

HUNTER'S POINT SHIPYARD

Examining a Waterfront
Development from an
Urban Design Perspective



Mariaclara Zazzaro
San Jose State University
May 2016

HUNTER'S POINT SHIPYARD: EXAMINING A WATERFRONT DEVELOPMENT FROM AN URBAN DESIGN PERSPECTIVE

by Mariaclara Zazzaro

A Planning Report presented to the faculty of the Department of Urban and Regional Planning,

in partial fulfillment of the requirements for the degree

Master of Urban Planning.

San Jose State University

May 2016



Cover image source: Kleinfelder.com

This page intentionally left blank

Acknowledgements

The author would like to thank the following individuals for their ongoing support throughout the creation of this report.

Dr. Ginette Wessel, PhD (faculty adviser), San Jose State University

Dayana Salazar, San Jose State University

Richard Kos, AICP, San Jose State University

La Shon Walker, Lennar Urban

Ryan Drake, Complete Fabrications Inc.

Ramona Dixon, Port of Oakland

Maya Rodgers, Parks 94124

Matthew Snyder, San Francisco Planning Department

Jonathan Plowman, SF Department of Community Investment and Infrastructure

Chris Mitchell, Fehr and Peers

Valden Kamph

Table of Contents

TABLE OF FIGURES	VIII
CHAPTER 1: INTRODUCTION	1
1.1 Background and Definition of Terms	3
1.2 Research Question and Hypothesis	4
1.3 Relevance of Studying the Hunter's Point Waterfront	4
1.4 Methods	6
CHAPTER 2: LITERATURE REVIEW	11
2.1 Meet Me in the Square: Examining Elements of Successful Public Spaces	11
2.2 Strolling Along the Shore: Current Trends in Waterfront and Promenade Design	13
2.3 Ivory Towers by the Sea: The Socioeconomic Challenges of Waterfront Regeneration	17
2.4 Key Takeaways	20
CHAPTER 3: EXPLORING AMERICAN WATERFRONTS	23
3.1 Methods of Selection	23
3.2 The Iconic Waterfront: Brooklyn Bridge Park, Brooklyn, NY	27
3.3 The Post-Industrial Waterfront: Buffalo Canalside (Buffalo, NY)	39

3.4 The Corporate Waterfront: Mortensen Riverfront Plaza and Landing (Hartford, CT)	51
3.5 The Working Waterfront: Middle Harbor Shoreline Park (Oakland, CA)	65
3.6 Best Practices in Waterfront Design	73
CHAPTER 4: HUNTER’S POINT SHIPYARD	77
4.1 History of Hunter’s Point Shipyard	78
4.2 Urban Context: The Bayview/Hunter’s Point Neighborhood	80
4.3 Developing a Public Waterfront	82
4.4 Meeting the Grade: How the Plan for HPS Meets the Best Practices of Waterfront Development	84
4.5 Perceptions of the HPS Development	88
CHAPTER 5: URBAN DESIGN RECOMMENDATIONS	89
5.1 Access and Connectivity	90
5.2 Enclosure and Open Space	91
5.3 Streetscape Amenities	92
5.4 Interaction with Water’s Edge	93
5.5 Programming and Public Art	94
5.6 Safety and Comfort	94
5.7 Planning and Management	95

CHAPTER 6: CONCLUSIONS	97
6.1 Discussion of Findings	97
6.2 Limitations of Study	97
BIBLIOGRAPHY	100
APPENDIX A: SITE AUDIT INSTRUMENT FOR CHAPTER 3	103
APPENDIX B: INTERVIEW QUESTIONS	104

Table of Figures

FIGURE 1: THE HUNTER'S POINT SHIPYARD IS LOCATED IN THE SOUTHEASTERN CORNER OF THE CITY AND COUNTY OF SAN FRANCISCO. MAP CREATED BY THE AUTHOR	2
FIGURE 2: AN NYC PARK, BEFORE AND AFTER THE "PARKS WITHOUT BORDERS" PROGRAM. SOURCE: NYC DEPARTMENT OF PARKS AND RECREATION	12
FIGURE 3: BROOKLYN BRIDGE PARK. SOURCE: NYC COLLEGE OF TECHNOLOGY	24
FIGURE 4: OVERHEAD OF CANALSIDE. SOURCE: VIMEOPRO.COM	24
FIGURE 5: MORTENSEN RIVERFRONT PLAZA. SOURCE: CAPITOLRISING.COM	25
FIGURE 6: MIDDLE HARBOR SHORELINE PARK, IN THE SHADOWS OF OAKLAND'S WORKING PORT. PHOTO BY THE AUTHOR.	25
FIGURE 7: MAP OF WATERFRONTS VISITED AS PART OF CHAPTER 3'S PRECEDENT STUDY. MAP CREATED BY AUTHOR WITH DATA BY THE USG	26
FIGURE 8: CONTEXT FOR BROOKLYN BRIDGE PARK. MAP CREATED BY THE AUTHOR.	28
FIGURE 9: OVERHEAD PLAN SHOWS THE PARK'S VARIED SHAPE, PLENTIFUL PROGRAMMING, AND CLOSE PROXIMITY TO PUBLIC TRANSIT. SOURCE: BROOKLYN BRIDGE PARK.	29
FIGURE 10: CONSTRUCTION OF THE BROOKLYN-QUEENS EXPRESSWAY. ONE CAN OBSERVE THE HEIGHT DIFFERENCE BETWEEN THE ELEGANT HOMES OF BROOKLYN HEIGHTS TO THE RIGHT AND THE INDUSTRIAL WAREHOUSES OF THE PORT TO THE LEFT. SOURCE: NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION	30
FIGURE 11: THE PARK SITE BEFORE DEVELOPMENT. SOURCE: WIKIMEDIA COMMONS, 2003	30
FIGURE 12: BROOKLYN BRIDGE PARK MASTER PLAN. SOURCE: MICHAEL VAN VALKENBURG AND ASSOCIATES, INC.	31
FIGURE 13: SQUIBBS FOOTBRIDGE AT BROOKLYN BRIDGE PARK. SOURCE: GARDENISTA.COM	32
FIGURE 14: JANE'S CAROUSEL, WITH THE MANHATTAN SKYLINE IN THE BACKGROUND. SOURCE: APASIONANTE.WEEBLY.COM	32

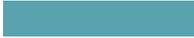
FIGURE 15: THE GRANITE PROSPECT DOUBLES AS EVENT SEATING. PHOTOGRAPH BY THE AUTHOR	33
FIGURE 16: SEATING AT BROOKLYN BRIDGE PROMENADE. PHOTOGRAPHS BY THE AUTHOR.	34
FIGURE 17: A GIRL RECLINES IN ONE OF JEPPE HEIN'S CREATIONS. SOURCE: PUBLIC ART TRUST, 2014.	35
FIGURE 18: CYCLISTS AND PEDESTRIANS CAN WALK ALONG THE RIVER UNDER THE BROOKLYN BRIDGE ALONG THE NORTHERN EDGE OF THE PARK. PHOTOGRAPH BY THE AUTHOR.	36
FIGURE 19: THE SLOPES OF BROOKLYN BRIDGE PARK ARE DESIGNED TO ACT AS SOUND GUARDS AGAINST THE NOISE OF THE DOUBLE DECKER HIGHWAY. SOURCE: BROOKLYN BRIDGE PARK DEVELOPMENT CORPORATION	36
FIGURE 20: SIGNS DISCOURAGE USERS FROM SITTING ON THE LAWN OR ROCKS. PHOTOGRAPHS BY THE AUTHOR.	37
FIGURE 21: CONTEXT FOR BUFFALO CANALSIDE, JUST SOUTH OF DOWNTOWN AT THE MOUTH OF THE BUFFALO RIVER ALONG LAKE ERIE. MAP CREATED BY THE AUTHOR.	40
FIGURE 22: THE ERIE CANAL HARBOR AT BUFFALO IN 1908. SOURCE: WWW.ERICANAL.ORG	41
FIGURE 23: PLAN OF CANALSIDE BUFFALO. SOURCE: ERIE CANAL HARBOR DEVELOPMENT CORPORATION.	42
FIGURE 24: P THIS PAGE INTENTIONALLY LEFT BLANKPORTIONS OF THE OLD BUFFALO LOCKS HAVE BEEN INCORPORATED INTO THE DESIGN OF CANALSIDE. PHOTOGRAPH BY THE AUTHOR.	44
FIGURE 25: SHARK GIRL SCULPTURE AT CANALSIDE. PHOTOGRAPH BY THE AUTHOR.	44
FIGURE 26: SEATING AT CANALSIDE. PHOTOGRAPHS BY THE AUTHOR.	45
FIGURE 27: VISITORS ENJOY A BEVERAGE AT THE BLUE LINE BRIDGE, THE WIDEST OF THE THREE PEDESTRIAN/CYCLIST BRIDGES AT CANALSIDE. THIS BRIDGE ACTS AS THE PRINCIPAL ENTRYPOINT INTO THE PARK FOR PEOPLE ARRIVING VIA LIGHT RAIL AND PUBLIC TRANSIT. SOURCE: ECHDC.	46
FIGURE 28: THE GRANARIES AT BUFFALO'S OUTER HARBOR, ACROSS FROM CANALSIDE, HOST A LIGHT INSTALLATION	46
FIGURE 29: SEATING FROM THE NOW-DEFUNCT BUFFALO AUDITORIUM HAS BEEN RE-PURPOSED FOR OUTDOOR USE.	48
FIGURE 30: NORTHERN SIGHT LINE FROM CANALSIDE LEAVES MUCH TO BE DESIRED. PHOTOGRAPH BY THE AUTHOR.	48

- FIGURE 31: RENDERING OF POSSIBLE PLAN FOR OF CANALSIDE. SOURCE: ARTVOICE.COM 49
- FIGURE 32: CONTEXT FOR MORTENSEN RIVERFRONT PLAZA 52
- FIGURE 33: PLAN OF THE GREATER RIVERFRONT RECAPTURE PROJECT. 53
- FIGURE 34: VIEW OF THE DOWNTOWN HARTFORD AND THE HARTFORD (NOW BUCKLEY) BRIDGE. THE SPIRE OF THE OLD STATE HOUSE IS VISIBLE IN THE FOREGROUND. SOURCE: FLICKR USER FARM2 53
- FIGURE 36: THIS 1966 EASTWARD AERIAL SKETCH SHOWS THE CONFIGURATION OF INTERSTATES SEVERING HARTFORD FROM THE RIVER. SOURCE: RICHARD WELLING, COURTESY OF CONNECTICUT HISTORICAL SOCIETY 54
- FIGURE 35: THIS 1913 POSTCARD PRESENTS AN IDYLIC PORTRAIT OF A RIVERSIDE PROMENADE IN HARTFORD. SOURCE: HARTFORD PUBLIC LIBRARY 54
- FIGURE 37: THE MORTENSEN LANDING AND BAND SHELL EXTEND OVER A NEWLY LOWERED I-91, AND INTEGRATE PEDESTRIAN ACCESS ONTO THE FOUNDER'S BRIDGE. SOURCE: RIVERFRONTREAPTURE.ORG 55
- FIGURE 38: FOUNDERS BRIDGE PROMENADE OVER I-91, LOOKING WEST TOWARDS DOWNTOWN HARTFORD. SOURCE: [HTTP://COMMONS.TRINCOLL.EDU/TWOWHEELEDHARTFORD](http://commons.trincoll.edu/twowheeledhartford) 57
- FIGURE 39: FOUNDER'S BRIDGE PROMENADE OVER I-91, LOOKING WEST TOWARDS CONNECTICUT SCIENCE CENTER AND DOWNTOWN HARTFORD 58
- FIGURE 40: EASTWARD VIEW FROM MORTENSEN PLAZA TOWARDS AMPHITHEATER, CONNECTICUT RIVER, THE FOUNDERS BRIDGE, AND TOWN OF EAST HARTFORD. PHOTOGRAPH BY THE AUTHOR. 58
- FIGURE 41: PEDESTRIAN WAYFINDING SIGNAGE AT STATE HOUSE PLAZA. PHOTOGRAPH BY THE AUTHOR. 58
- FIGURE 42: TRASH RECEPTACLES AT THE MRP. PHOTOGRAPH BY THE AUTHOR. 60
- FIGURE 43: WAYFINDING AT MORTENSEN RIVERFRONT PLAZA 60
- FIGURE 45: AMPHITHEATER SEATING AT MRP. PHOTOGRAPH BY THE AUTHOR. 61
- FIGURE 44: BENCH STYLES AT THE MRP. PHOTOGRAPH BY THE AUTHOR 61

FIGURE 46: SCULPTURE ALONG THE RIVERWALK, WITH SCULPTURE WALK BANNER ON LAMPPOST	62
FIGURE 47: NATURAL EMBANKMENTS ARE INTERSPERSED WITH REMNANTS OF COMMERCIAL ACTIVITY. PHOTOGRAPH BY THE AUTHOR.	62
FIGURE 48: CONTEXT FOR MIDDLE HARBOR SHORELINE PARK.	66
FIGURE 49: PLAN OF MIDDLE HARBOR SHORELINE PARK. SOURCE: THE PORT OF OAKLAND.	67
FIGURE 50: ROAD TO MIDDLE HARBOR. PHOTOGRAPH BY THE AUTHOR.	69
FIGURE 51: ONE OF THE LIGHTS AT THE MOLE POINT OBSERVATION TOWER. PHOTOGRAPH BY THE AUTHOR.	69
FIGURE 52: SHIPPING CLEATS HAVE BEEN INCORPORATED INTO THE PARK'S DESIGN. PHOTOGRAPH BY THE AUTHOR.	70
FIGURE 53: DOLPHIN SCULPTURE PLAYS HOST TO SOME IMPROMPTU ART. PHOTOGRAPH BY THE AUTHOR	70
FIGURE 54: DECORATIVE TILES ADORN SEVERAL SMALL PILLARS AT THE AMPHITHEATER. PHOTOGRAPH BY THE AUTHOR.	71
FIGURE 55: PICNIC TABLES AT POINT ARNOLD. PHOTOGRAPH BY THE AUTHOR.	71
FIGURE 56: VIEW OF SAN FRANCISCO FROM THE WESTERN PACIFIC MOLE WATCHTOWER	72
FIGURE 57: SEATING STYLES VARIED BETWEEN EACH WATERFRONT, FROM FORMAL BENCHES TO INFORMAL STOOPS TO SEMI-FORMAL EVENT SEATING.	74
FIGURE 58: THE HUNTER'S POINT SHIPYARD LIES IN THE FAR SOUTHEAST CORNER OF THE CITY	77
FIGURE 59: THE HUNTER'S POINT SHIPYARD IN 1920, WITH INDIA BASIN IN THE FOREGROUND.	78
FIGURE 60: THE ACTIVE SHIPYARD IN 1948. SOURCE: SAN FRANCISCO CHRONICLE	78
FIGURE 61: CONTOURS OF THE ORIGINAL SHORELINE OVERLAID ON THE MODERN DAY CONTOURS OF THE HUNTERS POINT SHIPYARD.	79
FIGURE 62: STUDY AREA BOUNDARY. MAP CREATED BY AUTHOR.	80
FIGURE 63: TRANSPORTATION ACCESS TO THE HUNTER'S POINT SHIPYARD. MAP CREATED BY THE AUTHOR WITH DATA FROM THE CITY OF SAN FRANCISCO AND SAN FRANCISCO MUNICIPAL TRANSIT AGENCY.	81

- FIGURE 64: SIGNAGE AND FENCING WARNS TRESPASSERS OF LEGAL (AND CHEMICAL) CONSEQUENCES. PHOTOGRAPH BY THE AUTHOR. 82
- FIGURE 65: THE OLD AND THE NEW. PHOTOGRAPH BY THE AUTHOR. 82
- FIGURE 66: RENDERING OF LENNAR'S OPEN SPACE PLAN FOR HUNTER'S POINT SHIPYARD, AS SEEN FROM THE SOUTHWEST. SOURCE: TRANSPARENT HOUSE FOR LENNAR URBAN 83
- FIGURE 67: HILLSIDE DETAIL OF LENNAR URBAN'S OPEN SPACE PLAN. SOURCE: TRANSPARENT HOUSE FOR LENNAR URBAN 83
- FIGURE 68: OVERHEAD RENDERING OF BUILD INC.'S FUTURE MIXED-USE DEVELOPMENT ALONG THE FUTURE INDIA WATERFRONT PARK SOURCE: BUILD INC. 85
- FIGURE 69: RENDERING OF FUTURE INDIA BASIN WATERFRONT. SOURCE: GUSTAFSON, GUTHRIE AND NICHOL. 85
- FIGURE 70: RENDERING OF STREET-LEVEL ACTIVITY AT BUILD INC'S RESIDENTIAL PROJECT AT INDIA BASIN OPEN SPACE PARK. SOURCE: BUILD INC, 2014 86
- FIGURE 71: VIEW FROM THE EXISTING INDIA BASIN SHORELINE PARK. SOURCE: SAN FRANCISCO CHRONICLE 86
- FIGURE 72: POTENTIAL PROGRAMMING AT NORTHSIDE PARK. SOURCE: LENNAR URBAN, MARCH 2016 87
- FIGURE 73: CIRCULATION MAP OF HPS. THE LEFT-HAND PANEL DEPICTS CURRENT CIRCULATION CONDITIONS WITH OVER 10 MILES OF BLOCKED ROADWAY. THE RIGHT-HAND PANEL PROPOSES RE-OPENING THE STREET GRID, EXPANDING THE BICYCLE NETWORK, CONSTRUCTING PEDESTRIAN PATHS, AND EXTENDING THE BUS LINES. MAP CREATED BY AUTHOR WITH DATA FROM THE CITY OF SAN FRANCISCO, SAN FRANCISCO MUNICIPAL TRANSIT AUTHORITY, AND THE SAN FRANCISCO RECREATION AND PARKS DEPARTMENT. 90
- FIGURE 74: POTENTIAL MASSING ALONG EASTERN PIERS OF HUNTER'S POINT SHIPYARD. LARGE BUILDINGS MAINTAIN THE FORM OF THE STREET GRID, ALLOWING FOR ELONGATED VIEW SHEDS AS THE USER APPROACHED THE WATERFRONT. BUILDINGS ARE STEPPED TO MITIGATE THE 'CANYON' EFFECT, AND SETBACKS ARE VARIED TO CREATE A MORE INTERESTING VARIETY OF ENCLOSURES. RENDERINGS BY AUTHOR ON GOOGLE EARTH BASE MODEL. 91
- FIGURE 75: ELEVATION AT THE HUNTER'S POINT SHIPYARD. MAP CREATED BY AUTHOR WITH DATA COURTESY OF THE CITY OF SAN FRANCISCO AND THE UNITED STATES GEOLOGICAL SURVEY. 92
- FIGURE 76: NATURAL EDGES ALONG A TRAIL IN THE FUTURE HUNTER'S POINT SHIPYARD. BASE PHOTO AND RENDERING BY THE AUTHOR, WITH COLLAGED ELEMENTS COURTESY OF SHUTTERSTOCK. 93

This page intentionally left blank



This page intentionally left blank

CHAPTER 1: INTRODUCTION

American cities once relied heavily on their waterfronts for commerce, particularly between the eighteenth and early twentieth centuries when the industrial revolution necessitated the rapid movement of goods across the country and the globe.¹ Waterfronts also supported auxiliary land uses such as ship-building and large-scale manufacturing, which necessitated the construction of warehouses, factories, railway yards, and loading docks.² Waterfronts were dirty and crowded to be sure, but a lively waterfront signified a bustling economy and was therefore an indispensable part of any successful city. As Waterfronts fell into disuse in the late twentieth century, cities began to re-imagine them as vibrant commercial and recreational centers that could help cleave out a global identity.

The last decade has San Francisco's southeastern waterfront experiencing a similar rebirth, particularly on the site of a former Naval Base at the Hunter's Point Shipyard. The report will culminate in a set of design recommendations and guidelines for creating an active, attractive, and accessible urban waterfront. While many of these guidelines were be focused primarily on the Hunter's Point Shipyard, the principle takeaways could be applicable to a wide cross-section of planning and architectural professionals. These include:

- San Francisco Planning Department
- San Francisco Parks and Recreations Department (SFPRD)
- Lennar Urban
- Build Inc.
- Residents of Bayview / Hunter's Point
- Prospective Tenants of the Hunter's Point Shipyard
- Planning Departments in the United States overseeing Waterfront Renewal
- Landscape architects interested in designing for a post-industrial site

¹ Richard Marshall, "Connection to the Waterfront: Vancouver and Sydney" in *Waterfronts in Post-Industrial Cities*, ed. Richard Marshall New York : Spoon Press, 2001), 17.

² Marshall, 19.



Figure 1: The Hunter's Point Shipyard is located in the southeastern corner of the City and County of San Francisco. Map created by the author

1.1 Background and Definition of Terms

The Hunter's Point Shipyard

The Hunter's Point Shipyard (HPS) is located in the southeastern corner of the City and County of San Francisco (see [Figure 1](#)), and served as Naval shipyard between 1941 and 1974. It once provided over five thousand jobs to the residents of Bayview Hunter's point, and its closure had a devastating effect on the neighborhood's economic vitality. The shipyard area comprises 490 acres of land, 5 miles of shoreline, and over unused buildings.³ Talks of redevelopment have been in the works since 1996, with a re-development plan finally approved by the City of San Francisco in 2008. Development officially broke ground in 2013, as part of a 7.3 billion-dollar redevelopment plan spearheaded by the Lennar Corporation.

Bayview/ Hunter's Point Neighborhood

Adjacent to the development site lies the Bayview/Hunter's Point Neighborhood (BVHP) (Seen in light pink in [Figure 1](#)). It sits largely isolated from the rest of the city due to its topography, which leaves it enclosed in its own valley facing the bay and the HPS. One of the largest draws to the area was the now shuttered Candlestick Park, home to the San Francisco 49ers from 1960 until 2014. The area is served primarily by the MUNI T Light rail line as well as several MUNI buses.

According to the 2010 US Census, the neighborhood American with a median income of \$38,638. Despite the below-average income and the

11.4% unemployment rate residents exhibit a strong sense of neighborhood pride, and the 48% homeownership rate speaks to a solid middle class. The neighborhood is also 41% African American, which is another strong identifier for its residents.

Reception to the Hunter's Point Shipyard development in this neighborhood has been mixed. On the one hand the site is greeted a potential jobs generator, and the *SF Bayview* goes so far as to applaud the Lennar Corporation's investment in a new school.⁴ On the other hand, it is regarded as an infringement that needs to be dealt with. A sidebar on the Bayview Hill Neighborhood Association's homepage specifically targets the Lennar Corporation for contributing to the area's low air quality.⁵ In these two local sources alone, we sense the uncertainty of a community that wants to believe change will come, but it wary of believing too much.

Defining 'Urban Waterfront'

Lastly, the term 'Waterfront' bears defining as it will be used extensively throughout this report. The term is employed to signify any place where a city meets a body of water, be it in the form of a beach, wharf, boardwalk, greenspace, or promenade.

Defining 'Post-Industrial'

A majority of waterfronts alluded to in this report were once centers of maritime and railroad freight, and are thus classified as "post-industrial"; that is, they no longer rely on an industrial economy. Most

³ *Hunters Point Shipyard Area Plan*, Policy 1.1

⁴ Rochelle Metcalfe, "Third Street Stroll", *San Francisco Bayview National Black Newspaper*, September 28, 2015.

⁵ Bayview Hills Neighborhood Association, *The Air We Breathe*, <http://www.bayviewhillsf.org> (Accessed September 28 2015)

post-industrial sites re-appropriate existing structures such as warehouses and refineries for residential and commercial use.

1.2 Research Question and Hypothesis

This report is focused on waterfront development, particularly as it relates to the plan for the Hunter's Point Shipyard in southeast San Francisco. The two principle questions explored in this research are:

- What urban design best practices define public waterfront designs nation-wide and how does the plan for the Hunter's Point Shipyard shoreline adhere to these best practices?
- As the HPS project approaches its third phase and final phase of development, how can the City of San Francisco ensure that the urban design elements respond to the needs of the adjacent community?

The HPS Waterfront has enormous potential to be a visual and social uniting factor between the residents of the Bayview/Hunters Point neighborhood and the newcomers within the Hunter's Point Shipyard. The Lennar Corporation appears to treat this area as a playground for the future occupants of the glistening high-rises and manicured townhouses of the HPS development, however I believe that there is still time to design a truly inclusive space that invites all residents to pass through the HPS and enjoy the shoreline of the San Francisco Bay. In the word of noted urban design scholar Kevin Lynch: "Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past

⁶ Kevin Lynch, *The Image of the City*, (Cambridge: The MIT Press, 1960), 1.

⁷*Brian Hoyle, "Global and Local Change on the Port City Waterfront", *The Geographical Review* 90-3, July 2000, 497.

experiences."⁶ My research will culminate in a set of design recommendations aimed at creating a thriving waterfront that is both accessible and legible to residents and visitors alike.

1.3 Relevance of Studying the Hunter's Point Waterfront

There are many reasons for examining the design of a waterfront development, particularly as it relates to the case of the Hunter's Point Shipyard. The project presents a classic instance of post-industrial waterfront revitalization, which has become a widely popular urban renewal strategy within the last quarter century.⁷ Secondly, the site's proximity to a low-income neighborhood suggests a unique opportunity to explore the design principles behind both exclusive and inclusive public spaces. This research therefore touches on multiple facets of Urban Planning and Design, and builds on the already extensive scholarship within the following fields:

Waterfront Regeneration

As manufacturing jobs began to migrate overseas in the second half of the twentieth century, many smaller ports fell into disuse and neglect, leading to a belt of blight along what might otherwise be a city's most desirable areas⁸.

⁸ Paul Ryckbost, "Re-developing Urban Waterfront Property." University of Michigan Urban and Regional Planning Department Economic Development Handbook. Last modified on April 14, 2005. Accessed September 26, 2006.

The last few decades have witnessed a worldwide trend in reversing this blight⁹, for many cities now embrace their waterfronts as economically viable spaces that warrant careful design and curation. This trend towards waterfront regeneration was the principal theme at the 2000 *Global Conference for an Urban Future* in Berlin. This conference led to the creation of the *10 Principles for a Sustainable Development of Urban Waterfront Areas*, two of which are particularly relevant to the Hunter's Point Shipyard.

- **Waterfronts are part of the existing urban fabric:** New waterfronts should be conceived as an integral part of the existing city and contribute to its vitality. Water is a part of the urban landscape and should be utilized for specific functions such as waterborne transport, entertainment and culture.
- **Public access is a prerequisite:** Waterfronts should be both physically and visually accessible for locals and tourists of all ages and income. Public spaces should be constructed in high quality to allow intensive use.¹⁰

These principles signify the planning community's acknowledgement of the importance of thoughtful waterfront design. My research aims to shed further light on this practice, and build on the growing consensus

in the planning community that revitalizing an urban waterfront should involve social and economic (as well as aesthetic) concerns.¹¹

Designing for an Equitable Public Space

Waterfront regeneration projects have not always been the most equitable civic endeavors. They are too often designed solely for upscale residential and recreational activities such as condominiums, private marinas, and expensive boutiques, which stand in stark contrast from the surrounding urban form.¹² As a result, their public spaces can be viewed as 'public' in name only; their design elements too often connote exclusivity and separation. (We saw earlier how the plan for the Hunter's Point Waterfront contains many such high-luxury land uses.)

According to noted urban design theorist William Whyte, the access of an urban space can be measured by the connection to its surroundings.¹³ These connections needn't be physical; it only takes a couple acts of careless design to create a space that is foreboding and unwelcoming to an outsider. Tridib Banjaree remarks on this phenomenon in his study of downtown business districts: "in many parts of downtown business districts, a thin brass line or a groove cut in the sidewalk.....makes it clear that the seemingly unbounded public space is not boundaryless after all."¹⁴ Kevin Lynch believes that the

⁹ *Marichela Sepe, "Urban History and Cultural Resources in Urban Regeneration: a Case of Creative Waterfront Renewal", *Planning Perspectives*, 2013 Vol. 28, No. 4, 596.

¹⁰ *Orianna Giovinazzi and Maria Moretti, "Port Cities and Urban Waterfront: Transformations and Opportunities", *TemaLab Journal of Mobility, Land Use and Environment* Vol. 3 (2009), 57.

¹¹ A. Breen and D. Rigby, *The New Waterfront: A Worldwide Urban Success Story*. (London: Thames and Hudson, 2006)

¹² *Susan Oakley, "The Role of Urban Governance in Re-constructing Place, Economic Function and Social Relations in Urban Waterfront Regeneration: The Case of Port Adelaide, South Australia", *Space and Polity* 11, 280

¹³ William Whyte, *The Social Life of Small Urban Spaces*, Michigan: Project for Public Spaces, 1980.

¹⁴ *Tridib Banerjee, "The Future of Public Space Beyond Invented Streets and Reinvented Place", *Journal of the American Planning Association*, Vol. 67, No. 1, (Winter 2001), 11.

human brain is constantly seeking to organize and identify its surroundings, and are therefore particularly sensitive to signifiers of paths and boundaries.¹⁵

Planning scholarship thankfully is leaning towards a model of inclusive design; Clare Cooper Marcus write that “....a designer [...] must consider both the larger societal changes and the creation of better, more supportive environments from people’s daily lives.”¹⁶ My research will explore this particular aspect of urban waterfronts, thereby integrating the fields of waterfront revitalization and urban design.

1.4 Methods

Primary Methods

Method #1: Precedent Analysis – CHAPTER 3 and 4

This method involved a **cross-comparison of 6-8 public waterfronts**, which was limited to waterfronts that have undergone a significant re-development within the last fifteen years. The research lead to the creation **comprehensive list of desirable elements** of a thriving waterfront, and helped in delineate a **set of best practices** for creating a viable public space along an underused urban waterfront. These best practices provide the framework for the analysis of the Hunter’s Point Shipyard in Chapter 4 of my report. For each site I wrote a 15-page in-depth analysis of the waterfront, its urban context, and its design elements.

Method #2: On-Site Analysis of the HPS – CHAPTER 4

¹⁵ Lynch, 96.

This method comprised of a **thorough on-site analysis of the Hunter’s Point Shipyard** from an urban design perspective, which provided the backbone of chapter 4 of this report. The site analysis consists of four principal parts:

- I. Familiarization of the HPS and the BVHP via bicycle to note natural paths and sight lines.
- II. Photographing and recording the design elements.
- III. Detailed note-taking and sketching on overlay maps
- IV. Organization of field notes and photographs according to criteria established in Method #1, in order to ascertain a design narrative for the Hunters Point Shipyard.

Secondary Methods

Method #3: GIS Analysis – Chapters 4 and 5

The maps strengthened the arguments put forth in Chapter 5, and helped form a visual continuity throughout my analysis. The author digitized all the abandoned roadways that were not included in the San Francisco dataset, and then conducted a network analysis in GIS to calculate average walk, drive, or transit times between the HPS waterfront and points of neighborhood interest.

Method #4: Interviews - CHAPTERS 4 and 5

The author conducted 5-6 **brief interviews** with residents and stakeholders of Bayview/Hunters Point, a neighborhood directly adjacent to the Hunter’s Point shipyard. These interviews helped

¹⁶ Marcus, Clare Cooper Marcus and Carolyn Francis. People Places: Design Guidelines for Urban Public Space. New York: International Thomson Publishing Inc., 1998.

strengthen the author's understanding of the project's community outreach component and place-making potential. Local residents provided a human element to the analyses and recommendations laid out in Chapters 4 and 5 of the report. The interviews were conducted either via email or in person, in which case they were recorded onto the author's phone, and relevant quotes will be transcribed and kneaded into the report.

Method #5: Analysis of Plans – Chapter 4

The author embarked on detailed review of the maps, renderings, and plans produced over the last five years by the Lennar Corporation for the Hunter's Point Shipyard. This helped supplement my on-site analysis featured in Chapter 4. The author also met with several planners and urban designers from the City of San Francisco, Lennar Urban, and Fehr & Peers to ascertain the full extent of the plans. This

resulted in a development and construction timeline for the Hunter's Point Shipyard, which helped weight the feasibility of the recommendations put forth in Chapter 5.



This page intentionally left blank

CHAPTER 2: LITERATURE REVIEW

This literature review aims to distill the best (and worst) practices of designing public waterfronts. The purpose of this literature review is twofold; first, to gain a firm understanding of waterfront development in order to embark on a detailed audit of six waterfronts, and second, to inform the author's design recommendations for the Hunter's Point Shipyard in southeast San Francisco. The leading questions are:

1. What are the design elements that contribute to a successful public space?
2. What are the current design trends in waterfront regeneration?
3. What are the social and economic challenges of waterfront regeneration?

Answers to these questions will highlight key insights about the physical and social aspects of waterfront design. They will also inform future design proposals for the Hunter's Point Shipyard. This work has particular significance for waterfront communities in San Francisco and globally.

2.1 Meet Me in the Square: Examining Elements of Successful Public Spaces

What makes a park successful? Why do some beautiful parks lie empty while a concrete enclave teems with life both night and day? While scholarship can never give us a definitive set of global guidelines, it can help us scratch the surface on how to design spaces for people and cities. Before embarking on a re-design of the Hunter's Point Shipyard it is important to examine the public space literature.

Safety and Comfort

Although much is made of the design and aesthetic appeal of a park or plaza, studies have found that safety and comfort are in fact the most telling markers of a successful public space.¹⁷ The issue of safety is particularly relevant to women, the elderly, and disabled¹⁸, but is an important consideration among all demographics: more simply, people do not commonly use spaces where they feel unsafe.

There are several design interventions that can improve safety and comfort in a public area. According to Luymes and Tamminga, factors that enhance the safety of a park include high imageability (visibility of the entire space), clearly defined entrances, porous or transparent boundaries, and limited number of hidden places.¹⁹ A 2009 study by

¹⁷Don T. Luymes and Ken Tamminga, "Integrating Public Safety and Use into Urban Greenways," *Landscape and Urban Planning* Vol. 33, 1995, 394; William Whyte, *The Social Life of Small Urban Spaces*, Michigan: Project for Public Spaces, 1980, 15-22

¹⁸ Luymes and Tamminga, 397

¹⁹ Luymes and Tamminga, 394

Marion Roberts found that the addition of street-lighting not only reduced crime, but also increased the sense of comfort and safety among pedestrians.²⁰ These findings were echoed by Kate Painter, whose 1996 study found that the addition of street lighting limited criminal activity by 90%.²¹ Another possible intervention lies in increased surveillance through policing or security cameras. In Birmingham, the presence of Closed Circuit Television Cameras (CCTV) appeared to diminish crime within the surveilled area, however city-wide crime rates remained static, suggesting that the crime had merely been displaced to a nearby location.²² We can thus deduce that surveillance can inhibit crime in some areas but cannot be the primary strategy for improving the safety of a public space. In fact, a 2007 study by Van Melik et al. found that the most powerful contributors to a user's sense of security were adequate lighting, crosswalks, well-maintained pathways, and manicured vegetation.²³

Comfort is another crucial factor for a successful park. In his landmark 1980 study of New York City Public Plazas, William Whyte discovered that one of the single most significant factors of a successful plaza was not size, shape, or even sunlight: it was places to sit. "The most attractive fountains, the most striking designs, cannot induce people to come if there is no place to sit."²⁴ Greenery can be an important

contributor to the comfort and perceived safety of an urban park. Studies have found that people are far more attracted to public spaces that feature trees, grass, and other types of vegetation.²⁵ This is particularly true for women; a study of by Kuo, Coley, and Sullivan concluded that women are much more likely to socialize with their neighbors when their homes are surrounded by greenery and vegetation.²⁶ Furthermore, a 2004 study of communal outdoor spaces by Sullivan, Kuo, and DePooter found that people are 90% more likely to frequent spaces that featured greenery than spaces that were relatively barren. This statistic skyrocketed to 125% among people who were alone, which speaks to the pleasantness and sense of and privacy that tree canopy can provide.²⁷ It is important to note however that too much greenery can have the opposite effect on the perceived safety of a space: one focus group participant in a 2013 study reported that she felt much safer in a park before the city brought in additional landscaping, since the new plantings increased the shadows and obscured her sight lines from one end of the park to the other.²⁸ And of course it bears mentioning that there are some very successful plazas that that have no greenery at all. Arcaded cobblestone piazzas such as those found in Siena and Venice have nary a shrub in sight and yet they have nonetheless served their communities (as well as

²⁰ Marion Roberts, "Planning, Urban Design and the Night-Time City: Still at the Margins?" *Criminology and Criminal Justice* 9, no. 4 (2009): 495

²¹ Kate Painter, "The Influence of Street Light Improvements on Crime, Fear and Pedestrian Street Use, After Dark," *Landscape and Urban Planning* 35, no. 2 (1996): 193-201

²² Rianne Van Melik, Irina Van Aalst and Jan Van Weesep, "Fear and Fantasy in the Public Domain: The Development of Secured and Themed Urban Space," *Journal of Urban Design* Vol. 12 no. 1 (February 2007): 172

²³ Van Melik et al., 174

²⁴ Whyte, 28

²⁵ Aleksandra Kazmierczak, "The Contribution of Local Parks to Neighborhood Social Ties," *Landscape and Urban Planning*, No. 109 (2013), 32 ; F.E. Kuo, W.C. Sullivan, R.L. Coley and L. Brunson, "Fertile Ground for Community: Inner-city Neighborhood Common Space", *American Journal of Community Psychology*, Vol. 26 (1998), 825;

²⁶ Kuo, 825

²⁷ William C. Sullivan et al. "The Fruit of Urban Nature: Vital Neighborhood Spaces," *Environment and Behavior* 36, no. 5 (September 2004): 678-700

²⁸ Kazmierczak, 38

millions of international visitors) beautifully over the course of multiple centuries.²⁹ We can deduce that greenery is most certainly a desirable component, but as with any other design element it should be designed in relation to the built environment so as to avoid unseen or foreboding places.

Access and Connectivity to Neighborhood

It comes as no surprise to learn that park use is more prevalent in neighborhoods whose surrounding streets are already safe, well-maintained³⁰, and low in crime. Parks and plazas are thus extensions of their neighborhoods, which underscores William Whyte's belief that the success of urban space can be best measured by the connection to its surroundings.³¹ This includes access to public transit, clearly marked entrances, walkable pathways, and proximity to commercial or recreational land uses.³² But connectivity needn't be always so literal; urban design theorist Kevin Lynch believes that the human brain is constantly seeking to organize and identify its surroundings, and humans are therefore particularly sensitive to signifiers of paths and boundaries.³³ A public space should thus be immediately readable and should have natural paths that lead the user to the space, through the space, and away from the space in an effortless manner.³⁴

In his 2005 assessment of walkability, Michael Southworth distilled the following criteria of successful urban pathways: connectivity of path network, linkage to other modes of travel, varied and fine grained land use patterns, safety from traffic and social crime, path quality (landscaping, street surface), and path context (destinations, number of users). A 2012 study by Arlie Atkins et al. reinforced these findings, and found that that 95% of their subjects' favorable ratings on walkability were explained by the following five variables: human scale, transparency, tidiness, enclosure, and imageability.³⁵ Southworth notes that the most interesting urban paths function as a series of revelations, each one inviting you to continue on to the next surprise.³⁶ This can be achieved through architecture and urban form, but even small interventions such as landscaping and street art can help provide a visual narrative along a path. New York City is tackling issues of transparency and enclosure by softening the boundaries between park space and the adjacent sidewalk (see [Figure 2](#)).³⁷ Pedestrian-oriented signage is a crucial component of imageability, as people who are aware of safe and convenient places to walk are twice as likely to travel by foot than people who are not aware of such options.³⁸ Enclosure and human scale are also important considerations, and may account

²⁹ Southworth, 254

³⁰ Kazmiercak, 42

³¹ William Whyte, *The Social Life of Small Urban Spaces*, Michigan: Project for Public Spaces, 1980.

³² Caitlin Campbell, *Visualizing Residual Spaces In A New Light: A Study for Creating & Designing an Urban Public Space Under a Downtown San José Freeway*, San Jose State University Masters Thesis Project, December 2013; Southworth, 250.

³³ Lynch, 96.

³⁴ Michael Southworth, "Designing the Walkable City," *Journal of Urban Planning and Development* Vol. 131, no.4 (December 2005): 248

³⁵ Arlie Adkins et al, "Unpacking Walkability: Testing the Influence of Urban Design Features on Perceptions of Walking Environment Attractiveness," *Journal Of Urban Design* Vol. 17 No. 4 (November 2012), 501

³⁶ Southworth, 251

³⁷ New York City Department of Parks and Recreation, "Parks Without Borders," <http://www.nycgovparks.org/planning-and-building/planning/parks-without-borders>

³⁸ Southworth, 250



Figure 2: An NYC park, before and after the "Parks Without Borders" program. Source: NYC Department of Parks and Recreation

for the success of the Italian piazzas. It is important to consider these characteristics when designing public spaces, as parks and plazas have the potential to act as natural focal points for community.³⁹

Amenities and Sociability

In addition to developing connectivity between places, there are a variety of elements that keep people returning to public space. The literature consistently supports the theory that access to food is among the largest drivers of success in an urban park. William Whyte

notes that "if you want to seed a place with activity, put out food."⁴⁰ In their 2008 study of East London public spaces, Cattell et. al found that access to a wide variety of cheap food options rendered Queens Market one of the most well-frequented and beloved public spaces in the neighborhood.⁴¹ The same study found that single users (users not traveling as part of a group) were far more attracted to spaces with food options than to spaces without food options, and were more

³⁹ Lynch, 72-9

⁴⁰ Whyte, 50

⁴¹ Vicky Cattell et al., "Mingling, Observing, and Linger: Everyday Public Spaces and their Implications for Well-Being and Social Relations," *Health and Places* 14, no. 3 (2008): 544-561

likely to engage with other users.⁴² In essence, food gives people a universally-acknowledged reason to linger in the public space. This is a very important consideration: many of the subjects in Urban Designer Kazmierczak's study didn't mind frequenting parks alone, but avoided doing so for fear of being perceived as 'odd'.⁴³ Planning scholars Demerath and Levinger affirm that chaotic spaces attract the most people because they give the user complete freedom to come and go as s/he pleases, and offer a wide ranging choice of activities and social interactions.⁴⁴ In her study of shared public spaces, Kazmierczak's discovered that parks with the highest number of social, or "optional" activities (such as playgrounds, chess/checker board tables, bandstand, etc.) also saw the longest visits.⁴⁵ As William Wythe put it, "What attracts people most, it would appear, is other people."⁴⁶ Public spaces are unique in that they can satisfy a person's competing desires for isolation and companionship in one fell swoop.

There is no magic formula for creating the perfect park, for the simple reason that contexts and cultures vary vastly across the globe, and what works for one city might be disastrous in another. Even within their cultural contexts people are themselves vastly different in what they seek from a public space, reflecting what Cattell et al. refer to as "the complex and often contradictory nature of people's relationship to public space."⁴⁷ Nonetheless, there are some key takeaways to

glean from the literature. Public spaces should be comfortable, visually and physically accessible, well-maintained, and adaptable to changing tastes and hobbies. They should ideally feature amenities such as food, seating, and play infrastructure, and should feature visual markers (statues, central fountain) to serve as landmarks for people within and without the space. Places should be and feel safe, and should feature manicured planting, adequate lighting, and high visibility of its boundaries and pathways. Ultimately, successful spaces also contribute to the existing urban context by supporting the design, land uses, and interests of the community.

2.2 Strolling Along the Shore: Current Trends in Waterfront and Promenade Design

People are naturally attracted to the water's edge. Access to navigable water has long been considered a public right in western civilization, a tradition which harkens back to the Roman Empire⁴⁸ when a city's waterfront was regarded as its commercial and cultural front door.⁴⁹ American cities once relied heavily on their own waterfronts for commerce,⁵⁰ however changes in manufacturing and shipping trends led to a rapid decline in urban waterfronts by the mid 20th century. Cities saw vacant warehouses and rusted piers sitting on what would

⁴² Cattell et al., 555

⁴³ Kazmierczak, 50

⁴⁴ Loren Demerath and David Levinger, "The Social Qualities of Being on Foot: A Theoretical Analysis of Pedestrian Activity, Community, and Culture," *City & Community* 2, no. 3 (2003): 220 -233

⁴⁵ Kazmierczak, 42

⁴⁶ William H. Whyte, *The Social Life of Small Urban Spaces*, New York: Project for Public Spaces, 1980, 19

⁴⁷ Cattell et al., 556

⁴⁸ A. Breen and D. Rigby, *The New Waterfront: A Worldwide Urban Success Story*. (London: Thames and Hudson, 2006), 24

⁴⁹ Brian Hoyle, "Global and Local Change on the Port City Waterfront", *The Geographical Review* 90-3, July 2000, 397.

⁵⁰ Richard Marshall, "Connection to the Waterfront: Vancouver and Sydney" in *Waterfronts in Post-Industrial Cities*, ed. Richard Marshall New York : Spoon Press, 2001), 17.

otherwise be highly desirable land. If ports signify the power and prosperity of a city then it is little wonder that neglected waterfronts can invoke such strong sensations of blight, depression, and economic decline among those who behold it. The last 30 years have seen a concerted reversal of this blight⁵¹, and cities have undertaken numerous large scale waterfront developments in an effort to reclaim and revitalize their post-industrial landscapes. This section seeks to analyze the principal trends and design elements that have formed the foundation of many successful waterfronts developments in the United States.

Port revitalizations had become so commonplace by turn of the millennium that they were the chief topic of discussion in at the 2000 *Global Conference for an Urban Future* in Berlin. This conference led to the creation of the *10 Principles for a Sustainable Development of Urban Waterfront Areas*,⁵² an attempt to codify the best practices of waterfront development. They are as follows:

1. Secure the quality of water and the environment.
2. Waterfronts are part of the existing urban fabric.
3. The historic identity gives character.
4. Mixed use is a priority.
5. Public access is a prerequisite.
6. Planning in partnership speeds the process.
7. Public Participation is an element of sustainability.
8. Waterfronts are long-term projects.

⁵¹ Breen and Rigby, 25; Orianna Giovinazzi and Maria Moretti, "Port Cities and Urban Waterfront: Transformations and Opportunities", *TemaLab Journal of Mobility, Land Use and Environment* Vol. 3, 2009, 57; Marichela Sepe, "Urban History and Cultural Resources in Urban Regeneration: a Case of Creative Waterfront Renewal", *Planning Perspectives*, 2013 Vol. 28, No. 4, 596.

9. Revitalization is an ongoing process.
10. Waterfronts profit from international networking.⁵³

It should be noted that these principles align closely with the elements of public space discussed in the previous section. As before, access and imageability are considered key elements, as is integration with the surrounding landscape. Some of the principles speak directly to issues of funding and management; waterfronts are highly visible projects that pull on a delicate mix of private and public funds. As such, community input is particularly important if a city seeks to maintain public support for a project. In examining these principles, let's turn to the most prevalent elements in waterfront design in the context of the American waterfront.

Public-Private Partnership: Joint Stewardship of the Waterfront

Waterfronts must be safe and free of toxicity, and the burden of cleanup should lie on the municipalities and local governments. The City of Yonkers, NY provides an excellent example of this principle at work; the Yonkers Brownfields Economic Redevelopment Initiative (YBERI) works with developers to secure state funds to help decontaminate and reconstruct derelict lands in exchange for construction and development rights. The once derelict Yonkers Riverfront now boasts a greenway, an urban park, and several mixed use apartment complexes.⁵⁴ The YBERI was able to wisely allocate its

⁵² Giovinazzi and Moretti, 58-59

⁵³ Giovinazzi and Moretti, 58

⁵⁴ City of Yonkers, "Department of Planning and Development – Brownfield Program", accessed November 23rd, 2015, <http://www.cityofyonkers.com/work/department-of-planning->

funding to not only reverse the level of contamination but to build and improve upon the existing infrastructure. Waterfront developments have been highly successful when planned in public private partnerships, particularly where the public entity plans the design and the function, and the private entity is charged with providing funding and seizing on marketable opportunities.⁵⁵

Historic Connection

Waterfront design should embrace the heritage of water and city, and proudly preserve its industrial past. One example that achieves this beautifully is Rowe's Wharf on the Boston Waterfront, which adapts historically-significant buildings to modern commercial and residential uses.⁵⁶ The design guidelines are dedicated to preserving the quality and character of the buildings, resulting in a public space flanked by the elegant Rowe's Wharf Dome on one end and the towering masts of the *USS Constitution* on the other.⁵⁷

Retaining Maritime Character

Waterfronts should, where possible, continue to be hubs of waterborne transportation. Giovinazzi and Moretti as well as Brian Doucet point to Rotterdam to exemplify how urban rejuvenation can occur in the context of a working international port. The economic development of the port lands along the *Kop Van Zuid* (Head of the

development/development/business-economic-development/brownfield-program

⁵⁵ Giovinazzi and Moretti, 60

⁵⁶ Breen and Rigby, 63

⁵⁷ David L.A. Gordon, "Implementing urban waterfront redevelopment in an historic context: a case study of the The Boston Naval Shipyard," *Ocean and Coastal Management* Vol. 42 (1999), 912

South) in the 1980s helped bring identity and economic development to the largely industrial south side of the city, which had historically lagged beyond the more prosperous north side.⁵⁸ Up until that point, the city was divided into two distinct sections: the residential/cultural one to the north, and the industrial/maritime one to the south. The construction of the iconic Erasmus Bridge helped unite these two elements of the city, and ushered an era of rapid development along the working port. "In this experience it is hard to distinguish the port from the city and the search for an agreement between the needs inherent to economic growth and technological development, and those inherent to urban spaces and environmental issues has brought excellent results."⁵⁹ By retaining its original maritime function, the port avoided the pitfall of falling into sentimentality or nostalgia, as can too often be the case when a waterfront seeks to include maritime elements as part of its design strategy.⁶⁰

Pedestrian Access and Permeability

Waterfronts should be both physically and visually accessible for locals and tourists of all ages and income, and should be constructed in high quality to allow intensive use. For example, Brooklyn Bridge Park made this possible by placing public access at the forefront of its master plan. One key design element lay in the concept of "urban junctions", or "neighborhood parks at key entry points that transition between the park and adjacent residential communities."⁶¹ At the

⁵⁸ Brian Doucet, "Urban Strategy or Urban Solution? Visions of a gentrified waterfront in Rotterdam and Glasgow," Association of American Geographers 2013 Conference: PortcityScapes Special Session, Los Angeles: April 12 2013, 4

⁵⁹ Giovinazzi and Moretti, 60

⁶⁰ Doucet, 7

⁶¹ Brooklyn Bridge Park, "Brooklyn Bridge Park – Design," accessed November 2015, <http://www.brooklynbridgepark.org/pages/parkdesign>

Brooklyn Bridge, wayfinding signage is posted at nearby subway entrances and at the foot of the bike paths, and the soft transition from urban core to water's edge helps form a natural path for the user.

In this respect, the otherwise delightful Rowe's Wharf in Boston – designed successfully with historical preservation- failed miserably in regards to access and connectivity. Gordon points out that the wharf area was completely unserved by public transit on its completion in 1978, and the developer was forced to run shuttle buses for the residents in the nearby condominiums.⁶² Furthermore, the points of public access were obscured by poor signage and sight lines, and the constant presence of security guards made visitors feel unwelcome. Public reaction was so incendiary that city officials were compelled to pass a law in 1983 promoting public access to all of Boston's shore and encouraging public recreational uses along waterfronts.⁶³ This tale speaks to the extent to which citizens desire the right to enjoy their city's most attractive elements, particularly when they witness an influx of investment and construction.

Public Participation

Cities should benefit from sustainable waterfront development not only in ecological and economical terms but also socially. The community should be informed and involved in discussions continuously from the start. Burlington, VT embarked on an aggressive outreach strategy to elicit public input on its vision for its

⁶² Gordon, 920

⁶³ Gordon, 921

⁶⁴ City of Burlington, VT, Planning Commission, *Downtown and Waterfront Plan Public Outreach and Engagement, Strategy*
<https://www.burlingtonvt.gov/docs/4245.pdf>

waterfront along Lake Champlain. The City launched a three-pronged approach to engagement through online forums, community meetings, and mobile 'open houses' set up along the site itself.⁶⁴ The plan broke ground in August of 2014 to much local fanfare, and is set to include a skate park, a marina, green space, and two new piers.⁶⁵ Seattle is home to one of the world's most recognizable waterfronts, and yet officials continue to elicit public opinion on how to improve the space. Over ten-thousand people have contributed to the waterfront planning process since 2010, which prompted the city to form the Office of the Waterfront in 2015 in order to streamline public participation and planning. In both these cases, citizens are made to feel a sense of ownership towards their waterfront.

Dynamic Mixed Use

Waterfronts should celebrate water by offering a diversity of cultural, commercial and housing uses. River Place in Portland, Oregon gives us an excellent peek at how this can be achieved without resorting to a wall of identical high rises. Elegant townhomes are separated from commercial uses by way of height. The visual line starts at the three story apartment buildings before stepping down to a two-story commercial strip, which tapers to the bustling promenade, which then flows into the Willamette river through a series of docks.⁶⁶ The area is bisected by numerous paths, and users can easily navigate between the various uses.

⁶⁵ Mike Kanarick, "City of Burlington Breaks Ground on Major Re-development of Northern Waterfront", City of Burlington Press Release, August 5th, 2014:
<https://www.burlingtonvt.gov/Press/City-of-Burlington-Breaks-Ground-on-Major-Redevelopment-of-Northern-Waterfront>

⁶⁶ Breen and Rigby, 67

These examples paint a strong picture of waterfront regeneration in the United States and abroad. The following section will examine how these elements affect the city and the community at large.

2.3 Ivory Towers by the Sea: The Socioeconomic Challenges of Waterfront Regeneration

Waterfront regeneration projects have not always been the most equitable civic endeavors. They are often constructed solely for upscale residential and recreational activities such as condominiums, private marinas, and expensive boutiques, whose design elements lie in stark contrast from the surrounding urban form.⁶⁷ As a result, their public spaces can be viewed as 'public' in name only; their design elements too often connote exclusivity and separation.

This report has concluded that success of an urban space can be measured by the connection to its surroundings.⁶⁸ These connections aren't only about access; it only takes a couple acts of careless design to create a space that is foreboding and unwelcoming to an outsider. Tridib Banerjee remarks on this phenomenon in his study of downtown business districts: "in many parts of downtown business districts, a thin brass line or a groove cut in the sidewalk.....makes it clear that the seemingly unbounded public space is not boundary-less after all."⁶⁹

⁶⁷ *Susan Oakley, "The Role of Urban Governance in Re-constructing Place, Economic Function and Social Relations in Urban Waterfront Regeneration: The Case of Port Adelaide, South Australia", *Space and Polity* 11, 280

⁶⁸ William Whyte, *The Social Life of Small Urban Spaces*, Michigan: Project for Public Spaces, 1980.

⁶⁹ *Tridib Banerjee, "The Future of Public Space Beyond Invented Streets and Reinvented Place", *Journal of the American Planning Association*, Vol. 67, No. 1, (Winter 2001), 11.

Planning scholarship thankfully is leaning towards a model of inclusive design; Clare Cooper Marcus write that "....a designer [...] must consider both the larger societal changes and the creation of better, more supportive environments from people's daily lives."⁷⁰ The following best exhibit the socioeconomic challenges of modern waterfront design.

Waterfront as Playground

The large swaths of underused land presented by abandoned waterfronts also provide ample opportunity to create new recreational facilities such as stadiums, parks, sports complexes, theaters, and recreational marinas. Indeed, nearly all large scale urban waterfront renewals involve some kind of recreational component.⁷¹ New Orleans' new Riverwalk Place features a shopping mall and an aquarium. Baltimore's Inner Harbor also features an aquarium, convention center, a shopping mall, an art museum, upscale hotels, and the *USS Constellation* museum where tourists receive live audio tours of the naval ship. San Diego's waterfront features a convention center, a stadium, a waterfront museum, and its own battleship tour of the *USS Midway*. Waterfronts are naturally attractive places for such ventures, where "the city becomes a product which is sold to investors, tourists, and high-income residents.....where the entrepreneurial city takes hold.....where globalization becomes urbanized."⁷²

⁷⁰ Clare Cooper Marcus and Carolyn Francis. *People Places: Design Guidelines for Urban Public Space*. New York: International Thomson Publishing Inc., 1998.

⁷¹ Campo, 172

⁷² Brian Doucet, "Urban Strategy or Urban Solution: Visions of a gentrified waterfront in Rotterdam and Glasgow," Association of American Geographers 2013 Conference:PortcityScapes Special Session, Los Angeles: April 12 2013.

As a result, critics are often quick to judge waterfront renewal projects as overly commercial and lacking in any authentic lived urban experience. Susan Oakley is one such critic. “This consumption lifestyle is as an expression of status and desire for select exclusive occupancy. The Port waterfront is therefore symbolic of a distinctive form of consumption lifestyle that incorporates high-income, non-nuclear occupancy with boutique consumerism all within a high-profile tourist, cultural and leisure precinct.”⁷³ Breen and Rigby, while allowing that this might occasionally be true, think this far too severe an indictment of waterfront development. “It is one thing to decry ‘cookie cutter’ design, standardization of retail stores, and the sanitation of colorful waterfronts,” they argue. “It’s another, mistaken thing to trivialize waterfront development effort as consisting essentially lookalike marketplaces and aquariums.”⁷⁴ Luis Loures believes that Waterfront Developments have matured over the last few decades, and that most proposals now “tend to be much more inclusive and holistic, providing directions on how ecological restoration, cultural preservation, economic development and public needs and interest should be met.”⁷⁵ Nonetheless, a majority of waterfront developments still involve a great deal of place-making and ‘destination’ initiatives, which are often used to win public approval.⁷⁶

⁷³ Susan Oakley, “The Role of Urban Governance in Re-constructing Place, Economic Function and Social Relations in Urban Waterfront Regeneration: The Case of Port Adelaide, South Australia”, *Space and Polity* 11, 2007, 293.

⁷⁴ Breen & Rigby, 22

⁷⁵ Luis Loures “Post-industrial landscapes as Drivers for Urban Redevelopment: Public versus Expert Perspectives towards the Benefits and

A Tale of Two Neighborhoods

Waterfront developments often reveal a divergence between a city’s desire for new communal spaces and their ability to attract newer, wealthier residents. Even the most pro-development literature concedes to this particular problem. “There is unfortunately a tendency to block off with walls and gates the public’s access to and along water bodies in many cities,” write Rigby and Breen. “This is especially true of condominium and housing projects in pioneering markets....in appealing to a basically suburban market to take up city living, it is felt necessary to promote security and safety.”⁷⁷ Daniel Campo takes issue with the characterization of disused waterfronts as places that are inherently blighted, unsafe, and a burden to the surrounding neighborhoods. “While most traditional waterfront industries have long left (our) shores, the waterfront facilities and infrastructure that they have left behind have become venues for a wide variety of informal or vernacular uses.”⁷⁸ In over 40 visits of a particular Brooklyn pier, Campo witnessed picnickers, skateboarders, fire dancers, fisherman, and a group of retirees simply sitting in lawn chairs reminiscing about old times. There is nonetheless a prevailing theory among developers that new residents must be convinced of a waterfront’s desirability, and therefore all traces of the site’s former identity must be eradicated.

The Toronto Waterfront provides the perfect instance of this phenomenon.⁷⁹ “(Toronto’s) harborfront is effectively an entire new

Barriers of the Re-use of Post-industrial Sites in Urban Areas,” *Habitat International* 2015, Vol 45, 74.

⁷⁶ Campo, 172

⁷⁷ Breen & Rigby, 24

⁷⁸ Campo, 172

⁷⁹ Breen & Rigby, 25; Bunce, 656,

neighborhood on Lake Ontario...it has been accompanied by major controversy about gentrification, open space or the lack of it, and charges about walling off the waterfront.” In her examination of the revitalization of Toronto’s Waterfront, planning scholar Susannah Bunce adds that “The use of ostensibly positive and “holistic” terms such as sustainability and regeneration dampens critiques of, and active resistance to, the effects of policy-led gentrification, such as policies that support middle-to-upper income-oriented property development instead of affordable housing.”⁸⁰ Susan Oakley notes a similar trend in the language surrounding the re-development of the Port of Adelaide in South Australia. “Constructing the former wharf and harbor landscape as a problem needing a solution has legitimated the regeneration of these waterfront sites into distinctly new urban forms.”⁸¹

Still others mention, these “new urban forms” are often designed to attract and foster a new creative class, for cities are competing on the global market for talent and intellectual capital. Marichela Sepe believes this to be an intrinsic characteristic of the 21st century city. “The object is to nourish creativity within the city, to produce a creative class from inside rather than attract one from outside. In this framework, there is the creative milieu, intended as a place.....which contains the characteristics necessary for generating a flow of creative ideas and innovations.”⁸² Critics take issue with this model, claiming that it inherently sacrifices existing conditions for something that is

‘new’ and ‘innovative’; perhaps more cynically, that lip service to innovation and creativity can mask a developer’s very old-fashioned desire to build high-cost luxury housing on a desirable waterfront location.⁸³ David J. Madden explores this idea in his study of the self-styled DUMBO neighborhood in Brooklyn, a place that transformed itself from industrial working class waterfront to wealthy enclave in under 20 years. “The area’s dominant spatial projects were once oriented towards the industrial middle-class and working-class ‘public’ of public housing. Now, in the form of Dumbo, the area is oriented towards an elite and elitist version of the public and its interests.”⁸⁴

Not all authors view this economic segregation as an entirely negative trend. Giovinazzi and Moretti see this as an opportunity to design plans that works at different speeds for different sectors of the city, which will then form a more representative whole.⁸⁵ Brian Doucet believes that segregation is an unfortunate byproduct of a nonetheless genuine desire on the part of politicians to improve their city. “While the solutions may further exacerbate the problems they intending to solve, the challenges and visions which lie at the heart of [waterfront developments] remain noble and socially just.”⁸⁶ It is important to remember that hindsight is always 20/20, and that pitting the narrative of commoner vs. soulless developer does little to address the very real

⁸⁰Bunce, 656

⁸¹ Oakley, 292

⁸² Sepe, 597

⁸³ Khakee, 428

⁸⁴ David J. Madden, “Neighborhood as Spatial Project: Making the Urban Order on the Downtown Brooklyn Waterfront,” *International Journal of Urban & Regional Research* 38, no. 2 2014, 489

⁸⁵ Giovinazzi and Moretti, 67

⁸⁶ Doucet, 15

problem of blight, joblessness, and urban decay in post-industrial waterfront communities.⁸⁷

Most authors remain mercurial when it comes to suggesting any sort of concrete solution to this problem. They contend that port cities ought to be flexible and adaptable but offer little suggestion as to what that might look like from a design or policy perspective.⁸⁸ Hoyle is certainly correct when he writes that waterfront development “involves, ideally, a unique set of compromises based on a more deep-rooted reunion between the city and the sea.”⁸⁹ How exactly we are supposed to go about that remains woefully undiscussed.

2.4 Key Takeaways

Waterfronts are highly complex places to design. Embarking on the next phase of research, the author will examine four American waterfronts based on the principle takeaways gleaned from the literature review:

- Since water is the primary draw of a waterfront, the **shoreline itself must be clean** and free from unusual weather patterns such as strong winds.
- **Public access** is an absolute necessity. Waterfronts should have several clearly marked official points of entry, and even more unofficial ones that pass through intermediary land uses such as pocket parks, residential plazas, or shopping centers. When possible, adjacent street grid should contain straight lines connecting to the main thoroughfares of the neighboring communities. Waterfront should be easy walking distance to

one or more forms of public transit, one of which must be a direct line to the city’s commercial center or hub. Sight lines to the water should be unobscured and should extend to the paths of entry.

- Waterfronts should maintain **safety** by implementing a consistent street light system, clearly marked crosswalks, and well-maintained. In some cases, traditional surveillance may be required however it should never be the guiding principle in keeping the waterfront safe.
- Waterfronts should **foster a historic connection** with its industrial past by re-appropriating obsolete infrastructure where possible. Historic connection needn’t be exclusively maritime, and can speak to the particular history of the city or the community.
- Developers can mitigate the effects of neighborhood upheaval by **integrating existing land uses – both formal and informal – into the new developments**. For instance, if an abandoned industrial site is currently used illegally by skateboarders, consider incorporating a skate park into the new developments. Better yet, they should seek input on the skate park design from the skaters themselves.
- Waterfront area should feature several **‘sub-parks’ that cater to specific uses** such as a playground, a dog run, or a life-sized chess board. These will help form a series of nodes throughout the space and ensure that all visitors have a corner to call their own.

⁸⁷ Doucet, 14

⁸⁸ Sepe, 602; Hoyle, 414; Bunce, 655

⁸⁹ Hoyle, 415

- **Public art** should be featured generously throughout the watered. This lends visual interest and uniqueness to the space, and helps orient the user as s/he navigates the space. If possible, art should rotate on a yearly basis.
- **Landmarks** such as statues or fountains can help cement natural centers across the waterfront.
- **Piers and marinas** invite the public to interact with and touch the water, reinforcing the connection between land and sea.
- **Seating** should be widely available, and should include a list of movable seating (chairs) and fixed, informal seating (ledges, steps, sculptures).
- **Greenspace** is a highly desirable quality on a waterfront, but should be used purposefully to as not to obscure sight lines and to limit the number of dark or unseen places at night.

These waterfront design features are the focus of the next steps of this research. This literature review aims to contribute to existing scholarship and research on waterfronts by examining urban design features and their social impacts in surrounding communities.



This page intentionally left blank

CHAPTER 3: EXPLORING AMERICAN WATERFRONTS

The previous chapter revealed that waterfront regeneration projects are highly complex endeavors. Cities and designers must carefully balance issues of equity, safety, design, access, imageability, and economic development while also considering external factors such as public opinion, funding sources, and changing political climate. The waterfronts explored in this chapter all underwent radical transformations in the last 15 years, reinforcing the global trend of waterfront place-making in large and small cities alike. It is worth examining how each waterfront design met its intended goals, and whether or not these goals are in keeping with the guidelines distilled at the conclusion of chapter 2. From these precedent studies, the authors will outline a set of concrete, proven best practices that can carry on into the design recommendations for the Hunter's Point Shipyard.

3.1 Methods of Selection

The selection process involved scouring planning and design magazines and blogs (such as Planning, SPUR, CityLab, and Planetizen) to find examples of highly visible urban waterfronts that have recently undergone a large-scale re-development. The key search words were "waterfront", "re-development", "Urban design", the same terms were used within Academic Search Complete and other academic databases. The author also mined her own memories from her numerous journeys across the United States.

After compiling an initial shortlist, each site was researched to ensure it met the requirement of a) having been developed in the last fifteen years, and b) have undergone a significant change in design. While the sites selected are by no means identical to Hunter's Point Shipyard (HPS), they all exhibit characteristics that have potential to cross over into the San Francisco site.

1. **Brooklyn Bridge Park - Brooklyn, NY | 2007- Present:** Like the HPS, the BPP sits on the edge of a historic harbor framed by a large suspension bridge and city skyline. This park may teach us how to best integrate iconic urban vistas into a park's overall design and identity, which could prove highly useful when considering a design for the Hunter's Point Shipyard's viewshed to the San Francisco skyline.
(Visited: December 23rd and 28th, 2015)



Figure 3: Brooklyn Bridge Park. Source: NYC College of Technology

2. **Canalside Park - Buffalo, NY | 2013 – Present:** Canalside's many inlets, silos, and factories resemble the structural makeup of the HPS, and could shed light on ways to incorporate industrial infrastructure into a cohesive park design. Buffalo shares the HPS' strong naval history, and could provide guidelines on how to maintain that historic connection throughout the waterfront.
(Visited: December 19th, 2015)



Figure 4: Overhead of Canalside. Source: vimeopro.com



Figure 5: Mortensen Riverfront Plaza. Source: CapitolRising.com

3. **Mortensen River Plaza - Hartford, CT | 1991 - 2013:** Hartford's riverfront was once synonymous with homelessness, crime, and blight, much like the public perception of the Hunter's Point Shipyard. The city of Hartford could point to best or worst practices for building safe public spaces in high crime areas – real or perceived.

(Visited: December 27th, 2015)

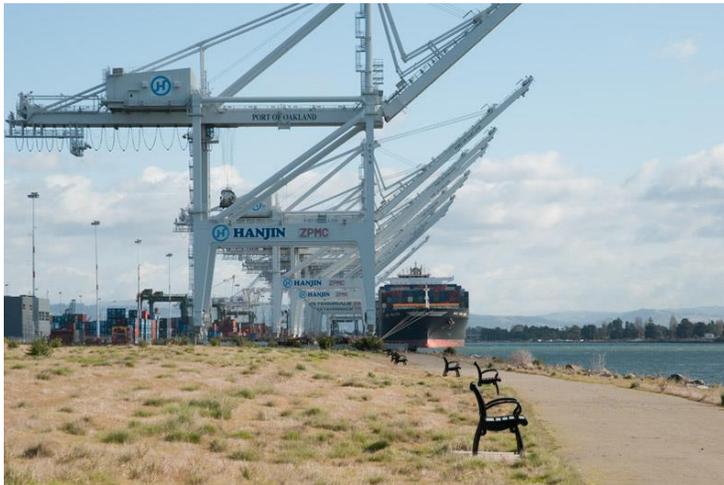


Figure 6: Middle Harbor Shoreline Park, in the shadows of Oakland's working port. Photo by the author.

4. **Middle Harbor Shoreline Park – Oakland, CA | 1998 – 2004:** Located in the midst of the international port, Middle Harbor sits miles away from the Oakland's urban core, much like the HPS lies Bay five miles south of Market Street in San Francisco. It is thus worth examining how the park designers chose to integrate the space into the surrounding port landscape, and to study site's visibility within the greater urban context.

(Visited: February 6th, 2016)

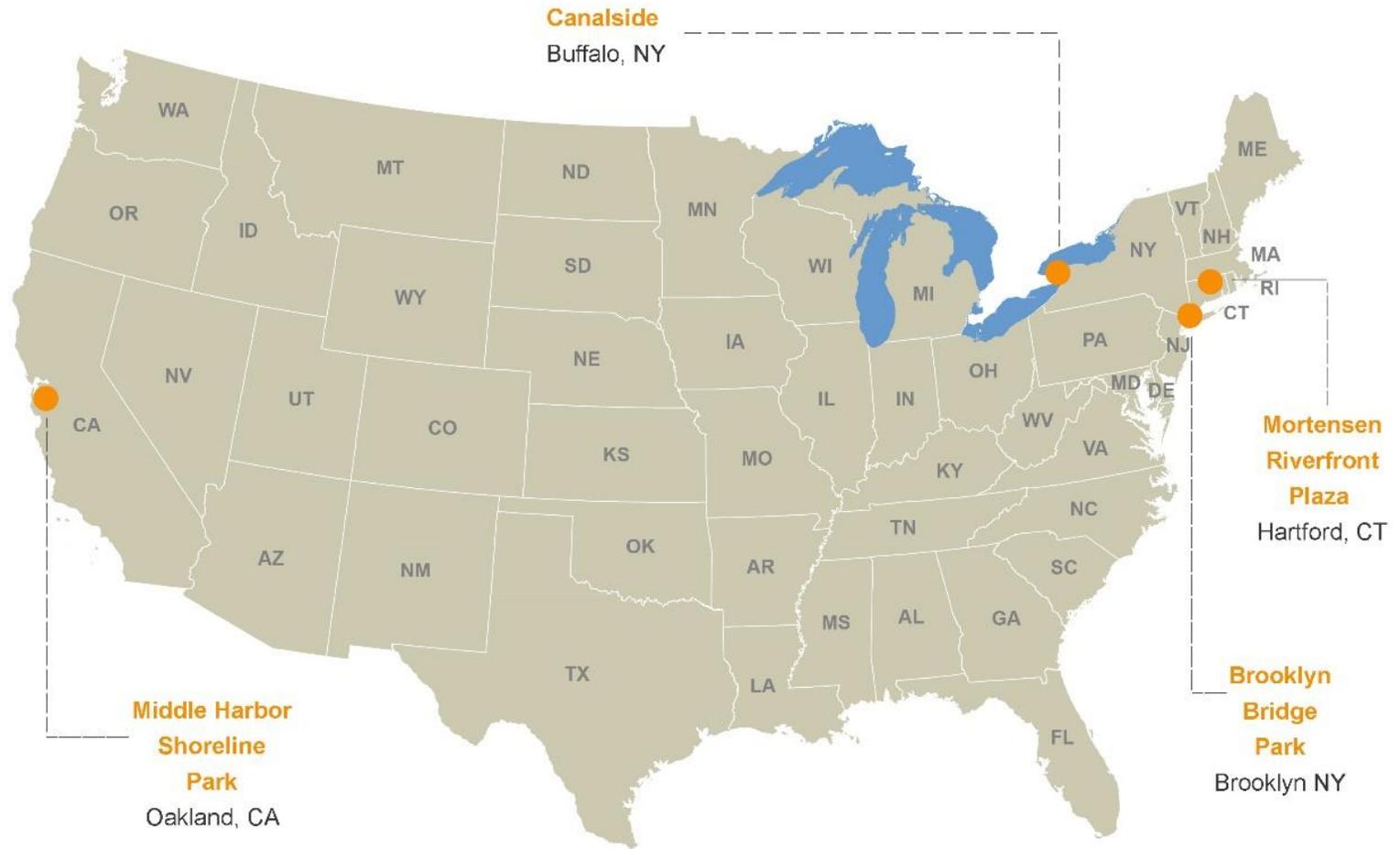


Figure 7: Map of waterfronts visited as part of Chapter 3's precedent study. Map created by author with data by the USGS.d

3.2 The Iconic Waterfront: Brooklyn Bridge Park, Brooklyn, NY

Original land use: Commercial waterfront, light manufacturing, ferry and cable car terminal

Regeneration: 2005-present

Designers: Michael Van Valkenburgh and Associates, Mary Ann Thompson Architects (Pier 2) **Opened:** 2010, set for completion in summer of 2016

Size: 85 acres along 1.3 miles (74% complete as of writing)

Goal of Design

The Brooklyn Bridge Park sought to clean, beautify and revitalize the Central Brooklyn Waterfront. The site occupies a highly panoramic swath of land which snakes along the Brooklyn shore from the Manhattan Bridge to the north all the way down to the Atlantic Avenue terminal to the south, offering visitors sweeping views of the lower Manhattan skyline, the statue of liberty, and the vast upper New York Harbor. It is against this backdrop that project designer Michael Van Valkenburgh aimed to create a public space that achieved three principle goals: 1) Blur the boundary between city and harbor by allowing users to interact with the water, 2)create seamless points of entry between the park the adjacent neighborhoods, and 3)to spearhead a new model of sustainable park design through careful coordination between the park's programming

and the site's existing environmental and structural conditions.⁹⁰

Michael Van Valkenburgh and Associates is a New York planning and design firm that specializes in parks and open space planning, with a particular focus on waterfront projects such as the Allegheny Riverfront Park in Pittsburgh, or

Urban Context and Connectivity

Much of Brooklyn Bridge Park lies nestled under the bluffs of Brooklyn Heights, in the shadows of the double-decker lanes of the Brooklyn Queens Expressway. Brooklyn Heights is one of the oldest neighborhoods in New York City. With its handsome brownstones, peaceful tree-lined streets and elegant iron gas lamps, the area has maintained much of its historic charm throughout the centuries, and is arguably one of the few New York City neighborhoods which has always been considered upscale. To the north of the park lies the DUMBO neighborhood (an acronym for Down Under Manhattan-Brooklyn Overpass), a once-industrial area that has seen concerted growth and development within the last twenty years, and is now home to some of the city's most expensive real estate.⁹¹

⁹⁰ Brooklyn Bridge Park, "Park Design", <http://www.brooklynbridgepark.org/pages/parkdesign#about-the-design>, accessed December 6th, 2015

⁹¹ Emily Nonko, "The 8 Most Expensive Neighborhoods in New York City", *NewYork.com*, January 27, 2015.



Figure 8: Context for Brooklyn Bridge Park. Map created by the author.



Figure 9: Overhead plan shows the park's varied shape, plentiful programming, and close proximity to public transit. Source: Brooklyn Bridge Park.

History

Brooklyn's waterfront at Brooklyn Heights was once the epicenter of the city's commercial activity. It also served as the principal transportation hub between Brooklyn and Manhattan, first as a ferry terminus for Robert Fulton's steamboat and later as the eastern anchor of the Brooklyn Bridge cable car. The construction of the Brooklyn Queens Expressway (see Figure 11), essentially severed the historic nucleus of Brooklyn Heights from its commercial waterfront, creating an enormous gash in the neighborhood that was only slightly mitigated by the construction of the Brooklyn Heights Promenade in 1951. (Both projects were conceived by noted urban planner and "master builder" Robert Moses). As the commercial waterfront fell into disuse in the latter half of the 20th century, the site was left with dozens of vacant warehouses standing in the shadows of one of the world's most iconic skylines. The Port Authority of New York and New Jersey announced plans to sell the waterfront land for development in 1983, sparking a decades-long debate over how the property should be used, who should be allowed to purchase it, and whom it should ultimately serve. In 1998, the Downtown Brooklyn Waterfront Local Development Corporation (DBWLDC) took over the planning process for the site. Construction broke ground a decade later in 2008, and the first six acres of the park opened to the public in 2010. The park is currently two-thirds complete, and developers aim to finalize construction by the summer of 2017. The finished park will ultimately occupy 1.3 miles of shoreline across 85 acres.



Figure 11: Construction of the Brooklyn-Queens Expressway. One can observe the height difference between the elegant homes of Brooklyn Heights to the right and the industrial warehouses of the port to the left. Source: New York City Department of Parks and Recreation

Planning and Implementation

Brooklyn Bridge Park is unique in that it is designed to be financially self-sustaining.⁹² A 2002 Memorandum of Understanding (MOU) between the State of City of New York contributed to the creation of the Brooklyn Bridge Park Development Corporation (BBPDC), which was to oversee financial and logistic aspects of constructing the park. The MOU further stipulated that the BBPDC could allot no more 20% of its total acreage towards private development, in order to fund its projected a \$55 million annual operating budget. This presented a

⁹² New York State Urban Development Corporation, *Brooklyn Bridge Park: Civic Land Use Improvement Project Modified General Plan*, July 26, 2005.



Figure 10: The park site before development. Source: Wikimedia Commons, 2003

unique set of challenges in designing a space that was public, accessible, equitable, and yet still profitable.

The 2005 master plan was founded on a lengthy public process. As early as 1998, the DBWLDC facilitated a number of community workshops and focus groups to envision a conceptual framework for the park. Residents delineated several priorities, which included

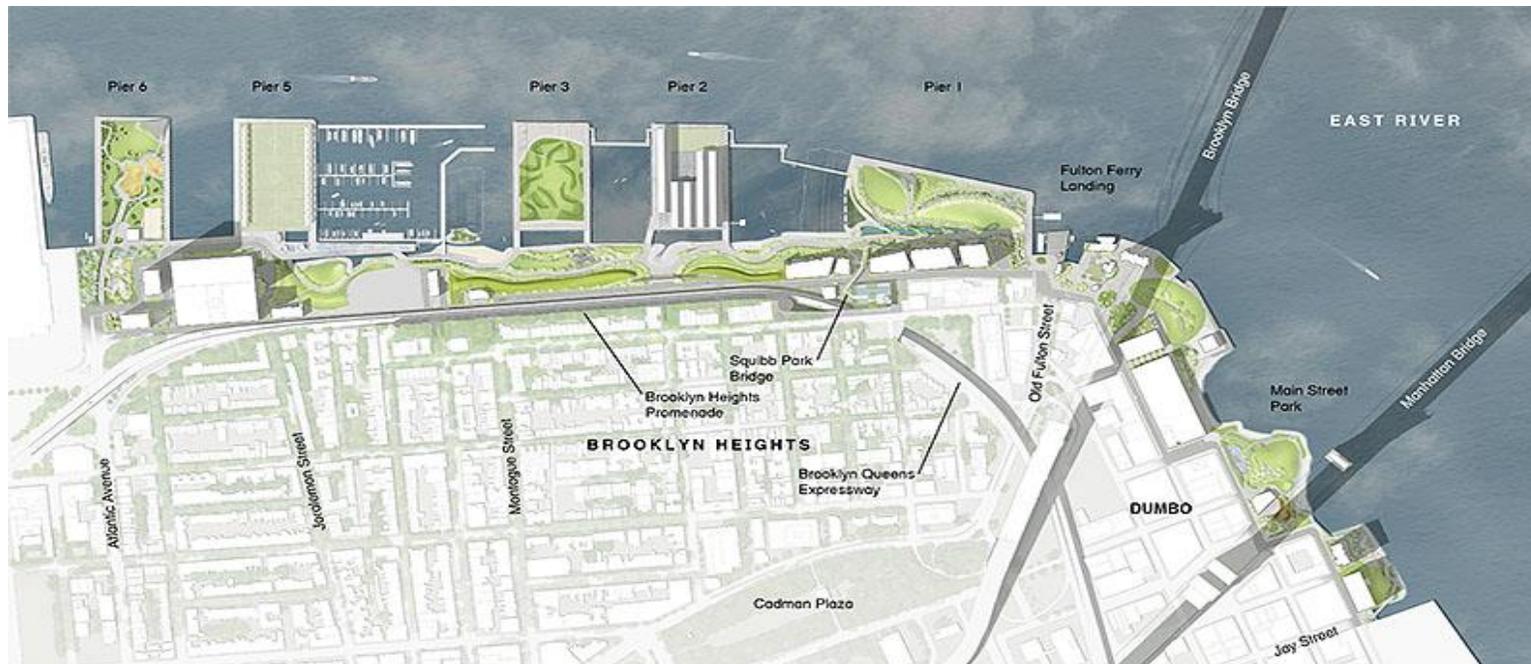


Figure 12: Brooklyn Bridge Park Master Plan. Source: Michael Van Valkenburg and Associates, Inc.

ensuring numerous public access points and constructing recreational programming for youth such as basketball courts and soccer fields.

Over the years, the biggest priority was that the view from the Brooklyn Heights promenade remain unobstructed. The 2008 draft master plan for the Brooklyn Bridge Park included commercial and residential development along Piers 1, 5 and 6, and the public insisted on imposing strict limits on the height and footprint of these new buildings, lest they interfere with the openness of the viewshed. The park's 2010 Master Plan reflected these concerns, and capped developments at Pier 1 at 325,000 square feet and 315 feet in height.

Access and Connectivity

Although the park is undoubtedly in an extremely high-income area it is nonetheless accessible to visitors from all over the city. The park's entrances lie within a 10-minute walking distance of eight subway lines (four of them express lines), and the park's Ferry terminal shuttles passengers across the river to Wall Street, Midtown Manhattan, North Brooklyn, and Governor's island. The park does suffer from a dearth of entrances; it currently has only two access points from the bluffs on Brooklyn Heights; the northernmost and southernmost portions of the park connect to lower-grade areas of Brooklyn, and offer more open (though highly trafficked) points of access. Cyclists have perhaps the

most seamless access to the site. The promenade lies along the Brooklyn Greenway, a bicycle and pedestrian-only trail along Brooklyn's Waterfront that will eventually run a full 14-miles from Greenpoint to Bay Ridge. As of writing, 6 miles of the greenway are open to the public.⁹³ Users can access numerous restaurants and bars at the northern and southern ends of the park, as well as several on-site eateries such as a pizzeria, an ice cream bar, and a seasonal beer garden.

Design Elements

The park is flanked by three distinct edges: the East River and New York Harbor to the west, the Brooklyn-Queens Expressway to the east, and the Manhattan and Brooklyn bridges overhead. The park's design is largely predicated on softening these edges. The park's entry points all pass through smaller neighborhood spaces such as dog parks, playgrounds, and community gardens, thus inviting casual user to seamlessly transition between the community and the Brooklyn Bridge Park. The 60-foot height difference between Brooklyn Heights and the park is softened by series of man-made hills, and the zig-zagging Squibbs Park foot bridge provides pedestrian access between the promenade and Pier 1. (see [Figure 13](#)).

The shoreline offers a myriad of ways to experience the water. It features salt marshes, boat ramps, and beaches interspersed between 6 large piers that jut out into the East River towards Manhattan. The largest (and most completed) of these piers is Pier 1, which serves as

⁹³ Brooklyn Greenway Initiative, "Use It Now," <http://www.brooklyngreenway.org/the-greenway/map/>, accessed December 8, 2015.



Figure 13: Squibbs footbridge at Brooklyn Bridge Park. Source: [gardenista.com](#)

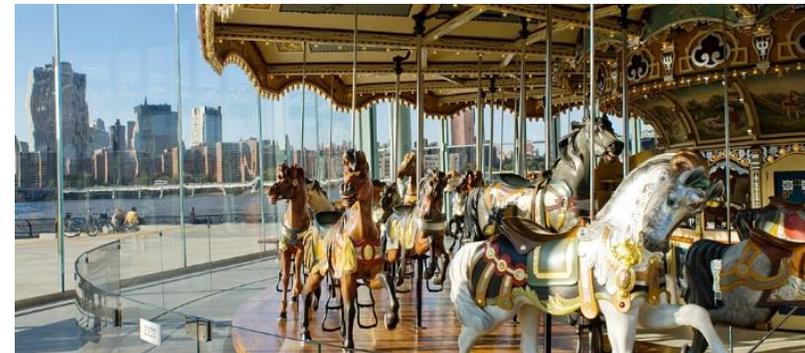


Figure 14: Jane's Carousel, with the Manhattan Skyline in the background. Source: [apasionante.weebly.com](#)



Figure 15: The granite prospect doubles as event seating. Photograph by the author

its own pocket park rife with lush greenery, hillocks, and winding pathways that give way to an expansive lawn along the water. The other piers feature a bevy of activities include a boat dock, an environmental education center, soccer fields, two ferry terminals, and the combination indoor/outdoor Carousel. Summertime is the most popular season at Brooklyn Bridge Park, when visitors can move between free kayaking sessions, music performances, and al fresco film screenings.

Greenery is bountiful in the park, and features a range of trees in terms of height and foliage. Tall marsh grasses peek out between perfect round rocks along the pathways. The planting is lush and varied and well-placed throughout the site. Benches are also plentiful, and often take the form of continuous banquettes which curve along the

pathways. There is little movable seating, however the myriad of steps, lawns, hills, and benches provide ample formal and informal seating options both in the sunlight and in the shade.

The street furniture is simple. Most of the benches are a classic park New York City Park bench, while a couple of flats. In both cases, wood-and-iron design evokes the elevated walkway of the Brooklyn Bridge without overstating the reference. There are 75 such benches throughout the park, and along with the 11 picnic tables and 10 café tables there is formal seating for over 360 people. Informal seating is unfortunately scarce due to the abundant signage that discourages people from sitting on the decorative rocks and planters. Even the lawns are mostly off-limits if the park is not hosting an event. The notable exception is the granite prospect (see [Figure 15](#)) a staircase overlooking the East River which often doubles as event seating.

The boardwalked area of the promenade that extends below the Brooklyn and Manhattan bridges achieves a similar affect, and allows the Brooklyn Bridge –with its suspended cat's cradle of steel, iron, and wood - to act as a the visual centerpiece while the boardwalk, railings, and benches support it in color and tone.(See [Figure 18](#).)

Along with planting and furniture, the park also features public art to keep the visitor's eye continuously engaged. Each year park programmers introduce a new wave of sculptures and installations. Currently on display is Jeppe Hein's "Please Touch the Art", an expansive 18-piece sculpture series that invites the public to interact with the art and incorporate it into their experience of the park. (See [Figure 17](#)). The park is highly active both night and day during the summer months, and still draws large crowds of tourists and locals during the winter daylight hours.

The designer's commitment to sustainability is evident in his design. The site incorporates two civil war-era buildings, and the Granite Prospect at Pier 1 is made entirely of salvaged granite from the reconstructed Roosevelt Island Bridge. Much of the infrastructure incorporates salvaged iron and granite left over from other Capitol projects around New York City. The gardens also feature unique sustainability practices. The Freshwater Gardens at Pier 1 collect and filter rain water into a



Figure 16: Seating at Brooklyn Bridge Promenade. Photographs by the Author.



Figure 17: A girl reclines in one of Jeppe Hein's creations. Source: Public Art Trust, 2014.

network of storm water tanks beneath the park's surface, which bring water to irrigate the lawns and trees.⁹⁴ The landscaping and topography served another unique purpose: they provide a sound barrier between the BQE and the water's edge (See [Figure 14](#)).

Highlights

The focal point of Brooklyn Bridge Park is the stunning view of the skyline, the harbor, and the Brooklyn Bridge. Pier 1 exploits this beautifully through its curvilinear pathways, which guide the user behind green hills and through thickets of trees until before landing him squarely in front of the skyline. The park maintains a consistent level of visual variation throughout, and its generous programming means there is always something for the casual bystander to observe.

⁹⁴ Brooklyn Waterfront History, "Freshwater Gardens", <http://www.brooklynwaterfronthistory.org/story/fresh-water-gardens>, accessed December 7 2015.

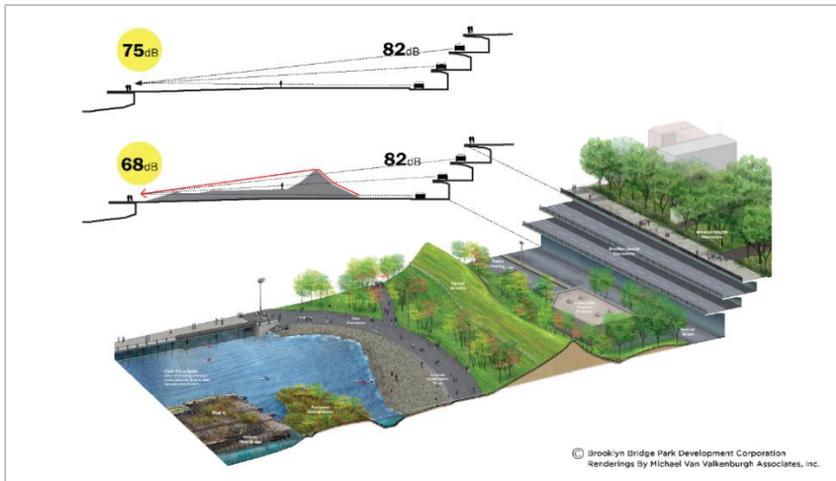


Figure 19: The slopes of Brooklyn Bridge Park are designed to act as sound guards against the noise of the double decker highway. Source: Brooklyn Bridge Park Development Corporation

Challenges

The height differential between the Brooklyn Heights Promenade and Brooklyn Bridge Park remains a challenge in terms of accessibility. The one direct point of access is the 4.2 million dollar Squibbs Park Bridge, which has been closed for repairs since 2014 with no official word from the Brooklyn Bridge Park Corporation on when it will reopen.⁹⁵ This presents a problem for accessibility: without the foot bridge, the only points of access from Brooklyn Heights are either along residential Joralemon Street or, more problematically, along the highly trafficked areas of Atlantic Avenue and Old Fulton Street, which essentially serve as feeders to the BQE.

⁹⁵ Lisa W. Foreraro, "Patience Fades as Squibb Park Bridge in Brooklyn Remains Shut," *The New York Times*, July 14, 2015



Figure 18: Cyclists and pedestrians can walk along the river under the Brooklyn Bridge along the northern edge of the park. Photograph by the Author.

The final shape of the park is still uncertain. Portions are still under construction, and the inland parcels along Piers 5 and 6 are slated for residential development to satisfy the park's original General Project Plan. Although the plan calls for affordable housing units, stalled construction and political tug-of-wars have kept the sites vacant to this day. The proposed development site comprises a mere 0.5% of the park's total footprint, however unchecked construction and broken promises could continue to cordon off unfettered access to the waterfront.



Figure 20: Signs discourage users from sitting on the lawn or rocks. Photographs by the Author.

Recent developments revealed the Brooklyn Bridge Park Development Corporation to be largely ineffective at enforcing height limits set forth by the 2005 Master Plan. Park officials are currently mired in a controversy surrounding the construction of the Pierhouse, a large mixed-use development that is currently planned to take up 650,000 square feet and well exceeds the 315-foot height limit, thereby obstructing the view of the Brooklyn Bridge from the promenade.⁹⁶ This underlines the inherent conflict of interest between serving the public interest while at the same time trying to capture market value of a waterfront. The self-sustaining model is admirable, but other cities should be wary of emulating the BBPDC's approach without seriously rethinking the administrative structure.

The site's strict regulations may present another setback in the future. Park laws prohibit such informal activities as skateboarding, consuming alcohol of any kind, unleashed dogs, or any sort of unpermitted performance or food vending (see Figure 20). Security officer patrol the space and strictly enforce these regulations. This constant surveillance could potentially stymie the sense of spontaneity that is so intrinsic to successful public spaces. That said, this is unlikely to deter tourists and out-of-town-visitors from visiting the park. Brooklyn Bridge Park is so highly unique, and its views are so iconic, that tourists will continue to make the Brooklyn Bridge Park a natural end point to their near mandatory walk across the Brooklyn Bridge.

⁹⁶ Mary Frost, "Brooklyn Bridge Park Leadership Derided for 'broken promises' at Brooklyn Town Hall," *The Brooklyn Eagle*, May 5, 2016.

This page intentionally left blank

3.3 The Post-Industrial Waterfront: Buffalo Canalside (Buffalo, NY)

Built: 1825

Original Use: Port of Call for Erie Canal; Naval port of Call; Heavy Industry; Red Light District

Regeneration: 2008 - present

Architects: Perkins Eastman Architects

Opened: 2013

Purpose of Design

The Canalside Park represents Buffalo's most recent push towards urban renewal. Its principal goal is to reunite Buffalonians with their waterfront and to reinforce the historic connection between Buffalo and the Erie Canal. The Erie Canal Development corporation enlisted Perkins Eastman to carry out this daunting task. Perkins Eastman is a large planning and architectural firm, which has been in business since 1991. It has over 900 employees across nine offices, and has completed projects in 46 states and 45 countries. They specialize in large scale projects such as corporate parks, campuses, and large mixed-use developments, some of them waterfront projects. These include Baltimore's Inner Harbor East, The Cleveland Waterfront, and the Southeast Washington DC Waterfront. The firm is thus well-versed

in waterfront renewal, and has a solid foundation in economic development and long range planning.

Urban Context

Canalside is located seven blocks south of Buffalo's downtown core, close to commercial behemoths such as the First Niagara center (home of the NHL Buffalo Sabres), The Harborcenter Mall, and the Courtyard Marriott.

Buffalo's downtown has long been plagued by blight and underuse, but Canalside has truly breathed new life into the city. Last summer's concert series drew in an average of 150,000 people per show, with thousands more visiting for more casual recreational uses such as boating, skating, or simply enjoying the outdoors.

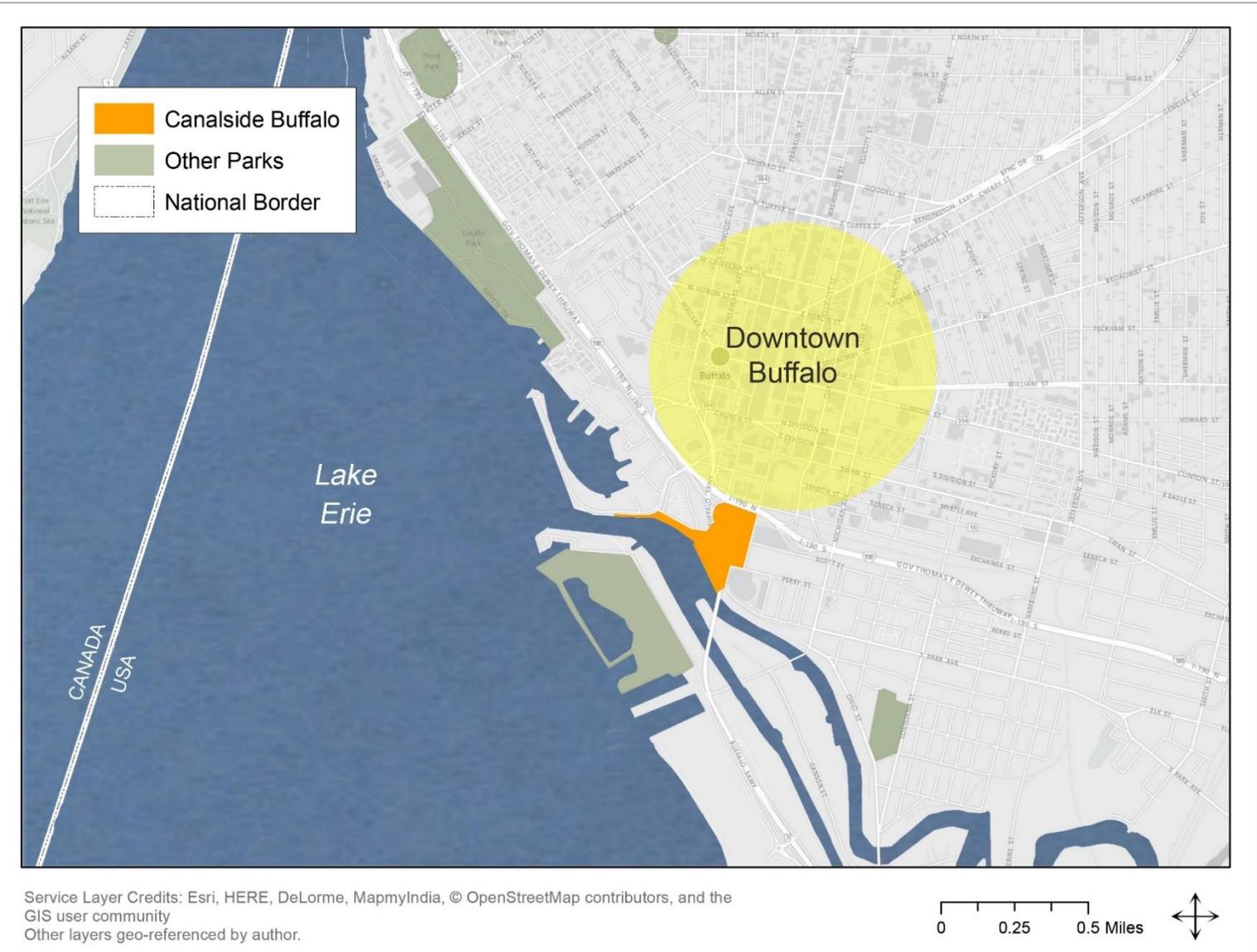


Figure 21: Context for Buffalo Canalside, just south of downtown at the mouth of the Buffalo River along Lake Erie. Map Created by the author.

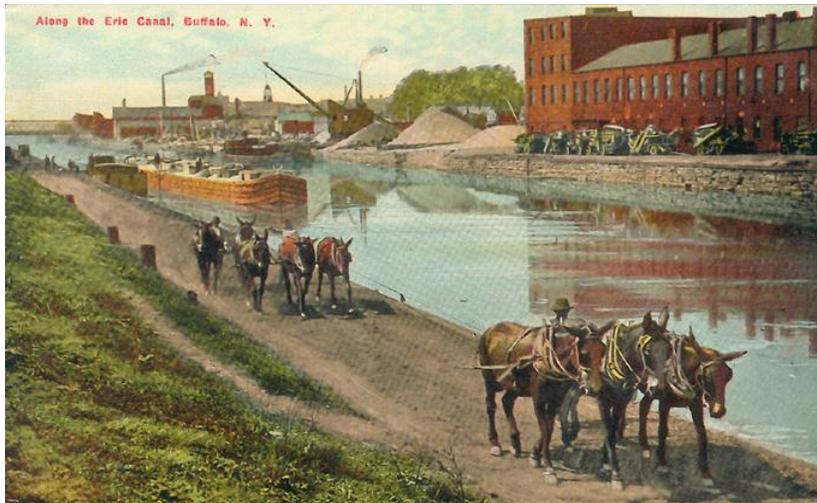


Figure 22: *The Erie Canal Harbor at Buffalo in 1908.* Source: www.eriecanal.org

History

Canalside Park is located along the Erie Canal Harbor on Lake Erie, at the confluence of the Buffalo River and the now-dormant Erie Canal. Upon its completion in 1825 the Erie Canal provided the first navigable connector between the port of New York City and the granaries of the Midwest. As a result, Buffalo's economy and population blossomed to make it the largest inland port in America. By 1860, it was already the tenth largest city in the United States;⁹⁷ by 1900, it boasted more millionaires per capita than any other city in the nation.⁹⁸

⁹⁷US Census Bureau, 1860

⁹⁸ Jackie Rose, *Marrying Up*, Don Mills: Red Dress Ink (2005),

The city would retain its status for another half-century, until changes in freight transport, the opening of the St. Lawrence Seaway, and loss of manufacturing contracts would all take their toll on the metropolis. Buffalo remained in a state of economic decline throughout the latter half of the 20th century, and its infrastructure crumbled as steadily as its economy. Portions of the canal that lay within city limits were completely paved over to create parking lots for a civic center complex, one of many ill-fated urban renewal efforts in the 1960s and 1970s.

This all changed in 2008, with the forming of the Erie Canal Harbor Development Corporation (ECHDC), which pledged to redesign the waterfront and reclaim Buffalo's heritage.⁹⁹ A portion of the Canal was re-dredged and re-connected to the Buffalo River. The new canal closely follows the contours of its 1825 original, and features a navigable slip on the western edge, and two shallow extensions to the east. The park officially opened to the public in 2013, and was immediately highly popular among Buffalonians¹⁰⁰. Now entering its third year, the space is already attracting recreational businesses such as breweries, restaurants, and ice skate rentals.

Planning and Implementation

Buffalo's Canalside was planned in three principle phases. Phase 1 involved restoring pedestrian access to the park and rehabilitating the naval vessels for public display, which was completed in 1999. Phase 2 involved delineating design goals for the area, which included

⁹⁹ Erie Canal Harbor Development Corporation

¹⁰⁰ Yelp, "Canalside",

Design Elements

The design of Canalside is naturally guided by river and the canal. One waterfront promenade follows the Buffalo River to the south, offering pedestrians and cyclists views of the old granaries and historic ships such as the *USS Little Rock*. Another boardwalk flanks the commercial slip to the northeast and continues along the new canal before stopping short at Main St, Buffalo's principal thoroughfare (see [Figure 23](#)). The promenades are boardwalked in light wood along the water, while the bisecting pathways are paved in a sand-colored cobblestone, lending an airy but retro feel to the park. Remnants of the original locks can be found interspersed throughout the park, at times embedded directly into the boardwalk. The juxtaposition of wood and stone works in concert against the backdrop of green lawns in summer, or frosty ice fields in winter. Pedestrians and cyclists can navigate across the canals on a series of three bridges. (see map on [Figure 23](#)), all constructed as part of the Canalside development. These faux-railroad bridges act as both connector and a vantage point, and are excellent places to watch the ice skaters or paddle boaters pass by underneath. The space also boasts a number of expansive lawns. The two largest are the Pierce Lawn and the Dart lawn, which provide open greenspaces that can house events such as concerts, free yoga classes, and food truck festivals. The other, smaller lawns function primarily as side parks and feature a bevy of small saplings. As of writing, planting is still minimal within the space, confined principally to saplings and a single large pine tree.

Seating is plentiful along the pathways, with benches spaced every 30-40 feet. The benches are designed to evoke the turn of the last century, with elegant wrought iron details in the armrest and wooden

slat seats that match the design of boardwalk, while brightly colored Adirondack chairs provide a much needed pop of color.

Picnic tables with movable seating add a personal touch to the Great Lawn on the Buffalo River and on the Blue Line Bridge. The tables also feature industrial frames with wooden-slat surfaces, while the chairs are occasionally accented with a welcome splash of brightly colored paint. There is sadly a dearth of public art, excepting the popular *Shark Girl* sculpture ([Figure 25](#)) and enormous light installation that illuminates the old granary across the river at night (see [Figure 28](#)). However, when considering the lock ruins, trestle bridges, handsome brick facades, and kayakers/ice skaters, one concedes that the park offers a high degree of visual interest for the passerby. Lighting is unfortunately minimal to non-existence throughout much of the park outside of the immediate recreation zones along the canal.



Figure 24: Portions of the old Buffalo locks have been incorporated into the design of Canalside. Photograph by the author.



Figure 25: Shark Girl sculpture at Canalside. Photograph by the author.



Figure 26: Seating at Canalside. Photographs by the author.

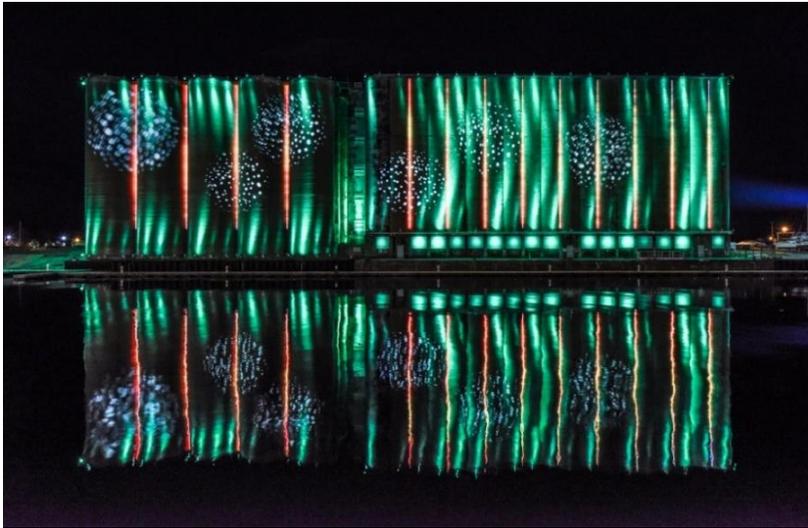


Figure 28: The granaries at Buffalo's Outer Harbor, across from Canalside, host a light installation

Lastly, the site is bisected by the Niagara Skyway, an elevated highway that towers over 100 feet above the waterfront. Canalside is nestled below a particularly high bulge in the overpass, which gives the park user the impression of standing below an enormous archway. The effect is highly unique for an underpass location, if not altogether attractive.



Figure 27: Visitors enjoy a beverage at the Blue Line Bridge, the widest of the three pedestrian/cyclist bridges at Canalside. This bridge acts as the principal entrypoint into the park for people arriving via Light Rail and public transit. Source: ECHDC.

Highlights

One of Canalside's greatest attributes lies in its ability to provide recreational activities in a historic setting at all times of year. This flexibility makes it perfectly suited to Buffalo's extreme climate, which can range from 10 degrees in the winter to over 80 degrees in the summer. In the summer, visitors can rent kayaks, paddle boats, and stand up paddle boards, which users can row under the bridges and along brick frontages. The riverfront features a living boat dock, where recreational boats co-exist alongside historic military vessels. In the winter, the shallow canal is transformed into the state's largest ice

rink.¹⁰¹ Users can zip along the Erie Canal on ice skates or specialized ice bikes, which were invented and manufactured by Buffalo Bikes specifically for use at Canalside.

Experiencing Canalside to witness the city at multiple levels. At the base we have the river and the canals, which change shape, texture, color, and use throughout the seasons. At the next level we have the pedestrian boardwalks and lock ruins; above those, the criss-crossing pedestrian bridges. Look up still further and you see the granaries and warehouses that evoke Buffalo's industrial heyday, while the skyscrapers behind them present the city's attempt at modernity and renewal. And of course, all of this occurs under the ceiling of the Niagara Skyway. Cities have long struggle with handling the underused spaces below its freeways. Buffalo's Canalside has – intentionally or not – found a way to use the freeway as a visual unifier rather than a divider: the park fits perfectly under its arch. The pedestrian, cyclist, and ice biker can all cross from one side of the freeway to the other with complete ease, content in their own kingdom as the cars rumble along in theirs.

Challenges

Considering that Buffalo's original park system was entirely designed by Olmstead and Vaux,¹⁰² far more attention could be paid to the landscaping of the park to bring it up to par with the city's superbly designed (if not always well-maintained) public parks. Canalside's infrastructure offers numerous opportunities to create unique enclaves between the old locks or continuous canopy along the Buffalo River. Lighting could also be improved significantly. The addition of elegant wrought iron lamps would certainly be in keeping with the overall design, and would lend an air of romance to the pathways in addition to making them much safer to navigate at night. The north-facing sight lines are unfortunately full of blight, as they look face a highway on-ramp, a cracked parking lot, and dozens of high-rise housing projects (see [Figure 30](#))

The second challenge facing Canalside is the danger of over-development and the obliteration of open space. The ECHDC is currently looking to leasing some of its property to developers¹⁰³, which could eradicate much of the openness that Buffalonians appear to treasure.¹⁰⁴ As the *Buffalo News* reported, "current plans could obliterate a lot of that green and also force the Thursday night concert series to move from a place that is almost ideal."¹⁰⁵

¹⁰¹ Nicolas Arnaud-Goddet, "A Look at Buffalo's Waterfront Regeneration," *Skyrise Cities*, December 1 2015. Accessed online December 2nd 2015.

¹⁰² Francis R. Kowsky (1987). "[Municipal Parks and City Planning: Frederick Law Olmsted's Buffalo Park and Parkway System](#)". *BFN.ORG*. Retrieved 15 July 2006.

¹⁰³ Erie Canal Harbor Development Corporation, edhc.com

¹⁰⁴ Yelp.com, "Canalside Park",

¹⁰⁵ "New plans for Canalside offer value to community, but also a need for caution," *The Buffalo News*, October 2nd, 2015.



Figure 29: Seating from the now-defunct Buffalo Auditorium has been re-purposed for outdoor use.

And lastly, the uncertain future of the Niagara Skyway¹⁰⁶ also holds great sway over future development at Canalside. If it is to remain, the designers could attempt to better visually integrate the structure through art and lighting, and the pylons could be incorporated into recreational activities such as skate parks or a jungle gym. If it to be demolished, the park designer could set about finalizing the landscaping and configuration of the park. With its existence still in limbo, the designers and developers are stuck in their current bind.



Figure 30: Northern sight line from Canalside leaves much to be desired. Photograph by the author.

¹⁰⁶ Dr. Edward Steinfeld and Megan Basnak, "The Skyway Revisted", *Buffalo Rising*,



Figure 31: Rendering of possible plan for of Canalside. Source: artvoice.com

This page intentionally left blank

3.4 The Corporate Waterfront: Mortensen Riverfront Plaza and Landing (Hartford, CT)

Built: Continuously used as a port between 1600 and 1960

Original Use: Commercial Waterfront (1600 - 1890); Railyard (1890-1960); I-91 corridor (1960-Present)

Regeneration: 1980 – 2010

Architects: JCJ Architects

Opened: Landing opened in 1999; River access opened in 2009

Purpose of Design

The Mortensen Riverwalk is the focal point of the larger Riverfront Recapture project, which seeks to reunite the towns of Hartford and East Hartford with the banks of the Connecticut River through a system of trails, promenades, boat landings, and recreational facilities (see Figure 17). When the project first took root in 1980, the largest challenge lay in neutralizing the effects of the elevated I-91 and I-84 skyways, which severed the Connecticut River from the urban core of downtown Hartford and resulted in miles of flood-prone brownfields along this historic river. The purpose of the Mortensen Riverwalk was thus twofold: to seek funding and political will to completely redesign the I-91/I-84 interchange, and to ultimately create a space in which the people of Hartford could interact with the Connecticut River.

Urban Context

The Mortensen Riverfront Plaza lies on the banks of the Connecticut River, which runs from Lake Champlain on the Canadian border to Essex, Connecticut on Long Island Sound. The park is conveniently located east of downtown Hartford, offering a direct sight line to the

Old State House, State House Square, and the glittering high rises that house some of the nation's most important insurance agencies (Aetna, Travelers, Merrill Lynch, and Phoenix among others). The park bisects two large corporate plazas and provides pedestrian access over Interstate 91. The study area is divided into four principal parts: The Phoenix Plaza adjacent to Constitution Plaza, the Mortensen Bridge and walkway, the amphitheater and landing, and the Lincoln Sculpture walk. Together these four sections comprise the area known as the Mortensen Riverfront Plaza (MRP), which is part of the greater Hartford Riverfront Recapture Project. (See [Figure 33](#)).

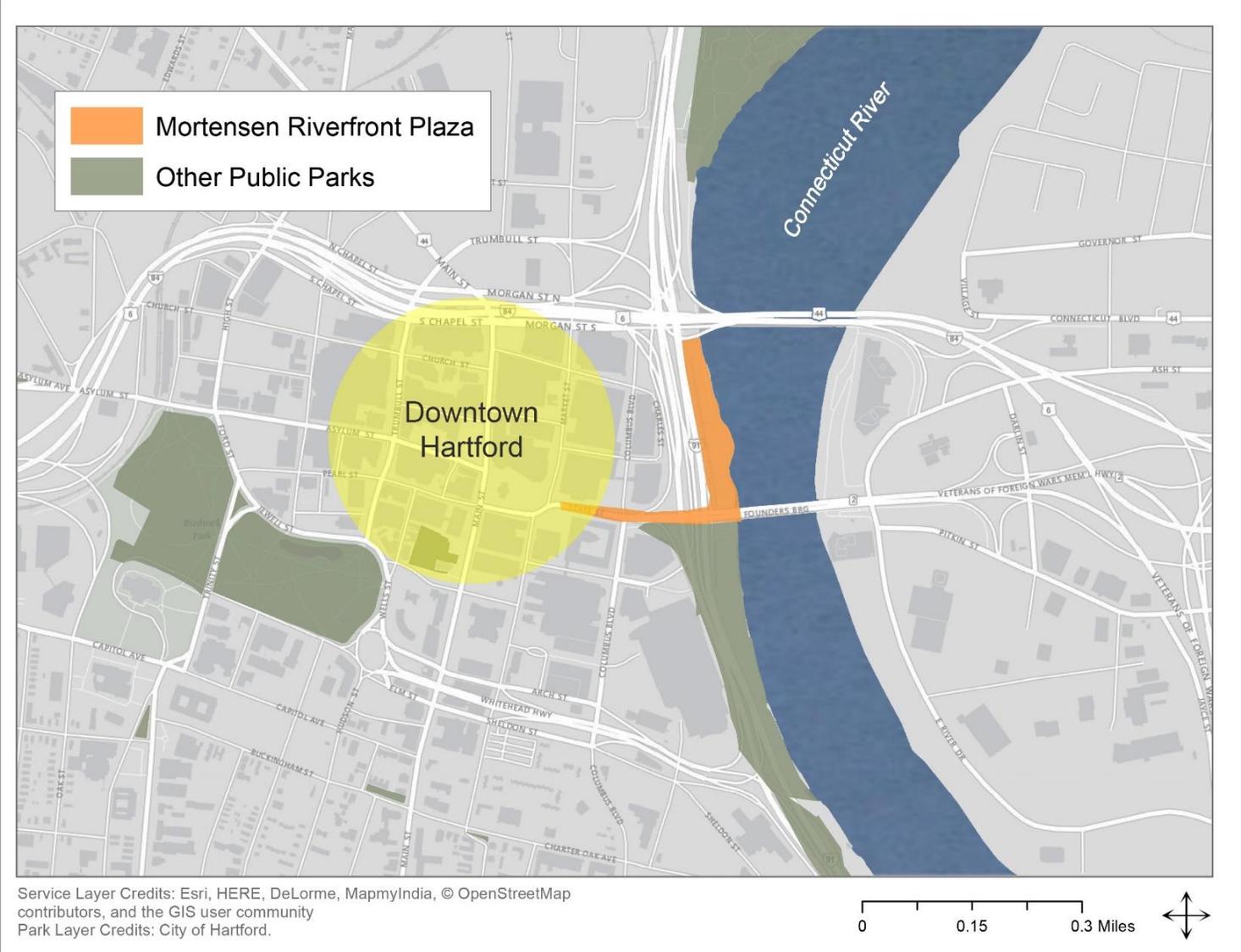


Figure 32: Context for Mortensen Riverfront Plaza

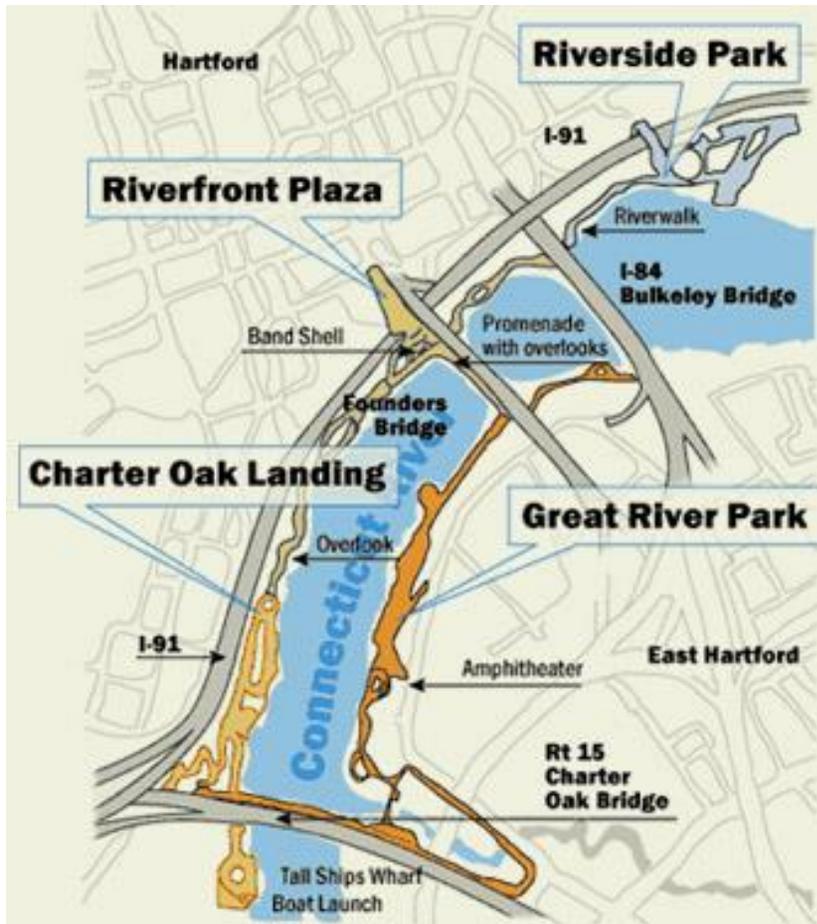


Figure 33: Plan of the greater Riverfront Recapture project.

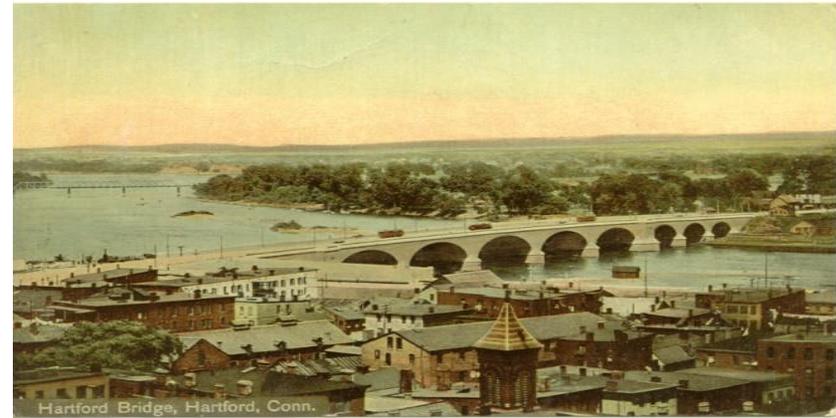


Figure 34: View of the downtown Hartford and the Hartford (now Buckley) bridge. The spire of the Old State House is visible in the foreground. Source: flickr user Farm2

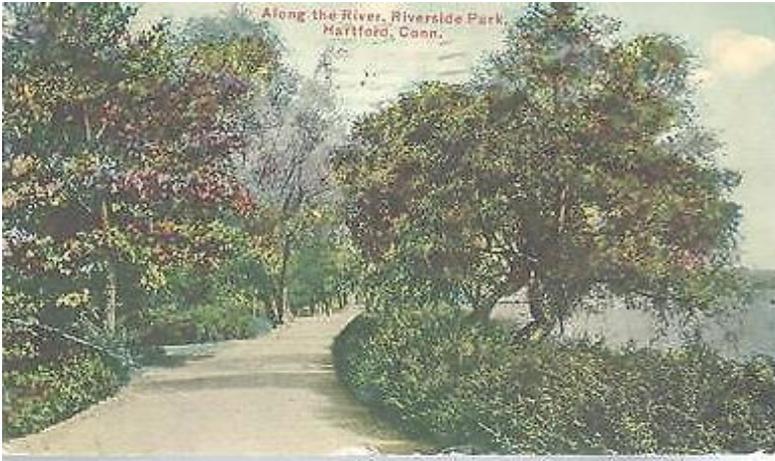


Figure 35: This 1913 postcard presents an idyllic portrait of a riverside promenade in Hartford. Source: Hartford Public Library

History

For centuries, the Hartford Waterfront was home to the Algonquin tribe of Connecticut. The first European settlers were Dutch traders who arrived in 1633, and were soon joined by the British Reverend Thomas Hooker who named the burgeoning village after Hertford, England.¹⁰⁷ The Port of Hartford grew rapidly over the centuries, as it was the northernmost navigable port that could host sea-faring vessels.¹⁰⁸ By the late nineteenth century there were over 2,000 vessels traveling in and out of Hartford each year, many of them carrying immigrants from Ireland and Italy. These immigrants occupied

¹⁰⁷Karen O'Maxfield, "Hartford Neighborhoods: Riverfront", <http://hartford.omaxfield.com/riverfront.htm>, 2014.

¹⁰⁸ Karen O'Maxfield, "Hartford Neighborhoods: Riverfront", <http://hartford.omaxfield.com/riverfront.htm>, 2014

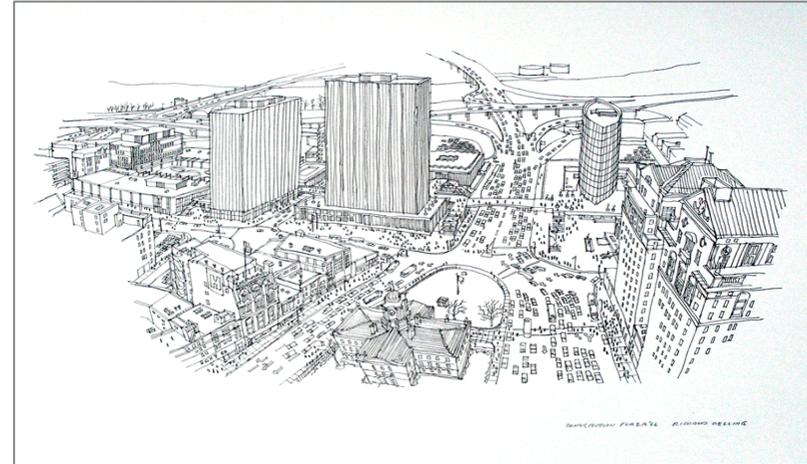


Figure 36: This 1966 eastward aerial sketch shows the configuration of interstates severing Hartford from the River. Source: Richard Welling, courtesy of Connecticut Historical Society

the riverfront tenements along Front and Park Streets, and contributed to a multi-ethnic neighborhood known for its Italian grocers.

The riverfront's busy commercial activity did not dissuade people from visiting and enjoying the water, and the city maintained a pedestrian greenway along its banks up until the 1920s (see [Figure](#)). (Nineteenth century Hartford's dedication to urban greenery is well documented. In 1853 it opened the nation's second urban public park, Bushnell Park, designed by Frederick Law Olmsted the same year he completed designs of New York's central park.¹⁰⁹)

¹⁰⁹ Stacy Stowe, "Riverfront Park Now Beckons Hartford, *The New York Times*, August 11, 2002.



Figure 37: The Mortensen Landing and Band Shell extend over a newly lowered I-91, and integrate pedestrian access onto the Founder's Bridge. Source: riverfrontreapture.org

The first piece of infrastructure to separate Hartford from its riverbank was the Connecticut Valley Railway, however the railroad remained such an integral part of the city's commercial and industrial life that it retained a certain degree of permeability, as workers were still interacting with the water's edge on daily basis. It was only in 1956 that Hartford finally severed its ties with the Connecticut River by constructing the north-south interstate 91 along the Connecticut River, and connecting it to

east-west interstate 84 through a flyover interchange. The interstates cleaved a series of rigid edges through the city's downtown and along the river (see [Figure 36](#)), and wreaked irrevocable damage onto the city's physical, social and economic fabric. By the 1970s, Hartford had one of the highest crime rates in the nation, with much of it concentrated in the abandoned areas

along the river and under the freeways (the city's homicide rate is still consistently ranked among the highest in New England).¹¹⁰

In 1980, a group of concerned citizens and philanthropists gathered to discuss how the riverfront could benefit Hartford, which led to the creation of Riverfront Recapture a year later in 1981. Riverfront Recapture began as a public-private effort to reconnect Hartford and East Hartford to the river in ways that would enhance residents' quality of life. Over the course of 20 years, Riverfront Recapture would leverage political capital into a complete overhaul of the riverfront.

Planning and Implementation

Mortensen Riverfront Plaza is unique in that it managed to successfully funnel state and local resources (ConnDOT, Phoenix Insurance, and Lincoln Financial, among others) into creating a public asset for the people of Hartford.

In 1980, the biggest obstacle to restoring public access between downtown Hartford and the river was the elevated highway of Interstate-91. Fortunately, the Connecticut Department of Transportation (ConnDOT) was already planning a major redesign of the I-91/I-84 interchange in downtown Hartford. Riverfront Recapture asked ConnDOT to use this opportunity to restore pedestrian access to the Riverfront. In 1984, ConnDOT agreed to include Riverfront access in its plans by rebuilding a section of I-91 at ground level and constructing a landscaped plaza over the new highway to reunite downtown Hartford with the river (See [Figure 37](#)). Recognizing that it would take more than a decade to

complete the project, Riverfront Recapture turned its attention to the first phases of park development at Charter Oak Landing in Hartford and Great River Park in East Hartford. Incremental progress, including a restoration of Hartford's historic Riverside Park, continued the Riverfront transformation as construction moved forward on the downtown Riverfront Plaza, which was completed in 1999.

Riverfront Recapture transformed itself in 1998 when it took on management responsibility for the Riverfront parks, working in partnership with the City of Hartford and the Town of East Hartford. Riverfront Recapture is now responsible for all programming of events and activities in the Riverfront parks. In 1998, the Metropolitan District (MDC) agreed to work with Riverfront Recapture to provide daily maintenance of the parks and has played a key role in improving the river's water quality so that it can be used for recreational activity. Planning continues for even more extensions of river walks on both banks and other Riverfront enhancements. The project has earned national recognition and awards, including the Waterfront Center's Excellence on the Waterfront Top Honor Award.

¹¹⁰ Sperling's, "Hartford, Connecticut", www.sperlingsbestplaces.net, accessed January 2016.



Figure 38: Founders Bridge Promenade over I-91, looking West towards downtown Hartford. Source: <http://commons.trincoll.edu/twowheeledhartford>

Access and Connectivity

Mortensen River Plaza lies less than 400 feet from State House Square, which serves as the transportation terminal for CT transit's city buses as well as several intercity buses, an airport shuttle, and a free downtown loop bus which runs from Constitution Plaza to Union Station. Parking structures are plentiful along Front street just below the landing, and the downtown Hartford is home to numerous public surface lots. In short, the park is easily accessible by transit, pedestrians, and cars. Bike access is also fairly straightforward despite

the surprising dearth of bike lanes in downtown Hartford.¹¹¹ The plaza's bike racks can accommodate up to 20 bicycles (15 on the landing, 5 along the Riverwalk).

The Morten Plaza's point of pedestrian access is across a handsome pedestrian foot bridge that connects the Phoenix corporate plaza to

¹¹¹ Alex S. Perez, "Hartford Needs to Make Room for Bikes", *The Hartford Courant*, February 23, 2016.

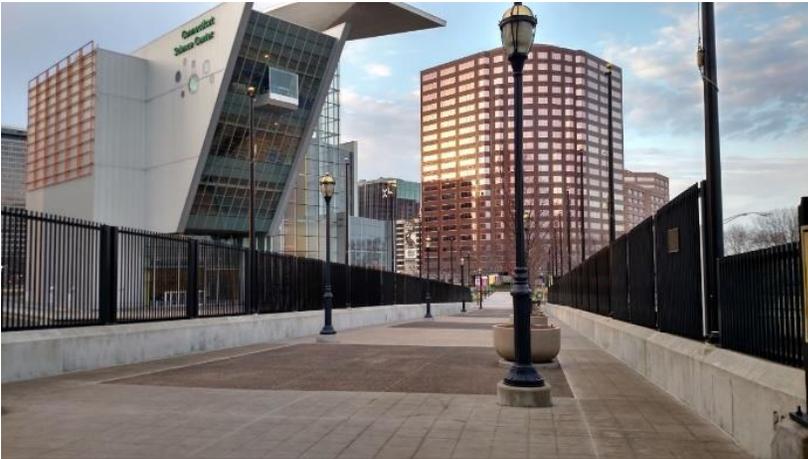


Figure 39: Founder's Bridge Promenade over I-91, looking West towards Connecticut Science Center and downtown Hartford

the Mortensen landing and amphitheater (see [Figure 40](#)). There plaza is also accessible through the Phoenix and Constitution corporate plazas, however there is no signage to this effect, and only the savviest local would know to take this route. This is a great loss to the city, since the shortcut through the Phoenix plaza and behind the future University of Connecticut site shaves eleven minutes off the journey between Mortensen Riverfront Plaza and the burgeoning entertainment district at Front Street. All paved portions of the Riverfront Recapture Project are ADA accessible.

Within the park itself the wayfinding is informative, colorful, and cohesive (see [Figure 43](#)). Signs guide the user towards the attractions such as the amphitheater or the Lincoln Sculpture Park as well as to the destinations at the far ends of the trails (East Hartford, Charter Oak Landing). The signs encourage people to use the plaza as either recreational destination or as part of a larger path to the river. The



Figure 40: Eastward view from Mortensen Plaza towards amphitheater, Connecticut River, the Founders Bridge, and town of East Hartford. Photograph by the author.

only point where signage could be improved is at the principle pedestrian access point on State House Square. The sign is small and muted (see [Figure 41](#)) when contrasted with the expansive signage at the Front Street entrance (see). Front Street primarily serves people arriving to Hartford via vehicle, as it is, a large connector with little foot traffic. Park administrators might consider putting a greater emphasis on clearly guiding downtown foot traffic towards the park and its attractions.



Figure 41: Signage at the Front Street entrance (left) is clearly geared towards automobiles, whereas the pedestrian signage at State House Square (right) could easily go unnoticed

Design Elements

The Mortensen Riverfront Plaza essentially serves as a landscaped pathway from the heart of downtown to the intimate trails of the greater Riverfront Recapture project. From downtown, there are few visual cues to guide the user towards the river except for the elegant spires of the Mortensen Pedestrian Bridge. However once on the bridge the user is treated to fantastic views of downtown Hartford and the Old State House to the west, the cupola of the Colt Manufacturing plant to the south, and the Connecticut River and Riverfront Plaza to the east. Walking through the plaza, the user experiences a variety of enclosures, from the expansive vistas at the Mortensen Bridge to the echoing chamber beneath the Founders and Buckley bridges. There is a constant variety of heights, be in the lamp posts, the bridges, the trees, and the public art, and the eye is continuously engaged at different levels.

The design theme references the river only in the undulating stone steps between the Mortensen Bridge and the band shell, which provide informal seating options in addition to lending a decorative flair. The design elements are mostly cohesive, and generally skew towards the look of a classic British Park. Trash cans (of which there are 31) form as important visual markers throughout the space, and their style changes depending on their placement. There is ample lighting in the park, featuring two types of lamp posts. The Phoenix plaza approach has sleek modern lamp posts, but these morphs into elegant gas lamps at the landing and along the Lincoln Sculpture Walk. The lights are well spaced every 20-30 feet and match those along the Founders bridge, offering a classic and unified feel at night.



Figure 42: Trash receptacles at the MRP. Photograph by the author.

The area feels very safe during the day and at night, a sensation that is only augmented by the presence of park rangers, managed by Riverfront Recapture and funded by the MDC. There is a small ranger station embedded into the side of the hill next to the Amphitheater, which makes them highly accessible to event goers but virtually invisible to users on the Sculpture walk or any of the adjacent trails. It would be very difficult for a person to signal for help even a quarter mile up the river as there are no call boxes. Despite this drawback the park appears to see a healthy amount of foot traffic and all portions, particularly among runners and families with children. Indeed, much of the park's programming is geared towards encouraging children to interact with water through kayak lessons, regattas, and a ropes course. Summertime at the park sees boast outdoor concerts and regattas at the boat house, which is also available for weddings and other ceremonies. The stage hosts several concerts and outdoor film events through the summer. The Connecticut Hall of Science frequently hosts mobile exhibits out along the Founders Bridge approach. All in all, the park appears lively and safe, even on a cold



Figure 43: Wayfinding at Mortensen Riverfront Plaza

weekday afternoon. The only potential drawback is the lack of accessible bathrooms; on a recent visit they were locked shut, with no indication of when they would reopen.

Part of the MRP's success may lie in the fact that it's quite simply a very easy place to be, whether you are engaging in rigorous exercise or merely watching the current flow by. Seating is ample throughout the park and comes in many forms. There 16 wooden benches, 21 stone benches, 2 interactive sculptural chairs, 6 stone planters that can easily double as benches, the undulating 2-tiered stone bench along the landing approach, and the 2,500 capacity band shell seating on a patchwork of grassy slopes. (see [Figure 45](#)). All told, the park can comfortably seat over 3,000 people.



Figure 44: Bench styles at the MRP. Photograph by the author



Figure 45: Amphitheater seating at MRP. Photograph by the author.

The vegetation is equally varied. Phoenix Plaza has a series of angular planters, which boast a patchwork of native vegetation. Along the river, the trees slowly thicken and give way to a natural forest before opening up again onto the boathouse. The effect is very natural and adds a sense of softness that is altogether uncommon in urban waterfront parks. Embankment edge along riverbank gives sense of permeability to the water, with overhanging trees, natural inlets, and reeds swaying in the current.



Figure 45: Sculpture along the Riverwalk, with Sculpture Walk banner on lamppost

Public art is an integral part of the Riverfront Recapture project, with much of it concentrated in the study area of Mortensen Riverfront Plaza. There are 13 total sculptures dedicated to the life of Abraham Lincoln, and 6 other sculptures on the theme of the relationship between man and nature. Each sculpture is by a different artist but made of the same weather bronze material. This material is a subtle nod to the riverfront's industrial past, although it risks looking somewhat monochromatic in wintertime against the drab brown trees, brown freeway pylons, and patches of brown dirt in the lawns¹¹².

¹¹² This may be a cultural preference of New England, which as a whole prefers subtler, classic designs over garish colors. The same sculpture walk would perhaps look very different in Miami.



Figure 46: Natural embankments are interspersed with remnants of commercial activity. Photograph by the author.

Highlights

The natural embankments along the river's edge make the Mortensen Riverfront Plaza a true standout among urban waterfronts, and give the user the sense that she is on the edge of a great river rather than on the edge of a large city. The amphitheater seating is highly creative, and its flexibility ensures that it never looks empty. Indeed, the plentiful seating options – formal and informal - are one of the park's greatest assets, as is the abundant lighting and trash receptacles. The sculpture walk is another memorable highlight, and the art's muted tones blend in perfectly with the quiet beauty of the riverfront. But perhaps the most impressive part of the MRP is its history, which illustrates how political will and strategic thinking can lead to great public works.

Challenges

As with any secluded river trail, the trail portions of Mortensen Riverfront Plaza have the potential to be unsafe at night, particularly in the areas under the bridges. Strategically placed safety call boxes might help enhance the sense of safety at nighttime. The pathways through the corporate plazas could be better advertised to the public, and the pedestrian signage could also be improved within State House Square. Riverfront Recapture would also benefit from implementing better pedestrian signage in downtown Hartford, and tap into the city-wide effort to improve walkability.

This page intentionally left blank

3.5 The Working Waterfront: Middle Harbor Shoreline Park (Oakland, CA)

Built: From 1988 until 2004

Original Use: Regeneration: 1998 - 2004

Architects: Gates & Associates

Opened: September 2004 (with the exception of Port View Park, which opened in 1994)

Purpose of Design

Middle Harbor Shoreline Park (MHSP) is a 38-acre shoreline park built on the site of the former Oakland Naval supply depot. This busy supply yard effectively cut off public access to Oakland's middle shoreline park until it ceased operations in 1988, when the Navy transferred ownership to the Port of Oakland. The port set out to build a public waterfront, with more than two miles of pathways encircling Middle Harbor Basin. MHSP provided unfettered access to the Oakland's shoreline and offers magnificent views of the bay, natural habitats and busy maritime activity.

The park is also part of the Port's effort to mitigate the damage incurred by centuries of dredging and shipping. In its natural state, Oakland's waterfront was covered by hundreds of acres of salt marshes and shallow tidelands. These tidal wetlands provided food, shelter, and other benefits to a wide variety of fish, amphibians, reptiles, birds, insects, and mammals. Dredging and fill for military,

Port, and commercial uses have greatly reduced the habitat in size and quality. By 1935, fill had extended some areas of the Oakland shoreline nearly two miles into the bay. Middle Harbor is located on some of these former tidal wetlands, most of which were underwater at high tide. The Port of Oakland and the U.S. Army Corps of Engineers are working on a project to restore shallow wildlife habitats to Middle Harbor.¹¹³ The park currently features restored wetlands and habitats and protected habitats along the shore.

¹¹³ "Community Relations", *Port of Oakland*, www.portofoakland.com

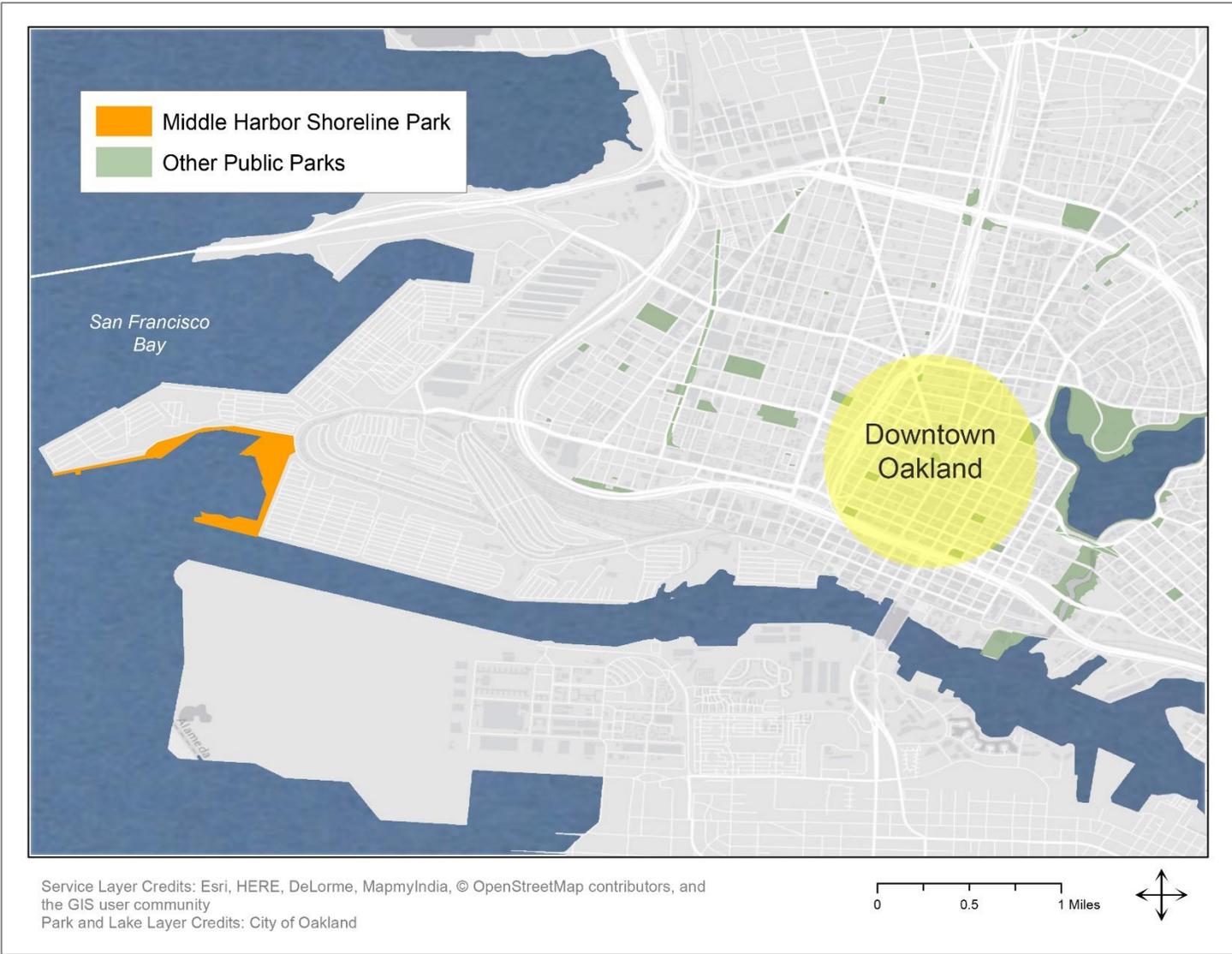


Figure 47: Context for Middle Harbor Shoreline Park.



Figure 48: Plan of Middle Harbor Shoreline Park. Source: The Port of Oakland.

Urban Context

The Middle Harbor Shoreline park is located in the Westernmost corner of Oakland, 3 miles from the City Center and 2 miles from the nearest commercial neighborhood of Jack London Square. It is nestled in the cove between two active branches of the Port of Oakland. The Port of Oakland is the second largest port on the west Coast and deals principally in exports, shipping goods such as wood pulp, metal, and vegetables to locations across the Pacific Rim and beyond. In 2015, the port averaged 6 vessels a day and loaded 2,277,515 containers.¹¹⁴ It is

¹¹⁴ Port of Oakland, "Operations at a Glance", www.portofoakland.com, accessed March 2016

amid this action that one stumbles upon the Middle Harbor Shoreline Park, a small natural oasis amidst a sea of steel and concrete.

History

Middle Harbor Shoreline Park is built on the site of the former Oakland Naval Supply Depot, an important supply center for the Navy's Pacific Fleet from World War II until 1998, when the depot was closed and transferred to the Port of Oakland. This 541-acre facility was equipped with dozens of warehouses with a combined floor area of over 7 million square feet. The Naval Supply Depot that stood on this land played an important role in the World War II war effort--civilian and military workers processed and shipped a wide variety of cargo, including aviation material, electronics, weapons, clothing, food, fuel, lumber, and medicine and medical equipment.

A majority of the buildings on the Supply Depot were warehouses and offices. The Supply Depot had its own fire and police stations, library, post office, bank, cafeteria, chapel, bowling alley, movie theater, coffee roasting plant (which at its peak supplied all of the armed forces in the Pacific), several lounges, Naval and Marine barracks, and housing for officers and their families. This self-contained "city" was connected by 42 miles of train tracks and 26 miles of paved roadway.

Middle Harbor itself was dredged to create a 40-foot-deep berthing area for naval ships, and fill was placed to create the land for the depot. Oakland was chosen as the site of this important supply center because of the city's extensive rail and highway connections leading

almost directly to the bay and its shipping lanes. The Oakland Naval Supply Depot even had its own internal railroad transportation system with a roundhouse and rail car repair shops. The Naval Supply Depot closed in 1988, and ownership was subsequently passed over to the Port of Oakland.

Planning and Implementation

The planning and design of this park was done with extensive community involvement, which first identified key goals for the park in 1999. Primary community goals included access to the waterfront, creating a place for learning about the local flora and fauna, and environmental stewardship, whereas the Port's goals included fostering a long-term connection between the park and the community and spearheaded a wetland restoration program. Community design fair began as early as 1998, as were attended by over 2,000 people who gave their input on issues of programming to vegetation. The park opened in 2004, and is completely owned and administered by the Port of Oakland.¹¹⁵

Access and Connectivity

Accessing the MHSP is not an intuitive affair. From downtown Oakland visitors must cross beneath the elevated I-280 and onto a long asphalt road flanked by rail yards, container warehouses, and berthing docks. There is no signage indicating the presence a public park until you arrive at the park's entrance. (Numerous reviewers on the park's Yelp page recounted second guessing themselves and feeling lost, while many more referred to the park as 'hidden' and 'out of the way'.)

Once inside the park grounds there is no signage to guide the visitor towards the various points of interest, such as the amphitheater or observation tower.

The MHSP is not served by public transit, and is a 1.4 mile walk from the closest bus stop (further still from the nearest BART station, which is a 2-mile walk to the east). According to the park's Community Director Ramona Dixon, the Port lobbied to have AC Transit run a bus line to the park entrance, but federal budget cuts forced the agency to prioritize high-volume areas.

Even the most dedicated pedestrian would have difficulty walking along the 1-mile approach with no sidewalk, under the constant threat of being run over by one of the many semi-trucks barreling through on their way to pick up freight (see [Figure 49](#)). Cyclists will have a slightly easier time of it, but should also be wary of broken glass, speeding traffic, and having pebbles kicked out from under the wheels of a truck. Once cyclists arrive at the park they will be greeted by no more than 7 total bike racks (2 at Point Arnold, and 5 outside the observation tower at Western Mole). All in all, the MHSP is geared heavily for vehicular access, as the park's 5 surface lots can comfortably store over 350 cars.

¹¹⁵ Interview with Ramona Dixon



Figure 50: One of the lights at the Mole Point Observation Tower. Photograph by the author.

Design Elements

The MHSP features a vaguely maritime theme, expressed chiefly through the decorative use of bollards and cleats throughout the park (See [Figure 51](#)). Otherwise, the design elements (railings, benches, trash cans) are strictly utilitarian.

Vegetation in the park is rather sparse, with only a handful of trees surpassing ten feet or featuring any kind of significant foliage. Sight lines are thus entirely unobstructed, allowing the user to behold the Bay Bridge and the San Francisco skyline from any point within the park. The downside to this openness is there is very little to shade the user from the sun or (most importantly) the gusts of wind hurtling over the Bay from the Pacific Ocean.

Much of the shoreline is made up of natural beaches, wetlands, rocks, and natural embankments, with several yards of railing relegated to



Figure 49: Road to Middle Harbor. Photograph by the author.

the Point Arnold lookout. As in Hartford, this lends a natural feeling to the waterfront and blurs the rigid line between natural and man-made elements. Unfortunately, this also leads to copious quantities of trash at low tide, which the park appears too under-funded to maintain.

There are exactly three sources of outdoor light within the confines of the entire park: a single flood light at the amphitheater and two lamp posts flanking the observation tower. The only other available lighting is designed to exclusively serve the surface parking lots. This heavily discourages any kind of nighttime use, as befits a park that strictly enforces its sunset closing time.



Figure 51: Shipping cleats have been incorporated into the park's design. Photograph by the author.

There are a couple of instances of public art: the dolphin sculpture and the mosaic tiles, both located at the amphitheater (See [Figure 52](#)). The tiles are designed by Oakland high school students and provide a much-needed cultural link to the nearby city.

Seating is amply available throughout the park. Formal seating includes 27 regular picnic tables, 7 ADA-accessible picnic tables, located under a large trestle at Point Arnold. The park also boasts 136 benches, 9 stone banquettes, and over 50 decorative cinder blocks. These are well interspersed throughout the park's 150 acres, and allow for large gatherings or intimate contemplation. The trash cans leave something to be desired, as they located haphazardly throughout the park and show no attempt at forming a cohesive design.



Figure 52: Dolphin sculpture plays host to some impromptu art. Photograph by the author



Figure 53: Decorative tiles adorn several small pillars at the amphitheater. Photograph by the author.

Highlights

The one standout design element is the combination watchtower and comfort station located in the Western Pacific Mole section of the park. It features a comfort station at the first level, and two additional levels to allow for sightseeing. In fact, the Western Pacific Mole is the most successful portion of the park for several reasons: it has a natural shoreline, breathtaking views, ample educational signage, historic connection to a railway. The enclosure is also varied, with one side of featuring the tall cranes of the port and the other the vast expanse of San Francisco Bay, and the user feels as though she is jutting out into the action. It was also the most popular portion of the park, and



Figure 54: Picnic tables at Point Arnold. Photograph by the author.

featured the most large groups of people as well as several couples enjoying the stunning views. The children were particularly entertained by a large cruise ship slowly making its way to Jack London Square, mere feet from the edge of the park. This area stood in stark contrast to the rest of the park which was underpopulated and far less visually engaging.

Challenges

The largest challenge at Middle Harbor Shoreline Park is the lack of easy transit access, which keeps it from being a true urban park. The cleanliness is also an issue, for despite the copious number of garbage cans (over 40 throughout the park) there is still a constant stream of refuse being washed onto shore. And lastly, the vast open sight lines are both a blessing and a curse: those beautiful, unobstructed views of San Francisco come at the price of scale and enclosure, which leaves the user feeling vulnerable to the elements throughout most of the park.



Figure 55: View of San Francisco from the Western Pacific Mole Watchtower

3.6 Best Practices in Waterfront Design

The four waterfronts all exhibit many of the characteristics discussed in the previous chapter, and align closely (though not completely) with the *10 Principles for a Sustainable Development of Urban Waterfront Areas*. The precedents have shown that the following elements play an integral role in predicting the effectiveness of an urban waterfront.

Open Space: Open space is particularly important to a waterfront in a dense urban environment, such as Brooklyn Bridge Park, as it can provide a respite from crowded streets and serve as a gradual transition between open water and urban core. Mortensen Plaza strikes a sensible balance with its open space as befits its location in a small capital city. Only at Middle Harbor Shoreline Park are the effects of too much open space clearly discernible. Care must be taken at the HPS to ensure that its amount of open space is proportional to the adjacent developments, since it too lies miles away from an urban core.

Recreational Facilities: Brooklyn Bridge park and Buffalo Canalside both have an abundance of year-round recreational facilities and public programming, while Mortensen Riverfront Plaza and Middle Harbor Shoreline Park offer a more peaceful and secluded experience. The HPS can adopt both approaches: enough programming to attract visitors, but so much that it retains the air of a carnival. Natural trails and wetlands can help maximize the site's potential for an urban oasis.

Vegetation and Landscaping: Brooklyn Bridge Park exhibits a highly manicured variety of vegetation, while Hartford applies a relaxed and natural style to its planting. Both approaches are highly effective for they both provide a wide variety of color and foliage to their

surroundings. Middle Harbor Shoreline Park has some wonderful natural elements along its embankments and its wetlands, but suffers a dearth of height differential in its planting, which contributes to the user's sense of vastness inside the park. Canalside Buffalo is the least successful in this regard, and could benefit from dedicated efforts to improve its landscaping.

Public Art: Once again, Brooklyn Bridge Park and Mortensen Riverfront Plaza adopt divergent but highly effective approaches to public art, whereas Canalside and Middle Harbor only showcase a couple of pieces. The HPS's public arts program could be a rotating showcase of local artists, a fixed repertoire that highlights its history, or a combination both.

Streetscape Amenities: Canalside, Brooklyn Bridge Park, and Mortensen Riverfront Plaza all exhibit excellent streetscape amenities in their seating, lighting, trash receptacles, fixtures, and even ruins. The Middle Harbor Shoreline Park suffers in this regard, and the lack of cohesion contributes to the park's sense of isolation and even neglect. The HPS's plan should design its streetscape amenities with intention, and take care to establish guidelines for future expansion (this will help avoid MHSP's scattered trash cans).

Massing and Enclosure: Mortensen Riverfront Park is perfectly scaled to its surroundings, and manages to balance the heights of the office buildings, and width of the freeway, and the size of the river. On the other end of the spectrum is the MHSP, whose wide open spaces render it difficult to navigate. The HPS should take care to provide a variety of enclosures throughout the parks, be it through buildings, trees, meadows, or even public art.

Sight lines/Viewsheds: If a waterfront park has a single purpose, it is to provide the user with a clear view of the water. That said, Middle Harbor’ unobstructed viewshed quickly becomes monotonous to the user. The HPS must take care to design elements in a way that provide varied and even playful sight lines to the bay.

Commercial Activity: Any public park will benefit enormously from the proximity to commerce. In this regard, Canalside Buffalo is clearly the king, as it exhibited a high degree of activity even on a 12-degree Tuesday afternoon. The Hunter’s Point Shipyard’s commercial amenities must strike a balance between being accessible to the park users without overpowering the park’s natural elements.

Access and Circulation: Middle Harbor paid the price for its isolation, and planners must ensure that the HPS does not suffer the same fate. Design plans should be presented to the SFMTA and Lennar Urban to ensure a steady stream of public and private transportation options are available to the public. Wayfinding is also an important component to a successful waterfront, as it has the potential to integrate city landmarks into the user’s experience of the park.

Inclusive Planning and Management: Middle Harbor exhibited the most inclusive planning process by far, and make concerted efforts to outreach to the surrounding community, particularly in West Oakland. The park is highly praised by the people of Oakland, despite its design shortcomings, since they feel a sense of ownership. The HPS should look to this model as its begins to cull community feedback on its open space plans.

Share of Seating Capacity

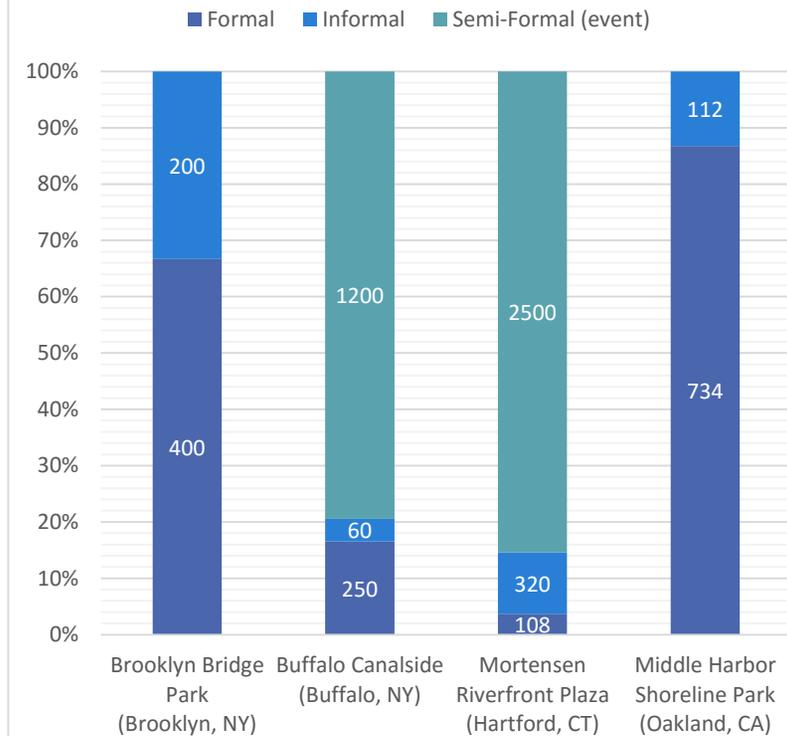


Figure 56: Seating styles varied between each waterfront, from formal benches to informal stoops to semi-formal event seating.

Safety and Comfort: The lighting design at Mortensen River Plaza ensured that it felt safe and accessible at all times of day, which should be replicated at the HPS. All of the precedent sites offered a wide variety of seating options, with the noted exception of Canalside.

Access to Water’s Edge: The Brooklyn Bridge Park had beautiful views, but the shoreline was highly regulated by fencing and ominous signage, while the access points were narrow, limited, and under strict surveillance. Contrast this to the experience the Mortensen Riverfront Plaza, where the user could experience the best aspects of an urban park along with a natural riverbank. The HPS plans should take care to limit fencing and barriers to where they are most

necessary (such as playgrounds), and to use natural barriers as much as possible so as to soften the edge.

Table 1: Matrix of required elements. 0 signals poor, 1 signals fair, and 2 signals good.

	Open Space	Rec Facilities	Veg. & Landsc.	Public Art	Massing and Enclosure	Sight Lines / Viewsheds	Commercial Activity	Access and Circulation	Inclusive Planning	Safety and Comfort	Waters Edge	TOTAL RATING
Brooklyn Bridge Park	1	2	2	2	1	2	1	2	0	2	1	15/22
Canalside Buffalo	1	2	0	1	1	1	2	1	1	2	1	15/22
Mortensen Riverfront Plaza	1	2	2	2	2	1	1	2	1	2	2	18/22
Middle Harbor Shoreline Park	2	1	1	0	0	2	0	0	2	1	2	10/22
AVG.	1.25	1.4	1.25	1.25	1	1.5	1	1	1.5	1.4	1.5	



This page intentionally left blank

CHAPTER 4: HUNTER'S POINT SHIPYARD

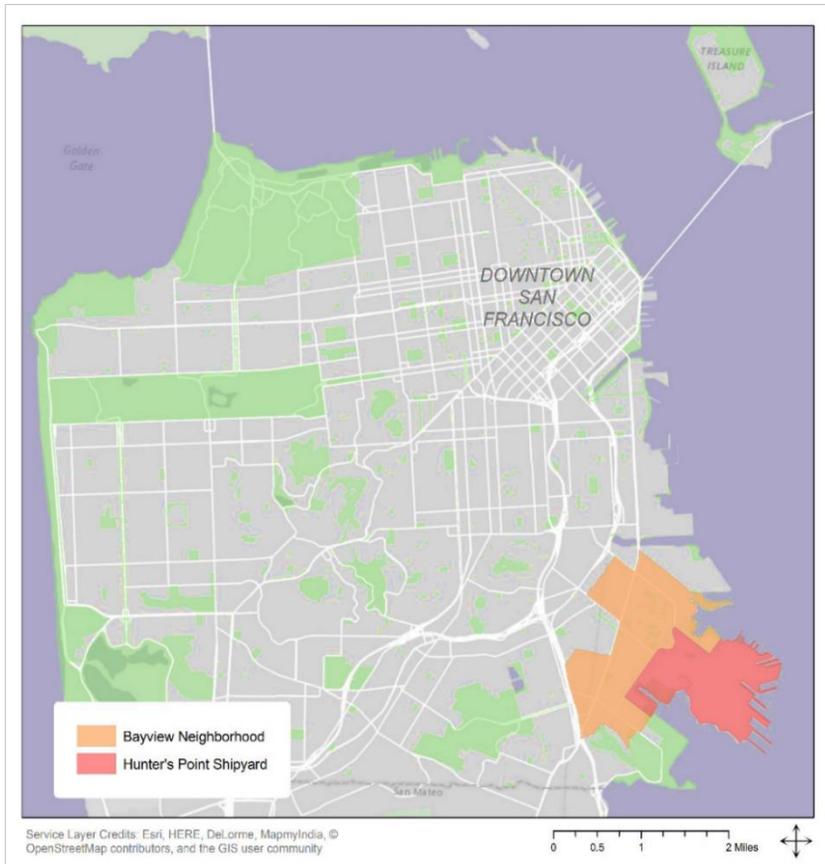


Figure 57: The Hunter's Point Shipyard lies in the far southeast corner of the city

As exhibited in the previous chapter, waterfront designs are highly contextual projects which rely as heavily on history and location as they do on individual design elements. It is thus important to understand the history of the Hunter's Point Shipyard and its place in the wider context of San Francisco's maritime culture. In addition, the shipyard's effects on the adjacent Bayview/Hunter's Point community cannot be ignored, as the neighborhood will play an enormous role in guiding the design, shape, and connectivity of the future waterfront.



Figure 58: The Hunter's Point Shipyard in 1920, with India Basin in the foreground.



Figure 59: The active Shipyard in 1948. Source: San Francisco Chronicle

4.1 History of Hunter's Point Shipyard

The current site of the Hunter's Point Shipyard was first adopted for maritime use in the 1860s by the California Dry Dock Company.¹¹⁶ It grew rapidly, and by the turn of the 20th century it was the largest dry dock on the Pacific coast. This spurred the development of a close-knit shipping community along San Francisco's southeastern waterfront (see [Figure 60](#)).

In 1941, a mere 11 days after the Japanese attacks on Pearl Harbor, the United States Navy acquired the dry dock facilities at Hunters Point in order to expedite the construction of naval ships. Hunters

Point promptly became one of the highest-producing shipyard on the West Coast, and even loaded the key missile components of the atomic bomb onto the *USS Indianapolis* in 1945. After the Second World War, the Navy opened the Naval Radiological Defense Laboratory (NRDL) on the Hunter's Point grounds, initially to decontaminate naval ships which had been exposed to atomic weapons testing. Over the years, the NRDL also performed experiments on the effects of radial contamination on plants and animals, and was the US's largest facility for applied nuclear research.

¹¹⁶ The San Francisco Shipyard, "History", <http://thesfshipyard.com/history/>, accessed March 2016



Figure 60: Contours of the original shoreline overlaid on the modern day contours of the Hunters Point Shipyard.

All told, the Hunter's Point Shipyard employed over 8,000 workers at its peak.

Despite a highly successful production rate, the Navy de-commissioned the Shipyard in 1974. The Navy leased the land to a commercial ship-building enterprise named Triple A Machine Shop, Inc. which operated until 1989. The Environmental Protection Agency

(EPA) subsequently declared the base a Superfund site¹¹⁷ due to the overwhelming amount of radioactive chemicals in the groundwater, and placed the Shipyard on its National Priority List (NPL) for cleanup.¹¹⁸ By this time the landscape of the Hunters Point peninsula had been altered significantly by decades of infill, grading, and levelling. (See Figure 60).

As the 20-year cleanup began, so did talks of re-development. City planners were drafting proposals as early as 1996, and the Hunters Point Area Plan was finally approved by the City of San Francisco in 2008. Development officially broke ground in 2013, as part of a 7.3 billion-dollar redevelopment plan spearheaded by the Lennar Corporation. Lennar has since been joined by the development firm Build Inc. to lead numerous large-scale housing and urban renewal projects throughout the site.¹¹⁹

¹¹⁷ EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters.

¹¹⁸ Environmental Protection Agency, "Hunter's Point Shipyard", *Pacific Northwest: Region 9 Superfunds*,

<http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/Hunters+Point+Naval+Shipyard?OpenDocument>, accessed March 2016.

¹¹⁹ Lizzie Johnson, "Visions of a new SF Park in Once-industrial Waterfront Space", *The San Francisco Chronicle*, March 9, 2016.

4.2 Urban Context: The Bayview/Hunter's Point Neighborhood

The Bayview Neighborhood lies directly west of the former Shipyard site. According to the 2010 US Census, the neighborhood has 10,963 households with a median income of \$38,638. Despite the below-average income and the 11.4% unemployment rate residents exhibit a strong sense of neighborhood pride, and the 48% homeownership rate speaks to a solid middle class. The neighborhood is also 41% African American (as opposed to 6% city-wide). This is a strong point of identity for its residents, who see their neighborhood as being a stronghold of black leadership and identity in the city of San Francisco.

The area is served primarily by the MUNI T Light rail line as well as several MUNI buses, which average a 40-minute commute to San Francisco's Financial District. There are 10.7 miles of road within the site that are inaccessible to the public, and many of these lead directly to the waterfront.



Figure 61: Study Area Boundary. Map created by author.

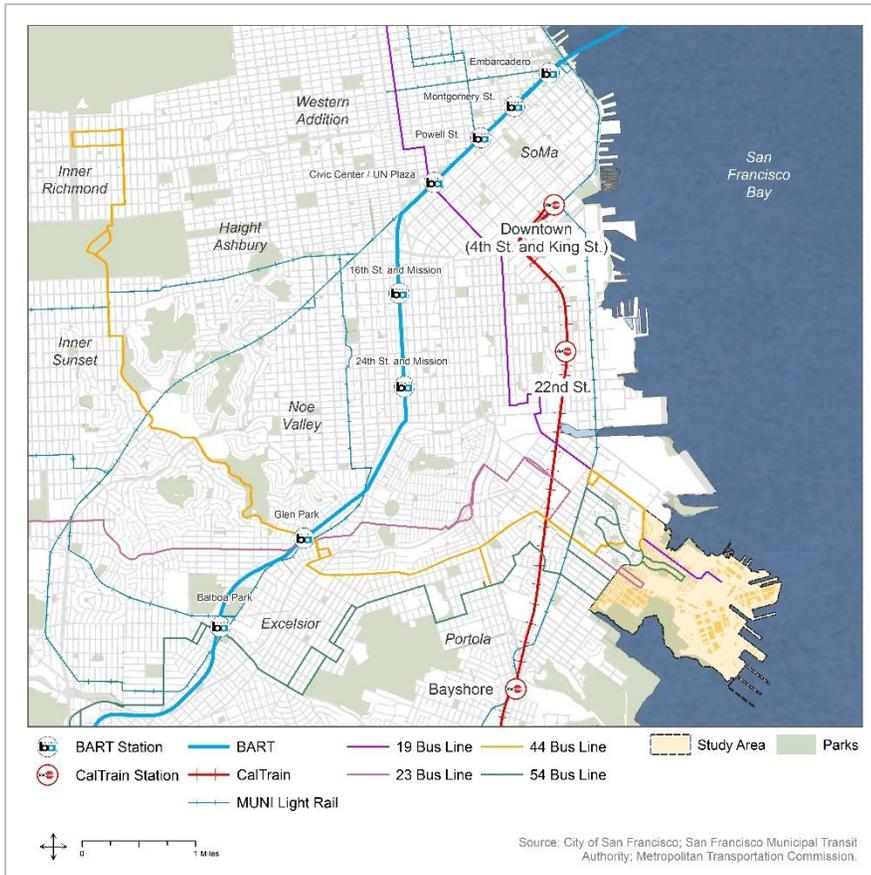


Figure 62: Transportation Access to the Hunter's Point Shipyard. Map created by the author with data from the City of San Francisco and San Francisco Municipal Transit Agency.

The Hunter's Point Shipyard once provided over five thousand jobs to the residents of San Francisco, many of whom were African American residents of the Bayview/Hunter's Point neighborhood who had migrated from the southern United States in the 1940s. What was once a rural urban outpost blossomed into a full-fledged urban neighborhood, with the Third Street corridor serving as its social and economic spine. It follows that the Shipyard's 1974 closure had a devastating effect on the neighborhood's economic vitality.¹²⁰ The area suffered a second blow with the closure of nearby Candlestick Park, a stadium which was home to the San Francisco 49ers from 1960 until 2014 and was often the sole reason most San Franciscans ever ventured to the southeastern shore.

The Bayview/Hunter's point neighborhood is in dire need of a new park; 5 out of its 7 parks and playgrounds are rated substandard by the San Francisco Department of Parks and Recreation.¹²¹ The neighborhood also boasts a higher-than-average percentage of families; 55% of households have children under the age of 18, compared to only 40% city-wide. These families could benefit enormously from access to a public park. To design such a park along

¹²⁰ Sierra Hartman, "A Rare Look at an Abandoned SF Shipyard," *The Bold Italic*, October 1, 2014.

¹²¹



Figure 63: Signage and fencing warns trespassers of legal (and chemical) consequences. Photograph by the author.

a world class waterfront would be to provide a much-cherished resource to an area that has historically been neglected by the City in terms of social and recreational facilities.

4.3 Developing a Public Waterfront

A new neighborhood: visions for the southeast waterfront

The City of San Francisco's vision for the Hunter's Point Shipyard area is guided by its waterfront location. The site's Area Plan¹²² stipulates that "as an area surrounded on three sides by water, the primary urban design consideration must be its shoreline location. Care must be taken to assure that shoreline open space is the focus of development."¹²³ The City is also looking to create a cultural and economic hub in this often overlooked corner of the city, and aims to

¹²² San Francisco's General Plan is further divided into Area Plans for each municipally-designated neighborhood. The Hunter's Point Shipyard has its own Area Plan, as does the Bayview/ Hunter's Point neighborhood.



Figure 64: The old and the new. Photograph by the author.

create "...a new neighborhood [that will] produce tangible economic community benefits, and ensure that the new development acts as a catalyst for further economic and community development throughout the Bayview and the City."¹²⁴ In short, the City of San Francisco is continuing to capitalize on its world-class waterfront location. In many respects, the Hunter's Point Shipyard is the final frontier for open waterfront along an otherwise densely developed shoreline. Anne Taupier, project manager for the Mayor's Office of Economic and Workforce Development, estimates that two-thirds of new housing and jobs growth over the next 20 years will take place along the waterfront.¹²⁵

¹²³ *Hunters Point Shipyard Area Plan*, Policy 3.1

¹²⁴ *Hunters Point Shipyard Area Plan*, Policy 6.0

¹²⁵ Johnson, *SF Chronicle*



Figure 65: Rendering of Lennar's open space plan for Hunter's Point Shipyard, as seen from the southwest. Source: Transparent House for Lennar Urban

At the forefront of this vision is the Lennar Corporation, who pledges to build 10,000 housing units in addition to expansive commercial and recreational facilities throughout the site. Developer Build Inc. has leased additional parcels on the property, and plans to build 1,200 mixed-income housing units and additional recreational facilities. If these plans are carried to fruition they would more than double the number of households in the Bayview/Hunters Point neighborhood. The waterfront's marketability is tempered by the City of San Francisco's Department of Parks and Recreation, whose plans to extend the Blue Greenway from Mission Bay down to Candlestick Park guarantee unfettered public access to shoreline. The Blue Greenway is a planned 13-mile trail/waterway along the San Francisco's eastern

¹²⁶ San Francisco Bay Trail, "Southeastern Waterfront", <http://baytrail.org/get-on-the-trail/map-by-number/san-francisco-southern-waterfront/>, accessed March 2016.

¹²⁷ Shipyard General Plan, 2010



Figure 66: Hillside detail of Lennar Urban's open space plan. Source: Transparent House for Lennar Urban

waterfront, and will comprise San Francisco's portion of the Bay Trail, a 500-mile regional pedestrian and cycling trail.¹²⁶

Current Conditions

The shipyard property comprises 490 acres of land, 6 miles of shoreline, and over 100 unused buildings.¹²⁷ Much of the area is restricted to public use due to hazardous conditions, both structural and chemical (see [Figure 63](#)). The Hunter's Point Shipyard site is nonetheless already home to 88 brand new town-house units, with 10,000 more planned within the next two decades.¹²⁸ All of the constructed townhouses were sold before they were built, and the market for Phase 2 housing is scheduled to open at the end of May.¹²⁹

¹²⁸ Fimrite, Peter. "Housing Blooms at Last at Once Toxic Hunter's Point Shipyard Site." *The San Francisco Chronicle*. June 8, 2015. (Accessed September 9th, 2015.)

¹²⁹

One of the most surprising and stalwart tenants of the Shipyard is the Shipyard Trust for the Artists (STAR). Artists have inhabited the shipyard since 1982, and have fostered a community that has blossomed into the largest artist colony in the United States with over 300 resident artist and sculptors. STAR is a vested stakeholder in changes taking place at the Shipyard, and the organization has been working with the Hunter's Point Citizen's Advisory Committee (CAC) and Lennar Urban to ensure that the Shipyard remains an affordable space for artists.

4.4 Meeting the Grade: How the Plan for HPS Meets the Best Practices of Waterfront Development

Overview of Planned Waterfront Design

There are currently four entities charged with developing the Hunter's Point Shipyard Waterfront: Lennar Urban, Build Inc., The San Francisco Parks and Recreation Department (SFPRD), and the Association of Bay Area Governments (ABAG) through the Bay Trail initiative.

Their collaborative plan to restore the shoreline's open space includes:

- Last Port shorefront park, with acres of bayside meadows and trails
- Two waterfront promenades

- Waterfront Recreation and Education Park
- A 300-slip marina
- Bay access for windsurfing, kayaking and sailing.¹³⁰
- 4 Miles of connected Blue Greenway cycling and pedestrian trails
- India Basin Waterfront Park, an expansion and re-imagining of the existing India Shoreline Park

The Southern and Southeastern portions of the site are principally under the purview of Lennar Urban, in partnership with Pacific Gas and Electric. Although Lennar Urban has not updated its open space plans since 2010, open space is nonetheless a prominent feature, as seen in [Figure 65](#). The eastern meadows evoke the open expanses of the Middle Shoreline Park, and risk being far too windswept and unprotected to be enjoyable. Indeed, the eastern and southern portions appear almost barren, and are separated from the housing developments by geometric fields and planting. The street pattern does not extend outside of the housing development and the building design is inward-facing, which is surprising given its waterfront location. Most of the activity appears concentrated in the northern section of the site, very close to where the STAR operates today. The variation in heights and building size suggest this is the intended site for commercial and recreational uses. The plans for the northern portion of the site are far more developed. They include the

¹³⁰ <http://thesfshipyard.com/vision/>



Figure 67: Overhead rendering of Build Inc.'s future mixed-use development along the future India Waterfront Park Source: Build Inc.

expansion the existing India Basin Park owned by the San Francisco Recreation and Parks Department (SFRPD), the adjacent Big Green Park which will be managed by Build Inc., and the Northside Park, currently being developed by Lennar Urban.

The India Basin shoreline park will expand India Basin Park onto the adjacent city-owned property at Innes, which is slated to become a large recreational center. The San Francisco Department of Parks and Recreation has commissioned the Seattle-based architecture firm of Gustafson, Guthrie and Nichol (GGN) to lead the designs for the new park, which will be an expansion of the existing India Basin Shoreline Park. The designs feature a gradual interaction with the water through piers that jut out into the wetlands, and curvilinear paths around the basin. This portion of the shipyard offers sweeping views



Figure 68: Rendering of future India Basin Waterfront. Source: Gustafson, Guthrie and Nichol.

of the San Francisco Bay from the vantage point of a gently curving hillside. GGN's plans include generous planting and a commitment to uncovering the basin's recreational potential. Build Inc. aims to expand the public park along the waterfront and construct a residential complex at its edge (see Figure 68), which looks upon the wetlands and across India Basin towards Heron's Head Park. The park depicted in the rendering is a patchwork of wetlands and small bays, and the mixed-use housing development certainly appears to have the elements of a walkable downtown core (see Figure). The separation between the park and the housing development is rather stark and could potentially create a binary enclosure that is tall on one side completely flat on the other. However, the architect's use of



Figure 69: Rendering of street-level activity at Build Inc's residential project at India Basin Open Space Park. Source: Build Inc, 2014

setbacks may help mitigate this effect. Construction is expected to break ground in 2017. To the east of this park lies the NorthSide Park, which is owned by Lennar Urban (see [Figure 71](#)). Lennar Urban is currently soliciting community feedback on design concepts for the park, and will be entering the final design phase in late May. The current focus is primarily recreational, and Lennar appear very dedicated to ensuring that this park has all the amenities that residents might expect from good urban park. While this is a noble endeavor in and of itself, it seems somewhat redundant in the context of the Hunter's Point Shipyard. The India Basin Open Space Park is only a block away, and it is already committed to being a destination recreational facility for the entire city. In emphasizing the



Figure 70: View from the existing India Basin Shoreline Park. Source: San Francisco Chronicle

recreational aspects of the park. Lennar Urban unwittingly risks turning the shipyard into a fairground destination rather than a working, diverse community.



Figure 71: Potential programming at Northside Park. Source: Lennar Urban, March 2016

4.5 Perceptions of the HPS Development

Reception to the Hunter's Point Shipyard development in this neighborhood has been mixed. On the one hand the site is greeted a potential jobs generator, and the *SF Bayview* goes so far as to applaud the Lennar Corporation's investment in a new school.¹³¹ Longtime Hunter's Point resident James F. recently moved into one of the new condominiums managed by James Stewart Properties, and he is ecstatic about the upcoming changes in the neighborhood. He used to reside in a public housing project, but was recently re-located by the city into his own brand new apartment. He now attends monthly meetings to provide input on the designs of a pocket park on his block. "This is going to be a great neighborhood", he gushes, "not like before. I've seen some things, let me tell you, but all that's going to change now."

Not everyone views this change so favorably, and the developments are also seen as harbingers of gentrification and exclusion. Ryan D. has operated a metal fabrication company in the HPS since 1995, and harbors some trepidations about the incoming development. He initially located to the neighborhood for cheap warehouse space. As an avid outdoorsman he welcomes the improvements in shoreline access, marinas, and bicycle trails, but he worries that these amenities will result in higher rents for his warehouse space. "Once it gets too nice, I'm probably out," he deadpans. "I would love to stick around and enjoy it. Maybe I'll get a year or two."

Lennar's website for the HPS development does little to assuage his fears. It advertises five principle characteristics: Open Space,

Sustainable Living, Arts and Innovation, Shopping and Entertainment, and 'Spirited Neighborhoods.' The Spirited Neighborhoods category does not include any mention of the Bayview, and instead dwells on the relationship between the HPS and the planned developments at Candlestick Park, which will include "hotels, high-rise condos, niche restaurants and a trendsetting retail hub."¹³² This language marks a departure from the promise of equity and inclusiveness that was stipulated in the site's Area Plan. Moreover, the development has completely dropped the word "Hunter's Point" from its name, settling on the simpler "The Shipyard". Is the Lennar Corporation seeking to rid itself of any negative association with Bayview/ Hunter's Point neighborhood?

The Public Waterfront at the Hunter's Point Shipyard has the potential to mitigate this growing divide, and provide a space that serves both the new and existing community. Both James and Ryan are hopeful that they will be able to enjoy the new Hunter's Point Shipyard. The recommendations set forth in Chapter 5 are a small but earnest attempt to ensure that they get their wish.

¹³¹ Rochelle Metcalfe, "Third Street Stroll", *San Francisco Bayview National Black Newspaper*, September 28, 2015.

¹³² <http://thesfshipyard.com/vision>

CHAPTER 5: URBAN DESIGN RECOMMENDATIONS

The four precedents explored in Chapter Three revealed four very different approaches to revitalizing an urban waterfront. In the case of the Hunter's Point Shipyard, the two principle challenges are a) connecting the site to the Bayview neighborhood and to downtown, and b) avoid falling into the trap of over-development and the subsequent neighborhood displacement.

The recommendations set forth in this chapter are intended to guide rather than dictate a formal design. The designers, planners, and residents are already hard at work outlining the shape and scope of the area's northern parks, and will hopefully continue to do so as developments expands to the eastern and southern portions. These guidelines merely suggest adopting a holistic and collaborative approach to designing the Hunter's Point Shipyard Waterfront.

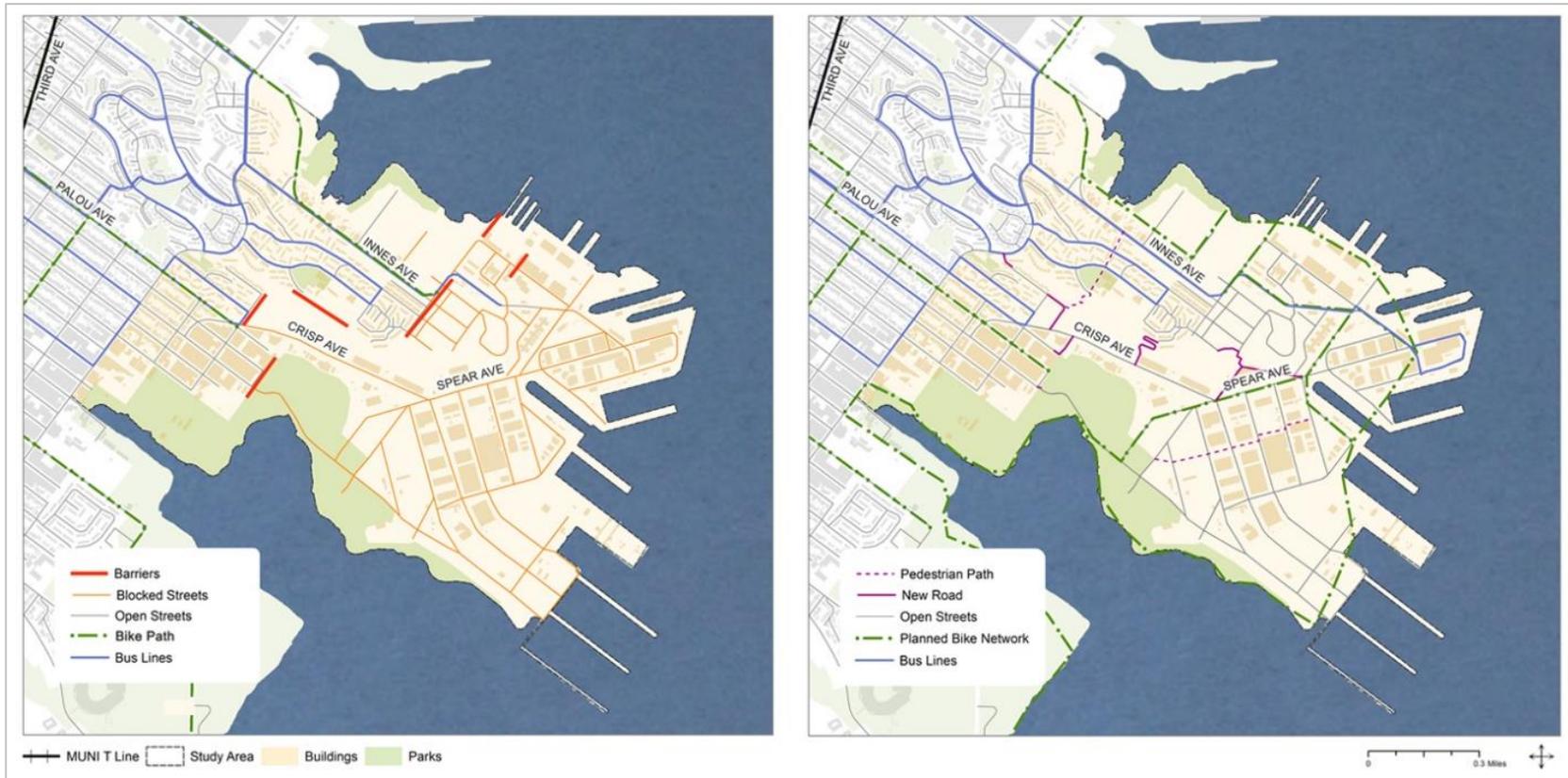


Figure 72: Circulation map of HPS. The left-hand panel depicts current circulation conditions with over 10 miles of blocked roadway. The right-hand panel proposes re-opening the street grid, expanding the bicycle network, constructing pedestrian paths, and extending the bus lines. Map created by author with data from the City of San Francisco, San Francisco Municipal Transit Authority, and the San Francisco Recreation and Parks Department.

5.1 Access and Connectivity

As seen in Chapter 4, the Shipyard needs considerable improvement in the areas of connectivity. The author recommends re-connecting the street grid between Bayview/Hunter's Point, for motor vehicles as well as for pedestrians and cyclists. These changes would open vehicular circulation through the site, and would allow the 19 and 24

Muni buses to bring disabled or elderly passengers directly to the shoreline. Additional pedestrian pathways could help break up the street grid into more manageable blocks in the southeast portion, and provide a shortcut over the hill. These small enhancements will mitigate the barrier caused by the curvilinear street grids at the top of the hill.



Figure 73: Potential Massing along eastern piers of Hunter's Point Shipyard. Large buildings maintain the form of the street grid, allowing for elongated view sheds as the user approached the waterfront. Buildings are stepped to mitigate the 'canyon' effect, and setbacks are varied to create a more interesting variety of enclosures. Renderings by author on Google Earth base model.

5.2 Enclosure and Open Space

One of the Shipyard's greatest assets is its topography, as depicted in [Figure 74](#). The central portion of the site boasts a steep hill which offers unparalleled views of San Francisco, Oakland, and San Bruno Mountain. The waterfront will therefore be enjoyed from the hillsides as much as from the water's edge, and the massing and view sheds must be planned accordingly. Developers should steer clear of designing walls of interrupted high rises along the water's edge, and

opt instead for regular openings, tiered setbacks, and a variation in buildings heights. This ensures that the enclosure remains interesting and works in concert with the blue expanse of the bay.

Although the viewshed should always be oriented towards the bay, it is equally important to provide a variety of enclosures, and give the user the choice of scale, be it the city scale (large waterfront with skyline views), neighborhood scale (pocket park behind a commercial strip), or personal scale (secluded bench along a trail). The bevy of

inlets and piers along the shoreline provide ample opportunity for different types of enclosure, views, and user experience, and designers would do well to take full advantage of this characteristic.

5.3 Streetscape Amenities

The Hunter's Point Shoreline will eventually comprise several small waterfront parks connected by the Blue Greenway. Although each one will host unique elements and designs, it is important that the parks maintain a sense of visual cohesion. The Mortensen Riverfront Plaza in Hartford was a sterling example of how to incorporate a destination waterfront into a system of more rural parks and trails. The designers achieved this through consistent color-coded signage, sculpture art, and stylistic elements such as benches, lamp posts, and trash receptacles. Oakland's Middle Harbor Shoreline Park also offers a valuable example to the HPS in the form of interpretative signs that highlight both the historic and the natural elements along the trails. This is an excellent opportunity to tap into the area's rich history of invention and manufacturing, as well as the neighborhood's significance as an incubator for the Civil Rights movement in the Bay Area. Perkins Eastman did a wonderful job at Buffalo's Canalplace with incorporating elements of its industrial history into its design elements, and there is ample opportunity for a designer to employ similar tactics at the Hunter's Point Shipyard.

The signage should be frequent yet not overpowering. This balance will be particularly important in the more isolated portions of the waterfront, where the signage should guide and inform the user without diminishing his sense of being in a truly natural setting.



Figure 74: Elevation at the Hunter's Point Shipyard. Map created by author with data courtesy of the City of San Francisco and the United States Geological Survey.



Figure 75: Natural edges along a trail in the future Hunter's Point Shipyard. Base photo and rendering by the author, with collaged elements courtesy of Shutterstock.

5.4 Interaction with Water's Edge

The undeveloped waterfront provides designers with a unique opportunity to cultivate a natural shoreline. The numerous inlets and hidden coves can offer peaceful oases for visitors (see [Figure 75](#)), and can help break up the monotony of the wide open spaces envisioned by Lennar Urban in their 2010 Open Space Plan. The water's edge should change according to its adjacent uses, but should strive to use

natural elements whenever possible such as sand, grass, stones, or logs. Fences and railings are discouraged along the waterfront with the exception of playgrounds, picnic areas, or marinas. In these cases, railings should employ decorative elements in keeping with the remainder of the park. Park designers are advised to steer clear of foreboding signage as much as possible and only employ it in places where there is genuine danger. Chain link should be avoided at all

costs; for far too long, access to the waterfront was abruptly truncated by a series of chain link fences smattered with large, dilapidated biohazard signs. Designers would be wise to steer clear of these references.

5.5 Programming and Public Art

In recent community meetings¹³³, residents have overwhelmingly expressed interest in re-activating the bay for traditional aquatic uses such as boating, fishing, and even swimming. The planned facility at India Basin will meet many of these needs, however additional facilities should be dispersed throughout the site in order to attract users to the eastern and southern portions of the waterfront. At least 60% of the shoreline should retain a natural embankment along the planned Blue Greenway / San Francisco Bay Trail in order to provide elements of a rural trail experience to its users.

Brooklyn Bridge Park provides an excellent example of how to properly implement a rotating showcase of public art; the park features works that are often large, brightly colored, and visible throughout the space (or even, in the case of Deborah Kass's cheeky *OY/YO* sculpture, from across the river in Manhattan).¹³⁴ The Hunter's Point Shipyard has similarly visible promontory along the northeast edge, which would be an excellent space to showcase sculptures or light installations. The SF Shipyard Artist Collective is located a mere 500 feet from this very space, and can serve as an invaluable resource to its neighbors in terms of providing a steady source of interesting, local public art.

¹³³ This was a spirited topic at both The Hunter's Point Community Action Committee meeting on March 14th, 2016 and the Northside Park community meeting on April 6th, 2016.

On the other end of the spectrum, Hartford's Mortensen Riverfront Plaza revealed the effectiveness of using art as a form of wayfinding by installing a visually unified sculpture walk. The Hunter's Point shipyard would benefit from a similar approach, as the art could complement the signage to help guide the user through the space, and establish a sense of place. The theme of the art could be maritime and industrial, or it could reflect the history and diversity of the adjacent Bayview neighborhood.

5.6 Safety and Comfort

One of the most difficult hurdles in designing for the HPS is the sheer vastness of the site. The wayfinding, enclosure, and programming recommendations all contain a discussion of how to unify such a large and unwieldy space, which presents an even larger challenge in terms of ensuring a sense of safety to all its users.

Lighting will naturally be an important element in this regard, as discussed in chapter 2. The heavily programmed areas along the northern and eastern shores should feature consistent sources of light, and lamp posts should be spaced no less than 50 feet apart (ideally closer to 30, as exhibited in the Mortensen Riverfront Plaza). The more secluded portions of the site should nonetheless strive for consistent lighting along the bicycle and pedestrian paths, with emergency call boxes located every quarter mile. Comfort stations can act as natural nodes for park users, and can provide amenities and information.

¹³⁴ Sarah Cascone, "Deborah Kass' *OY/YO* Sculpture Lands in Brooklyn but Speak to all Boroughs," *ArtNet News*, November 11, 2015.

Formal and informal seating should be abundant in the programmed areas. The industrial remnants could easily be re-purposed into seating, as exhibited in Buffalo Canalside's re-appropriation of the former locks into its overall design. The numerous piers along the eastern portion of the site provide ample opportunity for creative seating with 360 views of the Bay, Oakland, downtown San Francisco, San Bruno Mountain, and the Shipyard itself. Benches can also be dispersed throughout the site, particularly in the small leafy nooks along the southern trails.

5.7 Planning and Management

Given the site's numerous plans, stakeholders and governing bodies, it is imperative to form a central administrative mechanism to ensure smooth communication and management between the various entities. The current Citizen's advisory Committee (CAC) is an excellent starting point, and provides a forum to openly discuss management and growth. The CAC would do well to form a special sub-committee dedicated exclusively to issues of urban design, which would help maintain a sense of visual cohesion through the site. The CAC could also form a healthy roster of volunteers to help maintain the site's open spaces, as this can give residents a sense of ownership of the land as well as a connection to its history.

By the same token, planning for the open spaces must continue to be a public process. Lennar Urban has done excellent work in promoting public participation for the design of Northside park, just as the SFDPR has upheld a consistent and transparent design process for the parks at India Basin. There nonetheless needs to be a single unifying document that outlines the urban design priorities, and a centralized governing body that can hold developers and designers accountable if

and when they stray from the guidelines. Chapter 3 discussed the pitfalls of entrusting both public and private interests onto a single entity, as in the case of the Brooklyn Bridge Park Development Corporation. It is therefore imperative that the CAC move quickly to establish an area-wide plan for all development and public space.



This page intentionally left blank

CHAPTER 6: CONCLUSIONS

6.1 Discussion of Findings

This report revealed a strong connection between designing public parks and plazas and designing a successful, accessible waterfront. Chapter 2 and 3 explored the best practices of waterfront design, primarily from an aesthetic standpoint, though consideration was also given to issues of funding, administration, safety, and public participation. The findings revealed that waterfronts are inherently iconic places, and their design has potential to boost a city's image on a global scale. That said, waterfronts can also be intimate, local places, which reflect the natural and cultural diversity of their surroundings.

The Hunter's Point Shipyard site was analyzed throughout chapter 4, and revealed to be a very large, complex site with numerous stakeholders and administrative bodies. In fact, the site's size is perhaps its biggest setback, as it will be difficult to maintain a consistent design throughout the shipyard across its numerous plans and throughout its decades-long phased construction.

Chapter 1 hypothesized that the public had not been adequately engaged. The findings revealed a surprising rebuttal of this assumption, as the first phase of public parks have all solicited a great

deal of public input. Interviews and CAC meetings revealed an informed and dedicated public. Nonetheless, the markers that led the author to make her initial assumption are still in place. The first wave of development consists largely of inward facing, luxury condominiums whose branding efforts are clearly targeted towards wealthy entrepreneurs.

The Hunter's Point Shipyard has great potential to be a unique asset to the City of San Francisco, but it is imperative that the City Planners work with the Citizens Actions Committee (CAC) to solidify design and development guidelines, and quickly. As the last piece of developable waterfront, the shoreline is prime for a fast wave of construction.

6.2 Limitations of Study

The study might have benefited from a greater number of precedents. Time constraints restricted to the author to exploring only five waterfront, one of which was deemed irrelevant and therefore not included in this report.¹³⁵ The analyses in Chapter 4 revealed that administration to be the largest hurdles in implementing cohesive design at the Hunter's Point Shipyard. It would

¹³⁵ Chicago's Riverwalk was too similar to Hartford's Mortensen Riverfront Plaza, and less relevant to the Hunter's Point Shipyard.

have therefore been helpful to analyze sites that faced similar administrative challenges, both nationally and abroad.

The precedent analyses themselves were limited by temporal and financial constraints. The author could only afford to visit each site once during a cross-country train trip in the winter of 2015, which was itself not an optimal time to assess the success of outdoor spaces, particularly along the Great Lakes. An ideal study would have seen a team of 3 to 4 people visit each site numerous times across a span of seasons and days of the week in order to gauge the effectiveness of the design, and to yield a more quantitative

Another limitation was access to information. The author could already detect a disconnect between the varying entities, and it was difficult to piece together a chronological narrative of the Hunter's Point Shipyard. This was a finding in and of itself, and underscored the urgency in Chapter 5's recommendation that the CAC organize its design guidelines, and quickly.

This page intentionally left blank

BIBLIOGRAPHY

- Adkins, Arlie, Jenifer Dill, Gretchen Luhr and Margaret Neal. "Unpacking Walkability: Testing the Influence of Urban Design Features on Perceptions of Walking Environment Attractiveness." *Journal Of Urban Design* Vol. 17, no. 4 (November 2012): 499-510.
- Amiri, Oskar. "Urban Waterfronts as a Deserted Heritage. Gubin-Guben Case Study." *Science – Future of Lithuania* Vol. 7 (2015): 20-29
- Banerjee, Tridib. "The Future of Public Space Beyond Invented Streets and Reinvented Place." *Journal of the American Planning Association* Vol. 67, no. 1 (Winter 2001): 9-24.
- Breen, A. and D. Rigby. *The New Waterfront: A Worldwide Urban Success Story*. New York: McGraw-Hill, 1996.
- Brooklyn Bridge Park. "Brooklyn Bridge Park - Park Design." Last Accessed November 21st, 2015.
<http://www.brooklynbridgepark.org/pages/parkdesign>
- Bunce, Susannah. "Developing Sustainability: Sustainability Policy and Gentrification on Toronto's Waterfront." *Local Environment* Vol. 14, no. 7 (2009): 651-667.
- Campbell, Caitlin. "Visualizing Residual Spaces in a New Light: A Study for Creating & Designing an Urban Public Space Under a Downtown San José Freeway." San Jose State University Masters Thesis Project, December 2013.
- Campo, Daniel. "Brooklyn's Vernacular Waterfront." *Journal of Urban Design* Vol 7, no. 2, (2002):,171-199.
- Cascone, Sarah. "Deborah Kass' OY/YO Sculpture Lands in Brooklyn but Speak to all Boroughs." *ArtNet News*. November 11, 2015.
- Cattell, Vicky, Nick Dines, Wil Gesler and Sarah Curtis. "Mingling, Observing, and Lingering: Everyday Public Spaces and their Implications for Well-Being and Social Relations." *Health and Places* Vol.14, no. 3 (2008): 544-561.
- Cooper Marcus, Clare and Carolyn Francis. *People Places: Design Guidelines for Urban Public Space*. New York: International Thomson Publishing Inc., 1998.
- Demerath, Loren and David Levinger. "The Social Qualities of Being on Foot: A Theoretical Analysis of Pedestrian Activity, Community, and Culture." *City & Community* Vol. 2, no. 3 (2003): 220-233.

- Doucet, Brian. "Urban Strategy or Urban Solution? Visions of a Gentrified Waterfront in Rotterdam and Glasgow." Lecture, Association of American Geographers 2013 Conference : Port CityScapes Session, Los Angeles, CA, April 12, 2013.
- Giovinazzi, Orianna and Maria Moretti. "Port Cities and Urban Waterfront: Transformations and Opportunities." *TemaLab Journal of Mobility, Land Use and Environment* Vol. 3 (2009): 57 – 64.
- Gordon, David A. "Implementing urban waterfront redevelopment in an historic context: a case study of the the Boston Naval Shipyard." *Ocean and Coastal Management* Vol. 42 (1999); 909-931
- Hoyle, Brian. "Global and Local Change on the Port City Waterfront." *The Geographical Review* 90 -3 (July 2000.): 395-417.
- Lizzie Johnson, "Visions of a new SF Park in Once-industrial Waterfront Space", *The San Francisco Chronicle*, March 9, 2016.
- Kanarick, Mike. "City of Burlington Breaks Ground on Major Re-development of Northern Waterfront." City of Burlington Press Release, August 5th, 2014. Accessed November 23rd, 2015. <https://www.burlingtonvt.gov/Press/City-of-Burlington-Breaks-Ground-on-Major-Redevelopment-of-Northern-Waterfront>
- Kazmierczak, Aleksandra. "The Contribution of Local Parks to Neighborhood Social Ties." *Landscape and Urban Planning*, Vol.109 (2013): 31-44
- Khakee, Abdul. "Not-On-My-Waterfront Syndrome (NOMW-ism) in Urban Planning. *Planning Theory & Practice* Vol. 9 No.3 (2008): 425-428.
- Kuo, F.C, W.C. Sullivan, R.L. Coley and L. Brunson, "Fertile Ground for Community: Inner-city Neighborhood Common Space." *American Journal of Community Psychology* Vol. 26 (1998): 823-851.
- Loures, Luis. "Post-industrial landscapes as Drivers for Urban Redevelopment: Public versus Expert Perspectives towards the Benefits and Barriers of the Re-use of Post-industrial Sites in Urban Areas." *Habitat International* Vol. 45 (2015): 72-81
- Luyms, Don T. and Ken Tamminga. "Integrating Public Safety and Use into Urban Greenways." *Landscape and Urban Planning* Vol. 33 (1995): 391-400
- Lynch, Kevin. *The Image of the City*. Cambridge: MIT Press, 1960.
- Madden, David J. "Neighborhood as Spatial Project: Making the Urban Order on the Downtown Brooklyn Waterfront." *International Journal of Urban & Regional Research* 38, no. 2 (2014): 471-497.

- Marshall, Richard. "Connection to the Waterfront: Vancouver and Sydney" in *Waterfronts in Post-Industrial Cities*, ed. Richard Marshall (New York : Spoon Press, 2001), 17-29.
- New York City Department of Parks and Recreation. "Parks Without Borders." Last Accessed November 8 2015:
<http://www.nycgovparks.org/planning-and-building/planning/parks-without-borders>
- Oakley, Susan. "The Role of Urban Governance in Re-Constructing Place, Economic Function and Social Relation in Urban Waterfront Regeneration: The Case of Port Adelaide, South Australia." *Space & Policy* Vol.11, no. 3 (December 2007): 279 – 295
- Painter, Kate. "The Influence of Street Light Improvements on Crime, Fear and Pedestrian Street Use, After Dark." *Landscape and Urban Planning* 35, no. 2 (1996): 193-201.
- Roberts, Marion. "Planning, Urban Design and the Night-Time City: Still at the Margins?" *Criminology and Criminal Justice* 9, no. 4 (2009): 495-605.
- Ryckbost, Paul. "Re-developing Urban Waterfront Property." University of Michigan Urban and Regional Planning Department Economic Development Handbook. Last modified on April 14, 2005. Accessed September 26, 2006.
<http://www.umich.edu/~econdev/waterfronts/>
- Sepe, Marichela. "Urban History and Cultural Resources in Urban Regeneration: A Case of Creative Waterfront Renewal." *Planning Perspectives* 28, no. 4 (2013): 595-613.
- Southworth, Michael. "Designing the Walkable City." *Journal of Urban Planning and Development* Vol. 131, no.4 (December 2005): 246-257
- Sullivan, William C., Frances E. Kuo and Stephen E. DePooter. "The Fruit of Urban Nature: Vital Neighborhood Spaces." *Environment and Behavior* Vol. 36, no. 5 (September 2004): 678-700.
- Van Melik, Rianne, Irinavan Aalst and Jan Van Weesep. "Fear and Fantasy in the Public Domain: The Development of Secured and Themed Urban Space." *Journal of Urban Design* Vol. 12 no. 1 (February 2007): 25-42
- Whyte, William. *The Social Life of Small Urban Spaces*. New York: Project for Public Spaces, 1980.
- Yonkers, City of. "Department of Planning and Development – Brownfield Program." Accessed November 23rd, 2015.
<http://www.cityofyonkers.com/work/department-of-planning-development/development/business-economic-development/brownfield-program>

APPENDIX A: SITE AUDIT INSTRUMENT FOR CHAPTER 3

Name of Waterfront:

Date

Time

Weather:

Level of Activity:

Design Themes:

Sight Lines:

Connectivity:

Seating:

No of benches:

No of movable chairs:

Informal seating – approx. capacity

Public Art:

Programming:

Water's edge

Lighting:

No of lampposts

Frequency of lampposts (in approx. feet)

Safety

Wayfinding:

On first approach:

Within public space:

Cleanliness:

No. of trash receptacles

Additional Notes:

APPENDIX B: INTERVIEW QUESTIONS

1. How long have you lived/operated in the Hunter's Point Shipyard?
2. How often do you visit the waterfront?
3. How familiar are you with the planned developments?
4. What is your favorite aspect of the waterfront as it currently stands?
5. What would you like to see on at the Hunter's Point waterfront in the future?