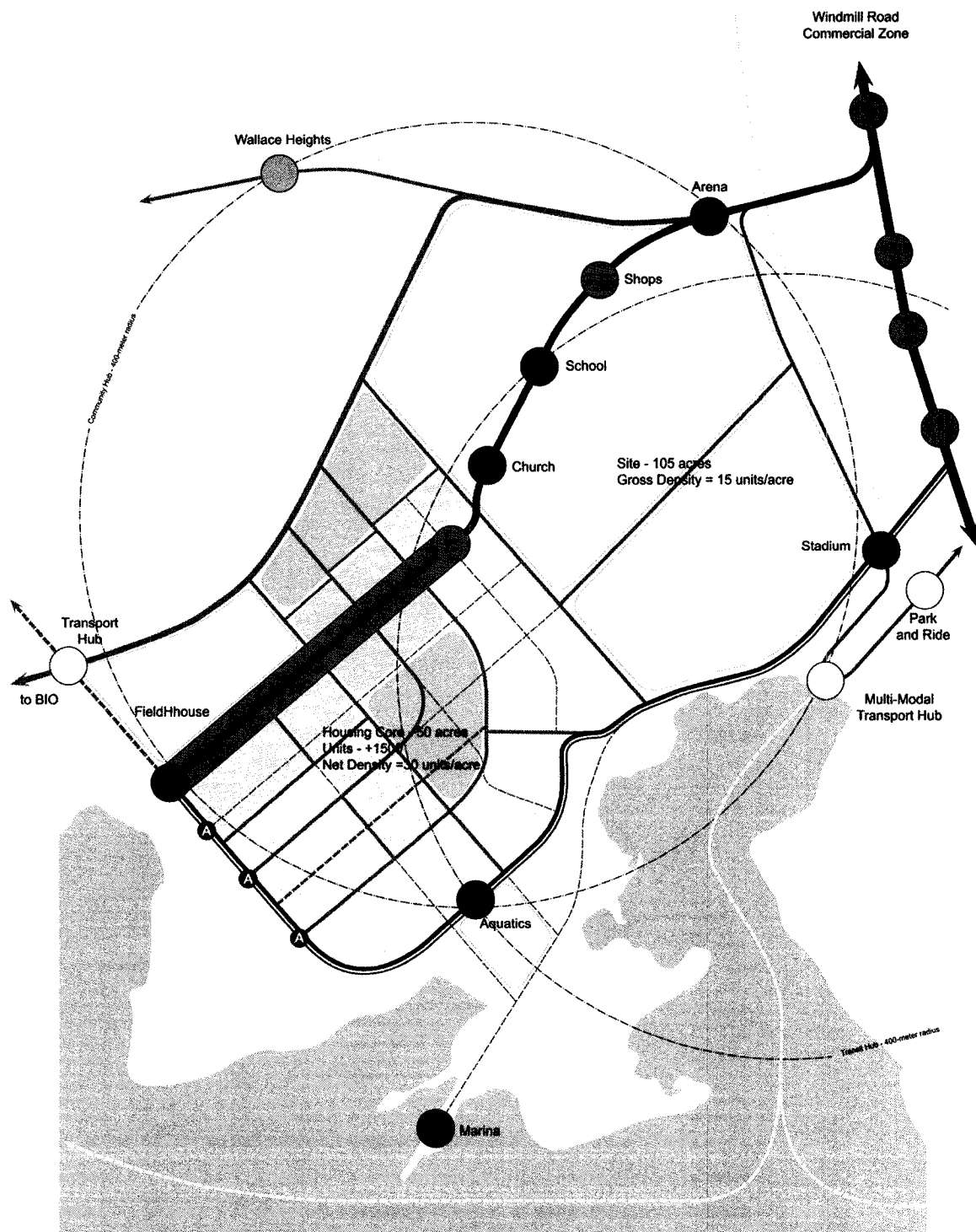
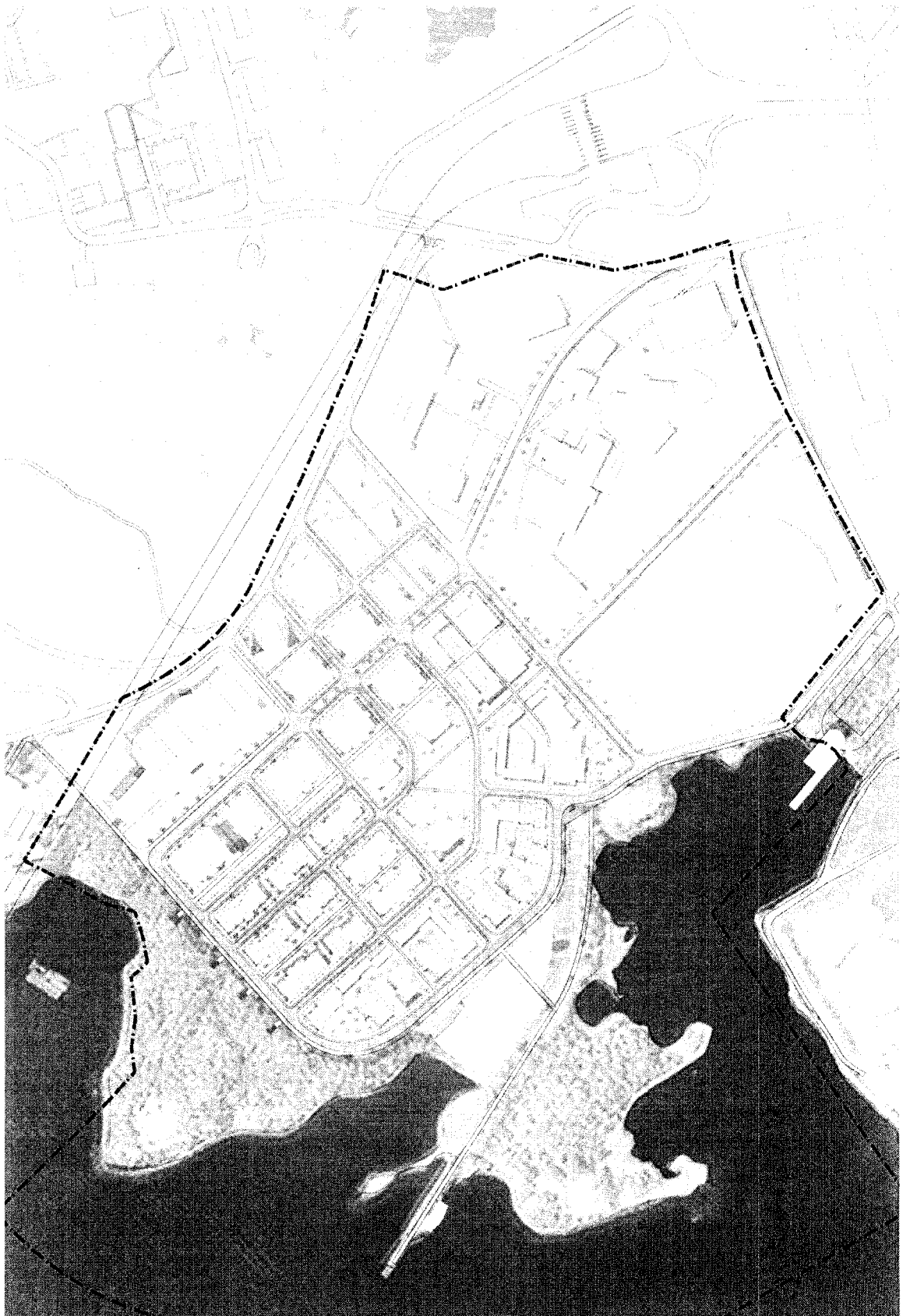
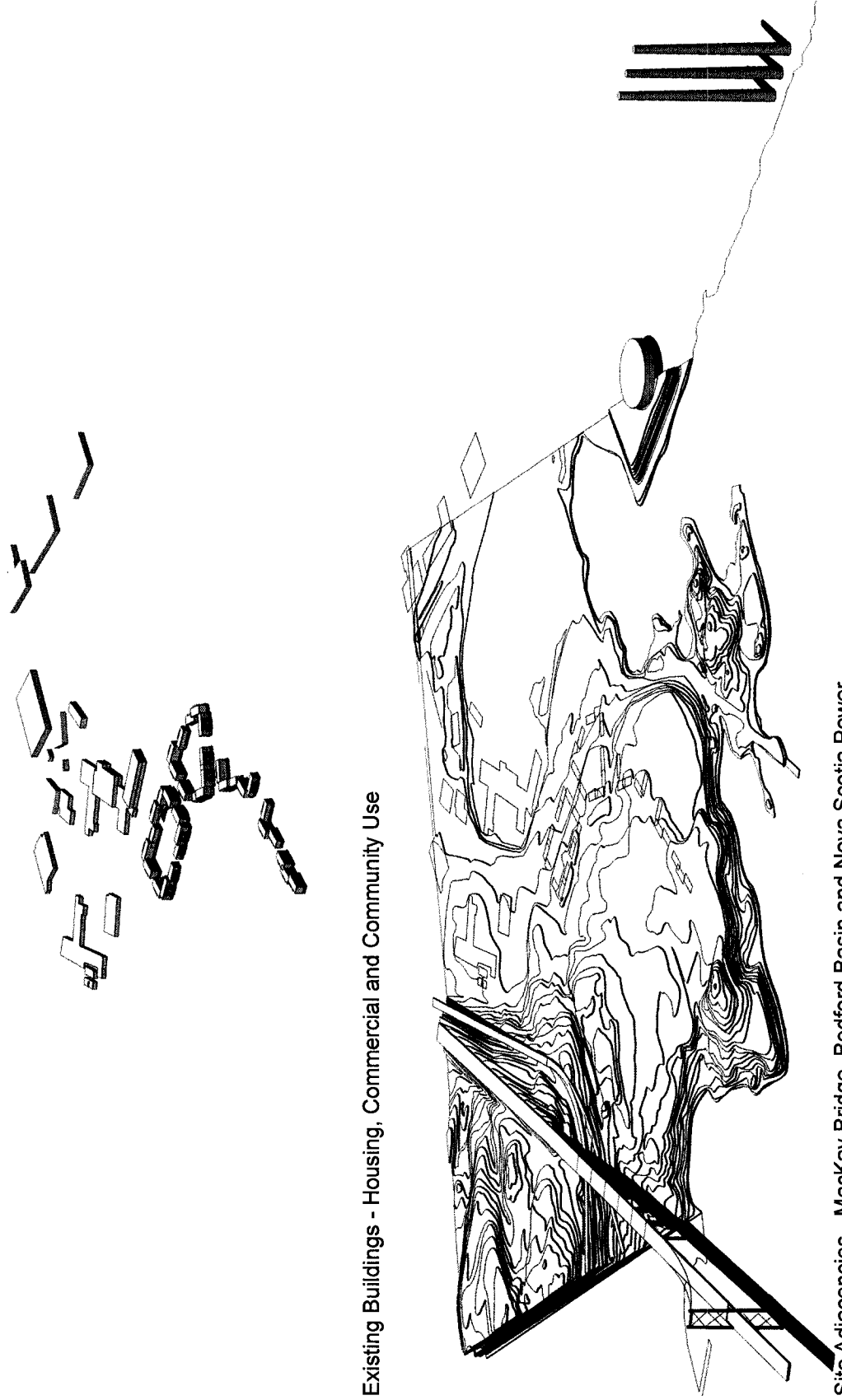


Diagram of Shannon Park configured following the Games.



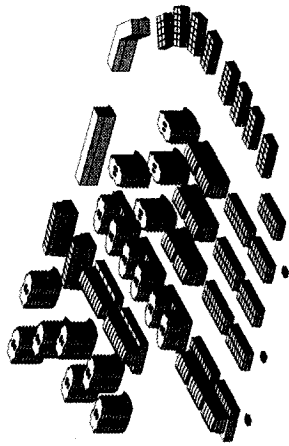
Shannon Park Community Plan - Temporary Games Support Removed.

1:5000

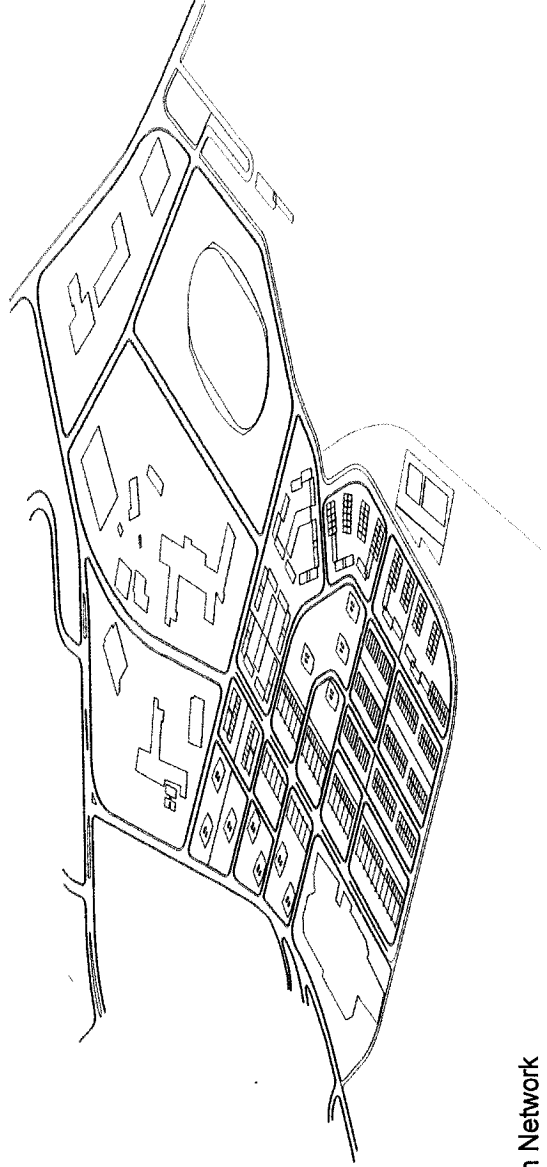


Existing Buildings - Housing, Commercial and Community Use

Site Adjacencies - Mackay Bridge, Bedford Basin and Nova Scotia Power

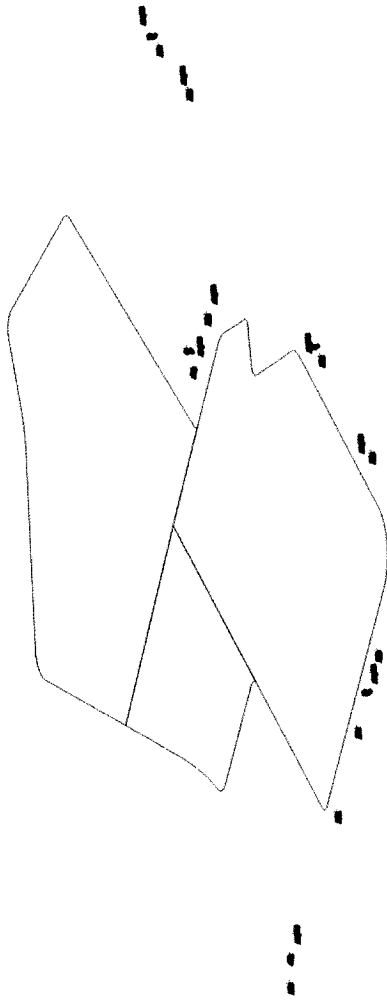


Permanent Community Buildings - Housing, Commercial and Transport Hubs



Street and Path Network





Temporary Games Support - Fences and Mobile Service Facilities



Permanent Games Facilities - Stadium, Aquatics and Field House with Temporary Parts

Proposition for Shannon Park



## DESIGN ELEMENTS

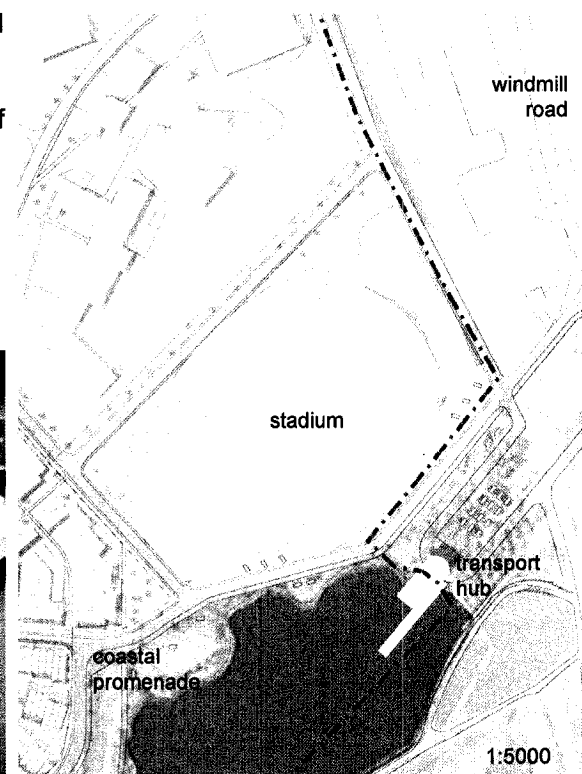
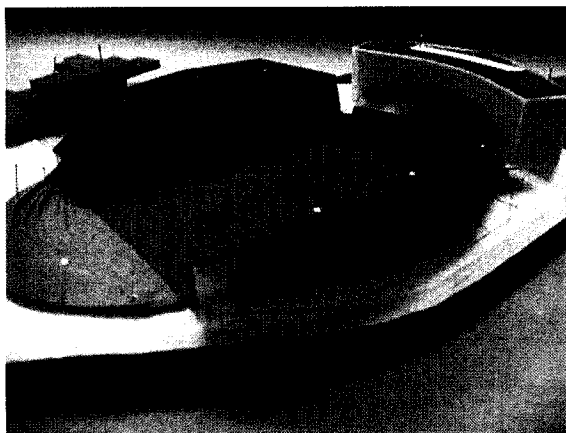
### STADIUM

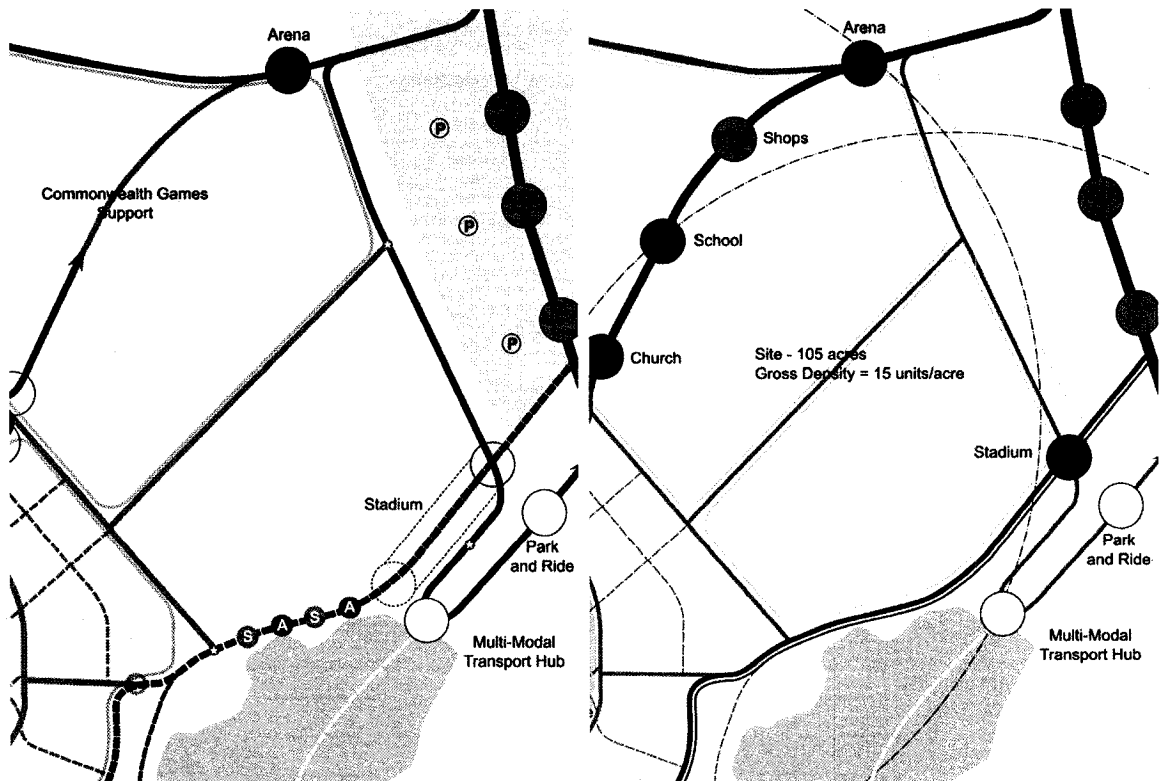
The 25, 000 seat stadium, the largest of the sporting facilities, is located near Windmill Road and the multi-modal transport hub (for accessibility and parking requirements). Located on a site which has traditionally been used as a playing field, the stadium provides a transition between the Windmill Corridor and the neighbourhood at Shannon Park.

Two strategies are employed to reduce the scale of the stadium and to lessen the impact on the neighbourhood. First, the stadium floor and subsequent spaces are depressed one level beneath grade to decrease the street elevation of the stadium. Second, at street level the stadium is lined with a layer of commercial use which would act as support services during the Games, but also serve the local community on a regular basis. In addition, a hotel is proposed forming part of the north stadium wall. While complementing existing hotels located along Windmill Road, which serve the expanding commercial park at Burnside, the stadium hotel would help offset the running costs of the stadium and activate that portion of the site which has no residents.

Right: Location of stadium near Windmill Road and the multi-modal transport hub.

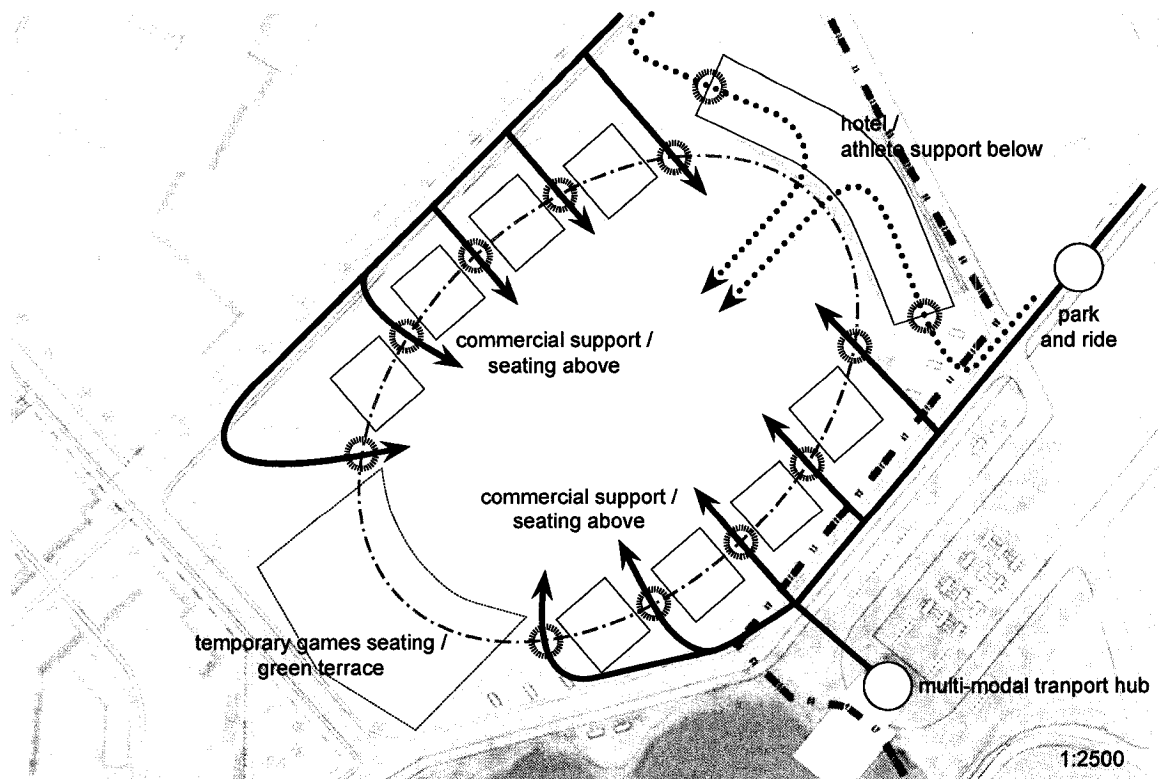
Below: Massing model illustrating hotel, lining of commercial, and terraced-seating.





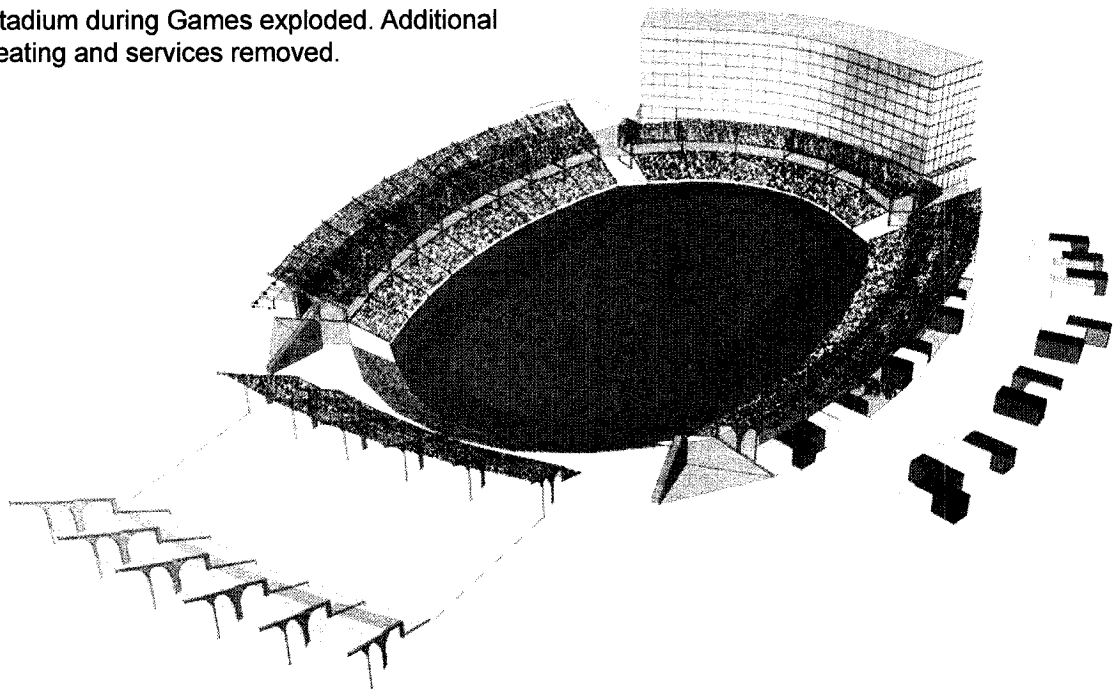
Stadium location within Commonwealth Park Diagram: (Left) During the Games, (Right) Following the Games.

Stadium diagram showing massing, primary and secondary entrances and circulation.



During the Games, temporary seating forming the southern wall of the stadium would accommodate an additional 10,000 spectators, with an overall capacity of 35,000 seats. Following the Games, the temporary seating would be removed, reducing the overall capacity to approximately 25,000 spectators. The southern edge would be reconfigured as a terraced park or outdoor amphitheatre, becoming a feature of the coastal promenade and serving the local community as an outdoor gathering space.

Stadium during Games exploded. Additional seating and services removed.



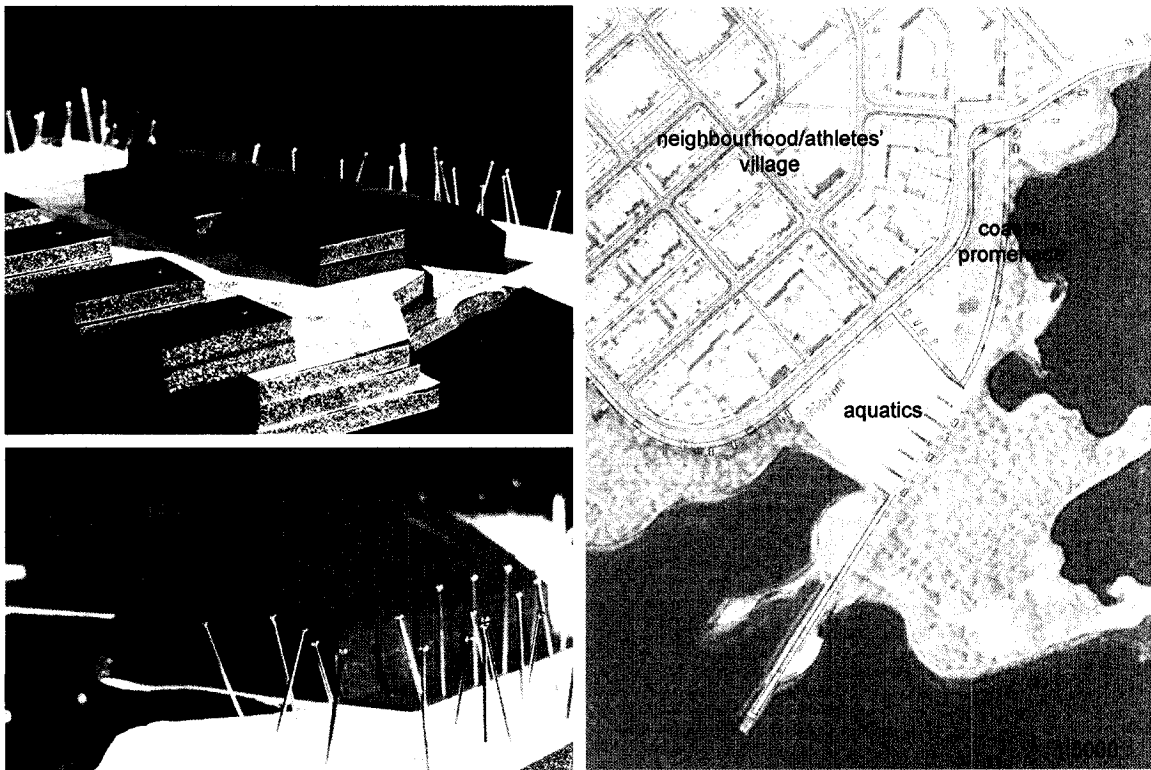
## AQUATIC CENTRE

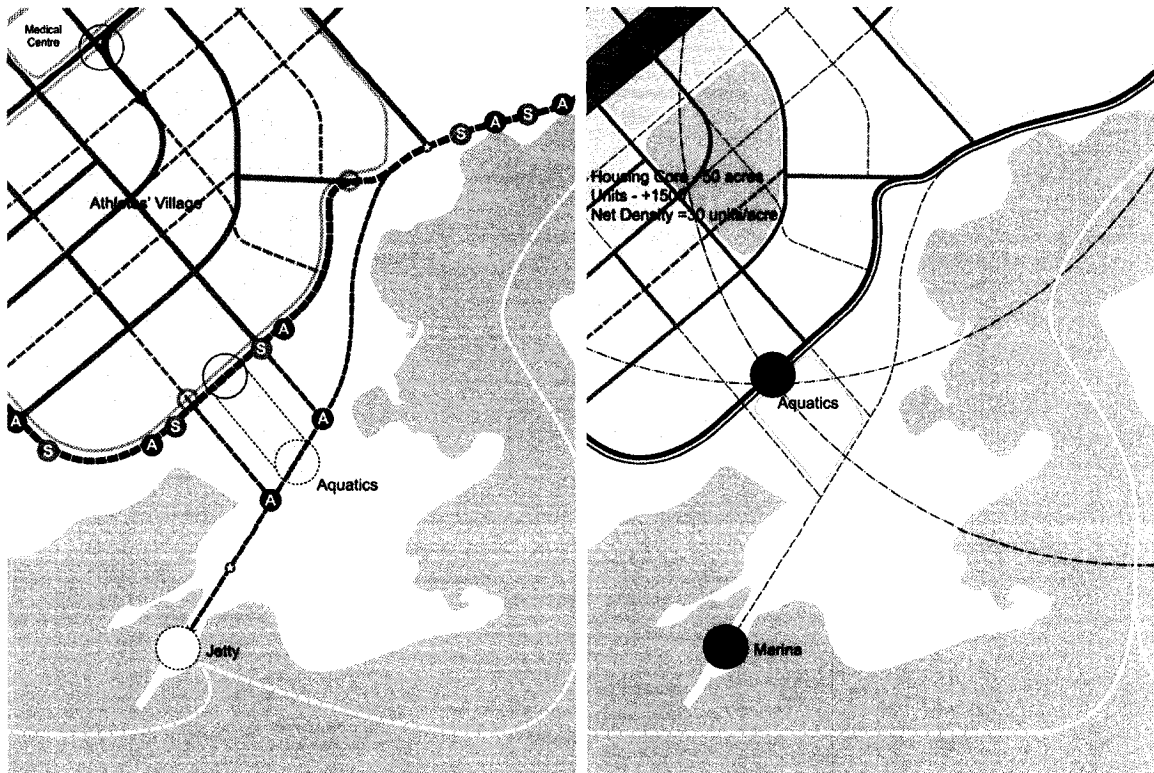
The aquatic centre is located midway between the stadium and field house along the coastal boulevard. Because the aquatic centre is smaller in scale, and most in demand for community use, it is deliberately nestled deeper into the neighbourhood to better facilitate its use as a community amenity. It is constructed into the embankment to accommodate tiered seating, additionally reducing the scale of the building from within the community, while maintaining visual prominence from the Bedford Basin. The coastal promenade serves as the entrance to the facility, however, the swimming area is located several levels below in a park setting with visual connections to the sea.

During the Games, the capacity of the aquatic centre would stand at 3,000, with support facilities located beneath the temporary eastern stand. After the Games, the temporary seating in the eastern stand would be removed, reducing the capacity to 2,000.

Left: Massing models illustrating how the aquatic centre is constructed into the embankment for seating and to reduce the neighbourhood scale.

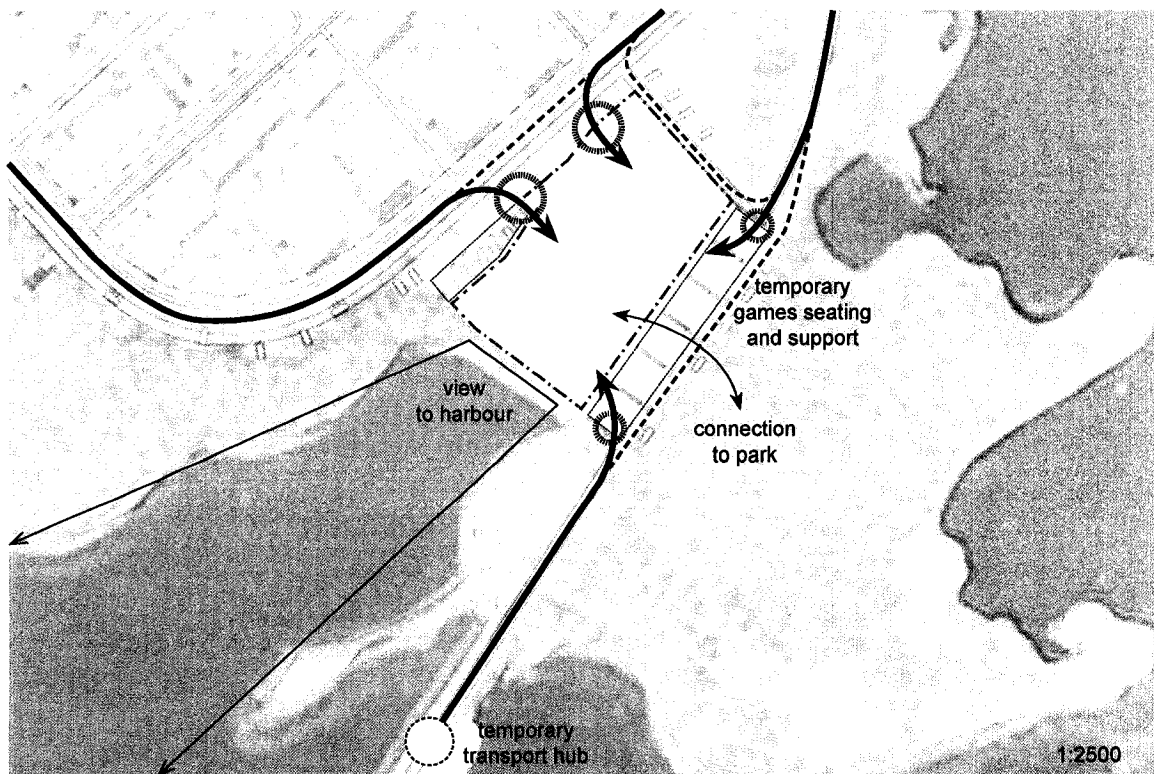
Right: Location of aquatics centre nestled into the neighbourhood.

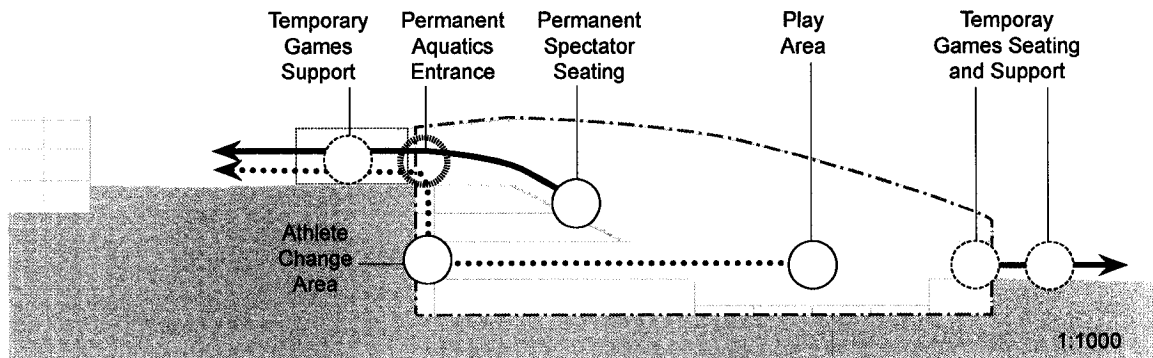




Aquatics location within Commonwealth Park Diagram: (Left) During the Games, (Right) Following the Games.

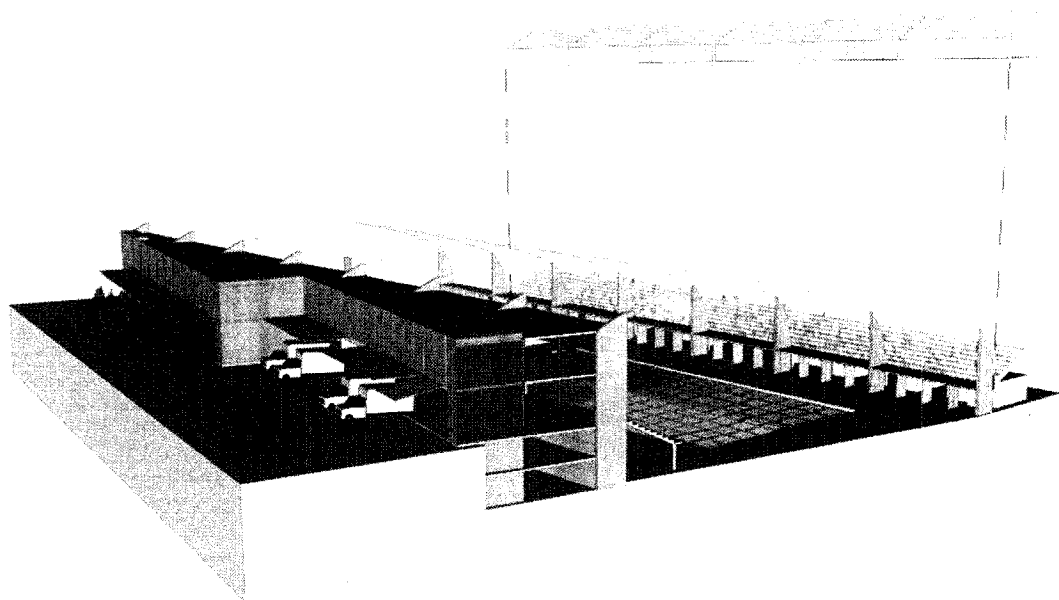
Aquatics diagram showing massing, primary and secondary entrances, views and circulation.





Aquatics Sectional diagram showing massing, entrances and circulation.

Aquatic centre during Games exploded. Additional seating and services removed.



Taken together, the stadium and aquatic centre offer two strategies for how large sporting facilities may be integrated into a neighbourhood programmatically: While the stadium attempts to reduce its neighbourhood impact by creating a crust of varied program on its street edge, the aquatic centre aims to reduce its scale by integrating into the landscape. Both approaches are utilized in a third facility: the field house.

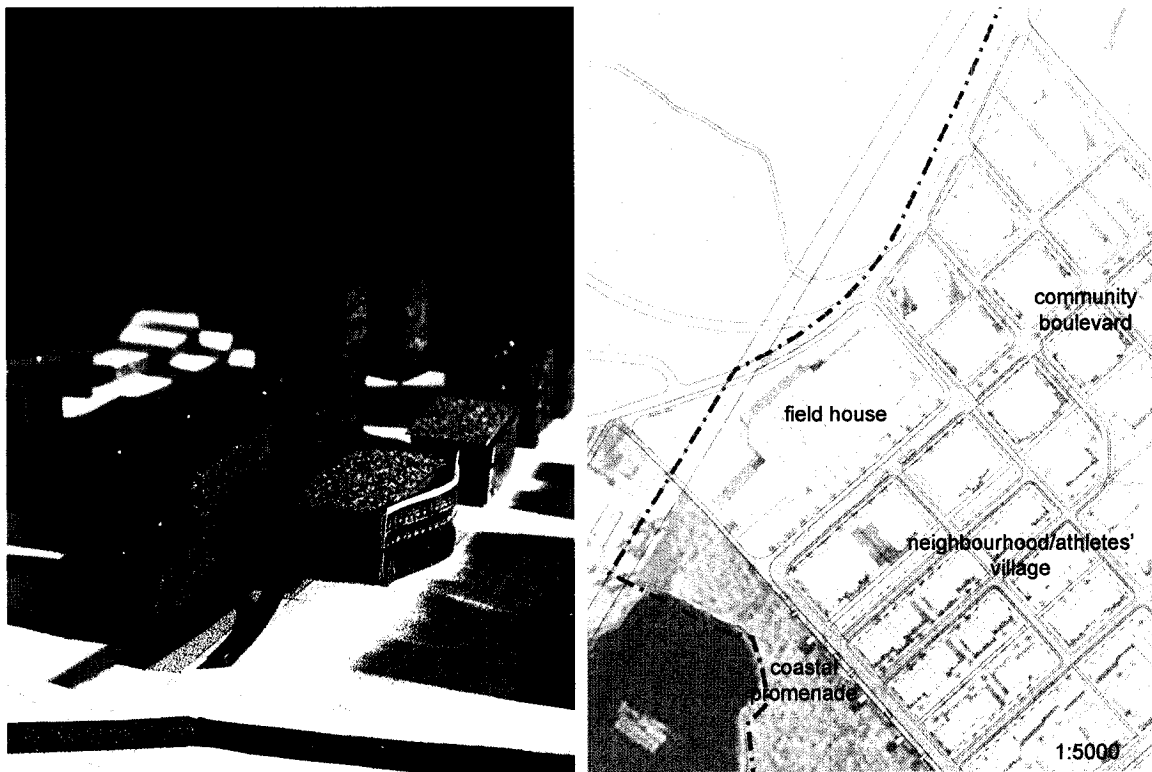


## FIELD HOUSE

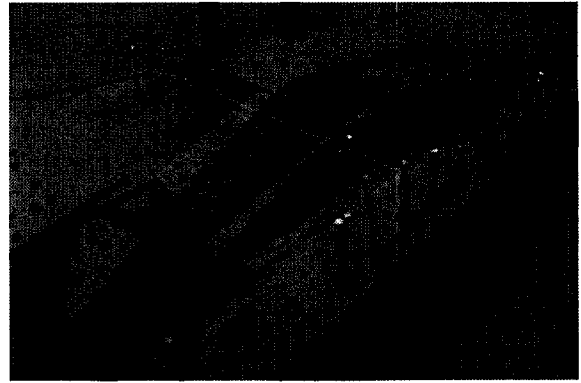
Located at the junction of the community boulevard and the coastal promenade, the field house has access to Princess Margaret Boulevard and is serviced by parking at the Bedford Institute of Oceanography (BIO). The field house borrows from both the stadium, by lining the eastern edge fronting the community boulevard with commercial and community-related program, and from the aquatic centre, by integrating into the landscape.

Left: Massing model illustrating how the field house integrates into the landscape.

Right: Location of field house on the coastal promenade at the community boulevard.



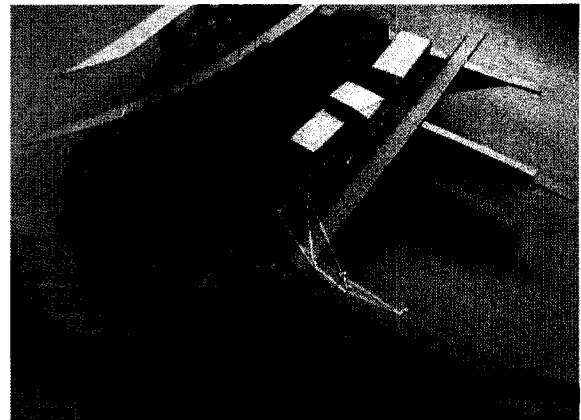
Process model illustrating initial concept of community boulevard and green roof. For this model, the coastal promenade forms part of a green-roof covering the field house. Internal gardens connect the boulevard to Baffin Boulevard on the opposite side.



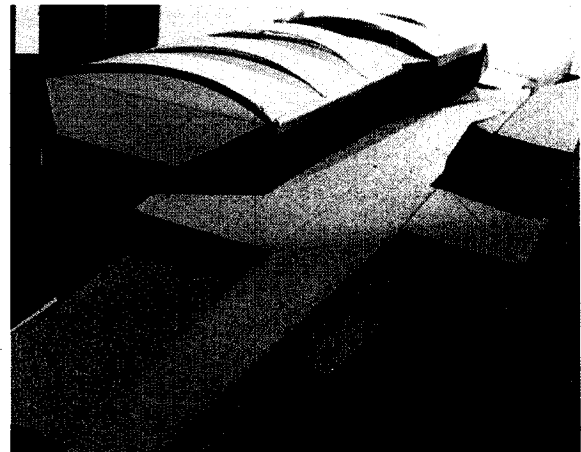
Process model using string to illustrate connections between the community boulevard and Baffin Boulevard. A central circulation corridor and green-roof draw the coastal promenade into the building.

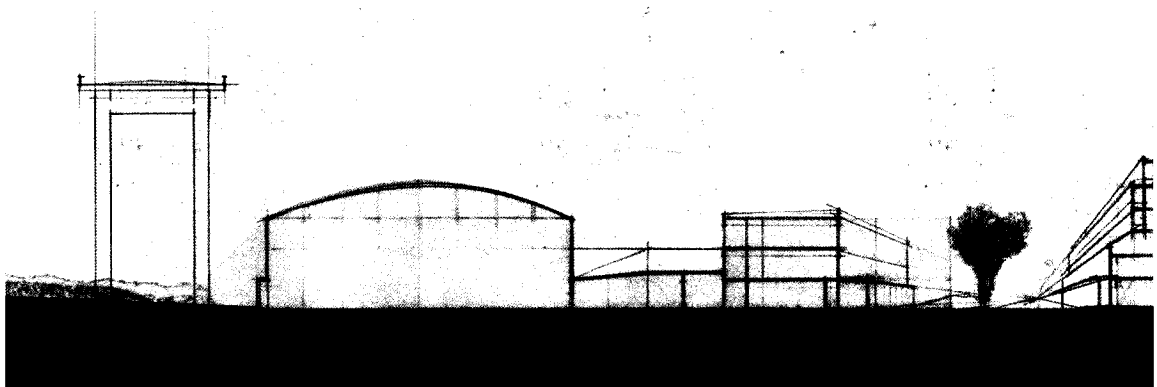
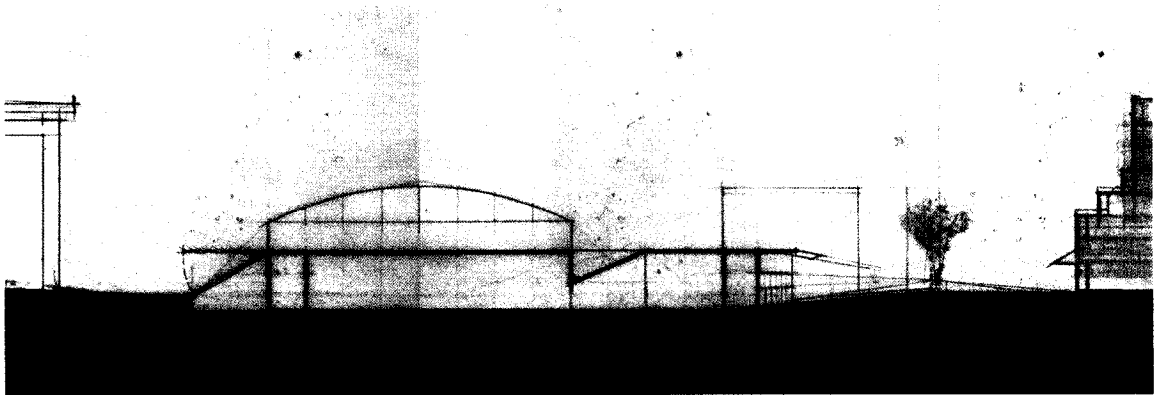
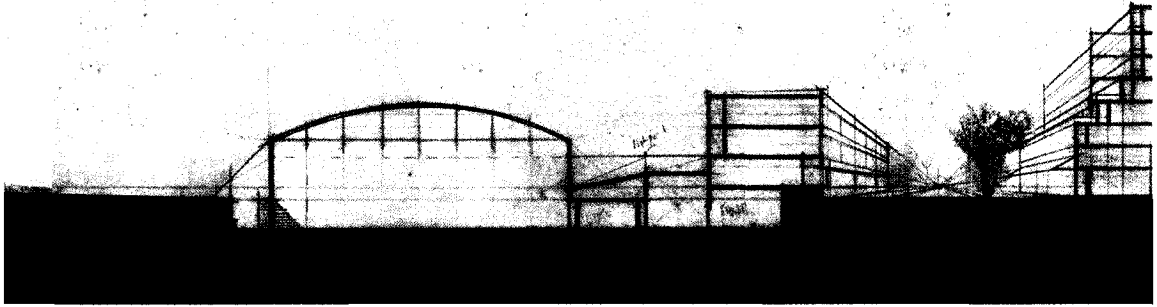


Process model illustrating major programmatic volumes with a central green roof.



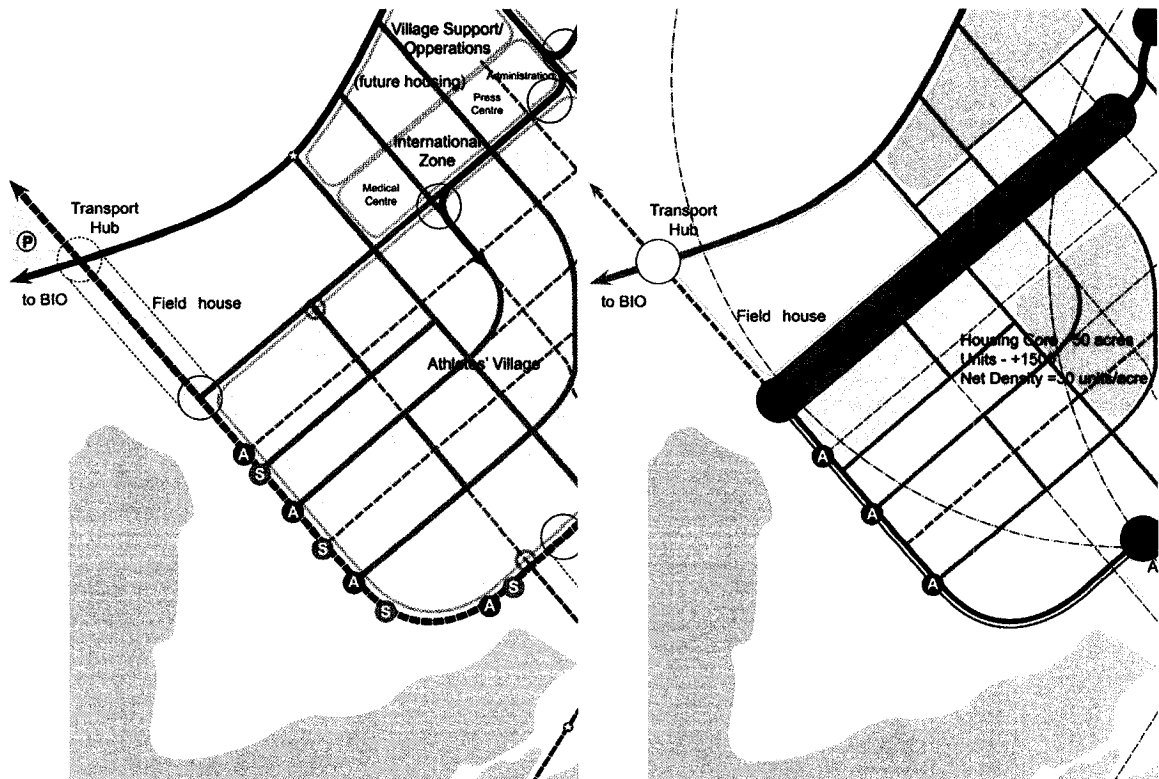
Process model illustrating division of major playing areas, green roof, and tiered seating with view to playing areas.





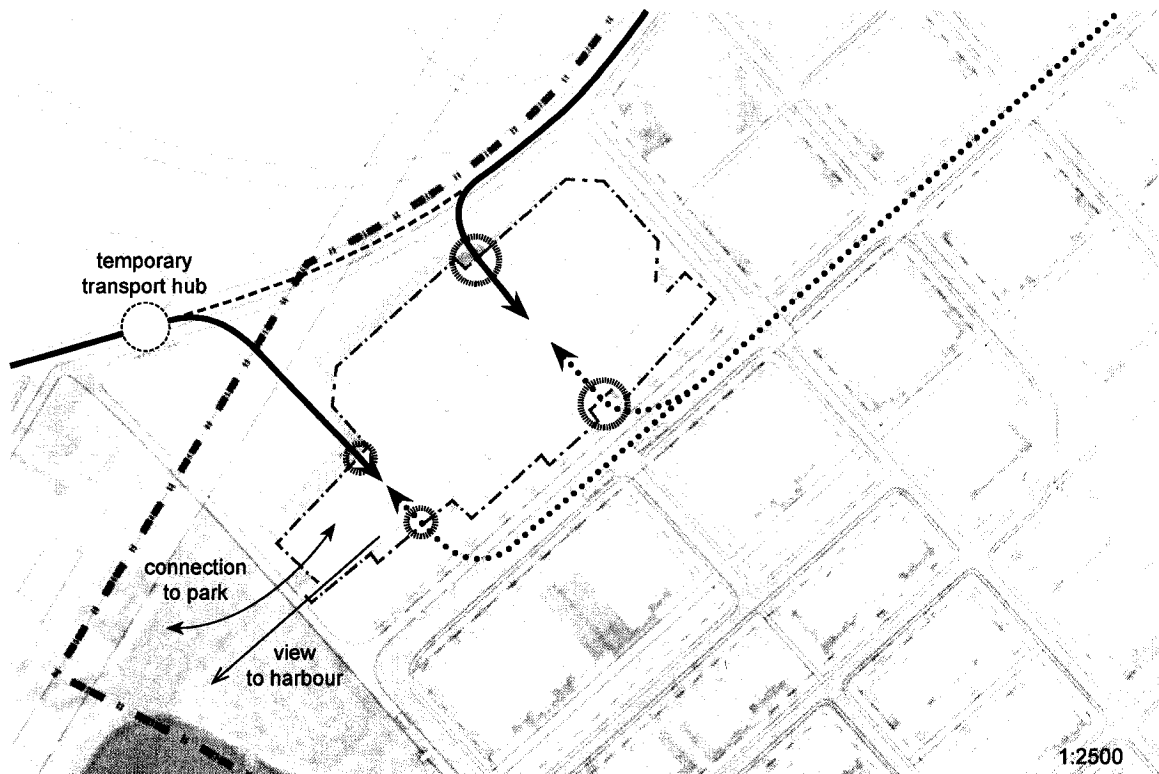
Field house study sections.

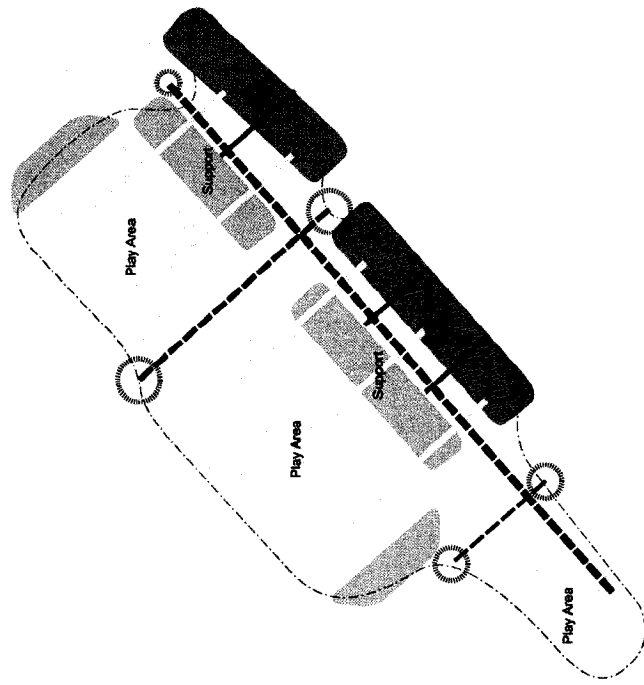
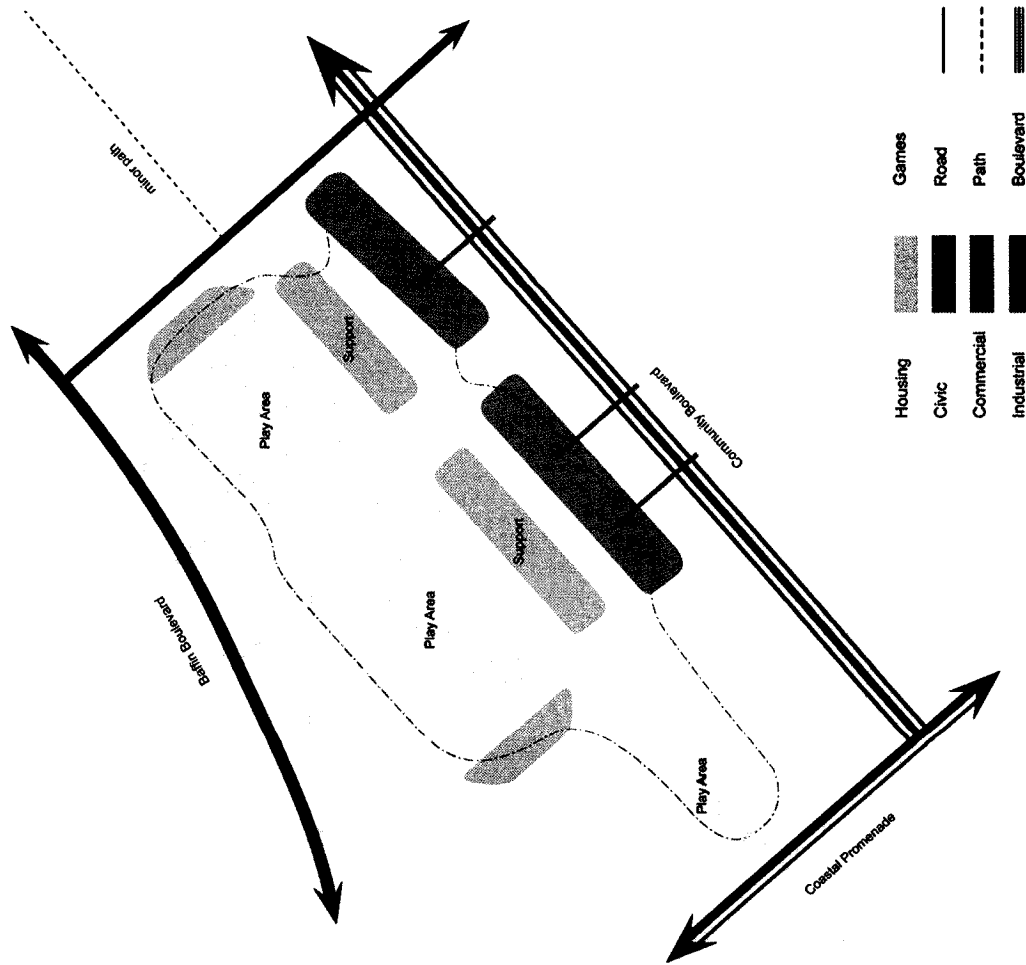
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Field House location within Commonwealth Park Diagram: (Left) During the Games, (Right) Following the Games.

Field House diagram showing massing, primary and secondary entrances, views and circulation.





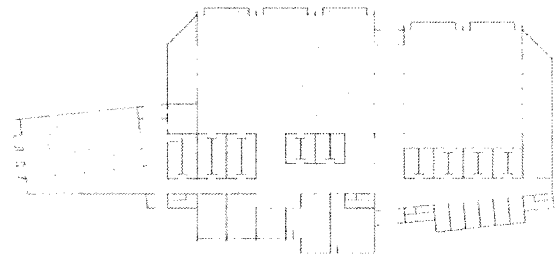
Housing	Games	Promenade	Temporary/Aspect	Relationship
Civic	Road	Alternative Path	Entry	Service/Amenity
Commercial	Path	Fence	Pedestrian Entry	Parking
Industrial	Boulevard	Building/Landmark	Boundary	Check Point / Security

Above Left: Field House Conceptual Site Diagram.

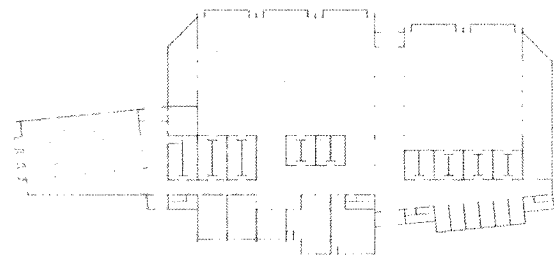
Above Right: Field House Conceptual Building Diagram.

Similar to how the facilities along the coastal promenade are dispersed to reduce their scale, the six playing courts of the field house are spread out to facilitate various functions and to avoid a single massive volume. Three courts form a major playing area which could be used either as one large venue or as a single court lined with spectator seating or as three separate courts. Two adjacent courts form a second play area, with access to the major playing area so that all five courts might be used for a large tournament or trade show. The final court, a single court, is physically and visually disconnected from the other playing areas. Located off the coastal promenade amid trees which line the embankment and with views of the harbour, the small court's intimate scale and seclusion permit a very separate function, such as a warm-up/practice area, or to host a gathering. This division of courts into three separate areas permits multiple and various functions to occur simultaneously.

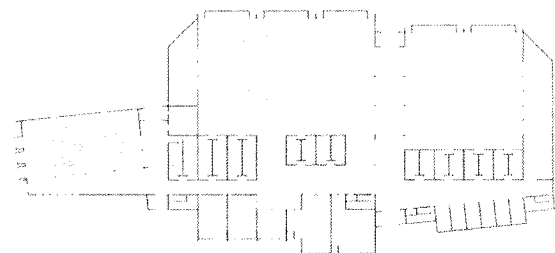
Major Playing Area with Support Field.



Small, Medium, and Large Fields of Play.

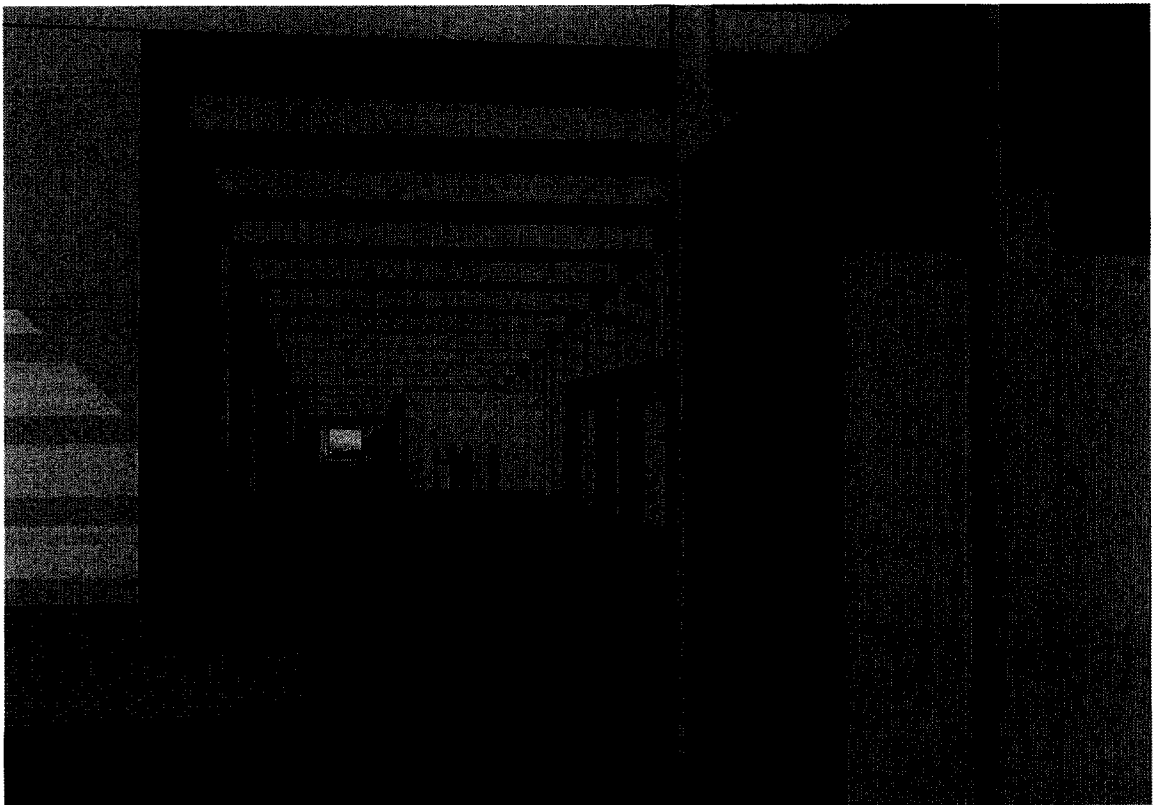


Individual Fields of Play.

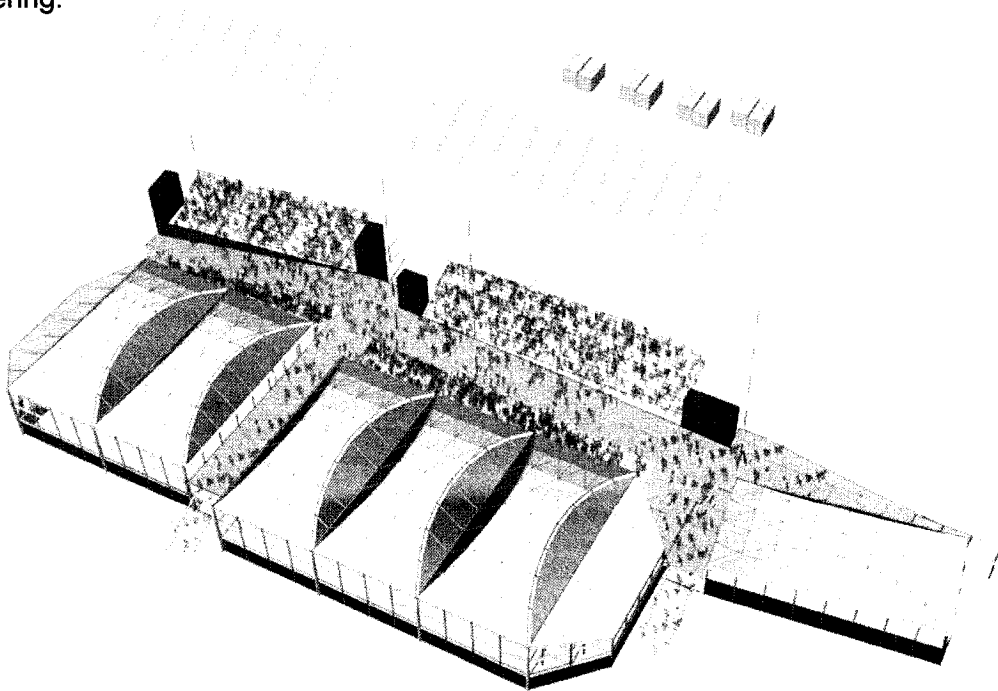


The courts are separated from the support area by a central circulation corridor which runs from a minor entry at the northern end to the small court and secondary entrance/exit at the southern extremity. Changing facilities are located between the corridor and playing areas. All fields of play, changing areas, and support occur on a single level.

Field House - View of corridor towards sea, with green roof and terraced seating above.

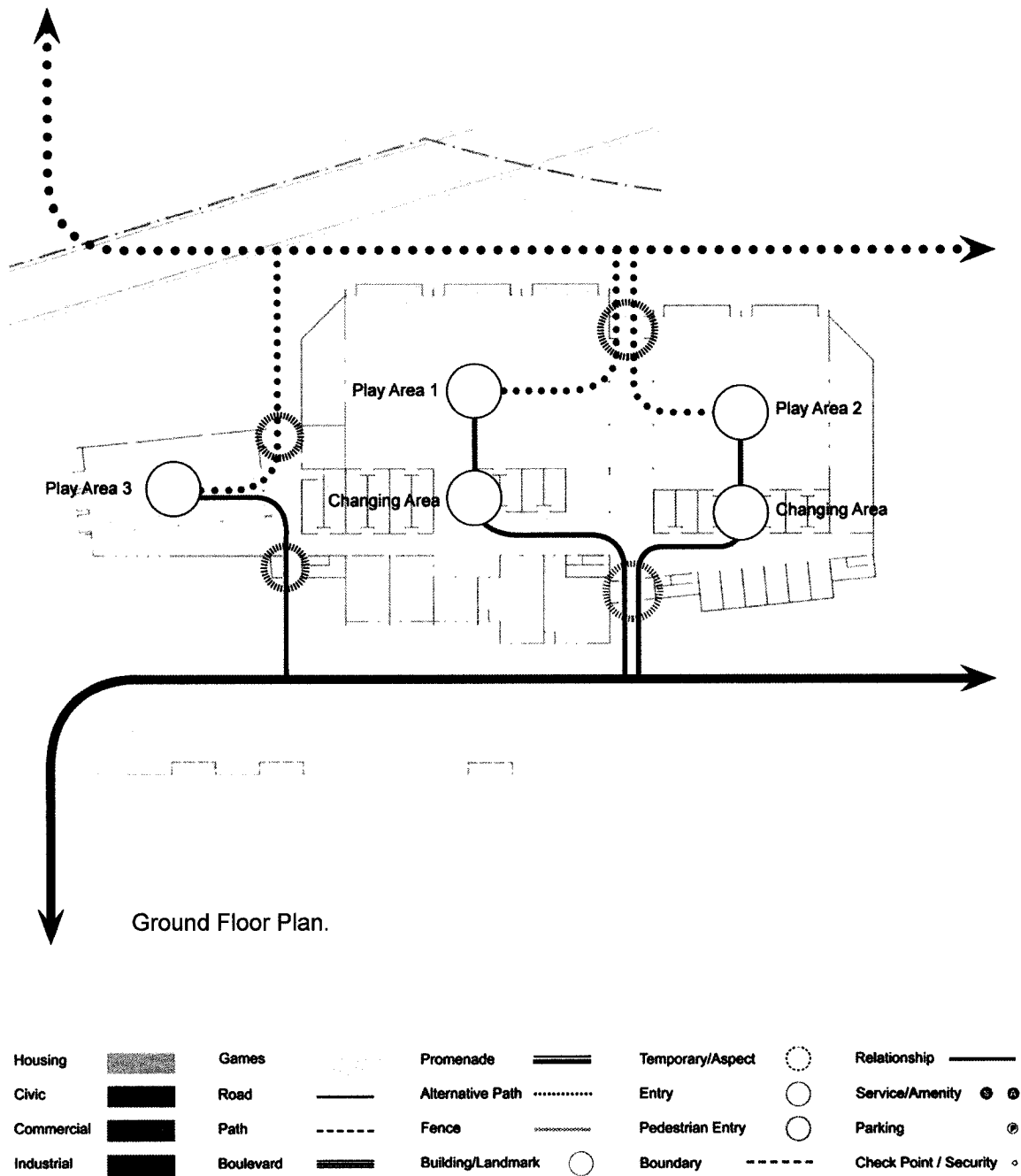


Circulation and security are issues for the facility both during the Games and later as a venue for community events. Accordingly, entrances/exits for the athletes and spectators may be kept completely separate. During the Games, when the number of athletes and spectators peak, only athletes will have access to the main level, which houses changing areas, fields of play and support functions. Access to the main level is limited to four major points of entry in two circulation corridors running east-west from Princess Margaret Boulevard to the community boulevard. Above the central athletes' corridor, a secondary green roof runs from the north - where the field house is one level below grade and therefore accessible by roof - to the south where it joins the coastal promenade as a lookout (which complements a number of small pavilions and staircases at the coastal termination of side streets). The green roof terraces to form seating with visibility of the fields of play. In this way, in meeting the needs of spectators, the field house borrows from the aquatic centre by integrating into the landscape. Access to the spectators' level follows the athletes' level with two major places of entry/exit to Princess Margaret Boulevard via staircases which may be raised to form a covered area or to impede access. During the Games, additional seating is located east of the green roof with services located beneath. After the Games, the additional seating and services are removed, and more permanent community-related programs completed. The green roof has a lasting legacy as a raised park and place of gathering.

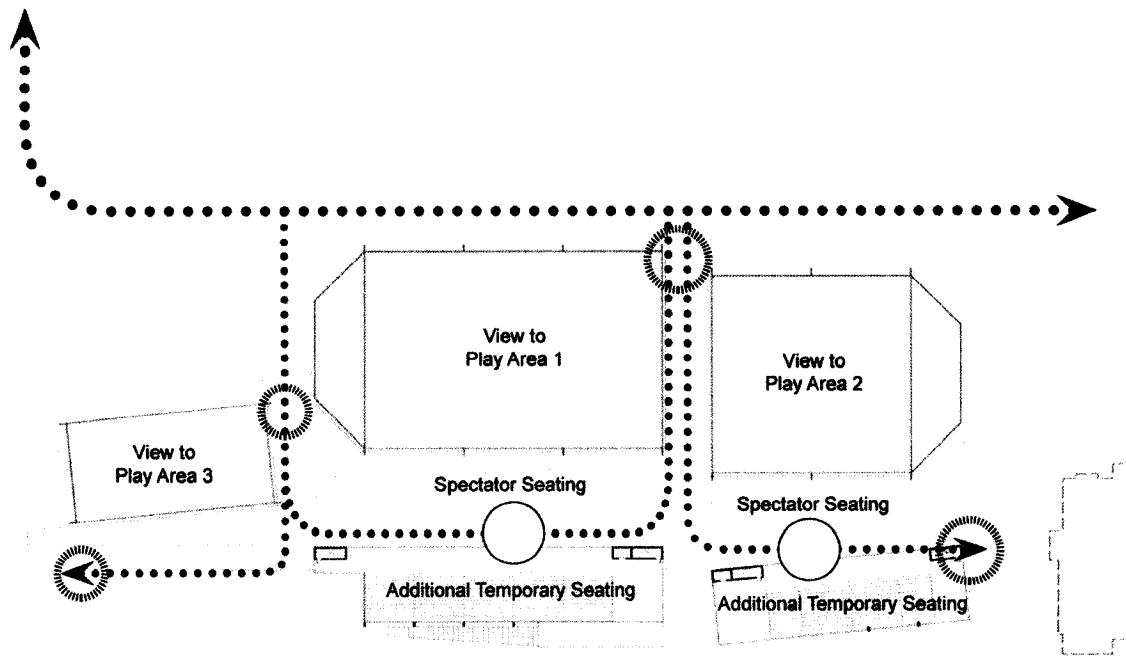


Field House during Games exploded. Additional seating and services removed.

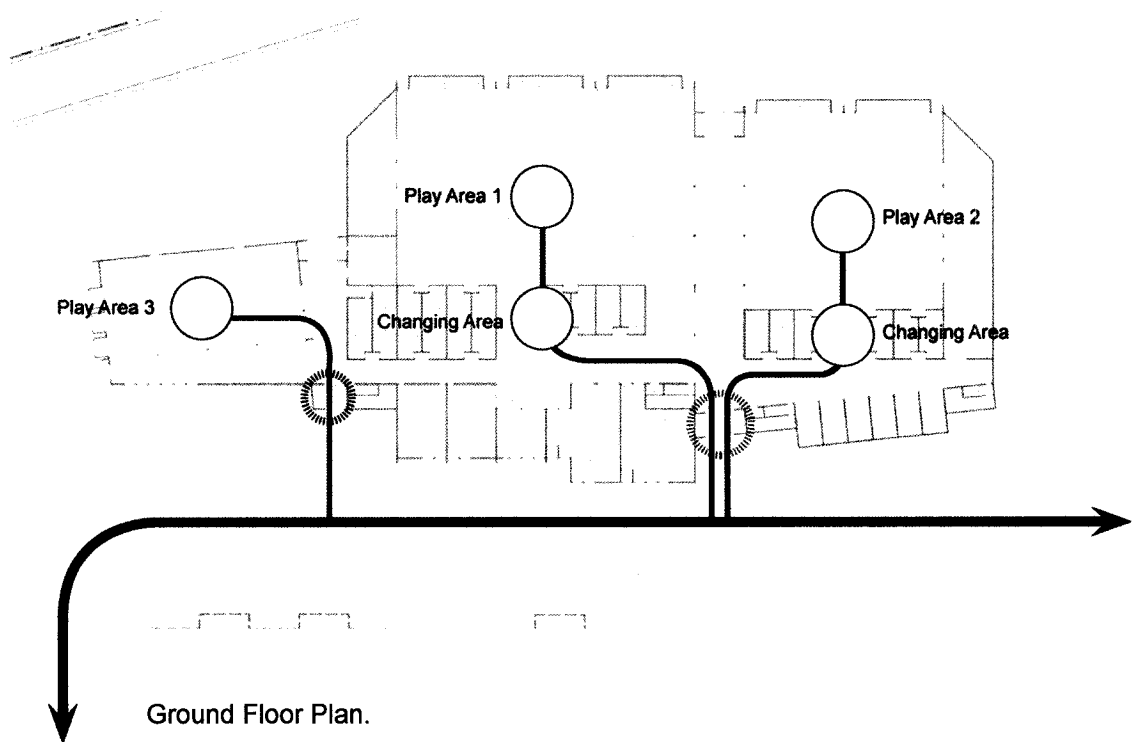




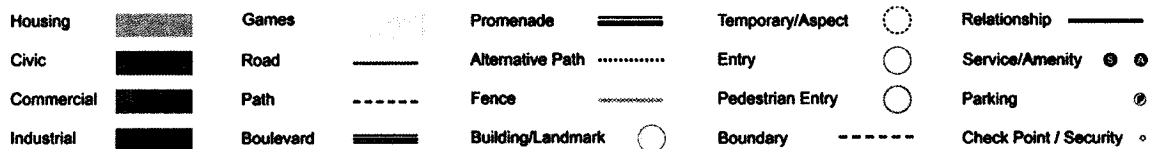
Field House Typical Circulation Diagram.



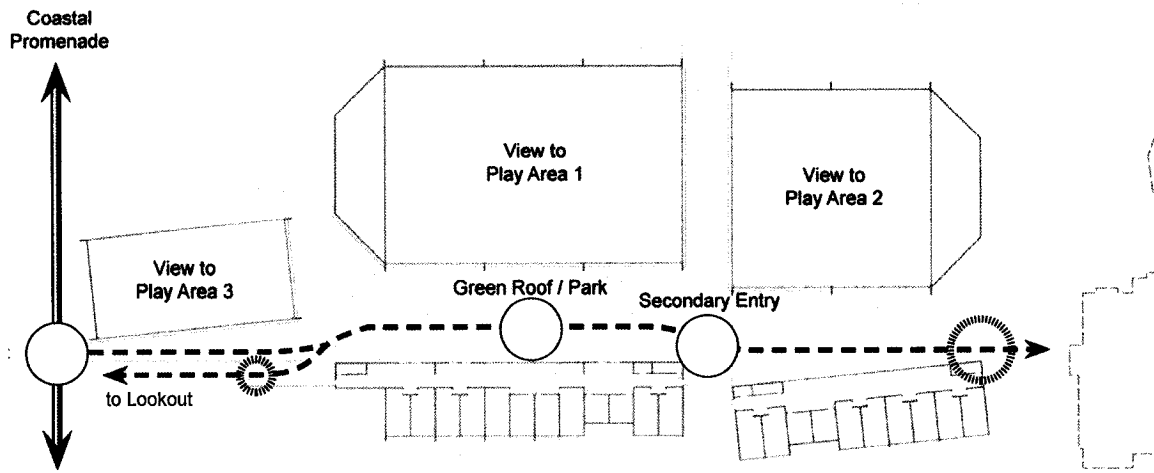
Second Floor Plan.



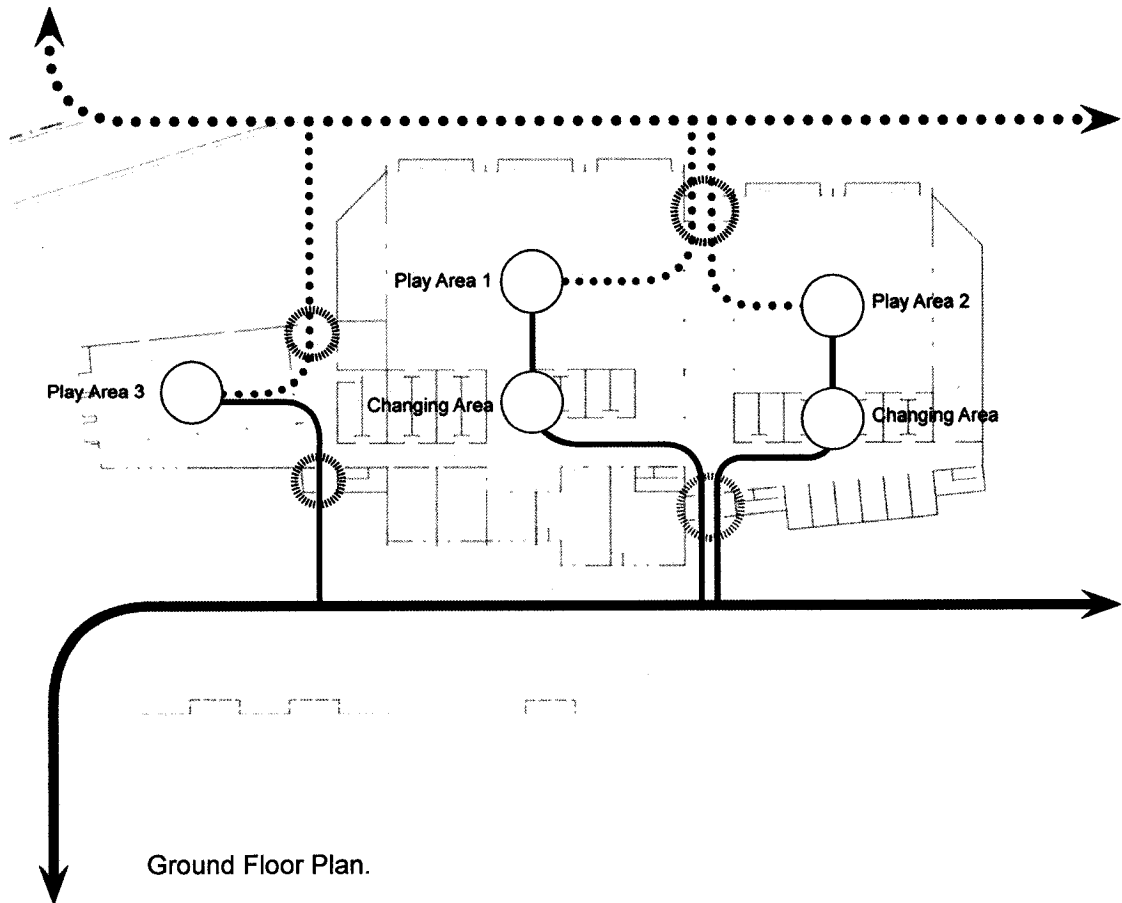
Ground Floor Plan.



Field House Games Circulation Diagram.



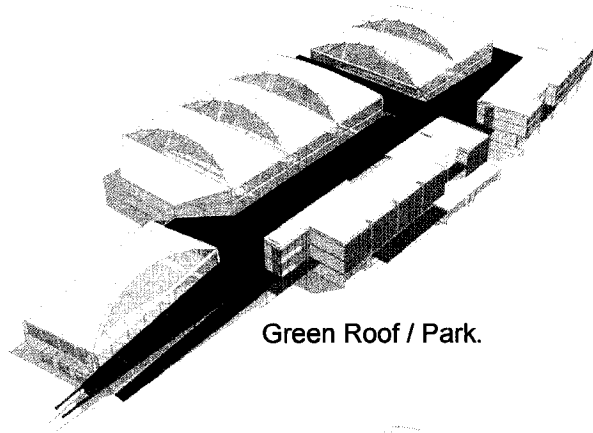
Second Floor Plan.



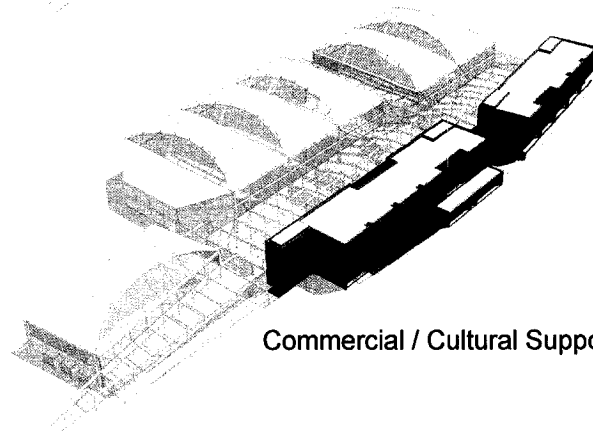
Ground Floor Plan.

Housing		Games		Promenade		Temporary/Aspect		Relationship	
Civic		Road		Alternative Path		Entry		Service/Amenity	
Commercial		Path		Fence		Pedestrian Entry		Parking	
Industrial		Boulevard		Building/Landmark		Boundary		Check Point / Security	

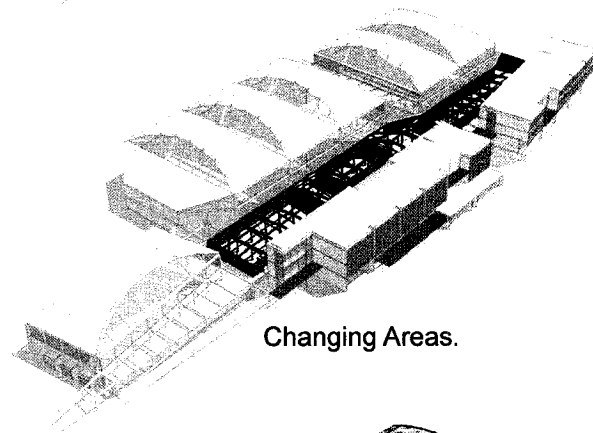
Field House Community Circulation Diagram.



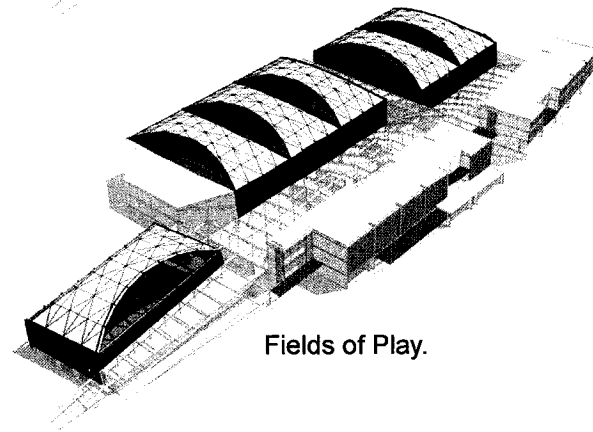
Green Roof / Park.



Commercial / Cultural Support.



Changing Areas.



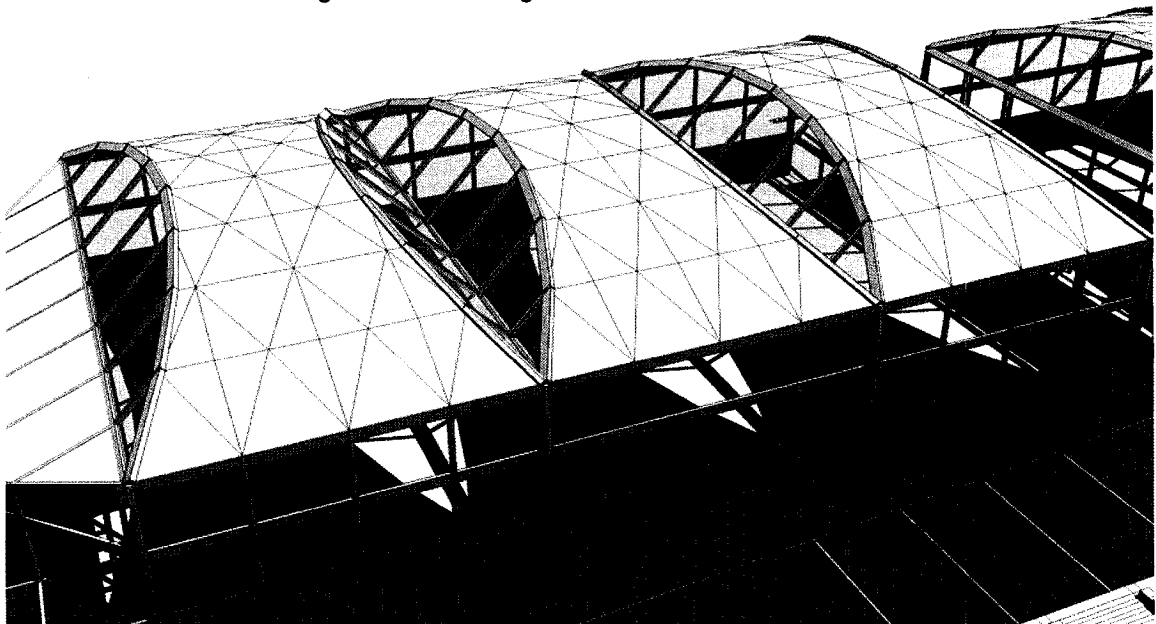
Fields of Play.

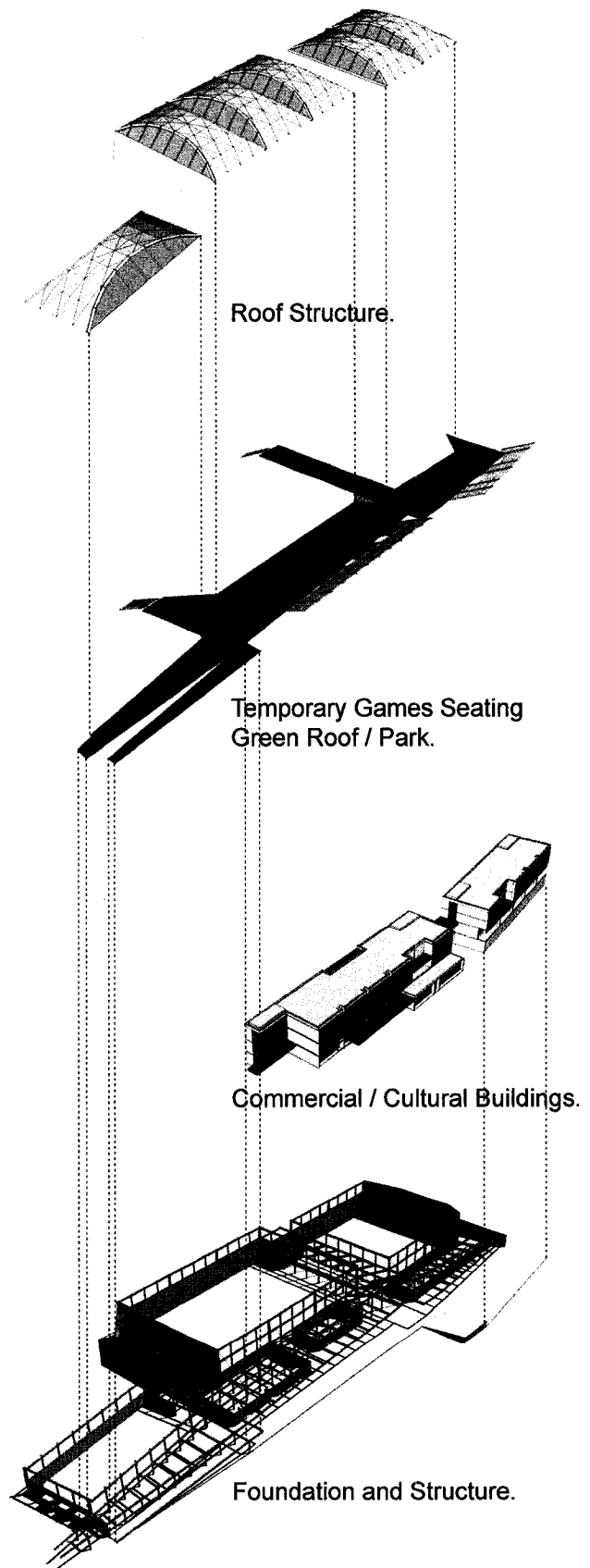
Field House Functional Parts.

The bowstring truss, with its wood-member construction, simple form, and ability to span 50+ metres with ease, is the primary spanning element for the roof of the field house. To span the playing areas, two-bowstring trusses at 45-degree angles are attached at 25-metre intervals. A wooden lattice fills the distance between trusses giving it lateral strength, while the voids between the attached bowstrings permit light to enter the playing areas. This system creates a covered enclosure measuring 50 x 25 meters, giving individual playing areas a sense of individual volume. Together the roofs are monumental without competing with the forms of the adjacent MacKay Bridge, and stadium and aquatic centre.

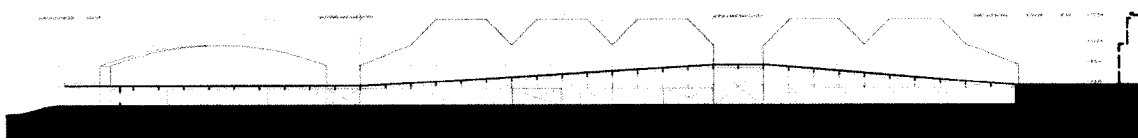
The field house mediates between the civic scale required by its use as a venue for the Commonwealth Games, and the neighbourhood scale required in its long-term use as a community facility. The field house integrates a crust of varied program on its street edge, incorporates the surrounding landscape, facilitates the security demands of large scale events without compromising the fluid and free use of the facilities in periods of general use, and posits a monumental structure which reads as individual volumes.

View of roof structure with green roof in foreground.

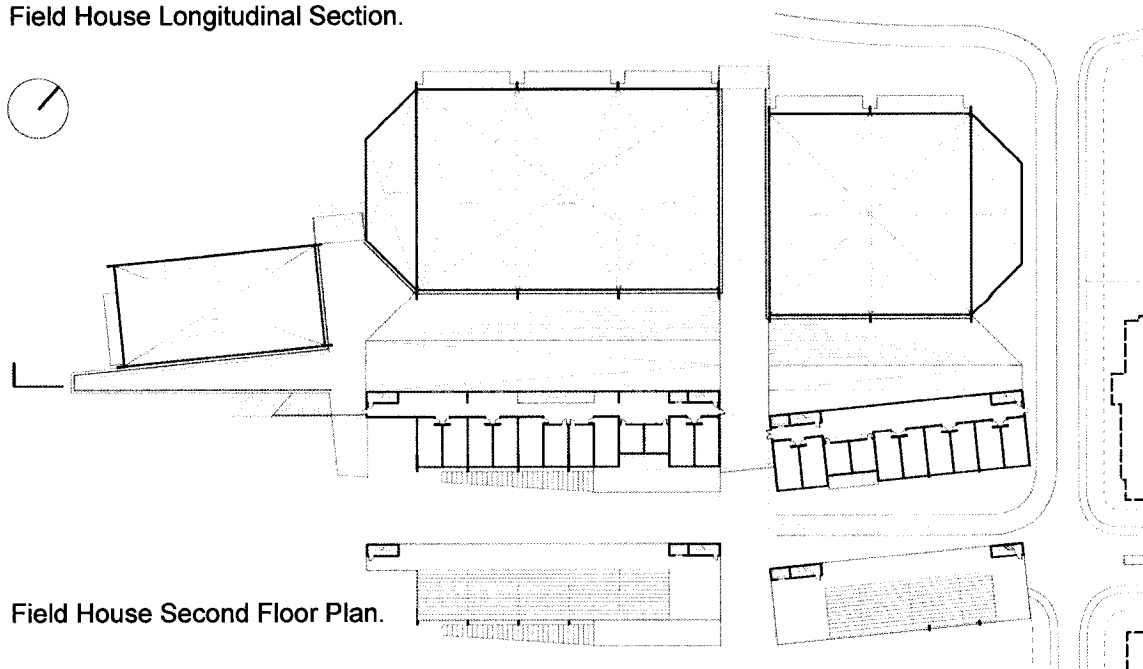




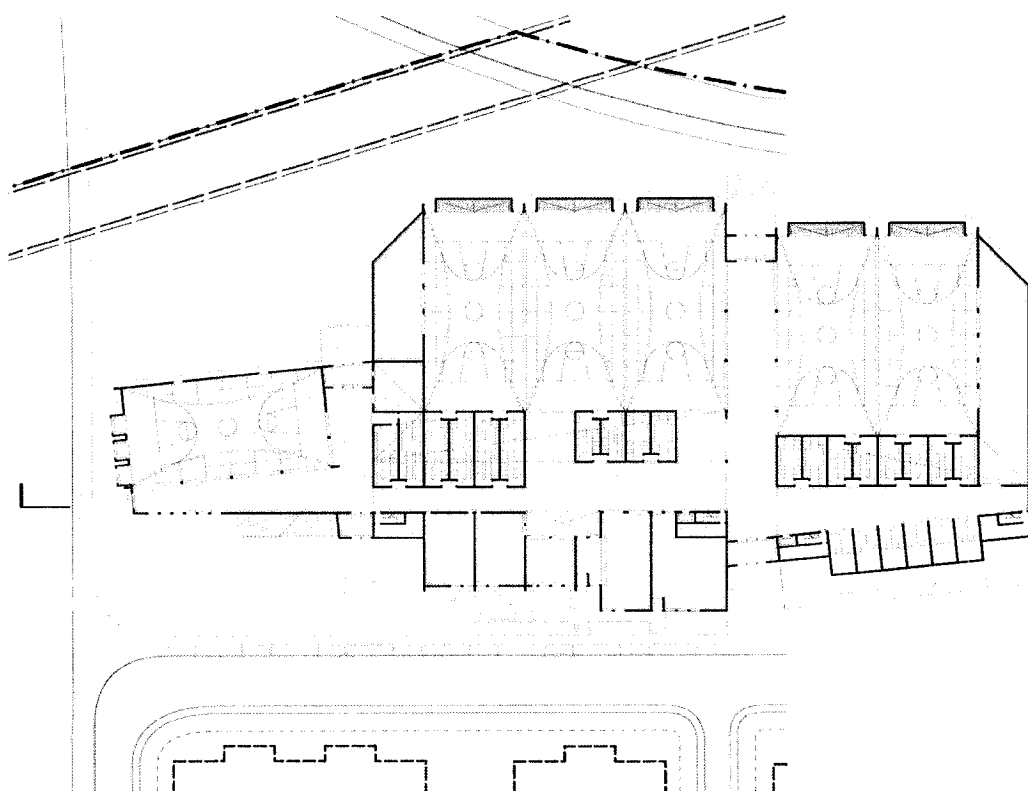
Field House Building Elements.



Field House Longitudinal Section.

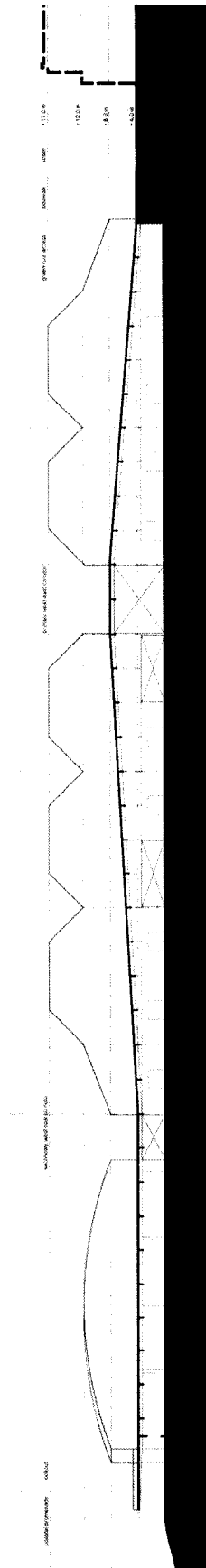


Field House Second Floor Plan.



Field House Ground Floor Plan.

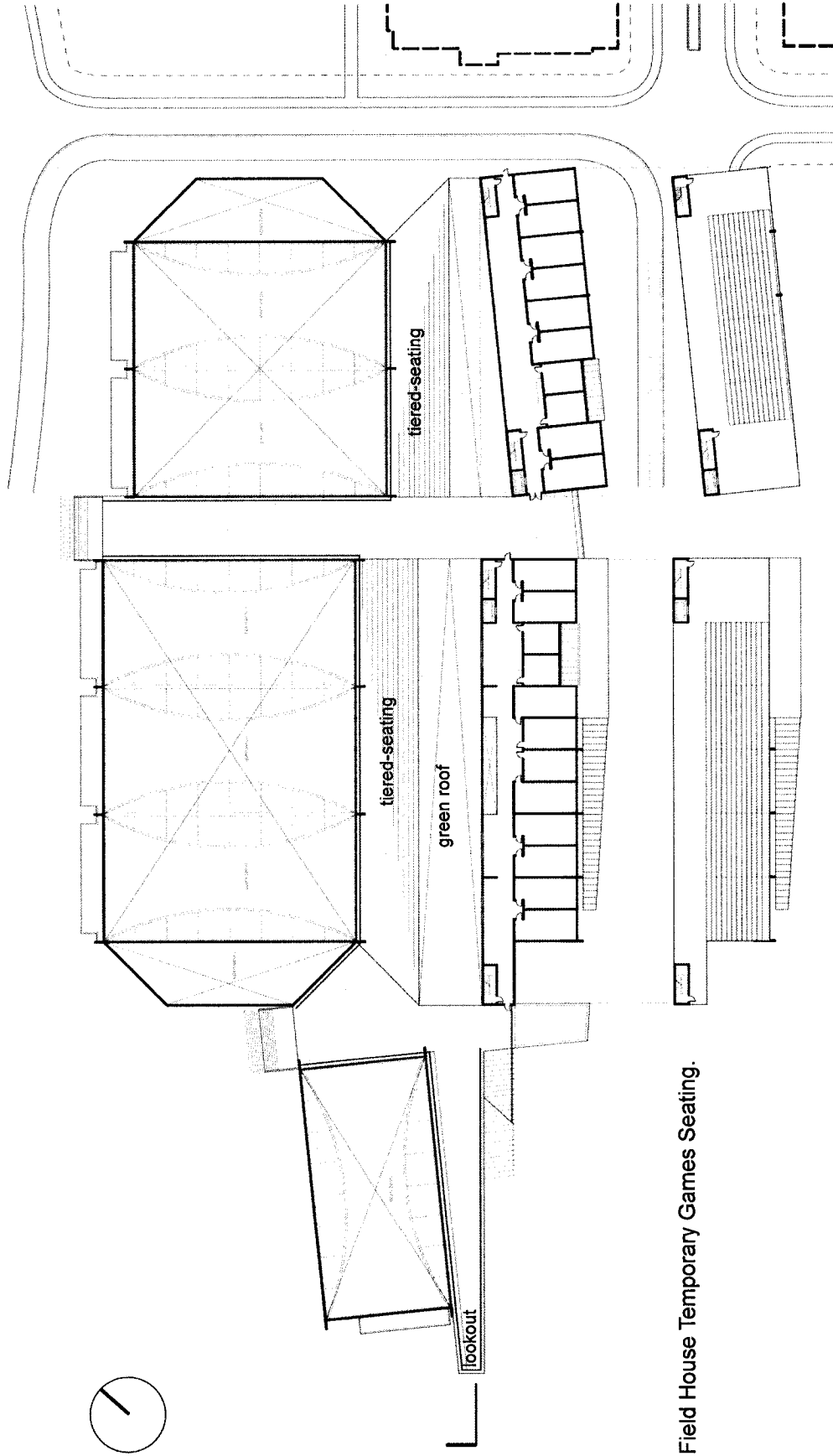
1:1500



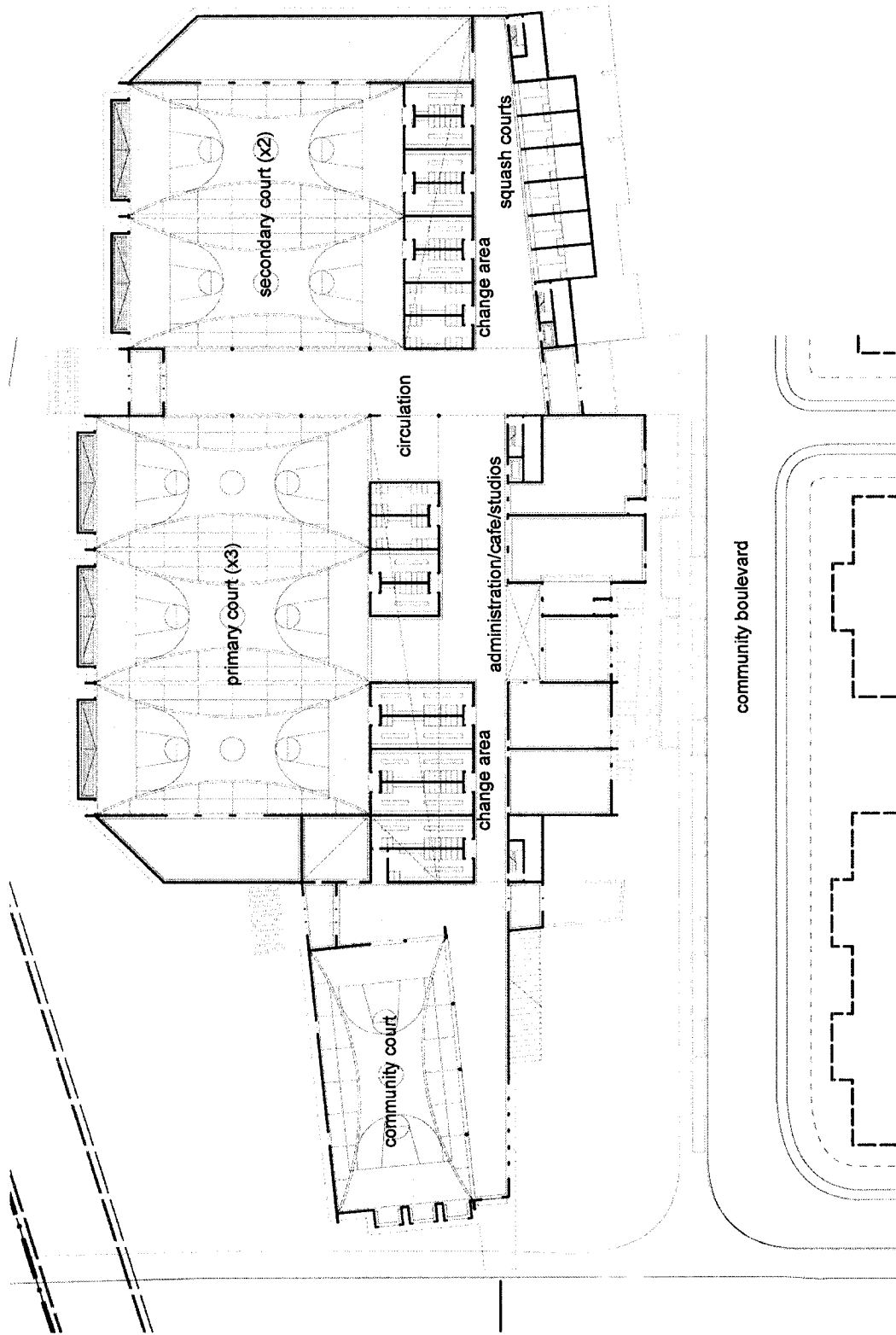
Field House Longitudinal Section.

1:1000

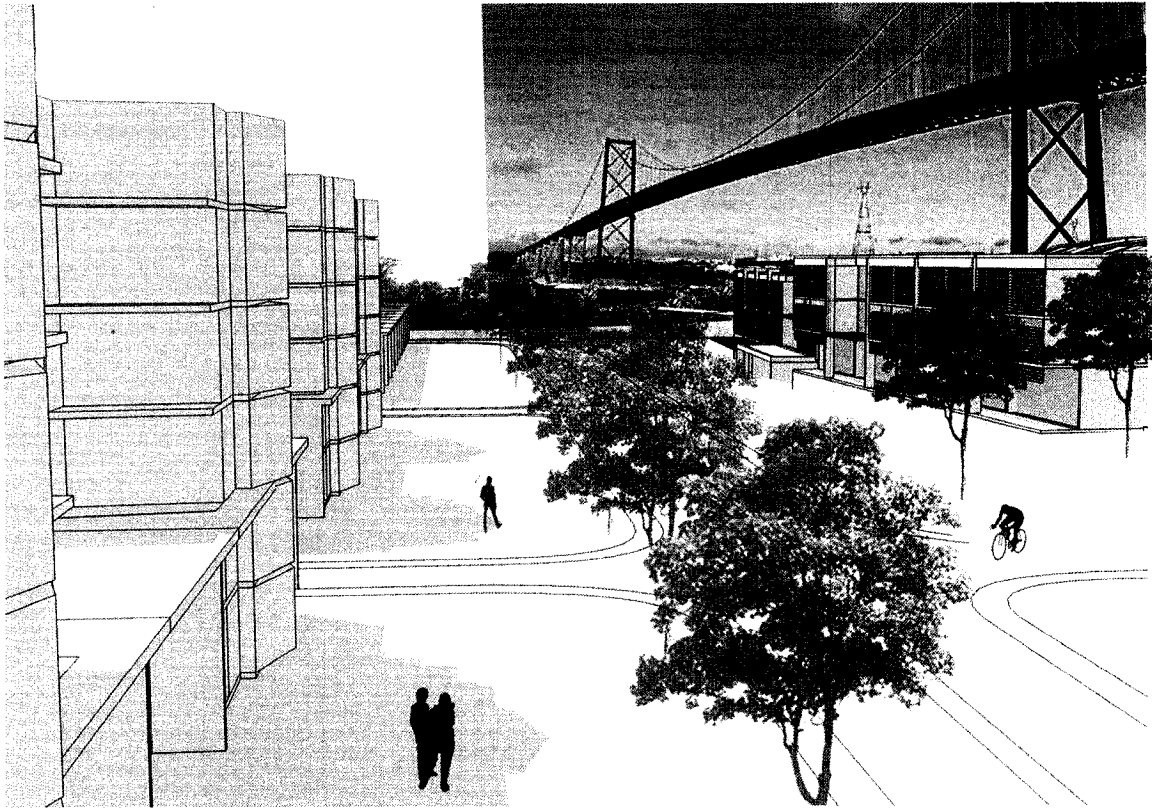




Field House Temporary Games Seating.

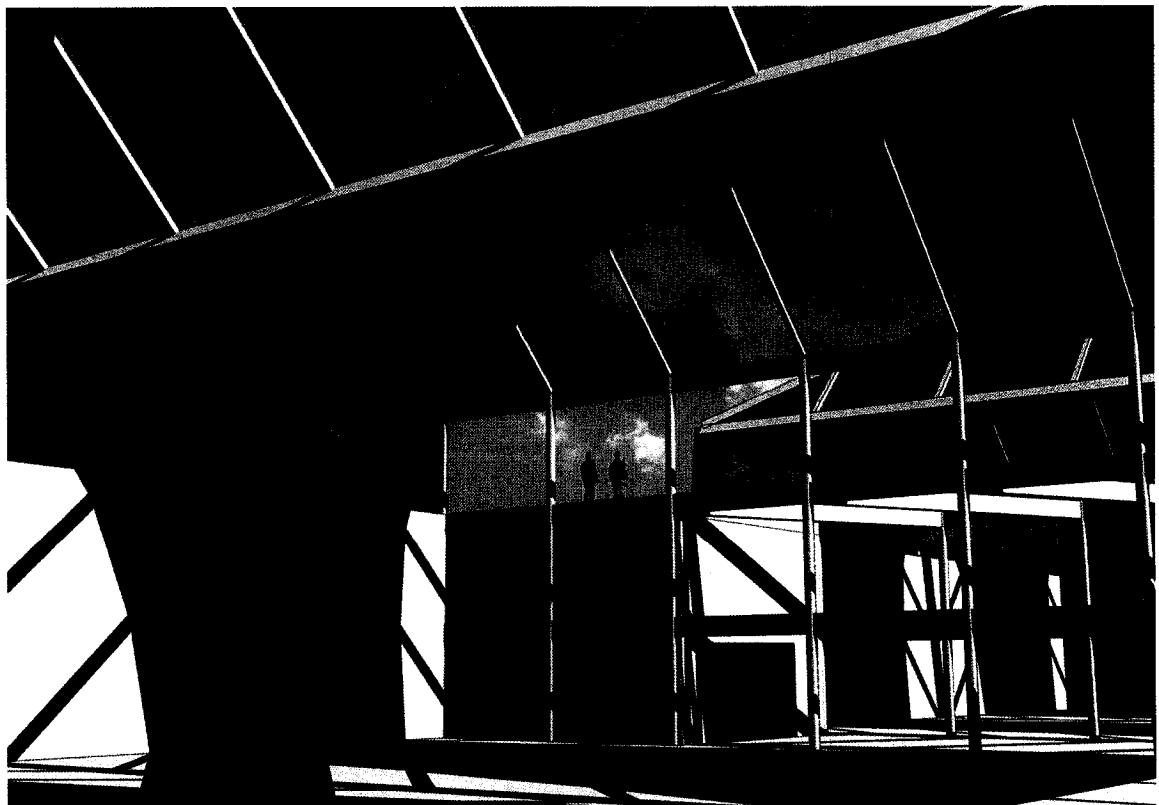


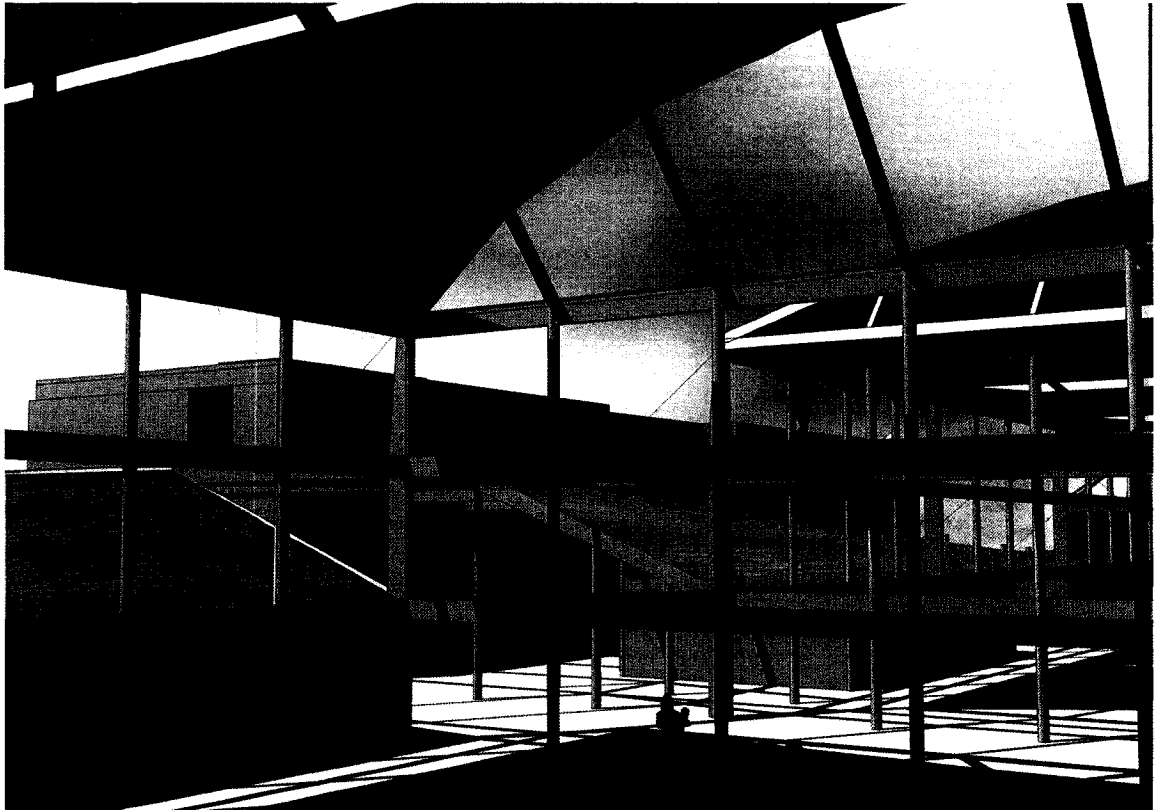
Field House Ground Floor Plan.



Field House - View of Community Boulevard with Field House in Background.

Field House - View from Large Sized Court to Green Roof.





Field House - View from Medium Sized Court to Green Roof.

Field House - View of Green Roof with Lookout in Background.





Field House - View of Green Roof with Offices in Backgroud.

Field House - View of Small Court / Community Space, with Coastal Promenade in Background.



## Summary

An historical pattern of abandonment and isolation is evident in North Dartmouth. When selected as the focal site for Halifax's bid for the 2014 Commonwealth Games, the Halifax Commonwealth Games Committee had intended to construct a new stadium for 25,000, a new multi-sport triplex, and an athletes' village. According to the Committee's plan, following the Games, the stadium had intended to attract the Canadian Football League (CFL) while other sporting venues would form a national training centre for the Maritimes. While the athletes' village was intended to provide post-Games housing, an absence of neighbourhood amenities (a school, shops) in the Commonwealth Games Committee's proposal suggested further abandonment of Shannon Park.

This thesis proposes an alternative design strategy for Shannon Park, where the temporary, external use represented by the Games could be mediated with a permanent, internal use of the site as a thriving and active community, connected to the greater Halifax Regional Municipality. By combining the fact of Shannon Park's isolation from adjacent communities with the Halifax Regional Plan - in which Shannon Park is identified as a place for multi-unit development as part of a coastal trail and the location of a fast-ferry - it is possible to mediate the necessities of large sporting venues while using the Games as a catalyst to rejuvenate an abandoned community.

To ensure the site's adaptability for both external and internal use, the majority of community infrastructure is maintained. A variety of street and path types are created as an extension of the existing network to ensure neighbourhood complexity and character. Connections to adjacent communities – Wallace Heights and the Bedford Institute of Oceanography (BIO) – are re-established where possible, and streets generally re-orient the site to the sea. Additional housing increases density from a total of 5 units/acre to 15 units/acre with graded density around the community boulevard and a minimum of 1500 units to support local shops. The effect is a transformation from a sub-urban to urban pattern of living, to act as a prototype for the area.

The sporting facilities, including the proposed multi-sport triplex and stadium, are strung and exploded along the coastal promenade, which follows the natural embankment and acts as a barrier between public parkland and the neighbourhood. The sporting facilities negotiate a civic scale with the needs of a community by layering the program, and by integrating into the landscape. This, combined with their location on the embankment, gives the facilities geographic prominence from afar, and reduces the scale of the buildings from within the community whilst permitting them to act as local landmarks.

During the Games, the sporting facilities and Games support are at full capacity. At the perimeter of the site, the stadium and field house are located adjacent to transport hubs near major transport corridors, facilitating access for the anticipated tens of thousands of spectators, athletes and officials. Responding to the security requirements of the Games, the design of the community, as echoed in the design of the facilities, allows for a complete separation of athletes from spectators, and the site is divided into temporary but demarcated zones allowing for operations of complex Games logistics.

Following the Games, the impermanent elements - including temporary mobile facilities and fencing - are removed. Temporary elements of the facilities themselves are also removed, reducing the capacity of venues. The community boulevard forms the centre of neighbourhood activities with the school as a hub. The coastal promenade forms the more public aspect of the neighbourhood with transport stops, including the multi-modal transport hub and park and ride, located at either end. This separation ensures adaptability for a successful Commonwealth Games, and long-term separation between community and civic amenity.

After hosting the Commonwealth Games, the new neighbourhood of Shannon Park remains connected to its surroundings, with transport options for residents rejuvenated and connections to the Bedford Basin and adjacent communities restored. These connections in place, Shannon Park becomes a site able to mediate between external uses such as the Games, and its long-term function as a community.

## Epilogue

In July 2005, the Halifax Regional Municipality submitted a letter of intent on a potential bid for the 2014 Commonwealth Games in partnership with the province. By October, Halifax entered the domestic riding for the Games against Calgary, Hamilton, Ottawa, and the Regional Municipality of York. In December, Commonwealth Games Canada chose Halifax over its domestic rivals, with an estimated Games Budget of \$500 million. By February, 2007, the Halifax Commonwealth Games Committee acknowledged that the Games would likely cost more than \$785 million. On March 8, 2007, the Provincial Government and the Halifax Regional Council withdrew their support for the bid of the 2014 Commonwealth Games. Officials identified the cost of hosting the event, which had risen from an original \$500 million to an estimated \$1.7 billion, as the principal motivator in their decision to cancel the bid.<sup>72</sup>

The Province was prepared to contribute \$300 million, the Municipality would contribute \$200 million, and the Federal Government agreed to contribute \$400 million towards the cost of hosting the Commonwealth Games, a total of \$900 million. According to the Office of Health Promotion and Protection, the bid proposed \$571.2 million for capital costs, \$635.7 million for operations and \$140-million for other Federal, Provincial and Municipal services. The total estimated cost, including inflation, was \$1.6-1.7 billion. To host the Games, the Province would have had to at least double its proposed \$300 million contribution. The Halifax Games Committee was asked to develop a winning bid that was affordable, but the requirements for the bid to meet Olympic Standards and the need to build infrastructure put the Games out of Halifax's reach.<sup>73</sup>

If the bid was successful, preparing for and hosting the Games was expected to generate \$2 billion in economic activity in Atlantic Canada. The 2014 Commonwealth Games would have created jobs, increased tourism, attracted investment, and left a legacy of sporting infrastructure.<sup>74</sup> The revenues, however, were over-projected and the cost factors for the capital projects were under-projected; the costs of hosting the Games would have placed the Municipality and Province at risk. Detailed architectural work, engineering designs and other planning work by consultants – elements necessary to satisfy the Federation in London – contributed to increased costs.<sup>75</sup>



Withdrawing from the bid process should send a message to the Commonwealth Games Federation that the standards for the Games should be within the reach of small to medium-sized cities, not only large centres.<sup>76</sup> It should also highlight a lack of transparency in the bid process. An absence of public consultation and debate, and secrecy about facilities and costs contributed to suspicion and a lack of support from the general public.<sup>77</sup> The 2014 Commonwealth Games will not be held at Shannon Park. Having withdrawn its Games bid, many suggest that Halifax will have a more difficult time attracting large-scale events, resulting in missed economic opportunities.<sup>78</sup>

The vision of 'state-of-the art' stadiums and projections for an Olympic-style event, ultimately contributed to the visions abandonment. Had the process accommodated public opinion, the vision of hosting the Commonwealth Games may have focused on the athletic facilities as well as the athletes' village, which was never properly discussed. It might have posited the athletes' village as an opportunity to rejuvenate an abandoned community with a legacy of sporting facilities. It might have acknowledged Shannon Park's suitability to mediate a temporary usage - as a Commonwealth Park - and a long-term vision as a post-Games community.

In May, 2007, a Commonwealth Games Federation Official suggested that had Halifax remained in the running for the 2014 Commonwealth Games, it would have won during the initial round of voting.<sup>79</sup> In November, 2007, either Glasgow, Scotland, or Abuja, Nigeria, will be chosen to host the 2014 Commonwealth Games. Shannon Park remains vacant and isolated from the greater Halifax Regional Municipality, awaiting a new vision for revitalization.

## Endnotes

- <sup>1</sup> Cleve Dheensaw, ed., *The Commonwealth Games: The First 60 Years 1930-1990* (Victoria: Orca Book Publishers: 1994), 7-13.
- <sup>2</sup> *Halifax 2014*, 2007 (cited March 1, 2007), available from <http://www.2014halifax.com/>
- <sup>3</sup> *Halifax 2014*, 2007 (cited March 1, 2007), available from <http://www.2014halifax.com/>
- <sup>4</sup> Commonwealth Games Bid Proposal: Halifax 2014. Submitted November 1, 2005, Appendix D.
- <sup>5</sup> John Martin, ed., *The Story of Dartmouth* (Halifax: Atlantic Nova Print Ltd, 1981), 515-6.
- <sup>6</sup> Harry Chapman, ed., *In The Wake of the Alderney: Dartmouth, Nova Scotia, 1750-2000* (Dartmouth: Dartmouth Historical Association, 2000), 143.
- <sup>7</sup> Harry Chapman, ed., *In The Wake of the Alderney: Dartmouth, Nova Scotia, 1750-2000* (Dartmouth: Dartmouth Historical Association, 2000), 117.
- <sup>8</sup> John Martin, ed., *The Story of Dartmouth* (Halifax: Atlantic Nova Print Ltd, 1981), 70, 436.
- <sup>9</sup> Mike Parker, ed., *Historic Dartmouth: Reflections of Early Life* (Halifax: Nimbus Publishing Ltd, 1998), 92.
- <sup>10</sup> Harry Chapman, ed., *In The Wake of the Alderney: Dartmouth, Nova Scotia, 1750-2000* (Dartmouth: Dartmouth Historical Association, 2000), 222-3.
- <sup>11</sup> Brookfield's Advertisement, 'Shannon Park: Home to 521 Families of the Royal Canadian Navy,' *MailStar*, March 21, 1953, Page 14, Halifax County.
- <sup>12</sup> Staff Reporter, 'Nearing Completion,' *MailStar*, April 15, 1952, Page 18, Halifax County.
- <sup>13</sup> M. Allen Gibson, 'Churches By The Sea,' *Chronicle-Herald*, June 12, 1965, Page 4, Halifax County.
- <sup>14</sup> Staff Reporter, 'Serves Entire District,' *MailStar*, July 17, 1957, Page 1, 6, Halifax County.
- <sup>15</sup> Harry Chapman, ed., *In The Wake of the Alderney: Dartmouth, Nova Scotia, 1750-2000* (Dartmouth: Dartmouth Historical Association, 2000), 374.
- <sup>16</sup> Harry Chapman, ed., *In The Wake of the Alderney: Dartmouth, Nova Scotia, 1750-2000* (Dartmouth: Dartmouth Historical Association, 2000), 386.
- <sup>17</sup> Staff Reporter, 'Sod Turned for \$315,000 Rink Complex in North Dartmouth,' *MailStar*, July 20, 1968, Page 5, Halifax County.

<sup>18</sup> Staff Reporter, 'Proposed Shannon Park Shopping Centre,' *MailStar*, September 9, 1960, Page 3, 8, Halifax County.

<sup>19</sup> Marilyn Gurney, 'Athabaskan Avenue: Shannon Park, Dartmouth' in *Halifax Street Names: An Illustrated Guide*, eds. Shelagh Mackenzie and Scott Robson (Halifax: Formac Publishing Company Limited, 2002), 16-7.

<sup>20</sup> Tim Bousquet, 'The Shadow of Power,' *The Coast*, November 23, 2006, 9.

Margaret Murphy, 'Power Lines,' *The Coast*, November 30, 2006, letterhead.

<sup>21</sup> Daniel Bonner, 'Shannon Park Set to Close on Sunday,' *Chronicle-Herald*, August 22, 2003, Section A7, Halifax County.

Beverley Ware, 'A Community Fades Away: Last Days of Shannon Park 'Kind of Sad',' *Chronicle-Herald*, August 25, 2003, Section A1-2, Halifax County.

<sup>22</sup> Richard Dooley, 'Memories Live on as Shannon Park Closes: Celebration at Base for 'City Within a City',' *The Daily News*, August 25, 2003, Halifax County.

<sup>23</sup> Michael A. Pagano and Ann O'M Bowman, 'Vacant Lands As Opportunity and Challenge,' in *Recycling the City: The Use and Reuse of Urban Land*, eds. Rosalind Greenstein and Yesim Sungu-Eryilmaz (Cambridge: Lincoln Institute of Land Policy, 2004), 18-9.

<sup>24</sup> Rosalind Greenstein and Yesim Sungu-Eryilmaz, *Recycling the City: The Use and Reuse of Urban Land* (Cambridge: Lincoln Institute of Land Policy, 2004), 5.

<sup>25</sup> Michael A. Pagano and Ann O'M Bowman, 'Vacant Lands As Opportunity and Challenge,' in *Recycling the City: The Use and Reuse of Urban Land*, eds. Rosalind Greenstein and Yesim Sungu-Eryilmaz (Cambridge: Lincoln Institute of Land Policy, 2004), 28.

<sup>26</sup> Ian Colquhoun, ed. *Urban Regeneration: An International Perspective* (B.T. Batsford Ltd, London: 1995), 39-43.

<sup>27</sup> Ian Colquhoun, ed. *Urban Regeneration: An International Perspective* (B.T. Batsford Ltd, London: 1995), 34-39.

<sup>28</sup> Richard Marshall, *Waterfronts in Post-Industrial Cities* (New York: Spon Press, 2001), 5.

<sup>29</sup> Richard Marshall, *Waterfronts in Post-Industrial Cities* (New York: Spon Press, 2001), 6, 53-4.

<sup>30</sup> Rinio Bruttomesso, 'Complexity on the Urban Waterfront,' in *Waterfronts in Post-Industrial Cities*, ed. Richard Marshall (New York: Spon Press, 2001), 40-1.

<sup>31</sup> Rinio Bruttomesso, 'Complexity on the Urban Waterfront,' in *Waterfronts in Post-Industrial Cities*, Richard Marshall (New York: Spon Press, 2001), 43-6.

<sup>32</sup> Neil Smith and Peter Williams, *Gentrification of the City* (Boston: Hyman, 1986), 5.

<sup>33</sup> Lorenzo Vicario and P. Manuel Martinez Monje, 'Another 'Guggenheim Effect?' in *Gentrification in a Global Context: The New Urban Colonialism*, ed. Rowland Atkinson (New York: Routledge, 2005), 166.

- <sup>34</sup> John Robert Gold and Margaret M. Gold, *Cities of Culture: Staging International Festivals and the Urban Agenda, 1851-2000* (Burlington, Vt: Ashgate, c2005), 1-8.
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- <sup>37</sup> John Robert Gold and Margaret M. Gold, *Cities of Culture: Staging International Festivals and the Urban Agenda, 1851-2000* (Burlington, Vt: Ashgate, c2005), 66.
- <sup>38</sup> John Robert Gold and Margaret M. Gold, *Cities of Culture: Staging International Festivals and the Urban Agenda, 1851-2000* (Burlington, Vt: Ashgate, c2005), 123.
- <sup>39</sup> John Robert Gold and Margaret M. Gold, *Cities of Culture: Staging International Festivals and the Urban Agenda, 1851-2000* (Burlington, Vt: Ashgate, c2005), 250-2.
- <sup>40</sup> John Robert Gold and Margaret M. Gold, *Cities of Culture: Staging International Festivals and the Urban Agenda, 1851-2000* (Burlington, Vt: Ashgate, c2005), 161.
- <sup>41</sup> John Robert Gold and Margaret M. Gold, *Cities of Culture: Staging International Festivals and the Urban Agenda, 1851-2000* (Burlington, Vt: Ashgate, c2005), 182-3, 196.
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- <sup>44</sup> HRM draft Regional Plan, 2006 (cited March 1, 2007), available from [www.halifax.ca/](http://www.halifax.ca/)
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- <sup>48</sup> Cynthia Girling and Ronald Kellett, *Skinny Streets and Green Neighborhoods: Design for Environment and Community* (Washington: Island Press, 2005), 15-6.
- <sup>49</sup> William Morrish, *Planning to Stay: a Collaborative Project* (Minneapolis: Milkweed Editions, 1994), 67-76.
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- <sup>52</sup> Kevin Lynch, 'The City Image and its Elements,' in *The City Reader*, eds. Richard T. LeGates and Frederic Stout (New York: Routledge, 1996), 425-8.
- <sup>53</sup> Cynthia Girling and Ronald Kellett, *Skinny Streets and Green Neighborhoods: Design for Environment and Community* (Washington: Island Press, 2005), 12-3.
- <sup>54</sup> Cynthia Girling and Ronald Kellett, *Skinny Streets and Green Neighborhoods: Design for Environment and Community* (Washington: Island Press, 2005), 12.
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- <sup>56</sup> Kurt Andersen, 'Is Seaside Too Good To Be True?' in *Seaside: Making a Town in America*, eds., David Mohny and Keller Easterling (New Jersey: Princeton Architectural Press, 1991), 46.
- <sup>57</sup> David Mohny, 'Interview with Andres Duany' in *Seaside: Making a Town in America*, eds., David Mohny and Keller Easterling (New Jersey: Princeton Architectural Press, 1991), 67.
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- <sup>59</sup> Cynthia Girling and Ronald Kellett, *Skinny Streets and Green Neighborhoods: Design for Environment and Community* (Washington: Island Press, 2005), 77.
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- <sup>61</sup> Elizabeth Moule, 'Charter of the New Urbanism,' in *The Seaside Debates: A Critique of the New Urbanism*, Todd W. Bressi and Warren T. Byrd (New York: Rizzoli International Publications, Inc, 2002), 21.
- <sup>62</sup> Cynthia Girling and Ronald Kellett, *Skinny Streets and Green Neighborhoods: Design for Environment and Community* (Washington: Island Press, 2005), 96.
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