CONNECT CHELSEA:

Three Visions for a Gateway City

CONNECT CHELSEA:

Three Visions for a Gateway City

2 May, 2014

Harvard University Graduate School of Design
Urban Planning Core Studio

Cover - *(Nguyen)*

ACKNOWLEDGMENTS

City of Chelsea

Jay Ash, *City Manager*

John DePriest, *Director of Planning and Development*

Albert Ewing, *Housing Authority*

Matthew Frank, *District 3 Councilor*

Joe Foti, *Director of Public Works*

Brian Kyes, *Chelsea Police Chief*

Luis Prado, *Health and Human Services*

Ricardo Sanchez, *Planning and Development*

Commonwealth of Massachusetts

Sal DiDomenico, *State Senator – Middlesex and Suffolk District*

Scott Hamwey, *Massachusetts Department of Transportation*

Community Liasons

Roseann Bongiovanni, *Chelsea Collaborative*

Dan Cortez, *Massachusetts General Hospital*

Rich Cuthie, *Chelsea Chamber of Commerce*

Melissa Dimond, *Massachusetts General Hospital*

Kevin Feole, *Market Basket*

Father Edgar Gutierrez-Duarte, *Saint Luke's Episcopal Church*

Ann Houston, *The Neighborhood Developers*

Steve Lampron, *Jordan Boys and Girls Club*

Emily Loomis, *The Neighborhood Developers*

Saritin Rizzuto, *Chelsea Chamber of Commerce*

Kevin Saba, *The Development and Marketing Group*

Melissa Walsh, *The Neighborhood Developers*

Sandra Whitley, *People's AME Church*

Special Thanks

Thank you to all the residents, business and property owners, city officials, civic leaders, and interested participants who completed surveys, engaged in interviews, participated in workshops, gave feedback, and supported the project with patience and insight.

Student Project Team

Erica Blonde

Patrick Boateng

Andrew Cantu

Kathryn Casey

Heidi Yongha Cho

Young Ae Chung

Owen Deutsch

Vineet Diwadkar

Irene Figueroa Ortiz

Matthew Furman

Jonathan Goldman

Allison Green

Kevin Gurley

Mark Heller

David Henning

Virginia Keesler

Jacob Koch

Ethan Lassiter

Joyce Lee

Zachery LeMel

Maynard León

Joshua Levitt

Yani Li

Jefferson Mao

My Tam Nguyen

Ning Pei

Martha Pym

Jeenal Sawla

Margaret Scott

Jonathan Springfield

Aldarsaikhan Tuvshinbat

Sofía Viguri

Robert Wellburn

Samuel Wright

Suggested Citation

Harvard University, Urban Planning Core Studio. 2014. Connect Chelsea: Three Visions for a Gateway City. Draft Report. Cambridge, MA: Graduate School of Design.

Core Faculty

Dan D'Oca

Ann Forsyth, Program Coordinator

Kathryn Madden

Teaching Assistants

Charles Brennan

Tim Czerwienski

Jennifer Lee

Lydia Scott

Course Input and Reviewers

Baye Adolfo-Wilson

Manisha Bewtra

Renato Castelo

Reese Fayde

Maxine Griffith

Joyce Klein Rosenthal

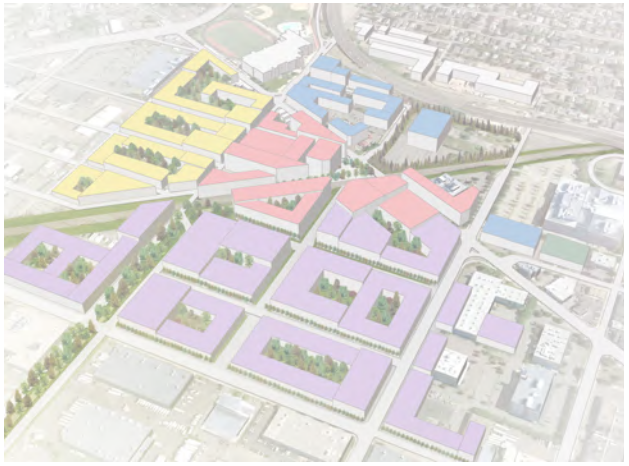
Helen Lochhead

Richard Peiser

Robert Pietrusko

Eric Shaw

TABLE OF CONTENTS



Urban Design						
Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
Transition scale of the built environment	Assess zoning code, re-write if needed	Chelsea Planning and Development Department	Zoning Board of Appeals, Planning Board, City Manager, City Council	City operating budget	Low	Short
	Re-zone/create new zones	Chelsea Planning and Development Department	City Council, Zoning Board of Appeals	City operating budget	Low	Short
	Create name for overall new neighborhood	Chelsea Planning and Development Department	Cultural Council, Historical Commission, Youth Commission, City Manager, City Council, business community, community members	DIF, BID, state/federal funds, city budget	Low	Medium
Transportation						
Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
Reintroduce street grid	Work inter-departmentally to complete street grid (as per plan) by using ROW or land acquisitions	Chelsea Planning and Development Department	Public Works, City Attorneys, City Manager, property owners	City of Chelsea CIP	Medium/High	Medium
Strengthen role of station with multi-modal connections	Use Station Improvements as shared, central node in neighborhood and enable easy multi-modal connections	MBTA	MassDOT, City of Chelsea	MBTA, MassDot, City, EPA Smart Growth Transportation Funding	High	Medium
	Analyze existing bus routes and identify potential route changes	MBTA	MassDOT, City of Chelsea	MBTA, MassDot, City	Low	Short
	Examine extension of Boston Hubway Bike share to Chelsea	Hubway, MassDOT	City of Chelsea	Hubway	Low	Short
Natural Systems and Open Space						
Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
multi-scalar water management system	Develop and promote the inclusion of green infrastructure strategies (such as bioswales, curb alternatives, permeable surfaces, urban trees, planters, etc.) into street design to coordinate and realize ecological and social benefits. Amend zoning code to enforce this.	Chelsea Planning and Development Department	DPW, Zoning Board of Appeals, MassDOT	PARC, LAND	Medium/High	Medium/ Long
	Amend zoning codes to encourage individual land owners to develop higher efficiency water management practices, such as vegetated (or green) walls, roofs, and infiltrateable surfaces. Consider financial incentives	City Manager; City Council	Planning & Development; Zoning Board of Appeals; Public (Property Owners)	City Council	Low	Short
Economic Development						
Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
Reduce the extent to which	Hire an economic development planner who is responsible for applying for brownfields assessment and remediation grants, as well as offering technical assistance to developers	Chelsea Planning and Development Department	Chelsea Chamber of Commerce, Metropolitan Area Planning Council, local businesses, property developers	City general operating funds (short term) and DIF revenue (long term)	Low	Short
	Conduct an area-wide planning study to identify where contamination exists and probable remediation costs	Chelsea Planning and Development Department	EPA, MA Department of Environmental Protection, HUD, property owners, property developers	EPA Assessment Grant Program, EPA Brownfields Area Wide Planning Program, CDBG	Low	Short
Housing						
Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
Ensure 20% affordable Housing	Evaluate Inclusionary zoning policy	City Council	Developers	Private Developers	Low	Long
	Leverage Tax credits to finance development	Developers		Federal Tax Credit Designation	Low	Long
	Maximize public and private funding sources that support smart growth/affordable housing	TND and Private Developers	State and federal agencies	Federal and State funding sources	Low	Short
Incentivize Market Rate Housing Development	Rationalizing zoning policies	City Council	Chelsea Planning and Development Department	Policy change (no funding required)	Low	Short
	Introduce housing incrementally to avoid saturating the housing market	City Council	Chelsea Planning and Development Department	Policy change (no funding required)	Low	Medium
	Exercise eminent domain	City Council	Chelsea Planning and Development Department	Policy change (no funding required)	Medium/High	Medium

EXECUTIVE SUMMARY

CONNECT CHELSEA

Chelsea has seen spectacular growth recently, as new hotels, residences and offices have sprung up throughout the city. Now, with the announcement of the Massachusetts Bay Transit Authority (MBTA) Silver Line extension linking Chelsea to downtown Boston, the future looks ever more promising. Most notably, the western part of Chelsea around the proposed station offers great development opportunities in the coming years. However, while this crucial area can be a major asset for the city, the specific uses for it are still largely undefined.

Connect Chelsea: Three Visions for a Gateway City is a project of the Spring 2014 Core Urban Planning Studio at Harvard University's Graduate School of Design. The project focuses on the area immediately to the west of Route 1, which includes the "Everett Avenue Urban Renewal District," a priority district as identified by the City of Chelsea, and the terminus of the proposed MBTA Silver Line extension. By adding capacity to the City's planning department and supporting local community development efforts, the studio will help anticipate economic development and land use in the area in advance of the potential changes that this major infrastructure investment will bring.

Chelsea is a complex city with competing priorities, diverse stakeholders, and many different visions for the future. As the team of students conducted background research, engaged with community members, and planned for the future, the team was constantly confronted with the multifaceted nature of the city. The recommendations of Connect

Figure 2 - Planning Focus Area *The plan focuses on the area to the west of Route 1, which is dominated by parking lots, vacant lots, industrial uses, and big box retail.*

Chelsea are presented in the form of three scenarios, each of which examines Chelsea from a distinct viewpoint. The scenarios stand alone and can be read individually, but they are also complementary when considered together as forming a spectrum of possible approaches. In this way, the project addresses the broad range of challenges in Chelsea by offering solutions from a multitude of perspectives.

Figure 1 - *(Nguyen)*

CONTEXT

As a diverse community with a significant immigrant population, Chelsea embodies the concept of a Gateway City. The city has long been an affordable and inclusive option for working-class people from various backgrounds. Now, due to the promise of a mass transit option and its proximity to Boston, Chelsea is becoming more and more attractive to middle class professionals.

The Silver Line extension will have an especially significant effect on the study area of western Chelsea, which is characterized by large land parcels, industrial functions, surface parking, and big box retail. This area was devastated by the fire of 1973, but gradual redevelopment provides a foundation for growth. Indeed, western Chelsea has attracted new hotels, market-rate housing, health care institutions, and even the regional FBI headquarters in recent years. The Silver Line extension will only spur this process as developers move to capitalize on Chelsea's growing reputation and advantageous location.

However, development is also limited by certain physical conditions. Because of Chelsea's industrial past, land contamination will most likely create substantial legal and financial barriers for developers. Furthermore, Chelsea's location on the Mystic and Island End Rivers makes it susceptible to rising sea levels and flooding. Indeed, western Chelsea's relatively low elevation puts it almost completely within the Federal Emergency Management Agency (FEMA) floodplain.

These complicated conditions, as well as the diversity of stakeholders in the city, have sparked many efforts to guide the development of the city. It is important to take these past and present efforts into account. A number of non-profit organizations are active in the community, including the Chelsea Collaborative, Centro Latino, the Chamber of Commerce, and many others. The Neighborhood Developers, the local community development corporation (CDC), has spearheaded revitalization and new affordable housing in the Box District and Bellingham Hill. The CDC is currently working with the city on the Broadway Corridor Action Plan. In the past 10 years, there have been nine planning reports written on the city, with much of the focus on how to attract new development. In light of all this, Connect Chelsea has been structured to respect current initiatives and community process through an extensive outreach and engagement effort with the various stakeholders of Chelsea.

Figure 3 - Intercept Interview on MBTA *Studio members conducted outreach in numerous ways, including intercept interviews with commuters on MBTA busses that serve Chelsea (Pei).*

ENGAGEMENT

The project is grounded in a significant engagement effort during which students reached out to more than 600 people who live, work, manage businesses, or otherwise spend time in Chelsea. Over a period of several months, the studio sought input through online platforms, written "intercept" surveys, in-person interviews, and group workshops. The diversity of techniques employed in this process helped to engage multiple sectors of the community, gather a rich set of information about complex topics, and raise general awareness about potential changes coming to Chelsea.

Participants brought to the forefront some of the key issues surrounding the development of western Chelsea, including:

- City Government and its ability to balance improvements for both new and existing residents
- Uncertainties over the extension of the Silver Line, and its impact on affordability
- Chelsea's industrial base and the shift towards the service economy
- Housing balance and whether new development addresses existing needs

Overall, despite the ongoing nature of discussions over these key issues, there was strong confidence in Chelsea's potential to grow in an inclusive manner. The input from various stakeholders on how to achieve this goal was instrumental to the formulation of the three scenarios put forth in this report.

Figure 4 - Surveys at Market Basket *Located at the heart of western Chelsea, Market Basket is an important center of activity, so studio members sought to solicit community input at the site (Pei).*

SCENARIOS

The three scenarios presented in this plan reflect the multitude of perspectives on the future of Chelsea. Each presents a unified vision built around five topic areas: Housing, Economic Development, Transportation, Open Space, and Urban Design. The scenarios examine these topics from the neighborhood level, the city level, and the regional level. In doing so, they offer a wide range of possible interventions, ranging from low-cost, immediate recommendations to ambitious, large-scale development plans.

Scenario 1: Leveraging Local Strengths

The Leveraging Local Strengths scenario offers a set of recommendations focused on the innate strengths of Chelsea in response to the potentially transformative effect of the Silver Line extension. It emphasizes building around realistic and actionable solutions in order to serve the existing community. In doing so, the scenario provides a unified vision of Chelsea that helps to maintain affordability, grow the economy, and strengthen community connections.

The scenario focuses on three core strengths:

- A diverse, socially engaged community that is inclusive and affordable for newcomers
- A solid economic base that supports a diversity of skills and a range of jobs
- A set of strategic, physical, and locational qualities

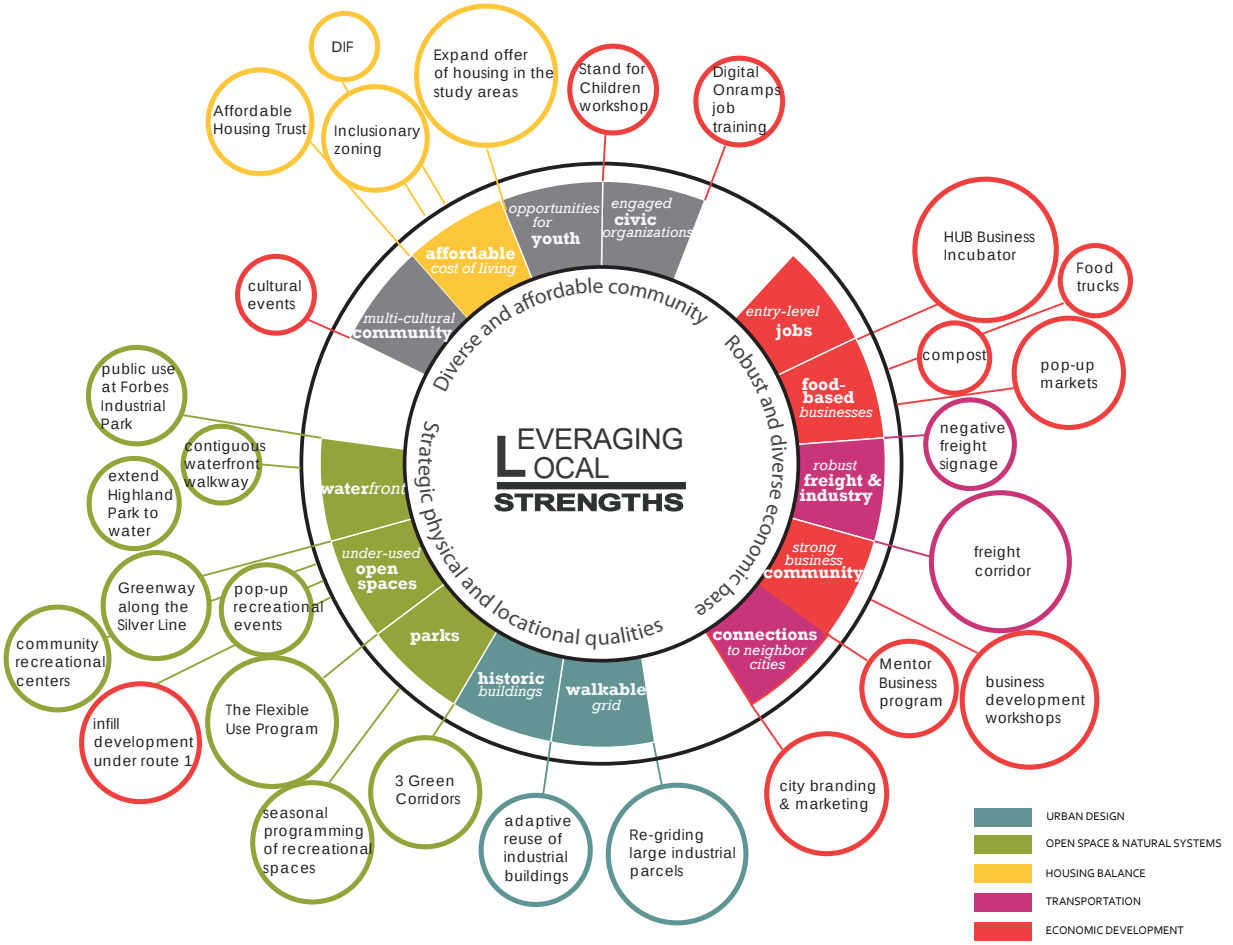


Figure 5 – Chelsea Strengths and Opportunities *Chelsea's strengths range from a thriving freight industry to affordability. Ways in which these strengths can be enhanced are developed within the plan.*

Simple, low-cost steps can be taken immediately to enhance these strengths. Phasing is heavily weighted toward implementation in the first three years, with major physical investments, such as housing or road infrastructure, projected for the next 10 to 20 years. Overall, the scenario plans for 1,500 units of housing, at least 20% of which would be affordable, and proposes more than 20 separate, small-scale interventions ranging from business incubator spaces to a citywide marketing campaigns.

This is a modular set of recommendations, as they can be taken individually and applied on a case-by-case basis. At the same time, all of these interventions come together in order to empower residents, enhance the existing character of Chelsea, foster stronger connections, and inspire civic pride. Thus, Leveraging Local Strengths acknowledges the city's need for a strengthened tax base, while addressing the priorities of current residents.

Scenario 2:
A Network Of Neighborhoods

A Network of Neighborhoods scenario recognizes the importance of a strong and distinct sense of place for western Chelsea. Its interventions focus on creating stable and thriving neighborhoods, as well as their importance to potential investors, residents, and the long-term prosperity of the city.

Chelsea is a city with a well-defined set of commercial corridors and pocket residential districts. However, this neighborhood network does not extend into the Everett Avenue Urban Renewal District. Instead, the area is dominated by surface parking, vacant lots, industrial uses, and big box retail. Key points of interest, such as Market Basket and Chelsea High School, are islands of activity within a landscape that is largely inhospitable to pedestrians. Community input identified this portion of the city as unwelcoming, unexciting, and giving off the perception of danger.

This scenario proposes transforming the area by establishing three new neighborhood centers:

- Mystic Square – New mixed use development and creative reuse of industrial space centered on new Silver Line station
- Arlington Corner – A residential hub with local businesses and civic anchors
- Island End – Mixed-use residential and office development with waterfront access

These neighborhood centers would replace vacant lots and parking spaces west of Route 1 and become memorable urban places catering to a population of several thousand people who live, work, and shop in the area. The scenario would add 3,700 units of housing over a 20-year phasing period, starting with the establishment of Mystic Square, and then moving on to Arlington Corner and Island End. Enhanced streets and open spaces would connect the new neighborhoods to Chelsea's existing urban fabric, while also providing important stormwater and flooding risk prevention. New civic spaces and economic development programs would increase human capital and generate a sense of community and identity in a section of Chelsea that is currently very isolated.

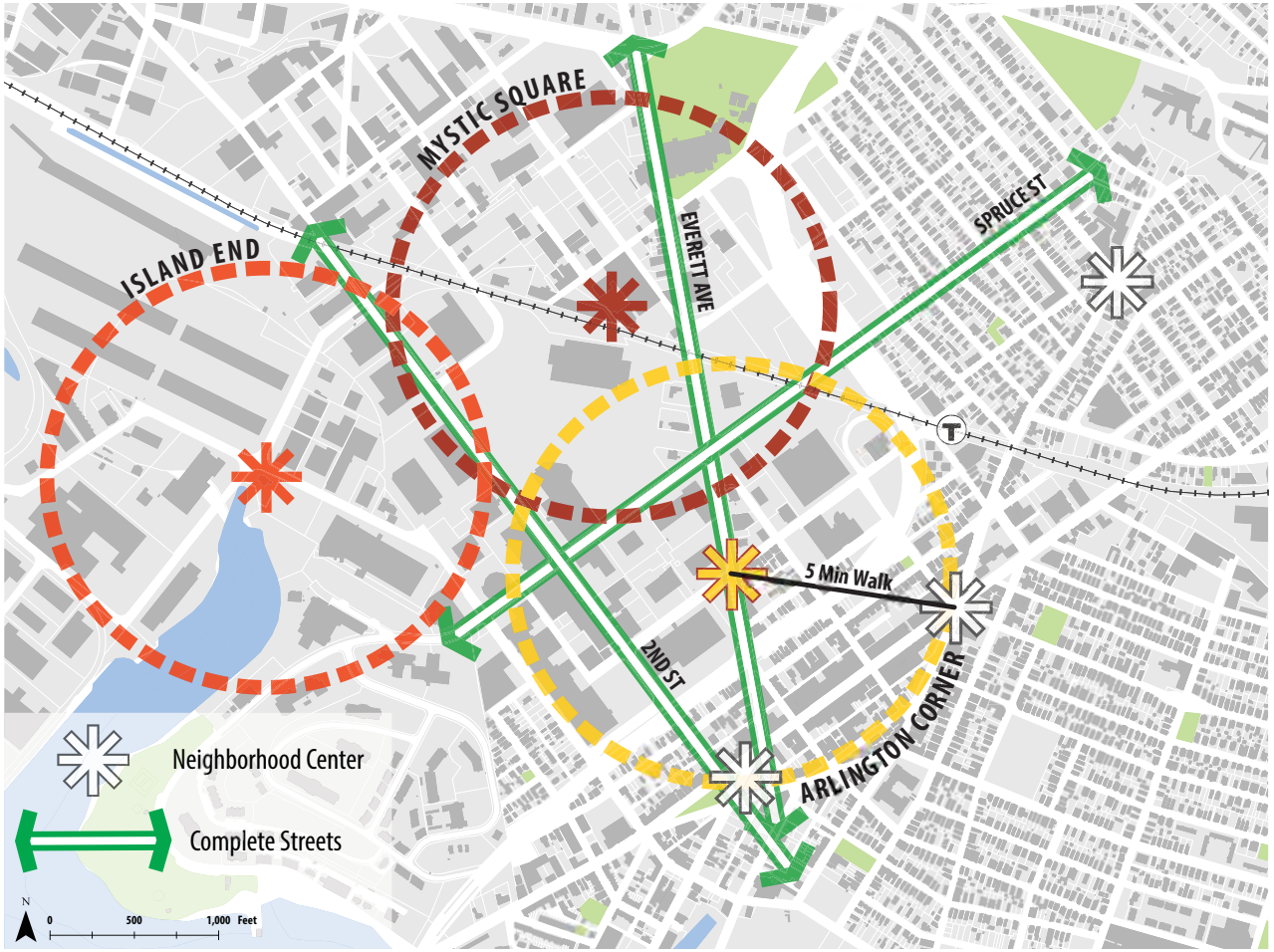


Figure 6 – Interconnected Neighborhoods *Proposed neighborhood centers in western Chelsea, which are memorable public spaces that catalyze other activity, link to existing neighborhood via complete streets.*

With the arrival of rapid transit, Chelsea will have many redevelopment offers for the urban renewal district. These will include buildings that, while well-designed and intentioned, are not strongly integrated into the surrounding land uses. A Network of Neighborhoods argues that the City should proactively seek to place such developments into a wider context of open spaces, people, and amenities.

Scenario 3:
Building For The Workforce

The Silver Line extension brings with it an important connection to the regional economy and major development opportunities. The Building for the Workforce scenario seeks to harness the full potential of development, while connecting residents to all of the opportunities that such development presents.

The scenario emphasizes a long-term outlook that capitalizes on immediate market demand for housing in the Greater Boston area and lays the groundwork for the sustained economic health of Chelsea. Over a 25-year period, the plan proposes the addition of 8,000 housing units, 3.5 miles of greened streets, 28 acres of green space, new employment and training space, and the creation of strong connections between the Silver Line and the spaces where people live and work in Chelsea.

This scenario will guide development in line with three key themes:

- Capitalizing on the city's regional economic advantage by connecting Chelsea residents with the major industry clusters of Greater Boston
- Developing infrastructure to attract and retain important employers
- Creating strong neighborhood identity with distinct district characteristics in order to establish an environment for long-term economic stability

Phasing the scenario over a 25-year period will allow for minimization of risk as well as orderly design. Implementation will proceed in three steps: Phase 1 (5 years, from 2015 to 2020), Phase 2 (10 years, from 2020-2030), and Phase 3 (10 years, from 2030 to 2040). The City can adapt the plan to market changes and avoid unnecessary infrastructure investments.

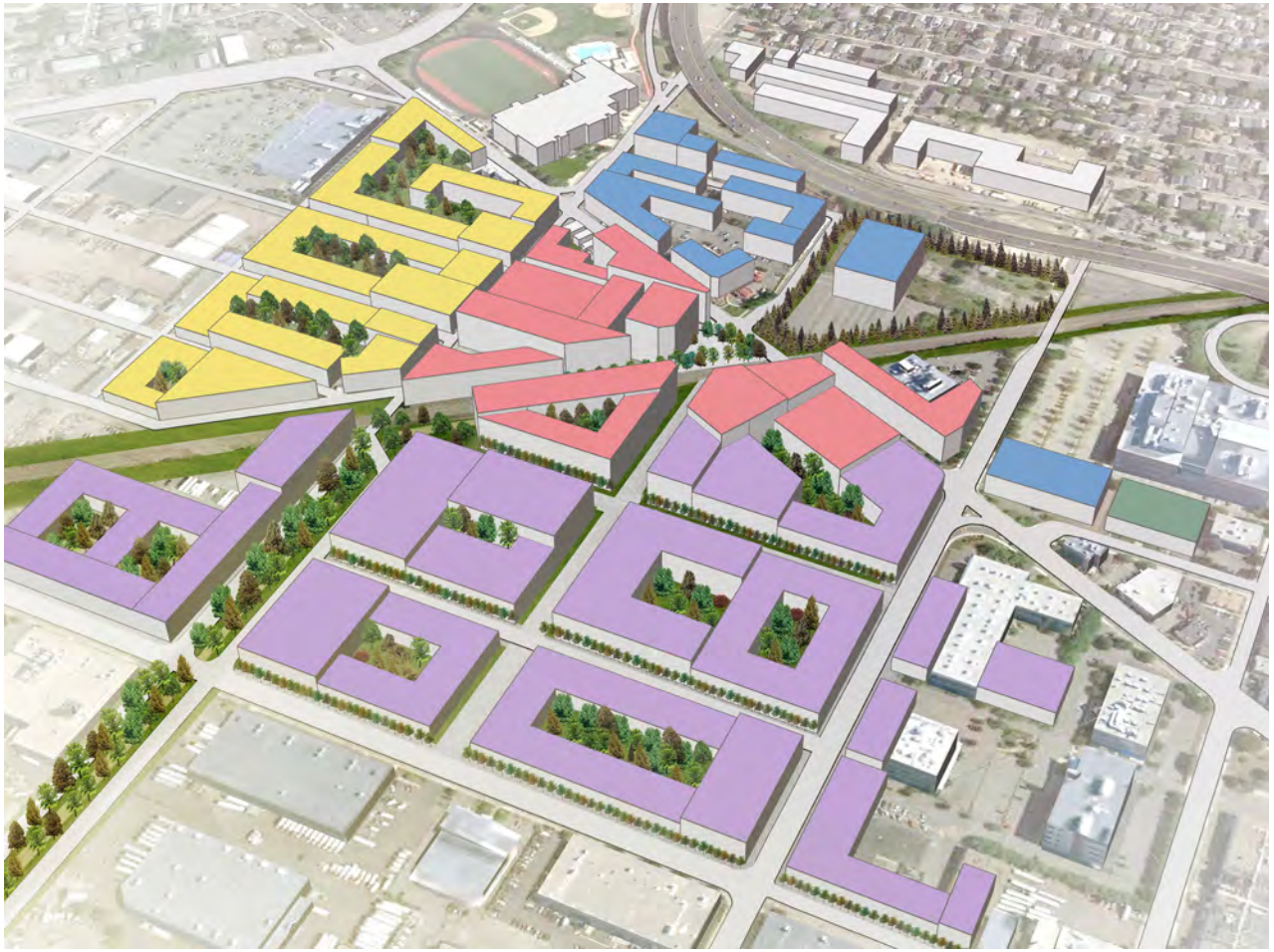


Figure 7 – Full Build Out of Study Area *Building for the Workforce envisions the gradual transformation of western Chelsea into a dense, mixed-use neighborhood.*

The Silver Line extension will enhance connections to nearby Boston, generating new development and employment opportunities in Chelsea. It will accomplish this by attracting employers that are connected to the strengths of the Greater Boston economy and by increasing residents' access to jobs outside of the city. New development, infrastructure improvements, and smart design can bolster Chelsea's current regional position, redefining it as an economic and residential center where urban life, opportunities, and aesthetics converge to offer citizens an optimal neighborhood and community experience.

NEXT STEPS

Connect Chelsea presents a menu of options for the improvement of Chelsea that spans many situations and can be adapted to fill a variety of needs. From the low-cost, immediate interventions of Leveraging Local Strengths, to the neighborhood-building of A Network of Neighborhoods, to the ambitious regional-driven development of Building for the Workforce, the plan offers a framework for realistic, feasible work that could be undertaken right away. At the same time, the plan provides a coherent, long-term perspective.

It is the hope of the studio that this report will be used as a way to think about all of the forces and interests at play in the development of Chelsea. Connect Chelsea is an attempt to engage with the complexity of the city and to represent the numerous components that are important to consider in a unified and encompassing vision. Despite their different perspectives, all three scenarios for the city strive towards the common goal of a safe, inclusive, and thriving Chelsea. For this reason, an essential component of the report is the final section on implementation, which documents the tools and resources that policymakers, businesspeople, organizations, and residents have at their disposal in order to make their vision of Chelsea into reality.

SCENARIO COMPARISONS

Leveraging Local Strengths

The character of Chelsea is valuable. This plan welcomes more of what makes Chelsea unique to complement local housing, industry, and business.

Proposes:
- 1,500 housing units (20%+ affordable)
- 20+ small-scale business interventions ranging from business incubator spaces to a citywide marketing campaign

A Network of Neighborhoods

Chelsea is a city of neighborhoods. This plan establishes new neighborhoods to the west to connect the city as a whole.

Proposes:
- 3,700 housing units
- 3 new neighborhood centers: Mystic Square, Arlington Corner, and Island End
- Soft infrastructure network to manage storm water and increase open space

Building for the Workforce

Chelsea's location is an asset. This plan uses the location to guide development to house and provide jobs for a growing workforce.

Proposes:
- 8,000 housing units (20%+ affordable)
- 3.5 miles of greened streets and 28 acres of green space
- New employment and training space
- Strong connection between the Silver Line and live-and-work spaces.

INTRODUCTION

CHELSEA: GATEWAY CITY

Directly across the Mystic River from downtown Boston, the City of Chelsea is home to a diverse community of 35,000 residents. As the second most densely populated city in Massachusetts, the 1.8 square mile area has long been representative of a wide breadth of cultural backgrounds, and it is one of the 26 designated Gateway Cities in the Commonwealth. For Chelsea, the notion of 'gateway' is particularly apt: 45% of the city's residents were born outside the US – 27% above the Greater Boston average. Of these residents, over 65% hail from Central America, including approximately 5,300 from El Salvador and 2,300 from Honduras (ACS, 2013; US Census, 2011). The result is a young and diverse city that places enormous value on – and pride in – sense of community.

These strengths are matched by real challenges. The Massachusetts Institute for a New Commonwealth (MassINC) states that Gateway Cities face "stubborn social and economic challenges" (MassINC, 2011). In Chelsea, this is perceptible in a number of ways. At 23%, Chelsea's poverty rate is over three times the Greater Boston average; unemployment, at 11.6%, is 3.5% above the metropolitan average; and, finally, in a city where more than a quarter of the population is under 18, the high school dropout rate (8%) is over twice that of Greater Boston (ACS, 2013; MAPC, 2014; US Census, 2011).

The focus then, for both the city and for this report, is the future. The most important characteristic of a Gateway City is that, alongside challenges, there is great "unrealized potential" that can be catalyzed through a strategic, long-term vision for the future. The wave of incoming development and political will surrounding the Silver Line extension puts Chelsea and its residents in a prime position to ensure that the area designated as the "Everett Avenue Urban Renewal District" is integrated into the existing context in a way that reaffirms Chelsea as an inclusive, diverse, and attractive place to live.

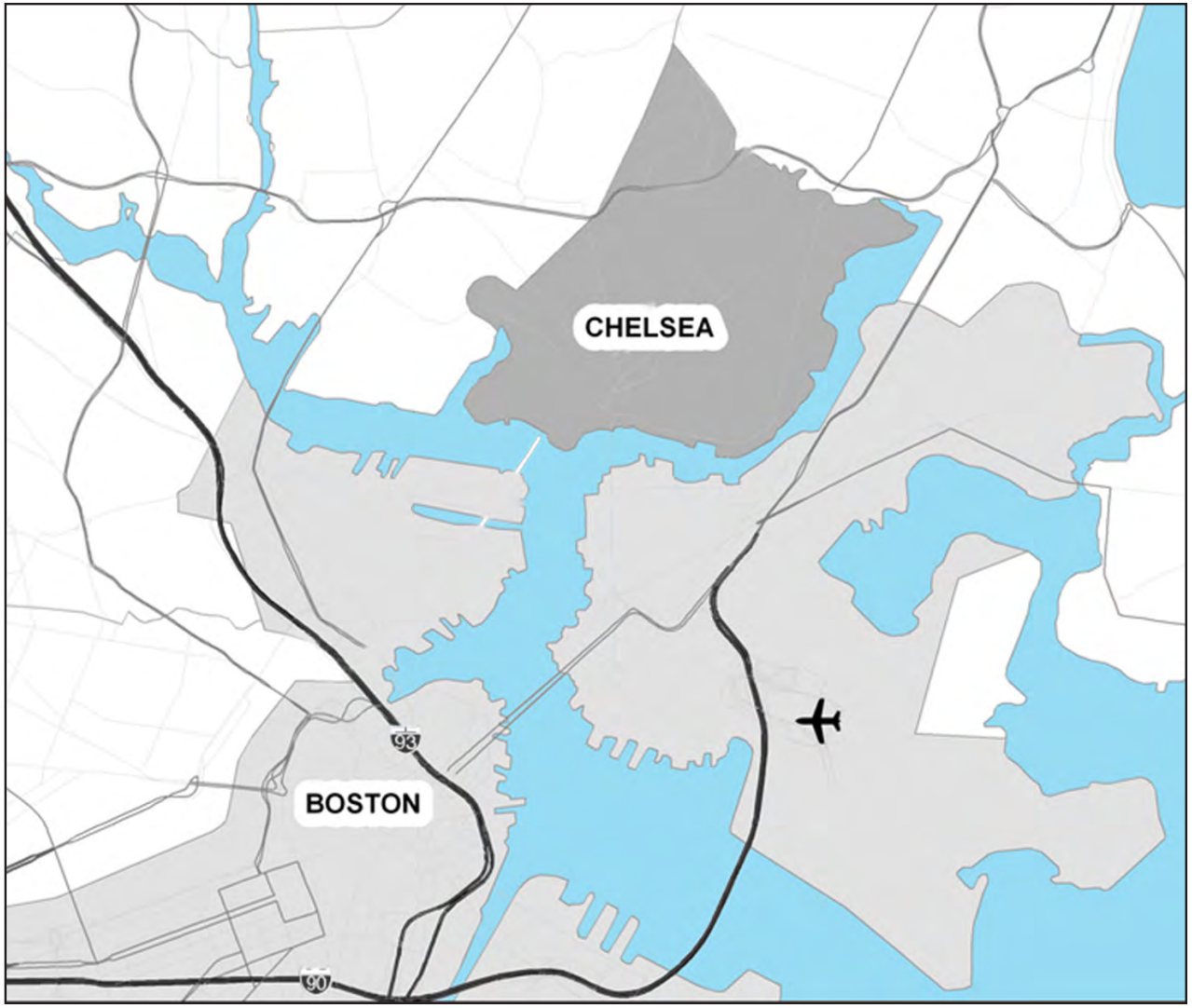


Figure 2 – Chelsea's location in the Boston metropolitan region *Located on the north bank of the Mystic River, Chelsea is closer to downtown Boston than many of the city's own neighborhoods. The 1.8 square mile city is surrounded by Charlestown to the southwest, and counter-clockwise by Everett, Revere, and East Boston (MassGIS).*

Figure 1 – *(Nguyen).*

The Silver Line:
An Opportunity for Chelsea

On October 30, 2013, Governor Deval Patrick announced the extension of the Massachusetts Bay Transportation Authority (MBTA) Silver Line bus rapid transit to Chelsea. Serving an estimated daily ridership of 9,000 people, the extension will connect the city to the Blue Line's Airport station in 8 minutes, the World Trade Center in the Seaport District in 19 minutes, and to South Station in the heart of downtown Boston in 23 minutes (Governor Patrick's Office, 2013). With construction expected to begin in late 2014, the Silver Line will be a transformative force for Chelsea. The line will bring people, development, and investment, while also providing a much needed transit improvement to an area that has the greatest proportion of transportation-dependent residents in Greater Boston.

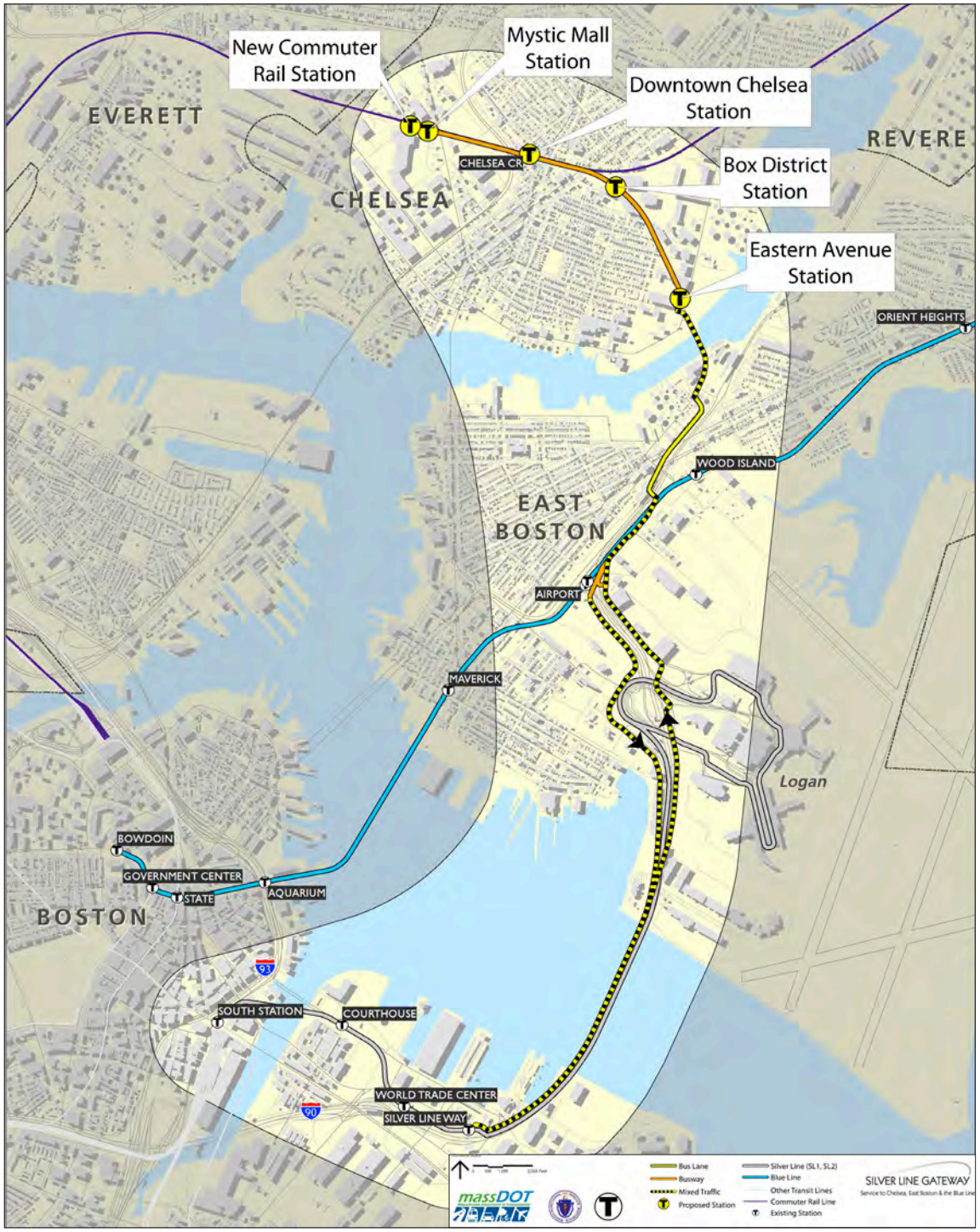


Figure 3 – The Silver Line extension *Chelsea will be further connected to downtown Boston by bus rapid transport, taking only 23 minutes from Chelsea to South Station. The final station of the Silver Line will be located in the heart of the "Everett Avenue Urban Renewal District" (MassDOT).*

Western Chelsea

The extension of the Silver Line marks the beginning of a new chapter in the city's history, particularly for the "Everett Avenue Urban Renewal District," an area designated by the City for targeted development. For the purposes of this report, the planning focus is broadened to the area west of Route 1, referred to here as western Chelsea. In 1973, a tragic fire resulted in the destruction of eighteen blocks – almost one-fifth of the city – profoundly impacting the neighborhood's shape and form. A once thriving industrial district, framed by a grid network of streets, was completely razed. Gradually redeveloped over the past 40 years, the character of the area continues to reflect the impact of the fire. It is dominated by surface parking, large parcel industrial functions, big box retail, and vacant lots. Often cited as an area little known by many of the city's residents, it contrasts starkly with the vibrant, densely populated neighborhoods of Bellingham Square, the Broadway Corridor, and Addison-Orange to the east of Route 1.

Figure 4 – The 1973 Fire *The fire of 1973 tragically destroyed almost one-fifth of the city, razing much of a thriving industrial area and destroying western Chelsea's grid network of roads (Grant).*

Figure 5 – Contemporary western Chelsea *Large parcels, big box retail, and vacant lots dominate the area today (Viguri).*

Figure 6 – Brownfield Sites in western Chelsea *Western Chelsea's industrial uses present planning challenges when developing land contaminated by petroleum and other hazardous materials (Viguri).*

Two important physical conditions in western Chelsea impact possibilities for development in the area, both of which have strongly informed the visions outlined here. The first is the potential for land contamination, a result of Chelsea's past and present industrial character. The owners of brownfield sites can incur substantial costs during development, while also taking on legal liabilities. Though Chelsea has not undertaken a comprehensive contamination inventory, there are indications of petroleum and other hazardous materials. MassGIS has classified four "Tier II" sites within western Chelsea, meaning that the land poses a small risk. A further 18 sites have been designated with 'activity and use limitations' (AULs), which place legal restrictions on uses for the site, such as residential or day care, in order to protect health and the environment (MassDEP, 2014)

The second feature is a product of Chelsea's location on the Mystic and Island End Rivers. Although the abundance of waterfront is one of the city's greatest assets, it presents significant risks of flooding, storm surge, and sea level rise. Surrounded by three hills, western Chelsea's relatively low elevation creates a natural drainage basin. The area is almost entirely within the Federal Emergency Management Agency (FEMA) floodplain. Existing conditions, including the predominance of poorly draining impervious surfaces and the threat of sea level rise – estimated to be between two and six feet by the end of the twenty-first century – have serious implications both for the developable potential of the land and for the safety of individuals who might live or work in the area. While these pre-existing conditions might discourage development, the large parcels and relatively flexible economic activity in the area create an unprecedented opportunity for strategically implemented transit-oriented development.

Figure 7 – The Boston Harbor Association's Flood Map (5ft) *The area of western Chelsea is particularly susceptible to flooding, whether from sea level rise or poor storm water drainage conditions; this vulnerability must be addressed with responsibility in future plans for the city (Boston Harbor Association).*

STUDIO GOALS

In the context of this set of challenges and opportunities, the Spring 2014 Core Urban Planning Studio at Harvard University's Graduate School of Design has developed three planning scenarios for western Chelsea. Each imagines an alternative vision for how the city might develop over the next 30 years. The first, Leveraging Local Strengths, outlines a low-cost, locally-focused plan that draws on Chelsea's existing strengths; the second, A Network of Neighborhoods proposes that the city's walkable grid and mixed-use character be extended into western Chelsea; the third, Building for the Workforce, envisions Chelsea as a regional workforce hub, providing strategies for how the Silver Line can be used to strengthen the city. Though unique, all three of the plans address the same core objectives:

- Strengthen the identity of the city based on its existing assets while setting forth a clear vision for the future
- Develop urban design concepts to enhance a sense of place in western Chelsea, connecting it with the rest of the city
- Identify economic development strategies for the existing industrial areas, balancing retention of existing companies with redevelopment and recruitment of new industries
- Create an optimized network of transportation infrastructure, including traffic and parking improvements
- Identify opportunities to develop mixed-income housing and improve the existing housing stock
- Connect open space systems along the Silver Line corridor and the nearby waterfront areas
- Engage citizens and stakeholder groups in planning for future change

Figure 8 - Engaging the City *During February 2014, over 600 residents, workers, business owners, and visitors to Chelsea contributed input through online platforms, written "intercept" surveys, in-person interviews, and workshops. Their views were the touchstone for developing the three planning scenarios posed in this report (Cantu).*

Overall, the plans reflect the diversity of Chelsea and offer a sense of the various options available for its growth. As such, each plan is designed to exist either independently or collectively, and the strategies outlined in each are designed to be both adapted and combined. Above all, it is hoped that the visions outlined here will both reflect and stimulate conversation among Chelsea residents about the future that they desire for their city.

THE PROCESS

The three outlined scenarios are founded upon a period of research, analysis, and consultation undertaken by the studio as a whole over the course of three months. In early February 2014, the group met with the Chelsea City Manager, the Director of Planning and Development, and the Silver Line Project Manager at MassDOT. Throughout the process, the City Manager continued to stay abreast of the work during the studio.

The first three weeks of the studio were spent performing qualitative, on-site observations along western Chelsea's main corridors and undertaking a comprehensive analysis of existing data sources. This process allowed students to form preliminary assessments of planning issues in the city and greatly informed the community engagement process. Throughout February 2014, over 600 residents, workers, business owners, city officials, developers, non-profit organizations, and visitors to Chelsea voiced their opinions through online platforms, written "intercept" surveys, in-person interviews, and workshops. Outreach helped raise awareness about upcoming changes in Chelsea and enabled the student team to receive valuable insights from the following targeted populations:

Residents, Workers, and Transit Riders
A total of 547 surveys, including 183 completed online, captured opinions on numerous topics, including: available amenities, needed development, and awareness about the Silver Line. The greatest number of surveys was collected in Market Basket, MGH, and the Route 111 bus.

Online Community
A "Plan West Chelsea" Facebook page was created as a platform for discussion and publicity regarding the Silver Line extension, area development, and the student project, reaching 2,340 views at its peak. The page received endorsement by local newspapers, community groups, and other local social media.

Figure 9 - Workshop Materials *Engagement activities sought to gain insight on the way space is used by residents and visitors in Chelsea, while also mapping sites in which they would like to see changes occur (Figueroa).*

Government and Community Organizations
In-depth interviews and "ride-alongs" with seven city officials and two community leaders provided insight on the city's challenges, the vision for overall urban growth, and plans for incoming development. Interviewees were asked to perform a SWOT analysis and also evaluated public services.

Business Community
Semi-structured interviews were carried out with the managers and owners of 35 establishments in western Chelsea, including both large and small enterprises. Both old and new establishments were reached. Questions addressed the evolution of their businesses, their relationships with the community and the city, and their views on expected development.

Real Estate Developers
In-depth interviews with six of the 12 active developers of affordable and market-rate housing and hotels in Chelsea covered major challenges, milestones, and trends in Chelsea's real estate market.

Community Organizations
Informal workshops were held with over 60 attendees at Saint Luke's Episcopal Church Community Dining Room and Post-Worship Coffee Hour. Participants reflected on what they appreciate or would change about Chelsea. A second activity featured a focus group on incoming development with ten staff members of the Chelsea Collaborative. Lastly, 13 residents and workers participated in a two-hour bilingual workshop held at The Neighborhood Developers. Using maps of the study area, participants performed SWOT analysis and discussed their expectations for new development.

Teenagers
Eight members of the Boys and Girls Club participated in an interactive workshop to discuss the activities and amenities available for youth in Chelsea, including frequently visited sites, sites where they feel insecure, and amenities needed for young people.

Local Events
Beyond the activities organized formally through the studio course, students established an ongoing dialogue with the community by attending "Chel-Yea" gatherings and organizing a canned-food drive for Saint Luke's Church.

Community-Wide Event
A concluding participatory workshop was held on the afternoon of Tuesday April 29 at Market Basket. Over 100 attendees participated including Chelsea residents, employees, high school students, children and government officials. The GSD team presented the planning proposals for each of the three scenarios and asked attendees to select the initiatives they liked most for Chelsea, which were collectively displayed through the use of cards.

Overall, the breadth of audiences and engagement techniques provided a rich set of recommendations to address the complex set of development challenges facing Chelsea. Community engagement revealed the centrality of institutions and organizations and allowed students to develop a deeper understanding of the forces shaping Chelsea's future. Outlined in the following pages are divergent views revealed during the engagement process, key takeaways and recommendations that directly informed the planning scenarios, and a summary of the community feedback pertaining to each planning scenario.

COMPETING VIEWS

While recommendations were generally consistent across community groups, four cross-cutting topics generated mixed opinions and revealed enduring challenges for the planning process.

Trust in the city government

Generally, developers and several business owners commended local government for clear leadership, a vision of Chelsea "both as a city and a market," and support in attracting investment and public funding. Some community organizations and local business owners expressed an opposing view, however, voicing concern over infrastructure improvements exclusively around new development or the failure of the city to act sufficiently on behalf of current residents. While new development is largely seen as a way to stimulate economic growth, many community members believe that investment should be prioritized in existing neighborhoods.

Uncertainties over the impacts of the Silver Line

Although survey results indicate positive expectations about the Silver Line extension, there is no clear understanding of how affordability or accessibility may be affected. While most business owners expressed satisfaction, some stakeholders worry that the Silver Line station will further limit parking and create more congestion, as it will serve as the end of the line. Others suggested maintenance of the current Route 111 bus as a higher priority, while teen participants questioned whether the new line could be divisive between the north and south of the city. More broadly, community organizations expressed concern over possible gentrification spurred by transit accessibility, while private and non-profit developers cautioned against overestimating the changes induced by a new bus station. Overall, survey results revealed that a higher percentage of young, minority, and low-income respondents were unaware of the future Silver Line extension.

Figure 10 - The Connectedness of Chelsea's Local Business *Chelsea has a strong business fabric, which is often based on personal relationships, and facilitated by professional and service organizations to maintain close connections (Nguyen).*

Chelsea's industrial base and the shift towards the service economy

Chelsea's light industry is widely valued as a source of blue-collar jobs. With new development arriving, the community recognizes the likely shift in land use to residential or commercial purposes. Some business owners acknowledge and welcome this trend, so long as it confers benefits such as higher property values. Other stakeholders expressed concern about rising rents and argue that Chelsea should proactively protect its industrial character and economy.

Housing needs

Survey results indicate that housing is a development priority for those who identified in the lowest income bracket (annual household income less than $15,000). This demand is echoed by the Chelsea Collaborative, whose staff members noted that residents too frequently cannot qualify for affordable housing, as they do not meet minimum income levels. At the same time, however, other stakeholders showed little interest in housing or opposed public and multifamily housing due to perceived impacts on community character.

KEY TAKEAWAYS AND RECOMMENDATIONS

Throughout the engagement process, the community expressed a series of shared concerns that have informed the distinct scenarios outlined throughout the report. Concerns are grouped here in the same categories utilized in each of the individual plans: urban design, transportation, open space and natural systems, economic development, and housing.

Urban Design Principles

In spite of Chelsea's walkability, businesses and residents repeatedly noted the need to enhance the pedestrian experience to increase foot traffic and street safety. Community engagement indicated a need for street improvements, suggesting that relatively simple and immediate maintenance could impact how people view the city. Stakeholders envision active building frontages and "eyes on the street" as part of a community effort to develop a healthier local economy and reduce crime. Respondents expressed a desire for more ground floor retail with housing above, as modeled in nearby Davis Square. While the community is open to mid-rise dense development (5-6 story buildings), results indicate resistance to high-rise development, particularly given new hotel development. Lastly, litter was frequently discussed as a problem that undermines street life. Bolstered neighborhood-cleaning efforts represent an opportunity to encourage community engagement and civic pride.

Transportation

On the whole, the community is largely supportive of the incoming Silver Line and cited appreciation for Chelsea's connectivity to Boston and surrounding cities. Nonetheless, there is a general dissatisfaction with the quality of bus services (overcrowding, lack of evening service), street safety, accessibility for people with disabilities, and a lack of bicycle lanes. Railway at-grade crossings are considered dangerous, and participants suggested that wayfinding could be improved by revising the configuration of one-way streets. Managers of industrial businesses (freight, food distribution, scrap metal) underscored the need for road maintenance to reduce wear on trucks, equipment, and products. Restricted parking and permitting emerged as a key concern for businesses who believe this may limit commercial activity.

Natural Systems and Open Space

Community members emphasized the need for centrally located, accessible, and safe recreation space, often linking recreational programming with the desire for youth enrichment and crime prevention. Teenagers in particular expressed interest in spaces to meet friends, picnic, or play sports. Youth recreational space is largely limited to institutional facilities (such as the High School). Concrete recommendations reflect these limitations and opportunities, including: a) enhancing connections to parks and the waterfront; b) creating alternative spaces such as skate parks and cinemas; c) using open spaces to promote Chelsea's historical and cultural heritage; d) utilizing space underneath the Route 1 overpass for park space or public events.

Economic Development

Stakeholders generally agreed on the need to preserve business diversity and suggested strengthening the network of resources (such as the Chamber of Commerce) for resident-owned businesses, particularly those that are run or staffed by the foreign-born population. Businesses cited mentorship programs or an official policy to encourage larger or chain businesses to utilize local goods and services as promising ideas. Stakeholders underscored that new commercial activity should complement current retail activity on Broadway in downtown Chelsea. Upgrades in physical infrastructure (streetscaping, parking, litter removal) were highlighted as methods to strengthen the local economy and discourage crime. Developers pointed out that the emerging collaborative economy, such as Zipcar, Hubway, or shared workspaces, could be well suited for development in Chelsea.

Housing Balance

Chelsea has long been considered an affordable community, a foundation of its identity as a Gateway City. As such, community organizations stressed the need for expanded affordable housing, particularly as market-rate rentals in Chelsea grow. To achieve this end, non-profit housing developers mentioned that they hope to see a housing trust fund established by the City. Developers also emphasized mixed-income housing as a practical and sustainable development pattern, while still considering the need to maintain a balance with employment opportunities. The challenges of industrial contamination were also discussed and developers commended the city for its efforts to capture state and federal funding for remediation.

Community

Participants in engagement activities underscored the need to foster a stronger sense of community in Chelsea with neighborhood boards, community watches, and afterschool activities for youth. Residents are eager for events to celebrate Chelsea's cultural diversity and encourage integration. Teenagers expressed dissatisfaction with the relationship between local police and youth and cited many areas throughout the city where they feel unsafe.

Through the community engagement process, there was a clear message of confidence in Chelsea's future and a commitment to strengthening the Chelsea community. Residents and stakeholders are open to new development and hopeful that investments will continue to be made in existing infrastructure. Chelsea's affordability, diversity, and accessibility resonated as key strengths and set the tone for the proposed plans.

Figure 11 - Mapping Chelsea by Category *Mapping activities with teenagers revealed the places they like most to hang out (green), the sites they like (yellow) and dislike (pink), as well as those places they avoid (orange) (Pym).*

COMMUNITY-INFORMED PLANNING SCENARIOS

The outcomes of the engagement processes form the foundation from which the three planning scenarios developed. The first vision, Leveraging Local Strengths, addresses tensions between the city's light industry and growing service economy, while acknowledging and nurturing the assets people love about Chelsea: its social diversity, affordability, and the small town feel of the built environment. The second vision, A Network of Neighborhoods, prioritizes the concerns caused by the disconnected and vacant areas west of Route 1. The plan views the community's desire for housing, civic spaces, and an improved pedestrian experience as an opportunity to provide a cohesive, inviting street environment. The third and last vision, Building for the Workforce, responds to housing demands articulated by the low-income population, while also addressing the overarching desire for places for youth and families to enjoy. It deliberately avoids "bedroom community" development.

Throughout the report, the reader will find that overlaps between the three visions for the city are inevitable, as they all strive toward the common goal of realizing a safe, affordable, and inclusive Chelsea. For this reason, an essential component of this report is captured in the final section entitled Implementation, where it is made clear that a wide range of stakeholders have the tools, resources, and leadership needed to champion the initiatives that resound most strongly with a communal vision of Chelsea.

Figure 12 - The Voices that Shape Chelsea's Future *The engagement process collected the main concerns of the community and expectations for incoming development; it also revealed the centrality of institutions and organizations, allowing a deeper understanding of the forces shaping Chelsea's future (Blonde).*

COMMUNITY FEEDBACK

On April 29, the GSD group prepared a community outreach activity in order to gather people's reactions to the most distinctive strategies put forward by each of the three plans. The event took place outside the main entrance of Market Basket (170 Everett Avenue), one of the main shopping destinations in the city for residents and visitors alike. Through posters and flyers, the general public was informed about the Silver Line extension and introduced to the work developed by the Core Studio. They were then invited to select the initiatives that resounded most strongly with what they consider to be necessary and desirable for Chelsea's development.

Overall, the public responded with a very positive attitude towards new development in Chelsea; even those unaware of the Silver Line extension expressed the city will benefit from greater exposure. Efforts to imagine different futures were met with excitement; this constituency was particularly inclined towards new civic space and community centers, as well as increased connectivity to the waterfront. In contrast to previous engagement activities, there was a much more active conversation about the need for affordable housing and retail, so as to preserve Chelsea's emblematic diversity. A possible explanation for this was the presence of stronger visuals, which better communicated the form this development might take.

People touched upon a great variety of topics, with the need for employment opportunities came across strongly. A crosscutting sentiment is that Chelsea should do more to retain its thriving population, so that a stronger sense of long-term commitment emerges: "We want to evolve from 'Chelsea is a great place to be from' towards 'Chelsea is a great place to be.'"

Figure 13 - Community Feedback Activity *After three months working on three visions for Chelsea, the student group presented planning proposals to the community and encouraged people to create their own version for the future (Lee).*

SCENARIO 1:
LEVERAGING LOCAL STRENGTHS

INTRODUCTION

Vision

Building a Connected, Vibrant, and Inclusive Community

True to its title, the following plan recognizes and amplifies Chelsea's existing strengths to build a connected, vibrant, and inclusive community. Hours of observation, research, and community engagement revealed a forward-looking city with three core strengths: a diverse, affordable and socially engaged community; a solid economic base that supports a diversity of skills; and a set of strategic physical and locational qualities. Quotations from students conversations and research appear throughout the plan to give a sense of community voice.

Building on these strengths, the plan proposes realistic and actionable solutions to maintain Chelsea's affordability, grow its economy, and strengthen community connections. Using the City of Chelsea's "Everett Avenue Urban Renewal Area" as a focal point, proposals look to connect local strengths with strategic and targeted development throughout western Chelsea and the city overall. The plan will generally refer to the "study area," removing the stigma often associated with "urban renewal."

Under the title of Leveraging Local Strengths, the following goals provide a framework for conceptualizing the overall plan. Each goal recognizes a strength of the Chelsea community and is further elaborated in detailed proposals.

Figure 1 - *(Nguyen)*

Issues

The arrival of the Silver Line Gateway project represents a transformative force for Chelsea. Extended access to both the commuter rail and bus rapid transit (and with it, the ability to access North Station, South Station and Logan Airport) will bind Chelsea more closely to the economy of Boston. The resulting challenge will be to ensure that new economic development benefits the existing Chelsea community. With the community in mind, this plan is designed to both protect and enhance Chelsea's distinctive character.

Given significant incoming development (in the form of hotels, offices, and market-rate residences) coupled with corresponding population growth, Chelsea's accessibility and livability may be at risk in coming decades. As such, the plan envisions future development that acknowledges the city's need for a strengthened tax base while maintaining the priorities of current residents for an affordable, inclusive community.

Though the city government is an active and forceful advocate, the municipal budget is constrained even as development increases. The plan carefully considers this reality and utilizes clear phasing and implementation strategies so that simpler, low-cost steps can be taken immediately. The plan presents modular options, enabling the city to take advantage of funding, key partnerships, and market conditions to construct a cohesive vision for the city over time. Implementation phasing is weighted toward the next one to three years, with major physical investments such as housing or road infrastructure projected for the next 10 to 20 years.

Goals

The plan proposes future development that:

- Empowers Residents, Local Business Owners, and Workers
- Reflects and Enhances Existing Chelsea Character
- Fosters Physical and Social Connections throughout Chelsea
- Inspires Civic Pride

Community Voices

What I most like about Chelsea…

"The existence of community organizations that help us with self-development."

- Survey Respondent

Figure 2 - Asset Diagrams *Chelsea's identified assets and corresponding initiatives outlined in the plan.*

Figure 3 - Strengths *These identified strengths appear throughout the document, emphasIzing their prominence in the plan.*

Context for the scenario

In spite of the development and financial challenges addressed here, recent and ongoing economic shifts represent a significant opportunity for Chelsea. As outlined in the Vision above, this plan addresses future development from a unique perspective, as each proposal draws inspiration from a current asset. The following sections outline Chelsea's existing situation and propose development under the following themes: Urban Design, Transportation, Open Space and Natural Systems, Economic Development, and Housing Balance. The report concludes with a summary and compilation of the proposed implementation strategies from each chapter.

The plan carefully analyzes the nuances of Chelsea's strengths. This analysis appears in the diagrams to the left. One key diagram is the compilation of the city's many interconnected assets and corresponding initiatives. A second diagram, featured beneath, emphasizes the key strengths per planning chapter. As demonstrated by the interventions and strengths identified, the plan integrates a diverse set of initiatives, ranging from physical to programmatic. While each chapter outlines multiple related proposals, each contains a central theme or recommendation. For Urban Design, the proposed redesign of the current Market Basket parcel extends Chelsea's residential street grid into the study area, creating a clearer neighborhood identity and targeting opportunities for strategic infill.

In Transportation, thoughtful consideration is paid to the need to channel and separate the diverse activity and often conflicting uses of the study area, whether it be freight traffic, vehicles, pedestrians, or bicyclists. For Open Space and Natural Systems, proposals address the wide range of disconnected or underutilized spaces in the study area, capitalizing on the neighborhood's industrial character and community resources to build a network of recreational spaces.

Economic Development focuses on the expansion of Chelsea's entrepreneurial spirit through creative social and physical linkages, ranging from a branding and outreach campaign to incubator space for small businesses known as the "Hub Chelsea." Lastly, Housing Balance emphasizes Chelsea's characteristic affordability and accessibility, aiming to expand housing options into the study area with mixed-income, mixed-use, and transit-oriented development. Throughout the following chapters, the vision and goals are echoed and expanded, ultimately creating a coherent and compelling plan for Chelsea's future through one principle strategy: Leveraging Local Strengths.

Figure 4 - Map with Overlay of Proposed Interventions *Strategic implementation and interventions throughout the City of Chelsea.*

Figure 5 - *(Nguyen)*

URBAN DESIGN

Vision

The arrival of the Silver Line Gateway project will be transformative for Chelsea. Adjusting to these changes while leveraging the city's urban design assets involves a strategy of preservation, adaptation, and reuse. These strategies will be articulated in a form-based code that allows for flexible programming and use.

Issues

Scale of the Market Basket / Mystic Mall parcel
The Market Basket parcel, formerly the Mystic Mall shopping complex, is larger than any other in the study area. The sheer size represents a significant opportunity to form a new set of buildings with an appropriate street grid. Given the site's size and proximity to the new Silver Line station, its form will also determine the feel of the neighborhood overall. Though size is an opportunity, it also presents a development challenge due to its increasing land value (given proximity to transit) and the potential cost and complexity of acquisition. To maximize its proximity to the Silver Line, the existing parcel could be strategically divided into smaller, more legible pieces.

Vacant and underutilized land in the urban renewal district
Significant vacant and underutilized land characterizes the urban renewal district, as designated by the City of Chelsea. This represents great potential to contribute to an enhanced Chelsea economy, as many of the buildings are of quality brick construction and can be rehabilitated for uses better suited for transit-oriented development, particularly as industry moves to consolidate east of Second Street.

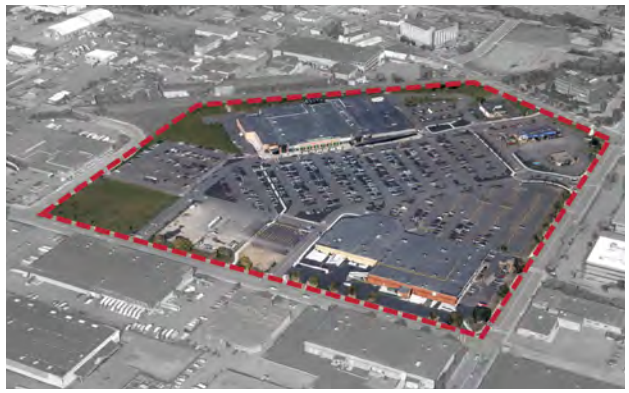


Figure 6 - Market Basket / Mystic Mall Parcel
Aerial view of the Market Basket parcel in context (Google Earth).

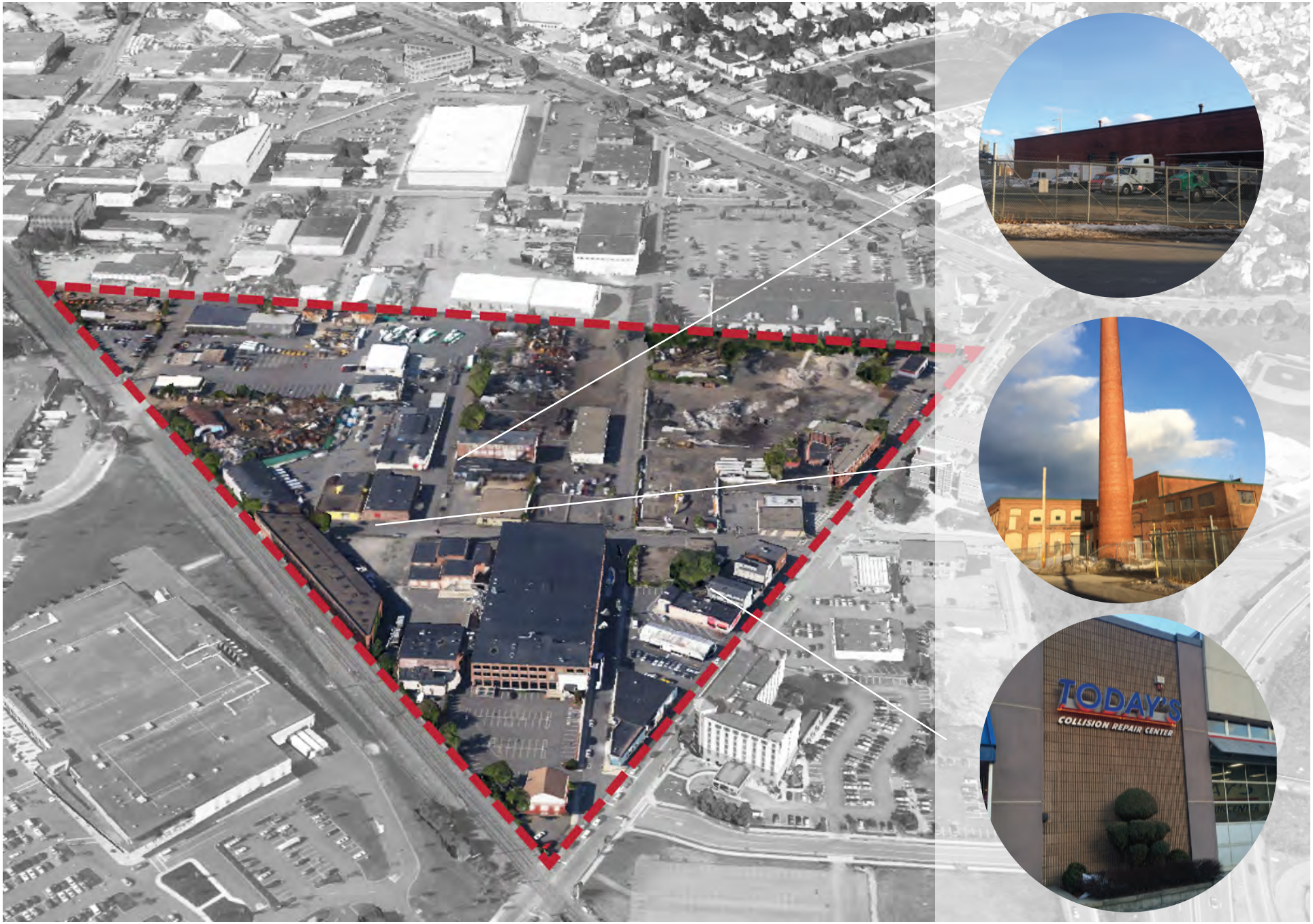


Figure 7 - Urban Renewal Area *Aerial of the designated urban renewal "triangle" in context, with snapshots conveying the character and uses of the area (Aerial: Google Earth) (Photographs: Nguyen).*

Goals

Integrate the Market Basket parcel into city fabric
The Market Basket parcel is key to transforming the study area into an accessible and pedestrian-scale neighborhood connected to Chelsea's urban fabric.

Build a clear neighborhood identity to attract tenants and residents into the area
A neighborhood identity, guided by principles of urban design and building form, will enhance existing uses and invite new productive uses to the area.

Strategies

Strength **Walkable Grid**

Create and expand block structure
Leverage the strength and character of the city's existing street grid with strategic integration of the grid in the study area.

Utility and efficiency of the grid
Street grids are useful tools to enable small scale development and promote the legibility of a neighborhood. A strategic grid efficiently divides an area, proportionally allocating land to roads and sidewalks and encouraging a more walkable city. Grid efficiency can be analyzed if certain measurements are known and calculated in the following manner (Strongtowns.org 2014):

L: Length of block W: Width of Block R: Road width

$$(L*W)/((L+R)*(W+R))$$

These same calculations were applied to Chelsea's current street grid. Using Google Earth to estimate existing conditions, the plan identifies that along Broadway, an iconic Chelsea road, blocks are 500' x 120' and the road is generally 40' wide, leaving 69.4% of the land contained in the blocks themselves. For reference, it is useful to compare Chelsea's grid to other iconic cities, visualized in the image below.

Notably, the street grid of Broadway is as efficient as the super blocks of Salt Lake City, while remaining small enough to replicate the walkable feel of Portland. Realistically, current Broadway blocks would confine development of large projects (such as the scale of Market Basket). Rather than replicate the existing grid exactly, the plan instead calls for replicating the structure of the northern neighborhood streets of Chelsea, approximately twice the depth of Broadway blocks.

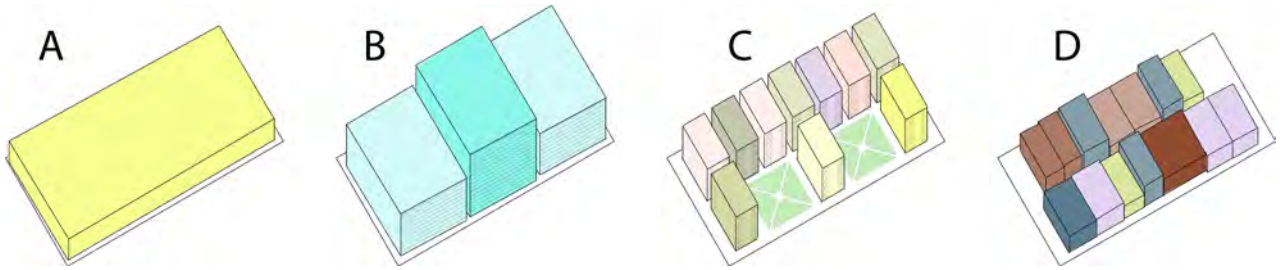


Figure 8 - Block Flexibility *The block structure is compatible with many built forms, including A) a Market Basket-sized store or warehouse, B) office towers, C) apartment buildings, and D) Broadway-style retail. The plan proposal calls for a thoughtful mix of these uses.*

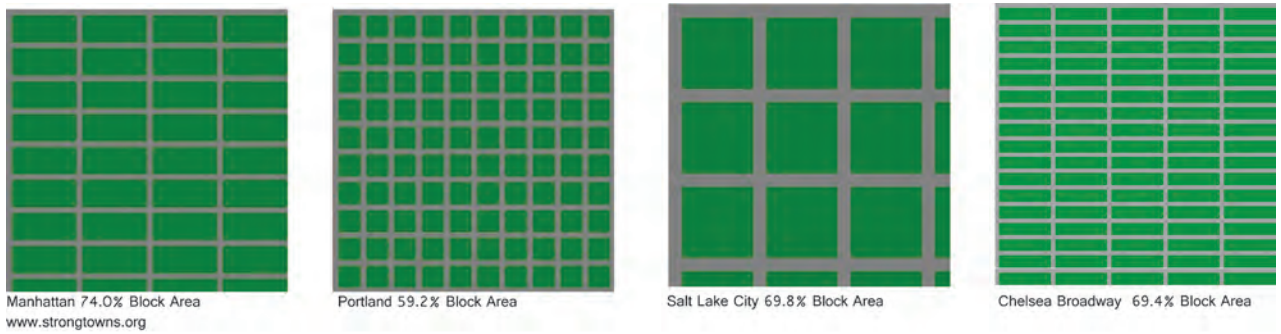


Figure 9 - Comparative Street Grids *When comparing Manhattan, Portland, Salt Lake City, and Chelsea street grids, Chelsea proves nearly as efficient as Salt Lake City's mega blocks (Strong Towns Blog).*

Flexibility of the grid

The chosen street grid can accommodate a variety of building types. The blocks are large enough to hold the largest existing building footprint in the area: Market Basket. The grid can also be configured to hold office towers, apartment buildings, or even Broadway-style retail with a central alley.

Grid phasing

The proposed grid layout allows the development of blocks incrementally as market demand arises. Rather than developing one mega parcel, development can realistically occur block by block. Phasing can occur first in the eastern portion of the site, with immediate access to the Silver Line T Station (and where no major buildings currently reside). Further phasing will require a major development decision: the siting of Market Basket. While the building fits within the proposed grid structure, it occupies valuable land close to transit. By shifting the building to occupy an entire block to the west, other uses can be strategically placed in the northern blocks, while the grocery store still retains transit accessibility. The proposed redesign allows for mixed-use towers (constructed on top of Market Basket) to capture greater value from the site and house potential customers, right above the aisles. The land uses proposed in the grid incorporate residential in order to preserve the strong affordable market housing base of the city and expand transit accessible housing options, as outlined further in the Housing Balance chapter.

Figure 10 - Phase 1 *The initial phase capitalizes on early housing demand and causes minimal disruption to the area.*

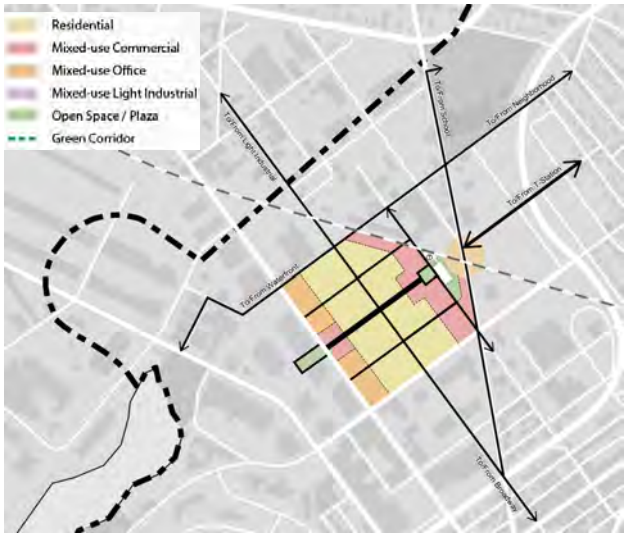


Figure 11 - Phase 2 *The secondary phase proposes re-siting of the Market Basket, allowing for development of the entire grid, comprehensively or incrementally.*

Figure 12 - Phase 3 *Phase 3 is proposed to run concurrently with Phases 1 and 2, adding density to the north and south (see the following proposal to preserve industrial buildings).*

Strategies

Strength **Historic Buildings**

Preserve industrial buildings
Chelsea's industrial heritage and built form is an asset that will be challenging to recover if removed from the area. New development in the study area (seen in the proposed massing) should encourage infill that enhances existing structures.

Preservation and infill
Chelsea's industrial heritage is an asset to be preserved. The many unique brick structures clustered in the district suggest the creation of a designated zone, allowing buildings to be protected through historic designation or preservation subsidies. Such a policy would require additional financing and formal designation at the city, Commonwealth, or Federal level. The district could allow for new development through infill to respect the scale, facade, and form of the current buildings while accommodating modern uses. This can logically be accomplished through a form-based code, outlined in the following section.

Form-based code and streetscape
Form-based codes create a clear set of guidelines for new development. For the study area, the proposed code will preserve existing structures and guide

"I would definitely be interested in looking into redeveloping the building as residential or commercial"

- Freight warehouse owner

Figure 14 - Proposed Infill Massing *A rendering of potential future massing for the urban renewal area, highlighting new development built in and around existing structures (GoogleEarth).*

Figure 13 - Porter House, NYC The *SHoP architects' infill development created a unique and iconic new structure while maintaining the existing character in a transitioning area (SHoP Architects).*

the design of new development to fit the historic industrial character. Though similar building materials may be required, more modern structures may still be allowed to ease overall cost and achieve a strong district character. A form-based code sets physical exterior form while ensuring interior use can respond to market needs and area demands. As proposed, the form-based code will allow flexible spaces and uses combined with unique building shapes to bolster a local identity.

Regulatory framework

As proposed, the interventions in the design and zoning of new development in the study area are relatively low-cost changes, focused mainly on adjusting the city's regulatory framework for new development and design. Adoption of a form-based code would require public participation in the drafting of plans and approval by the city, but would require no capital cost or long-term costs other than staffing. Specific design recommendations are as follows:

- Designate desired building envelopes for new development, including a minimum height of 2 stories, and setbacks for development above 4 stories.
- Encourage the use of complementary building materials and facades, including brick, steel, concrete, and glass to ensure that design is sensitive to the existing fabric.
- Promote development that builds to the lot edge with high fenestration (doors and windows) to encourage socially active spaces and a more pedestrian friendly streetscape through its street wall.

Preservation of historic buildings, particularly with infill around and above existing structures, ensures that space is flexible and adaptable to a variety of uses. Proposed uses range from current functions (flower shops, auto repair, manufacturing) to restaurants, commercial services, and value-add manufacturing. The code aims for pedestrian-friendly redevelopment while ensuring that it can incorporate current assets and changing market forces.

While a form-based code is deemed appropriate for the urban renewal triangle, the Market Basket/Mystic Mall site retains traditional zoning to ensure that the area can accommodate residential development, as will be explained below in following Housing section. In addition, the Market Basket parcel currently houses new construction, signifying that historical preservation or form-based code could create unnecessary regulation.

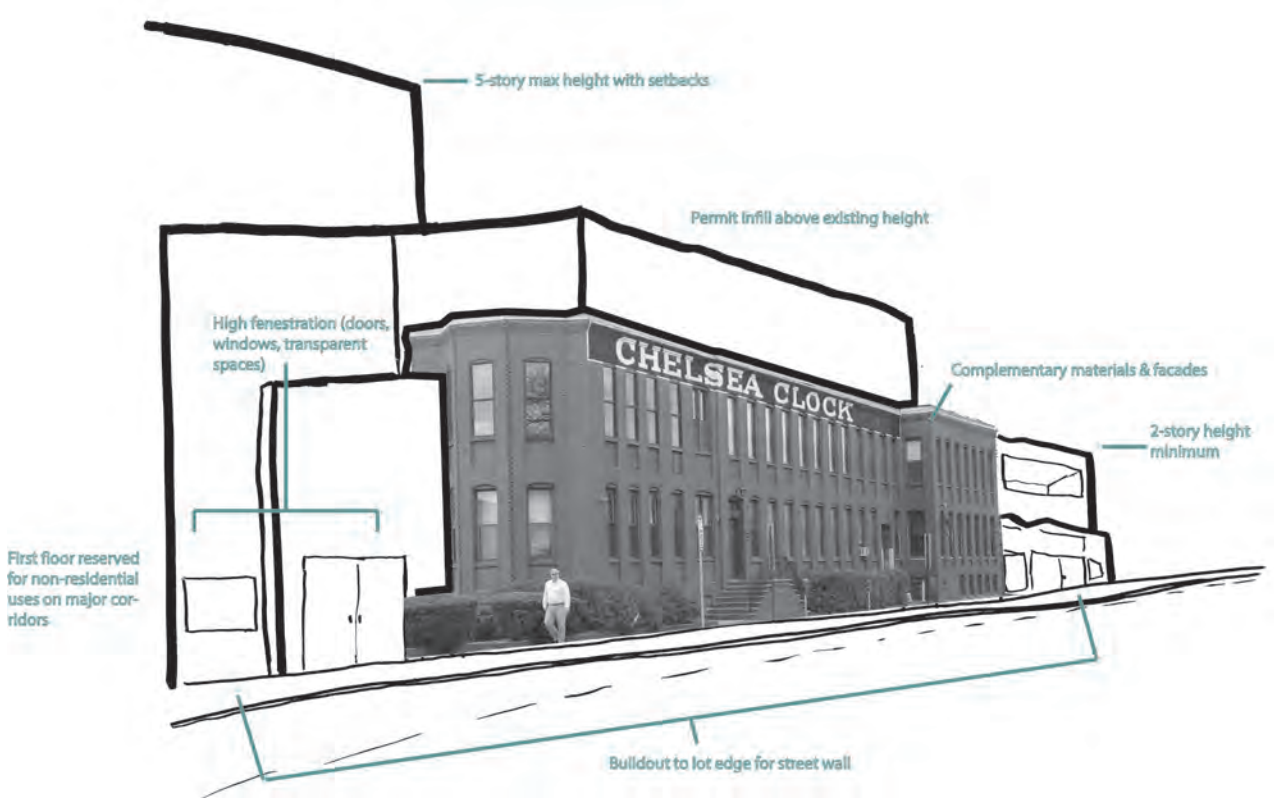


Figure 15 - Form-Based Code Recommendations *Example of proposed form-based code with regulations and design requirements to enhance existing structures (Photograph: Nguyen).*

TRANSPORTATION

Vision

Strategic investment in transportation infrastructure will leverage Chelsea's strong industrial sector while also ensuring that non-industrial areas are better designed, supportive of pedestrian and multi-modal use, and connected to existing hubs and assets.

Issues

Robust freight industry

Frequent conflicts between freight, personal vehicles, bicycles, and pedestrians require a re-allocation and re-design of the transportation right-of-way. Proposed interventions support freight movement, given its predominance in the study area and regional economic importance. Chelsea's thriving industrial sector – driven by freight, wholesale produce and goods, and manufacturing – relies heavily on Chelsea's roads. On the whole, industry in the Boston metropolitan area relies on trucks for more than 90% of freight movement (by tonnage), compared to 78% nationally. As such, freight is an important component of Chelsea's economy and transportation challenges. The designation of an Airport Related Overlay District encourages uses of storage, truck and equipment repair, food handling and preparation facilities, as well as the handling of cargo and freight, and supports the development of freight-intensive economic activity.

Many of the benefits from the bustling production and movement of goods accrue directly to the City. Trade, transportation, utilities, and manufacturing account for 270 companies in the area, with $186 million in wages in 2012 (42% of Chelsea's total income generation) and employing 4,215 people (38% of Chelsea's total) (Fay et al. 2011).

These businesses have a vested interest in infrastructure improvements, as freight movement incurs significant wear on equipment as well as road surfaces themselves. In an interview with Second Street Scrap Metal, the proprietor shared that "one year in Chelsea equals four on the highway." Additionally, the maximum speed on Williams at the Chelsea border ranges between 10 and 15 mph. While city officials correctly observed that potholes serve as a low-cost traffic calming measure, it remains prudent to improve infrastructure, in turn reducing costs to businesses and retaining the industrial jobs that drive a large portion of Chelsea's economy. The resulting task, therefore, is to fund infrastructure improvements while ensuring safety and ease for all users.

Conflicts between users

Conflicts frequently arise between trucks and other users of the roads. While industries are largely clustered within the far west corridor of Chelsea and into the city of Everett, trucks pass through other neighborhoods on their way in and out of the city. These shared routes create conflict and mobility issues are likely to increase as development enters the study area, particularly in proximity to the Second Street corridor, as it is heavily used by freight-hauling trucks coming from the New England Produce Center. Additionally, truck traffic has a significant presence to the south, where the fuel industry uses Chelsea's Haul Road to access Logan Airport.

Figure 16 - *(Springfield)*

Lack of pedestrian and bicycle infrastructure
Chelsea lacks adequate pedestrian and bicycle infrastructure, including: long road crossing distances, few on-street bike lanes, and a lack of dedicated bike lanes within the study area. A network based around existing infrastructural strengths and the Silver Line station would encourage healthy forms of transportation and increase access to Chelsea's existing strengths, including its mix of street-facing shops, open space, and community resources.

Figure 17 - Mobility Conflict *Bicyclist opts to ride on a sidewalk rather than the road in the study area (Nguyen).*

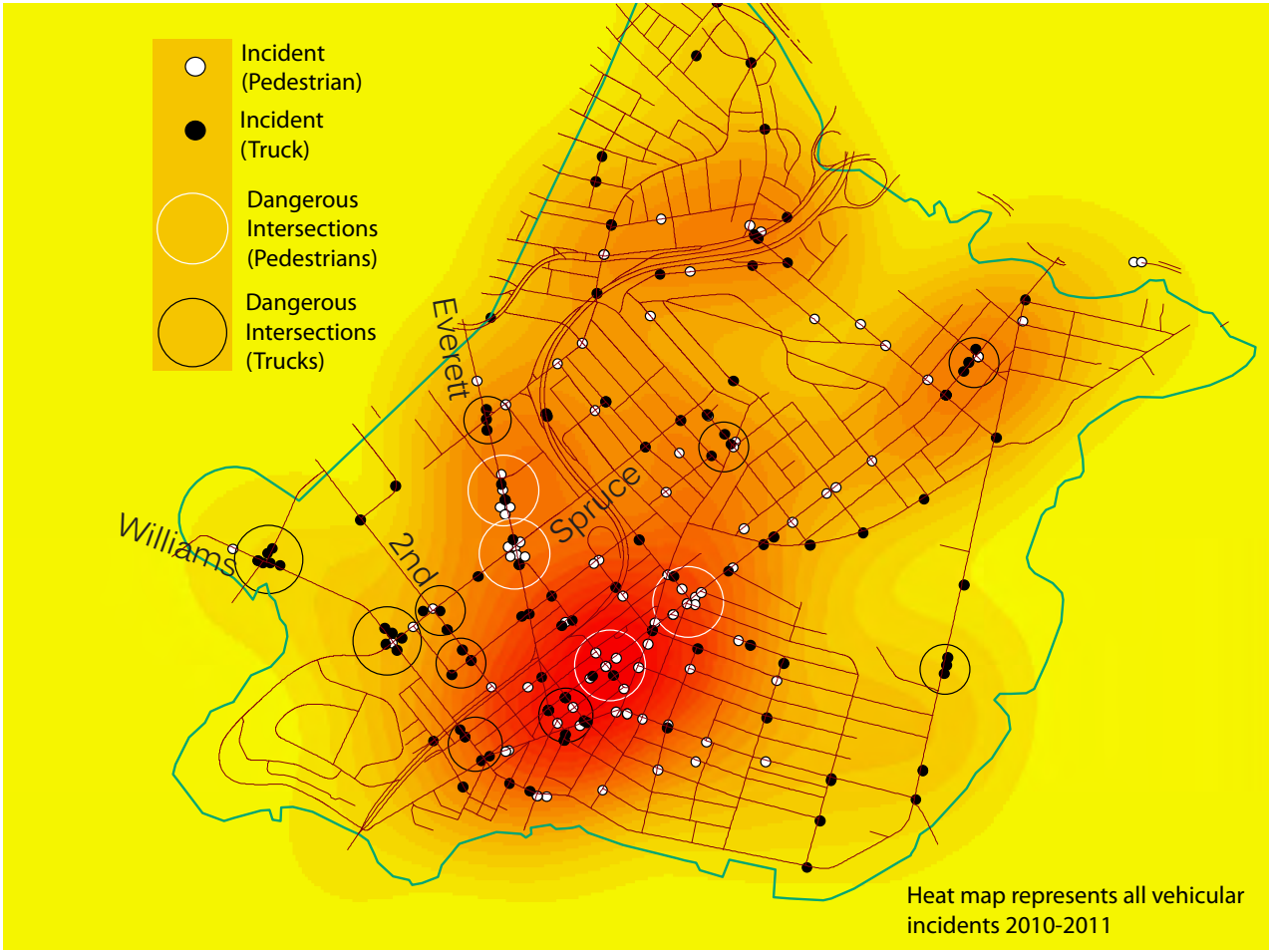


Figure 18 - Map of Accidents in Chelsea *During 2010 and 2011 (most recent available data) there were 121 accidents involving trucks within Chelsea. Collisions are dispersed throughout Chelsea, suggesting that separating uses and restricting truck traffic to a freight corridor will help reduce conflict. Clusters of incidents appear around certain intersections, suggesting potential sites for redesign, to be addressed below.*

Goals

Separate freight trucks from non-industrial traffic
Removing freight from residential areas allows streets to be more welcoming and safe for Chelsea's residents.

Provide multi-modal access to open space and community assets
Designing a better network of bicycle and pedestrian infrastructure will leverage existing assets by increasing accessibility for all users.

Provide infrastructure that improves efficiency for freight industries
Separated freight lanes would provide quick access for trucks to move through Chelsea while physically separating those trucks from other users.

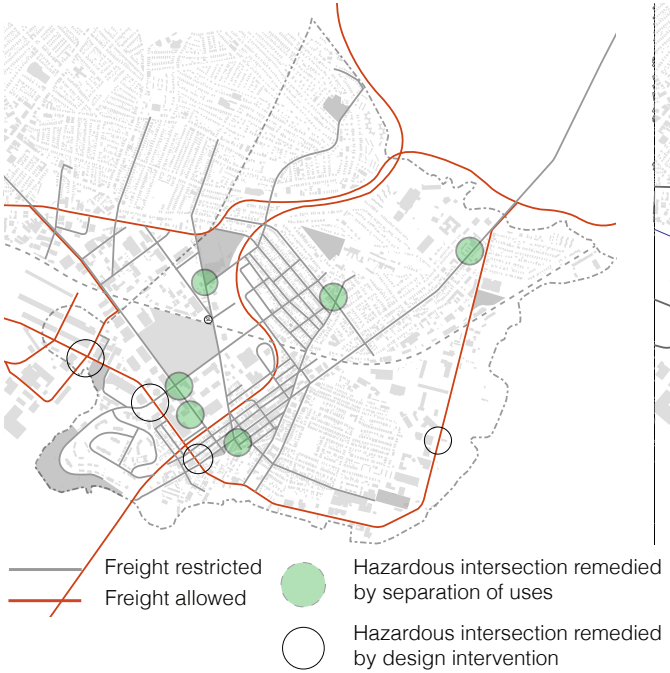


Figure 19 - Freight Roads Proposal *The circles represent intersections with high rates of truck accidents (drawn from Figure 19). By restricting trucks to the red corridors, a number of intersections would be relieved of heavy truck traffic. The circles remaining – along the corridor – would require design interventions.*

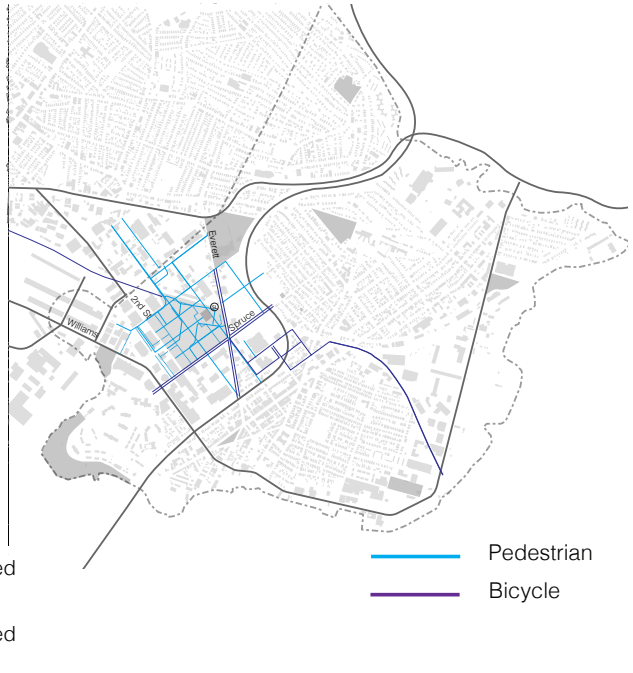


Figure 20 - Proposed Pedestrian and Bicycle Routes *Building on the state's study for a multi-use path 'CSX Right-of-way Study,' the path would connect a number of Chelsea's neighborhoods by utilizing land already acquired by the Commonwealth from inactive railroad use.*

Figure 21 - Intersection Conflict *Freight bearing trucks create daily conflict with other users throughout the city. (Springfield).*

"Walking means you can interact and talk with other people...it's how you move towards a larger solution"

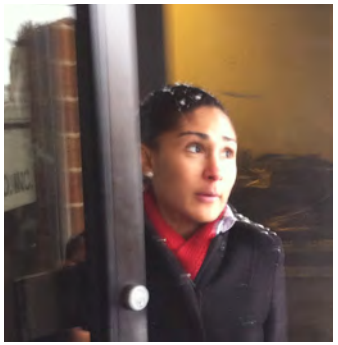


Figure 22 - Saritin Rizutto *Local professional and board member of the Chamber of Commerce (Springfield).*

Strategies

Strength **Robust freight and industry**

Redirect freight trucks away from residential areas

Separating uses will increase overall safety and allow streets to accommodate cars, bicycles and pedestrians. A first and low-cost step proposes restricting truck traffic from roads designated as pedestrian-friendly. This would include roads to the east of Second Street, and the segment of Second Street that abuts the Mystic Mall property. Potential challenges include the fact that roughly 40% of trucks originate from Chelsea, while the remaining vehicles enter from elsewhere, giving Chelsea less discretion in guiding these trucks' paths (Ash 2014). Future signage would need to be clearly articulated, and routinely enforced.

Re-design freight routes to provide separated freight lane

A re-design of freight routes will increase the capacity of businesses with industrial uses by reducing wear and tear on industrial equipment and increase the efficient movement of goods. A safe and efficient flow of goods can be achieved through separating uses and creating designated freight lanes to be used by trucks alone from 5am until 1pm, capturing the majority of daily freight traffic. This infrastructural change requires no road width increase and can be phased over a number of years, after truck traffic has been re-routed off pedestrian-friendly roads. Funding mechanisms can be leveraged from the industrial business community, creating a buy-in system that enables improved infrastructure at a low cost per business.

Strength Under-used Open Space

Provide bicycle and pedestrian improvements connecting transit, open space, and community assets

To fully realize Chelsea's open spaces, a network of pedestrian and bicycle infrastructure plays a central role in connecting the urban fabric. This network includes strategic bicycle connections that leverage the Silver Line transit stop with a mixed-use path along the commuter rail line. On-street infrastructure would build connections to schools and open spaces, serving as bicycle and pedestrian destinations. Funding for multi-modal infrastructure is available from multiple sources, including: federal (Transportation Enhancement Program, Safe Routes to Schools), regional (Gateway Cities Parks Program), state (PARC), and non-profit sources (WalkBoston, Bikes Belong Coalition).

Figure 23 - Cross Section of Separated Roads *Suggested street designs minimize conflicts between motorized and non-motorized traffic and promote both traffic flow and safety.*

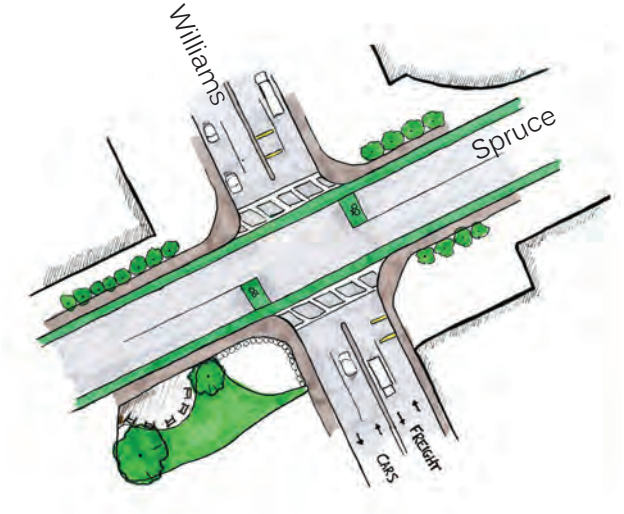


Figure 24 - Intersection Design at Williams and Spruce Street *Aerial view of suggested street design to minimize vehicular conflict.*

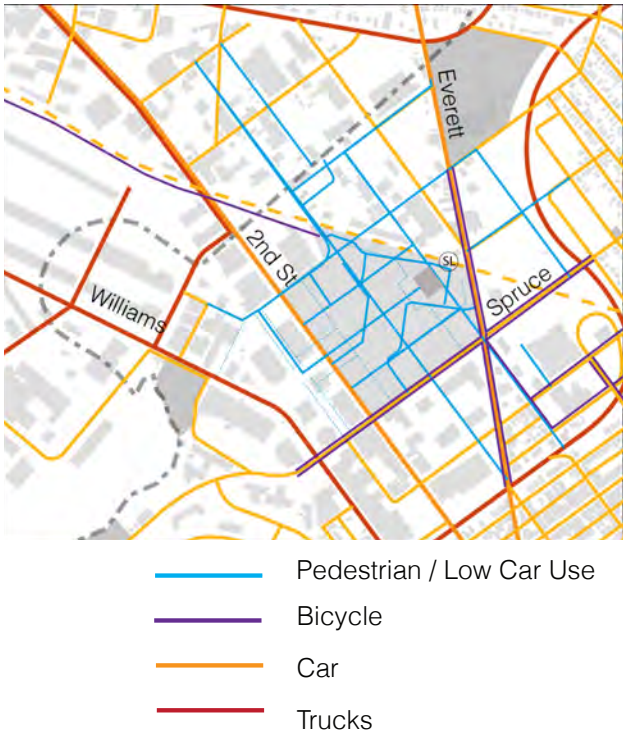


Figure 25 - Street Hierarchy *Creating a hierarchy of roads allows each to serve a different purpose. Roads marked in red are accessible by freight and intended for efficient flow, orange accommodate cars and include safety features for pedestrians at intersections, and blue are primarily pedestrian oriented.*

OPEN SPACE + NATURAL SYSTEMS

Vision

Chelsea contains an extensive waterfront, a multiplicity of open space, and unique underutilized land. These features represent both innate strengths and opportunities for development and transformation. This plan proposes to reconnect recreational facilities across the city, promote civic engagement, and encourage the use of Chelsea's distinct geography, such as the waterfront. The proposed open space plan is based on flexible use, reconnection, and programming of existing open spaces, combining physical interventions with institutional design.

Issues

Disconnected urban fabric
Route 1 and the commuter railway fragment Chelsea's urban fabric into distinct, disconnected neighborhoods, creating interruptions and prompting safety concerns. Commuter parking lots owned by Chelsea's major employers sit empty in the evening, while spaces in the underbridge provide uncomfortable disruptions, particularly for pedestrians. Additionally, the commuter rail tracks meet the street grid in the study area, challenging vehicular flow and leading to accidents with pedestrians. These obstacles discourage movement and create disengagement, limiting efforts to integrate Chelsea's neighborhoods.

Underutilized open spaces
Chelsea is home to 40 passive and active open spaces within its dense urban fabric, totaling 52.6 acres and ranging from sport fields to community gardens (VHB 2010, 39). The existing physical infrastructure limits the capacity of these spaces to operate as a network, in spite of the high demand for recreational activities evidenced in the Chelsea Open Space and Recreation Plan 2010-2016. Limited public access to existing recreational facilities exacerbates this issue (VHB 2010, 26).

Publicly inaccessible waterfront
Chelsea has an extensive waterfront, historically a home to industrial activity. In spite of its extent, public access to the waterfront is limited and the only frequented waterfront parks are Mary O'Malley Park and Island End Park in western Chelsea. While waterfront areas along the Mystic and Chelsea Rivers host maritime activities, they do not accommodate public access and are largely used for industrial activity (or are contaminated brownfields). Present infrastructure does not encourage pedestrian or bicycle access to the waterfront.

Limited developable park space
At 1.8 square miles, Chelsea has limited options to construct new park facilities and must therefore work within the confines of available land. As many potential park sites are designated as brownfields, this plan strategically identifies parcels for park and recreation spaces that can be converted in the near term without significant remediation.

Figure 26 - *(Nguyen)*

Goals

Link
Strengthen the physical connection within open spaces as a mechanism to reconnect the fragmented urban fabric.

Program
Use a programming agenda to provide innovative and coordinated uses to underutilized open spaces and to promote civic engagement.

Adapt
Introduce adaptive uses and create spaces that are responsive to challenge.

Reclaim
Activate and inhabit underutilized spaces such as the waterfront and the Route 1 underbridge.

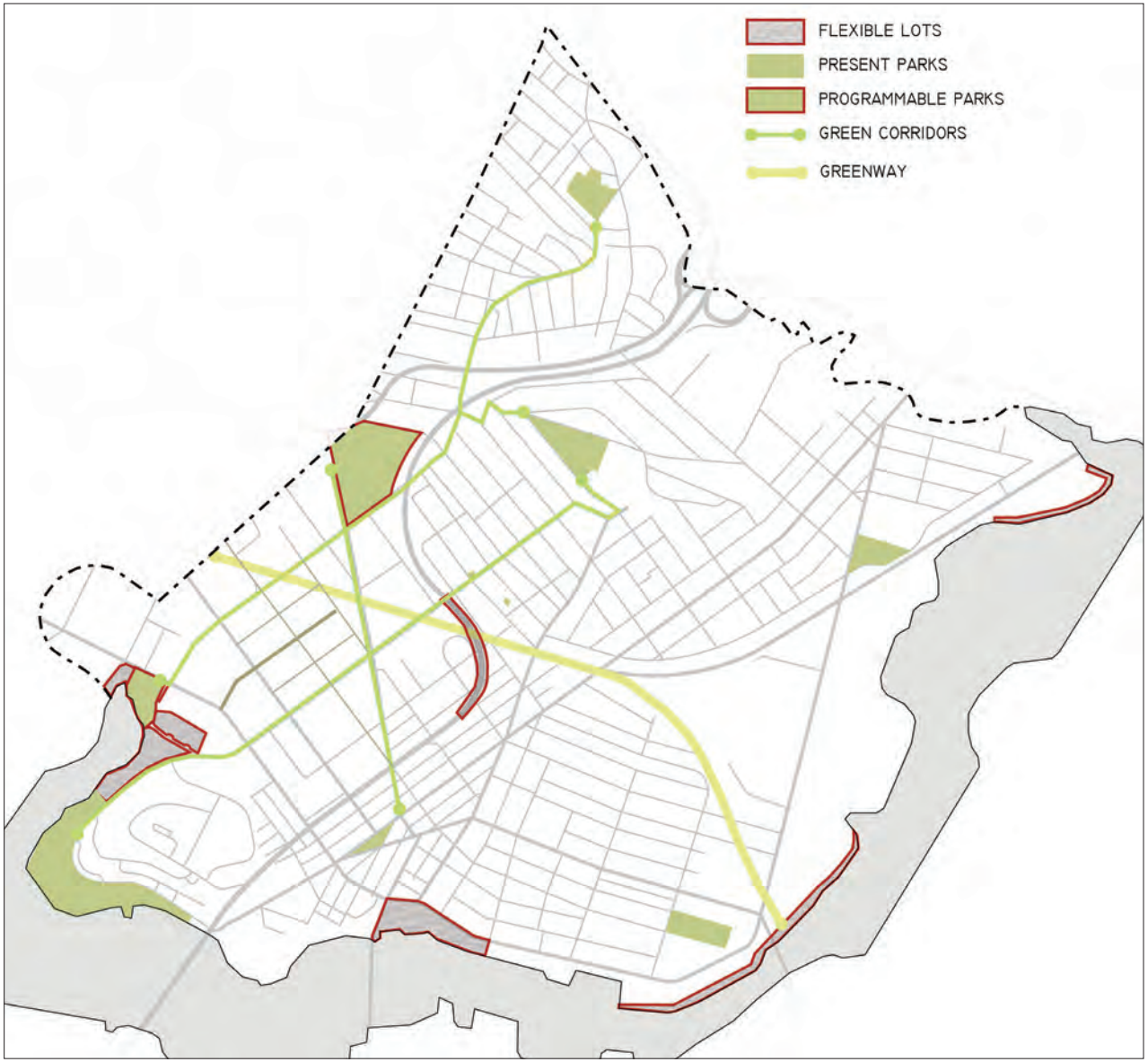


Figure 27 - Open Space and Natural Systems Interventions *The above map indicates sites for intervention that achieve this plan's four goals: to reconnect Chelsea's urban fabric, create an innovative programming agenda, introduce adaptive uses for underutilized spaces, and reclaim the city's waterfront.*

Strategies

The strategic planning of open spaces and natural system consists of three different pieces that are complementary but can be implemented independently.

Strength **Under-used open spaces**

Green Corridors

This plan proposes three green corridors to connect open spaces across Chelsea. The plan also introduces active landscaping into the urban fabric to prepare the city for climate change challenges. The first corridor connects Mary O'Malley Waterfront Park to Malone Park. Located on Spruce Street, the proposed corridor extends to Commandant's Way to the south and to Franklin Avenue, Forsyth Street and Lafayette Avenue to the north. A second corridor connects Chelsea High School to the Chelsea Square Park at Broadway Avenue via Everett Avenue. Third, a strategic corridor links Voke Park to Island End Park on the waterfront and runs along a newly introduced connection through the industrial area and Market Basket parcel to Carter Street and Washington Street.

Figure 28 - Gray to Green *The Grey to Green initiative in the city of Portland, Oregon is a successful example of retrofitted sidewalks that incorporate green infrastructure and create an active urban landscape (City of Portland).*

The proposed green corridors combine green infrastructures and multi-modal transportation systems to promote efficiency, climate adaptation, and safety. Blue-green infrastructures consist of a network of bioswales and active landscape components and are incorporated into sidewalks and roads to passively manage stormwater. These systems minimize fiscal expenditures in water management, nurture biodiversity, provide shade, protect pedestrians from vehicles, and reduce air and soil pollution. Landscaped corridors could reintroduce nature into the urban grid, enabling Chelsea's natural systems to work as a single entity.

The proposed multi-modal system consists of four key layers: widened sidewalks, protected bike lanes, on-street parking, and roads. Proposed intersections should be carefully designed to ensure the safety of all users. By increasing the space between moving vehicles and pedestrian pathways, the plan aims to encourage a vibrant street life.

Figure 29 - Connecting by Greening *The map identifies three proposed corridors: to connect Mary O'Malley Waterfront Park to Malone Park, Chelsea High School to Chelsea Square Park, and Voke Park to the Island End Park along the waterfront.*

Strength **Parks**

The Flexible Use initiative

The second component of the open space plan proposes a combination of institutional design with physical interventions to introduce flexible use of underutilized open spaces. The Flexible Use program identifies key open spaces in the city and strategic partnerships and programming that could make these spaces more accessible to Chelsea residents throughout the year.

The Flexible Use Initiative has three components:

Transforming institutional recreational facilities into active community centers. The targeted sites are Chelsea High School facilities, including but not limited to Memorial Stadium.

Reclaiming the waterfront with pop-up seasonal uses in parking lots along the waterfront.

Reconnecting east and west Chelsea by activating and repurposing the spaces under Route 1.

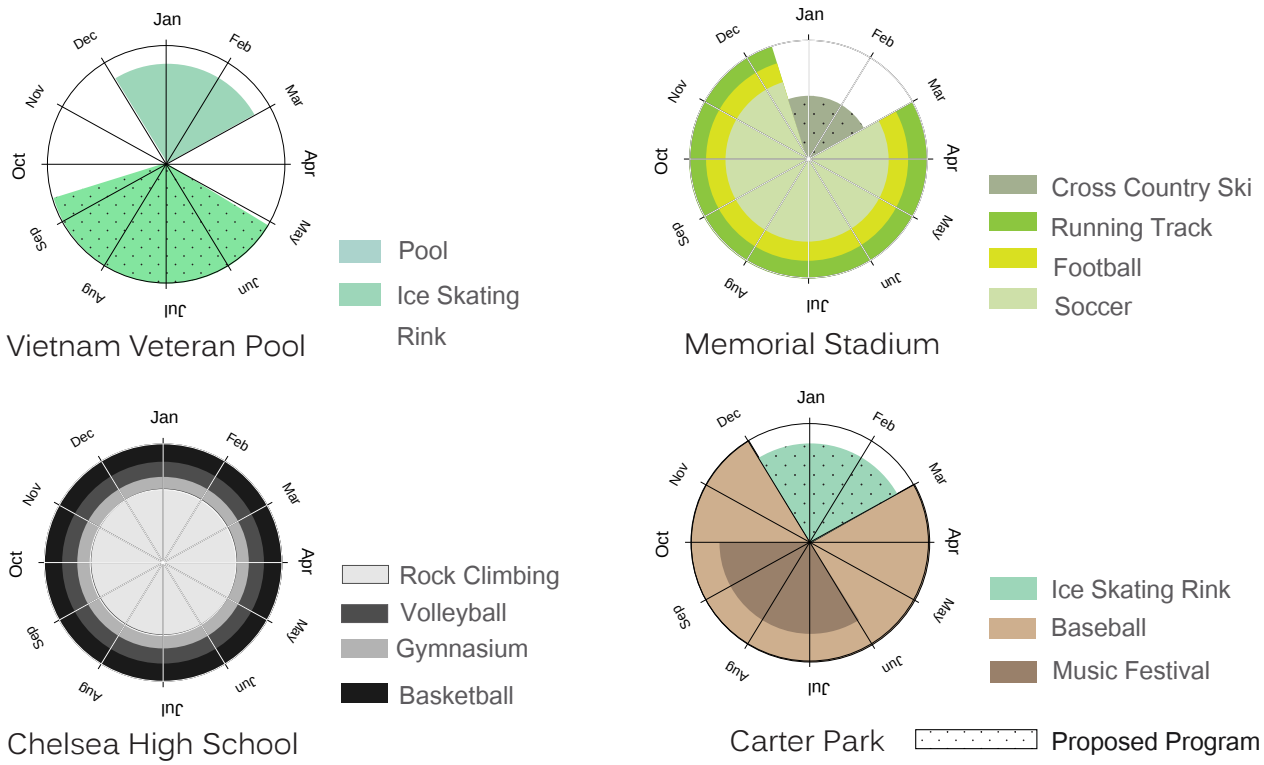


Figure 30 - The Flexible Use Program *The diagram maps the seasonal programming breakdown with the introduction of new programs, extending the use of each facility.*

Institutional facilities

Chelsea has well-equipped, underutilized athletic facilities that could readily meet the high demand for year-round recreation. This proposal expands the offer of recreational and athletic opportunities in Chelsea by transforming institutional athletic facilities into community centers during off-hours. This is primarily accomplished through a Joint Use agreement to regulate the shared use of facilities.

This proposal identifies the gymnasium and stadium at the Chelsea High School as sites for expansion. The High School site is advantageous for its physical accessibility and safety, availability, community visibility, and variety of equipment. The convenient location next to Vietnam Veterans Pool and Carter Park has the potential to transform the site into a cluster of recreational spaces and a destination for community members seeking a more active life.

Programming

A preliminary draft of the programming identifies a series of programs and events. Year-round, the Chelsea High School gymnasium could allot space for rock climbing, volleyball, cross fit, running on an indoor track, and basketball. From March to mid-December, Memorial Stadium could logically provide facilities for outdoor track, football, and soccer, while Carter Park could host basketball games and

free sport clinics, and from May to October, small festivals. Vietnam Veterans Pool could be open from early May until mid-September. At the moment, these recreational facilities only serve enrolled students during school hours and sport organizations until 5:30 p.m. and are rarely used during the weekend. A clear programming agenda (bolstered by the Joint Use agreement) could assure that facilities stay open to the local community from 5 p.m. until 9:30 p.m. during the week, and from 11 a.m. until 7:30 p.m. on the weekend.

Joint Use agreement

A Joint Use agreement requires oversight, funding, and thoughtful partnership. As designated by this plan, the proposed administrative body would include state and local agencies, non-profit organizations with relevant expertise, and community organizations. The Massachusetts Joint Use Toolkit (Downer 2013) provides a complete framework to outline this type of agreement.

"The city needs a recreational center for the kids and sports programs without having to pay a lot for use of facilities."

-- Online survey respondent

Figure 31 - Aerial of Chelsea High School Facilities *Cluster of Recreation: The close proximity of different athletic and recreational facilities provides a unique opportunity for coordinating uses (MassGIS).*

Figure 32 - Basketball at Chelsea High *Students take advantage of the high school's basketball court after school (Nguyen).*

Strength **Waterfront**

Reclaiming the waterfront

Chelsea is surrounded on three (of four) sides by water, totaling 4.5 miles of waterfront. Waterfront parcels border four waterways: Island End River, Chelsea Creek, Mill Creek, and the Mystic River. Waterfront property is undeniably one of Chelsea's strongest assets. Maximizing the waterfront's commercial use while prioritizing public access represents one of the city's greatest opportunities over the next 30 years. Recognition of this potential is evidenced in the following waterfront studies:

- A 2007 community study for the Chelsea Creek Waterfront, which surveyed community groups such as the Chelsea Creek Action Group, the Chelsea Green Space and Recreation Committee, and the Chelsea Creek Restoration Partnership
- The 2009 *MetroFuture* Plan, which presented waterfront preservation opportunities as part of a smart growth strategy for greater Boston
- The 2009 Lower Mystic River Corridor Strategy conducted by the Metropolitan Area Planning Council (MAPC) for the cities of Boston, Chelsea, Everett, Malden, Medford and Somervile (VHB 2010, 4, 9-10)

This plan proposes revitalization of Chelsea's waterfront by identifying parcels and engaging in strategic partnerships with current owners. Flexible programming, as well as multipurpose use (both commercial and recreational), presents unique opportunities to leverage Chelsea's locational assets while fostering growth. The Chelsea waterfront has a strong industrial history, and this plan recognizes the critical role Boston Harbor plays in the shipping and receiving of resources. Additionally, Chelsea Designated Port Area (DPA) regulations stipulate that the area along the Chelsea Creek must retain its role in industrial development and commercial navigation (VHB 2010, 22). This plan therefore takes a firmly realistic approach in selecting appropriate properties for transformation into open and recreation space.

This plan's belief in the feasibility of mixed-use open spaces along the waterfront stems from a landmark initiative within Chelsea: the renovation and expansion of "the salt dock". This project, a collaboration between the City of Chelsea, the Landing Studio design firm, and a team of engineers and environmental consultants, is aptly named P.O.R.T. (Publicly Organized/Privately Owned, Recreation Territory). P.O.R.T. leverages the seasonality of the dock's industrial use. In winter, when salt is required for road maintenance, Eastern Minerals utilizes the asphalt lot at 37 Marginal Street for salt storage. In summer, the company installs a temporary park, extending the adjacent 0.75 acre park built into a 1.3 acre recreational space. This public-private-partnership is notable as a point of comparison to Boston, where maritime industry is being exchanged for real estate development. In Chelsea, innovative strategies are utilized to embrace and enhance the waterfront industry (McMorrow 2013) and reactivate the waterfront through public-private partnership.

Figure 33 - P.O.R.T. (Publicly Organized, Privately Owned, Recreation Territory) *Chelsea's Salt Dock is a unique public-private-partnership combining industrial use with public waterfront access (Landing Studio).*

This plan has identified three waterfront areas that could benefit from public-private-partnerships:

Island End Park

Island End Park opened in 2010 and occupies an area of approximately 7,000 s.f. (0.16 acres) (VHB 2010, 43). One main feature is a boardwalk connecting the park to Admiral's Hill Marina. The park also features a picturesque gazebo with a view across the river to Charlestown and Boston. Presently, adjacent parking lots serve as boat storage and parking for Jefferson at Admiral's Hill, an apartment housing development. This plan proposes leveraging the parking space surrounding Island End Park, particularly the lot directly to the northeast abutting Beacham Street. Proposals include utilizing the space for hard court activities as well as kayak and other boat launch space, a desire highlighted in The Chelsea Open Space and Recreation Plan (2010-2016). More generally, multiple community surveys demonstrate a general desire for hard court activities, such as skateboarding, basketball, or bicycle paths, emphasizing the versatility and utility of such parking areas (VHB 2010, 63).

Enterprise Rent-A-Car lot and Logan PreFlight Airport Parking

Enterprise Rent-A-Car lot and Logan PreFlight Airport Parking are adjacent parking lots on the Chelsea waterfront, sited where Marginal Street becomes Eastern Avenue. The two lots total 15.5 acres of land and are separated by the Chelsea Street Bridge, connecting Chelsea to East Boston. This plan envisions a use agreement between the City of Chelsea and the owners of both parcels, converting one-fourth of the land (on the waterfront) into recreation space in exchange for parking facilities elsewhere in Chelsea (not on the waterfront).

Teens need activities and spaces...like a skate park? Adults and students need gathering spaces"

-- Survey respondent

Both Enterprise and Logan PreFlight lots were identified in the 2010 Open Space and Recreation Plan as possible locations for a "walkway along the entire water's edge" (VHB 2010, 64). This plan proposes a similar walkway (to the one connecting Island End Park to Admiral's Hill Marina), though constructed as a landscaped path rather than a boardwalk. In addition to a path, the present asphalt ground could be utilized for hard court activities, providing opportunities for basketball, roller skating, or skateboarding. The proposed landscaped path allows Chelsea residents to enjoy walking, jogging, and biking along the waterfront. These recreation facilities complement Island End Park and Mary O'Malley Park in western Chelsea, recognized as passive space for sitting and picnicking. Eastern Chelsea could provide an active recreation space in close proximity to Highland Park, a popular athletic field.

Asphalt can also provide space for food trucks to cater to Chelsea residents enjoying time on the waterfront. Precedents include the Red Hook Food Venders in Brooklyn, New York, channeling the community's Latin American heritage and providing authentic street food outside the Red Hook Ball Fields (Red Hook Food Vendors 2014). This plan envisions a similar initiative to reflect Chelsea's diverse community by providing space adjacent to new parks for small businesses. Food trucks can serve as a consistent attraction to the new recreation space. Multiple precedents indicate that this type of partnership is possible and mutually beneficial, particularly the partnership between the City of Chelsea and Eastern Minerals, demonstrating how private enterprise can take on responsibilities normally reserved for the public sector, such as manicuring parkland. Another useful example is Erie Basin Park in Red Hook, Brooklyn, a nearly mile-long stretch of public waterfront owned and operated by a private retailer, IKEA (Byles 2008).

Forbes Park

Forbes Industrial Park is situated at the mouth of Mill Creek and shares Chelsea's industrial history. Though the area technically falls under the Mill Creek Designated Port Area (DPA) regulations, the 2007 Chelsea Creek Waterfront Plan indicates that waterfront park access is "compatible with appropriate port uses in many instances" (VHB 2010, 22). This area borders a predominantly residential area and has potential to provide waterfront park space. Although a recent proposal for the "Forbes Lofts," a conversion from industrial park to luxury residential units, failed to yield development (Bencks 2013), this plan sees great potential for greening of the waterfront area for light recreation and pedestrian access between Chelsea and Revere. When the Forbes Industrial Park eventually develops into residential or commercial use, the city would have the opportunity to negotiate public access, similar to the proposal for the Enterprise Rent-A-Car lot and Logan PreFlight Airport Parking.

Figure 34 - Reclaiming Chelsea's Waterfront *The above rendering demonstrates diverse waterfront uses, made possible through a negotiated partnership with Logan PreFlight Airport Parking. The present asphalt can accommodate hard court activities such as basketball and skateboarding.*

Activating the Route 1 underbridge
The transformation and activation of parking lot spaces under Route 1 is both an open space and economic development strategy. The plan has the following phasing:

- Next 5-10 years: Flexible use between hosting pop-up events and serving as a parking lot. Some of the uses may and are not limited to farmers markets, food trucks, skate parks, playgrounds, and outdoor cinema
- 10-20 years: Target areas transform into more formalized public spaces
- 20-35 years: Areas along the existing street grid transform into affordable retail spaces and entertainment facilities. A new grid is introduced to subdivide the large space in the underbridge into smaller lots.

Multiple precedents for underbridge programming and construction guided the proposals outlined here. First, a strategy from which this plan initially draws is the pop-up transformation of the Holton Street Bridge in Milwaukee. The Louisville Waterfront Park in Kentucky similarly hosts food trucks in the underbridge during events along the waterfront. The Urban Plaza is an urban design project by LA DALLMAN that transformed the underbridge of the Marsupial Bridge in Milwaukee into an engaging urban space. The A8ernA project by NL Architects in Koog aan de Zaan, the Netherlands, depicts the power of design in creating a sense of place under bridges. Programming ranges from skateboard space to retail. The following chapter on Economic Development will further address this initiative.

Figure 35 - New Space for Local Businesses *Red Hook Food Vendors of Brooklyn, NY harness the community heritage and encourage entrepreneurship (RZF Images).*

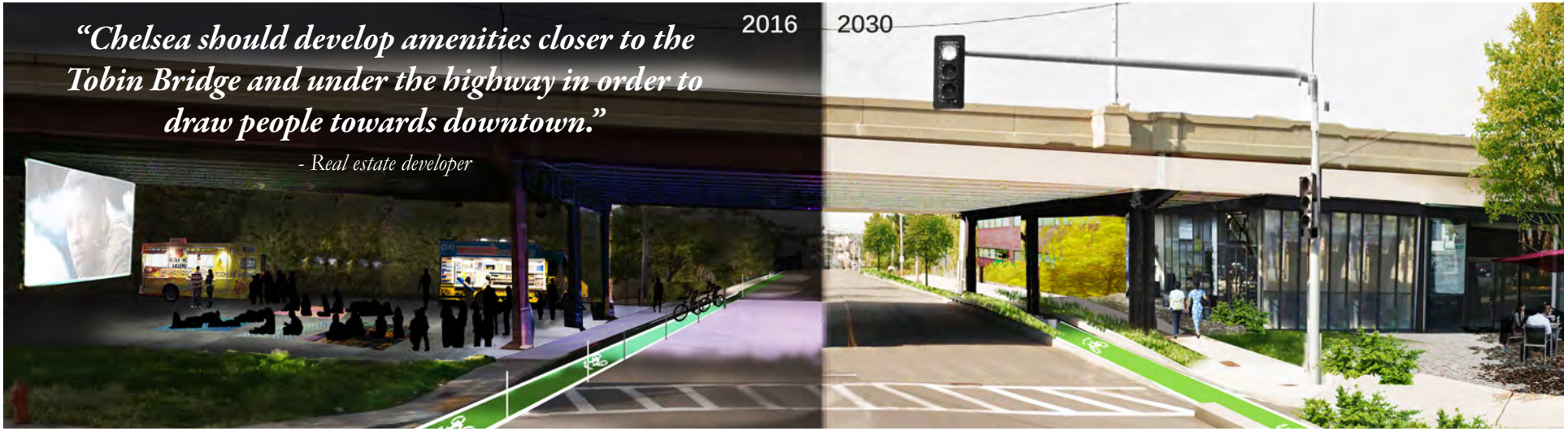


Figure 36 - Inhabiting the Underbridge *The artist rendering depicts the evolution of the intersection between Spruce Street and Route 1 in the next 15 years, combining flexible uses in the short-term and infill developments into the future.*

The Silver Line greenway

The arrival of the MBTA Silver Line presents a unique opportunity to incorporate the rail tracks into Chelsea's urban fabric and to further connect Chelsea to Boston. Extending the right-of-way of the public system would require the reconstruction of the area along the rail. This plan proposes a greenway with protected pedestrian pathways and bike lanes along the bus rapid transit system. The connection would provide a shorter connection between the western and southern areas of the city, increase the property value of land along its way, articulate the connection between the rapid system and the city, and introduce a large scale green infrastructure for storm water management. Current plans for the Silver Line include a greenway extending from Eastern Ave to the first T-station. The greenway proposed here adapts to the physical conditions and limitations of the city, from accommodating outdoor spaces of surrounding buildings to becoming a shared way for pedestrians and cyclists.

"As long as there's a greenway, I'm happy."
- Survey respondent

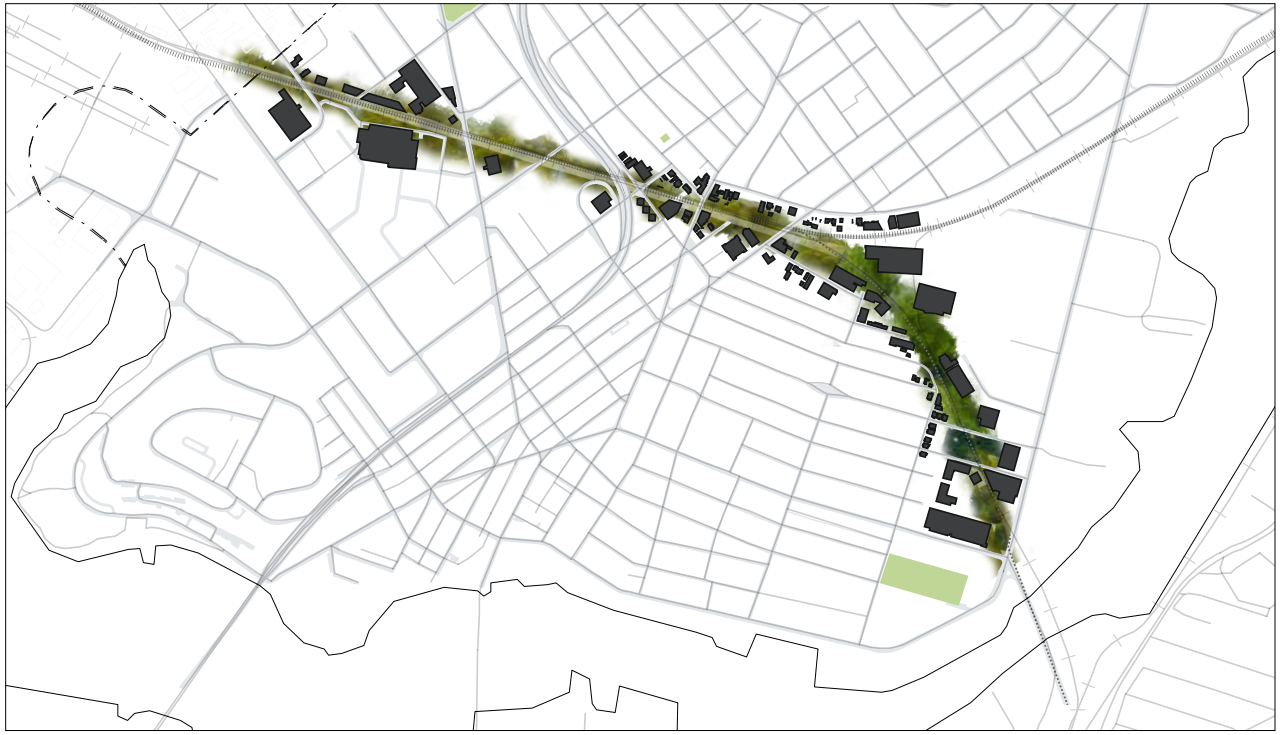


Figure 37 - Proposed Greenway *The greenway incorporates infrastructure improvements, large scale stormwater management, and shared paths for pedestrians and cyclists.*

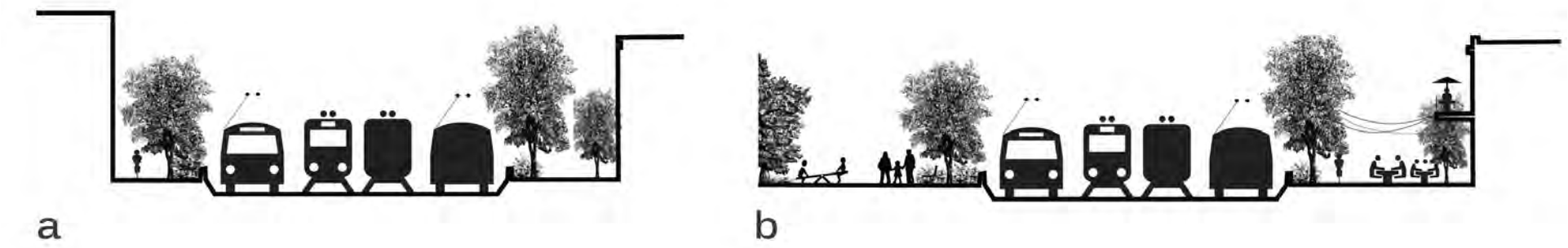


Figure 38 - Activating the Silver Line *Cross-sections A and B illustrate possible configurations of the greenway, depicting how the corridor responds to different site conditions.*

ECONOMIC DEVELOPMENT

Vision

A spirit of entrepreneurship characterizes Chelsea's economy already, as residents launch businesses in food production, catering, logistics, back-office services, information technology, and other industries. Further economic development in Chelsea should build upon industrial strengths, adapt to current economic trends, celebrate cultural diversity, and capitalize on the city's locational advantage. This plan envisions comprehensive training and entrepreneurship programs to support the workforce, and a strengthening of Chelsea's reputation as a cultural and economic center to bring customers from throughout the region.

Issues

A shifting economy
Historically, Chelsea's economy relied heavily on industry, particularly manufacturing, wholesale, and distribution. Economic shifts away from industry, combined with rapidly rising land prices in Greater Boston, indicate that Chelsea's economic mix must strategically adapt.

Low educational attainment and English language proficiency
Overall, Chelsea has low levels of educational attainment and English language proficiency. Almost 40% of Chelsea residents over age 25 have less than a high school education, and only 14% have Bachelor's degrees. Additionally, 45% of Chelsea residents were born in a foreign country, including over 7,000 who arrived since 2000, and 63% of residents are not proficient in English (U.S. Census Bureau 2012).

Fgure 39 - *(Nguyen)*

Competition in high growth sectors
Much of the recent job growth in the Boston Metro Area has been in the technology and biosciences industry. Boston and Cambridge in particular have invested tremendous money and energy in attracting and retaining firms of all sizes. While there is potential for low-cost tech-focused workspaces in the urban renewal area (Farrell 2012), it is unlikely that Chelsea will host the next high-tech cluster. Instead, Chelsea should strengthen and grow its current assets.

GOALS

Invite
Establish a clear communication framework that sparks the interest of existing residents in economic and cultural opportunities in the study area.

Identify
Use the study area as an opportunity for Chelsea to create and project a cohesive and reinvigorated image of the city and its cultural and economic offerings. This will help Chelsea businesses attract new customers, and capture spending dollars from guests in local hotels or people passing through on their way to the coming Everett or Revere casino.

Stitch
Ensure that the study area is successfully integrated into Chelsea's existing economy, overcoming the separation created by Route 1.

Start-up
Provide physical spaces where Chelsea can harness its untapped entrepreneurial potential through skill-building, idea-sharing and product-showcasing, creating a network of support that can ultimately allow local businesses to scale up.

STRATEGIES

Strength **Entry-level jobs**

Strength **Food-based businesses**

Strength **Multi-cultural community**

Hub Chelsea: Incubating Chelsea's 21st century economy

Home to one of the nation's largest produce distribution centers, Chelsea has a valuable food sector. Food manufacturers like Signature Breads and Kayem Foods are anchors of the community, while younger artisan producers like Mystic Brewery tap into the growing market for specialty foods. The Market Basket grocery store is the East Coast's largest food-only supermarket, and restaurants throughout the city offer high quality menu items, with a particular strength in Latin American cuisine.

Food is not Chelsea's only strong sector, however, and the economy must diversify in order to thrive in the competitive Boston region. Hub Chelsea provides a framework through which Chelsea can recognize the potential of its current strengths.

Programming & Services

Hub Chelsea proposes a business incubator, shared workspace, and community facility to nurture local entrepreneurs and highlight Chelsea's unique economic and cultural assets.

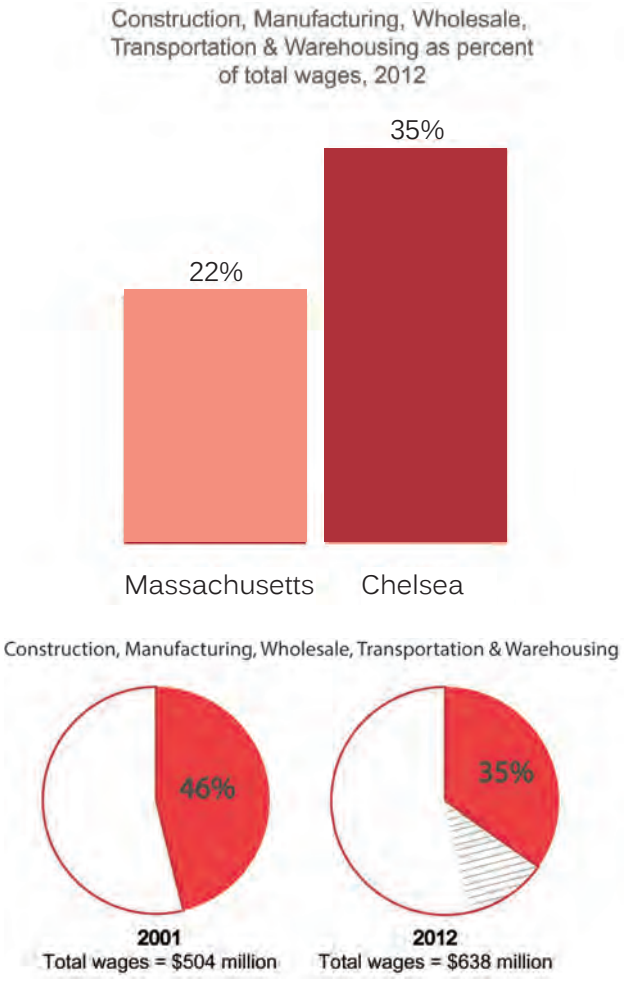


Figure 40 - Chelsea's Blue Collar Economy *Though Chelsea's economy has grown significantly since 2001, the share of wages in blue-collar industries has steadily decreased. Compared to the state average however, Chelsea's blue-collar industries still provide a large percentage of wages. (Massachusetts Executive Office of Labor and Workforce Development).*

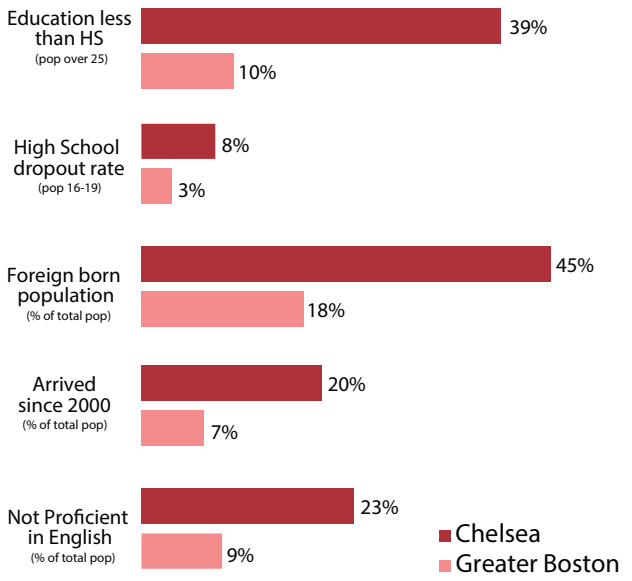


Figure 41 - Education and Language in Chelsea *Chelsea's educational and English language indicators are far below regional averages. In the short term, local industries should continue to provide jobs for low-skilled workers and job-training programs should increase their skill building. In the longer term, investment in education must be a key tool to expand opportunity (U.S. Census Bureau).*

What I most like about Chelsea is

"the industrial area that provides jobs for lower-income people."

- Survey respondent

Figure 42 - Envisioning Hub Chelsea *A site identified for the Hub is 115 Carter Street, home to the Driscoll Warehouse, an attractive and sturdy red brick warehouse built in 1900. The 33,000 s.f. building is strategically located opposite the future MBTA station, where it can showcase Chelsea's dynamism for people arriving on the commuter rail or Silver Line.*

The Hub Chelsea building would feature three components: a commercial kitchen in which small specialty food business entrepreneurs can perfect their products and produce them for sale; a flexible co-working space where entrepreneurs in technology and business services can rent inexpensive offices and meeting rooms; and an open community event space.

A number of programming elements bring Hub Chelsea to life. First, a business incubator and mentorship program, coordinated by the Chamber of Commerce, matches local business owners with aspiring entrepreneurs. Chelsea's tight-knit business community is an asset for new businesses just starting out on the path to prosperity. As envisioned, artisanal food producers can be mentored by businesses like Mystic Brewery or Chelsea Fire, buy ingredients from New England Produce Market merchants, procure supplies from Harbour Food Service Equipment, and sell their products to the Wyndham and Residence Inn hotels.

"Would love to see more diversity of restaurants"

- Online survey

Hub Chelsea would incubate businesses for a limited period of time, until they are ready to thrive in other spaces. As proposed, Hub Chelsea's kitchen and office spaces would be open for educational purposes. Local schoolchildren and adults could participate in cooking and nutrition classes, led by MGH Chelsea staff and modeled after programs like Cooking Matters (Cooking Matters 2014) or Edible Schoolyard (Edible Schoolyard 2014). Additionally, Bunker Hill Community College could expand its culinary arts program into Hub Chelsea, providing students with direct access to entrepreneurs and business mentors.

Hub Chelsea proposes events like Massachusetts Innovation Nights, where hiring managers and job-seekers meet to learn about innovative businesses developed within the Commonwealth (Mass Innovation Nights 2014). Weekly markets would give entrepreneurs from the incubator an opportunity to sell their products and get feedback from customers.

Strength **Strong business community**

City outreach and events

A focused branding, outreach, and events campaign uses a participatory process to instill civic pride, cultivate a sense of inclusion, and highlight the city's competitive advantages.

Process

The process could begin with a research phase, in which the Chelsea collects insights from key audiences and the public as a whole. Public participation in the design phase is critical if residents are to feel ownership over the outcome.

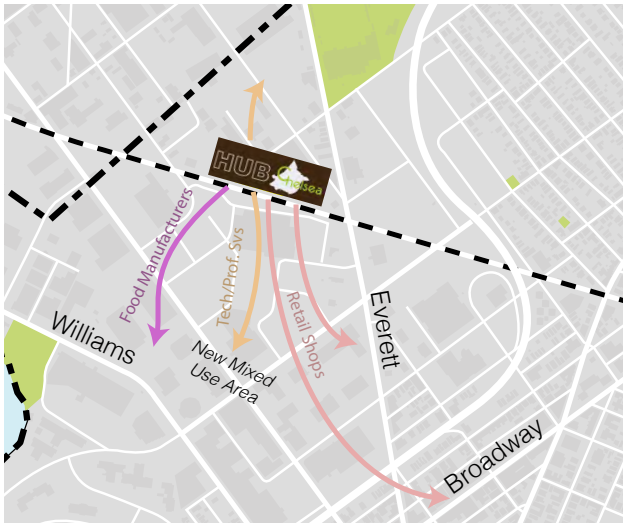


Figure 43 - Hub Chelsea's Impacts *Successful food processing businesses could move into industrial spaces clustered around Williams Street or storefronts on Broadway, Everett Avenue, or the new Maple Street Corridor. Professional services business could move into office space around the urban renewal and Mystic Mall areas.*

Key audiences and stakeholders in the process include the Chamber of Commerce, community organizations, public officials, visitors from neighboring areas, and more. Local marketing students can assist in coordination and stakeholder can help articulate a narrative about the history, current assets, and drivers of the city towards the future. The result could be a thematic and graphic identity that is a clean and memorable symbol of what the city stands for.

Visual and audio marketing materials could be disseminated through press releases, editorials, print and online advertisements, Public service announcements, and less traditional communication channels such as ethnic media, blogs, and community gatherings. Low-cost branding sites include way-finding signs, light pole banners, litter baskets, phone booths, taxis, bus shelters, and garbage trucks.

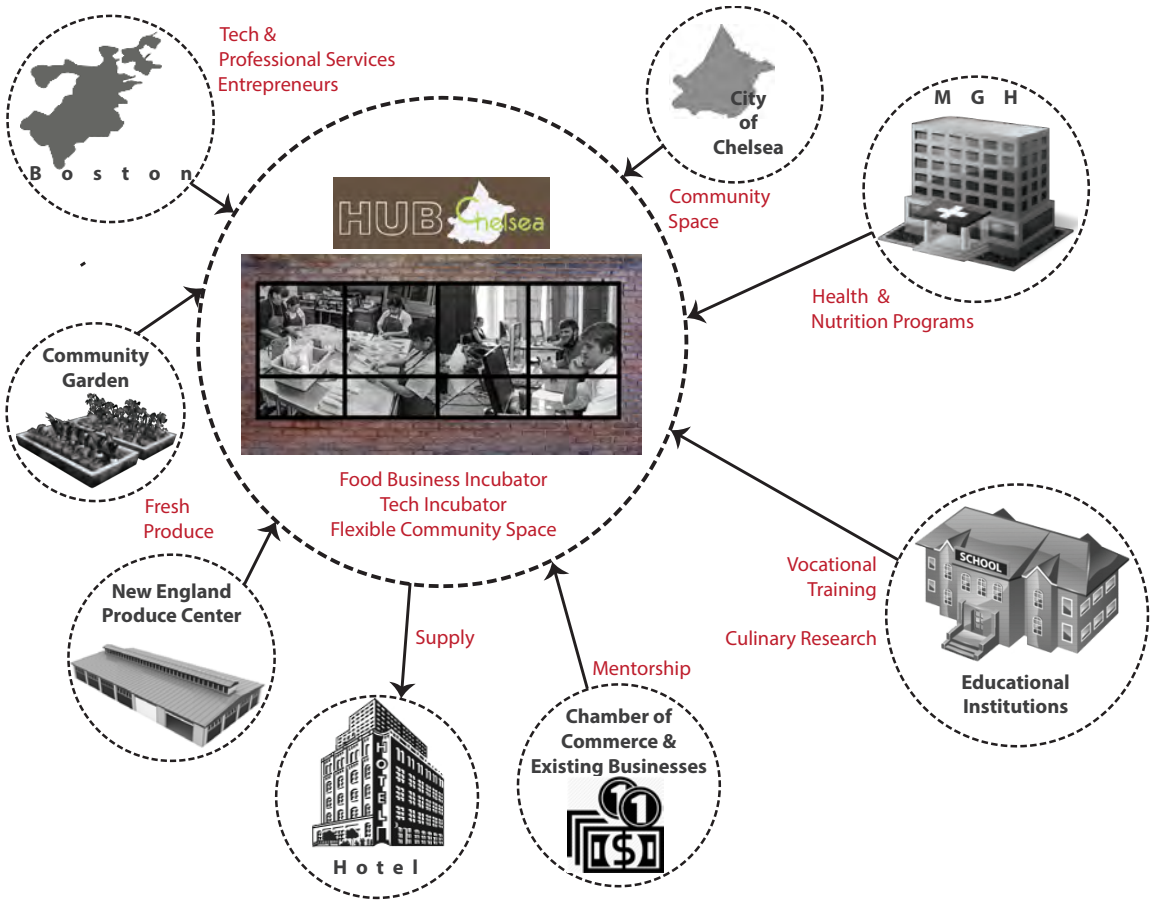


Figure 44 - Hub Chelsea Relationships *Community and cultural events to inspire civic pride and stewardship.*

Figure 45 - Entrepreneur Space *Precedent for shared entrepreneur space in Long Island City, New York (Aaron Showalter).*

Figure 46 - Proposed Outreach Campaign - *Engagement activities with residents revealed that the community itself represents a cherished assets of the city. A public outreach campaign would motivate people to take pride on Chelsea's cultural diversity (Swoveland).*

A Community-wide calendar

A proposed community-wide calendar builds on the city branding strategy, encouraging civic engagement and collective identity in Chelsea. The calendar would be available in multiple versions: a live website, SMS text, posters at central community locations, and a weekly email. From community events to major construction updates and the launch of new businesses, the calendar could serve as a virtual civic center for current and future Chelsea residents, as well as visitors, to stay connected to what is ongoing events in the city.

"All the pieces are in place. We just need some coordination to put them all together."

- Non-profit leader

Strength **Under-used spaces**

Strength **Multi-cultural community**

Chelsea cultural "FoodPark"

Two of Chelsea's strongest assets are its strong food economy and cultural diversity, bolstered by the rich ethnic backgrounds of its people. This proposal envisions a marketplace that reflects these strengths and transforms currently underutilized spaces into flexible public areas for community activity and retail.

A logical site for the Chelsea Cultural FoodPark would be the spaces under the Tobin Bridge/Route 1. The proposal for the FoodPark designates a special taskforce, led by the Chamber of Commerce, to encourage the production and marketing of locally and ethnic-oriented cuisine, products, and artistic events such as dancing performances and music. The City could support this effort through modest streetscaping techniques under Route 1 during the weekends. The FoodPark proposal serves multiple purposes:

- Improve street life and public safety in currently inactive spaces.
- Showcase and promote products developed in Hub Chelsea.
- Create a destination for residents and visitors alike.
- Connect the two sides of Chelsea currently separated by Route 1

In the long term, the possible acquisition of Tobin Bridge parcels would allow spaces to become permanent rent-controlled retail opportunities for local entrepreneurs.

Phasing

The first phase consists of sporadic "Pop-ups," where residents showcase homemade or traditional ethnic products such as regional dishes, art, flowers, costumes, and more. Scheduled performances by local artists could attract customers from all over the region.

Flea Market: the second phase resembles farmers and flea markets, where non-permanent structures are used for product display. This phase could also include locally owned food trucks. At this stage, the city identity would be reinforced through street signage and shopping bags.

Affordable Retail Space: with sufficient demand, non-permanent structures could be replaced by rent-stabilized retail spaces, assembled in a formal market. The urban design is modeled after Mexico City's successful "Bajo Puentes" program, described below.

A clear economic opportunity exists for Chelsea to promote its diversity through goods that embrace tradition and cultural pride, particularly given its sizable population of Latino residents and entrepreneurs. Demographic and economic trends build a strong case for products targeted to Latino preferences, especially considering this is the second-largest ethno-racial group in Massachusetts, which grew almost 30% between 2000 and 2008.

Compared to the nationwide expected population growth of 42% during the 2010 to 2050 period, the Hispanics population will surge by 167%, making this the fastest growing ethnic segment in the country (Nielsen 2012). Furthermore, the entrepreneurship of the Latino population has already been noted in recent studies, which point out that, despite difficult access to finance, from 2007 to 2013.

Figure 47 - Mercado Central, Minneapolis
Successful Latino-oriented marketplace (Wittig).

Figure 48 - "Bajo Puentes" in Mexico City *Lively underbridge park (Landin).*

Latino businesses grew at a 7% annual rate, compared to a 3% rate for all businesses. Therefore, there is a strong potential for the FoodPark to incentivize entrepreneurial spirit and attract regionally-shared consumer preferences. Chelsea holds a strategic location between many of the largest Latino concentrations in East Boston, Revere, Winthrop and Lynn.

Figure 49 - Proposed Farmers Market Under Tobin Bridge *Rendering imagines potential use for vacant parking lot under Route 1, currently owned by MassIT.*

Organics recycling: the future of waste processing

Chelsea has an opportunity to provide a valuable organics recycling service for the Boston metropolitan region, leveraging its expertise in waste management, large land parcels currently used for scrap metal yards, its proximity to Boston, and its evolution as a food and agriculture hub. Organics recycling — the processing of food and yard waste into either compost or energy — has been used as an economic development tool in other cities (NCDENR 2014), and could play a central role in a regional commitment to green initiatives. In several nearby cities, including Lawrence, waste has been harnessed as a source of energy production with anaerobic digestion systems converting organic waste to energy (Wong 2011, 14).

Combined with food production and catering, composting completes the food lifecycle and leverages Chelsea's connections with Greater Boston. Scrap metal yards could shift closer to their processing plants in Everett, allowing the land to transition to composting initiatives.

Ample funding for such initiatives is available to cover each stage of implementation. MassDEP Sustainable Materials Recovery Program (SMRP) could provide funding for site assessment, feasibility studies, design assistance, and construction financing assistance, with grants ranging from $1,000 to upwards of $100,000. MassCEC Commonwealth Organics-to-Energy funds anaerobic digestion projects, allocating $2.3 million to projects in the Boston metropolitan area.

Figure 50 - Potential Organics Recycling Sites *Chelsea can leverage its expertise in waste management and its evolution as a food hub to launch new ventures in organics recycling. Companies can be seeded by grants, secure Institutional and municipal contracts, and sell valuable compost and renewable energy (Google Earth, Richard Zeid & Madebyelvis, Noun Project).*

After startup funds are acquired, private compost businesses could have consistent revenue streams, selling compost to farms and gardens or energy to utilities. As more institutions and municipalities adopt organics recycling, businesses in Chelsea could then secure formal contracts (Harvard 2014), UMass Amherst, and Clark University (MassRecycle 2014) are just two examples among many of the trend toward composting. A matrix of available funding sources is available on MassDEP's website (MassDEP 2014).

HOUSING BALANCE

Vision

One of Chelsea's principle strengths is its affordability, whether for longtime residents or new immigrants. A range of moderately priced rental and homeownership opportunities has made Chelsea an appealing and affordable home to a diverse community for decades. A concentrated investment in new housing development that maintains current rates of affordable housing (of at least approximately 20%) will broaden options for current residents while welcoming new residents of all income levels to the area. The map below demonstrates the fine-grained residential fabric in Chelsea, while showing a clear area for growth in the study area.

With the extension of the Silver Line, a great opportunity presents itself to amplify Chelsea's desirability and accessibility, all the while preserving its characteristic affordability. By densifying the study area with strategic, transit-oriented, mixed-use, and mixed-income development, the area will offer housing options to new and longtime residents alike, broadening the taxpayer and consumer base, relieving the housing burden, and further promoting Chelsea as vibrant, livable home in the Boston area. By combining housing options with a major transportation improvement, current residents will have expanded access to regional economic opportunities, strengthening the community at the individual, household, and neighborhood level.

While Chelsea's residential appeal is largely linked to its affordability (particularly relative to Boston), Chelsea's livability is equally tied to its employment opportunities for entry-level work, a wide network of supportive services for community members, a diverse economic and industrial base, and regional connectivity and accessibility. As such, preserving housing affordability not only provides greatly needed shelter, but also invests in the strategic strengthening of an already well-serviced community. The housing proposals made here fit logically into the remainder of the plan proposals, principally as part of the Urban Design parcel redevelopment or as a logical foundation for Economic Development, encouraging mixed-use development and keeping employees affordably housed in the area.

Figure 51 - *(Wikimedia Commons)*

Figure 52 - Subsidized Housing Units in Chelsea, By Building *Subsidized housing accounts for 12% of Chelsea's housing stock, but remains insufficient to meet growing demand (Chelsea Housing Authority).*

Issues

Regional housing demand

As the Boston housing market continues to expand, Chelsea has become a logical extension of the regional market, attracting new market-rate development and new residents. Housing demand is broadly seen in Chelsea's low vacancy rate, with an occupancy rate ranging between 96 and 100% on average (City of Chelsea 2012). At the same time, affordable housing development continues to be in great demand, evidenced in part by the overwhelming demand for affordable housing at many different income levels (The Chelsea Record 2010).

While market-rate development serves to broaden the taxpayer and consumer base in Chelsea, the continued affordability of Chelsea's housing is brought into question as new, market-rate development enters. A clear vision for future affordable housing development is needed in order to accommodate the needs of current residents while also encouraging new residents and families to invest and remain in Chelsea.

Chelsea's residential growth

A moderate estimate of Chelsea's need for new housing, given current rates of new construction and Chelsea's population increase, expects that the area will host 1500+ new residential units in the next 10 years (U.S. Census Bureau 2012). Jay Ash, City Manager, estimates that Chelsea can expect up to 500 new residential units per year in the next several years, outpacing the more moderate estimate utilized here. Regardless of the exact projections, it is largely agreed that Chelsea will continue to host significant new development in the coming years. The strategic question, therefore, is how this development can best be guided and integrated to benefit the area and the city overall. The area presents an excellent opportunity for accessible, affordable, high-density development, both to provide the area with a strategic plan for moving forward, but more importantly to immediately house Chelsea's future residents, whether young professionals or longtime residents and families.

Given the wide range of housing demand in Chelsea, calculations shown here give an approximation of the housing mix that would be appropriate to meet the demonstrated need at a range of income levels and household characteristics. Future housing development should accommodate a family-friendly unit mix, with a higher percentage of two- or three-bedroom units to accommodate Chelsea's relatively larger household size (with an average of 3 people per household in Chelsea compared to 2.31 in Boston) (U.S. Census Bureau 2010). In addition to accommodating families, the proposed housing mix also maintains a proportion of studio and one-bedroom units to match that of Boston, recognizing the appeal of transit-oriented development to young professionals.

Need for mixed-use transit-oriented development

The study area has historically been home to large-scale industrial uses. Recently, commercial uses such as the Market Basket grocery store or smaller commercial buildings featuring chain stores have been developed. New residential development can fit into this fabric, integrating higher density residential with existing commercial uses, accommodating the demands of transit-oriented development for mixed-use, pedestrian accessible development. Several precedents for mixed-use and transit-oriented development have guided these proposals.

Figure 53 - Affordable Housing in the Box District *The Neighborhood Developers have developed successful affordable housing units in the nearby Box District area of Chelsea (Landscape Online).*

Bartlett Yards, a mixed-use residential development in Roxbury, MA, demonstrates the successful combination of a commercial anchor with a large-scale residential development (Nuestra Comunidad Community Development Corporation 2013). A precedent in Denver, Colorado shows thoughtful integration of dense residential uses immediately surrounding a transit station, successfully combining quality design and affordable units. The Denver TOD project features a funding stream designated specifically for transit oriented development, which could pair logically with more specific funds and policies outlined later in the plan (Denver Community Planning and Development Department 2014). Mixed-use and transit-oriented development fit naturally into the ongoing proposals for the study area overall, primarily with a new street grid as proposed in the Urban Design chapter.

Figure 54 - One North *An example of recent large scale market-rate development in Chelsea (One North of Boston).*

Figure 55 - Bartlett Place *A guiding precedent for mixed-income and mixed-use affordable housing development in Roxbury, MA (Nuestra Comunidad CDC).*

Number of Bedrooms	Boston	Chelsea	Proposed
0	6.80%	10.40%	8.00%
1	25.50%	17.90%	20.00%
2	34.80%	33.20%	38.00%
3	22.00%	25.60%	27.00%
4	7.70%	9.90%	7.00%
5 or more	3.20%	2.90%	0.00%

Figure 56 - Proposed Housing Unit Mix *The table shows a proposed unit mix to accommodate young professional and family households for Chelsea's future (American Community Survey 2008 – 2012).*

Goals

Substantially increase the supply of affordable and market-rate housing

Chelsea is home to a diverse and continually growing population. Further investment in housing will strengthen opportunities for current residents while continuing to expand the many assets that make Chelsea an appealing and livable home.

Create mixed-use, mixed-income residential and transit-oriented development

Chelsea's accessibility and convenience makes it a logical site for transit-oriented development (TOD). Large-scale development fits readily into the industrial and commercial fabric and will enable the city to continue to accommodate a diverse range of new development with commercial and residential functions.

Establish permanently affordable housing

Chelsea's proactive city government, whether through city administration or the City Council, has a deep understanding of the city's needs and the ability to guide development in thoughtful, strategic ways to ensure a broad base of affordable housing for years to come. Multiple policies are available (whether in combination or stand-alone) to the city to achieve permanent affordability.

Strategies

Strength **Affordable cost of living**

Build 1500+ new units of affordable and market-rate housing in the study area in the next 10 years

Current occupancy rates, "lease-up" rates and population growth rates are testament to the fact that Chelsea is an increasingly appealing place to live, particularly as development increases and accessibility improves with the extended Silver Line (U.S. Census Bureau 2010). While housing is generally in demand, affordable housing is a key component to ensuring that Chelsea remains home to longtime residents and recent immigrants alike. A concerted effort for new residential development requires collaboration from public and private partners, particularly those committed to affordable development. Successful past partnerships have included active affordable housing developers such as Mitchell Properties or The Neighborhood Developers in collaboration with supportive lenders such as Bank of America or Chelsea Bank. Additionally, successful affordable development requires a complex layering of funding from city and state sources.

Encourage a catalytic, large-scale, mixed-use residential development with a public market as an anchoring ground floor development

Given the area's current commercial and industrial fabric, and with the expectation that the Silver Line development will bring a significant number of new consumers and residents to the area, housing development must also meet the needs of the changing neighborhood with ground floor commercial activity. A ground floor public market would match the community's already robust small business character (particularly with the clustered food industry) and bring a community orientation to new commercial development. One guiding precedent is the Midtown Global Market in Minneapolis, Minnesota. The Global Market is a mixed-use development featuring a ground floor public market with community space and mixed-income housing on the floors above. The site is connected to transit and also features a variety of anchoring services, such as a hotel and government offices also on site (Midtown Global Market 2014).

A project of this magnitude and complexity requires a strategic layering of partners and funding, whether residential or commercial developers, willing lenders, and foundational or public support to ensure both initial investment and long-term monitoring of the project's success.

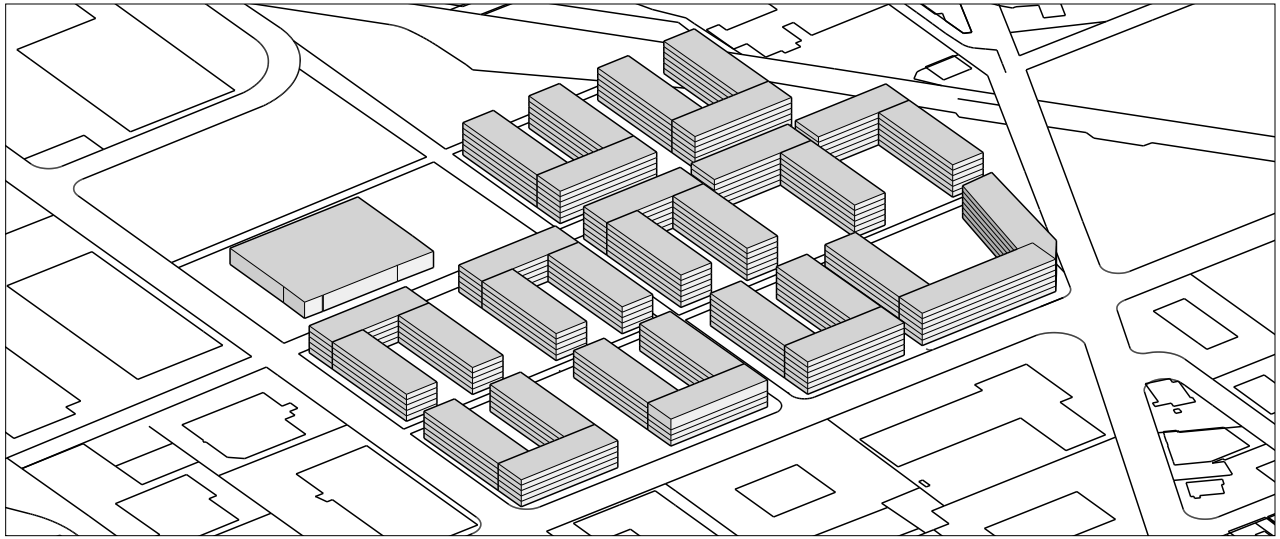


Figure 57 - Configuration of New Development on the Market Basket Parcel *Rendering of proposed high density development, including residential units.*

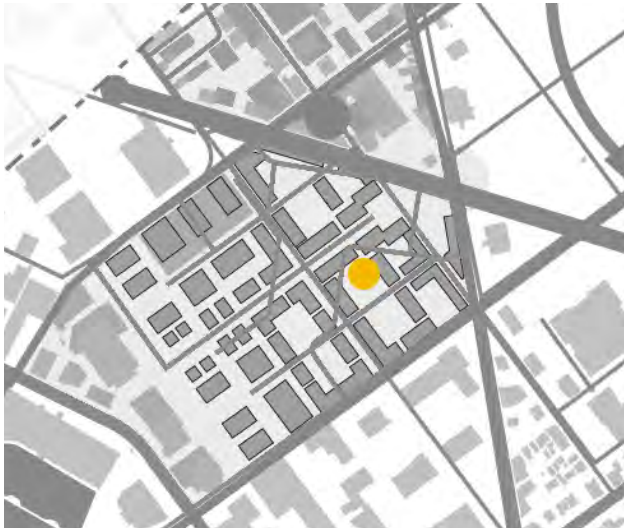


Figure 59 - Priority Residential Site *Proposed priority site for new residential development in the re-designed street grid on the Mystic Mall parcel.*

Figure 58 - Envisioning Development *Artist rendering of a pedestrian corridor within new residential development.*

Enact an inclusionary zoning policy to incentivize the construction of affordable housing units in all new development

Though Chelsea has an excellent advocate and affordable housing developer in The Neighborhood Developers, a broad-reaching, citywide policy on inclusionary zoning would ensure that all developments, regardless of the lead developer, would offer needed affordable housing options. An inclusionary zoning policy (with a goal of at least 20% affordable units) would be consistent with Chelsea's current percentage of affordable housing, and could be flexible with regard to its allocation of specific income requirements (i.e. 50% of affordable units at 60% of AMI or below). The City of Chelsea, through its administration and City Council leadership, has the ability to directly advocate for affordable housing by using an inclusionary zoning policy.

Institute a broad mix of rental and homeownership options for mixed-income housing developments

In broadening housing options for Chelsea residents, it is important to also consider the particular needs of the community beyond simple income qualifications. As compared to Boston, Chelsea has a higher average household size, a lower homeownership rate, and a lower median income (U.S. Census Bureau, 2010). These characteristics create barriers not only to affordable housing generally, but to affordable homeownership in particular. As such, it is important to encourage development that offers both rental and homeownership options to enable current low-income residents to invest in Chelsea, encouraging long term household savings as well as neighborhood stability. Homeowner loan programs, such as those available through MassHousing, are key to ensuring the financial feasibility of homeownership opportunities in new developments.

Leverage public and private support for affordable housing by furthering partnerships between willing lenders and developers

Recent affordable housing developments, such as those enabled by The Neighborhood Developers, have embodied the successful twinning of able, committed developers and community oriented financial institutions. A continued effort to leverage the significant interest and investment in Chelsea will ensure that thoughtful, affordable development continues as the city continues to grow.

Create policy on climate resilient construction to incentivize flood resilient and low impact construction, particularly for residential buildings

Recent development in the city has proven the feasibility and desirability of low impact construction, such as The Neighborhood Developer's LEED platinum development in The Box District (TND 2014). The city has an excellent opportunity to guide and incentivize resilient construction to insulate it from natural disaster or energy scarcity well into the future. While this initiative is expected at the level of the city, significant State level resources are available in Massachusetts to support sustainable infrastructure development, such as the MassWorks funding that enabled the successful development of the One North housing development (Massachusetts Executive Office of Housing and Economic Development 2014).

Designate District Improvement Financing in the study area

Given the growing interest in development in the study area, investment could be further incentivized with the use of District Improvement Financing (DIF). The great future potential in the study area, particularly with its connection to transit, could enable the city to capture future land value to be used for investment in the area, such as infrastructure improvement. The land use requirements of the DIF structure could be a particularly useful method for charting a clear development path for the study area, bringing the city's vision for the area to the forefront of future discussion with developers (Massachusetts Executive Office of Energy and Environmental Affairs 2014). A DIF fits with broader goals for the area, such as the infrastructure improvements needed for a re-design of the Market Basket parcel.

Figure 60 - Transit-oriented development incorporating public space *Artist rendering of proposed plaza between residential buildings and the incoming Silver Line Station.*

Establish an Affordable Housing Trust Fund to ensure future affordable housing development in the study area and Chelsea more broadly

An Affordable Housing Trust Fund is a mechanism through which the city can better control and encourage the development of affordable housing into the long term (City of Chelsea 2004). The formal establishment of a housing trust would allow the city to better control available funding for future development. Given the modular approach offered in this plan overall, the city could utilize an Affordable Housing Trust Fund in lieu of a more restrictive Inclusionary Zoning policy, or the potential complexity of establishing a DIF. Though principally used for the construction of new affordable properties, the Trust Fund could also serve to fund affordable housing preservation or rehabilitation throughout the city.

IMPLEMENTATION

Vision

In keeping with the plan's emphasis on Chelsea's strengths, the implementation of the numerous proposals detailed in the previous chapters rests largely on existing capacity and relationships already present in Chelsea. The plan's vision for Chelsea is one of expanded opportunity, built upon the city's many assets outlined and strengthened through proposed plans. Implementation strategies are true to this perspective and when held together, fulfill the vision of both recognizing and amplifying Chelsea's existing strengths to build a connected, inclusive, and vibrant community.

Issues

Funding and implementation continue to present a profound challenge for the City of Chelsea, even as investment and development increase in the area. As such, the implementation strategies outlined in each chapter and compiled here pay close attention to the importance of phasing. Numerous plan examples are envisioned as catalysts for future development and are intended to be enacted immediately and with minimal cost to the city. At the same time, each chapter carefully considers the steps needed to realize a vision for the city in the long term, and includes policies or developments that rely on multiple committed partners, stages and layers of funding, and a longer term investment or management to ensure project completion. The phasing diagram compiled below offers a synthesis of the projected goals for the study area and Chelsea more broadly. When visualized together, it becomes clear that the vast majority of proposed plans can be feasibly integrated within the next one to three years. More significant interventions, such as infill development, affordable housing construction, or roadway infrastructure, can be expected to take 10 to 20 years as funding sources and clear partnerships must be established and sustained over time. Notably, the implementation strategies are often interconnected and overlapping, allowing the city government and its partners to capitalize on the most advantageous proposals, given Chelsea's present capacity.

Figure 61 - *(Nguyen)*

Strategies

Implementation strategies are compiled in grid format, separated by plan chapter and designated with key characteristics such as an approximate time frame or a rough estimate of cost. These are presented jointly with the remaining two scenarios in the final chapter of the document. While the proposed plans and strategies vary greatly, they are held together by a sincere belief in the sound logic and necessity of their implementation. The grid serves the additional purpose of linking each proposal to numerous potential partners and funding sources. This identification reflects the wide range of stakeholders in Chelsea's future, whether current businesses, community organizations, city officials, State offices, or private developers. While the grid is intended to identify steps for the proposals going forward, it also clearly demonstrates that Chelsea is already home to an active, engaged community.

The dense web of proposals, partners, and phasing presented above, daunting though it may be, clearly evidences Chelsea's numerous opportunities for moving forward. Although many implementation strategies require complex financing and careful phasing, the city is host to a continually stronger market for investment and a proactive city government. These factors may allow implementation to occur more rap-

idly (and therefore with lower transaction fees) than in other areas of Greater Boston. The city has already seen this to be true in the efficient approval and permitting time for new developments, ensuring a project completion timeline that is beneficial to developers and the city. With a collaborative city government, many partners respond in turn to propel initiatives forward, such as real estate developers that can finance and support strategies for housing development and urban design.

While the individual chapters feature a wide range of implementation strategies, they are unified by an emphasis on strategic partnerships and policies for new development. The implementation strategies are designed to meet the overall vision and goals of the plan, ensuring that affordable housing is preserved, infill development is context-sensitive and advantageous, and that the proposed urban fabric is financially feasible for the city. Existing businesses, residents, and community groups all have a great deal to gain from the proposed initiatives, with economic development initiatives such as the Chelsea Hub, the activation of community recreation space, or strategic improvements to transportation of all kinds. By engaging active organizations such as the Chelsea Chamber of Commerce, Roca, or the Boys & Girls Club, partnerships will bolster the success of developments while simultaneously benefiting organizations and their constituents.

Overall, the implementation strategies outlined represent Chelsea's extensive assets and the City's numerous advocates and supporters. Summed together, the implementation phasing and strategies visualized here outline positives steps forward for a connected, vibrant, and inclusive community under the guiding vision of Leveraging Local Strengths.

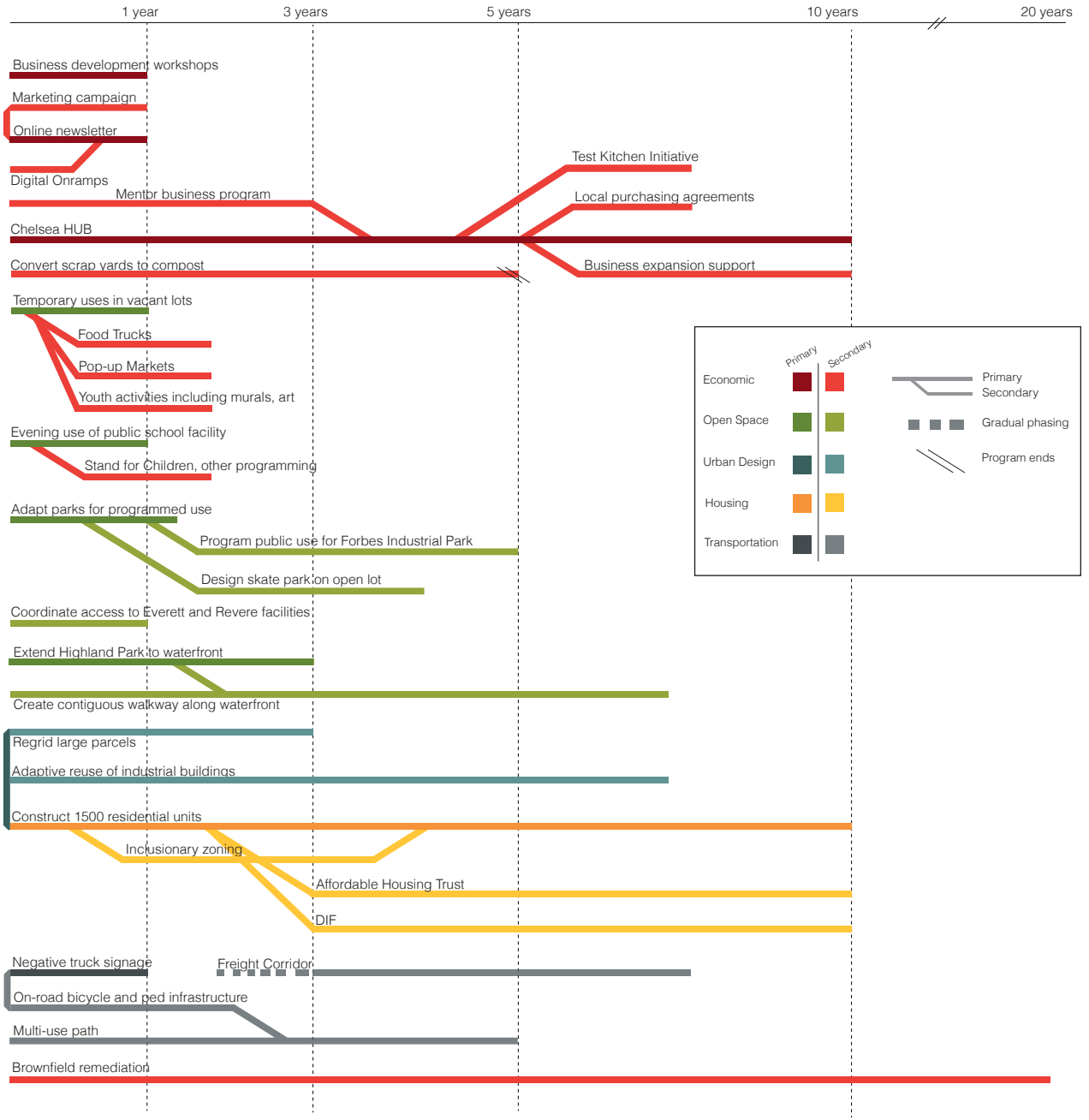


Figure 62: Implementation Phasing *Implementation phasing featuring creative, interconnected, and modular options over the short and long term.*

SCENARIO 2:
A NETWORK OF NEIGHBORHOODS

INTRODUCTION

A vision for Chelsea

With the MBTA's current plan to expand the Silver Line to Chelsea, western Chelsea will likely see a sharp increase in development. The Network of Neighborhoods Plan argues that the city should harness future development in order to transform this section of the city, currently defined by parking and vacant lots, into an attractive, exciting neighborhood. This new neighborhood would link seamlessly with Chelsea's existing network of distinctive enclaves, districts, and corridors: Bellingham Square, Carey Square, Addison-Orange, the Box District, etc.

The plan envisions the creation of three neighborhood centers in western Chelsea. These centers would be public spaces that attract people to Chelsea, encourage active street environments, and act as memorable landmarks. Greater Boston is home to many neighborhoods that are anchored by such great public spaces, including Copley and Davis Squares.

The plan recommends that the City take steps across five functional areas (urban design, transportation, open space, economic development, and housing) in order to foster the creation of a vital neighborhood around these centers. The plan's key proposals are:

- Enhanced streets and open spaces that connect the new neighborhood to Chelsea's existing urban fabric, while also providing important stormwater management and flood risk prevention
- New civic spaces and economic development programs that increase human capital and generate a sense of community and identity in a section of Chelsea that is currently very isolated
- A land use program that proposes the creation of 3,700 new housing units

Proposed neighborhood centers

Mystic Square

The first of the proposed neighborhood centers is Mystic Square, immediately adjacent to the incoming Silver Line station. The plan advises that nearby industrial buildings should be retrofitted to house a mix of residential, office, and artisan uses. A combination of these heritage buildings with contemporary structures would help to aesthetically define the area. Framed by red-brick buildings, a new public plaza could incorporate public art, dynamic programming, and sustainable green space. The plan also recommends the introduction of a new street network to create additional ground-floor frontage for national retailers, including coffee shops, restaurants, and Market Basket. Developers could use the upper floors of buildings for condos, rental units, and office space. These land uses would generate the activity needed to support a thriving street environment.

Island End

The plan proposes the creation of a park oriented toward Chelsea's waterfront, near the current site of the New England Produce Center. Such a public space could catalyze real estate development, gradually transforming the area's existing industrial base into a mixed-use neighborhood. Modestly sized condominiums and corner retail uses could act as a

Figure 1 - *(Bowen)*

Figure 3 - Precedent: The Science Center Plaza at Harvard University *This memorable, exciting community space helps to define Harvard Square (STOSS Landscape Urbanism).*

Figure 4 - Precedent: Davis Square *Dense, mixed-use, attractive neighborhoods organized around rapid transit stations abound in Greater Boston (The New England Journal of Aesthetic Research).*

Figure 5 - Precedent: Copley Square *Street events, interesting shops, and an inviting public library define this neighborhood (Penny Cherubino).*

Figure 6 - Conceptual Map of A Network of Neighborhoods *Neighborhood centers would be memorable public spaces that spark activity within the area. These centers would be linked by both streets that are dynamic, interesting places and interdependent land uses.*

bridge between the low-density Admiral's Hill and the higher density Mystic Square. Through flexible programming, including food-trucks, the plaza would convey a sense of vibrancy and liveliness. The park should be a 'destination' that compliments one of the city's greatest existing assets, the Mary O'Malley Waterfront Park.

Arlington Corner

A new community center and library at the intersection of Spruce Street and Everett Avenue (the current site of a low-rise office building) could enliven the area just to the north of Route 1. As envisioned, the center could provide flexible space for a range of events, including English language classes and vocational training. The center should be an architecturally striking building: a structure that defines the neighborhood in the public imagination and conveys the fact that Chelsea is a city on the rise. The community center could be augmented by an anchor park with play spaces and community gardens. Surrounding these communal assets, developers would invest in the construction of three- and four-story townhouses to form the heart of a new residential district. Office and retail space to the west of Arlington Street could help to balance land use and to ensure that the streets are active throughout the day.

Why are neighborhoods important?

The Network of Neighborhoods Plan rests on recognition of the deep importance of neighborhoods to people and places. There are many reasons why neighborhood development is crucial:

- The quality of a person's life and the opportunities that he or she has are often determined by the type and quality of housing and amenities in their neighborhood.
- When people interact with each other in planned and unplanned ways, they generate new ideas and increase their productivity.
- Attractive, memorable places play a significant role in defining how a town is perceived by potential investors and residents, which impacts long-term prosperity.

Pathways to strong neighborhoods

Despite the importance of neighborhoods, there is no universally agreed upon definition of a 'good' neighborhood. For this reason, the plan opts to largely eschew existing frameworks for creating ideal neighborhoods, such as that embodied by the Charter of the New Urbanists. Instead, the plan starts from a set of principles that are intended to capture the beneficial aspects of neighborhoods in a manner that is specific to Chelsea.

- Expand economic opportunity for all of the city's residents.
- Respect the existing urban fabric and historical context.
- Capitalize on the planned expansion of the Silver Line by promoting walkable sustainable development.
- Foster the development of neighborhood centers that, while unique from each other, are connected by green corridors.
- Address the threats of flooding and sea level rise by constructing new parks and streets that are both recreational and water management assets.

The remainder of this scenario offers detailed suggestions across five functional areas: urban design, transportation, open space, economic development, and housing. It concludes by describing key implementation methods.

URBAN DESIGN

Vision

People are at the heart of neighborhoods. The built environment should enhance the experiences of individuals on the street and connect attractions throughout the city through appealing open spaces and transportation corridors.

ISSUES

Lack of human scale
The existing buildings in western Chelsea are visually uninviting to pedestrians. Their bland concrete edifices and large setbacks from the street do not encourage mingling in the public realm. The massings of existing commercial and industrial buildings dominate certain blocks, especially to the north of the commuter rail line, with blank, towering walls.

While Chelsea is technically a very 'walkable' city given the proximity of points of interest, pedestrians and cyclists have difficulty navigating the landscape. This is due to a number of factors, including: uneven paving, wide streets where truck and vehicular traffic dominate (particularly on Everett Avenue, Spruce Street, and Second Street), fragmented blocks, and imposing buildings.

Lack of neighborhood identity
Currently, western Chelsea lacks a unique, positive identity. Stakeholders perceive the area as inhospitable and nondescript. This is problematic because it discourages people from enjoying this space and detracts from its marketability.

GOALS

Create walkable connections along Everett Avenue & Spruce Street
Everett Avenue is the main artery by which people travel from the Mystic Mall shopping area to the Broadway commercial corridor. This 10-15 minute walk between two important hubs should not simply be a functional path; it should be an enjoyable experience past attractive buildings. Unique streetscaping should capture the imagination of Chelsea's diverse range of residents and visitors.

Similarly, Spruce Street represents one of the key east/west streets across Chelsea. It provides an important connection between the waterfront of Island End and the commercial attractions of Everett Avenue. This corridor is particularly important, as Chelsea's waterfront represents an underutilized recreational and development asset.

Focus new development around neighborhood centers
While the entirety of western Chelsea should be an inviting environment, the proposed Mystic Square, Island End, and Arlington Corner neighborhood centers would benefit greatly from a critical mass of activity. The plan advises that land uses that generate foot and automobile traffic, including the Market Basket, be strategically located to meet this goal. Visitors and residents could be drawn to new developments by both the amenities that they offer and the high quality of their design.

Figure 7 - *(Martin)*

Create a new neighborhood civic space and library
To enhance the neighborhood feel of Arlington Corner, the plan envisions an anchor civic development at the southeast corner of Everett Avenue and Spruce Street. This dynamic space will provide a social center for activities occurring in Chelsea.

Creatively reuse industrial buildings
As highlighted in the economic development section of this plan, the reuse of iconic industrial buildings would provide opportunity for smaller businesses to establish a presence near Mystic Square. These businesses could benefit from proximity to similarly sized enterprises, creating a dynamic commercial community.

Figure 8 - Truck Traffic on 2nd Street *The built environment caters to heavy truck traffic, rather than people (Viguri).*

Figure 9 - Poorly Marked Crossing on Carter Street *Existing conditions are unwelcoming to pedestrians (Goldman).*

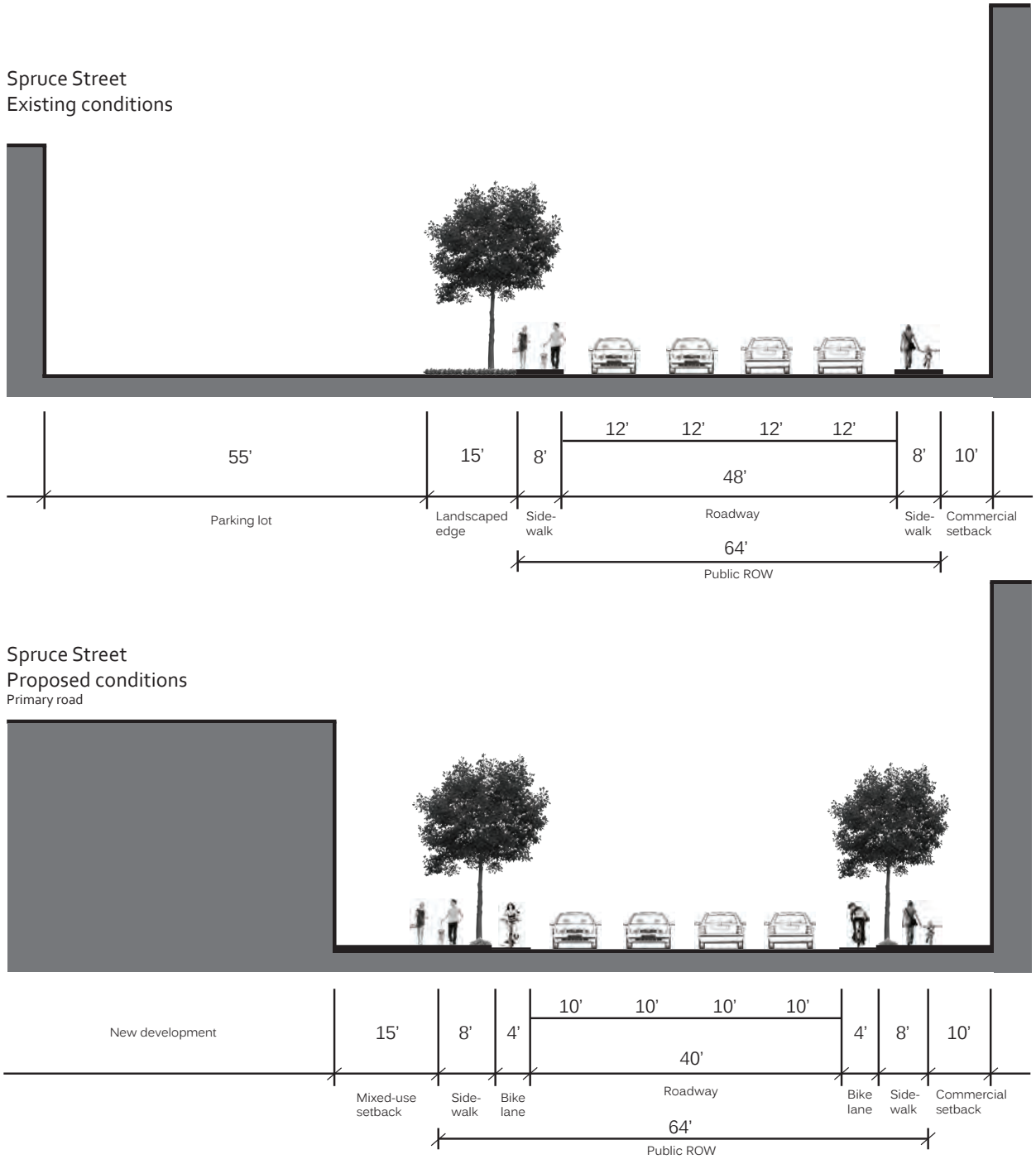


Figure 10 - Spruce Street *An example of a primary complete street.*

STRATEGY

Utilize zoning ordinance to shape physical character of neighborhood

Chelsea can realize its urban design goals through the powerful tool of zoning. Floor-to-area ratio (FAR) allows the city to regulate the density and height of new buildings. In order to promote a relatively uniform built character, the plan recommends both minimum and maximum FARs as outlined in Appendix 2.1: Proposed Table of Dimensional and Use Requirements. Zoning can also be used to establish lot coverage, setbacks, accepted ground floor uses, and minimum heights in order to guide neighborhood character.

Create complete streets

By designating complete streets, which provide safe and convenient travel for all users regardless of their mode, the City can attract people to western Chelsea and connect neighborhood centers. Complete street corridors could incorporate bike lanes, vegetated strips, and wide sidewalks. The ability of the City

to implement complete streets depends on the existing size of the right of way. In some portions of Chelsea, there is enough space to include most of the elements of a complete street, including isolated bike lanes. This is the case with Spruce Street, which the plan recommends be reconstructed as an 'iconic boulevard.' On secondary streets, such as Arlington Street, there is only enough room for enhanced sidewalks.

Create wayfinding system

The comprehensive application of wayfinding signage throughout and between neighborhoods is crucial to making people feel comfortable on the street. Signs would also strengthen the visual identities of particular neighborhoods.

Providing recognizable signage connections along the newly improved corridors is a low cost way to further enhance the identity of Chelsea and illuminate the connections between its neighborhoods.

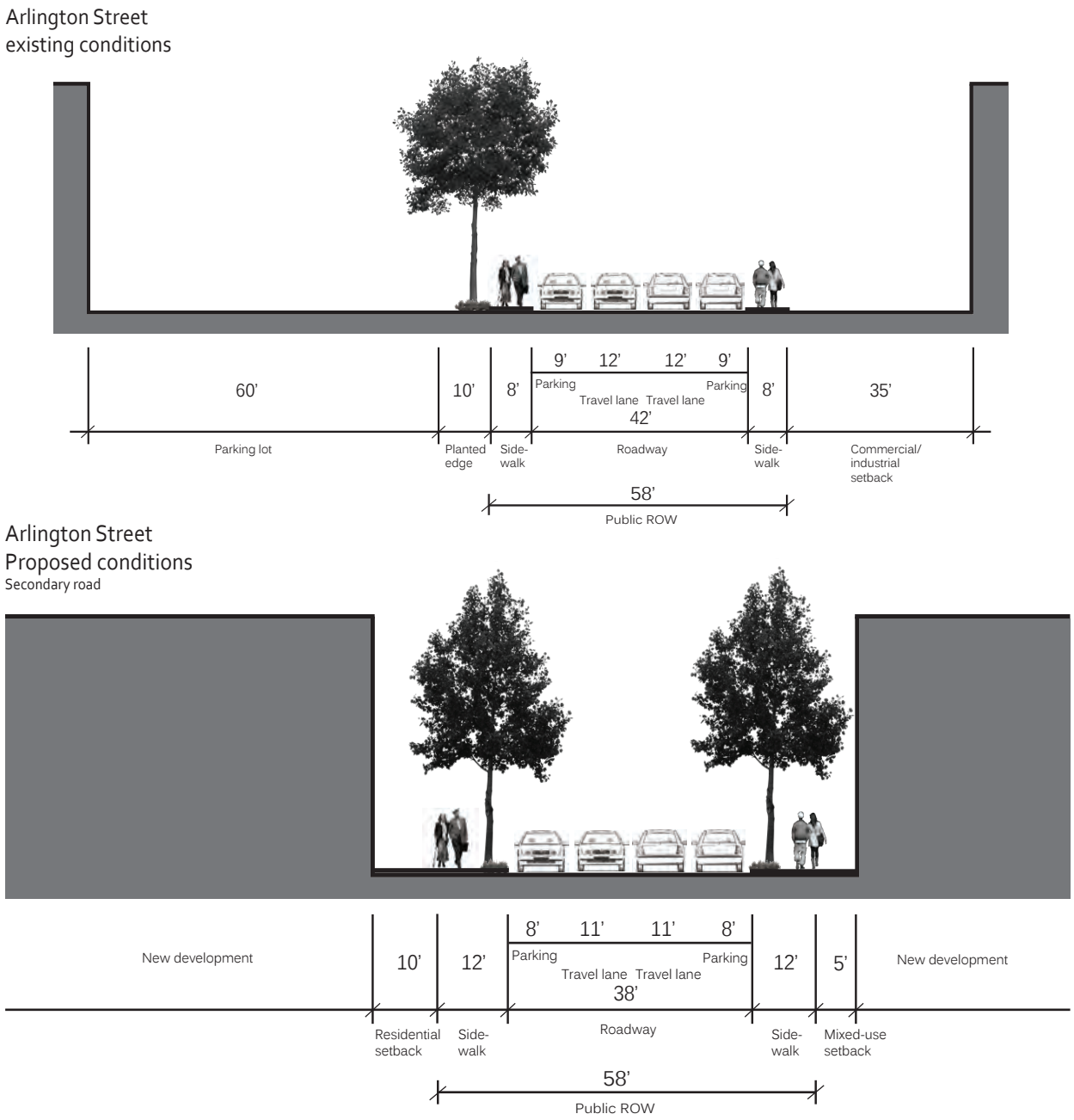


Figure 11 - Arlington Street *An example of a secondary street.*

TRANSPORTATION

VISION

The plan recommends the creation of a coherent network of roads, freight and bus routes, bike paths, railways, and sidewalks, that bridges the current gaps in western Chelsea. Key streets should be reprogrammed to accommodate multiple modes of transportation, enabling pedestrians, bicyclists, motorists, and trucks to exist in harmony. Chelsea's transportation network should also capitalize on the future Silver Line stations and integrate them into vibrant neighborhoods.

ISSUES

Substandard pedestrian infrastructure
Throughout western Chelsea, streets are not designed with pedestrians in mind. There are numerous instances, including portions of Beacham Street, Heard Street, and Vale Street, in which there are no sidewalks. In other places, such as the Everett Avenue and Arlington Street rail-crossings, sidewalks are at-grade with vehicle traffic. Many narrow, brick, and uneven sidewalks fail to meet standards set by the Americans with Disabilities Act. While signalization and signage has been upgraded in some areas, others distinctly lack these amenities.

Heavy truck traffic poses safety and environment risks
Due to the industrial character of western Chelsea, many large trucks use the roads. Coupled with poor quality pedestrian infrastructure and the proximity of Chelsea's middle and high schools, this creates potential safety risks. In 2011, there were 56 vehicular accidents in Chelsea involving large trucks. These crashes damaged a total of 112 vehicles. Eighteen of these occurred within western Chelsea and an additional nine crashes occurred within a quarter mile of western Chelsea's edge (MassDOT, 2011).

Furthermore, truck traffic takes a toll of the built environment by damaging roads, emitting fumes, and generating noise pollution. According to the Federal Highway Administration, doubling a truck's axle load causes the vehicle to create anywhere between two to twenty times as much damage to a road, costs that are covered in large part by the public sector. As such, heavy trucks often only pay fifty percent of their road costs (Dougherty and Davis, 2014).

Parking dominates the built environment
Parking within western Chelsea constitutes a large amount of impervious surface, creating serious runoff, drainage, and flooding issues. Parking also detracts from an active street life. Once western Chelsea is linked to Boston's rapid transit system by the Silver Line, space currently devoted to parking may greatly rise in value, increasing viability for an alternative land use.

Figure 11 - *(Travel Agency Tribes)*

GOALS

Create better linkages between transportation assets

During interviews and focus groups, stakeholders raised concerns regarding the routing of buses within the study area. Services are not sufficiently coordinated, do not run late enough, and do not reach important destinations. For instance, the 112 bus, which connects the Mystic Mall to the Wellington and Wood Island MBTA stations does not run past 8:00 PM on weekdays (MBTA, 2014). Connecting bus routes, the Silver Line, and the pedestrian network is essential to making western Chelsea easier to navigate and an attractive place to live. The gradual introduction of bicycle infrastructure could add another option to a multi-modal transportation portfolio.

Divert truck traffic away from the mixed-use neighborhoods

Truck traffic generated by the New England Produce Center and other industrial land uses is incompatible with neighborhood streets that are scaled for pedestrians. The plan identifies routes that could provide inbound and outbound access to Route 16 and Route 1 with minimal disruption of pedestrian, residential, and retail environments.

Figure 12 - Parking Dominates the Built Environment *The large amount of parking in western Chelsea is both an aesthetic and environmental concern, as impervious surfaces reduce water quality (Wellburn).*

Figure 13 - Truck Traffic Causing Disruptions on Second Street *The limited maneuverability of large trucks causes problems on the roads of western Chelsea (Viguri).*

Figure 14 - Proposed Street Hierarchy and Freight Routes *Freight routes guide trucks to Route 1 with as little impact on neighborhoods as possible. Primary streets are major corridors that people should find enjoyable to move along and instantly recognizable.*

STRATEGIES

Redesign the street grid

The plan advises the introduction of a regular pattern of blocks by changing the street grid. This alteration to the street network is recommended for several reasons:

- It would create regular, medium sized parcels ideal for development.
- Navigation would be improved through the new street network.
- Grid networks are friendly to pedestrians.
- Street frontage and corners would increase, which is beneficial to retail activity.
- The grid would create a new east-west connection on Market Street to Vale Street.

Create truck routes

While this 25 year plan envisions that industry will gradually move out of Chelsea due to changes in regional land prices, it is important to address the impact of trucks and industry on the built environment in the present. The creation of specific truck routes would help mitigate their impact on the surrounding environment.

The proposed trucking routes are Williams, Beacham, Vale, and Market Street. These streets are ideally positioned to bring trucks to and from Route 1 and the airport. Since these routes pass by the high school, additional safety measures, including expanded medians and limited hours of operation, will be taken in order to ensure that the trucks are isolated from pedestrian traffic. Truck routes have a width of 14' per lane.

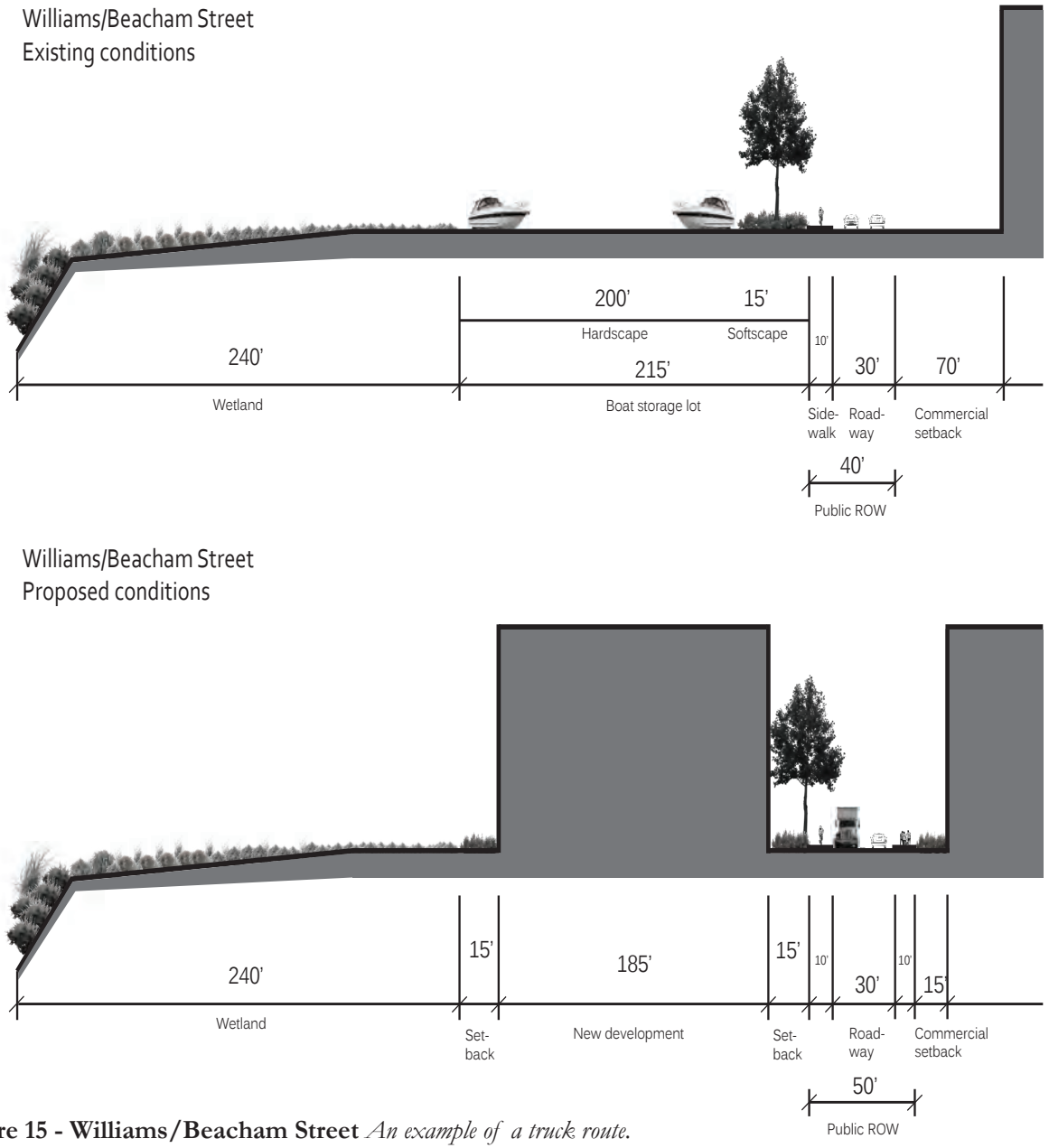


Figure 15 - Williams/Beacham Street *An example of a truck route.*

OPEN SPACE + NATURAL SYSTEMS

VISION

Open space plays a key role in uniting both neighborhoods and residents, while also providing important environmental benefits. In Chelsea, a network of parks and green streets ('corridors') could be created to serve both of these functions. The strategic location of green spaces could allow them to act as a water management system that reduces the risk of flooding.

ISSUES

Flood risk in western Chelsea
While Chelsea's location on the Mystic River is a tremendous asset, it is also a risk that must be addressed. A model created by the Boston Harbor Association (Figure 17) demonstrates that five feet of flooding, whether from sea level rise or a storm surge, would inundate much of western Chelsea.

Lack of access to green spaces
Access to parks and recreational facilities provides a number of tangible benefits, from encouraging social cohesion to improving public health. Although Chelsea has over 30 high quality open space facilities totaling over 90 acres, the distribution of these spaces and their ease of access is unevenly distributed across the city (City of Chelsea GIS Program, 2012).

Figure 16 - *(Jonathan Goldman)*

GOALS

Connect new and existing neighborhoods
Green infrastructure should be strategically integrated along western Chelsea's main corridors to create connections between the city's existing and planned squares and open spaces. By adding aesthetic and functional value, green infrastructure would reinforce other streetscape improvements, such as improved pedestrian routes and bicycle lanes. It would also help to create natural pathways that unite the city and enhance the lived experience of the built environment.

Provide access to open space and recreational activities for all Chelsea residents
High quality parks and open space should be equitably provided for all residents, establishing opportunities for all to benefit from improved health and welfare. In response to a concern raised by many residents in the community engagement process, the provision of recreational facilities for Chelsea's youth should be prioritized.

Water management and flood risk mitigation through open space networks
A network of programmed and unprogrammed green spaces should be created to establish a citywide water management system. This network would range in scale to include parks, green streets, pedestrian corridors, and other public parcels, such as municipal parking lots. By incorporating a range of green infrastructure strategies, including street trees and planters, the plan seeks to create a strong neighborhood identity and to mitigate flood risk.

STRATEGIES

Create a network of green corridors

As a complement to the urban design and transportation strategies, green infrastructure should be constructed along the three main pedestrian and bicycle corridors: Everett Avenue, Spruce Street, and Second Street. This could include a combination of bioswales, curb alternatives, permeable surfaces, urban trees, plants, and planters. The surrounding streets, including Arlington Street, Carter Street, and Maple Street, should be developed as auxiliary green streets. A number of zoning code amendments, focused on issues such as canopy coverage targets and vegetation limits, could support these interventions.

Create a network of multi-scalar programmed parks along Everett Avenue

Four programmed and strategically placed parks could be situated along Everett Avenue. These would include three pocket parks (totaling one acre) and one neighborhood 'anchor' park (totaling two acres). They would be designed for a range of users, but focused on students from Chelsea High School and Joseph Browne School. Their programming could incorporate input from the students themselves to create a sense of local ownership. Safety would be of paramount concern in all these parks, so their design should buffer activities from the street through planters or green fencing. All interventions should also incorporate permeable surfaces. Funds to support these efforts could be leveraged from the Gateway City Parks Programs fund.

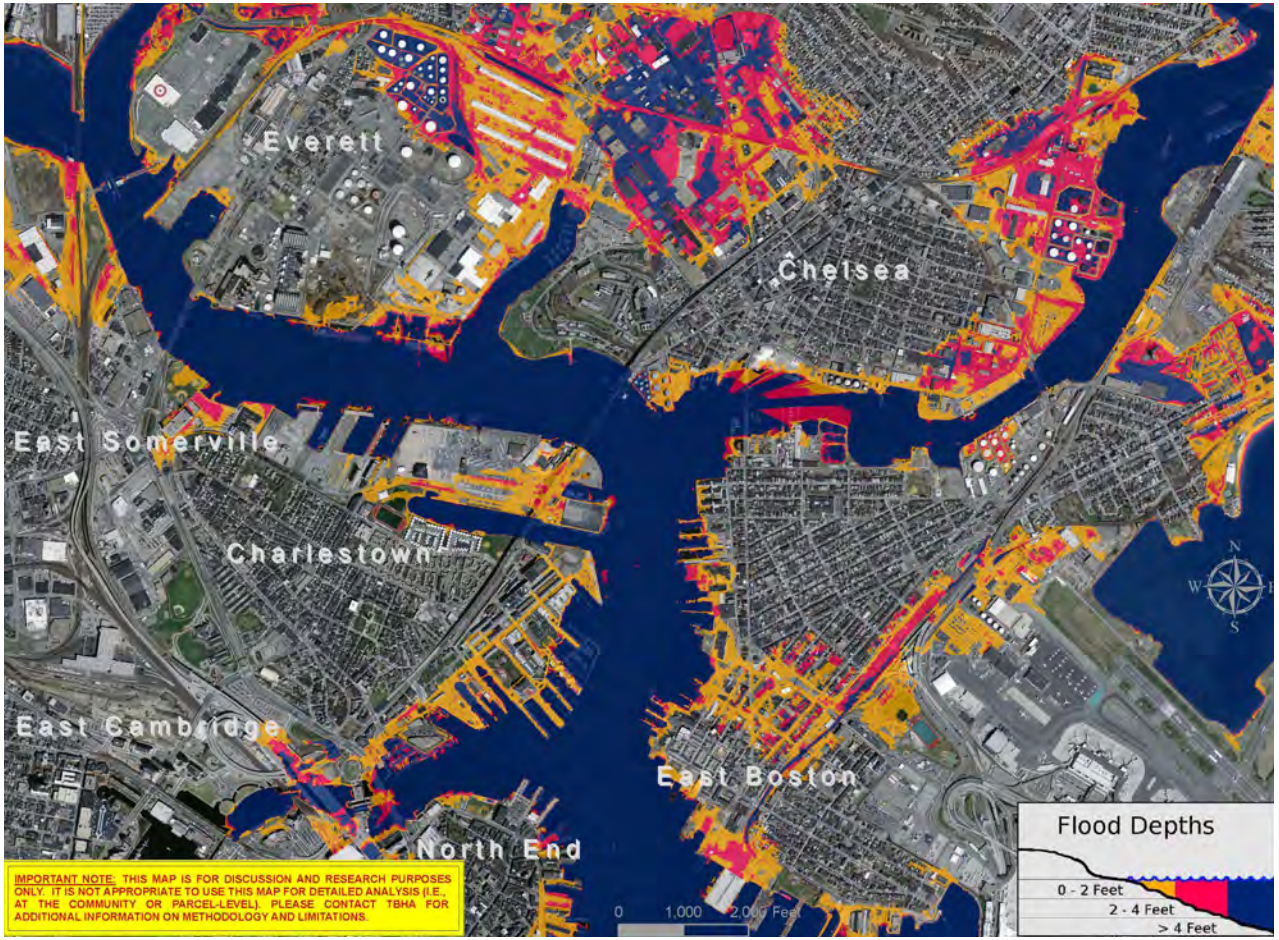


Figure 17 - Flood Zone *Five feet of flooding would leave the vast majority of western Chelsea underwater (Boston Harbor Association).*

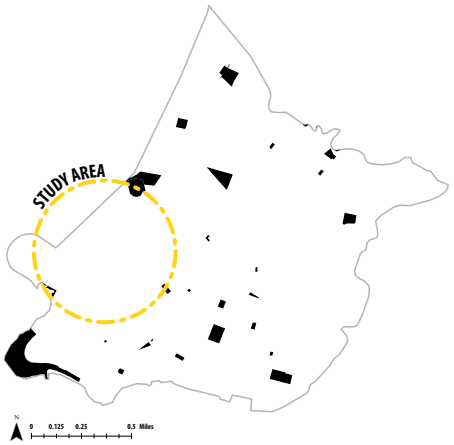


Figure 18 - Open Spaces of Chelsea *Although there are many parks in Chelsea, there is little open space in western Chelsea.*

Figure 19 - Piers Park *During the engagement process, Piers Park in East Boston was often cited as an effective and appealing waterfront park (Panoramio).*

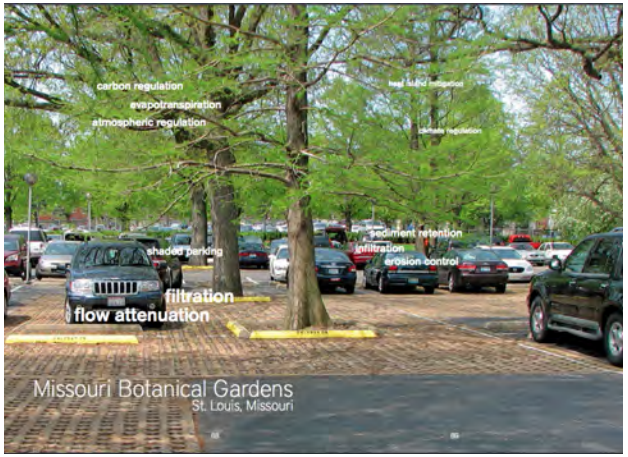


Figure 20 - *Permeable car parks in St. Louis (MTR Landscape Architects).*

Strategically situate unprogrammed parks to function as ecological catchments

The plan proposes a 9.5 acre riparian park for the mouth of the Island End River to protect against storm water surges and act as a filtration device in flooding events. The park would be constructed around an existing residential complex, increasing the value of the structure in the process. This action could be supplemented by a linear park, consisting of shade trees and open spaces, along Second Street between Market Street and Spruce Street. This would provide an additional 2.5 acres of potential storm water catchment. Both parks could incorporate a range of native species, enabling funds to be leveraged from the Massachusetts Preservation Project and the Massachusetts Cultural Facilities Fund.

Figure 21 - *Pervious streetscaping in Portland (Dutch Dialogues).*

Figure 22 - *Permeable playground in Rotterdam (Openbare Ruimte).*

Figure 23 - Open Space Concept Plan *Complete streets link new pockets parks, a riparian park on the waterfront, and existing parks to neighborhood centers.*

ECONOMIC DEVELOPMENT

VISION

The arrival of the Silver Line in Chelsea will spark additional commercial development projects in western Chelsea. One option for new development is to creatively reuse existing industrial buildings. City officials can incentivize this reuse of key buildings in Mystic Square, Island End, and Arlington Corner by easing the land acquisition and environmental remediation processes. A portion of the new revenue generated by development could be reinvested in Chelsea's residents and small businesses through job training programs and incubator spaces for emerging industries.

ISSUES

Developable parcels are small and fragmented

Western Chelsea hosts few remaining parcels that are large enough to be viable for significant redevelopment. In personal interviews, real estate developers stated that most of the 'low-hanging fruit' with regard to land has already been redeveloped. Excluding seven parcels that had an existing building constructed after 2004 and the parcels through which the commuter rail line passes, 53% of parcels are less than a quarter acre in size. Only 22 parcels are two acres or larger in size (City of Chelsea Assessor, 2013).

Figure 24 - *(Goldman)*

Area in economic transition

In the past decade, economic activity in western Chelsea has had both positive and negative aspects. In the aggregate, it appears as though business activity in western Chelsea has dropped off considerably. Between 2006 to 2013, the number of businesses in the area decreased from 269 to 241, and the number of employees declined from 4,709 to 3,305. These figures stand in contrast to the city's recent success in attracting large, prestigious developments to the area. In 2013, the recently opened Market Basket grocery store generated $113 million in sales, and the FBI took steps towards building a regional headquarters in the urban renewal area (ESRI Business Analyst, 2006-2013). For comparison, in 2006, Kayem Foods bread factory had the highest sales volume of any business in the study area. By 2013, Kayem had fallen to fifth, behind Market Basket, T.J.Maxx, a temp agency for professional offices, and a producer of specialty lab equipment (ESRI Business Analyst, 2006-2013). This decline further supports the argument that western Chelsea is experiencing a gradual shift away from industrial uses. It is worth noting, however, that these figures cover only a portion of Chelsea, which has seen positive economic growth as a whole (U.S. Census Bureau, 2011).

Contaminated land

While Chelsea has not undertaken a comprehensive inventory of contamination in the study area, there is reason to believe that a large majority of developable sites have petroleum and hazardous material deposits. Such brownfields impede development as they drive up costs significantly for environmental testing and expose developers to unwanted legal liabilities. A full analysis of the brownfield sites and current status of developable land can be found in Appendix 2.2.

Underemployment of people and places

Chelsea contains a large amount of vacant space (Figure 26). This land, however, is fragmented across the area.

At 9.9% Chelsea's unemployment rate in February 2013 was significantly higher than the statewide rate of 7.4%. Educational and language barriers are contributing factors. Thirty-seven percent of Chelsea residents left school without earning a diploma, compared to ten percent statewide. Forty-four percent of individuals in Chelsea reported speaking English less than 'very well,' while this figure was only nine percent for all of Massachusetts (U.S. Census Bureau, 2012).

Figure 25 - Vacant Land *White space shows land that is not occupied by a street, structure, water, or park. Western Chelsea has a large amount of open space due to the prevalence of parking and vacant parcels (City of Chelsea Assessors, 2013).*

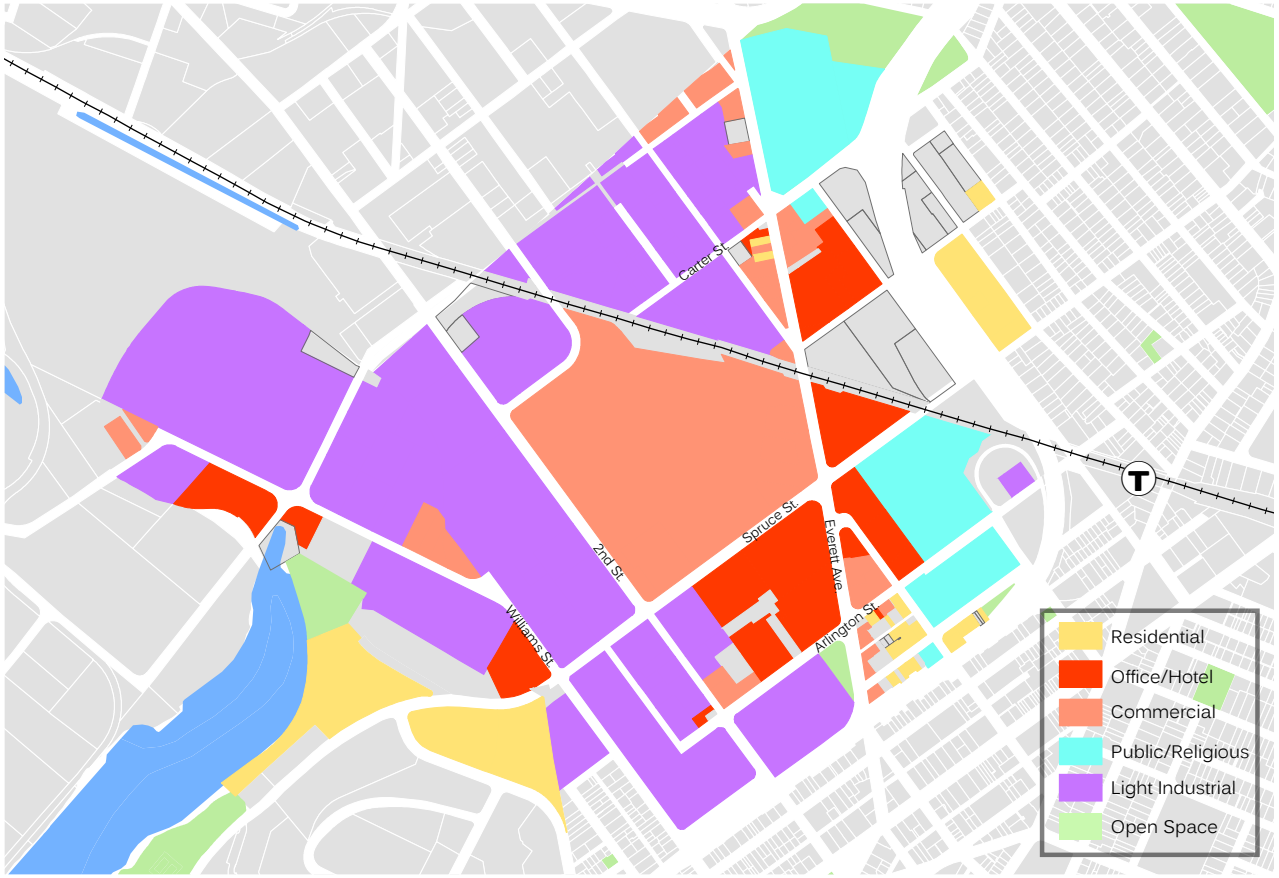


Figure 26 - Existing Land Use *A large amount of western Chelsea is currently devoted to industry.*

Size	Number of Parcels	Percent of Parcels	Total Area (Square Feet)	Percent of Total Area (Square Feet)
<0.25 Acres	114	53%	481,237	6%
0.25-0.49 Acres	31	14%	516,252	6%
0.5-0.99 Acres	29	13%	853,619	10%
1-1.99 Acres	21	10%	1,186,619	14%
2-3.9 Acres	12	6%	1,316,540	16%
>4 Acres	10	5%	4,045,070	48%

Table 1 - Parcel Sizes *(MassGIS)*

GOALS

Improve the redevelopment process
While the City of Chelsea prides itself on having an efficient development approval process compared to Boston, developers still face numerous obstacles when they undertake projects in the city. Foremost among these are land assembly and remediation of environmental contamination. While the City cannot fully solve these issues, it can help make development more attractive through investment in infrastructure and site cleanup.

Increase the human capital of Chelsea residents
With the arrival of the Silver Line, Chelsea residents will have unprecedented access to jobs throughout the region, especially within downtown Boston and the Innovation District. In order for Chelsea residents to take advantage of this opportunity, however, there must be programs in place to increase their skills and knowledge.

Figure 27 - Chelsea Clock *Potential building suitable for preservation (Nguyen).*

Chelsea Economic & Community Development Planner | Roles & Responsibilities

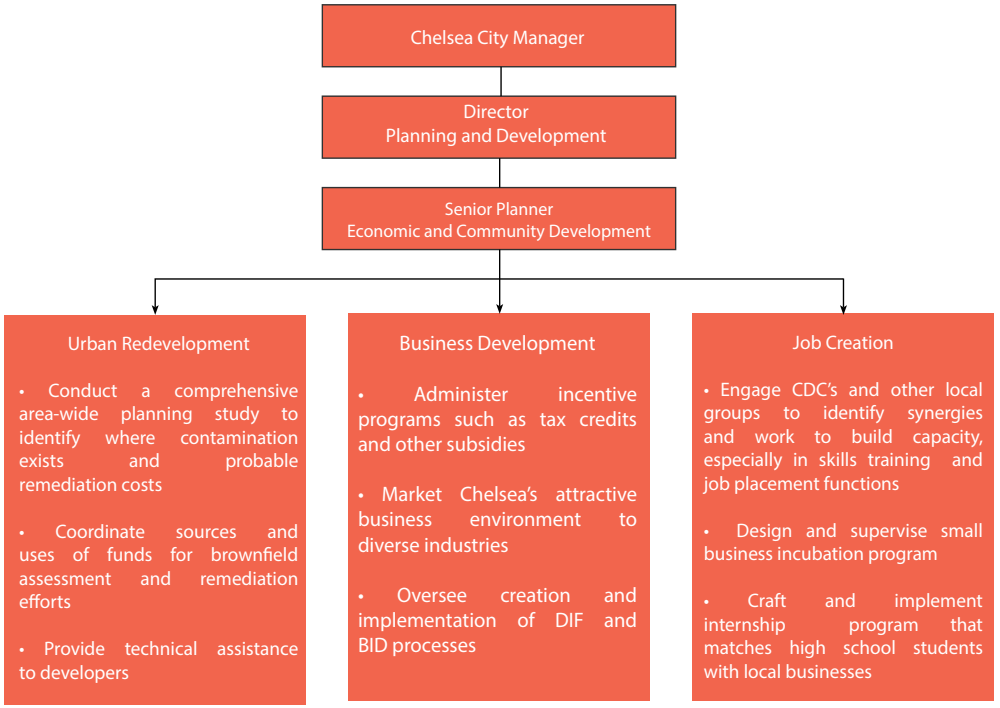


Table 2 - Proposed Department Organization *Tasks address needed redevelopment, business development, and job creation.*

Support local, small businesses
Chelsea is home to numerous small businesses. In 2013, there were 168 businesses with fewer than 30 employees in western Chelsea (ESRI Business Analyst, 2013). Small business plays an extremely important role in the economy. According to the U.S. Small Business Administration, small businesses (independent firms with fewer than 500 employees) make up 99.7% of employer firms and 64% of new, private sector jobs (Small Business Administration, 2012). Small businesses should be an important focus for Chelsea because they are ideally scaled for the neighborhoods. Furthermore, supporting small businesses involves less risk for the City than investing in the development of large office spaces for bigger firms, which can be harder to attract.

STRATEGIES

Hire an economic development planner

The City of Chelsea currently lacks a full-time staff person dedicated to economic development planning. This individual would be responsible for managing urban redevelopment, job creation, and businesses development. The proposal unifies economic development functions within one role. Over time, the City could use revenue generated by redevelopment in the study area to fund the creation of an economic development sub-unit within Planning and Development.

Revitalize historic industrial buildings with small manufacturing

While large portions of existing industrial buildings will need to be demolished over the next 25 years to make way for other uses, there are a number of buildings which should be preserved. The Chelsea Clock Company, Driscoll Warehouse, and Civitas Therapeutics buildings exemplify the early 20th century brick construction type which is aesthetically valuable to the city and historically significant. Currently, Congregation Agudath Shalom is the only building of this type listed on the National Register of Historic Places, but there could be an expansion of this designation after an assessment study. In the future, the owners of these buildings could take advantage of Federal Historic Preservation Tax Credits and credits from the Massachusetts Historical Commission. Both current and future occupants of the buildings should build partnerships with local schools and arts organizations.

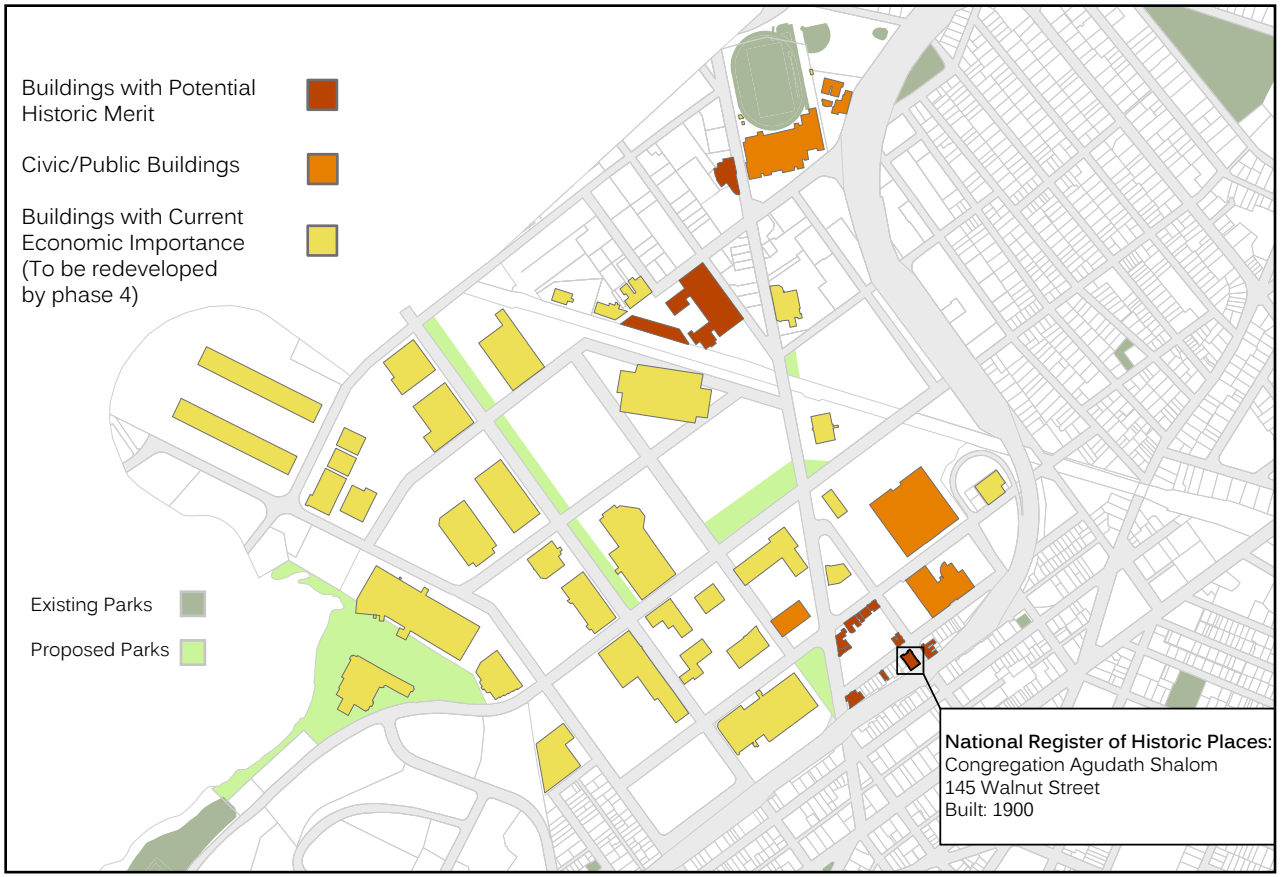


Figure 28 - Selected Preserved Buildings *Key buildings with high economic or aesthetic value.*

Extend tax incentives for businesses to locate or expand in Chelsea

Economic development requires local financial commitments. The City has previously made use of the Tax Incentive for the Retention and Expansion of Business (TIRE), with positive results. The TIRE program entails a 45% property tax discount for a period of 10 years, which the City estimates has been responsible for the preservation of over 1,000 jobs and $1 million in additional revenue since 2003 (City of Chelsea, 2004). While the immediate loss of revenue is a cost to the City, western Chelsea could benefit in the long-term.

HOUSING

VISION

Housing in Chelsea is an integral feature of the vision for vibrant neighborhoods.

At the heart of thriving neighborhoods is a strong residential population that has access to a range of accommodations that match their incomes, family structures, and personal preferences. To meet this need, the plan includes a proposal for an increase in residential units near Mystic Square, Island End, and Arlington Corner. This would bring over 3,700 units to the area, 330 of which would be in smaller multifamily residences (up to six units/building), 2,800 units would be in mid-rise mixed-use buildings, and 630 units would be in high-rise buildings.

A critical element of this vision is ensuring that new buildings are flood resilient. By incorporating important flood mitigation designs and best practices into new zoning requirements, Chelsea will protect itself against future damages to property.

ISSUES

Affordability
Since its median household income is less than two thirds of Massachusetts' median income, it is important to provide new affordable housing and protect existing affordable units in Chelsea (US Census Bureau, 2012).

The Silver Line extension brings a new dynamic to Chelsea, for it may increase the area's desirability and put pressure on the housing market. This threatens to increase rental rates and home values. As the homeownership rate is at only approximately 30% in Chelsea, increasing single-family sales prices would not directly benefit a majority of city residents (U.S. Census Bureau, 2012).

Flooding threat
Given Chelsea's oceanside location and the Boston Harbor Association's 2010 flood maps for the area (Figure 17), flood mitigation must be a primary focus for housing developers.

Lack of character
Western Chelsea currently lacks a strong character. While techniques mentioned previously, such as a wayfinding program, would be helpful, building type and usage are major determinants of a neighborhood's image.

Figure 29 - *(Nguyen)*

GOALS

Create neighborhood character through housing development

In the Network of Neighborhoods proposal, Chelsea is not home to one demographic. Rather the plan envisions a diverse range of existing and future residents. A wide range and significant quantity of housing would be needed to serve existing and new families, professionals commuting to Boston and within Chelsea, refugees who resettle in Chelsea, and everyone in-between. Chelsea is a city of opportunity, and it requires a mix of housing to support this reality.

Increase number of units and ensure a mix of unit sizes

According to the Metropolitan Area Planning Council, predicted population growth over the next two decades is anticipated to be near 17% in Chelsea (MAPC 2013, 84). This means that housing demand within the city, based on an average household size of three persons, will total over approximately new 3,640 units (U.S. Census Bureau, 2012). This calculation assumes that the current housing stock remains stable, which is unlikely in the context of Chelsea's old buildings.

By analyzing the predicted population growth within the next two decades, we see that the proposed additional units serves to meet this demand. Furthermore, the plan recommends that new housing should meet the needs of many different users. Proposed unit sizes include one-, two-, and three-bedroom units.

Figure 30 - Precedent: Flood Resistant Housing *Housing with raised stoops in San Francisco that mimics the triple-decker style (Fougeron Architecture).*

Figure 31 - Precedent: Transit-Oriented Development *Mixed use housing near transit in Denver has been built at roughly the same scale as existing industrial buildings in Chelsea (Urban Land Conservancy).*

STRATEGIES

Addition of an inclusionary zoning policy
Inclusionary zoning is a critical tool available to Chelsea. It allows the city to safeguard the presence of affordable units within western Chelsea as increasing land values make the land more desirable for market rate development.

Engage with existing developers to discuss opportunities for new units
Under the leadership of the City Manager and City Council, Chelsea has developed a reputation as a pro-development city. They have fostered positive working relationships with CDCs and private developers. The Box District Development is a key example of this. Chelsea should maximize this good will and positive reputation in order to encourage further development, building upon their proven record of being a City supportive of development.

Support different housing typologies through zoning
By creating three zoning areas that correspond to the proposed neighborhoods center, different characters can be encouraged through differentiated housing.

The area around the proposed Mystic Square currently lacks a cohesive physical character, with large swathes of underutilized lots, junkyards and unwelcoming pedestrian routes. By integrating mid- and high-rise housing units with commercial uses on the ground floor, the plan proposes a clear neighborhood identity.

Mid- and high-rise housing are economically viable, as Boston's housing stock is under pressure due to high demand. 2013 rental vacancy rates were on average just 3.8% (Bluestone et al., 2013). Since Chelsea (and Mystic Square in particular) will be a quick commute to South Boston once the Silver Line begins to operate, it will be a prime location for new commuter housing intended to meet this demand.

Arlington Corner, which is further from the proposed Silver Line stations but adjacent to the middle school and a proposed community center, would be an ideal location for family housing. Triple-decker style buildings, including a mix of unit sizes, could be clustered to create a dense, lively place to live.

Island End could also be a site for mid-rise housing as industrial uses are phased out over the next 25 years. This would be the last site of development for housing units, factoring in the time required for brownfield remediation and significant change in land use. Proximity to Chelsea's underutilized waterfront provides an opportunity for housing units that capitalize on Chelsea's natural assets, adding a new dimension to an area which has been long overlooked. The housing and commercial spaces organized around a civic plaza will be drivers for foot traffic in to this area of Chelsea, activating it as a destination spot.

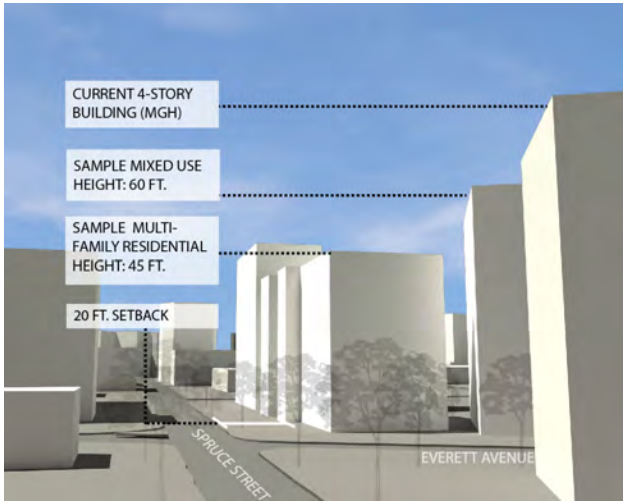


Figure 32 - Proposed Mystic Square Massing - *Dense, tall housing near a proposed transit station concentrates activity, preserve a large amount of land area for open space and create an attractive community.*

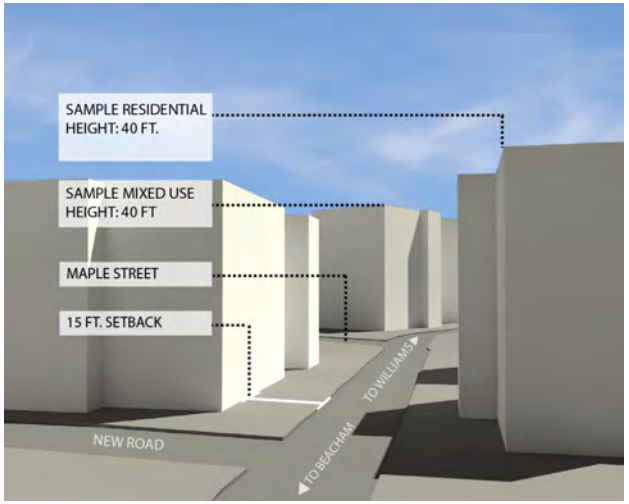


Figure 33 - Proposed Island End Massing *Mixed-use buildings are clustered near the street. While the first floors hold retail uses, the upper floors hold offices and condos.*

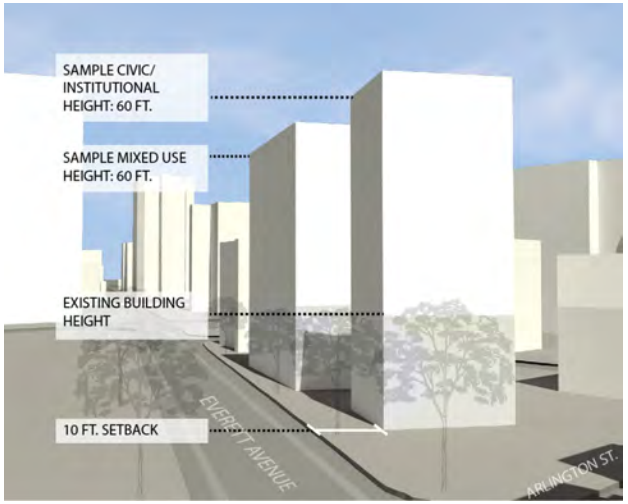


Figure 34 - Proposed Arlington Corner Massing *Along Everett Avenue, major buildings attract enough activity to ensure that the street is full of activity during most hours of the day. As one moves away from Everett Avenue, the buildings decrease in scale.*

IMPLEMENTATION

FUNDING

The neighborhood vision outlined in this plan will be a long-term project involving a diverse array of stakeholders. While Appendix 2.3: Uses and Sources Table provides detailed information regarding how each of the strategies discussed in the preceding sections can be funded, several key policies are essential for the realization of the overall vision.

PHASING

While the plan envisions a large-scale transformation of the study area, it foresees this change happening gradually over the course of 25 years. To the greatest extent possible, the City should utilize opportunities to advance the plan naturally. For instance, property transfers between private owners offer the City chances to negotiate for roadway easements. The plan advises several timelines related to major improvements.

Transportation Infrastructure

The Silver Line extension and development of the Mystic Square transit station is the first major transportation intervention in Chelsea. With construction anticipated to begin in late 2014, this intervention will be complete within the first five years of the plan. This coincides with the initial engagement and development process in the creation of new streets: through surveys and land acquisition. At the same time, the process of upgrading existing streets should begin in the first five years, including high quality-sidewalks, repaving, and complete streets amenities.

Figure 35 - *(Ngueyen)*

The second phase of the transportation plan proposes the creation and expansion of major streets through publicly-owned parcels, as well as along easements through privately-owned properties on which construction would not displace a structure. Finally, the street network could be extended through parcels with existing structures.

Open Space Phasing

The phasing of open space is deliberately structured to coincide with the timelines of other major development. The phasing of the green street network mirrors that of the street infrastructure. Structural interventions such as bioswales, pavement extensions, and the planting of street trees should occur alongside the more transportation-focused interventions, thereby minimizing construction costs.

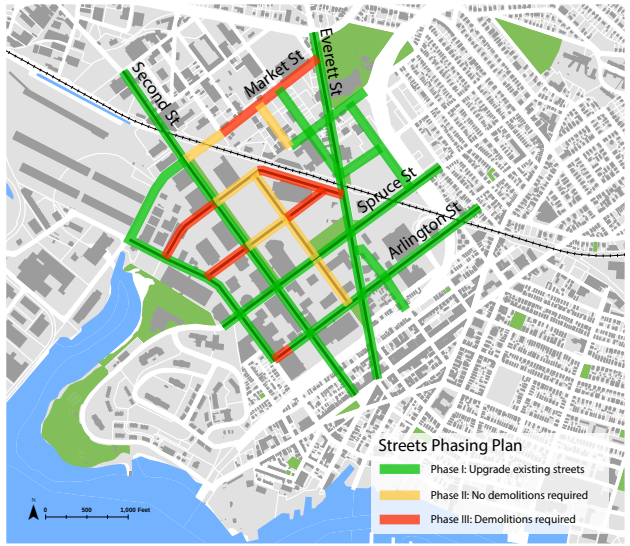


Figure 36 - Proposed Streets Phasing *Upgrades to existing streets are prioritized first for most of the area.*

The plan recommends that the development of the parks occur over a number of timescales, dependent on the different actors involved. The creation of the larger, programmed 'anchor' park at the intersection of Spruce and Everett should be phased early in the plan. Although this will front-load costs to some extent, the park functions as a catalyst for private development in Arlington Corner and Mystic Square. The construction of the park can be subsidized through the Gateway City Parks Programs Fund.

The development of the riparian, ecological park at the mouth of Island End River and the Second Street linear park should begin towards the tenth year of the plan. This is intended to coincide with the changing land use of the area, as industrial buildings approach the end of their structural life cycle, and market forces draw industry away from the city. The development of the park will also act as an incentive for private developers to invest in the area, facilitating the early stages of the redevelopment of former industrial uses into a mixed-use neighborhood.

The creation of 'pocket parks' planned along Everett Avenue should happen over a flexible timescale, dependent on the geographic patterns of development and the extent that funds can be leveraged from private investment to fund open space. These parks should also be guided to some extent by the input of local open space advocacy groups.

Land Use Program

While the plan's land use program is not highly prescriptive on a parcel by parcel basis, the visions for Mystic Square, Island End, and Arlington Corner can best be realized through a particular pattern of mixed-use development.

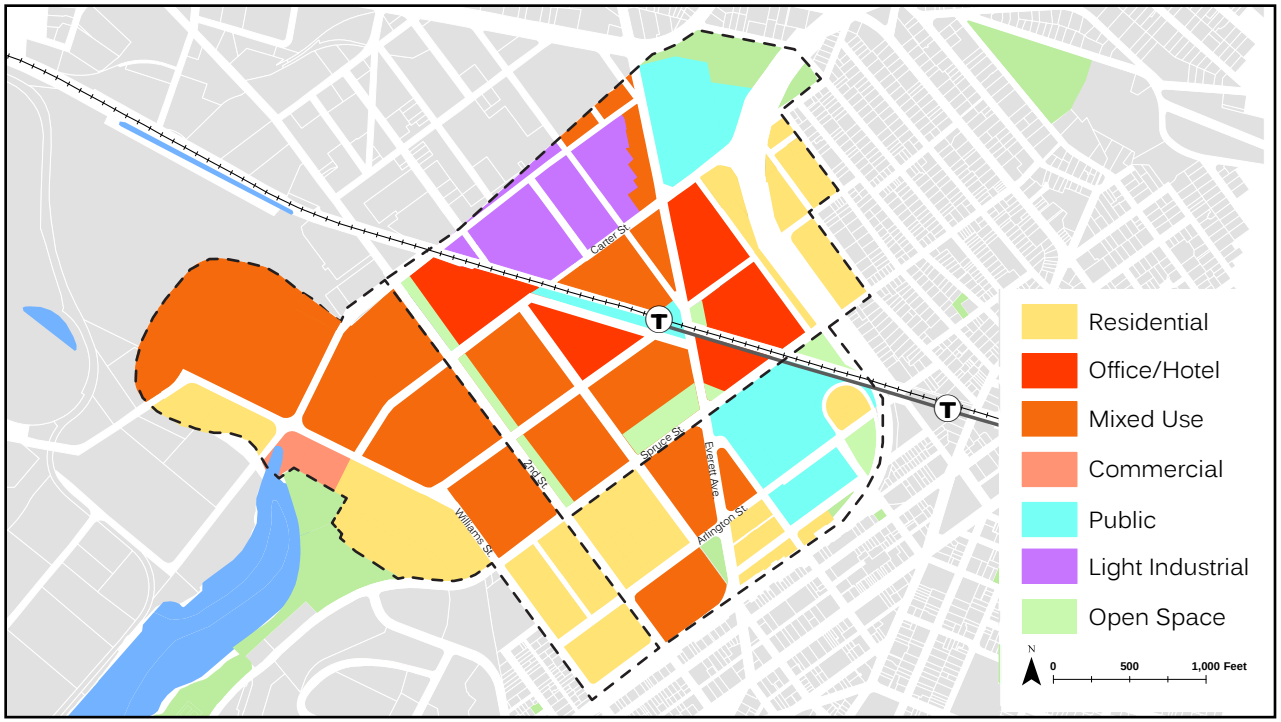


Figure 37 - Proposed Land Use Buildout, 2040

The area surrounding the Mystic Square Silver Line station could experience redevelopment first, with construction driven by the desire to capitalize on the area's newfound accessibility. This first stage of development, which the plan envisions will last approximately five years, would also involve the creation of a civic plaza adjacent to the Silver Line station.

If land use changed near Mystic Square, then parcels near Arlington Corner would also gradually experience redevelopment. While larger structures of more recent construction could remain, infill development would increase activity in the area. The profitability of such enterprises would be key to another intermediate stage of development: the subdivision of the existing Mystic Mall plaza into several lots.

The revenues generated by these developments over the course of ten to fifteen years would support a revolving door fund for brownfield remediation. This fund would assist with the cleanup of parcels throughout the western Chelsea, but would be of considerable assistance in Island End. During the last phase of development, housing and small-scale commercial development subsumes industrial uses in the lots that are near Admiral's Hill and Chelsea Creek.

ZONING

Changes to the zoning ordinance are key to the realization of several strategies within the plan. Foremost, the plan recommends the creation of three new zoning districts in order to guide the redevelopment of Mystic Square, Island End, and Arlington Corner. As shown in Figure 37, these 'Neighborhood District' zones are flexible, mixed-use areas that incentivize the creation of affordable housing and enhancement of the built environment. Each has a slightly different zoning specifications in order to shape a unique character (see Appendix 2 for proposed zoning).

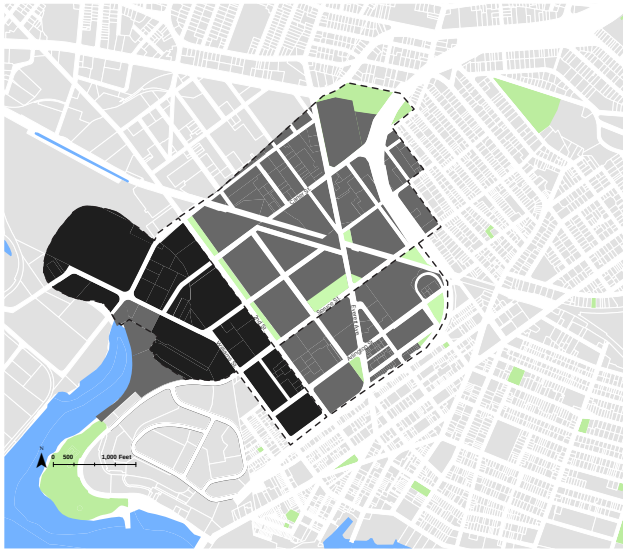
Developers of particular land uses in each of the zones could access additional FAR and/or lower parking requirements in return for providing public benefits. These public benefits include: at least 20% affordable housing, affordable retail space, environmentally beneficial landscaping, or local hiring.

Zoning also offers a low-cost, immediate strategy for promoting environmentally sensitive design within Chelsea. With regards to dealing with flooding risk, the City should revise its Flood Overlay District to be both geographically larger and provide for stricter regulation of uses within the flood zone. Specifically, within the Flood Overlay District the following uses should be prohibited, except by special permit: storage or processing of materials that are buoyant, flammable, or explosive and junk or salvage yards, or solid waste disposal facilities or landfills. Furthermore, all developments in the Flood Overlay District that place essential operating system (HVAC) on the first floor or within a basement could be required to go through the special permit process.

Phase 1: Years 1-5, the urban renewal area

Phase 2: Years 5-10, Mystic Mall parcels

Phase 3: Years 10-15, Arlington Corner



Phase 4: Years 15-25, Island End

Figure 38 - Proposed Land Use Program Phasing

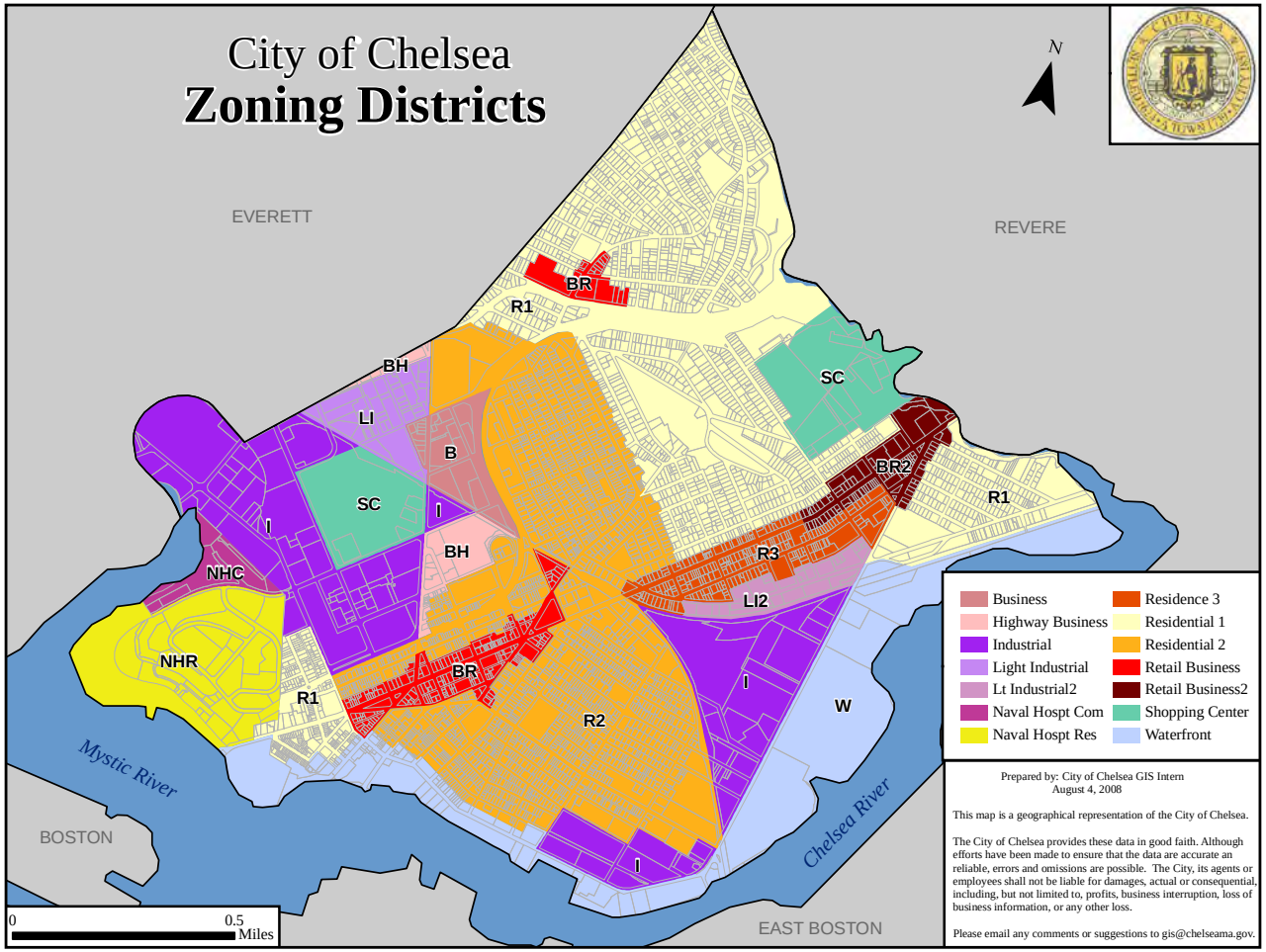


Figure 39 - Existing Zoning *Zoning in Chelsea represents an opportunity for low-cost design improvements.*

Beyond managing flood risk, zoning can also assist with water management. The ordinance can specify thresholds beyond which developers must meet Low-Impact Development (LID) construction standards. LID reduces the negative impacts of stormwater by mimicking pre-development hydrology and treating stormwater close to its source. These methods include vegetated walls, roofs, and pervious paving surfaces. Since LID can impose extra costs on developers, the City could work with stakeholders in order to craft an ordinance. The specific ordinances for which amendments are recommended are outlined in Appendix 2.4. Collectively, these are focused on achieving several goals:

- Require LID landscaping within parking lots, with the amount of landscaping increasing at a faster rate than the amount of parking
- Specify the type of vegetation and its density
- Provide financial incentives for developers and homeowners to provide more LID elements than is currently required by the base code
- Create a flexible process for exemption or contribution to a fund for off-sit environmental enhancement in order to avoid stalling development.

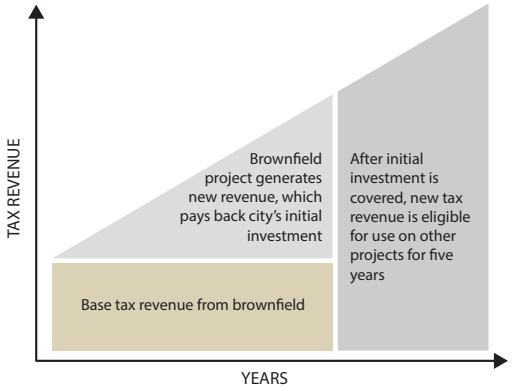


Figure 40 - District Improvement Financing *The City could fund infrastructure, as well as social programs, by creating a western Chelsea DIF.*

District Improvement Financing (DIF)

Implementing a DIF would facilitate the creation of infrastructure and the remediation of brownfields within the western Chelsea. A DIF is a portion of a municipality, ranging in size from a single parcel to 25% of the town's area, that is blighted, distressed, or underutilized. Once a DIF is created, the designation can last for up to 30 years (MA Dept. of Energy and Environmental Affairs, 2014).

A DIF works by allowing a municipality to fund infrastructure enhancements by borrowing against future property tax revenues. The municipal investment sparks private development in the district and increases the amount of tax revenue that the city collects. This process allows the city to segregate its debt service from general funds and opens up flexible debt service options.

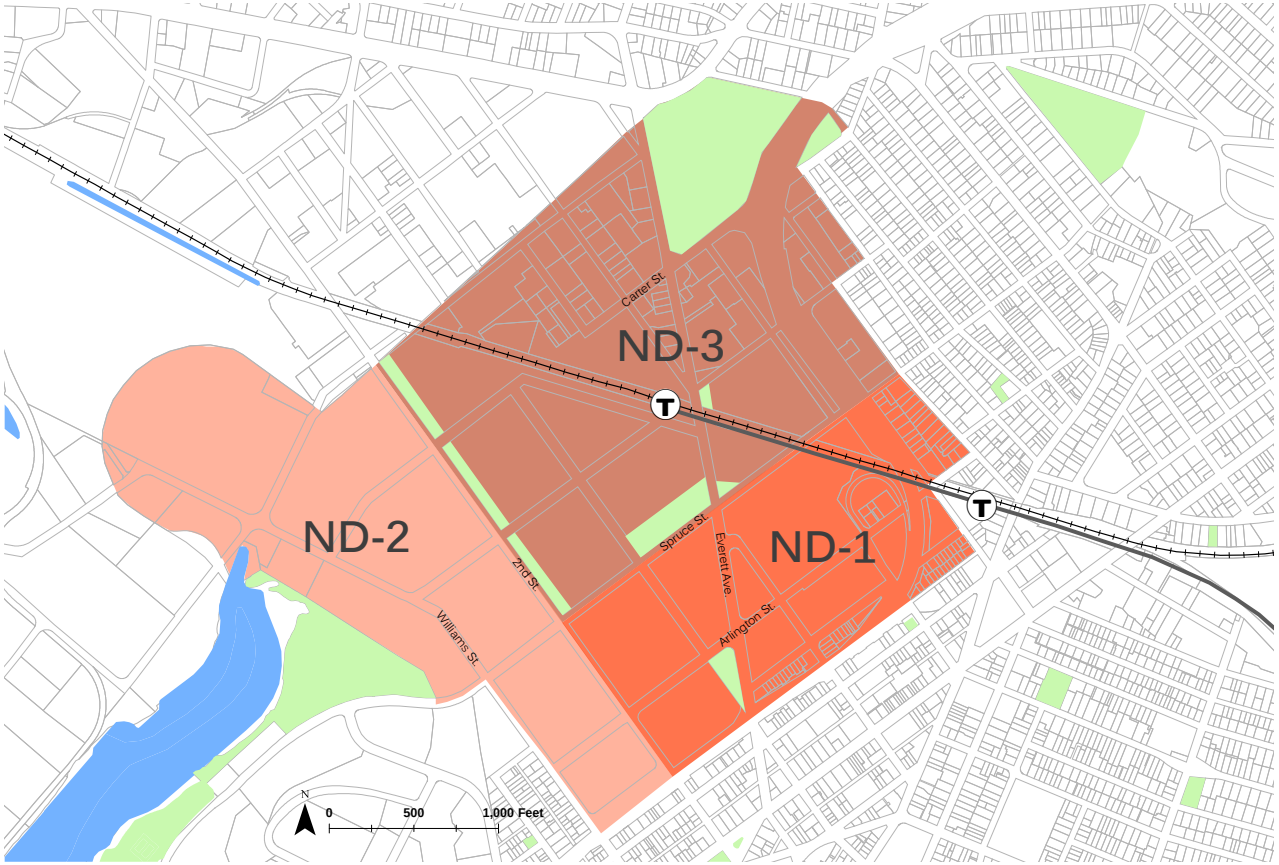


Figure 41 - Proposed Neighborhood Zones *The City could create zones that encourage the development of human-scaled buildings and the introduction of businesses that serve everyday needs to western Chelsea.*

In Chelsea the creation of a DIF would proceed in five steps:

1. Create a unique development program for the western Chelsea, including existing uses and proposed zoning, expected construction, current and expected infrastructure, and a financing plan
2. Proposed DIF is approved by State Economic Assistance Coordinating Council
3. City borrows against future tax revenue to invest in infrastructure
4. New development occurs that would not have without the city's infrastructure investment

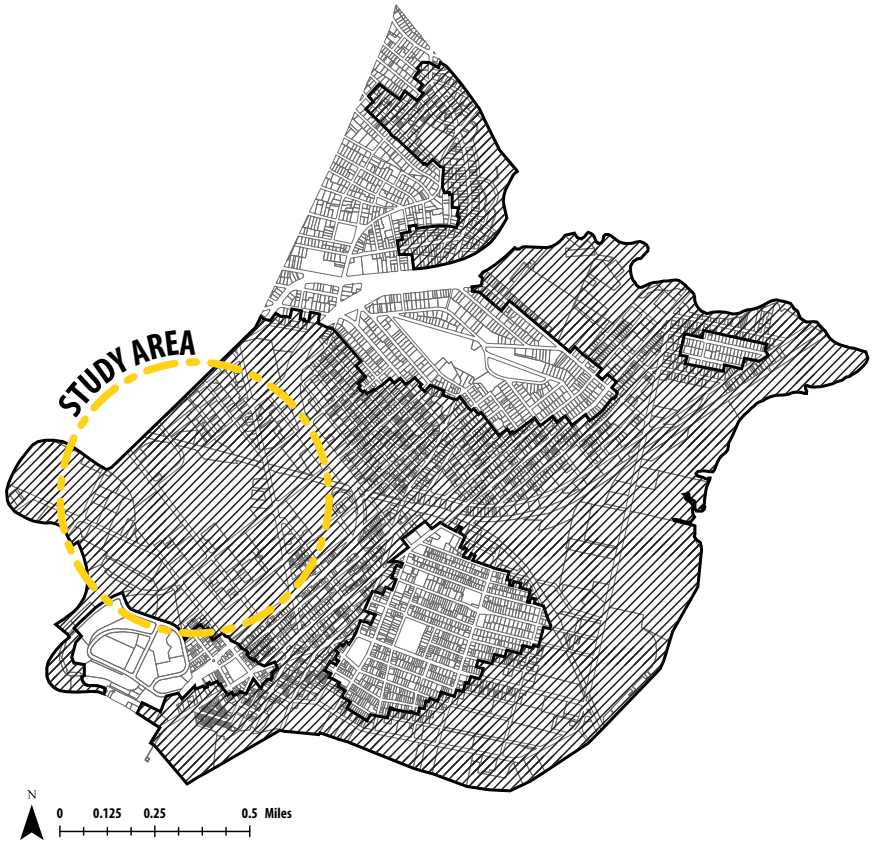


Figure 42 - Proposed Flood Overlay District *Within this zone, certain dangerous uses would be prohibited.*

5. City uses new revenue to pay back debt and to fund additional programmatic goals. DIF revenue in excess of debt service could be allocated according to the following formula:

   5% to fund city economic development services

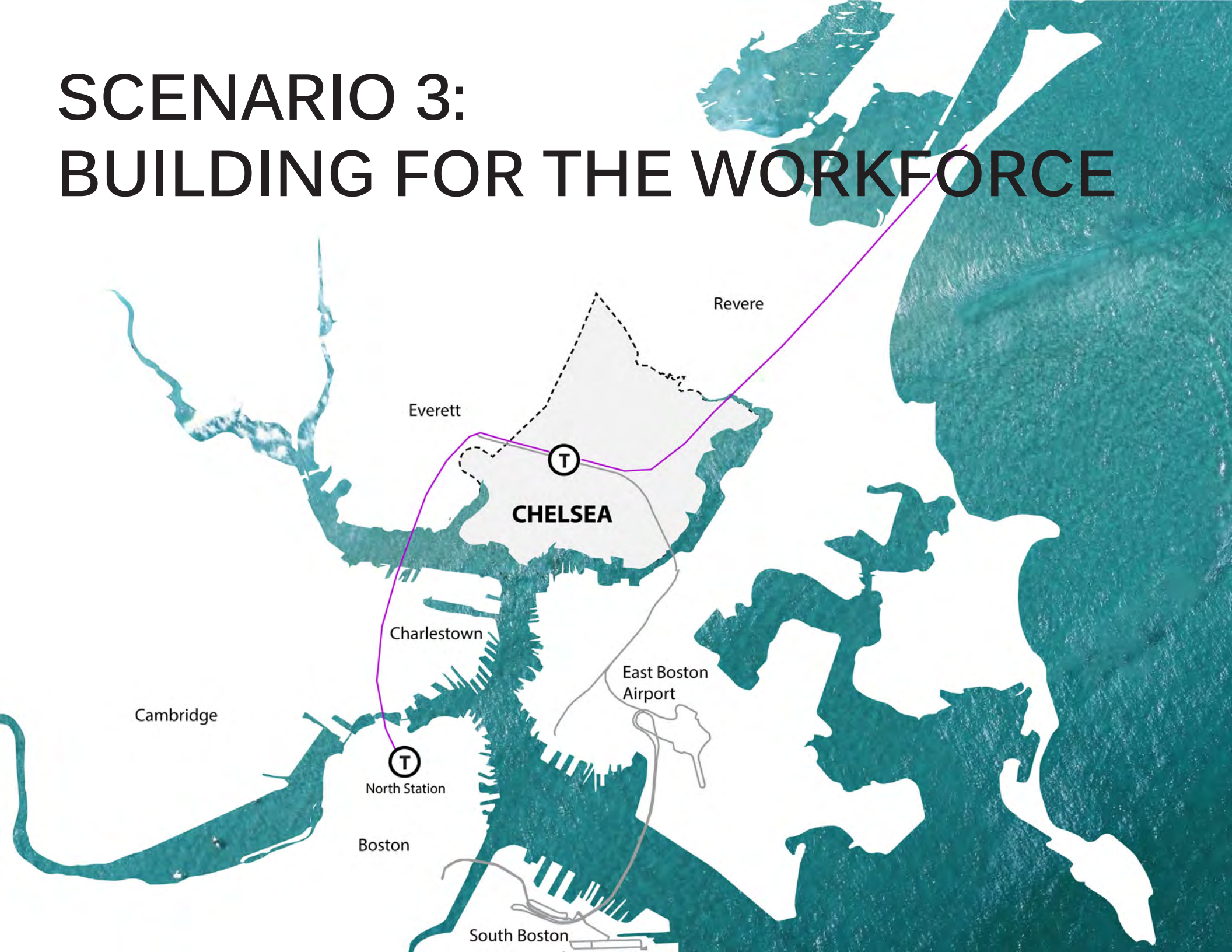
   5% to fund jobs training program

   25% to seed Brownfields Redevelopment Fund

   65% to fund infrastructure investment

The Brownfields Redevelopment Fund would operate as a revolving door fund that developers could apply to in order to defray up to $200,000 of the costs of environmental testing and/or remediation.

SCENARIO 3:
BUILDING FOR THE WORKFORCE



INTRODUCTION

Vision

Building for the Workforce proposes to shape the development opportunity created by the Silver Line extension in order to improve quality of life for residents. Coupling new development with infrastructure improvements and smart design can redefine Chelsea as a regional economic and residential center that offers a community experience.

Channeling new and anticipated investment, the Building for the Workforce scenario proposes to:

Capitalize on regional economic advantage

• Catalyze and anchor a mixed-use neighborhood that: addresses the city and region's current and expected housing demand; offers retail, office, industrial, and recreational space; and, enhances employment opportunities.
• Create 8,000 units of mixed-income housing over 25 years, with long-term buy-in to ensure a stabilized community over time.
• Approach Bunker Hill Community College concerning expansion to Everett Avenue, and pursue back office development by reaching out to large employers.
• Prepare Chelsea's workforce and small business owners to take advantage of opportunities within Chelsea and the greater region.

Create infrastructure to guide future development

• Create civic spaces, an enhanced road network, and green spaces to provide a framework for development.
• Anchor western Chelsea with a large public civic space at the Silver Line station programmed for cultural festivities, community activities, and commerce.
• Repair existing streets and create new complete streets to introduce an integrated block structure.
• Build the West Side Greenway.
• Acquire land along the Mystic River to transform into The Hook, a recreational resource that will also serve flood mitigation purposes.
• Implement a series of low impact design components such as bioswales, rain gardens, and public plazas with permeable pavement to mitigate Chelsea's storm water overflow and associated water contamination.

Use districts to build neighborhood identity

• Cultivate strong neighborhood identity by forming six identifiable districts around the Silver Line extension: Market Square, Everett Avenue, West End, South Second, Broadway Gateway, and the Eds, Meds, and Feds district.
• Infuse newly developed areas with characteristics specific to the districts, making the neighborhood more interesting, lively, and safe.
• Create the West Side Greenway, an iconic pedestrian boulevard with a central strolling path that will connect the Silver Line station to the waterfront.

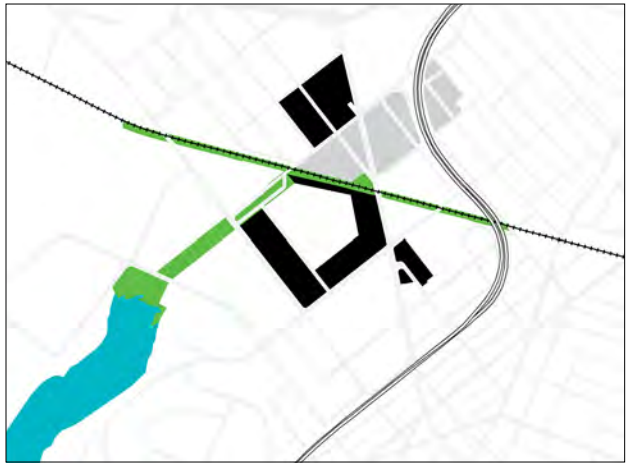
Figure 1 - Chelsea Regional Connections

Figure 2 - Green Infrastructure *The plan proposes ample green space and pedestrian access (CNU Houston).*

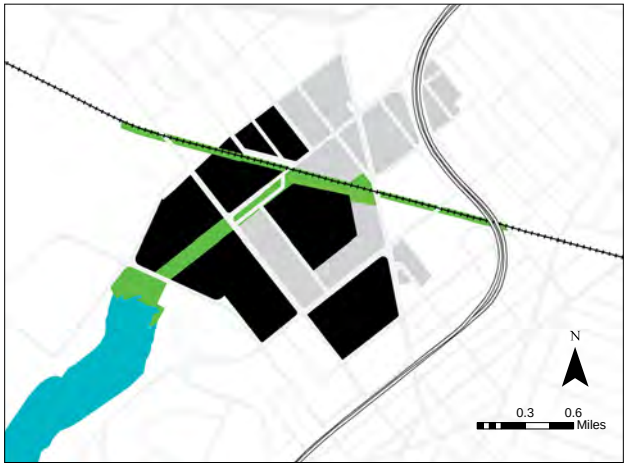
Figure 3 - A Stone's Throw from Boston *The plan aims to capitalize on Chelsea's regional advantage (Wikipedia).*

Existing land parcels in the urban renewal area framed by Route 1 and the Silver Line route.

Phase 1 (2015 - 2020). Primarily residential development close to the Silver Line station, with preliminary work on new street network and greenway.



Phase 2 (2020 - 2030). Expansion of Bunker Hill along Everett Avenue, continued residential development, and selective commercial development.



Phase 3 (2030 - 2040). Buildout of western Chelsea featuring residential and commercial development in the Mystic Mall area; completion of infrastructure improvements and Market Square civic space; and, commercial development in the industrial/office flexible space along Second Street.

The plan centers on a flexible, long-term vision to promote a strong economy for Chelsea. Implementation would proceed in three phases: Phase 1 (5 years, 2015 to 2020), Phase 2 (10 years, 2020 to 2030), and Phase 3 (10 years, 2030 to 2040). Phasing is an important component of this plan, as it allows for minimization of risk as well as orderly design (Figure 4). The city can adapt the plan to market changes and avoid unnecessary infrastructure investments.

In order to accommodate future build-out in Chelsea, the plan proposes the creation of a TOD overlay district in western Chelsea. Floor Area Ratio (FAR) in the overlay district would range from 3 to 6 (Figure 5). In the final build-out, the Market Basket parcel would have the highest allowed density. Figure 6 shows approximate land uses across western Chelsea under this plan. Figure 7 shows the full buildout that would result from using the entire allowed FAR. The plan does not necessarily propose buildout to this extent, merely a framework that could accommodate optimistic development scenarios.

Figure 4 - Phasing Diagram *The plan minimizes risk through phasing (MassGIS).*

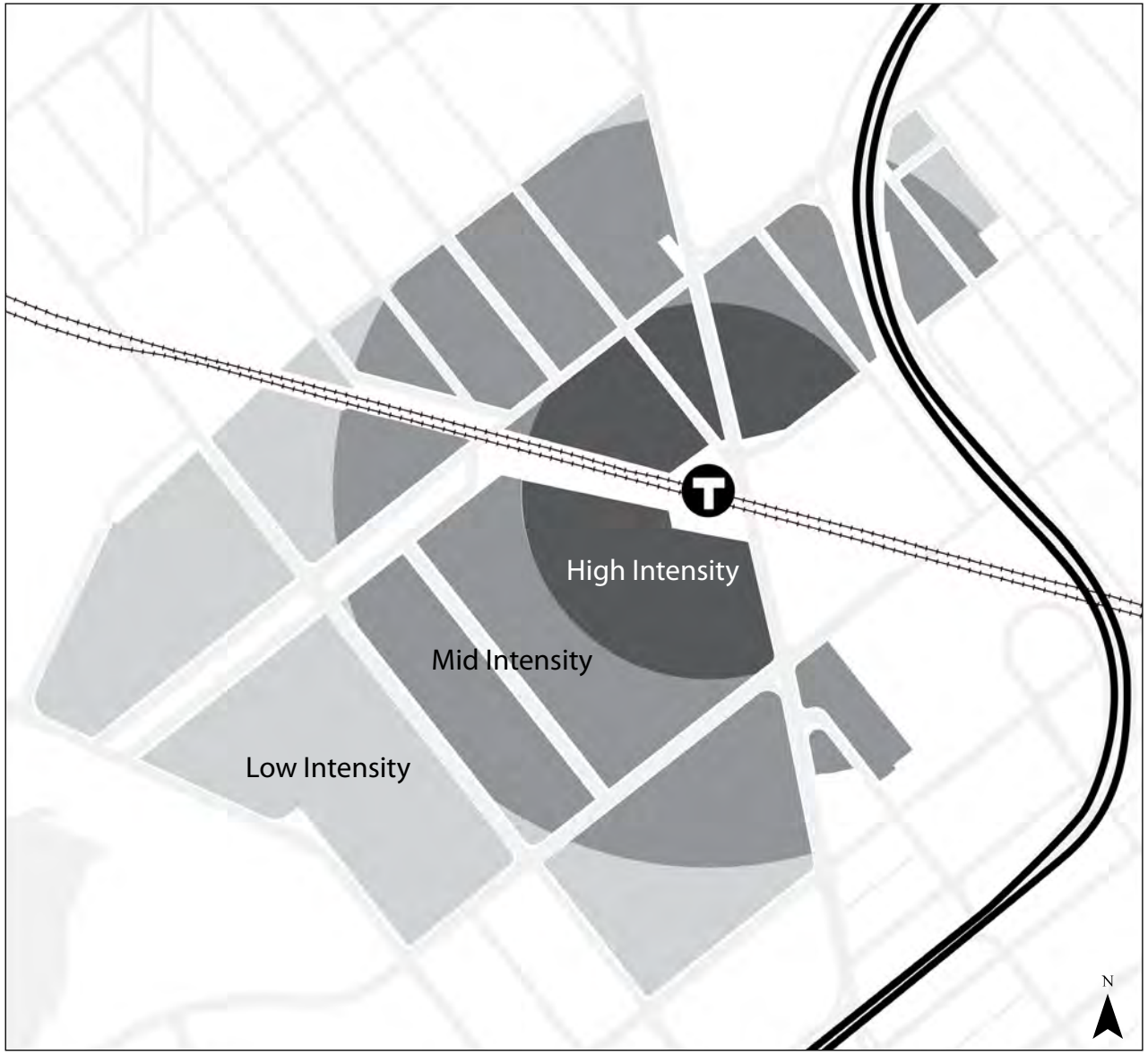


Figure 5 - Maximum FAR *Approximate zones for maximum allowed FAR under the Building for the Workforce scenario (MassGIS, SHoP Architects, Ultimate Minneapolis, Davis Square Architects).*

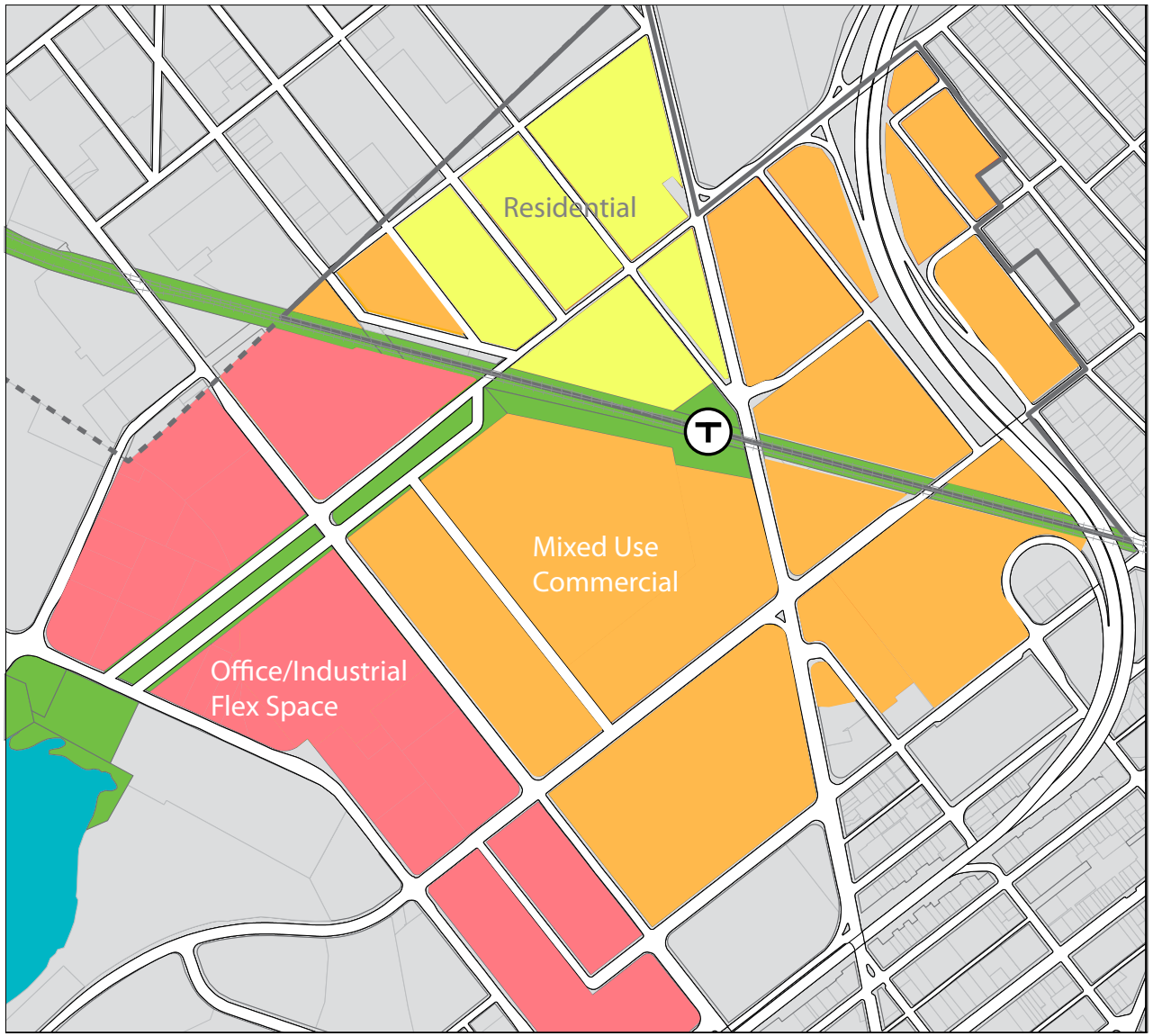
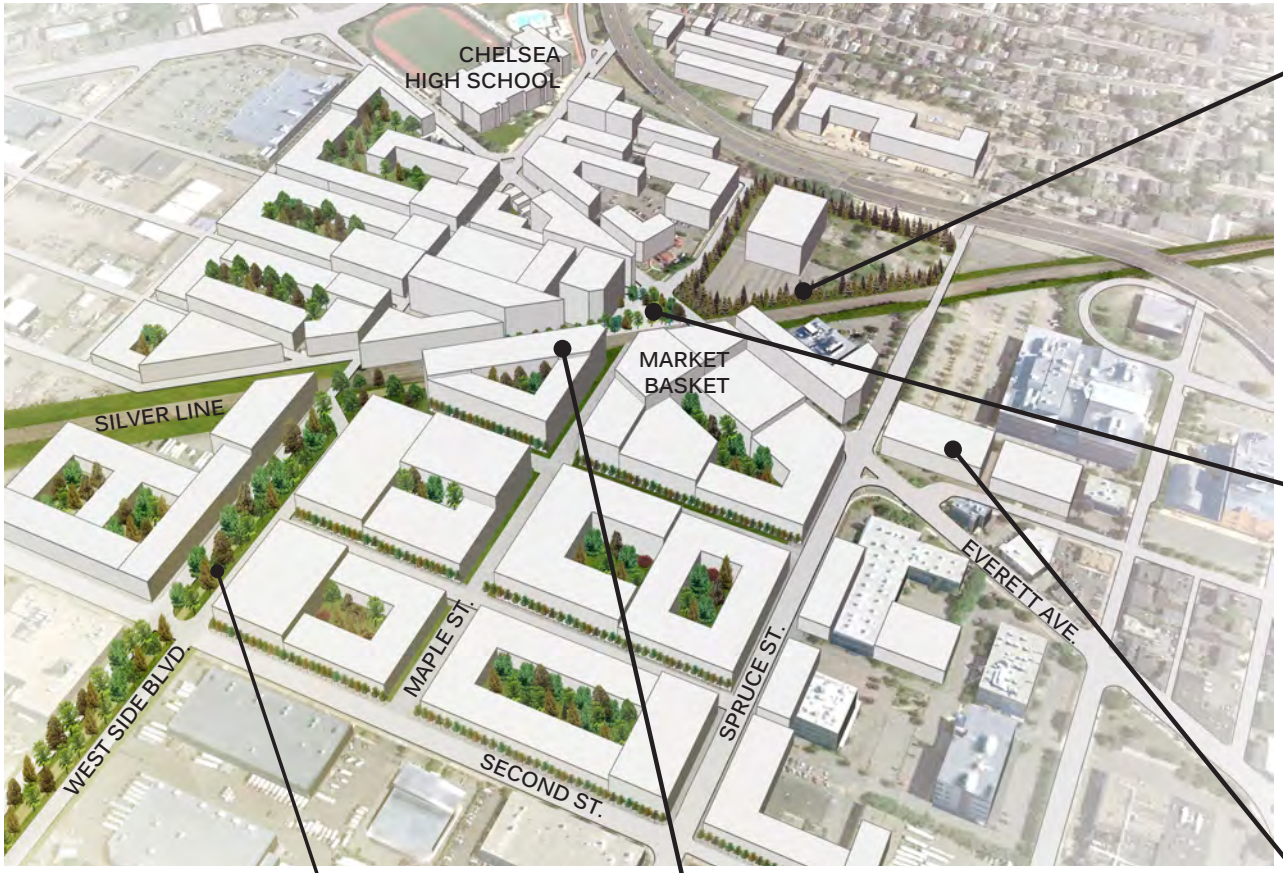


Figure 6 - Land Use *Map of approximate land uses across western Chelsea (MassGIS).*

Figure 7 - Massing Study *A potential buildout of the West Chelsea neighborhood at full allowable FAR illustrating key neighborhood features (Google Maps, Chung, transitorienteddevelopment.org, USGBC, Union Square Main, Wikipedia).*


CHELSEA
HIGH SCHOOL
MARKET
BASKET
SILVER LINE
WEST SIDE BLVD.
MAPLE ST.
SECOND ST.
SPRUCE ST.
EVERETT AVE.


Example: Eds / Meds / Feds
Longwood Medical Area; Boston, MA


Example: Market Square
Walnut Creek; San Francisco, CA


Example: West Side Blvd.
Commonwealth Ave; Boston, MA


Example: Transit Hub
Somerville Union Square proposed station;
Somerville, MA


Example: Bunker Hill Expansion
Austin Community College; Austin, TX

HOUSING

Vision

The plan proposes an incremental buildout of 8,000 new housing units in Chelsea over the next 25 years, for an average of 320 new units per year. These would include 15% affordable units, 25% workforce units, and 60% market rate units. The plan defines affordable units as units available to people making 60% of area median income, and workforce units as those available to people making 120% of area median income. This breakdown represents maximum affordable units feasible with less than 20% subsidy requirement, according to the calculations of this planning team.

Issues

High housing demand in metro Boston
High housing demand in metro Boston increases development potential for the City of Chelsea. Recent growth in Boston neighborhoods such as Charlestown, East Boston, and South Boston has generated interest among private and non-profit developers seeking new territory in which to take advantage of the ongoing demand. Neighborhoods such as South Boston have experienced over 17% growth in housing stock over the past decade (BRA 2013), and metro Boston is experiencing low homeowner vacancy rates of 2.2% and residential rental vacancy rates of 5.2% (BRA 2013). The Metropolitan Area Planning Council (MAPC) projects that the region will require 305,000 housing units over the next 30 years (MAPC 2014, 1).

Figure 8 - *(Nguyen)*

Demand is particularly high for workforce housing: as asking and effective rents have continued to rise, incomes in the metropolitan region have fallen (Bluestone et al. 2013, 21). From 2000 to 2010, the percentage of Greater Boston renters paying more than 30% of their gross income in rent increased from 39.2% to 50.1% (Bluestone et al. 2013, 21).

Interest in developing housing in Chelsea
To date, developers working in Chelsea have mostly focused on taking advantage of this demand, pursuing options for housing development (and some hotel development) (GSD Urban Planning, 2014). Chelsea has numerous assets to leverage in order to capture the growing housing demand in the region:

- Developable parcels: approximately 70 acres of potential underutilized/ undeveloped site(s)
- Location and connectivity: about 4 miles from Boston, with the future Silver Line increasing connectivity
- Current affordability of housing: makes Chelsea an attractive place to live

Goals

320 units per year over 25 years (8,000 units)
Given regional demand for housing, the city can conservatively capture 3.2% of the MAPC growth projection, amounting to 320 units per year, or 8,000 units over 25 years.

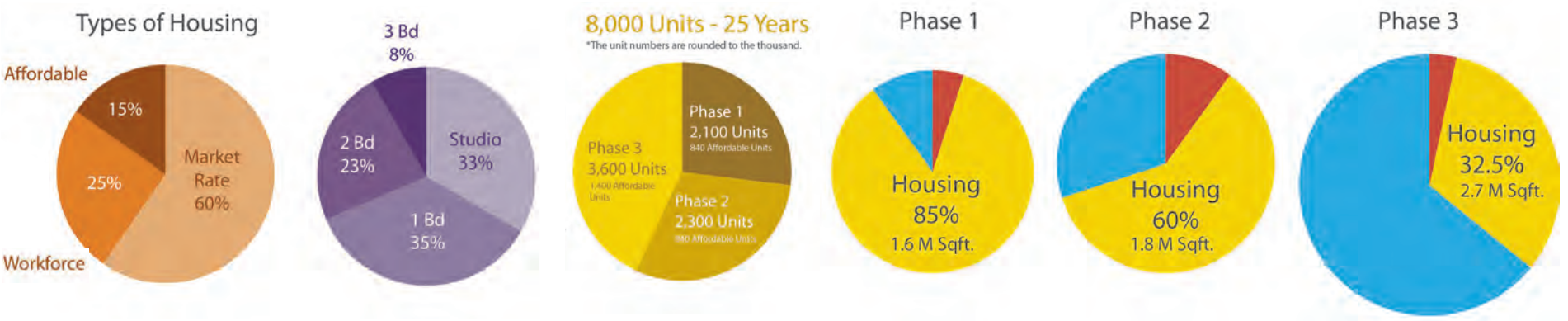


Figure 9 - Building for the Workforce Scenario Housing Type Allocation *Total numbers are based on simple development analysis by the authors, refer to appendix for calculations.*

Maintain affordability, with 15% affordable housing and 25% workforce housing

Maintaining affordability is essential. This plan focuses on creating workforce housing, which has fewer protections than affordable housing and has been squeezed out of the market in the past. Developers often include the required number of affordable units, then fill out their project with higher-end luxury units to recoup costs. This leads to a dearth of housing for people who make too much to qualify for housing assistance but who cannot afford high-end units. The plan also includes programs to support eventual home ownership. The proposed residential development would create a lively, mixed-income residential and commercial district in an area currently occupied by scrapyards and parking lots. Figure 9 shows further breakdown in terms of types and phasing of future residential development.

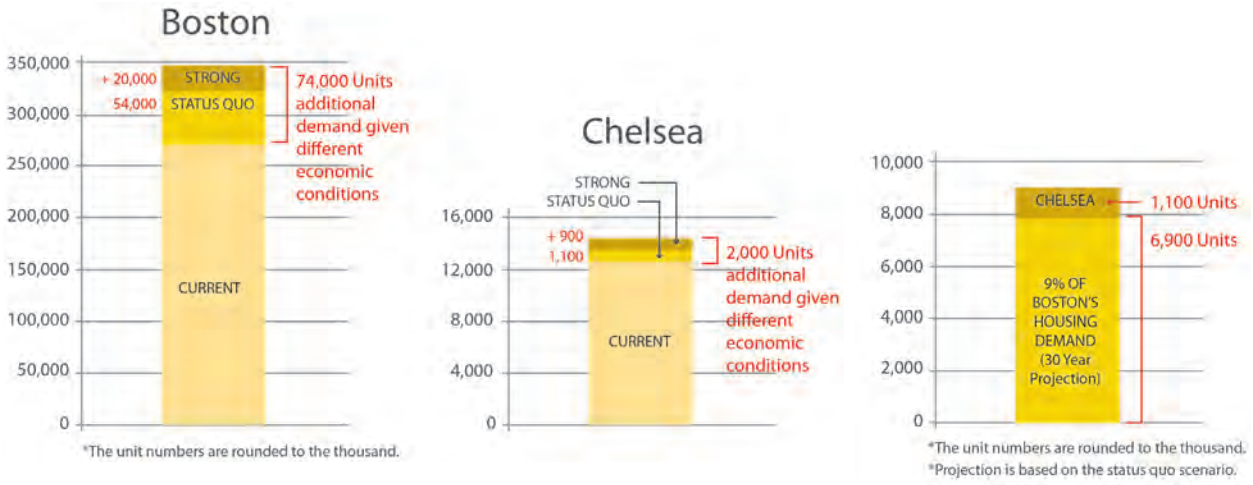


Figure 10 - Demand Projection and Regional Housing Absorption *30-year housing demand projection and absorption in Boston Area (Total projection is based on U.S. Census data and MAPC's 30-year demand analysis).*

Strategies

Phasing

Phase 1. The first phase includes development of parcels that are easily assembled and in close proximity to the Silver Line station. Success of this phase is critical in creating momentum to attract capital for later phases. The plan projects development of 1,600 units during Phase 1, of which 640 would be workforce or affordable units.

Phase 2. The second phase aims to strengthen sense of character through developing residential units in conjunction with infrastructure investments and urban design. The parcels slotted for development in this phase are those that are most suitable for framing Everett Avenue as a destination corridor that links western Chelsea to other neighborhoods. The total housing proposed for Phase 2 is approximately 3,200 units, of which 1,280 units would be workforce or affordable units.

Phase 3. The third phase, full buildout, would add an additional 3,200 housing units, including 1,280 workforce or affordable units. A large portion of the new housing would occur at the current Market Basket site, as rising real estate values would by this time encourage a denser model.

Figure 11 - Residential Development Phasing Map *Phasing strategy to guide future development (MassGIS).*

Implementation

Creative funding and incentives are critical to the plan's viability. Approximately 18% in subsidy would be required to achieve the 40% affordable and workforce housing goal. Premium rent for market rate units could partially support the affordable component, as the higher floors would have prized views of downtown Boston. In addition, the plan proposes the following strategies to fulfill the remaining subsidy gap:

Figure 12 - Tent City Apartments *Mixed income multifamily housing in Backbay neighborhood in Boston (Tent City Apartments).*

- The Chelsea Planning Department could submit modifications to the Massachusetts Qualified Allocation Plan that would encourage developers to apply for Low Income Housing Tax Credits, thereby increasing the attractiveness of developing in Chelsea.

- The Chelsea Housing Authority could become a Massachusetts Move to Work Housing Authority, allowing it to designate more than 20% of its Section 8 vouchers as site-based vouchers. This would encourage developers to include more affordable housing eligible for Section 8 funding.

- The Planning Department could designate the area around the Silver Line station as a 40R overlay district, allowing eligible projects to apply for state-funded zoning incentive payments.

- The City of Chelsea could use fees from development projects to establish an Affordable Housing Trust that would support affordable housing programs, green space acquisition, and historic preservation. The Trust would be eligible for matching funds from the State.

- The Planning Department could pass a Family Unit Ordinance requiring that a minimum percentage of affordable and workforce units be included for any project receiving public subsidies.

Precedent - Bartlett Place

Bartlett Place in Roxbury can serve as a model for creating long-term affordable ownership. The 8-acre project in a former bus yard is slated for the development of 323 homes, with 40% ownership and 60% rental. Due to the soft for-purchase market for homes in Roxbury, the Phase 1 development consists only of rental units. However, in order to support Roxbury's long-term vision of wealth creation, the development allows 48 of the Phase 1 rental units to become optioned to purchase after 7 years.

Figure 13 - Bartlett Place *Mixed-use multifamily, mixed income development in Roxbury, MA (Nuestra Comunidad CDC).*

ECONOMIC DEVELOPMENT

Vision

Building for the Workforce emphasizes a long-term outlook for economic development that leverages immediate market demands while planning for the sustained economic health of Chelsea. By developing around the Silver Line extension and responding to housing needs in the Boston area, Chelsea can position itself as an attractive place for important regional employers. Although the current market for office development in Chelsea is weak, connections to downtown Boston and the Innovation District present long-term opportunities to capitalize on the region's strengths in the health care, education, and professional service industries. New development and an influx of residents can also spur Chelsea's retail and services sectors. This kind of economic growth does not always bring jobs that are immediately accessible to residents. Thus, workforce training and training for small business owners are integral to the economic development strategy.

Issues

Uncertain current office market conditions
The development of office space is a longer-term aspiration for Chelsea considering the persistence of high office vacancy and low office absorption rates in the metropolitan region. According to Jones Lang LaSalle (2013), the office vacancy rate for Boston North rose sharply in the early 2000s, and remains around 14%. The direct net office absorption for Boston North was 70,897 s.f. in Q4 2013 (Jones Lang LaSalle, 2013). Colliers International (2014) reports office vacancy of 10.2% and office absorption of only 6,600 s.f. for Boston's inner suburbs in Q1 2014.

Figure 14 - *(Nguyen)*

The GSD Urban Planning Team interviewed nine real estate developers working in Chelsea, and none expressed interest in office development there (GSD Urban Planning, 2014).

Long-term potential for back office development
The continued growth of the medical sector in Greater Boston suggests future demand for back office medical space. The health care & social assistance industry has driven Boston's recovery from the recession, with job growth every year since 2001 (Lima, 2013, 15). Furthermore, the New England Economic Partnership (NEEP) projects additional job growth of 9.7% in the health care sector between 2011 and 2016 (Lima et al., 2013, pp. 15). Lately, this growth has coupled with a trend among health care providers of shifting administrative functions out of the space-constrained and expensive city center.

The businesses moving into the Innovation District may also become interested in utilizing back office space in Chelsea. These dozens of businesses span a range of sectors, from information technology (IT) to biotechnology to law (Bubny, 2012.). The Innovation District is also starting to attract health care providers, further increasing the likelihood that Chelsea could successfully attract medical back office. Dana-Farber Cancer Institute recently began construction on a 50,000 s.f. Molecular Cancer Imaging Facility in the Innovation District (Globe Staff, 23 Oct. 2013).

Existing assets enhance back office opportunity
Chelsea also has existing assets that might serve as building blocks for office development. The Massachusetts General Hospital (MGH) Chelsea Center, Civitas Therapeutics, and Beth Israel Deaconess Medical Sector (BIDCM)'s Chelsea

facility could provide the basis for healthcare-related office expansion. The Massachusetts Information Technology Center (MITC) presents opportunities for IT-related subcontracting work. Proliferation of hotels in Chelsea contributes to a favorable environment for office development.

Goals

Capitalize on long-term development potential
This plan envisions mixed-use office development along the Everett Corridor, close to MGH, MITC, and hotels. It designates the industrial area along Second Street as a flexible office/industrial zone. This flexible space would accommodate major industrial employers in the short term, while allowing Chelsea to save space for office and commercial development. Chelsea can pursue this development when industrial consolidation becomes more realistic, and when office and commercial markets are more robust.

Expand Bunker Hill Community College
Another course of action that could bear development benefits would be expanding Bunker Hill Community College to Everett Avenue. If Bunker Hill were interested, this development would provide Chelsea with additional jobs, shoppers, and residents. The Everett 100, 105, and 111 properties are potential sites for the expansion. Situating new Bunker Hill facilities here could help to draw people from the Silver Line station into Broadway Street and vice versa. The Everett 100 parcel (Patriot Park) is currently for sale for $525,000. Parcel 105, owned by 99 Everett LLC, hosts offices that do not appear prohibitively costly to acquire, valued at $809,700 (City of Chelsea., 2014). The Everett 111 parcel is more expensive, currently collectively appraised at approximately $2.3 million (City of Chelsea, 2014). Another complication is that the 111 property is divided into 14 units, with 11 owners.

Develop new retail and maintain existing retail
New and existing retail in Chelsea could play a crucial role in maintaining development momentum, creating jobs, capturing the spending power of new residents and employees, and fostering a strong sense of community. According to State Senator Sal DiDomenico, new development can spur the renovation and improvement of existing retail businesses (GSD Urban Planning, 2014). Residential and hospitality development in particular can create opportunities for subcontractors, especially in food and cleaning services. The City can guide existing businesses to take advantage of this potential.

Train workforce and small business owners
Economic development will not, in itself, serve as a silver bullet for revitalizing Chelsea; the city must shape and leverage this development to maximize benefits to its residents and small business owners. It must prepare residents to take advantage of new employment opportunities, and small business owners to take advantage of new business opportunities. Adapting existing educational and training programs should be an iterative process for Chelsea over the coming decades. Office space development generally employs between 1 person per 100 s.f. and 2 persons per 100 s.f., suggesting that even a small amount of office construction could yield a substantial number of new jobs (GSA, 2011, pp. 26).

Figure 15 - Maintain Existing Retail *Economic development programs would support both established and new businesses (Madden).*

Figure 16 - Promote Small Businesses *Training and support for small businesses will enable Chelsea residents to take advantage of new opportunities (Springfield).*

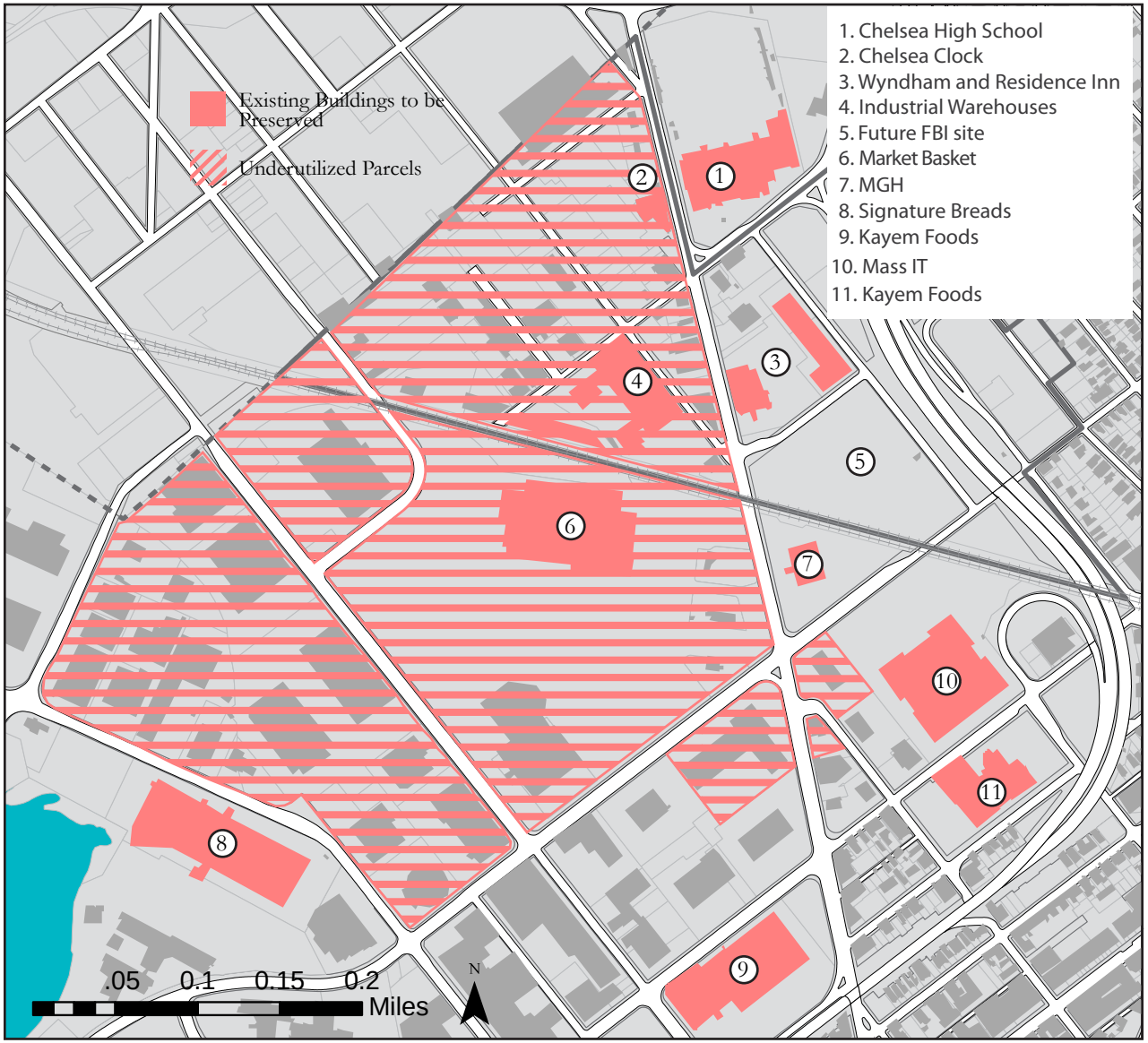


Figure 17 - Chelsea's Development Assets *Existing assets create back office opportunity by serving as anchors and generating business (MassGIS).*

Strategies

Phasing

Phase 1. The first phase includes preliminary office and retail development and Bunker Hill expansion. Given the weak office market and risks associated with large-scale construction, Phase 1 office development would be conservative. The floor area ratio (FAR) proposed in this plan allows for 175,000 s.f. of office development in Phase 1, but the plan acknowledges that actual development would be contingent on demand, and could be as low as 10,000 - 30,000 s.f., spread between mixed-use buildings. FAR allows for up to 104,000 s.f. of retail in Phase 1, but the amount of development could be much less. Bunker Hill could begin land acquisition and construction on Everett Ave in this phase, with acquisition of Patriot Park as a logical first step. The college could use the existing building at Patriot Park, temporarily or long-term, or redevelop.

Phases 2 – 3. The phasing progresses to more substantial office buildout, continued retail development, and continued Bunker Hill Community College expansion in Phases 2 and 3. These phases could include construction of larger office buildings. Given the plan's proposed FAR and anticipated residential development, western Chelsea could physically accommodate 5.8 million s.f. of office development, and 760,000 s.f. of retail development for full buildout. The actual amount of development would likely be much less. The proposed FAR is not meant to be predictive but rather to create a framework that accommodates optimistic growth possibilities, should they become relevant.

Implementation

The City of Chelsea would benefit from a proactive approach to encouraging development. By creating a one-stop-shop for development inquiries, City officials could reach out to potential tenants to identify office development opportunities. This outreach is especially important considering that "more than 90% of the office space under construction in the Boston Market is pre-leased to special tenants" (Ross, 16 Jul. 2013). The City should also seek to reduce risk for potential developers (see implementation table).

The City of Chelsea should consider adapting training infrastructure for Chelsea's workforce and small business owners. To jumpstart workforce training in Chelsea, Bunker Hill could specifically expand its training programs that are most relevant to Chelsea's workforce. The U.S. Department of Labor is currently providing grants to implement the Massachusetts Community Colleges and Workforce Development Transformation Agenda. One component of this program is directing money to help community colleges "offer new or redesigned certificate and degree programs" in one or more of six target sectors, including health care (MA Community Colleges, 2014). Bunker Hill could extend its Allied Health Certificate Programs to include health care administration. The City could also seek to adapt existing workforce training infrastructure outside of Bunker Hill in response to the anticipated demands of future employers. It is also important that the City pair retail development with training to help small business owners serve their new customer base. Otherwise, development might harm local businesses by increasing the number of chain establishments. This is especially true for immigrant owners who might not have the language and marketing skills to capture new demand.

Precedents - Assembly Row and Quincy Center Comparison

Aggressive buildout in Chelsea can carry both high risk and high opportunity, as exemplified by the Quincy Center and Assembly Row (Somerville) cases.

Plans for New Quincy Center involved a buildout of 3.5 million s.f. over 10 years, including 300,000 s.f. of office space within the first year (Diesenhouse, 5 Apr. 2011). In 2014, Street-Works pulled out of the $1.6 billion project, citing escalating construction costs (Grillo, 13 Mar. 2014). The City may seek another private partner, but for now, the razed center blights Quincy's landscape (Bernsau, 14 Mar. 2014).

The $1.2 billion Assembly Row project will contain 5 million s.f. of new development, including 1.75 million s.f. of commercial space (Douglas, 6 Dec. 2013). Partners HealthCare plans to move 4,500 administrative employees into 700,000 s.f. of office space in 2016 (Douglas, 6 Dec. 2013; Leung, 13 Dec. 2013). Financial benefits are substantial for both the City and Partners. The City of Somerville will decrease residential and commercial tax rates for FY2014, mainly due to the new Assembly Square construction and associated shift in tax burden from residential to commercial (City of Somerville, 26 Nov. 2013). Partners anticipate that the move will save $10-15 million annually in real estate costs (Leung, 13 Dec. 2013).

Quincy Center may seem a stark warning for municipalities such as Chelsea with the potential for large-scale transit-oriented development. Differences in phasing are important, however: in contrast to the extremely short phasing timeline for Quincy, this plan for Chelsea unfolds over 25 years and incorporates a flexible perspective for commercial development. While becoming the next Assembly Row would be an excessively aggressive goal, the Somerville case highlights development opportunity for Boston's inner suburbs, such as the potential to attract large office tenants.

Figure 18 - Assembly Row *Rendering of future Assembly Row development (Federal Realty).*

TRANSPORTATION

Vision

Chelsea should be accessible for commuters, children, adults, and the elderly alike, whether shopping at Market Basket or traveling to church. Building for the Workforce aims to create an efficient transit network linked to the Silver Line that includes safe bicycle paths and a comprehensive, walkable street system.

Issues

Transportation planning challenges for Chelsea include: neglected road infrastructure; several complicated intersections; and a lack of amenities such as bicycle parking. These deficiencies undermine connectivity and safety. Chelsea should aim to rectify these problems to connect the city's diverse locales, from Broadway, to the Mystic Mall, to the waterfront.

Figure 19 - Complete Streets *A potential example of a future complete street in Chelsea, created by architect Steve Price (The City Fix).*

Figure 20 - *Fan Pier Boston*

Goals

Repair poor road infrastructure
Many of Chelsea's roads require repairs, with uneven surfaces and potholes. Poor road infrastructure damages cars, creates noise, raises safety concerns, and makes for an uncomfortable driving experience.

Complete inconsistent street grid
Chelsea should alter its street plan to create a consistent grid, solving issues of roads that are currently discontinuous or dead-ended. Additionally, the large Mystic Mall parcels create a space that is not conducive to walking. Despite the fact that Chelsea is not a large geographic area, walking distances often feel far greater than they are actually.

Improve the pedestrian experience
Improvements in sidewalks, landscaping, and crossings would improve pedestrian experience. Many sidewalks are narrow and in disrepair. Landscaping is sparse. Improved landscaping is particularly crucial where the Silver Line corridor intersects the street grid, to prevent the train tracks from acting as a barrier. Several crossings (such as the intersection of Everett Avenue and Arlington Street) are very wide, lack street signals, and have faint crosswalks.

Create bicycle infrastructure
Chelsea would benefit from a city-wide bicycle network. There are only 1.6 miles of bicycle lanes in the city (MassDOT, 2011). Without proper lanes, cyclists must share the road with cars. There is also little to no bicycle parking, an inconvenience.

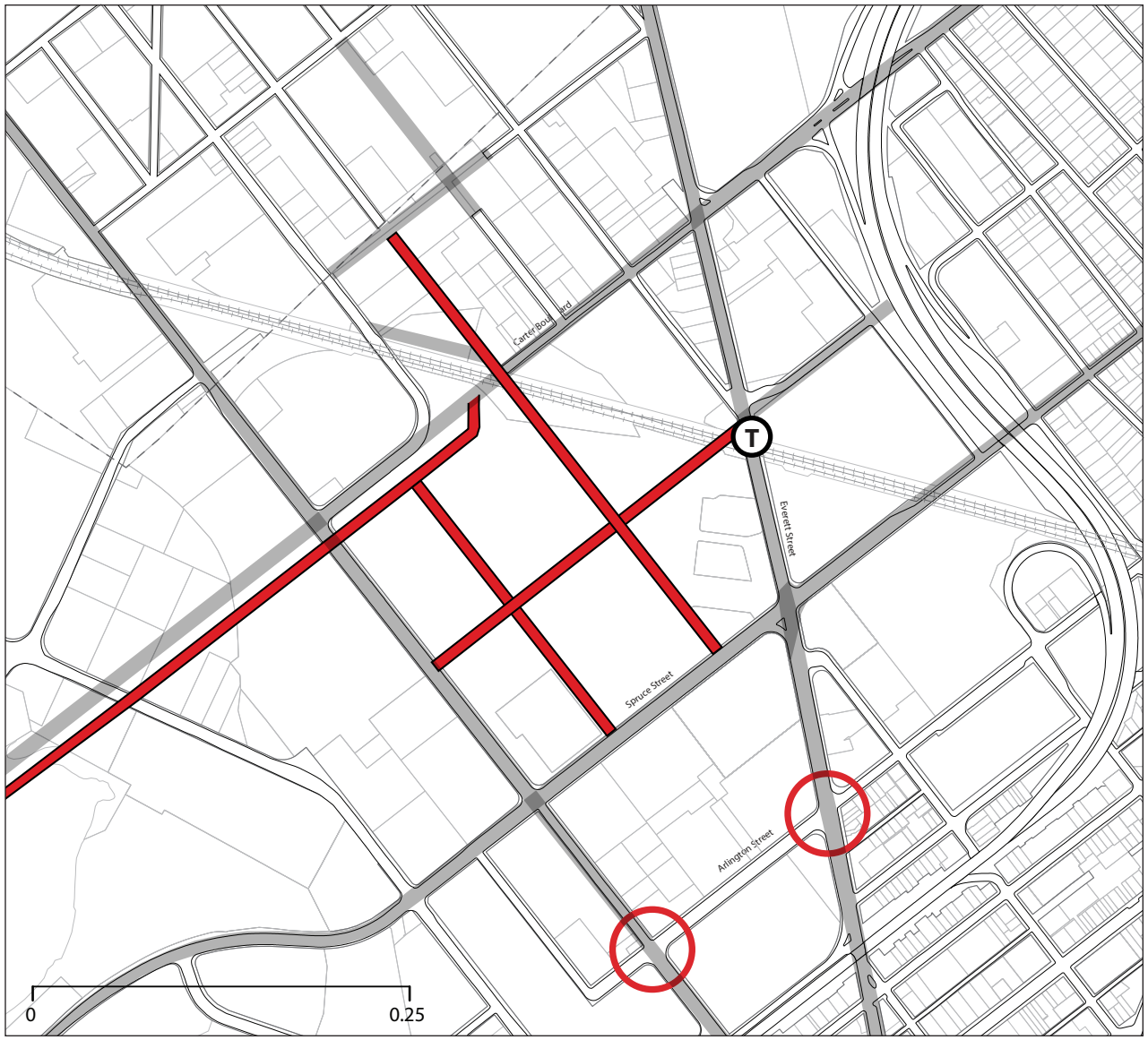


Figure 21 - Proposed Street Network *Building for the Workforce will integrate the Mystic Mall parcel into the larger street grid and improve key intersection in the area (MassGIS).*

Figure 22 - Poor Road Conditions *Neglected road infrastructure on Arlington Street (Tuvshinbat).*

Figure 23 - Difficult Intersection *The intersection of Everett Avenue and the Commuter Rail tracks has poor signage and is difficult to cross (Tuvshinbat).*

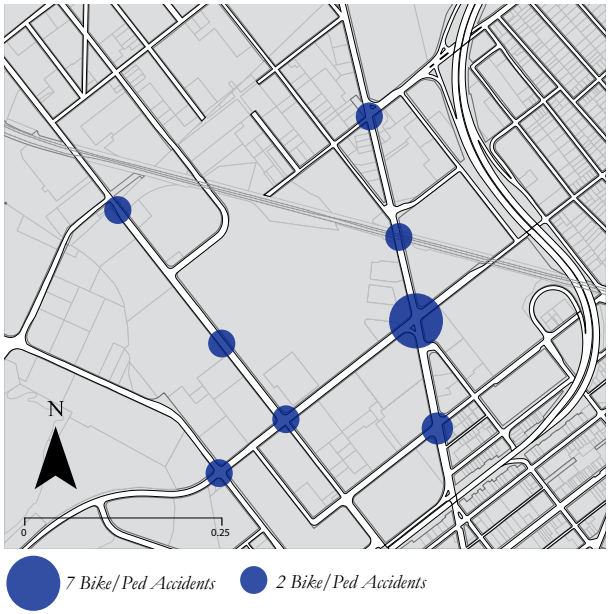


Figure 24 - Pedestrian and Bicycle Accidents *Location and number of pedestrian and bicycle accidents in between 2002 and 2006 (Boston Region MPO).*

Figure 25 - Automobile Accidents *Location and number of automobile accidents in Chelsea over the last 10 years (Massachusetts Department of Transportation).*

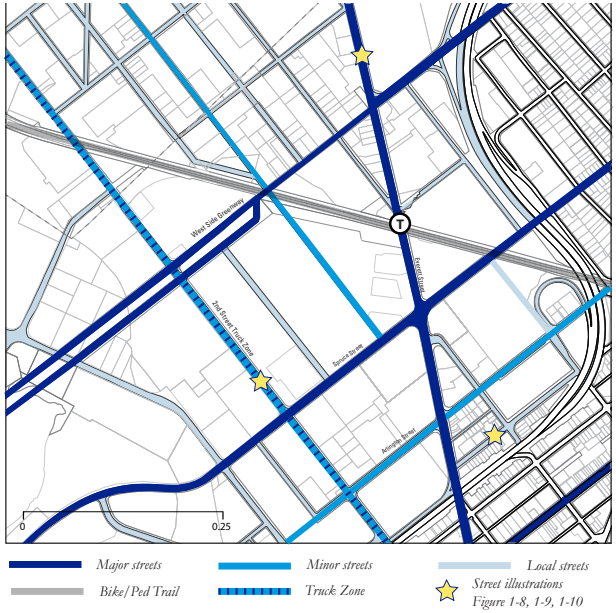


Figure 26 - Street Hierarchy *The hierarchy of streets in Chelsea guides circulation (MassGIS)*

Figure 27 - Major Streets *Proposed major street section, Everett Street view (Width: ~65).*

Figure 28 - Minor Streets *Proposed minor street section, 2nd Street view (Width: ~64').*

Figure 29 - Local Streets *- Proposed local street section, Walnut Street view (Width: ~40').*

Consolidate bus routes

Working with the MBTA, Chelsea could eliminate unnecessary bus stops, consolidate the bus network, and re-direct one or more of the routes to connect with the upcoming Silver Line station near the Mystic Mall. Chelsea's bus routes primarily serve the city's southern half. Service is limited in the north. Some bus stops on each of the routes appear underutilized or perhaps redundant. The system, overall, is not efficient.

Change parking requirements

By reducing the zoned minimum parking requirements by 50%, Chelsea could eliminate expansive surface parking and ease the development process. Chelsea has a lot of parking, and surface parking lots are a common fixture throughout the city. The city's zoning requires a large number of parking spaces to be built, far more than for some similar cities in Greater Boston (Furman et al, 2013). Real estate developers have difficulty working in Chelsea due to the parking requirements and often file for variances (GSD Urban Planning, 2014).

Designate a truck zone

Chelsea would benefit from designating Second Street as a truck throughway to remove truck activity from Everett Avenue. Industries in western Chelsea generate a lot of truck activity, causing traffic on Everett Avenue and other major streets en route to Route 1 and Route 16. The trucks also cause road damage and noise.

Figure 30 - Bicycle Paths *Precedent for bicycle paths in Chelsea (railstotrails.org).*

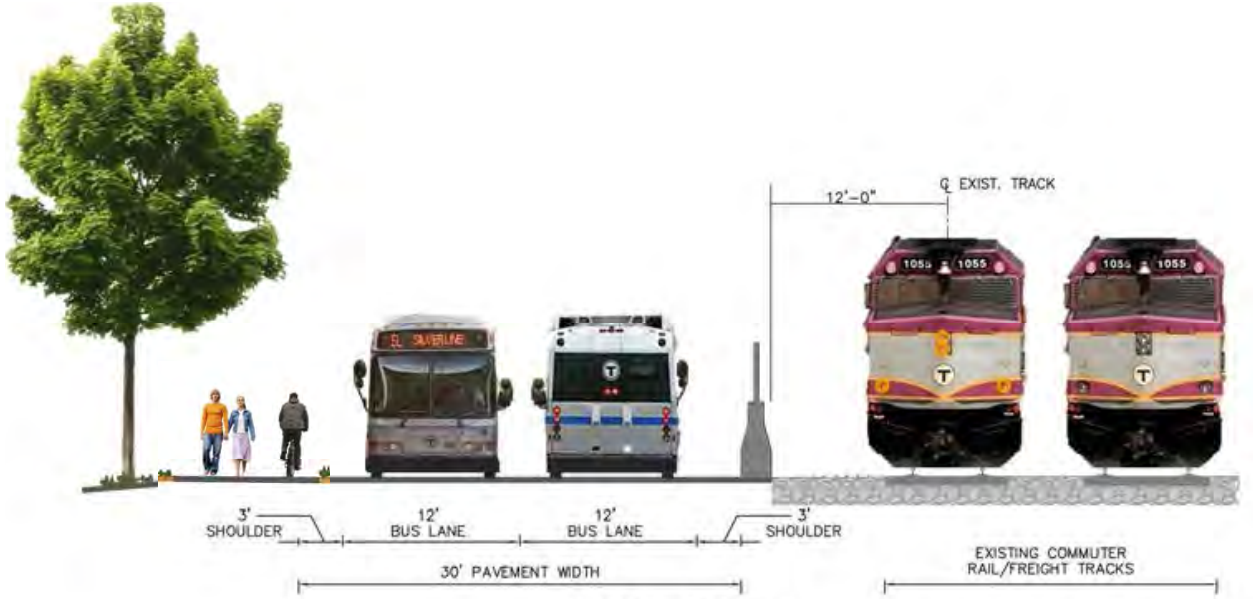


Figure 31 - Complete Streets for Chelsea *An altered street section for the Silver Line corridor with a shared bicycle and pedestrian path, based on massDOT's original street section (derived from Massachusetts Department of Transportation)*

Figure 32 - Street Network Development, Phase1
Phase 1 of the street network development entails improvement of major streets, bicycle and pedestrian trails, and intersection improvements along the Silver Line corridor (MassGIS).

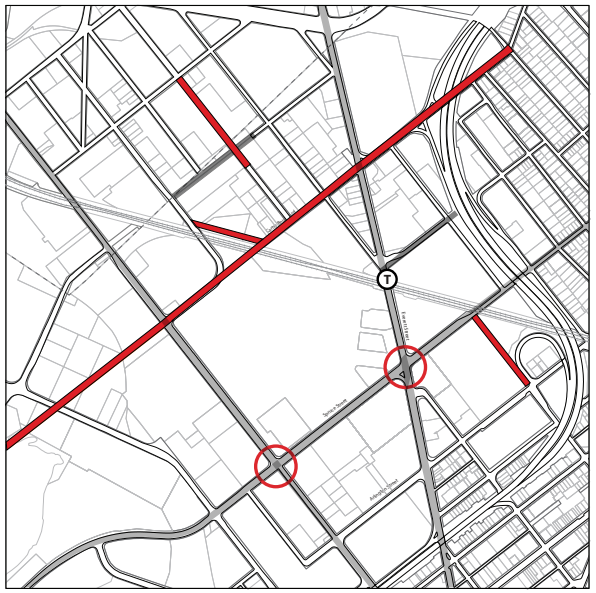


Figure 33 - Street Network Development, Phase 2
Phase 2 of the street network development entails the creation of 0.8 miles major streets, 0.2 miles of minor streets, and 0.3 miles of local streets (MassGIS).

Figure 34 - Street Network Development, Phase 3
Phase 3 of the street network development entails completion of the street network and construction of the West Side Greenway (MassGIS).

Decommissioned streets Improved streets New streets Improved Intersections

Strategies

Phasing

Phase 1. The first five-year period of Chelsea's transportation plan consists of several initiatives intended to serve the city's immediate transportation needs and shape a development-friendly area. First and foremost, the City of Chelsea should collaborate with MBTA and private developers to design a vibrant, mixed-use transportation center surrounding the Mystic Mall Silver Line station. Main streets adjacent to the station, primarily Everett, would undergo renovation that would feature bicycle lanes, sidewalk improvements, and intersection alterations. In order to promote a pedestrian-friendly experience amenable to development, the City of Chelsea should begin re-ordering its grid system, extended some dead-end street and building new streets.

Phase 2. The second phase would continue the initiatives started in Phase 1. By the end of this period, the City should complete at least 50% of the new bicycle network and street grid.

Phase 3. During Phase 3, the city would complete the proposed transportation network improvements.

Implementation

In implementing the transportation component of Building for the Workforce, the City of Chelsea should seek to forge strong public-private partnerships with real estate developers and secure funding from a variety of sources: city tax revenues; private real estate developers; National Highway Performance Program (NHPP); Surface Transportation Program (STP); Congestion Mitigation and Air Quality Improvement Program (CMAQ); National Transportation Enhancements Clearinghouse (NTEC); Massachusetts Bay Transportation Authority (MBTA); Safe Routes to School (SRTS); and Massachusetts Department of Transportation (MassDOT).

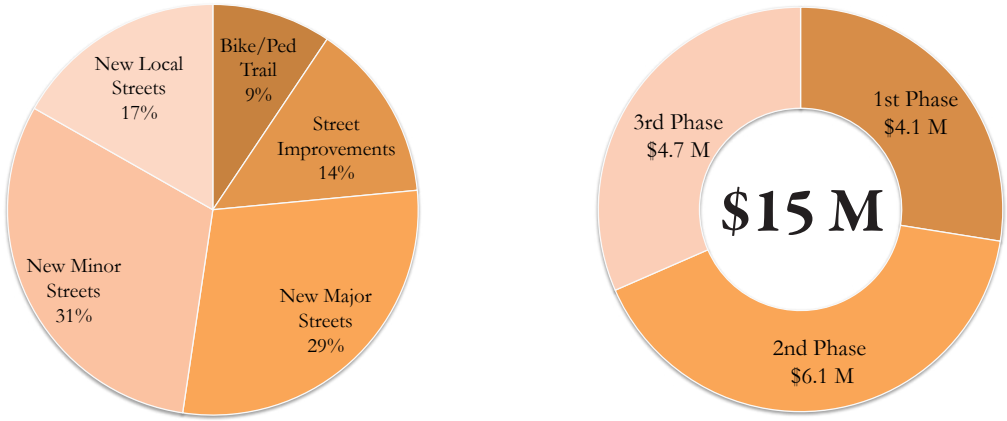


Figure 35 - Cost Breakdown *Diagrams showing the cost breakdown (using generic estimates) for street improvements per phase (Florida Department of Transportation).*

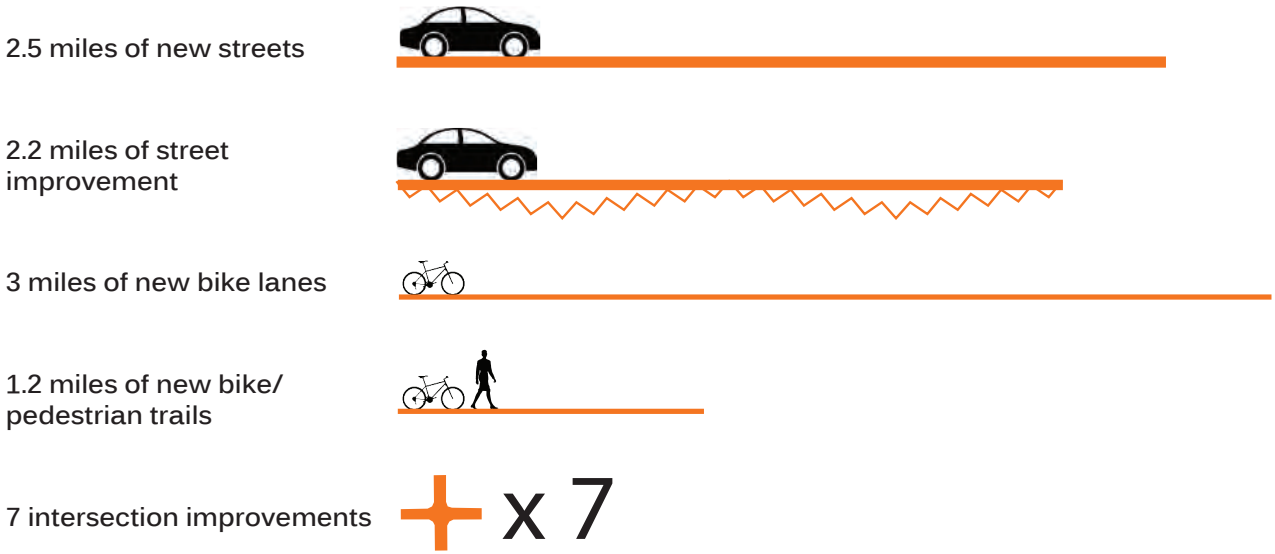


Figure 36 - Transportation Transformation *Diagram showing the total number and amount of proposed transportation improvements.*

OPEN SPACE
+ NATURAL SYSTEMS

Vision

The goals and strategies concerning Chelsea's open space and natural systems are critical for their boldness and significance. Associated community benefits to initiatives like The Hook include increased access to the waterfront, social programming, attractive green space, and protection against sea-level rise. According to the Metro Boston Regional Multi-Hazard Mitigation Plan, flooding from storms caused by deficiencies in the drainage system and inundation from sea-level rise and storm surge remain the most hazardous environmental threats for Boston and Chelsea (Vanasse, Hangen & Brustlin 2010).

The Hook

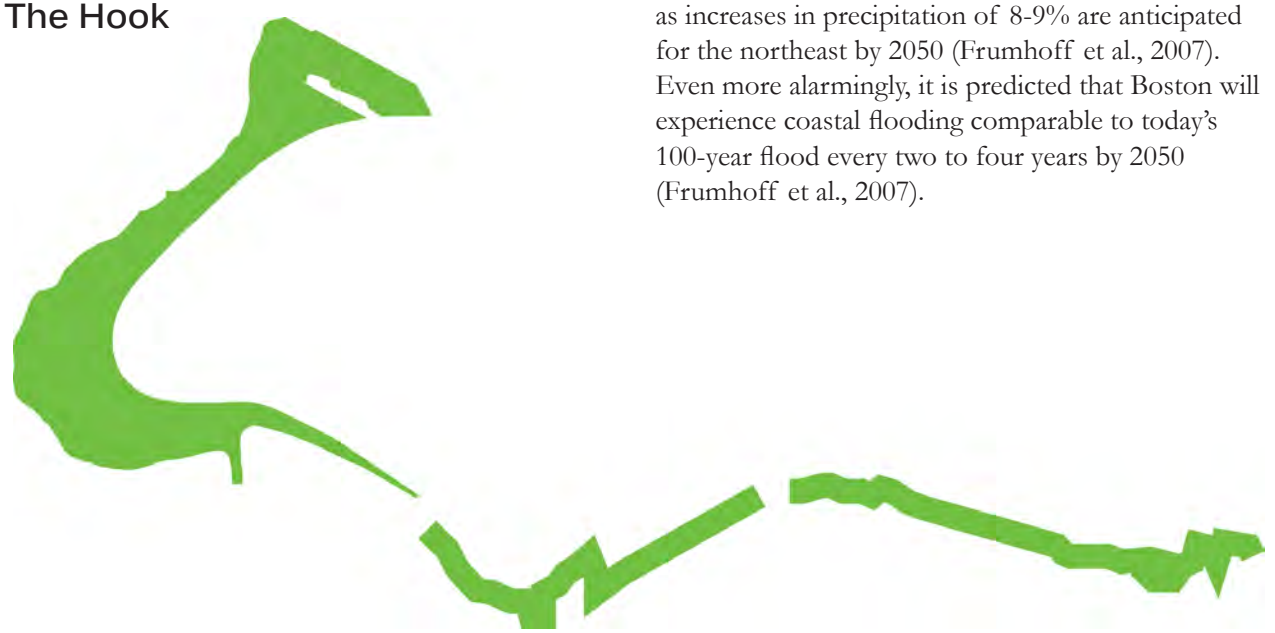


Figure 37 - The Hook as a Connector *The Hook would increase connectivity between the Chelsea community and the waterfront as well as mitigate flooding (MassGIS).*

Figure 38 - *(Fischer)*

Issues

Storm water drainage deficiencies lead to flooding and water contamination

In Chelsea, the high ratio of impervious to pervious surfaces exacerbates poor storm water drainage, while combined sewer overflow systems result in water contamination. Only 4% of land surface in Chelsea is pervious (MassGIS). Sewers combining flood water and sewage can be found in as much as 75% of Chelsea ("Public Notification: City of Chelsea Combined Sewer Overflows"). In order to manage excess water, these sewers discharge the sewage-storm water mix into the closest body of water. Drainage deficiencies will become increasingly problematic, as increases in precipitation of 8-9% are anticipated for the northeast by 2050 (Frumhoff et al., 2007). Even more alarmingly, it is predicted that Boston will experience coastal flooding comparable to today's 100-year flood every two to four years by 2050 (Frumhoff et al., 2007).

Inundation from sea-level rise

Western Chelsea's low-lying position along the Island End River and between three hills makes the area highly susceptible to flooding caused by sea-level rise. The study area lies almost completely within the FEMA floodplain. Because of this, flood insurance rates in the area will rise, and without any protective measures in place, potentials developers and lenders may be deterred from investing in the area. Fortunately, by implementing strategies to reduce flood risk, Chelsea can become eligible to join the Community Rating System, earning discounted flood insurance premiums for residents (Furman, 2013).

Goals

Increase pervious surface in Chelsea to improve drainage and reduce flood risk

Increased open space and vegetation throughout the city will provide additional outlets for absorption of excess storm water. For example, the plan proposes planting trees along Everett Avenue to reduce storm water runoff. Overall, the plan proposes 10 acres of new green space, 18 acres of enhanced existing open space, and 3.5 miles of pedestrian green space.

Create Chelsea's Green Hook

The Hook represents a bold move to environmentally fortify the City of Chelsea, without losing sight of the most important component - the individual. In addition to mitigating flood risk, the Hook would provide desperately needed space for informal social gatherings, like weekend picnics and impromptu soccer games, along with programmed play space for children, teenagers and families.

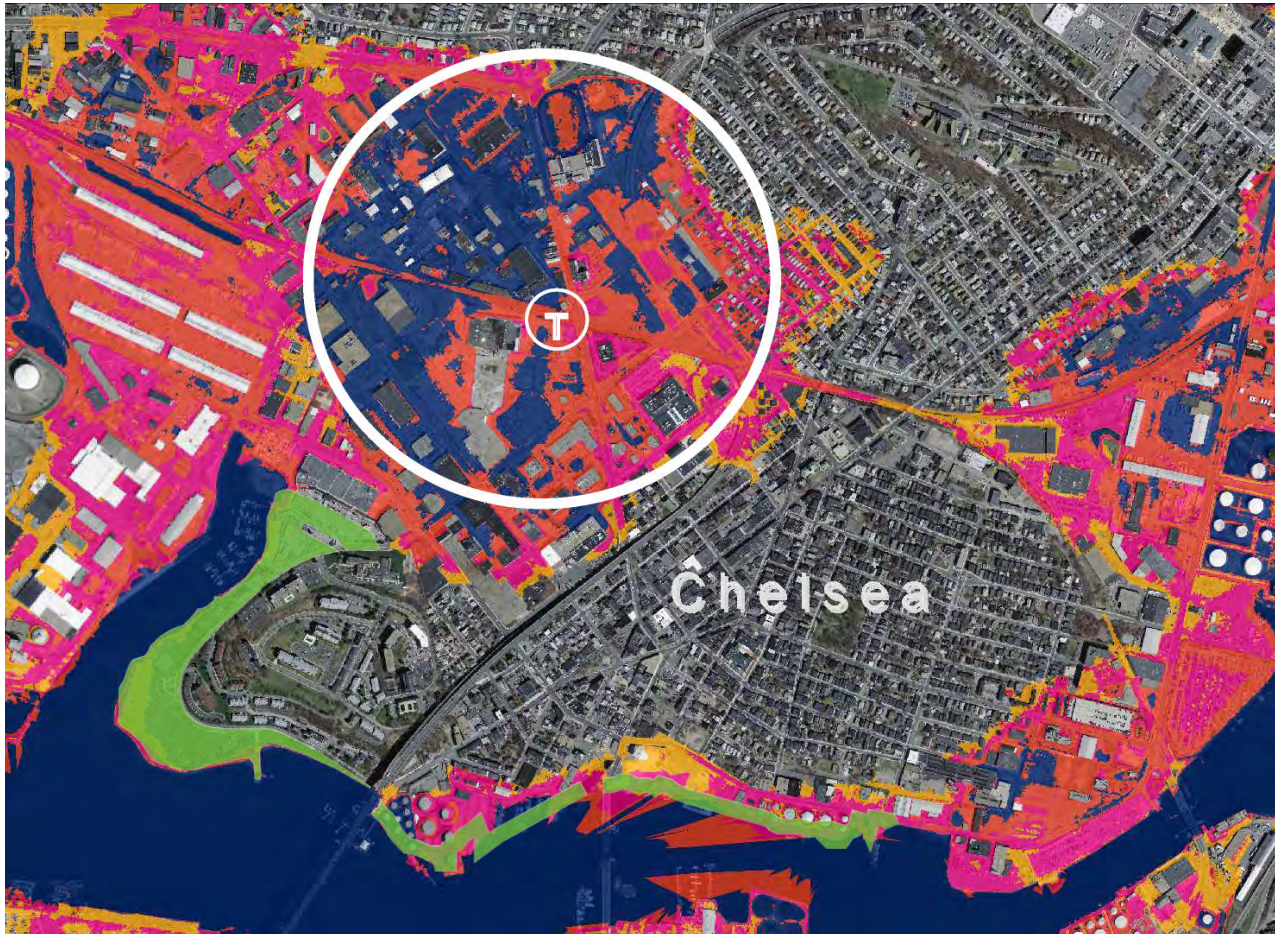


Figure 39 - Boston Harbor Association Sea-level Rise Map *Flooding that would result from 7.5 feet of sea level rise (Source: Kirshen, Douglas, and Watson 2010).*

Implementation

This plan identifies a number of subsidies available through the state and federal governments that could be used to support initial development of The Hook (see the implementation chapter of this document).

Figure 40 - Spending Breakdown *Spending broken down by component of the open space plan strategy.*

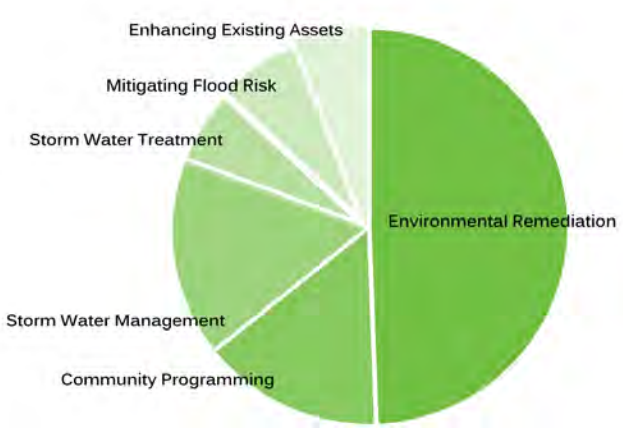
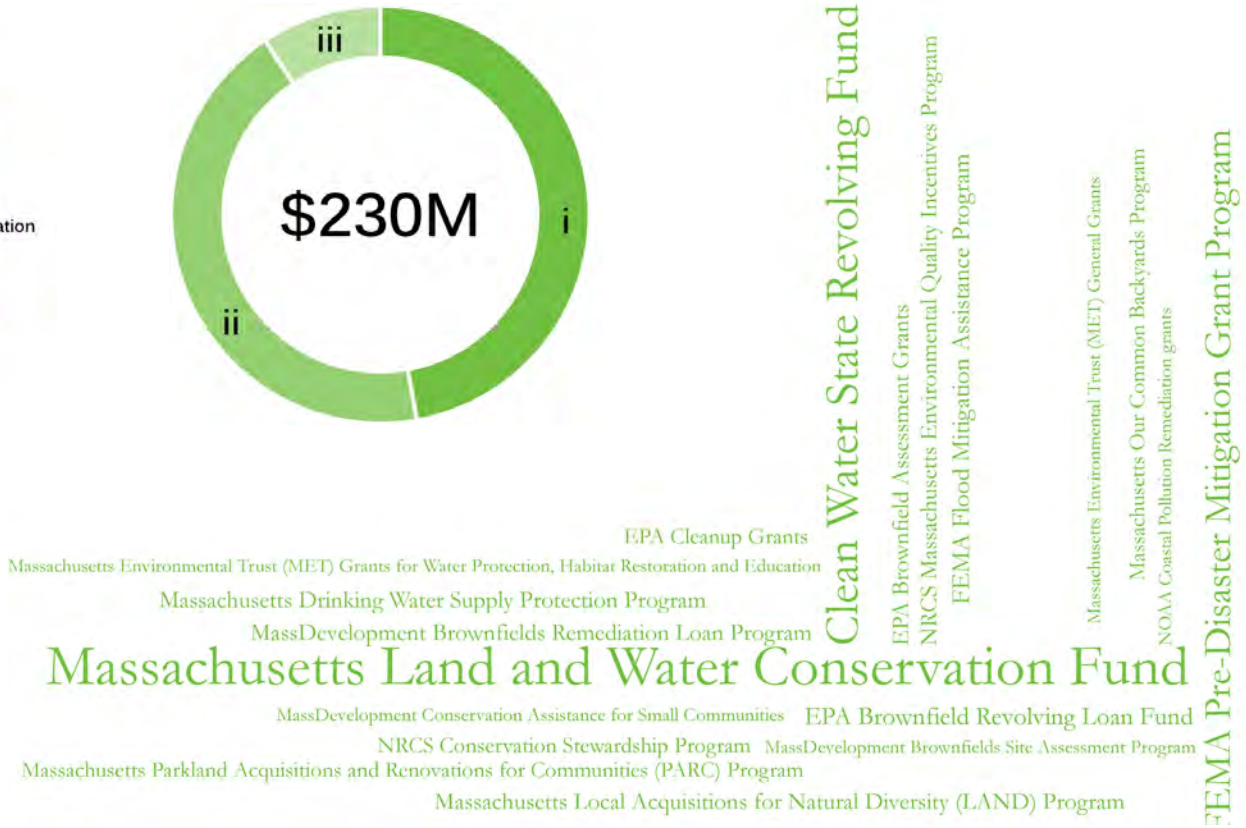


Figure 41- Cost Phasing *Estimate of the division of funds amongst the three development phases.*

Figure 42 - Funding Sources *Grant and loan sources available at the state and national levels that can help subsidize open space and natural systems development.*



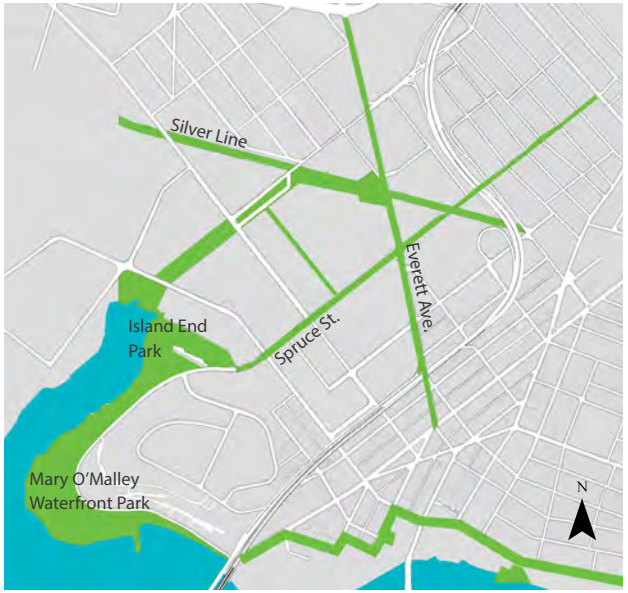
Sources: City of Everett, City of Lancaster, Connect Buncombe, Hudson River Sustainable Shorelines, MacDonald, Massachusetts Water Resources Authority, Port of Portland, Tweed.

Phase 1.
During Phase 1, the City would enhance exiting open space assets, and increase connectivity between existing and new infrastructure through green infrastructure development. The City would:

- Enhance infrastructure and programming at Mary O'Malley Park
- Green Infrastructure Development along the 8,000 linear feet comprising Everett Avenue and Spruce Street
- Conduct environmental remediation and begin construction of 521,000 s.f. Island End Park
- Implement flood mitigation strategies in Island End Park

Phase 2.
The second phase includes completion of The Hook. Specifically, the City would:

- Complete 370,000 s.f. of landscape enhancements along The West Side Greenway, linking Island End Park to Chelsea's community
- Implement social infrastructure within new park area such as a soccer field or skate park
- Finish oyster-tecture installation at Island End Park and establish non-profit-run education program
- The City would also complete green infrastructure and low impact development along primary streets.



Phase 3.
During Phase 3, the City would complete the green bike path along the waterfront east of Mary O'Malley Park and invest in larger city infrastructure projects, such as separating water and sewer.

Figure 43 - Open Space Phasing *Chelsea can create an expansive open space system through incremental steps (MassGIS).*

THE HOOK

Stormwater Mitigation Strategies:

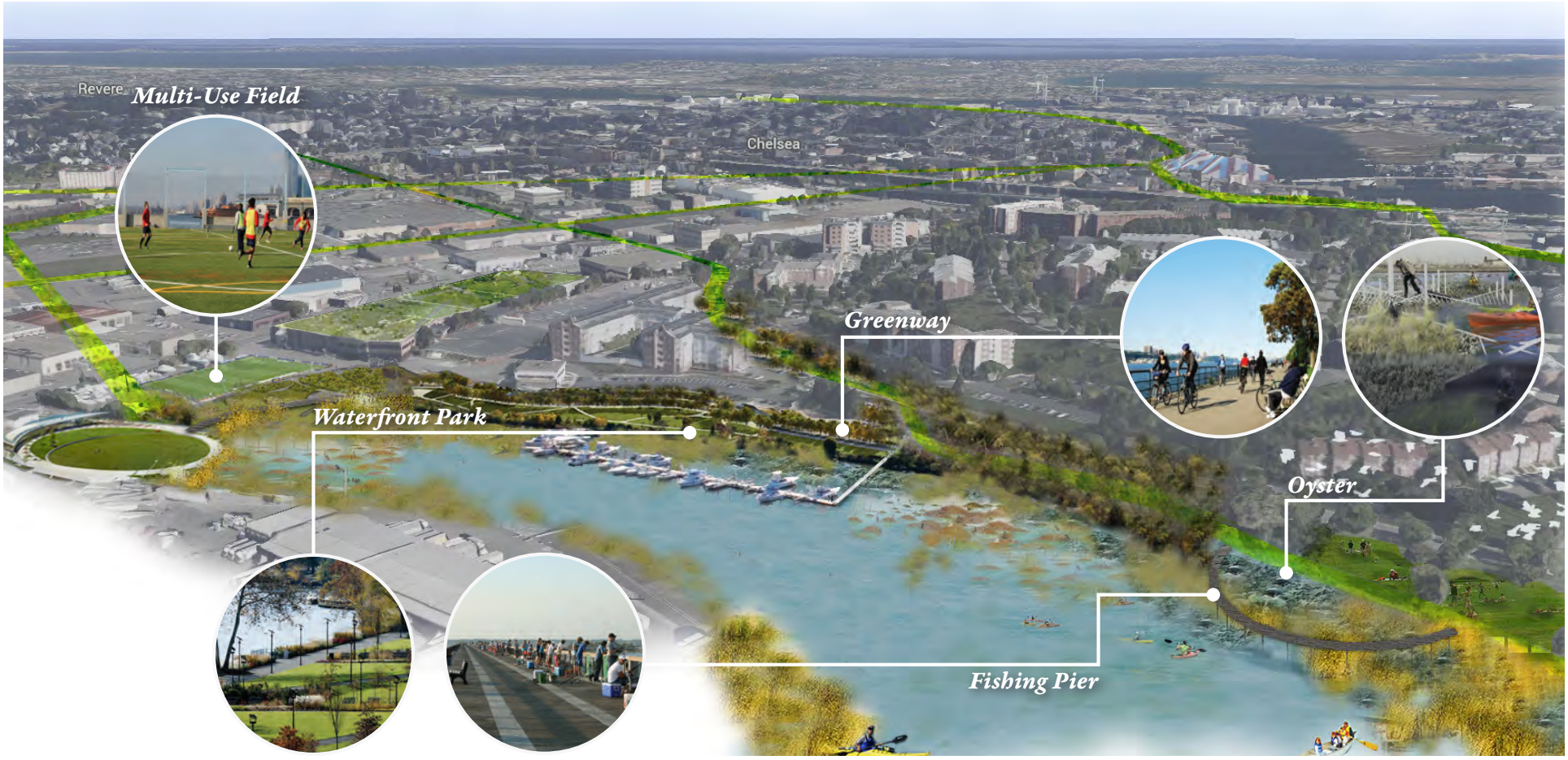
Bioswale

Cistern

Curb Cut

Green Roof

Permeable Pavers



Models for collaboration

An important aspect of planning open space and natural systems is collaboration between citizens, community groups, environmental experts, and government entities. Figure 42 depicts just one possible configuration of a collaborative model for drawing on the experiences of various stakeholders to create relevant and inclusive plans. Different stakeholders make a range of contributions at each stage of the process. As an example, Reviewing and Brainstorming could involve community-driven organizations, such as Chelsea Green Space and Recreation committee, linking community members with regional authorities on open space such as the Metropolitan Area Planning Council (MAPC) to create an informed community vision. This vision can then combine with the concerns of government bodies such as The Housing Authority or Chelsea Public Schools to guide city planning efforts. A system of "checks and balances" allows the community to maintain a voice throughout the planning and approval process.

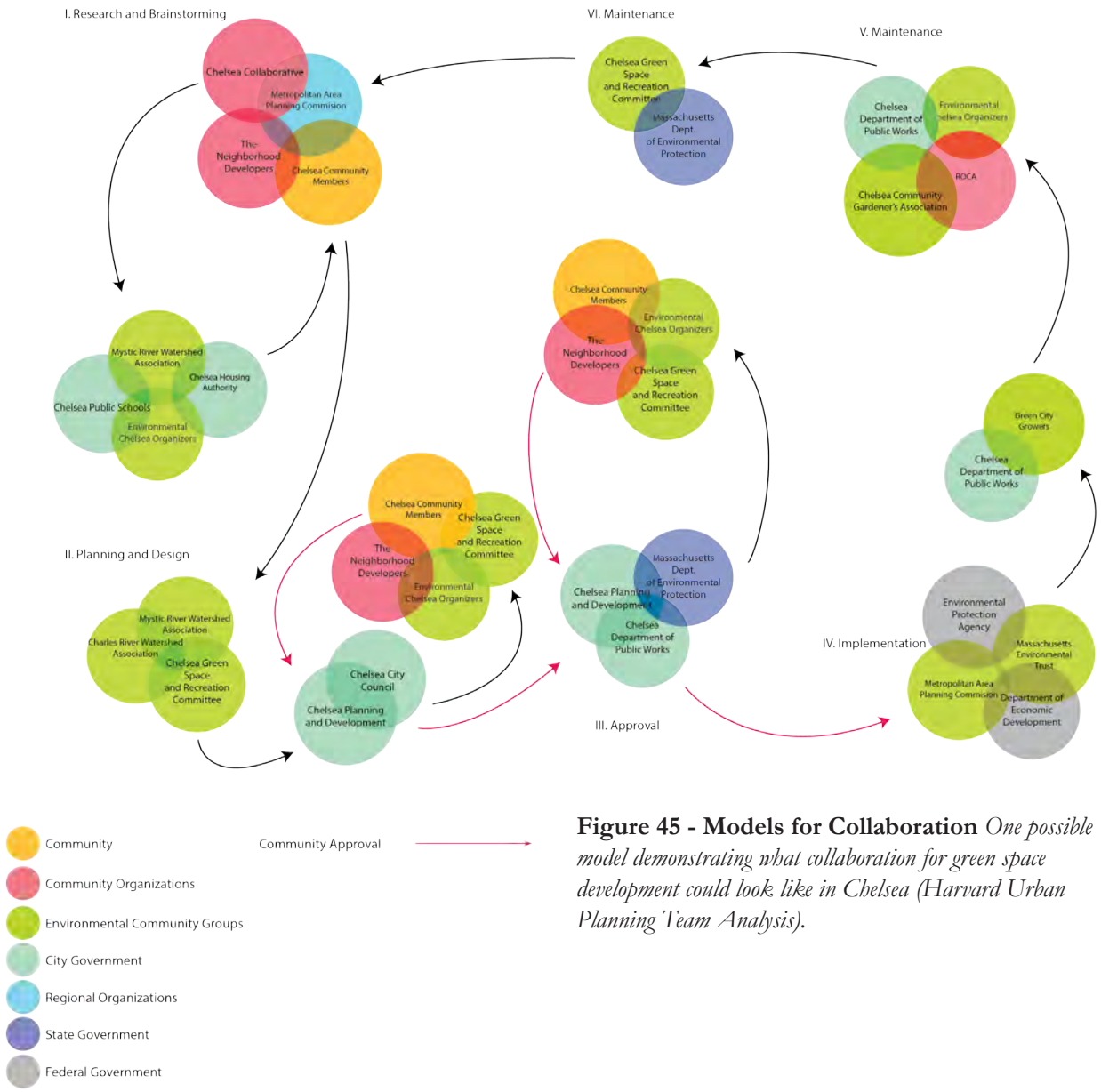
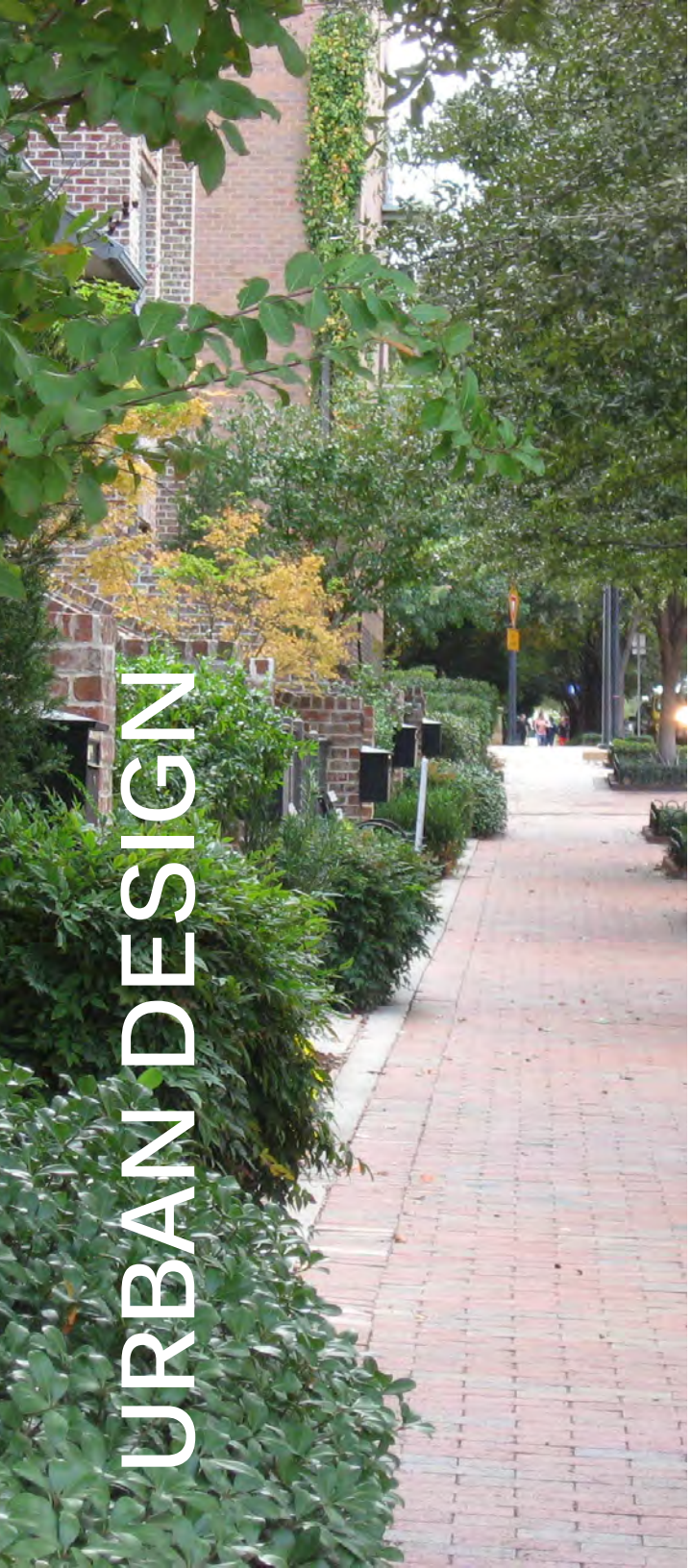


Figure 45 - Models for Collaboration *One possible model demonstrating what collaboration for green space development could look like in Chelsea (Harvard Urban Planning Team Analysis).*

Figure 44 - The Hook's Green Menu *The Hook would constitute a dynamic menu of recreational opportunities and ecosystem services.*



URBAN DESIGN

Vision

This plan proposes a series of urban design measures that would elevate quality of life for Chelsea's residents, students, and employees, and leave a favorable and memorable impression on visitors. Building the Workforce would foster distinct districts of varying character that would offer residents and visitors a range of uses and experiences. The plan also calls for creation of The West Side Greenway, an iconic boulevard with a central pedestrian path connecting the Silver Line station and The Hook.

Issues

New developement can be devoid of character
Without the incorporation of careful urban design, new development can feel devoid of charcater, undermining sense of community and quality of life.

Goals

Foster distinct districts of varying character
Identifiable districts will order and connect newly developed sections of western Chelsea, making the neighborhood more interesting, lively, and safe, and engendering civic pride. Shaping "key perceptual qualities of the urban environment" is essential "to influence people's decisions to walk rather than drive to a destination, stroll in their leisure time, or just hang out and socialize on the street" (Ewing, Clemente 2013, 3). The plan delineates six districts:

Market Square
This area would feature high-rise residences and 15-story (approximate) offices with ground-floor retail, centered around a large, open public space surrounding the Silver Line station. The open space will host community activities like farmers' markets and cultural festivities.

Figure 46 - *(Forsyth)*

Everett-Avenue Corridor
This pedestrian-focused, tree-lined corridor would feature a continuous series of animated shop windows, restaurants, a new Market Basket, illuminated light industry, teen centers, and senior clubs. New housing would be located above active street-level facades.

West End
The area would offer tree-lined roads, townhouses, modern apartments, and low-rise office buildings. It will be a quiet place to live, within walk distance of the Silver Line and Market Basket.

South Second District
The area would consist of an office and industrial flex space, with some residential development. Brightly painted murals expressing Chelsea's multi-cultural community would animate the exteriors of the office and industrial buildings along Second Avenue. The murals would help create connectivity across Second Avenue, between the Silver Line station and the waterfront.

Broadway Gateway
The use of murals would repeat along the retail spaces at the intersection of Everett and Broadway, forming Broadway Gateway. This would visually connect Everett Corridor to the vibrant retail and restaurant activity on Broadway Street.

Eds, Meds, and Feds District
The district would include institutional buildings, residential developments, and hotels, while accommodating the expansion of MGH and Bunker Hill Community College. Density would be consistent with the developments east of Everett Avenue. New

landscaping and pathways would forge visual and physical connections between educational and job training infrastructures, linking, for example, Chelsea High School and the Joseph A. Browne School.

Create the West Side Greenway

The West Side Greenway would become an essential nexus of activity in Chelsea's landscape. Modeled after Boston's Commonwealth Avenue and Mexico City's Paseo de la Reforma, this wide promenade would be lined by trees and park benches, with light one-way traffic passing on either side. The West Side Greenway would expand community activity at Market Square. It would be surrounded by residential development. and illuminated at night, encouraging residents to stay outside and engage their neighbors in an informal, natural setting, a source of aesthetic pleasure and civic pride to all people using it.

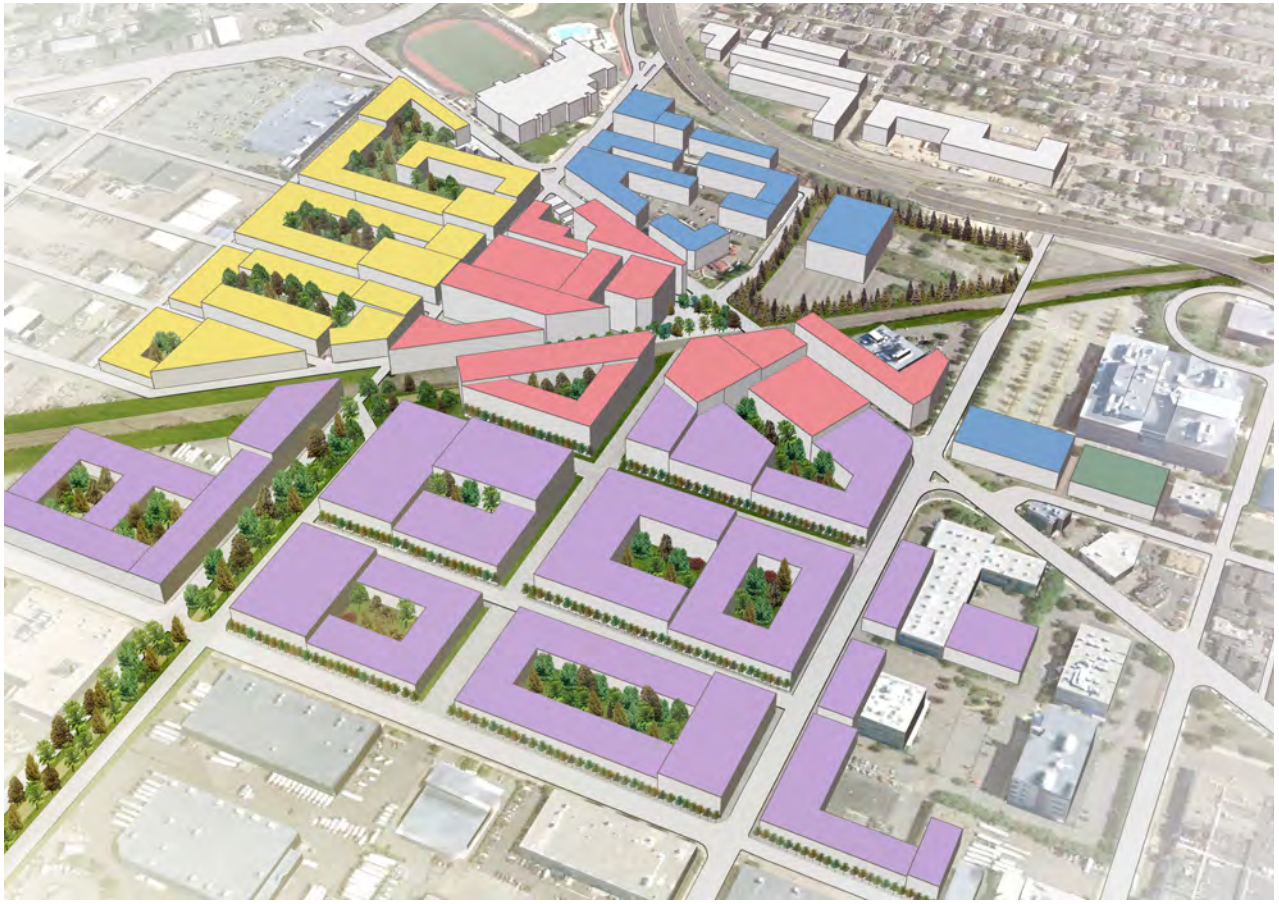


Figure 47 - Neighborhood Districts *Informal, flexible boundaries for the six primary neighborhood districts (MassGIS, see Appendix 2 - Building for the Workforce District Descriptions Matrix).*

Market Square/Everett Ave

Example: Washington D.C.

- Multi-modal transit district
- High quality public space
- Mixed-Use
- Walkable

Feds / Eds / Meds

Example: Arlington County, VA

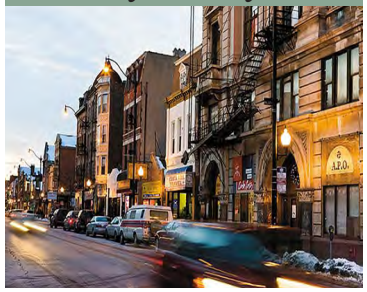
- Active street life
- Extensive landscape planting
- District for jobs and educational training

South Second

Example: Addison Circle; Dallas, TX

- Mid-to-low intensity
- Culturally expressive public arts program
- Mixed-use
- Waterfront connection

Broadway Gateway



Example: Pilson Neighborhood; Chicago, IL

- Mid-intensity
- Culturally expressive public arts program
- Mixed-use with primary residential

West End

Example: Beacon Hill; Boston, MA

- Mid-intensity
- Small, quiet residential street
- Increased open space
- Residential with small office

Figure 48 - Everett Avenue Corridor *Complete street improvements like those in Sunnydale, California will transform the corridor a main pedestrian thoroughfare (Bellecci & Associates, Inc).*

Figure 49 - Public Mural Program *Modelled after Chicago's Pilsen neighborhood, an arts program will energize and instill a sense of civic pride and ownership throughout Chelsea (triposo.com).*

Strategies

Phase 1

This plan calls for implementing the following urban design measures in Phase 1:

- Work with urban designers to write official design guidelines and institute a public office to enforce the code
- Develop Market Square
- Create a density gradient with a concentration of taller buildings with higher FAR around the station, thereby maximizing the value of the land around the station while maintaining aesthetic desirability
- Construction of a new Market Basket on Everett Avenue will begin without interrupting service at the store's current location
- Begin Bunker Hill Community College expansion in Eds, Meds, and Feds District
- Begin a community mural program to help foster a sense of community identity and ownership. Coordinate with local leaders and businesses to paint vibrant murals on industrial and office buildings, and highway underpasses
- Program community art gatherings or informal galleries in available office or industrial spaces along Second Street

Phase 2

Building for the Workforce calls for implementing the following measures in Phase 2:

- Begin consolidating industrial space along Second Avenue
- Begin development of the West End parcels
- Begin South Second District
- Construct The West Side Greenway in tandem with the West End and South Second District
- Complete Market Basket's move to the new Everett Avenue Corridor building
- Complete Everett Avenue Corridor infill and development
- Continue community mural program
- Enforce the city's design guidelines

Phase 3

This plan calls for implementing the following measures in Phase 3:

- Continue consolidation of industrial and back office buildings along Second Avenue
- Complete development of the West End
- Complete South Second District

Implementation

Public arts projects can engage the community, transform run-down or undeveloped areas, and attract people to zones that might otherwise seem unfamiliar or imposing. As in Chicago's Pilsen neighborhood, a community mural program in Chelsea could create a sense of community identity and ownership within the changing neighborhood. Chelsea Planning Department and local arts-based organizations could coordinate the program, recruiting artists in Chelsea and organizing opportunities for local students to create murals that span façades of industrial buildings and highway underpasses.

The city should work with urban design and planning specialists to develop official design guidelines, and create an office or position to oversee compliance. This office would be instrumental to managing long-term, cohesive development in Chelsea. While the City would be responsible for at least some costs of the plan's formulation and implementation, it might expect returns in the form of higher tax revenue from the quality of development that would follow. The City could also use public funds for neighborhood redevelopment such as the HUD Strong Cities program, Strong Communities Visioning Challenge (SC2), and INVEST 1.0 Implementation Projects.

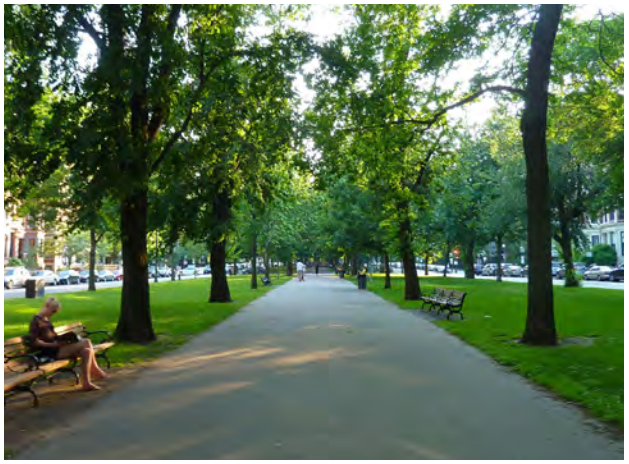


Figure 50 - Distinct Districts *Strong design guidelines will order, enrich, and diversify the neighborhood's character. Mid-rise apartments in Hammarby Sjostad, Stockholm offer a precedent for the West End; murals in Chicago set a lively backdrop like that anticipated in the Broadway Gateway district; the tradition of Boston's Commonwealth Avenue will continue in the West Side Greenway as will the New England townhomes of Harbor Point Housing in the South Second (Images, top left to bottom right: Ann Forsyth, Casa Aztlán, Dan Bertolet, Goody Clancy & Associates).*

Figure 51 - Vision for Chelsea's West End District *Inspired by Hammarby Sjostad, Stockholm, the area north of the Silver Line transit stop will feature ample open space and mixed-use housing, office, and commercial space (Forsyth).*

Figure 52 - Market Square Imagined *SHoP Architects' rendering for the Domino Sugar Factory rehabilitation makes a compelling precedent for Chelsea's future transportation center (SHoP Architects).*

Figure 53 - Illuminated Facades *The area along Everett Avenue will offer passersby glimpses inside animated shops, cafes, and light industrial production (Colette Copeland).*

Conclusion

Building for the Workforce takes advantage of the opportunities offered by the Silver Line extension into Chelsea by using near-term market demand to anchor a long-term development strategy.

The plan would capitalize on **regional economic advantage** through an ambitious but sensible residential and commercial development program carefully phased according to market conditions.

Building for the Workforce calls for **transportation and open space improvements and restructuring** that would guide the form of development while increasing environmental resilience.

Finally, the plan would create a s**trong neighborhood identity with distinct district characteristics** in order to establish community buy-in and make Chelsea a strong, stable city for decades to come.

IMPLEMENTATION

IMPLEMENTATION

Throughout the planning process, implementation has been an integral component. Implementation is not conceived of as just a means to an end. It is a mechanism for granting agency to a wide range of stakeholders. The proposals outlined here identify key stakeholders and propose thoughtful and practical strategies for their engagement in the realization of planning proposals.

Implementation strategies that exist in all three scenarios are represented within diagrams in this chapter. The diagrams seek to synthesize the overall planning process. It is the intention of the studio that the community will be able to use these implementation schemes in order to identify promising avenues for change.

Common Strategies
While each scenario elaborates a distinct set of implementation strategies, significant and inevitable commonalities exist. Figure 2, featured below, lays out 10 common strategies, giving a clear sense of the studio's focus areas. Strategies are grouped by planning area. They range from civic identity to freight management.

Stakeholder Chart
Figure 3 highlights 25 key stakeholders across the three scenarios. Within each scenario, the most involved stakeholders are identified with individual circles. A comparison across scenarios conveys a sense of how leadership differs, while also underscoring the consistency of certain stakeholders. Stakeholders range from the voices captured in the community engagement process to elected and appointed officials in the Commonwealth and Federal governments.

Scenario Implementation Grids
Implementation grids are utilized for each scenario to synthesize the following planning considerations: Strategies, Actions, Leaders, Partners, Funding Sources, Costs, and Timelines. Stakeholders are understood in two categories: leaders and partners. Leaders are the primary drivers of the proposal, while partners provide necessary support. Costs and timeline vary based on the scale or scope of intervention proposed. Funding costs are divided into three ranges: low ($0 to $100,000), medium ($100,001 to $1,000,000) and high (exceeding $1,000,000). The timeline of plan phasing is similarly divided into three ranges: short (0 to 5 years), medium (5 to 15 years), and long (exceeding 15 years). Generally, proposed policies and programming tend to be both low cost and implementable within a short time frame. Infrastructure improvements, unsurprisingly, have higher expected costs and longer time frames.

Figure 1 - *(Springfield)*

Figure 2 (next page, left) – Common Strategies *10 common strategies among the three scenarios are identified within broader planning themes.*

Figure 3 (next page, right) – Stakeholder Chart *25 key stakeholders (and the 12 most involved stakeholders) are highlighted from the different implementation strategies.*

URBAN DESIGN

STREET GRID. Introduce street grid with dimensions based on the existing urban fabric of Chelsea residential areas

REZONE. Update zoning code to accomodate new development and climate change

ECONOMIC DEVELOPMENT

ADAPT. Adaptive reuse of industrial buildings

IDENTITY. Stregthen local identity and marketing

OPEN SPACE

PARTNERSHIPS. Work with local schools to increase accessibility to recreational spaces

GREEN INFRASTRUCTURE. Build green corridors and stormwater management systems

HOUSING

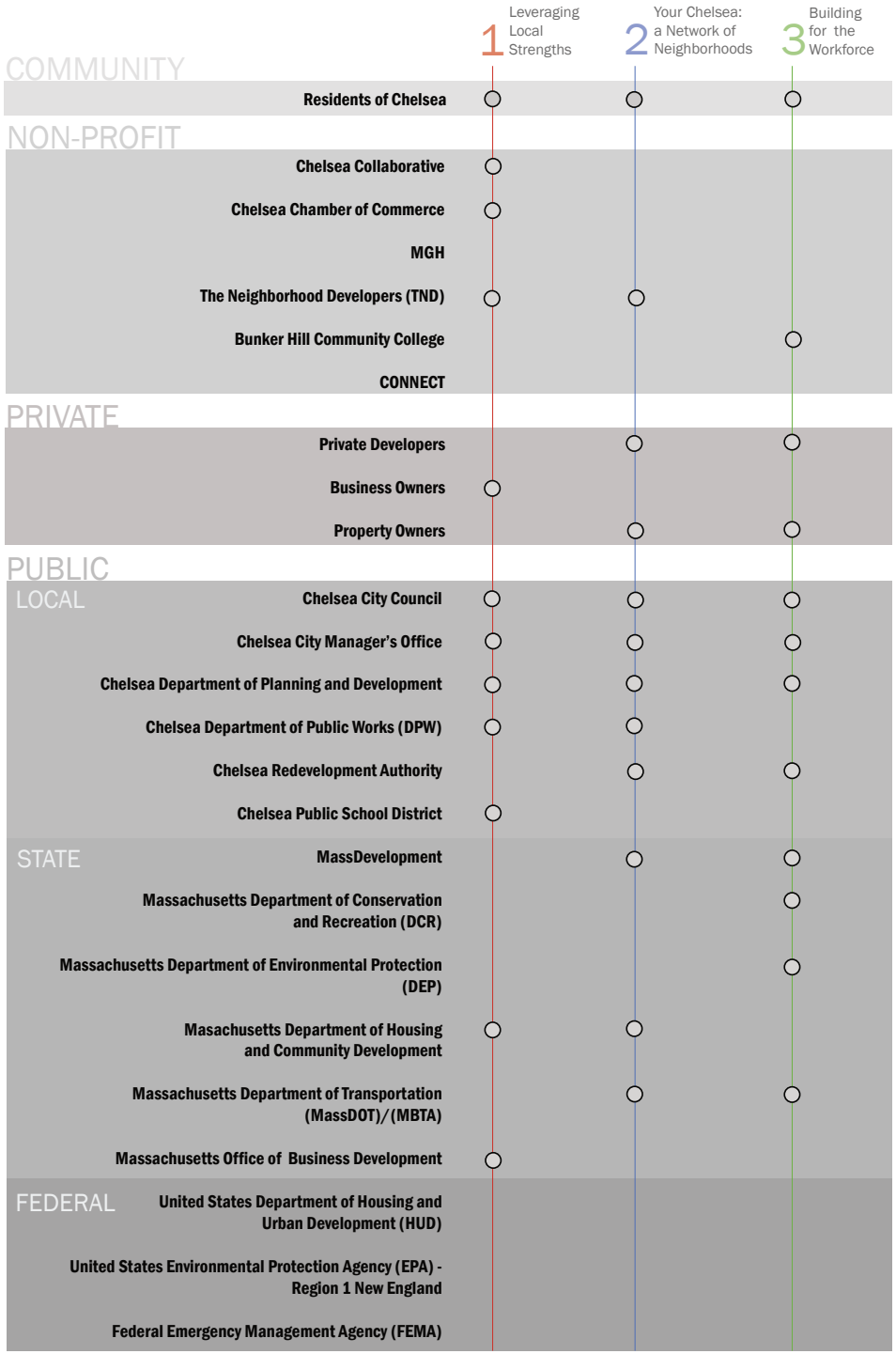
MIXED-USE. Promote mixed-use housing development

RESILIENCY. Establish building regulations for flooding through zoning changes

TRANSPORTATION

FREIGHT. Identify freight routes/corridors

WALKING/CYCLING. Create cyclist and pedestrian-friendly streets



LEVERAGING LOCAL STRENGTHS

The Leveraging Local Strengths scenario provides a modular set of actions, focused on realistic solutions to enhance the existing community. Champions are concentrated at the local level consisting of community groups, residents, business owners, and municipal departments. Key strategies include capitalizing on the existing food distribution cluster, supporting local entrepreneurship, reclaiming the waterfront, and the adaptive and flexible use of spaces. Because the scenario is heavily weighted towards the use of local resources and the strengthening of existing conditions, most actions are low-cost interventions that can be implemented within a period of five years. Coordinating stakeholders from different sectors and primarily depending on local resources depicts a complex political landscape, but it also represents a unique opportunity for establishing an inclusive form of urban governance. In essence, the scenario conceives of the implementation process as a vehicle for civic engagement and community building, for its modularity enables local actors to take over the development of pieces of the plan.

Transportation						
STRATEGIES	**ACTIONS**	**LEADERS**	**PARTNERS/STAKEHOLDERS**	**FUNDING SOURCE**	**COST**	**TIMELINE**
Introduce a Freight Corridor	**Install negative truck signage restricting trucks from non-freight routes in residential zones**	Chelsea Public Works Department		Chapter 90, MassWorks, MassDOT Transporation Enhancement Program, Safe Routes to School, MassDOT CMAQ Improvement Program, Federal grants (TIGER, etc), Private contribution of local industrial compnaies	Low	Short
	Redesign and improvement system of streetscape and roads	Chelsea Public Works Department	Local industrial companies, Chamber of Commerce	Chapter 90, MassWorks, MassDOT Transporation Enhancement Program, Safe Routes to School, MassDOT CMAQ Improvement Program, Federal grants (TIGER, etc), Private contribution of local industrial compnaies	High	Medium -Long
Onstreet Bicycle Lanes	**Dedicate a right-of-way, painting bike lanes (2,800 foot long bike route)**	Chelsea Public Works Department	MA Executive Office of Energy & Environmental Affairs, Local schools, Chelsea School District	Transportation Enhancement Program, Safe Routes to Schools, Recreational Trails Program, Gateway Cities Parks Program, Massachusetts Parkland Acquisitions and Renovations for Communities Program, WalkBoston, NEGAF, Bikes Belong Coalition, CMAQ Improvement Program	High	Medium-Long
Dedicated Bicycle/Pedestrian Path	**Dedicate land along SL / Rail for 4,200 foot-long multi-use path connecting with Northern Strand Community Trail**	Chelsea Public Works Department	MA Executive Office of Energy & Environmental Affairs	Transportation Enhancement Program, Safe Routes to Schools, Recreational Trails Program, Gateway Cities Parks Program, Massachusetts Parkland Acquisitions and Renovations for Communities Program, WalkBoston, NEGAF, Bikes Belong Coalition, CMAQ Improvem Improvement Program	High	Long
	Construct 700 foot long multi-use path adjacent to Everett Ave (connecting with Mystic Mall)	Chelsea Public Works Department	MA Executive Office of Energy & Environmental Affairs	Transportation Enhancement Program, Safe Routes to Schools, Recreational Trails Program, Gateway Cities Parks Program, Massachusetts Parkland Acquisitions and Renovations for Communities Program, WalkBoston, NEGAF, Bikes Belong Coalition, CMAQ Improvem Improvement Program	High	Long

Figure 4 – Implementation Grid: Leveraging Local Strengths *Leveraging Local Strengths emphasizes programming and policy interventions with low costs and short time frames, enabling immediate community engagement and a modular approach in which strategies can be enacted separately or comprehensively.*

Natural Systems and Open Space

STRATEGIES	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Increase the use of existing open spaces	**Establish a Joint Use Agreement and a program to support it.**	The Chelsea Collaborative	MassParks, KaBoom!, Chelsea Public School District, Chelsea Public Works Department, Chelsea Health Department, Mass in Motion, The Chelsea Youth Soccer League, Chelsea PopWarner Football & Cheerleading, The Chelsea Youth Basketball League, The Chelsea Little League, Chelsea High School	The Play Joint Use grant sponsored by KaBoom! State grants, volunteers, donations. Free of charge use of the facilities, releases the hosting institution from liability under the Massachusetts Recreational Use Statute, significantly reducing risks. Requesting local agencies such as the Department of Public Works and the Health Department to include the program in their annual budget and/or to include staff in their payroll. Ask community groups to publicize the program.	Low	Short-Medium
	Retrofit current parks to better accommodate athletic and active uses: baseball, basketball, soccer, inline skating, chess, bocce, walking	Chelsea Public Works Department	Chelsea Planning & Development Department	Massachusetts Local Acquisitions for Natural Diversity, Community Development Block Grant, Our Common Backyards Program	Medium-High	Medium-Long
Increase connectivity among open spaces in the city	**Construct three green corridors along Spruce Street, Everett Avenue and Washington Avenue**	Chelsea Public Works Department	United State Environmental Protection Agency-Region 1 New England (contact: Johana Hunter), Chelsea Planning & Development Department,	EPA Technical Assistance Program, EPA's DOT Transportation Enhacement Activities, Create an Incentive Program to encourage future private development of properties along the green corridors to finance its construction.	High	Long
	Make Revere and Everett facilities more accessible to Chelsea residents	Chelsea Planning & Development Department		City taxes	Medium-High	Short
Integrate the Silver Line/commuter rail corridor to the urban fabric of Chelsea	**Create a greenway along the the Silver Line/commuter rail corridor**	Chelsea Planning & Development Department	United State Environmental Protection Agency-Region 1 New England (contact: Johana Hunter), Massachusetts Bay Transportation Authority (MBTA), Chelsea Public Works Department	EPA Technical Assistance Program, EPA's DOT Transportation Enhacement Activities	High	Medium-Long
Activate with flexible programs	**Create a flexible program and pop-up uses for parking lots**	Chelsea Cultural Council	Chelsea Public Works Department, MassDOT, Chelsea Collaborative, Chelsea Chamber of Commerce, Chelsea Planning & Development Department, Massachusetts Cultural Council, Private Food Businesses	Chelsea Community Fund, Adams Arts Program	Low-Medium	Short
	Convert asphalt lot to skate park	Chelsea Public Works Department	Chelsea Planning & Development Department	Our Common Backyards Program	High	Medium
	Dedicate space and organize activities for youth mural painting and public sculpture	Chelsea Youth Commission	Roca, Boys & Girls Club, Chelsea High School, Private Developers, Chelsea Collaborative	Private Developers, Chelsea Community Fund, Local businesses	Low	Short-Medium
Reclaim the waterfront	**Work with owners of Logan PreFlight and Enterprise Rent-A-Car parcels to determine walkway along water's edge**	Chelsea Planning & Development Department	Chelsea City Council, Logan PreFlight, Enterprise Rent-A-Car, Property owners, Private developer	Massachusetts Local Acquisitions for Natural Diversity	High	Long
	Potential public use for Forbes Industrial Park (park link between Mill Creek Park and Burke School complex)	Chelsea Planning & Development Department	Private Developers	Massachusetts Land and Water Conservation Fund, Massachusetts Parkland Acquisitions and Renovations for Communities Program	High	Medium
	Extend Highland Park to waterfront	Chelsea Planning & Development Department	Private Developer	604(B) WQ Planning Grants, Massachusetts Parkland Acquisitions and Renovations for Communities Program	High	Long
	Public boat launching ramp on Chelsea River and Island End River (also storage for boats and trailers)	Chelsea Public Works Department	Chelsea Planning & Development Department	Massachusetts Local Acquisitions for Natural Diversity, Massachusetts Parkland Acquisitions and Renovations for Communities Program	Medium	Short

Economic Development

STRATEGIES	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Capitalized on existing food distribution cluster	Promote inward investement for support businesses	Chelsea Chamber of Commerce	Massachusetts Office of Business Development, Chelsea Economic Development Board	Small business administration (SBA)	Medium	Medium
	Strengthen the food linkage in the regional economy	Chelsea Economic Development Board	Regional industry partners, New England Council, Massachusetts Office of Business Development	Economic Development Fund, Community Development Block Grants	High	Long
	Inagurate a food-based research and culinary institute	Bunker Hill Community College	Industry experts, Private investors	Private Source	High	Medium-Long
	Promote an industry of composting waste	Chelsea Public Works Department	Food Industry, Waste Industry	Community Service Grant	Medium	Medium
	Establish businesses for organics recycling for both compost and energy generation (anaerobic digestion)	Private entrepreneurs	Chelsea Public School District, Local restaurants,New England Produce Center, Residents of Chelsea, Chelsea Public Works Department	Municipal contracts, Sales to farming & gardening projects, MassDevelopment, USDA, MassDEP, MassCEC	High	Short-Medium
	Catalyze food production in Chelsea	Chelsea Chamber of Commerce	Food Industry, Massachusetts Office of Business Development	Community Development Block Grants	Low	Medium
Increase job opportunities	Provide skill training and summer internships	Bunker Hill Community College	Local students, Chelsea School District, Unemployed Citizens	Hyams Foundation, Community Service Grant	Medium-High	Short-Medium
Support Entrepreneurs	Encourage enterpreneurship in immigrant communities	Chelsea Chamber of Commerce	Latino Business Community, MGH	Gateway Plus Action Grant	Medium-High	Short-Medium
	Create an information center for immigrant communities	MGH	United States Department of Health and Human Services, Community Organizations, Local immigrant communities	City of Chelsea Health and Human Services	Low	Short
	Establish pop-up market under the underbridge of Route 1 to reactivate underutilized space	Chelsea Chamber of Commerce	Chelsea Public Works Department, Chelsea Planning and Development Department, Latino Business Community	Small Business Admnistration Grants, Livable Community Grants	Medium	Short-Medium
	Promote infill development in the underbridge of Route 1 for the creation of affordable commercial spaces	Chelsea Planning and Development Department	Private Developers	Private investment	Medium-High	Long
Develop the business incubator HUB Chelsea	Develop a program	City of Chelsea Planning and Development	Non-Profit community organizations	Private Investors and Businesses, Economic Development Block Grants	Low	Short
	Determine the governance	City of Chelsea Planning and Development	Non-Profit community organizations	Private Investors and Businesses, Economic Development Block Grants	Low	Short
	Lease or acquire a suitable building	City of Chelsea Planning and Development	Private sector, Non-Profit community organizations	Private Investors and Businesses, Economic Development Block Grants	High	Medium
	Identify a developer	City of Chelsea Planning and Development	Private sector, Non-Profit community organizations	Private Investors and Businesses, Economic Development Block Grants	Low	Medium
Strengthen the local economy	Create a branding to promote local economy	Chelsea City Manager's Office	Business leaders, representatives of community organizations, Sample of visitors	Small Business Admnistration Grants, Livable Community Grants	Low	Short

Housing

STRATEGIES	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Catalyze high density, mixed-use, mixed-income housing development	**Build 300 + unit Transit Oriented Development with supportive housing, affordable rental units, and market rate units**	The Neighborhood Developers	Mitchell Properties, Masachusetts, Department of Housing and Community Development, Chelsea City Manager's Office, Chelsea City Council, Chelsea Collaborative, NeighborWorks America, Living Cities Foundation, Chelsea Chamber of Commerce, Hispanic American Chamber of Commerce, Bank of America Foundation, Boston Foundation, The Life Foundation, Hyams Foundation	MassHousing Affordable Housing Trust Fund, 40R Smart Growth Overlay District,Transit Oriented Bond program HOME Funds (via North Suburban HOME Consortium), Community Development Block Grant, MassDevelopment (Low Income Housing Tax Credit, New Market Tax Credit), Community Investment Tax Credit, Home Funders program via the Community Econmoic Development Assistance Corporation (CEDAC), Supportive Housing funds via MA CEDAC, Community Development Action Grant (via DHCD), Certified Housing Development Credit, Economic Development Incentive Program, Gateway Cities Planning Grants: Housing Development Incentive Program, Housing Planning Grant, Gateway Plus Action Grant	High	Medium-Long
	Introduce inclusionary zoning policy to mandate mixed-income development for both market rate and subsidized developments	Chelsea Planning & Development Department	Chelsea City Council, Masachusetts Department of Housing and Community Development	MassHousing mortgage support projects	Low	Short
	Encourage homeownership for first-time homebuyers through loan programs	Chelsea Planning & Development Department	Masachusetts Department of Housing and Community Development	MassHousing mortgage support projects	Low	Short
	Establish an Affordable Housing Trust Fund for the City of Chelsea	Chelsea Planning & Development Department	Masachusetts Department of Housing and Community Development	MassHousing mortgage support projects	Low	Short
Prepare for climate change	**Establish a Climate Change Zoning to mandate or incentivize resilient construction techniques, storm-water recapture, etc…**	Chelsea City Council	Chelsea City Council, MassWorks, Chelsea Planning & Development Department, Massachusetts Executive Office for Administration and Finance	Massachusetts Parkland Acquisitions and Renovations for Communities Program, MassWorks Infrastructure Program Infrastructure Investment Incentive Program	Low	Short
Secure a mixed use zoning	**Inagurate an DIF area or Growth District**	Chelsea Planning & Development Department	Massachusetts Economic Assistance Coordinating Council, Chelsea City Manager's Office, Chelsea City Council, Masachusetts Department of Housing and Community Development	MA Smart Growth / Smart Energy Program	Low	Short

Urban Design

STRATEGIES	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Adaptive Reuse of Light Industrial Buildings	**Provide additional incentive to developers by giving historic designation or additional subsidy.**	Chelsea Planning & Development Department	Chelsea Zoning Board of Appeals, Private developers	Commonwealth, Federal (EPA, HUD) grants and subsidies for adaptive reuse, Historic Tax Credits, Private developer equity, New Market Tax Credit	High	Short
Ensure that new development is contextual	**Establish a form-based code**	Chelsea Planning & Development Department	Chelsea City Council, Chelsea Zoning Board of Appeals, Private developers, community members	Funding for planning director / design consultant team	Low	Short
Integrate new construction into existing built form of Chelsea	**Make changes to existing building codes**	Chelsea Planning & Development Department	Chelsea Zoning Board of Appeals, Private Developers, City Building Inspectors	General funds / design consultant team	Low	Short
	Re-grid large parcels	Chelsea Planning & Development Department	Chelsea Public Works Department, DeMoulas, Private Developers	Costs negotiated with landholder, Cost sharing based on landholder benefit from development	High	Medium-long

NETWORK OF NEIGHBORHOODS

The implementation grid for A Network of Neighborhoods demonstrates the plan's commitment to feasible and phased neighborhood development. Good neighborhoods develop incrementally over time, and the grid contains a range of strategies that can be enacted in the short-, medium-, and long-term. The strategies focus on the development of attractive, memorable places through coordination among community members, government officials, institutions, and other stakeholders.

Transportation						
Strategy	**Action**	**Leader**	**Partners / Stakeholders**	**Funding Source**	**Cost (high, medium, low)**	**Timeline (short, medium, long-term)**
Reintroduce street grid	Work inter-departmentally to complete street grid (as per plan) by using ROW or land acquisitions	Chelsea Planning and Development Department	Public Works, City Attorneys, City Manager, property owners	City of Chelsea CIP	Medium/High	Medium
Strengthen role of station with multi-modal connections	Use Station layout/design to create central node in neighborhood and enable easy multi-modal connections	MBTA	MassDOT, City of Chelsea	MBTA, MassDot, City, EPA Smart Growth Transportation Funding	High	Medium
	Analyze existing bus routes and identify potential route changes	MBTA	MassDOT, City of Chelsea	MBTA, MassDot, City	Low	Short
	Examine extension of Boston Hubway Bike share to Chelsea	Hubway, MassDOT	City of Chelsea	Hubway	Low	Short
Identify Trucks/Freight Routes	Outreach to local freight/industry stakeholders and present DRAFT plan for truck routes	Chelsea City Manager	Chamber of Commerce, Industry groups	n/a	Low	Short
	Finalize truck routes	Chelsea Planning and Development Department		n/a	Low	Short
	Install signage and publicize time restrictions, and any infrastructural upgrades	Chelsea DPW	Planning, Public Works, Chamber of Commerce	USDOT Tiger Discretionary Grants, City	Low	Short
	Enforce truck routes and time restrictions	Chelsea Police Department	Citizen reporting	Regular police operating budget	Low	Short/Medium
	Conduct review of truck routes (evaluate crash data, outreach to local industry partners, survey people on the street)	Chelsea Planning and Development Department	Chamber of Commerce, Industry groups	City	Low	Medium
Minimize surface and street parking	Develop public parking garage	Chelsea Planning and Development Department and City Manager	Private sector	Private sector	Medium	Short
	Zoning changes for parking requirements in future development	Chelsea Planning and Development Department and City Council	Loca business community	City budget	Low	Short
	Analyze potential for dynamic parking pricing pilot program	Chelsea Planning and Development Department	MAPC	USDOT Urban Partnership Program, MAPC	Low/Medium	Medium

Figure 5 – Implementation Grid: A Network of Neighborhoods *A Network of Neighborhoods presents a range of interventions focused around medium cost interventions into the built environment, slowly building a re-envisioned neighborhood in the study area.*

Natural Systems and Open Space						
Strategy	**Action**	**Leader**	**Partners / Stakeholders**	**Funding Source**	**Cost (high, medium, low)**	**Timeline (short, medium, long-term)**
Integrate natural/open spaces through creating green corridors	Develop and promote the inclusion of green infrastructure strategies (such as bioswales, curb alternatives, permeable surfaces, urban trees, plants, planters, etc.) into street design to coordinate and realize ecological and social benefits. Amend zoning code to enforce this.	Chelsea Planning and Development Department	DPW; Zoning Board of Appeals; MassDOT	PARC; LAND	Medium/High	Medium/ Long
	Develop targeted 'green' streets and corridors to ensure and promote the safety of pedestrians and bicycles	Chelsea Planning and Development Department	DPW; Zoning Board of Appeals; MassDOT	PARC; LAND	Medium/High	Medium/Long
	Program streets and intersections ('plazas') to establish attractive corridors between different neighborhoods	Chelsea Planning and Development Department	DPW; Zoning Board of Appeals; MassDOT; City Clerk	PARC; LAND; Private Investors	Medium/High	Medium/Long
	Develop clear connections to waterfront nodes using new and existing streets and open space, and improved streetscape designs	Chelsea Planning and Development Department	DPW; Zoning Board of Appeals; MassDOT	PARC; LAND; Rivers and Harbors Grant	Medium/High	Medium/Long
Incorporate existing and new individual parcels within a multi-scalar water management system	Amendment zoning codes to ensure individual plots increased uptake of achievable water management practices, such as groundwater recharge and rainwater harvesting strategies	City Manager; City Council	Planning & Development; Zoning Board of Appeals; Public (Property Owners)		Low	Short
	Amend zoning codes to encourage individual land owners to develop higher efficiency water management practices, such as vegetated (or green) walls, roofs, and infiltratable surfaces. Consider financial incentives	City Manager; City Council	Planning & Development; Zoning Board of Appeals; Public (Property Owners)	City Council	Low	Short
Ensure equitable provision of suitable recreational and open space facilities for all residents	Provide each neighborhood with access to appropriately located and well designed parks, playgrounds, recreational spaces	Chelsea Planning and Development Department	Community Schools; DPW	PARK, LAND	Medium/High	Medium/Long
	Give priority to the rehabilitation and ongoing maintenance of existing parks, playgrounds, and recreational facilities	DPW	Community Schools; Planning & Development; Community Groups	PARC	Medium	Short
	Collaborate with schools and youth provision groups to ensure access to existing recreational facilities	Chelsea Planning and Development Department	Chelsea School District, DPW		Low	Short
	Design and program recreational spaces appropriately to ensure safety and discourage crime	Chelsea Planning and Development Department	Community Schools; Police; DPW	PARC	Low/Medium	Short
Develop Soft Infrastructure Network Plan	Increase quantity and dispersement of vegetated and pervious open spaces, street and vegetation corridors, parking lots, coastal land, vacant land parcels and setbacks together as an integrated water management plan to collectively direct, catch and recharge stormwater into the groundwater system.	City of Chelsea	Individual Property Owners/Managers; Infrastructure Managers (Chelsea PW); Federal Government Water and Coastal Management (FEMA, USACE) bodies; Landscape Architecture and Hydrological Engineering Consultants.	BIDs, DIFs and Tax Exempt Bonds for district-based interventions; MassDev + MassDOT funding for infrastructure for economic devt; gateway cities funding for park and infrastructural projects; Massachusetts cultural heritage and historic funding for preserving "native" landscapes; Brownfields remediation funding.	Low	Short/Medium
Incorporate Soft Infrastructure Specifications	Develop soft infrastructure specificationsand guidelines based on performance criteria and provide a library of best technical practices guidelines to incentivize land owners/managers to intervene within their land parcels.	City of Chelsea	Infrastructure Managers (Chelsea PW); Federal Government Water and Coastal Management (FEMA, USACE) bodies; Landscape Architecture and Hydrological Engineering Consultants.	City General Operating Funds	Low	Short/Medium
Construct Island End River Park	Designate a continuous wetlands conservation areato connect Mary O'Malley Waterfront Park with the Western coast of Island End River to accommodate flooding and filter stormwater runoff before entering the Mystic River.	City of Chelsea; City of Everett	Adjacent Industrial landowners; Federal Government Water and Coastal Management (FEMA, USACE) bodies; Landscape Architecture and Hydrological Engineering Consultants.	gateway cities funding for park and infrastructural projects; Massachusetts cultural heritage and historic funding for preserving "native" landscapes; Brownfields remediation funding.	High	Long
Design roads as vevees	Plan new road and infrastructure constructionalong with terraced landforming to anticipate new flooding freeboard elevations for building construction and other activities.	City of Chelsea	Infrastructure Managers (Chelsea PW); Federal Government Water and Coastal Management (FEMA, USACE) bodies; Landscape Architecture and Hydrological Engineering Consultants.	BIDs, DIFs and Tax Exempt Bonds for district-based interventions; MassDev + MassDOT funding for infrastructure for economic devt; gateway cities funding for park and infrastructural projects.	Medium/High	Medium/High

Economic Development						
Strategy	**Action**	**Leader**	**Partners / Stakeholders**	**Funding Source**	**Cost (high, medium, low)**	**Timeline (short, medium, long-term)**
Reduce the extent to which brownfields discourage development	Hire an economic development planner who is responsible for applying for brownfields assessment and remediation grants, as well as offering technical assistance to developers	Chelsea Planning and Development Department	Chelsea Chamber of Commerce, Metropolitan Area Planning Council, local businesses, property developers	City general operating funds (short term) and DIF revenue (long term)	Low	Short
	Conduct an area-wide planning study to identify where contamination exists and probable remediation costs	Chelsea Planning and Development Department	EPA, MA Department of Environmental Protection, HUD, property owners, property developers	EPA Assessment Grant Program, EPA Brownfields Area Wide Planning Program, CDBG	Low	Short
	Establish District Area Financing (DIF) in West Chelsea that funds a revolving door fund for brownfield remediation	Chelsea City Manager's Office	MA Executive Office of Energy and Environmental Affairs, MA Economic Assistance Coordinating Council, MA Executive Office of Housing and Economic Development, private developers	New business tax revenues from within DIF; initial development in DIF sparked by brownfields grants from MassDEP Waste Site Cleanup Program, Brownfields Redevelopment Fund, Brownfields Tax Credit Program, and other state/federal programs	Medium	Medium
	Apply Chapter 43D expedited permitting process to West Chelsea brownfields	Chelsea Planning and Development Department	MA Executive Office of Housing and Economic Development, private developers	Chelsea Planning and Development Department	Low	Short
Improve municipal process of property acquisition and disposition for redevelopment	Develop comprehensive acquisition plan that identifies key parcels	Chelsea Planning and Development Department	Other city departments, CDCs, property developers	City general operating funds	Low	Short
	Centralize land disposition and acquisition oversight into a municipal land bank	Chelsea Planning and Development Department	City tax collector and attorney's offices	City general operating funds (short term) and revenue from sale of properties (long-term)	Medium	Medium
Promote businesses which invest in the community	Extend tax incentives to businesses to locate or expand in Chelsea	Economic Development Board	Chelsea Chamber of Commerce, Chelsea Planning and Development	Tax Incentive for the Retention and Expansion of Business (TIRE)	Medium	Medium
Support small manufacturing/community arts spaces	Rehabilitate existing industrial facilities to be used by small manufacturers	Economic Development Board	Chelsea Chamber of Commerce, Urban Manufacturing Alliance, MassMEP	State Emerging Technology Fund, State Job Creation and Building Investment Tax Credits, Federal Industrial Revenue Bond Program	Low	Medium
	Partner with local schools and community organizations to establish an industrial arts "creative district" centered on Carter Street which hosts job training and manufacturing workshops	Economic Development Board	Chelsea Artists' Collaborative, New England Sculpture Service, Artisans' Asylum, indpendent makerspaces; Chelsea High School, Bunker Hill Community College, Boys and Girls Club	City general funds and business contributions	Low/Medium	Long

Housing

Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
Ensure 20% affordable Housing	Institute inclusionary zoning policy	City Council	Developers	Private Developers	Low	Long
	Leverage Tax credits to finance development	Developers		Federal Tax Credit Designation	Low	Long
	Maximize public and private funding sources that support smart growth/affordable housing	TND and Private Developers	State and federal agencies	Federal and State funding sources	Low	Short
Incentivize Market Rate Housing Development	Rationalizing zoning policies	City Council	Chelsea Planning and Development Department	Policy change (no funding required)	Low	Short
	Introduce housing incrementally to avoid saturating the housing market	City Council	Chelsea Planning and Development Department	Policy change (no funding required)	Low	Medium
	Exercise eminent domain	City Council	Chelsea Planning and Development Department	Policy change (no funding required)	Medium/High	Medium
Encourage different housing typologies	Include specific language about building forms in the zoning code	Chelsea Planning and Development Department/City Council	Developers	Policy change (no funding required)	Low	Medium
Review brownfield sites and choose prime residential development sites based on sites requiring least amount of remediation	Seek funding for phase 1 of assessments	City Council	Developers/Non profit developers, the EPA	EPA	High	Variable (depending on remediation)
Building responsibly in relation to flood mitigation	Set zoning requirements to include flood mitigation design	Zoning Board/City Council	Developers	Policy change (no funding required)	Low	Long

Urban Design

Strategy	Action	Leader	Partners / Stakeholders	Funding Source	Cost (high, medium, low)	Timeline (short, medium, long-term)
Transition scale of the built environment	Assess zoning code, re-write if needed	Chelsea Planning and Development Department	Zoning Board of Appeals, Planning Board, City Manager, City Council	City operating budget	Low	Short
	Re-zone/create new zones	Chelsea Planning and Development Department	City Counsil, Zoning Board of Appeals	City operating budget	Low	Short
New neighborhood branding/wayfinding	Create name for overall new neighborhood	Chelsea Planning and Development Department	Cultural Council, Historical Commission, Youth Commission, City Manager, City Council, business community, community members	DIF, BID, state/federal funds, city budget	Low	Medium
	Create unique identities for the smaller nodes	Chelsea Planning and Development Department	Cultural Council, Historical Commission, Youth Commission, City Manager, City Council, business community, community members	DIF, BID, state/federal funds, city budget	Low	Medium
	Develop wayfinding system for new areas	Chelsea Planning and Development Department	Cultural Council, Historical Commission, Youth Commission, City Manager, City Council, business community, community members	DIF, BID, state/federal funds, city budget	Low	Medium

BUILDING FOR THE WORKFORCE

Building for the Workforce's implementation strategy relies on establishing strong public-private partnerships between Chelsea and private real estate entities over the next 25 years to fund Chelsea's vigorous, expected growth. In addition to robust housing development, the plan's directive for substantial green space and infrastructure expansion calls upon state and regional funding sources. Numerous policy changes also support these goals. Overall, by reaching out to the private sector and solidifying Chelsea's place within the region, Building for the Workforce hopes to capitalize on the city's economically advantageous position and utilize this opportunity to create a strong neighborhood identity that will last for years to come.

Transportation						
STRATEGY	**ACTIONS**	**LEADERS**	**PARTNERS/STAKEHOLDERS**	**FUNDING SOURCE**	**COST**	**TIMELINE**
Propose Mystic Mall Silver Line Station	Construction a station at the intersection of Everett Avenue and the Mystic Mall. It will serve as the center of all transportation networks and will feature mixed-use development, open space, and ample office space.	MassDOT/MBTA	City of Chelsea, Private developers	MBTA funds, Private funds, tax revenue	High	Short
Adjust parking regulations	Reduce current requirements by 50% to avoid excess surface parking	City Council	None	N/A	Low	Short
	Require one tree planted per 10 parking spots	City Council	None		Low	Short
	No more than 25% of parking visible from major street view	City Council	None		Low	Short
Improve pedestrian experience	Street adjustments and the creation of new streets linking West Chelsea to extant residential space	Chelsea Planning & Development	Federal/state transportation authorities, Private developers	Department of Transportation (DOT), Department of Infrastructure (DOI), Mass Highway, Department of Housing and Community Development (DHCD), Regional Planning Authority, Metropolitan Planning Organization	Medium to High	Short to Long
	Divide larger blocks into smaller pieces to promote walkability	Chelsea Planning & Development	Federal/state transportation authorities, Private developers		Medium to High	Medium to Long
	Landscaped crossings along the Silver Line, ensuring that the space remain permeable	Chelsea Planning & Development	Federal/state transportation authorities, Private developers		Medium to High	Short
Create bicycle network	Addition of bicycle lanes on all major streets (Everett, Broadway, Spruce)	Chelsea Planning & Development	Private Developers, Hubway	Safe Routes to School (SRTS), National Transportation Enhancements Clearinghouse (NTEC)	Medium	Short
	Bicycle lane construction along the Silver Line corridor	Chelsea Planning & Development	Private Developers, Hubway		Medium	Short
	Creation of a comprehensive network of major bicycle arteries that provide east-west and north-south mobility	Chelsea Planning & Development	Private Developers, Hubway		Medium	Medium
	Creation of a secondary, minor arterial network	Chelsea Planning & Development	Private Developers, Hubway		Medium	Long
	Excellent bicycle parking located at key locations to increase awareness of and encourage cycling	Chelsea Planning & Development	Private Developers, Hubway		Medium	Medium
Implement traffic demand management	Identify major arterial roads	City Manager	MassDOT/MBTA	National Highway Performance Program (NHPP), Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Low	Short
	Build secondary roads to complement major arteries	City Manager	MassDOT/MBTA		High	Medium to Long
	Intersection and traffic signal improvements at major network crossings	City Manager	MassDOT/MBTA		Medium	Medium
Create a designated truck zone	Make 2nd Street a truck-intensive zone	MassDOT	City of Chelsea	National Highway Performance Program (NHPP), Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Low	Short
	Road improvements to handle traffic load	MassDOT	City of Chelsea		Medium	Short
Improve pedestrian experience	Street adjustments and the creation of new streets linking West Chelsea to extant residential space	Chelsea Planning & Development	Federal/state transportation authorities, Private developers	Department of Transportation (DOT), Department of Infrastructure (DOI), Mass Highway, Department of Housing and Community Development (DHCD), Regional Planning Authority, Metropolitan Planning Organization	Medium to High	Short to Long
	Divide larger blocks into smaller pieces to promote walkability	Chelsea Planning & Development	Federal/state transportation authorities, Private developers		Medium to High	Medium to Long
	Landscaped crossings along the Silver Line, ensuring that the space remain permeable	Chelsea Planning & Development	Federal/state transportation authorities, Private developers		Medium to High	Short
Create bicycle network	Addition of bicycle lanes on all major streets (Everett, Broadway, Spruce)	Chelsea Planning & Development	Private Developers, Hubway	Safe Routes to School (SRTS), National Transportation Enhancements Clearinghouse (NTEC)	Medium	Short
	Bicycle lane construction along the Silver Line corridor	Chelsea Planning & Development	Private Developers, Hubway		Medium	Short
	Creation of a comprehensive network of major bicycle arteries that provide east-west and north-south mobility	Chelsea Planning & Development	Private Developers, Hubway		Medium	Medium
	Creation of a secondary, minor arterial network	Chelsea Planning & Development	Private Developers, Hubway		Medium	Long
	Excellent bicycle parking located at key locations to increase awareness of and encourage cycling	Chelsea Planning & Development	Private Developers, Hubway		Medium	Medium
Implement traffic demand management	Identify major arterial roads	City Manager	MassDOT/MBTA	National Highway Performance Program (NHPP), Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Low	Short
	Build secondary roads to complement major arteries	City Manager	MassDOT/MBTA		High	Medium to Long
	Intersection and traffic signal improvements at major network crossings	City Manager	MassDOT/MBTA		Medium	Medium
Create a designated truck zone	Make 2nd Street a truck-intensive zone	MassDOT	City of Chelsea	National Highway Performance Program (NHPP), Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Low	Short
	Road improvements to handle traffic load	MassDOT	City of Chelsea		Medium	Short

Figure 6 – Implementation Grid: Building for the Workforce *Building for the Workforce offers interventions with a clear focus on economic development and thoughtful consideration of a variety of low- to high-cost measures.*

Natural Systems and Open Space

Phase One: Mitigate flooding by addressing deficiences in Chelsea's drainage system by leveraging new TOD for the construction of green infrastructure (GI) development and low impact development (LID) techniques that place Chelsea's citizens first. Introduce Chelsea's "Green Hook" and begin preliminary financial and

STRATEGY	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Protect and Enhace Established Community Assets	Further Program Mary O'Malley Waterfront Park and create stronger access to it from surrounding neighborhood	Department of Public Works (DPW)	Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club, , Chelsea Planning & Development, Massachusetts Department of Environmental Protection (MassDEP), Environmental Protection Agency (EPA)	FEMA Flood Mitigation Assistance Program	Medium	Short
Initiate stormwater management	GI development along Everett and Spruce Streets (ex. bioswales that flow into rain gardens at street corners)	DPW, Chelsea Planning & Development, MassDEP, EPA	Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club	NRCS Mass, Clean Water SRF, Drinking Water Supply Protection Program, NOAA Coastal Pollution Remediation	Medium	Short
	LID techniques required for all new development taking place in Phase One (ex. greenroofs, public plazas with permeable pavement) Use Market Square around new Silver Line Station as showcase	Chelsea Planning & Development , Private Developers	MassDEP, EPA, Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club	NRCS Mass, Clean Water SRF, Drinking Water Supply Protection Program, NOAA Coastal Pollution Remediation	Medium to High	Short
	Infrastructure Improvements (ex. rainwater harvesting as part of infrastructure improvement, underground retention, oversized pipes)	Department of Conservation and Recreation (DCR), DPW	MassDEP	Clean Water SRF, Drinking Water Supply Protection Program	High	Long
Create flood mitigation	Commission a financial and environmental feasibility study for "engineered" and "natural" flood mitigation techniques within critical area*	DPW, Chelsea Planning & Development	Local engineering firm (consultants)	FEMA Pre-Disaster Mitigation Grant Program, Brownfields Redevelopment Fund through MassDevelopment	Medium	Short
	Create RFP for development of "Green Hook" (emphasize designs that place	City Council, Chelsea Planning & Development	FEMA, EPA, local nonprofits & community groups	FEMA Flood Mitigation Assistance Program	low	Short
Begin land acquisition	Set up a land acquisition committee that will reach out to affected property owners within critical area	Chelsea Planning & Development	Property and business owners	Conservation Assistance for Small Communities, Brownfields Redevelopment Fund through MassDevelopment	Low	Short
	Buy parcels from current owners within critical area. Negotiate easment acquisition along Marginal Street for greenway construction.	City Council, Chelsea Planning & Development	Property and business owners	LAND, PARC	High	Medium
Ensure timely implementation	Create check point dates developers are required to reach that trigger the next phase of public benefits/development	City Council, Chelsea Planning & Development	Private developers	City of Chelsea	low	Short
Initiate environmental remediation	Implement necessary remediation step on acquired parcels within critical area. Set goal for 25-50% completion.	EPA, Federal Emergency Management Agency (FEMA), Chelsea Planning & Development	Local enviromental engineering consultants	Brownfields Redevelopment Fund through MassDevelopment	Medium to High	Long

Phase Two: Continue to implement GI development and LID techniques within phase two construction. Begin remediation and implementation of the "Green Hook" along parcels at tip of the Island End River (expand Island End Park).

STRATEGY	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Continue stormwater management	GI development along new streets created through phase two	DPW, Chelsea Planning & Development, MassDEP, EPA	Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club	NRCS Mass, Clean Water SRF, Drinking Water Supply Protection Program, NOAA Coastal Pollution Remediation	Medium	Short
	LID techniques required for all new development taking place in phase two (ex. greenroofs, public plazas with permeable pavement)	Chelsea Planning & Development, Private Developers	MassDEP, EPA, Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club	NRCS Mass, Clean Water SRF, Drinking Water Supply Protection Program, NOAA Coastal Pollution Remediation	Medium to High	Short
Continue land acquisition	Buy parcels that were not acquired in phase one from current owners	City Council, City Attorney	Affected business owners	PARC, LAND	High	Short
Continue environmental remediation	Implement necessary remediation step as determined in phase one environmental study. Complete remediation on all publicly acquired parcels and work with private developers for remediation of their parcels if contaminated.	EPA, FEMA, Chelsea Planning & Development	Local enviromental engineering consultants; private developers	Brownfields Redevelopment Fund through MassDevelopment	Medium to High	Long
Continue flood mitigation	Implement stormwater and flood prevention strategies in the area	EPA, FEMA, Chelsea Planning & Development		FEMA Flood Mitigation Assistance Program	High	Medium
Construct community spaces	Construct structures and spaces for social gathering	City Council, Chelsea Planning & Development	Local Nonprofits (Chelsea Green Space); Community	Our Common Backyards Program	Medium	Medium
Create new pedestrian connections	Complete West Chelsea Boulevard (Carter Street) that connects new residential development and Silver Line Station to The Hook at Island End Park	DPW, Chelsea Planning & Development, City Council	Landscape architecture firm, transportation consultant	Local BID, City of Chelsea, EPA Grants	Medium	Short to Medium
Liaise with community groups	Establish a relationship with a local nonprofit that will sponsor this environmental education programming for youth	Local Nonprofits	City Council	MET General Grant/Non-Profit Sponsorship	Low	Short
Maintain new park space	Set up joint program with local residents, community groups and associations to maintain park	DPW, Chlesea Green Space	Residents, local businesses, local schools, Chelsea Boys and Girls Club	City of Chelsea, Local Residents, State and Federal Grants	Medium	Ongoing
Expand park space east of Tobin Bridge	Set up a land acquisition committee that will reach out to waterfront landowners to create privat public partnerships for future development and open space	Chelsea Planning & Development	Property and business owners	Conservation Assistance for Small Communities, Brownfields Redevelopment Fund through MassDevelopment	Low	Short

Phase Three: Complete remediation and development of the "Green Hook." Involve community in programming decisions for the "Green Hook." Continue to implement GI development and LID techniques within phase three construction.

STRATEGY	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Finalize environmental remediation	Implement necessary remediation step as determined in phase one environmental study for remaining parcels along the waterfront	EPA, FEMA, Chelsea Planning & Development	Local enviromental engineering consultants	Brownfields Redevelopment Fund through MassDevelopment	Medium to High	Medium
Complete Green Hook	Link green streets along spruce through park space and entire waterfront with greenway and into existing neighborhood to the East	DCR, DPW	Chelsea Green Space	PARC, LAND	Medium	Medium
	Program all spaces along waterfront and allow for temporaray inundation	DCR, DPW	Local schools, non-profits	Clean Water SRF	High	Medium
Maintain new park space	Set up joint program with local residents, community groups and associations to maintain park	DPW, Chlesea Green Space	Residents, local businesses, local schools, Chelsea Boys and Girls Club	City of Chelsea, Local Residents, State and Federal Grants	Medium	Long
Finalize stormwater management	GI development along new streets created through phase three	DPW, Chelsea Planning & Development, MassDEP, EPA	Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club	NRCS Mass, Clean Water SRF, Drinking Water Supply Protection Program, NOAA Coastal Pollution Remediation	Medium	Short
	LID techniques required for all new development taking place in phase three (ex. greenroofs, public plazas with permeable pavement)	Chelsea Planning & Development, Private Developers	MassDEP, EPA, Chelsea Green Space, Property and business owners, local schools, Chelsea Boys and Girls Club	NRCS Mass, Clean Water SRF, Drinking Water Supply Protection Program, NOAA Coastal Pollution Remediation	Medium to High	Short
Treat stormwater	Separate water and sewer	DCR, DPW	MassDEP, EPA	Drinking Water Supply Protection Program, Clean Water SRF	High	Long
Finalize land acquisition	Acquire land along waterfront adjacent to Marginal Street	City Council, Chelsea Planning & Development	Property and business owners	LAND, PARC	High	Medium

Economic Development

STRATEGY	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Form one-stop-shop for development inquiries	Create clear web platform for Chelsea Planning & Development that specifies contacts and procedures for interested developers and tenants	Chelsea Planning & Development, MassDevelopment, Possibly Planning Director John DePriest or other designated Planning or Economic Development staff member to serve as the lead organizer	Chelsea Chamber of Commerce	Municipal budget, Gateway Plus Action Grant (MA Department of Housing and Economic Development)	Low	Short
Engage in proactive outreach to employers who might be interested in becoming tenants of new development in Chelsea	Reach out to employers in the Boston area that may need back office space to gauge their interest in Chelsea and learn about any specific development needs/ parameters.	Chelsea Planning & Development, MassDevelopment	Chelsea Chamber of Commerce	Municipal budget, Gateway Plus Action Grant (MA Department of Housing and Economic Development)	Low	Short
	Reach out to health care providers and Innovation District businesses.	Chelsea Planning & Development, MassDevelopment	Chelsea Chamber of Commerce		Low	Short
	Considering this input, assemble parcels that are large enough to accommodate the office space needs of prospective tenants and negotiate with developers as to the characteristics of the new development.	Chelsea Planning & Development, MassDevelopment	Chelsea Chamber of Commerce		Low	Short
Reduce risk for potential developers	Test possible development sites for hazardous waste contamination to identify high risk/ high cost areas	Chelsea Planning & Development	Private developers	EPA grants (Area-Wide Planning Pilot Program, Multi-Purpose Pilot Grants, or Targeted Brownfields Assessments), Grant from Brownfields Site Assessment Program within MassDevelopment's Brownfields Redevelopment Fund, Municipal funds	Medium	Short
Expand Bunker Hill Community College	Work with Bunker Hill Community College to identify sites for facility expansion.	Bunker Hill Community College	Chelsea Health & Human Services, Chelsea Planning & Development, ConnectNOW, Chelsea Chamber of Commerce, Employers	"Pay for Success" grants, Workforce Competitiveness Trust Fund grants, Grants to implement the MA Community Colleges and Workforce Development Transformation Agenda (US Department of Labor), Performance Incentive Fund grants (MA Department of Higher Education), Investments and fundraising campaign by Bunker Hill	Low	Medium
	Collaborate to build on current worker training programs, based on priorities for the Chelsea workforce	Bunker Hill Community College	Chelsea Health & Human Services, Chelsea Planning & Development, ConnectNOW, Chelsea Chamber of Commerce, Employers		Low	Medium
	Broaden the Allied Health Certificate Programs at Bunker Hill to include health administration.	Bunker Hill Community College	Chelsea Health & Human Services, Chelsea Planning & Development, ConnectNOW, Chelsea Chamber of Commerce, Employers		Medium	Medium
Modify existing employee training programs so that they are relevant to new employers	Communicate with potential and current employers to identify the skills they seek	Chelsea Planning & Development	Chelsea Health & Human Services, Bunker Hill Community College, Chelsea High School, Chelsea Collaborative, ConnectNOW, Chelsea Chamber of Commerce, Central Latino, Inc., Choice Thru Education, Inc., Shore Educational Collaborative, Jordan Boys & Girls Club, Roca, Inc., Lewis H. Latimer Society	Gateway Cities Education Agenda grants (MA Executive Office of Education), Workforce Competitiveness Trust Fund grants, Future "Pay for Success" grants, MA 21st Century Community Learning Centers--Supporting Additional Learning Time grants (MA Department of Elementary and Secondary Education), MA 21st Century Community Learning Centers--Summer Enhancement Grant (MA Department of Elementary and Secondary Education), Contributions from municipality and community partners	Medium	Short to Medium
	Adjust the existing employee training curriculums accordingly	Chelsea Planning & Development	Chelsea Health & Human Services, Bunker Hill Community College, Chelsea High School, Chelsea Collaborative, ConnectNOW, Chelsea Chamber of Commerce, Central Latino, Inc., Choice Thru Education, Inc., Shore Educational Collaborative, Jordan Boys & Girls Club, Roca, Inc., Lewis H. Latimer Society		Medium	Medium
	Modify certification programs to encompass these skill sets. For example, enhance training for entry-level administrative health care jobs.	Chelsea Planning & Development	Chelsea Health & Human Services, Bunker Hill Community College, Chelsea High School, Chelsea Collaborative, ConnectNOW, Chelsea Chamber of Commerce, Central Latino, Inc., Choice Thru Education, Inc., Shore Educational Collaborative, Jordan Boys & Girls Club, Roca, Inc., Lewis H. Latimer Society		Medium	Medium
Encourage multiplier effects by orienting local services to needs of new businesses and their workers	Coordinate marketing and entrepreneurship training for local service businesses	Chelsea Planning & Development	Chelsea Chamber of Commerce, Chelsea Neighborhood Developers, Chelsea Collaborative	MassInnovation, Massachusetts Small Business Development Center	Medium	Medium
	Organize community festivals and events that highlight local businesses	Chelsea Planning & Development	Chelsea Chamber of Commerce, Chelsea Neighborhood Developers, Chelsea Collaborative	MassInnovation, Massachusetts Small Business Development Center	Medium	Medium
	Improve web presence of local businesses	Chelsea Planning & Development	Chelsea Chamber of Commerce, Chelsea Neighborhood Developers, Chelsea Collaborative	MassInnovation, Massachusetts Small Business Development Center	Medium	Medium
Ensure new office space fits with longer-term market demand	Create office buildings that conform to current green and consolidation-related demand (for example, LEED buildings and smaller spaces within buildings)	Chelsea Planning & Development	Private developers, MassDevelopment	Municipal incentives (lower cost for land or increased FAR in exchange for green buildings, for example),EPA Sustainability Pilots (to fund environmental sustainability in local brownfields projects), MA Technology Collaborative Renewable Energy Trust, US DOE grants	Medium	Medium
	Encourage development of space that could accommodate multiple types of uses (a built form that allows for shifts in the types of tenants if that is fitting for the community)	Chelsea Planning & Development	Private developers, MassDevelopment		Medium	Medium
Raise employer awareness of financial incentives for hiring low-income employees	Emphasize these financial incentives on the Chelsea Planning & Development web page and during conversations with tenants of new development	Chelsea Planning & Development	Chelsea Chamber of Commerce, Chelsea Collaborative	Raise employer awareness of: Federal Work Opportunity Tex Credit, New Employee Training Grant Program, Workforce Training Fund Program, On-the-Job Training Program, Apprentice Training Program	Low	Short to Long
Create connectivity between new business development and the Silver Line to best capitalize on regional network advantage	Create visual and transport connections to any new business developments located farther from the Silver Line (for example, complete streets or shuttle bus connections from to the Silver Line station).	Chelsea Planning & Development	MassDOT/MBTA, Chelsea Chamber of Commerce, Priavte developers, Chelsea Neighborhood Developers	MassDOT/MBTA funding, Gateway Plus Action Grant	Medium	Medium

Housing

STRATEGY	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Ensure affordable housing	Inclusionary zoning ordinance: 15% affordable units for low income, 60% AMI, in FAR 5, FAR 4, FAR 3, and FAR 2.	Chelsea Planning & Development	City Council	N/A	Low	Short
	Section 8: Convert CHA to "Move to work". CHA to allow for higher percentage of vouchers to be allocated for site -based housing.	Chelsea Housing Authority (CHA)	Department of Housing and Urban Development (HUD), Private developers, Low-income residents	HUD	High	Long
	Affordable Housing Trust: Additional subsidy mechanism to supplement the funding for affordable housing, receives matching funds from the state government.	Chelsea Planning & Development	State of Massachusetts, CHA, City Council, Private developers	Developer fees	Medium	Long
	LIHTC: $1 for $1 tax credit, current waiting list is long (turnover 1-2 years), opportunity to submit modifications to MA Qualified Allocation Plan that favor conditions in Chelsea.	Private developers	HUD, Low-income residents	HUD	Medium	Long
	FAR Bonus: Up to 15% for increasing affordable housing included in project.	Chelsea Planning & Development	Private developers	N/A	Low	Long
	40R: State-funded zoning incentive payments with a Smart Growth zoning overlay district.	Chelsea Planning & Development	Private developers	State	Medium	Medium
Encourage workforce housing	FAR Bonus: Up to 25% for establishing tiered rents for families making 120% AMI	Chelsea Planning & Development Department	Priavte developers	State	Medium	Medium
Increase average unit size	Family unit ordinance: Institute minimum requirements for percentage of affordable and workforce family units (3br+) for any projects receiving public subsidies; Institute minimum requirements for percentage of affordable and workforce family units (3br+) for any projects receiving public subsidies.	Chelsea Planning & Development	Priavte developers, Low-income residents	N/A	Low	Short

Urban Design

STRATEGY	ACTIONS	LEADERS	PARTNERS/STAKEHOLDERS	FUNDING SOURCE	COST	TIMELINE
Create new streets, street grid, green streets	Strategically pave new streets to reduce congestion and increase pedestrian access	Chelsea Planning & Development	Chelsea, Private developers, Chelsea residents, Neighboring towns/cities, State of Massachusetts	Mass Chapter 90 Program, PWED Grants, STRAP Grants, Pedestrian and Bicycle Safety Program	Low	Short
Create distinctive, indentifiable districts	Write strong design guidelines to lead and ensure quality development	Chelsea Planning & Development	Urban designers, Chelsea residents, Private developers	City of Chelsea, Community Marketing, HUD Strong Cities, Strong Communities Visioning Challenge (SC2), INVEST 1.0 Implementation Projects, Private Capital	Low	Short
	Ensure guidelines enable stable infill and continued growth once adequate absorption is reached	Chelsea Planning & Development	Urban designers, Private developers		Low to high	Long

CONNECT CHELSEA:

Appendix 1

CITATIONS

Executive Summary

Fig. 1. Nguyen, My Tam. Source: Personal Photograph.

Fig. 3. Pei, Ning. Source: Personal Photograph.

Fig. 4 Pei, Ning. Source: Personal Photograph.

Introduction

Fig. 1. Nguyen, My Tam. Source: Personal Photograph.

Fig. 4. Grant, Spencer. Source: Digital Commonwealth: Massachusetts Collections Online, http://ark.digitalcommonwealth.org/ark:/50959/bk128g447

Fig. 5. Viguri, Sofia. Source: Personal Photograph.

Fig. 6. Viguri. Sofia. Source: Personal Photograph.

Fig. 7. Boston Harbor Association. Source: Boston Harbor Association, http://www.tbha.org/boston-harbor-sea-level-rise-maps

Fig. 8. Cantu, Andrew. Source: Personal Photograph.

Fig. 9. Figueroa, Irene. Source: Personal Photograph.

Fig. 10. Nguyen, My Tam. Source: Personal Photograph.

Fig. 11. Pym, Martha. Source: Personal Photograph.

Fig. 12. Blonde, Erica. Source: Personal Photograph.

Fig. 12. Lee, Jennifer. Source: Personal Photograph.

Frumhoff, Peter, James J. McCarthy, Jerry M. Melillo, Susanne C. Moser, Donald J. Wuebbles, "Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions," Northeast Climate Impacts Assessment. http://www.climatechoices.org/assets/documents/climatechoices/confronting-climate-change-in-the-u-s-northeast.pdf

Figure 1 - *(Goldman)*

Governor Patrick's Office. 2014. "Governor Patrick announces the Seaport MBTA expansion." Governor of Massachusetts. http://www.mass.gov/governor/pressoffice/pressreleases/2013/1030-mbta-silver-line-chelsea-greenway.html

Massachusetts Dept. of Environmental Protection. 2014. "Waste site and hazardous material release sites database." http://public.dep.state.ma.us/SearchableSites2/Search.aspx

Massachusetts Institute for a New Commonwealth. 2014. "About the Gateway Cities." http://www.massinc.org/Programs/Gateway-Cities/About-the-Gateway-Cities.aspx

Metropolitan Area Planning Council. 2014. "Population and Housing Demand Projections for Metro Boston."

Leveraging Local Strengths

Al-Mubaraki, Hanadi Mubarak. 2013. "Business Incubation as an Economic Development Strategy: A Literature Review." International Journal Of Management 30.1.2: 362-372.

Bencks, Jarret. 2013. "No Takers for Forbes Park Development at Auction." The Boston Globe. http://www.bostonglobe.com/metro/regionals/north/2013/07/31/takers-for-chelsea-forbes-park-development-auction/v4RQMbpth6KYyxNI96fOzM/story.html

Byles, Jeff. 2008. "Erie Basin Park." The Architects Newspaper. http://archpaper.com/news/articles.asp?id=2763

ChangeLab Solution. 2014. "Model Joint Use Agreement Resources." http://changelabsolutions.org/

Chelsea Record. 2010. "Out of the Ashes – Chelsea's Box District." http://chelseamass.net/?p=988

City of Chelsea, MA. 2014. "Chelsea City Hall." http://www.ci.chelsea.ma.us/Public_Documents/index

City of Chelsea, MA. 2012. "Housing Incentive Program Plan." http://www.mass.gov/hed/docs/dhcd/cd/hdip/hdip-chelseazone-plan.pdf

City of Chelsea, MA. "Chelsea Parks in City of Chelsea." http://www.ci.chelsea.ma.us/Public_Documents/ChelseaMA_Parks/index

City of Chelsea, MA. 2004. “Community Development Plan.” http://www.chelseama.gov/Public_Documents/ChelseaMA_Planning/PublicationsFolder/ChelseaCDP.pdf

City of Portland, Oregon. 2010. “Grey to Green.” http://www.portlandoregon.gov/bes/47203

Cooking Matters. 2014. “Home Page.” http://cookingmatters.org/

Denver Community Planning and Development Department. 2014. “Decatur-Federal Station Area Planning.” http://www.denvergov.org/tod/TransitOrientedDevelopment/TransitCorridors/WestCorridor/DecaturStation/tabid/395243/Default.aspx

Downer, Sarah, et al. 2013. The Massachusetts Joint Use Toolkit: Helping Kids and Communities be Healthy and Active. Cambridge, MA: Center for Health Law and Policy Innovation at the Harvard Law School.

Edible Schoolyard. 2014. “The Edible Schoolyard Project.” https://edibleschoolyard.org/

Farrell, Michael. 2012. “Start-ups squeezed out of Kendall Square.” The Boston Globe. http://www.bostonglobe.com/business/2012/04/12/big-tech-booms-kendall-but-start-ups-struggle-find-place/Bc2j8Dk2TzLDqZUTXZuGIL/story.html

Falbo, Nick. 2013. “Protected Intersections for Bicyclists. Portland, Oregon.” http://www.protectedintersection.com/

Fay, Spofford. 2011. “CSX Right-of-way Stdy.” Massachusetts Executive Office of Energy & Environmental Affairs.

Fig. 1. Nguyen, My Tam. Source: Personal Photograph.

Fig. 5. Nguyen, My Tam. Source: Personal Photograph.

Fig. 7. Nguyen, My Tam. Source: Personal Photograph.

Fig. 13. SHoP Architects. Source: http://blog.buildllc.com/2012/11/examples-of-urban-infill/

Fig. 15. Nguyen, My Tam. Source: Personal Photograph.

Fig. 16. Springfield, Jonathan. Source: Personal Photograph.

Fig. 17. Nguyen, My Tam. Source: Personal Photograph.

Fig. 21. Springfield, Jonathan. Source: Personal Photograph.

Fig. 22. Springfield, Jonathan. Source: Personal Photograph.

Fig. 26. Nguyen, My Tam. Source: Personal Photograph.

Fig. 28. City of Portland. Source: Sustainable City Network, http://www.sustainablecitynetwork.com/topic_channels/water/article_c26ddcfe-b313-11e0-a5fa-001a4bcf6878.html?mode=image&photo=1

Fig. 32. Nguyen, My Tam. Source: Personal Photograph.

Fig. 33. Adams, Marie. Source: Landing Studio, http://www.landing-studio.com/#projects/01_Project_Rock_Chapel_Marine/01_P.O.R.T._?img=2

Fig. 35. RZF Images. Source: RZF Images Blogspot, https://rzfimages.wordpress.com/tag/red-hook-food-vendors

Fig. 39. Nguyen, My Tam. Source: Personal Photograph.

Fig. 45. Showalter, Aaron. Source: NY Daily News, http://www.nydailynews.com/new-york/queens/entrepreneur-space-celebrates-anniversary-article-1.1282537

Fig. 46. Swoveland, Matthew. Source: Flickr, http://www.flickr.com/photos/mswoveland/8591360128

Fig. 47. Wittig, Cameron. Source: Walker Art Center, http://blogs.walkerart.org/ecp/author/site-admin/

Fig. 48. Landin, Jose Manuel. Source: Mi Diario Urbano, http://midiariourbano.blogspot.com/2012/07/bajo-puentes-en-la-ciudad-de-mexico.html

Fig. 51. Wikimedia Commons. Source: Wikipedia, http://en.wikipedia.org/wiki/Chelsea,_Massachusetts

Fig. 53. CBA Landscape Architects, Source: LLC. Landscape Online, http://landscapeonline.com/research/article/17479

Fig. 54. One North of Boston. Source: Boston.com, http://www.boston.com/yourtown/news/chelsea/2013/12/one_north_of_boston_to_host_winter_brew_fest.html

Fig. 55. Nuestra Comunidad CDC. Source: Boston.com, http://www.boston.com/yourtown/news/roxbury/2013/09/boston_approves_bartlett_place_project_in_dudley_square.html

Fig. 61. Nguyen, My Tam. Source: Personal Photograph.

Forbes Park. 2008. “Photos & News.” http://forbeslofts.com/gallery.htm

Grain Collective. 2008. “IKEA Erie Basin Park, Brooklyn, NY.” http://graincollective.com/ikea-erie-basin-park

Harvard Law School. 2014. “Event and Office Composting.” http://www.law.harvard.edu/about/administration/facilities/energy/composting.html#CompostingatHarvard

Hot Bread Kitchen. 2014. “Our Mission.” http://hotbreadkitchen.org/about-us/our-mission

Humphreys, J. 2013. The Multicultural Economy. Selig Center for Economic Growth.

Impact Hub Seattle. 2014. “A Coworking Space, An Event Venue, & Innovation Lab for Inspiring People.” http://www.impacthubseattle.com/

Interview, 2nd St. Scrap Metal, February 2014.

Interview, Jay Ash, April 2014.

Landing Studio. 2014. “P.O.R.T.: Publicly Organized / Privately Owned, Recreation Territory.” http://www.landing-studio.com/#projects/01_Project_Rock_Chapel_Marine/01_P.O.R.T._?img=0

MA Department of Environmental Protection. 2014. “Financial & Technical Assistance for Anaerobic Digestion Projects.” http://www.mass.gov/eea/agencies/massdep/service/energy/anaerobic-digestion/anaerobic-digestion-financing-and-technical.html

MA Executive Office of Energy and Environmental Affairs. 2014. “Smart Growth/Smart Energy Toolkit.” http://www.mass.gov/envir/smart_growth_toolkit/index.html

MA Executive Office of Health and Human Services. 2014. “Mass in Motion.” http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/mass-in-motion/

MA Executive Office of Housing and Economic Development. 2014. "MassWorks Awards 2013." http://www.mass.gov/hed/economic/eohed/pro/infrastructure/massworks/massworks-awards-2013.html

MA Executive Office of Labor and Workforce Development. 2014. "Employment and Wages." http://lmi2.detma.org/lmi/lmi_es_a.asp

MassRecycle. 2014. "College and University Recycling Awards." http://www.massrecycle.org/recyclingawards/2013-winners-finalists/college-and-university-recycling-awards

MassINC. 2012. "Gateway Cities Education Trends May 2012." http://www.massinc.org/INCSpot/~/media/Files/Mass%20Inc/Programs/Gateways/GC%20Ed%20Trends%20FINAL.ashx

Mass Innovation Nights. 2014. "Home." http://mass.innovationnights.com/

McMorrow, Paul. 2013. "Chelsea Reclaims its Waterfront." The Boston Globe. http://www.bostonglobe.com/opinion/2013/02/12/chelsea-reclaims-its-waterfront/LuxwGrxcJk7DWrffgMeXlI/story.html

Midtown Global Market. 2014. "History." http://midtownglobalmarket.org/

Nielsen. 2012. "State of the Hispanic Consumer: The Hispanic Imperative." http://www.nielsen.com/us/en/reports/2012/state-of-the-hispanic-consumer-the-hispanic-market-imperative.html

North Carolina Department of Environment and Natural Resources. 2014. "Composting: Organics Recycling - Economic Development." http://portal.ncdenr.org/web/deao/recycling/composting/ed.NYC Economic Development Corporation. 2014. "Long Island City." http://www.nycedc.com/program/long-island-city

Nuestra Comunida Community Development Corporation. 2014. "Bartlett Place." http://www.nuestracdc.org/properties/60-bartlett-place

Prophet. 2006. "Branding Your City. CEOs for Cities." http://www.ceosforcities.org/research/branding-your-city/

Red Hook Food Vendors. 2014. "Red Hook Food Vendors." http://www.redhookfoodvendors.com/

Ross, Terrance. 2012. "Hot Bread Kitchen founder opens retail store to complement nonprofit bakery, business incubator." New York Daily News. http://www.nydailynews.com/new-york/uptown/hot-bread-kitchen-founder-opens-retail-store-complement-nonprofit-bakery-business-incubator-article-1.1141235

SEGD. 2009. "Erie Basin Park." http://segd.org/content/erie-basin-park

Small Business Administration. 2001. "Ethnic Marketing? Turning Obstacles into Opportunities." Small Business Success. V.

The Neighborhood Developers. 2014. "Box District Milestone." http://www.theneighborhooddevelopers.org/box-district-milestone-our-first-leed-platinum-certification/

Trapasso, Clare. 2013. "Entrepreneur Space celebrates 2nd anniversary." New York Daily News. http://www.nydailynews.com/new-york/queens/entrepreneur-space-celebrates-anniversary-article-1.1282537#ixzz2ym6vrAUX

University of Vermont. 2001. "Massachusetts Recreational Use Statute." http://asci.uvm.edu/equine/law/recreate/ma_rec.htm

U.S. Census Bureau. 2012. "American Community Survey, 2008-2012 5-Year Estimates." American FactFinder. http://factfinder2.census.gov

U.S. Census Bureau. 2010. "City and County Quick Facts, Census 2010." American FactFinder. http://factfinder2.census.gov

U.S. Census Bureau. 2012. "American Community Survey, 2008-2012 5-Year Estimates." American FactFinder. Accessed April 12, 2014. http://factfinder2.census.gov

Valdés, A. 2013. "Bajo Puentes en la lupa de inversionistas." Metros Cúbicos. México.

Vanasse Hagen Brustlin, Inc. 2010. Chelsea Open Space and Recreation Plan 2010-2016. Watertown, MA: City of Chelsea Department of Planning & Development.

Wong, Shutsu Chai. 2011. "Tapping the energy potential of municipal wastewater treatment: Anaerobic digestion and combined heat and power in Massachusetts." Massachusetts Department of Environmental Protection. http://www.mass.gov/eea/docs/dep/water/priorities/chp-11.pdf

A Network of Neighborhoods

Bluestone, Barry, et al. 2013. "The Greater Boston Housing Report Card 2013: What Follows the Housing Recovery? The Kitty and Michael Dukakis Center for Urban and Regional Policy, Northeastern University." http://www.tbf.org/~/media/TBFOrg/Files/Reports/2013%20GBHRC.pdf

City of Chelsea, MA. 2014. "Assessor's Online Database." http://data.visionappraisal.com/ChelseaMA/DEFAULT.asp/

City of Chelsea, MA. 2012. GIS Program.

City of Chelsea, MA. 2004. "Community Development Plan." http://www.chelseama.gov/Public_Documents/ChelseaMA_Planning/PublicationsFolder/ChelseaCDP.pdf

Dougherty, Michael, and Ralph Davis. 2013. "HVUT Helps Level the Playing Field." U.S. Highway Administration. http://www.fhwa.dot.gov/policy/091116/03.htm

City of Chelsea, MA. 2013. "Code of Ordinances." http://library.municode.com/index.aspx?clientId=14939

ESRI. 2006-2013. "Business Analyst." http://www.esri.com/software/businessanalyst

Fig. 1. Bowen, Jeffrey. Source: Personal Photograph.

Fig. 2. STOSS Landscape Urbanism. Source: American Society of Land Scape Architects, http://www.asla.org/guide/site.aspx?id=40957

Fig 3. New England Journal of Aesthetic Research. Source: Gregcookland.com, http://gregcookland.com/journal/2010/11/03/worst-public-art-davis-square-ten-figures/

Fig 4. Cherbino, Penny. Source: Serious Eats, http://www.seriouseats.com/2009/06/market-scene-copley-square-market-in-boston-1.html

Fig. 7. Martin, Manuela. Source: Flickr, https://www.flickr.com/photos/manuelasiener/

Fig 8. Viguri, Sophia. Source: Personal Photograph.

Fig 9. Goldman, Jonathan. Source: Personal Photograph.

Fig. 11. Travel Agency Tribes. Source: TravelAgencyTribes.com, http://www.travelagencytribes.com/travel-blog?place=boston

Fig. 12. Wellburn, Robert. Source: Personal Photograph.

Fig. 13. Viguri, Sophia. Source: Personal Photograph.

Fig. 16. Goldman, Jonathan. Source: Personal Photograph.

Fig. 17. Boston Harbor Association. Source: Boston Harbor Association, http://www.tbha.org/boston-harbor-sea-level-rise-maps

Fig. 19. Panoramio. Source: Panoramio.com, http://static.panoramio.com/photos/large/3035070.jpg

Fig. 20. MTR Landscape Architects. Source: mtrla.com, http://mtrla.com/portfolio/missouri-botanical-garden/green-design/

Fig. 21. Dutch Dialogues. Source: dutchdialogues.com, http://dutchdialogues.com/2010/04/20/precedents/ne-siskiyou-green-street-portland4/

Fig. 22. Openbare Ruimte. Source: deopenbareruimte.nu. http://www.deopenbareruimte.nu/nieuws/eerste-grootschalige-waterplein-geopend-in-rotterdam/

Fig. 24. Goldman, Jonathan. Source: Personal Photograph.

Fig. 27. Nguyen, My Tam. Source: Personal Photograph.

Fig. 29. Nguyen, My Tam. Source: Personal Photograph.

Fig. 30. Fougeron Architects. Source: fougeron.com, http://www.fougeron.com/carter.php

Fig. 31. Urban Land Conservancy. Source: urbanlandc.org, http://www.urbanlandc.org/assets-investments/evans-station-lofts/tod-opens-at-evans-station-in-denver/

Fig. 35. Nguyen, My Tam. Source: Personal Photograph.

International Futures Programme. 2011 "The Future of Families to 2030." http://www.oecd.org/sti/futures/49093502.pdf

MA Department of Energy and Environmental Affairs. 2014. "District Improvement Financing (DIF)/Tax Increment Financing (TIF)." http://www.mass.gov/envir/smart_growth_toolkit/pages/mod-diftif.html

MA Executive Office of Workforce and Labor Development. 2013. "Labor Force, Employment and Unemployment." http://lmi2.detma.org/lmi/town_comparison.asp

MassDOT. 2011. "Crash Records."

MassDOT. 2013. "Silver Line Gateways Alternatives Analysis." http://www.massdot.state.ma.us/Portals/31/Docs/SL_Gateway_June_19_2013_English_Accessible.pdf

MBTA. 2014. "112." http://www.mbta.com/schedules_and_maps/bus/routes/?route=112

Metropolitan Area Planning Council. 2013. "Expanded Environmental Notification Form."

Small Business Administration. 2012. "Frequently Asked Question." http://www.sba.gov/sites/default/files/FAQ_Sept_2012.pdf

U.S. Census Bureau. 2011. "County Business Pattern." American FactFinder. http://factfinder2.census.gov

U.S. Census Bureau. 2012. "American Community Survey, 2012 5-Year Estimates." American FactFinder. http://factfinder2.census.gov

U.S. Census Bureau. 2014. "Chelsea (City), Massachusetts." http://quickfacts.census.gov/qfd/states/25/2513205.html

Building The Workforce

Bernsau, Marc. 2014. "Preview: What happened in Quincy Center," Boston Business Journal. http://www.bizjournals.com/boston/gallery/15181?r=http%3A%2F%2Fwww.bizjournals.com%2Fboston%2Fprint-edition%2F2014%2F03%2F28%2Fwhat-went-wrong-at-quincy-center.html

Bluestone, Barry, et al. 2013. "The Greater Boston Housing Report Card 2013: What Follows the Housing Recovery? The Kitty and Michael Dukakis Center for Urban and Regional Policy, Northeastern University." http://www.tbf.org/~/media/TBFOrg/Files/Reports/2013%20GBHRC.pdf

Boston Region MPO. "Chelsea." http://www.ctps.org/Drupal/data/pdf/studies/bikeped/urban_centers/Chapter_5_Chelsea.pdf

Bunby, Paul. 2012. "Goodwin Procter Inks Mega-Lease at Fan Pier," GlobeSt.com. http://fanpierboston.net/2012/fan-pier-goodwin-procter/

Busch, Chris, et al. 2013. "City of Boston Natural Hazard Mitigation Plan: A Component Plan of Boston's Comprehensive Emergency Management Program." http://www.cityofboston.gov/images_documents/Boston%20Hazard%20Mitigation%20Plan%202013%20Update%20-%20Revised%20Draft%2008%2014%2013_tcm3-40099.pdf

City of Chelsea, MA. 2014. "Assessor's Online Database." http://data.visionappraisal.com/ChelseaMA/DEFAULT.asp/

City of Everett, MA. 2003. "Everett Waterfront Assessment." http://www.mapc.org/sites/default/files/Complete_Everett_Waterfront_Assessment.pdf

City of Lancaster. 2014. "Green Infrastructure Plan." http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_004822.pdf

City of Somerville, MA. 2013."Somerville Tax Rate Lowered Thanks to Unprecedented Gains in New Commercial Growth—Mainly in Assembly Square." http://www.somervillema.gov/news/property-tax-rates-going-down-thanks-mainly-unprecedented-new-growth

"Climate Impacts Assessment Report." 2007. http://www.climatechoices.org/assets/documents/climatechoices/confronting-climate-change-in-the-u-s-northeast.pdf

Colliers International. 2014. "Market Snapshot: Q1 2014 Statistics: Office/R&D." http://www.colliersmg.com/pdfs/Research/Snapshot_Q1_14.pdf

"Combined Sewer Overflows (CSOs)." 2012. http://www.mwra.com/03sewer/html/sewcso.htm

Connect Buncombe. 2012. "Greenway Cost Estimating and Funding." http://www.buncombecounty.org/common/parks/MasterPlan/11-Appendix.pdf

Diesenhouse, Susan. 2011. "Rebuilding Downtown from the

Ground Up." The New York Times. http://www.nytimes.com/2011/04/06/realestate/commercial/06quincy.html?_r=0

Douglas, Craig. 2014. "Partners Healthcare moving thousands of workers to Somerville's Assembly Row." Boston Business Journal. http://www.bizjournals.com/boston/blog/mass_roundup/2013/12/partners-healthcare-moving-thousands.html

Douglas, Ellen, Paul Kirshen, Chris Watson. 2010. "Boston Harbor Sea Level Rise Maps." http://www.tbha.org/boston-harbor-sea-level-rise-maps

Ewing, Reid, and Otto Clemente. Measuring Urban Design: Metrics for livable places. Island Press, 2013.

Frumhoff, Peter, James J. McCarthy, Jerry M. Melillo, Susanne C. Moser, Donald J. Wuebbles. 2013. "Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions."

Furman, Matthew. 2013. "Memorandum Re: Off-Street Parking," City of Chelsea, MA

Fig. 2. Congress for the New Urbanism. Source: CNU-Houston, http://cnu-houston.org/

Fig. 3. Wikimedia Commons. Source: Wikipedia, http://en.wikipedia.org/wiki/Battle_of_Chelsea_Creek

Fig. 5. SHoP Architects. Source: shoparc.com, http://www.shoparc.com/project/Domino-Sugar-Refinery. Ultimate Metropolis, Davis Square Architects

Fig. 8. Nguyen, My Tam. Source: Personal Photograph.

Fig. 12. Maloney Properties. Source: Tent City Apartments, http://www.tentcityapartments.com/

Fig. 13. Bartlett Place. Source: Bartlett Place LLC, http://bartlettplace.net/

Fig. 14. Nguyen, My Tam. Source: Personal Photograph.

Fig. 15 Madden, Kathryn. Source: Personal Photograph.

Fig. 16. Springfield, John. Source: Personal Photograph.

Fig. 18. Federal Realty. Source: assemblyrow.com, http://www.assemblyrow.com/shopping/demographics/

Fig. 19. McGreal, Ryan. Source: Durand Neighbourhood Association, http://raisethehammer.org/static/presentations/walkable_streets.html

Fig. 20. Fan Pier Boston. Source: Fanpier.com, http://www.fanpierboston.com/transportation/mbta/

Fig. 22. Tuvshinbat, Aldarsaikhan. Source: Personal Photograph.

Fig. 23. Tuvshinbat, Aldarsaikhan. Source: Personal Photograph.

Fig. 30. Rails to Trails Conservancy. Source: railstotrails.org, http://community.railstotrails.org/media/p/38186.aspx

Fig. 31. MassDOT. Source: www.massdot.state.ma.us, http://www.massdot.state.ma.us/silverlinegateway/Home.aspx

Fig. 38. Fischer, Damien. Source: Personal Photograph.

Fig. 39. Boston Harbor Association. Source: Boston Harbor Association, http://www.tbha.org/boston-harbor-sea-level-rise-maps

Fig. 44.

Commonwealth of Pennsylvania. Source: Dept. of Conservation and Natural Resouces, http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_004822.pdf

Scape / Landscape Architecture PLLC. Source: scapestudio.org, http://www.scapestudio.com/projects/oyster-tecture/

University of Rochester. Source: The Green Dandelion blog, http://blogs.rochester.edu/thegreendandelion/wp-content/uploads/2014/01/tumblr_l5numn7lZ01qzt7kko1_500.jpg

University of Arkansas. Source: uacdc.org, http://uacdc.uark.edu/books/complete/26LID_Manual_Book_Sample.pdf

The Examiner. Source, examiner.org, http://www.examiner.com/images/blog/EXID14380/images/Riverside_Park_Bike_Path.jpg

Vandyke, Mark. Source: dreamstime.org, http://thumbs.dreamstime.com/z/bodie-island-lighthouse-north-carolina-outer-banks-newly-restored-marsh-s-33779595.jpg

Blogspot. Source: blogspot.com, http://1.bp.blogspot.com/-DLXWRB6kDH8/TgvdV2mEW8I/AAAAAAAADw8/OOaX37ZcauQ/s1600/¬shing%2Bpier4.jpg

Beton, Mark. Source: smugmug.org, http://www.markbetonphotography.com/Travel/Spain-and-Portugal/Madeira-2011/i-RxgF7kh/0/L/funchc0204b-L.jpg

Conde Nast Traveler. Source: cntraveler.com, http://www.cntraveler.com/daily-traveler/new-york/2013/05/photos-new-york-city-arts-museums-parks-concerts-theaters/_jcr_content/par/cn_contentwell/par-main/cn_colctrl/par-col2/cn_slideshow/item0.rendition.slideshowWideHorizontal.brooklyn-bridge-park-pier-5-credit-julienne-schaer.jpg

State of Oregon. Source: Dept. of Environmental Quality, http://www.deq.state.or.us/wq/images/loans/GreenStreetCurbExtSEClay.jpg

Water Environment Research Council. Source: werf.org, http://www.werf.org/liveablecommunities/images/UDFCD2.jpg

Fig. 46. Forsyth, Ann. Source: Personal Photograph.

Fig. 48. Bellecci and Associates, Inc. Source: bellecci.com, http://belleci.com/

Fig. 49. Triposo. Source: triposo.com, 6. http://www.triposo.com/

Fig. 50.

Bertolet, Dan. Source: citytank.org, http://citytank.org

Casa Altzn. Source: casaaltzan.org , http://casaaztlan.org/viva_aztlan_festival

Forsyth, Ann. Source: Personal Photograph.

Goody, Clancy & Associates, Inc. Source: Personal Communication.

Fig. 51. Forsyth, Ann. Source: Personal Photograph.

Fig. 52. SHoP Architects. Source: shoparc.com, http://www.shoparc.com/project/Domino-Sugar-Refinery.

Fig. 53. Copeland, Colette. Source: Colette's Dallas Mexican Food Reviews, http://colettecopelandmexican.blogspot.com/2012/05/27-intromit.html

Appendix 2 - District Description Matrix. (from left to right)

Alvarez, Raul. Source: Raul Rafael Alvarez.com, http://www.raulrafaelalvarez.com/a-quasi-helpful-guide-to-chicago.

Daily Chicago Blog. Source: Daily Chicago Blogspot, http://dailychicagophoto.blogspot.com/2011/11/exploring-pilsen-v.html.

Sabrina Souffle. Source: Sabrina Souffle Blog, http://sabrinasouffle.org/?s=pilsen&submit=Search.

Tropics of Meta. Source: Tropics of Meta: Historiography for the Masses, http://tropicsofmeta.wordpress.com.

Triposo. Source: Triposo.com, http://www.triposo.com/.

Grazia, Sergio. Source: ArchDaily, http://www.archdaily.com/463386/la-fresque-ithaques-atelier-wra.

Gluck+. Source: Architect Led Design Build, http://gluckplus.com.

Cube Design Research. Source: Cube Design Research, http://cubedesignresearch.com/projects/hayden.

Copeland, Collette. Source: Collette Copeland Mexican Blog, http://colettecopelandmexican.blogspot.com/2012/05/27-intromit.html.

Casa Aztlan. Source: Casa Aztlan.org, http://casaaztlan.org/viva_aztlan_festival.

Bellici & Associates, Inc. Source: Bellici & Associates, http://bellecci.com/services/complete-streets

SHoP Architecture. Source: shoparc.com, http://www.shoparc.com/project/Domino-Sugar-Refinery.

Bertolet, Dan. Source: City Tank. http://citytank.org/

Klein, Tim. Source: Smithsonian Magazine, http://www.smithsonianmag.com/travel/chicago-eats-125760423/?no-ist.

Demenglog. Source: Demenglog.com, http://demenglog.com/cabinets/popular-restaurants-in-cape-town-tripadvisor.html.

Alvarez, Raul. Source: Raul Rafael Alvarez.com, http://www.raulrafaelalvarez.com/a-quasi-helpful-guide-to-chicago.

Florida Department of Transportation. 2013. "Generic Cost per Mile Models." http://www2.dot.state.fl.us/SpecificationsEstimates/costpermile.aspx

Furman, Matthew. 2013. "Memorandum Re: Community Rating System," City of Chelsea, MA

Globe Staff. 2013. "Dana-Farber to start construction on cancer imaging center in Hub's Innovation District." http://www.bostonglobe.com/business/2013/10/23/dana-farber-start-construction-cancer-imaging-center-hub-innovation-district/gW9LO1Ln8EjqGD6KrjETsL/story.html

Grillo, Thomas. 2014. "Street-Works out of $1.6B downtown Quincy redevelopment." Boston Business Journal. http://www.bizjournals.com/

Grillo, Thomas. 2014. "Reports offer mixed views on direction of Boston office market." Boston Business Journal. http://www.bizjournals.com/boston/real_estate/2014/01/q4-brings-mixed-reviews-to-boston.html

GSA Office of Governmentwide Policy (Office of Real Property Management Performance Measurement Division). 2011. "Workspace Utilization and Allocation Benchmark." http://www.gsa.gov/graphics/ogp/Workspace_Utilization_Banchmark_July_2012.pdf

GSD Urban Planning Team. 2014. Informal interviews with: Emily Loomis, Bart Mitchell, Mark Robinson, Kevin Saba, Christine Thomas, Dave Traggorth, and Sal DiDomenico.

Hudson River Shorelines Project. 2012. "A Comparative Report of Ten Shore Protection Approaches." http://www.hrnerr.org/wp-content/uploads/sites/9/2012/08/Comparative-Cost-Analysis.pdf

Jones Lang LaSalle IP, Inc. 2013. "Office Outlook: North. Q4 2013" http://www.joneslanglasalle.com/ResearchLevel1/Office%20Outlook%20Q4%202013_North.pdf

Leung, Shirely. 2013. "Partners' move to Somerville is good for the region." Boston Globe http://www.bostonglobe.com/business/2013/12/13/boston-loss-somerville-gain-partners-move-assembly-row-good-for-region/Xh7ZKwCDjT4UJelW0KOdrI/story.html

Lima, Alvaro, John Avault, Mark Melnik. 2013. "Boston by the Numbers." Boston Redevelopment Authority. https://mail.google.com/mail/u/0/#search/young+ae+chung/1456d2cdc4cbc705?projector=1

Lima, Alvaro, Mark Melnik, Joh Avault, and Gregory Perkins. 2013. "2013 Economy Report," Boston Redevelopment Authority. http://www.bostonredevelopmentauthority.org/getattachment/86038673-b830-4152-9108-3c50978aa69e/

MacDonald, Elizabeth. "Buildng a Boulevard." ACCESS, Number 28. http://www.uctc.net/access/28/Access%2028%20-%2002%20-%20Building%20a%20Boulevard.pdf

Massachusetts Water Resources Authority. 2014. "Combined Sewer Overflow." http://www.mwra.com/03sewer/html/sewcso.htm

MassDOT. 2011. "Bicycle Facility Inventory and Year-End Report." http://www.massdot.state.ma.us/Portals/17/docs/2011_bike_ye_rpt.pdf

MassDOT. 2013. "Silver Line Gateway: Service to Chelsea, East Boston & the Blue Line." http://www.massdot.state.ma.us/silverlinegateway/Home.aspx

MassDOT. 2014. "Crash Records Search." http://services.massdot.state.ma.us/crashportal/CrashMapPage.aspx

MassGIS. 2014. http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/layerlist.html

Milwaukee Metropolitan Sewerage District. 2014. "Green Infrastructure Benefits and Costs." http://h2ocapture.com/PDF/05_Benefits_Costs_Draft_Final.pdf

Pack, Kelly, and Pat Thomas. 2013. "America's Rails with Trails Report." Rails-to-Trails Conservancy.

Port of Portland. 2004. "Brownfield/Greenfield Development Cost Comparison Study." http://www.portofportland.com/

PDFPOP/Trade_Trans_Studies_Brnfld_Stdy_Exec_Smry.pdf

"Public Notification: City of Chelsea Combined Sewer Overflows." http://www.ci.chelsea.ma.us/public_documents/ChelseaMA_DPW/cso.htm

Reardon, Tim, and Meghna Dutta. 2012. "Growing Station Areas: The Variety and Potential of Transit Oriented Development in Metro Boston." http://www.reconnectingamerica.org/news-center/half-mile-circles/2012/growing-station-areas-the-variety-and-potential-of-transit-oriented-development-in-metro-boston/

Reardon, Tim, and Meghna Hari. 2014. "Population and Housing Demand Projections for Metro Boston." http://www.mapc.org/sites/default/files/MetroBoston%20Projections%20Final%20Report_1_16_2014_0.pdf

Ross, Carey. 2013. "Boston's office market in midst of a resurgence." Boston Globe http://www.bostonglobe.com/business/2013/07/15/boston-office-market-roaring-driving-rents-highest-level-four-years/mu0wyKHkxPmEwUGA14i42N/story.html

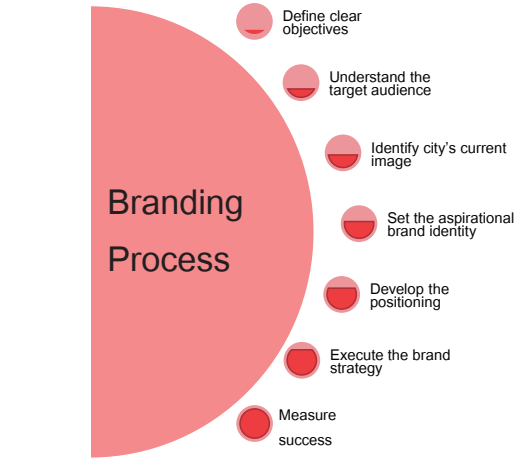
Schlaikjer, Erica. 2009. "Winners of the Livable Streets Contest." http://thecityfix.com/blog/winners-of-the-livable-streets-contest/

Tweed, Katherine. 2013. "Cree Launches $99 LED Street Light." Green Tech Efficiency. http://www.greentechmedia.com/articles/read/cree-launches-99-led-street-light

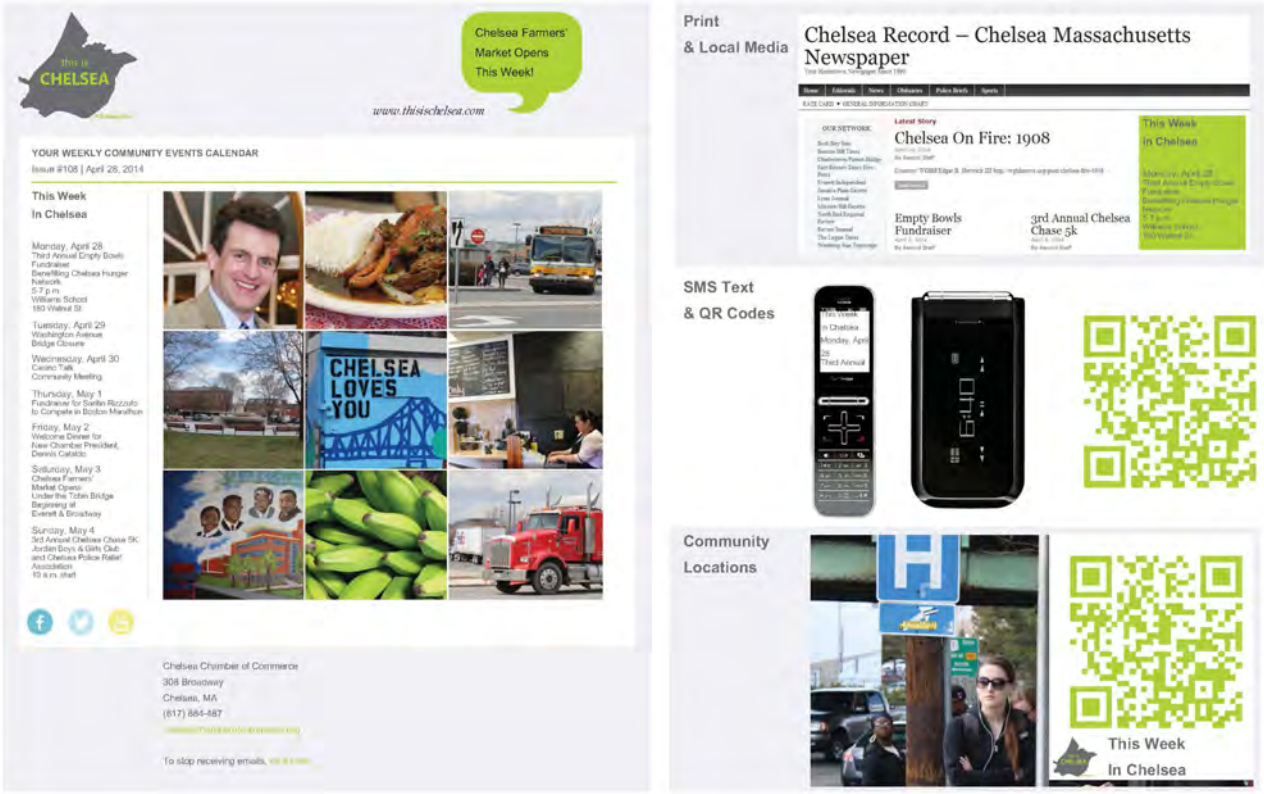
Vanasse Hagen Brustlin, Inc. 2010. Chelsea Open Space and Recreation Plan 2010-2016. Watertown, MA: City of Chelsea Department of Planning & Development.

CONNECT CHELSEA:

Appendix 2



Sample Branding Process *Economic development could be greatly strengthened through a clear and thoughtful branding process, depicted in the following stages.*



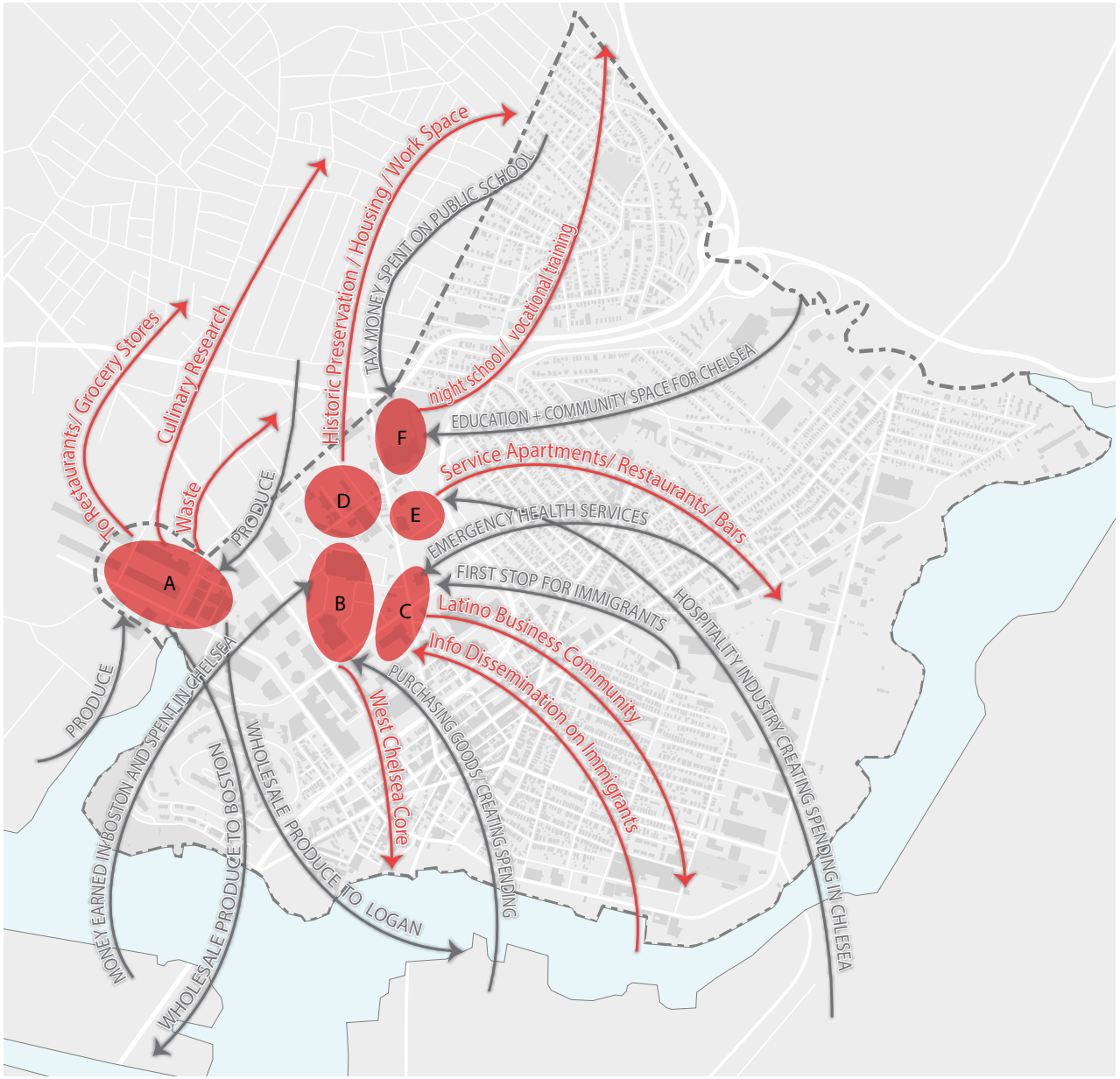
Mock-up of Community Calendar in Multiple Media *A community-wide calendar can be implemented through multiple channels, from a website, to a weekly email, to print and local media, SMS text, and at key strategic locations for city-wide events and updates.*

Figure 1 - *(Goldman)*

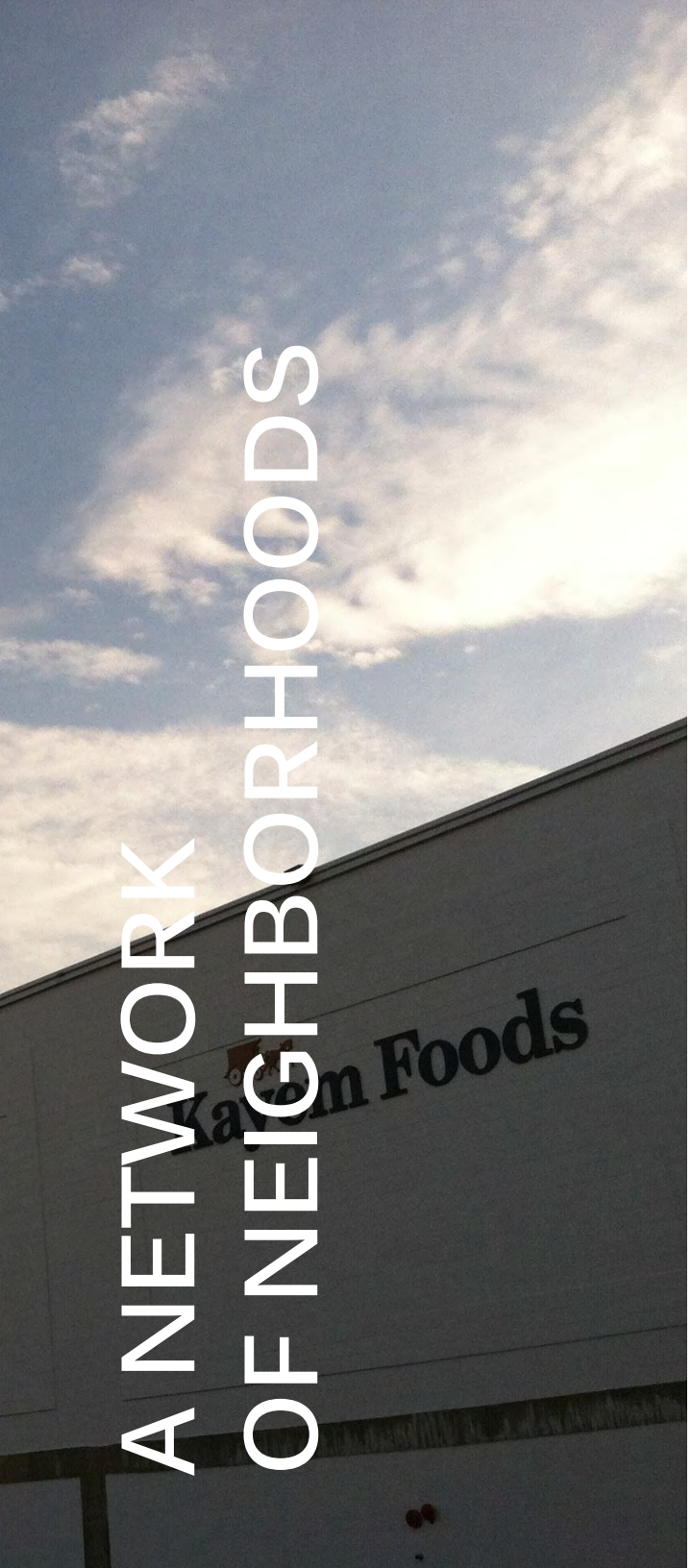
Chelsea
on a mission to thrive.

CHELSEA
LOVES
YOU

Chelsea Logos (Illustrative Examples) *Through engagement with key stakeholders, Chelsea could generate a graphic identity that successfully captures its assets and clearly communicates its vision. The image should honor the heterogeneity of Chelsea's residents, its welcoming environment, and economic potential. Images here depicted here were inspired by street art in Chelsea.*



Regional flows of goods and services *As a distribution powerhouse just minutes from Boston and Logan airport, Chelsea plays a crucial role in the regional economy. This plan seeks to strengthen and update existing connections in a way that modernizes Chelsea's economy.*



BROWNFIELDS ANALYSIS

The Massachusetts Department of Environmental Protection (DEP) identifies 200 waste sites in Chelsea. Not all of these sites should, however, be categorized as brownfields. Thirty sites can be removed from the population because they were invalid submissions, duplicate cases, or declared to be clean by DEP. Of the remaining sites, 148 have undergone remedial actions and been certified as posing "no serious risk" by DEP. The most common contaminant is oil (72%).

Focusing in the study area, MassGIS identifies 5 "tier classified" Chapter 21E sites. Tier classified sites are brownfields rated based on their complexity, contamination, and the risk of harm. With the exception of one site that is in default because the owner has failed to submit required paperwork to the state (Tier 1D), all of the sites in the study area are Tier II. This means that the sites have been assessed to pose a small risk; cleanup and development on the sites can be undertaken by a licensed professional without additional approval by the state.

Additionally, 18 sites in the target area have "activity and use limitations" (AULs). These are legal limits on future actions on the sites meant to protect health and the environment. For instance, a limitation might be that a site cannot be used for residential or day-care uses (MassDEP, 2014)

Figure 1 - *(Goldman)*

PROPOSED TABLE OF DIMENSIONAL AND USE REQUIREMENTS

Neighborhood District	Permitted Uses	Min. FAR	Max FAR (standard)	Max FAR (bonus)*	Max Height	Max Lot Coverage	Parking (standard)	Parking (bonus)**
ND-1 (Arlington Corner)	Multifamily Residential	0.5	1.5	2.0	45'	75%	.5/du	N/A
	Entertainment/Retail	SP	SP	SP	SP	SP	SP	SP
	Civic/Institutional	1.5	2.5	N/A	45'	75%	1/1000 sq. ft	N/A
	Office/Hotel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Mixed Use	1.5	2.0	2.5	45'	75%	2/1000 sq. ft.	1.5/1000 sq. ft
	Light Industrial	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ND-2 (Island End)	Multifamily Residential	1.5	2.5	3.0	60'	70%	1/du	N/A
	Entertainment/Retail	1.0	1.5	N/A	60'	70%	2/1000 sq. ft.	1.5/1000 sq. ft
	Civic/Institutional	1.5	2.5	N/A	60'	70%	1/1000 sq. ft	N/A
	Office/Hotel	SP	SP	SP	SP	SP	SP	SP
	Mixed Use	2.0	3.0	3.5	60'	70%	2/1000 sq. ft.	1.0/1000 sq. ft
	Light Industrial	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ND-3 (Mystic Square)	Multifamily Residential	2.0	3.0	5.0	100'	60%	1/du	N/A
	Entertainment/Retail	1.0	2.0	N/A	100'	60%	2/1000 sq. ft.	1.5/1000 sq. ft
	Civic/Institutional	2.0	3.0	N/A	100'	60%	1/1000 sq. ft	N/A
	Office/Hotel	2.0	4.0	5.0	100'	60%	2.5/1000 sq. ft.	1.0/1000 sq. ft
	Mixed Use	2.0	4.0	5.0	100'	60%	2/1000 sq. ft.	1.0/1000 sq. ft
	Light Industrial	0.5	1.5	N/A	N/A	60%	.5/1000 sq. ft.	N/A

* with provision of 20% permanently affordable housing

** with provision of community benefits such as landscaping, affordable retail/commercial, or local hiring provision

USES AND SOURCES

Item	Total Cost ($ Over 20 Years)	Sources
Urban Design		DIF; BID; State and Federal Funding Sources; City Revenue
Neighborhood Branding	**500,000**	
Rezoning	**0**	
Transportation		City of Chelsea CIP; MBTA; MassDOT; EPA Smart Growth Transportation Funding; USDOT Tiger Discretionary Grants; USDOT Urban Partnership Program
Total Streetscape Improvements	**67,056,000**	
Broadway	24,024,000	
Arlington Street	12,408,000	
Everett Avenue	16,896,000	
Second Street	13,728,000	
New Side Streets	**11,700,000**	
Open Space		PARC; LAND; Rivers and Harbors Grants; Gateway Cities Parks Program; Mass Cultural Facilities Fund
Total Open Space	**32,364,300**	
Programmed	6,639,300	
Unprogrammed	25,725,000	
Economic Development/ Urban Renewal		DIF; EPA Assessment Grant Program; EPA Brownfields Area Wide Planning Program; MassDEP Waste Site Cleanup Program; State Job Creation and Building Investment Tax Credits; TIRE; Federal Industrial Revenue Bond Program
New Staff Member	**1,200,000**	
Total Municipal Land Acquisition	**10,539,600**	
Arlington Corner	1,356,200	
Mystic Square	6,025,700	
Island End	3,157,700	
Grant Matching	**2,000,000**	
Business Attraction	**(Foregone Revenue)**	
Housing		Private Developers; State and Federal Funding Sources; Policy Revision (no funding required)
Total Residential	**763,092,600**	
Arlington Corner	200,860,100	
Mystic Square	562,232,500	

OPEN SPACE ZONING REQUIREMENTS

Open Space - Zoning Recommendations	
Strategy	**Zoning Code Recommendations**
(A) Integrate natural/open spaces through creating green corridors	34-216 - Establish canopy coverage targets (e.g. 35% sidewalk coverage within a specified time after planting) to expand on stret tree spacing guidelines found in the design guidelines for R3, BR2, and LI2 districts, which reference of a 'continuous canopy' upon maturity
i) create a multi-scalar water management network	34-78(c) - Provision current limits vegetation greater than 2.5ft above curb grades up to 20ft away from property lines of intersecting streets
ii) contribute to the beautification of streetscapes	30-218 - Existing 10ft requirement could be a potential site constraint on small lots. Consider reducing the distance to 5ft for distance requirement of construction of storm drains from any new or existing water service connection
iii) Connect distinct neighborhoods in a natural way	IV(H) - Currently requires street trees to be planted within a root barrier; this might preclude the use of GI practices such as infiltrative tree filters. Consider removing these restrictions
iv) coordinate ecological and social opportunities and goals	34-183(g) - Ensure that landscaping screening and window/façade requirements in the Smart Growth Overlay District do not restrict the use of stormwater planters, filter boxes, or other streetscape practices generally located in front of buildings and along sidewalks. This is particularly important where 4ft tree lawn and/or tree pits are required, sidewalk widths are required to be 8ft minimums with 3ft tree pits, or vegetation height is restricted. Consider revising ordinances that affect road right-of-way and/or sidewalks to be more flexible for LID practices.
(B) Incorporate existing and new individual parcels within a multi-scalar water management system	30-218(m), 30-223 - Establish thresholds for properties, new connections, or redevelopment activities that will trigger compliance with stormwater standards
(i) create a multi-scalar water management network	30-218(m), 30-223 - Reduce the thresholds and provide an opportunity for the City to: 1) include projects that can have a measurable stormwater impact; 2) take advantage of opporunities to improve existing stormwater quality and quantity; and 3) incorporate minimum redvelopment requirements for onsite stormwater management, impervious area reduction, and open space
(ii) promote new development that is designed in consideration of stormwater management practices	34-155(a), 34-155(i) - Add "to promote green stormwater infrastructure" to the purposes of Planned Development in the Zoning Ordinance and add stormwater management as one of the review factors for designing planned developments
	34-215 - Add calculations for DCIA and pollutant removal for pollutants of concern to the list of required elements for all plan applications requiring review

Source: EPA Region 1 Green Infrastructure Partnership with the City of Chelsea (2012)

Figure 1 - *(Goldman)*

DISTRICT DESCRIPTIONS MATRIX

	Market Square	West End
Imagability	 	 
Use	• Mixed-use • Primarily commercial, some residential • Retail at base	• Primarily Residential • Office
Street Life	• Retail at base • Central green space around Silver Line • Everett widened, increased ped traffic • Smaller green ped arteries leading E-W	• Small, quiet, green arteries for pedestrian traffic and light, local/residential car traffic
Height + Scale	• Mid-rise towers • Taller buildings grouped in center around open T stop • Stepped buildings with set-backs	• Low-rise stepped to lower density • Stepped height, higher vertically near Everett grading down toward Back Office
Transparency	• Steel • Glass • Concrete • Brick	• Wood • Brick • Steel • Glass
Enclosure	• At ground level with retail • Central open space • Dense, closely built construction	• Increased privacy • More glass on W edge, more traditional on E edge • Narrower streets, tree lined • Increased open space at base while maintaining vertical density
Connection	• Pedestrian and car access to Everett Ave Corridor, Broadway • Pedestrian access to Eds, Meds, + Feds, South Second, and The Hook	• Ped and light car access to Everett Ave, Silver Line Transportation Center • Light, quiet ped access to Broadway, Chelsea Shore • Bordered by traffic-heavy 2nd St. on West

Everett Avenue Corridor

- Mixed-use
- Civic, Light Industry, and Retail at base
- New Market Basket
- Primarily residential on upper floors

- Civic, Light Industry, and Retail at base
- Ped Boulevard with green, ped street improvements with light car traffic
- Smaller green ped arteries leading E-W

- Mid to low-rise towers
- Taller buildings along Everett Ave with human scaled ground floor

- Steel
- Glass
- Concrete
- Brick
- Consistant, high transparency at street level
- Reveal and illuminate interior activities at all times of the day
- Vertical enclosure: set-backs, tree canopy
- Dense, closely built construction
- Wide E-W boulevard with open N-S directional views

- Ped and car access to North Everett Ave
- Clear directional pull to Broadway
- Ped, light car acess to East Residential, Central Marsh, and the Chelsea Shore

South Second

- Primarily commercial back office
- Option to open vacant spaces as art galleries
- Culturally expressive public arts program

- Use public mural program to enliven back office box buildings, place E-W to strategically pull people to The Hook
- Heavy N-S truck and car traffic

- Low-rise Office Buildings

- Brick
- Glass
- Concrete
- Some transparency in offices
- Little transparency in industry

- Wood
- Aluminum Siding
- Steel

- Buildings in close proximity
- Street wide for through traffic

- 2nd Ave utilize for heavy traffic access to highways, Broadway
- Ped and light car access to Everett Ave
- Ped Access to East Residential, Central Marsh, and the Chelsea Shore

Broadway Gateway

- Mixed-use
- Retail at base
- Primarily residential on upper floors

- Retail and restaurant industry at base
- Culturally expressive public arts program

- Low-rise commercial with residential above

- Brick
- Wood
- Glass
- Concrete
- At ground level
- Mixed with active mural arts program
- Broad Everett right of way
- Dense, closely built construction

Image Sources, Left to Right: Raul Rafael Alvarez, Daily Chicago Photo, Sabrina Souffle Tropics of Meta, Triposo, ArchDaily, GluckPlus, Cube Design Research, Casa Aztlan, Colette Copeland, Belecci, SHoP Arc, City Tank, Smithsonian Magazine, Demenglog, Raul Rafael Alvarez, Jersey Bites, Chicago is the World, Chicago Apartment Finders.

Housing Setup Phase I & II

SITE CHARACTERISTICS	
Site area (SF)	548,389
Zoning district	TOD
FAR	5
Max buildable area (sf)	2,193,558

SPACE ALLOCATION	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Retail	5%	109,678	5%	104,194
Residential	85%	1,864,524	15%	1,584,845
Office	10%	219,356	20%	175,485
Totals	100%	2,193,558	15%	1,864,524

COMMENTS

109.76	Total Dev Acres
11.47%	Ph 1 in Total Dev Acres
12.59	Ph 1 in Acres
548,389	SF
5	FAR
2,741,947.12	TOT SF
548,389	Infra@20%
2,193,558	Max build area

RESIDENTIAL SHARE	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Market	60%	1,118,714	15%	950,907
Workforce	25%	466,131	15%	396,211
Low Income Affordable	15%	279,679	15%	237,727
Totals	100%	1,864,524	15%	1,584,845

MARKET RATE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	380	20%	190,181
One Bd	650	512	35%	332,818
Two Bd	1,100	259	30%	285,272
Three Bd	1,350	106	15%	142,636
Total		1,257	100%	950,907

WORKFORCE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	158	20%	79,242
One Bd	650	213	35%	138,674
Two Bd	1,100	108	30%	118,863
Three Bd	1,350	44	15%	59,432
Total		524	100%	396,211

LOW INCOME AFFORDABLE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	95	20%	47,545
One Bd	650	128	35%	83,204
Two Bd	1,100	65	30%	71,318
Three Bd	1,350	26	15%	35,659
Total		314	100%	237,727
TOTAL HOUSING UNITS		2,096		1,584,845

MARKET RATE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($1400/Mn.)	500	380	$33.60	$6,390,097
One Bd ($1850/Mn.)	650	512	$34.15	$11,365,719
Two Bd ($2200/Mn.)	1,100	259	$24.00	$6,846,532
Three Bd ($3000/Mn.)	1,350	106	$26.66	$3,802,678
Total		1,257		$28,405,026

Median Income	120% Median Income
$28,659	$34,391
$47,081	$56,497
$51,789	$62,147
$56,968	$68,362

WORKFORCE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($860/Mn.)	500	158	$20.63	$1,635,123
One Bd ($1413/Mn.)	650	213	$26.08	$3,616,011
Two Bd ($1554/Mn.)	1,100	108	$16.95	$2,014,635
Three Bd ($1709/Mn.)	1,350	44	$15.19	$902,855
Total		524		$8,168,624

Median Income	60% Median Income
$28,659	$17,195
$47,081	$28,249
$51,789	$31,073
$56,968	$34,181

LOW INCOME AFFORDABLE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($430/Mn.)	500	95	$10.32	$490,537
One Bd ($706/Mn.)	650	128	$13.04	$1,084,803
Two Bd ($776/Mn.)	1,100	65	$8.47	$604,390
Three Bd ($855/Mn.)	1,350	26	$7.60	$270,856
Total		314		$2,450,587

TOTAL HOUSING INCOME	2,096	$39,024,238
POTENTIAL INCOME AT FULL MARKET RATE		$47,341,710
SUBSIDY REQUIRED		$8,317,473
		18%

Note: Chelsea's median household income for family is $47,081. (ACS 2010-2012 Estimates)
Chelsea's median non family income is $28,659. (ACS 2010-2012 Estimates)
Low income is defined as 80% of area median family income. (HUD Income Limits FY 2013)

RETAIL

Avg Unit Size (sf)	NLA (sf)	Total Units
5,000	104,194	20

OFFICE

Avg Unit Size (sf)	NLA (sf)	Total Units
15,000	175,485	11

SITE CHARACTERISTICS	
Site area (SF)	1,085,425
Zoning district	TOD
FAR	4
Max buildable area (sf)	3,473,359

SPACE ALLOCATION	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Retail	10%	347,336	5%	329,969
Residential	60%	2,084,016	15%	1,771,413
Office	30%	1,042,008	20%	833,606
Totals	100%	3,473,359	16%	2,934,989

COMMENTS

109.76	Total Dev Acres
22.70%	Ph 2 in Total Dev Acres
24.92	Ph 2 in Acres
1,085,425	SF
4	FAR
4,341,699	TOT SF
868,340	Infra@20%
3,473,359	Max build area

RESIDENTIAL SHARE	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Market	60%	1,250,409	15%	1,062,848
Workforce	25%	521,004	15%	442,853
Low Income Affordable	15%	312,602	15%	265,712
Totals	100%	2,084,016	15%	1,771,413

MARKET RATE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	425	20%	212,570
One Bd	650	572	35%	371,997
Two Bd	1,100	290	30%	318,854
Three Bd	1,350	118	15%	159,427
Total		1,405	100%	1,062,848

WORKFORCE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	177	20%	88,571
One Bd	650	238	35%	154,999
Two Bd	1,100	121	30%	132,856
Three Bd	1,350	49	15%	66,428
Total		586	100%	442,853

LOW INCOME AFFORDABLE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	106	20%	53,142
One Bd	650	143	35%	92,999
Two Bd	1,100	72	30%	79,714
Three Bd	1,350	30	15%	39,857
Total		351	100%	265,712
TOTAL HOUSING UNITS		2,342		1,771,413

MARKET RATE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($1400/Mn.)	500	425	$33.60	$7,142,338
One Bd ($1850/Mn.)	650	572	$34.15	$12,703,690
Two Bd ($2200/Mn.)	1,100	290	$24.00	$7,652,505
Three Bd ($3000/Mn.)	1,350	118	$26.66	$4,250,329
Total		1,405		$31,748,862

Median Income	120% Median Income
$28,659	$34,391
$47,081	$56,497
$51,789	$62,147
$56,968	$68,362

WORKFORCE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($860/Mn.)	500	177	$20.63	$1,827,610
One Bd ($1413/Mn.)	650	238	$26.08	$4,041,688
Two Bd ($1554/Mn.)	1,100	121	$16.95	$2,251,797
Three Bd ($1709/Mn.)	1,350	49	$15.19	$1,009,139
Total		586		$9,130,234

Median Income	60% Median Income
$28,659	$17,195
$47,081	$28,249
$51,789	$31,073
$56,968	$34,181

LOW INCOME AFFORDABLE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($430/Mn.)	500	106	$10.32	$548,283
One Bd ($706/Mn.)	650	143	$13.04	$1,212,506
Two Bd ($776/Mn.)	1,100	72	$8.47	$675,539
Three Bd ($855/Mn.)	1,350	30	$7.60	$302,742
Total		351		$2,739,070

TOTAL HOUSING INCOME	2,342	$43,618,165
POTENTIAL INCOME AT FULL MARKET RATE		$52,914,770
SUBSIDY REQUIRED		$9,296,604
		18%

Note: Chelsea's median household income for family is $47,081. (ACS 2010-2012 Estimates)
Chelsea's median non family income is $28,659. (ACS 2010-2012 Estimates)
Low income is defined as 80% of area median family income. (HUD Income Limits FY 2013)

RETAIL

Avg Unit Size (sf)	NLA (sf)	Total Units
5,000	329,969	65

OFFICE

Avg Unit Size (sf)	NLA (sf)	Total Units
15,000	833,606	55

Housing Setup Phase III

SITE CHARACTERISTICS	
Site area (SF)	1,289,396
Zoning district	TOD
FAR	5
Max buildable area (sf)	5,157,586

SPACE ALLOCATION	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Retail	5%	257,879	5%	244,985
Residential	50%	2,578,793	15%	2,191,974
Office	45%	2,320,914	20%	1,856,731
Totals	100%	5,157,586	17%	4,293,690

COMMENTS

109.76	Total Dev Acres	
26.97%	Ph 3 in Total Dev Acres	
29.60	Ph 3 in Acres	
1,289,396	SF	
5	FAR	
6,446,982	TOT SF	
1,289,396	Infra@20%	
5,157,586	Max build area	

RESIDENTIAL SHARE	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Market	60%	1,547,276	15%	1,315,184
Workforce	25%	644,698	15%	547,993
Low Income Affordable	15%	386,819	15%	328,796
Totals	100%	2,578,793	15%	2,191,974

MARKET RATE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	789	30%	394,555
One Bd	650	607	30%	394,555
Two Bd	1,100	359	30%	394,555
Three Bd	1,350	97	10%	131,518
Total		1,852	100%	1,315,184

WORKFORCE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	329	30%	164,398
One Bd	650	253	30%	164,398
Two Bd	1,100	149	30%	164,398
Three Bd	1,350	41	10%	54,799
Total		772	100%	547,993

LOW INCOME AFFORDABLE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Studio	500	197	30%	98,639
One Bd	650	152	30%	98,639
Two Bd	1,100	90	30%	98,639
Three Bd	1,350	24	10%	32,880
Total		463	100%	328,796
TOTAL HOUSING UNITS		3,087		2,191,974

MARKET RATE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($1400/Mn.)	500	789	$33.60	$13,257,059
One Bd ($1850/Mn.)	650	607	$34.15	$13,474,064
Two Bd ($2200/Mn.)	1,100	359	$24.00	$9,469,328
Three Bd ($3000/Mn.)	1,350	97	$26.66	$3,506,282
Total		1,852		$39,706,732

WORKFORCE RESIDENTIAL INCOME

Median Income	120% Median Income
$28,659	$34,391
$47,081	$56,497
$51,789	$62,147
$56,968	$68,362

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($860/Mn.)	500	329	$20.63	$3,392,268
One Bd ($1413/Mn.)	650	253	$26.08	$4,286,783
Two Bd ($1554/Mn.)	1,100	149	$16.95	$2,786,409
Three Bd ($1709/Mn.)	1,350	41	$15.19	$832,483
Total		772		$11,297,943

LOW INCOME AFFORDABLE RESIDENTIAL INCOME

Median Income	60% Median Income
$28,659	$17,195
$47,081	$28,249
$51,789	$31,073
$56,968	$34,181

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Studio ($430/Mn.)	500	197	$10.32	$1,017,680
One Bd ($706/Mn.)	650	152	$13.04	$1,286,035
Two Bd ($776/Mn.)	1,100	90	$8.47	$835,923
Three Bd ($855/Mn.)	1,350	24	$7.60	$249,745
Total		463		$3,389,383

TOTAL HOUSING INCOME	3,087	$54,394,057
POTENTIAL INCOME AT FULL MARKET RATE		$65,477,551
SUBSIDY REQUIRED		$11,083,494
		17%

Note: Chelsea's median household income for family is $47,081. (ACS 2010-2012 Estimates)
Chelsea's median non family income is $28,659. (ACS 2010-2012 Estimates)
Low income is defined as 80% of area median family income. (HUD Income Limits FY 2013)

RETAIL

Avg Unit Size (sf)	NLA (sf)	Total Units
5,000	244,985	48

OFFICE

Avg Unit Size (sf)	NLA (sf)	Total Units
15,000	1,856,731	123

SITE CHARACTERISTICS	
Site area (SF)	1,858,089
Zoning district	TOD
FAR	3
Max buildable area (sf)	4,459,413

SPACE ALLOCATION	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Retail	2%	89,188	5%	84,729
Residential	15%	668,912	15%	568,575
Office	83%	3,701,313	20%	2,961,050
Totals	100%	4,459,413	19%	3,614,354

COMMENTS

109.76	Total Dev Acres	
38.86%	Ph 3 in Total Dev Acres	
42.66	Ph 3 in Acres	
1,858,089	SF	
3	FAR	
5,574,266	TOT SF	
1,114,853	Infra@20%	
4,459,413	Max build area	

RESIDENTIAL SHARE	SHARE (%)	GFA (SF)	COMMON AREA (%)	NLA (SF)
Market	60%	401,347	15%	341,145
Workforce	25%	167,228	15%	142,144
Low Income Affordable	15%	100,337	15%	85,286
Totals	100%	668,912	15%	568,575

MARKET RATE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Two Bd	1,100	217	70%	238,802
Three Bd	1,350	76	30%	102,344
Total		293	100%	341,145

WORKFORCE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Two Bd	1,100	90	70%	99,501
Three Bd	1,350	32	30%	42,643
Total		122	100%	142,144

LOW INCOME AFFORDABLE RESIDENTIAL UNIT SIZE

Type	Unit Size (sf)	Total Units	Type in %	NLA (SF)
Two Bd	1,100	54	70%	59,700
Three Bd	1,350	19	30%	25,586
Total		73	100%	85,286
TOTAL HOUSING UNITS		488		568,575

MARKET RATE RESIDENTIAL INCOME

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Two Bd ($2200/Mn.)	1,100	217	$24.00	$5,731,237
Three Bd ($3000/Mn.)	1,350	76	$26.66	$2,728,478
Total		293		$8,459,716

WORKFORCE RESIDENTIAL INCOME

Median Income	120% Median Income
$28,659	$34,391
$47,081	$56,497
$51,789	$62,147
$56,968	$68,362

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Two Bd ($1554/Mn.)	1,100	90	$16.95	$1,686,452
Three Bd ($1709/Mn.)	1,350	32	$15.19	$647,812
Total		122		$2,334,264

LOW INCOME AFFORDABLE RESIDENTIAL INCOME

Median Income	60% Median Income
$28,659	$17,195
$47,081	$28,249
$51,789	$31,073
$56,968	$34,181

Type	Unit Size (sf)	Total Units	Rent PSF	Rent Total
Two Bd ($776/Mn.)	1,100	54	$8.47	$505,936
Three Bd ($855/Mn.)	1,350	19	$7.60	$194,344
Total		73		$700,279

TOTAL HOUSING INCOME	488	$11,494,259
POTENTIAL INCOME AT FULL MARKET RATE		$14,099,526
SUBSIDY REQUIRED		$2,605,267
		18%

Note: Chelsea's median household income for family is $47,081. (ACS 2010-2012 Estimates)
Chelsea's median non family income is $28,659. (ACS 2010-2012 Estimates)
Low income is defined as 80% of area median family income. (HUD Income Limits FY 2013)

RETAIL

Avg Unit Size (sf)	NLA (sf)	Total Units
5,000	84,729	16

OFFICE

Avg Unit Size (sf)	NLA (sf)	Total Units
15,000	2,961,050	197

Housing Setup Summary

SUMMARY

Total Developable Area	109.76
Total Housing	8,013

Districts	Market Rate Units	Workforce Units	Low Income Affordable Units	Total Housing Units	% Subsidy Required
PHASE 1	1,257	524	314	2,096	18%
PHASE 2	1,405	586	351	2,342	18%
PHASE 3 - 5FAR	1,852	772	463	3,087	18%
PHASE 3 - 3FAR	293	122	73	488	18%
TOTAL	4,515	1,881	1,129	8,013	

Housing Types	Market Rate Units	Workforce Units	Low Income Affordable Units	Total Housing Units	% of Housing Type Affordable
STUDIO	1,595	664	399	2,658	40%
1 BD	1,691	705	423	2,819	40%
2 BD	1,125	469	281	1,875	40%
3 BD	397	165	99	662	40%
TOTAL	4,808	2,003	1,202	8,013	

Total Retail

Districts	NLA (SF)	Total Units
PHASE 1	104,194	20
PHASE 2	329,969	65
PHASE 3 - 5FAR	244,985	48
PHASE 3 - 3FAR	84,729	16
TOTAL	763,877	149

Total Office

Districts	NLA (SF)	Total Units
PHASE 1	175,485	11
PHASE 2	833,606	55
PHASE 3 - 5FAR	1,856,731	123
PHASE 3 - 3FAR	2,961,050	197
TOTAL	5,826,872	386