

ABSTRACT

Title: PORTLAND, MAINE: A CULTURAL
GATEWAY CONNECTING WATERFRONT
AND CITY

Erin McNamara
Masters of Architecture
December 2005

Directed By: William Bechhoefer
School of Architecture, Planning and
Preservation

This thesis explores how a community oriented multi-cultural arts facility on the Portland, Maine waterfront can serve as a meaningful link between both the city and the waterfront, and city residents and an increasing flow of tourist traffic. Involving community members in its performances and audience, the facility and its programs would serve to communicate the multifaceted identity of Portland to waterfront visitors. The location of the facility in a newly developing waterfront area also ensures that Portland's residents will maintain access to and maintain a presence in this historic area, which was the original city center. Without well intentioned development, this area might become strictly a tourist and high-end retail district.

The specific site location includes Maine State Pier, located at the end of the most direct driving route to the commercial waterfront, and the two blocks immediately inland to the East. These blocks are currently just outside the tourist and commercial

waterfront area. However, after relocation of cruise ship and international ferry services to a new terminal east of the Maine State Pier, the site will serve as the main threshold between city and waterfront for visitors arriving by car and boat.

The program for the multicultural arts center is to be modeled after an existing organization in Portland, the Center for Cultural Exchange, now residing in a limited facility, in an area where it remains unknown to most city visitors. The driving premise of the organization is that only by expressing their cultural identity publicly can the city's various ethnic groups begin to become a part of the city's broader self-identity. With the help of artists in residence, the CCE works with community groups to develop visual and performing arts events that can be shared within their own community and more broadly with Portland's public. My thesis proposal, to bring this organization to the waterfront, will allow this expression its most public voice.

Architectural issues to be explored include: integration of new development with existing downtown circulation and fabric; integration of new buildings with historic structures on the site; integration of the facility with public open space also to be created as a part of the project, potential for further development of the pier enabling existing industrial and transportation facilities to coexist with other uses; designing for climate; and the contextual challenge of reflecting Portland's history and architectural regionalism, while building an architecturally vital venue reflecting the city's progressive and diverse culture.

PORTLAND, MAINE: A CULTURAL GATEWAY CONNECTING
WATERFRONT AND CITY

By

Erin P. McNamara

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Architecture
2005

Advisory Committee:
Professor William Bechhoefer, Chair
Professor Gary Bowden
Associate Professor Carl Bovill

© Copyright by
Erin P. McNamara
2005

Dedication

To my family, who have been so enthusiastically undoubting and supportive through this life changing educational endeavor.

And to Steve, whose selfless friendship, support, and patience helped me get through the longest days, nights, and weeks needed to complete this.

Table of Contents

ABSTRACT	
TABLE OF CONTENTS	ii
LIST OF TABLES	iv
LIST OF FIGURES	v
CHAPTER 1: SITE AND CONTEXTUAL HISTORY	1
CHAPTER 2: GEOGRAPHIC OVERVIEW OF SITE AND CONTEXT	7
SECTION 1: GEOGRAPHIC OVERVIEW	8
SECTION 2: METROPOLITAN PORTLAND	10
CHAPTER 3: DOWNTOWN PORTLAND	17
SECTION 1: DOWNTOWN PORTLAND	18
SECTION 2: EXISTING DISTRICTS WITHIN DOWNTOWN	22
SECTION 3: DOWNTOWN PORTLAND'S BUILT CHARACTER	25
CHAPTER 4: SITE INFORMATION	33
SECTION 1: DETAILED SITE DESCRIPTION AND ANALYSIS	34
SECTION 2: SITE DIMENSIONS AND TOPOGRAPHY	40
SECTION 3: SUNLIGHT, WIND, AND WEATHER	44
SECTION 4: APPROACH TO THE SITE	47
SECTION 5: SITE EDGE CONDITIONS	49
SECTION 6: OVERVIEW OF EXISTING MASTER PLANS	58

CHAPTER 5: CULTURAL IDENTITY AND INCLUSIVE DESIGN	68
SECTION 1: ETHNICITY IN PORTLAND	69
SECTION 2: CURRENT DEVELOPMENT TRENDS	74
SECTION 3: A VENUE FOR INCLUSIVE DEVELOPMENT	76
CHAPTER 6: DESIGN CHALLENGES	78
SECTION 1: SITE CHALLENGES	79
SECTION 2: BUILDING CHALLENGES	81
CHAPTER 7: PRECEDENTS	83
SECTION 1: CULTURAL FACILITIES IN WATERFRONT DEVELOPMENT	84
SECTION 2: URBAN DESIGN OF CRUISE SHIP PORTS	87
SECTION 3: BUILDING TYPE	89
CHAPTER 8: BUILDING PROGRAM	94
SECTION 1: OVERVIEW OF PROGRAM AND FUNCTIONAL CONSIDERATIONS	95
SECTION 2: DETAILED PROGRAM DESCRIPTION	96
SECTION 3: SUMMARY TABLE OF PROGRAM ELEMENTS	102
SECTION 4: ORGANIZATIONAL DIAGRAMS	103
SECTION 3: OTHER PROGRAM ELEMENTS	105
CHAPTER 9: PRELIMINARY DESIGN APPROACH AND ALTERNATIVES	106
SECTION 1: DESIGN GOALS	107
SECTION 2: SPECIFIC DESIGN APPROACH	108
SECTION 3: DESIGN ALTERNATIVES: SITE	112
SECTION 4: DESIGN ALTERNATIVES: BUILDING FORM	117

CHAPTER 10: FINAL ANALYSIS AND DESIGN	134
SECTION 1: SITE AREA INTERVENTIONS	135
SECTION 2: SITE ORGANIZATION	139
SECTION 3: FINAL DESIGN	143
SECTION 4 REVISIED PROGRAM SUMMARY TABLE	163

List of Tables

1. 2000 Census Demographic Highlights
2. A comparison of Census data
3. Portland Public School students enrolled in English as a Second Language program by native language
4. Portland High School Fall 2003 Enrollment

List of Figures

1. Portland in 1690
2. Portland in 1775
3. Portland in 1831
4. Portland in 1876
5. Early photo of Maine State Pier
6. Grand Trunk Railroad Grain elevator
7. Location of Portland on Northeast Coast
8. Greater Portland including major islands
9. Aerial photo of Portland peninsula
10. Overview of major city transportation routes.
11. Detail of transport routes on peninsula
12. Overview of public facilities
13. Detail of public facilities on peninsula
14. Overview of city land uses
15. Detail of land use on peninsula
16. Downtown district as identified by city planning department
17. Figure-Ground of Downtown area
18. Major streets and street hierarchy in downtown area
19. Major Traffic Routes to Downtown
20. Public plazas and other open space in downtown area
21. Height limits in Portland's downtown and site area
22. Downtown Arts and Old Port District

23. Major Points of Interest
24. Galleries/Arts Related Outside of Arts District
25. Historic sites and buildings in site area
26. Old Port shopping area
27. Small Park on edge of Old Port
28. A pattern of small open spaces
29. City Hall
30. Customs House
31. 'Time and Temperature Building'
32. Old Portland Library
33. Historic Churches of Congress Street north of site
34. 20th century building
35. Fire Station
36. Recent 20th century buildings on Congress Street
37. Mix of old, new, and open space
38. The city's brick landscape
39. Portland Art Museum
40. Portland Historic Society
41. Restaurant with offices above on Commercial Street
42. Hotel, completed 2004
43. Sculpture and open space
44. Unique bus shelter
45. One of Commercial Street's most prominent buildings

46. More shops with residential above lining Commercial Street
47. Streets continuing onto piers
48. Pier lined with primarily fishing related restaurants and shops
49. Condominium and office building on pier with fishing shed behind
50. View of densely built piers
51. Buildings and surface parking limit open space on the waterfront
52. One small public walking space
53. Small waterfront seating area
54. Waterfront property used for surface parking
55. Entrance to another large waterfront parking lot
56. Parking and a dumpster separate pedestrians from the water
57. Fishing area of waterfront
58. Port Authority Building at front east side of Pier
59. : Parking Structure at front west side of Pier
60. Ship Service Building and offices
61. Island Ferry Terminal, west berth
62. Sculpture, outer end of pier to west
63. Lighting and seating, outer west
64. The 'Whale Wall'
65. View of waterfront block east of Pier
66. 'Narrow Gauge' train and ticket booth
67. Water view obstructed by parking
68. Historic Structures on Franklin Street, lower block

69. Commercial Street from Franklin to India Streets
70. Historic former Grand Trunk Railroad Building
71. Recent addition to older brick structure at Fore and India Street
72. View of center of the block from Fore Street
73. View to site on Fore Street
74. View to site on Fore Street
75. Shops on Middle Street adjacent to Jordan factory
76. Jordan's factory on Middle Street
77. Jordan's Front entrance on India Street
78. Site topography
79. Site dimensions
80. Section across site from Congress Street to end of pier
81. Section across upper portion of site
82. Section across site from Commercial Street to end of pier
83. Comparative site sections
84. Orientation to the sun
85. Wind Rose diagrams
86. Weather data from August 2004
87. At the intersection of Franklin and Commercial Streets
88. Views of approach from Franklin Street
89. Full view of front of garage
90. Sculpture at intersection; an attempt at creating a sense of place for
pedestrians

91. Approach from Commercial Street
92. View from east of site: surface parking and the garage block view of waterfront
93. Site edge conditions
94. View north on Franklin Street from Commercial
95. More contrast in scale is seen on Franklin Street approaching Middle Street
96. View approaching site and downtown on Franklin Street
97. The view from Congress Street
98. Upper eastern side of Franklin Street north of site
99. Grand Trunk Railroad building
100. Key to site area
101. The next block north on India Street
102. The northern side of Middle Street opposite the Jordan factory
103. Key to India Street images
104. The first block north of the site
105. Across the street on this block
106. The next block
107. D) Second block north of site on India Street
108. Upper block of India Street to east
109. View down India Street from Congress
110. Community health facility at corner of India and Congress
111. Church and related school buildings

- 112. Church complex above seen from east
- 113. Synagogue at top of India Street
- 114. A new design boutique,
- 115. Parking lot and shopping center north of site on Congress Street
- 116. Sign marking historic site in parking lot
- 117. Streets north and east of site
- 118. The Shipyard Brewery, east of the site.
- 119. Butler building housing small businesses.
- 120. View toward water east of site
- 121. View toward site from east.
- 122. Public housing with water views
- 123. Portland Company complex
- 124. Current and new cruise ship location
- 125. Cruise and Ferry terminal design requirements
- 126. The furthest reaching plans of the Ocean Gateway Project
- 127. Proposed Maine State Pier improvements
- 128. Starting point for Waterfront Development Committee
- 129. Ultimate development according to Waterfront Development Master

Plan

- 130. Assumed development in relation to downtown and site.
- 131. Impact of changes on site edges.
- 132. An image of Boston's Harborwalk continuing under the new ICA
- 133. Overview of the Boston ICA and its urban area

134. Image of performance in the future ICA theater
135. New opera and arts area
136. Henning Larsen's Opera facility
137. Overview map of Helsinki's South Harbor
138. Promenade from pier to tourist attractions
139. View of pier area
140. Half Moon Theater plan and section
141. Interior view
142. Varieties of performances and seating configurations
143. Seating variations and modules proposed in Carnegie Mellon project
144. View of seating modules.
145. 'Black Box' lighting grid
146. Axonometric view showing balcony and catwalks
147. Relationship and general proportion of program elements
148. Program elements categorized by type of use
149. Elements requiring ground floor access
150. General use and massing of development assumed
151. Typical Commercial Street dimensions and lane organization
152. View of Commercial Street sidewalk
153. Site Scheme 1
154. Solution 1a
155. Solution 1b
156. Site Scheme 2

157. Scheme 2: Axonometric view with uses
158. Site Scheme 3
159. Solution 3a
160. Solution 3b
161. Design Principles related to site and building form
162. Option 1: Axonometric view in context
163. Option 1: Axonometric view with programmatic groupings identified.
164. Option 1: Site Plan
165. Option 1: Site section through center of block
166. Option 1: Diagrammatic Floor Plans
167. Option 1: Diagrammatic Building Section
168. Option 2: Axonometric view in context
169. Option 2: Axonometric view with programmatic groupings identified.
170. Option 2: Site Plan
171. Option 2: Site section through center of block
172. Option 2: Diagrammatic Floor Plans
173. Option 2: Diagrammatic Building Section
174. Option 3: Axonometric view in context
175. Option 3: Axonometric view with programmatic groupings identified.
176. Option 3: Site Plan
177. Option 3: Site section through center of block
178. Option 3: Diagrammatic Floor Plans
179. Option 3: Diagrammatic Building Section

180. Option 4: Axonometric view in context
181. Option 4: Axonometric view with programmatic groupings identified.
182. Option 4: Site Plan
183. Option 4: Site section through center of block
184. Option 4: Diagrammatic Floor Plans
185. Option 4: Diagrammatic Building Section
186. Proposed site area interventions highlighted
187. Figure-Ground before and after proposed development
188. Site Plan showing Plaza Level of facility.
189. Site Section and Site Elevation
190. Ground Level Plan
191. Mezzanine Level Plan
192. Second Level Plan
193. Third Level Plan
194. Commercial Street Elevation
195. India Street Elevation
196. Section-Elevation Through Plaza
197. Section Through Large Theater and Lobby Spaces
198. Section Through Large Theater and Plaza
199. Detailed Theater Sections
200. View from Maine State Pier
201. View from East
202. View of Plaza with large stage open

203. View of Plaza from North
204. View from Cruise Ship
205. View from West
206. View from bottom of Bridge stair toward Plaza stair
207. View from bottom of Bridge stair toward park, stage, and cruise ship
208. View from Plaza Ticketing and Entry
209. View from Bridge showing projection of interior activity
210. Entry at Street
211. Lower Lobby from Mezzanine
212. Main Lobby from Ticketing area
213. Second Level Lobby/Gallery
214. Third Level view over Atrium
215. View from inside small theater
216. Section through Atrium curtain wall
217. Diagrammatic view of primary structural elements

Site and Contextual History

Site and Contextual History

The site for this project has considerable historic significance in being the center of Portland's origin and growth. A brief overview of the city history is also valuable in establishing the historic importance of the waterfront to the city. Finally, the city's history reveals strong threads of independence, strength in the face of adversity, and a tradition of welcoming immigration. These characteristics are often referred to as part of the city's continuing cultural identity.

Fort Loyall, the first defensive fort for the area known as 'the Neck', was built near the end of what is now India Street. The fort and most of this early settlement was later destroyed by Indian attack in the French and Indian war of 1689. After recovery, in 1718 the area was established as the town of Falmouth, part of the Commonwealth of Massachusetts. King Street, now India Street, was the major thoroughfare. The first parish meeting house was erected at Middle and King Streets. Through King Street, three streets ran to the west which would shape and organize the growth of the city: Fore, Middle and Back Streets. At the time, Fore Street followed the outline of the harbor. As the town grew, Back Street was renamed Queen and then Congress Street.

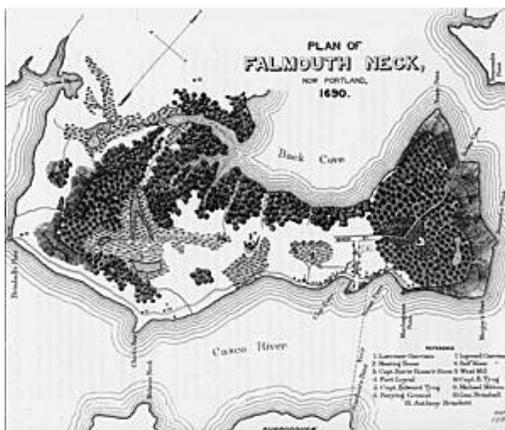


Figure 1: Portland in 1690, showing initial streets and surrounding forests.¹

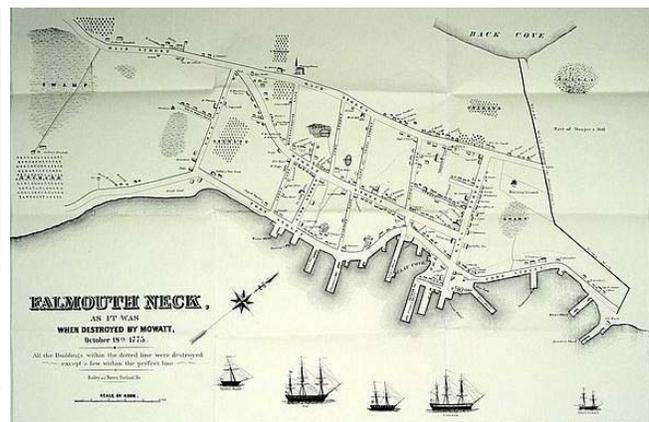


Figure 2: Portland in 1775, before British attack. [www.vintagemaineimages.com, item 4136]

Again almost destroyed by attack from Britain in the early days of the revolution, Portland rebuilt and continued to grow. In 1786, 'the Neck' area was established as an independent town from Falmouth, and named Portland. In 1790, the population was 2,200, and by 1810 it

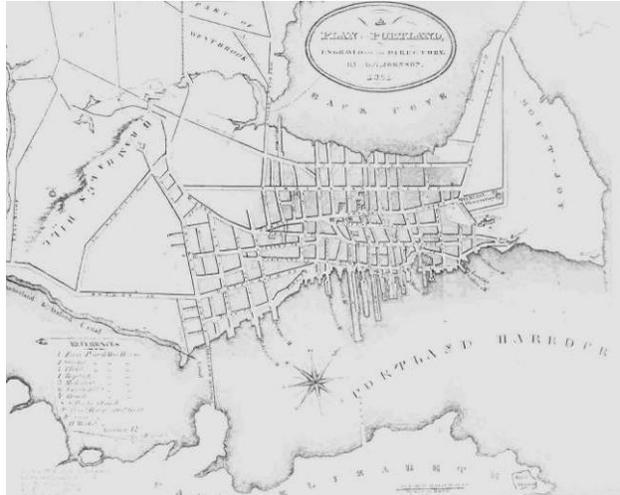


Figure 3: Portland in 1831.²

more than tripled to 7,169.³ On March 4, 1820, Maine became a State, with Portland as its capital⁴, although Portland did not become an incorporated municipality until 1832 when the capitol was moved to Augusta.

In 1842, Portland was connected to Boston by rail, and in 1853 connected to Montreal, Canada. Steamships also provided improved cargo and passenger service to Boston, New York, and Northern ports, with transatlantic service also beginning in 1853. By 1850, the city population was over 20,000.⁵ To support the transport of goods, land at the waterfront was filled and Commercial Street was built, with railroad tracks at the center.

The city suffered significant destruction for a third time on July 4, 1866, when a fire, presumed to have been started by a youth's errant firework, ignited in a boat yard and spread to raze the city from its center eastward. However, in recovery from this fire, many improvements were made to city streets, and some of Portland's oldest grand historic buildings were built, including the post office on Middle Street, which had been residential but became the primary retail street, and Customs House on Commercial

Street. The city's first public park, now Lincoln Park, was created between Congress, Pearl, Franklin and Federal Streets.

The late years of the 19th Century were Portland's most commercially successful. The city had over three hundred manufacturing plants, and was primarily a point of export. The connection to Montreal by rail proved valuable, as the ice-free harbor served as the export port for western Canada five months of the year. To store Canada's grain for export, the largest freight elevator east of Detroit was built by the Grand Trunk Railroad in 1896.

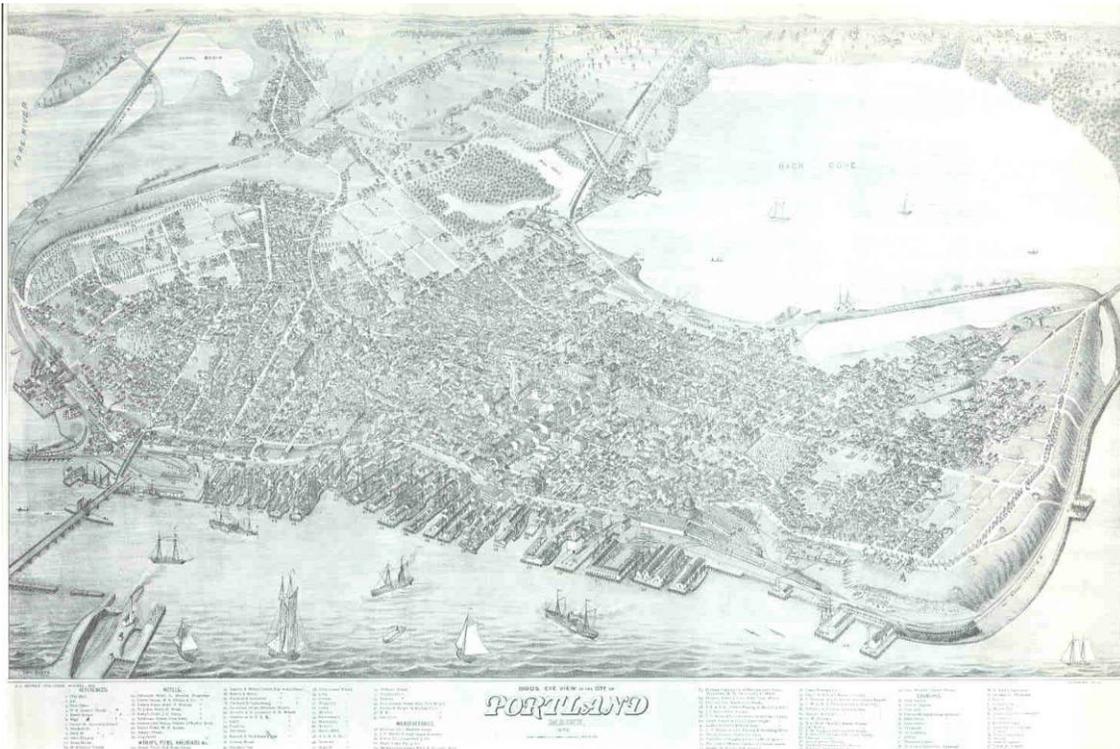


Figure 4: Portland in 1876, showing density of city and harbor.⁶

By 1900 the population of Portland surpassed 50,000⁷. In the early years of the century more grand public buildings were built, including the Cumberland County and Federal Courthouses, City Hall, and Police Station. Until the First World War, Portland served as

a major immigration port, with 26,421 passengers passing through its inspection station in 1913. Many of these immigrants continued west or to Canada.⁸

In 1923 Maine State Pier was built in an effort to keep the port commercially competitive, especially with a new port in St John, Canada. The port was initially designed to handle both passenger and freight transport, with proximity to both the Grand Trunk Railroad passenger terminal, and its large grain elevator. While some of Canada's commerce was ultimately lost, port improvements resulted in Portland being considered one of the principal ports of the Atlantic coast by the U.S. Military. During World War II, a ship building facility was located on the harbor's southern banks, and training facilities on its islands. The harbor became a point of import of overseas oil to Canada, with a pipeline to Montreal built following the exiting rail lines. Canadian and United States oil imports through the port increased steadily until the oil crisis of 1976.



Figure 5: Early photo of Maine State Pier. [www.oceangatewaymaine.org/]

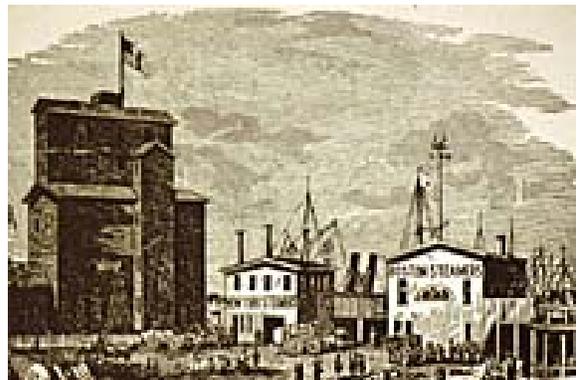


Figure 6: Grand Trunk Railroad Grain elevator at pier. [www.oceangatewaymaine.org/]

In the 1970's and 80's, Portland began efforts to maintain an active waterfront. The Maine State pier was leased to Bath Iron Works for a ship service facility, and a new fish pier was built at the western end of the Commercial Street waterfront. The Canadian government also helped subsidize the current international ferry terminal with service to

Nova Scotia. Some new building occurred in downtown Portland in these years, with the addition to the Portland Art Museum, designed by Pei Cobb Freed, the Portland Public Library on Congress Street, and the Cumberland County Civic Center most notable.

While waterfront redevelopment in many cities began turning from traditional uses to residential and commercial development, in 1987 Portland citizens voted for zoning that restricted development on the waterfront side of Commercial Street to marine-related activity. The waterfront remained successful, surpassing Boston in passenger and cargo activity by the late 1990's. However, the value of waterfront real estate has kept the debate over waterfront use restrictions close to the surface. As Bath Iron Works' 2001 lease renewal date for its Maine State Pier site approached, the City evaluated its waterfront resources and began efforts to determine development needs and possibilities. While significant need for an improved passenger terminal to accommodate larger modern vessels had developed, industrial waterfront interests were opposed to Portland's becoming a tourist port and forsaking its traditional waterfront economy. Ultimately, a master planning process was created in an attempt to balance both of these interests.

Geographic Overview of Site and Context

Geographic Overview

Portland Maine is located at north latitude 43 deg 43' 05", west longitude 70 deg 17' 35", or approximately 100 miles from Boston, on the Southern Maine coast. Portland is the most significant of many peninsulas and over 220 islands found within Casco Bay, which stretches across approximately 20 miles of the Maine coast.



Figure 7: Location of Portland on Northeast Coast

[www.portofportlandmaine.org/where_idx.html]

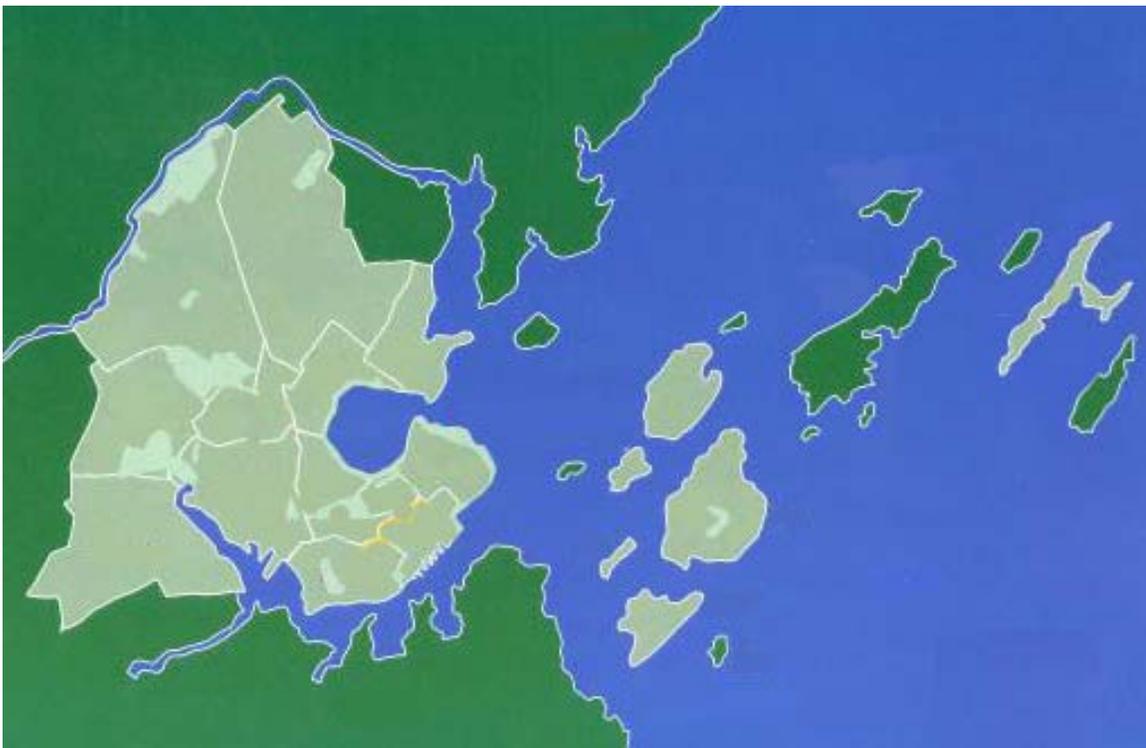


Figure 8: Greater Portland including major islands.

www.ci.portland.me.us/planning/images/neighborhoodmap.jpg

Portland occupies approximately 22 square miles of land area, while its municipal limits include over 52 square miles of land and sea area, including 17 islands. The Bay and its

islands protect Portland Harbor and have contributed directly to Portland's port success, while also contributing to promotion of a seasonal tourist industry and adding layers of interest to its landscape and folklore.

Entrance to Portland Harbor is possible through two channels 6 fathoms deep between Casco Bay's islands. In 1836, the harbor was dredged to 30 feet depth, and a breakwater was built to protect the harbor wharves. After additional improvements completed in 1927, the ultimate controlling width of the harbor is 1,100 feet, with a 35 foot deep berth at the Maine State Pier.

Portland's northern climate includes long winters, with snow often beginning in October and lasting through March, and average snowfalls of between 60 and 90 inches. Winter temperatures hover in the 20 degree range, with temperatures above freezing referred to as 'warm spells'.⁹ Summer offers mild temperatures between 70 and 80 degrees, but rarely above 80. However, these may not begin until mid June, and even in mid-summer, temperatures cool significantly in the evenings. By the first of September, temperatures begin to cool more steadily, with averages from 35 to 55 by November.

From a design perspective, insulation from cold is more of a consideration than protection from too much sun. While a few of the warmest summer days can be moderately humid, and air conditioning has become a norm in newer public buildings, the warmth of the sun can generally be welcomed.

Metropolitan Portland

Metropolitan Portland is contained on a saddle-shaped peninsula just less than 3 miles long, and an average of three quarters of a mile wide. The peninsula is largely a rock formation having survived significant glacial action during the ice age, with enough limestone present to support agriculture. Historically, the peninsula was forested, earning Portland the name 'Forest City' in the late 1800s. The remnants of this history can be seen in many large old trees found in parks and along the city streets.

Portland peninsula is connected to the mainland at the northwest, where greater Portland spreads to the north and west. The peninsula rises from sea level to an average height of 100 feet along its central ridge. The eastern end of the peninsula, known as Monjoy Hill, rises to 161 feet, and the western Bramhall Hill ends abruptly in a cliff at 175 feet.

Between these two hills the peninsula drops from its central ridge to the Back Cove on the northern side, and Portland Harbor at the mouth of the Fore River to the south. The commercial downtown is located on this southern side, facing the harbor. The growth of the city began from the southern shore of the harbor toward the height of the ridge, with the two ends following, and remaining primarily residential today.

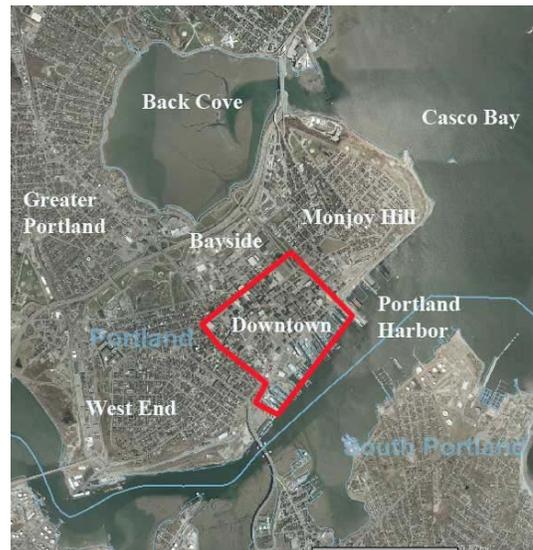
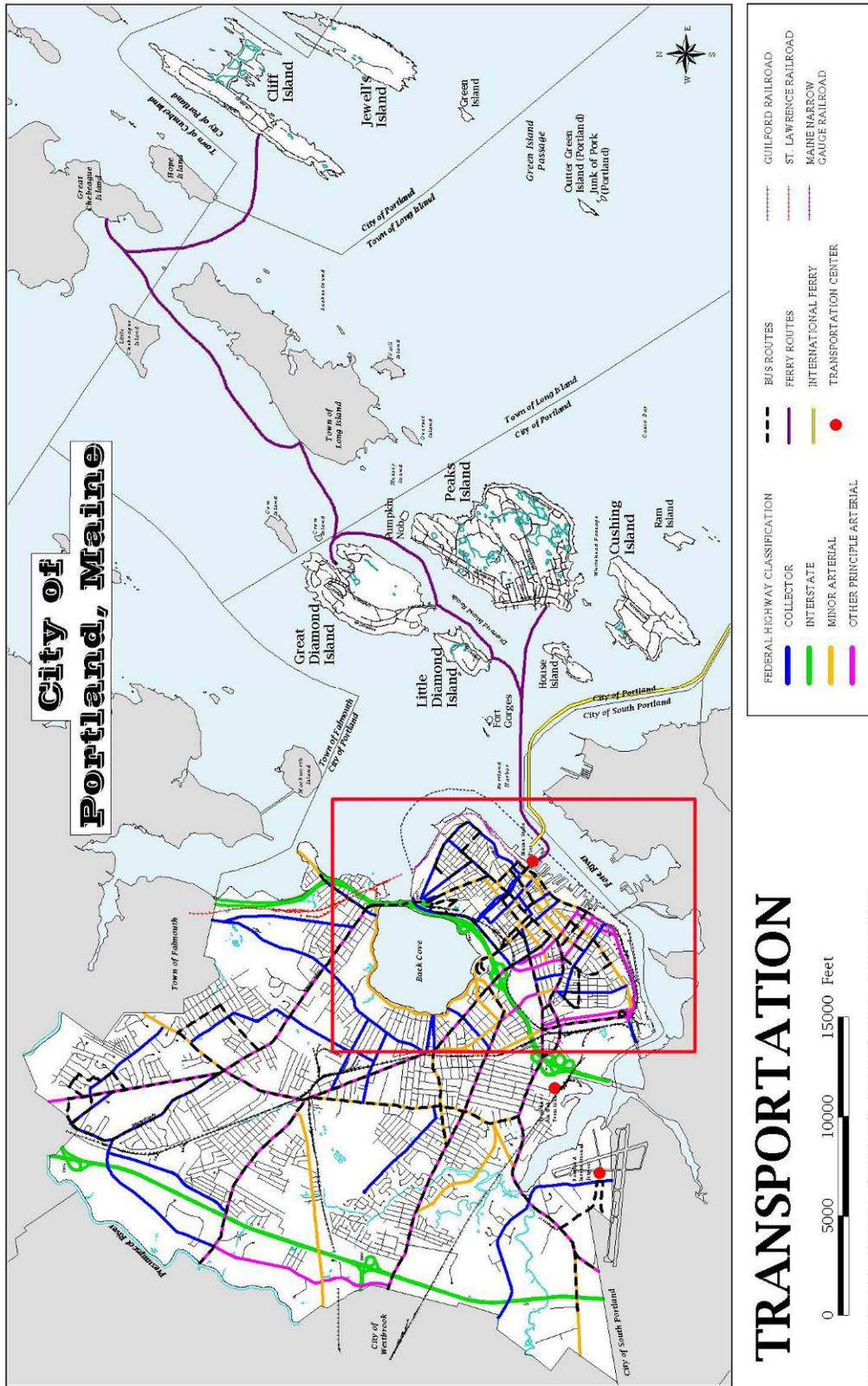


Figure 9: Aerial photo of Portland peninsula with neighborhoods and adjacent areas.
[<http://apollo.ogis.state.me.us/maps>, labels by author]



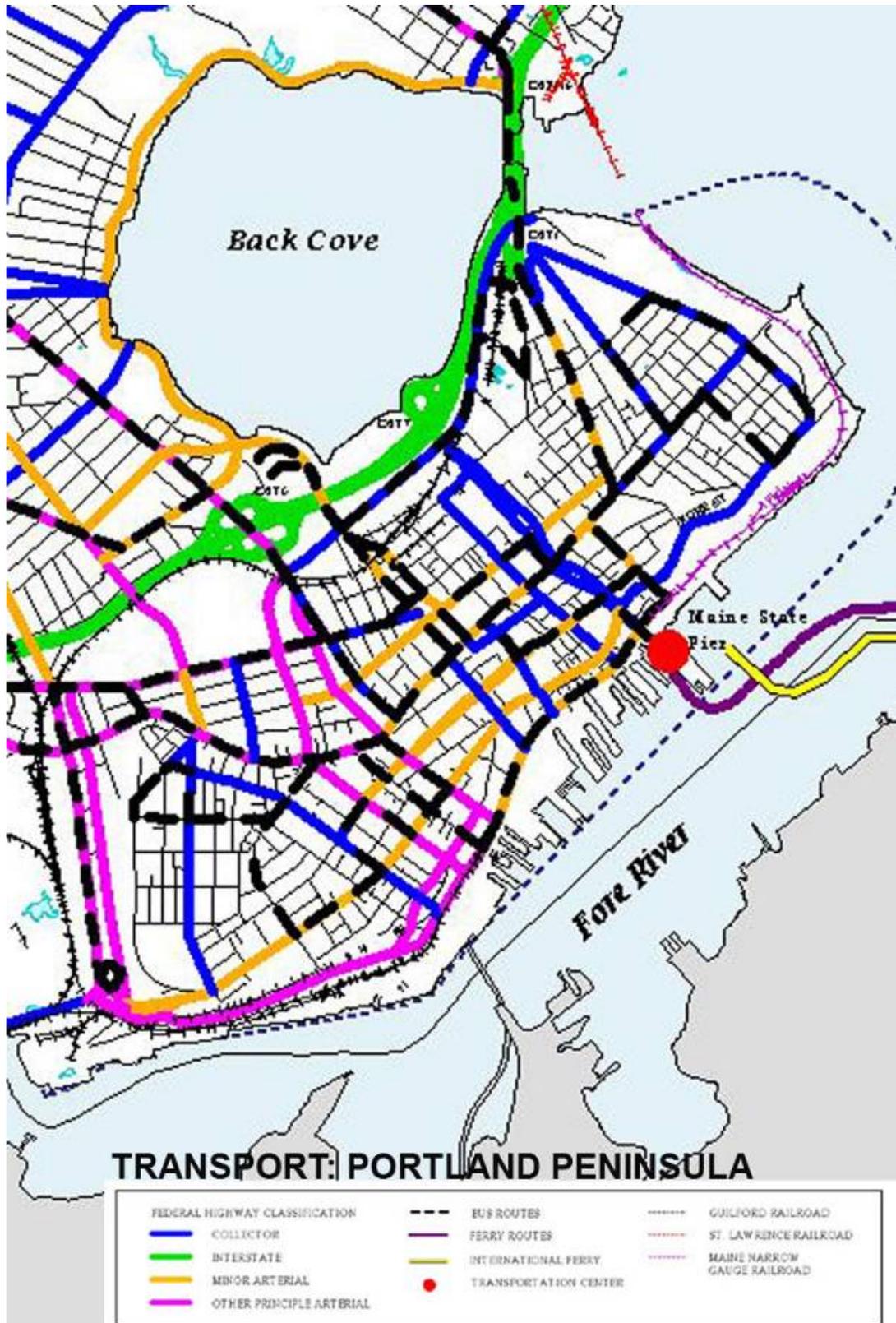
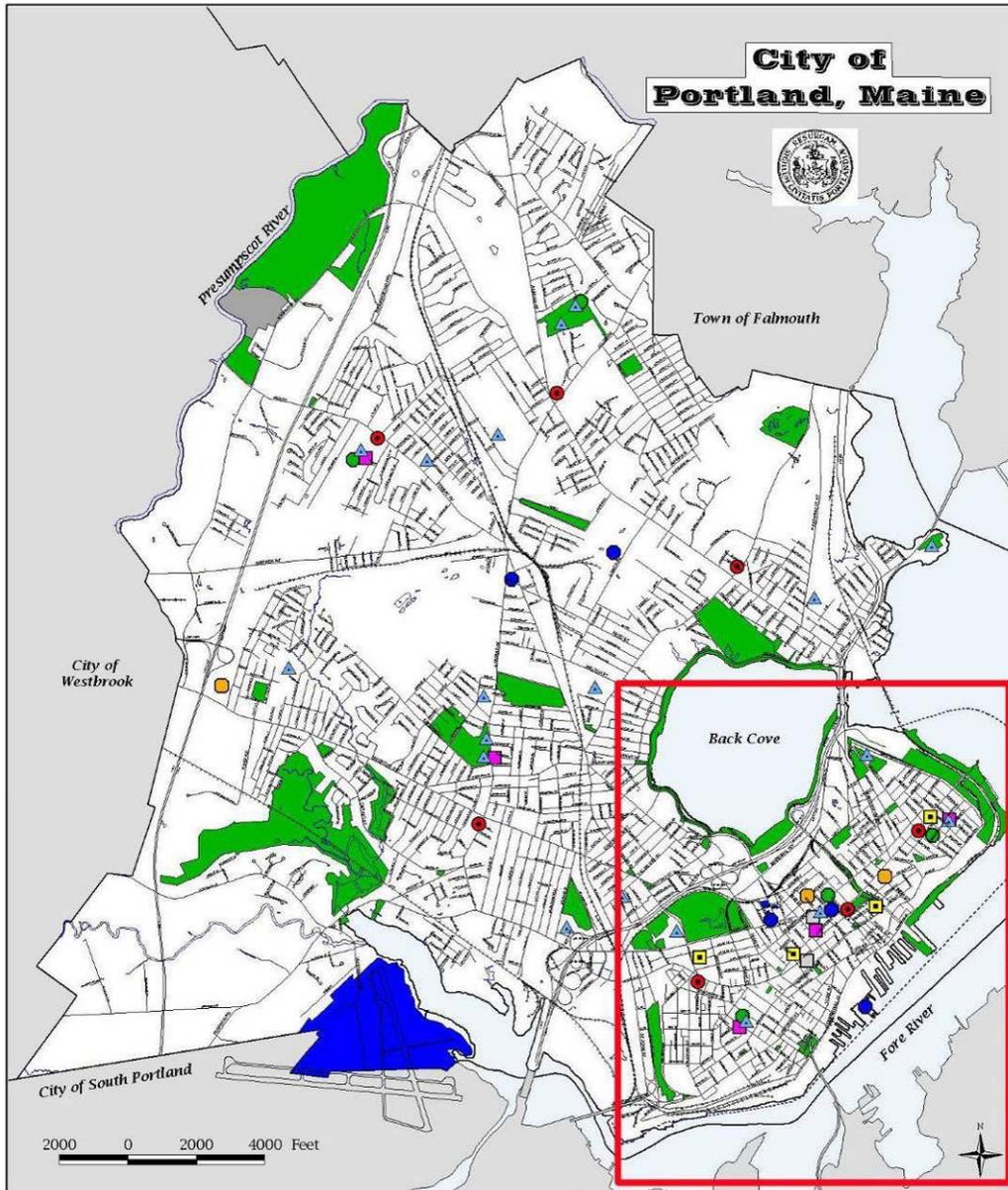
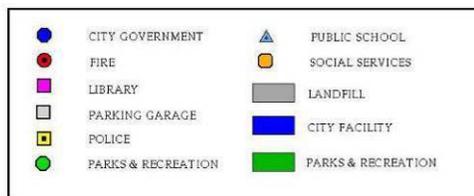


Figure 11: Detail of transport routes on peninsula
[\[www.ci.portland.me.us/planning/planningdiv.htm\]](http://www.ci.portland.me.us/planning/planningdiv.htm)



City of Portland FACILITIES



Map produced by the City of Portland's GIS Workgroup August 2002

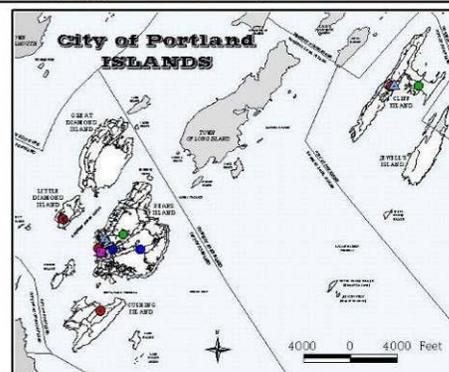


Figure 12: Overview of public facilities [www.ci.portland.me.us/planning/planningdiv.htm]

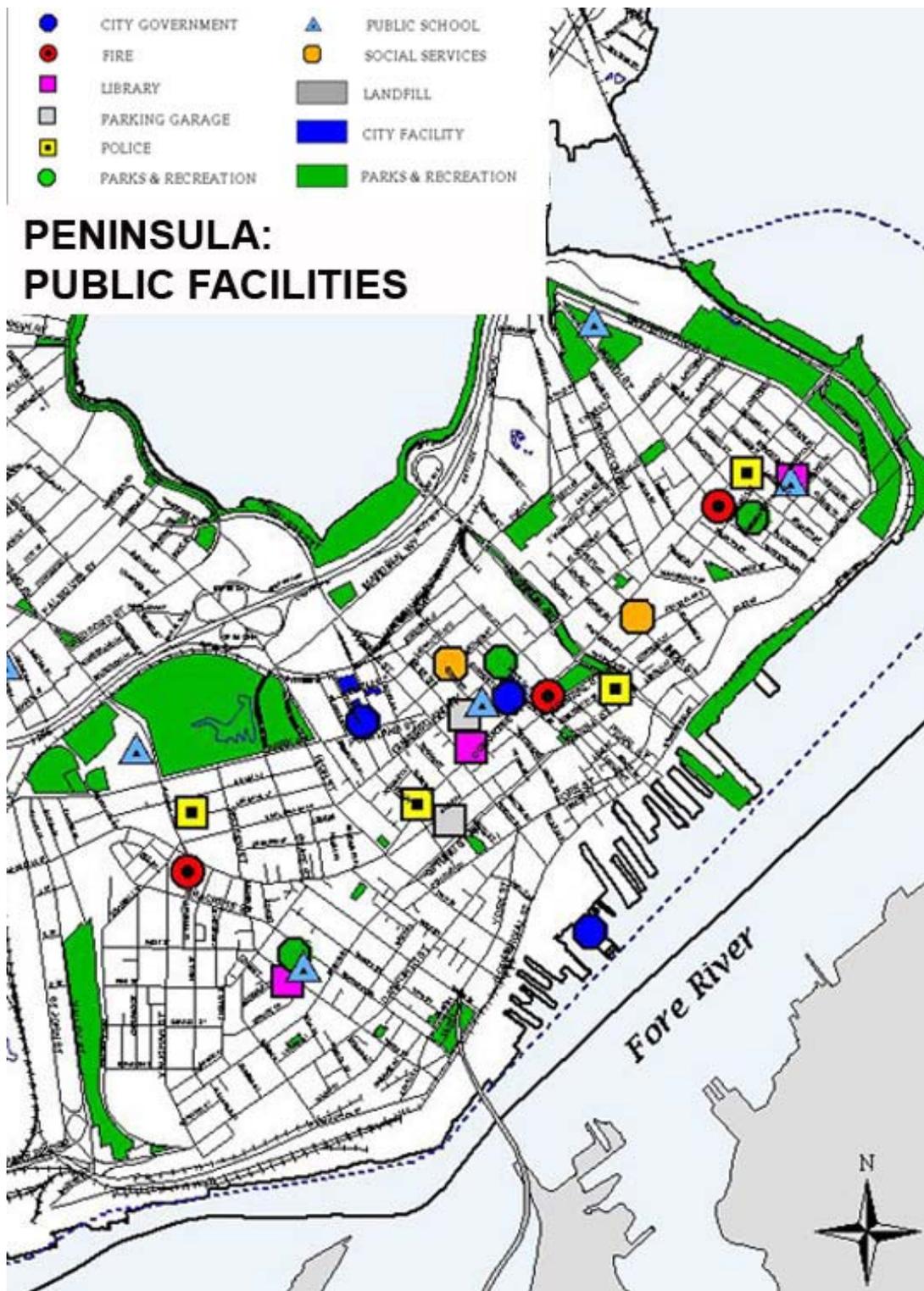


Figure 13: Detail of public facilities on peninsula
 [www.ci.portland.me.us/planning/planningdiv.htm]

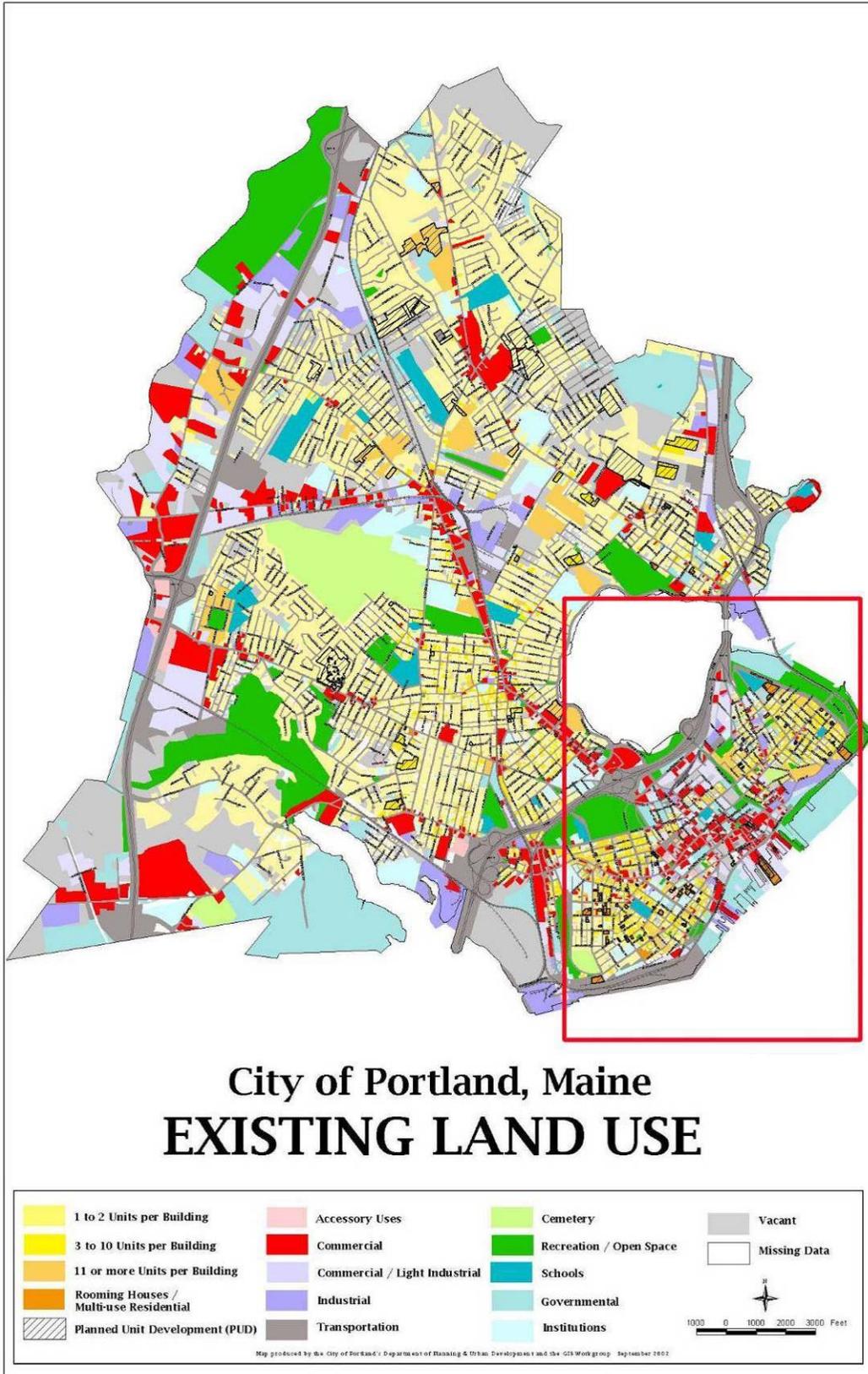


Figure 14: Overview of city land uses [www.ci.portland.me.us/planning/planningdiv.htm]

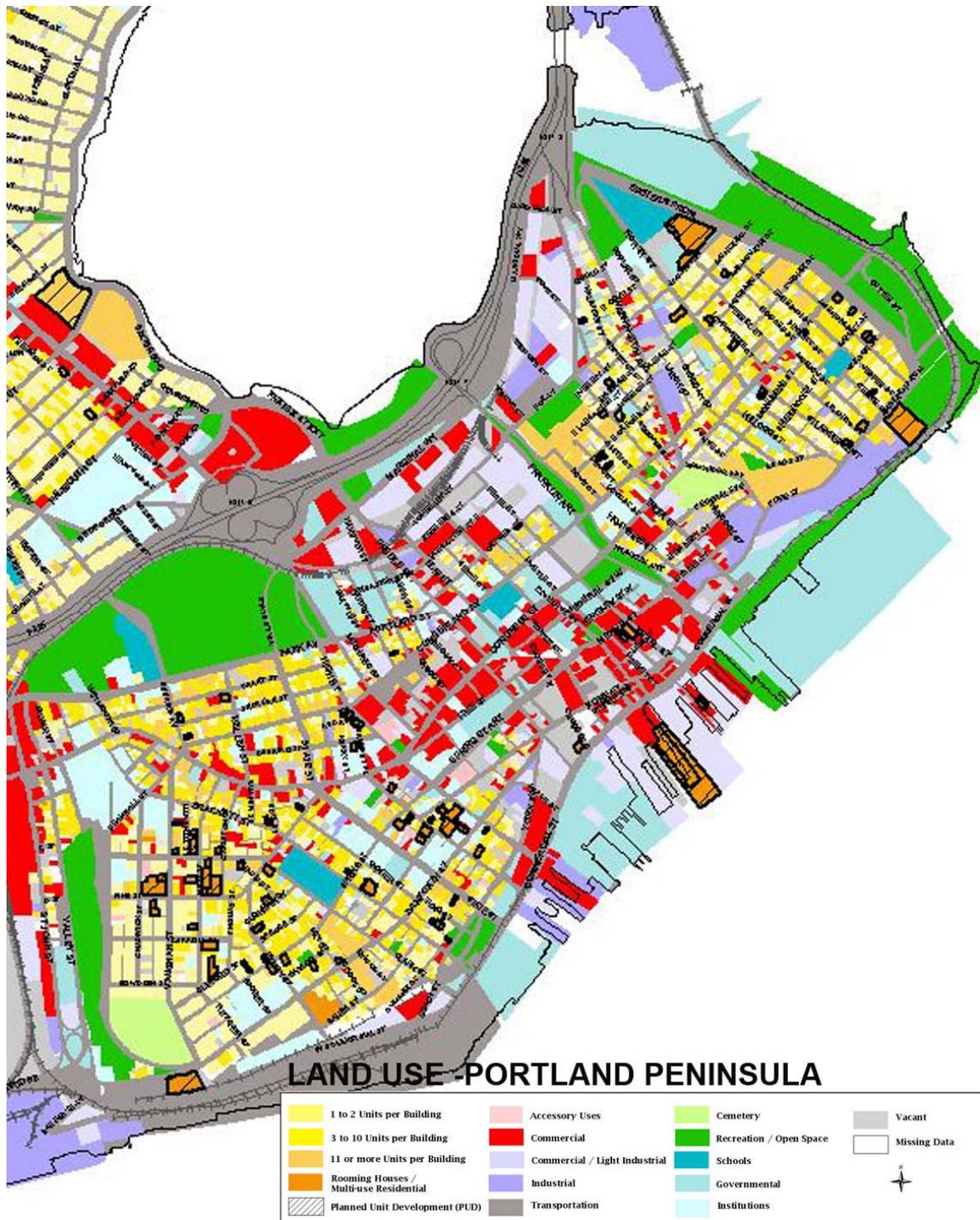
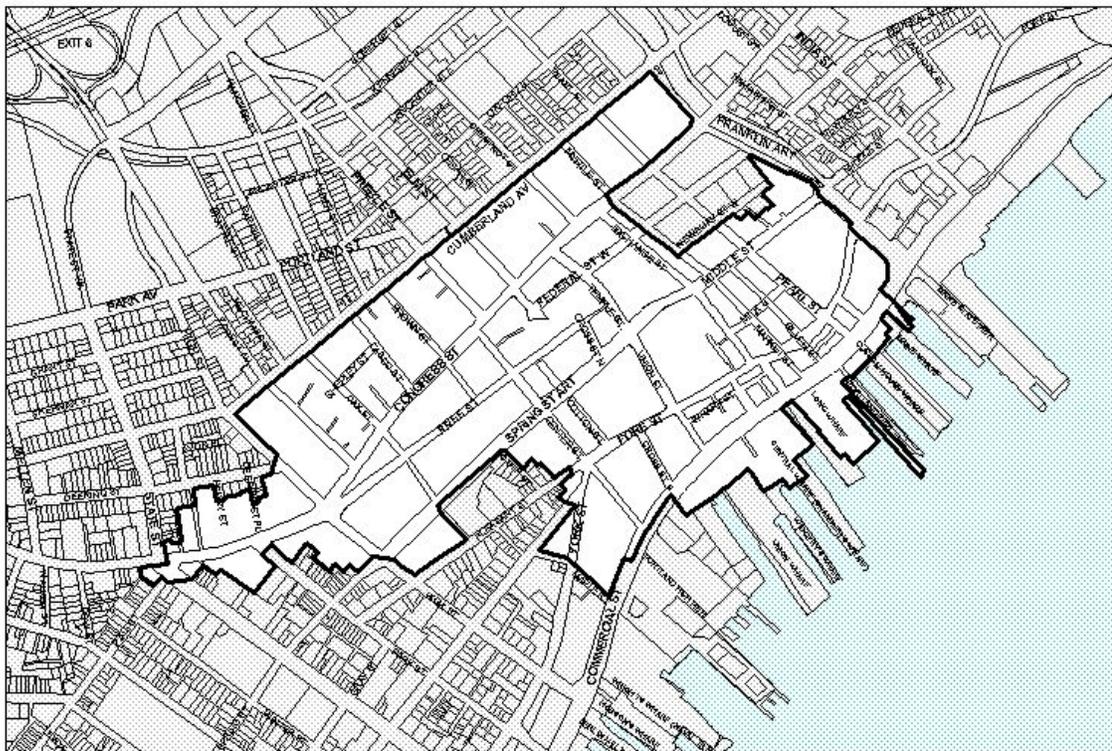


Figure 15: Detail of land use on peninsula [www.ci.portland.me.us/planning/planningdiv.htm]

Downtown Portland

Downtown Portland

Portland's downtown district is relatively small, covering an area of approximately one half mile by three quarters of a mile. The retail commercial waterfront area begins at the Maine State Pier and runs for about a half mile of the downtown length, with the western part of the waterfront devoted to fishing, marine, and construction industry, and then becoming increasingly industrial.



PORTLAND DOWNTOWN DISTRICT

Effective July 1, 2004

Map produced by the City of Portland's GIS Workgroup March 5, 2004

200 0 200 400 600 Feet

Figure 16: Downtown district as identified by city planning department.
[www.ci.portland.me.us/planning/planningdiv.htm]



Figure 17: Figure-Ground of Downtown area: Shows the larger scale and density of downtown, generally smaller scale near the waterfront, and small scale of surrounding housing. Most larger open spaces reflect surface parking lots. The site area can be seen as a natural extension of the downtown toward the waterfront.

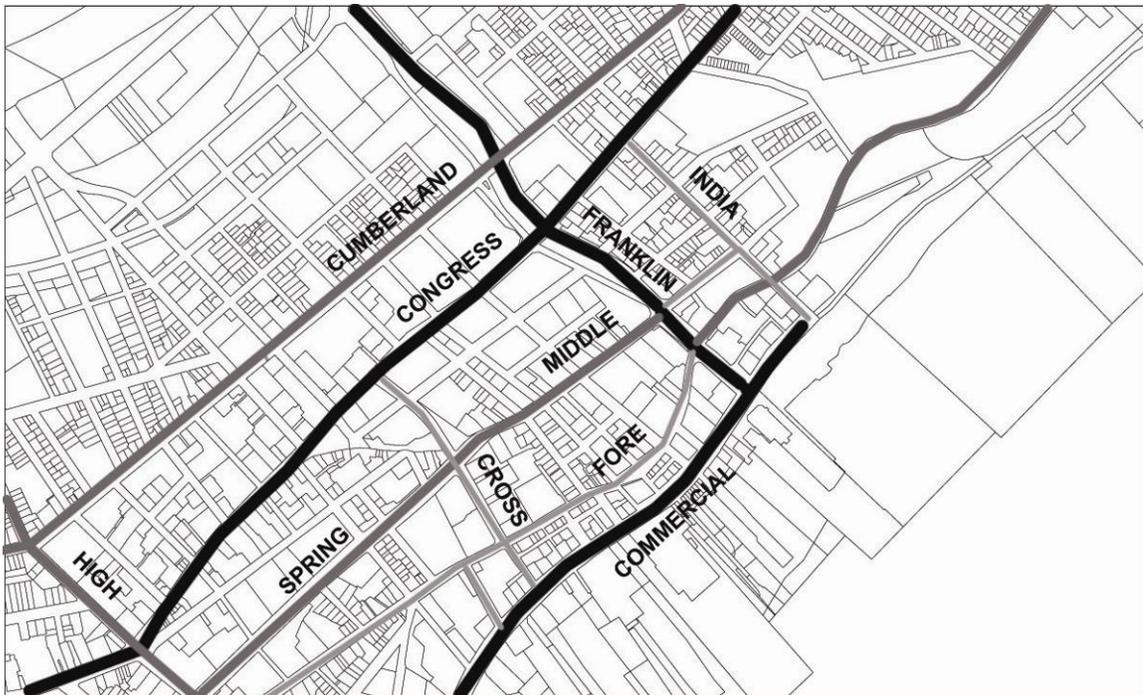


Figure 18: Major streets and street hierarchy in downtown area.

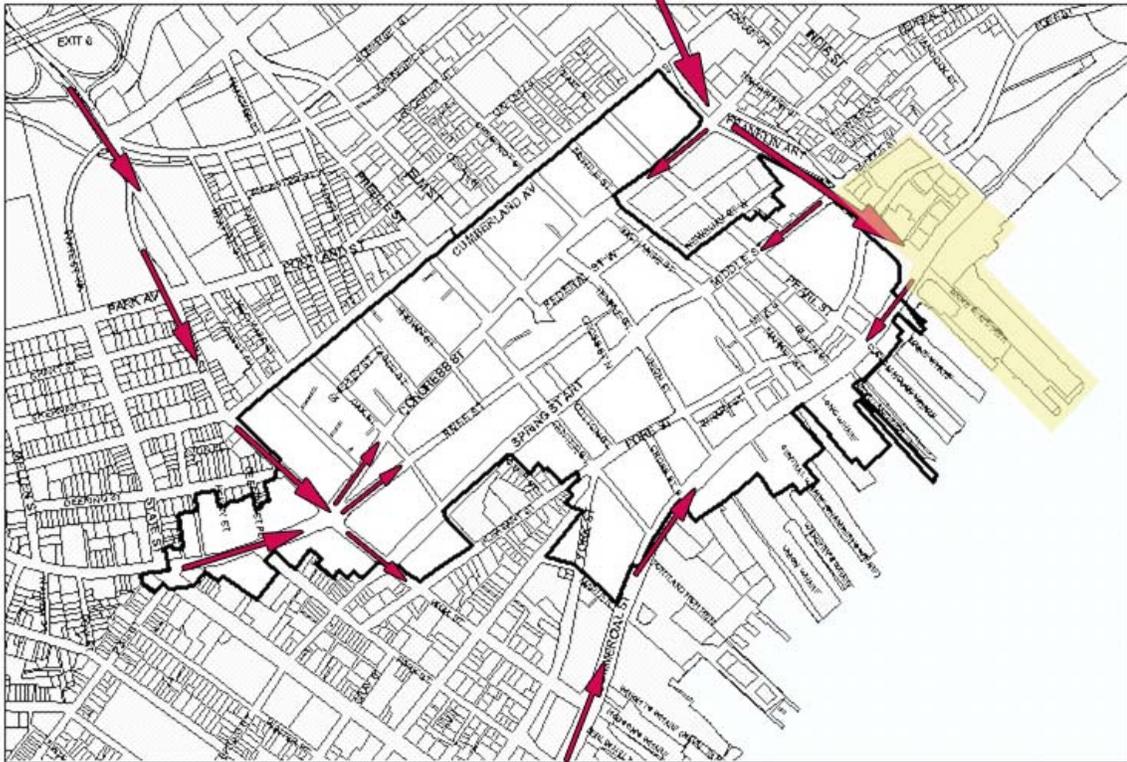


Figure 19: Major Traffic Routes to Downtown. The main mode of transport is vehicular.

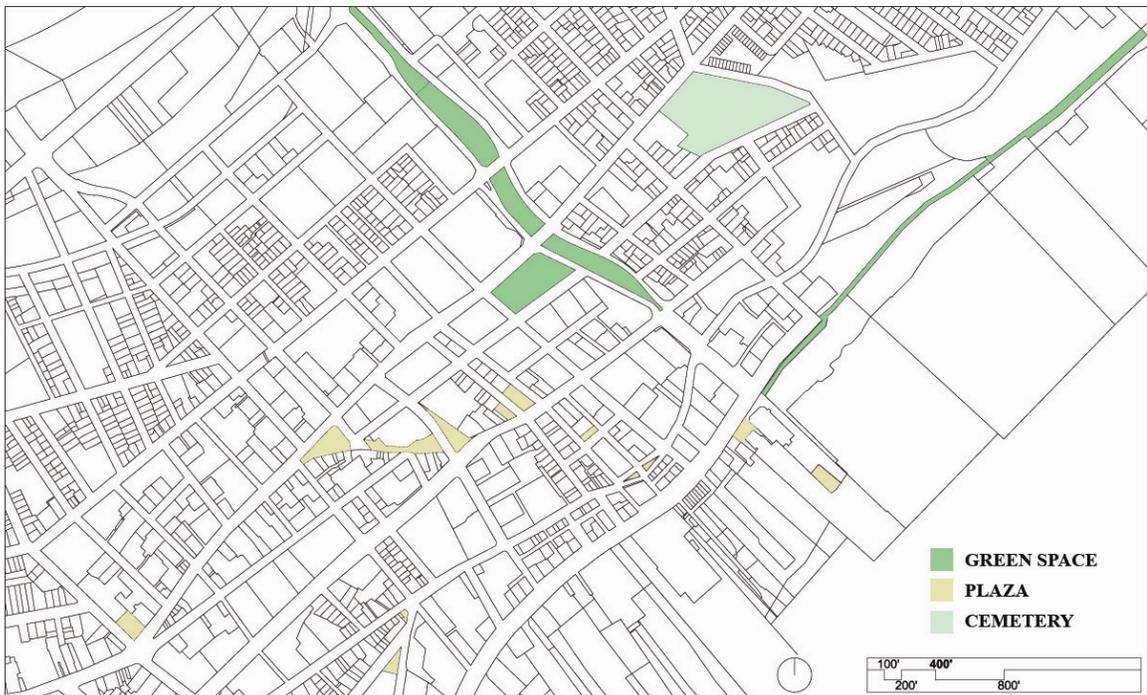


Figure 20: Public plazas and other open space in downtown area

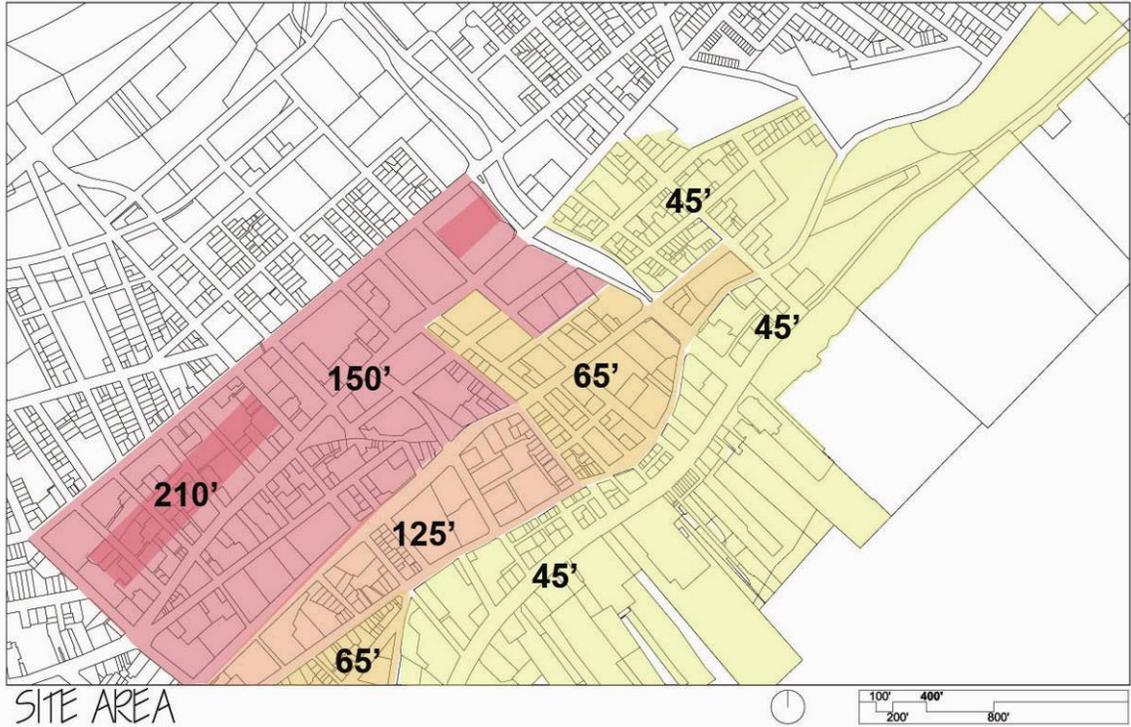


Figure 21: Height limits in Portland's downtown and site area. Heights are particularly restricted at the waterfront.

Existing Districts within Downtown

Within the downtown district, the city identifies two areas: the ‘Arts District’, and ‘Old Port’. The site area for this project lies adjacent to the Old Port area. The Arts District is centered around Congress Street, and includes Portland Museum of Art, the Children’s Museum of Maine, the Institute of Contemporary Art at the Maine College of Art, the Center for Maine History, and within City Hall, Merrill Auditorium. The current Center for Cultural Exchange marks the westernmost point of the Arts District, and of the downtown area. As would be expected, various galleries and arts related shops are also found in this area.

However, arts related shops, galleries, and businesses have also been locating well outside of this designated arts area, with many scattered throughout the Old Port, on the eastern stretch of Congress Street north of our site area, and even within and further east of the site area. Because the arts have such a strong and growing presence in the city, it seems natural that the ‘arts district’ be expanded. Anchoring the arts district at the waterfront would serve both to capture the attention of incoming tourists, and to bring this public activity to the waterfront, which is otherwise primarily private and commercially oriented.

The site area can also be woven back into the downtown by maintaining and emphasizing its history. There are several historic sites and buildings between the waterfront of the site area and Congress Street to the North, which could encourage more tourist activity in these areas.

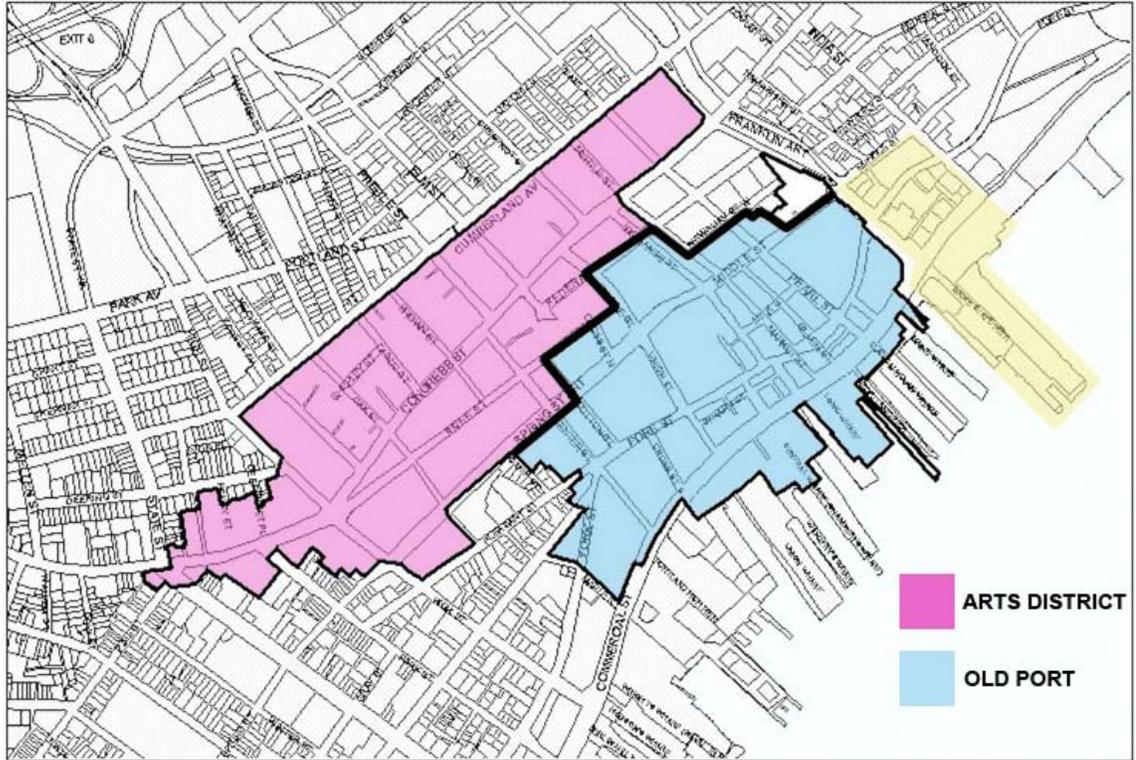


Figure 22: Downtown Arts and Old Port Districts.

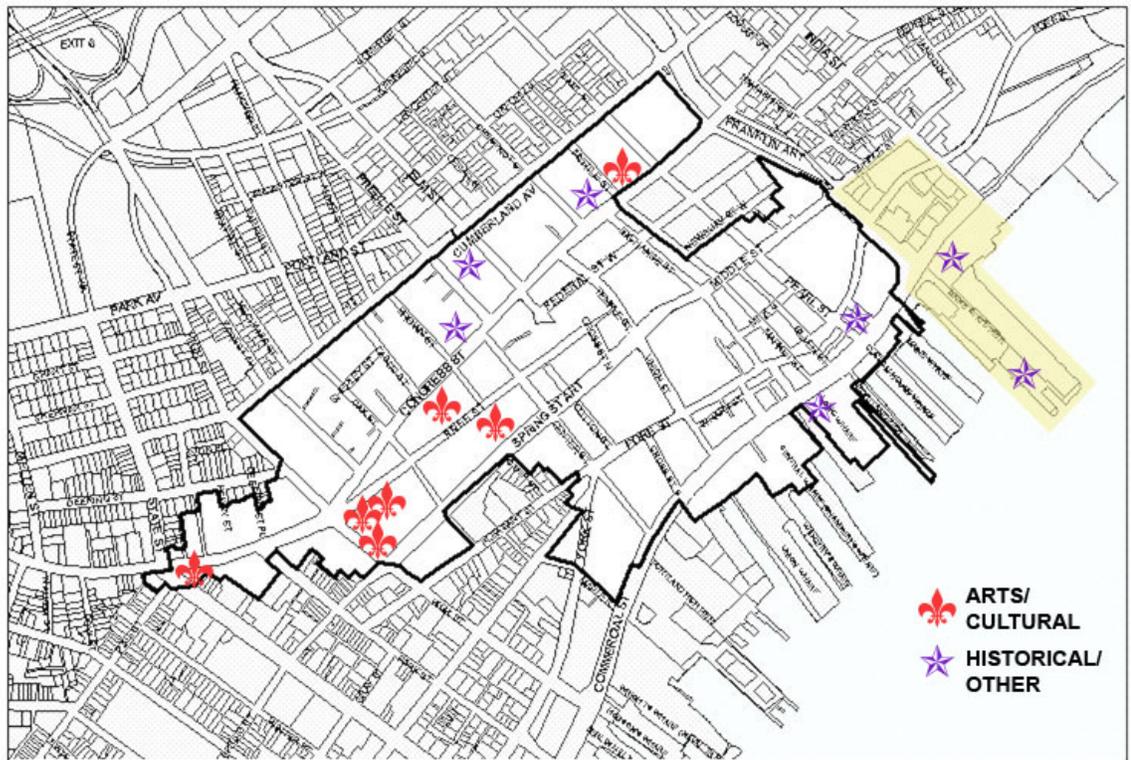


Figure 23: Major Points of Interest.

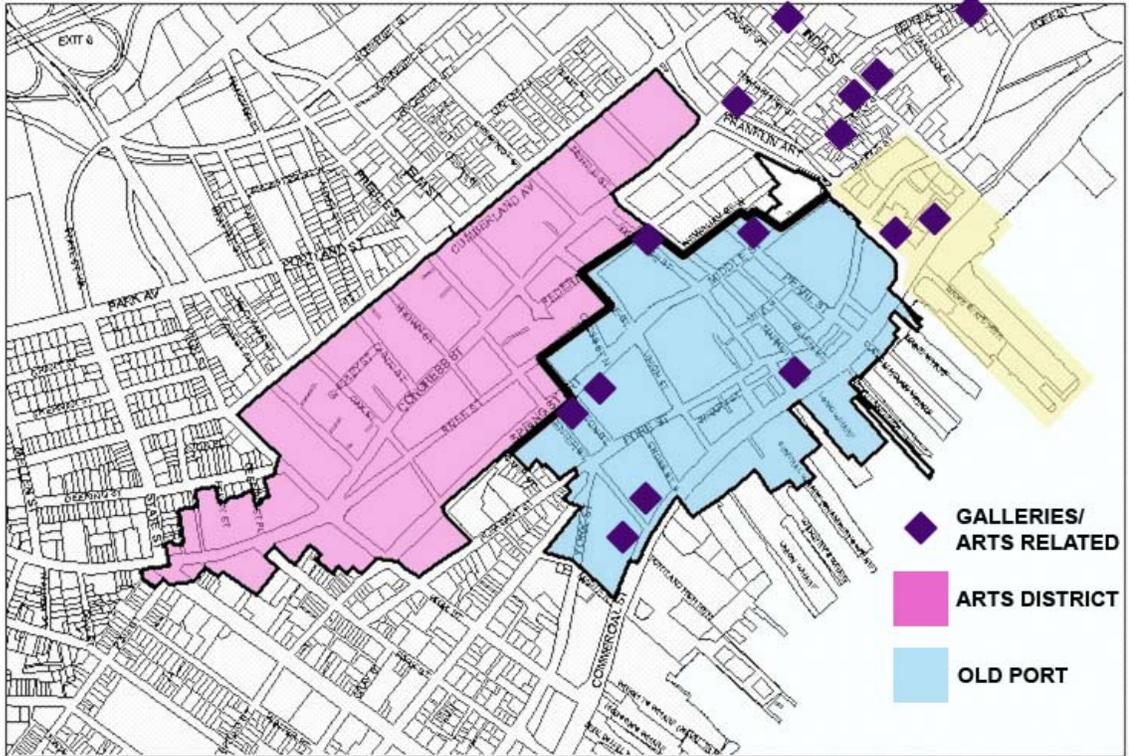


Figure 24: Galleries/Arts Related Outside of Arts District. The location of an arts related facility in the site area can be seen to extend and anchor the arts district at the waterfront.

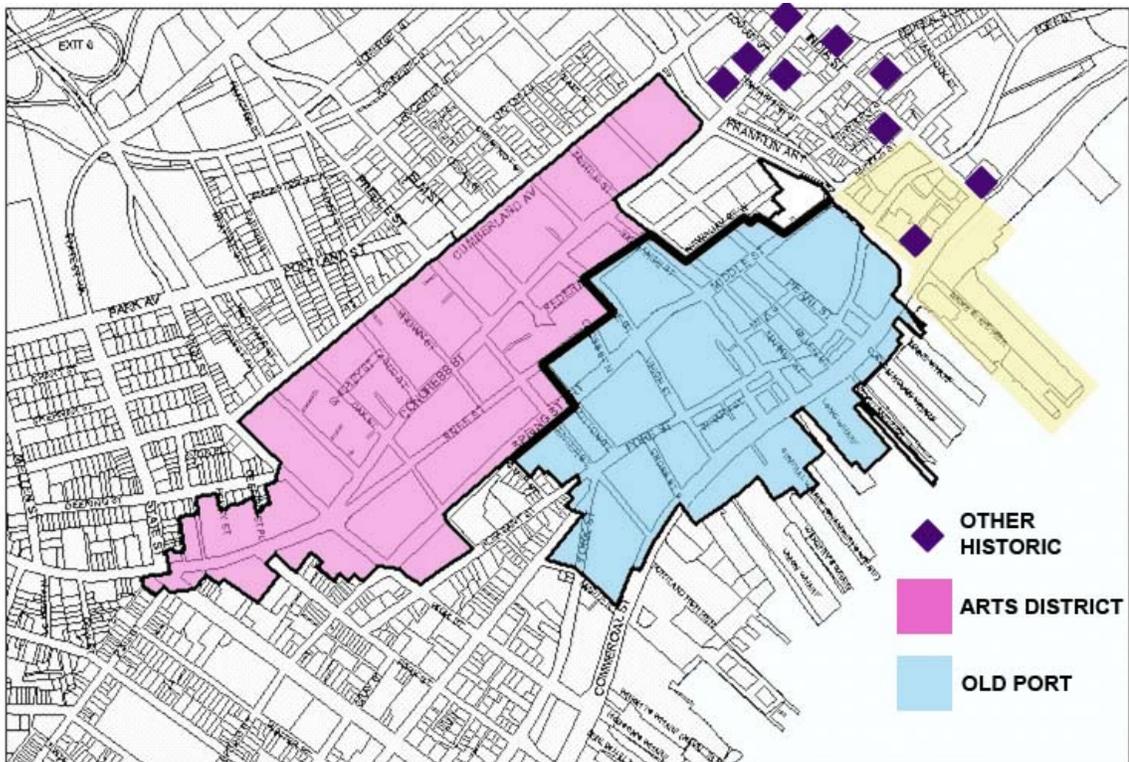


Figure 25: Historic sites and buildings in site area, but not recognized as part of current downtown, Arts District or Old Port.

Downtown Portland's Built Character

Downtown Portland derives much of its built character from its history. From the European scale and cobblestone streets of the old port blocks, the downtown area is compact and walkable, with a network of small public open spaces woven into the fabric.



Figure 26: Old Port shopping area



Figure 27: Small Park on edge of Old Port

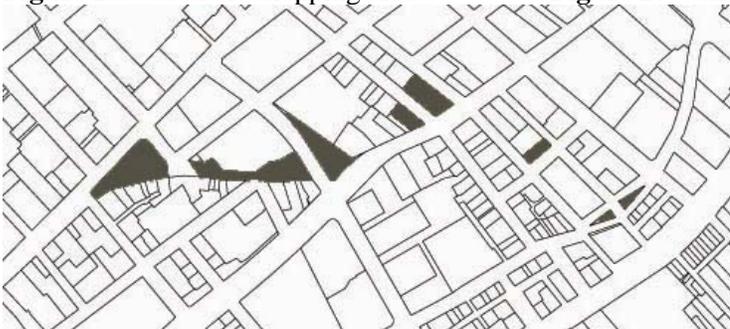


Figure 28: A pattern of small open spaces seemingly began in the old port and has been extended into the center of downtown.

Numerous historic buildings provide evidence of the city's nineteenth century stature, while those from throughout the twentieth century and even more recently show a continuity of growth and vitality. The buildings of the city from all time periods are overwhelmingly of brick; those of more grand stature and of civic nature are of stone; and some combine both materials. There is a noticeable lack of steel and glass structures common to the early and mid 20th century, possibly indicating a slowdown of growth in the downtown area during that time period.



Figure 29: City Hall.



Figure 30: Customs House.



Figure 31: 'Time and Temperature Building'.



Figure 32: Old Portland Library.



Figure 33: Historic Churches of Congress Street north of site.



Figure 34: 20th century buildings.



Figure 35: Fire Station.



Figure 36: Recent 20th century buildings on Congress Street.



Figure 37: Mix of old, new, and open space at the heart of downtown.



Figure 38: The city's brick landscape.

While this limited palette of materials and strong presence of period buildings results in a conservatively historic architectural tone overall, a few innovative structures show an element of openness to experimentation.



Figure 39: Portland Art Museum.



Figure 40: Portland Historic Society.



Figure 41: Restaurant with offices above on Commercial Street.



Figure 42: Hotel, completed 2004, adjacent to site, receiving mixed reviews from the public.

This creative undertone is also felt through the presence of various unique sculptures and other structures seen in the city, assumed to be contributions of the arts school.



Figure 43: Sculpture and open space.



Figure 44: Unique bus shelter.

The waterfront also greatly affects Portland's character, and so understanding its built environment will be critical to the efforts of weaving the site area back into the downtown. As an outcome of the development of the city, the majority of the commercial waterfront area is really an extension of the Old Port. The historic character of the buildings remains similar, although with slightly greater heights, and longer, more continuous facades lining Commercial Street in comparison to the smaller more individual facades of the Old Port streets.



Figure 45: One of Commercial Street's most prominent buildings, this building has its back to the waterfront.



Figure 46: More shops with residential above lining Commercial Street.

On the blocks immediately adjacent to the Maine State Pier, the Old Port in fact continues directly onto the waterfront, with streets crossing Commercial Street and extending onto piers. Some of these have maintained an older character, while others have a mix of old and new, with condos and offices neighboring active fishing facilities. This phenomenon creates an image of an eclectic village, literally on the water. However, this private waterfront property limits public access and views to the water.



Figure 47: Streets continuing onto piers, and lined with buildings.



Figure 48: Pier lined with primarily fishing related restaurants and shops.



Figure 49: Condominium and office building on pier with fishing shed behind.



Figure 50: View of densely built piers immediately adjacent to Maine State Pier.

Public access to the waterfront is further limited because virtually all the land not built on is used for surface parking. Only a few public walking areas exist on the waterfront. While a walking/biking trail extends along the waterfront from the Maine State Pier east, the trail is not evident on the most utilized stretch of Commercial Street that passes thorough downtown, or further west.



Figure 51: Buildings and surface parking limit open space on the waterfront.



Figure 52: One small public walking space on waterfront pier, adjacent to surface parking lot.



Figure 53: Small waterfront seating area next to Maine State Pier.



Figure 54: Waterfront property used for surface parking.



Figure 55: Entrance to another large waterfront parking lot, adjacent to walking space above.



Figure 56: Parking and a dumpster separate pedestrians from the water.



Figure 57: Fishing area of waterfront. This view is hidden behind a larger building.

Site Information

Detailed Site Description and Analysis

Maine State Pier is approximately 1000 feet in length and 180 feet wide. The pier currently includes a parking structure at Commercial Street and opposite the end of Franklin Boulevard, commuter and tourist ferry services to local islands, and on the Eastern side, a 100 feet wide ship service building that runs the length of the pier. An attempt to make a public space on the outermost end of the pier is evident by a small area with lighting, a few benches and sculpture.



Figure 58: Port Authority Building at front east side of Pier.



Figure 59: Parking Structure at front west side of Pier.



Figure 60: Ship Service Building and offices, eastern berth.



Figure 61: Island Ferry Terminal, west berth.



Figure 62: Sculpture, outer west end of pier.



Figure 63: Lighting and seating, outer west



Figure 64: The ‘Whale Wall’ mural painted on the Maine State pier ship service building is considered local landmark. The mural runs the entire length of the nearly 1000 foot shed.

The waterfront area in front of the eastern berth contains surface parking for port employees, small port facility buildings, and further inland at Commercial Street, the starting point of the historical narrow gauge railway, used primarily as a tourist and children’s attraction, as well as a paved coastal walking trail which runs eastward away from the downtown. Views to the water are currently completely blocked by the existing parking and service uses. The water meets the land in a bulkhead for the length of the property to accommodate the deep water berth.



Figure 65: View of waterfront block east of Pier shows vast area used for parking, although few cars. Pier to be developed for cruise ship and ferry terminal behind.



Figure 66: 'Narrow Gauge' train and ticket booth.



Figure 67: Water view obstructed by parking.

The block opposite the waterfront, between Commercial and Fore Streets, is sparsely built on, with a significant amount of surface parking. Along the Franklin Boulevard edge of this block are two brick warehouse buildings which have been in existence approximately since the construction of the pier, currently used as commercial office

space. These two structures and the portion of the block fronting Commercial streets are included in the waterfront historic district. Other structures fronting Commercial include a small brick and granite office building dating from 1917 in the center of the block, a small one story industrial structure, and a wood framed house structure now used as a restaurant. At this corner India Street meets Commercial Street at its current termination, marked by another historic structure, a three story brick office building, formerly a part of the Grand Trunk Railroad facility. Moving to the backside of this block at Fore Street, the only other structure is a small three story brick structure with a new brick addition near the India Street corner, currently home to a bank and offices. The remainder of the block is divided into various surface parking lots serving the individual buildings.



Figure 68: Historic Structures on Franklin Street, lower block.



Figure 69: Commercial Street from Franklin to India Streets. On the left is the front façade of the historic building meeting Franklin Street (above), and adjacent is a smaller building from 1917.



Figure 70: Historic former Grand Trunk Railroad Building terminating Commercial Street.



Figure 71: Recent addition to older brick structure at Fore and India Street.



Figure 72: View of center of the block from Fore Street.

The second block back within the site area, between Fore and Middle Streets, is currently the location of the Jordan Meat factory, recently bought by a national food chain and closed in February 2005. The building is a one to two story industrial structure, with little potential for reuse. A smaller two story brick structure housing small businesses and two restaurants, with entrances on Middle Street, shares the Franklin Blvd. end of this block. Both buildings have surface parking along Fore Street.



Figure 73: View to site on Fore Street.



Figure 74: Approach to site on Middle Street.



Figure 75: Shops on Middle Street adjacent to Jordan factory.



Figure 76: Jordan's factory on Middle Street



Figure 77: Jordan's front entrance on India Street

Site Dimensions and Topography

Beginning at the waterfront, the bulkhead is 10 feet above sea level, with the harbor water level recorded at an average of 3 feet above sea level. The land slopes imperceptibly from the bulkhead, rising 5 feet to reach 15 feet at Commercial Street, and rising only 5 more to only 20 feet height at Fore Street. The slope then becomes more perceptible although still gradual across the next block, reaching 30 feet at Middle Street. Beyond the site, the slope increases more significantly, with Congress Street marking the top of the hill at approximately 55 feet, the lowest elevation of the peninsula's ridge.

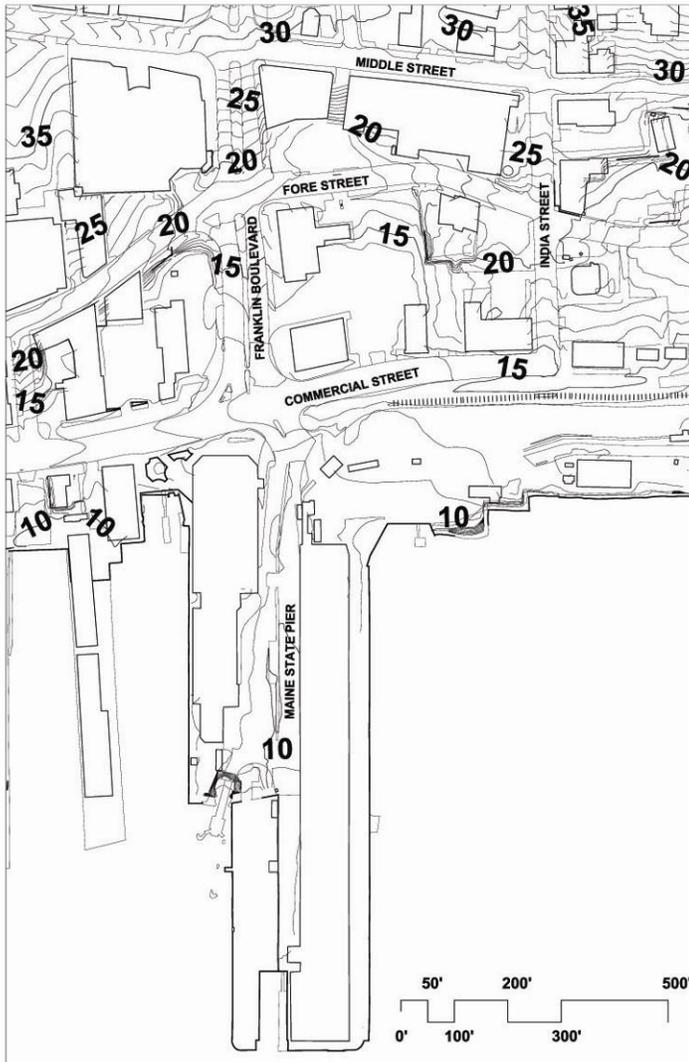


Figure 78: Site topography.

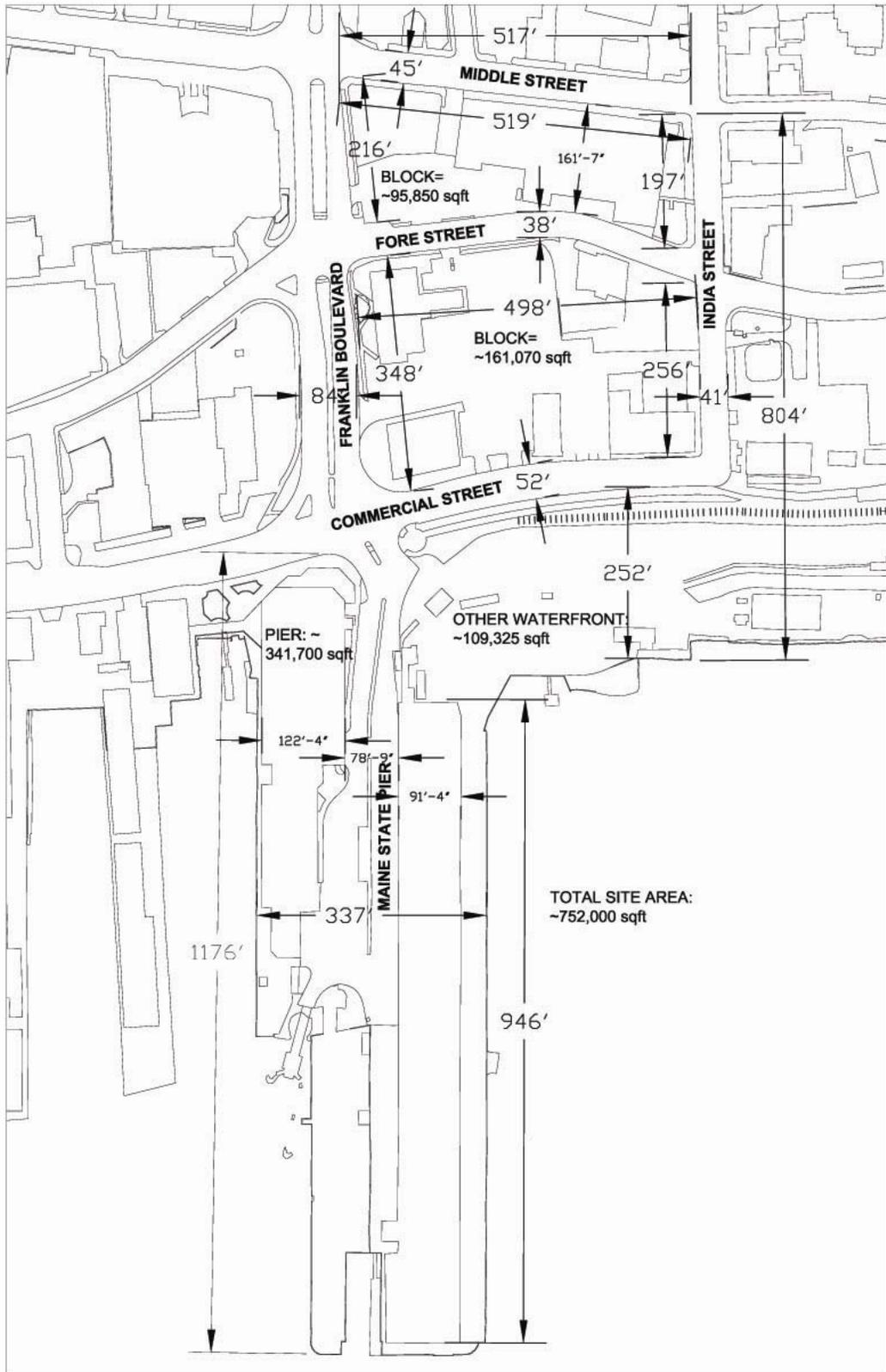


Figure 79: Site dimensions.

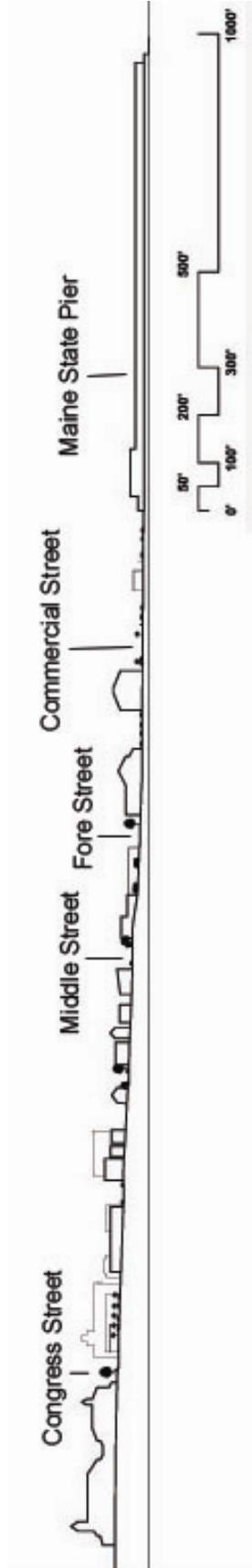


Figure 80: Section across site from Congress Street to end of pier shows sparsely built blocks and small scale between the main streets, and length and lowness of ship service shed.

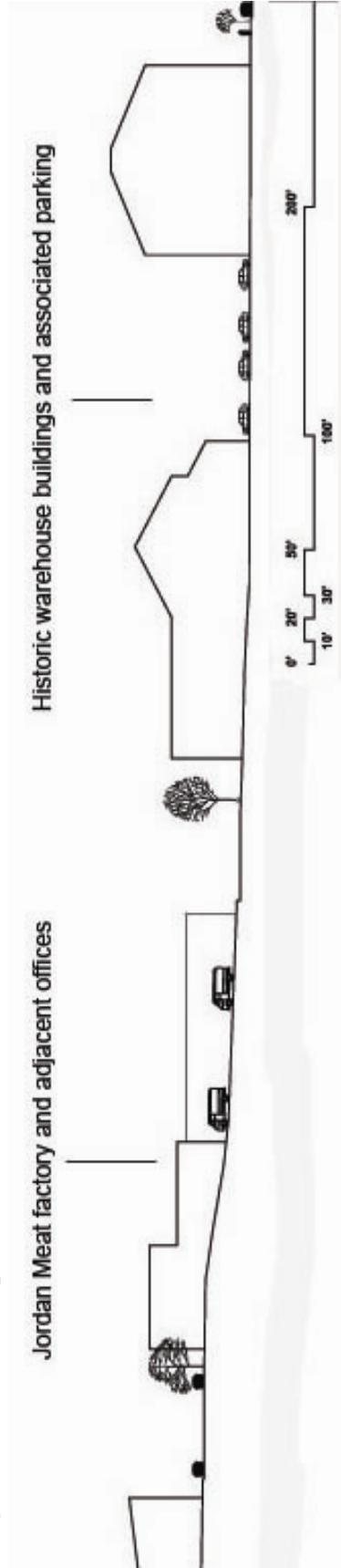


Figure 81: Section across upper portion of site.

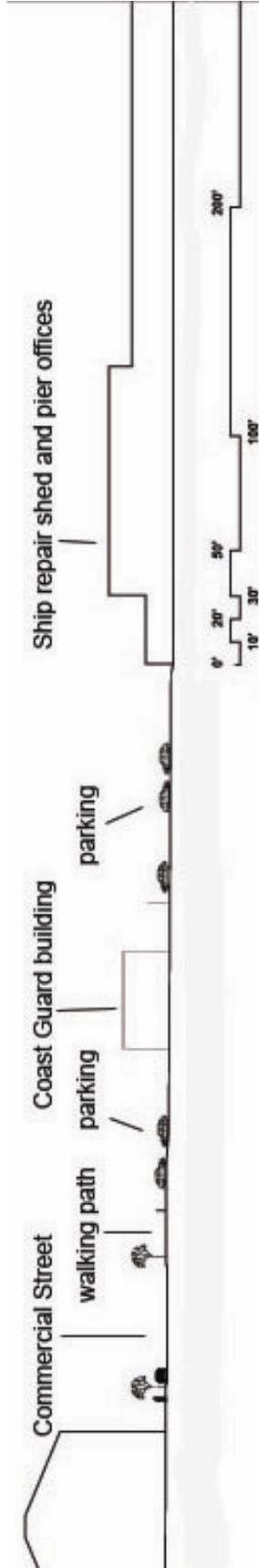


Figure 82: Section across site from Commercial Street to end of pier.

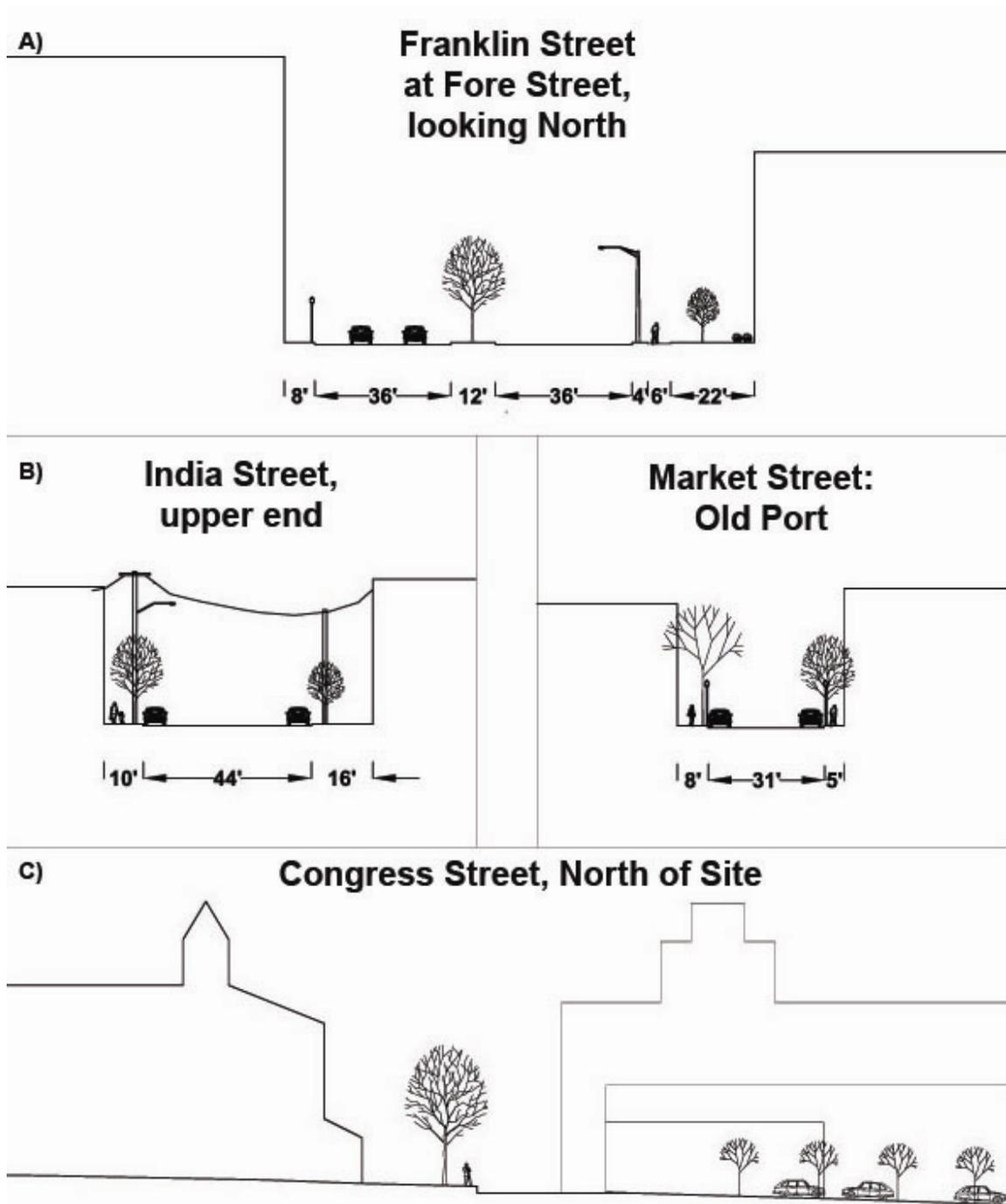


Figure 83: Comparative site sections: (A) The streetscape on Franklin Street can be seen to change abruptly, with gas lamps on the west (Old Port) side and more industrial street lighting on the east (site) side. (B) The India Street section shows wider streets and a slightly larger scale than the Old Port. This street width may be preferred to accommodate heavier traffic from development in the area, although street hardware similar to that in the Old Port could enhance the historic character of the area. (C) The larger massing on Congress Street north of the site can support larger scale development than existing, seen in prior section through site area.

Sunlight, Wind, and Weather

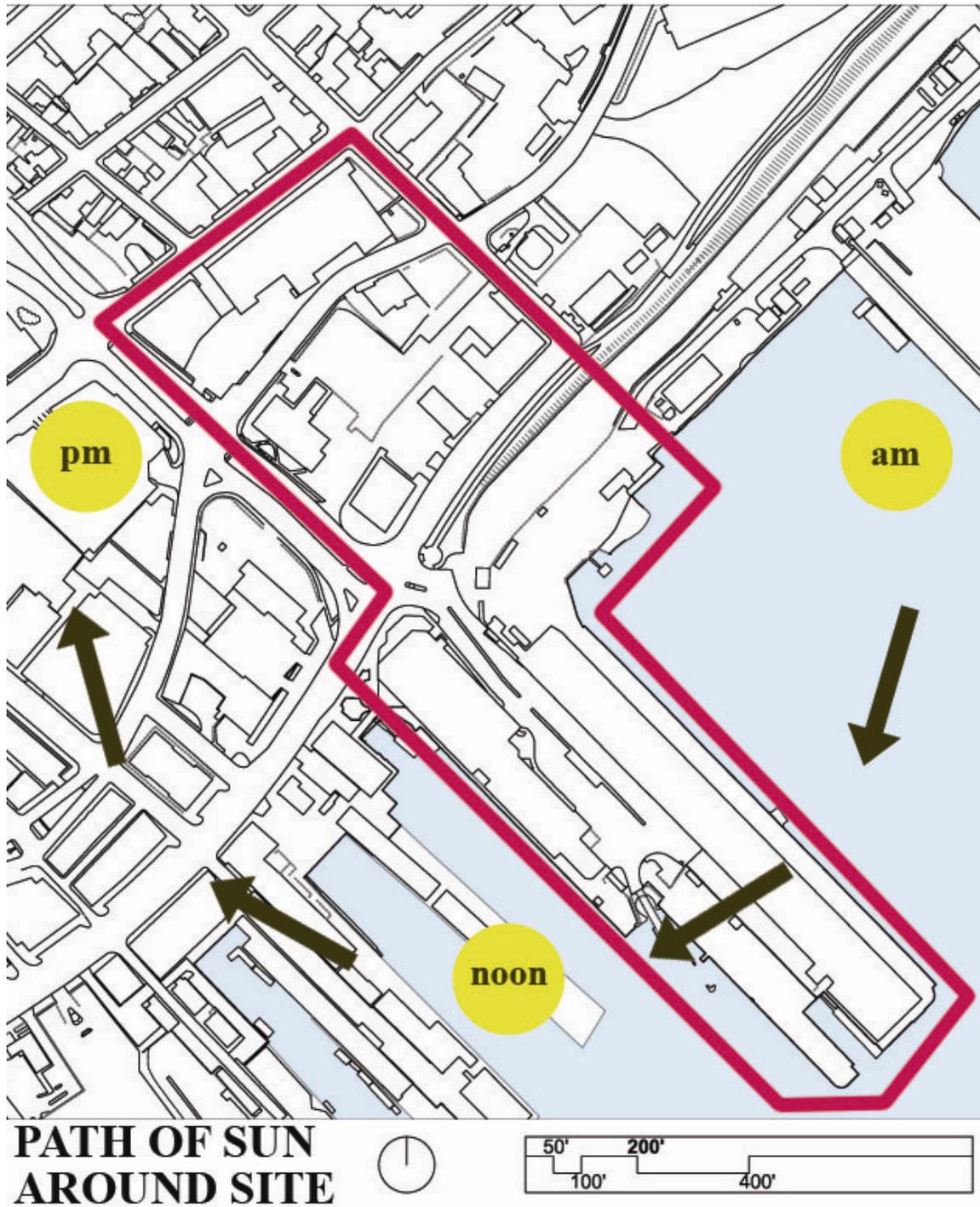


Figure 84: Orientation to the sun: The Southeastern orientation of the site allows collection of sunlight and warmth in conjunction with providing water views. Taller buildings to the West may provide some shading within the site.

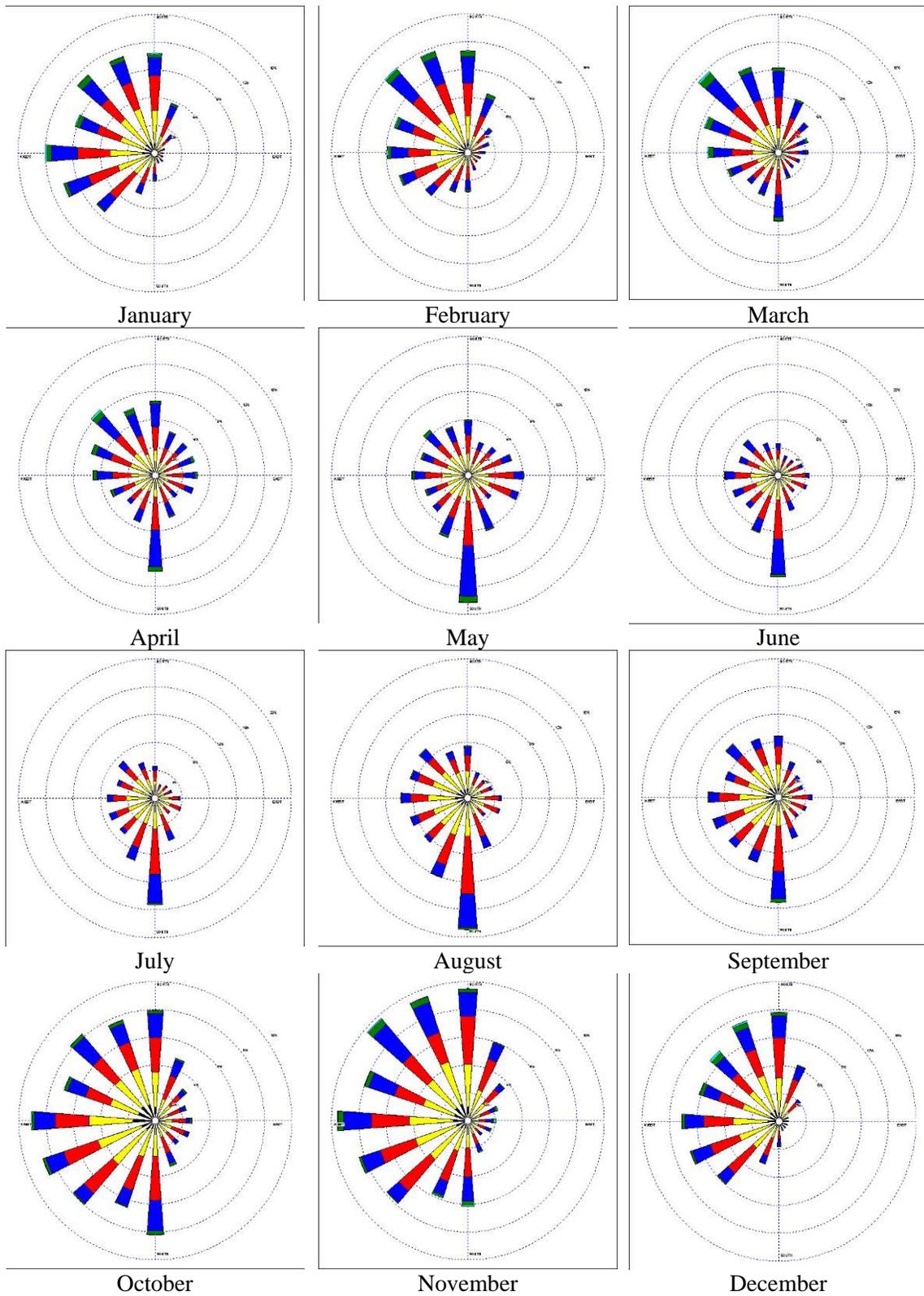


Figure 85: Wind Rose diagrams (based on winds at Portland airport) show West-Northwest winds heaviest in fall and reducing through winter, and a persistent Southern wind in summer [ftp://ftp.wcc.nrcs.usda.gov/downloads/climate/windrose/maine/portland/]

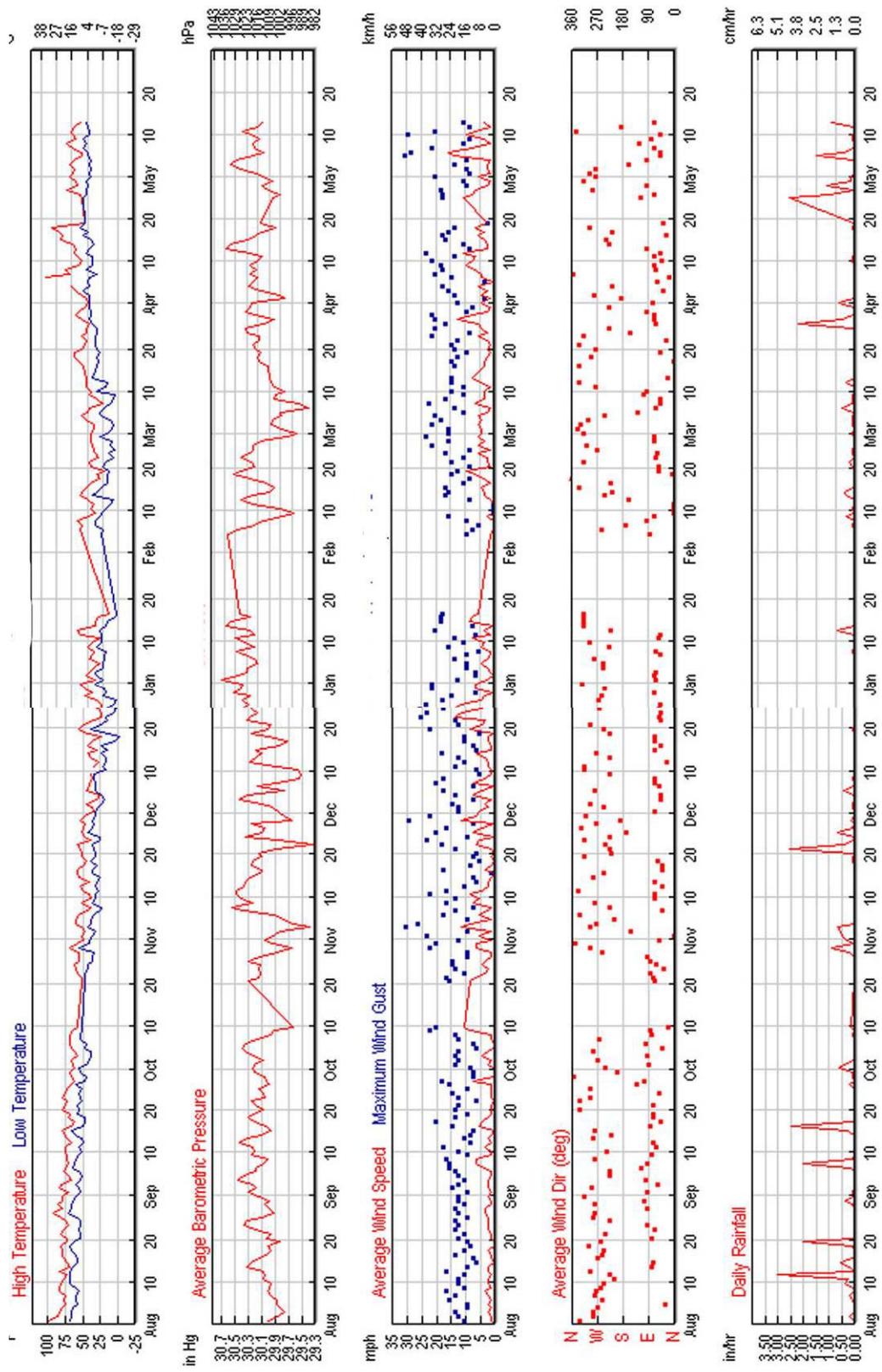


Figure 86: Weather data from August 2004 through May 2005. Note that these data are from closer to the coast than the airport, and more Northeast winds are present. [<http://www.wunderground.com/weatherstation/WXDailyHistory/>]

Approach to Site

The approach to the site on Franklin Street is the most direct route to the city by automobile, as Franklin Street connects directly to the interstate. Given that this point of arrival is the first view that most tourists visiting by car will experience, the existing conditions at the end of Franklin Street are not ideal:

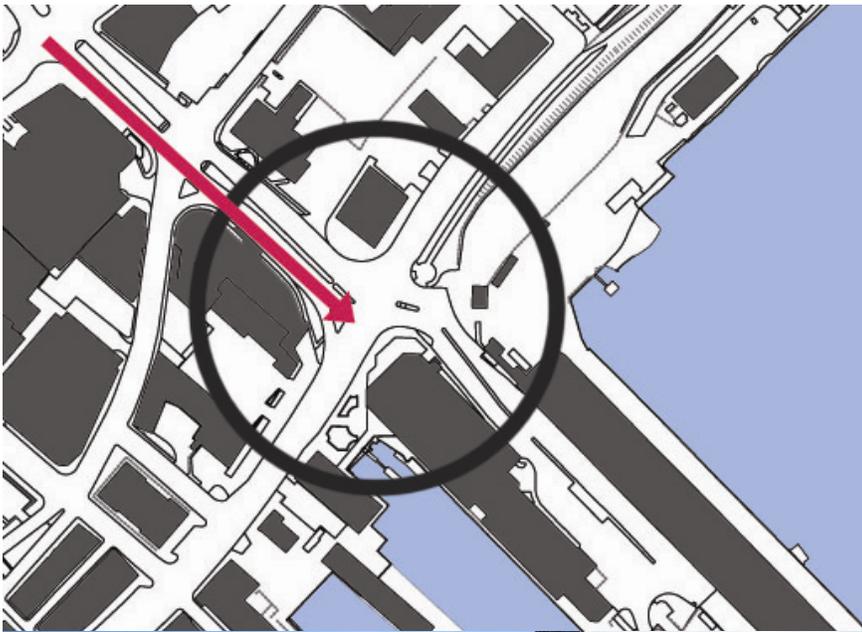


Figure 87: At the intersection of Franklin and Commercial Streets, vehicles approach directly toward the Maine State Pier parking garage.

Little sense of arrival or place is established, while vehicular entrance to the Pier is awkward.



Figure 88: Views of approach from Franklin Street show no real focal point or sense of arrival. While a false front was placed on the garage to create some sense of monumentality, it can only be seen from off center by approaching drivers.. Removal of the garage might allow some view to the water.



Figure 89: Full view of front of garage.



Figure 90: Sculpture at intersection; an attempt at creating a sense of place for pedestrians.



Figure 91: Approach from Commercial Street.



Figure 92: View from east of site: surface parking and the garage block view of waterfront.

While the garage on the pier serves island residents and provides some tourist parking, its removal or redesign should be considered in the interest of improving both the waterfront environment and the experience of entry to the city. A smaller garage with another more appropriate use fronting the street might be considered. Additionally, because this intersection will also be more heavily used by pedestrians after relocation of the cruise ship terminal, improvements to the streetscape should be considered.

Site Edge Conditions

Immediate Site Surroundings

The previous site sections begin to show the massing and density of the site in comparison to some of its neighboring areas. In fact, the site has extremely varied edge conditions with respect to both massing and current use. It is bordered on the Franklin street side by some of the downtown's most dense buildings, including a new hotel, two parking structures with offices above, and the

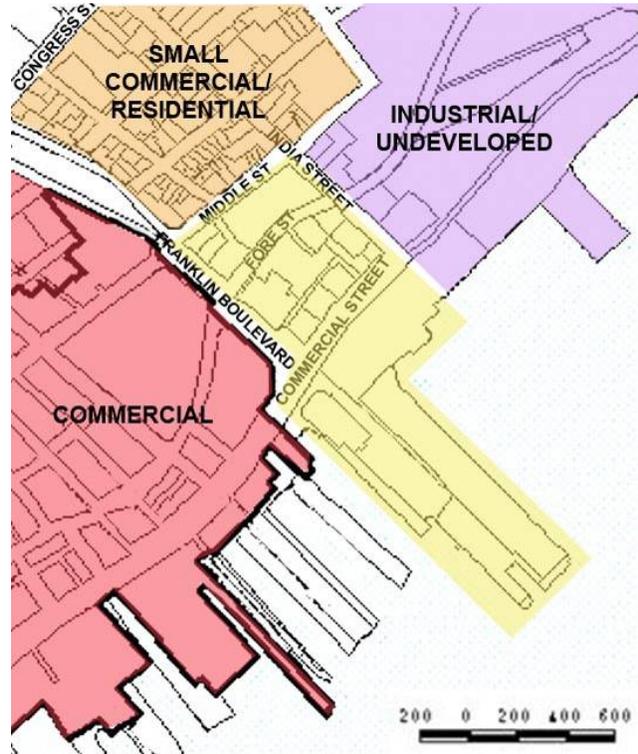


Figure 93: Site edge conditions.

police station. The entrances to all of these are on Commercial, Fore, Middle and Congress streets, respectively, so that the buildings' sides face Franklin Street and the site. This hard edge has for some time marked the end of the commercial downtown.

In contrast to these massive buildings, the two warehouse buildings described on the lower block of the site are the most significant on the opposite side of Franklin Street. The upper of these is in fact the only building with its entrance on Franklin Street from Congress Street to the water. The rest of the eastern side of Franklin Street is a mix of one to three story small structures of mixed residential and commercial/light industrial use, all with sides or backs to Franklin Street.



Figure 94: View north on Franklin Street from Commercial shows hard edge of existing downtown. Historic buildings of site area do have a strong presence, which could be enhanced with streetscape improvements.



Figure 95: More contrast in scale is seen on Franklin Street approaching Middle Street. Note lack of sidewalk on site side of street here.



Figure 96: View approaching site and downtown on Franklin Street shows backs of downtown buildings and dramatic reduction in scale.



Figure 97: The view from Congress Street shows a municipal parking structure, and the width of the gap created by Franklin Street.



Figure 98: Upper eastern side of Franklin Street north of site. In the foreground of this photo is a fence that discontinues Newbury Street at this point. The green median of Franklin Street, which may have been well intended, serves as a separator between the area to the east and the downtown. Note that there are also no sidewalks on either side of this portion of Franklin Street.

Immediately surrounding the site on India Street between the termination of Commercial Street and Fore Street are the historic Grand Trunk Railroad building, currently housing offices, its associated parking, and a concrete pump station. Between Fore Street and the termination of Middle Street is a small apartment house, a one story bar with a small fenced in outdoor patio, parking and an Italian grocery, in its location for 75 years. On Middle Street adjacent to the site from Franklin Street to India Street are a small but relatively new bank, a sporting goods shop and three small three story townhouses with recently renovated restaurants at the ground/second floors. Each building has its own associated surface parking, with both corners of the street also surface parking.



Figure 99: (A) Grand Trunk Railroad building, parking and municipal pump station, adjacent to site.

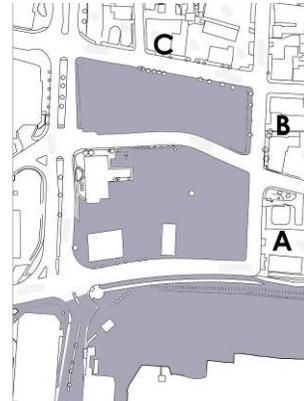


Figure 100: Key to site area.



Figure 101: (B) The next block north on India Street: Italian grocery, bar, and apartment building.



Figure 102: (C) The northern side of Middle Street opposite the Jordan factory contains more parking than buildings.

North of Site

Immediately north of the site, the same general scale and lack of density continue, with a mix of historic brick buildings, wood framed multiunit houses, and a few light industrial structures, with surface parking interspersed between. India Street is predominantly commercial, with a mix of shops and small professional offices, some with residences above, and a few residential townhouses remaining. One social service organization with a shelter is also found on the block



Figure 103: Key to India Street images.

closest to the site. A church and its rectory take up one block of Newbury Street, between the site and Congress Street.

As India Street approaches Congress Street, the scale, density and character grow.

Community health services occupy the larger buildings on both corners of the intersection of India and Congress Streets, one an elegant old school with clock tower.

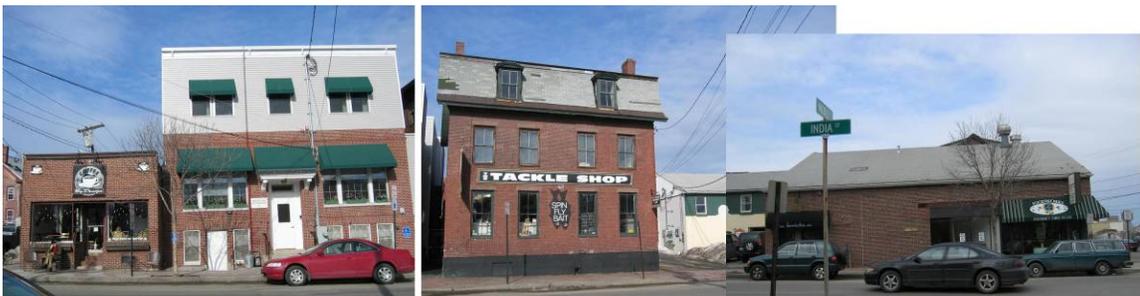


Figure 104: (A) The first block north of the site on India Street: coffee shop, social organization/shelter, fishing tackle shop, lot under construction, hair salon, and Italian cafe.



Figure 105: (B) Across the street on this block is all surface parking with an auto glass shop at the center behind its own parking.



Figure 106: (C) The next block: Italian deli, parking, row-house with one office, housing above.



Figure 107:(D) Second block north of site on India Street: Density becomes more consistent and buildings show historic character. A more historic church accompanies the more modern style rectory on the corner.



Figure 108: (E) Upper block of India Street to east. With the exception of one low light industrial building, now a bike shop and art studio, offices occupy the more historic brick buildings. On the left an old school building now holds elderly and assisted housing and public health services.



Figure 109: View down India Street from Congress shows consistent scale and character of upper blocks.



Figure 110: (F) Community health facility at corner of India and Congress, adjacent to row houses seen in photo to left.

On Congress Street is also a grouping of some city's oldest churches, including a small synagogue. Oddly, across the street from these handsome structures is a large, big-box style structure, formerly a grocery store, with a Rite Aid, drycleaner/ laundry mat, and one vacant storefront. Even more ironically, a sign in the parking lot here indicates that this is the site of a historic meeting house used when the city was burned by the British. The historic area is clearly currently not fully appreciated by residents, and likely seen by few of Portland's current visitors.



Figure 111: Church and related school buildings at the corner of Congress and Franklin; The building at left now serves as a homeless shelter.



Figure 112: Church complex above seen from east, and adjacent older church from 1600s.



Figure 113: Synagogue at top of India Street, nestled behind some of Portland's few remaining old trees.



Figure 114: A new design boutique, with a small architecture office above, between the churches and synagogue.



Figure 115: Parking lot and shopping center north of site on Congress Street.



Figure 116: Sign marking historic site in parking lot.

East of Site

To the east of the site beyond India Street, Middle Street ends in street parking at Hancock Street, while Newbury and Federal Streets continue one block further to Mountfort Street. The built lots on these streets are primarily lined with housing. This edge dissolves to vast open areas of parking, with two large Butler buildings, one on either side of Fore Street, housing a variety of commercial and light industrial tenants, and the Shipyard Brewery. Further east are a public housing development and the Portland Company complex, a historic industrial site currently hosting a boat repair shop, public railroad museum, and other rented office space. This site is also considered prime real estate for redevelopment.

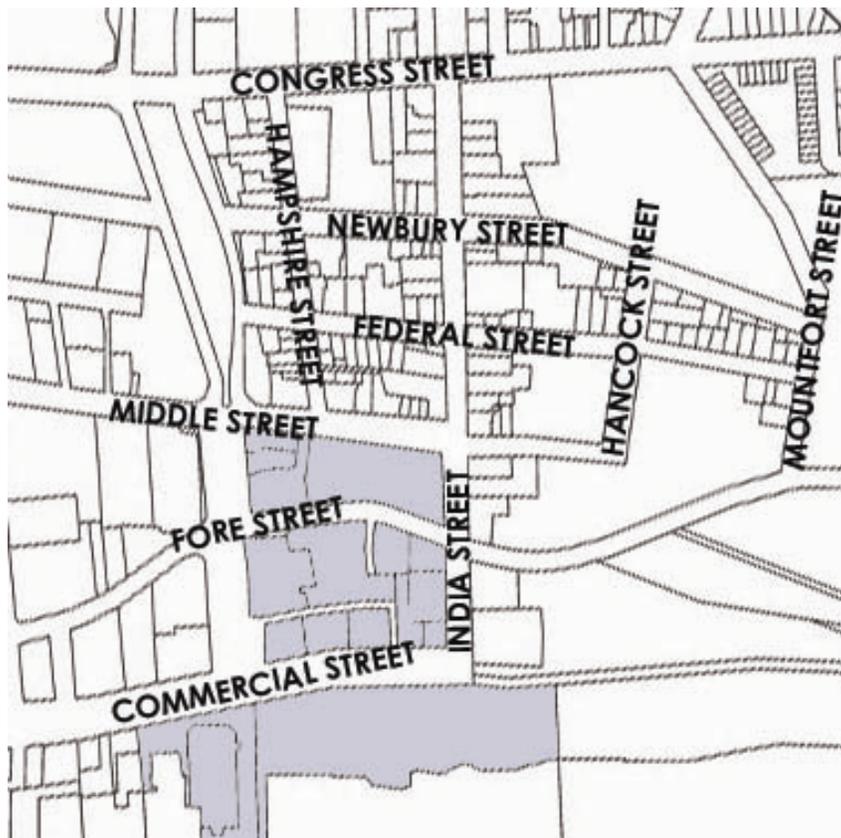


Figure 117: Streets north and east of site.



Figure 118: The Shipyard Brewery, east of the site.



Figure 119: Butler building housing small businesses.



Figure 120: View toward water east of site.



Figure 121: View toward site from east.



Figure 122: Public housing with water views at Newbury and Mountfort Streets.



Figure 123: Portland Company complex hosts a train museum and various small businesses.

Overview of Existing Master Plans

In 1998, a Mayor's Task Force determined the advisability of separating passenger and container ship facilities, citing increased capacity needs for both facilities, passenger safety, separation of tourist and industrial traffic both on Commercial Street and in the harbor as its primary arguments. It was also argued that the city would benefit from increased tourist revenues by improving incoming tourists access the city and its amenities. The site determined for the new facility is on an existing pier to the east of Maine State Pier, previously used by Bath Iron Works, and in sufficient condition to be



Figure 124: Current and new cruise ship location.

expanded for the new facility.

As a result of this decision, the city created the Waterfront Development and Master Planning Committee, which has focused its efforts primarily on the land-side development of the waterfront, from Franklin Boulevard to

the east. Within this entity a subcommittee, the Marine Passenger Terminal Project Committee, was developed to study the specific needs related to improved cruise ship and ferry facilities. This project was named the Ocean Gateway Project.¹⁰

In a November 2001 report, the Ocean Gateway Project Committee summarized the primary requirements of the passenger terminal to include:

3.1 Phase 1 Design Criteria

- Two berths – Pier 1 (secondary berth, 1,000 linear feet), Pier 2 (primary berth, 850 linear feet including dolphin) - shared use for ferry and cruise vessels
- Terminal facility at Pier 2 (20,000 square foot minimum, two stories) – shared use for ferry and cruise vessels
- Federal security requirements for piers and terminal
- Warehouse space
- Roll-on/roll-off access for vehicles and provisioning of international ferry
- Service vehicle access to vessel for fueling, water, solid waste, stores
- Emergency vehicle access to vessel and terminal
- Pedestrian access to downtown
- Intermodal (motor coach, METRO, taxi) connections for ferry and cruise passenger pick-up and drop-off - shared use with international ferry queuing and PDOT Zone
- Queuing areas for international ferry
 - 200 vehicle equivalents or 45,000 square feet (minimum) each to be held concurrently
 - Federal inspection (U.S. Customs, Immigration and Naturalization Service) security requirements for inbound vehicles (and potentially outbound vehicles)
- Parking at-grade
 - Marine facilities employees – 10-20 spaces (within PDOT Zone)
 - Federal employees – 15 spaces (within PDOT Zone)
 - Short term and visitor – 14 spaces (within PDOT Zone, Pier 2 intermodal area)
 - Long term passenger – 300 spaces (upland)
 - Island resident – 150-200 spaces (upland)
 - Existing tenant (AutoEurope) – 80 spaces (upland)
 - Public use (Trail, Narrow Gauge Railroad) – 25 spaces, minimum (upland)

Figure 125: Cruise and Ferry terminal design requirements.¹¹

Most of this development is planned to occur at the site of the proposed new terminal, to the east of this thesis focus area. However, the final proposed plan impacts the site area as follows:

- extends Commercial street to reach the eastern pier, accomplished by widening the street to the water side in order to bypass the historic Grand Trunk Railroad building that currently terminates the street.
- locates the queuing areas for the international ferry services (45,000 square feet each minimum, needed concurrently) on the waterfront area between the piers

- dedicates the waterfront edge of the land between the piers as a secure area.
- includes location of a second cruise-ship berth on the eastern side of the Maine State Pier, assuming removal of the existing ship service building and considerable renovation of the pier, including enhancements to the island ferry facilities, transportation accommodations for cruise passengers, and possible inclusion of public amenities such as open space and a small outdoor performance stage.

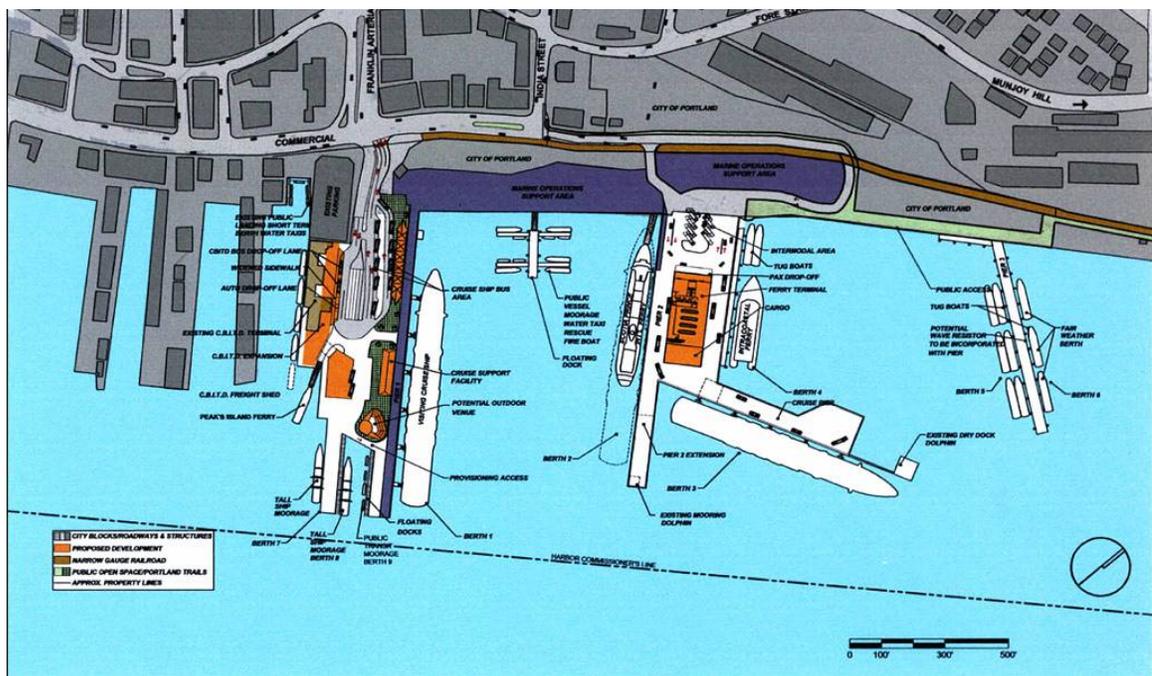


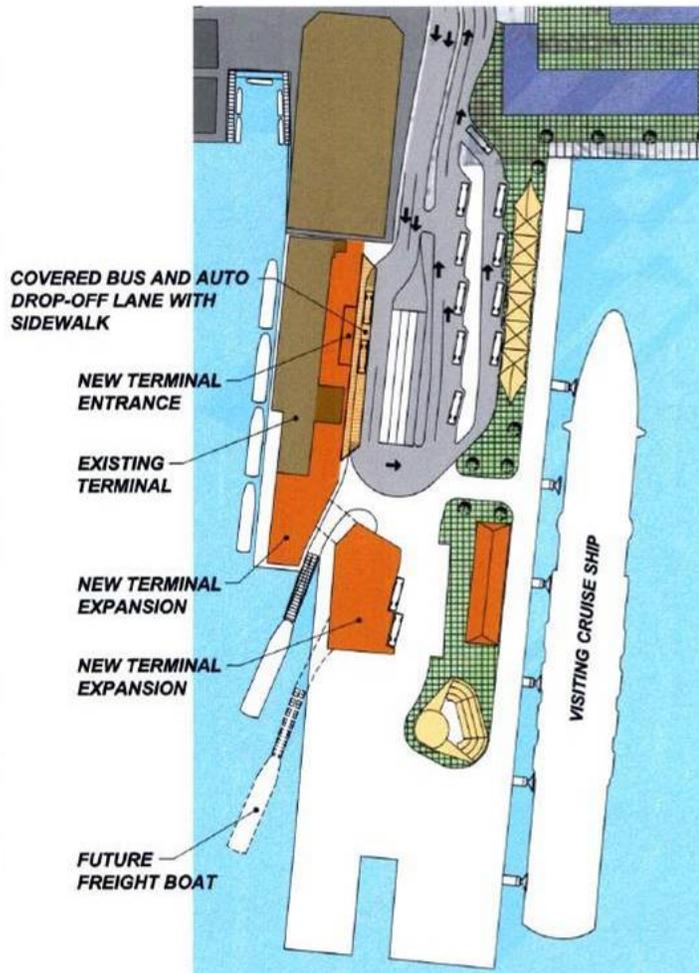
Figure 126: The furthest reaching plans of the Ocean Gateway Project propose a second cruise ship berth on the Maine State Pier as well as several berths more on the proposed new pier.¹²

The Ocean Gateway Committee design process included public focus groups and a public design charrette as well as input from outside design consultants. While all of the suggested designs of the public included public open space on the waterfront land between the two piers, among all of the options considered in the committee report, none considered using this land as public open space. Even when locating the queuing areas to the east of the second pier was considered, this area was left as surface parking, otherwise

excluded from the design. A small amount of open space was planned on the pier itself, and the area to the east of the pier was generally left undeveloped (presumably left as the responsibility of the land-side committee) other than an indication that the waterfront walking trail should be moved to the waters edge.

The Committee considered enhancement of the local island ferry facilities as a separate study, and similarly sought input from island residents. The major improvements determined to be needed include separation of freight and passenger areas of the terminal and increased capacity for both, both improved vehicle and pedestrian access to the terminal entrance for drop off/pick up and buses. The following diagram from the report outlines these improvements along with assumed changes related to the second cruise berth described previously.

Figure 127: Proposed Maine State Pier improvements.¹³



With respect to the development of the immediate waterfront and the second pier hosting new passenger facilities, the Waterfront Development and Master Planning Committee has for the most part used the recommendation of the Ocean Gateway Project Committee as a starting point. In particular, they have assumed the ferry queuing areas would coexist on the waterfront parcel between the piers with the required secure zone at the immediate waters edge. A green buffer between the coastal trail and these vehicle areas is indicated.

However, the Master Planning Committee has not recognized the development of the second cruise ship berth or removal of the existing ship service building. On the contrary, Portland's 2002 Comprehensive Plan Waterfront Resources Report, and 2005

comment from its author, William Needelman, Senior Planner, specifically indicates a preference for preservation of this facility, and the possibility of additions to the structure that would allow other day to day uses to share the site. The rationale provided by Needelman for keeping the facility is that the combined deepwater berth and service facilities provide significant city revenue and unique skilled employment opportunities when in use, and could not be relocated to another area of the harbor.

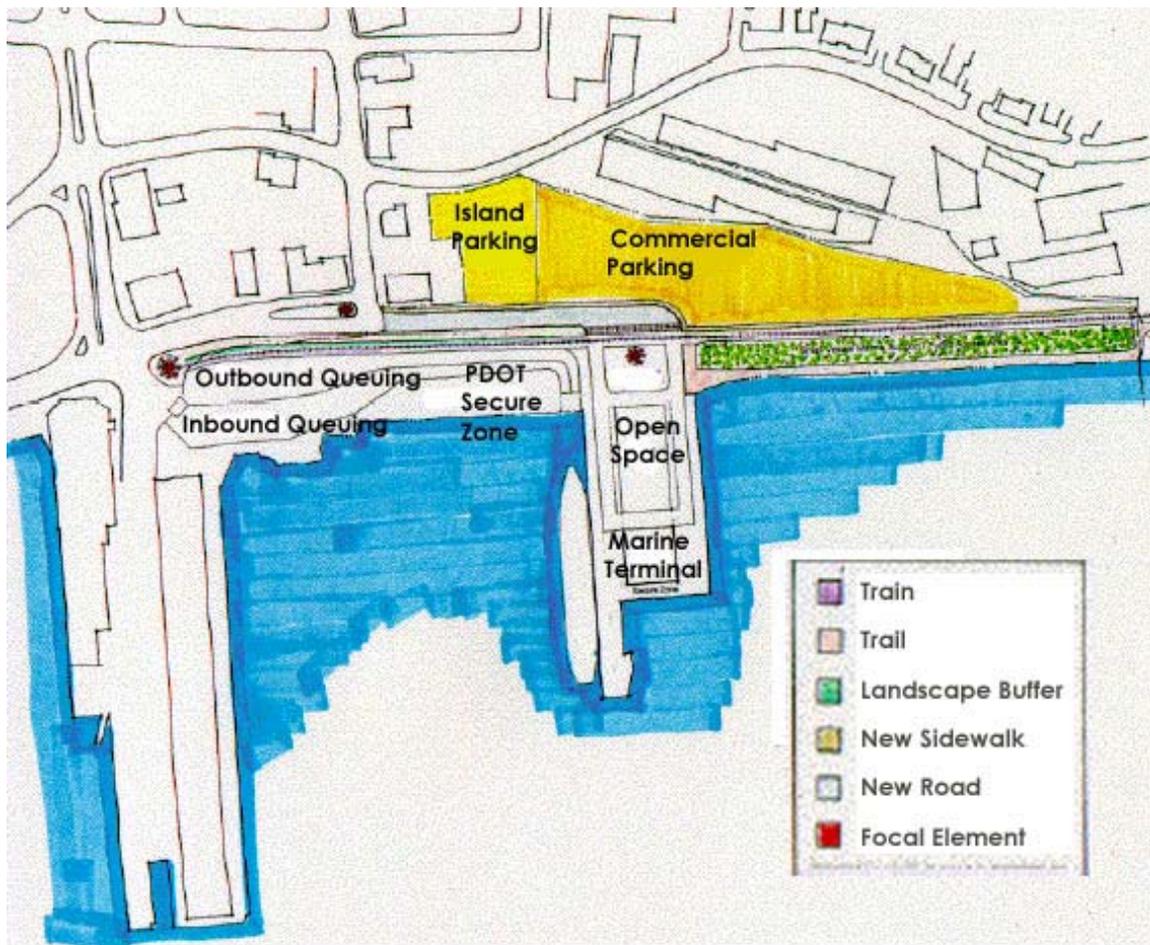


Figure 128: Starting point for Waterfront Development Committee based on Ocean Gateway Committee Recommendations. [<http://www.ci.portland.me.us/planning/wfphase1.pdf>]

The Master Planning Committee expands on the plans for the landside development of the area, first by continuing the extension of Commercial Street to include the extension of Hancock and Mountfort Streets, and addition of a new street to complete the existing

street grid, to create walkable city blocks for new development, to ease traffic created by the new facility, and to ease public access to the new waterfront area. The Master Plan proposes that the new blocks accommodate needed parking concealed behind a perimeter of ground level commercial, with mixed office and residential spaces above. The Master Plan also develops the waterfront area between Commercial Street and the water to the east of the new passenger terminal as public open space, including the waterfront trail, public boat access and green space. Finally, the Master Plan outlines a number of guidelines and principles for development of the area, including

- compatibility with existing neighborhoods, natural environment, and maritime uses,
- mixed use development that will ensure use year round and during all hours of the day,
- priority to maritime uses within 75 feet of the waters edge, and
- economically responsible development.

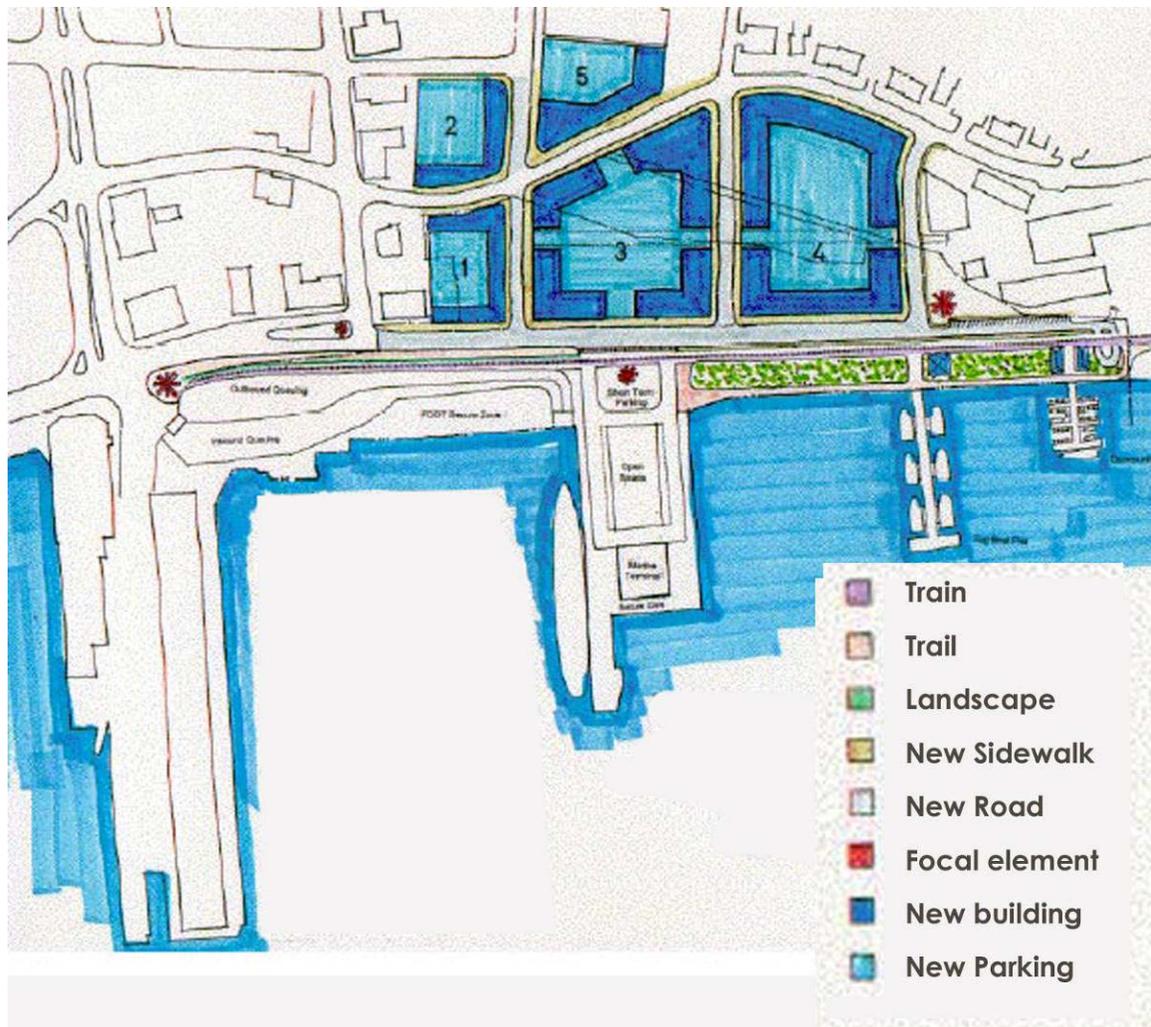


Figure 129: Ultimate development according to Waterfront Development Master Plan. [<http://www.ci.portland.me.us/planning/wfphase3.pdf>]

Despite its detailed attention to the development of proposed new blocks, the Waterfront Development Master Plan makes little reference to the two landside blocks critical to this thesis, other than to summarize their current contents, indicate a preference for preservation of historic structures, suggest structured parking, and assume infill development. Similarly, the Ocean Gateway Project Report makes no reference to the content of these blocks. This lack of planning on these blocks seems to make this thesis more vital, as this area will be critical in connecting the new development to the existing city fabric.

After review and consideration of these prior planning efforts, this thesis will assume the following:

- Street extensions will be completed to the full extent outlined in the Waterfront Master Plan, with the general configuration of structured parking and other uses incorporated. The parking outlined in the Master Plan will also be assumed to be sufficient for the Passenger Terminal and other planned uses.
- The Ocean Gateway Passenger Terminal and related facilities on the eastern pier will be developed as planned.
- Development on the Maine State Pier will not include a second cruise ship berth, but will include improvements to the local island ferry facilities, and will consider the addition of mixed uses that can coexist with the ship service facility.
- Possibilities for relocating international ferry queuing areas and incorporation of more green space will be considered.

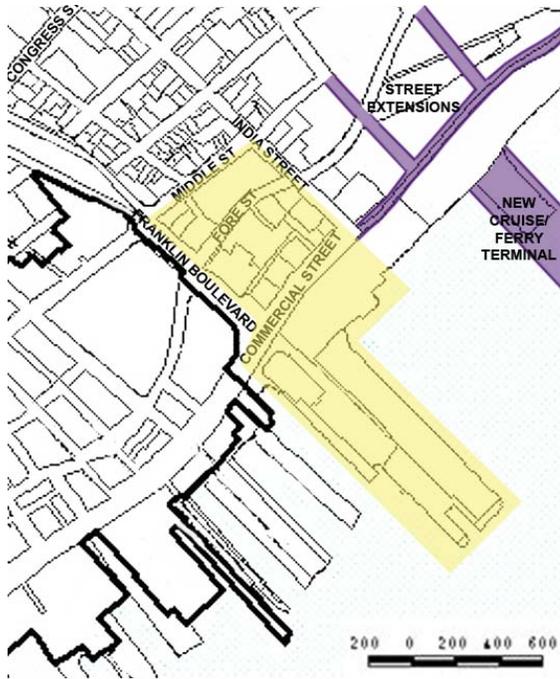


Figure 130: Assumed development in relation to downtown and site.

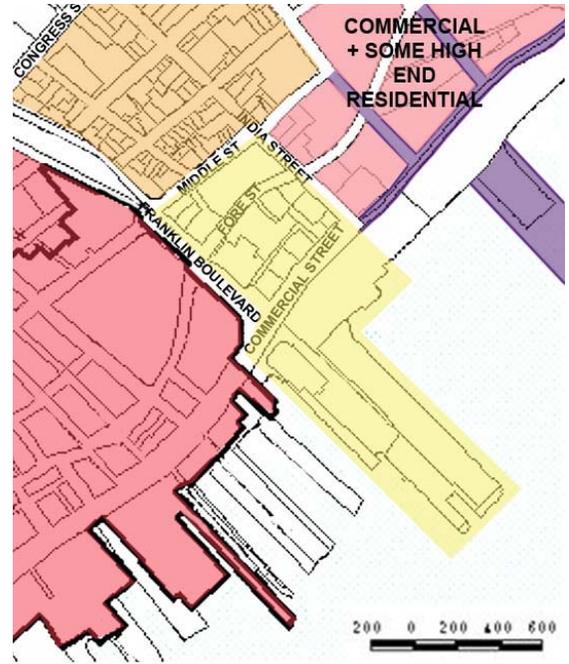


Figure 131: Impact of changes on site edges.

Cultural Identity and Inclusive Design

Ethnicity in Portland

Settled by British colonists, Portland, and Maine more broadly, have been populated largely by British descendents, with a strong presence of Scottish and Irish descent. The first recorded arrival of immigrants directly from overseas was a group of 20 Scotch and Irish families, arriving in 1718, the same year the town of Falmouth was established. Further influx of Irish and Scottish can be traced through the mid 1800's, particularly related to major building efforts within the city that created work opportunity or overseas events such as border wars between Scotland and England and the great famine in Ireland. Similarly, significant Italian immigration is noted to have coincided with the construction of the railroad in the 1830s. A strong presence of French-Canadian infiltration is also noted from these early years.¹⁴

Until 1923, the Federal Government operated an immigration station on Portland's House Island. While many of these immigrants moved westward or north to Canada, Portland continued to absorb new ethnicities. In 1930, only 55 percent of the city's population of 70,810 was of native parentage. Of the 32,492 non-natives, almost 30 percent were of Scotch-Irish origin, and almost 40 percent French Canadian. But 15 percent of Portland's population represented other cultures. By 1940, populations of Italians, Syrians, Greeks, Jewish, Polish, Finnish, Swedish, Germans, and African Americans were significant enough to be noted as having established recognizable neighborhoods and/or public celebrations and customs in the city.¹⁵

However, while the assimilation of the primarily western European cultures noted above shows a general history of immigration in Portland, which is often referenced as a point of pride in the city, it would not support claims of ethnic diversity today. The first slaves

arrived in what would be Portland early enough to participate in the defense of the area versus Indians in 1689, and slavery was ended in Maine and Massachusetts in 1783, although civil rights were still extremely limited. However, from the days of the first Census in 1790, less than 2 percent of Maine’s population was black. The other earliest non-white population was Native American, many of whom died from disease brought by Europeans, or in the process of their land being progressively taken.¹⁶

Today many Portlanders and outsiders have the impression of Maine overall as ‘the whitest state’, and 2000 census data seem to support this with an overall 96.9 percent of the population categorized as white.[<http://quickfacts.census.gov/qfd/states/23000.html>]

Most of the Portlanders that I spoke to referenced this status with a sense of chagrin. Not surprisingly, as Maine’s largest city, Portland’s population shows the presence of more diversity than the state as a whole, but Portland still appears less diverse in comparison to other cities and the nation as a whole. A few trends are surprising, such as having a higher percentage Asian population than Washington, DC, with this population level close to the national average.

	MAINE	PORTLAND		Washington DC	San Francisco	US
		Number	Percent	Percent	Percent	Percent
Total population	1,274,923	64,249	100.0	100.0	100.0	100%
One race		63,054	98.1	97.6	95.7	97.6%
White	96.90%	58,638	91.3	30.8	49.7	75.1%
Black/African American	0.50%	1,665	2.6	60.0	7.8	12.3%
American Indian/Alaska Native	0.60%	302	0.5	0.3	0.4	0.9%
Asian	0.70%	1,982	3.1	2.7	30.8	3.6%
Native Hawaiian/Other Pacific Islander	0	36	0.1	0.1	0.5	0.1%
Some other race	0.20%	431	0.7	3.8	6.5	5.5%
Two or more races	1.00%	1,195	1.9	2.4	4.3	2.4%

Hispanic or Latino (of any race)	0.70%	974	1.5	7.9	14.1	12.5%
Foreign born	2.9%	4,895	7.6	12.9	36.8	11.1%
Speak a language other than English at home	7.8%	6,030	9.9	16.8	45.7	17.9%

Table 1: 2000 Census Demographic Highlights for City of Portland, State of Maine, comparative cities and Nation. Source: U.S. Census Bureau, Summary Files
[<http://factfinder.census.gov>] [<http://quickfacts.census.gov/qfd/states/23000.html>]

These data reflect a somewhat rapid increase in diversity in the city population, as seen in a comparison of 1990 and 2000 census data:

	<u>1990</u>	<u>2000</u>	<u>% change</u>
Total population	64,358	64,249	-.2%
White residents	62,161	59,612	-4.1%
Non-white residents	2,197	4,637	111.1%
Hispanic residents	513	974	89.9%
Difficulty Speaking English	1,609	2,325	44.5%

Table 2: A comparison of Census data shows Portland’s non-white population more than doubling in ten years.¹⁷

Portland public school statistics also show the broad numbers of cultures within the city.

A detailed chart of languages spoken by high school students in the English as Second Language program shows over 40 languages, with Cambodian and Vietnamese most common. The language barrier suggests that these students represent the most recently immigrated cultures. The demographics of Portland high school, located in the downtown area, also more specifically suggest that much of the city’s diverse population live in or near the city a center.

PORTLAND PUBLIC SCHOOLS LEP STUDENTS BY LANGUAGE GROUPS

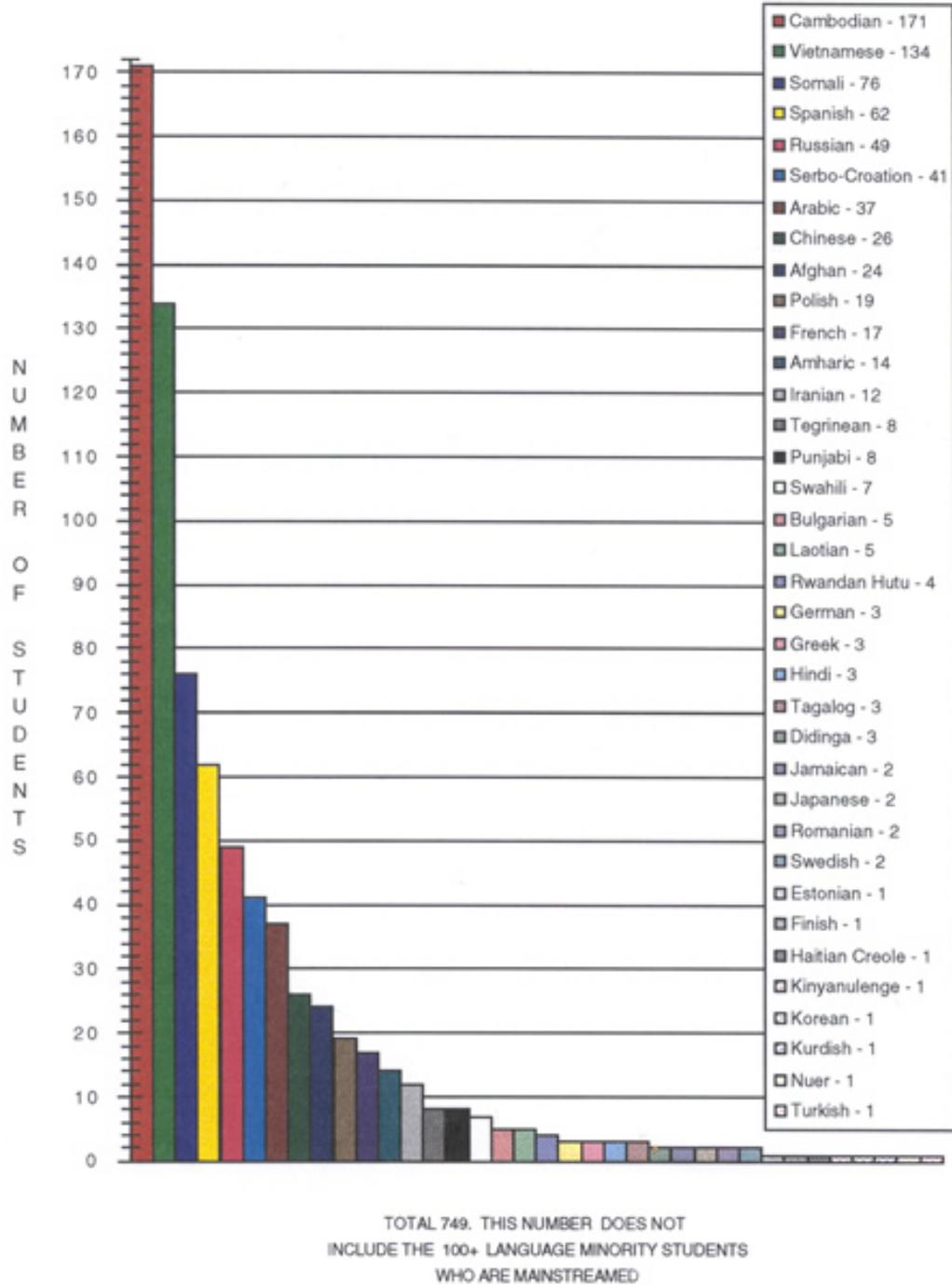


Table 3: Portland Public School students enrolled in English as a Second Language program by native language. [<http://www.portlandschools.org/Pages/Contents/PPSData/Languages.htm>]

Portland High School Fall 2003 Enrollment

	Number	Percent
White	833	67.9%
Black	231	18.8%
Asian	99	8.1%
Native American	100	0.8%
Hispanic	38	3.1%
Other	14	1.1%
Total	1225	

Table 4: Portland High School enrollment shows a greater mix of cultures than the city as whole.

[<http://www.portlandschools.org/Pages/Contents/PPSData/PPSEnrollEthnic.htm>]

Current Development Trends

Development in and around the site area to date has been as might be expected for a low density area located just outside any existing downtown area. Two shops, an Italian grocery and a pizza/deli/catering service, have a long history in the area dating to its prior identity as the 'Italian neighborhood', and are still thriving. A few others, such as a small bar, tobacco shop, auto glass repair shop, and most notably within the site, the Jordan Meats facility, seem to have survived to date in the area, but be on their way out, in obvious disrepair relative to newer establishments. There are also a few social service organizations in the area, whose patrons are assumed to live in the relative vicinity, including a few subsidized housing establishments a few blocks away from the site.

The majority of the other businesses in the vicinity appear to be relatively new. Some, such as a bike shop, have located in the area in order to have more space than is available in the more dense parts of downtown. Availability of parking is also attractive, with most shops having their own surface lot, and street parking plentiful and free, versus metered parking just a few blocks away. Other smaller businesses have assumedly located in the area to take advantage of the proximity to downtown, with reduced rent. An overview of these newer businesses in the blocks immediately surrounding the site is as follows:

- Other specialty foods (1 in addition to grocery above)
- Specialty hobby shops (3): sporting goods, bikes, sport-fishing
- One gourmet coffee and pastry cafe
- Legal and chiropractic offices (several)
- Real estate offices (one commercial one residential)
- One photo gallery/studio
- One trendy consignment shop
- Two gallery/boutiques

- Two hair salons
- One sunglasses shop (moving in)
- Six mid-to-high-end restaurants
- Two banks

In general, these newer shops cater to a different clientele than the older shops, showing a pattern of ‘gentrification’ seen in many cities. This pattern already seems to be somewhat exclusionary, as their products cater to higher incomes, if not also more ‘western’ interests.

But as the property values in the area rise with the plans for the new cruise ship terminal coming closer to reality, this situation threatens to become more extreme. Luxury condominiums, hotels, and shops catering to tourists are the primary focus of new development discussion. It seems that without a specific effort, the typical forces of economics and real estate will result in a continuation of the existing Old Port scenario, where many city residents, particularly recent immigrants who are for many reasons generally economically disadvantaged, feel no reason or ability to visit their own city’s most valued amenity.

Particularly in light of Portland’s lack of public open space, it seems critical that some space be created where the waterfront can simply be appreciated, without spending money. A public cultural institution offers further opportunity for year round, non-commercial activity at the waterfront. Both of these could also be of interest to both tourists and residents. Finally, within the realm of commercial development, it seems that opportunities need to be created to make this new waterfront area inviting to people of all backgrounds as well as incomes.

A Venue for Inclusive Development

The Center for Cultural Exchange is an existing organization in Portland. The organization's website provides a concise overview of its goals, activity, constituents, and programs:

“The Center for Cultural Exchange is a not-for-profit institution dedicated to advancing cultural understanding through arts and education programs. It serves as a community center for the expression of traditional folkways and contemporary performance. Hosting over 200 events per year, the Center is among the most active public presenters of ethnic heritage in New England. In partnership with Portland's ethnic communities - from the older Irish, French Canadian, Greek, Jewish, Armenian and African-American immigrant communities, to the newest Americans from Cambodia, Afghanistan, Latin America, Somalia, Congo and Sudan – we build year round programs of performances, workshops, educational residencies, dances, ethnic meals, public dialogues, film screenings, and festivals. The Center broadcasts a weekly radio show, produces a series of audio compact discs, coordinates heritage-based regional touring programs, publishes booklets relating to community and culture, and manages a small café.”

[<http://www.centerforculturalexchange.org/about.html>]

The Center brings artists from all over the world for musical, dance, and dramatic productions that address cultural issues. In addition the Center holds many educational programs, from Brazilian dance to Japanese calligraphy and traditional Celtic fiddling, for adults, teens, and young children. More uniquely, the Center enlists artists in residence and other local artists to work with local community groups, helping them create programs that express their cultures both within their own communities and the broader public.

The philosophy behind the organization's efforts is that American culture can not be truly 'democratic', or representative of all of the people, until it embraces the richness and diversity of the nation's many minority culture groups. According to James Bau Graves, one of the Center's artistic directors, this 'democratization' is proposed as an alternative to the more often seen trend of cultural groups losing their ties to their cultures as they assimilate into mainstream American 'culture', which has been dumbed-down and neutralized by the entertainment industry and other mass marketing. Bau Graves suggests that rather than practicing cultural traditions privately or in secluded community centers, minority groups need to express their cultural identities publicly in order to become a part of the broader cultural identity.¹⁸

The goals of this organization tie perfectly with the goal of bringing all of Portland's public to the waterfront. While a more traditional arts or cultural venue could further exclude minority populations, this organization's programs embrace all of the city's cultures, from old to new. A performing arts venue can also easily be tied to an outdoor space. And finally, the Center's multicultural focus provides a theme that can be built upon in order to create other opportunities for Portland's various cultural and economic groups.

Design Challenges

Site Challenges

The greatest challenges related to the site concern its edge conditions. To the west, the site needs to be woven into the fabric of the existing downtown. Because Franklin Street is a divider here, it must be made a more welcoming, walkable street, and passage at cross streets should be made as amenable as possible. A connection to the old port, and route to the Arts District should be clear.

To the North the challenge is not creating a barrier, physical or economic, to neighborhood residents and the patrons of the many social services on Congress Street. Because there are historic sites and buildings in this direction, tourists should not be discouraged from exploring these areas. But the area should not be given up completely to tourist and commercial uses and luxury condominiums. While many of the existing buildings on the site and to its north are of small scale, the larger scale of buildings at the top of the hill relieves some of the pressure to maintain this existing small scale and low density. However, the maximum building height allowed on the Jordan site, if inappropriately utilized, could create a wall between the waterfront and residents. The increased slope of the hill beginning to the north of the site mitigates this issue somewhat, but not completely.

To the east there is a conflict between what is and what will be. According to current height restrictions, and existing master plans, the scale will be smaller than to the west of the site. However, there are discussions of increasing this height limit to match the 65 foot limit allowed in the lower downtown area and on the Jordan block. And lastly, to the extent that planned development does not occur, the existing surface parking and low density environment could remain. The recent purchase of two lots in this area by

private developers, and their stated intention to build parking and retail on one and condominiums on the other, indicates that this third possibility is extremely unlikely.

At the waterfront itself, the challenge is one of incorporating the functional needs of the waterfront related to industry and security, while creating access to the water, or at least a feeling of access and a view. Two specific factors in this challenge are relocating existing parking, and accommodating ferry queuing. Accommodation of parking for all new program elements will be another more typical challenge.

Existing structures on and around the site also present challenges. The general preference of the city is to keep and reuse historic structures, and based on the history of the site, and general mix of historic and new buildings in the city, this approach would seem most fitting. The location of the historic buildings on this site limits the possibilities of new development somewhat. However, the site area is large enough that it should be feasible to work within these limits. Another structure to be considered is the pump station on India Street adjacent to the site, which might be relocated, or treated artfully so as not to be intrusive to the new program.

A final area of challenge is the Maine State Pier. Questions here include how the pier might accommodate new uses, whether any existing structures should be removed, and how the pier might be made more welcoming and usable given its prominent location and the waterfront views it offers. Regarding the long range future of the Pier, it is unclear whether the ship service function will remain, if a second cruise berth would be needed, or whether the pier might eventually be converted to non-marine uses. Designs would ideally be appropriate for either future scenario. Practical issues such as parking for island residents and pier employees need to be weighed versus ideal design wishes.

Building Challenges

The greatest challenge related to the building itself is accommodating the range and scale of activities to be including in the program. Circulation and entry will be challenged by several program elements which will require direct entrance from the street as well as entrance from within the greater facility. Another challenge will be balancing and separating the day-to-day circulation of the organization's staff and community members using classroom facilities from performance and event spaces.

Regarding form and character of the building, there are several considerations:

- What is the appropriate scale for the context, and is that scale compatible with the program?
- How can the building be designed to be perceived as approachable by the community, but also compelling and memorable to visitors?
- How might the building convey its multicultural arts identity?
- How will this new building with its own character be made to 'fit into' Portland's somewhat conservative architectural landscape?
- How can the building respond to both the waterfront and Portland's Northern climate?
- How will the building relate to the street? In the current facility, performances can be seen enough from the street that passersby are compelled to look, to see what is going on. This is compatible with the goals of the facility and would be desirable.

Expanding on this idea, provisions for projecting movies or performances from the interior onto the exterior of the building might be considered.

- Similarly, how will the building relate to any public open space included in the site programming or broader urban design?

Precedents

Precedents: Cultural Facilities in Waterfront Redevelopment

Boston, Massachusetts. Boston ICA:

Boston is in the process of building a new Institute for Contemporary Art as a part of the redevelopment of its Fan Pier area. The Fan Pier waterfront is adjacent to the typical tourist waterfront area including Faneuil Hall and the aquarium. It has historically been an industrial pier area, and been largely covered with surface parking. More recently however, redevelopment efforts have been aimed at integrating the area with the downtown and tourist activity. The first stages of this effort included the renovation of the former World Trade Center into offices, the location of an outdoor concert venue, and the recent building of a new federal courthouse. The New ICA facility is a part of a next stage of development which includes extending the walking path of the waterfront from the aquarium to the world trade center, a new hotel with special conference facilities, and ultimately includes a large new convention center.

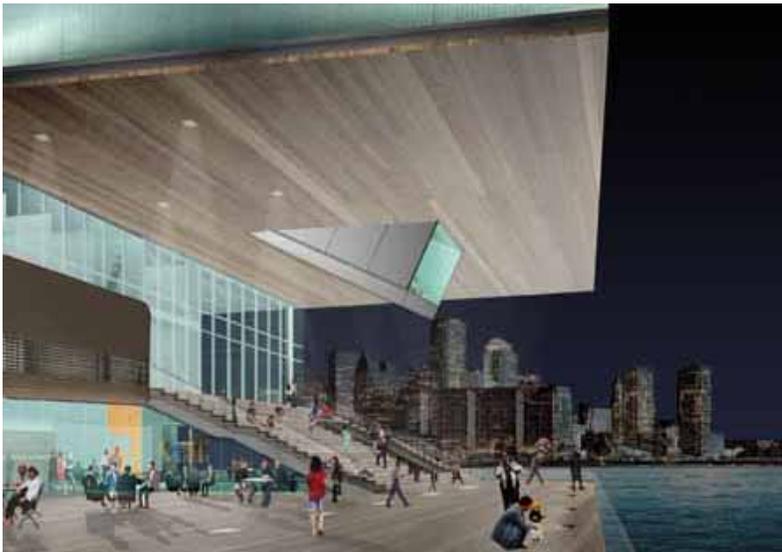


Figure 132:

An image of Boston's Harborwalk continuing under the new ICA with financial district behind
[<http://www.arcspace.com/architects/DillerScofidio/ICA>]

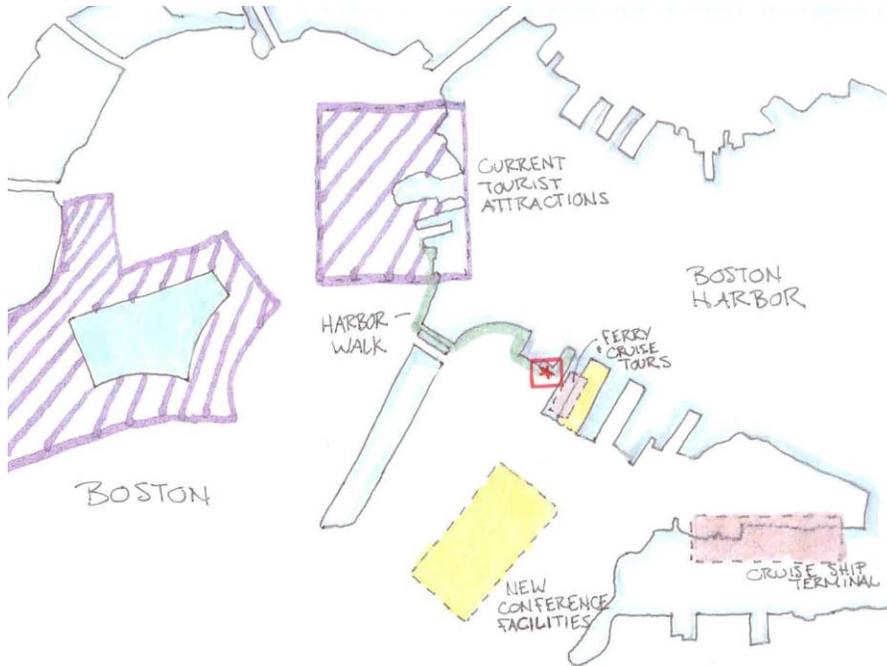


Figure 133: Overview of the Boston ICA and its urban area shows its location in an area of new development, between waterfront cruise and ferry services and major downtown and existing tourist sites. The HarborWalk creates a pedestrian link to the site.

This example has both urban design and programmatic elements in common with my proposal for Portland. The ICA itself is intended to serve as both a tourist venue, and a place for community involvement and education. The center has classrooms for children and adult art classes, as well as a café and internet research room. These community based functions serve a similar purpose: maintaining access to the waterfront for city residents along with tourists



Figure 134: Image of performance in the future ICA theater. This venue also serves as an example of a performance space exposed to the exterior, a scenario under consideration for this project. [<http://www.arcspace.com/architects/DillerScofidio/ICA>]

Copenhagen, Denmark: New Opera and mixed-use/arts district:

Copenhagen has recently completed a new opera house on dock Island, an area of its waterfront that was historically a military and warehouse district, and has long been abandoned. The area is recently under redevelopment as a mixed-use and arts district, ultimately to include several arts facilities, loft apartments, offices, shops and restaurants¹⁹. This area is adjacent by water to the main waterfront area of the city that is typically visited by tourists, and therefore will be easily accessible to tourists. However, it also extends the fabric of the city to hold many functions of day-to-day use for residents. This precedent also shows that even larger cities must constantly adapt and expand beyond existing defined areas to meet an increased demand for cultural activity. Finally, the ship-like form of the building serves as an example of waterfront imagery in architecture.

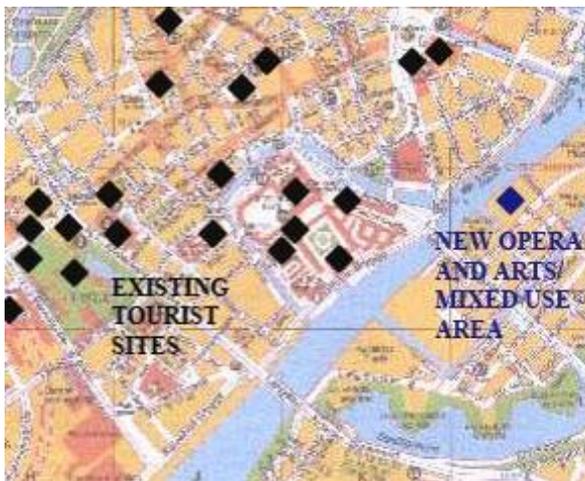


Figure 135: New opera and arts area adjacent to existing downtown and tourist sites.



Figure 136: Henning Larsen's Opera facility: an example of ship-like imagery in waterfront design.

[www.arcspace.com/architects/larsen/Opera]

Precedents: Urban Design of Cruise Ship Ports

Helsinki, Finland:

While there are no major cultural facilities located in the main port area of Helsinki's waterfront, valuable design principles can be seen in considering the relationship between Helsinki's port area and the location of its major public attractions. At the primary waterfront area, cruise ships, ferries, dinner cruises, and some fishing boats all share space. Because of the large crowds and varied service vehicles that pass over the immediate waterfront area, the space is hardscaped, but open, with unobstructed views to the water. Making the most of this paved space, a public market with vendors selling produce, fish, baked goods, art, and souvenirs takes place. An enclosed structure with a smaller number of formal market stands provides some market presence in the off season or on inclement days. Across the street from where the market takes place, there is a welcome center, providing information to orient incoming tourists.



Figure 137: Overview map of Helsinki's South Harbor shows pier with four terminals and proximity to train station.

[<http://www.hel.fi/port/english/matkustajaliikenne/satamat/index.html>]

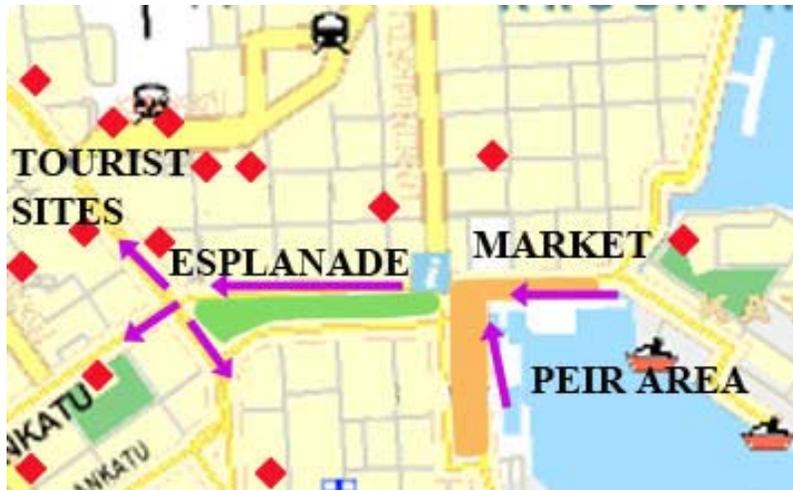


Figure 138: Promenade from pier to tourist attractions

[basemap from <http://kartta.hel.fi/opas/en/>, additional data by author]



Figure 139: View of pier area

[<http://www.hel.fi/port/english/matkustajaliikenne/satamat/etelasatama/index.html>]

To the West of the center of the marketplace, a long narrow public park, the Esplanade, provides space for both tourists and residents to enjoy the waterfront activity. The park includes an outdoor stage, outdoor café, kiosks with beverages and ice cream, and plenty of seating areas. In addition to being a destination in itself, the park establishes a natural promenade, leading tourists the few blocks from the pier area to the ‘downtown’ and the majority of cultural and tourist sites. The Esplanade is also lined with shops, restaurants, and a few hotels.

Precedents: Building Type

*Half Moon Theater, London, 1984: Flexible Stage Options*²⁰

The Half Moon Theater in London was the first theater built in London in almost a century. In London's east end, the theater is aimed primarily at bringing arts to the community audience, rather than traditional theater crowd. The theater uses a modification of the black box approach, also referring back to Elizabethan traditions of theater performances in streets and courtyards.

This precedent is first valuable in its approach to stage and seating. A large open room accommodates an average crowd of 450, and using all flexible seating is completely adaptable to varied arrangements and activities. Staged seating is provided in retractable and mobile units which are stored in wall cavities.

The theater design is also of interest for its relationship to the street and outside. Not completely a 'black box', the theater has windows to an internal courtyard. The main stage room is also separated from an entry courtyard which faces the street by a large operable 'garage door'. This approach allows additional space for performances, and allows performances to be more public, including the street in the space of the audience.

The program also includes a smaller intimate theater, connected across an internal courtyard.

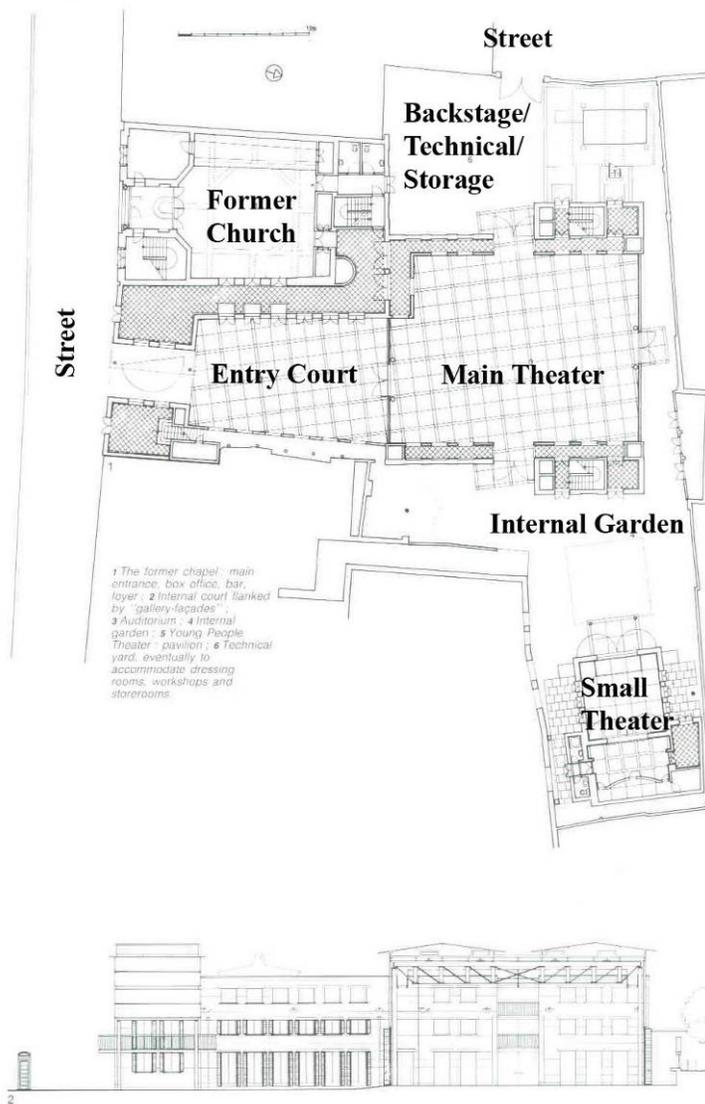


Figure 140: Half Moon Theater plan and section.

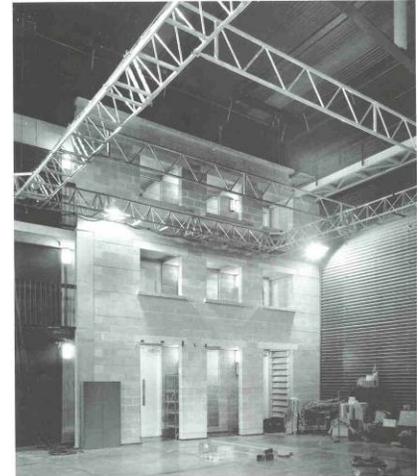


Figure 141: Interior view.

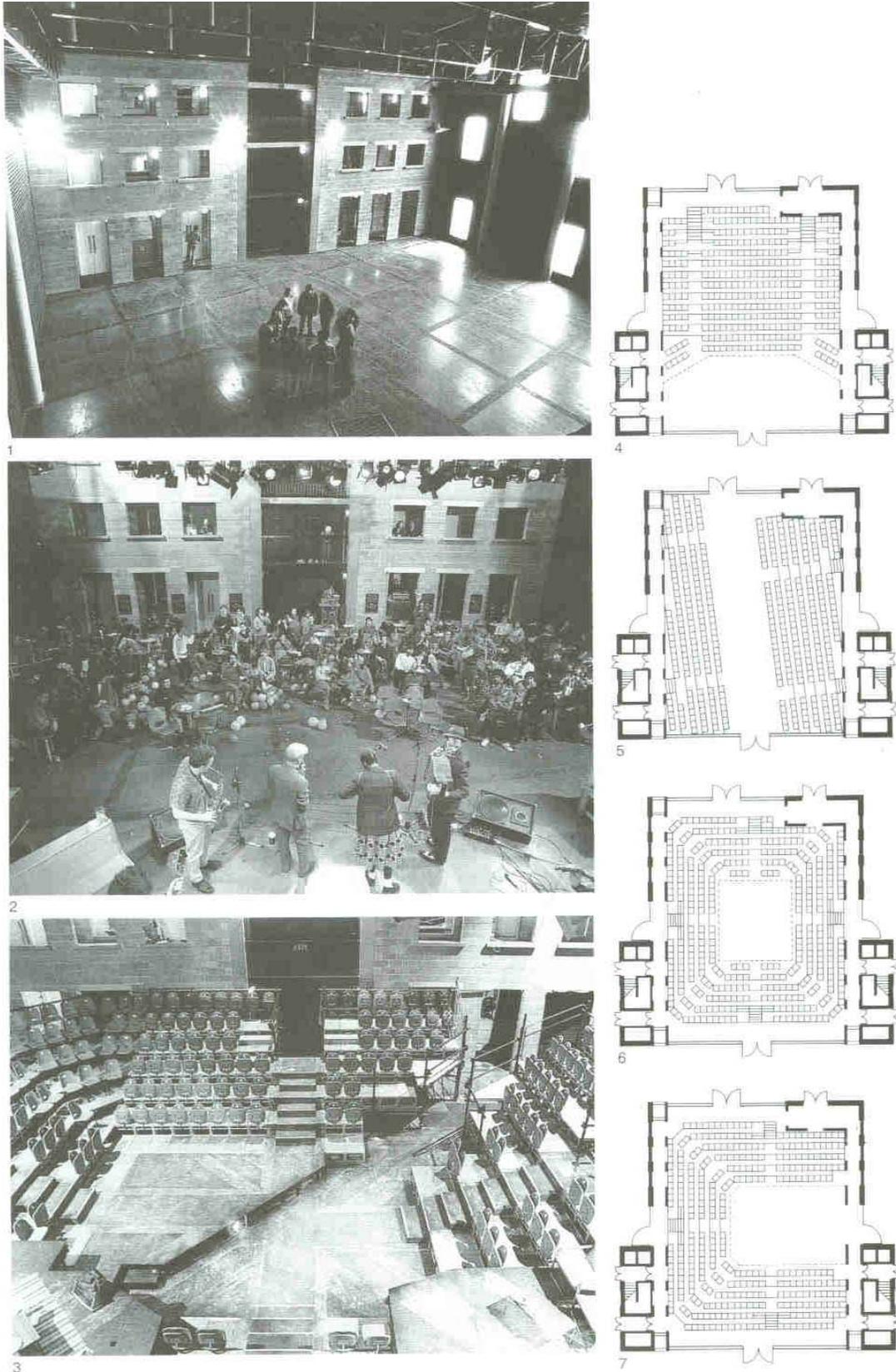


Figure 142: Varieties of performances and seating configurations.

Moveable Seating Units: Project for Carnegie Mellon University Theater²¹/Experimental Theater University of Nebraska at Omaha²²

In the Project for Carnegie Mellon University proposal, a modular system of seating on air casters which could also be arranged to suit extremely varied performance types and needs was designed. Varied aisle types were also designed to accommodate angled connections between banks of seats. This project was not completed due to a change in university administration and budgets.

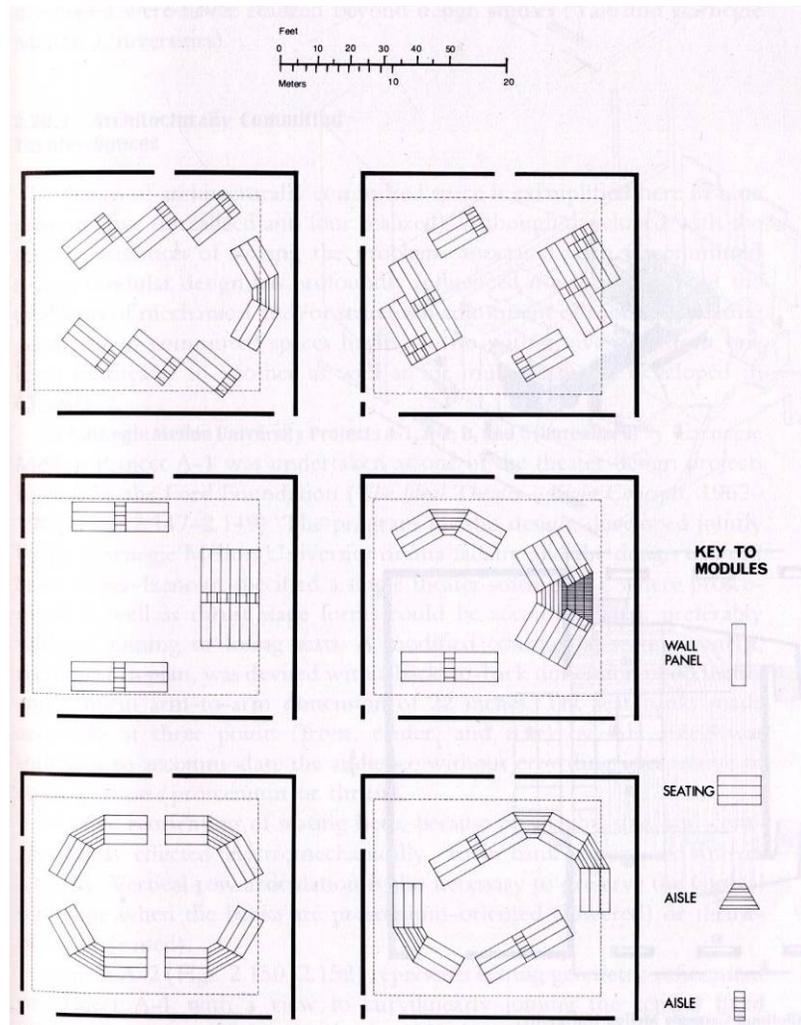


Figure 143: Seating variations and modules proposed in Carnegie Mellon project.

The Experimental Theater at the University of Nebraska at Omaha uses a similar type of seating, with fixed aisles integrated to the seating banks.



Figure 144: View of seating modules.

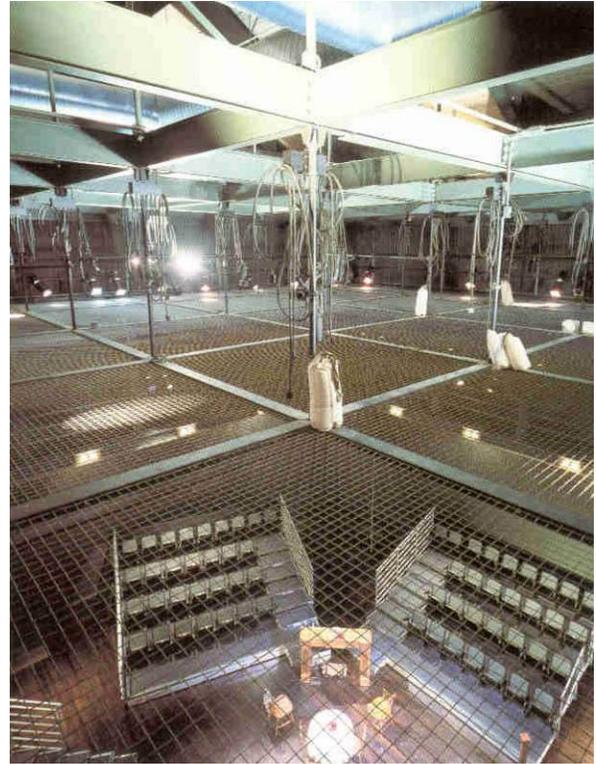


Figure 145: 'Black Box' lighting grid above.

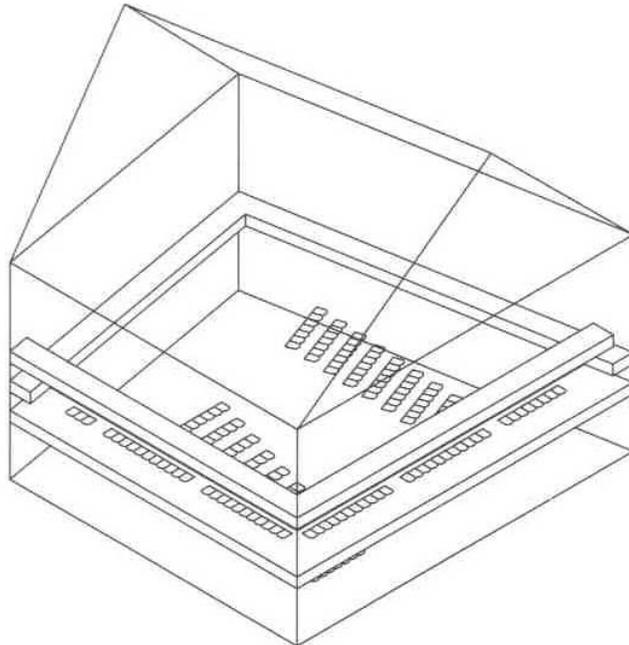


Figure 146: Axonometric view showing balcony and catwalks.

Building Program

Overview of Program and Functional Considerations

The facility is expected to function as both a community center and a more formal performance venue. While the performance areas of the facility will be used for specific events, most often held evenings or weekend days, the rest of the facility, including a gallery, offices, classrooms, restaurant, and cooperative arts shop, is expected to be active on a daily basis. During a typical day, the gallery, restaurant, and arts shop would be open to the general public. In order to cater to tourists and locals, the restaurant would serve quick, light meals, although a more formal dining area might also be included. Several ethnic varieties of foods would be offered, providing work opportunity for city immigrants. Similarly, the cooperative arts shop would sell crafts and other products made by local artisans and artists, proving an outlet for those not ready for their own shop. The gallery would serve as an exhibitions space for various types of exhibits, including those of an ethnic nature, as well as exhibitions of works from the art school, and other local schools. During performances, all areas of the facility would be open and accessible to visitors. Ideally however, access to the restaurant and shop would not be limited to ticket holders at these times. The administrative and classroom areas of the facility would also be used daily, by employees and local residents.

Detailed Program Description:

Overall Square Footage: 27,900 sf

Performance Related and Public Spaces:

22,300 sf

Lobby:

1500 sf

A large lobby should accommodate the combined maximum crowd of the two performance spaces, and should include ticketing, coat check, access to the restaurant, arts shop, and restrooms. The lobby should be the most prominent point of entry to the building, and should relate to the street and perhaps also to the water or any associated open space. It should have plenty of natural light, views if possible, and project its activity outward, particularly when used at night. A stair is expected for access to balcony seating.

Larger Theater:

4000 sf

The major performance area should seat 400 to 500 people. The stage and seating should be adjustable to accommodate wide variation in audience size and desired seating arrangements. This could be accomplished through a system of moveable seating, by use of partitions that divide the space, or a combination of the two. At least one level of balcony seating is desired. A formal fixed proscenium stage is particularly not desired as it may be intimidating to community performers. Some type of 'black box' approach will likely be most suitable.

The activities that will take place in the space will include live music and dance, spoken word performance, movie viewing, and some small dramatic productions.

Acoustics should be primarily designed for music. Accommodations for sets and extensive lighting are not considered necessary, while wings for entrance and exit of dancers, and a backstage area with dressing facilities are needed.

As previously mentioned, it might be desirable for the theater to have direct windows to the outside. The extent of this could range from small viewing windows to a wall of ventricular glass as seen in the Boston ICA. A variety of options are to be explored.

Small Theater: 1500 sf

Some performances may be designed for a more intimate audience. This space should accommodate up to 100 people, all within close proximity to the performer. It is possible that the center could hold simultaneous events, so while the space might be designed so that it can function as an extension of the larger stage, it should primarily function separately and provide a more intimate setting. The smaller stage should have its own lobby/vestibule, but the spaces should share other support facilities.

Back Stage and Wings: 1300 sf

These spaces should be shared by both stages, and located to best support each, to provide access from each stage to other support areas, and such that delivery of sets and other service activities are separate from public circulation. A separate

scenery shop is not deemed necessary as expansive sets are generally not expected as backstage and classrooms could provide space for this purpose as needed, as.

Green Room/Dressing Rooms: 700 sf

The green room should comfortably accommodate at least 20 people, and should include a sink and refrigerator for refreshments, as well as casual seating and space for instruments or other props. Separate male and female dressing areas should include changing and makeup areas, restrooms, at least one shower.

Sound/Recording Studio: 400 sf

This room should be as close as possible to both stages for recording of live performances. A small recording room could also be included.

Kitchen: 500 sf

The kitchen should be sufficient for serving up to 200 guests, assuming that the larger performance space or the lobby area could be used for dinners or other such events. Direct access to both of these areas should be provided, with circulation that does not interfere with that of performers or audience/guests. The same kitchen would also be expected to serve the restaurant, and thus should be immediately adjacent or located within its premises.

Gallery:

4000 sf

The gallery is designed for the display of art from the local art school, community members, artists in residence, or traveling exhibits. These might include hung artworks and/or moderately sized sculpture.

The space should be accessible from the lobby, and share support facilities. The gallery would be open daily, and could be accessible during events. The gallery space could be designed as a part of the lobby, or as a separate space. At least a considerable portion of the gallery should be visible from the exterior of the building, serving to advertise the facility and make its display most public. In these areas natural light and views would follow. However, some areas of controlled might also be desired.

Multicultural Restaurant:

1000 sf

The restaurant would be open daily and possibly evenings and should be directly accessible from both the street and the lobby of the facility. Access to any adjacent public open space would also be ideal. The restaurant may be divided in to sections (i.e. café, restaurant, bar) to suit various needs and clientele. The restaurant would most likely share the facility kitchen described previously.

Natural light should be plentiful and views would be beneficial. Small separate restroom facilities should also be included. Internet facilities might be included for tourist and community use.

Cooperative Arts Shop: 1000 sf

The arts shop would be open daily and possibly evenings and should be directly accessible and visible from both the street and the lobby of the facility. Access to any adjacent public open space would also be ideal. The need for street visibility outweighs the need for, but ensures that natural lighting will be plentiful.

Circulation: (20% of above program) 3200 sf

Circulation spaces include stairs, elevators, corridors, and all entry and other access areas.

Service/Miscellaneous: (20% of above program) 3200 sf

Service functions include restrooms, storage, loading, and mechanical spaces.

Offices and Classrooms 5600 sf

Staff Offices: 3100 sf

Eight individual offices each 150 sf

One shared volunteer office area 300 sf

Other workspace (copy, etc) 100 sf

Conference room 450 sf

Break room	200 sf
File storage	150 sf
Circulation	(~15% of above) 350 sf
Service/Miscellaneous	(~15% of above) 350 sf

Natural lighting should be provided to as many occupied spaces as possible.

Classrooms/Community Spaces	2500 sf
-----------------------------	---------

Large classroom/studios (2)	each 500 sf
-----------------------------	-------------

These spaces should accommodate up to 20 adult students and be flexible to be used for arts, crafts, dance, and music. Because classes and programs are offered for children the room should accommodate both adults and children. Significant storage should be included for multimedia supplies.

Small classrooms (2)	each 300 sf
----------------------	-------------

These classrooms should be suitable for small discussions or small group instruction. One could be a computer/media lab.

Music practice rooms (2)	100 sf each
--------------------------	-------------

Circulation	(~20% of above) 350 sf
-------------	------------------------

Service/Miscellaneous	(~20% of above) 350 sf
-----------------------	------------------------

Summary of Program Elements

	<u>Square Footage</u>
Performance Related and Public Spaces:	
Lobby	1,500
Large theater	4,000
Small theater	1,500
Backstage/wings	1,300
Dressing/Green room	700
Music recording	400
<i>Subtotal</i>	<i>9,400</i>
Gallery	4000
Kitchen	500
Restaurant	1000
Arts shop	1000
<i>Subtotal</i>	<i>6,500</i>
Circulation (~20% of above)	3,200
Support spaces (~20% of above)	3,200
<i>Subtotal</i>	<i>6,400</i>
Total	22,300
Offices and Classrooms	
Staff Offices	
Eight individual offices (each 150 sf)	1,200
One shared volunteer office	300
Other workspace (copy, etc)	100
Conference room	450
Break room	200
File storage	150
Circulation (~15% of above)	350
Service/Miscellaneous (~15% of above)	350
<i>Subtotal</i>	<i>3,100</i>
Classrooms/Community Spaces	
Large classroom/studios (2)each 500 sf	1,000
Small classrooms (2, each 300 sf)	600
Music practice rooms (2, 100 sf each)	200
Circulation (~20% of above) 350 sf	350
Service/Miscellaneous (~20% of above)	350
<i>Subtotal</i>	<i>2,500</i>
Total	5,600
Grand Total	27,900

Organizational Diagrams

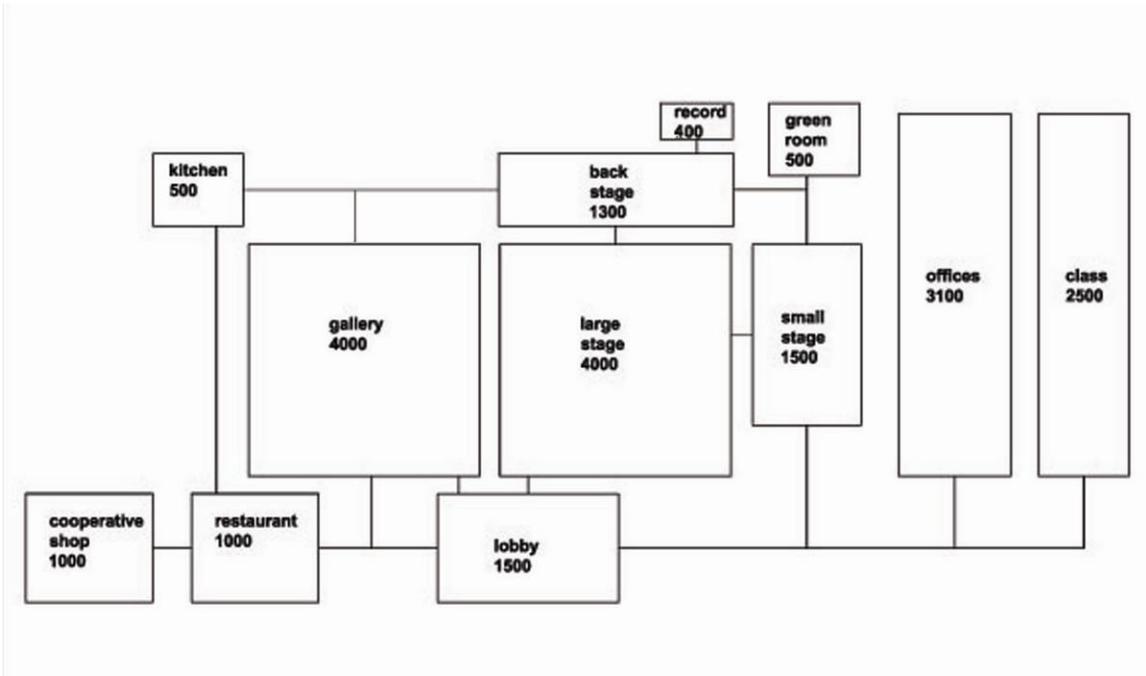


Figure 147: Relationship and general proportion of program elements.

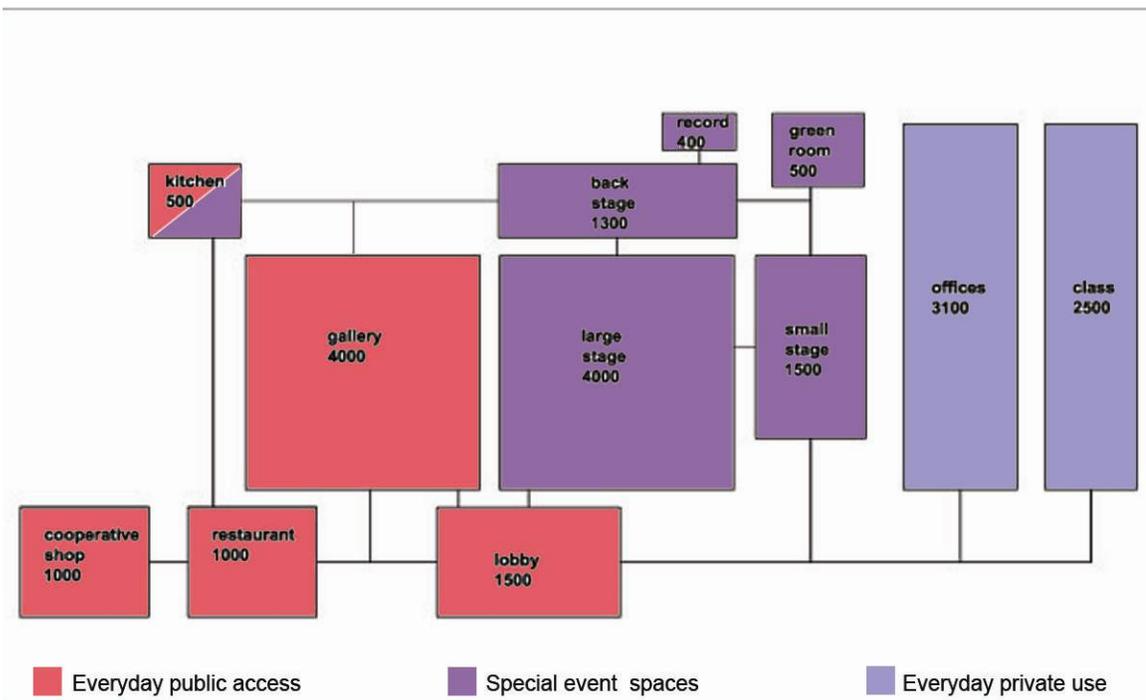


Figure 148: Program elements categorized by type of use.

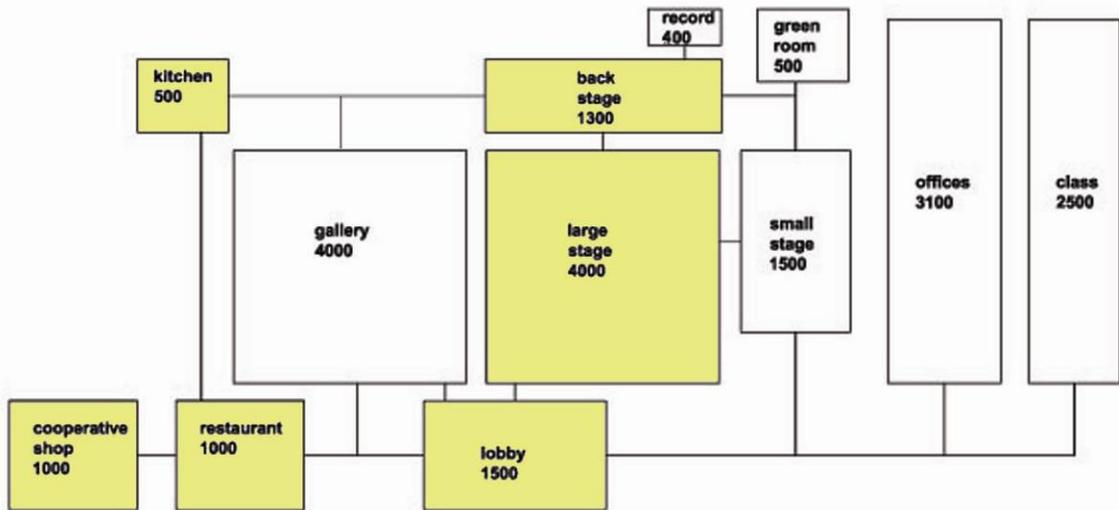


Figure: Elements requiring ground floor access (shaded); others are more flexible with regard to their vertical location. This analysis will impact the building massing.

Other Program Elements

Parking:

Parking for events should accommodate approximately 300 cars. This parking should be located in close proximity to the center, but should be planned primarily for local commercial/retail daytime use (not residential, as events would require evening use.) A small number of spaces could be reserved for Center staff, daily visitors, and community members attending classes.

Outdoor performance space:

An outdoor stage area should be included as a part of the public open space intended to be included in the overall design. This space should be relatively informal and may be as simple as a raised platform with grass seating area, using the building as a backdrop. Activities that might take place in this space would be similar to those occurring in the interior theaters. The space should be inviting and useable by the public when not in use for performances.

Space for small artist/vendor carts:

This would be a paved outdoor area where small vendors could sell food and crafts. It is envisioned as a potential way to make use of the paved area needed for ferry queuing, as this only occurs once to twice per day, typically in the evening.

Preliminary Design Approach and Alternatives

Design Goals

- *Introduce public open space and a public cultural facility that create reason for being at waterfront for all of Portland's residents, and a place of interest which also communicates the cultural identity of the city to tourists:*
- *Anchor arts district at waterfront:* The arts district can be seen to have outgrown its current definition. This new facility would serve as a new anchor for the Arts district, bringing this strong aspect of the city's character to the immediate attention of incoming visitors.
- *Create a sense of arrival and promenade for incoming tourists:* Approach by car and water are to be considered.
- *Weave the site area back into downtown:* Because of its location, increasing prominence as entry point for tourists, and history as the initial site of the city, the site area should be made to feel as connected and part of the downtown as possible. Franklin Street and those that cross it should be walkable, with sidewalks, attractive street lighting, trees or other landscaping, and benches. The historic buildings and sites in this area should be identifiable to pedestrians and included in sightseeing information.
- *Prevent the creation of a physical or economic barrier between housing in the vicinity and new development:*

Specific Design Approach

- Assumed development adjacent to site area:



Figure 150: General use and massing of development assumed, and considered most suitable, to occur around the site.

- North of the site: Development would follow existing patterns of mixed commercial with housing above on India and Middle Street, but with increased density, and elimination of surface parking lots on the street. The blocks between India and Franklin Streets could remain primarily residential, at a larger scale than existing, but including housing for mixed incomes and family sizes. The specific design of these buildings will not be a part of this thesis.
- East of the site: As stated previously, the plans outlined by the city for this area will be assumed to be completed, with commercial development at the extension of Commercial Street, significant structured parking to accommodate cruise facility needs behind, and mixed commercial and

housing on the inland blocks. The scale of this development is assumed to be within existing height limits.

- Historic and other existing buildings: The diagram above also shows the historic buildings within and immediately adjacent to the site that might impact site design. These buildings will be assumed to be preserved, and included in design schemes, while other existing buildings in the site area can be assumed to be eliminated. Possible exceptions to this assumption may be considered and will be noted.
- Maine State Pier:
 - Following the local precedent of the street and built environment continuing onto piers, the Pier should be an active part of Portland's downtown. In order to increase activity on the Pier, the existing ship service building might be rebuilt or have a second level added to accommodate new uses. Appropriate retail such as larger restaurants with outside dining, recreation facilities, and an 'ESPN Zone'-type entertainment venue could bring new activity to this space. Again, the specific design of these buildings is not to be a part of this thesis.
 - The island ferry terminal will be rebuilt in its current location.
 - The parking garage may be removed or redesigned. A more appropriate structure and function facing this vital intersection and threshold will be considered.
 - Design interventions to the intersection in front of the Pier will be considered with the goal of improving sense of arrival and the pedestrian experience.

- Ferry queuing should be handled such that the waterfront can be most accessible. The most likely approach would use environmentally appropriate paving where needed but leave a landscaped waters edge. This paved area could potentially also be used by vendors during daytime hours, as queuing occurs primarily in the evenings. While the extensive space required for this function limits options for its location, this could be evaluated further to allow another use of the waterfront on the site.
- Design will attempt to keep the blocks of the site porous, to prevent creation of a barrier to neighboring residential, and encourage circulation both North/South and East/West through the site. This approach also hopes to imitate and capture the success of the pattern of small open spaces existing in downtown.
- The walking trail should be continued to the west on Commercial Street, also serving to provide a more hospitable walking experience for all waterfront visitors. Removal of parking from the waterfront side of the street may be required in order to widen the sidewalk, or space may be found within existing configuration.

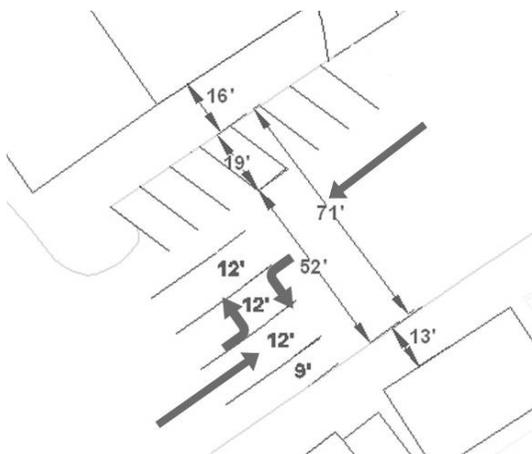


Figure 151: Typical Commercial Street dimensions and lane organization



Figure 152: View of Commercial Street sidewalk. The walking trail should be incorporated here.

- All streetscape in the site area should be improved to include sidewalks, trees and/or other landscape elements, and other street furnishings as appropriate and consistent with the Old Port and downtown.

Design Alternatives: Site

Applying the general principles described above, the following three urban design schemes consider various alternatives for the specific site of the new arts facility and its associated outdoor space:

Scheme 1) Build on the development of Franklin Street as connector between current downtown and site, and create a direct link to new public green space associated with the new arts facility. This approach assumes that the waterfront area is used for ferry queuing.



Figure 153: Site Scheme 1: Franklin Street as connector between two complementary green spaces

One apparent negative of this approach is the separation between the new facility and open space and the waterfront. However, solutions to this issue can be found.

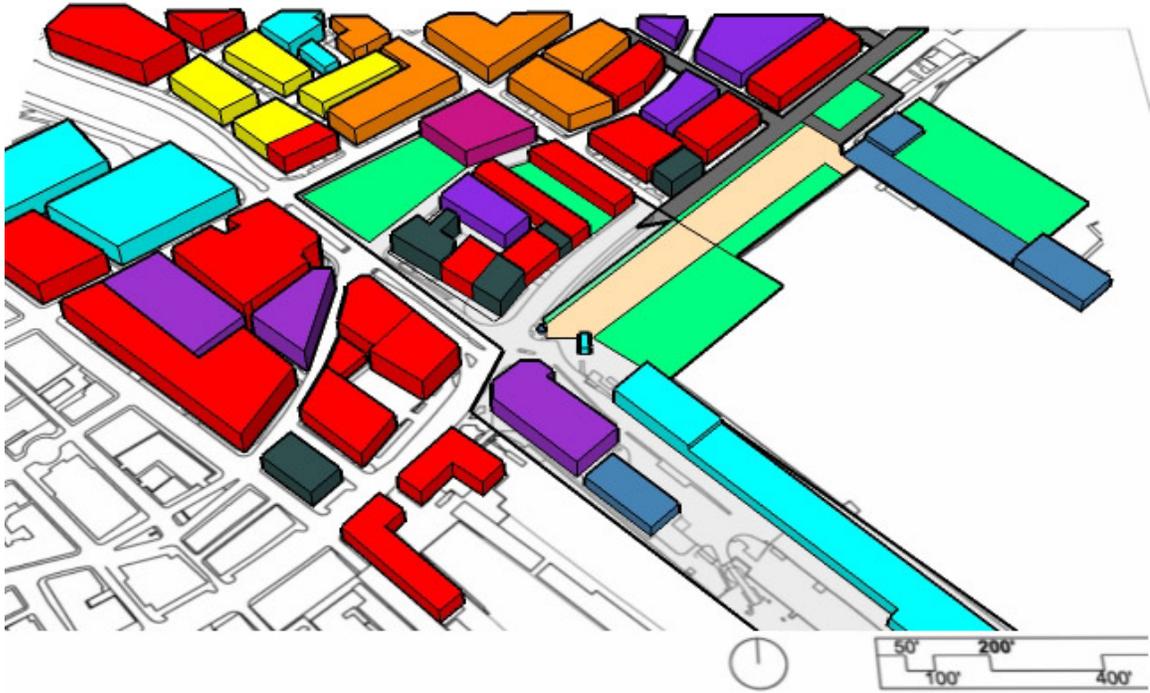


Figure 154: Solution 1a) Creating an arcade on the lower site block enhances the porosity of the block, and could encourage pedestrian traffic from the waterfront to the heart of the site area.



Figure 155: Solution 1b) Another approach could focus on the historic buildings on the lower block, and allow for a variety of spaces.

Scheme 2) This scheme locates the new facility on the lower block, and focuses its associated open space toward the water. Queuing is still assumed at the waterfront.



Figure 156: Site Scheme 2) Open space focused toward waterfront..



Figure 157: Scheme 2 Axonometric view with uses: One advantage here is the more complete character of the blocks to the north of the site

Scheme 3) This scheme builds on the waterfront, assuming that queuing can be relocated to the east of the site area, and that security restrictions allow building in the secure zone.



Figure 158: Site Scheme 3) Building at the waters edge.

Within this option, porosity might still be created through the inland blocks, but without the arts facility to draw pedestrians in that direction. However, an advantage of this scheme could be seen in that it maximizes built space within the inland blocks.



Figure 159: Solution 3a) Building on the waterfront; assuming relocation of queuing

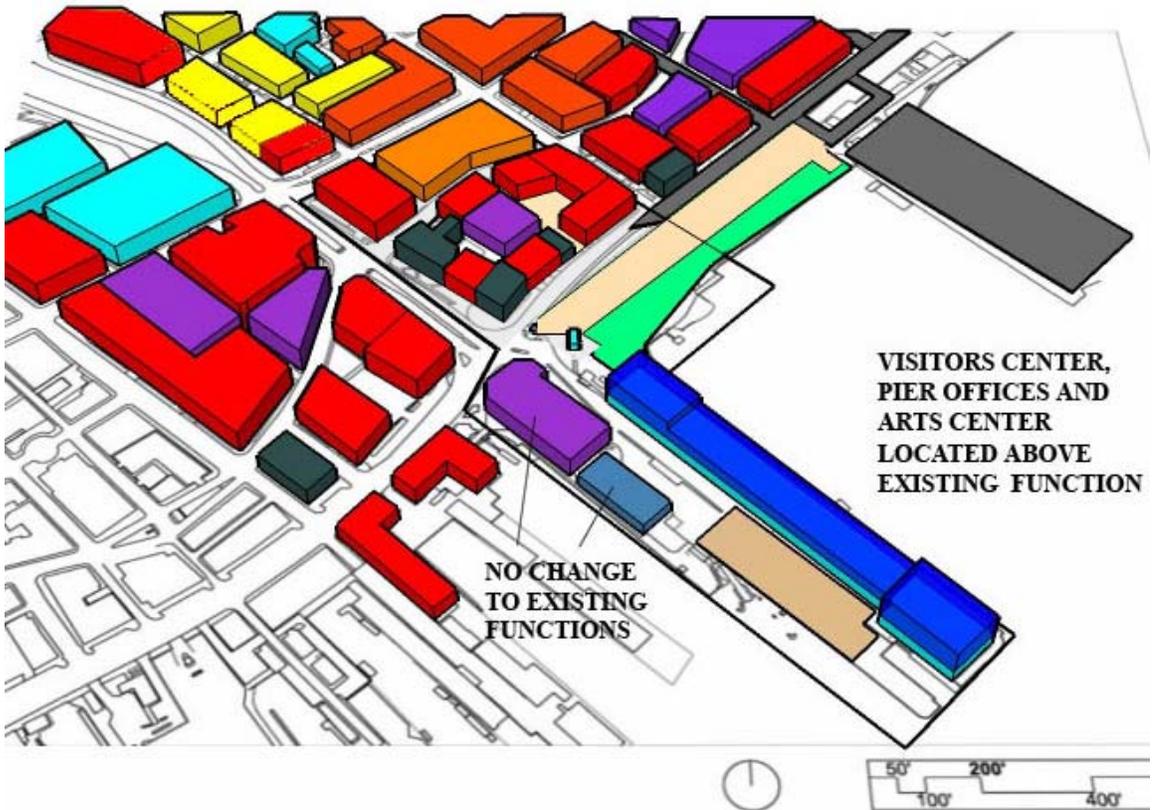
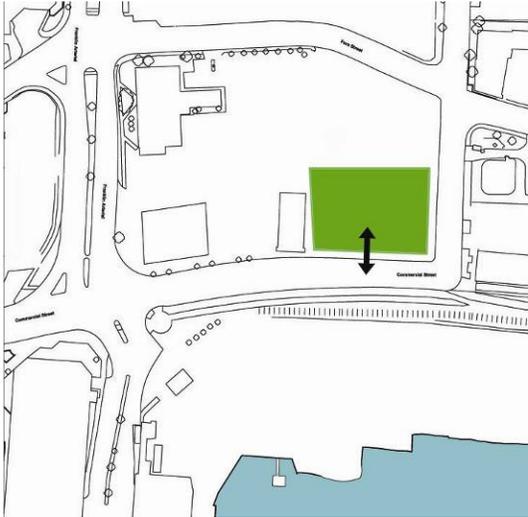


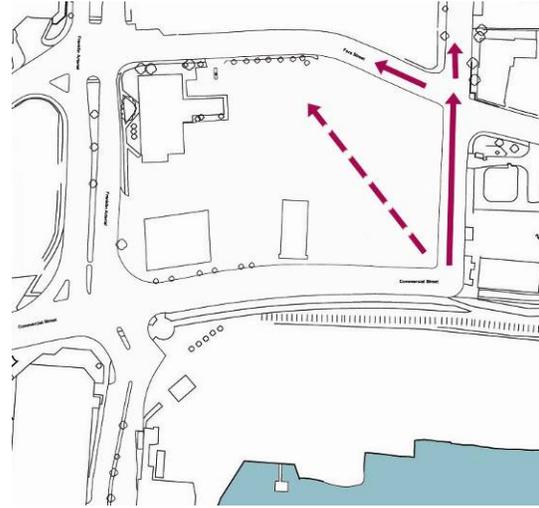
Figure 160: Solution 3b) If queuing can not be relocated, a more extreme approach might be to include the new facility on the Maine State Pier.

Design Alternatives: Building Form

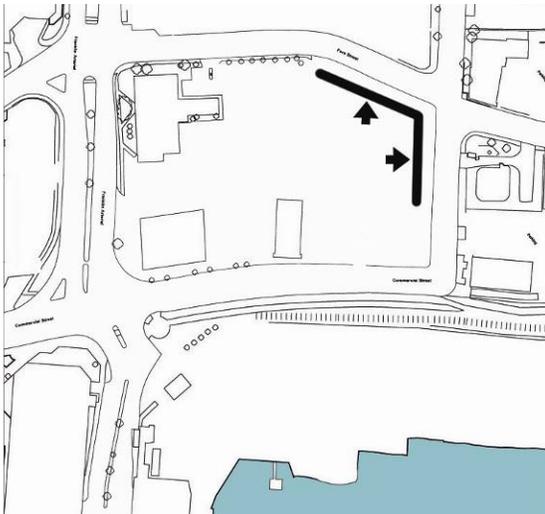
Preliminary design partis will be developed assuming selection of urban Scheme 2. The following design priorities apply to this choice of site.



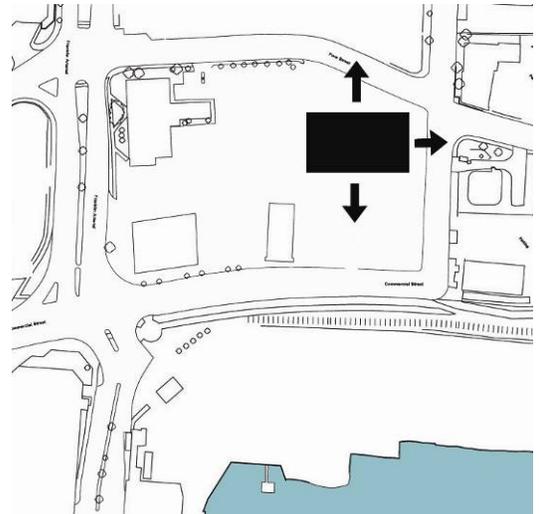
Orient open space toward water.



Encourage pedestrian movement both through the site and on India Street.



Build to the street edges on India and Fore Streets.



The building should relate to the streets and open space, in a sense having three 'fronts'.

Figure 161: Design Principles related to site and building form.

Option 1) With a goal of leaving the maximum amount of site area for open space, this design approach places a compact building at the northern edge of the block.

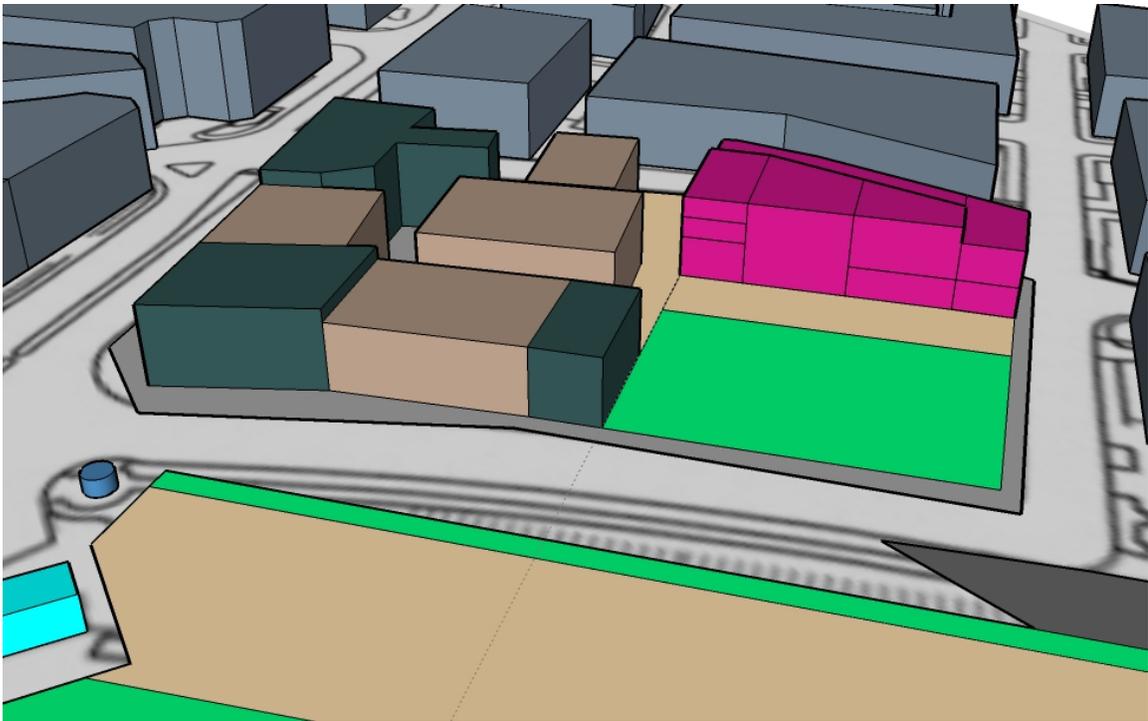


Figure 162: Option 1: Axonometric view in context.

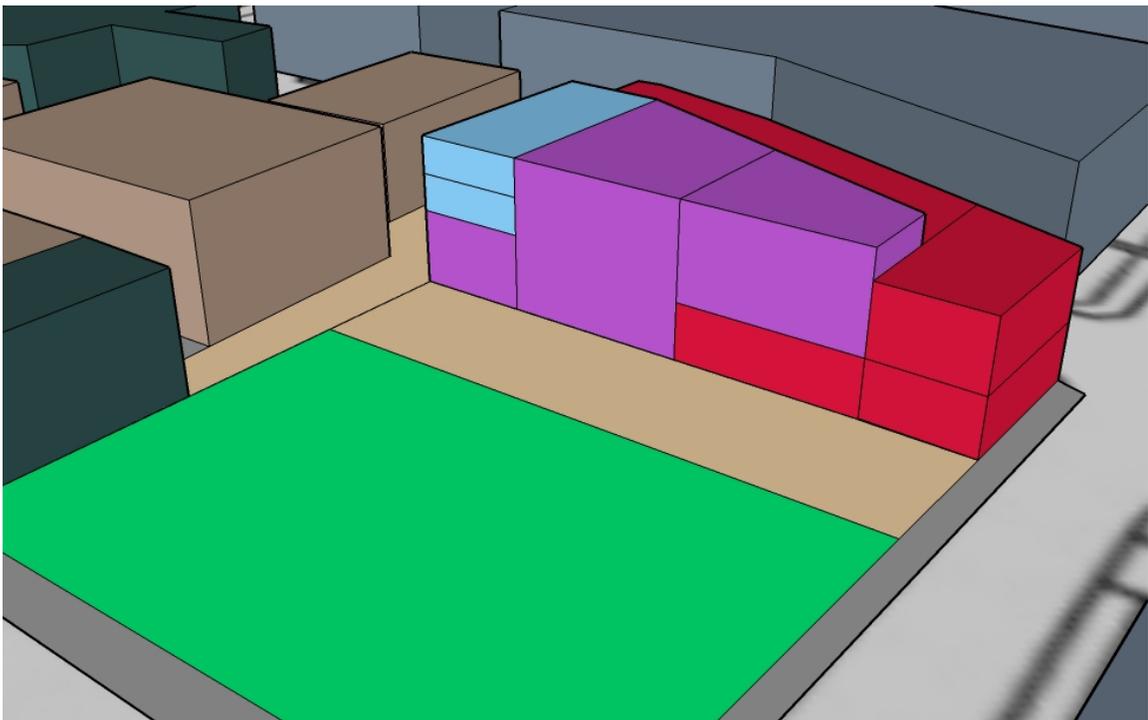


Figure 163: Option 1: Axonometric view with programmatic groupings identified.

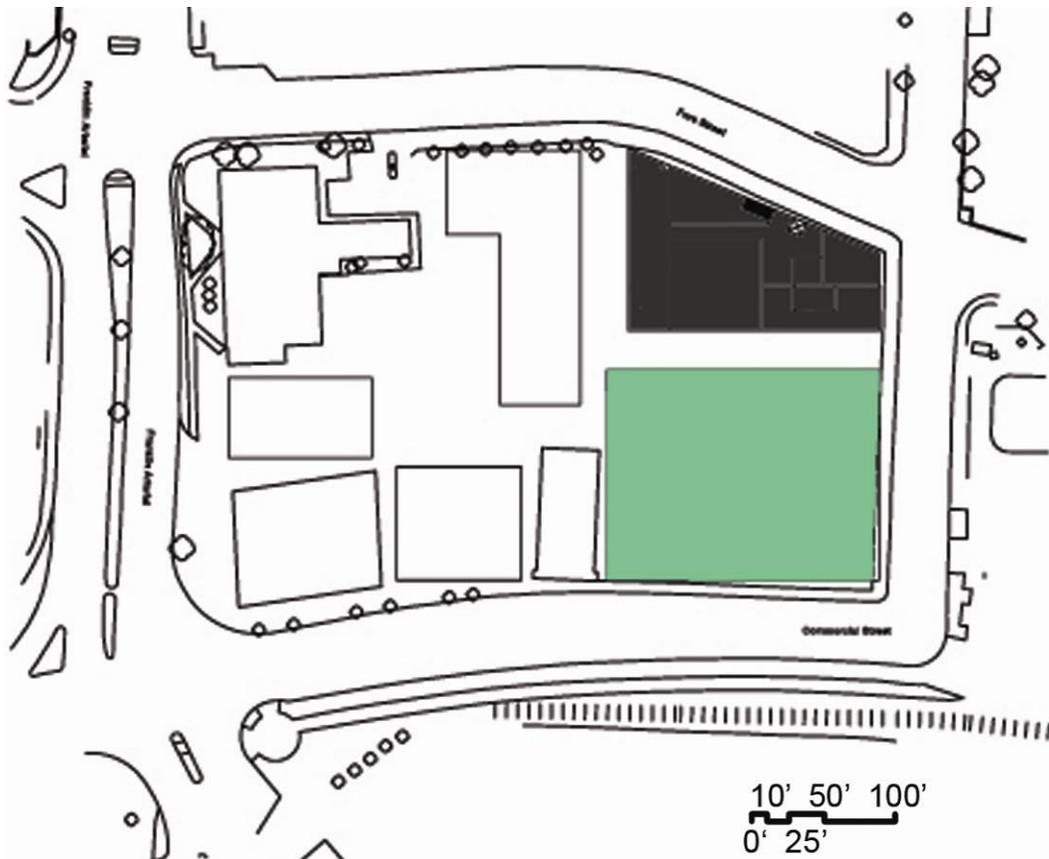


Figure 164: Option 1: Site Plan
 The large open space encourages circulation through the block, while the gallery, restaurant and shop will attract visitors to India Street.

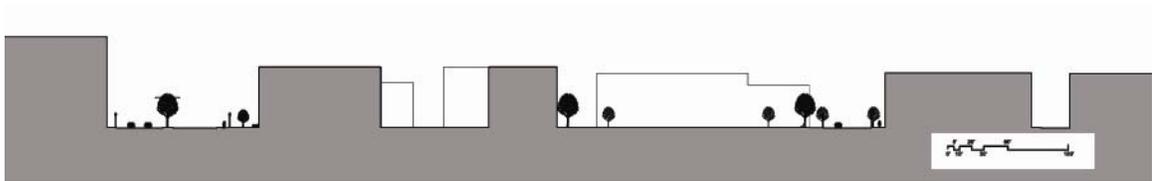


Figure 165: Option 1: Site section through center of block. Building shown in elevation behind.

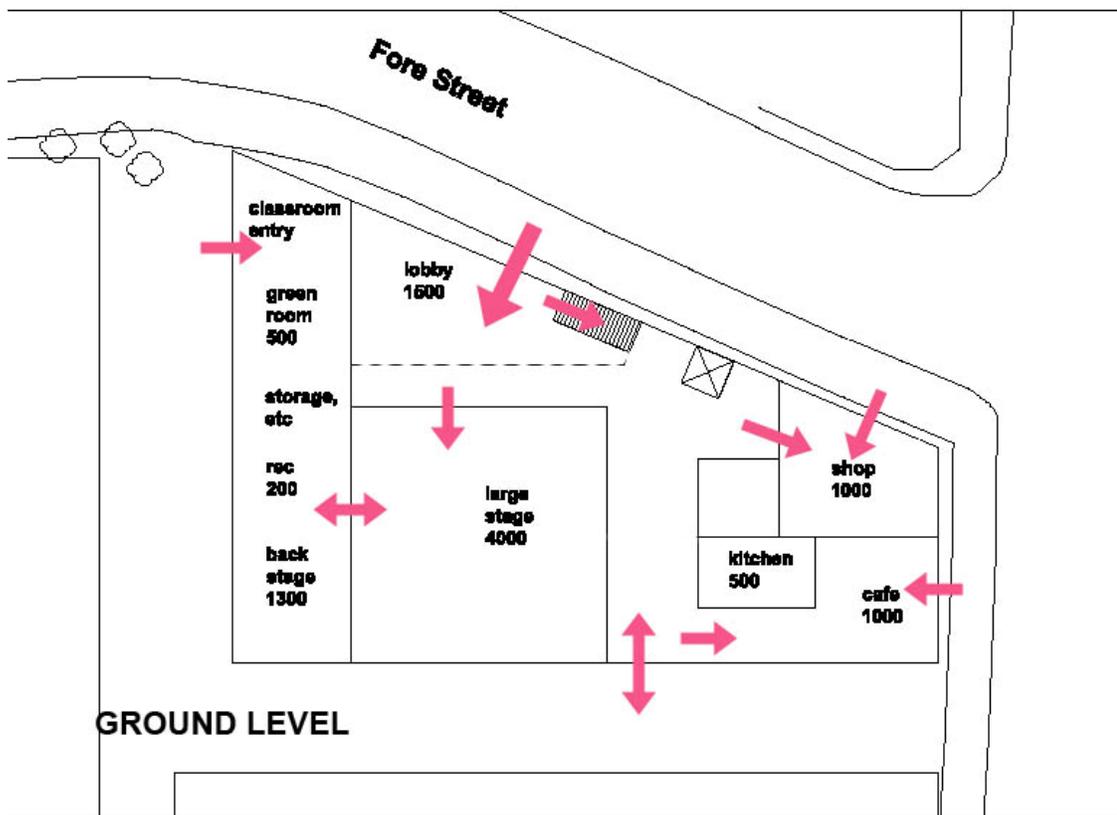
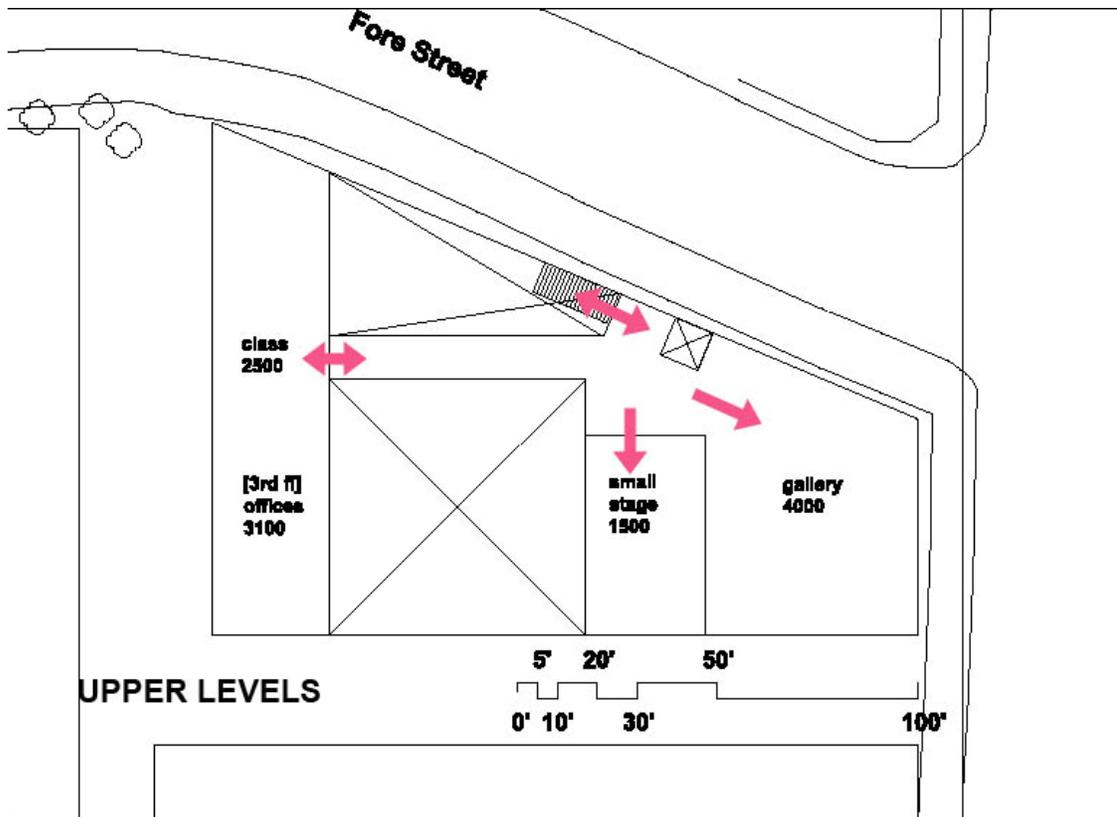


Figure 166: Option 1: Diagrammatic Floor Plans. Entry points and major circulation routes.

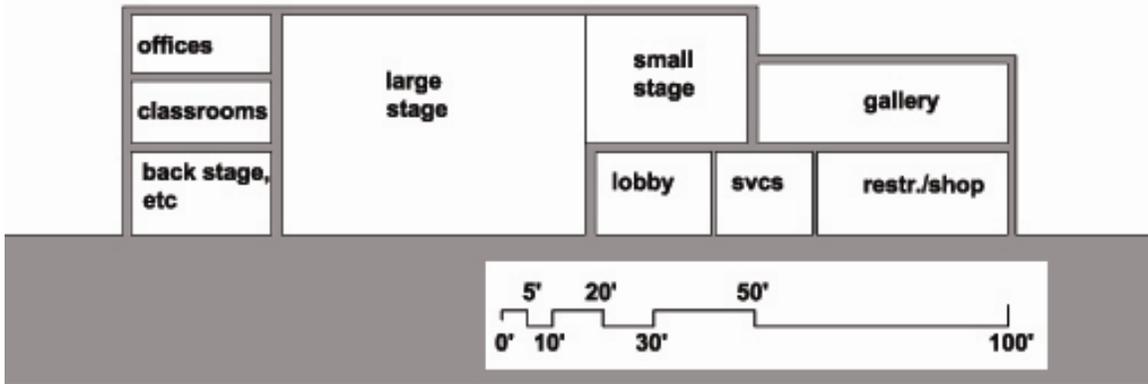


Figure 167: Option 1: Diagrammatic Building Section, looking North. This section illustrates an idea of ‘interlocking boxes’, where the smaller stage area might open into the larger, to be explored.

Option 2: This option attempts to line both India and Fore Street with the building, and create a more enclosed outdoor space.

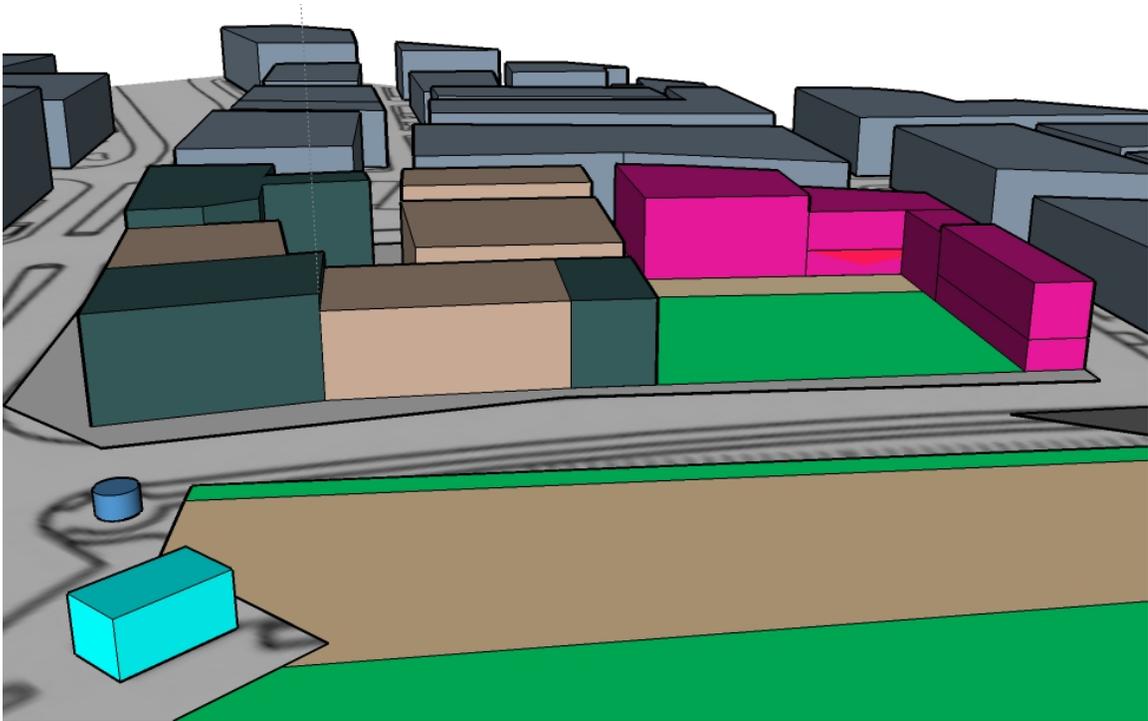


Figure 168: Option 2: Axonometric view in site context.

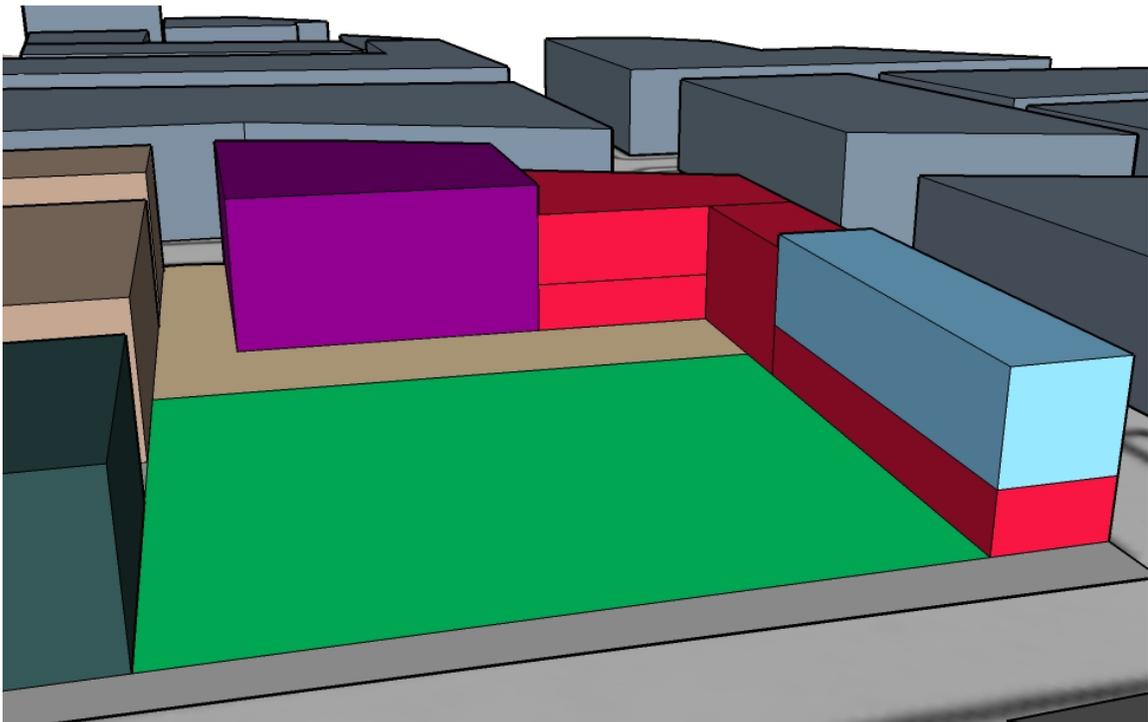


Figure 169: Option 2: Axonometric view with programmatic groupings identified.

This idea brings the shop and restaurant closer to Commercial Street in an attempt to ensure more immediate tourist attention. The elongated building allows all ground floor elements to have access to the outdoor space, while circulation both within and around the building could be less convenient.

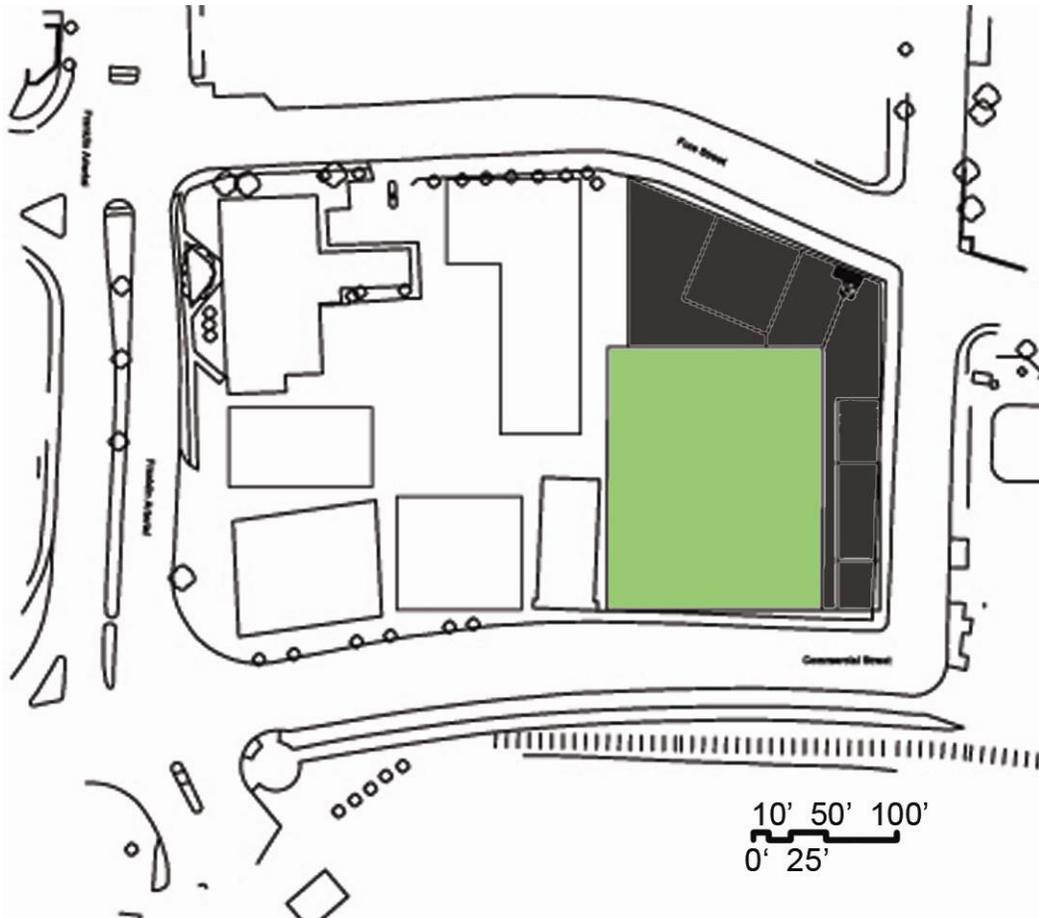


Figure 170: Option 2: Site Plan.

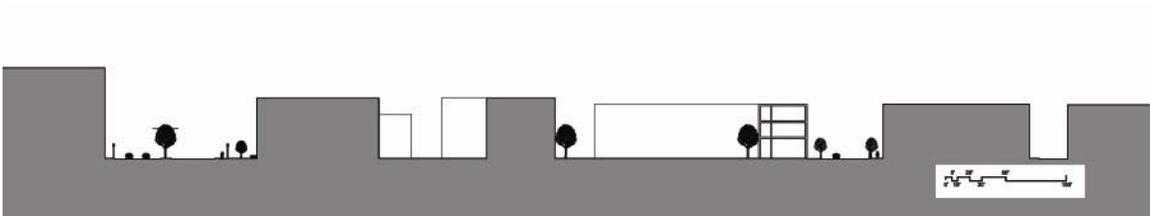


Figure 171: Option 2: Site Section through center of block.

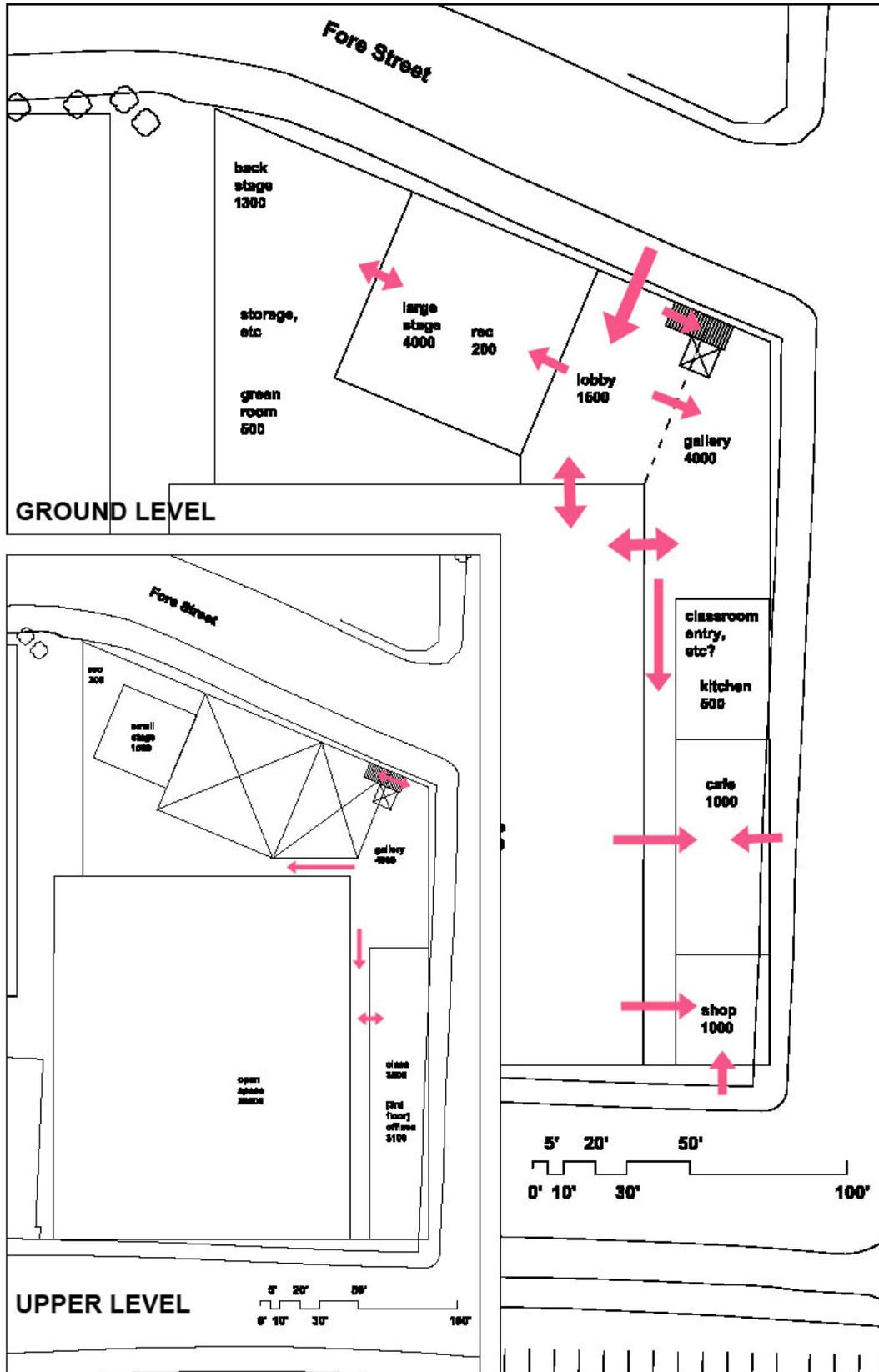


Figure 172: Option 2: Diagrammatic Floor Plans. Entry points and major circulation routes.

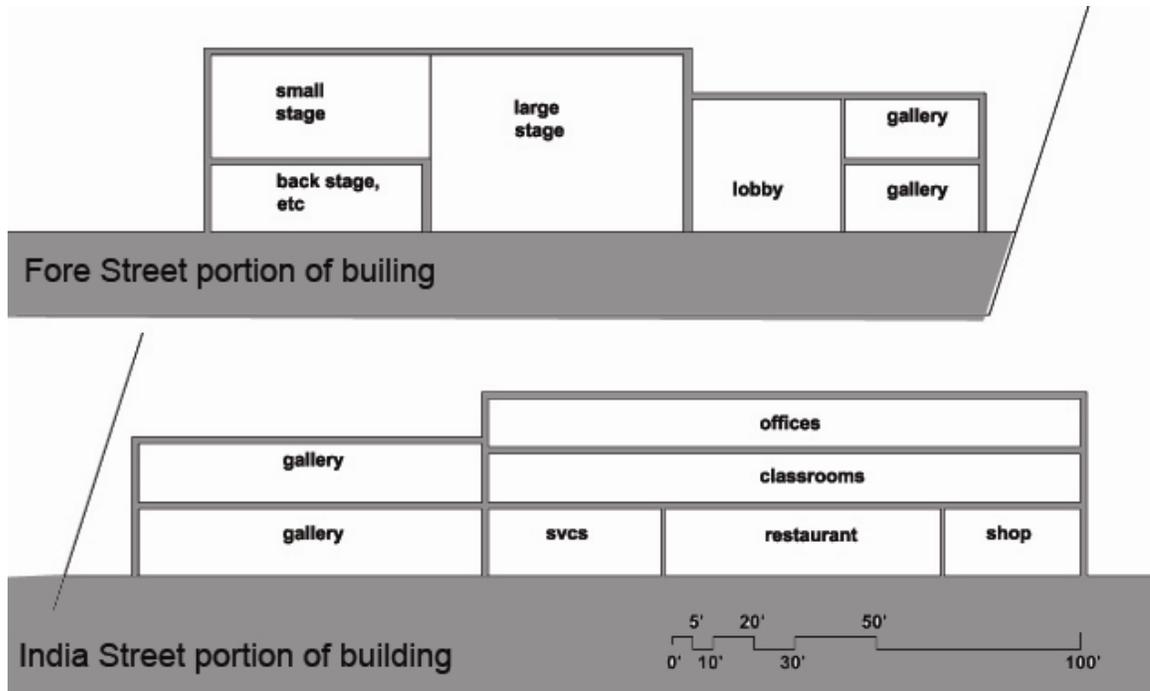


Figure 173: Option 2: Diagrammatic Section; Looking North and East.

Option 3) Another approach creates a ‘U’ shaped building, moving the office and classroom activity to an almost separate building.

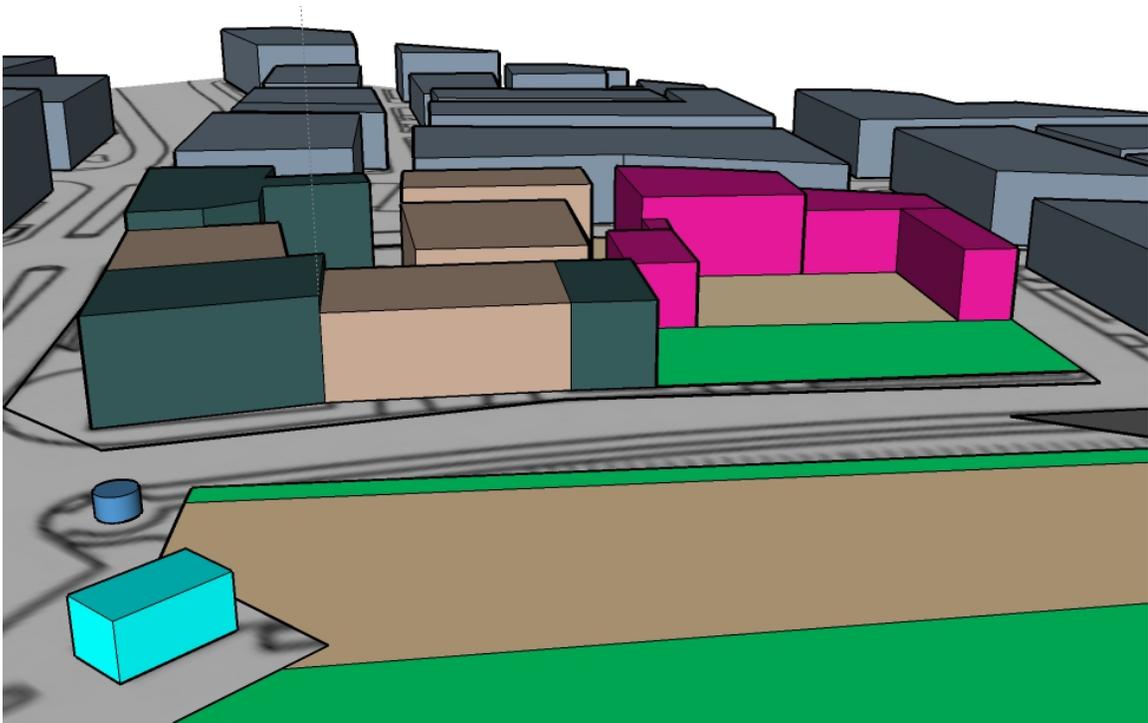


Figure 174: Option 3: Axonometric view in site context.

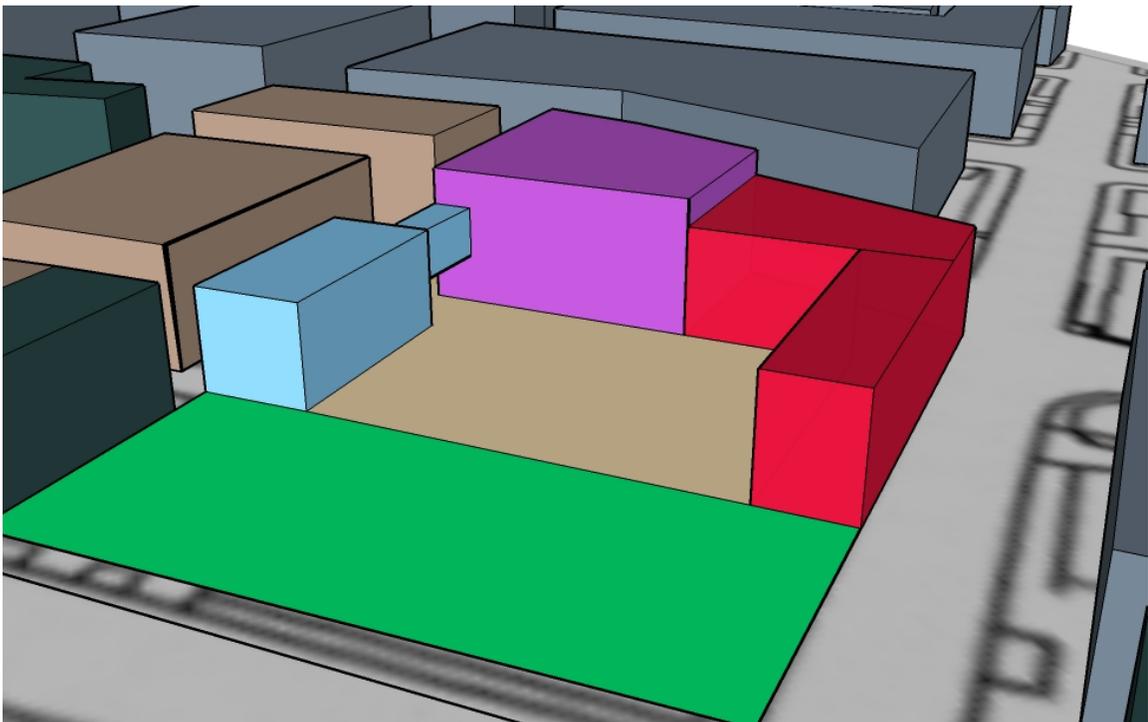


Figure 175: Option 3: Axonometric view with programmatic groupings identified.

In this variation, the shop restaurant and gallery still reach toward Commercial Street to draw attention, but in a more restrained form. This organization creates a more intimate outdoor space, clearly related to the building, with a more open space adjacent. In order to maintain porosity through the block, the office and classroom wing are shown only connected above the ground level.

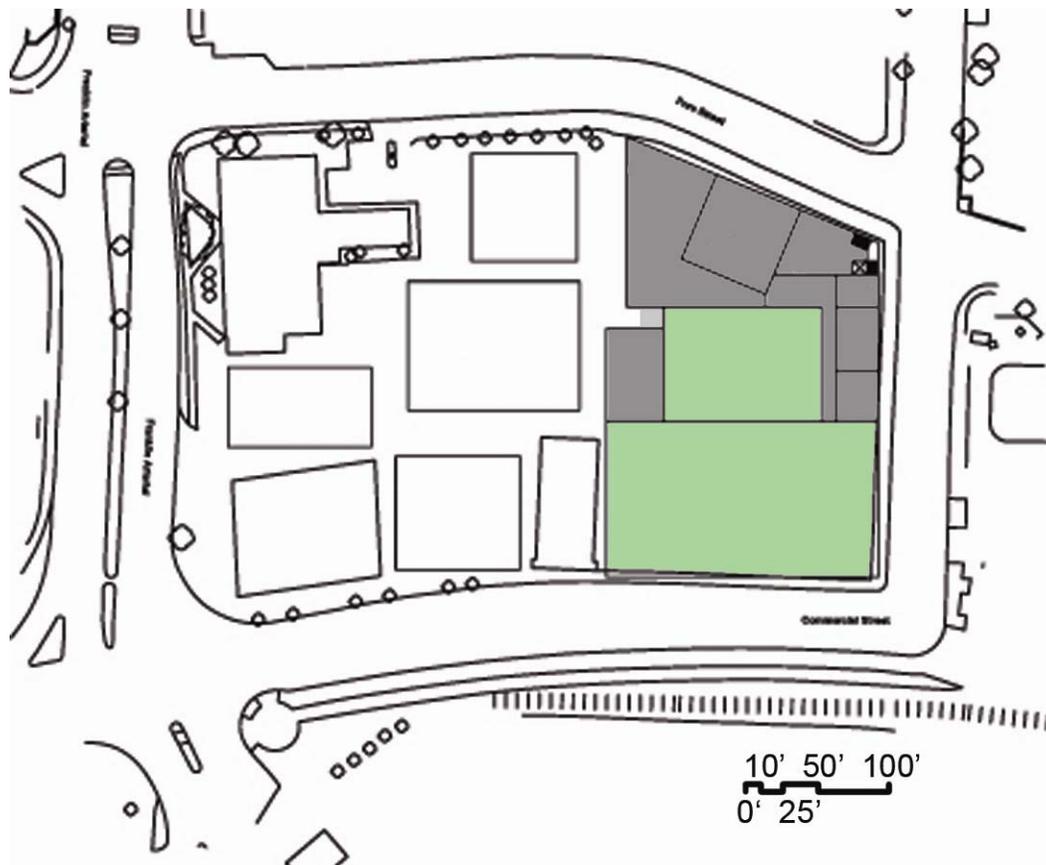


Figure 176: Option 3: Site Plan.

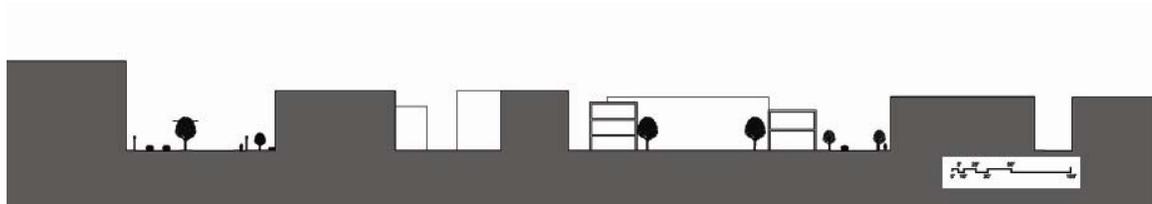


Figure 177: Option 3: Site Section through center of block.

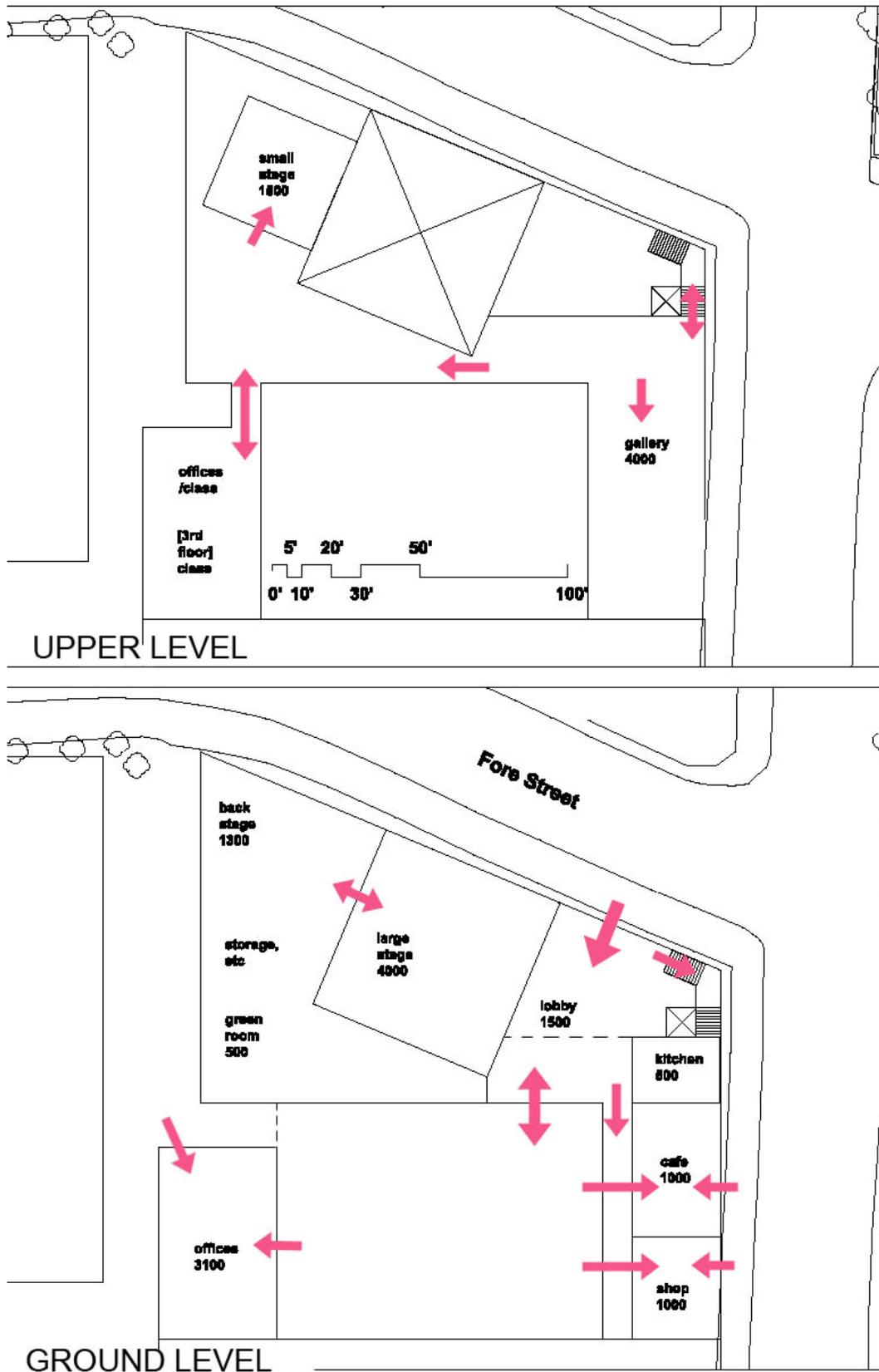


Figure 178: Option 3: Diagrammatic Floor Plans. Entry points and major circulation routes.

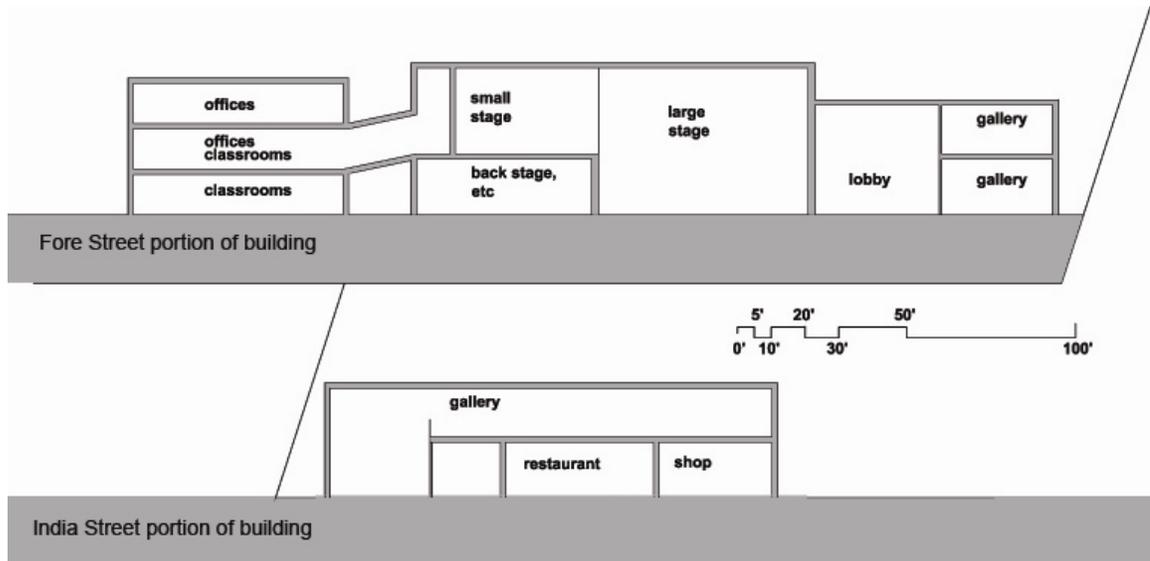


Figure 179: Option 3: Diagrammatic Building Section, looking in each direction from the courtyard.

Option 4) A much different approach turns the building to the India Street side of the block and allows the open space to stretch through the block.

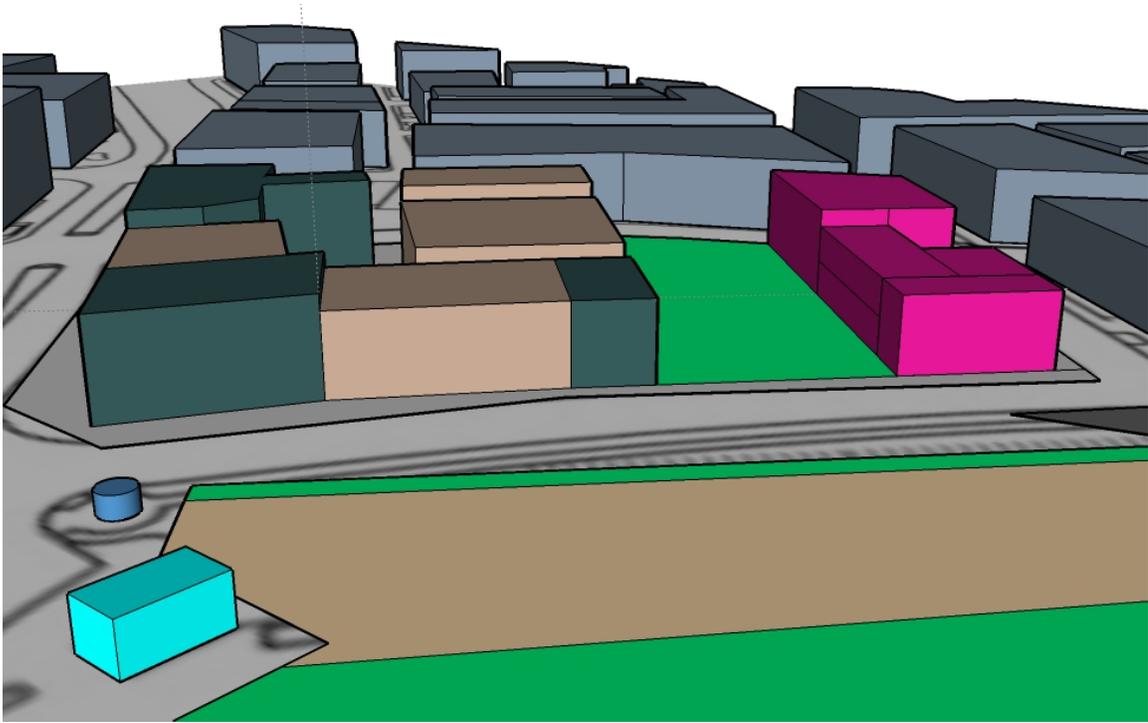


Figure 180: Option 4: Axonometric view in context.

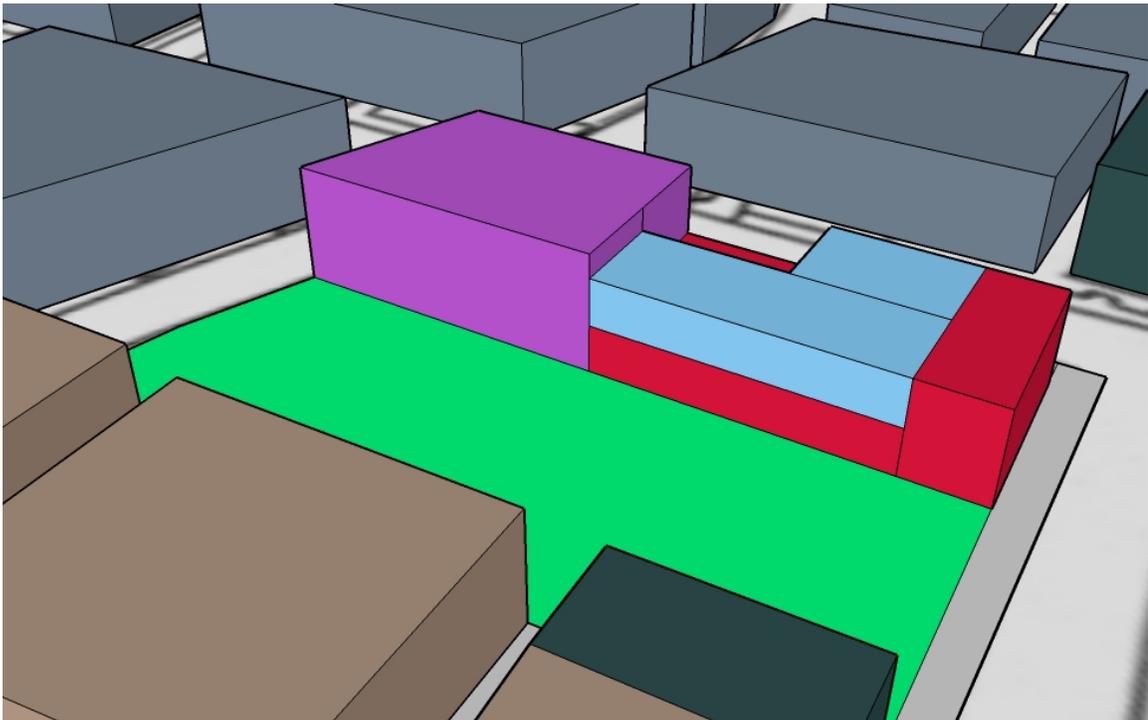


Figure 181: Option 4: Axonometric view with programmatic groupings identified.

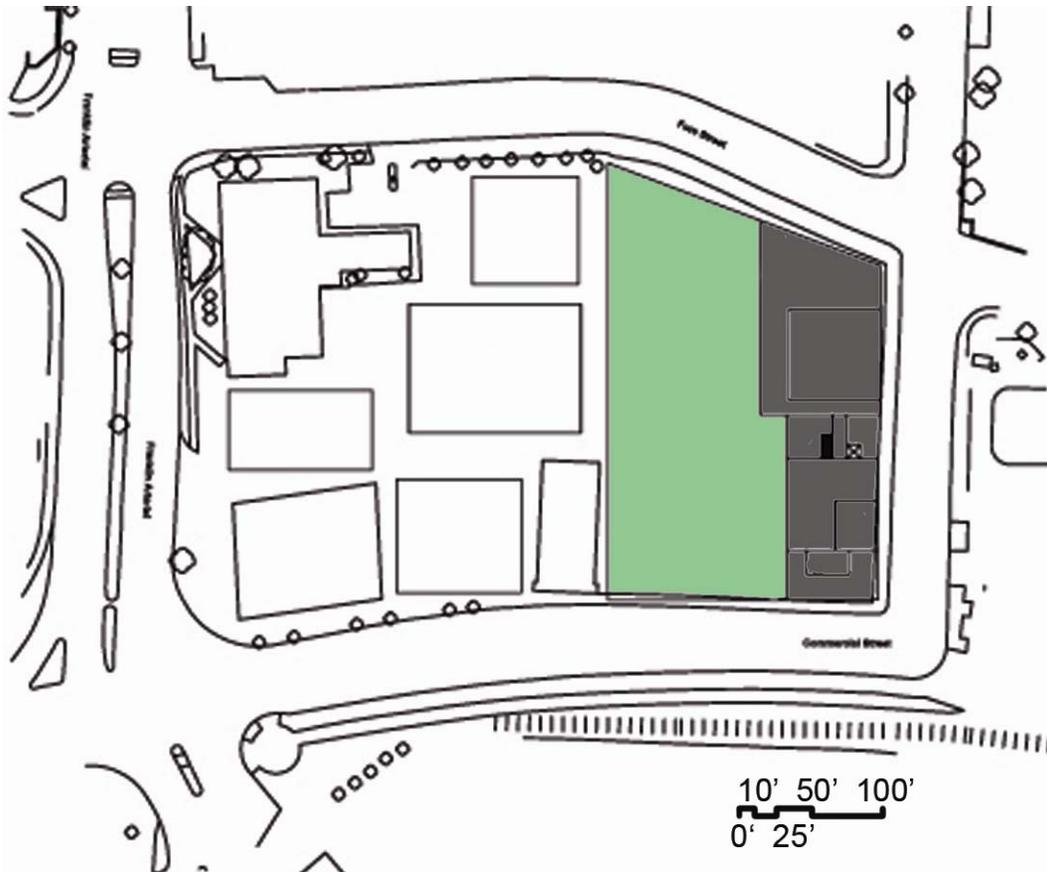


Figure 182: Option 4: Site Plan.

This approach creates the most porosity through the block, while also encouraging pedestrian movement on India Street. With the main entrance of the building moving to India Street, the treatment of the pump station at India and Fore Street becomes particularly important. However, the entry from the park side could also be emphasized.

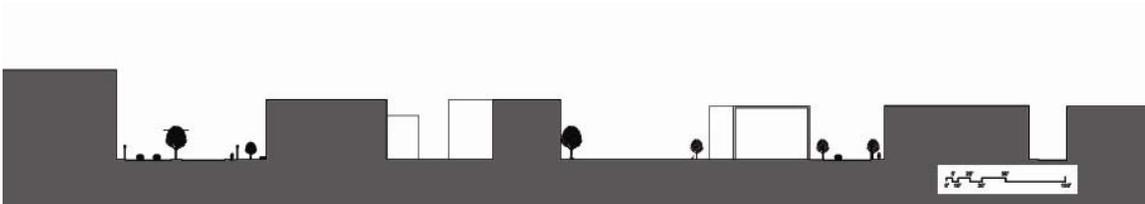


Figure 183: Option 4: Site Section through center of block.

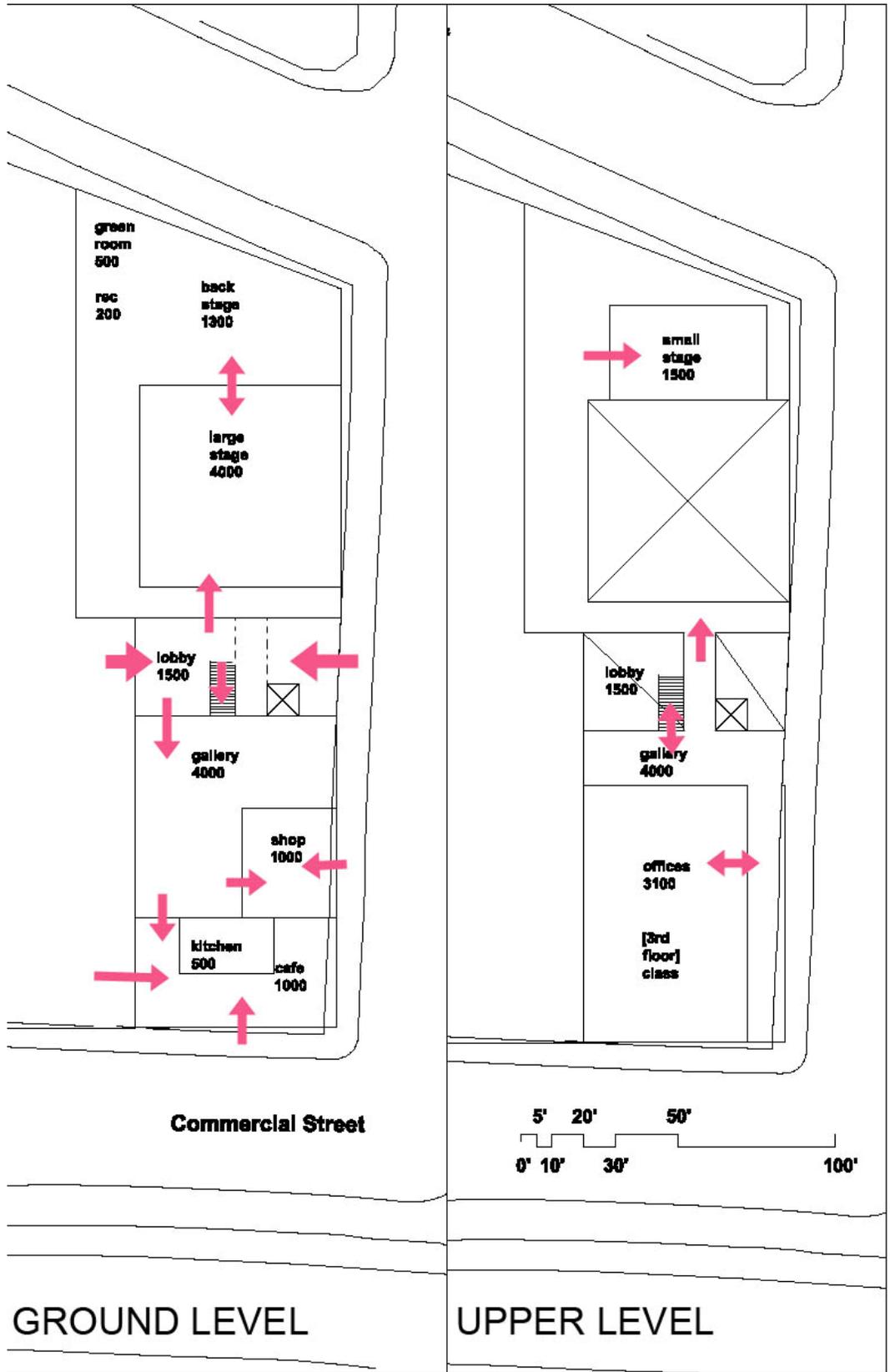


Figure 184: Option 4: Diagrammatic Floor Plans. Entry points and major circulation routes.

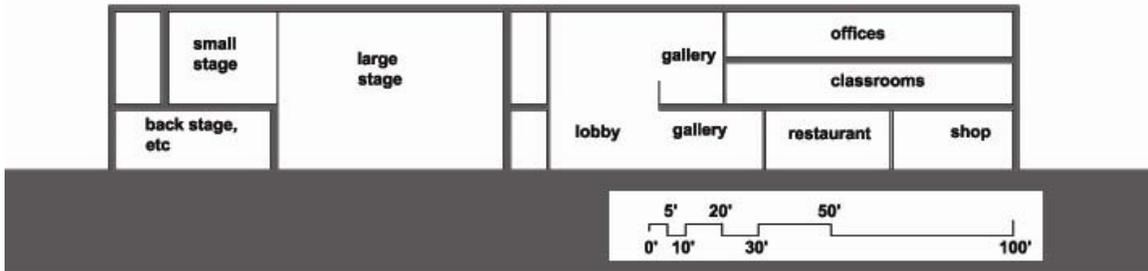


Figure 185: Option 4: Diagrammatic Building Section; looking east.

Final Analysis and Design

Site Area Interventions

After fully considering all prior analyses, the following site area interventions were considered most appropriate for the goals of this thesis, and in the best interest of the city of Portland's growth:

- The garage at the head of Maine State Pier should be removed, and replaced with a new visitor's center. 150 parking spaces reserved for island residents will be incorporated into the proposed site block, across the street, with access to this parking facility located as conveniently as possible for these commuters.
- The new Ferry/Cruise terminal plans should be revised to relocate the outbound ferry queuing lot to the east of the terminal, with the inbound/customs lot located west of the terminal, creating sufficient space for a sizeable waterfront public park adjacent to Maine State Pier to the east, in front of the proposed site area. The queuing lots should be paved in brick or another suitable paving material for civic use, and all gates required should be operable and visually appropriate such that when not in use most of the day, the space can be used by the public, and potentially licensed street vendors, as an extension of the park.

The existing city plan to locate all queuing and parking on the space between the piers, with more limited public open space to the east would create a large divider between the open space and downtown, as well as the proposed new development and the existing downtown, potentially drawing cruise tourists only toward the new development, and definitely not maximizing the use of this centrally located waterfront property.



Figure 186: Proposed site area interventions highlighted.

- Franklin Boulevard should be improved, with new pedestrian connections where cross streets do not connect to downtown, as well as sidewalks, landscaping, and lighting to encourage pedestrian use. New development along Franklin Street should include entrances facing this central and visible street.
- Franklin Boulevard should be straightened to approach Maine State Pier more directly, and Commercial Street straightened to make this intersection most clear and navigable. The straightening of Commercial Street should be located such that its extension runs straight in front of the Grand Trunk Railroad building that currently

terminates the street, simplifying traffic flow by eliminating the triangular intersection in the city proposal, and making Commercial Street more easily perceived as a continuous boulevard.

- The walking trail that runs along Commercial Street should be preserved to the East and continued to the West through the existing downtown area, with space for the trail and a green street buffer created by elimination of parallel parking on the water side of Commercial Street. The streetscape along the existing and new extension of Commercial Street should be consistent and promote pedestrian use.
- Development to the east should generally follow the existing city Masterplan.
- As described in Chapter 9, development to the north should be primarily residential, of a higher density than existing, with retail at the street on the through streets.

The basic organization of the ultimate site is as follows:

- Public open space is to be located on the water side of Commercial Street between India Street and Maine State Pier, with the block across the street considered the ultimate location for the build portion of the program.
- Constraints on the site block are as follows:
 - 150 parking spaces at a minimum are to be created, for exclusive use by island residents. Additional parking spaces should also be created to accommodate the new facility and other/existing commercial uses on the block.
 - The two historic buildings on the Franklin Street side of the block will remain.
- The previously stated goal of maintaining permeability through the block remains.



Figure 187: Figure-Ground before and after proposed development

Site Organization

- Parking is to be created in two levels at the center of the entire site area, with a retail ‘wrap’ that also includes entrances to the proposed facility. This approach is considered preferable to building a separate parking structure, in order to maintain an active street life on all sides of the block.
- The proposed facility will then be built on top of this structure. Elevating the building provides the advantage that all program elements can be at a height for an improved view versus that available from street level.
- The facility will be divided into two separate buildings, one holding performance and exhibition spaces and one with all everyday use, with a public plaza between. The large theater of the facility program will open to the plaza for public performances and celebrations. The multicultural café will have a significant presence of outdoor seating on the plaza, and all components of the program will have secondary entrances on the plaza. The buildings will be connected above the plaza level to facilitate user needs and reinforce the idea of connection.
- The northern edge of the site area, not used for the specified program will consist of two mixed use buildings, with retail at the street with secondary entrances onto the plaza. Tenants for these retail spaces would necessarily be commercial entities open into the evenings, (i.e., bookstore with café, gallery, restaurants) to keep the plaza active most hours. A glazed atrium will allow passage from the plaza to Fore Street between these two buildings, visually communicating openness and connection but

providing shelter for the stair and elevator accessing the plaza and parking garage, and sheltered secondary entrances to adjacent retail spaces.

- A pedestrian bridge will connect the plaza to the park, expressing the connection of the facility and the park and the public nature of the plaza. The prominence of the bridge and ramps are intended to encourage and facilitate their use, as well as to create a grand civic gesture and focal point enlivening this central public space.
- The park will also include an outdoor stage, further communicating its association with the new facility, and creating a new venue for larger public celebration and performance.
- Access to the garage and all service functions will be from the Franklin Street end of the block, where it is most easily accessible without impeding traffic, and will reduce the inclination to infill between the existing buildings, but allow a significant landscaped area to remain between them.
- A pedestrian entry to the garage will be located at the corner of the new construction, adjacent to the existing building facing Commercial Street, facilitating access for island residents.

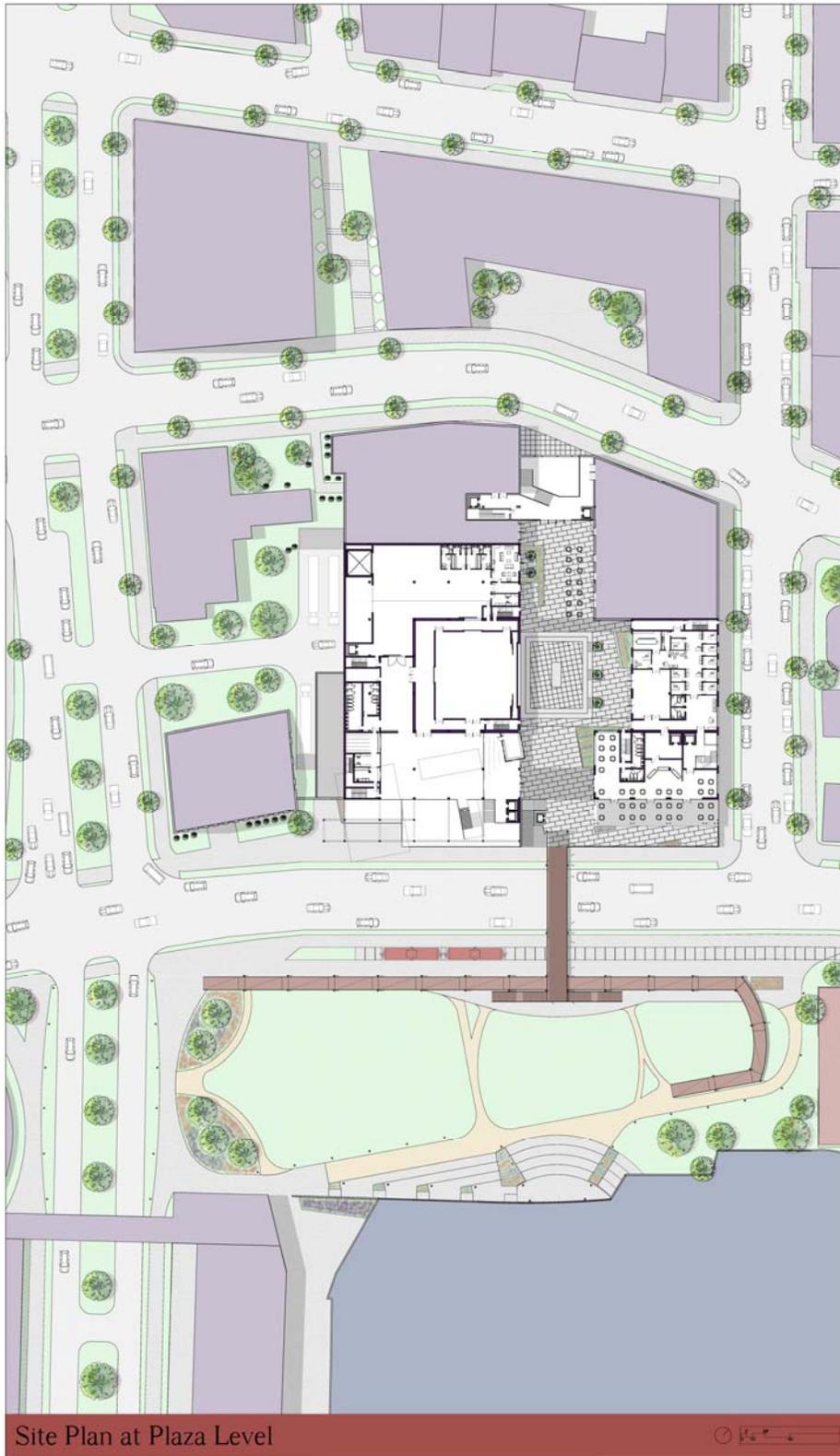


Figure 188: Site Plan showing Plaza level of facility.

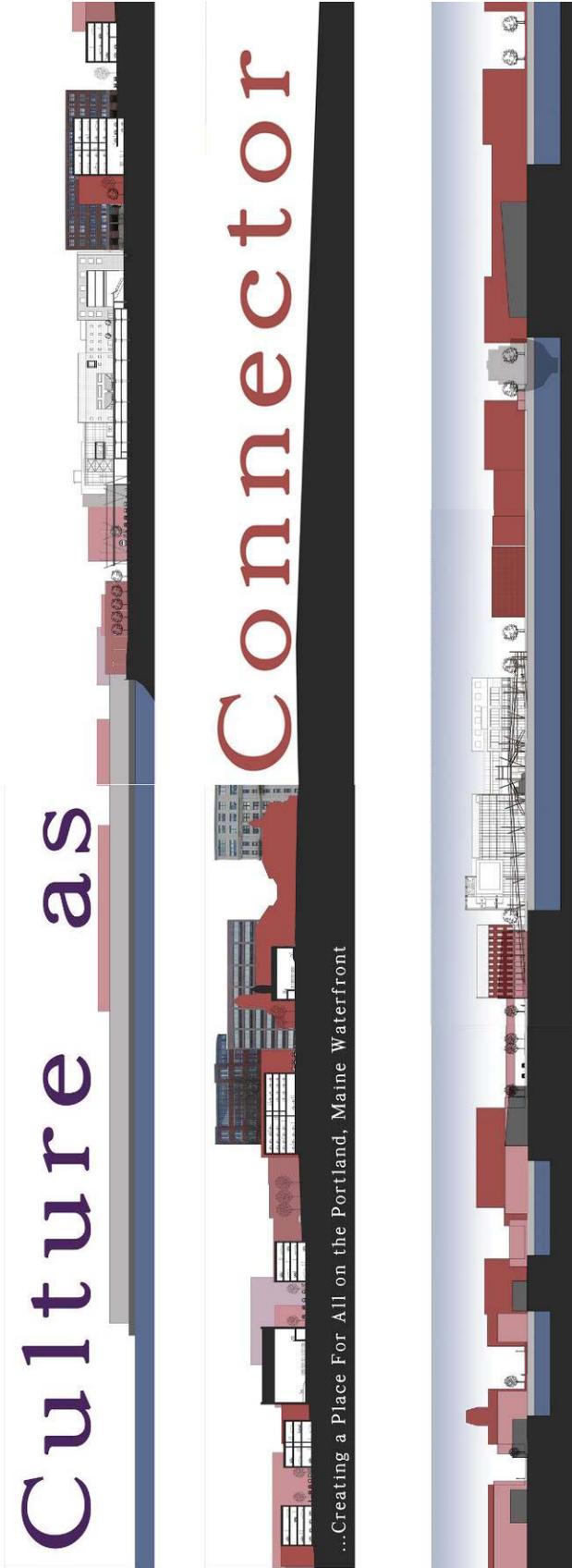


Figure 189: Site Section through plaza and Site Elevation showing site as section through water and piers

Final Design

Design Commentary:

The overall design aesthetic was strongly influenced by the site history as the location of the Grand Trunk Railroad grain elevator conveyor systems. Historic photographs of these expansive elevated horizontal conveyor systems (available online through the Portland Historical Society but not included due to copyright limitations) and their tall vertical supporting structures provided a feeling of appropriateness of and inspiration for the design of the bridge and its long ramps. The intent was to recall the power and monumentality of these historic images but reflect today's technology, materials, and an artistic interpretation that fits the new purpose of the site. The overall aesthetic of the building also recalls this industrial aesthetic.

The structure of the building is primarily of layered horizontal concrete slabs, with the atrium of exposed weathered steel with its verticality given primary expression, representing the relationship of pier and wharf structures and the layering and coexistence of similar horizontal and vertical structural elements which can be seen on Portland's waterfront (in this case weathered steel mimics the treated wood used for piers).

While the weathered steel replaces wood above, the use of steel is also in line with the overall industrial aesthetic. Weathered steel was also specifically chosen to emphasize the impact of the elements and time, as the weathering will vary over time inside and outside the building.

The steel structure of the atrium is continued outside the building to create a form of 'marquis' on which to advertising the events of the facility, as well as to create a 'porch' signaling and sheltering the entry.

Stone cladding was chosen for the building to express its civic nature, consistent with Portland's existing built fabric.

The two theaters are expressed as volumes, with the atrium/lobby spaces expressed as a third glass volume. The exterior material of each theater is continuous onto the interior surfaces where the volume meets the lobby spaces, expressing the connection of inside to outside. The interior material of the large theater is the same stone used on the exterior such that when open, the exterior space flows into the theater.

White steel cladding was chosen for the small theater, in order to create a lighter, 'floating' appearance to the volume, so it might be illuminated and glowing at night, and to both reference and incorporate the local ship building industry in the building identity and process.

The angle of the small theater was chosen to relate to the angle of the neighboring existing building, and with the intent of both looking out at harbor views and projecting the activity of the facility to the park. Actual activity in the small theater can be seen directly or images may be projected onto the glass of the theater. The glass product used on this theater can also be adjusted electrically such that it can be partially opaque or completely blacked out.

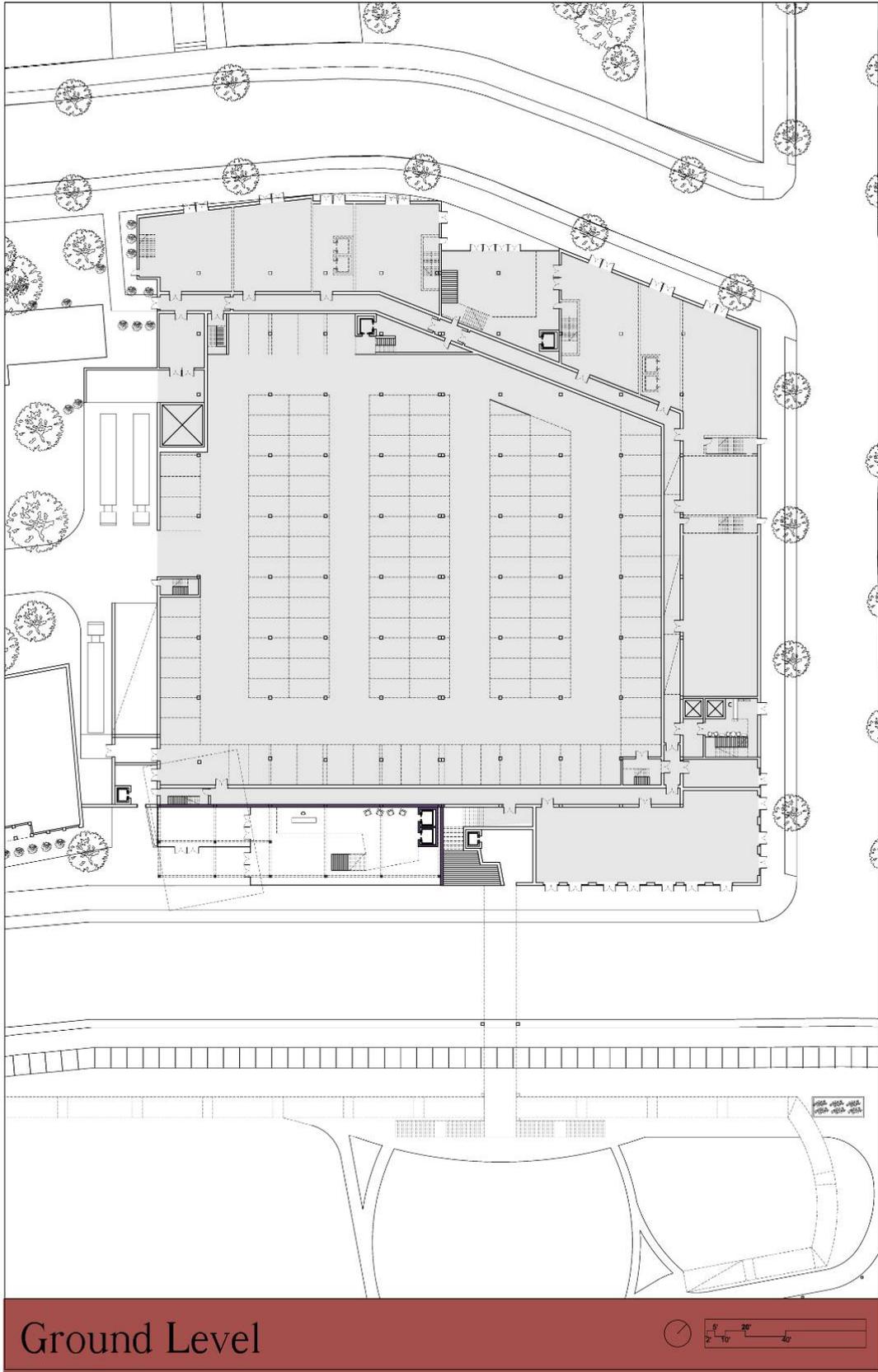


Figure 190: Ground Level Plan

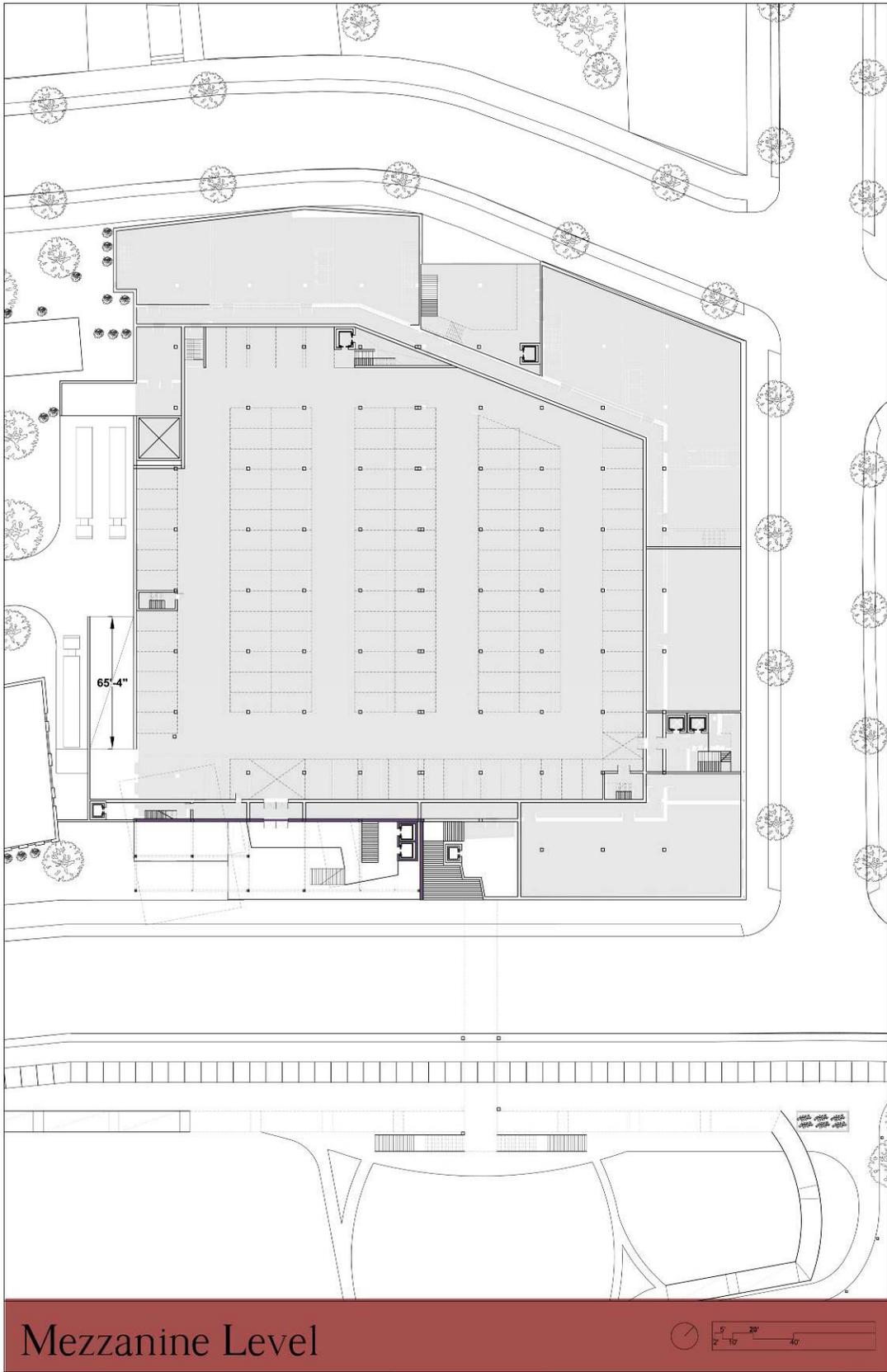


Figure 191: Mezzanine Level Plan

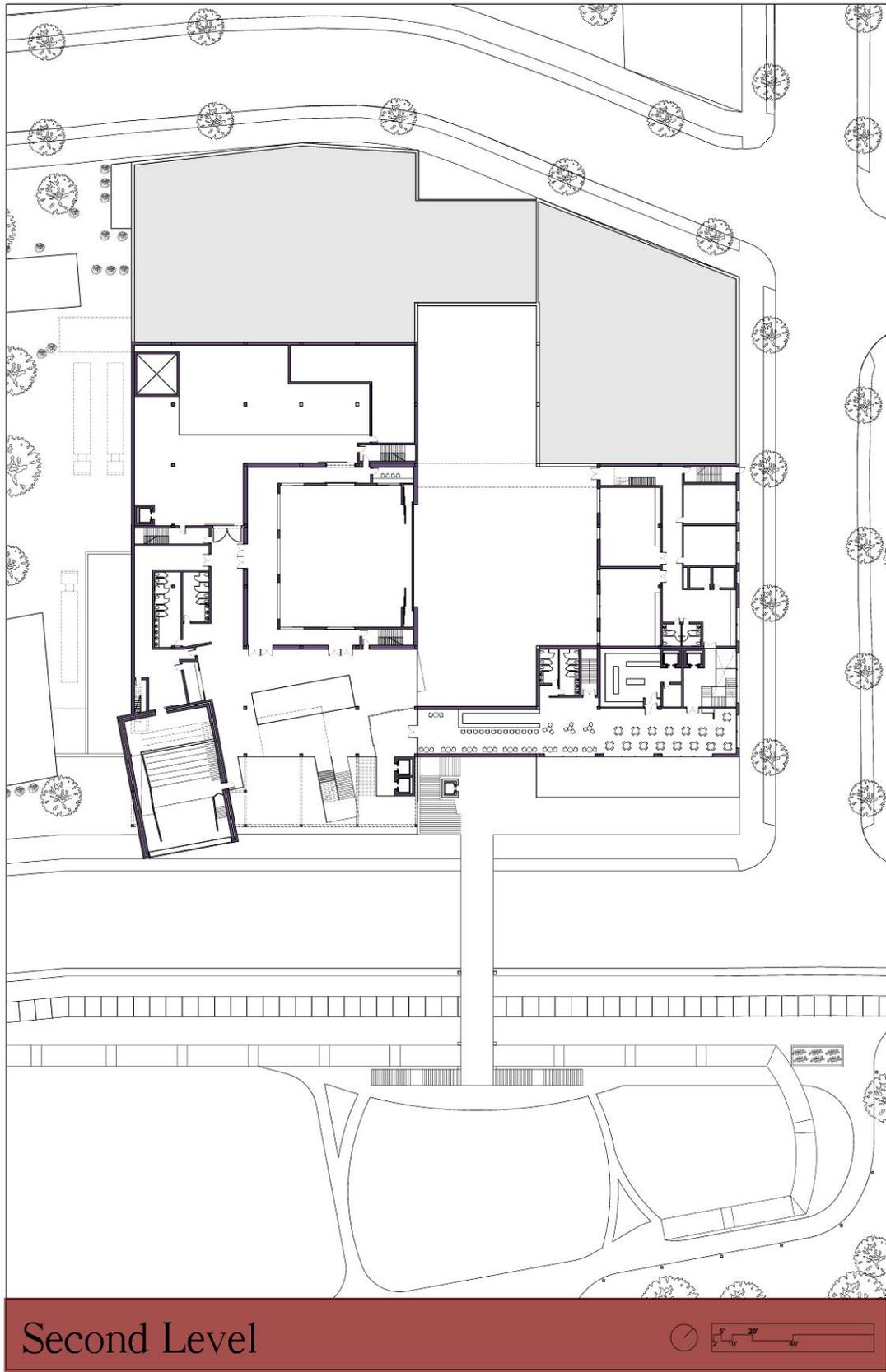


Figure 192: Second Level (above Plaza) Plan

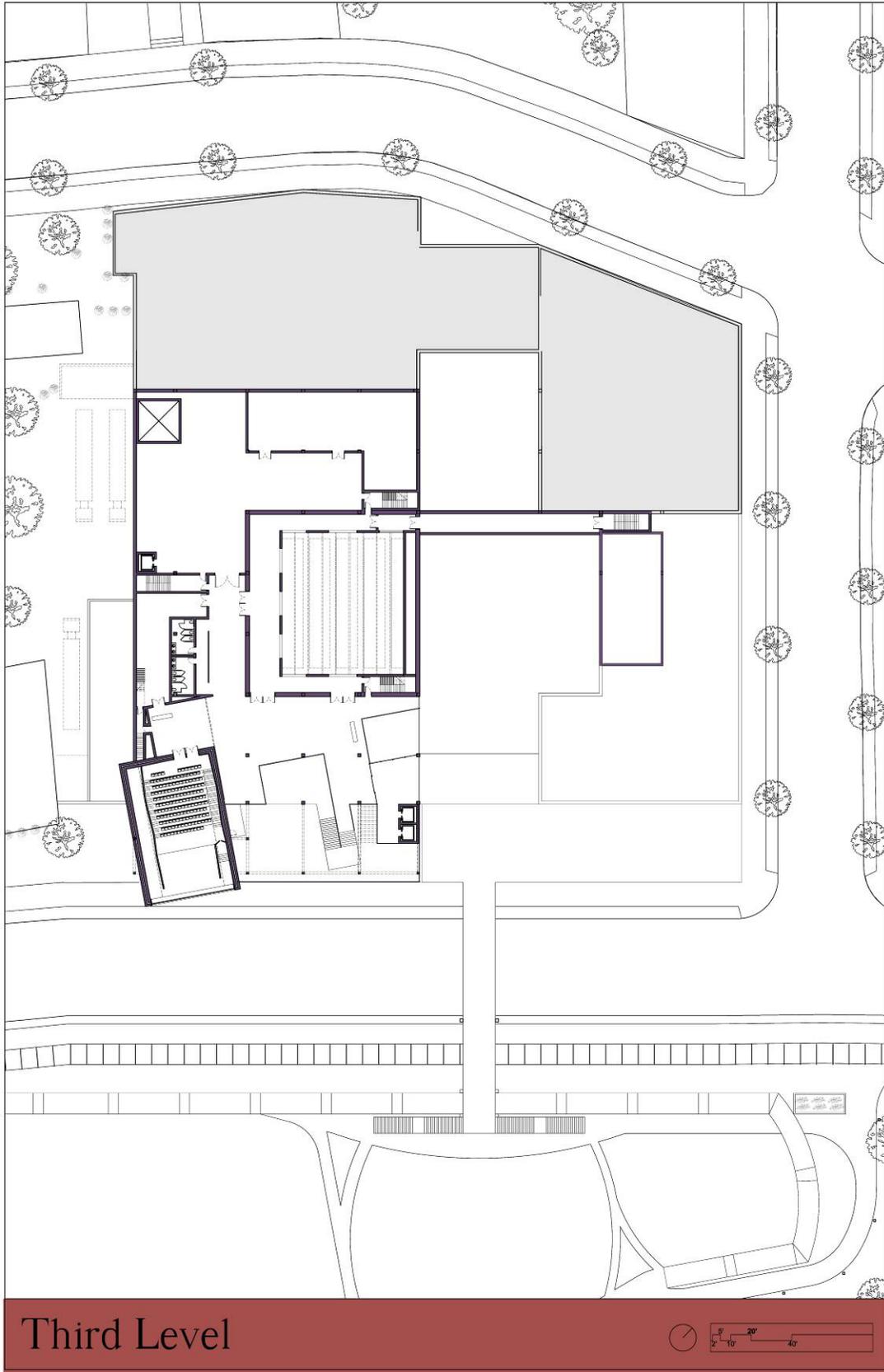
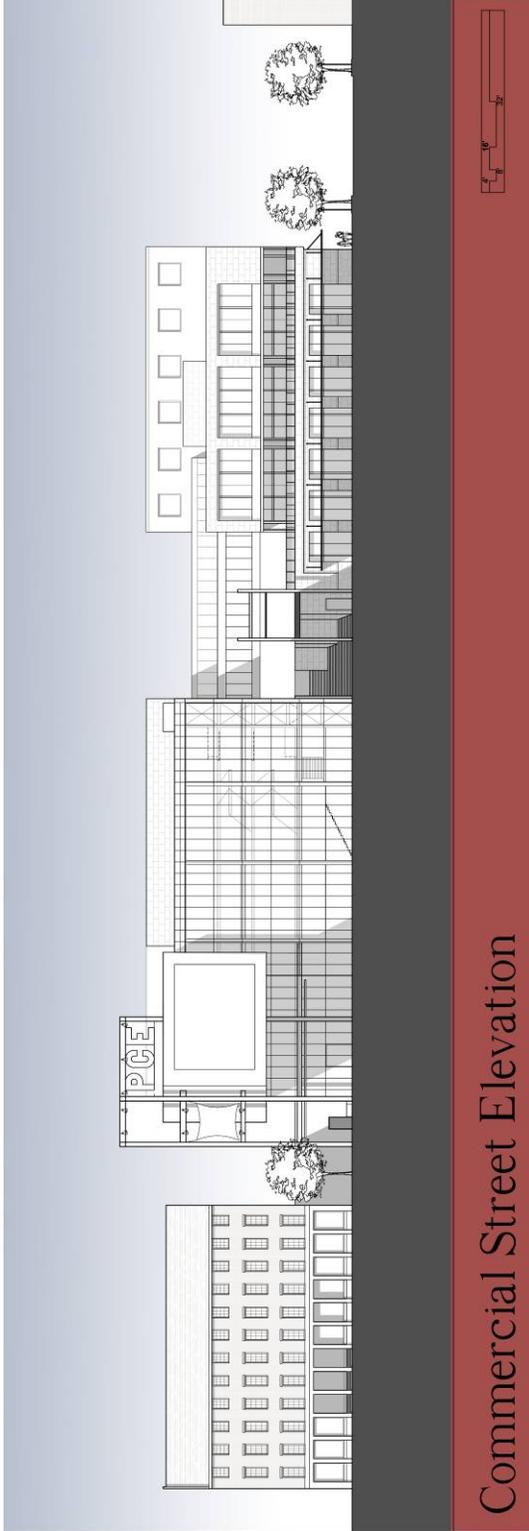


Figure 193: Third Level (above Plaza) Plan



Commercial Street Elevation

Figure 194: Commercial Street Elevation



India Street Elevation

Figure 195: India Street Elevation

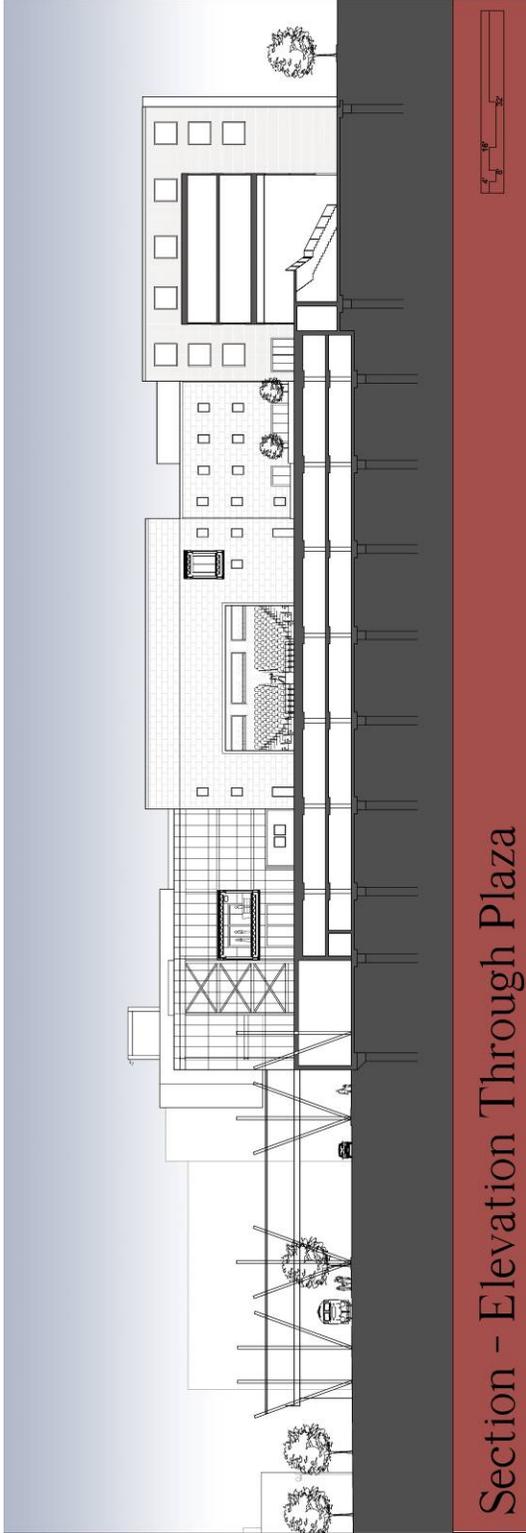


Figure 196: Elevation Through Plaza

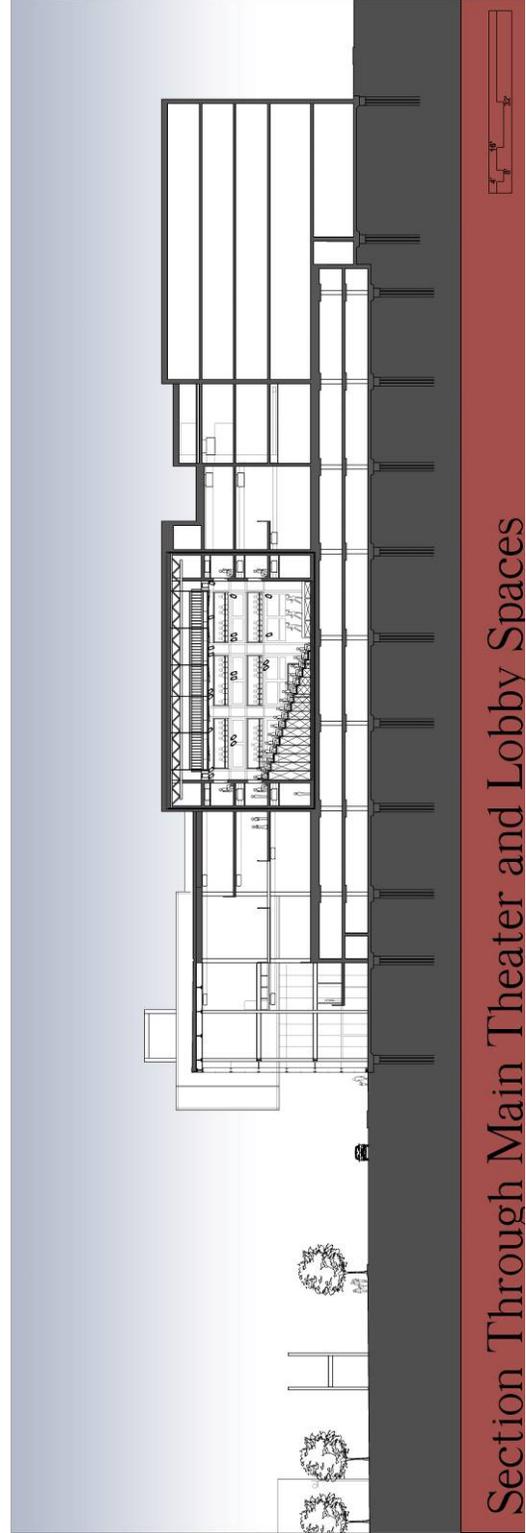


Figure 197: Section Through Main Theater and Lobby Spaces

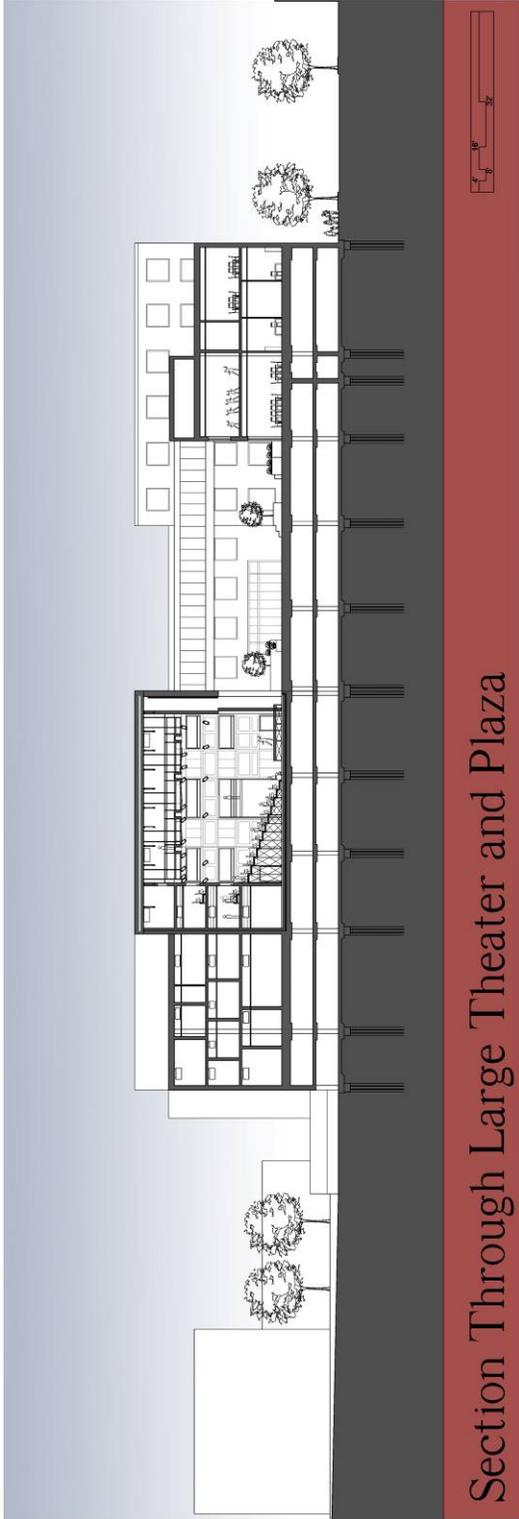


Figure 198: Section Through Large Theater and Plaza

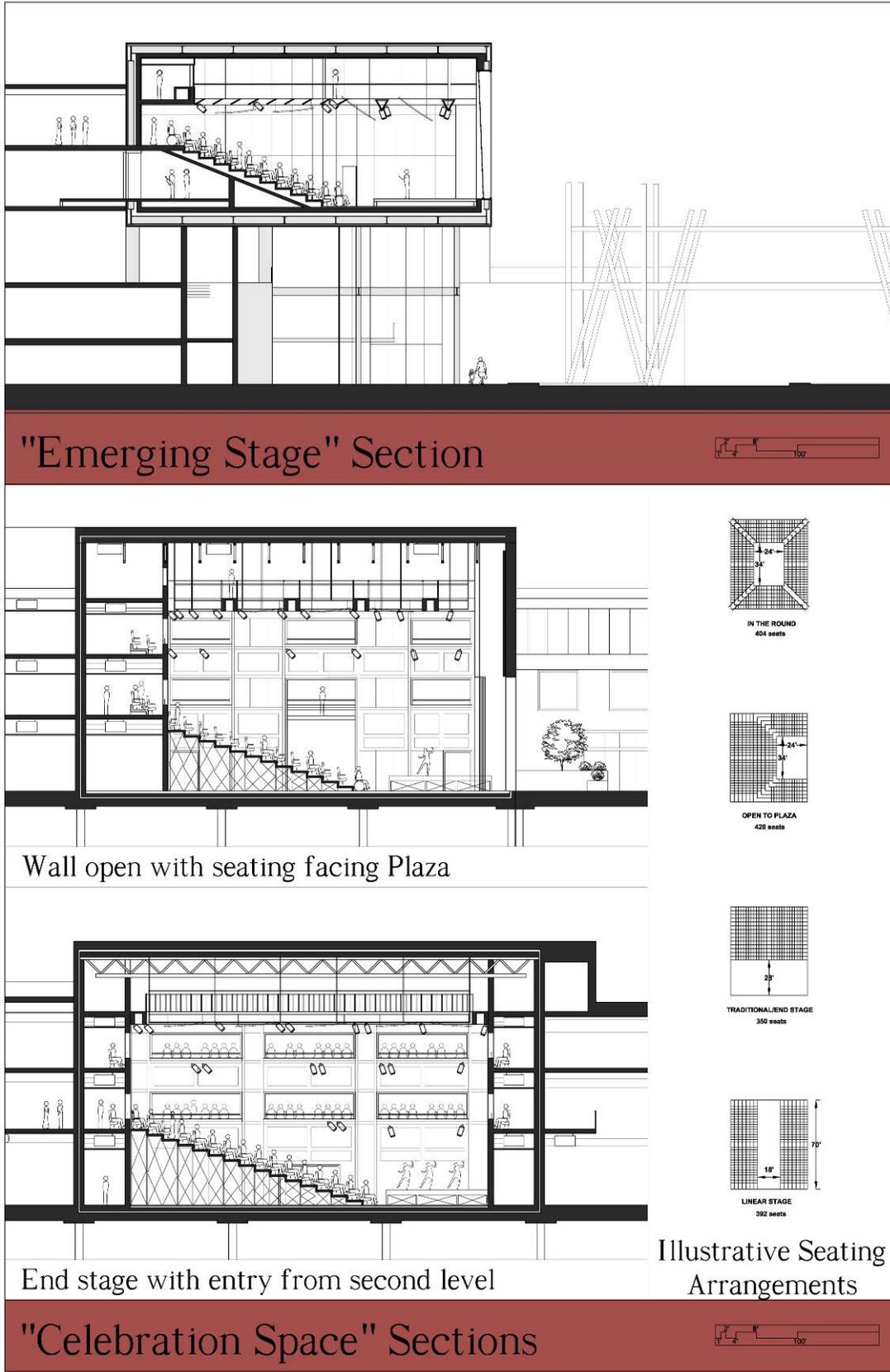


Figure 199: Detailed Theater Sections



Figure 200: View from Maine State Pier with multicultural celebration in progress.



Figure 201: View from East along Commercial Street



Figure 202: Plaza with Large Stage open for performance



Figure 203: Plaza from North looking toward water



Figure 204: View from cruise ship deck



Figure 205: View from west along Commercial Street



Figure 206: View from bottom of bridge stair toward plaza stair



Figure 207: View from bottom of bridge stair toward park, stage and cruise ship



Figure 208: View from Plaza ticket box and entry toward waterfront



Figure 209: View from Bridge showing projection of activity onto small theater glass screen



Figure 210: Entry at Street Level



Figure 211: Lower Lobby from Mezzanine



Figure 212: Main Lobby from ticketing area



Figure 213: Second Level Lobby/Gallery

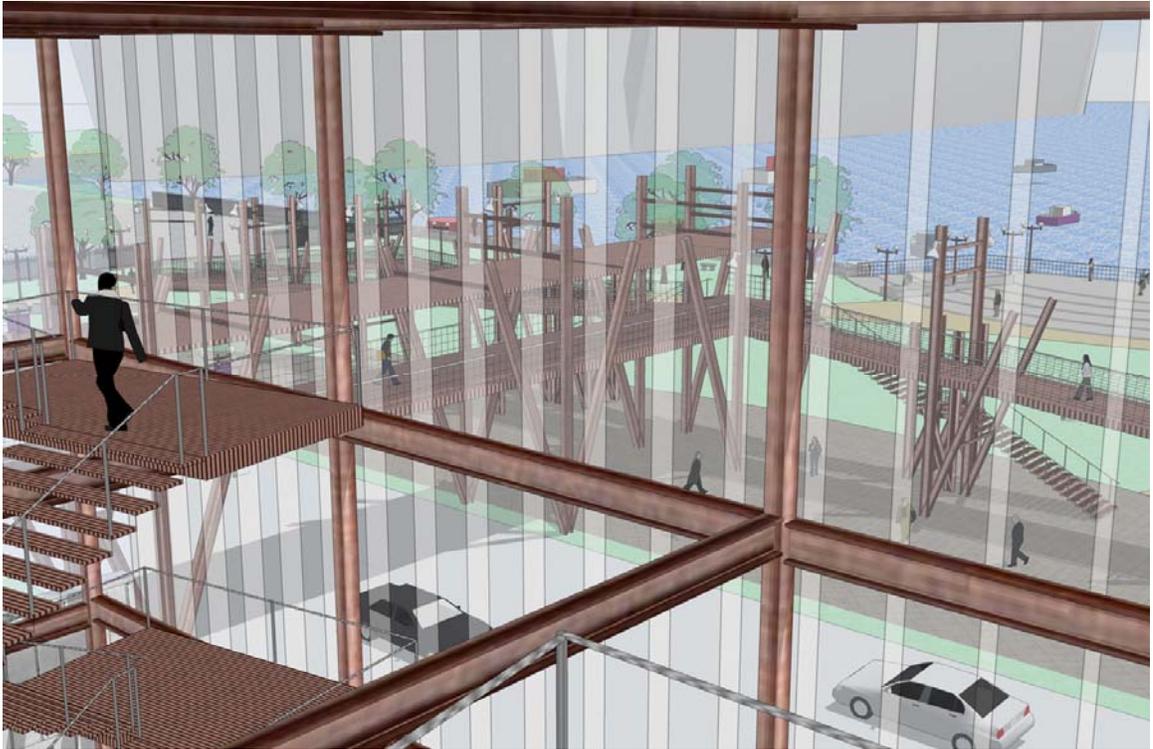


Figure 214: View from third level Lobby over atrium

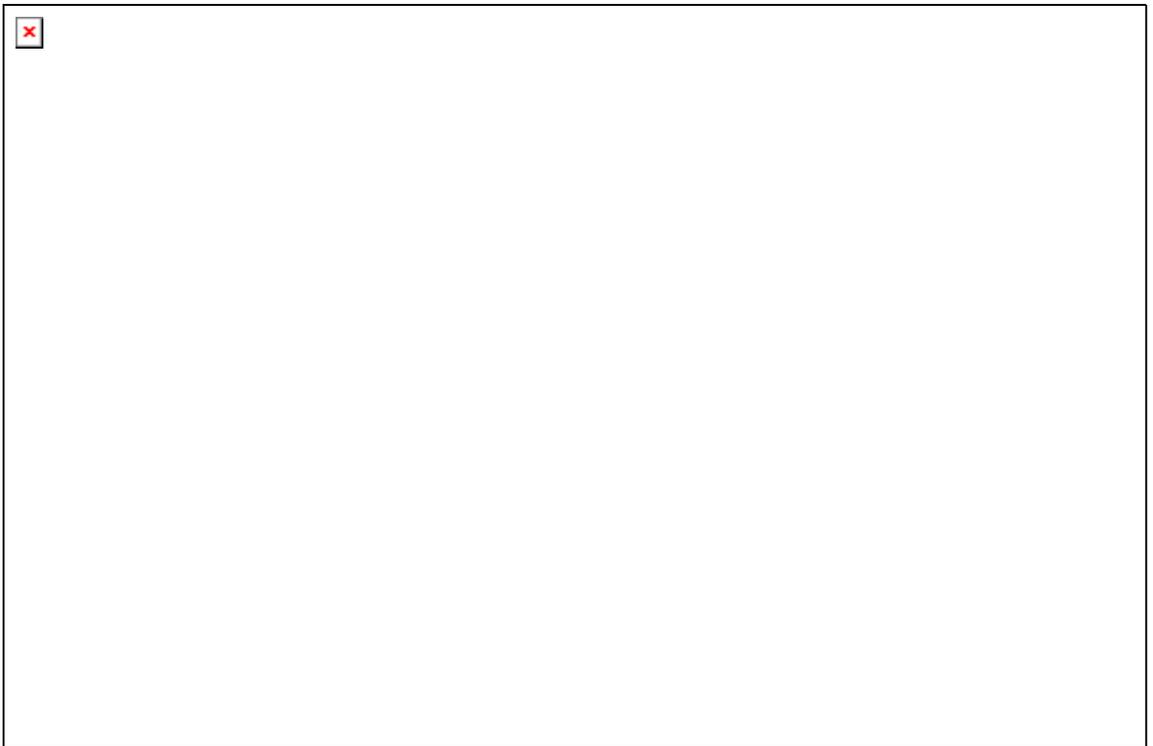


Figure 215: View from inside small theater

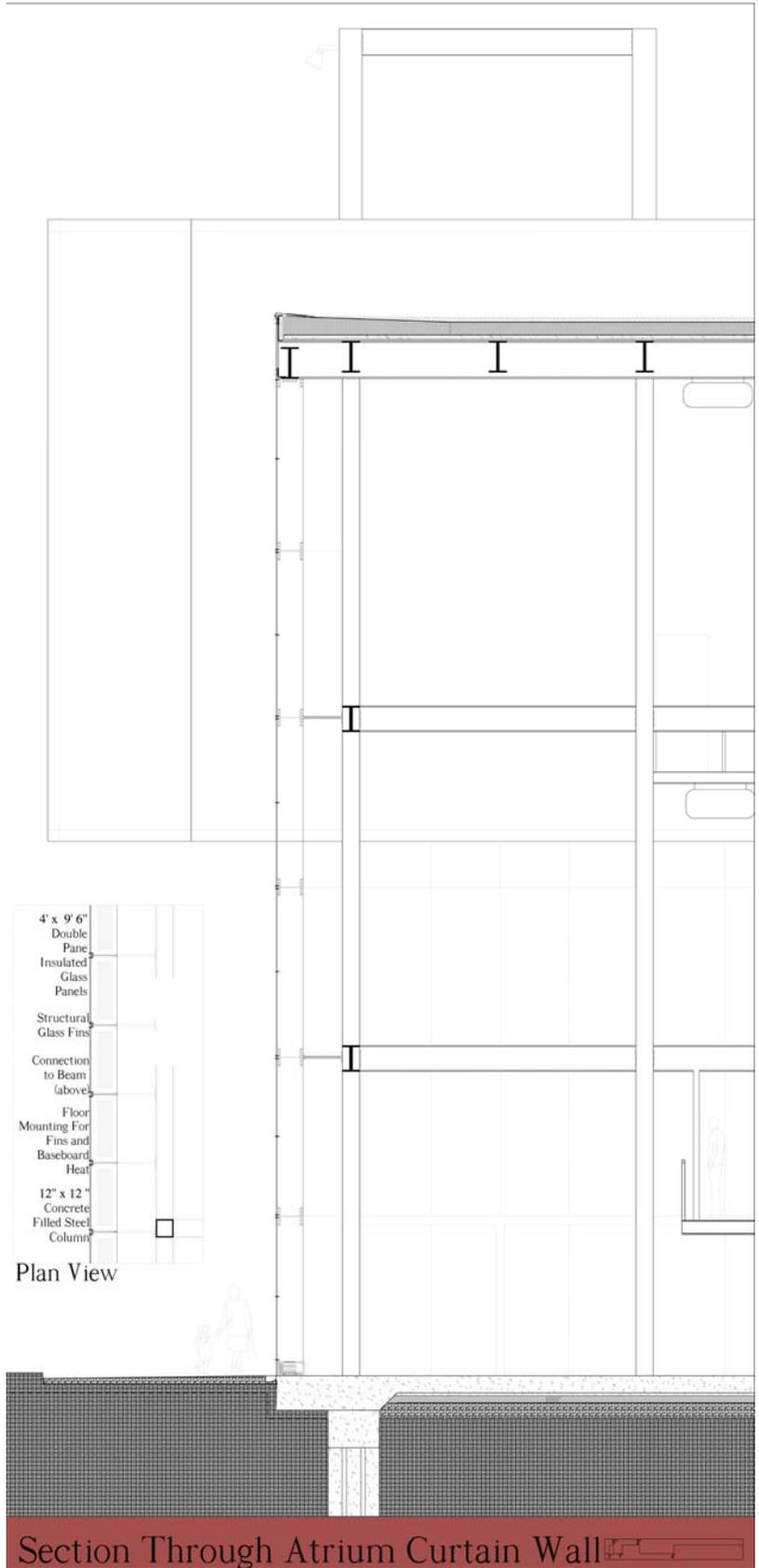


Figure 216: Section Through Atrium Curtain Wall



Figure 217: Diagrammatic view of major structural elements

Revised Summary of Program Elements

	<u>Approximate Square Footage</u>
Performance Related and Exhibition Spaces:	
All Lobby and gallery spaces	16,200
Large theater including seating and circulation	7,000
Large theater balcony seating and circulation	5,000
Small theater including seating and circulation	3,000
Backstage/theater storage	22,000
Dressing/Green room	1,500
Music recording and master sound control	1,500
Arts shop	1,000
	<i>Subtotal</i> 57,200
Circulation (all stairs, elevators and access to)	12,000
Support spaces (restrooms, mechanical, other)	12,000
	Total 81,200
Other Public Spaces	
Café (inside seating only)	2,500
Kitchen (including serving stations)	1,150
Restaurant and bar (seating plus all bar area)	3,500
Kitchen	1,200
	<i>Subtotal</i> 8,350
Circulation	1,200
Support spaces	1,500
	Total 11,050
Offices and Classrooms	
Staff Offices	
Eight individual offices (each 120 sf)	960
Open workspace (including volunteer desks, file storage, copy, group workspace, director assistant/reception, circulation)	1,100
Directors office	220
Conference room	370
Kitchen/Break room	110
Reception	650
Circulation	2,600
	<i>Subtotal</i> 6,010
Classrooms/Community Spaces	
Large classroom/studios (2)each ~1,200 sf	2,400
Small classrooms (2, each ~500 sf)	1,000
Music practice rooms (2, 100 sf each)	200
Multipurpose room	1,200

Circulation		1,680
	<i>Subtotal</i>	6,480
	<i>Subtotal Office and Community</i>	12,490
Support spaces (combined for office/community)		1,300
	Total	13,790
Grand Total		106,040

Endnotes

¹ Josephine Detmer and Patricia McGraw Pancoast. Portland: Greater Portland Landmarks, Portland, Maine: Greater Portland Landmarks, Incorporated, 1972. p. 18

² Detmer and Pancoast, p. 40

³ Maine Writer's Project. Portland City Guide; American Guide Series, Portland Maine: Forest City Printing Company, 1940. p. 39

⁴ Maine Writer's Project, pp. 39, 40

⁵ Maine Writer's Project, p. 62

⁶ Detmer and Pancoast, p. 184

⁷ Maine Writer's Project, p.62

⁸ Maine Writer's Project, p. 50

⁹ <http://www.ci.portland.me.us/facts.htm#C>

¹⁰ City of Portland, Maine. "Ocean Gateway Waterfront Development History.", <http://www.oceangatewaymaine.org/history/>

¹¹ BEA International, Inc. and Woodard & Curran. Supplemental Report: Portland Waterfront Passenger Facility; Ocean Gateway Project, Prepared for State of Maine Department of Transportation and the City of Portland, Maine, November 2001. p. ES-1

¹² BEA International, Inc. and Woodard & Curran, Figure 9

¹³ BEA International, Inc. and Woodard & Curran, Figure 11

¹⁴ Maine Writers Project, p. 60

¹⁵ Maine Writers Project, pp. 59-61

¹⁶ <http://pressherald.maintoday.com/specialrpts/faces/timeline.shtml>

¹⁷ Kelly Bouchard. "In Transition: Can Portland afford to pay the price of growth?", Portland Press Herald, Blethen Maine Newspapers, Inc., February 8, 2004

¹⁸ James Bau Graves. Cultural Democracy: The Arts, Community, & the Public Purpose, Urbana and Chicago: University of Illinois Press, 2005. pp.1-19

¹⁹ <http://www.arcspace.com/architects/vandkunsten/torpedo/index.htm>

²⁰ Gaelle Breton. Theaters, New York, New York: Princeton Architectural Press, 1989. pp. 42-47

²¹ George Izenour, M.A. D.F.A. Theater Design, Second Edition, New Haven and London: Yale University Press, 1996. p. 111

²² Hardy Holzman Pfeiffer Associates. Theaters, Back Stage Books, New York, New York: Watson Guptil Publications, a division of BPI Communications, Inc., 2000. pp. 120-121

Sources

Books

Breton, Gaelle. Theaters. New York, New York: Princeton Architectural Press, 1989.

Detmer, Josephine and Pancoast, Patricia McGraw. Portland: Greater Portland Landmarks. Portland, Maine: Greater Portland Landmarks, Incorporated, 1972.

Graves, James Bau. Cultural Democracy: The Arts, Community, & the Public Purpose. Urbana and Chicago: University of Illinois Press, 2005.

Hardy Holzman Pfeiffer Associates. Theaters. New York, New York: Back Stage Books, Watson Guptil Publications, a division of BPI Communications, Inc., 2000.

Izenour, George, M.A. D.F.A. Theater Design. Second Edition, New Haven and London: Yale University Press, 1996.

Maine Writer's Project, State of Maine Work Projects Administration. Portland City Guide; American Guide Series. Portland Maine: Forest City Printing Company, 1940.

Shettleworth, Earle G. Jr. and John E. Pancoast. Portland Historic Resources Inventory. Augusta, Maine: Maine Historic Preservation Commission, 1976, in cooperation with the Portland Planning Department and Greater Portland Landmarks, Inc., 1976.

Planning Documents

BEA International, Inc. and Woodard & Curran. Supplemental Report: Portland Waterfront Passenger Facility; Ocean Gateway Project. Portland, Maine: Prepared for State of Maine Department of Transportation and the City of Portland, Maine, November 2001.

City of Portland, Planning Division. Portland's Comprehensive Plan City of Portland, Maine: Compilation of Adopted Documents Goals and Policies Listed According to Growth Management Goals, Volume 1 & 2, 'Waterfront Resources', Portland, Maine: City of Portland, Planning Division. November 2002. P. W1-W14. Online: <http://www.ci.portland.me.us/planning/complanbook.htm> Accessed March 2005.

Waterfront Development and Master Planning Committee, City of Portland Planning Office With Technical Support from ICON Architecture, Boston, MA. A Master Plan for the Redevelopment of the Eastern Waterfront. Portland, Maine: City of Portland, Planning Division, June 3, 2002.

Articles

Bouchard, Kelly. "In Transition: Can Portland afford to pay the price of growth?" Portland Press Herald, Blethen Maine Newspapers, Inc., February 8, 2004.

Bruce, Marcus, PhD. "Second Lining: Culture as Collaboration." CCE website: <http://www.centerforculturalexchange.org/products.html>. Accessed March, 2005.

City of Portland, Maine. "Ocean Gateway Waterfront Development History." *Ocean Gateway: Port of Portland website*: <http://www.oceangatewaymaine.org/history/> Accessed March 2005.

Ellis, Justin. "Jordan's Job Losses to Hit Immigrants Hard." Portland Press Herald, Blethen Maine Newspapers Inc., Friday, January 14, 2005.

Jalali, Reza. "Lost in Transition: Refugees Calling Portland Home." CCE website: <http://www.centerforculturalexchange.org/products.html>. Accessed March, 2005.

Monroe, Captain Jeffrey W., Director of Transportation and Waterfront, City of Portland, ME. "Seeking the Port in Portland." *Ocean Gateway: Port of Portland website*: <http://www.oceangatewaymaine.org/history/> Accessed March 2005.

Torres Tama, Jose, "Cultivating Young Voices Through Performance Art" *Center for Cultural Exchange website*: <http://www.centerforculturalexchange.org/products.html>, Accessed March, 2005.

Turkel, Tux. "Developer To Buy, Transform Former Jordan's Meats Plant." Portland Press Herald, Blethen Maine Newspapers Inc., Friday, February 18, 2005.

"Special Report: The Changing Face of Maine; Historical timeline of American Indians, African-Americans and people of color in Maine" Portland Press Herald, Blethen Maine Newspapers, Inc. 1999, *Portland Press Herald website*: <http://pressherald.maintoday.com/specialrpts/faces/timeline.shtml> Accessed May, 2005.