SPATIAL AGENCIES:
SUPERIMPOSING MEDIA AND ARCHITECTURE IN PUBLIC SPACE

by

Adrienne Gerrits

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

at

Dalhousie University
Halifax, Nova Scotia
November 2015

CONTENTS

ABSTRACT

This thesis reconsiders several major urban elements in Halifax, Nova Scotia, Canada. It focuses on the original town square (the Grand Parade) and the adjacent main street (Barrington Street) that extends from the north end to the south end of the Peninsula. It seeks to reestablish the symbolic arrival into and departure from the city. The architecture obtains an alternative partnership with the personal mobile device to construct a new narrative of the city. Re-imagining both gateway and central square of Halifax, the virtual space of a social media application is overlaid onto the physical space of Barrington Street and Grand Parade. Citizens of Halifax, in contributing to its reinvention, are renewed as agents within the social and political aspirations of the city. A cast of characters negotiates the virtual and physical identity of the city. In redefining Barrington Street, the design focuses on implementing a Wi-Fi corridor, a city app, and two new city gates, as well as a reconstruction of the central public square and adjacent facade.

ACKNOWLEDGEMENTS

CHAPTER 1: INTRODUCTION

Origins of Halifax

The town of Halifax was founded by the British in 1749. It was decided to situate the town at the present location of downtown, resting halfway between the harbour and Citadel Hill. The steep natural landscape on the east side of the peninsula formed by a glacial drumlin would continue to be a defining characteristic for the present day city. The expedition's engineer and surveyor laid out the original street grid in 1749 as a series of rectangular blocks 320 feet by 120 feet, with lots 40 feet wide by 60 feet deep. A central break in the grid made space for Grand Parade. The "spacious square" was in fact a rectangle of rough ground on the steep face of the hill. It was proposed to build a church at the north end of it, and at the south end a combined jail and courthouse.[1] An important crux of public space within the city, it reconciled various activities necessary to maintain the order and rhythm of a newly built town. It was a training ground for the military, a common meeting place for residents, and accommodated both Saint Paul's Church and later Halifax City Hall.

Barrington Street

Barrington Street was the central street along the wooded slope and the lower length of Grand Parade. It developed a magnetism for its citizens as the town of Halifax continued to expand.
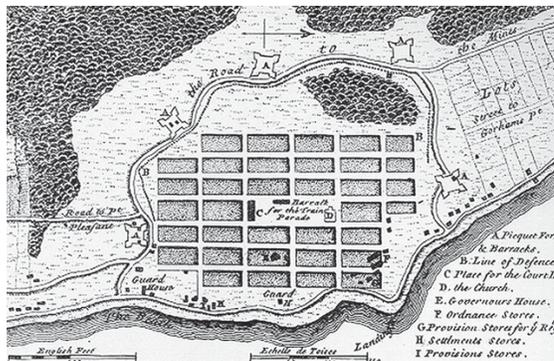
A plan of the town of Halifax in 1765 by John Rocque and Peter Andrews; from *A Set of Plans and Forts in America*.

Engraving of St Paul's Church by Richard Short, 1 March 1764; from Nova Scotia Archives.

At first, Barrington Street was just a trail leading to the cemetery just outside the town walls, but as the Grand Parade was cleared and St. Paul's was built, Barrington Street became

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1   Thomas Raddall, *Halifax, Warden of the North* (Halifax: Nimbus, 2007), 26.

the centre of the activities of the new town. It became the fashionable promenade each evening and Sundays where strollers guarded by red coated soldiers would take their exercise and display their airs along Barrington Street and through the woods to Point Pleasant.[2]

As the city developed over time, so Barrington Street flourished as a commercial centre. It continued to be the major thoroughfare into the downtown and dominated the Halifax market until the 1960s.[3]

The subsequent suburban growth with new outlying retail centres, however, negatively impacted the downtown. Barrington Street experienced a commercial starvation which continued to linger as it faced tides of unfortunate demolition and development projects. In the early 1980s, a series of historic structures were demolished to accommodate an unrealized office tower directly facing Grand Parade at the George Street intersection. The land is still owned by the provincial government and has remained a parking lot over the graves of four buildings: the Birks Building, 1735 Barrington Street, 1739 Barrington Street, and the Atlantic Trust Building. This will become one of the thesis project sites.

Despite its designation as a Heritage Conservation District, Barrington Street is now characterized by vacancy, high rent and neglected facades. A local journalist from *The Coast* compared Barrington Street to a ghost: a supernatural echo; a memorial to a once-great corridor extinguished by decades of poor planning.[4]

Barrington Street looking south, 1945;
from Nova Scotia Archives.

Barrington Street looking north, 2015.

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2   Susan Algie, "Barrington Street," *Bulletin (Society for the Study of Architecture in Canada)* 7, no. 3 (1981): 2.

3   Ibid., 3.

4   Jacob Boon, "Ghosts of Barrington," *The Coast* (2014), http://www.thecoast.ca/halifax/ghosts-of-barrington/Content?oid=4448644.
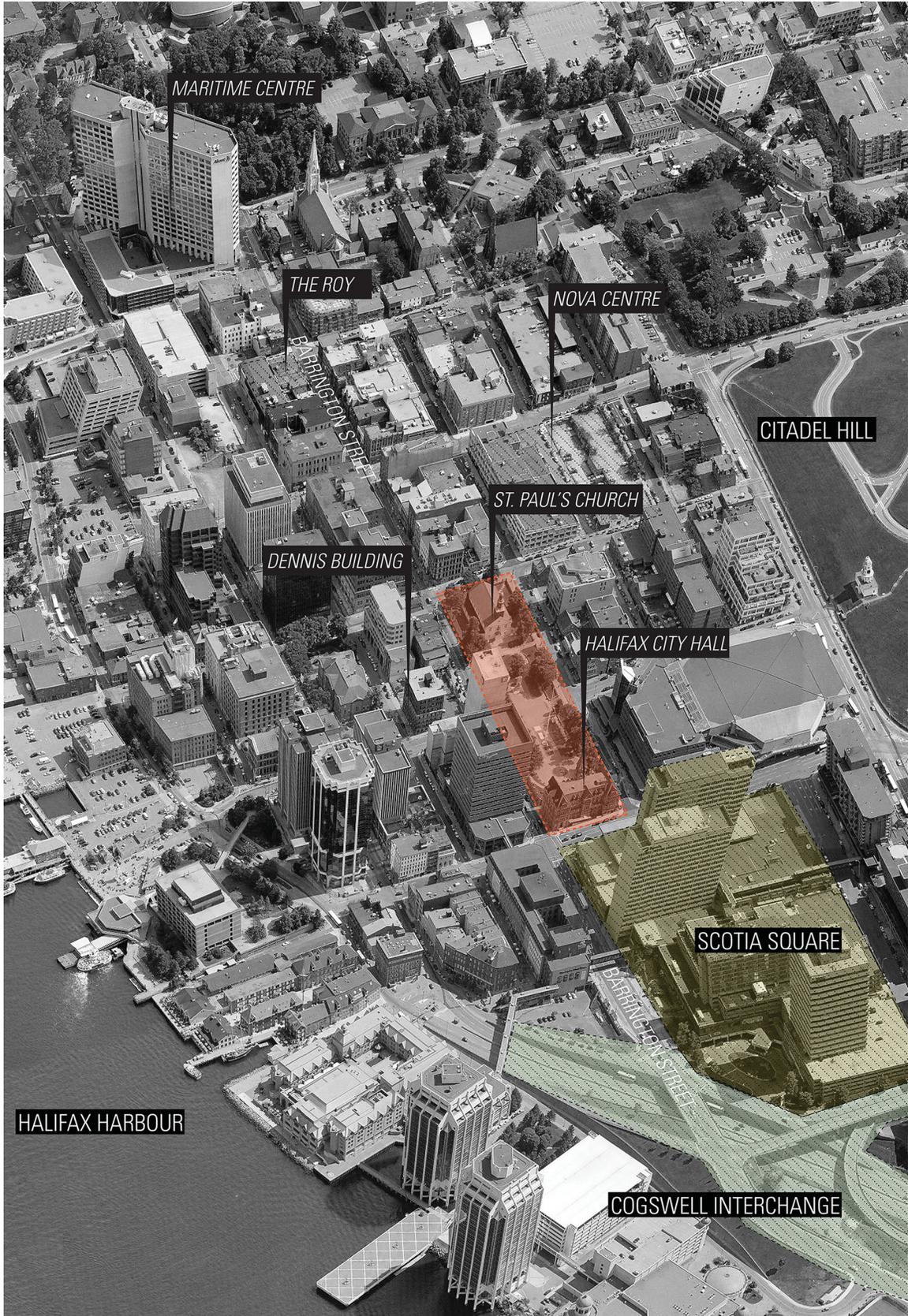
Urban character of Barrington Street; base image from Bing Maps.
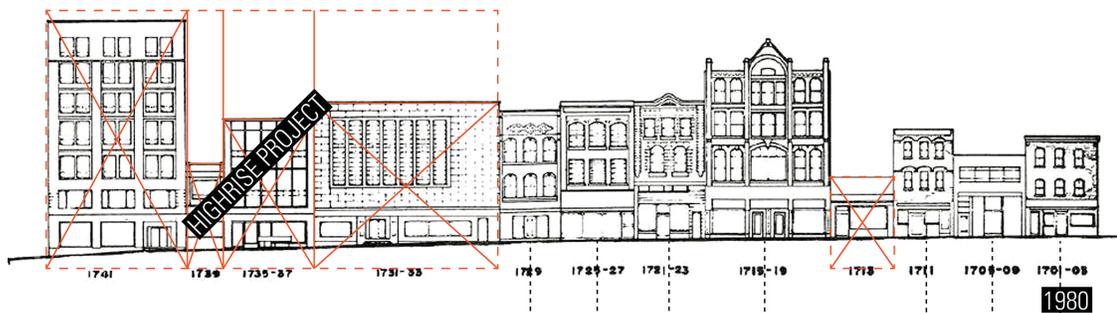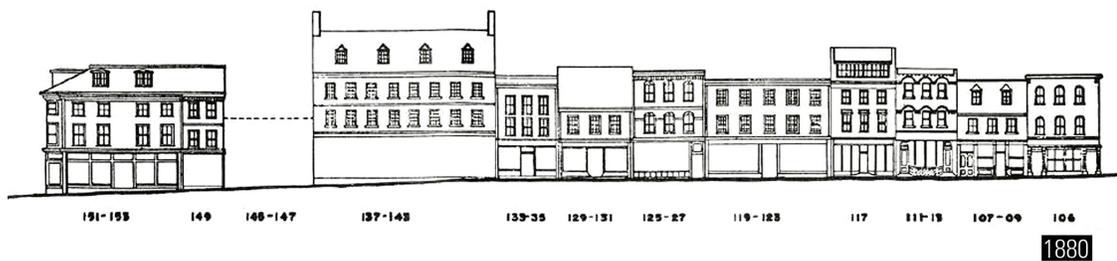
East side elevations of Barrington Street, between George Street (on the left) and Prince Street (on the right), in 1880, 1920, 1980, and 2014; base image from Susan Algie, "Barrington Street," *Society for the Study of Architecture in Canada*.

Nonetheless, Barrington Street, despite its present ragged quality, remains the central main street of Halifax. At present it runs approximately seven kilometres, from the northeastern edge of the Halifax Peninsula, skirting along the coast through the heart of downtown Halifax to Inglis Street in the South End. Proceeding past views of harbour industry, beneath the iconic MacKay and Macdonald bridges, as well as varied land use, it is the most diverse artery leading into the city and has been integral to the image of Halifax.

Image of the Street

The street has been the subject of many seminal architectural and urban planning publications. In *Image of the City*, Kevin Lynch discusses the cityscape possessing a clarity or "legibility" from which inhabitants can recognize and format its parts into a logical assembly. The paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered.[5]

Robert Venturi and Denise Scott Brown brought insight to the ordinary and popular culture of the commercial strip. They determined the role which signs played in conveying meaning and providing order to the landscape.

> The system of the highway gives order to the sensitive functions of exit and entrance, as well as to the image of the Strip as a sequential whole. It allows variety and change along its sides and accommodates the contrapuntal, competitive order of the individual enterprises. There is an order along the sides of the highway.[6]

Barrington Street as observed from the north.

Current parkling lot beside the Dennis Building.

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5   Kevin Lynch, *The Image of the City* (Cambridge: MIT Press, 1960), 96.
6   Robert Venturi, Denise Scott Brown and Steven Izenour, *Learning from Las Vegas* (Boston: MIT Press, 1972), 20.

North

Downtown core

South

Billboards
HRM public park space
C3 industrial zones
Harbour industrial zones
Canadian Forces Base

Barrington Street within the Peninsula; data from Nova Scotia Geomatics Centre 2012.

CITY HALL

GRAND PARADE

ST. PAUL'S CHURCH

DENNIS BUILDING

Original town grid

CORNWALLIS PARK

VIA TRAIN STATION

HALIFAX PORT AUTHORITY
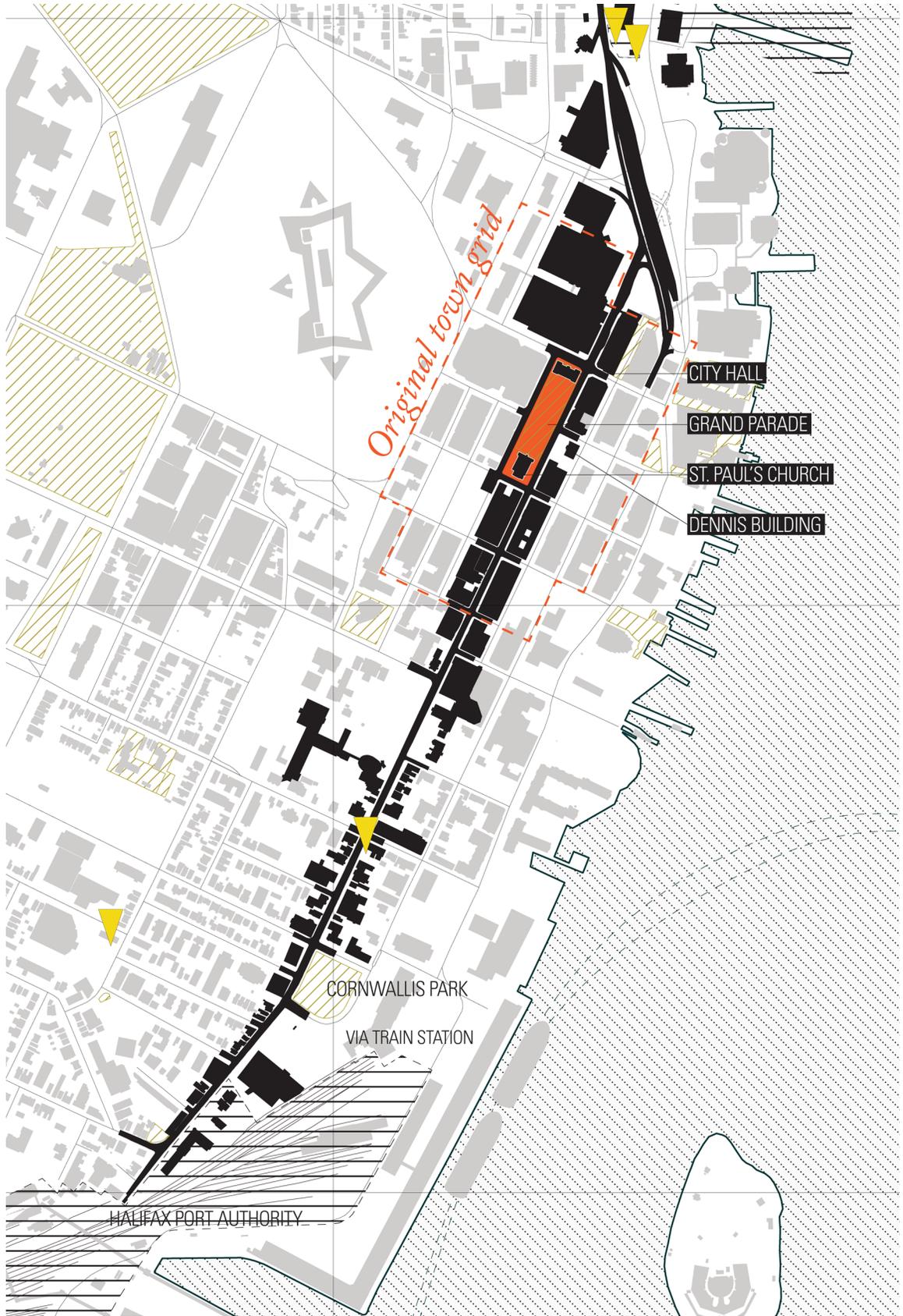
Barrington Street within the Peninsula; data from Nova Scotia Geomatics Centre 2012.

Barrington Street as experienced traveling southbound on the left and northbound on the right.
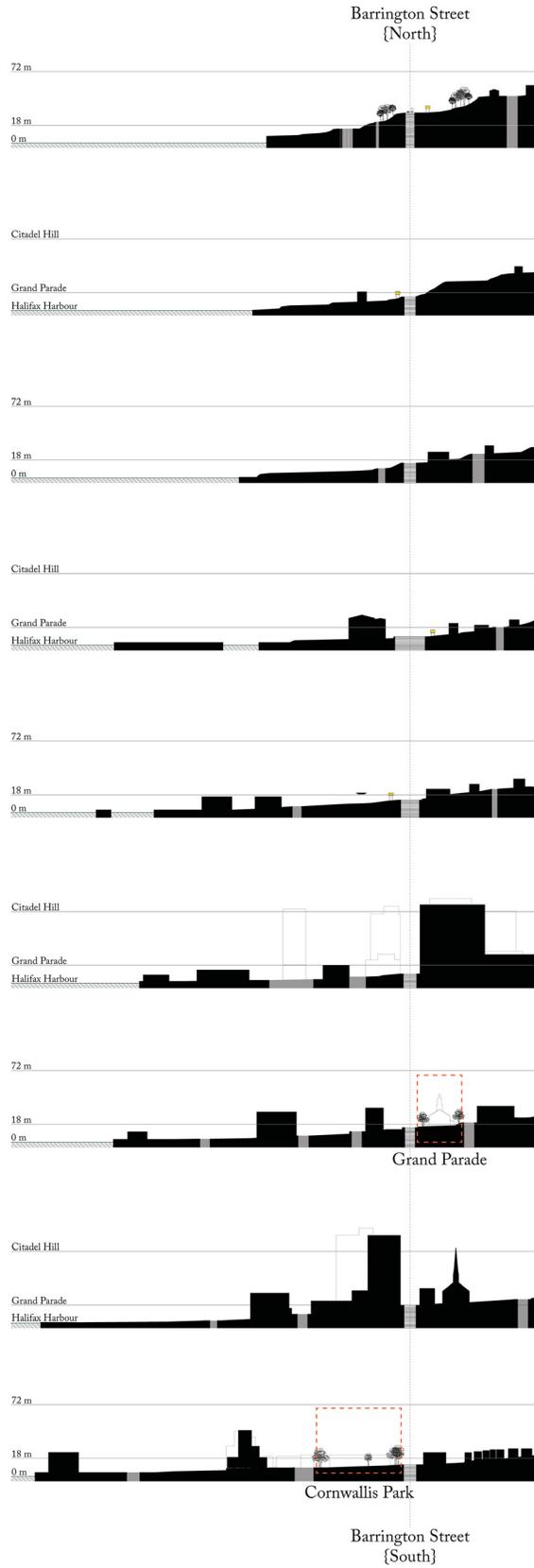
Sections along Barrington Street, from north (at the top) to south (at the bottom).

Towards the end of *Learning From Las Vegas,* Venturi and Scott Brown even positioned the sign to have greater significance than that of the building.

Lynch, Venturi and Scott Brown determine the street to be an extremely important experience in relation to the whole city. The street has a communicative capacity for the traveller, both in its distinct and progressive composition, as well as in its signage along the route.

Billboards, set in the landscape primarily for the audience within the travelling automobile, are communicative surfaces separate from their environment. Communicating both images and text, these regulated surfaces primarily occupy the vertical axis. Their weathering paper faces puncture the visual progression of the street, while their ground connection is overlooked. The highest percentage of billboards on the Halifax Peninsula is found along Barrington Street, indicative of the city's urban growth over time. These billboards reflect a particular appropriation of visual space as well as a high capacity for communication along the major artery. (See Appendix A for in-depth study on billboards.)

Despite Barrington Street's current trends, vague extents, and abundance of billboards, it is still embedded with a rich history as a major route and destination for the city of Halifax. It has remained a *cardo maximus* to the city, playing a vital role of entry as well as experience of the complex urban character of the Halifax.

Architecture as Spatial Agency

> We are in a unique position, I think, to synthesize different factors - social, technical, cultural, political, environmental - and to pose alternative scenarios based on them. The point of borrowing from the languages of futurology and speculative fiction is also to explore the role of architect itself - to reposition the architect as a cultural agitator, one who designs and imagines entire future scenarios, not just discrete buildings. Architects can then start to imagine the implications and the consequences of today's trends, emerging technologies, and emerging ecological conditions. That's the mandate.[7]

In conceiving a means to revitalize Barrington Street and return relevancy and power to its citizens, architectural visions should consider the social, cultural and technological shifts of its present circumstances, and consider pairing up with alternative mediums. Sylvia Lavin sees a saturated, intensive, yet temporary "kissing relationship" between the architectural surface and other visual mediums:

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7   Liam Young, "Superscape," in *Landscape Futures: Instruments, Devices and Architectural Interventions* (Barcelona: Actar, 2013),108.

> Architecture can expand its affective range – and therefore its consequence – by hooking up with more cultural players. And now is the time to do it, because mutual attraction between architecture and other forms of visual practice has never been more intense and more varied.[8]

No other medium is altering daily life more than the mobile device, influencing how citizens are gathering and appropriating public space. Public space, viewed as a common resource for its citizens, has an opportunity to be a social and political agent, to pair up with other relevant media to best address the citizens it serves. To reposition the citizen as both urban spectator and collaborator of public space, is to consider the means by which space and buildings are produced and inhabited.

> The story thus attempts to make a case for architecture as a socially and politically aware form of agency, situated firmly in the context of the world beyond, and critical of the social and economic formations of that context in order to engage better with them in a transformative and emancipatory manner.[9]

Narrative is utilized as a way to address the complexities of Barrington Street within its context of Halifax as both a major route into the city as well as a destination. The narrative also provides a means to mediate between the physical environment of the city and the virtual space of the mobile device through a cast of characters developed from urban cultural fragments and trending hashtags.

Thesis Question

How might architecture collaborate with social media to instigate a new spatial agency for the citizens of Halifax?

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8   Sylvia Lavin, *Kissing Architecture* (Princeton: Princeton University Press, 2011), 22.

9   Tatjana Schneider and Jeremy Till, "Beyond Discourse: Notes on Spatial Agency," in *Footprint* 3, no. 1 (2009): 98.

CHAPTER 2: THE SITE

> Narrative is present in every age, in every place, in every society; it begins with the very history of mankind and there nowhere is nor has been a people without narrative. All classes, all human groups, have their narratives, enjoyment of which is often shared by men with different, even opposing, cultural backgrounds. Caring nothing for the division between good and bad literature, narrative is international, transhistorical, transcultural: it is simply there, like life itself.[10]

Constructing the Narrative

Narrative is an important means in presenting the history and fiction of a place. Both history and fiction must be compelling in different ways, for no history is completely objective, but must be truthful towards the past. A work of fiction is not necessarily true, but has to be believable for the reader to fully engage with it. It can be a critical lens to understand a place through multiple time and spatial scales, while accommodating both the individual and collective memory.

In this thesis work, narrative is a means to address the complexities of Barrington Street in its relation to the city of Halifax. It attempts to compare the embedded historical and physical elements as well as the current virtual social media elements, in the form of text and imagery signifcant to Barrington Street and Halifax. Mapping is utilized to interpret these elements and important axes, providing a new hybridized spatial context for the design strategy. The architecture of the thesis work then seeks the role of a persuasive storyteller,[11] releasing characters into the setting of the architectural site along a speculative plotline.

Axes and Allies

> If maps are essentially subjective, interpretive, and fictional constructs of facts, constructs that influence decisions, actions and cultural values generally, then why not embrace the profound efficacy of mapping in exploring and shaping new realities?[12]

The thesis uses mapping to explore and interpret the narratives along Barrington Street.

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10 Roland Barthes, "Introduction to the Structural Analysis of Narratives," in *Image Music Text*, trans. S. Heath (London: Fontana Press, 1977), 79.

11 James Throgmorton, "Planning as Persuasive Storytelling in the Context of the Network Society," in *The Network Society: A New Context for Planning?* (New York: Routledge, 2005), 126.

12 James Corner, "The Agency of Mapping", in *The Landscape Imagination: Collected Essays of James Corner, 1990-2010*, edited by James Corner and Alison Bick Hirsch (New York: Princeton Architectural Press), 234.

The intent is to comprehend and graphically understand these narratives, sometimes spanning over significant time periods or through various spatial limits. Too often the cartographer's work is perceived as a fixed, factual representation of its subject. James Corner, an American landscape architect and theorist, instead positions mapping to be inherently subjective and interpretive:

> For they are the very formative basis from which projects transpire, and any cartographic projection is embedded with a particular comprehension and synthesis of data and information for any given site. This is why mapping is never neutral, passive or without consequence; on the contrary, mapping is perhaps the most formative and creative act of any design process, first disclosing and then staging the conditions for the emergence of new realities.[13]

The centre of Grand Parade absorbs the intersection of multiple axes and grids. Some are physically visible; others embody cultural or historical references. The most apparent axis is the longitudinal line of symmetry from Saint Paul's Church to Halifax City Hall, running parallel to the Barrington Street axis. Grand Parade also marks the intersection of Barrington Street and George Street down to the Halifax Harbour. These two intersecting lines, its *cardo* and *decumanus*, are major elements in the original street grid laid out in 1749.

The panoramic view from the Citadel reflects maximum visibility across the Grand Parade to the Halifax Harbour. The present star-shaped fortress was the fourth in a series of fortifications situated on the hill, with no geometric alignment with the original city grid.

Halifax has also been culturally linked to three international cities, known as sister cities: Hakodate, Japan was chosen in 1982 for its maritime location and industry, similar star-shaped fortress, and historical tradition of being a major international port. Campeche, Mexico was chosen in 1999, being of similar size, a capital of state, and rich in historical tradition. Finally, Norfolk, Virginia was added in 2006, reflecting the shared economic ties to the Armed Forces and pride in military history.

The last grid system is the topographic character of the city. The parade naturally slopes from the southwest corner of the parade down to the northeast corner at the junction of Barrington Street and Duke Street. Grand Parade was leveled off at the turn of the twentieth century.

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13 Ibid., 200.

Grids and axes across the Halifax Peninsula; data from Nova Scotia Geomatics Centre 2012.

Duke Street

Halifax City Hall

Hakodate, Japan 742 / 10,109 km

North

North East

West

Citadel Hill   Carmichael Street   George Street   Halifax Harbour 1749

Norfolk, Virginia 2006 / 1,575 km

South West

East

Campeche, Mexico 1999 / 3710 km

Grafton Street

Argyle Street

St. Paul's Church

Barrington Street

Granville Street

Prince Street

NOVA CENTRE //
in construction

ROY BUILDING //
in construction

South

South East
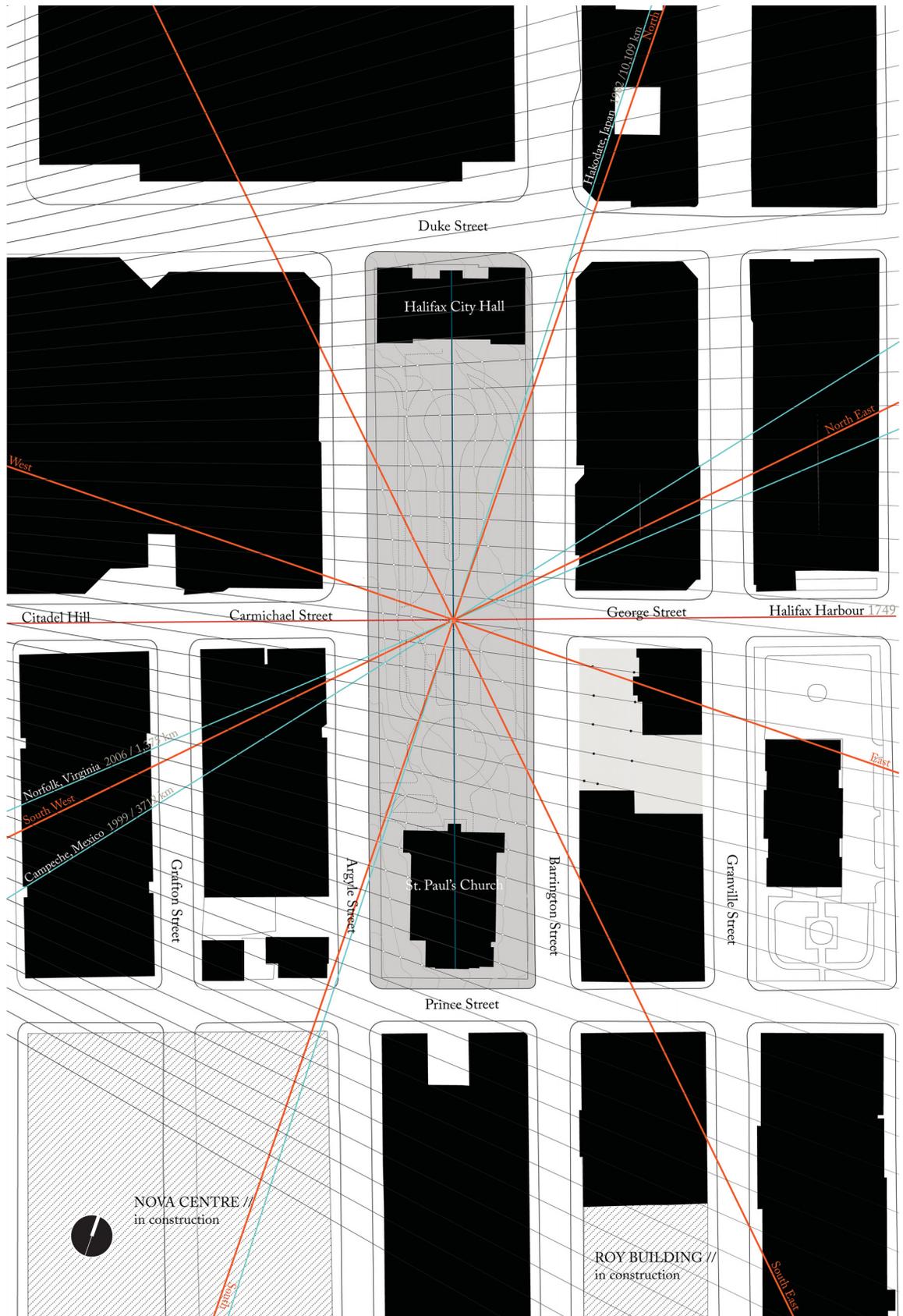
Grids and axes within Grand Parade.
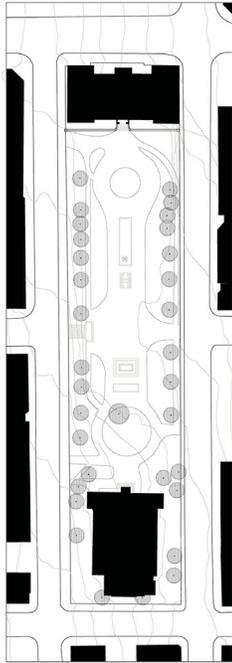
Existing condition
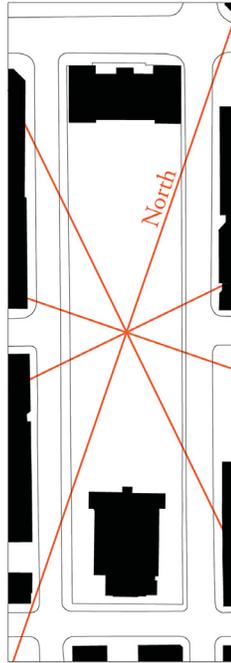
Cardinal directions

Original topography
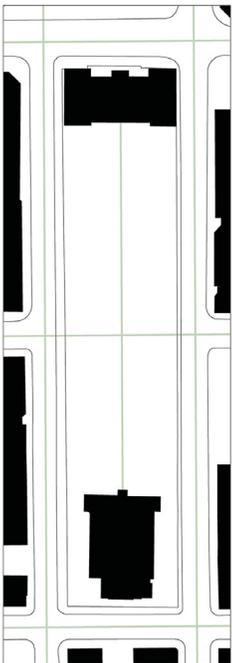
City grid of 1749
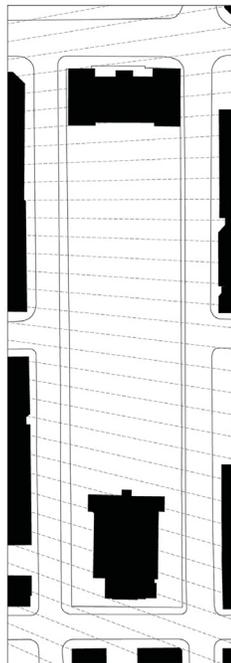
Radial views from the Citadel
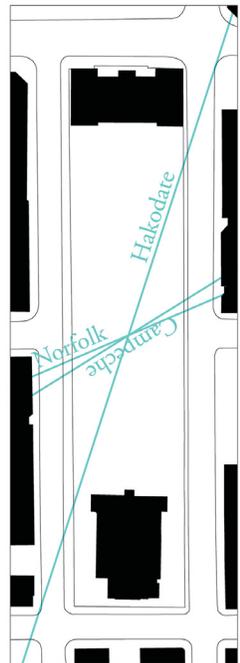
Sister cities

Separated grids and axes within Grand Parade.

Mobile Devices and Hashtagging Halifax

Contrasting the physical presence of the *cardo maximus* within its city is the present day personal mobile device. The mobile device is altering how individuals experience and navigate the city. Whether in the hands of a tourist or resident, it plays an important role in roaming and soaking up the information of the city. The mobile device and its social media applications are also influencing how citizens are gathering and appropriating public space. People can simultaneously be present within the virtually networked public spaces of a social media platform and the physical space of the city.

The mobile device surpasses the billboard's stationary location as well as its content. The billboard relies upon the vertical axis for orientation and placement along the road. The mobile device, however, has no primary axis, and can be used both vertically and horizontally, its orientation based on the physica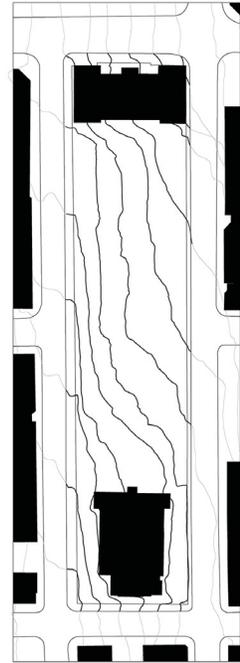l position of the user. The content of the billboard is designated for common consumption, whereas mobile media consumption is portable and more personal.

Social media applications in turn are altering how we perceive and capture the city. The mobile device allows its user to spontaneously capture and catalogue their interaction and perception of their physical urban environment. It is a means of recording and projecting the user's own personal image of the city. Instagram (Instant + telegram), for example, is a social media platform for posting and sharing photographs. The interface of Instagram organizes the incoming images from the plethora of followed users. The user can scroll through the images at leisure, then "like" or comment on favourite images. Similarly, Twitter is a social media platform primarily for text in which people virtually mingle within different networks of followers. Content is limited to the number of characters per tweet and can be re-tweeted or directed at a specific user using the prefix @ before a user's identity. In both of these applications there is a particular degree of play, as the user posts and comments on other posts. Other social media mobile applications are game-oriented within the physical setting of the environment, such as Geocaching.

I conducted a study of the hashtag "halifax" within the social media application Instagram, as it communicates a current set of images for the city of Halifax. Over a short period of time, images associated with #halifax were gathered and catalogued along with their other

Mapping Halifax based on uploaded imagery and hashtags; public images from Instagram.

descriptive hashtags. Repetition of certain words presented a temporary hierarchy and significance to certain words, revealing consistent themes and more temporary trends.

Future Networks

The city of Halifax is planning for significant active transportation and connectivity developments which will both impact Barrington Street. Starting in summer 2015, for a five-year trial period, the city is offering free Wi-Fi zones: aboard the harbour ferries, along the waterfront boardwalk, the retail portion of Spring Garden Road, on Citadel Hill, downtown Barrington Street and around the Grand Parade. The municipality views public Wi-Fi as a significant "first step" opportunity to enhance the experience of residents and visitors and support Halifax's growing reputation as an innovative, forward-thinking city through the implementation of smart city initiatives.[14] The free Wi-Fi zones over time could see increased pedestrian traffic and commercial activity, while intensifying their perception as destinations.

Projected expansions of the HRM Active Transportation Network have strategized Barrington Street to accommodate future on-road cycling lanes, as well as off-road multi-use trails, which will connect the waterfront boardwalk to the existing partial routes south of the Macdonald Bridge and farther north along the Bedford Highway. These future routes would enable pedestrians and cyclists to safely travel along the whole length of Barrington Street. It would also provide direct routes into the downtown core for active commuters.

Program

In proposing a new narrative for Barrington, two urban spatial conditions seek a new partnership for spatial agency: the square of Grand Parade, being the central, highly charged political and social space, and Barrington Street, the central yet currently fragmented route for the city. The design proposal sets out to intensify the roadside visual communication infrastructure along Barrington, coupling media and public space together to create hybrid spatial setting for people to collectivize.

Building upon the proposed downtown Wi-Fi zones and the relevant medium of the mobile device, a virtual layer is superimposed upon the entire length of the street in the form of a

14 Halifax Regional Municipality, "RFP # P14-360," December 16, 2014, 10.

Proposed free Wi-Fi zones and active transportation routes along Barrington Street.

Wi-Fi corridor which provides unity while intensifying the capacity for communication along the route. A city-wide app is provided for citizens to promote and discuss their individual and collective views for the city. The street becomes a hotline for citizens to promote what they believe to be crucial to the image of Halifax.

Urban growth over time has dissolved the original fortification walls, the distinct boundary of the original town of Halifax. In the spirit of Robert Venturi and Denise Scott Brown, there is a certain provocation in reconsidering the present experience of entry and exit of the city in relation to historical conditions. We look backward at history and tradition to go forward; we can also look downward to go upward.[15] In his essay "Spatial organization and social change in Roman towns," Dominic Perring distinguishes that town walls provided a clearly defined boundary to an urban settlement. Ancient city gates located at specific points along an outer fortified wall were distinguishable access points into the city. The space outside the city gate would also have a relationship to the centre of the town.

> The towns had been laid out with a single focus around a central forum, agora, or group of public buildings, but secondary foci had developed, most commonly outside gates, as the town grew. The result of this process was to ensure that visitors to these towns were immediately drawn to public space and a path to the centre of town was clear, despite any irregularity in the street plan caused by the urban growth.[16]

The city gate also acted as a navigational device, drawing people towards a major route which led to the centre of the city. The architectural emphasis of these towns leaves little doubt that visitors were expected and welcomed into the urban areas.[17]

Barrington Street's north and south ends are transformed into distinctive "gates" which provide access to the network and app, whether for citizen or tourist. Grand Parade is deconstructed and reconstructed to better serve as a public space for intentional democracy, cultural experience and exchange. The adjacent vacant lot at the southeast corner of Barrington Street and George Street once again realizes productivity beyond a parking lot. Juxtaposed to the church and government buildings on Grand Parade, a new Parade Palace provides a facade and physical space for citizen agents to gather and set about to create their own image of the city.

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15 Venturi and Scott Brown, *Learning from Las Vegas*, 3.

16 Dominic Perring, "Spatial organization and social change in Roman towns," in *City and Country in the Ancient World* (London: Routledge, 1991), 276.

17 Ibid.

RECURRING THEMES

collective
domestic
surface
monolith
scale
symmetry
promenade
assembly
perch
floppy
soft
edge
stacked
repetition
tunnel
process
fresh
horizon

A city wide app

my HFX

HAL-Fi
Wi-Fi corridor

BARRINGTON STREET

NORTH GATE
NG 01 WINDSHIELD IMAGE SEQUENCE
NG 02 SPEED REDUCER

GRAND PARADE
GP 01 EVERYONE'S SQUARE *{major}*
GP 02 CIRCULATION SLICE
GP 03 PLANTED SKIN
GP 04 INFORMATION LIGHT MASTS

PARADE PALACE
PP 01 STRUCTURAL REMAINS
PP 02 STOREFRONT SHOWCASE
PP 03 PIERS + PATIOS
PP 04 HULL HALL
PP 05 HUDDLED DRAWERS
PP 06 CROW'S NEST

SOUTH GATE
S 01 EVERYONE'S SQUARE *{minor}*
SG 02 CIRCULATION SLICE
SG 03 INFORMATION LIGHT MASTS

TEXT

local
tattoo
sky
evening
explore
northend
craftbeer
waterfront
community
sunset
art
southend
roadtrip
travelgram
coffee
food
travel
citadel
visit nova scotia
tunnel
supermoon
construction
graffiti
library
street photography

HALIFAX

Programming content; base images from Instagram.

CHAPTER 3: A MOBILE NARRATIVE

Barrington Street Hal-Fi Corridor

> Society is experiencing a shift in the meaning of public spaces, and the means by which people engage in it. Our public spaces are more and more embedded with network connection. One no longer "enters" the web - it is all around us.[18]

The design begins with a series of transmitters positioned along Barrington Street to form the Hal-Fi Wi-Fi corridor. A mesh Wi-Fi strategy is employed to maintain a resilient and efficient signal for the occupants and travellers along Barrington Street. Transmitters will be placed along the seven kilometre route at small intervals, discreetly fixed upon existing billboards and buildings which are linked to a ground line. The Hal-Fi corridor creates a network in which electronic devices can access broadband internet. The wireless transmitter receives information from the internet via the broadband connection, converts the information into radio signals and then releases it. In many ways, a transmitter can be compared to a micro radio station, dispersing signals sent from the internet. The audience for the transmissions is any type of electronic device which receives the radio signal through a wireless adapter.
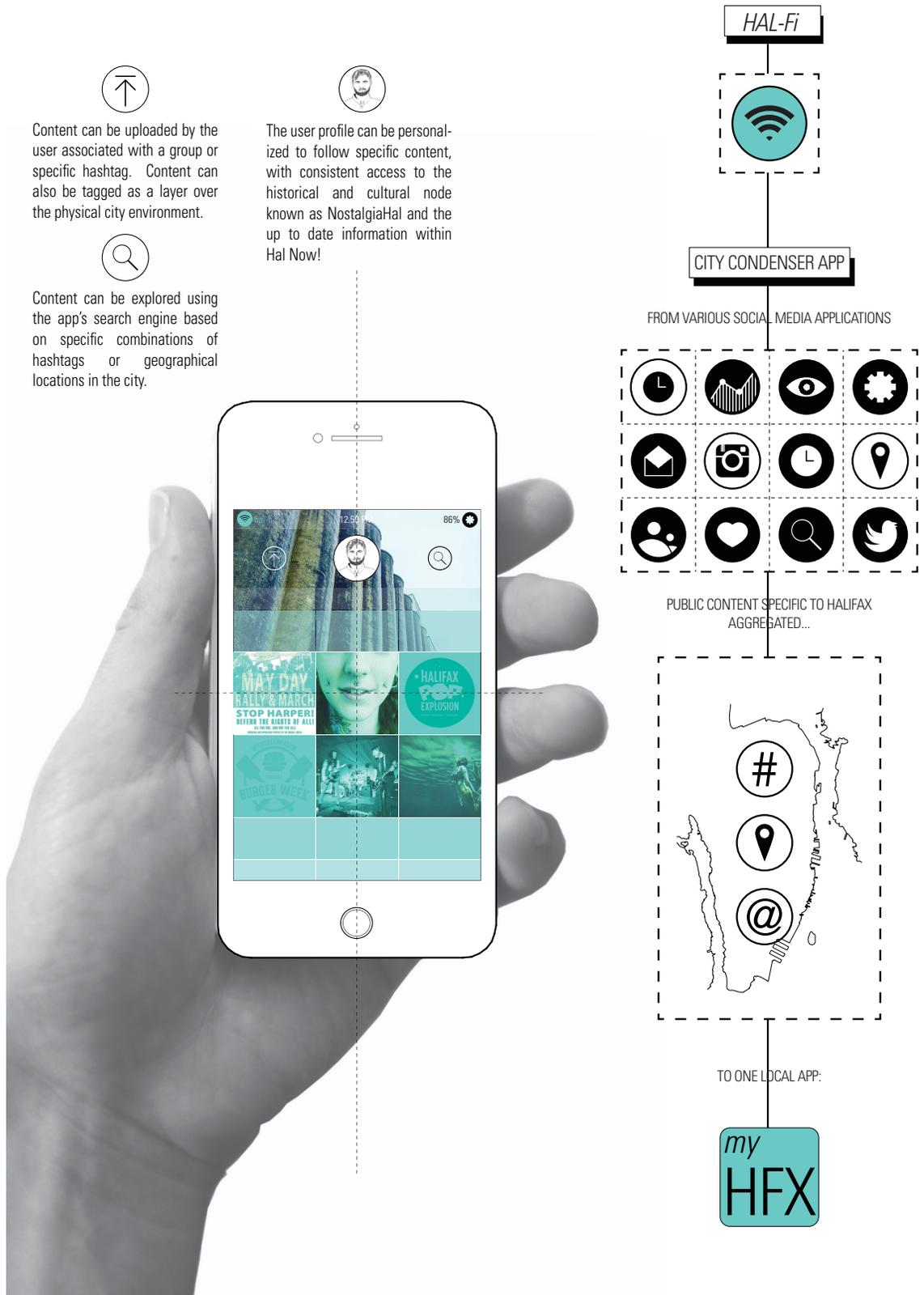
The myHFX App

> Architecture's most kissable aspect is its surface. Space is hard to get a hold on. Structure has historically been inadequately pliant. Geometry – well, who really wants to kiss a square? Architecture also has more surface and more kinds of surface than anything else: outside, inside, soft and hard, there's a surface for everyone. Finally, surfaces are where architecture gets close to turning into something else and therefore exactly where it becomes vulnerable and full of potential.[19]

The medium of the app then seeks to develop a non-unified framework for dialogue between the players within the city, where difference is celebrated, not neutralized. The agenda of the myHFX app is to be an open space where citizens in the city are able to evaluate and collaborate upon the development and experience of the urban fabric. The myHFX app is the starting point for citizens to find a hybrid political and social framework for the production of architectural thought outside the constraints of formal government policies. It encourages entrepreneurial attitudes from citizens for new spatial agencies.

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18 Adriana de Souza e Silva and Jordan Frith, "Location-Based Mobile Games," in *Playful Identities, The Ludification of Digital Media Cultures,* edited by Valerie Frissen et al, 169-180 (Amsterdam: Amsterdam University Press, 2015), 177.

19 Lavin, *Kissing Architecture*, 26.

Content can be uploaded by the user associated with a group or specific hashtag. Content can also be tagged as a layer over the physical city environment.

Content can be explored using the app's search engine based on specific combinations of hashtags or geographical locations in the city.

The user profile can be personalized to follow specific content, with consistent access to the historical and cultural node known as NostalgiaHal and the up to date information within Hal Now!

HAL-Fi

CITY CONDENSER APP

FROM VARIOUS SOCIAL MEDIA APPLICATIONS

PUBLIC CONTENT SPECIFIC TO HALIFAX AGGREGATED...

TO ONE LOCAL APP:

my HFX

The myHFX App interface and strategy.

Evaluation and dialogue are visualized through live feeds, trying to maximize the inter-action between competition and cooperation among government, stake-holders, and cit-izens. Information visualization is effective in focusing the interests in the design and helping to produce variety in design alternatives.

The myHFX app is not a separate platform alongside Instagram, Twitter, Tumblr, Face-book, Snapchat, etc., but rather collects and consolidates particular content for the city of Halifax into one place. Whether citizen or tourist, the app is available for anyone within the city to access and contribute to the content. It is a way of engaging others with shared ideas and interests within a public space forum. The app is a platform for citizen voice and initiative, a combination of text and imagery to open dialogue about events, culture, activities, etc. As content is gathered and catalogued based on hashtag labels and GPS coordinates, it is also a way to trace recurring themes and establish a different public cul-tural archive. It intends to reconcile the scale of the city with the scale of the hand.

The Characters

As a preliminary test, the myHFX app is experienced and navigated differently by four different characters, whose personas represent fragments of the city. Along Barrington Street each character begins the day on one part of the Peninsula, using the App to de-velop their personal narrative of the city. The fictional characters provide the overlap be-tween the virtual and physical space of the city, as they are also associated with a hashtag significant to Halifax.

#gottingen
    #hfxnorthend ----------

gloriapalmer Public meeting today to discuss progress on the development plan. We need feedback!
andyrose @gloriapalmer It is critical that the design reflects the community.
    #autumn

Gloria is a City Councillor representing District 8, the North section of the Peninsula. She commutes from Bedford every day and is coordinating a major north end development plan which will support the creative culture of the community.

#citadelhill
    #hfxpoli -------------------

stanweaver @hfxcityhall It's time the City take a critical action on fair wages.
bruce @stanweaver We'll be there!

Stan is a born and raised Haligonian, who has been working at the Citadel as a grounds keeper for the last 15 years. As a continuing effort to ensure the rights and respect for himself and his city, he is organinzing a demonstration in protest of minimum wage and fair employment policies.

#handmade
    #hfxlocal --------------

poppyfielding Working on a few new textile designs for the upcoming show! So excited!
    #coffee

Poppy is a recent textile grad from NSCAD. Her final work gained popularity after she was featured in an installation in Grand Parade. She was one of the grads chosen to have a temporary studio space in the Parade Palace. She has been using digital programs to design her fabrics.

#craftbeer
    #hfxpopexplosion ------

mcguire Pumped to play for Halifax again! #halifaxpopexplosion #eastcoastrocks #livingthedream
    #homeawayfromhome

Originally from Toronto, Mcguire fell in love with Halifax during the band's first tour around the east coast. He hates flying and decided to take the train for the Halifax Pop Explosion Festival. He really digs Joel Plaskett and the micro-brewery culture of the city.

Introducing the characters.

Welcome!

70 km > 50 km

NORTH GATE
// dense billboard industrial zone

HAL-Fi

CITY CONDENSER APP

FROM VARIOUS SOCIAL MEDIA APPLICATIONS

PUBLIC CONTENT SPECIFIC TO HALIFAX AGGREGATED...

#
@

TO ONE LOCAL APP

my HFX

#hfxnorthend

#gottingen
gloriapalmer Public meeting today to discuss progress on the development plan. We need feedback!
andynose @gloriapalmer It is critical that the design reflects the community.
#autumn

Gloria is a City Councillor representing District 8, the North section of the Peninsula. She commutes from Bedford every day and is coordinating a major north end development plan which will support the creative culture of the community.

Another long day...

But we need to finalize the plan.

#hfxpoli

#citadelhill
stanweaver @thecityhall It's time the City take a critical action on fair wages.
bruce @stanweaver We'll be there!

Stan is a born and raised Haligonian, who has been working at the Citadel as a grounds keeper for the last 15 years. As a continuing effort to ensure the rights and respect for himself and his city, he is organizing a demonstration in protest of minimum wage and fair employment policies.

Heading to the Parade for the protest...

We need to make this happen!

#hfxlocal

#handmade
poppyfielding Working on a few new textile designs for the upcoming show! So excited!
#coffee
tannis @poppyfielding Great session today, you work that window!
poppyfielding @ tannis Thanks so much, we had a lot of fun swapping tools and techniques with the ink crew.

Poppy is a recent textile grad from NSCAD. Her final work gained popularity after she was featured in an installation in Grand Parade. She was one of the grads chosen to have a temporary studio space in the Palace to develop and showcase her work. She has been using digital programs to design her fabrics.

PARADE SQUARE & PALACE
// Grand Parade & adjacent parking lot

Welcome!

SOUTH GATE
// Cornwallis Park

Awesome turnout at the pop up show.

Always inspired by the artwork.

#hfxpopexplosion

mcguire @redknight Nailed that solo! Boris is my hero.
bushyeyebrows So glad you came out west!
mcguire @bushyeyebrows Thanks! I can't wait to come back, you guys were a great crowd.
greendot @mcguire Great show last night!
#homeawayfromhome
mcguire Pumped to play for Halifax again! #halifaxpopexplosion #eastcoastrocks #livingthedream
#craftbeer

Originally from Toronto, Mcguire fell in love with Halifax during the band's first tour around the east coast. He hates flying and decided to take the train for the Halifax Pop Explosion Festival. He really digs Joel Plaskett and the micro-brewery culture of the city.

Too bad we weren't playing here...

At last!! Hello Halifax!

Bus stops
Free Public Wi-Fi Zones
Barrington Hal-Fi Corridor
Bus Routes
Railway Line

The characters and their movement toward the Grand Parade and Palace.

CHAPTER 4: DESIGN

> From the palisade to the screen, by way of stone ramparts, the boundary-surface has recorded innumerable perceptible and imperceptible transformations, of which the latest is probably interface. Once again, we have to approach the question to the City in a new manner. For example, does the metropolis possess its own facade? At which moment does the city show us its face?[20]

Urban Media Gates

From ancient Roman towns back to the current urban condition of Halifax, two architectural gates re-establish the outer thresholds of Barrington Street. Located at the northern and the southern ends of the road, the gates provide both physical and virtual entry into the city. Each gate provides a distinct physical experience by the citizen or traveller through motion. Each gate also supplies the first access point of the Wi-Fi network embedded along Barrington Street and the myHFX App. In superimposing the virtual social media platform onto the physical street, each gate attempts to engage and mobilize citizens who pass through it.

North Gate: Barrington Street / Glebe Avenue

> The Edge of a City projects probe phenomenological dimensions in the formation of new urban spaces, in order to transform the tangled waste at the fringes of our modern cities and build new urban sectors with programmatic spatial and architectural richness. Beyond this horizon we are seeking a moving territory between the extremes of idea and physical experience.[21]

The North Gate occupies a zone along the northeastern part of Barrington Street, immediately after passing under the Mackay Bridge. This particular portion of Barrington follows a gentle slope with vegetation on both sides. A vacant gravel parking lot is situated off the right shoulder, followed by access to Africville Road on the left shoulder. The zone is composed of a steady sequence of ten billboards, mostly on the harbour side of the road. Their quantity and proximity to one another contribute to a unique rhythmic quality between image and distance within the peninsula. The North Gate is also a speed reduction zone from 70 kilometres per hour to 50 kilometres per hour. Travelling at the indicated speed through the gate requires approximately 30 seconds, the same length as a typical television commercial. The North Gate is where the proposed Hal-Fi mesh network

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20 Paul Virilio, "The Over Exposed City," in *Rethinking Architecture: A Reader in Cultural Theory*, edited by Neil Leach (New York: Routledge, 1997), 382.

21 Steven Holl, *Edge of the City* (New York: Princeton Architectural Press, 1991), 15.

A view of the North Gate site, looking south along Barrington Street.

A view of the North Gate site, looking north with the Mackay Bridge in the background.
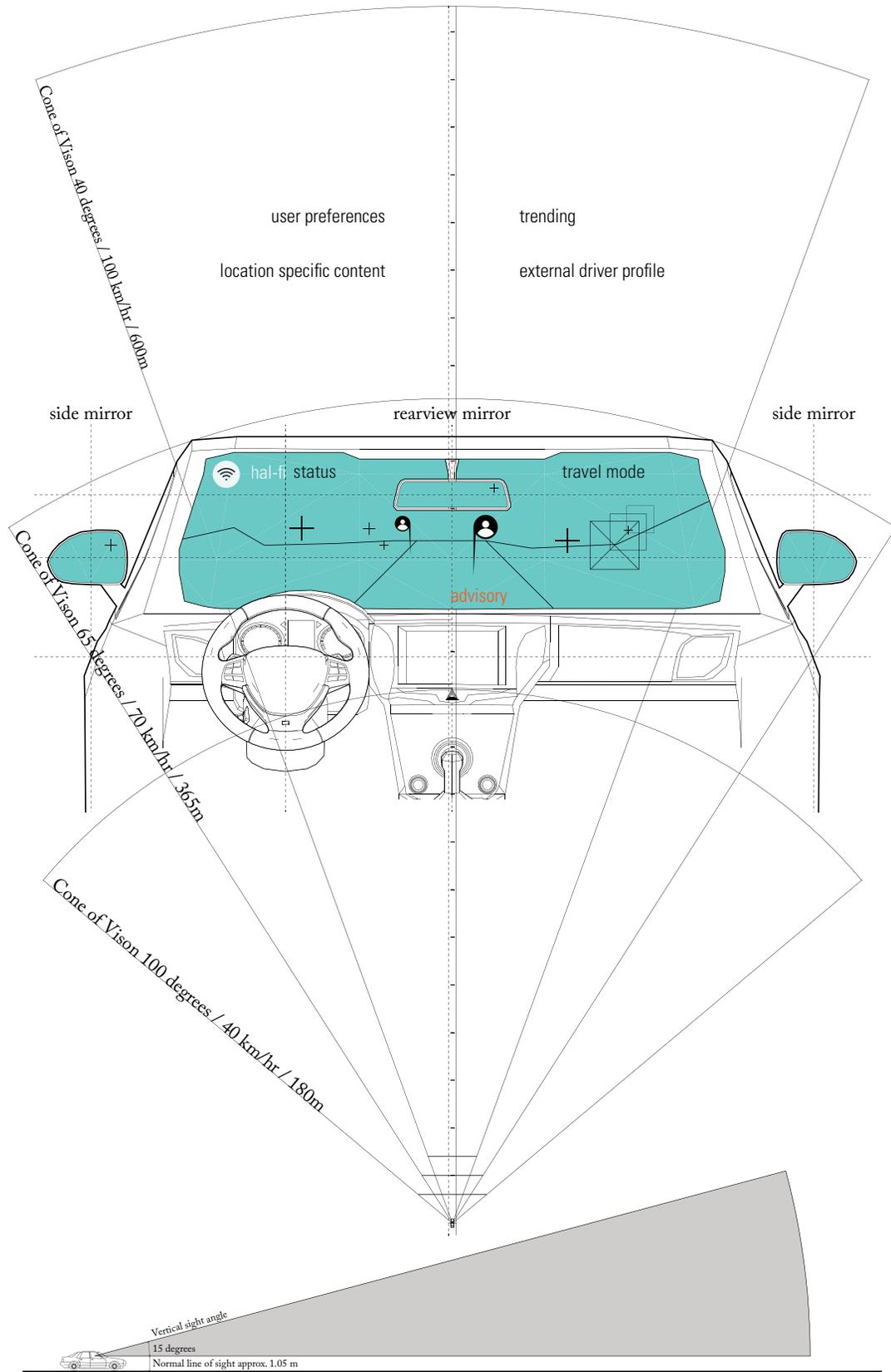
begins. The series of transmitters are situated within an elevated zone above the road surface, fixed to existing billboard structures and commercial buildings along the route.

In strategizing toward the future of roadside signage, the moving vehicle and the flow of civic information form a new partnership. The Wi-Fi corridor engages the driver and passenger through the myHFX app, graphically visible within the frame of the windshield through the use of a heads-up display and the frame of the personal mobile device.
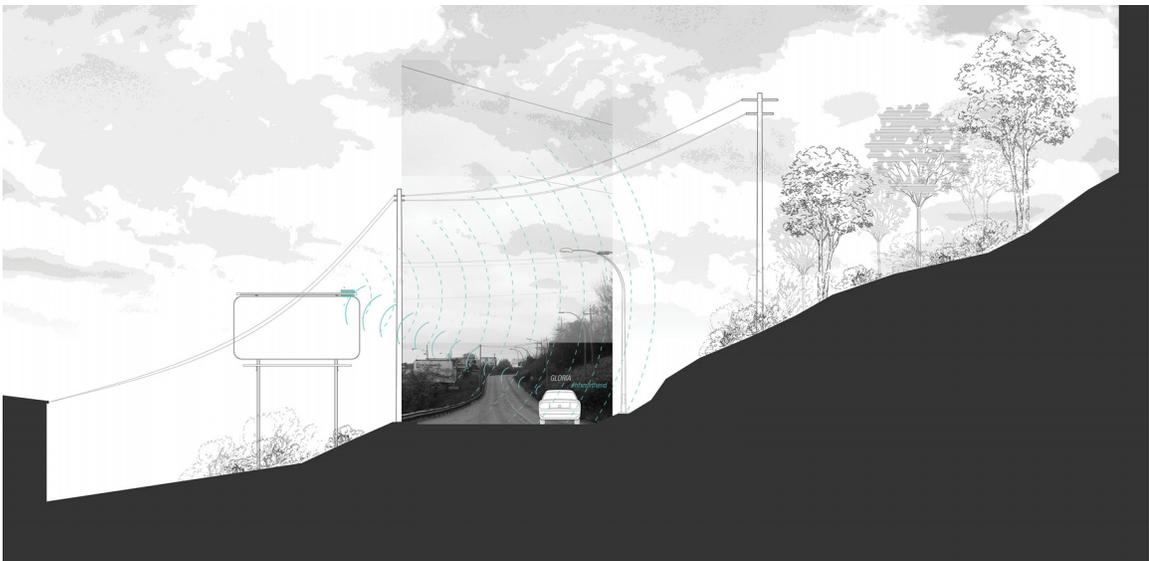
Section through the North Gate.

A heads-up display, also known as a HUD, refers to any transparent display which presents data or information without requiring users to avert their gaze from their usual viewpoints. Initially developed for military aviation, HUDs are used in commercial aircraft, automobiles, etc. The origin of the name stems from a pilot being able to view information

user preferences

trending

location specific content

external driver profile

Cone of Vison 40 degrees / 100 km/hr / 600m

Cone of Vison 65 degrees / 70 km/hr / 365m

Cone of Vison 100 degrees / 40 km/hr / 180m

side mirror

rearview mirror

side mirror

hal-fi status

travel mode

advisory

Vertical sight angle

15 degrees

Normal line of sight approx. 1.05 m

Windshield interface through the North Gate.
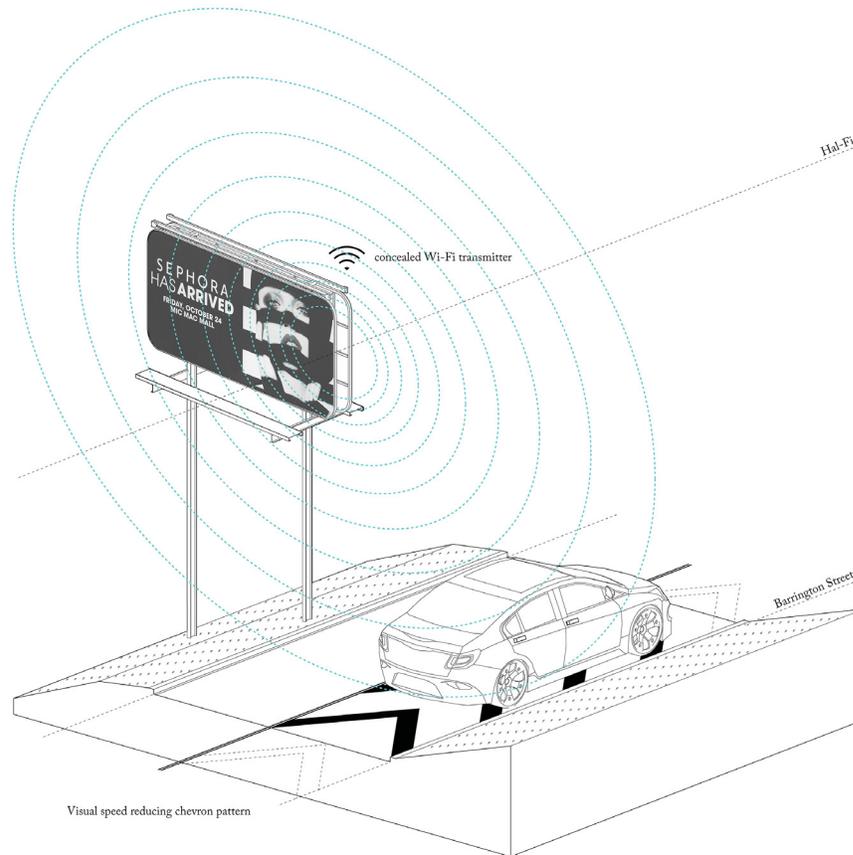
Diagram of the North Gate.

with the head positioned "up" and looking forward, instead of angled down towards lower instruments. Another advantage of the HUD is that the pilot's eyes do not need to re-focus between the distant view outside and the cockpit instruments inside. A typical HUD contains three primary components: a projector unit, a combiner, and a video generation computer. Recently, innovative work for HUD systems has implemented nanoparticles into a transparent medium.

> These tiny particles can be tuned to scatter only certain wavelengths, or colours or light, while letting all the rest pass right through. That means the glass remains transparent enough to see colours and shapes clearly through it, while a single colour display is clearly visible on the glass.[22]

Road signage and viewer engage in an active dialogue. Information is projected onto the windshield as the driver travels through the North Gate. The system is personalized,

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22 David Chandler, "Seeing things: A new transparent display system could provide heads-up data," *MIT News* (2014), http://news.mit.edu/2014/seeing-things-a-new-transparent-display-system-could-provide-heads-up-data-0121.
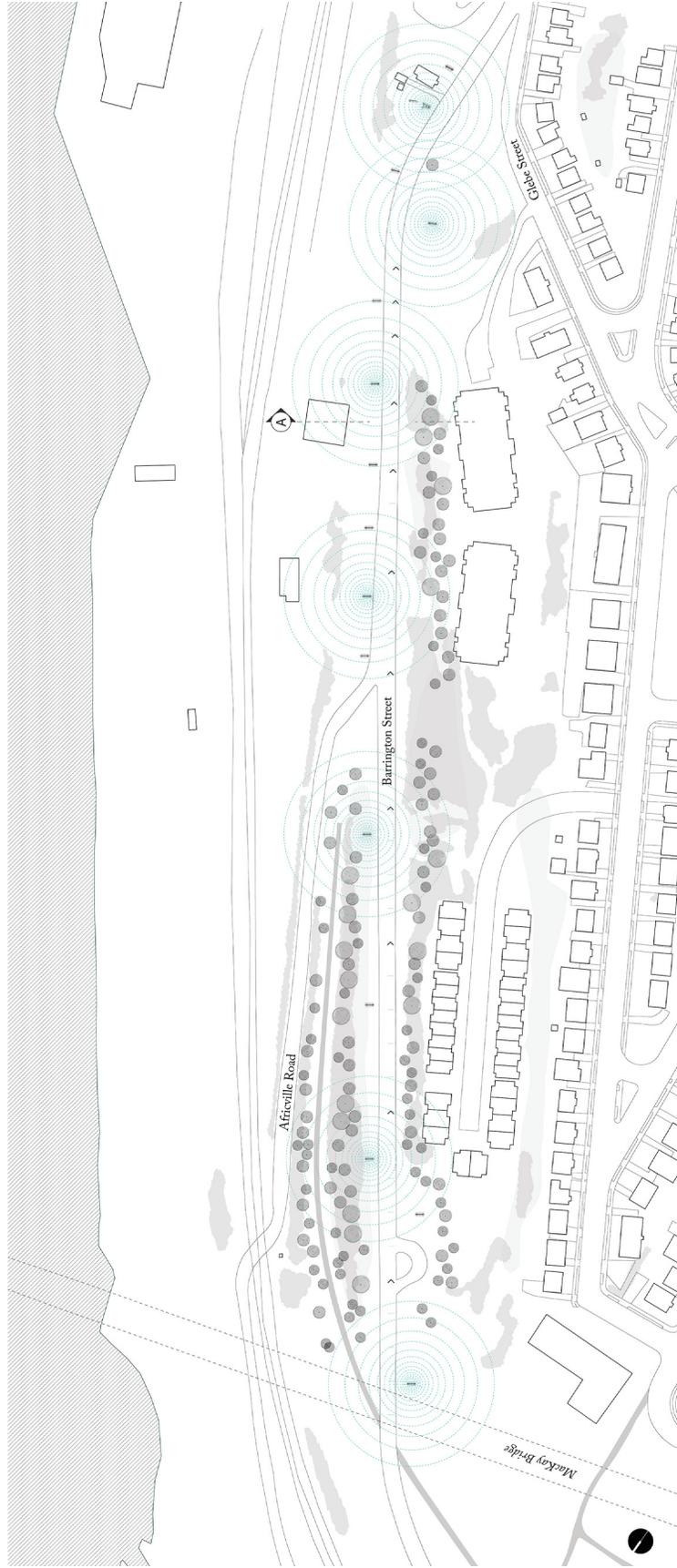
Site plan of the North Gate.
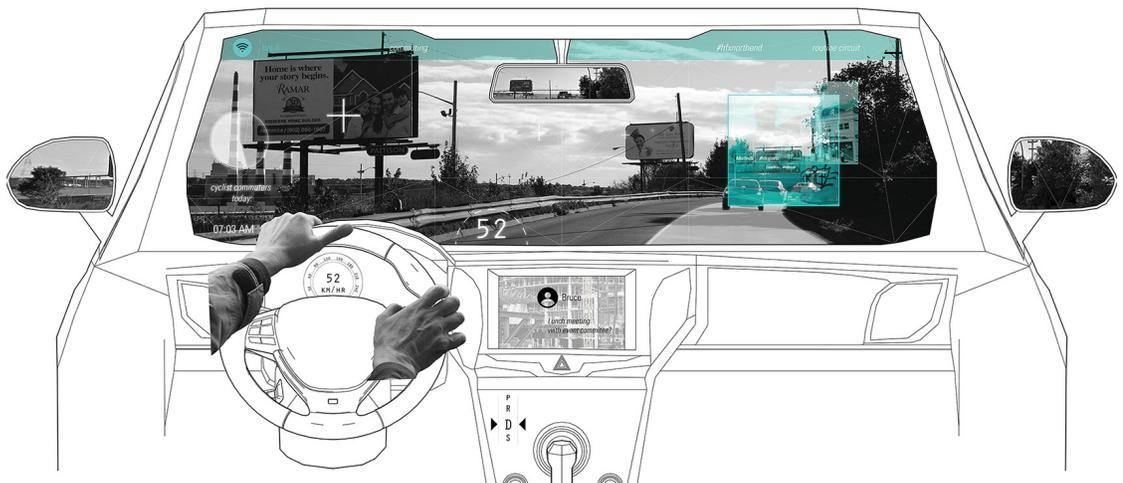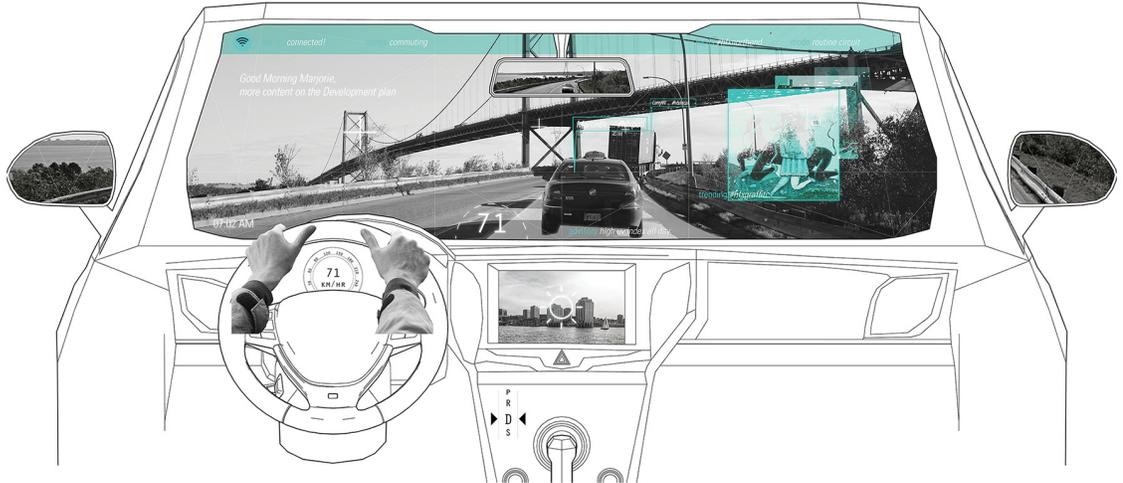
A sequence of Gloria's windshield interface through the North Gate; starting at the top.

Photograph of the North Gate site model.

Close-up photograph of the existing billboards and new Wi-Fi transmitters at the North Gate.

based on the occupant's preference for mode of travel and content, with the exception of general municipal advisories for everyone. Content is displayed in sequence, sometimes referencing trending content, a search or physical landmarks in front of the vehicle. Other myHFX users are also visible as they travel in front or behind. Finally, speed reducing chevrons are distributed along the surface of the North Gate to encourage deceleration.

South Gate: Barrington / Cornwallis Park

The site for the South Gate is an existing public square near the southern end of Barrington Street. It is situated adjacent to the passenger rail station and hotel as well as a large retail plaza which includes a supermarket and gas station. Originally built by the Canadian National Railway in the 1920s, the square served as an integral part of the station and hotel complex. Today the site is a significant pedestrian thoroughfare from the Seaport Market, where visiting cruise ships anchor in Halifax from spring to late autumn. Though travelling by train is less common today than by vehicle, a certain symbolic significance still remains as the rail station provides a portal to the city at the eastern end of Canada's railway network. It also has a unique relationship to other historically rich public spaces in the city.

> The Downtown Halifax Secondary Municipal Planning Strategy identifies Cornwallis Park as an important urban park and strategic piece of public open space functioning as the southern gateway park into downtown and the third anchor point in the triangle of public open space which includes the Grand Parade and Public Gardens.[23]

Cornwallis Park in front of hotel and rail station. Photograph by W.R. MacAskill, 1931.
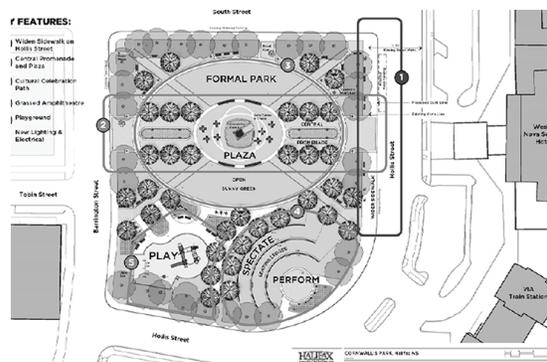
Proposed renewal plan for Cornwallis Park, 2015; HRM and Ekistics Plan + Design.

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23 Halifax Regional Municipality, "Tender #15-092," Specifications for Cornwallis Park Redevelopment Phase 1, September 2, 2015, 8.

light source, set at datum of the square in Grand Parade.

concealed Wi-Fi transmitter

screen
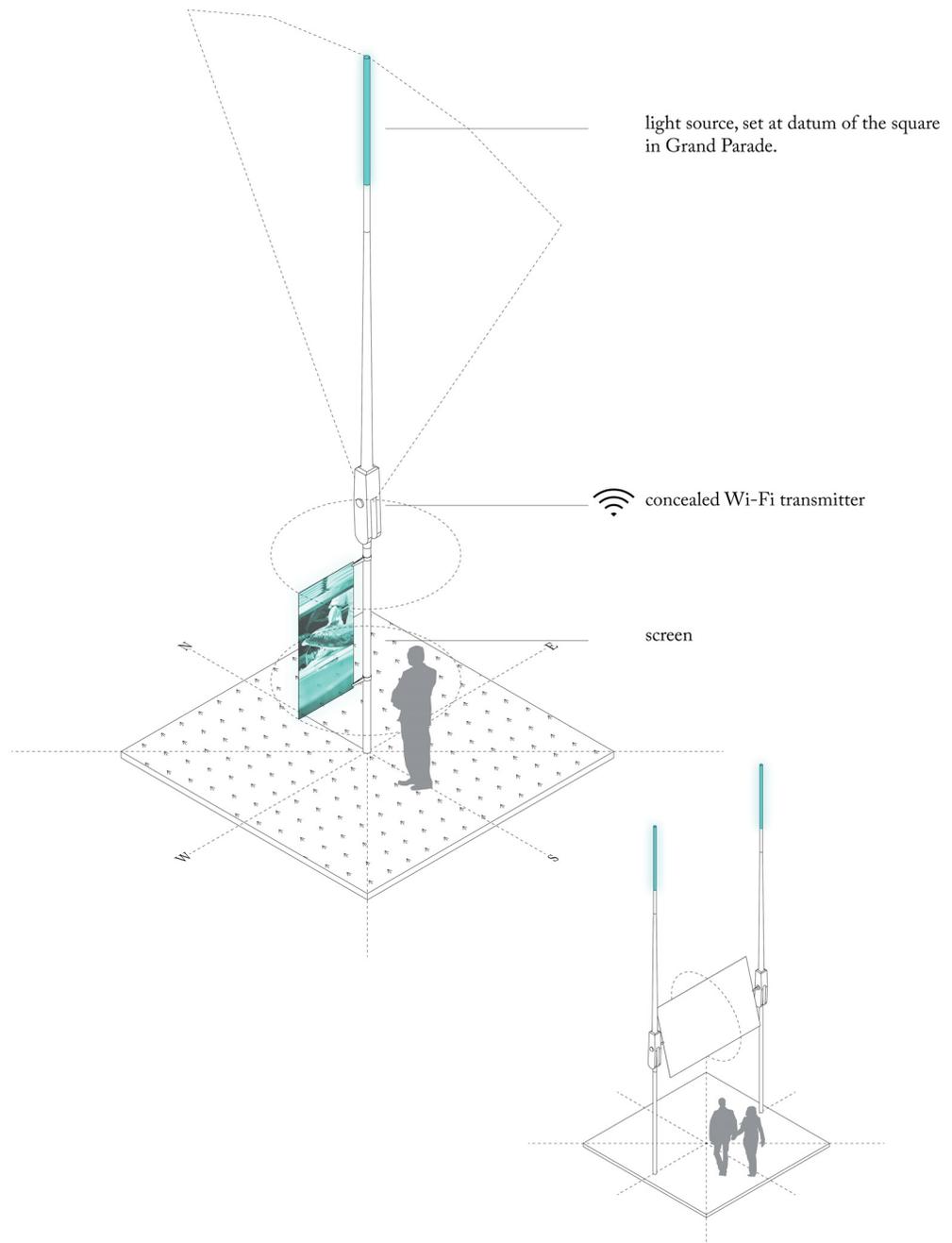
A diagram of a lightmast at the South Gate, demonstrating its scale, parts and variation.

View of the new central square for the South Gate.
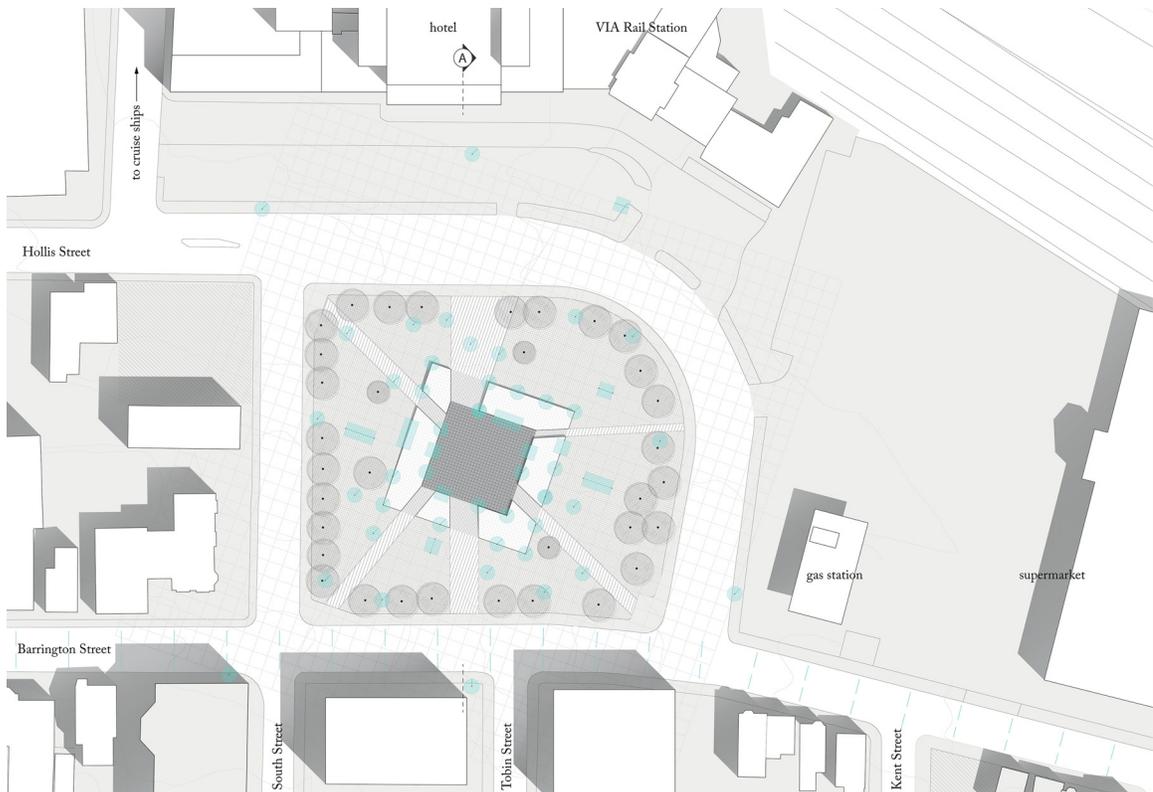
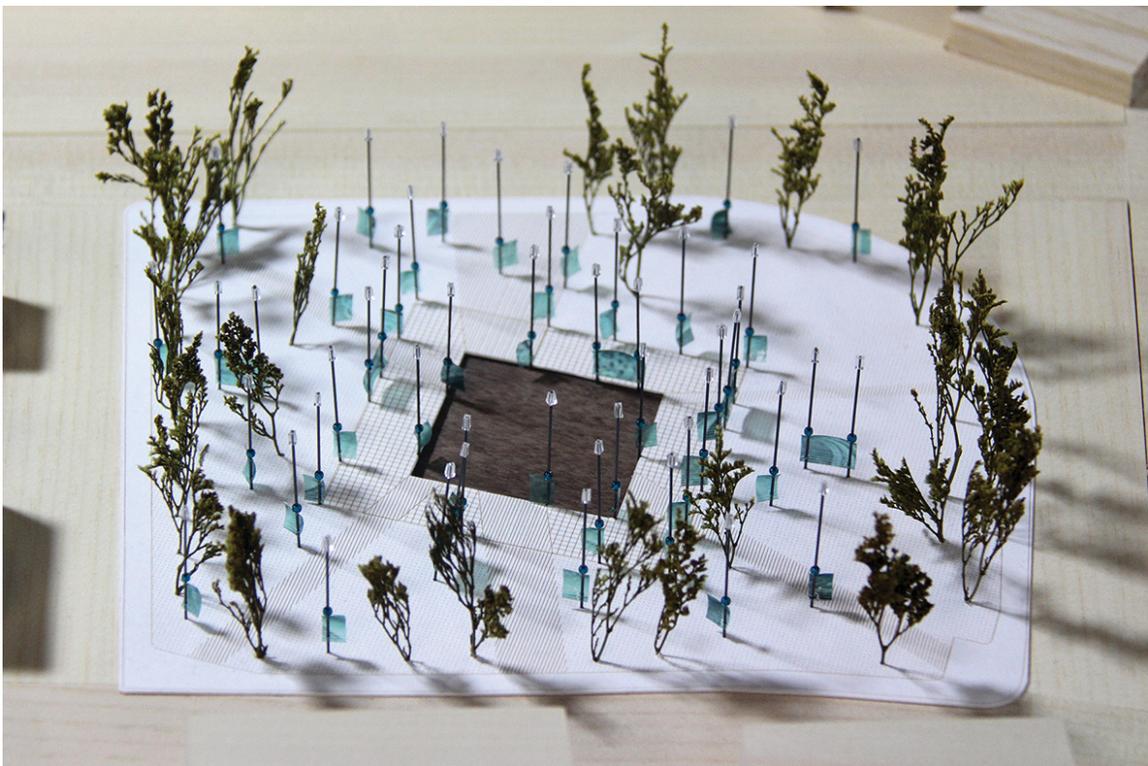

Site plan of the South Gate in Cornwallis Park.
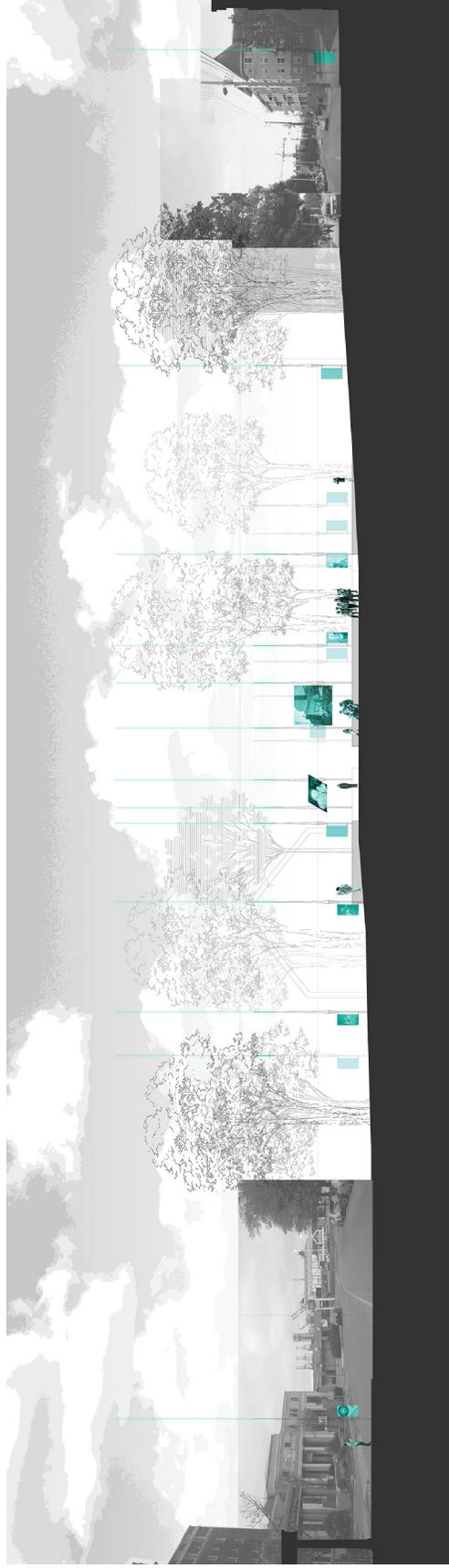
Hotel and train station.

Barrington Street

Section through the South Gate in Cornwallis Park, looking south.

Photograph of the South Gate site model.

Close-up view of the inner square at the South Gate.

Recently the city of Halifax has approved a renewal project for Cornwallis Park. The design strategy, however, separates the square into distinct activity zones including a formal park, plaza, playground and amphitheatre, diminishing the dynamic centrality of a square. The proposed plan would encourage segregation rather than interaction and overlap between people and activities. The South Gate design strategy sets out to encourage various activities throughout the square, accommodating the potential use of space for individuals or a large crowd.

The South Gate serves as an entrance into the city for people who have travelled by train or by a cruise ship. The design consists of a field of networking devices, leaving a central void which loosely forms a square. The networking devices follow a grid which references the cardinal axis, as in Grand Parade. The devices become a self-guided welcome centre to introduce Barrington Street and the surrounding urban fabric. The networking devices are accessed, manipulated and explored by connectivity to the app. Local citizens and tourists are able to navigate data and imagery of the city. Each network device is a thin steel column set into the ground which houses a Hal-Fi transmitter, as part of a strong Wi-Fi mesh zone. Each network device also possesses a light fixture that illuminates itself and the surrounding terrain at night. As the user engages with the app, the network device displays a plethora of imagery and text to the users.

Grand Parade

Typical morning view of Grand Parade.

2015 May Day protest at Grand Parade.

The Halifax municipality has been planning to revitalize the square between 2016 and 2017. Councillor Waye Mason compared it to Toronto's Yonge and Dundas as well as New York City's Times Square, yet, as a municipal heritage property, the restorations

Prince Street

Barrington Street

Argyle Street

St. Paul's Church

PARADE PALACE

George Street

Halifax City Hall

Duke Street
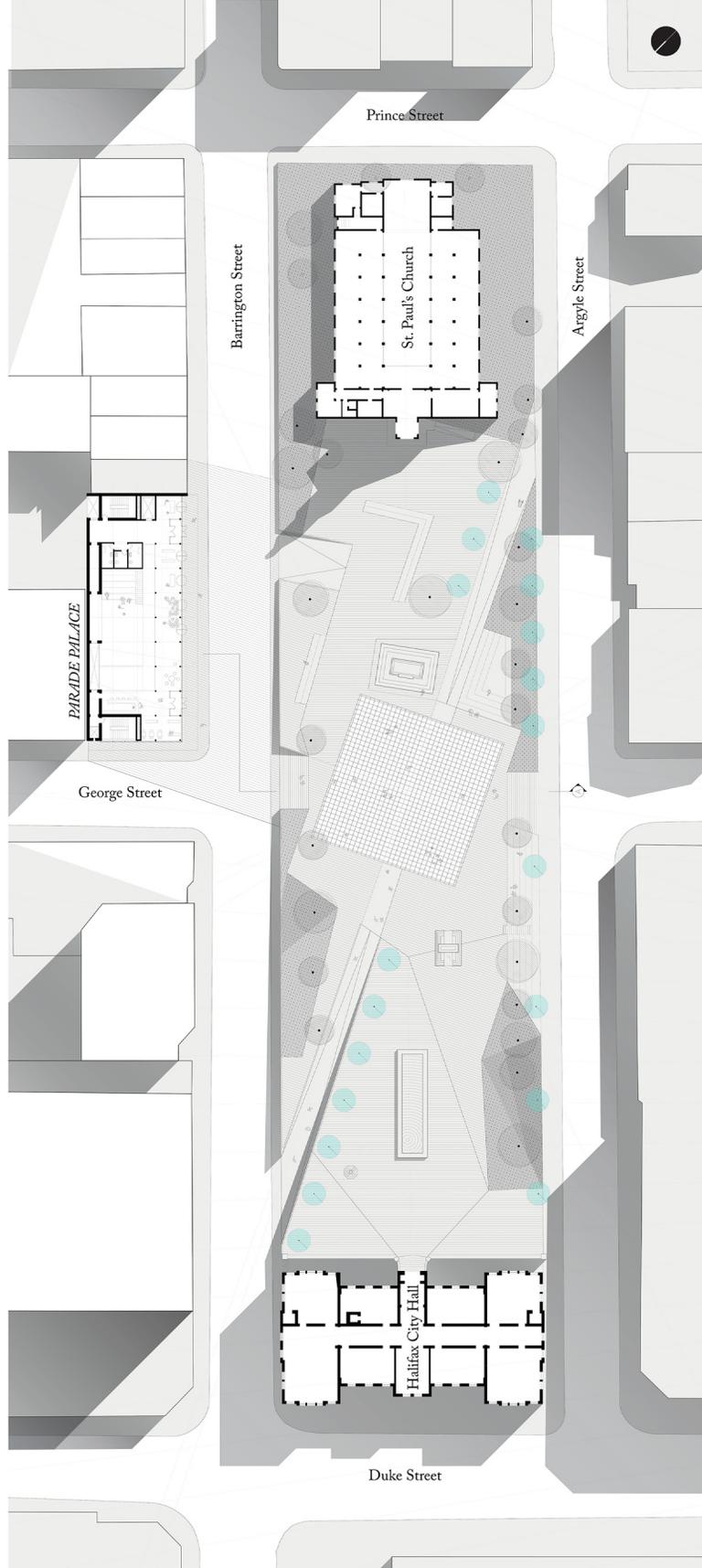
Site plan of Grand Parade and Parade Palace.

Photograph of the Grand Parade and Palace site model, looking south.
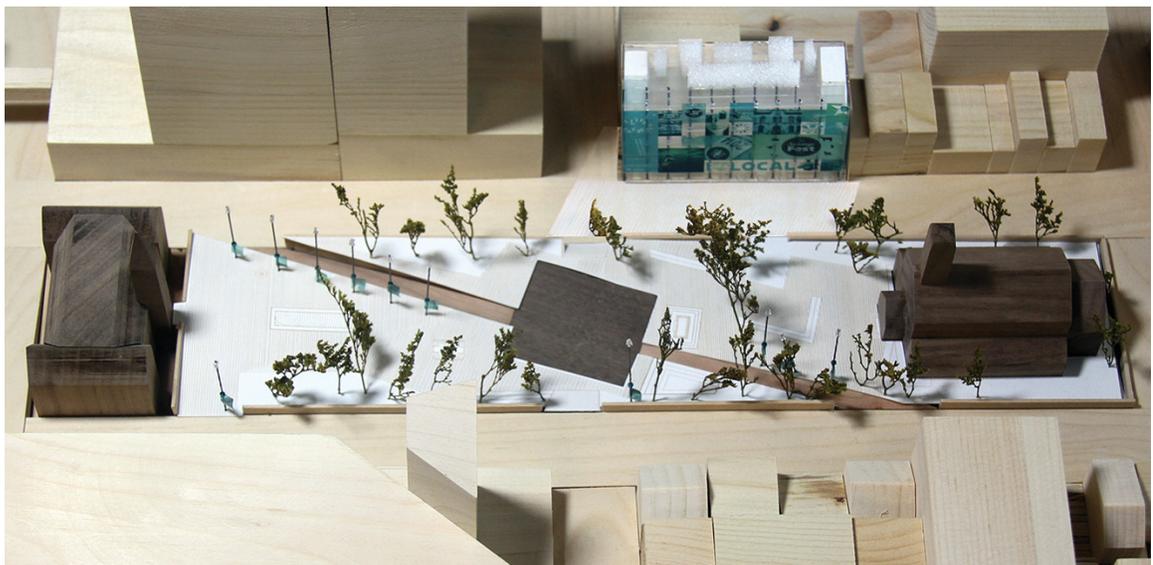
Close-up view of the inner square in the Grand Parade in front of the Palace.

will be required to adhere to original design and workmanship.[24] The comparison to the vibrant, LED-saturated central squares of other cities does not fit with the city's intent to replicate the historic elements of Grand Parade. Some of the current historical features detract from accessibility of the square. The monolithic granite wall at the lower end of the Grand Parade and City Hall is forboding and dreary for pedestrians while the perimeter of weathered wrought iron fencing deters people from the edge of the Parade Ground. The present symmetrical grassy islands serve no particular purpose except to direct circulation. They were not original to the design and developed only when the Parade was leveled at the beginning of the 20th century. Though the Grand Parade is occasionally filled during formal ceremonies, on a daily basis it is an underutilized space, especially during the twilight and evening hours. Thomas Raddall described the alteration of the Parade from its original vibrant state towards the end of his book *Halifax: Warden of the North*. The Grand Parade, once a frame for scarlet-coated regiments, is now a place of rumination for old men on benches about the Cenotaph.[25]

The redesign of the Grand Parade begins with superimposing the critical grids upon the site, which are then realized through a sequence of major moves.

The square is placed in the middle of the site, oriented towards the cardinal grid system. It does not show partiality to any of the other grids and axes of the site. The new square is the only completely level portion of the Grand Parade and remains empty to accommodate potential activities.

The slice across the whole Grand Parade from the western side of the church to the east side of the City Hall is from the close proximity between the north-south axis and that of Hakodate, Japan, being the first Sister City for Halifax. It provides a diagonal route across the square, with ramps of sufficient slope to include all types of accessibility. The new circulation route breaks up the present monolithic wall along Barrington Street, also providing interesting views for vehicular traffic.

The vegetative skin is confined to the two edges of Barrington Street and Argyle Street. Sloped verdant geometries provide different spectator experiences. Corner edges mutate

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[24] Stephanie Taylor, "City plans to renovate Grand Parade in Halifax," *Metro News*, July 3, 2015.

[25] Raddall, *Halifax, Warden of the North*, 324.
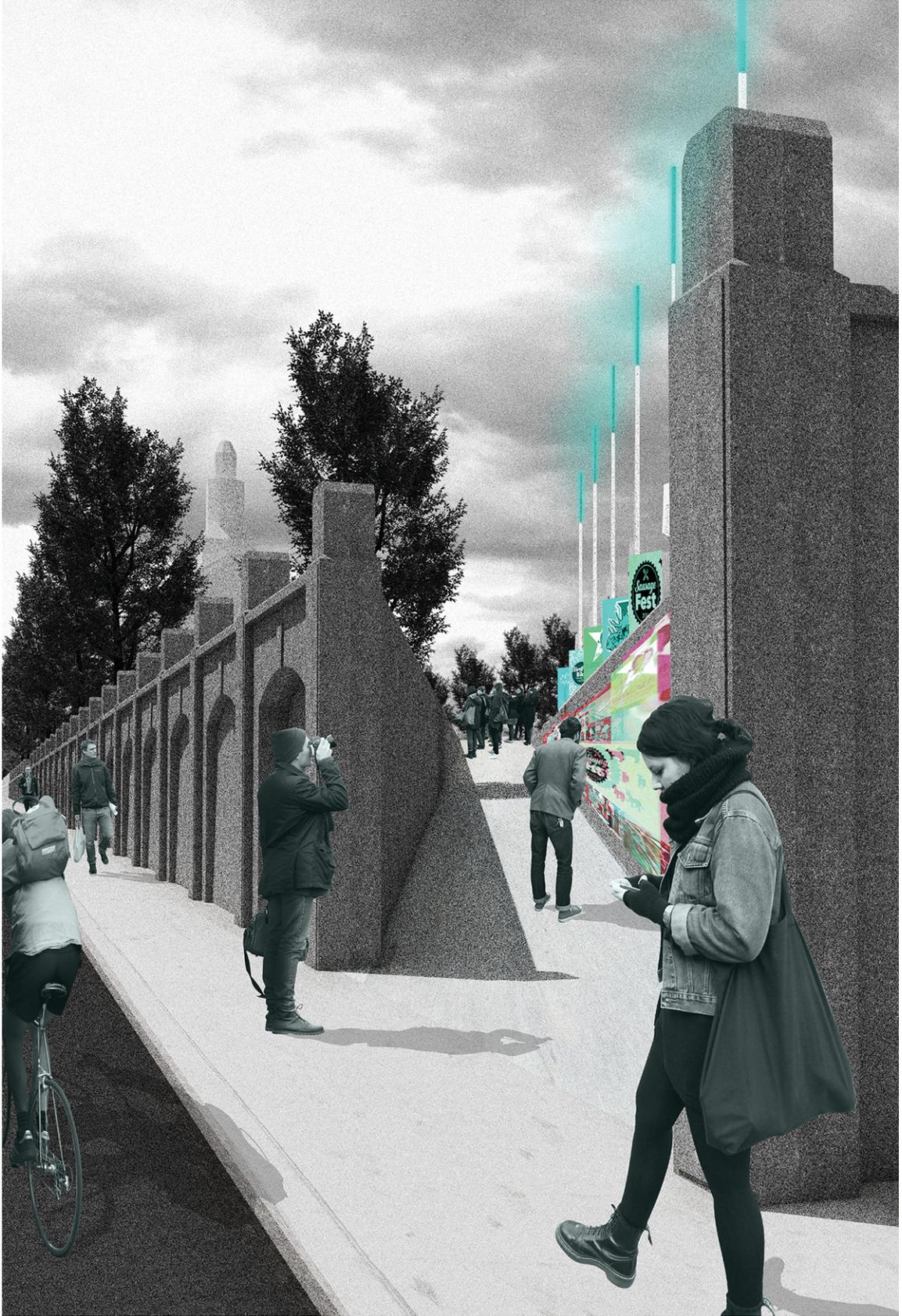
View from Barrington Street to new circulation slice in the Grand Parade.

Typical activities on the Parade.

into perpendicular volumes to provide collective seating. Finally, the monuments of Grand Parade are repositioned according to the intersections of multiple axes.

The Parade Palace

> In cities, the most public space is not the street or the park, it is the compressed space of the window. The window is our urbanity, nothing else can come close, its effects are what artists have been trying to produce over and over again for centuries. We love that impossible space of the window, the thing we cannot occupy.[26]

A new central building, known as the Parade Palace, is the pulsating venue for cultural and commercial activities and events significant to the people of Halifax. Taking inspiration from Cedric Price's Fun Palace, the building seeks to be a socially interactive and improvisational space, with integrated digital media technologies. The general order of the Palace is derived from its relation and exposure to the Parade, as well as an internal verticality which references the intention and composition of a typical billboard. The facade of the Parade Palace wraps the corner of Barrington Street and George Street, once again completing the facades which frame the Grand Parade. The public building, overseen by the city, serves as a counter to the adjacent senior site members of church and state, across from a large, recently renovated major financial institution. It provides a large digital screen that can be viewed from the Grand Parade and is connected to the smaller light mast screens on the square.

The Palace's design emphasizes the vertical axis, and the provocative spaces and experiences it induces. Gaston Bachelard wrote about verticality in *The Poetics of Space* as a means to organize our images of a dwelling:

> Verticality is ensured by the polarity of cellar and attic, the marks of which are so deep that, in a way, they open up two very different perspectives for a phenomenology of the imagination.[27]

Behind the Palace's facade, the depths of the underground "ruins" are contrasted by the elevated Crow's Nest at the top of the building.
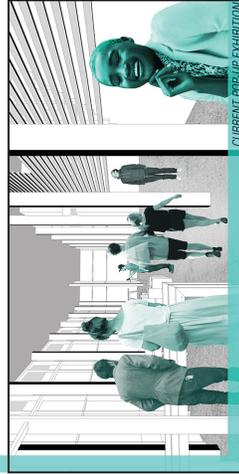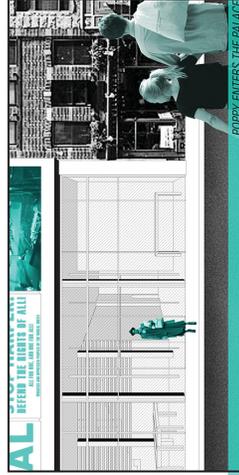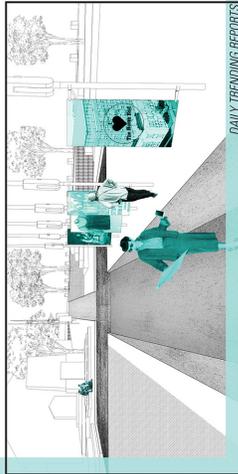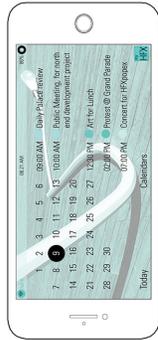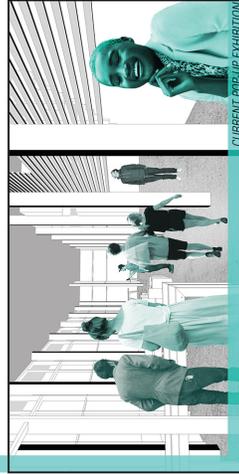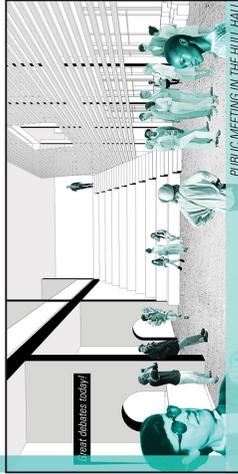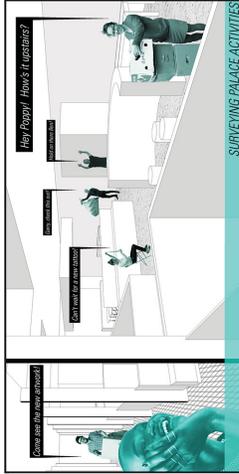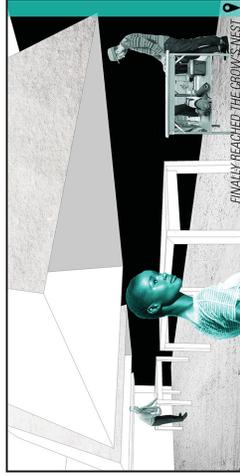
The programmatic activities behind the screen are a fluctuating indication of the popular content of the myHFX App. Trending hashtags are used to assign temporary square foot-

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26 MOS Architects, "Already Happened Tomorrow." Accessed Sept. 18, 2015, http://www.mos-office.net/.

27 Gaston Bachelard, *The Poetics of Space* (Boston: Beacon Press, 1994),17.
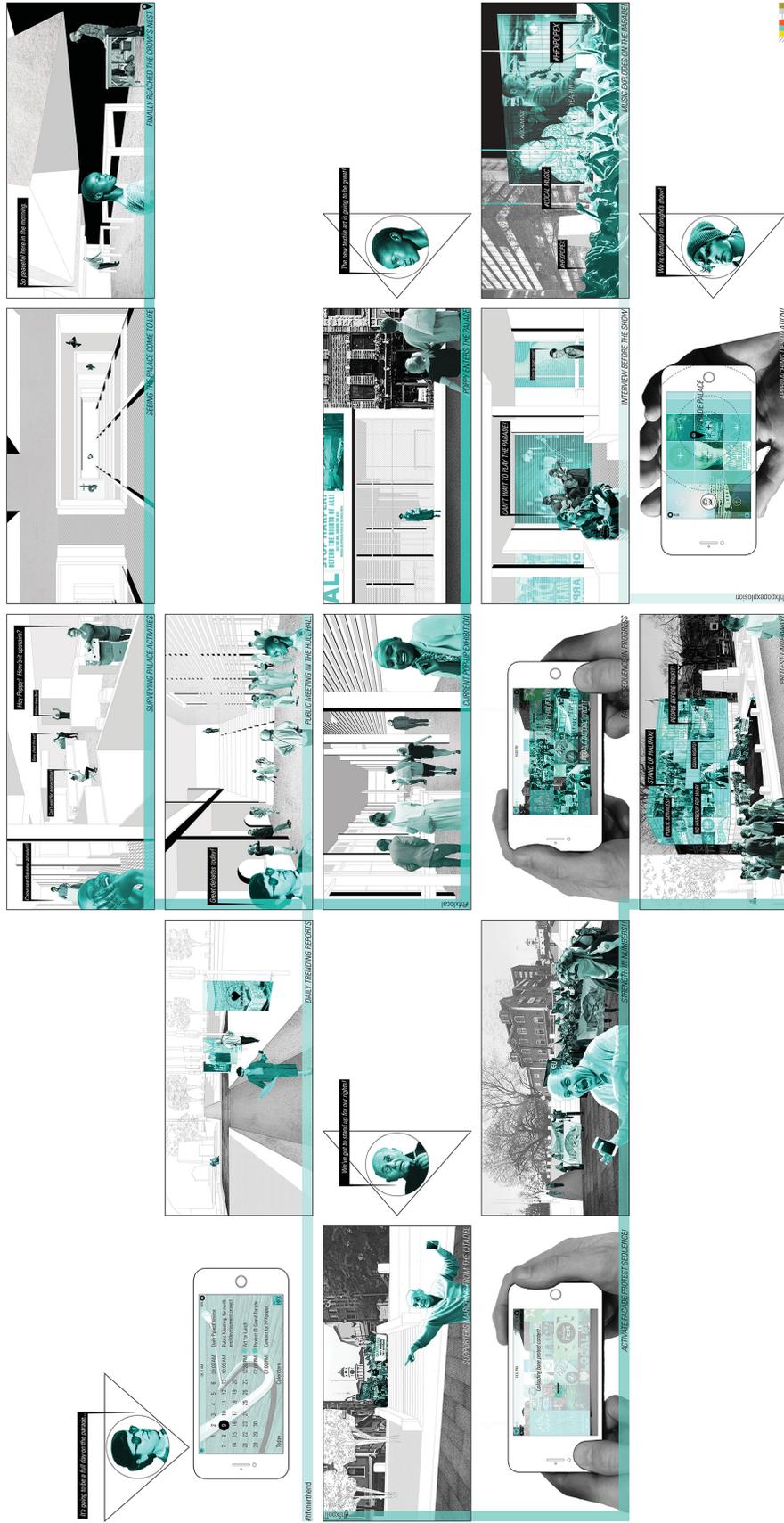
Storyboard depicting a typical day in the Parade and Palace, as experienced by the characters.

The new textile art is going to be great!

#hfxlocal

FINALLY REACHED THE CROW'S NEST

SEEING THE PALACE COME TO LIFE

POPPY ENTERS THE PALACE

DEFEND THE RIGHTS OF ALL!

SURVEYING PALACE ACTIVITIES

Hey Poppy! How's it upstairs?

Can't wait for a new tattoo!

Come see the new artwork!

PUBLIC MEETING IN THE HALL HALL

Great debates today!

CURRENT POP-UP EXHIBITION

It's going to be a full day on the parade.

#hfxnorthend

DAILY TRENDING REPORTS

Today	Calendars	HFX
09:00 AM	Daily Palace review	
10:00 AM	Public Meeting, for north and development project	
12:00 PM	Art for Lunch	
02:00 PM	Protest @ Grand Parade	
07:00 PM	Concert for HFXpopex	

Storyboard detail of Poppy and Gloria.

Storyboard detail of Stan and Mcguire.

age and frontage to various groups and events pertaining to the citizens of the city. The contents of the Parade Palace are a direct correlation to the interests and concerns of Haligonians. It is economically made feasible by the city, but the operations of the Palace are citizen driven and managed with regular updates with the municipality. Anyone, whether citizen or tourist, may enter and use the facilities.

The initial characters demonstrate potential programs and activities associated with the Palace and Parade over one day. Compiled into a loose storyboard grid, the characters occupy and interact with both the physical space of the site and the virtual space of the

Ground level of Palace facade.

Palace facade from Grand Parade.

myHFX app. Gloria, the city councillor, has an overview of the daily activities before proceeding to a public meeting in the Palace. Poppy enters and moves through the various spaces of the Palace to her temporary workspace. Stan travels to the Parade square to lead a protest, which includes the adaptation of the Palace facade. Mcguire has a short interview and jam session in the storefront portion of the facade before a concert on the Parade.

The design of the Palace draws from spatial and material fragments in the city. These fragments were gathered by searching for the hashtag #halifax and geolocation of the city from users of Instagram, a social media app which allows people to upload, share and view photos. Images pertaining to the image of Halifax were gathered initially by screenshots, chosen based on identifiable characteristics within a 36-hour time period. These

were assembled into a collage map of the city, with added notation and connection points. (See map on page 18.) Further in the design process, collage was the method chosen to develop the architectural spaces, considering the volumetric and material characteristics.

The storefront facade of the Parade Palace is a thick edge to walk under and along, skirting the edge of the sidewalk along Barrington Street. Looking up, exposed structural elements and storefronts appear, masked by a delicate LED mesh veil. The facade is comprised by a regulated grid of square shutter panels. It emulates the future facade visions of Venturi and Scott Brown:
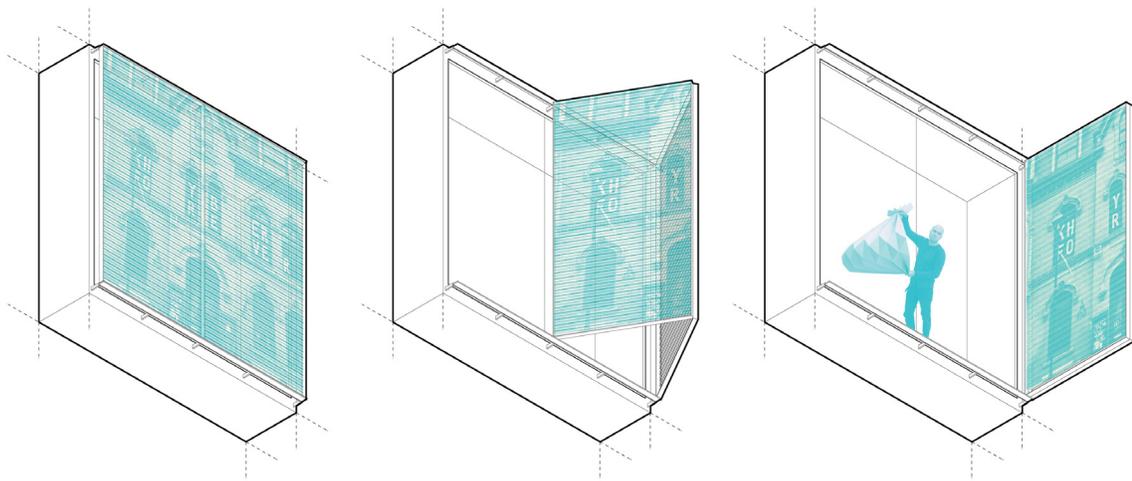
Operating the shutter panel of one of the Palace facade bays.

> Signs as electronic facades, decorative and informational ... but signs as architecture whose facades emit light rather than reflect light and accommodate the Post-industrial Age, the Electronic age, the Information Age![28]

The facade goes further than a glittering display of information, as it is a volumetric entity that can also become a live stage. The LED mesh shutters open, either vertically or horizontally, to reveal the contents for which they communicate. The volumetric spaces supporting the storefront activities are accessed by discrete garage doors and curtains at the rear of the space. A steel structure organizes the storefront facade. The field of structural columns and slabs enable sight lines to penetrate deep into the building. The ground envelope itself is glass, but becomes porous depending on the activity within the building. Hinged facade elements pivot to create doors and openings to pop-up shops, exhibitions and large assemblies.

28 Kester Rattenbury, Samantha Hardingham, and Robert Venturi, *Robert Venturi and Denise Scott Brown: Learning from Las Vegas.* Supercrit 2 (Abingdon: Routledge, 2007), 74.

Countering the sleek steel structure at the front of the Palace is the heavy masonry struc-
ture of the rear, reminiscent of fortification walls and ruins. The stone bowels of the Palace
Ruins accommodate a micro-brewery, a pub and storerooms, with a connecting void to the
ground level. An entrance along George Street allows for direct access to these spaces.

There are distinct forms of circulation within the Palace. The Piers and Patios mediate
the storefront facade, the large void and the exploded Drawer Rooms of the Palace. A
sequence of routings and breakout zones, the Piers and Patios are similar to the water-
front boardwalk, with many places to mingle, observe, meet-up and rest along the way.
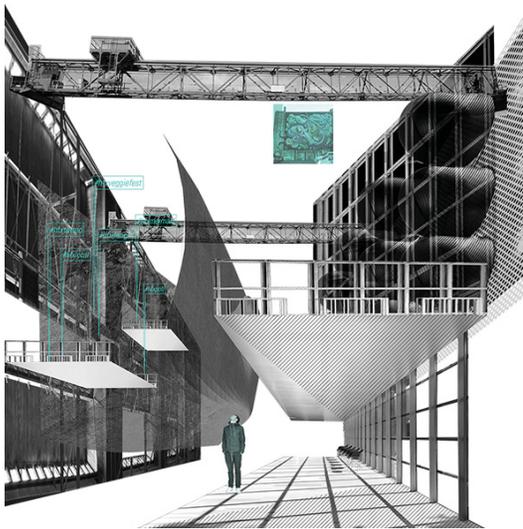
Hull Hall and entrance.

Piers and Patios circulation.

The edges of the platforms encourage mingling and gazing through the large void into the
myriad of activities within the building.

The appendage of spaces linked to the storefront, known as the Drawer Rooms on the
facade of the Parade Palace, at first appears haphazard. A series of smaller spaces which
act as the supporting "back room" of the storefront activities, they are the vibrant mixing
chambers of people and things associated with the popular content of the myHFX app.
Each space is compared to a drawer of particular contents. The Drawer Rooms loosely
form several families, collectivized by similar architectural and material features on the dif-
ferent levels of the Palace. Each drawer is cut or pulled away from the contents to provide
a loose edge, encouraging unexpected encounters between the various inhabitants and
activities. When examined within the screen extents of the myHFX app, an information

stratum coats the volumetric spaces, providing information, data, and commentary on the work and social assemblies being conducted.

The Hull Hall, occupying the ground and first levels, serves as a large public assembly space. Emulating the visible profile of a battered hull, the wooden carcass is comprised of two disjointed fragments which become the main level orchestra and balcony levels joined together by a gangway.
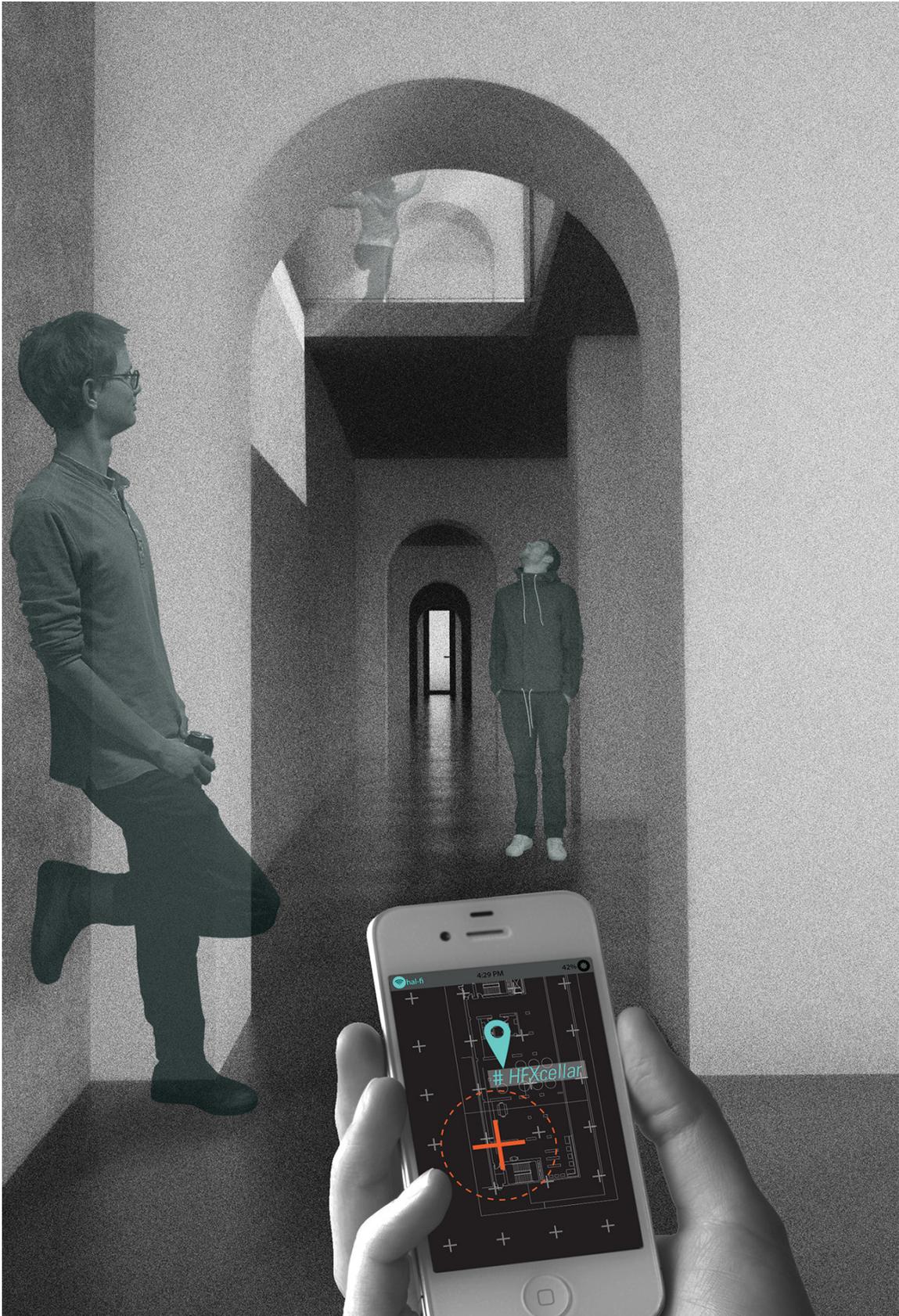
The Crow's Nest is the topmost studio space, characterized by large skylight volumes that puncture the roof plane. Variation in height and size give them a comical nature. From the rooftop level, people can look down through the skylight volumes into the Crow's Nest spaces.
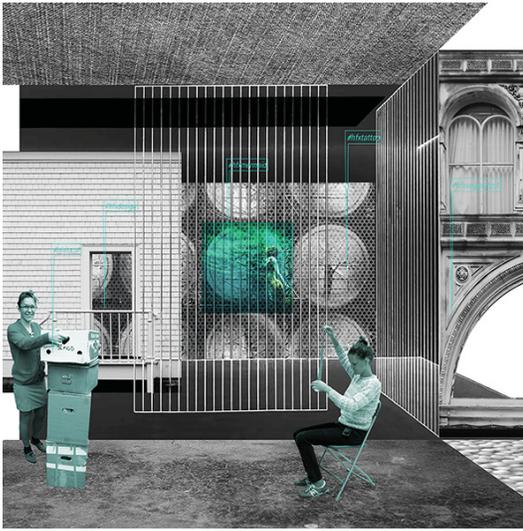
The Drawer Rooms.
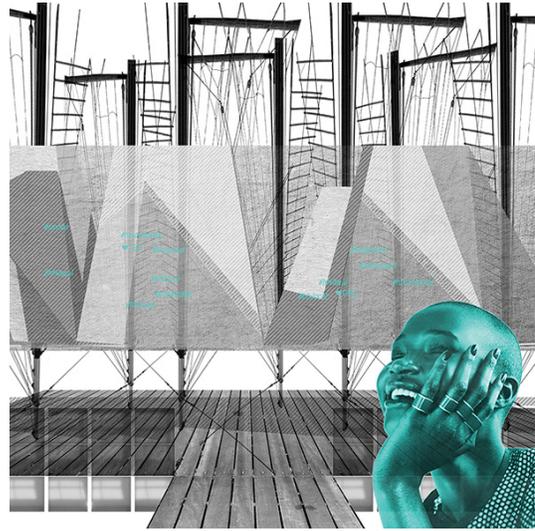
The Crow's Nest.
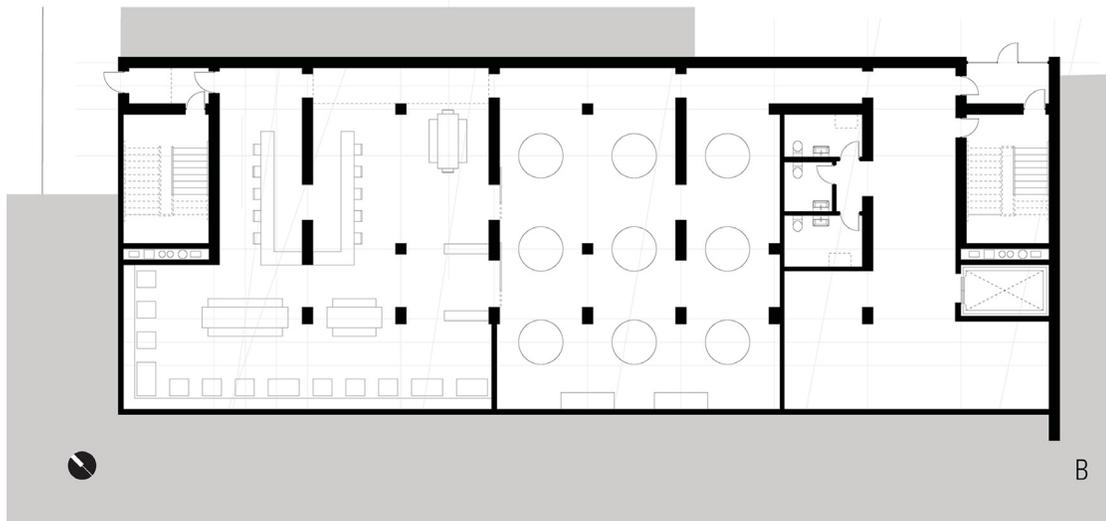
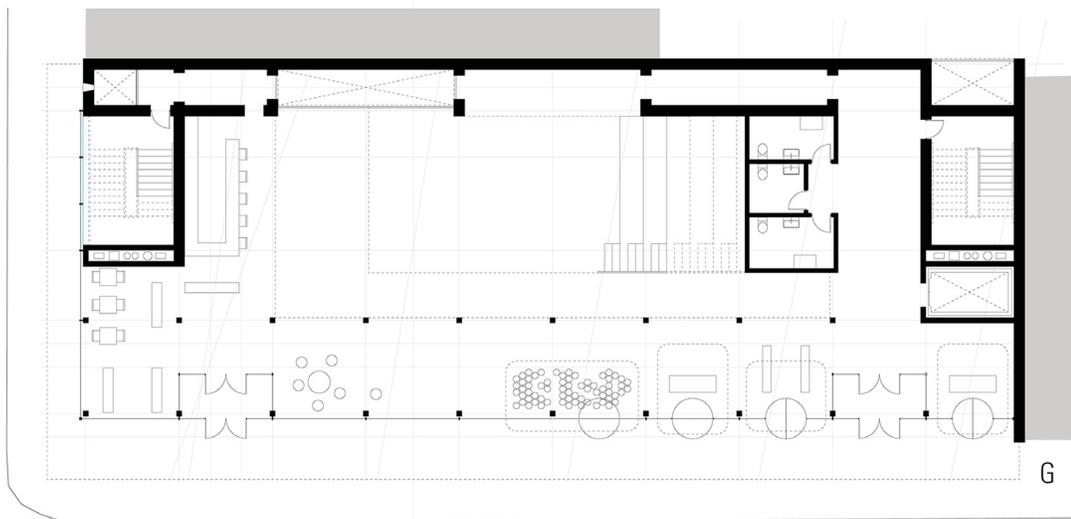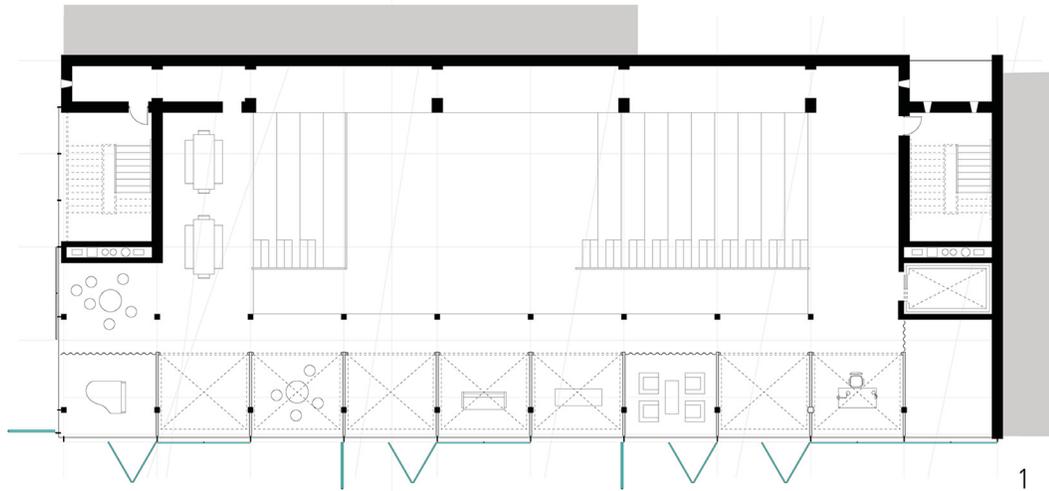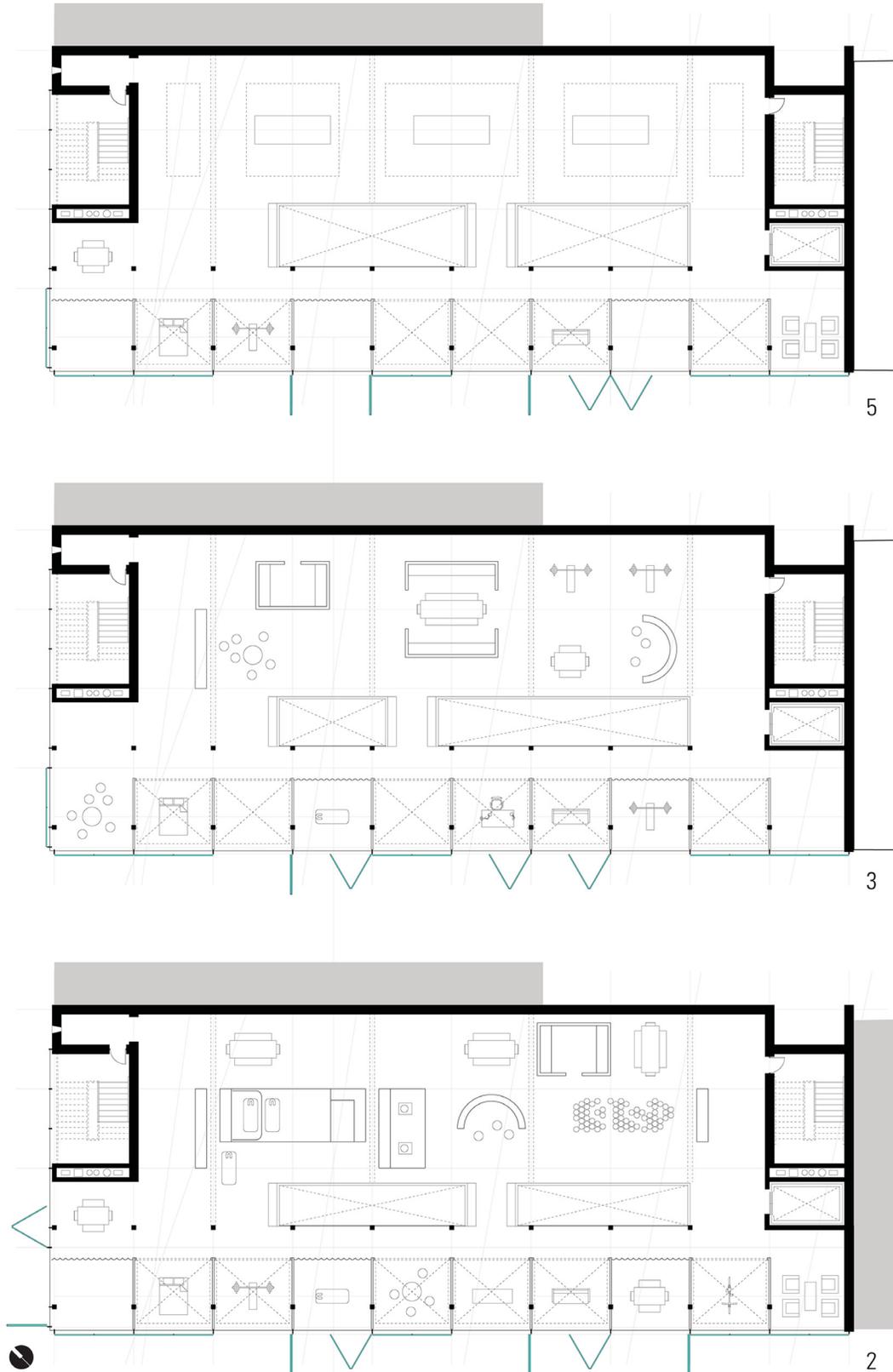View down the corridor in the depths of the Palace Ruins.

Front facade on Barrington Street.

Section through the building, looking toward Barrington Street.
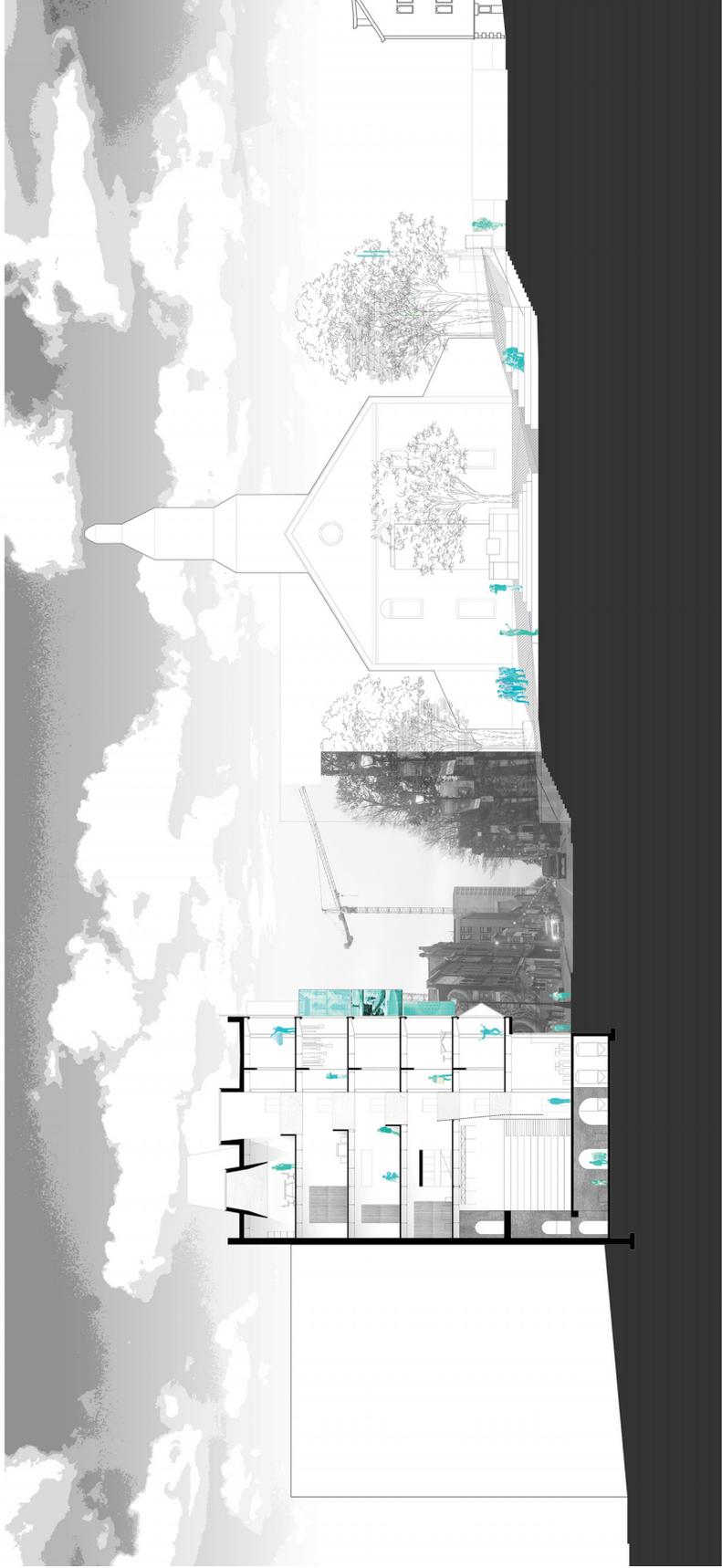
1:100 facade relief model, viewed from the front and back.

1

G

B

Basement, ground and first level floor plans of the Palace.

Second, third and fifth level floor plans of the Palace.

Section through Parade and Palace

CHAPTER 5: CONCLUSION

As key stakeholders, consultants and government authorities counter urban fatigue and failure with development strategies that promise opportunity for higher profit, growth, optimization, and security, the citizen voice is usually reduced to a whisper in the pursuit of the "smart" city vision:

> Yet, the smart city vision tends to focus on infrastructure, buildings, vehicles, looking for a client amidst the city governments that procure or plan such things. But the city is something else. The city is its people. We don't make cities in order to make buildings and infrastructure. We make cities in order to come together, to create wealth, culture and more people.[29]

If the city's vitality is found amongst its citizens, then perhaps any vision for improvement should begin with the citizens themselves. Every citizen has the capacity to contribute thought and ideas towards progressive social and political innovation. Every citizen has an opportunity to stake a claim and play out their position of ownership within the city. Visual practices shape perception, which in turn shapes experience, which in turn allows people to participate in emergent social forms or not.[30] The thesis work then calls for an alternative partnership between architecture and the relevant medium of the mobile device to address the current experience and issues associated with the development of public space as exemplified in Halifax. Paired with the virtual domain of the mobile device and social media, public architecture takes on the role of agent and develops a new relevancy for its citizens as the stage for social and political progress.

A speculative fiction attempts to mediate the complexities of the city of Halifax, as well as the physical and virtual domains of public space. For fiction is an impetus to architecture, a vision for and a response to culture.[31] It challenges the role of the architect to be a collaborator in envisioning a future urban environment rather than merely a singular building. In nurturing wild propositions, and by realizing the seemingly unimaginable, the architect lays down a new milestone of tangible realities. [32]

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29 Dan Hill, "On the smart city; Or, a 'manifesto' for smart citizens instead," *City of Sound* (2013), http://www.cityofsound.com.

30 Lavin, *Kissing Architecture*, 113.

31 Jimenez Lai, *Citizens of No Place: An Architectural Graphic Novel* (New York: Princeton Architectural Press, 2012), 12.

32 Ibid.

The characters and their stories are a means of evoking thought on the possibilities and consequences of the emerging mobile and screen technologies. The thesis work ultimately hopes to provoke thought to empower the reader and viewer to formulate and take action within the city and community to which they belong.

Final thesis presentation.

APPENDIX A: BEHIND THE BILLBOARD
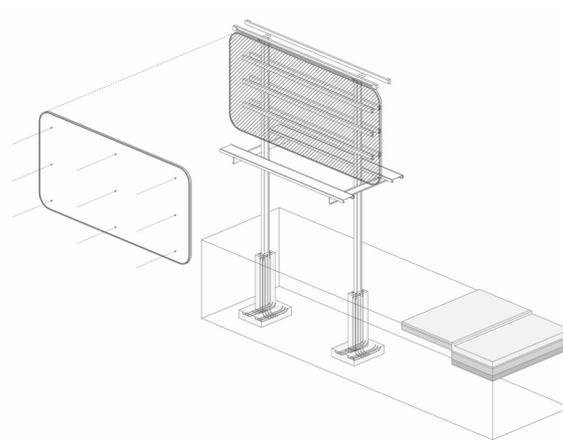
The billboard is designed for the traveller within the moving vehicle, and more precisely, within the windshield frame. The message, being a combination of text and imagery, is designed to be read instantaneously. Billboards are also located along the road to maximize initial and repetitive observation while the traveller is in motion.

The modern-day billboard has roots in lithography, invented in the late 1790s, which enabled a mass production of posters and announcements for a business or institution. The greatest limitation of the outdoor billboards during this time was their longevity, not able to withstand harsh environmental conditions over an extended amount of time. In 1835, circuses started using billboards for mass marketing and in the 1860s outdoor advertising companies began to make billboard space available for purchase. The International Billboards Poster Association of North America is still active today as the Outdoor Advertising Association of America, OAAA. The popularity of the automobile, however, led to the growth of the outdoor advertising industry. As private transportation became accessible to the masses, a new mobile audience was established for the billboard. The future of billboards will likely become a derivative of two-way interactive messaging platforms where users will have some say and some control in the content they will consumer from these large monitors.[33]

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33 Cat Chien, "Billboard Evolution," in *The Four Peaks Review* 1.1 (2011): 93.
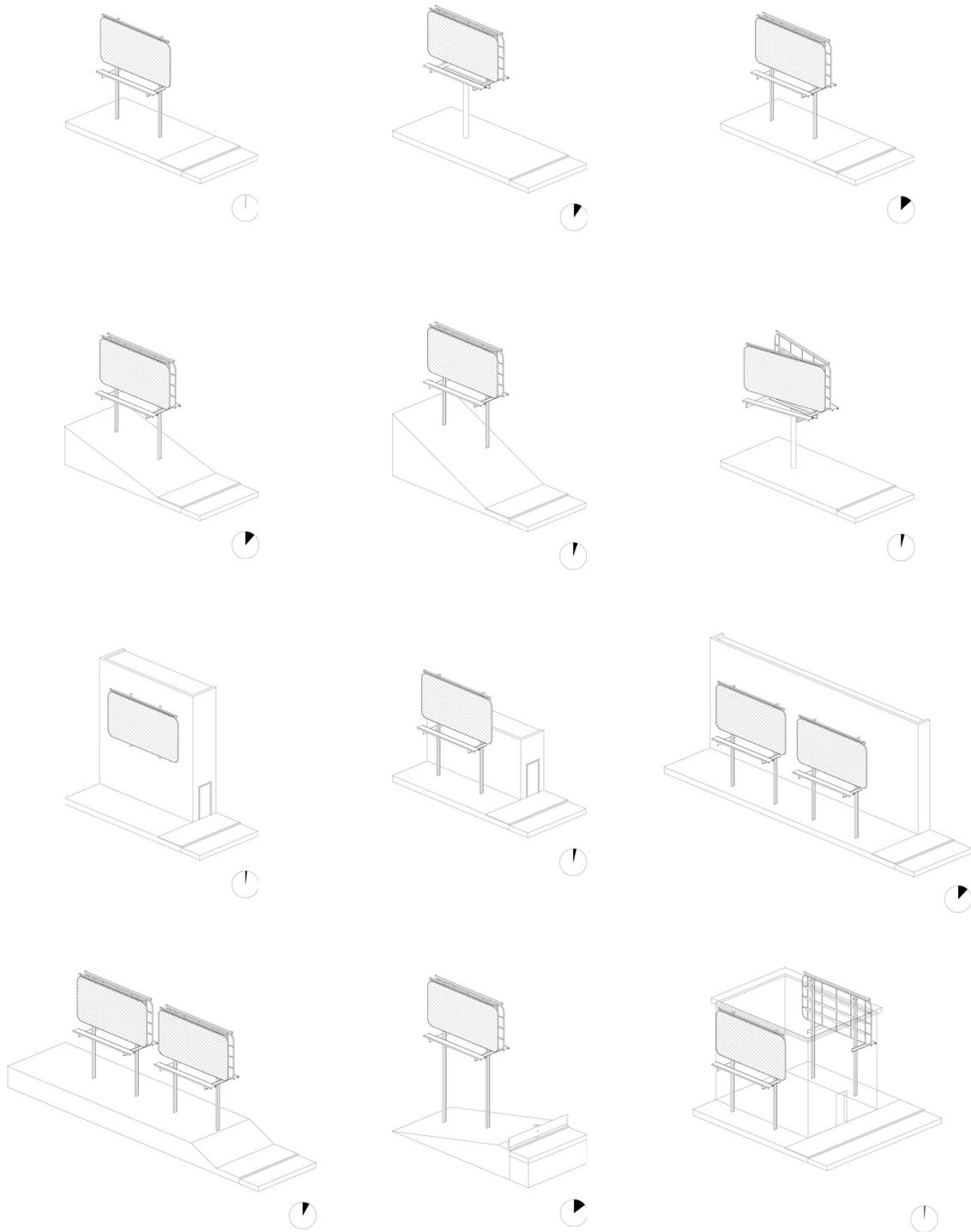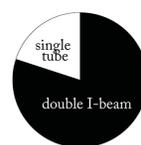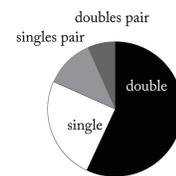
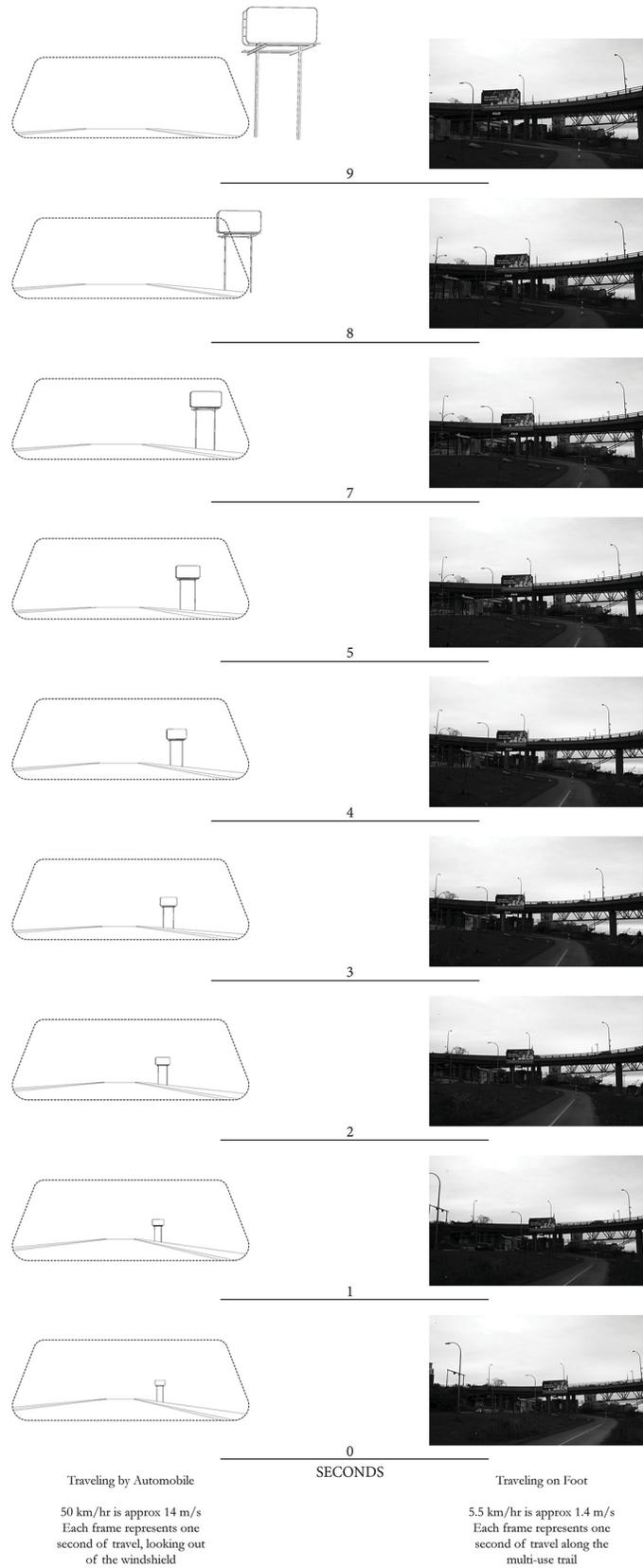| Location	Adjacent Program	Predominant ground condition	Billboard facade pairings	Steel structure

Billboard types found on the Halifax Peninsula.

33%

of daily ad exposure that is Out-of-Home messaging.

Your message goes here.

65

minutes is the average time spent commuting every week-day for Canadians.

Billboard images typically run over a 28-day flight, which translates to thirteen flights within any given year.

Pattison Outdoor	CBS Outdoor	Astral OOH	Quebecor Media / Others

Largest outdoor advertising companies in Canada

76%

of travellers notice billboards along the way.

According to a Pattison representative, cost of rental space ranges from 1,300 to 1,700 dollars per month. Usually a billboard campaign consist of 6-8 posters located throughout the city.

T1	T2	T3	T4	T5
B1	B2	B3	B4	B5

604.3

million dollars was the revenue for out-of-home advertising in Canada in 2013. In the United States it was 6.9 billion dollars.

Ratio of raw materials needed to produce primary steel:

Iron Ore	Coal	Limestone	Recycled Steel

18,841

is the number of horizontal billboards in Canada.

Facts and figures on the typical billboard.

9

8

7

5

4

3

2

1

0
SECONDS

Traveling by Automobile

50 km/hr is approx 14 m/s
Each frame represents one
second of travel, looking out
of the windshield

Traveling on Foot

5.5 km/hr is approx 1.4 m/s
Each frame represents one
second of travel along the
multi-use trail

Comparing the visual progression of a billboard from the automobile and on foot.

APPENDIX B: MOBILE DEVICES AND APPLICATIONS

Marshall McLuhan describes media as an extension of the body in his 1964 book *Understanding Media*, and says that all technologies are extensions of our physical and nervous systems to increase power and speed.[34] Mobile devices are consequently highly attuned versions of their owners, an extension of the human body with the capacity to intensify or amplify an organ or sense of function of the body within its environment. Hence, the extensive presence of the mobile device, including tablet computers and smart phones, continuously superimpose time and space as they seek closer links between the individual user and their physical and social environments.
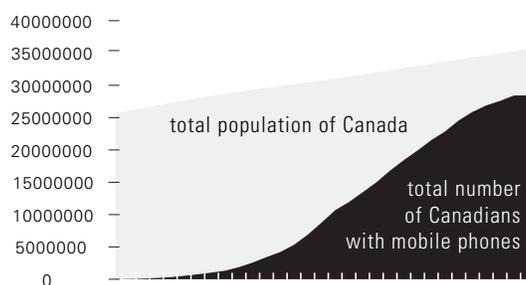

Mobile phone statistics; base data from the Canadian
Wireless Telecommunications Association. (2015)

Physical phones are connected through Wi-Fi, managing the virtual web of feeds, posts, alerts and personalized information from Facebook, Twitter, Instagram, etc. People are able to follow and congregate based upon common interest, event or place. Content, in the form of text lines, images or video, is uploaded, which is in turn viewed, critiqued, and augmented by other users. Recently, mobile devices have also been a catalyst for political and social activism, to inform and gather people with similar views and information. Occupy Everywhere is part-enabled by Twitter, just as Facebook helped fuel the Arab Spring.[35] The latter was a revolutionary wave of protests, riots and demonstrations beginning in Tunisia in late 2011 with the most radical discourse in Syria. All throughout this period, social media were effectively used to organize, communicate and increase awareness, despite state endeavours at repression and internet censorship.

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34 Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964), 90.

35 Hill, "On the smart city."
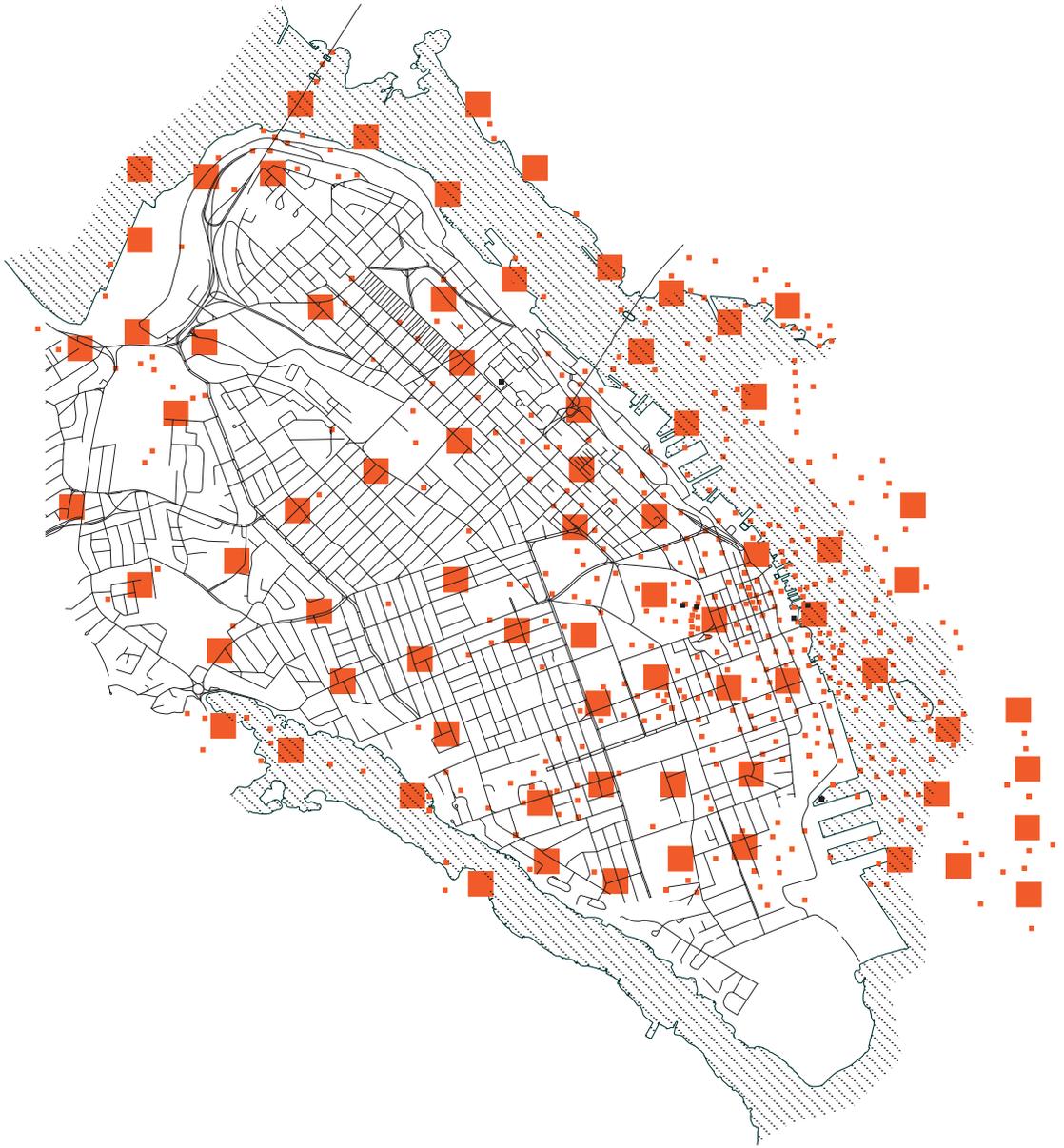
The Halifax peninsula according to Google's Panoramio; base data from Panoramio. Panoramio is a Google owned geolocation-oriented photo sharing website. Photos are directly uploaded and accessed as a layer in Google Earth and Google Maps, enabling users to view photos that other users have taken at a specific place. Each square represents an uploaded image.

APPENDIX C: PRECEDENTS BY CEDRIC PRICE

Cedric Price (1943-2003) was a visionary architect and teacher during the second half of the 20th century. Though most of his work would never materialize beyond paper or model form, his radical, all-embracing approach has been influential to contemporary architects and artists. He saw the role of architecture to be liberating and life-enhancing. Much of his work encouraged a creative and active participation through time-based urban interventions, adopting flexibility and new technologies.

Fun Palace
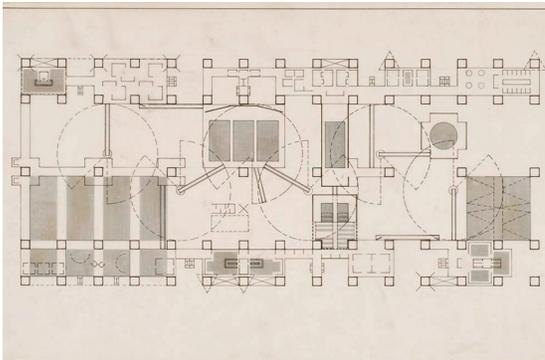
Plan of the Fun Palace; Canadian Centre for Architecture.
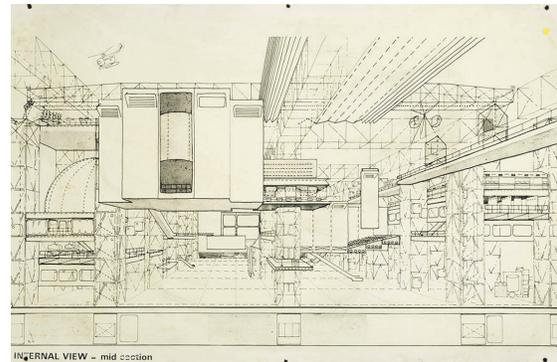
Interior view of the Fun Palace; Canadian Centre for Architecture.

Interior view of the Fun Palace; Canadian Centre for Architecture.

Perspective view of the Fun Palace; Canadian Centre for Architecture.

Fun Palace, the large, improvisational machine, was conceived in 1960-1961 and would become one of his most well known projects. It was initiated by avant-garde English theatre director and producer Joan Littlewood, whose intention was to build a "laboratory of fun" with facilities for dancing, music, drama and fireworks. The Fun Palace was intended to be a socially interactive architecture, integrating concepts of technological interchange-

ability with social participation and improvisation.The ultimate goal of the Fun Palace was to change in response to the wishes of users, renewing a sense of agency and creativity in the working class.

Price intended the structural grid of steel lattice columns and beams to be the only fixed element of the Fun Palace. They would supported by a "kit of parts" including pre-fabricated walls, platforms, floors, stairs, and ceiling modules that could be rearranged by cranes. Though the Fun Palace was never constructed, it did inspire the Centre Georges Pompidou in Paris, the 1971 project by Renzo Piano and Richard Rogers.

Magnet
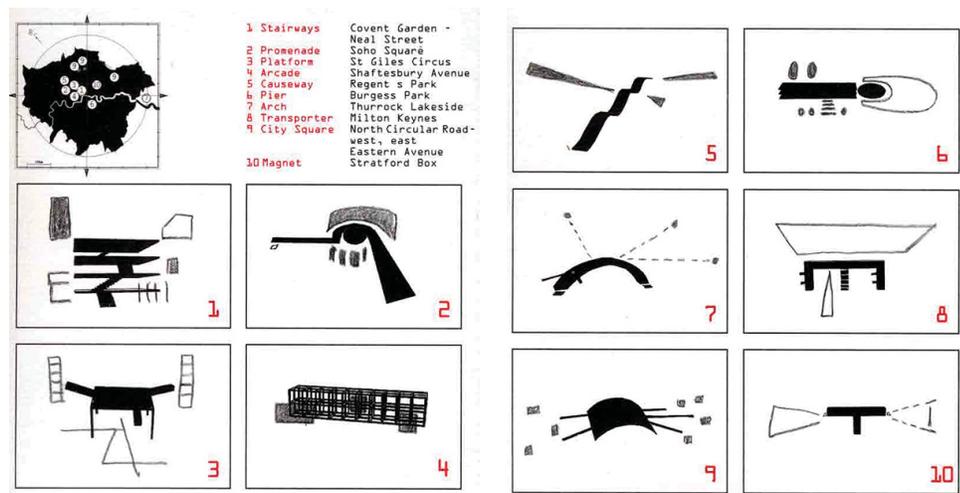
Magnet Interventions, 1997; The Architecture Foundation.

Towards the end of Cedric Price's career, his Magnet project proposed ten radical mobile structures which would provide public amenities and stimulate new patterns of public movement for neglected cities. The Magnets, as the name suggests, would draw people by improving access and providing new views of the existing urban landscape. Manifested as architectural fragments of stairways, arcades, piers and promenades, these temporary structures would create new public space while intensifying the use of existing spaces.

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