PERCEPTIONS OF STREETSCAPES IN DIVERSE BOSTON COMMUNITIES
A STUDY FOR LIVABLESTREETS ALLIANCE

Janet Lau, Adrianne Schaefer, Kiersten Mailler and Molly Cooney-Mesker
Spring 2012
Acknowledgments

Field Projects “Team 7” extends its appreciation to all those who made this project possible. Sincere thanks go to Julia Prange and Jackie Douglas at LivableStreets Alliance for providing us with the project, the multitude of Boston-area residents who welcomed us to their neighborhoods and who willingly and enthusiastically participated in the survey, our interviewees and their organizations including Gustavo Quiroga with the Allston Brighton Community Development Corporation, Vivien Wu with the Asian Community Development Corporation (ACDC), Carrie Dancy with East Somerville Main Streets, Cris Lagunas with Alternatives for Community and Environment (ACE), Paolo Debarros with Cape Verdean Community UNIDO, Katrina Moore with the Tufts Africana Center, Angela and Dorea Vierling-Claassen with CarFree with Kids blog, Mark Chase with Tufts Urban and Environmental Planning department, Wig Zamore with Somerville Transportation Equity Partnership (STEP) and, again, Jackie Douglas with LivableStreets Alliance. We would also like to recognize Project for Public Spaces for providing us permission to use its beautiful images for our survey.

We would like to offer special thanks to those who supported us throughout the research, including the Field Projects Teaching Team, especially Professors Justin Hollander and Penn Loh and teaching assistant Lydia Rainville.
Abstract

In this report, we explore the dynamic connection between streetscape design and public use and perception. Though a literature review has informed us of the effects of street and streetscape design on local communities and the public at large, greater insight and granularity was needed on streetscape perceptions of residents in the Boston Metro Area, specifically in historically under-represented communities. To this end, we present and discuss the results of two primary research methods, interviewing and surveying, that engaged local community members in specific communities and served as valuable reference points of community perception and use of neighborhood streets. Lastly, based on those results, we present recommendations for how sustainable transportation or “complete streets” advocacy groups – such as LivableStreets Alliance, who proposed the initial project scope – and other city planning officials can partake in open dialogue and collaboration with local community members in order to make streets more functional, appealing and equitable for all.
Table of Contents

Acknowledgements ........................................................................................................................................................................ 2

Abstract .................................................................................................................................................................................. 3

Executive Summary .......................................................................................................................................................... 8

Chapter 1
Introduction .............................................................................................................................................................................. 10
Research Goals and Objectives .............................................................................................................................................. 10
Overview of Report ................................................................................................................................................................. 11

Chapter 2
Literature Review ...................................................................................................................................................................... 12

Cultural inclusivity and socially driven design .................................................................................................................. 13
Public transit ridership ...................................................................................................................................................... 15
Public health .................................................................................................................................................................... 16
Safety .............................................................................................................................................................................. 17
Equity in streetscape planning ........................................................................................................................................ 18
Environmental psychology ............................................................................................................................................ 19
A Study of Streetscapes: Typologies and Components ................................................................................................. 20

Chapter 3
Methodology ............................................................................................................................................................................. 23

Surveys ................................................................................................................................................................................ 23
Interviews ............................................................................................................................................................................ 23
# Table of Contents (cont.)

## Chapter 4
Results................................................................................................................................. 26  
*Survey Results* ......................................................................................................................... 26  
*Interview Results* ..................................................................................................................... 38  

## Chapter 5
Conclusion ........................................................................................................................................... 45  
Recommendations .......................................................................................................................... 45  

## Appendix
Appendix I  Bibliography ............................................................................................................. 48  
Appendix II  Photo and graphic credits ........................................................................................ 52  
Appendix III  Dot survey posters ................................................................................................ 53  
Appendix IV  Survey demographic questionnaire ...................................................................... 56  
Appendix V  Community Leader Questions ................................................................................ 57  
Appendix VI  Community organization list .................................................................................. 58  
Appendix VII  Survey Anecdotes .................................................................................................. 59  
Appendix VIII  Signed Memorandum of Understanding ............................................................ 60  
Appendix IX  IRB Approval ......................................................................................................... 65
# List of Tables and Figures

## Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Street with space for cars and bicycles</td>
<td>20</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Separated bike path</td>
<td>20</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Separated bus lane</td>
<td>21</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Mixed Roadway</td>
<td>21</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Pedestrian only street in Kunming, China</td>
<td>22</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Sample Street</td>
<td>22</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Current vs. desired transportation mode graph</td>
<td>27</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Current vs. desired street activity graph</td>
<td>27</td>
</tr>
<tr>
<td>Figure 9</td>
<td>Preferred street design types or changes graph</td>
<td>29</td>
</tr>
<tr>
<td>Figure 10</td>
<td>Distribution of participants’ race graph</td>
<td>29</td>
</tr>
<tr>
<td>Figure 11</td>
<td>Distribution of participants’ income graph</td>
<td>31</td>
</tr>
<tr>
<td>Figure 12</td>
<td>Distribution of participants’ age graph</td>
<td>31</td>
</tr>
</tbody>
</table>

## Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Chi-square goodness of fit test on race</td>
<td>32</td>
</tr>
<tr>
<td>Table 2</td>
<td>Chi-square test on survey site and residence of respondents</td>
<td>32</td>
</tr>
<tr>
<td>Table 3</td>
<td>Chi-square test on race and desired activity on streets</td>
<td>33</td>
</tr>
<tr>
<td>Table 4</td>
<td>Chi-square test on survey site and current mode of transportation</td>
<td>35</td>
</tr>
<tr>
<td>Table 5</td>
<td>Responses to current activity on neighborhood streets by race</td>
<td>35</td>
</tr>
<tr>
<td>Table 6</td>
<td>Commute data by demographics (2009 American Community Survey)</td>
<td>36</td>
</tr>
<tr>
<td>Table 7</td>
<td>Responses to desired mode of transportation by race</td>
<td>37</td>
</tr>
<tr>
<td>Table 8</td>
<td>Responses to desired street design by race</td>
<td>37</td>
</tr>
</tbody>
</table>
About this project
LivableStreets Alliance is a non-profit advocacy organization that promotes safe and vibrant streets in the Boston area. The organization has supported significant streetscape improvements, including the upgrading of bicycle and pedestrian infrastructure and environments on Massachusetts and Commonwealth Avenues. Despite these successes LivableStreets Alliance has recognized that it still has much work to do in creating a culturally inclusive planning and advocacy process. The organization partnered with Tufts University’s Urban and Environmental Planning and Policy (UEP) program to study the perceptions of streetscapes among diverse Boston-area communities with the goal of more effectively reaching out to and representing the needs of these residents. Although Boston has a diverse cultural and ethnic population, many of these groups have been traditionally underrepresented in public planning processes.

Planning for culturally inclusive streetscapes
The struggle for cultural inclusive planning is not unique to LivableStreets Alliance. Planning initiatives across the globe are recognizing the need for inclusive urban design that meets the needs of increasingly diverse city populations. A review of the literature reveals several findings that helped to shape our research questions and approach. It is well documented that street use differs culture-to-culture and place-to-place. Additionally, an emerging body of work shows that perceptions of public parks vary across cultural backgrounds. In the U.S., these cultural differences are set against a legacy of generally inequitable, top-down and auto-centric planning. Additionally, our review of the literature reveals racial and socioeconomic inequities in streetscape design, especially in terms of public health and safety.

Project goals and objectives
This project aimed to address a couple of gaps in the existing literature, or at least identify trends within these gaps that are deserving of further investigation. The first goal was identifying how perceptions of streetscapes may differ by race, neighborhood of residence, country of origin, household income, age and gender. The second goal was discovering how disparate cultural groups in the Boston area may or may not use streets differently. In addition to these research questions, we were interested in residents’ desires for the future of their streetscapes and how these desires might differ by neighborhood of residence and demographics.
Methodology
The investigation primarily utilized on-the-street visual perception surveys and interviews with community leaders in five Boston area neighborhoods: Dorchester, East Somerville, Chinatown, Allston and Brighton. Locations for street surveys were chosen based on areas where LivableStreets Alliance has not historically been as active and where racial and socioeconomic diversity are predominant features of the neighborhood. Community leaders were selected based on their involvement in the target neighborhoods.

Results
The surveys and interviews revealed differences and commonalities in the way diverse Boston-area residents use and perceive streetscapes. Some of these trends point to a connection between demographics and streetscape uses and preferences. Although we do not draw conclusions between respondents’ answers and their backgrounds, the trends reinforce the importance of community engagement and provoke new approaches to planning for complete streets.

Conclusions and Recommendations
Known for its dynamic “street talks” and other events, LivableStreets Alliance requested for the team’s research to culminate in an engaging short film in addition to a report. The following report includes a review of the literature, an overview of research methods, qualitative and quantitative analysis of interviews and survey results, respectively, and recommendations. The team’s recommendations address techniques for developing inclusive complete streets initiatives through specific approaches to community outreach, communication and partnerships. Additionally, the team has identified trends that emerged as areas for future research.
Chapter 1

Introduction

LivableStreets Alliance contracted Tufts University UEP Field Projects “Team 7” to create a report and short film on the topic, “Cultural Perceptions of Streets in Boston (and Beyond).” In 2009 Mayor Thomas Manino of Boston launched “Boston Complete Streets” as a “collaboration to develop new street design guidelines and implement projects informed with a new Complete Streets approach to build road networks that are safer, more livable, and welcoming to everyone.” LivableStreets works to embrace this concept by reframing “complete streets” as “livable streets,” and engages in projects that balance multi-modal priorities and emphasize pedestrian safety. The cultural perceptions aspect of the research prompt captured all of our imaginations, however it was a broad conceptual topic that required further definition.

“Team 7” did not have the capacity to draw definitive conclusions about the many confounding factors shaping perceptions of streetscapes – research that would require a complex and multidisciplinary approach. Additionally, “culture” is an expansive and varied concept, and one that Team 7 did not feel was appropriate to use categorically for this project.

Reseach Goals and Objectives

In collaboration with LivableStreets Alliance, we defined a research objective that addresses the organization’s expressed interest in reaching communities beyond their traditional network of bicycle and pedestrian activists. LivableStreets discussed their membership and audience as tending to be middle-income and white.

Objective: Contribute to LivableStreets Alliance’s efforts to create more just, equitable and accessible streetscapes by researching the perceptions and uses of streets in diverse Boston-area communities that are traditionally underrepresented in planning processes.

From this we narrowed the research scope to investigating how the perceptions and uses of streetscapes varied between Boston-area neighborhoods and between various demographic groups – from age to race to income. LivableStreets Alliance did not have this data and we found it to be generally absent from the existing literature, especially in a Boston-specific context.

It was our objective to address the following questions:

• What are public perceptions of streets in different parts of the Greater Boston Region?

For more information on Boston’s Complete Streets initiative see www.cityofboston.gov/transportation/completestreets/.
• How do people from diverse backgrounds and ages perceive streets differently? What are current uses or activities on streets and what are desirable uses or activities on streets?

Report Overview
We first completed a literature review on existing research that focuses on cultural perceptions of streets and streetscapes. Then, through various qualitative and quantitative methods, we carried out primary research in order to address the research questions above as they pertain to our study area.

In providing our findings to LivableStreets Alliance, we hope the organization can better advocate for and communicate with a diverse range of Boston-area communities. A comprehensive description of our research methodologies and results is included in the following report. Additionally, we created a complementing documentary-style film. The film brings to life the evolution of streetscape design in the U.S., tensions communities feel around their streets and especially the redesign of their streets, and our team’s recommendations for the complete streets movement to engage with diverse communities. We hope the films serves to inform the public, as well as government organizations, private interest groups, and non-profits in the transportation and city planning sector of what Boston’s residents want for their streets and communities.
In the middle of the 20th century American streetscapes were transformed to meet the needs of a rapidly growing automobile culture. The role of streets shifted from the transport of resources to the mobility of cars. Form followed function, yielding wider, faster streets with little space for people and commerce. This streetscape transformation drew critical attention from journalists and academics. Jane Jacobs’ Death and Life of Great American cities, William Whyte’s Social Life of Small Urban Spaces, and later, Donald Appleyard’s Livable Streets spurred a popular interest in the role of streetscapes in our cities, daily lives and collective culture. This premier collection of work focused on the movement of people and the social vibrancy of streets, described by Jacobs as the “sidewalk ballet” (Jacobs 1967, 50). Since the first critiques of car culture and privatized public space, researchers, municipalities, planners and designers have attempted to unravel the complexities of what makes a good streetscape.

In the last decade a confluence of issues (and their particular influences) ranging from public health and safety to social vibrancy and community cohesion have increased interest in improving streetscapes and creating walkable communities. Organizations like LivableStreets Alliance in Boston, Project for Public Spaces in New York City and SPUR in San Francisco have been working to apply many of the principles uncovered by Jacobs, Whyte and Appleyard, among others. Various methods of urbanism – guerilla, DYI, tactical and open-source urbanism, to name a few – have taken off, allowing some residents to redefine their environments on small scales.

The livable streets movement has continued to promote the street as a social space in the face of expanding car infrastructure and culture. A body of research that identifies the negative public health, safety and environmental impacts of auto-centric streetscapes support the movement. Within this field of research spanning public health, landscape design, architecture, environmental science, psychology and planning, this literature review will inform readers what we do know about the factors that shape our perceptions and uses of streetscapes. Additionally, this literature review will provide a foundation of contemporary research that explores the impacts of our streetscapes and the planning and policy landscape that shapes them. As part of this research we
have reviewed intercultural planning approaches that may be applied to streetscape planning. With such a broad topic, this literature review is certainly not a complete documentation of all information currently available. Instead, it attempts to identify types of available literature and establish research gaps, which our project hopes to address.

The review first examines the movement towards planning culturally inclusive cities, to identify what, if anything, this field offers in the way of planning culturally inclusive streetscapes. Following the broad topic of cultural inclusivity, we review literature addressing public transportation, public health as related to streetscapes, and street safety to identify research within these fields related to cultural perceptions of streetscapes. We then look to equitable planning initiatives, hypothesizing that these initiatives may be grounded in research of cultural perceptions, and if not may provide us with some clues to different communities streetscape needs. Lastly, the review touches on the rich field of environmental psychology.

A Brief Overview of Existing Literature

Cultural inclusivity and socially driven design

The objective of studying cultural perceptions of streetscapes is to inform policy and design that meet the needs of diverse communities. There seems to be very limited research working towards a planning approach for culturally inclusive streetscapes specifically. However, there have been broad efforts toward urban planning that promotes spatial justice and cultural inclusivity through movements such as Right to the City, the Open City: Designing Coexistence, and the European Union’s Inter-cultural Cities. Spatial justice is the expression of social justice through spatiality. Henri Lefebvre and David Harvey drew upon Marxist theory to popularize the concept of spatial justice in the 1960s and ‘70s. More recently, Edward Soja has update Lefebvre’s work through a postmodern perspective on urban spaces, especially in the Los Angeles area. Spatial justice posits that the ownership, control and design of urban spaces are the physical manifestations of social and political dynamics (Harvey 1973, Soja 2010). The movement towards intercultural planning is being pursued on a continental scale with the European Union’s joint action called Inter-
cultural Cities. The guidelines focus primarily on participatory planning and economic concepts including entrepreneurship, innovation and access to markets (Wood 2009). While this work supports the growing need for intercultural planning it does not provide insights into cultural perceptions of streetscapes.

The European Union’s efforts toward intercultural planning are complemented by a body of socially focused streetscape research, which generally considers the streetscape as an important public realm with social and cultural capital (Grassov 2008). Winston Churchill Fellow and Loeb Fellow Ben Hamilton-Bailli evaluated “home zones” in Europe in 2000. His research highlights the debate about the relationship between the social domain and the domain of traffic. Hamilton-Bailli emphasized the need for combined “high quality public space with the needs of efficient integrated transport systems” (Hamilton-Bailli 2000, 4). In their report “Livable Streets and Social Inclusion,” Daniel Sauter and Marco Huettenmoser evaluate the effects of street design on social inclusion, contentment and personal development in Switzerland. The report expands the role of streetscapes to basic human needs, including the “ability of people to move according to their needs, in an environment built to human scale to be treated with dignity and respect” (Sauter and Huettenmoser 2008).

When streets are not being built to be socially and physically inclusive of their residents, ‘guerrilla urbanism’ can take place. In “Insurgent Public Space: Guerrilla urbanism and the remaking of contemporary cities,” various professors of anthropology, urban planners, community organizers, etc. introduce how outdoor spaces or streets can be taken back by inhabitants, changing the function of those spaces to serve the public good through alternative activities, expressions, and relationships. In this book, it is demonstrated that the culture, origin or experiences of groups of people can shape the way they perceive and use streets and public spaces. For example, LA’s Latino population is known for transforming “staid, auto-oriented urban neighborhoods and suburbs into hubs lively pedestrian and commercial activity through their legal or illegal DIY urban design interventions to commercial and residential streets” (Rojas, 2010, 38). Here, streets are an integral part of the community fabric since they bring people together and allow for mobility and social exchanges. On the streets, they construct vendor stands to sell produce, snacks, or material goods and temporarily transform vacant lots, sidewalks and curbs into pedestrian-oriented mercados; add props such as objects to sit on, talk over, and play with in order to
support human activity in public space; and host small fi-estas on streets during the Christmas season where adults and children mingle outside with street vendors during the day and partake in processions during the evening. As Rojas (2010) summarizes, “All these interventions turn streets into plazas rich in social neighborhood activity… Latino urbanism offers a model for urban improvisation and reinvention that addresses the issues of sustainability, public life, social justice, and the economic needs of the diverse urban dwellers and embraces the everyday acts of individuals, families and communities” (44).

**Public transit ridership**

Public transportation is an important element of streetscapes in many cities. It is also the element of streets in which behavior has been analyzed by ethnicity. While the private car continues to dominate travel in the U.S., there are notable variations on travel behavior across income, race, ethnicity, sex, and age. Overall, the poor, racial and ethnic minorities, and the elderly have much lower mobility rates than the general population. Moreover, the poor, blacks, and Hispanics are far more likely to use public transit than other groups. Indeed, minorities and low-income households account for 63% of the nation’s transit riders. Different socioeco-

nomics also have divergent rates of carpooling, taxi use, bicycling, and walking. In addition, they travel different distances and at different times. (Pucher and Renn 2001)

Transit has become a critical equity issue as millions of poor people and people of color live in communities where quality transportation options are “unaffordable, unreliable, or nonexistent” (PolicyLink 2010). The Center for Neighborhood Technology explores the impact that transportation costs associated with the location of housing have on a household’s economic bottom line using the housing and transportation index, which takes the sum of housing costs and transportation costs and divides it by income. Using this index, national studies from the San Francisco Bay Area to Chicago to Washington DC have found that high transportation costs are especially burdensome for low-income households (CNT 2009, ULI 2009).

In cities such as Los Angeles, transit-riding communities that are often ethnically diverse and underrepresented in city government, come together through public meet-
ings and organizations, like the Los Angeles Bus Riders Union, to advocate for the transit needs of their commu-

nities. As documented by Edward Soja’s “The City and
Spatial Justice, “this type of local activism is an example of the campaign for spatial justice to combat spatial and locational discrimination in government planning and policy. In Los Angeles, as Soja states, “The notion of spatial and locational discrimination, the creation of unjust geographies of mass transit, was added to the racial discrimination arguments and helped to win the case... the end result was a shift of billions of dollars of public investment from a rail plan that would benefit the rich more than the poor, as is usually the case in the capitalist city, to an almost unprecedented plan that would benefit the poor more than the rich. The bus network today is among the best in the country and is being used as a model of efficiency in other cities.” (Soja 2010)

Our research will attempt to identify patterns between ridership behavior and perceptions of streetscapes.

Public health

The connection between public health and the built environment is not a new concept. However there is an increasing emphasis on the role of streetscapes in encouraging healthy lifestyles. Research shows travel methods are important predictors of obesity across gender and ethnicity (Pucher et al. 2010). In addition to transportation, the land use mix in a person’s neighborhood also has the strongest association with obesity (Frank et al. 2004). As the mixed use development in neighborhood rises from “average” to “maximum” the probability of obesity in white and black males and females falls. In Atlanta, obesity rates are about 30% among African-American women in neighborhoods with average mixed-use, whereas in neighborhoods with maximum mixed-use, obesity rates are about 15%. The changes are similar in black males and white males and females (Frank et al. 2004, 8). Additionally, there is research focused on the health effects of transportation modes and land use on youth, specifically. A 2011 study of youth revealed findings similar to the earlier Frank et al. research: urban form including residential density, street connectivity, land use mix, and distance to school can either serve to constrain or promote physical activity of youth (Van Loon and Frank 2011).

A study motivated by youth obesity reports examined walking levels in children in the U.K. related to their perceptions of streets (Alton et al. 2007). This analysis of behavior and perceptions of streetscapes is something our research aims to accomplish with adult populations in Boson. The questionnaire-based study was conducted across six elementary schools with 473 children, ages 9-11 years (82% response rate), including 250 (52.9%)
boys and 160 (33.8%) from ethnic minority populations. The children were grouped into different levels of walkers based on their responses about the number and purpose of walking trips they had taken in the last seven days. Children then rated the safety (presence of strangers) and traffic in their neighborhoods along with their preferred modes of transportation. The research found that children from ethnic minority groups walked significantly less than white children and that “high walkers” were more likely to perceive heavy traffic surrounding their homes and unsafe streets to a higher degree, in addition to preferring healthier modes of travel. High walkers were also less likely to worry about strangers and less likely to report no parks or sports grounds nearby (Ibid).

Safety
Street safety is often investigated in tandem with health, especially for municipalities that are making changes on a local level. In 2004, New York City released “Streets for People: Your Guide to Winning Safer and Quieter Streets,” a design guide that emphasized traffic calming and road diet techniques, aimed at reducing the amount of a road space dedicated to cars in order to create safer streetscapes. In the early 2000s, the City of Bogotá, Colombia set forth on an aggressive campaign to calm traffic on its streets (Transportation Alternatives 2004). In a review of street design elements and accident statistics, Eric Dumbaugh (2005), argues that “safety concerns that emerge on urban streets result from design practices that fail to link a roadway’s design to its environmental context, thereby providing motorists in urban environments with a false sense of security and increasing their potential exposure to crashes and injuries”(295).

In “Safe Routes to Transit,” a bus rapid transit planning guide created by Nelson/Nygaard Consulting Associates, vehicle speed has been cited to be a significant determinant of crash severity. Lower speed limits and other traffic calming techniques such as speed humps, raised sidewalks and curb extensions can have great effect upon pedestrian safety since risk to drivers and pedestrians increase as vehicle speed increases. “Increased speeds must be accompanied by additional physical separations or impact protections. As speed decreases, the range of design options expands and so do options for pedestrians” (Nelson/Nygaard Consulting Associates 2005, 2). Additionally, perceived safety has been found to be a significant factor as pedestrians determine their walking routes (Weinstein 2008).

Comprehensive street design and in particular street furniture such as pedestrian level street lamps can brighten
up streetscapes and attract more walking activity. “Lighting improvements have a powerful capacity to reduce incivilities and fear at night” (Painter 1996, 200) and potentially increase pedestrian activity. Street lighting can be a community-oriented strategy to benefit all sections of the community and lead to increased usage. Higher usage can enhance natural, informal surveillance and contribute to increased safety (Painter 1996). Details on correlation between safety and “complete” streetscapes specifically have not been found in existing literature.

**Equity in streetscape planning**

A focus group study in California consisting of Mexican immigrant participants mentioned the practical advantages of walking or biking. Participants were open to increasing their own pedestrian and cycling activities, as they were cheaper modes of transportation, but voiced various suggestions for improving bicycle and pedestrian infrastructure, which showed the importance of street design and how it affects use. Their suggestions included, “implement traffic-calming measures in residential areas and school zones; install more lighting on streets and in parks; build more bike lines; provide more signal-protected pedestrian crossings around grocery stores, residential areas, and schools; allow more time for pedestrians to cross during a ‘walk’ signal” (Lovejoy and Handy 2007, 62).

Recently bicycle advocates have begun to investigate perceptions of biking across diverse communities. This work strives to identify barriers to bicycling and seeks to understand resistance to bicycle infrastructure. In a study titled “Beyond the Backlash: Equity and Participation in Bicycle Planning,” graduate researchers at Hunter College created a methodology for community participation in bicycle planning. Aimed at “determining how cycling infrastructure in New York City can best serve the needs of current and future cyclists, and how its longevity can be secured into the future,” the study reveals people’s fears surrounding new bicycle infrastructure. Targeted at New York City planners, the report emphasizes that bicycle infrastructure must have citizen support if the infrastructure is to continue to expand (Applebaum et al. 2011). The City of Boston’s 2010 annual bicycle report, “State of the Hub: Boston Bikes Year-end Update 2010,” addresses perceptions of streets as they differ by gender. The report notes that a solid majority –72 percent – of Boston bicyclists is male, and states that more men than women feel Boston’s streets are safe for bicycling (City of Boston 2011). In Portland, Oregon, the Community Cycling Center conducted a study
among low-income communities of color to determine if an interest in riding existed. If so, the study sought to identify the barriers preventing these residents from biking. The report revealed that adults in these communities have an interest in riding but perceive a number of barriers including cost, safety, mechanical knowledge and storage (Community Cycling Center 2010). Streetscape redesigns are often a central aspect of urban renewal projects, in which gentrification is a concern. While some groups benefit from renewal, groups like low-income and minority residents are disenfranchised (Kosnoski 2011). Several academics have discussed the social equity of public spaces and the ways in which the planning process should be inclusive if the space is to be inclusive. Randolf Hester and his wife Marcia McNally are sociology professors at UC Berkley and act as consultants to California town municipalities on social equity planning. Much of McNally’s work involves surveying local populations, particularly non-white communities, and deriving a plan with their needs in mind. Some important statistics have come out of this work, especially surrounding types of park use and activities for certain groups.

Environmental psychology
Environmental psychology and cognitive science provide a biologically based counterweight to cultural perceptions. In his book The Experience of Landscape, landscape psychologist Jay Appleton outlines his prospect refuge theory arguing that the environments and habits that helped humans to survive as hunters and gatherers shape our modern landscape preferences (Appleton 1975). James Howard Kunstler believes that the planning field needs to require more “livable spaces.” He contrasts the stark exteriors of many new developments with the friendlier facades of thoughtfully planned streets full of shop windows, seating spaces, grassy medians and tree-lined avenues and is able to show that the latter is preferable. Design guidelines for welcoming, human-scale spaces include, among other things, a user-friendly interface, a welcoming exterior that conveys function, ample seating, a haven from the urban bustle, and a balanced attention to the space as an artistic expression and a social setting (Low 2005). The design guidelines established in People Places argue that the observation method is imperative in determining the success of designed spaces (Cooper Marcus and Francis, 1997). Like Whyte and Low, they use quantitative research methods of group- and individual-tracking to look at use patterns for a space. The more heavily used a space, the more successful.
Urban design, and in particular street or streetscape design, greatly influences the activities that can take place on streets. They can serve and prioritize various users and facilitate access and mobility. They can also serve as open spaces for spontaneous activity to take place. Below are some street typologies and components to consider, and the inherent functions they serve. Some of them are very similar to the streetscape photos we presented in our survey.

In *Figure 1*, the car lane shares the street with a bike lane. A bike lane is a “portion of a roadway that has been designated by striping, signs, and pavement markings for the preferential or exclusive use of bicyclists” (NYC Street Design Manual).

*Figure 1*: Street with space for cars and bicycles (Source: NYC Street Design Manual)

*Figure 2*: Separated bike path
(Source: NYC Street Design Manual)
Here, pedestrian space is designated to the sidewalk. Figure 2 shows a street that provides more protection to cyclists due to a bike path being physically separated from vehicular traffic by a median. Figure 3 shows a thoroughfare with two lanes for cars and one designated curb-aligned lane for public transit. This lane allows buses to travel faster and not be as susceptible to traffic. Separated bus lanes are essential for good Bus Rapid Transit systems. Figure 4 shows a mixed roadway, which is a portion of a street that is ordinarily used and designed for vehicular travel, emphasizing motor access and flow. Again, pedestrians are separated from vehicles. Lastly, Figure 5 shows a street that is only open to pedestrian activity, prioritizing walking and the pedestrian scale over other transportation modes.

**Streetscape: Street furniture and Plantings**

Street furniture (e.g. benches, lighting/lamps, waste receptacles and bike racks) and plantings (trees, strips of grass, etc.) can also greatly influence the streetscape and the ambience it presents. “Green” streets and pedestrian-friendly amenities can change how one feels in a space,
thus influencing what one does in that space. *Figure 6* shows a sample street that pulls together many of the street components discussed above, including a bus lane, a bike lane, street furniture (street lamps, bike racks, bench, tables and chairs), and plantings (tree pits). All of these components are fitted alongside five lanes of vehicular activity. From this photo, one can see that streets or streetscapes do not have to prioritize only one function or user, but if planned and designed well, can bring multiple users to interact and share the space together.
Surveys of Diverse Community Member

Site Selection

We selected specific sites to conduct surveys on streets in the Boston Metro Area. Sites were selected in an effort to reach populations who are not typically included in LivableStreets Alliance’s outreach, which tends to be a white, middle-to-upper middle class, physically able population. We surveyed in the following communities in the Boston region:

- Allston – Allston Village
- Brighton – Cleveland Circle
- East Somerville – Sullivan Square T Stop
- Dorchester – Upham’s Corner
- Boston – Chinatown

We elected to survey on the streets for a couple of reasons. First, we were seeking a high level of visibility in order to maximize our sample number. Secondly, we wanted to survey people while they were in transit – from the store to their car, from the T to their home, from the bus to their school. We suspected that this would be an optimal time for people to be considering their streets and modes of transportation. The survey site with obvious potential for transit bias was Sullivan Square Station. We surveyed there because we struggled to find the needed density of foot traffic elsewhere in East Somerville. This location may have skewed our results towards a disproportionate number of public transit riders. However with the large park-and-ride facilities at Sullivan Square Station, this location did not exclude drivers.

We spent about a 1.5 hours (+/- 30 minutes) at each site. The number of participants at each site varied depending on numerous reasons, some of which include inclement weather (the cold and strong winds discouraged people passing by from participating, and also contributed to there being less people on the streets), location, day of the week (we surveyed on Fridays, Saturdays and Sundays), time of day, etc.

Survey Approach

The survey method was a simplified visual perception survey using a “dot” survey format. We asked three sets of questions, which were aligned with sets of photos pasted on large poster board sitting atop easels. Participants placed a “dot” sticker in the response area next to the photo that described their response to the question. Although this method was not used in previous studies

LivableStreets Alliance provided us with general demographic background about their membership on survey respondents to date.
covered in the Literature Review, we chose to gather responses in this manner because it fulfilled several objectives. The dot survey offered a:

- Visual way for participants to relate to the material
- Graphic appeal to attract more participants
- Dynamic sense of what the results are and what can be used to create content for the video(s)
- Bridge for language barriers

In addition, a short paper survey was passed out to participants in order to obtain demographic information, such as gender, income level, and race. We numbered those short paper surveys to correspond with the participants’ respective dot stickers, in order to keep track of survey responses with respondents’ demographic characteristics. Although initially stated as a research method in our project proposal, we were not able to interview and video record select survey participants due to a lack of interest on the participants’ behalf. (See Appendix II for the Dot survey and Appendix III for the short paper survey). Street surveys were written in both English and Spanish. We anticipated correctly that a significant number of Spanish-speaking residents would participate, and the translation of both our demographic and research questions in Spanish was very useful.

We introduced ourselves as Tufts Urban Planning students working with LivableStreets Alliance and we were generally well-received by residents, some of whom were familiar with LivableStreets and almost all of whom were familiar with Tufts. While the dot surveys were likely intimidating or unappealing to some residents, we found that they sparked interest in many passersby who would slow down out of curiosity and ask us about what we were doing. In some cases curious residents declined to participate in the surveys but engaged in good conversation about the streets in their neighborhoods. From these conversations we heard anecdotes that provided deeper more nuanced insights than the surveys alone provided. See Appendix VII for these anecdotes. The intention of survey participants seemed to vary from simply enjoying a few minutes to do a fun activity to earnestly wanting their opinions to be known.

Interviews with Community Leaders

Community Leader Selection

We contacted a select group of leaders from the non-governmental sector, including community, business, and residential organizations and asked them questions related to their perceptions of street usage, purpose, and design in their communities. We chose these leaders primarily in communities where we conducted surveys to provide a narrative to the results of the surveys and the
conditions we observed on the streets. Three of the leaders - Katrina Moore, Angela Vierling-Claassen and Dorea Vierling-Claassen - were not site specific. They were included to voice additional perspective from groups that the literature revealed to be underrepresented in transportation and streetscape planning – African Americans and women.

Of course, not all community leaders we initially contacted were available to participate in our project. Thus, our qualitative research results are somewhat limited to those who were able and willing to participate, and thus does not represent a comprehensive selection of all of the community leaders that would be relevant for this study. Furthermore, due to time constraints, we could only collaborate with only a sample (non-random) selection of prospective leaders. Unfortunately, for this project we were unable to interview a sample of business owners, which could have provided valuable input about local commercial interests.

*Interview Approach*

Each interview participant was asked the same questions about the streetscapes in their neighborhood (See Appendix IV for interview questions). Formatted as casual conversations, the interviews usually deviated from the scripted questions. However, almost all interviewees successfully provided responses to all of the questions. Generally two research team members participated in each interview with one person taking notes and the other conducting the interview. Leaders were filmed during their interviews. The interviews serve as a central piece of the film and provide context and narrative for the survey findings.
For each survey session there were two to four Field Projects team members conducting the survey. Sometimes, when participants didn’t intuitively understand the nature of the questions or what a specific picture was referring to, team members would assist them by guiding them through the questions. Even with careful vigilance, mistakes did occur. Some participants skipped a couple of questions (out of a total of 5 qualitative “dot” questions), while others chose two answers for one particular question. In this case, both answers were not considered in the results and were disqualified. Other times, participants did not want to or did not have the time to fill out the short survey about their demographic characteristics. Often, some items on the demographic survey were ignored, such as the questions about annual household income or race.

Transportation mode: use and desires

Survey question: “What type of transportation do you use the most?” vs. “What kind of transportation would you like to use more?”

Findings: Public transit (bus and T train) accounts for the majority of all transportation modes (58%), but current use does not correspond to desired use. Very few people currently bike (3%) but there is a great desire to bike (28%). Offering greater cycling amenities could lighten up public transit load.

Although some respondents stated that they desired to use cars as a means of transportation more often (n=18; 18% of Rs), only one of those respondents chose car activity as his desired main activity in streets and only two of those respondents chose a car-dominated street for their preference of new street designs. There is a conflicting relationship between respondents’ personal desires to drive more and their desires for public streetscapes that do not prioritize cars. Desires to drive a car could be motivated by reasons of efficiency and image. Even with Boston’s well-developed public transit system, there are still many commutes that are easier, safer and faster in a car. Also, there is prolific cultural value in the U.S. that car ownership is an indicator of wealth and social standing, while public transit use indicates a lack of means.

Current and preferred activities on streets

Survey question: “What is the main activity on streets in your neighborhood” vs. “What would you like to be able to do on streets in your neighborhood?”
**Findings:** Current car activity far surpasses desired level (42% versus 2%, respectively). Streets are also not perceived to be for transportation only - almost 60% of respondents want streets to facilitate social activities (e.g. kids playing, outdoor market shopping, outdoor seating at a café). There is an especially high discrepancy between current and desired biking and market activity, and it seems that residents would like more amenities to promote biking and outdoor markets on streets in their neighborhood.
Preferences on street design

**Survey question:** “What kinds of streets would you like to see more of in your neighborhood?”

**Findings:** Multi-modal streets are the most popular. Auto-friendly streets are the least desired. Streets that facilitate interaction on the ground were shown to be in high demand. With the distribution between street type preferences, it seems that different people look for or enjoy different kinds of environments and that there is not a one-fits-all solution – desired street elements included more street furniture and designs friendly to bicyclists or pedestrians. These findings would be interesting to investigate further with a study that controlled for confounding variables to identify what factors influence a person’s street design preferences.

**Demographics of respondents**

**Findings: Residency, n=98**
Most respondents’ neighborhoods of residence corresponded to the location of the survey site – Allston, Brighton, Somerville, Dorchester, and Chinatown. Out of all of the neighborhoods represented by respondents, the three neighborhoods most often cited were Allston, Dorchester and Somerville (each consisting of at least 15% of total respondents). Other neighborhoods and cities of residency in or close to the Boston Metro Area include South Boston, Brockton, Cambridge, Charleston, Jamaica Plain, Malden, Mattapan, Medford, Roxbury, Saugus, and Westford. A total of 98 respondents identified their neighborhood of residence; 8 people did not respond to this question and those missing values are not considered in the total.

**Findings: Country of Origin: n=92**
Our participants included a significant number of immigrants from a diversity of origins. A little over half of our respondents is American-born, and almost half is foreign-born. 55% of respondents were born in the United States. 18% of respondents were born in Cape Verde, with the majority of them living near Upham’s Corner in Dorchester. 7% of respondents were born in China. Other countries listed were Australia, Brazil, Dominican Republic, El Salvador, Finland, Ghana, Guatemala, Guinea, Haiti, Honduras, Jamaica, Peru, Saudi Arabia and Vietnam, but each had only about one or two respondents that identified with those countries. A total of 92 respondents identified their country of origin, or where they were born; 14 people did not respond to this question and those missing values are not considered in the total.
Findings: Race, $n=101$

The majority of our participants were not Caucasian/White (41% of the total participants). There were a significant number of participants who came from racially diverse backgrounds, including Black, Asian, and a mix of races that could have dated back several generations. A total of 101 respondents identified their race; 5 people did not respond to this question and those missing values are not considered in the total.

It is important to recognize that race is a confusing question – many Cape Verdean participants were mulatto or mixed. Participants who were half-black and half-white or half-Asian and half-white frequently identified themselves as “non-white/mixed.” While the U.S. Census provides more categories related to Hispanic and race, because of space, our survey only provided a non-white Hispanic option.
Findings: Residency, n=98
The majority of our respondents are low-income. In 2010, in the United States, the poverty threshold for one person under 65 was an annual income of $11,344; the threshold for a family group of four, including two children, was $22,133 (US Census Bureau 2010). The median annual household income in the Boston Metro Area, which includes our survey sites, is $68,020, according to the 2010 Census. The 2010 Census also shows 14.6% of households reporting an annual income of under $24,000.

Well over half of our survey participants are lower income, much more so than Boston’s lower income population as reported by the Census. 37% of our respondents reported that their annual household income was under $20,000. Depending on the size of their families (which we did not ask for in the survey), many respondents are considered below the poverty line. Some of the low household incomes can be attributed to being a student. The demographic survey asked whether participants were students to help us track how many low-income individuals were also students. Our results showed that from the 28 participants who responded as having an annual household income of less than $20,000, 16 (57%) were not students. Thus, the majority of the very low-income participants were not students and anecdotaly, several participants shared with us that they rely on government financial assistance. A total of 87 respondents identified their household income level; 19 people did not respond to this question and those missing values are not considered in the total.

An important caveat to keep in mind is that although we specifically asked for household income, this question could be misinterpreted as personal income. We do not anticipate this to detrimentally affect our analysis and results, as both an annual household and an annual personal income of under $20,000 would be considered low-income. Additionally, we were not surprised that participants often skipped this question. The IRB considers this to be a threatening question and so the survey form offered an option for preferring not to respond to this question.

Findings: Age, n=100
Aside from the elderly (65 years and above), all other age groups were relatively evenly represented. A total of 100 respondents identified their age group; 6 people did not respond to this question and those missing values are not considered in the total. Our chosen survey locations in active busy areas may have been a factor in our lower rate of responses from seniors.
Findings: Gender, n=99

55% of our respondents were male and 45% were female. A total of 99 respondents identified their gender; 7 people did not respond to this question and those missing values are not considered in the total.

Statistically significant difference between sample demographic and Boston’s demographics

We tested whether the observed racial demographic proportions from our sample differ significantly from proportions found in the U.S. Census 2010 data. Using a chi-square goodness of fit test, we discovered that our sample’s race proportions do differ significantly from Boston’s Census data (see Table 1). The difference is observed primarily in the categories of non-white Hispanic non-white/mixed, and White. Compared to Boston’s race demographics, our sample consisted of fewer White, more non-white/mixed, and fewer non-white Hispanic.
Table 1. Chi-square goodness of fit test on race respondents. The percentages of Asian and Black participants are close to the Census data for the Boston area.

Statistically significant relationships between demographic variables
Using the chi-square test, we found a significant relationship between survey site and respondents’ neighborhood or city of residence. Table 2 shows that most respondents lived in the neighborhood where they took the survey. 76% of respondents at the Allston Village site currently live in Allston; 61% of respondents at the Cleveland Circle site in Brighton currently live in Brighton; 67% of respondents at the Sullivan Square T stop in East Somerville currently live in Somerville; and 69% of respondents at the Upham’s Corner site in Dorchester site currently live in Dorchester; Only 33% of respondents at the Chinatown site currently live in Chinatown, but this is unreliable because our sample size in Chinatown was too small – only three respondents had participated.
Findings: Statistically significant relationships between demographic variables and survey answers

Using the chi-square test, we were able to find only a couple of significant relationships between the demographic of respondents and their dot survey answers. This is not surprising due to our small sample size of +/- 100; our study should be considered as a preliminary investigation and more research would be needed to confirm the validity or reliability of our results.

A statistically significant relationship existed between race and responses for desired street activity. Table 3 shows that the majority (everyone except for one respondent) did not desire more car activity in their neighborhoods. Market activity was very popular among most races, and the degree to which activities such as biking or kids playing were desired shifted between races.

The survey revealed a statistically significant relationship between survey site and current mode of transportation.

<table>
<thead>
<tr>
<th>Race</th>
<th>Biking</th>
<th>Cafe</th>
<th>Car</th>
<th>Kids playing</th>
<th>Market</th>
<th>Walking/Sitting</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>Non-white hispanic</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Non-white/mixed</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>White</td>
<td>7</td>
<td>8</td>
<td>0</td>
<td>4</td>
<td>13</td>
<td>9</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>12</td>
<td>1</td>
<td>14</td>
<td>32</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

\[\text{chi}^2 = 34.5308 \quad p = 0.022\]

Table 3. Chi-square test on race and desired activity on streets
(see Table 4). In Allston, modes were relatively evenly split between the train, bus, and walking. At Cleveland Circle, 39% of respondents ride the train, 28% drive and 22% walk; at the Sullivan Square T station 53% of respondents ride the train, 25% ride the bus, but only 7% walk. At Upham’s Corner 45% of respondents ride the bus, 0% take the train and 28% walk while 28% drive.

Participants’ transportation modes differed significantly between survey sites. That the majority of Sullivan Square respondents ride the train was not surprising, but it greatly differed from Upham’s Corner where no participant rides the train. This was a surprising find as Upham’s Corner is located about half-a-mile walk away from the closest commuter rail line, and a one-mile walk away from two T lines. It could be a practical and worthwhile investigation to dive deeper to find and alleviate the factors contributing to the underutilization of the train in this area.

Interesting trends that diverged between demographic groups and survey answers (not statistically significant)
Survey responses showed a number of interesting trends that suggest a connection between streetscape design, activity preferences and current and desired modes of transportation with participant demographics (as defined by our survey demographic questionnaire). While none of these trends were statistically significant they are noteworthy and areas for possible further investigation.

Current Activity on Streets
• Table 5 shows that White respondents were more likely to say that cafes and car activity dominated their neighborhood streets (23% and 48% respectively); Black respondents were more likely to say that kids playing and cars were the main activities in their streets (32% and 32% respectively).
• Most American-born respondents believed that car activity dominated their neighborhood streets (47%), whilst most Cape Verdean respondents believed kids playing was most prevalent in their neighborhood streets (44%)
• A greater percentage of women (22%) than men (10%) thought kids playing was a dominant activity on their neighborhood streets
• Car activity dominated in the sites at Allston, Chinatown, Cleveland Circle, and Sullivan Station but kids playing was the main activity cited by residents in Upham’s Corner.
**Desired Activity on Streets**

- For respondents whose households made less than $20,000 per year, markets were the most appealing (41%). For those whose households made over $100,000 per year, biking was the most appealing activity (40%).

**Current Mode of Transportation**

- Non-white mixed respondents were more likely to ride the bus (43%); White respondents were most likely to take the train (45%) or walk (23%);
- Among 18-24 year olds, riding the train and walking were the most common (40% and 31% respectively); among 25-44 year olds, taking the bus and the train were most common (39% and 25% respectively); for 45-64 and 65 and over respondents, modes were relatively equally split between riding the bus, taking the train, and driving.
- Respondents with annual household incomes of under $20,000 were less likely to drive than respondents that made over $40,000 per year as annual household income. Those whose households made less than $60,000 per year were more likely to ride the bus than those households who made over $60,000
- Most American-born respondents take the train (38%) or walk (22%); most Cape Veredian respondents ride the bus (38%) or walk (38%)
- The survey results generally aligned with 2009 U.S. American Community Survey data (see Table 6), which reports similar relationships between demographics and modes of transportation.

<table>
<thead>
<tr>
<th>Survey Site</th>
<th>Bike</th>
<th>Bus</th>
<th>Drive</th>
<th>Train</th>
<th>Walk</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allston</td>
<td>0</td>
<td>7</td>
<td>1</td>
<td>8</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>Chinatown</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Cleveland Circle</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Sullivan T</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>15</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>Upham’s Corner</td>
<td>0</td>
<td>13</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>28</td>
<td>18</td>
<td>31</td>
<td>21</td>
<td>101</td>
</tr>
</tbody>
</table>

\[ \text{chi}^2 = 43.5325 \quad p = 0.000 \]

*Table 4. Chi-square test on survey site and current mode of transportation*

<table>
<thead>
<tr>
<th>Race</th>
<th>Biking</th>
<th>Cafe</th>
<th>Car</th>
<th>Kids playing</th>
<th>Market</th>
<th>Walking/Sitting</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Non-white hispanic</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Non-white/mixed</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>White</td>
<td>3</td>
<td>9</td>
<td>19</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7</td>
<td>15</td>
<td>38</td>
<td>15</td>
<td>7</td>
<td>13</td>
<td>95</td>
</tr>
</tbody>
</table>

*Table 5. Responses to current activity on neighborhood streets by race*
**Desired Mode of Transportation**

- 0% (0 out of 8) Asians wanted to walk more; 30% of Blacks wanted to drive more whilst 19% wanted to walk more; 42% of Whites wanted to bike more whilst 25% of Whites wanted to take the train more (see Table 7).
- Walking was more appealing to respondents ages 18-24 and 25-44 as compared to their older counterparts.
- The majority of American-born respondents wanted to bike (34%) or take the train (22%) whilst the majority of Cape Verden respondents wanted to ride the bus (37%) or train (31%). Walking was also more appealing to American-born respondents than Cape Verden respondents.
- At Sullivan Square station, the majority of respondents wanted to bike or take the train (38% and 31%

<table>
<thead>
<tr>
<th>Country of origin</th>
<th>Respondents</th>
<th>Transportation Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drive Alone (%)</td>
<td>Public Transit (%)</td>
</tr>
<tr>
<td>Native Born Americans</td>
<td>81.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Foreign Born</td>
<td>88.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>69.3</td>
<td>8.1</td>
</tr>
<tr>
<td>Asian Alone</td>
<td>69.7</td>
<td>10.8</td>
</tr>
<tr>
<td>Some other race or two or more races</td>
<td>69.7</td>
<td>6.2</td>
</tr>
<tr>
<td>White alone</td>
<td>83.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>73.6</td>
<td>11.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Respondents</th>
<th>Transportation Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drive Alone (%)</td>
<td>Public Transit (%)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>69.3</td>
<td>8.1</td>
</tr>
<tr>
<td>Asian Alone</td>
<td>69.7</td>
<td>10.8</td>
</tr>
<tr>
<td>Some other race or two or more races</td>
<td>69.7</td>
<td>6.2</td>
</tr>
<tr>
<td>White alone</td>
<td>83.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>73.6</td>
<td>11.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2009 Household income ($)</th>
<th>Respondents</th>
<th>Transportation Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drive Alone (%)</td>
<td>Public Transit (%)</td>
</tr>
<tr>
<td>Less than $10,000</td>
<td>66.0</td>
<td>9.1</td>
</tr>
<tr>
<td>10,000 - 14,999</td>
<td>68.6</td>
<td>8.8</td>
</tr>
<tr>
<td>15,000 - 24,999</td>
<td>73.1</td>
<td>7.0</td>
</tr>
<tr>
<td>25,000 - 34,999</td>
<td>76.7</td>
<td>5.7</td>
</tr>
<tr>
<td>35,000 - 49,999</td>
<td>78.7</td>
<td>4.9</td>
</tr>
<tr>
<td>50,000 - 74,999</td>
<td>81.1</td>
<td>4.3</td>
</tr>
<tr>
<td>75,000 - 99,999</td>
<td>82.6</td>
<td>4.1</td>
</tr>
<tr>
<td>100,000+</td>
<td>81.4</td>
<td>6.2</td>
</tr>
</tbody>
</table>

*Table 6: Commute data by demographics (2009 American Community Survey)*
respectively). At Upham’s Corner desired mode of transportation was relatively evenly split between biking, taking the bus, and driving. At Cleveland Circle, most respondents wanted to take the train (39%), bike (28%), and walk (28%). In Allston, responses were evenly split between biking, taking the bus, driving, and taking the train.

**Desired Street Design**

- While all other age groups preferred multi-modal streets or pedestrian-only streets, respondents ages 65 and over preferred streets with more street furniture.
- Table 8 shows that multi-modal street design was by far the most popular for Blacks and non-white/mixed (62%). The majority of Whites desired multi-modal streets (40%) and pedestrian-only streets (20%).
- Only two respondents who had household incomes of $40,000 to $60,000 and one respondent who had a household income of over $100,000 chose auto-friendly streets as their desired street design. No respondents from any other income levels wanted more auto-friendly streets.
- Most American-born respondents wanted multi-modal streets (40%) and pedestrian-only

<table>
<thead>
<tr>
<th>Race</th>
<th>Bike</th>
<th>Bus</th>
<th>Drive</th>
<th>Train</th>
<th>Walk</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Black</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Non-white hispanic</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Non-white/mixed</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>White</td>
<td>17</td>
<td>3</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>29</td>
<td>15</td>
<td>17</td>
<td>23</td>
<td>14</td>
<td>98</td>
</tr>
</tbody>
</table>

*Table 7. Responses to desired mode of transportation by race*

<table>
<thead>
<tr>
<th>Race</th>
<th>Auto-friendly</th>
<th>Multi-modal</th>
<th>Pedestrian</th>
<th>Street furniture</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Black</td>
<td>1</td>
<td>16</td>
<td>7</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Non-white hispanic</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Non-white/mixed</td>
<td>0</td>
<td>9</td>
<td>3</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>White</td>
<td>1</td>
<td>16</td>
<td>15</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>44</td>
<td>31</td>
<td>21</td>
<td>99</td>
</tr>
</tbody>
</table>

*Table 8. Responses to desired street design by race*

- streets (40%) while most Cape Verdean respondents wanted multi-modal streets (59%) and streets with better street furniture (29%)
- Pedestrian-only streets were more appealing to men (37%) than women (24%).
Other concerns or issues to keep in mind concerning survey results

The number of respondents that participated varied due to a sundry of reasons, including but not limited to: the exact amount of time we surveyed, sometimes this was +/- 30 minutes more or less than the average of 1.5 hours; whether we surveyed on a weekend or week day – we found that more people were willing to offer us their time on the weekends as they were more approachable and less in a rush; and the New England weather, which was often cold and windy in the months of March and April. Lastly, the dot survey allows survey participants to see the most popular responses. While this likely is a factor that encouraged participation – people seemed more likely to participate when they saw the posters populated with many stickers – it also may have swayed responses.

The Cape Verdean respondents speak Portuguese but stated that they understood Spanish relatively well. We hope that the pictures shown in the dot survey and the translations in Spanish facilitated their understanding of our questions. Still, we recognize that some misunderstanding of the questions could have occurred.

Additionally, criticism of visual perception surveys used for planning purposes points to variables such as image quality, colors, weather and background activity as detracting variables that may influence a person’s preferences (Ewing et al 2005). Although we controlled for image quality and compounding images variables as much as possible, we’re aware that this is a weakness inherent in this methodology.

The following is a snapshot of themes that emerged from our interviews with community leaders, which is followed by a summary of each interview. Complete interviews were captured on film and have been edited for the project’s accompanying film.

Interview Results

Defining streetscapes

When asked about the streetscapes in their neighborhoods, community leaders provided unique definitions of what a “streetscape” means to them and their communities. Awareness that not all communities define streetscapes in the same way may help LivableStreets, and other complete street advocates, to better connect with neighborhoods, foster partnerships and generate support for streetscape improvement projects. As community leaders discussed the current conditions of their community’s streetscapes we discovered a wide variety of elements that interviewees considered as part of their streetscapes, including:
• Lighting
• Crowding
• Dirt and poor maintenance
• Multi-modal, serving a range of transit needs
• Streets names
• Bike lanes
• Central role in communities
• Parking
• Safety
• High curbs
• Open space for socializing
• Places for small-business street stands

**Streetscapes needs**
When asked about how they would change their streets and what they would like decision-makers to know, community leaders provided a variety of priorities.
• More space for kids
• Well-maintained sidewalks
• Community gathering spaces
• Better access to public transportation
• Safer bicycling options
• More street greening
• More community ownership and responsibility
• Better involvement with local youth in design and planning

**Streetscape design/use disconnects**
Community leaders shared several comments that revealed conflicts between the design and use of their streetscapes. These conflicts are ideal areas for further exploration and point to the importance of communication between the planning entities that are redesigning the streetscapes and the communities that are interpreting and interacting with their designs. These incongruities are further discussed in the conclusions and recommendations.
• Streets are too crowded with cars so there needs to be wider streets
• More parking is needed but so is more space for bicycles and pedestrians
• Cars drive by too fast and wider streets [and lanes] are needed
Carrie Dancy
Executive Director
East Somerville Main Streets

About
Carrie started working with East Somerville Main Streets after living in Argentina, where the vibrant streets and public plazas allowed her to reimagine how streets could look in the United States.

Use of streets
East Somerville is a social neighborhood. The streets are central to the neighborhood and especially to East Somerville Main Streets’ work. The streets are where much of the community outreach happens through fairs and other events. As for her own street use, Carrie walks regularly but is nervous about biking.

Perception of streetscapes
When discussing East Somerville’s streetscapes, Carrie focuses on Broadway, East Somerville’s main thoroughfare. After many years of planning, the City of Somerville initiated a redesign of Broadway. Broadway will undergo a street-diet, losing a lane of car traffic and gaining bike lanes, more street furniture, trees, wider sidewalks and a new public park. In discussing the Broadway redesign Carrie is comprehensive in her definition of streetscapes including streets, sidewalks and even parks. Carrie is enthusiastic about streetscape changes as positive for the community, noting, “It’s an exciting time for East Somerville.”

Angela and Dorea Vierling-Claassen
Founders and Bloggers
Carfree with Kids Blog

About
Angela and Dorea started Carfree with Kids to document the benefits and challenges of their life with kids without owning a car. The purpose of the blog and organization is to share experiences and advice with other car-free parents in addition to parents new to the concept, showing them that it is possible and in many ways better to raise kids without a car.

...walking is about “being in place not just walking through space.” - Vierling-Claassen’s

Use of Streets
Much of the Vierling-Classens’ living happens on the streets. They bike, bus and walk to school and work. Their kids play with neighborhood children on their...
dead-end street. They feel that they are a part of a community, and this community is united by various streets uses, with many residents walking, busing and allowing their kids to play in and around the streets.

**Perception of streetscapes**
Social cohesion is central to the Vierling-Claassens’ generally positive feelings about their neighborhood streets. They see the streets around their house as social spaces where kids play and neighbors watch out for one another. They are small, shared spaces where neighbors look out for one another. They believe walking is about “being in place not just walking through space.” The conditions of the streets in their East Cambridge neighborhood vary. They believe there’s a shortage of bike lanes and even on streets such as Massachusetts Avenue, where bike lanes exist, there is a high degree of car-bicycle conflict.

**Cris Lagunas**
Community Organizer
ACE (Alternatives for Community and Environment)

**About**
At ACE Cris organizes communities of color in Massachusetts around issues of development, land use and environmental justice. He dedicates much of his time to conversations with community members and using surveys.

**Use of streets**
For the ACE community public transportation is a prominent function of the streetscape and is not currently meeting the needs of all community members. Community members who ride their bicycles tend to not be doing so out of choice but out of necessity.

Greater attention should be given to the function and community togetherness – not just the aesthetics. - *Cris Lagunas*

**Perception of streetscapes**
Cris feels that streetscape design is not a primary concern for the community. While acknowledging the importance of creating space for bicycles, he emphasized that there are other issues of injustice that the communities he represents are facing such as employment and housing. He notes that streetscape improvements bring the threat of gentrification and displacement. Additionally, in assessing the redesign of public spaces, Cris says that greater attention should be given to the function and community togetherness – not just the aesthetics.
Concerning Roxbury’s streets, Cris feels that bus stops should be better designed to promote safety. He adds there are issues with bus consistency, reliability and accessibility.

**Gustavo Quiroga**  
Director of Community Engagement & Marketing, Allston Brighton CDC

**About**  
Gustavo came to Allston Brighton Community Development Corporation (CDC) as the Sustainability Manager, responsible for the organization’s Green & Healthy Homes Initiative. His work has included supporting neighborhood-based advocacy initiatives around sustainability including green space conservation, urban ecology, energy efficiency, and green jobs workforce development.

**Use of streets**  
Gustavo feels Allston and Brighton have a strong bike culture that is illustrated by the presence of Hubway, a bike-sharing program in Boston. He adds that despite the robust bike culture, many residents still drive. Public transit is central to Allston and Brighton with the Green Line and many bus routes. Gustavo walks, bicycles and takes public transportation. He says he is on the streets frequently talking with community members and mentions meeting in cafes as if they are almost a part of the streetscape.

...With many Allston-Brighton residents driving, parking is always a debate.” - Gustavo Quiroga

**Perception of streetscapes**  
Gustavo explains that Allston and Brighton are two distinct communities, especially in terms of their streetscapes. Allston is a large, diverse and dense community while Brighton is less dense and feels more like a “suburban” community. With many Allston-Brighton residents driving, parking is always a debate. Gustavo discusses major corridors that could use extensive surface improvements including the filling in of potholes and the repairing of cracked sidewalks. He perceives that Allston and Brighton, with their physical dislocation from the rest of Boston, are often considered last for basic streetscape improvements. Gustavo envisions various potential improvements for Brighton and Allston’s streetscapes including creating more green space and improving plazas.
Paulo Debarros, President
Cape Verdean Community UNIDO

About
Paulo has worked with the Cape Verdean community in Dorchester for almost 20 years, as a social worker, teacher, youth worker, and currently as the Board President of Cape Verdean Community UNIDO and the Director of Catholic Charities Teen Center at St. Peter's.

Use of streets
He works with communities who use the streets as spaces for gathering, block parties, walking and outdoor events. He believes that neighborhood streets could better cater to the families who use them.

Perceptions of streets
Paulo feels that many of the streets in his neighborhood are over-crowded. He suggests that streets in his neighborhood should be expanded, become one-ways, have more and safer spaces for kids, better sidewalks, and be better maintained and lit. He attributes accidents, in part, to the neighborhood’s narrow streets. He would like to see greenery and street names that are relevant to the history and culture of the residents who live there. He feels that the community should take responsibility for cleaning up the trash on the streets and be more engaged in general. He notes that he feels safe on the streets and that the media inaccurately portray violence on the streets of Dorchester.

Vivien Wu, Director of Programs,
Asian CDC

About
Vivien came to ACDC with experience in education and previously worked with Action for Boston Community Development, Inc. At ACDC she engages the Asian communities in Chinatown and the larger Boston region on issues of housing, economic development, leadership, education and action.

Goals of transit oriented development and the Asian American Community are one and the same. - Vivien Wu

Use of Streets
The Asian immigrant community in Boston is reliant on public transportation. Vivien stated that the “goals of transit oriented development and the Asian American Community are one and the same.” Residents in Chinatown meet and socialize with their neighbors on the street everyday. The streets in Chinatown are dense.
with heavy car and pedestrian traffic. This density is felt not only on the street level but also with noticeable air pollution. Not only is Chinatown a hub for its residents, but many non-residents and tourists travel in from the nearby suburbs (or further) on the weekends to take advantage of Chinatown’s shopping amenities. South Station is a hub for these people, residents and tourists. Chinatown brings people together on a daily and weekly basis but also throughout the year with large festivals that take over.

Perceptions of streets
Vivien points to a deficiency of trees in Chinatown and a lack of flora in the Rose Kennedy Greenway Park in Chinatown. This is coupled with people’s perceptions of Chinatown streets as dirty. Vivien has observed that this creates a self-perpetuating cycle – people tend to continue to pollute an area that they feel is already dirty. The streets are busy with car and pedestrian traffic. There is minimal opportunity for kids to play outside in Chinatown. Chinatown has a legacy of being considered unsafe but that is changing.
Chapter 4

Conclusions and Recommendations for Further Research

Our surveys and interviews revealed differences and commonalities in the way diverse Boston-area residents use and perceive streetscapes. Some of these trends point to a connection between demographics and streetscape use and preferences. As previously mentioned, we do not draw conclusions between respondents’ answers and their background. Instead, the diversity of perceptions and uses in this report supports a real need for LivableStreets Alliance and other streetscape advocacy organizations to reach out to communities before initiating projects.

The overarching goals of the complete streets movement and the goals of these communities is often the same — more safe, vibrant, inclusive streets. Although this may seem obvious and expected, there had been little work to explore these expectations in Boston. History shows us that when assumptions are made about and for communities without their input and participation, outcomes can be destructive. This report provides:

- Current public and regional issues related to street design as explored in the Literature Review
- Evidence that preferences, uses and desires for their streetscapes vary between diverse residents
- Comparable trends in perceptions and preferences between unique users of Boston’s streetscapes
- Insights into specific community concerns and priorities for streetscapes
- Perceptions of streetscapes defines by community leaders that LivableStreets Alliance and other organizations may be able to use in their communications and partnership building with communities
- A list of Boston area community organizations (including the organizations we interviewed plus a longer list of organizations in Appendix XI) for potential involvement and collaboration in the case of future local community improvement efforts

Lastly, we hope that this report may serve as a springboard for further investigation into the “cultural perceptions of streetscapes.”

Recommendations to Client: LivableStreets Alliance

Build Partnerships in Diverse Communities
Based on our personal interviews with community
leaders and survey responses, we discovered that most participants agree with LivableStreets Alliance’s goal of improving streetscapes for pedestrian, biking, and public transit use. These communities and residents are a largely untapped coalition base for LivableStreets Alliance’s mission. It would be beneficial for LivableStreets Alliance to build partnerships with community organizations that do not have missions directly related to transportation or street-design, but are aware of how streetscapes affect their communities and would like to improve them. The following are recommendations on approaches to targeting outreach and messaging to diverse communities.

**Outreach**

To connect with traditionally under-represented communities within the Boston area, we suggest first getting in touch with minority-organizations or neighborhood organizations in low-income, minority areas. Attached as Appendix XI is a list of community organizations the Field Projects team initially contacted with requests for interviews; many of them did not participate in the project due to various reasons, mostly related to time constraints. Through our research we identified these organizations as having missions and programming that intersect with LivableStreets Alliance’s work. This list could serve as a good resource for LivableStreets Alliance to start from in its efforts to form new partnerships in under-represented communities. These organizations will be able to help LivableStreets Alliance identify entry points to discussing street design for these communities, such as safety, family priorities, youth interaction, etc.

Senior citizens (65 years and older) were underrepresented in our survey sample. With the baby boomers aging, the senior citizen population in the U.S. is increasing. The elderly are especially vulnerable to inaccessible public transit and poor streetscape design. We recommend that LSA partner with elderly and senior citizen groups to better understand their needs and perceptions.

**Engagement**

LivableStreets Alliance’s emerging focus on planning streetscape networks provides the organization with a better reason than ever to engage communities beyond the places where immediate projects are occurring. Connecting with abutting communities may allow the organization to understand how streetscape projects are affecting residents in surrounding areas.

We found the dot survey to be a successful method for gathering public input. The format engaged a range of
people, some with English as a second language and/or low levels of literacy in English and Spanish. LivableStreets Alliance may want to consider using a similar format for community surveying and outreach in the future. These surveys would provide a more robust method accompanied with more traditional street planning methods, such as peak commute traffic counts. Additionally, in its direct work with government planning entities, we would encourage LSA to underline the importance and potential benefits of public participation methods, such as the dot survey or focus groups, to the city municipality. Many of our survey participants and community leaders expressed a desire for more direct public involvement in streetscape planning, and were surprised and pleased with our team’s efforts.

**Messaging**

As previously discussed, our interviews revealed diverse perspectives on how communities consider their streetscapes. Similarly, survey participants valued various street types and streets uses differently. By understanding what these values, needs and uses are, LivableStreets Alliance can better connect with the community about their streetscapes. For example, our survey revealed a lower rate of interest in riding bicycles by people of color than whites. LivableStreets may want to avoid leading with messaging centered on bicycling when working in certain communities (and instead, perhaps, focus on public transit) while it should emphasize biking to garner excitement in other communities. By discovering these types of preferences through the outreach and engagement methods suggested above, LivableStreets Alliance may be able to reach a wider audience.

**Design**

Look to incongruities of streetscape concerns and desires to generate innovative and place-based design solutions. We know from our research that street and transportation conditions along with uses and preferences vary from community. In our interviews and surveys we discovered preferences and uses that may seem at odds such as wanting safer but wider streets, or wanting to drive but not desiring auto-centric streets. These are considered to be conflicting by complete streets standards. However, by taking a closer look at these desires and working closely with the community, new street typologies may emerge. What could a street look like that is both wider and with slower and safer traffic? Or what would it look like for everyone to have equal access to a car but not have auto-oriented streets? The perspective of communities not typically included in the contemporary complete streets canon may help the movement to grow, evolve and innovate.
Bibliography


Appendix II

Photo and graphic credits

Street-type figures
Figures 1-4 are from NYC Street Design Manual
Figure 5, “Pedestrian only street in Kunming, China” is from Flickr member Cadkinsca
Figure 6, “Sample Street” is

Community Leader Interviewee photos were taken by Field Projects Team 7.

All figures (not specified above) and tables in this report were created by the Field Projects “Team 7”
What kinds of streets would you like to see more of in your neighborhood?
¿Qué tipos de calles le gustaría que fueran las calles de su barrio?
(choose/ elige 1)

Photos courtesy of Project for Public Spaces
What type of transportation do you use the most?
¿Qué tipo de transporte utiliza frecuentemente?
(choose/elige 1)

What kind of transportation would you like to use more?
¿Qué tipo de transporte le gustaría utilizar más?
(choose/elige 1)
What is the main activity on streets in your neighborhood?
¿Cuál es la actividad principal en las calles de su barrio?
(choose/elige 1)

What would you like to be able to do on streets in your neighborhood?
¿Cuál actividad le gustaría que se pudiera hacer en las calles de su barrio?
(choose/elige 1)
Appendix IV

Survey demographic questionnaire

1. Demographic questions / Preguntas demográficas
What is your age? / ¿Cuántos años tiene usted?
- Under 18 / Menor de 18
- 18-24
- 25-44
- 45-64
- 65+

2. Are you a student? / ¿Es usted un(a) estudiante?
- Yes / Sí
- No / No

3. What is your gender? / ¿Cuál es su sexo?
- Male / Masculino
- Female / Femenino

4. What is your neighborhood of residence? / ¿Cuál es su barrio de residencia?

5. What is your country of origin? (Where were you born?) / ¿Cuál es su país de origen? (¿Dónde nació?)

6. What is your race/ethnicity? / ¿Cuál es su raza/etnicidad?

7. What is your annual household income? / ¿Cuál es su ingreso familiar por año?
- Under $20,000 per year / Menos que $20,000 por año
- Between $20,000 - $29,999 per year / Entre $20,000 y $29,999 por año
- Between $30,000 - $39,999 per year / Entre $30,000 y $39,999 por año
- Between $40,000 - $59,999 per year / Entre $40,000 y $59,999 por año
- Between $60,000 and $99,999 per year / Entre $60,000 y $99,999 por año
- Above $100,000 per year / Más que $100,000 por año
- I would prefer not to provide this information. / No quiero dar esa información.
Appendix V

Community Leader Guiding Questions

Tell us a little bit about your group and how you got involved.
How are the streets meeting or not meeting your group members’ needs?
How would you want your community’s streets to be changed, in terms of use and design?
What do you want for government decision makers to know about your community’s desires for street use and design?
During nice weather, do you spend a lot of time out on the streets? Why or why not?

Yes or No questions
Are you happy about the streets in your community?
Are the sidewalks a good size?
Are there enough trees?
Are there enough places to sit?
Is there good lighting at night?
Is there enough parking?
Is your neighborhood bike-friendly?
Is your neighborhood car-friendly?
Is your neighborhood pedestrian-friendly?
Are those streets safe for children to play outside?
Boston-area community organizations contacted by the Field Projects team with requests for interviews.

**Organizations interviewed by the Field Projects Team**

ACE, Roxbury

ACDC (Asian Community Development Corporation), Chinatown and Asians City-wide

Allston Brighton CDC, Allston and Brighton

Cape Verdean Community UNIDO, Dorchester

Carfree with Kids, Cambridge/parents and women city-wide

East Somerville Main Streets, Somerville

---

**Organizations identified as possible community partners for in Complete Streets initiatives**

ACE (T-riders Union), Roxbury

Bird Street Community Center, Dorchester

Bowdoin Street Cealth Center, Dorchester

Boston Public Health Commission

Cambridge Health Alliance (and Somerville), Cambridge & Somerville

Cambridge Local First, Cambridge

Chelsea Collaborative, Chelsea

Chinatown Main Streets, Boston

Dudley Square Main Streets, Roxbury

Elder Services of Somerville, Somerville

Fields Corner Main Streets, Dorchester

Four Corners Main Street, Dorchester

Mission Hill Main Street, Roxbury

Nuestra Comunidad Development Corporation, Roxbury

Sociedad Latina, Roxbury

Somerville Community Corps., Somerville

Upham's Corner Health Center, Dorchester

Villa Victoria / IBA, Boston - South End

Welcome Project – Somerville, Somerville
Appendix VII

Survey anecdotes

One man who asked, “Why are you surveying about streets in Dorchester? The streets are great here! Come to Brockton, they could use some of your work.”

One man who responded with, “I live in the projects. I have nothing to do with those streets.” [points to pictures in the survey]

A woman who lived in low-income housing complex was thrilled that we were surveying. She let us know that she was getting involved with the community on issues of farmer’s market and better use of streets in her neighborhood.

A woman in Chinatown declined to participate, speaking in Cantonese, told us that what we were doing was pointless because the government was going to do whatever it pleased.
Signed Memorandum

I. Introduction

This Memorandum of Understanding (the “MOU”) summarizes the scope of work, work products, and deliverables, timeline, work processes and methods, and lines of authority, supervision and communication relating to the Project. The Project is identified above as the “Project,” as agreed to between (i) the Tufts University Department of Urban and Environmental Policy and Planning (UPP), (ii) LivableStreets Alliance, and (iii) UPP, as represented by a Tufts faculty member directly involved in teaching the Course during the spring 2012 semester.

II. Specific Provisions

1. Janet Lam
2. Molly Cooney-Moeller
3. Kirsten Meiler
4. Adrienne Schneider
The Client’s contact information is as follows:

Client name: LivableStreets Alliance
Key contact/supervisor: Julia Prange, Board Secretary
Email address: [redacted]
Telephone number: [redacted]
FAX number: NA
Address: 100 Sidney Street, Cambridge, MA 02139
Web site: http://livablestreets.info/

The goals of the Project are:

Through a Literature Review and conducting primary research, answer the following questions:

- What are public perceptions of streets – in different parts of Boston? In different parts of the world?
- Uncovering cultural perceptions: How do people from diverse backgrounds and ages perceive streets? How would they like to use streets?
- What are people’s arguments against changing street design/use? Why do people resist this kind of spatial change?

After reviewing data, present findings to LivableStreets Alliance so that the organization can better advocate for Boston-area communities and communicate with these communities.

Through a video, inform the public, as well as government organizations, private interests, and non-profits in the transportation and city planning sector, and promote safe streets at the human level instead of at the automobile level – help people understand the possibilities of livable communities: more people walking and biking (visibility and mobility).

Planned methods and processes – including the methodologies – through which the Field Projects Team intends to achieve these goals are:

Surveys, interviews, focus groups, and video observations

The work products and deliverables of the Project are:
(6) The anticipated Project timeline (with dates anticipated for key deliverables) is:

- Work-In-Progress/Draft of Report – April 6, 2012
- Final Project Report – May 2, 2012
- Video(s) – May 2, 2012

(7) The lines of authority, supervision and communication between the Client and the Field Projects Team are (or will be determined as follows):

The Field Projects Team will coordinate ideas and activities with Julia Prange, Board Secretary of LivableStreets, as the primary contact point. The team will also provide updates to and collaborate with Jackie Douglas, Director of LivableStreets. The Field Projects Team welcome suggestions or guidance from either.

(8) The understanding with regard to payment/reimbursement by the client to the Field Projects Team of any Project-related expenses is:

Expenses will be reimbursed through UB.

III. Additional Representations and Understandings

A. The Field Projects Team is undertaking the Course and the Project for academic credit and therefore compensation (other than reimbursement of Project-related expenses) may not be provided to team members.

B. Because the course and the project itself are part of an academic program, it is understood that the final work product and deliverables of the Project (the “Work Product”) – either in whole or in part – may and most likely will be shared with others inside and beyond the Tufts community. This
may include, without limitation, the distribution of the Work Product to other students, faculty and staff, release to community groups or public agencies, general publication, and posting on the Web. Tufts University and the Field Projects Team may seek and secure grant funds or similar payment to defray the cost of any such distribution or publication. It is expected that any issues involving Client confidentiality or proprietary information that may arise in connection with a Project will be resolved as early as possible by discussion among the Client, the Field Projects Team and a Tufts instructor directly responsible for the Course (or his or her designee).

C. Due to the collaborative nature of this project, all data and notes will be available for review by the client. The final report will be the intellectual property of the group, but may be used by LivableStreets Alliance for purposes of public awareness and general information. All research and data will be carried out for the purposes of the product and findings will be available for use by LivableStreets Alliance. The client may make any necessary alterations to the report up to the submission of the final product. Beyond the final due date, the client must verify any changes with the project team. The client may refer to the authors of the report as “Tufts University Graduate Students” and the client is not required to ask permission to distribute the report. Some materials may be considered confidential, such as the names or identities of research subjects. It is understood that this project may require the approval (either through full review or by exemption) of the Tufts University Institutional Review Board (IRB). This process is not expected to interfere with timely completion of the project. All group members are certified through the basic course of the Collaborative Institute Training Initiative under the IRB.

IV. Signatures

[Signature]

For [NAME OF CLIENT]
By: LivableStreets Alliance, Contact Julia Prange
Date: February 9th, 2012
Date: February 9th, 2012

Representative of the Field Projects Team
By: [PRINTED NAME – only one team member’s signature is necessary]
Date: 2/16/2012

Tufts UEP Faculty Representative
By: Justin Holander
Date: 2/16/2012
March 22, 2012 | Notice of Action
IRB Study # 1202044 | Status: ACTIVE

ATTENTION: BEFORE CONDUCTING ANY RESEARCH, PLEASE READ THE ENTIRETY OF THIS NOTICE AS IT CONTAINS IMPORTANT INFORMATION ABOUT PROPER STUDY PROCEDURES.

Title: LivableStreets Alliance UEP Field Project - Spring 2012
PI: Molly Cooney-Mesker
Study Coordinator: Molly Cooney-Mesker
Co-Investigator(s): Adrinanne Schaefer, Janet Lau, Kierstan Mailler
Faculty Advisor: Justin Hollander

The PI is responsible for all information contained in both this notice of action and on the following Investigator Responsibilities Sheet.

Only copies of approved stamped consent forms and other study materials may be utilized when conducting your study.

This research protocol now meets the requirements set forth by the Office for Human Research Protections in 45 CFR 46 under Expedited Category 7.


• Approved for 250 participants for the duration of the study.

Protocol Management:
  o For all changes to the protocol, submit: Request for Protocol Modification form
  o All Adverse Events and Unanticipated Problems must be reported to the Office of the IRB promptly (no later than no later than 7 calendar days after first awareness of the problem) using the appropriate forms.
  o Six weeks prior to the expiration of the protocol on 3/17/2013, investigators must submit either a Request for Continuing Review or a Request for Study Closure.
  o All forms can be found at: http://www.tufts.edu/central/research/IRB/Forms.htm

IRB Administrative Representative Initials: [Signature]

20 Professors Row, Medford, MA 02155 | TEL: 617.627.5417 | FAX: 617.627.3873 | EMAIL: SBER@tufts.edu