URBAN *ACTION*

A JOURNAL OF URBAN AFFAIRS

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SCHOOL OF PUBLIC AFFAIRS AND CIVIC ENGAGEMENT

INTRODUCTION

The 34th edition of Urban Action comes as major shifts in the movement of world populations proceed en masse towards the urban environment looking for better job opportunities and a higher standard of living. This edition of Urban Action continues and augments the tradition established by the earlier editions of the journal. The journal is produced annually and entirely by students enrolled in courses in the Urban Studies and Planning department at San Francisco State University. Therefore, Urban Action reflects the attitudes and outlook that current college students feel and think about the future of urbanization, and how present-day society inhabits and effects change, on the urban environment to suit its own needs and desires.

Our talented team of editors has leveraged previous editions and produced a comprehensive anthology for understanding the urban environment. Additionally, our skilled design team has created an exciting format that highlights the concepts each of the authors wish to communicate. Writers who have contributed to this edition of Urban Action represent their understanding and interpretation of the urban studies and planning curriculum, which include the disciplines of architecture, city planning, demography, geography, GIS, and urban design.

Our goal for this edition of Urban Action is to provide a publication that allows students to express their research while giving an interdisciplinary outline of the urban environment. We hope that you enjoy reading Urban Action 2013.

Omar Abu-Hajar

Managing Editor

Urban Action 2012-2013

Contributors

Managing Editor

Omar Abu-Hajar

Editing Team

Sonja Gajic, Matt Stang, Kareem Hines, Victoria Winters, Colton Coty, Joshua Ollinger, Mackenzie Bunch, Melissa Brymner, & Julian Bobilev

Design Project Manager

Nicholas McIlroy

Design Team

Alicia Pisani, Henry Pan, Haison Zack Dinh, Jamee Aroma, & Guy Michael

Academic Advisor

Ayse Pamuk

TABLE OF CONTENTS

FOOD SOVEREIGNTY AS A TOOL TO COMBAT FOOD INSECURITY;

Mobile Approaches to a Contemporary Problem

Olivia Gregory
& Brittany Giunchiliani

Abstract

For a successful, all-encompassing, healthy future environment, food security will need to be reshaped. The World Health Organization defines food security as having three facets: food availability, food access, and food use. This project will be assessing how to adequately create more access, better availability, and promote the positive use of nutritious foods in a variety of neighborhoods in the United States. Additionally, the goal of the project will be to help define the six pillars of food sovereignty and consider that this social thought will ameliorate the negative impact of food insecurity. This definition will help to understand that the problem not only is inaccessibility to nutritious food, but more importantly, where this food comes from and how it is produced. Empowerment in understanding these specific areas could abolish the monopolistic powers of the industrial food regime. The main question addressed throughout the article is how do urban communities in the United States gain access to food? The project team will devise a "pop-up grocery" project in a hypothetical neighborhood combating food sovereignty to illustrate a small-scale solution as well as address a case study of a real-life in Oakland, California. By organizing communities and creating more access to culturally appropriate food, reductions in dependency on the corporate food systems can be achieved in order to revitalize cultures and neighborhoods. Every individual has a specific role in creating a system of powerful communities, and each is a puzzle piece in the larger design of our future environment.

Introductionv

The time has come when the international community must begin to "reject the proposition that food is just another commodity or component for international agri-business" (International Planning Committee for Food Sovereignty). A food regime has thus emerged from stable periods of capitalist accumulation and agricultural production and consumption relations between nations (McMichael, 2009). The rise in transnational commerce has enslaved peripheral communities to provide essential nutrients to those in the core, while famine has become a cultural norm for people within underdeveloped nations. However, this unequal distribution of resources, food, and wealth is not only a global problem, but also a local one. Communities within our own nation lack access to nutritious food and are essentially forced into consuming a commodity, rather than a meal. This inequality is a growing problem as population increases and cities become denser. Consequently, we are seeing a rise in awareness regarding food production and its origin. However, this awareness remains available only to those with access to proper resources and education, giving them the power to choose. A multitude of communities have begun to gather and exchange ideas, preparing to combat this global problem of food insecurity with what is called food sovereignty.

This paper outlines the six principles of food sovereignty, including

in-depth research on the main points of the six concepts, small-scale solutions for hypothetical neighborhoods, a case study, and a critique of food security that is often deemed the solution to complex food issues. Food sovereignty has been studied on a global scale by many scholars, however we have narrowed our focus to food access within urban communities in the United States. Therefore, we have been able to reflect on our own observations, findings and experience living in and near these areas of interest. If we restructure consumption so the consumers' experience (their consumption activities and goods) enhances their desire to request traceability in the production and distribution of local, nutritional food goods, then the outcome would be an improved food system. Empowerment in understanding the six principles of food sovereignty could abolish the monopolistic powers of the industrial food regime. By organizing communities through education, empowerment, access, development, and health we can reduce dependency on corporate food to revitalize cultures and neighborhoods.

Literature Review

Food sovereignty is a term coined by members of the Via Campesina in 1996, world's foremost international movement of small farmers, to illustrate the rights for farmers, peasants, fishermen, women, rural youth, indigenous peoples, pastoralists, fisherfolk and environmental groups to delineate their own food systems (Food Sovereignty, 2011 & La Via Campesina, n.d.). It has further been defined in the 2007 International Forum on Food Sovereignty in Mali as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems." The delegates deepened their collective understanding of the key principles and published what is now known as the six pillars of food sovereignty. We include: focus on food for the people, value food providers, localize food providers, put control locally, build knowledge and skills, and work with nature. (Forum for Food Sovereignty, 2007, p.1).

Food security, defined by the Wisconsin Food Security Project, is "the assured access of all people to enough food for an active healthy life; households are food insecure if they have uncertain or limited access to food through normal channels" (Shaw, 2006, p.232). The lack of culturally responsible food for different groups of people in the United States plays a large role in food insecurity. The Newcastle Study, one of the largest UK studies on food deserts to date, shows that knowledge of and attitude towards food determines whether a healthy diet is consumed (Shaw, 2006, p.233), and thus the lack of education around nutritious food further exacerbates the problem.

Focus on Food for the People

Problems with access to nutritional and culturally appropriate food are not restricted to a low income. Research has shown that not only have people "lost more and more control over the source and quality of their food, and have become increasingly distanced from food practices

Accessing healthy food requires many different resources: mobility, financial capacity, and food preferences.

and knowledge," but also that food access problems are present in a wide variety of neighborhoods (Allen, 2010, p.296). Demographically-based food access problems, time-based constraints, limited (edible) food in rural areas, lack of cooking skills, wealth-based constraints and limited accommodation to cultural needs are just a few of the problems Hillary Shaw mentions in her work on food deserts (p.238-240). Shaw (2006) claims that the Low Income Project Team defined 'food deserts' as "areas of relative exclusion where people experience physical and economic barriers to accessing healthy food," and yet it still remains relatively undefined beyond this basic description (p.231). These problems affect all neighborhoods, ranging from affluent to extremely poor, with these specific issues also affecting gender disproportionately. For example, single women are particularly vulnerable and studies have shown that women with less access to healthy, vegetable rich meals tend to feed the males of the household better diets (Shaw, 2006, p.232). Accessing healthy food requires many different resources: mobility, financial capacity, and food preferences as several important factors. Less nutritious that are more energy-dense are cheaper and are less rich with vitamins and minerals provided by fruits and vegetables. This adds to the complex problem of food insecurity.

Geographical proximity to food also does not mean the consumer will find the options attractive. Even if grocery stores and markets are available it still may mean that a food desert exists due to these barriers (Shaw, 2006, p.232). The most important aspect to this food sovereignty pillar is that not only does it give the right to culturally appropriate, sufficient and healthy food to all individuals, but also it "rejects the proposition that food is just another commodity or component for international agri-business" (Forum for Food Sovereignty, 2007, p.1).

Value Food Providers

This principle of valuing food providers strives to reject policies, actions and programs that undervalue, threaten and eliminate the livelihoods of women and men, small scale family farmers, pastoralists, artisanal fisherfolk, forest dwellers, indigenous peoples and agricultural and fisheries workers, and migrants who cultivate, grow, harvest and process food (Forum for Food Sovereignty, 2007, p.1). Traceability schemes conventionally attempt to assure customers that the food they ingest is safe and has been the ultimate aim for food producers (Beekman, 2008, p.62). However, in order to value all food providers, ethical traceability must be used as a management tool as well as a communicative tool (Beekman, 2008, p.63). Beekman (2008), in his article on consumer rights to make informed food choices, explains that there are two justifiable variations of ethical traceability. Used as a management tool, governments must ensure consumers that they are provided with safe food. Ethical traceability used as a communicative tool is the notion that producers must provide consumers with sufficient information of these products.

The two are inherently intertwined by the fact that governments must ensure that the information provided is credible and sound (p.61).

However, with the interlaced relationship between business and politics, this communication between government and the consumer is becoming unclear. Due to the strength of this relationship, the only avenue to curb this altered communication is strengthening the community by valuing food providers. When a community, representing a small yet powerful entity, joins together to attempt to understand the role of food producers, a ripple effect will cause larger institutions to value food producers as well. For example, the notion of the 'ethical consumer' in relation to meat production has popularized and in response, large meat producers have written animal welfare policies and began to improve housing and slaughter conditions.

Localize Food Systems

Historically, the localization of food-systems emerged in response to social movements that occurred during the 1960s. Today, in Europe and the USA alone, alternative food institutions such as farmers' markets, farm-to-school programs, local label schemes and CSA are predominant strategies to develop local food systems (Allen, 2010, p.297). As stated in the 2007 Forum for Food Sovereignty, sovereignty brings the providers of food and the consumer together, establishing an avenue for local food producers to be at the center of decision-making on these food access issues. In turn, this protects communities from unhealthy and poor quality food, as well as inappropriate food aid, such as food stamps, and genetically modified organisms. This form of empowerment resists "governance structures, agreements and practices that depend on and promote unsustainable and inequitable international trade and give power to remote and unaccountable corporations" (Forum for Food Sovereignty, 2007, p.1).

The Importance of Local Control

Local food control must be maintained and considered during all urban/rural development and planning processes. Zoning large, corporate grocery stores traditionally requires extensive parcels of land in order to accommodate large parking lots. These grocery stores only bring nutritional food to the neighborhoods with the space required of these large developments. Currently in urban and rural development projects does one rarely see a single grocery store, but rather a project with many retail shops condensed into one. This trend only

enhances food insecurity within dense urban or open rural areas and contributes to food deserts due to the inaccessibility of these lots by foot and/or sufficient transportation (Jackson & Sinclair, 2012, p.97).

"A socially just food system is one in which power and material resources are shared equitably so that people and communities can meet their needs, and live with security and dignity, now and into the future" (Activist Researcher Consortium, 2011, p.297). This statement alone stresses the need for local food control. Cities must begin to integrate locally owned, affordable retail and food shops walking distance away from these impacted neighborhoods. Foot traffic must be the main priority for those designing the modern city in order to allow easy access to local markets. Transportation routes should also be designed to transport people and goods safely and sufficiently with reliable service and affordable rides. In this paper we will discuss how to strengthen local control to combat food insecurity and promote the values of food sovereignty through innovative mobile grocery stores, free farm stands, and cooperatively ran grocery markets. These ideas combined are only some of the ways in which the community is now given the power to decide where and when the food should be located at any given time.

Build Knowledge and Skills

Federal and local governments historically have intervened in order to "maintain neighborhood character" and have thus been hesitant to implement policies that preserve their socioeconomic status (Freeman, 2006, p.167). To prevent this from occurring in the future, communities must educate themselves to allow fluidity in local decision making and local development, affecting policy implementation on a larger scale. For example, instead of focusing on improving our largest hunger safety net, the United States Food Stamp Program, policy makers should shift their focus to improving communities' local control of food (Gundersen & Oliveira, 2001, p.877). This in turn would stabilize access to nutritional food and strengthen the power of choice.

It is known through research conducted over the past few decades that the government has historically been able to thwart all attempts for disempowered communities to gain control over their own communities. However, it is also apparent that when these communities are completely stripped from all investment, business, grocery, and proper education, a revolution can occur (Carter, 2006). The main point is that merely "introducing more places to buy food does not translate into better choices unless people are educated about what those better choices actually are" (Sifferlin, 2012). As Majora Carter (2006) points out, "from a planning perspective, economic degradation begets environmental degradation, which begets social degradation," and this social breakdown can be improved through an enhancement in community education and willful involvement, or social reformation.

Work with Nature

People who have the ability to purchase local food are consciously choosing to support sustainable practices.

The final principle of food sovereignty is a reminder that there is only one planet Earth, therefore, it is necessary to find a way to work with nature that benefits both humans as well as the rest of the environment. Methods of production and harvest must be less energy intensive in order to "maximize the contribution of ecosystems and improve resilience and adaptation, especially in the face of climate change; it seeks to heal the planet so that the planet may heal us..." (Forum for Food Sovereignty, 2007, p.1). There exists an interconnectedness between humans and the environment that often seems to be overlooked. This can be seen in unsustainable farming techniques that are carried out by industrial food producers. These techniques that are used in industrialized farming have only lead to the degradation of fertile land which then erodes and is rendered useless. In response to this environmental problem, urban areas have begun developing marginal areas of unused land to establish community gardens. According to the article People, Land and Sustainability: Community Gardens and the Social Dimension of Sustainable Development by John Ferris, Carol Norman and Joe Sempik (2001), there are many community gardens that exist around the world within both urban and rural areas. The authors provide a variety of examples of the different types of gardens that may exist within these communities; each one intended to be used as a response to the particular needs of a given area. There are some gardens that are simply used for their aesthetic value while other gardens are used by residents to grow fruits and vegetables. The demand for communal gardens has grown due to the issue of land scarcity, which is particularly present in urban communities (Ferris, Norman, & Sempik, 2001, p.561). Furthermore, the authors suggest that urban gardens may be one of many key tools for communities to adopt, as they are "...widely seen to be a way of improving local food supplies as well as leisure and recreational activity" (Ferris, Norman & Sempik, 2001, p.560).

As it relates to food sovereignty, some community gardens are used to grow fresh organic produce for the purpose of being distributed throughout the community. Any neighborhood should be capable of making their own communal gardening space and the level of wealth in the area is not necessarily a factor. Within the Mission district of San Francisco, there is a farmers' market that occurs every Sunday. What makes this farmers' market particularly unique are the prices for the produce: everything is free to anyone who desires fresh produce. As stated on their webpage, their mission statement is to become a friendly gathering space for people to come together and become involved in localizing food systems by providing sustainably produced food that will benefit everyone living within the community. The food that is showcased at the Free Farm Stand comes from peoples' backyards, various farmers' markets, and community and neighborhood gardens ("Free Farm Stand", n.d.). Communities who make their food readily accessible through the establishment of something similar to the Free Farm Stand are also choosing to

work with nature. As people begin to avoid purchasing food that is unsustainably produced by the industrial powers that plague our food system nationwide, people who have the ability to purchase local food are consciously choosing to support sustainable practices that protect the environment.

Methods to Combat Food Insecurity

Lance Freeman (2006), in his work on gentrification, states, "the aim here is to inform efforts to build just, livable, and prosperous cities" (p.157). Neighborhoods are constantly changing and this characteristic could be used to counteract traditional solutions to complex problems (p.167). Throughout the history of the environmental justice movement, only stationary solutions have been proposed—solutions that adapt to the problem rather than combat it head on. We shall now propose a mobile solution to these ever-changing problems.

A fun and certainly innovative way of combating food deserts has arisen in the form of mobile grocery stores. The development of these mobile grocery stores has certainly caused a new wave for food sovereignty, as it attempts to address the problem of food deserts head on by bringing healthy food to a neighborhood's doorstep. Alexandra Sifferlin (2012) examines mobile grocery stores as a solution to the plight of neighborhoods that lack access to healthy produce in her article Can "Pop-Up" Grocery Stores Solve the Problem of Food Deserts? Entrepreneurs from all over the country have developed their own version of these mobile markets. Sifferlin (2012) uses the example of the mobile grocery store called Freshmobile from Madison, Wisconsin. Their presence within neighborhoods that struggle to obtain fresh food has improved the diets of those living within these neighborhoods. This concept of literally bringing fresh food to one's doorstep is "popping up" across the nation; "several temporary and mobile pop-up markets will set up shop in so-called food deserts — low-income areas that are more than a mile away from the nearest grocery store — to sell mangoes, melons, lettuces, onions and other fresh fruits and vegetables" (Sifferlin, 2012).

In 2003, one of the first mobile grocery stores emerged in West Oakland, but only recently has the movement started to gain any traction. Through the USDA who first began to map food deserts in 2009, one is able to see a map of the locations of food deserts that lie across the country. Now that there is a sense of where access is needed the most, is it plausible that putting mobile organic markets in these areas will begin to solve a neighborhood's problem of accessing nutritional food? Not necessarily.

"Just because you build it, doesn't mean you will change people's behavior," says study author Barry Popkin, a professor of public health at the University of North Carolina at Chapel Hill. "Price, quality, accessibility, incentives, they matter too. Every community is different, but new efforts or supplementing existing infrastructure works if they're accompanied with affordable prices, education, promotion or

An innovative way of combating food deserts has arisen in the form of mobile grocery stores.

community collaboration" (Sifferlin, 2012).

In essence, communities must first be educated on the importance of a nutritional diet before they can truly value a healthy lifestyle. With this in mind, these mobile grocery stores are not only subject to selling produce but also have a wealth of helpful healthy tips to provide for their customers. Just by simply informing someone, "the Fresh Moves staff found that if they provide relevant health tips — like the fact that organic fruits are free of potentially harmful pesticides — their customers will buy more organic strawberries, even if they're more expensive" (Sifferlin, 2012). The power of knowledge really does have an effect on consumer behavior. When people have the facts about what they are putting in their body, they are typically more likely to make more conscious purchasing decisions at the marketplace.

In contrast to the emerging mobile grocery store phenomena, one of the more stationary ways an impacted area can collectively battle food insecurity is through the development of local, worker-owned

cooperative grocers that sell local, farm fresh produce. Such an example comes from Oakland's Mandela Foods Cooperative. A cooperative store is where anyone who works for the store inherently owns a part of that store. The cooperative is a component of the non-profit organization Mandela Marketplace and their mission statement entails: "Mandela Marketplace is a non-profit organization that works in partnership with local residents, family farmers, and community-based businesses to improve health, create wealth, and build assets through cooperative food enterprises in low income communities." ("Mandela Marketplace", n.d.). A cooperative grocery store like Mandela Foods encompasses the six principles of food sovereignty and emphasizes the following principles: focus on food for the people, the importance of local control, and building knowledge and skills. The executive director of Mandela Marketplace, Dana Harvey, discusses how food insecurity has plagued her West Oakland community. She

explains that there are around 25,000 residents living in West Oakland but there are no grocery stores available within the community. Access to food for members of the community is only achieved in the form of fast food establishments and convenience stores featuring alcohol and junk food. Citizens are thus subjected to unhealthy diets consisting of high fat, salt, and sugar, highlighting the challenges of their inaccessibility to healthful foods (Jackson & Sinclair, 2012, p.131).

Cooperative grocery stores are an important tool for empowering communities so that they can localize healthy foods for people who are troubled by their lack of access to nutritious foods. In addition, these cooperatives support entrepreneurship and provide jobs to these members of the community. Finally, cooperative grocery stores place an emphasis on sustainability and specifically at Mandela Foods, forty percent of the store's produce comes from local farmers who have developed a relationship with the manager over the years. Store workers pick up fresh produce from the farmers on a regular basis so the store is able to get pesticide-free and local produce. Mandela Marketplace works with marginalized, resource-limited minority farmers to make a bridge between farming and the community (Jackson & Sinclair, 2012, p.131).

Members of the community who shop or work at Mandela Foods spoke of their before and after experiences since the store's opening. Collectively, they agreed that most of their food originally came from convenience stores where they would simply heat up something such as a hot pocket in a microwave or they would purchase their food from the closest fast food chain, like McDonalds. After Mandela Foods opened, members of the community expressed their happiness to finally have access to healthy fresh produce at a fair price. These members enjoyed how the presence of the cooperative grocery store has empowered the local community and has taught them how to eat sustainably.

A Case Study: City Slicker Farms

West Oakland houses roughly 20,000 residents, 40% of which live below the federal poverty line (Green 37). Oakland as a whole spans nearly fifty-four square miles, the seventh largest city in California and one of the most impoverished (Oakland Convention). Within the West Oakland neighborhood there exists only one full service grocery store serving the population (Green 37), and those living in the outer reaches of the area therefore must rely on convenience stores and fast food establishments for their sustenance. This lack of access to healthy foods has resulted in a staggering increase in diabetes, asthma, obesity, and malnutrition (Green 37).

Within the 300 mile radius of the Oakland municipality lies twenty million acres of land used for food production, amounting to $16 billion in sales per year. Even with this abundance, one-half of the state's agricultural production gets exported, while most of our consumed food goods are imported from an average of 1,500 miles (Green 37). In order to address some of the issues presented in this publication,

Cooperative grocery stores are an important tool for empowering communities so that they can localize healthy foods for people who are troubled by their lack of access to nutritious foods.

we have selected to examine a community garden that is working to "empower West Oakland community members to meet the immediate and basic need for healthy organic food for themselves and their families by creating high-yield urban farms and backyard gardens" ("Mission and History").

As an attempt to "awaken the almost-forgotten knowledge of food production," City Slicker Farms was formed in 2001 to provide long-term sustainable access to fresh fruits and vegetables, with the intention to help alleviate pollution and poverty, and to reconnect people with nature ("Mission and History"). West Oakland, California is home to a variety of community farm programs that provide fresh, available, and nutritious foods to local residents. This specific garden provides culturally appropriate African-American, Latino, and Asian fruits and vegetables (cooking greens, root and summer crops, herbs, eggs, honey, bread, wood-fired oven pizzas, etc.) sold on a sliding scale in order to ensure all income levels can participate (Unger & Wooten 29).

This farm represents a 1.25 acre plot of land that produces 2.5 tons of food per year and a net income of roughly $5,000 in sales (2005 est) (Unger & Wooten 29). The land has been zoned as mixed

use, purchased by deed, which allows for the sale of animal food products directly to consumers. As a non-profit organization funded by private foundations, this community garden not only provides food to impoverished and malnourished residents but also motivates the urban population to produce its own food and participate in its cultivation. "Today City Slicker Farms consists of seven Community Market Farms (spaces open to the public), over 100 Backyard Gardens, a weekly Farm Stand, a greenhouse, [and] Urban Farming Education programs," and is inspiring various groups to begin similar programs in their communities. For more information, visit City Slicker Farms' main website at http://www.cityslickerfarms.org/. There are also various internship and volunteer opportunities available to help continue the growing food justice movement in the Bay Area.

Conclusion

Solving the complex problem of food insecurity has created a greater opportunity for disenfranchised communities to come together, spark creativity, and fight against injustices. Introducing innovative solutions and educating communities on the values of food sovereignty will lead them to become more empowered, inspiring the people within these communities to develop their own localized food system. This may come in the form of developing their own mobile market program, starting a number of community gardens where the produce can be handed out freely, at an extremely low cost, or with a work-trade agreement. They may even set out to create their own local marketplace that is owned and ran by members of the community.

These solutions that are already in use today serve as a reminder to all communities that they do not need to be dependent on large supermarkets, fueled by monopolistic food enterprises. Communities may even become completely sovereign once they are able to recognize that such industrial food regimes are not needed for an adequate standard of living. With proper education, communities will come to understand that food sovereignty lies within the power of the people. Of course, one must understand that alternative systems cannot be created without addressing the dominant system first. However, this transfer of power from the corporate food system to a more localized, community based food system will enable these communities to come together and take back the land.

When contemplating what it means to have access to nutritious food, this lack of accessibility has eventually led to the organization of communities that promote health education. In turn, education in leading a healthy lifestyle has empowered local communities to develop and create their own source to a nutritional diet, lessening their dependency on industrially produced food. By adopting the six principles of food sovereignty as defined in the 2007 International Forum on Food Sovereignty in Mali, communities are given the opportunity to revitalize cultures and embellish their sense of communalism. This is a feeling that is felt by all who are living in a neighborhood that encompasses the ideals of food sovereignty. Every individual within every community has the right to a healthy diet. By localizing food systems, working with nature, building knowledge and skills, and valuing the needs of producers and consumers, we find that everyone has a role to play in maintaining a more sustainable and secure future environment.

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BRT: Geary Extension

Henry Pan

Synopsis

Geary was Muni's very first corridor. At around 12:30pm on December 28, 1912, the first streetcar departed Kearny and Geary in San Francisco's Union Square on its first run on the A-Geary. The A ran from that spot to 10th and Fulton Street. Service became popular, and the Geary corridor was expanded to four routes by 1915. The B, which also opened in 1912, functioned as a shuttle from Geary and 10th to Geary and 33rd. The C opened in 1915, and ran on Geary until 2nd Avenue, when it diverted to California and operated between 2nd and 33rd Avenues.. The D line opened in 1915 for the Panama-Pacific Exposition, shuttling passengers from Downtown to the Presidio via Geary, Van Ness, Union, and Greenwich. Also in 1915, the four routes were extended to the Ferry Building. While service became cohesive, expansion was short-lived. The A was eliminated in 1932, and the D was eliminated in 1950. The C was also truncated to 2nd and California. Auto mania, the promise of a Bay Area Rapid Transit (BART) corridor, and redevelopment soon ensued, and the B and C were gone by the end of 1956. However, communities were destroyed, congestion ensued, and BART nixed the Geary plan because Marin County was not interested in a line. Since the 1960s, Geary has been without a rapid transit line, despite residents along Geary fighting for a resurrection. Their efforts have been stymied by some merchants that have fiercely opposed to the project. In addition, the ambivalence of key stakeholders delayed rapid service far longer than it should have.

Geary Streetcar Corridor

GearySCCorridor
Name
— A-Geary
— B-Geary
— C-Geary
— C-Geary/California
— D-Geary/Van Ness

Geary Bus Corridor, 1957
○ Limited Stops east of Presidio

Express Stops east of 33rd
Attributes
● Inbound and Outbound Stop
▼ Inbound-only Stop
▲ Outbound-only Stop
— Express Route
— Local Route

The Beginning

Geary was Muni's first rail corridor. It opened on December 28, 1912, and over the next four years, four routes operated on Geary (Matoff et al. 27). The A-Geary operated from Downtown to Fulton and 10th Avenue until 1932 (McKane and Perles 174). The D-Geary/Van Ness operated from Downtown to the Presidio via Geary Street, Van Ness Avenue, and Union Street until 1950 (McKane and Perles 178; San Francisco Examiner). What remained were the B-Geary and the C-Geary/California lines. However, they too were endangered. While the B and C survived, they were slated for elimination. It all began when Mayor George Christopher was elected as mayor of San Francisco in 1955. According to Rick Laubscher of the Market Street Railway, he campaigned on the platform that the B-Geary streetcar will be saved. Unfortunately, he had a change of heart once elected, proposing to switch operations on Geary to trolley buses (Laubscher; Matoff et al.). Increased automobile use contributed to the streetcars' demise. As an interim measure, the Geary line would operate with motor coaches. On the morning of December 29, 1956, the last B-Geary streetcar pulled into the Presidio Carhouse at Presidio and Geary (McKane and Perles 174). The next morning, however, an interim rapid transit plan was implemented. Many believed this was the interim to the BART plan which would soon be implemented. According to the San Francisco Call Bulletin (1956), express buses began to run on Geary, starting from 10th and Geary and running to 2nd and Market in Downtown San Francisco. The BART plan, however, would not be the case.

BART Flirts With Geary

Since then, there has been a never-ending fight to revive rapid transit on Geary. As soon as the B was discontinued, BART was planned to be built to Marin County. Unfortunately, in 1962, Marin County pulled out of the BART agreement, and as a result, plans for rapid transit on Geary were shelved (Geary Task Force 3). Things would not get better for the Geary corridor. According to the Geary Task Force Final Report, a 1966 bond that would have brought BART to Geary was defeated (Geary

Task Force 3). BART made one last attempt to study the Geary corridor in 1973 as part of the Northwest Corridor Extension. That, too, came to a halt as there was significant opposition, particularly from the merchants (Geary Task Force 3). It seemed that enhanced transit service would never be a reality on Geary. That all changed in 1979.

Kicking The Can Down The Road

Rapid transit on Geary was no longer on the horizon. However, Muni, along with Wilbur Smith and Associates, had been evaluating converting the transit system to resemble a grid system (San Francisco Muni, 7). Later, it was, with Phase 1A implemented on August 31, 1979. This involved implementing enhanced express bus service from the Richmond to Downtown, a limited-service bus route down Geary, and rerouting the 38-Geary away from Balboa to Lands End (McKane and Perles 229; Geary Task Force 4). Neighbors soon opposed this arrangement, and the 38 was eventually branched into three segments (Rosenberg). The first segment maintained its original routing to Ocean Beach via Balboa, while the second segment maintained its new routing to Lands End. A third segment was created to serve the Veterans Administration Hospital at Fort Miley. While rapid transit was still a long reach, this enabled better access to and from the Richmond District. Soon, increased growth in both the Richmond district and Downtown led residents to organize for more improved service on the 38. Eventually, the residents saw the need for rapid transit on Geary. A task force was created in 1988 to oversee alternatives for rapid transit on Geary, in response to a halfhearted plan to convert service on Geary to trolleybus BRT (Geary Task Force 4). The task force researched light rail and a bus rapid transit subway Downtown, which set the precedent for future project planning along Geary. They noted that it would be expensive to build a rapid transit mode using trolley buses, especially if it were to be accommodated by a subway. The task force ultimately chose to build light rail, contingent on funding. That is where Proposition B comes in.

Prop B was passed in 1989, which created a half-cent sales tax for

Geary Alternative 3A Consolidated Option

	BRT Line
●	Proposed BRT Stops
	38AX Local Zone
	38BX Local Zone
	Express Zone

transportation projects. But there was no way light rail on Geary could be built since there were no feasible alternatives developed by Muni to bypass the complex intersections at Fillmore, where six lanes of traffic dive under the street, and at Presidio/Masonic, where four lanes of traffic bypass those two streets through a tunnel. In addition, a competing light rail project doomed Geary light rail. According to Peter Straus and Duncan J. Watry, Prop B stipulated that funds would be allocated to build light rail on either the Geary or the 3rd Street corridor (Straus and Watry 61). Muni ultimately chose to build light rail along 3rd Street, because of widespread community support (Straus and Watry 62-63). While it was built, Geary was still a focus of transit improvements.

Contemporary Developments

Not all hope was lost for the Geary corridor. A corridor planning study was initiated in 1995, which, like the Geary Transit Task Force, also studied light rail and bus alternatives. Vehicles would originate from a facility at Lands End, and operate on an exclusive right-of-way from 39th Avenue to Laguna, enter a subway at Laguna, and emerge either at Market, where it could continue to the Transbay Terminal, or at Howard and 2nd, or at 3rd/4th Streets and Brannan, which was in conjunction with the Central Subway (Merrill & Associates, 18-20). Travel time from each terminal would take 28 minutes. The study also evaluated the feasibility of BART service on Geary, which would run from Marin County to the East Bay or the San Francisco International Airport. The study also attempts to address the situation caused by the intersection arrangements at Fillmore and Presidio/Masonic. The only alternative suggested was to put transit on viaducts that bypassed the bypasses (Merrill & Associates 49, 61). Another issue that was addressed was how the subway would cross Market Street to reach the South of Market or the Transbay Terminal. They studied having it cross above the Market Street Subway at 3rd Street, the only point feasible, or below the existing subway, which would be cost-prohibitive (Merrill & Associ-

ates, 50) . Despite the complexities, the study reaffirmed the importance of the Geary corridor, and how rapid transit was badly needed. The San Francisco County Transportation Authority agreed.

In 1996, the San Francisco County Transportation Authority identified Geary as one of four rapid transit corridors vital to the city, based on the 1995 system planning study (San Francisco Guideway Associates). This ensured rapid transit would still be guaranteed for one of the busiest corridors in the city. With Prop B funding earmarked for the Third Street Light Rail project, they did not have enough money to build light rail on Geary. Meanwhile, with the Richmond experiencing a population influx, as well as increased traffic, something had to be done soon. The SFCTA then decided on a two-phase approach to rapid transit on Geary: bus rapid transit, then light rail. This was eventually embraced by the then-newly formed San Francisco Municipal Transportation Agency (SFMTA).

Muni released its Vision for Rapid Transit in San Francisco study in 2002, which outlined the corridors deserving of frequent, reliable service in order to accommodate growth in the city. This was where BRT was introduced as a concept that could improve Muni service, since funding was limited ("Vision" 9). Geary was selected as one of 12 rapid transit corridors which would initially receive BRT. Ultimately, the corridor would be studied for either light rail or trolley coach BRT, making enhanced transit on Geary closer to reality ("Vision", 19). It finally received a definite source of funding in 2003, when Proposition K, a 30-year extension of Proposition B, passed. Proposition K plans to allocate $110 million for a BRT system that includes Geary, and $55 million for building light rail along Geary. As a result, this project evolved into a rail-ready project, where the infrastructure for bus rapid transit will be constructed to light rail standards ("Sales Tax" 155-156, Dyett & Bhatia et al. 2-11). However, many dilemmas remain unsolved for the current BRT project which is continually under opposition.

Geary: Building the Perfect BRT?

Many workings of the current BRT plan remain unsolved. For certain, the Geary BRT project will consist of dedicated lanes. In addition, if all goes according to plan, BRT will be ready as early as 2019. However, it is not known how far BRT will run all the way out to the Richmond. At a recent Geary BRT Citizens Advisory Committee meeting, it was announced by David Parisi and Chester Fung that BRT would end at 25th

Avenue, with the lanes transitioning to the right-side lane between 25th and 33rd (Parisi and Fung). In addition, they are still deciding on what alternatives to build. While all alternatives show a side-running alternative west of 25th, some of the alternatives will conflict with the existing Fillmore Underpass and the Masonic Tunnel. In fact, the alternatives are so complicated, that there are talks of a fifth alternative (Parisi). And finally, two variants of separated transit lanes will be built from Gough to Market Street (Fung).

The SFCTA is currently evaluating five alternatives for the project. One alternative is a no-build alternative, which is required under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA) to be studied. Another would entail side-running lanes. Two more alternatives would have center-running lanes, one with one center median, and the other with two side medians, as shown in Figure 3. A fifth alternative was disclosed at a recent meeting with David Parisi in December 2012, which would consolidate local and limited service because of concerns about allowing sufficient room for limited buses to pass the local BRT service. All alternatives will entail side-running BRT between 26th and 33rd Avenue, as well as two side-running alternatives on Geary and O'Farrell between Gough and Market (Parisi and Fung). If properly planned, the service should be ready by 2019.

But some alternatives pose problems, particularly with the two tricky intersections at Fillmore and Presidio/Masonic. While some alternatives call for filling the Geary underpass, the Presidio/Masonic intersection is more complicated.

The transit stop arrangement planned at the Geary and Presidio/Masonic intersection is problematic. Assuming a center-running alignment is selected, it would require buses to operate in the already-existing underpass, as shown in Figure 4. This would present a situation similar to what is experienced at Glen Park Station for the J-Church, which is located on the middle of San Jose Avenue. As Figure 5 shows, Glen

The bus lanes currently in use east of Gough Street are unprotected and susceptible to vehicular invasion.

Park station is only accessed via a stairwell adjacent to a freeway off-ramp. That particular station, like the proposed station, is unprotected, prone to vandalism, unsafe, and unattractive. One method to make a future Presidio/Masonic stop (as well as Glen Park) safe is to make the station similar to that of a Muni Metro Station, which will include a Station Agent booth. This allows surveillance of the station, therefore making the stop safer, more attractive, and less prone to vandalism. However, even if these changes are made, it still has to contend with external obstacles.

Even now, buses have to navigate obstacles. The bus lanes currently in use east of Gough Street are unprotected and susceptible to vehicular invasion. Currently, they are only to be used by buses, taxis, and motorists anticipating right turns for up to one block. But motorists often flout this rule, and drive on it for multiple blocks, hindering buses. This is especially prevalent in the Downtown area. The lanes are largely unenforceable because of the lack of resources at the SFPD traffic company, despite front-mounted enforcement cameras on the buses. As of March 2013, the SFCTA is currently evaluating a left-side running BRT and a right-side running BRT on Geary and O'Farrell between Gough and Market. Both alternatives have their benefits and drawbacks. Figures 6 and 7 demonstrate the two alternatives. The left-side variant may be more feasible and efficient to implement, considering it is concurrent with a center-running alternative in Outer Geary, and provides a gradual transition to the right side once it approaches Market. However, this necessitates creating island platforms, which are known for subpar waiting conditions, especially since it is surrounded by traffic. Right-side running BRT would not require any new construction of passenger waiting areas, however it is forced to weave through traffic on O'Farrell between Powell and Stockton to retain a parking garage queue. In order for BRT to be effective, there must be a barrier-separated bus-only lane east of Gough Street, to prevent autos from infiltrating the lane and slowing

transit service. The SFCTA acknowledges this and issues two alternatives, and while it may not be enough, it is the first step in developing a cohesive BRT system on Geary.

Geary BRT is another attempt to address problems along the corridor since the B and C lines were discontinued. If planned well, this project should be ready for revenue service in 2019. However, problems at the complex intersections and on inner Geary remain partially unsolved, although simple remedies, if implemented, probably would not delay start of service. In fact, as soon as the BRT line opens, planning should immediately begin for light rail along the corridor, to compensate for depreciated levels of service since the B and C were withdrawn.

Conclusion

The Geary project has come a long way. It was Muni's first corridor, and now has the potential to be Muni's first BRT corridor. Unfortunately, the false siren of progress, with auto mania and redevelopment, signaled its demise. Over the years, it could have had BART operate into the Richmond, but support was lackluster and they weren't willing to commit. Eventually, many sought to get light rail built, but the ambivalence
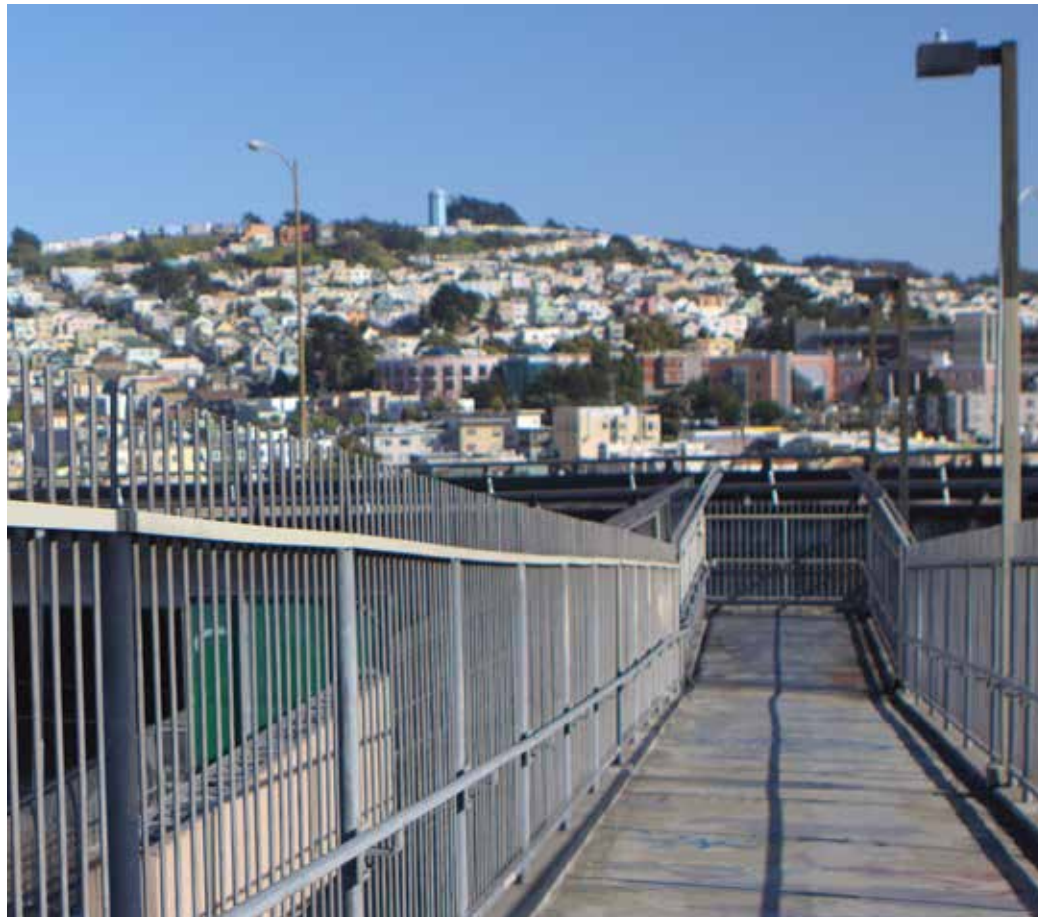
remains. This was why the project planned in the 1980s has failed to materialize. Today, there is a BRT planned for the corridor, which appears promising, but is marred by opposition. How much longer will our agencies allow the opposition to delay a project desperately needed to better serve the Geary corridor, and prevent our city from achieving Transit First? The environmental impact report must be vetted by the public later this year. The dynamics associated with the EIR review should be interesting, seeing it has been 56 years since the City threw away a rail expansion opportunity by removing the B and C, with public opinion on various project iterations over the years ambivalent. Hopefully, without delays, this project should be ready by 2019.

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CONGESTION PRICING
Practical Relief for
San Francisco's Increasing Traffic
Matt Stang

This article describes the basic structure of a potential congestion pricing plan in San Francisco as formulated by the San Francisco County Transportation Authority (SFCTA) through their Mobility, Access, and Pricing Study (MAPS). A comprehensive congestion pricing plan is a viable and practical solution to reducing automobile traffic within the city of San Francisco and the immediate surrounding areas. Congestion pricing calls for the commodification of high demand road space within urban areas during peak period usage. It aims to reduce peak rush hour auto travel by charging drivers for access to chronically congested traffic zones. Internationally, congestion pricing has been successfully employed in cities such as Singapore, Stockholm, and London. Several city-wide pricing plans will be reviewed and critiqued on their viability and impacts. Also discussed will be the many benefits - such as: reduced congestion, safer streets for pedestrians and cyclists, and improved air quality - as well as some barriers to implementation, for example: cross-county border fee conflicts, inner city cordon boundary locations, and public transit capacity.

What is Congestion Pricing?

The United States Department of Transportation (U.S. DOT) defines congestion pricing as "a way of harnessing the power of the market to reduce the waste associated with traffic congestion" (p.15, 2009). By implementing a fee for vehicle use within chronically congested zones, municipalities hope to reduce the manifold impacts associated with automobile congestion. The main target of a congestion pricing plan is the single occupant vehicle (SOV). If only considered from the amount of space occupied, SOV's are the least efficient form of travel when concerning peak hour commutes. Congestion pricing, also known as cordon pricing, or value pricing, is a way to capitalize on high demand road use by treating the road space as a commodity. In a sense, the plan aims to rent highly concentrated areas of congested road space to commuters with SOV's paying the highest price. As is typical of most sophisticated pricing systems, there are different levels, or tiers to the plan, which will be discussed in detail later in the article. The idea of congestion pricing is a radical but promising way

to reduce automobile congestion in high impact areas.

International congestion pricing applications

Internationally, congestion pricing has been practiced successfully for many years. Singapore, London, and Stockholm have all employed some sort of pricing plan to help combat the detriments of congestion. These modern, working programs serve as a model to which we can weigh our concerns and observe the many benefits.

London's program has been in effect for nearly a decade. Although the pricing charges for access to the city center are much steeper (nearly $16 as of 2011) than those proposed for San Francisco, the plan has been worth it. Within the first year, traffic in the cordon zone was reduced by 18%, delays were lessened by 25%, and travel speeds up by 30%. The result of the high charges has prompted many London residents to convert to public transit. Bus reliability was much greater as was usage, up by 40% (U.S.DOT, 2008). The combination of reduced traffic and greater transit reliability markedly affected the predictability of travel in the downtown area. These changes resulted in a vast improvement across the public transportation network.

Before congestion pricing became a workable solution to traffic issues that it is today, Singapore had a fee program in place beginning in 1975. The island nation's land challenged situation, coupled with rapid economic growth in and around the Central Business District (CBD), led to low level of service (LOS) across public transit and private vehicle travel. When the plan, named the Area Licensing Scheme (ALS), was first put into action it covered a relatively small, two square mile area in the CBD restricted zone (RZ). In 1975, the fee was $1.30 for entry between 7:30am and 9:30am, which was monitored through visual confirmation by officers who manned 28 different locations around the RZ. Today there are over 50 electronic checkpoints that charge motorists a base rate of $2.00 for entry in to the RZ from 7am to 7pm, during weekdays. Travel within the RZ, from the onset of Singapore's ALS plan has been much more efficient, with benefits across multiple fronts. Commuter travel, air quality, public transit, and local businesses have all seen improvements.

In 2006, Stockholm adopted a plan that has also worked successfully to reduce traffic. Initially, the automated tolling system and transit upgrades were to be implemented simultaneously, yet unintentional delays to the tolling system allowed transit improvements to be made six months prior to the system taking effect. Not only did it allow the city the time to make necessary changes without the additional traveler demand, but it also encouraged commuters to take advantage of a more efficient transit service. Interestingly enough, there was no change in congestion levels or transit usage until the congestion pricing took effect. Once commuters were faced with a charge, traffic was reduced by 20%.

These three examples show how a finely detailed congestion pricing system can bring relief to over-burdened, high-congestion urban zones. By recognizing the value of each of the above systems, as well as the

Within the first year, traffic in the cordon zone was reduced by 18%, delays were lessened by 25%, and travel speeds up by 30%.

conflicts faced from fee implementation, local U.S. governments, such as San Francisco, can compare their existing domestic congestion issues against those encountered by each of the international programs.

Why is there a need?

Other attempts to reduce congestion, such as high occupancy vehicle (HOV) lanes and affordable public transit fees, have not effectively persuaded drivers of SOV's, which make up the majority of auto traffic, to choose another mode or off-peak time to commute. Based on a public outreach program the perceptions about a potential congestion pricing project reveal that 46% of the respondents want a pilot program. Considering that the outreach program was conducted in 2010, after the severe economic downturn of 2007-2008, there was some concern as to the additional economic impact of a pricing program. As a result, only 14% favor permanent implementation. Other categories show that 16% want a different solution, 12% were unsure, and 11% were interested but desire a modified plan (MAPS, p.40). When the same group was asked to respond to the possible advantages that a pricing plan would bring, the largest group, at 40%, said reduced congestion was the greatest benefit. 24% believed that transit frequency and speed would increase, 15% imagined a greater quality of life and environment, and 2% thought bicycling and walking would improve (p.40). Surprisingly, 20% believed the there was no need for a pricing plan, and if a plan were to be enacted it would be ineffective and wanted another solution.

San Francisco's 2010 Municipal GHG Emissions
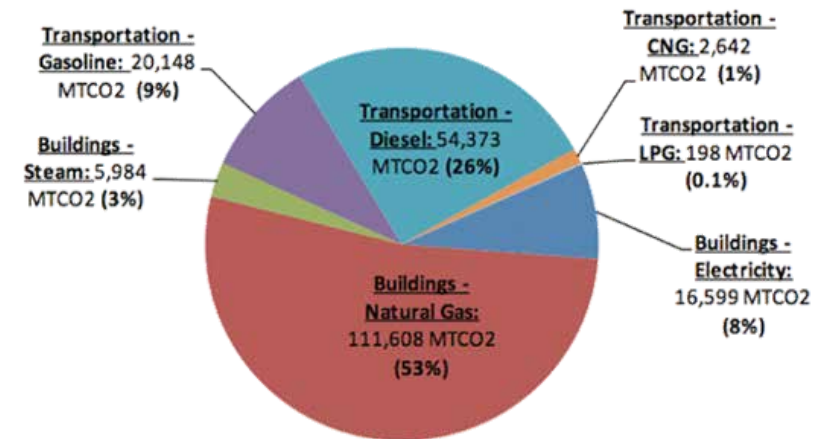
Above: Figure 1, source: westsideobserver.com

Improve air quality

Beside the overall goal of reduced auto congestion, there are a few other positive outcomes that could be achieved through a pricing plan. The greatest concern regarding air quality, are greenhouse gases (GHG) and the detrimental effects that are associated with them. Senate Bill 375 (SB375) and Assembly Bill 32 (AB32) require that California GHG

be brought down to 1990 levels by 2020 (figure 1). The biggest contributor to San Francisco GHG is transportation 47%. 23% of the GHG comes from intraregional road vehicles while a larger amount, 24%, comes from road vehicles within the city. As the population of San Francisco and the Bay Area continues to grow, so will the number of cars emitting GHG's see growth. The Bay Area Air Quality Management District (BAAQMD) cites cold starts of automobiles and trucks as a substantial contributor to air pollution. According to BAAQMD, a cold-start qualifies as an engine start up from a car or truck that has been sitting for an hour or more. The reason it is such a problem is due to the inefficiency of the catalytic converter when cold. It takes several minutes to warm up the device before it can properly function, yet most

commuters begin their trips almost immediately after starting their vehicle. The district's site mentions that the largest percentage of cold-start polluters are non-commuters making short and inefficient trips (BAAQMD, 2011). According to the SFCTA, there are roughly 120,000 automobile vehicle trips going to and from the focus area within the p.m. rush hour. Of that number more than 70% are made within San Francisco. Considering that intra-San Francisco travel times are relatively short, the probability that this group has a large amount of cold-start emitters is high.

Even though there is a concerted effort to produce lower emission vehicle types, such as hybrid and flex fuel, it is not enough to markedly reduce GHG levels. An increase in population will also affect the vehicle miles traveled (VMT). As new housing growth continues to reach further from the economic center of San Francisco, more commuters must travel greater distances. The great majority of the vehicles used will continue to be more and more fuel efficient, but improved fuel efficiency is counteracted by increased VMT (U.S. DOT, 2009). Maintaining the status quo of congested highways with more fuel-efficient vehicles is not the solution.

Promotion of alternative forms of travel

As a Transit First city, San Francisco's policies support the development of "complete streets"— facilities that accommodate the safe and efficient movement of users, including pedestrians, bicyclists, transit riders, and motorists (MAPS. p.8). Part of San Francisco's City Charter, under the responsibility of the San Francisco Municipal Transportation Agency (SFMTA), is the Transit First policy. The main objective of the policy is to keep the city's residents moving by implementing a wider range of sustainable transportation options, such as public transit, bicycling, and walking, as an alternative to SOV usage. The implementation of a congestion pricing plan will reduce automobile traffic and create more room and greater access for other modes of transportation. It is possible that many issues in need of attention, which are listed within the Transit First policy, will be addressed and more expediently remedied.

Economic losses

The gross economic loss incurred through the delays of congestion is another indication of a need for change. Increased fuel consumption,

There are roughly 120,000 automobile vehicle trips going to and from the focus area within the p.m. rush hour.

higher operating costs for commercial vehicles - and the most ubiquitous concern - excess travel time, all contribute to this loss. In San Francisco, during 2005, these combined costs equaled more than $2 billion of annual economic loss. Within the next twenty years that figure is predicted to surpass $3 billion (MAPS, p.9). Yet altering the traffic volume, during peak am and pm hours, solely based on economic concerns does not directly reduce congestion. From a purely economic standpoint, maximizing society's resources - by efficiently utilizing taxpayer dollars - is paramount to reducing congestion (Downs, 2004). Spending less time in traffic affords travelers more time to be productive at work rather than idly waiting in long lines of congestion.

Above: Figure 2, Focus Area

Mobility, Access, and Pricing Study

In 2010, the SFCTA conducted research on the feasibility of reducing traffic through using congestion pricing in the heavily impacted downtown area. Several different zones, also known as cordons, are examined through the SFCTA's MAPS (study) in an attempt to find a practical solution to San Francisco's escalating congestion problems. The study aims to find a solution to the excessive peak hour traffic within a section of downtown they call the Focus Area (figure 2).

The area is defined by Harrison Street, 13th Street, Van Ness Avenue, Broadway, and The Embarcadero. Limited parking, excessive rush hour traffic, and poor surface transit LOS affect this area, which includes the city's financial hub. The excess time spent commuting amounts to a gross loss of personal time, substantial economic loss, and negative environmental impacts. "The traffic effects are central, since they are the main driver of other benefits, such as improvements of local air quality, travel time reliability and greenhouse gas emissions" (Borjesson, Brundell-Freij, Eliasson, Hugosson, 2012). The ultimate goal of congestion pricing is to reduce automobile congestion during peak travel hours with the added benefits of safer streets, better air quality, and increased public transportation efficiency and revenue.

Initial Cordon Zone Locations

In order to effectively reduce congestion within San Francisco, the MAPS team examined four different types of cordon pricing zones under their "Phase I Analysis - Initial Scenario Design and Screening" study (MAPS, p.17) (figure 3). The varying zones were chosen based on the high volume of the major highway entry/exit points at the San Francisco border crossings and the heavy traffic of the downtown area along Market Street. 1) Some study zones covered the entire city, such as the Gateway design, which considers pricing points at highways 280 and 101, at the south border with San Mateo county, as well as the golden gate and the bay bridge access points. In addition, there are several other secondary road crossings, at the southern border, that would need monitoring. 2) The Double Ring configuration also aims to capture both the perimeter access points, as listed in the Gateway model, and the chronically traffic dense area of the financial district. 3) The study then looked at the downtown, Civic Center, and SOMA districts, a zone referred to as the Focus Area in the MAPS report. This area, called the Downtown Cordon, is a relatively small zone in comparison to the previous two, but it focuses on the heart of the traffic congestion in the city. The cordon border runs from South Van Ness/ Van Ness, to Harrison Street and 13th Street, over to The Embarcadero and stops at Broadway. 4) The last type of design, known as the Northeast Cordon, surrounds much of the northeastern quadrant of the city, which also includes the entire Downtown Cordon border. The initial layout of this option covered the area east of Divisadero and Castro Streets and north of 18th Street.

Key Findings from the Four Cordon Analysis

The key findings from the initial analysis of the above four designs

Above: Figure 3, Four Cordon Pricing Zone Options

shows that it is necessary for the pricing system to have an average level which is equivalent to a fee of about $3.00 during am and pm peak periods (MAPS, p.20). The four scenarios were broken down into three categories: characteristics, advantages, and disadvantages. The Gateway design would potentially cover 4.6 million daily trips, yet it would not directly target the high congestion Focus Area. It would also charge drivers entering the city at the Route 1/19th avenue border, which for most practical travel purposes is unavoidable. While this design might help to reduce congestion of those traveling into high congestion zones within San Francisco, it would unfairly charge those who have to traverse the city with no other efficient route choice. The Double Ring plan also suffers from the same issues as the Gateway plan in regard to the problems associated with a city perimeter cordon. This design includes an additional downtown fee area, which may help to dissuade the number of automobile travelers with a downtown destination. The downside is that the dual cordon might prove too complex for commuters, considering that two different fees might apply. This plan was also predicted to capture 4.6M, as many as the Gateway design daily trips, which seems conservative given the combined cordons.

The concentrated area that the Downtown Cordon aimed to cover would only collect revenue from 1.3M daily trips, which makes its financial feasibility questionable (MAPS). While it targets an area stricken with low LOS, both for transit and private vehicle travel, it would create parking and travel problems around the border. Pedestrian and bicycle travel around the Downtown Cordon may conflict with those attempting to circumvent the fee cordon, particularly around the proposed Harrison Street, 13th Street, and South Van Ness/Van Ness crossings. Commuters and travelers whose destination lies close to the border will most certainly attempt to park outside the fee area to avoid a charge. The increased density of automobile travel surrounding the fee cordon will not only hinder the flow of drivers heading downtown, but will also slow transit, bicyclists, and pedestrians. Among the four designs, the Northeast Cordon showed the most promise. It addressed the chronically sluggish peak hour traffic in the downtown area of the city and provided substantial revenue based on the cordon size. Furthermore, drivers navigating the border of the Northeast Cordon may find it easier to understand than the other designs, considering the relatively straightforward boundaries of Divisadero and 18th street, as well as the natural barrier of the northeast waterfront.

Northeast Cordon shown to be most promising

The next step of the MAPS survey, known as "Phase II Analysis - Scenario Refinement and Pilot Options", determined that a refined northeast cordon - from this point on referred to simply as the northeast cordon - showed the greatest potential across several categories (figure 4). (insert the northeast cordon design here) The review of the cordon shows that it "provides the greatest congestion reduction in the city's most congested areas, while also delivering substantial additional benefits for transit performance, environmental quality, and sustain-

able growth" (MAPS, p. 23). The perimeter of the northeast cordon is bounded by 18th Street to the south, Laguna Street to the west, and the entire northeast waterfront with a $3.00 fee during both peak periods. Although the cordon has great potential, it was not the only option under review in the second phase analysis. The study also considered two other scenarios: the modified northeast cordon and the southern gateway. The plan for the modified northeast cordon consists of the same boundaries as the northeast cordon with the difference of an outbound charge of $6.00 during PM peak hours. The southern gateway would cover the boundary between San Francisco county and San Mateo county to the south with a fee plan identical to the AM/PM schedule of the northeast cordon. Across vehicle travel metrics, the potential for congestion reduction with the northeast cordon plan is hopeful. It is important to note that in order to more accurately evaluate the effectiveness of a future congestion pricing plan the study used the year 2015 as a forecast for its evaluation of relative metrics. The largest notable change would be a 13% decrease in AM peak vehicle trips to and from the cordon, as compared to only a 5% change across both the modified northeast cordon and the southern gateway. PM peak vehicle trips to and from the northeast cordon might yield a 12% decrease, where the modified plan would show a 13% decrease and the southern gateway a 5% reduction. The northeast cordon design is also a top performer when it comes to potentially reducing daily San Francisco VMT by 5%, which could reach 9.8 million by 2015 (MAPS, p.26).

Resistance

While the proposed southern border plans may seem promising when it comes to reducing San Francisco traffic, some below the county line think otherwise. It is important to note that all plans that contain southern border fee cordons have received sharp criticism from several San Mateo County officials. Jerry Hill, State Assembly member (District 19, Democrat), the most outspoken of those involved, remarked at an SFCTA board meeting in December of 2010 that "he and others from San Mateo County were supportive of efforts to reduce congestion and deal with climate impacts, but not if it included charging drivers to cross the county line" (Roth, 2010). Hill was so strongly opposed to the southern border plans that he "was prepared to introduce legislation that would make it illegal for one county to charge other counties 'punitive measures' like pricing" (Roth, 2010).

It seems that Hill is missing the point. He admits that congestion reduction and climate concerns are important issues yet he stonewalls the SFCTA study plans while offering no alternative solution. Reacting to a plan that aims to successfully target universal concerns based on price is extreme. If Mr. Hill framed the additional cost of a congestion pricing fee in terms of the overall expenditure of automobile ownership he would realize that it is a very small percentage (commutesolutions. org 2012). Palo Alto councilmember and Friends of Caltrain organizer, Yoriko Kishimoto views the idea of congestion pricing as a potential

benefit to commuters. Kishimoto believes that a plan would "relieve congestion on the 101 freeway, increase Caltrain ridership, and provide drivers the option of paying a premium for a predictable commute" (sf.streetsblog.org 1/11). She recognizes the value and necessity of reducing congestion, but unlike Hill, offers an alternative option in the form of a VMT tax. Anticipating that drivers aiming to avoid a fee on 101 might choose secondary roads, she says that a VMT tax would cover all travelers and could be a viable solution in the long term (sf.streetsblog.org). Unfortunately, the threats from Assemblymember Hill and the overall negative reaction from other politicians and planners in Daly City and the City/County Association of Governments of San Mateo County were sufficient to kill the southern border study option. The SFCTA voted 9-2 to remove the San Mateo plan from the study. Kishimoto may be right after all. If a VMT tax is enforced, then no one can complain about being a targeted with a location-based fee.

Concerns for Low Income Commuters

A point of contention with a charging plan is that it will unfairly burden financially stressed low-income households. The perception might be that there are many low-income commuters, yet the MAPS study revealed that they make up less than 5% of the travelers during peak hours. Even so, the Study plans to offer a 50%, "lifeline value" discount to low-income motorists.

Fee zone detection

A border/toll system must be efficient in order not to decrease traffic flow, yet be able to charge all vehicles crossing the toll border. Not all commuters/drivers will choose, or can afford to pay the deposit for a remote sensing device, such as a vehicle mounted transponder. Therefore, the only other way to accurately determine what vehicles are crossing the line is to record the license plate digits with surveillance cameras, such as those currently in place at unmanned toll crossings.

Transportation infrastructure concerns

In order to increase the LOS of peak hour San Francisco traffic some drastic and revolutionary measures need to be put into place. The current traffic levels are quite poor and getting worse. Major advance planning for the anticipated gain in ridership and the impact on MUNI and BART must be a significant part of the plan. When looking at the scope of the congestion pricing plan one must also consider how it will affect the commuters and travelers it displaces. If drivers are willing to make a transportation mode shift, then the appropriate transit accommodations must lead congestion pricing implementation. High Occupancy Vehicle (HOV) lanes in the bay area are being used less over time (Kwon & Varaiya 2006) and the percentage of SOV's remains high despite historically high gas prices. While a great many commuters ride Bay Area Rapid Transit (BART) trains, the system operates near capacity. Without major upgrades to the BART system, the capacity and frequency will not change anytime soon. BART was designed as a single track system, meaning there is only one track line inbound and one track line outbound servicing each station, so there is no way to

run express service into the city without adding additional lines.

Surface transit is subject to the flow of commuter traffic, yet two major Bus Rapid Transit (BRT) lines, proposed for the Van Ness & Geary corridors, may help to relieve some public transit commuter delays. Nearly all options of the two BRT plans include eliminating several lanes, which most certainly will have a negative effect upon vehicular traffic on those corridors. Car drivers may opt to use side streets that bracket the BRT routes in order to park and/or bypass the excess traffic cause by lane reductions. In turn, this most certainly will have a negative impact on the neighborhoods surrounding the corridors. By the time the BRT lines are realized gas prices may be so high as to preclude a large percentage of local and city-bound drivers.

While it is possible that the numbers of SOV automobiles can be reduced by offering a less expensive mode choice, those that drive commercial vehicles and delivery trucks are stuck with surface street travel. Therefore, a sophisticated plan would need to take in to account vehicle weight and frequency and charge accordingly. Cities worldwide depend on trucks to deliver their goods and should be given preference of road space and not be penalized for it.

The $900+ million of federal funds that are destined for the Central Subway project makes one think about how that amount of money could have improved the BART system and MUNI in preparation for a congestion pricing plan. Instead what the city will get is a destination challenged subway line that ends in Chinatown. Observing a map of the planned route for the subway shows its terminus falling short of North Beach, the Marina, and several waterfront neighborhoods. It seems like a great deal of expense and labor to bore a tunnel from the South of Market (SOMA) neighborhood without connecting it to several of the city's strongest tourist destinations.

Other alternatives that would help to relieve congestion, either in coordination or in lieu of congestion pricing, would be to restrict parking on odd numbered days to drivers with odd numbered tags and vice versa. An increase of the gas tax would drive the price of gas up, which would reduce vehicle use, but it would not directly target drivers commuting to the CBD. Telecommuting incentives could help to reduce traffic by paying employees to work at home during peak hours. A VMT tax would deter travelers from unnecessary travel and help to fund public transit. The revenue could go to support the public transportation system of the township or county of the driver's origin.

Conclusion

There are many detrimental issues related to automobile travel that a sophisticated congestion pricing plan could help alleviate. Reduced travel time and stress, increased transit reliability and revenue, greater commute time predictability, enhanced economic productivity, and better air quality are just some of the benefits that could be realized by congestion pricing. Unfortunately, most people will not change their mode of transportation or schedule on their own accord. The Stockholm example, where an upgraded transit system preceded congestion

pricing fee implementation by six months, made no difference to com-muters. It was only after they were forced to pay for access to the CBD that they shifted their mode choice or time of travel. The successes of the international congestion pricing programs should serve as the impetus for a San Francisco plan. Furthermore, the example set by San Francisco would inspire other major cities, stricken with greater traffic problems, to do the same. Yes, Americans still have a love affair with the automobile, but it will not be tolerated indefinitely. Driving habits are slow to change for many reasons, one of them being that an automobile provides a sense of freedom, convenience, and luxury that other modes of transportation seldom offer. Perhaps a substantial

change will come when the price of a gallon of gasoline reflects the true cost of the associated environmental damage.

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Ensuring a Vibrant Waterfront:

From Industry to Investment

Nicholas McIlroy
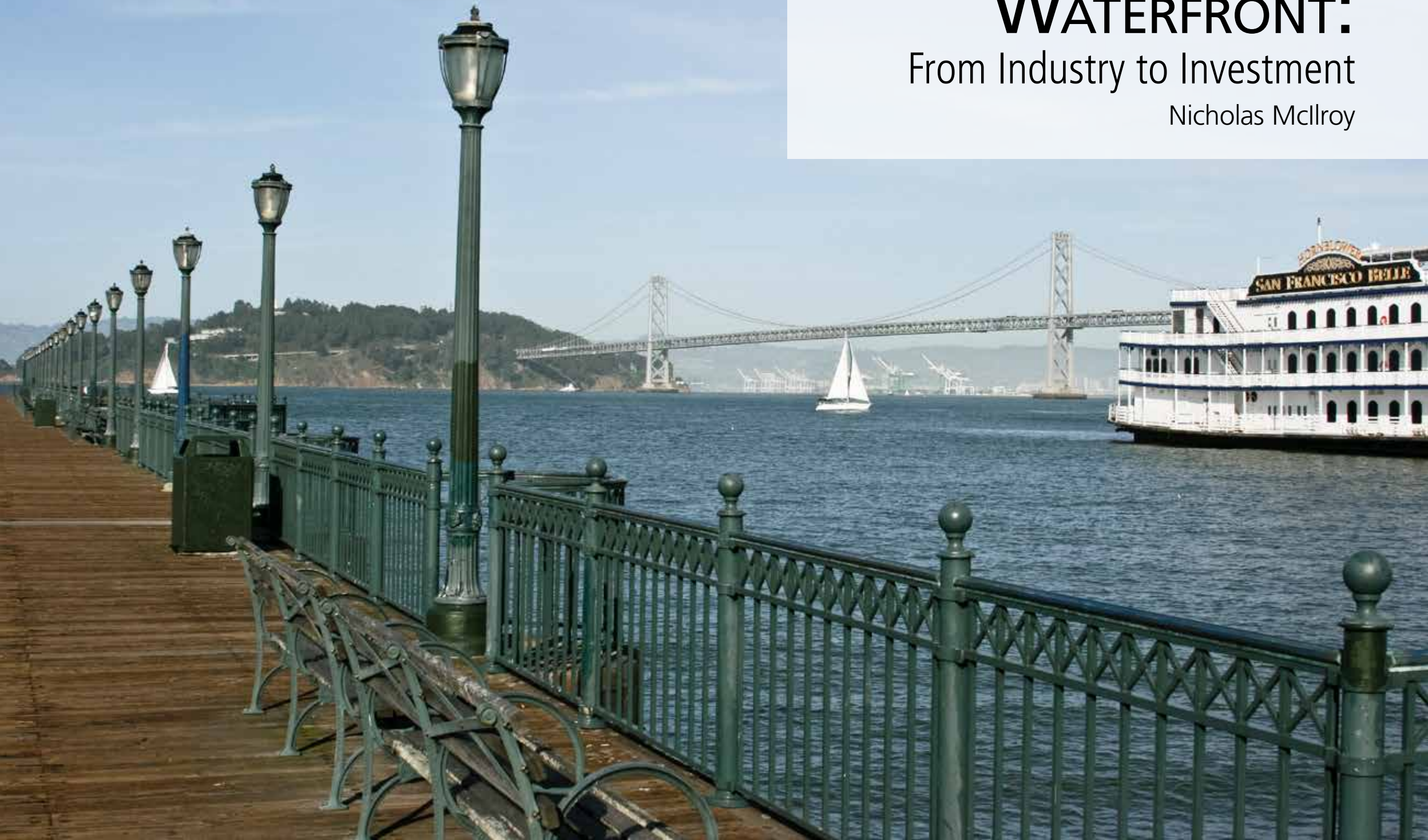
Introduction

Waterfronts have been instrumental in shaping successful world class cities. During the industrial era, waterfronts were utilized for break-bulk shipping, different forms of fishing, and the processing of goods. Throughout the last fifty years, these industries have moved out of the expensive waterfront real estate of old built up cities. The main force driving this change is that the shipping industry has been revolutionized with container shipping, which requires large swaths of open space connected to deep water that older cities cannot provide. Even if they wanted to, the real estate would be too expensive to create the open spaces, so it is not economically feasible. This signifies that waterfront cities across North America have seen a decline and a need to change their use to fit the changing economy. The question is how can waterfronts be successful in adopting a new economic identity while still preserving public space? The answer can be found along the waterfronts of cities across North America. Cities such as San Francisco have been able to create public space for its residents and any tourists, while at the same time adopting a new economy that revolves around professional services. The open space and developments created on the waterfront serve as a large tourist attraction and serve as a welcoming gateway to the city. An examination of this shift from industrial to post-industrial cities and how waterfronts can continue to connect people to the water will be explored.

During the industrial era, people were often directly connected to and interacting with waterfronts on a daily basis. Work, trade, and transportation all revolved around the waterfront. The main mode of transportation was by water, and ships delivering cargo would stay in ports for two weeks to load their shipment and restock supplies for the next voyage. This made waterfronts vital to a city's financial success, but they also contributed to the decline of some cities. A culture that catered to the transient nature of sailors and maritime life gave industrial waterfronts a bad name and created an economy of cheap entertainment and a proliferation of dive bars. Being away from home for weeks on end with only a brief amount of time to spend their money led to prostitution, gambling, and drinking. Therefore, from the advent of cities in North America, there has been the lure of mystery and danger surrounding ports. On the positive side, there have also been ways for an average worker without higher education to find fairly high paying work on the waterfront. With the invention of standardized shipping containers, the whole culture of waterfronts began to change. Older cities that did not have the space to adapt to container shipping began to decline. Jobs were lost and the industries that supported this maritime culture began to fade. In response to this loss of industry and jobs, the run-down waterfronts became subject to revitalization. Yet this revitalization came under the pretense that industrial waterfronts were not successful in connecting people to the water when they really were. They connected a very colorful and diverse group of people to it. There were no elitist

Industrial waterfronts in cities across North America have seen a steep decline, so they adjust their value in terms of use to fit into a new dynamic.

breweries with nine dollar pints speckled along a clean environment. They were dirty, alive and full of people. Therefore, the challenge that cities faced, was how to preserve the industrial interaction, exchange, and community when they rehabilitated their waterfronts. A balance needed to be found between making waterfronts economically viable, and equally accessible to everyone.

Background and Literary Review

For an in-depth understanding of waterfronts, it is important to look at the authors who have written about them and established a vernacular to work from. Starting with industrial waterfronts, Michael Chiarappa's article "New York City's Oyster Barges" begins by painting a picture of how oyster barges connected the water to the street and provided a vibrantly industrious waterfront in New York in decades past. The main emphasis can be summarized by, "oyster barges embodied and expressed the palpable rhythms of a competitive consumer economy and framed an occupation's dynamic waterfront culture" (Chiarappa 2007). This space and the relationships it created where explicitly important to the health of New York. It created the framework for the gateway to New York City. These oyster barges provided a medium and a socio-economic exchange that connected people to the water. Chiarappa finishes this article with a very poignant statement that highlights how developers can throw away something great in the name of progress:

"Ironically, Robert Moses and his cadre of modern planners spelled the end of New York City's oyster barges at the wharf when they began their campaign to reconnect the city to its 'rim of water' through high ways and parks rather than through the more tangible experience of the working waterfront." (Chiarappa 2007)

During the end of the oyster barges' lives, a small amount of crimes began to occur and it scared pedestrians out of the waterfront area. The tragedy is that freeways disconnect people from the water and open up the waterfront to more serious crime. Is there some way to continue the lively tradition of connecting people to the water by preserving some of the industrial experience?

One of the answers to preserving a connection to the waterfront comes from Dr. Jasper Rubin's book on waterfront development. In the chapter Neoliberalism and the City, he picks up where Chiarappa left off, where San Francisco is able to respond to Robert Moses and the rest of the modernist regime that swept the United States with the revitalizing cities movement. The ideology behind this revitalization process is a form of neoliberalism that focuses on "the privatization of public resources, including, for example, the creation of quasi-public entities and the use of contractors to carry out government activities" (Rubin 2011, 144). This suggests that cities turn over parcels of land, in this case waterfronts, to private developers for below market value with the goal being that the increased value of the land after development and the new tax income will help boost the cities revenue. When a waterfront property transfers from public to

private hands there needs to be restrictions in place to prevent the land from losing its use value.

For decades, San Francisco's piers used to enjoy the flow of goods from shipping, it was the main industry that shaped the city and led to its worldwide prominence. However, when the major shipping moved across the San Francisco Bay to Oakland, the city saw a declining economy. It is clear that the planning of SF's waterfront:

"has been keenly influenced by public interest in preserving use value, which has been supported by an enlightened, as opposed to technocratic, bureaucracy, and the results have been more than superficial" (Rubin 2011).

What Rubin suggests by, "more than superficial," is that they actually still have use value, because of the revitalized waterfront that still connects pedestrians to the water. San Francisco's waterfront has an invested public and intelligent government leaders that were able to create a successfully revitalized waterfront.

An important factor in waterfront development after government, private developers, and the public, is the role of the environment and the environment itself. This last component of waterfronts is just as important as connecting people to the water and should not be overlooked. Brian Hoyle's article titled Global and Local Change on the Port-City Waterfront, not only discusses the environment, but also how the importance of revitalizing waterfronts is extending around the world. One distinction he makes is that "the impact of infrastructural revitalization on society goes hand in glove with its impact on the environment" (Hoyle, 2000). This impact on the environment can range from infill to endangering species and native populations. Pollution increased dramatically during the industrial era and is still in contention with contemporary waterfronts. Cities such as San Francisco, who used to enjoy large populations of salmon and crab, now find the salmon nearly extinct from the area and the crab population nothing compared to how it used to be.

Contemporary Waterfront Development

A waterfront is where the water meets the land along some portion of a city. It does not have to be something spectacular or need to be a comprised "of towers and monuments" (Figueiredo, 2003) in order to be successful. Often there is a bridge in the back-drop and in the foreground there may be piers, a ferry
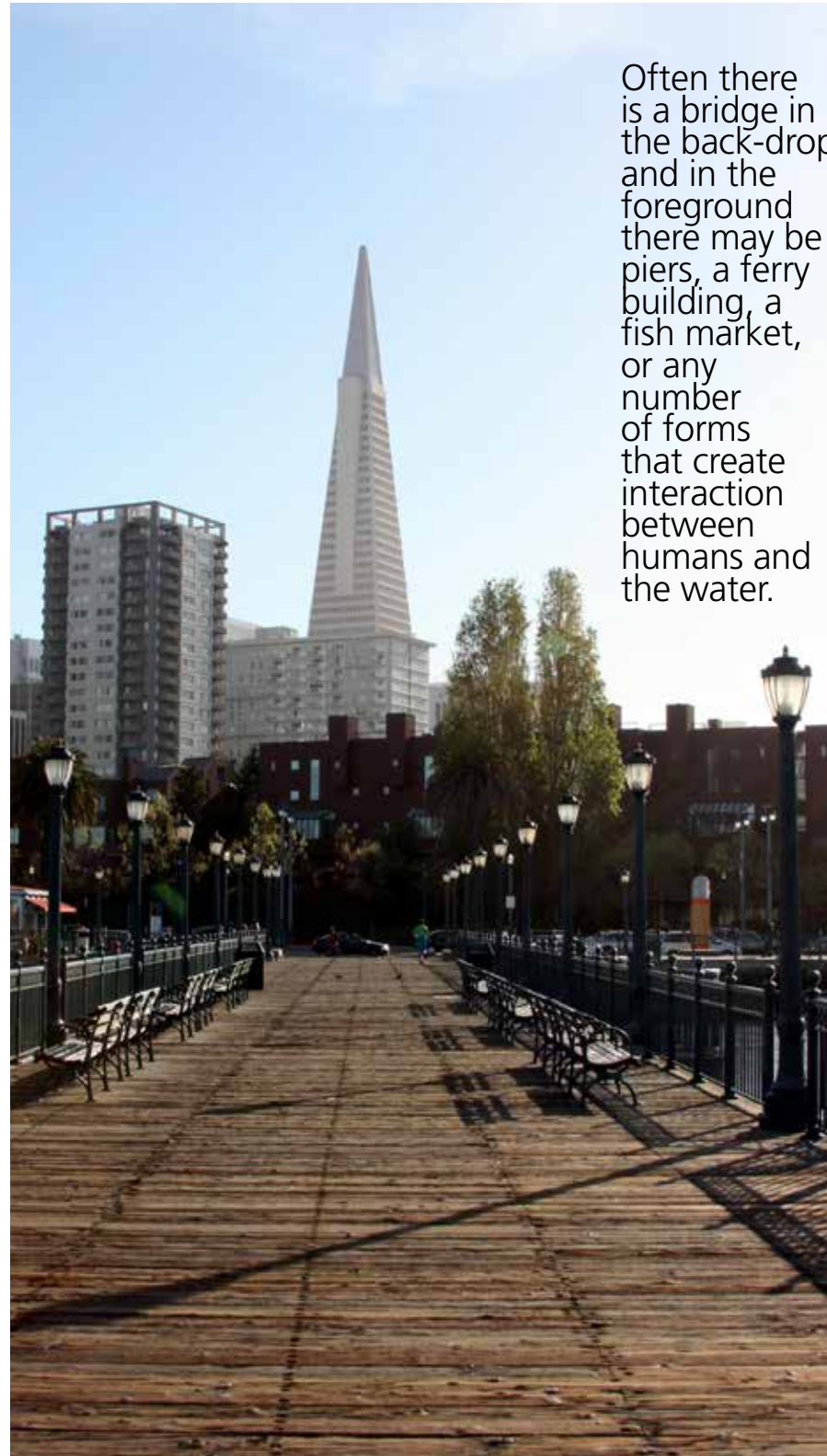
Often there is a bridge in the back-drop and in the foreground there may be piers, a ferry building, a fish market, or any number of forms that create interaction between humans and the water.

building, a fish market, or any number of forms that create interaction between humans and the water. It simply needs to preserve the use value of the land and maintain some sort of flow between the land and the water. This orients people and if done correctly can really shape a city into the centerpiece of the area. In order for these to be achieved, regulations by the government need to be put in place to control neoliberal development and protect the environment. Community and rights activist groups need to do their part as well and speak up to preserve their right to access these areas and to make sure the government is doing its job. The last component is for all three to come together and make it happen in a cohesive fashion.

However, politics and development are rarely on the same page. It is a battle field of drastically different interests and for every story of achievement there are five other stories of failure that get swept under the rug. Waterfront development is not immune to these problems and more often than not it is a question of figuring out "how can conflicting aims, objectives, and interests be reconciled?" (Hoyle, 2000). Even when these differences are figured out and a waterfront gets revitalized, there are plenty of battles that had to be fought to get it there. In the case of San Francisco, many different waterfront developments were proposed. There were some ideas that would block views, some that aimed to fill in the bay, and many that would have completely privatized the waterfront. Each one was stopped by a mixture of government regulations, local activists, and non-profit organizations. These strict restrictions and the strong vocal feedback by pedestrians were able to "attenuate the flow of capital investment and the creep of privatization along the waterfront" (Rubin). The outcome has been multiple successful developments, such as the ferry building plaza, and AT&T Park.

Some cities have been less successful at developing their waterfronts. When elite ideologies stonewall use value, developments can be halted and valuable waterfront real estate can go un-used. Industrial decline created a paradigm shift that old industrial waterfronts need to create new tourist and public open spaces in order to stay competitive. An example where people wanted this to happen, but conflicting ideologies halted development is with Penn's Landing, which is located in Philadelphia. This prime stretch of waterfront real estate got muddled up in a battle between the progressive community and the elitist private developers to determine its use. The space deteriorated for forty years, because they could not work together. There needs to be a "proper balance between the appropriate locus of power with respect to policy making"

(McGovern, 2008). If the government had been able to balance out two powers with regulation and clear stated development goals, such as 'create public open space and preserve the connection to the water,' then maybe Penn's Landing could have been a success. Instead the site is a brown field that is both an eye sore and a detriment to Philadelphia.

Brown field sites along waterfronts are just one of the many environmental dilemmas that pervade waterfront development. Bay infill is also a balancing act, because it disrupts local ecosystems, and harms the environment, but it is also one of the last ways to develop when a city is built up everywhere else. Both brown field clean up and infill are expensive for developers. There are also other requirements that cities place on developers if they want to build on the waterfront, such as public space, access to the water, no blocking of views, and many other requirements. Therefore, older cities are often a balancing act for developers as they must cater to multiple ideologies and preferences. This is why waterfront development in cities such as San Francisco is so challenging and also so rare in success. Currently there are plans to develop a new basketball arena for the Warriors (stadium is presently in Oakland) along the water a few blocks away from AT&T Park. The San Francisco Giants professional baseball team is not excited about the prospect of competition and residents may join them because of fears of more traffic congestion. All of this outcry will occur, despite the Warriors attempts to appease citizens by creating a large open space, providing retail outlets, and doing this all without spending tax money. Not to mention that non basketball fans will be serviced by a venue that attracts concerts and world class shows to San Francisco.

With the success of waterfronts comes another concern: which is that these redeveloped areas that connect people to the water also tend exclude people by design. During the industrial era, a rowdy, but diverse demographic had access to the piers and the water. Waterfronts welcomed foreigners and locals, rich and poor, craftsman and intellectuals. Today, these clean and prosperous waterfronts can become gentrified. This means that only rich intellectuals are able to enjoy what waterfronts have to offer. Creating an equitable waterfront that does not limit who can use it becomes another component of a successful waterfront. Therefore, not only do waterfronts have to be usable, they need to be accessible to everyone.

Conclusion

The redevelopment and continued development of ports helps spur city prosperity. It is important to comment that city waterfronts were vibrant and successful during their industrial era. The New York City oyster barges are a beautiful example of how to connect people to the water. They acted as "a gateway phenomenon whose voracious transformational rhythm was emblematic of more than taking oysters from the raw to the cooked but also a host of ecological relationships and consumptive patterns at the heart of America's national temperament" (Chiarappa). This is one example of the many diverse uses that cities enjoyed during this era. It is often mentioned how successful waterfronts are today, but there is little mention of the historical success they enjoyed in previous eras.

As these working waterfronts began to decline with maritime technological advances, cities adapted. Cities are entrepreneurial in nature and they move to the flow, so when their use changes, then the city itself changes. Today waterfronts are used to attract tourists, office jobs, and to host attractions such as ball parks and aquariums. The success of these publicly accessible resources plays a big role in the image that these cities purvey.

After witnessing the devastating impact of Hurricane Sandy on the East Coast, it becomes clear that cities need to be aware of the possibility of extreme-environmental events when planning and developing waterfronts. There are also the concerns of ecosystems and native species that need to be protected by restrictions and governance. The impact of development needs to be a conscious endeavor, whether it is finding consensus between environmentalists and developers or between the elite and progressive community. When regulations and voices come together, developments can be oriented to help areas clean up brown field sites and help repair ecosystems.

Waterfront development does not need to be something of a spectacle or monument. Instead the focus should be on creating a space that opens

itself up to the public and connects people to the water in imaginative ways. The buildings do not have to be grandiose, because the spaces that they create become the monument. A city is not a city without the people that live, breath, and work within it and a waterfront needs to reflect this. This can be achieved by making pedestrians feel welcome and to give them activities they can interact with. Whether it is fishing off of a break-water pier or having dinner overlooking the water. All of these activities are backed up by the ideology of preserving people's right to the city.

The interesting component of this is that manufacturing and industrial uses can still have a place on waterfronts. The new movements of, back-to-the-city and think locally, will hopefully spur the advent of more forms of contemporary manufacturing jobs along waterfronts. In San Francisco there are a number of distilleries and a brewery along the water. There are crab fishermen that still crab around the Bay and the ferry still keeps the flow of passengers moving across the water. The simple inclusion of putting AT&T Park up against the water so that the public can kayak in the water and catch home-runs is a wonderful way to keep people connected. In some cases nature will take back the waterfront as is seen with Pier 39, where sea lions now cover the pier. All along this stretch tourists flock to see these sights, and experience San Francisco's waterfront. This successful public open space is part of the reason why the surrounding area has flourished and will continue to flourish for years to come. The most successful waterfronts have found ways to let the historic industrial waterfronts contribute to shaping the space and the connection to the water.

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India:
## Struggling to Develop
Into a World Class Society
Victoria Winters

The Indian Subcontinent has been an area of focus and interest since the rapid urbanization of Southeast Asia, specifically in megacities like Shanghai. With technological innovations and more people moving into cities over the last 20 years, the rate of increased population has begun to surpass efficient urbanization in some cities. As more people move to nearby cities for a multitude of reasons, it is inevitable to assume that not every inhabitant of a neighborhood, city, or country shares the same political, religious, or cultural views. This paper will focus on the internal struggle between the Hindus and Muslims in various uprisings, both religious and political, throughout India, as well as the internal struggle for housing between the classes due to the wealth stratification, and how this has effected key Indian cities such as Gujarat and Mumbai while they develop in to a world class city.

Religious Differences Creating Political & Economic Disparities
To truly understand India we have to examine one of its focal and oldest components: the internal struggle over religious differences between Hindus and Muslims. Religious differences are not uncommon, but much of India's internal struggle is derived from the religious differences of Hinduism ideologies with Muslim beliefs. Muslims are currently the minority with much of India identifying with Hinduism, intentionally labeling establishments as Hindu-centric and discriminating employment and housing status on religious identification (Chopra 2006). This can be traced back to the Indian Independence Act of 1947, as well as the destruction of the Babri Mosque in Ayodhya, India in 1992.

The Indian Independence Act, in which the United Kingdom separated the part of India the British had colonized into what is now Pakistan and parts of India, was detrimental to the nation (The National Archives 2012). The land division that granted a large amount of Muslims their own land on Pakistan soil was only a partial
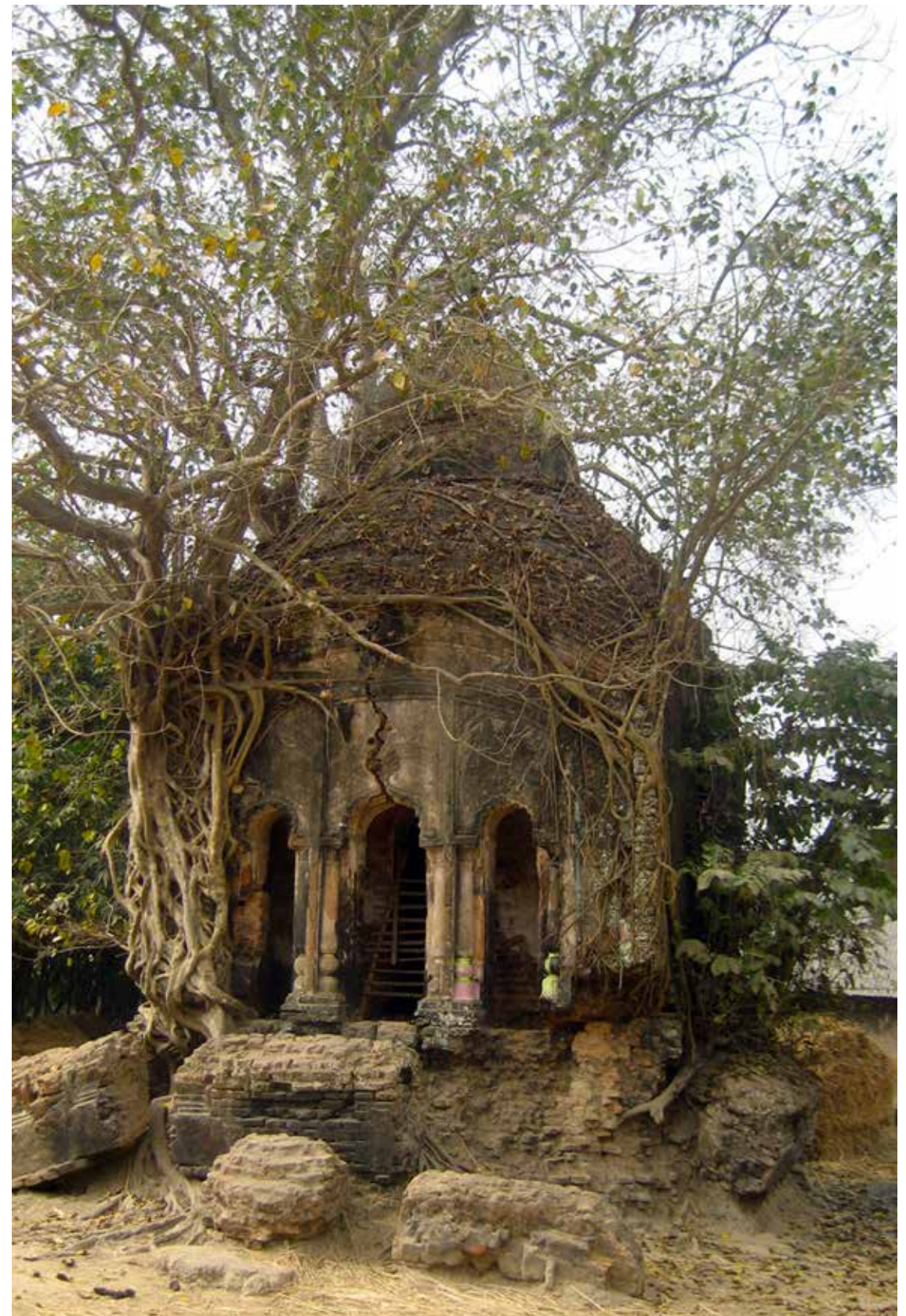
solution to aid those that were forced to leave India, but for those that remained the conflict was still prevalent. The Indian Independence Act of 1947 resulted in the Partition of India by British Division as a result of political pressure that advocated for the withdrawal from the East and the return to England to focus on the growing socialist government. The initial idea was to create Indian independence by splitting the state in to two independent states, a majority-Hindu India and a majority-Muslim Pakistan (Hill 2008). The idea to divide and grant two separate states based off of religious differences to avoid conflict, did not transition as smoothly as anticipated. The immediate months before and after the official partition saw an estimated 12-17 million total in migration across borders, as well as 200,000 to 1 million deaths related to the newly declared division (Hill 2008).

The Partition of India resulted in additional emotional turmoil, by physically constructing a barrier in the middle of one of India's most profitable exports. India was known for producing 'jute,' a rough fiber derived from the stems of a plant that can be used for twine or rope and can be woven in to sacking or matting (Merriam-Webster Dictionary). Jute was the focal point of Bengal economics, dominating the market in the mid-nineteenth and twentieth centuries (Bharadwaj & Fenske 2012). Jute, both raw and manufactured, jumped from India's fifth largest export in 1878 to India's largest export accounting for a fourth of India's total exports by 1921 (Bharadwaj & Fenske 2012). The significant increase in the quantity of jute export from India can largely be accounted for by the large population that India houses. Jute is a more labor-intensive crop requiring much supervision that can be simultaneously done with a large population to gather a labor-pool from. The Partition of India sharply divided the country's main export, placing the jute cultivation in East Pakistan and the majority of jute mills residing in West Calcutta (Bharadwaj & Fenske 2012). Due to the division of jute production through the partition, uneven increase in migration was seen across the newly declared border. Corresponding cities on parallel sides of the border were overall equal in migration between them, but particular cities were outliers who saw more immigration into India than out. Relations between West Pakistan and Indian Punjab were equal, while approximately 3,000,000 migrated in to Bengal and the immediately surrounding states, while only 600,000 migrated from India to East Pakistan (Bharadwaj & Fenske 2012) resulting in larger migration numbers into India versus the newly defined Pakistan. By 1951, 8% of West Bengal's population was comprised of immigrants, 37% in Nadia, 16% in West Dinajpur, and lower populations being home to approximately 1% such as Purnea and Hazaribagh (Bharadwaj & Fenske 2012).

The destruction of Babri Masjid on December 6, 1992, or the Babri Mosque, in Ayodhya, India, was a result of the collateral damage that occurred from 150,000 combined Hindu and Muslim demonstrators that escalated during a political rally. Who was to be held accountable for the destruction of the Babri Mosque is hotly contested; historical events can be referenced that might explain this uprising as a reaction

India is a country that claims secularist governmental rule, but communal demonstrations such as the destruction of the Babri Masjid and the Gujarat Riots of 2002 play directly in to religious turmoil.

to the conflicting politics that caught this mosque in its cross hairs. Destruction of the Babri Mosque and those in support of its destruction are thought to have come from both Hindu Fundamentalist groups, including but not limited to, middle class Indians such as traders, small business owners, and white collar workers, as well as the Indian generation that grew up during the Partition of India experiencing and growing in the controversial politics of that time (Chhibber 1993).

The destruction of the Babri Masjid was an event that disturbed many nationwide due to the muted response, especially in regards to preventative measures that could have reduced loss or mobilized authorities in an attempt to stabilize the fighting. As the mosque was destroyed, then prime minister P V Narasimha Rao acted more like a figurehead, disregarding deployment of reserved forces less than 11km away (Ali 2002). The mosque destruction in Ayodhya set off subsequent violence in larger cities such as Mumbai where a death count of 1000 occurred and in Surat where mass rapes of Muslim women were displayed publicly (Ali 2002). Other cities were not immune from such conflict, merely just teetering on the edge of constant turmoil. Expanding cities such as Ahmedabad, Kanpur, Bhopal, and Delhi all saw their fair share of violent outbreaks due to deep rooted remembrance of the violence of the Babri Masjid, but clinging to more recent actions to justify the attacks; many illegal liquor business and gambling dens would crop up to the outcry of locals and against their beliefs, eliciting attacks on both sides (Ali 2002).

The controversy surrounding the Babri Masjid in Ayodhya, India became more of a slanderous event recounted by two opposing sides, rather than an actual historical recollection. Going forward from this and determining what was to become of the land the Babri Mosque once rested on, is a task appointed to the Archaeological Survey of India (Charan). Through the appointment of the High Court, the ASI is to determine whether a Hindu temple once rested there. The contested area was most recently home to the Babri Mosque, which was constructed in the sixteenth century by Mir Baqi, but was destroyed by Hindu fundamentalists (. Mir Baqi, commander to the Mughal emperor, was believed to have built the Babri Masjid on the ruins of an earlier temple that signified the remains of Lord Ram's birthplace. Lord Ram is considered one of the highest and most focal gods of worship in the Hindu religion. After completing the physical excavation of the site area the ASI discovered remnants of a building that would predate the sixteenth century mosque. The discovery of a possible tenth century Hindu temple underneath the more recent remains of the Babri Mosque is problematic on more than one level because of the precedent it might set for other religious buildings, monuments, or territories (Charan, Ayodhya: Digging Up India's Holy Places).

The discovery of older architectural remnants only furthers the

dispute of whom the land belongs to and what the pre-existing remnants mean for the Hindu majority or Muslim population. From the Muslim standpoint the discovery of the pillars and other architectural remnants was not a question of authenticity but a question of interpretation (Charan 2004). The opposing argument to the discoveries was that the Babri Mosque was just an extension of a pre-existing Mosque of the Sultanate period between 1200-1526 (Charan 2004). Due to the lack of support offered to authenticate the pillars and other architectural findings by the ASI, the pillars are being regarded as filler for the Mosque floor (Charan 2004). Pillars along with pottery and floral motifs are characteristic of Muslim architecture and have been interpreted as Hindu pattern. Misinterpretation of these artifacts occurred with disregard to contextualization (Charan 2004). These findings and the way in which they've been broadcasted was very suspect due to the governmental control of the ASI.

Nearly a decade later the Gujarat Riots occurred in 2002. As the dispute between Hindus and Muslims continued, the violence increased. We can see this in the 2002 riots of Gujarat in which 58 Hindu passengers of a train pulling out from Godhra station were murdered by residents of a Muslim neighborhood after the train was forced to make an unscheduled stop (Hindu Fundamentalism 2012). Innocent occupants included 58 random passengers of a train coach that were burned alive on February 28, 2002 (Ali 2002). The Gujarat riots forced a modernizing India, to take a look into the domestic turmoil that has existed for well over a thousand years if they have any hope of progressing towards a more united country. In an ever-modernizing world where religion is becoming less relevant, how can we explain the effects religion has on India and their internal turmoil? In a country with two dominant religions we see that Hindus and Muslims contest with one another, similar to the United States' Democrats and Republicans. India is a country that claims secularist governmental rule, but communal demonstrations such as the destruction of the Babri Masjid and the Gujarat Riots of 2002 play directly in to religious turmoil.

One could argue that religion has become almost synonymously interchangeable with political affiliation in developing cities across India. Communal violence comes from competitive politics between two elite communities, Hindus and Muslims (Ali 2002). Varying religious views have harmoniously existed in other
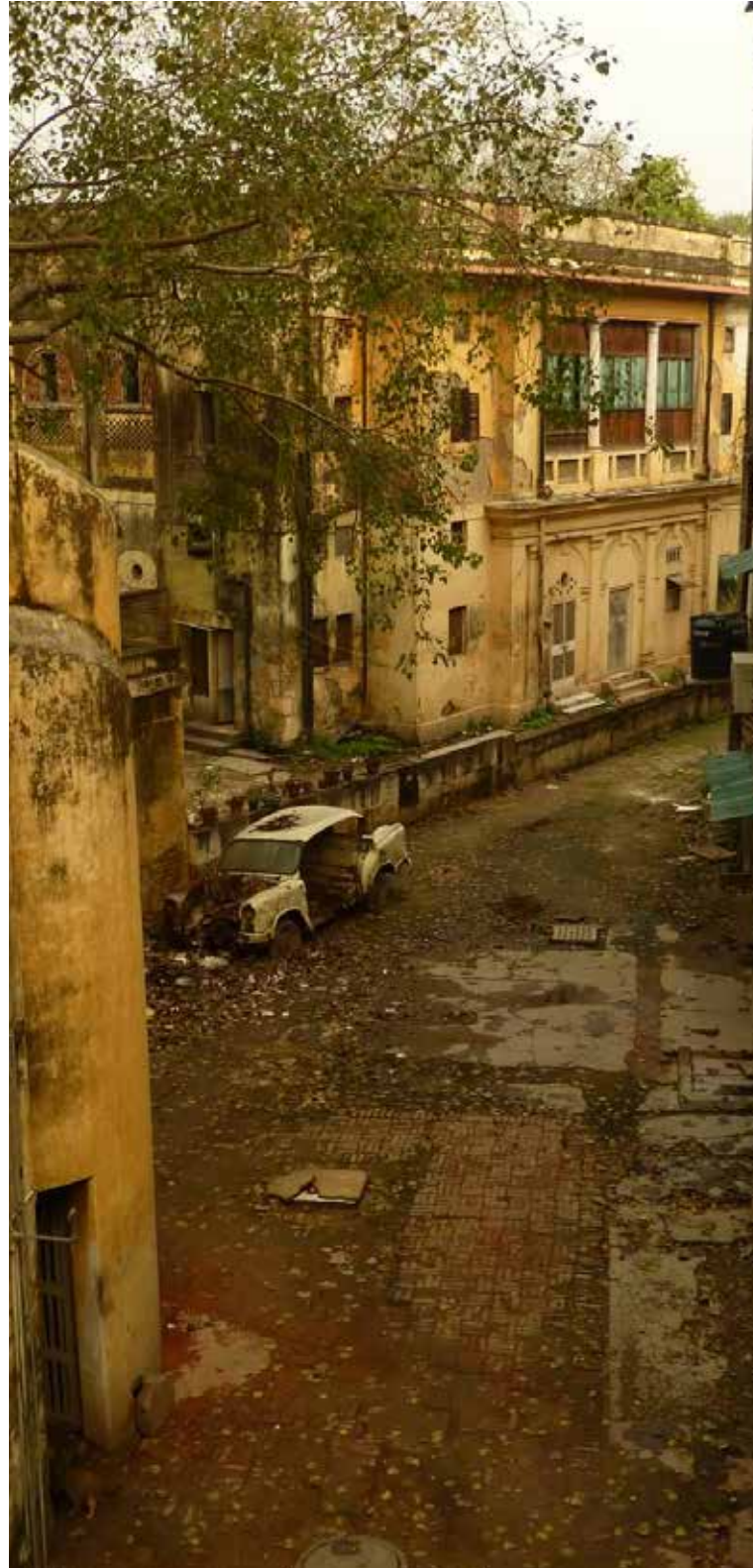
successful World Class Cities such as Shanghai, New York City, Paris, San Francisco, and Singapore. The two contrasting communities need a mediator to bridge the conflict, a third party to help bring the two sides together. The colonial authority of the British during the early developing years in India is not solely responsible for the current state of affairs, but is a variable worth analyzing. Asghar Ali claims that the British saw the potential that a united Hindu-Muslim India could impose on the empire and was the catalyst in sparking a division between the two religious groups early on through distortion of history. School textbooks were written to portray Muslim oppression of Hindus through demolition of temples in an effort to shame and humiliate Hindus in India (Ali 2002). As India continued to develop the division remained and politics only exacerbated it. Prior to the Partition, Muslims accounted for 25% of India's population. With such a large minority, how to equally divide seats in governmental power became a more prevalent problem (Ali 2002). Resolve could not be reached and its negation mobilized the conflicting sides in to communities of action through lasting policies (Ali 2002).

Conflict among Hindu and Muslim inhabited areas is common nation wide in India. One such party that embodies the growing nationalist presence in India is the Bharatiya Janata Party (BJP). The BJP became a prominent Hindu fundamentalist group after the 1991 elections (Chhibber 1993). Hindu fundamentalism became a modern phenomenon after it's electoral success in which the BJP increased its total referendum to just under a quarter of the total votes cast in the election (Chhibber 1993). Hindu Fundamentalism is a relatively new idea; it initially originated from the Modern Christian religion of the 19th century from American millenarian sects and was a main contribution in the development of Islamic Fundamentalism. Its counterpart was seen as a reaction to the fall of both Islamic political and economic power (Merriam-Webster Dictionary). In response, we then see Hindu Fundamentalism crop up in a similar radical fashion. Significant contributing events include the BJP increasing electoral power and becoming a prevalent governmental power in at least four northern Indian states, as well as the destruction of Babri Masjid and its resulting violence being the two focal indicators of Hindu Fundamentalism's deep roots in Indian politics (Chhibber 1993).

The year 1998 marked the first anti-Christian attack in which both Christians and Muslims were openly attacked without police intervention (Ali 2002). The attacks of 1998 began with the accusation that Christians were converting Hindus through coercion and fraudulent actions. This led to the most rampant attacks on Christians where both bibles and churches were burned. One such case of this was in Dangs (the tribally inhabited section of Gujarat) on December 25, 1998 where a church was infiltrated and many worshipers were tortured and terrorized (Ali 2002). Muslims suffered a similar fate as more political agitation between Hindus and Muslims began to accumulate. In Gujarat, Muslims were forced to flee after a ban was declared when the news broke of the marriage between a Muslim boy and Hindu girl (Ali 2002). Relations

with either Christians or Muslims were looked down upon, and many Christian and Muslim storefronts closed, shrinking back the public community presence of minorities.

The Trickle Down Effect of Disparity: Informal Housing Settlements India is not only home to internal conflict between opposing viewpoints of the civilian population, but there is also domestic dispute revolving around the government and the social and economic stratification they have allowed to happen. Mumbai, formerly Bombay, is one of the most diverse cities in India, containing a variation of ethnicity and linguistics. Within the last decade, Mumbai's government has looked to Shanghai for development inspiration and prosperous ways in which to urbanize. Mumbai prepared to become a more prominent destination on the map by announcing "Vision Mumbai – Transforming Mumbai in to a World Class City" (Mahadevia 2008). This plan allowed for evictions of slum neighborhoods, with the first large one occurring in 2004 continuing through early 2005. Although this new plan was supposed to create a new image of Mumbai symbolizing their growth and increased worth, the term "Shanghaing Mumbai" became well-known for slum evictions and mass displacements (Mahadevia 2008).

India's diversity has contributed to both its contrasting religious views and its continual modernization, Mumbai attracts both tourists and migrants seeking employment, helping reinforce its diversity. Finding employment in a growing economy is easy enough, but finding permanent residency is not. Approximately three-quarters of Mumbai's residents live in slum settlements or run down tenements (Chalana 2010). Mumbai is India's largest city with over 14,000,000 residents accounting for a population density of 57,000 people per sq. mi.; with approximately two-thirds of the city's population concentrated on less than ten percent of the city's total land area, making it more than twice the density of New York City (Chalana 2010). The large amounts of informal housing that Mumbai contains allowed rapid development and expansion, creating a bubble of temporary employment that is not sustainable. As Mumbai strives to become a World Class city, it neglects planning for the three-fourths of their total population living in slums; this action has coined Mumbai the term "Global Capital of Slum Dwelling" (Chalana 2010).

Mumbai is home to two types of squatter settlements, "chawls" and "Jhuggi-Jhopri." Chawls are mainly built with timber frame structures and have one to two rooms in the private residency, opening up to a communal hallway where multiple units share basic sanitary amenities such as toilets The Girangaon chawl tenements were built in response to the textile boom of the 19th century in Bombay, and were constructed with the support of the state government funding (Chalana 2010). Chawls were created to offer affordable housing for lower-income families that needed centrality to developing cities to sustain employment, but only needed the basic amenities to maintain a simple lifestyle. Frederich Engels the author of The Condition of the Working Class in England (1845) wrote about the unsanitary and overcrowded living conditions that the working class of Manchester

Mumbai seeks to use the Dharavi Redevelopment Project to redevelop the 530 acres of land that 600,000 slum dwellers currently live on.

was subjected to in response to the Industrial Revolution that was occurring at that time. Chalana portrays the simplistic lives of the chawl-dwellers much like Engels' description of working class in Manchester, England. Chawl-dwellers of India experienced living conditions similar to those of Manchester, England; living in unregulated, unsanitary, overcrowded housing in an effort to survive not being left behind by India's fast expanding global economy. These low-income tenancies migrate where there is available work, and often where they can send their children to school. The farther away they expand out from the heart of the city, their chances of finding sustainable employment and education decrease. Although it may be economically cheaper to live on the fringes, the necessity for centrality the inner city provides requires sacrifice. Chalana observes, much like Engels, that people will fill open areas, gathering and socializing even in the most cramped alleys or community squares (Chalana 2010). Although bustling with social interaction throughout chawl communities, chawls often became dilapidated. Chalana contributes this to the rent control, lease holders realize whether or not they maintain their property their property value cannot increase, de-incentivizing them to invest in their units (Chalana 2010). Subsidized government housing with permanent rent control, and the ability to pass leases down through families for generations leads to overcrowding. With both the cheap construction and the increased occupancy of each individual unit, the Girangaon chawl quickly became blight in Mumbai's development.

The second kind of low-income settlement in Mumbai is the Jhuggi-Jhopri. Jhuggi Jhopri settlements are informal slum settlents that are not government subsidized and developed as a result of the lack of affordable housing for the working class who cannot afford to live in the high-rise developments they spent a lifetime building. Mumbai is home to Dharavi, which is now one of the most famous slums in India due to its portrayal in Danny Boyle's 2009 film "Slumdog Millionaire." Jhuggi-Jhopri settlements are higher in density compared to the chawls, but are comprised of low-rise buildings of one or two stories versus the four to five story buildings that are typical of chawl tenements (Chalana 2010). Jhuggi-Jhopri slums do not develop on a grid pattern like most planned development, but this does not mean that the absence of straight lines means there is an absence of planning. The slum developments are successful mixed-use developments that allow women to peruse without traveling, allowing them to fulfill social stipulations of familial obligations while maintaining their freedom during the day (Chalana 2010). Jhuggi-Jhopri's develop and expand because local governments have allowed them to exist for the convenience of a labor pool, a political group to lobby for votes, as well as housing that does not come out of Mumbai's budget and has a low environmental impact on India (Chalana 2010); slum dwellers are almost similar to the illegal immigrants of our country that pay taxes, but do not collect social security. Similar to illegal immigrants, inhabitants of informal settlements across India are forced to compete one against another for below living wage jobs. This economic environment creates an unsustainable work

force that will self-perpetuate, possibly until it collapses in upon itself. While India's elite begins to redevelop cities we see the rate of slum razing and evictions increase. The Dharavi Redevelopment Project is a prominent example of the shift in capital of the inner city. Informal slums and low-income developments occupy crucial land in the heart of the city, including the land surrounding the Bandra-Kurla business center and space on either side of suburban railway lines (Chalana 2010). Mumbai seeks to use the Dharavi Redevelopment Project to redevelop the 530 acres of land that 600,000 slum dwellers currently live on (Chalana 2010). The DRP is considered to be the "Opportunity of the Millenium" project that would redevelop the neighborhoods that Dharavi currently occupies in to a high-rise city through the reallocation of zoning; "a glittering township of parks, skyscrapers, shopping, arcades, and good life". The rezoned land would then be split in to five sectors that would be auctioned off allowing the redevelopment of each section to be overseen by the highest bidder. The redevelopment of Dharavi would mean the permanent displacement of all current residents unless they can prove residency prior to 2000. Along with the majority of Dharavi's residents becoming permanently displaced, proposed development only plans to maintain 2% of their land for non-polluting industries (Chalana 2010).

Conclusion

As India continues to develop and expand, in hopes of establishing world class cities in a global society, they need to provide a more united front in one aspect or another. The extreme stratification they have in terms of religion, economics, and politics leaves too much of India divided. The historical distortion of religious turmoil between Hindus and Muslims lead to a primarily dominant Hindu majority and created a Muslim minority. The stratification of haves and have-nots in terms of religious views affects the governmental ruling power and allows for harassment and exclusion through politics. This then snowballs in to the economics of India as a whole, where developing cities such as Mumbai, keep providing living amenities (employment, education, housing) to those of preference, through religious beliefs, political views, or annual income, creating a bubble. In conclusion, the societal bubble that India has created is not stable and will not be sustainable for much longer. India should reassess its population as a whole and come to a compromise either secularly, politically, or economically to continue urbanization and redevelopment at the rate at which they currently are.

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URBAN PIONEERS IN AUSTIN

A Field Observation
Zack Dinh

I had never been to Austin before. I had never been to Texas either. I did not know what to expect. I knew that Austin was known for its music scene, and I had heard from many that the city was "unusual." Austinites apparently embraced their uniqueness, popularizing the slogan, "Keep Austin Weird." Portland, Oregon, a place I had been before, also had a similar slogan of, "Keep Portland Weird." With this limited information I assumed the two cities shared a similar vibe. I hoped the similarities extended towards the urban realm. Portland is considered one of the most livable cities in the country and is on the forefront of bicycle advocacy and sustainable city planning. A city like that in Texas, in the South, would be incredible.

I had spent the semester prior researching Jan Gehl, a renowned urban design consultant from Copenhagen, Denmark. His first publication: Life Between Buildings was still fresh in my mind. He became famous for his "public life surveys" a process where he observed the urban environment methodically to identify problems and create solutions for a more pedestrian friendly urban environment. It is a belief shared by Gehl and many others, the promotion of a pedestrian friendly environment makes a city more livable, sustainable, and equitable. Municipalities around the world have hired Gehl to improve their cities. So, I promised myself that I would make a conscious effort to assess the quality of Austin's urban planning and its effect on the city's livability.

The area that fascinated me most was South Congress Avenue, better known as the SoCo District. The street that runs through the SoCo connects it directly to downtown Austin just a few miles north. The brown colored State Capitol loomed in the distance at the end of South Congress Avenue. Texas' SoCo District is a vibrant area with old buildings and semi-permanent structures converted into functional use, such as, restaurants and shops. The first time I experienced the SoCo it was a Thursday afternoon. There were people moving leisurely up and down the street poking in and out of one-of-a-kind clothing stores and novelty shops. Others waited for big blue buses that arrived frequently. Although South Congress Avenue was a major street, speeds were slow. Motorcyclist even cruised through on Harleys and custom café racers helmet-less.

Build something and people will come: SoCo builds with uniqueness and creativity, transforming dirt lots into pedestrian hot spots.

The surrounding area was filled with single-family houses, making for rather low density. At first I thought this would hinder accessing the SoCo District. However after walking to and from the area through the quiet neighborhoods, I realized that the streets were arranged on a grid pattern. This allowed for easy travel by foot or bike with very few obstacles, making SoCo easily accessible to many local residents. Additional features included: corner bulb-outs to reduce pedestrian crossing exposure, bicycle lanes, and on-street bicycle parking; creating a very intimate pedestrian realm.

I fondly remember how effectively businesses in SoCo merged private and public space. Many of the old buildings were built directly against the sidewalk. Parking areas were commonly turned into outdoor seating areas. Vacant lots that would have been disruptions to the street scene were used as sites for "trailer park eateries." These makeshift culinary destinations contained mobile trailers outfitted with kitchens serving anything from Cajun to Indian food. Street life was further enhanced by the welcoming sound of music that filled the air. There was no shortage of guitarists singing and playing throughout SoCo's establishments. On the street, musicians were also allowed to play as they pleased. It felt like a music festival, but this was everyday life.

I liked being in SoCo. It was peaceful, people were friendly and just happy. It had a real sense of pioneering spirit, the kind I could only imagine existing in a desert town from a wild-west movie. I met a guy waiting to hop on a freight train to New Orleans. I talked to a street musician that wore his two front teeth on a necklace. I met two artists who made paper machete masks and walked around town wearing them. There were no big box department stores but a multitude of local business. There was uniqueness to every establishment. There was art everywhere.

The SoCo District stood in stark contrast to the other areas surrounding central Austin. Unlike San Francisco, which is bounded by its geography, Austin has been free to sprawl out. Although Austin and San Francisco have similarly sized populations, Austin covers five and half times more land area. The outskirts of Austin typically consisted of wide,

fast moving streets, and shopping centers with excessively large parking lots. These areas were inhospitable to pedestrian life. It was not uncommon for streets to have no sidewalks. I often remember walking in places where the streets was so wide, that I felt the cars whizzing by would surely hit me while I crossed.

Being in SoCo was sort of like being on Valencia Street in San Francisco's Mission District. Although there were extreme differences between the two, there was something very familiar with the types of businesses in the area. They both catered towards a similar demographic. If I were to describe the people that lived in the Mission, the description would be exactly the same for those who lived in SoCo; a neighborhood full of young people that are interested in indie music, coffee, art, bicycles, vintage fashion, interesting haircuts, handmade goods, and organic food. The catalyst for the prospering development in SoCo is thanks to the work of Hipsters.

Cities are full of places that are inhospitable to pedestrian life or any sort of life for that matter. Just as pioneers of the past migrated westward across the continent in search of prosperity, Hipsters for that same reason settle into largely forgotten enclaves of major cities. These areas are often undesirable to others because the lack of amenities, or are just dangerous. However urban pioneers are a brave and creative class of people. The promise of affordability makes these places attractive. Here they are free to express themselves through art, music, lifestyle, and the businesses they open.

The irony of their actions are, while on their quest to create a home of their own, they are also sowing the seeds towards their own demise. As they convert old shops and warehouses into hip cafes, bookstores, and art galleries, they create a destination that attracts outsiders. Scattered all throughout SoCo, modern high-rise apartments were being built, ready to take full advantage of the "cool" environment the urban pioneers had created. As more people flock to this up-and-coming place, property values rise and the cost of living increases. I cannot help but see the similarities between Austin's SoCo District and San Francisco's Mission

District. A decade ago the Mission was up-and-coming. Today, after the explosion in its popularity, it is no longer affordable. Unknowingly, Hipsters are the first wave of settlers simply preparing the land for those with much more money and far less culture. Once the expensive restaurants and chic furniture stores open, everything is over.

Austin's SoCo District is proof that Hipsters have the ability to "grow flowers in the desert." Their activities have turned a sleepy section of highway into a pedestrian friendly community that is vibrant, attractive, and economically successful. SoCo's development is an example of a phenomena occurring throughout American cities. The older generations left the city for the suburbs, and now it seems that young people are returning back to cities to partake in wonders of urban life. In this context these people are pioneers, functioning as catalysts for change. Cities and neighborhoods are like fashion trends, they fall in and out of style. Things that are old are new again. Cities are not static places; they are ever and always changing.

STREETSWEEPING

Send them to Richmond, Vallejo or Oakland
before we get to know them (sweep),
learn their faces and emotions (sweep),
or accidentally make some poor friends
(sweep).
Don't vote for more low income housing.
Transform the Mission into Noe Valley.
Stop saying Filmo. Start saying Fillmore.
Make the SROs in the TL pay they bills more!
Kill those who know the working class age of
Frisco.
Sanitize and sterilize The City by The Bay
until people can't recognize today was not
yesterday.

Hey, by the way, we gotta cut your pay
(sweep).
If you wanna leave just say (sweep).
We can kick your ass to the curb (sweep),
hand your job to the next man off the street.
Then he'll be the sweeper.
You'll be the swept away.
Think real hard which role you wanna play:
The trash or the broom? The past or the
change?

Benjamin Orion Lonchero

Street sweepers keepers of the cleanliness,
rejuvenators of the asphalt emptiness,
wipe away the black and the brown.
Whitewash the ground.
Sweep up the penniless!
Amongst the dirt and debris
evict the injured and diseased.
With the grime, the sludge, the slime, the
mud! Keep the poor on the run.

CRIME PREVENTION

Analysis of Crime Prevention Through
Environmental Design and Related Theories

Andrew Sloane

Exclusive architecture appears like an angry smile on the face of the modern day built environment - in the form of sleep-proof bus benches, intricately designed aircraft grade aluminum skate-stoppers, and decorative window bars. While these elements are there for the sole purpose of preventing crime through environmental design, an inclusive architecture planned to create community can fulfill the same purpose. This paper examines the relevance of Crime Prevention through Environmental Design (CPTED) today and also provides a brief overview of related prevailing theories with a focus on residential areas. By analyzing the writings of Jane Jacobs, Oscar Newman, William Clifford and others, a thesis will be proposed highlighting a focus on creating community as the biggest factor in eliminating crime and demanding a better relationship between planners, police, and citizens. While this thesis focuses on creating community it is by no means arguing against the relevance of CPTED. It is merely an attempt to underscore the importance of inclusive architecture over exclusive architecture.

Since the dawn of human existence citizens have sought safety through the physical and built environment. It is also important to recognize how little this human has changed over the millennia. It is easy to see the relevance of crime prevention through environmental design in the antiquated walled cities of Europe and Asia dating back to when warring tribes roamed the land. However, it seems almost barbaric that humans are still taking shelter in fortified inner city compounds during a time when we are supposedly protected from physical harm by complex social contracts. Clifford rationalizes CPTED in his book Planning Crime Prevention - an address to the United Nations - stating that it would be naive to plan as if humans were never "irrational, frustrated, unhappy or perverse" (Clifford,1976). He compares that ignoring the darker side of human nature, while designing the built environment, is akin to building a house with no toilet, or similar to a scientist who is ignorant of how their research could be misused (Clifford, 1976). This view is neither a diminutive or abhorrent view human nature it is simply founded in the opportunistic quality of human actions. In Timothy Crowe's, Crime Prevention Through Environmental Design, a study of Americans revealed that 60 percent of people, regardless of social standing, would steal if given the chance (Clifford, p. 14). This phenomenon is best described by the legal or rational philosophy of crime, which explains that criminal behavior, or behavior that is prohibited by law, is rooted in a relationship of pain and pleasure. If the risk of committing a crime is low and the reward is high, those seeking opportunity will often take the path of the least resistance. It is also important to understand how drastically wrong things can go when the impact of the built environment, on individuals, is not taken into account. Oscar Newman's description of Pruitt-Igoe, an American housing project that opened in 1954 in St. Louis, explains how the buildings in the Le Corbusier style design resulted in "sewers of glass and garbage" instead of the river of trees designers had envisioned (Newman, p. 11). Newman's analysis of the Pruitt-Igoe failure
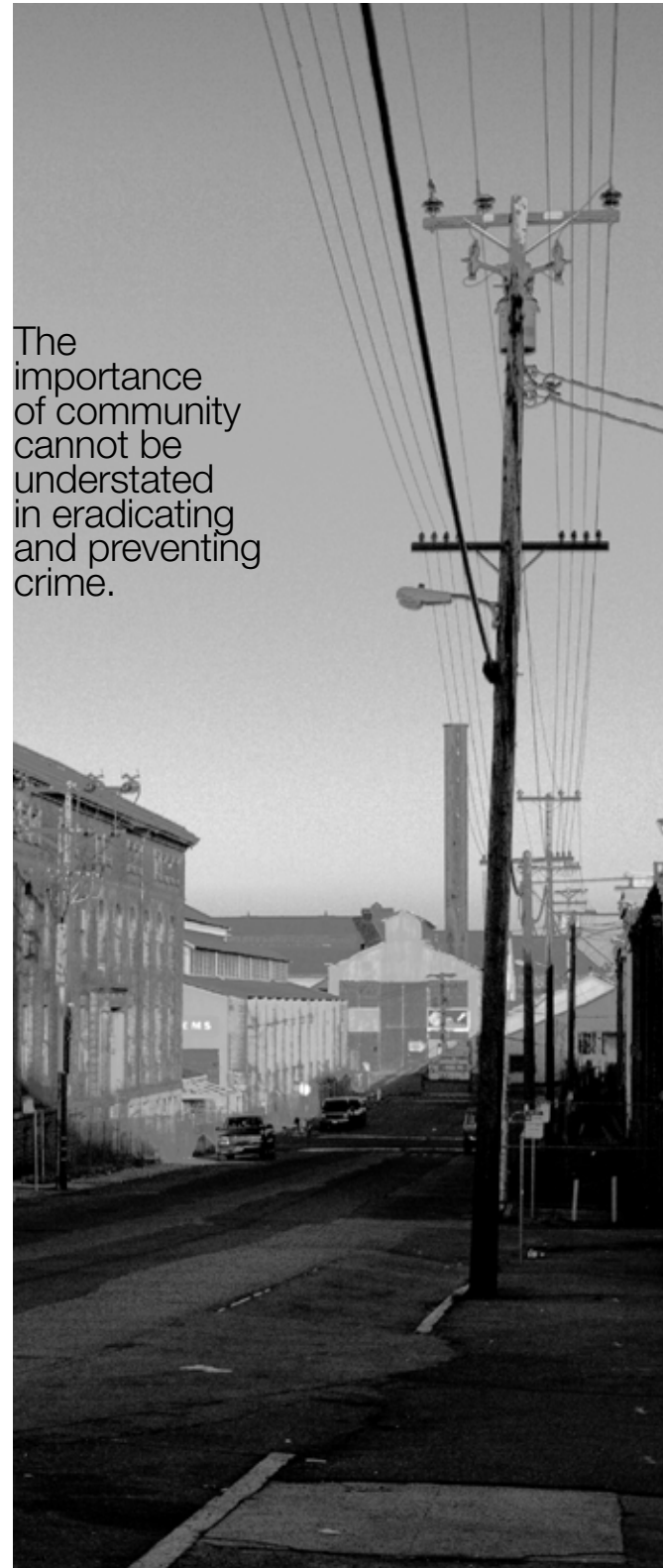
The importance of community cannot be understated in eradicating and preventing crime.

suggests that the project was a direct result of poor environmental design. Both the nature of human beings and the closely related role that the environment plays in creating safe circumstances show how relevant and critical concepts of CPTED are in planning.

After establishing CPTED relevance as an area of study it is important to first establish why and where crimes are being committed. As alluded to earlier, the legal philosophy of crime states. that crime is understood as a system of risk and reward. This theory is countered by the social theory, which claims that crime is a result of social standing, or that crime is the consequence of a limited access to capital. Crowe disagrees with the social model and opines that crime has the potential to occur equally at all social levels. Be that as it may, most underprivileged individuals that commit common crimes are often more harshly prosecuted and criminalized. Authors' Steven Gottfredson, Barry Poyner, and Ralph Taylor, cite that criminals perceive risk at a neighborhood level and pick targets at random. This means that, from a criminal perspective, entire communities are viewed as an easier or more challenging opportunity for crime. Therefore, a focus on CPTED at the neighborhood level is necessary. The direct intention of CPTED, based on the legal theory, is to reduce crime and increase the quality of life for residents, through increasing the risk of committing crime by reducing the reward (Crowe).

Although the majority of the articles selected for this paper focus on residential areas, the densities and design of the neighborhoods studied vary. For example, Poyner focuses on suburban or residences on the periphery of cities, while Jane Jacobs focuses primarily on inner city living. Although Poyner and Jacobs represent two different schools of thought, they both have underlying similarities. While the authors seem to quibble over specifics, such as debates surrounding cul-de-sacs and pedestrian access, many key concepts are shared.

One of the most influential works in the CPTED field is Jane Jacobs' The Death and Life of Great American Cities. Although the book was written in 1961, it still offers a wealth of relevant insight and information. When reading the more contemporary work of Mike Davis' Fortress Los Angeles (1997) many of the same critiques of the built environment are made which also appear in the chapters of Jacob's book. For instance, her damnation of inner city villages barricaded by tall cyclone fences, built with the barbaric ideals of turf warfare, (Jacobs) is almost identical to Davis' analysis of certain neighborhoods in Los Angeles. Jacobs' work primarily focuses on dense cities and is not concerned with low-density suburbs. The author's optimal city neighborhood is a mixed use community designed to combat crime by maintaining as many "eyes on street" as possible at all times of the day. "Eyes" are necessary because city streets are a constant and unpredictable mix of strangers, locals and visitors. Jacobs also notes that business owners and residents are assets and proprietors of safety because of their presence and observations. Throughout the book Jacobs heavily stresses the importance of community in creating safe cities. She declares, "there is no substitute for a lively

street" (Jacobs, p. 120), adding that public peace is not kept by the police but by the residents. Insightfully she explains the danger of exclusive neighborhoods, or what Davis terms as "beachheads of gentrification," stating that they will destroy the city by making it into a landscape of "mutually suspicious hostile turfs." Explaining the destructive force that class polarization can have on a city or a community leads to rampant crime and decay. Like Oscar Newman, Jacobs views high rise apartment buildings as unsafe, identifying how their hallways become un-police-able extensions of the street because of their semi-private nature.

Oscar Newman, another prominent writer in the field of crime prevention, also highlights in his 1996 book, Defensible Space, the large role that residents play in making vital communities. The book's subject and title is a concept with which Newman feels residents can embrace their territory and control the space around their homes effectively rendering criminal offenders powerless (Newman, p. 9). A case study, which Newman cites, is the Clason Point Housing Project in the South Bronx of New York City. The decrepit public space of the projects, described as a mess of bare dirt over run by gang activity, was transferred to private yard space for the residents. What resulted was the creation of a healthy, crime-free environment for residents to utilize. Newman expresses how law-abiding residents are the largest untapped resource for crime prevention and states that their participation is essential to averting crime (Newman, p. 9).

Newman, similar to Jacobs, feels that creating community is the most effective and lasting strategy in preventing crime. Simply put, Defensible Space is the prevention of crime via the restructuring of public spaces in order to enhance community. Similar to Jacobs, Newman sees anonymous public space as the enemy of public safety. In addition, Newman theorizes a direct correlation between the number of units and higher rates of crime (Newman, p. 24). Instead of high-rise housing complexes Newman prefers two to three story walk up units with non-communal parking lots.

The next step is to examine how CPTED theories translate into the built environment. The focus and analysis presented by many scholarly sources (Davis, Jacobs, Newman, and Poyner) harshly critique current trends in the built environment, arguing that planners primarily focused on oppressing the majority of populations with their design rather than including them. This collective position begs the question, "who is the city built for?" For example, people around the world celebrate Go Skateboarding Day on June 21, taking over the streets in critical mass fashion while proving their clout as a community, yet they are given little respect. Instead, people like Chris Loary - the inventor of Skate-Stoppers, the small metal objects that are ubiquitously affixed to skateboard vulnerable, right-angle edges in nearly every urban environment - and others like him, are making a fortune as their metal scabs cover the nation in a fun-squelching sweep. On the other hand, skate plazas and parks are still low priorities on the lists of city planners. The focus of modern day planning has too heavy a focus on

People around the world celebrate Go Skateboarding Day on June 21, taking over the streets in critical mass fashion proving their clout as a community.

excluding stake holders in communities rather than including them. While this observation may seem trite, the same style of thinking is applied to other unwanted communities in modern day society such as the homeless, informal workers, pedestrians, and most anyone that the city perceives to be out of place. That is why moral conduct is, or should be, an important part of the practice of crime reduction/eradication.

When planning to eradicate crime, ethics should take precedent over results. In Planning Crime Prevention, author William Clifford briefly examines oppressive Soviet and Nazi regimes noting, " With sufficient power to control the movement of people, oblige them to work, ration their food and wages, planning can be organized like a prison system, productively, cheaply and sometimes profitably, but this by no means necessarily satisfies those at work" (Clifford, p. 23). While the inclusion of this type of totalitarian planning in the discussion of CPTED is a slippery slope argument it does raise interesting questions. Is the reduction of one hundred percent of crime ethical? Are the laws that CPTED is enforcing just? Is a safe and content society the same as a crime free society? In a hypothetical society where CPTED is on the forefront of a government's anti-crime agenda, such a Singapore, it could be a utopian dream or a fascist nightmare. Depending on whose theories they subscribe to the majority of randomness and freedom of expression would be lost from the city landscape. Shrubs and foliage would be obliterated, every space not deemed expectable for housing the homeless would be rendered inaccessible or covered with spikes, and curfews would be strictly enforced. If CPTED was the driving force behind planning, crime could be fully eradicated, but at what cost? It is important to remember that planners, who are practitioners of ethics, serve more than one master. Not only should planners be fulfilling the requirement of the city government, meeting

budget requirement and deadlines, they are also aiming at fulfilling the needs and wants of the general population. In order to strive for equity, failure often besets some aspects of planning. This concept is best explained by San Francisco city planner, Dean Macris, who said "If everybody is a little pissed off, then I am doing my job." While a Machiavellian planning style might garner some results it would also forsake the progressive angle many urban planners strive for.

The majority of the scholars cited in this article critically discuss the accidental and purposefully coercive nature of the built environment. Among this group, none are louder than Davis, whose social critiques read like real-life horror stories clearly explaining how cities have been designed to evict the unwanted. The focus of CPTED should be as much an attempt to alleviate the oppression created by planners as it is to stop people from committing crimes against one another. It is clear after reading articles and books from Newman and Jacobs that instead of focusing on CPTED, a focus on creating community needs to take place. The locus of CPTED, which is to create natural surveillance and defensible space, is a benefit and an aid to the community. Furthermore, an emphasis on inclusive architecture, such as places of recreation and class-coalescence are urgently needed. In addition to these goals of modern planning, an extra-planning activity of creating community needs to take place. I mention extra-planning or externally driven informal planning, because in order for crime to be eradicated in a meaningful way communities need to form organically. If communities are forged solely around crime prevention, the overly functionalist attempt at creating community will only fuel a hyper-paranoia disposition towards crime. It is this type of fear towards crime that most certainly contributed to the death of Trayvon Martin, and others who are killed every year by the hands of citizens and police. Another illustration of the need for community can be understood from the documentary film, The Pruitt-Igoe Myth, which examines and argues the point that the common problems associated with the project's demise are misleading (Turan). Instead it explains a more complex background story, leading up to the development's early demolition, which points to a lack of funding for maintenance and unscrupulous welfare policies, which didn't allow people with crime history (typically the father-figure) to live in the project, therefore which forbade families from remaining intact. The documentary begins by focusing on the building management, who had a bright view of the housing project as a whole, but lack of respect for residents, which ultimately led to the accelerated decay of the development. The built environment was not the cause of destruction. Studies show that buildings of similar size, with doormen and regular maintenance, can be kept in high-quality condition for many years. If an attempt at creating a community atmosphere and level of respect were established at the Pruitt-Igoe complex, it is possible that the physical condition of the building could have been maintained.

Another priority that will enhance equity and the ability for planners to effectively plan crime reduction, is an enhanced connectivity between planners, police, and citizens. Clifford declares that many planners feel crime prevention is a problem that should be handled by the police, instead of understanding that crime is an inevitable feature of human life (Clifford, p. 23). In addition, the author notes that instead of looking at just blueprints planners need to look at society itself for the answers. Crowe also feels that planners alone cannot plan out crime, but if planners and police work together they will begin to ask questions and find answers that have not yet been explored. Poyner, author of Crime Free Housing in the 21st century, notes that police show a stronger interest in CPTED than planners, and demands that projects should be evaluated by police before implementation (Poyner, p. 3). Insightfully, Paul Cozens, in a paper titled Crime Prevention Through Environmental Design, concurs that planning needs to be multi- disciplinary. He expresses the belief that, if police and communities are involved with planning, it can function proactively to combat crime and keep certain individuals out the hands of police and out of the courts (Cozen et. al, p.153). Planners need to acknowledge that crime is a feature of social life and embrace the input of police, and those affected, when implementing design.

In conclusion, crime prevention through environmental design is an incredibly relevant area of study because of the unavoidable pathology of human nature. With this understanding it is important to remember that planning is an activity for the people not an act of oppression towards them. An effort should be made to include stakeholders with communities in order to decriminalize space and increase equality. If a greater effort is made to bridge disciplines by including citizens and police in the planning process, crime can be proactively combated by enhancing community and ownership. It is a much better solution than reactively constraining and evicting those deemed unwanted.

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CENTRAL FREEWAY

Next Time you are Enjoying Patricia's Green…
Josh Ollinger

Introduction

The last time the Central Freeway stood strong over Octavia Street was more than 20 years ago and longtime San Francisco residents can still paint you a picture of how it cut through the neighborhood. Following the devastation caused by the 1989 Loma Prieta earthquake, the debate over whether or not to rebuild the freeway became one of San Francisco's most contentious issues in the city's history. The political ramifications of the debate were very personal to many of the city's residents creating a grassroots movement among both sides. Although the issue created a shift in power to the public realm, the major change in San Francisco's political landscape came from the emergence of an Asian voting population in the western side of the city. The controversy over the Central Freeway has many levels to it; pitting the west against the east, neighbor against neighbor, and would not only decide the future of the Hayes Valley neighborhood, but also the direction that transportation planning was moving in San Francisco. The freeway was an issue that San Francisco residents were fervent over and the divide over whether to rebuild ultimately reshaped both the political and urban environment of the city.

Background

In originally building Central Freeway, the plan was to attract people to San Francisco by investing in an infrastructure that supported the future of automobiles. Freeways in urban areas provide quick routes for people living in and outside the city to drive over and across residential neighborhoods. As time would show, the communities surrounding the freeways would eventually become dilapidated as a result. The investment in freeways was a recurring theme for much of the forties and fifties, as a large part of the American dream was to own a car. This perception of ideal lifestyle in the United States was concurrent with Eisenhower's Interstate Highway System, in which the

Figure 1

entire transportation infrastructure was being rebuilt nationally (History IHS, FHA). Combined with the white flight of people fleeing cities for the comfort of the suburbs, it was logical at the time that San Francisco should invest heavily in its own future by building a freeway system. The 1948 Transportation Plan for San Francisco, prepared by De Leuw Cather and Company, called for the building of the Central Freeway, as well as several other freeways in the city (De Leuw). The plan was adopted in 1951 as the Trafficways Plan and was amended to San Francisco's master plan in 1955 (Faigin). Figure 1 shows the original plan outlined in gray, as well as where the Central Freeway had been built out to before the city's 1959 "Freeway Revolt" which is outlined in red. The Freeway Revolt was a movement during the late 50's through the 70's that protested heavy building of freeways through already urbanized areas (Carolsson). Prior to the movement, the freeway reigned supreme in California; the state having one the most intricate and expanded highway systems in the country. Once freeways began to infringe upon the integrity of neighborhoods the public erupted in an outcry. Following the protest, the Board of Supervisors subsequently decided to halt freeway construction with only the first phase of the Central Freeway being completed (Carolsson).

The Central Freeway was modified and opened that same year, quickly becoming one of the most heavily utilized freeways in San Francisco. The freeways that did get completed went up in under a decade; several miles of freeway emerged in what must have seemed like overnight for many of the residents. Figure 2 (across) illustrates how the local population was suddenly left living in a shadow as the freeway was right on top of an already very urbanized area. Granted the Hayes Valley residents did make their voices heard in halting the construction, the real battle over the freeway did not start until after the 1989 Loma Prieta

earthquake. The quake registered as a 6.9 on the Richter Scale and struck the Bay Area after being caused by a nearby slip along the San Andreas Fault (Freedman). Mike Krukow, who was on the mound for the San Francisco Giants during the World Series at the time, described the earthquake as feeling like a "600 pound gopher going under your feet at 45 miles per hour" (Freedman). The Central Freeway along with the Embarcadero Freeway was heavily damaged. Fortunately traffic around the city was uncharacteristically light as the majority of people were watching the World Series which featured two Bay Area teams. After the dust settled and the damage accounted for, the time came to rebuild. It was at this point that the local residents surrounding the Central Freeway organized and spoke out against its reconstruction.

Public Political Power

The Central Freeway debate was a very heated issue among the city's residents and is one of the most significant events in the shaping San Francisco's current political landscape. Politicians at the time not only saw the astounding power in grassroots organizing, but also were witness to the emergence of an Asian voting stronghold in western San Francisco that reshaped the politics of the city. The Central Freeway had two major impacts that eventually shaped the dividing line between the protestors and supporters for the rebuilding process. Although it is hard to believe now, the freeway acted almost as a plague to its surrounding residents by creating blight, poverty and crime throughout the Hayes Valley area. The freeway's intrusion can be seen in Figure 3

(Cieplinsky, Restoring). At the same time, this freeway preformed as a transportation hub for many of the western city residents particularly from the Richmond and the Sunset districts. The western side of the city is filled with sparsely populated single-family unit housing and the residents often commute by car. The Central Freeway was one of the few structures that had been built prior to the Freeway Revolt and was praised as being essential by commuters. The issue of the Central Freeway was heated enough to draw out large numbers of San Francisco residents into the political debate to voice their opinions.

In order to realize the amount of frustration over rebuilding the Central Freeway, it is important to first understand the 1956 grassroots Freeway Revolt that started in San Francisco and eventually spread nationally. After giant cement pillars started going up in their backyards and right through their neighborhoods, some 30,000 San Franciscans sent in signed petitions to the Board of Supervisors. As a result the supervisors canceled the city's future plans for freeway extensions (Cieplinsky, Freeway Revolt). American folk singer Malvina Reynolds even wrote a song on the city's freeway revolution called Cement Octopus. This was the first time that the American public had come together in a grassroots effort to seriously oppose the post-WWII consensus on automobiles, freeways, and suburbanization as the future of planning (Faigin). Unfortunately the battle over the Central Freeway was different from the Freeway Revolt turning former protestors into supporters as many of the city's residents had come to rely on the Central Freeway. Following the quake, the northern part of the freeway had been damaged beyond repair and by 1992 Caltrans had removed the debris. At the same time, the Board of Supervisors voted to ban the construction of new freeways north of Market Street so that the Central Freeway could not be rebuilt and the remaining land was repurposed and slated for housing (Cieplinsky, Battle of CF). There still remained a stretch of the Central Freeway north of Market Street, running above Octavia Street that would become the center of protest. With growing public pressure, a city task force decided in 1995 that the remaining portion should be replaced by a surface boulevard. It was argued that this plan would slow down cars, create more traffic on local streets, and increase commuter time. On the other hand, it was argued that this proposal would eliminate the shadow cast by the freeway, make it easier for cars to get to more inaccessible areas, and hopefully in the process rejuvenate the neighborhood in the process. California State operated Caltrans, who owned the freeway, had a history of being pro-freeway and decided instead to rework the collapsed double-decker into a single elevated level to be more efficient (Cieplinsky, Battle of CF). The plan would get rid of the top floor and expand the lower deck so that it could carry traffic in both directions. Following the decision, city officials anticipated that there would be gridlocked traffic during the construction period. To everyone's surprise, the surrounding streets managed to accommodate the extra vehicles, leading to the popular slogan "Mayor Brown, tear it down." Robin Leavitt, a neighborhood resident and architect, along with Patricia Walkup, a long-time neighborhood activ-
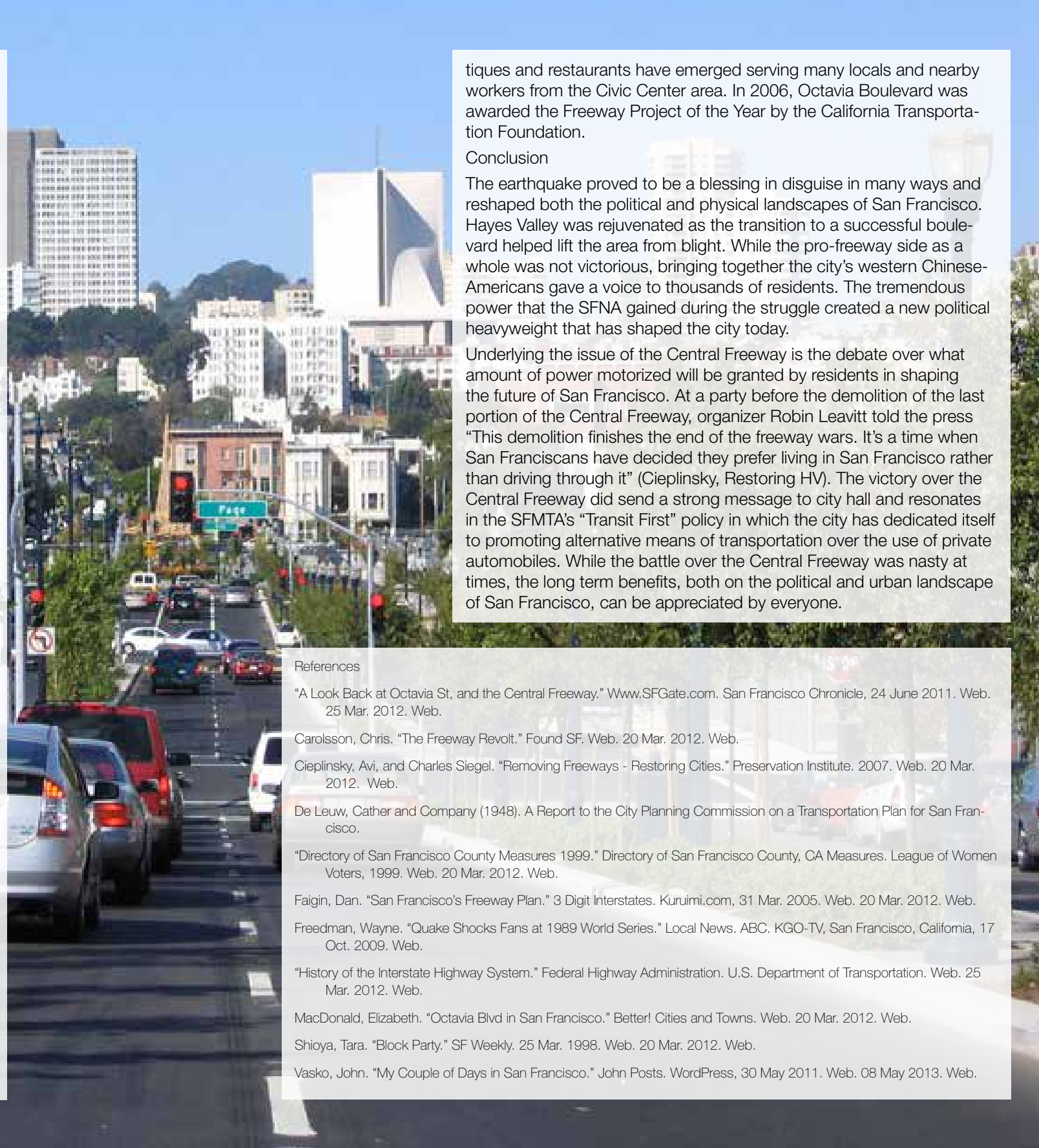

ist, emerged as the main leaders of the movement (a diverse coalition mainly comprised of African Americans and white residents) to remove the freeway and replace it with Octavia Boulevard (Cieplinsky, Battle of CF). Following suit, San Francisco Mayor Willie Brown came out in favor of the alternative plan. Just as support for removing the freeway emerged as a public initiative, so followed the opposition. The western neighborhoods began organizing in favor of Caltrans' plan to rebuild the freeway marking the first time that the western Chinese-American population in San Francisco used its political weight. The movement for the protection of the freeway was led by the San Francisco Neighbors' Association (SFNA) under Julie Lee, a co-founder of the group, and Rose Tsai, another leader of the SFNA and a popular radio talk show host (Shioya). In 1997, they convinced Mayor Brown and Caltrans to reopen the lower deck to traffic and followed up with gathering 30,000 signatures in just three weeks to get an initiative on the upcoming ballot to support rebuilding the freeway. Formally known as Proposition H, the initiative passed in 1997 by 53% partially due to the withdrawal of support by Willie Brown for the Octavia Boulevard Plan (Cieplinsky, Battle of CF). The highest voter turnout in support of Proposition H came from the Richmond, Sunset, and Visitation Valley, which were three areas with high concentrations of the city's Chinese population (Shioya). Politicians at the time were fixated on Chinatown as the hub of Chinese-Americans and did not recognize that the growing population in the western San Franciscan neighborhoods might have a diverging viewpoint. In 1998, the freeway opponents again led by activists

Walkup and Leavitt, gathered enough signatures to put the issue on the ballot once again. Proposition E, which was to repeal Proposition H, won on voting day and again the future of the Central Freeway was altered (Directory, League of Women Voters). With a strong sense of discontent among the freeway supporters the issue of rebuilding the raised structure again made it to the ballot in the 1999 Proposition J. This ballot also included another initiative, Proposition I, to "use the proceeds from any sale of excess Central Freeway right-of-way property to fund the Octavia Boulevard Plan" which gave residents the chance to either support the freeway or boulevard (Directory, League of Women Voters). After a heated battle at the polls, San Francisco residents voted 54% in favor of funding the Octavia Boulevard Plan over rebuilding the freeway. Even though the Chinese backed pro-freeway SFNA lost the battle, success can be argued in the amount of political clout the community gained in organizing. If it was not for the similar grassroots campaign effort around the Hayes Valley neighborhood, the decision over the Central Freeway could easily have gone the other way.

Octavia Boulevard

The Central Freeway's fate had been decided, but there was still remained the issue as to how much of the freeway should be demolished. In the final compromise, there would be no overpass over Market. Removing the upper level of the freeway presented little change to the existing street patterns, while removing the lower part proved to be a design nightmare. The new Octavia Boulevard had to not only act as an on/off ramp, but also now interact with local cross streets (the most prominent being Market Street). Figure 4 shows where the Central Freeway stood towering over Market Street (Cieplinsky, Restoring HV). The plan for the boulevard was designed by Allan Jacobs, who later became the San Francisco Planning Director, and a professor at UC Berkeley. Figure 5, shows what Octavia Boulevard looks like today. It was designed to be 133 feet wide, have four lanes for through traffic with a separating landscaped median, and two service lanes for residential traffic and bicycles, separated from the through lanes by two additional landscaped medians (Cieplinsky, Restoring HV). The outside service lanes and landscaped medians were designed as a buffer for the local housing from the noise of through traffic. The San Francisco Planning Department also listened to the call for denser pedestrian and transit oriented development, which meant less parking for a more walk-friendly area (Cieplinsky, Restoring HV). The design added a park at the end of Octavia Boulevard, now a popular spot for locals and is home to a rotating display of statues (Figure 6). The park was renamed Patricia's Green in honor of her efforts after the anti-freeway activist passed away in 2006 (Cieplinsky, Restoring HV). The final demolition of the Central Freeway began in 2003 and was completed in 2005 over 15 years after the Loma Prieta earthquake (Shioya). Anyone that would walk through the neighborhood today would agree that the project worked fantastically for Hayes Valley residents as the area is far from its original dilapidated state and become one of San Francisco's core neighborhoods. A variety of small businesses including high-end bou-

tiques and restaurants have emerged serving many locals and nearby workers from the Civic Center area. In 2006, Octavia Boulevard was awarded the Freeway Project of the Year by the California Transportation Foundation.

Conclusion

The earthquake proved to be a blessing in disguise in many ways and reshaped both the political and physical landscapes of San Francisco. Hayes Valley was rejuvenated as the transition to a successful boulevard helped lift the area from blight. While the pro-freeway side as a whole was not victorious, bringing together the city's western Chinese-Americans gave a voice to thousands of residents. The tremendous power that the SFNA gained during the struggle created a new political heavyweight that has shaped the city today.

Underlying the issue of the Central Freeway is the debate over what amount of power motorized will be granted by residents in shaping the future of San Francisco. At a party before the demolition of the last portion of the Central Freeway, organizer Robin Leavitt told the press "This demolition finishes the end of the freeway wars. It's a time when San Franciscans have decided they prefer living in San Francisco rather than driving through it" (Cieplinsky, Restoring HV). The victory over the Central Freeway did send a strong message to city hall and resonates in the SFMTA's "Transit First" policy in which the city has dedicated itself to promoting alternative means of transportation over the use of private automobiles. While the battle over the Central Freeway was nasty at times, the long term benefits, both on the political and urban landscape of San Francisco, can be appreciated by everyone.

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REDESIGNING OAKLAND
The Lake Merritt BART Station Plan
Natasha Dunn

Oakland is a large, diverse city with many challenges to overcome, from funding to aging infrastructure. There are also bustling new changes to the community, from farmer's markets and a burgeoning restaurant scene to local events such as Art Murmur and Art and Soul Oakland, featuring local art and music. The city's planned projects are both ambitious and exciting, and center on increasing housing and development around transit areas, attracting retail businesses and encouraging affordable housing. A number of area plans are either in the planning stages or already completed. The city has identified various Priority Development Areas (PDAs) that will absorb part of the Bay Area's expected growth by 2040, as projected by the Metro-

politan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). A regional planning document, Plan Bay Area, addresses the growth in population that is likely to occur over the next few decades, and Oakland's vision of itself appears to be in line with a larger goal of fostering a prosperous economy in a healthy and sustainable way. The Lake Merritt BART Station Area Plan is examined in detail to better understand Oakland's ability to come through on balancing housing and jobs with growth, with conclusions as to Oakland's place in the larger regional ABAG and MTC One Bay Area dialogue.

The Lake Merritt Bart Station is located between Downtown Oakland and Lake Merritt, encompassing a half-mile radius around the train station itself. The area is bounded by the lake to the north, Broadway to the west, San Francisco Bay (including part of Jack London Square) to the south, and Laney College and its open space to the east. The area includes a few distinct demographic groups, including the 15,000 students that attend Laney College, residents of Chinatown (primarily Asian), and the civic and office employees that work in the office buildings close to the lake. The larger PDA includes Downtown Oakland and more of Jack London Square, and has a population of around 8,054 households. The smaller focus area around the BART station contains roughly 12,500 people in 6,159 households (City of Oakland, 2011, p. 8-19).

The neighborhood is built on a grid, with regular city-sized blocks that contain a variety of mixed uses, from institutional and civic buildings, to low density apartment buildings and ground-floor retail, much of it underutilized or sadly vacant. Some light industry is mixed in, and a few small, urban parks offer residents a bit of greenery. Interstate 880 (I-880) runs through the southern portion of the focus area, acting as a visual and physical barrier from the nearby neighborhood of Jack London Square, and creating noise and pollution issues for current residents and potential developers. The area also includes a few small streets of once-charming turn of the century historic houses in various stages of repair. The planning area is broken up into smaller areas of concentration, including the 14th Street Corridor bordering the lake, the East Lake Gateway with Oakland Unified School District property, the Laney College area, the BART Station area, I-880, Commercial Chinatown and Upper Chinatown.

Growth Projections

The larger county of Alameda is predicted to grow by approximately 212,700 households by 2035, and the county's PDAs and Growth Opportunity Areas are predicted to grow by 82% (ABAG, 2011 p.44). The county is expected to take the second highest amount of growth in the region, second only to Santa Clara County (ABAG, 2011, p. 29). The Downtown Oakland/Jack London Square PDA is just one of the areas in Oakland that the city has identified to absorb growth, with an enormous projected increase of 212%, from 8,054 households to 25,146 households. This PDA is expected to take on a larger percentage of growth than any other PDA in Oakland (ABAG, 2011, p. 49). The

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp. GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance

smaller Planning Area is projected to take on roughly 170% growth from 6,159 households to 16,659 households, which is still sizable. Growth is also expected to occur around the West Oakland, Fruitvale, MacArthur and Coliseum BART stations.

According to the Lake Merritt BART Station Area Plan, the study area will need between 3,700 and 5,600 new housing units to accommodate the population growth, even with the area's smaller households (1.94 persons per household versus the citywide 2.94 (City of Oakland, 2011, p.8-18-19). Up to 5,755 new jobs will be created, some of them in retail. Increasing retail is one goal of the plan as well as a concern of business owners in Chinatown. Young people moving to the suburbs has been a concern for the vitality of the retail base, yet the plan predicts between 897 and 1,122 retail jobs could be brought to the area. The plan distinctly states that these are merely predictions, not a plan on how to develop said jobs (City of Oakland, 2011, p. 3-22). The main bulk of the jobs will come from office jobs created by new office space, and the area may even potentially see the loss of around 450 light industrial, hotel and institutional jobs.

Oakland seeks to be a model, sustainable community in which all

residents may live safe, healthy lives. The Land Use Element of the General Plan, dating from 1998 contains language that is directly in line with One Bay Area's larger goals of densification around transit-based neighborhoods. Transit-oriented development and infill around BART stations is mentioned in anticipation of absorbing projected regional growth, which is preferable to encroaching on open space. The Housing Element 2007-2014 explicitly mentions implementing California's Senate Bill 375 mandate of reducing greenhouse gas emissions, along with the city's goal of reducing its carbon emissions through various means (City of Oakland, 2006, p. 256). A number of current strategies emerge to realize this vision. Creating affordable housing, absorbing its fair share of regional growth, encouraging development that reduces environmental effects, and the adoption of an Energy and Climate Action Plan are among some of the city's solutions. Even so, Oakland has some challenges to overcome before it is able to reach its vision. Because the recent recession hit both commercial and residential housing construction, expensive high rise buildings that allow for higher densities of up to 484 dwelling units per acre will be difficult to sell, and affordable housing is rarely an easy sell.

Zoning and the General Plan

Oakland's General Plan dates to 1998, but has many revisions and supplements including an Estuary Plan from 1999, a Pedestrian Master Plan from 2002, and a Bicycle Master Plan from 2007. The Housing Element, revised through 2014, distinctly discusses opportunity sites for residential infill in transit villages around BART; along the major transit corridors of Broadway, International and Foothill Boulevards; and above commercially zoned buildings throughout the city (City of Oakland, 2006, p. 190). The document clearly discusses land use planning by focusing on development downtown and in areas served by transit to encourage sustainable development, energy conservation, lowering carbon emissions, and reducing the ecological footprint of new construction (City of Oakland, 2006, p. 202). Mixed-use developments are encouraged to reuse existing space and infill vacant sites, and higher density housing is encouraged by the city. Developers can generally build projects in the area between 145 and 484 dwelling units per acre. Blocks around the BART Station and going west toward downtown have the higher density limit, and buildings toward the periphery – closer to Lake Merritt and its estuary, and closer to San Francisco Bay – appropriately cap out at the lower end of the scale. Infill makes sense not only by visually updating and potentially energizing an area, it also brings the opportunity to build safer and cleaner structures.

The current zoning map dates from April 2011, and includes increased heights, increased density, and reduced parking requirements specifically in Transit-oriented districts, which are neighborhoods revolved around the city's eight BART stations or served by multiple AC Transit bus lines (City of Oakland, 2006, p.230). The map has a new category specifically for the Central Business District (CBD), part of which falls in the Lake Merritt/BART Station Area Plan. The zoning is a mixture

Creating affordable housing, absorbing its fair share of regional growth, encouraging development that reduces environmental effects, and the adoption of an Energy and Climate Action Plan are among some of the city's solutions.

of different types of uses including commercial, residential, retail, and mixtures thereof. Height limits range from smaller 45 foot and 55 foot buildings to 400 foot towers. One corridor along the main thoroughfare of Webster in Commercial Chinatown has no height limits at all. This could potentially produce buildings that are too high and look out of place, but they would be clustered together, and would visually "step down" in heights to Lake Merritt.

The Area Plan seems to adequately consider the pedestrian perspective, existing building heights which will generally not change, and the historic and cultural feel of the community. Taller towers will need to have upper story setbacks to allow for sunlight, air movement and views. They should also minimize shadows on parks as well as enhance the skyline and generally fit in with the feel of surrounding buildings (City of Oakland, 2011, p. 4-15). One concern from residents in the area's historic houses is excessive building heights that would be both visually inappropriate and cast shadows on the low turn-of-the-century homes. The city, with input from the Oakland Heritage Alliance, has a few preservation streets with their own zoning designation and lower building heights.

Opportunity Sites

The planners conducted a number of workshops with different demographic groups – families, students, property owners and merchants, to identify community concerns and potential development sites. Workshops were conducted in English, with translations in Mandarin, Cantonese and Vietnamese. The resulting map of opportunity sites outlines parcels and partial blocks suitable for infill. These sites are generally vacant, at grade parking lots, have low-density buildings, or are areas with low land value such as that abutting I-880.

Currently the area has many two and three-story buildings which could be built up or replaced with buildings conforming to the new zoning code for the area. Mixed use is encouraged, allowing different ratios of office, residential and retail use. Some of the potential development sites are owned by BART, MTC and ABAG, with existing low buildings or parking lots that could be replaced with 400 foot buildings that are 38 stories. Land under I-880 consists mainly of California Department

of Transportation (Caltrans) owned parking lots (which may or may not be developable) and confusing, poorly lit under crossings. With the right city vision and follow-through, land next to and under the freeway has sites for infill that could bring safety and vibrancy to an area that currently feels dark and unsafe. Tall buildings next to the interstate that would absorb some of the population growth would need special consideration to abate noise and pollution. To do this, the city proposes facing buildings away from the freeway, sequestering parking on the freeway side, and requiring dust and noise barriers.

Parking and Circulation

The Planning Area has a lower vehicle ownership rate than elsewhere in Oakland, at 0.66 vehicles per household, versus 1.35 vehicles per household, respectively, which suggests higher use of public transit. This may be due to a few factors, including a larger elderly, immigrant population coupled with a lower median income in the area than city-wide ($27,786 versus $49,481 citywide). Eighty-four percent of housing units in the area are rented versus the larger city renter-occupied rate of 59%. In addition, 45% of residents are cost burdened, paying over 30% of household income to rent (City of Oakland, 2011, p.8-18). All of these may point to an older, economically challenged demographic unwilling or unable to afford car ownership. Yet the city must balance the concerns of local merchants who fear their customer base will leave the area for the relative ease of suburban shops with plenty of parking. This all has implications in the affordability of housing units as well as the amount of land that is needed to provide parking in a neighborhood that seeks to encourage transit use, and whose residents apparently use existing public transit.

Generally parking for retail is reduced when compared to other zones in the city, and some zones do not require any retail parking spaces to be built. Multifamily residential units generally require a minimum of one space per unit. No maximums are mentioned, for which the city has taken criticism from the organization TransForm in particular. The advocacy group is looking to make biking safer, and suggests removing parking minimums or at the least creating maximums (CSG #11). To its credit, the city does discuss the benefit of establishing maximums, but there is no solid move toward eliminating parking minimums, only decreasing minimums to reduce the cost of affordable housing and make room for more housing units or bike parking.

The Area Plan considers a range of future parking requirements, from 3,882 to 5,558 off-street parking spaces depending upon growth. According to a 2007 MTC parking report that models traffic, estimates are between 2,628 and 9,561 spaces needed (City of Oakland, 2011, p. 7-27-28). Even in the mid-range of the city's projections, 4000-plus parking spaces seems like an absurdly large amount of parking, effectively doubling the area's 4,767 public parking spaces (City of Oakland, 2010, p. 7-34).

It seems clear the city understands the complexity of the parking issue in an area that seeks to promote transit and bicycle use as well as walk-

ability. Retail increases the need for car-dependent shoppers to park, but the large amount of population growth expected will be in-filled into areas with no additional land to consume. Some of the strategies that Oakland is looking at are unbundling parking from future units, promoting car-sharing and parking sharing, creating different price tiers for long versus short term parking, adding more on-street parking through space modification, and increasing parking enforcement.

Currently on-street parking in the area is generally parallel parking. Proposed changes to street design would make a number of streets more bike and pedestrian-friendly by adding bike lanes, angle parking, and street scape improvements including better lighting, bulb-outs, and visibly marked pedestrian crossings. Other proposed street changes include returning one-way streets to two-ways, reducing driving lanes, and implementing other traffic calming measures to make the streets feel safer. Closing down streets for festivals and special events is also an easy, effective way to promote foot traffic and a greater sense of community.

Affordable Housing

A critical need for affordable housing exists given the planning area's relatively low median income and the large percentage of residents that are cost burdened. Currently the Lake Merritt BART neighborhood has 1,694 affordable housing units, which is roughly 30% of the area's 6,200 units (City of Oakland, 2010, p.4-6). This falls short of the 45% of cost burdened residents, however, but the city realizes it needs creative strategies to deal with the shortfall. Unfortunately there is no inclusionary housing policy in Oakland's zoning ordinance – it was proposed and subsequently defeated in 2007 by Council- and Special Commission members Desley Brooks and Ignacio De La Fuente as being not "thoughtful enough" (Allen-Taylor, 2007). The Density Bonus Ordinance is one tool for tackling affordable housing. Under this ordinance, developers of 5 units or more may exceed maximum allowable density if affordable and senior housing is included. A second tool is the Jobs/Housing impact Fee of $4.60 per square foot on new office and warehouse developments (not residential) that goes into a fund to offset affordable housing costs. Condominium conversion and a form of rent control (the Residential Rental Adjustment Program) are two other approaches the city uses.

ABAG has projections for affordable housing for the shorter amount of time covered by the city's Housing Element 2007-2014, which predicts a need of 1,327 units, of which 648 should be affordable units. Yet the city falls short in its own prediction of only adding 398 to 664 total units, market rate included (City of Oakland, 2011, p. 8-22). This may change as the Bay Area continues to come out of the recent recession. Looking further out, the city estimates 540 to 1,350 additional affordable units needed by 2035, based on state law of 15% requirement. Lost in the mix here is the separation of the tiers of affordability: the city does an adequate job of providing very low income units, but falls short with extremely low income, low income, and moderate income units.

The City of Oakland requires no development impact fees for residential development, according to the city's Housing Element (City of Oakland, 2006). The aforementioned jobs and housing fee does apply to commercial and warehouse developments, but again, not to residential. The city has a school impact fee for residential development, and a traffic impact fee has been considered, but not yet implemented. These tools may be unwelcome taxes on development, but realistically the only way affordable housing will be built is if it is required with each new development.

Stakeholders

The Lake Merritt BART Station Area Plan process has been informed by continuing community outreach and involvement. Ongoing Community Stakeholders Meetings of around 50 individuals and organizations have met every few months to ensure the voices of the community are considered. Opinions have been gathered from groups such as TransForm, The East Bay Bike Coalitions, the Oakland Heritage Alliance, Asian Pacific Environmental Network, Asian Health Services and the Chinatown Chamber of Commerce to name a few.

The Chinatown Coalition is a loose group representing a number of these advocacy groups. Some of the concerns include addressing the needs of the low income immigrant residents, preventing displacement of residents, climate change impacts, the use of nontoxic building materials, respect for Chinese history in the area, and broader environmental justice issues. The Coalition is also wary of Chinese interests being passed over, as many of the local residents still have mistrust of the city's taking of Chinatown property via eminent domain for the 1970s building of the BART Station. The Chinatown Chamber of Commerce is understandably concerned about adequate parking for customers, and zoning that doesn't restrict business types important to the Asian community.

TransForm and other biking/walking advocacy groups such as Walk Oakland Bike Oakland and the East Bay Bicycle Coalition are concerned with making the streets safer for bikers by traffic calming, more lighting and signage, and clearly delineated areas for biking and bike parking. Other comments include too much zoning for retail, concern over restrictive zoning resulting in vacant spaces, suggestions to relax zoning setbacks to incentivize affordable housing, and height as a visual barrier near the BART Station (CSG #12).

The community interviews with residents produced a general list of understandable desires from the community that reflect the city's own vision of its streets as safe, walkable neighborhoods. Better street lighting along streets and in the area's few urban parks topped the list along with wider sidewalks, more public spaces, improvements to existing parks and more trees. Adequate parking for shoppers, slower traffic, and one-way streets converted to two-way were also cited as local needs. The list reads like the concerns of any neighborhood in any city, where residents want the safest, healthiest surroundings for their families and neighbors.
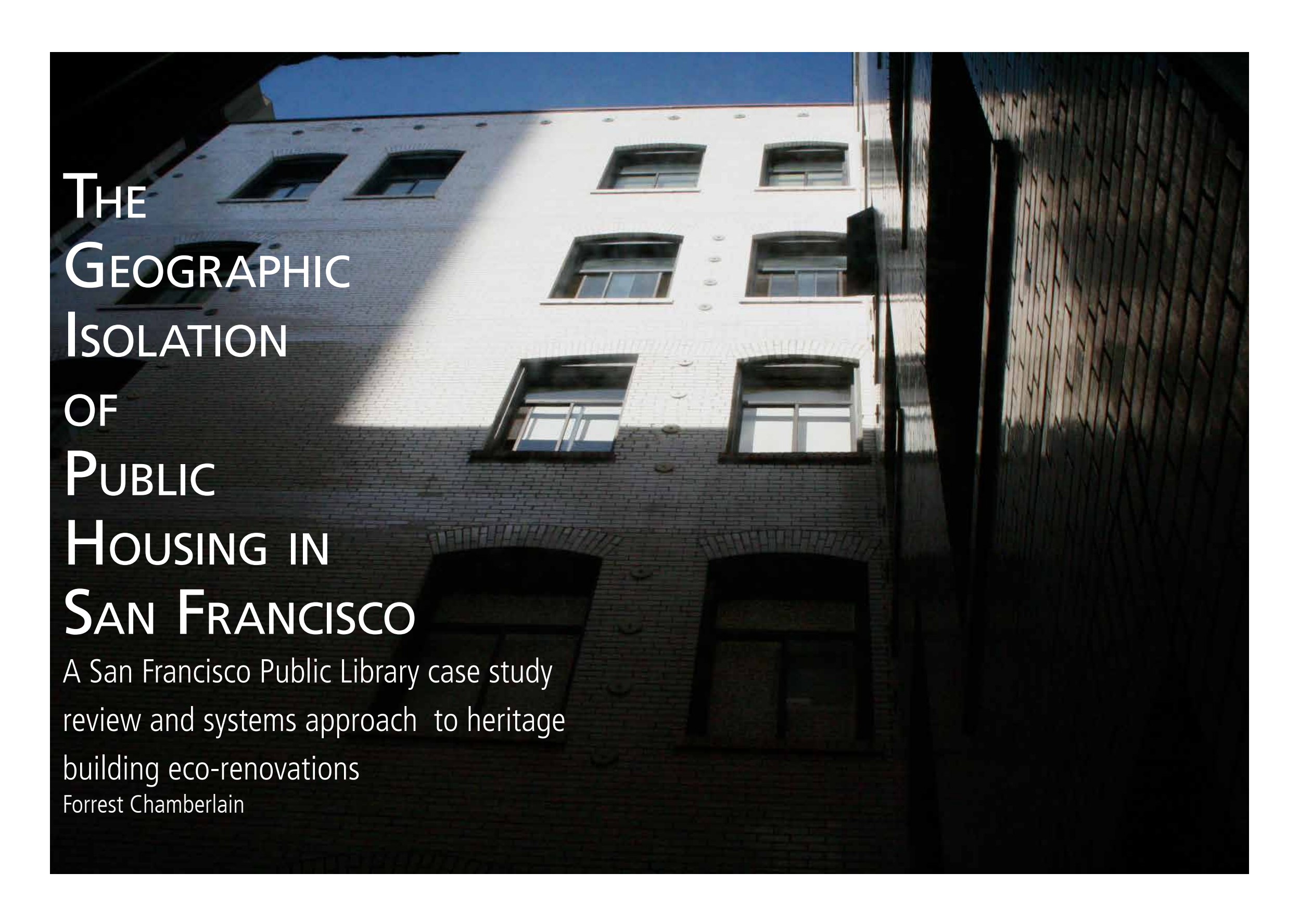

Conclusion

Alongside regional One Bay Area discussion, Oakland has been examining its own place as a safe, livable community while decreasing its environmental impacts. This is evidenced by language in the General Plan across the years. The city has garnered praise and awards for its move toward sustainability from at least a dozen different organizations in the recent past. Even so, Oakland continues to struggle with funding infrastructure, attracting retail and solving its long-standing drug and crime problems.

The planning dialogue and proposals in the Lake Merritt BART Station Area Draft Plan suggest that in a perfect world, Oakland could and would absorb its share of the larger regional growth expected to occur in the Bay Area. Whether the regional projections need readjustment is a question that may need addressing. Another relevant uncertainty is whether Oakland can succeed in the art of creating a welcoming and vibrant community that residents will want to use on bike and foot. Even if Oakland builds the place, there is no guarantee that its formula and methods will lure the people to come. In order for the city to realize its future, it must overcome its past.

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The Geographic Isolation of Public Housing in San Francisco

A San Francisco Public Library case study review and systems approach to heritage building eco-renovations

Forrest Chamberlain

San Francisco, like any other American city, has its share of social and economic problems. Affordable housing is scarce in San Francisco, and low-income families continue to be priced-out of the city. A key stock of very low-income housing is federally subsidized public housing. According to 2010 estimates, San Francisco has 9,641 people living in public housing.

Public housing neighborhoods are often the most severely distressed urban communities, with disproportionally high crime and poverty rates, poor public health, and a lack of employment opportunities and other community assets. The buildings themselves are often physically deteriorated, poorly maintained, and lacking in quality architectural design. In a 2007 annual survey, the Department of Housing and Urban Development labeled San Francisco's public housing as among the most troubled in the nation.   The most troubled public housing neighborhoods in San Francisco have some of the highest poverty levels, high school dropout rates, and crime associated with gang violence in California.

One factor explaining the shameful condition of San Francisco's public housing is geography. Public housing in San Francisco historically has been constructed in areas of the city that are considered to be undesirable, far from public transportation centers, business activity, and critical amenities.

Throughout this research paper, I address the issue concerning the geographic isolation of public housing in San Francisco, and present the following argument:

 San Francisco's most distressed public housing sites are geographically isolated from critical community assets and amenities, and this isolation has a quantifiable impact on the neighborhood social environment.

For my analysis I have selected eight public housing sites that the San Francisco Housing Authority considered to be the most distressed in 2006. To address the poor living conditions of these sites, the San Francisco Housing Authority in conjunction with various other city agencies and private stakeholders, has developed the HOPE SF plan. The principle strategy of HOPE SF is revitalization through wholesale building demolition and reconstruction. HOPE SF is San Francisco's own version of HOPE VI, a program enacted by the Department of Housing and Urban Development with the intention of improving the overall conditions of distressed public housing throughout the United States, using similar means of demolition and reconstruction.

A Brief History of Public Housing

The late 19th and early 20th century American city was overcrowded, overdeveloped, and poorly regulated. Impoverished inner-city neighborhoods, mostly home to immigrant and minority communities, grew exponentially with a lack of infrastructure, non-existent municipal resources, and scarce recreational space. During the post World War II years, the conditions of many of these already troubled communities

Public housing neighborhoods are severely distressed with disproportionally high crime and poverty rates, poor public health, and a lack of employment opportunities.

experienced further economic abatement, largely due to the mass exodus of jobs and middle-class communities to the suburbs. Distressed inner-city urban conditions prompted government officials to devise new policy and planning tactics that would eventually lead to urban renewal, slum-clearance strategies, and the construction of public housing.

Federally funded public housing projects were primarily constructed in two waves: the years between the Housing Act of 1937 and the outbreak of World War II, and in the years following the Housing Act of 1949. The Housing Act of 1937 established the federal public housing program, and provided local public housing agencies with construction loans. San Francisco established its housing authority in 1938, and began to construct public housing sites in less affluent neighborhoods.

The original intent of public housing was to provide housing to both low-income and lower-middle class families. By the 1950s the demographic of public housing had changed, as it was primarily being used as a tool to house extremely poor populations that were displaced from urban renewal and slum clearance plans. Urban renewal was a federally funded tool that was used to clear away and redevelop "blighted" urban areas into more prosperous land uses.   The areas that were considered "blighted" were most often older residential neighborhoods, which primarily housed working poor, immigrant and minority communities. These neighborhoods were seen in their worst light; overcrowded, congested, dangerous, and economically obsolete.

In 1946, San Francisco's first master plan identified four general areas as blighted: South of Market, the Western Addition, the Mission District, and Chinatown. Parts of South of Market (what is now the Yerba Buena Center) and the Western Addition (the Fillmore and Japantown neighborhoods) were subjected to urban renewal, which resulted in subsequent building demolition and tenant displacement. The neighborhoods considered blighted that were not subjected to urban renewal (the Mission District, Chinatown, parts of South of Market) are now considered as some of San Francisco's most vibrant and treasured neighborhoods.

The housing act of 1949 required the mass construction of new public housing units as a solution to house populations displaced from urban renewal. Title III specifically required housing authorities to demolish one slum dwelling for every public housing unit built. Population living in affected neighborhoods generally lacked the social mobility to consider any other housing option besides relocating to newly built public housing units. Essentially, entire poor urban communities across the country were stripped off their resources and forced to live in public housing projects.

In 1948 San Francisco's Fillmore district, a predominately low-income African-American neighborhood, was declared blighted. By 1964 the majority of the neighborhood had undergone demolition, displacing

approximately 4,700 families and destroying what was once referred to as "the Harlem of the west". In a portion of the cleared land, high-rise and low-rise public housing projects were constructed, housing some of the displaced families. Other displaced families relocated to public housing projects in the Southeastern neighborhoods, namely Bayview/Hunters-Point, Visitacion Valley, and Potrero Hill.

Public housing projects have been historically constructed in undesirable areas due to racially motivated neighborhood opposition and government decisions. This has resulted in subsequent geographic isolation from the surrounding fabric of the city. These areas were also often separated from other neighborhoods by physical (and psychological) barriers such as major highways. Because of geographic isolation, neighborhoods with public housing projects offered few social or economic opportunities that are critical in maintaining a healthy and functional community. Lack of employment opportunities coupled with federal policies that discouraged employment encouraged many public housing residents to rely on the informal economy to supplement income. Due to concentrated poverty and the crime associated with open-aired drug markets, adjacent neighborhoods saw a decline in their tax-base and business activities.

When the San Francisco Housing Authority began to build public housing in 1938, none were constructed in affluent or even mixed-income neighborhoods. Instead they were constructed in poor, and what were considered to be the most undesirable parts of the city.

HOPE VI and HOPE SF

The HOPE VI plan sought to improve the conditions of distressed public housing in cities throughout the country. Sites marked for revitalization received federal funding for building demolition, redesign, and reconstruction. The HOPE VI plan adopted many of the design principles of new urbanism, which generally promotes models of pedestrian oriented, mixed-use neighborhoods. Instead of the towers-in-the-park "superblock" urban design model that previously characterized public housing projects, public housing built under HOPE VI typically consisted of a fine-grained street network that aligned and connected to the surrounding urban fabric. HOPE VI public housing typically consisted of low to mid-rise buildings designed in diverse architecture styles instead of bleak high-rise brutalism. HOPE VI public housing developments also integrated sites with new neighborhood services and amenities, including community centers and ground-floor retail uses.

Another effort of HOPE VI was to disperse public housing so that it was not concentrated in specific areas, which allowed residents to have better access to educational and employment opportunities. A strategy used to de-concentrate public housing was the use of section 8 vouchers. Public housing residents that were displaced due to HOPE VI redevelopment were given the choice to receive section 8 vouchers to rent from private landlords, or to relocate to new

redeveloped sites or other public housing units.

Instead of only allowing very low-income populations, an objective of HOPE IV public housing was to integrate people from all different income levels. In a 2012 telephone interview with Henry Cisneros (the former director of the Department of Housing and Urban Development), Mr. Cisneros explained that one of main priorities of the HOPE VI and the HOPE SF was, and still is, to create mixed income communities where poverty is not concentrated in specific geographic areas.

The HOPE SF plan is a similar plan as HOPE VI, but it is specifically aimed to revitalize San Francisco's severally distressed public housing in the absence of federal funding allocated to HOPE VI. Because federal funding for HOPE VI was severally cut during the BUSH administration, HOPE SF was created as San Francisco's own version of the program that uses other sources of capital to fund redevelopment.

As of 2006, eight public housing projects have been identified and recommended for revitalization under the HOPE SF plan. These sites are the Sunnydale apartments in Visitacion valley, the Alice Griffith apartments at Candlestick Point, the Hunters Point, Hunters View, and Westbrook apartments in Hunters Point, the Potrero Terrace and Annex apartments in Potrero Hill, and the Westside Courts in the Western Edition. (See map one)

Although the HOPE VI plan has been responsible for the revitalization of 240 severely distressed public housing projects throughout the country, it by no means has served as an end-all solution to the issue. There are still troubled public-housing neighborhoods found in virtually every major American city, and because of the state of the Nation's economy, there is little hope for improvements.

The Current Conditions of Public Housing in San Francisco

San Francisco has a variety of public housing sites located in different parts of the city. Most of the public housing is concentrated in the Southeastern neighborhoods (Bayview/Hunters-Point, Portrero Hill, Visitacion Valley), although there is also a large concentration in the Western Edition, and some scattered sites in the Tenderloin, Chinatown, and North-Beach neighborhoods. (See map one) Many of these sites are composed of two-to-three story buildings that resemble military barracks, while others resemble contemporary mixed-use residential buildings and single-family row houses.

Over time much of San Francisco's public housing stock has become severally deteriorated. Residents often complain about excessive mold, sewage overflows, infestation of rats and cockroaches, and inconsistent building maintenance. Crime and violence plagues many public housing sites. Residents complain about rampant drug dealing, the unsafe environment that it creates, and a lack of police enforcement to address safety concerns. In addition to these problems, The San Francisco Housing Authority has come under

recent scrutiny, after the agency made the list of "troubled" Housing Authorities following a 2012 federal HUD audit. The San Francisco Housing Authority Executive Director Henry Alvarez has also come under federal investigation due to allegations of corruption.

Geographic Isolation of HOPE SF Public-Housing Sites

San Francisco's most distressed public housing sites (identified by HOPE SF) are geographically isolated from critical community assets, contributing to a poor social environment. Public housing neighborhoods identified by HOPE SF have disproportionally poor performing schools, employment opportunities, police protection, and city services. In the Southeastern neighborhoods of San Francisco, where much of the city's public housing is concentrated, there are few grocery stores or other community amenities, and MUNI drivers often refuse to travel through them at night.   The integration of new neighborhood services and amenities is required to create safer and more functional communities, and should be imperative for the HOPE SF plan.

San Francisco Housing Authority Properties
■ Public Housing
▢ San Francisco Block Groups
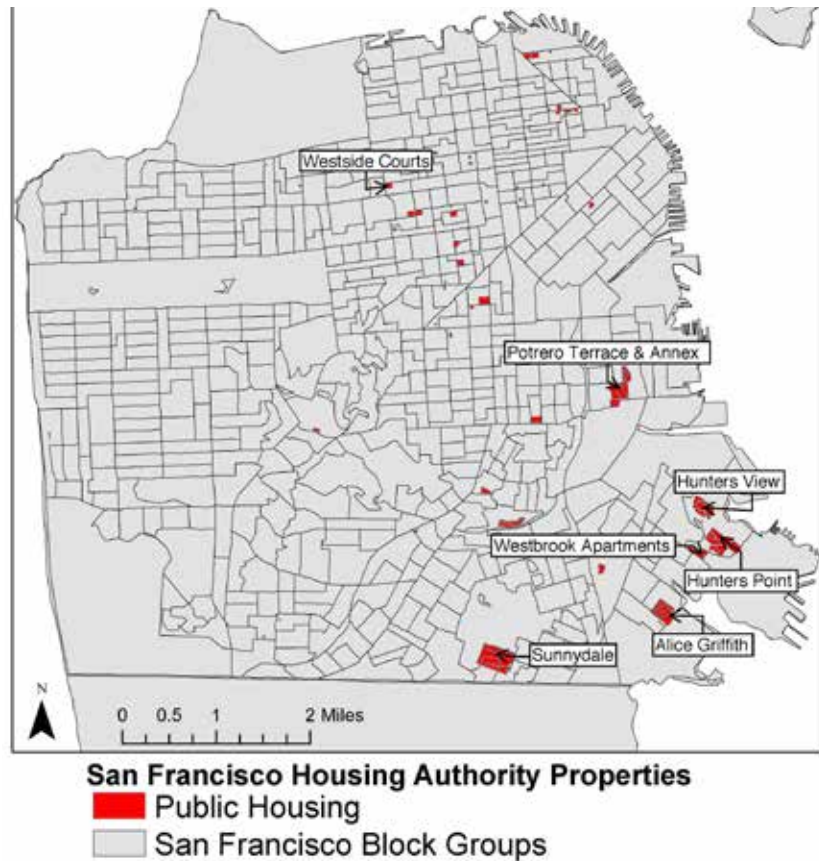
Above: Map One

Analysis Methods and Variables Used

Statistical and spatial analysis methods were used for the purpose of measuring the social environment of HOPE SF sites in relation to public housing sites not identified by HOPE SF, and in relation to the rest of the city. The unit of analysis that has been used to collect data on the HOPE SF sites is from the census block-group level.   To measure the social environment, census data from the year 2000 was collected relating to poverty, levels of educational attainment, and the average unemployment rate. These three variables were specifically chosen to measure the social environment, although there are other variables that would also serve as appropriate indicators. These are the dependent variables, while the number of amenities within walking distance (.5 miles) to each site is the independent variable. The variables that are used for "community assets" are all critical amenities in maintaining a working, healthy community. The critical amenities in this case are parks and open space, human services organizations, public and private health facilities, police stations, public libraries, public and private schools, and grocery stores and farmers markets.
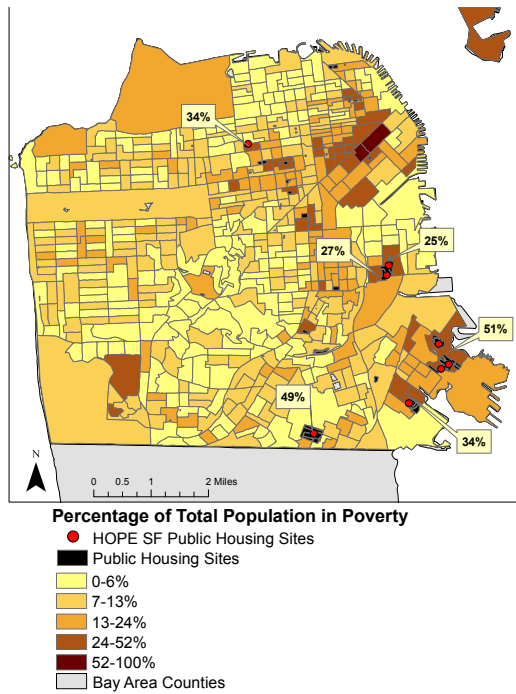
Spatial Analysis

The first step in the analysis involved measuring the social environment of the HOPE SF neighborhoods. Map two shows the distribution of the total population in poverty within each census block-group in San Francisco. Out of all the HOPE SF neighborhoods, the block-group with the highest poverty level (51%) contains the Hunters View, Hunters Point, and Westbrook public housing sites.
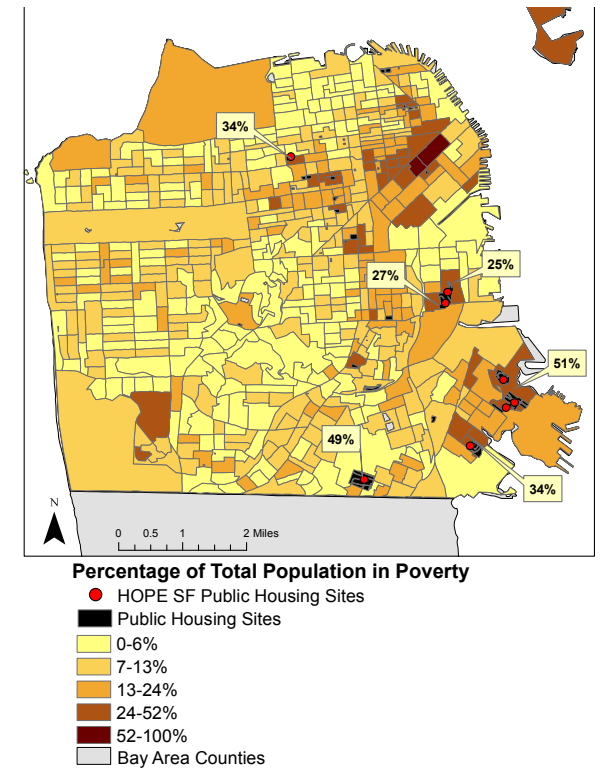
Neighborhoods containing public housing (especially those identified by HOPE SF) have a much lower educational attainment average then the majority of San Francisco. Map three shows the percentage of the total population over 25 years old that has either no formal education or has not graduated from high school. The level of education attainment is especially low in the Southeastern neighborhoods (Bayview/Hunters Point, Visitacion Valley) of San Francisco, where most of the city's public-housing sites are concentrated.

Areas with the highest levels of educational attainment (percentage of population that has either graduated from high school or obtained a bachelor's degree) are the Pacific Heights, and Noe Valley/Castro neighborhoods, located in the more central area of San Francisco. Sunnydale has the lowest educational attainment rate out of all the HOPE SF sites. As of this writing, not a single person in Sunnydale has a bachelor's degree, and 25% of the population over 25 years old has either not completed high school or has no formal education.

 Neighborhoods containing public housing sites identified by HOPE SF have disproportionally high unemployment rates (See map four). Sunnydale has the highest unemployment rate (60% of the population over 16 years of age) out of all the HOPE SF sites. This is followed by the Hunters Point neighborhood, which has an unemployment rate of 55%.

Percentage of Total Population in Poverty
- ● HOPE SF Public Housing Sites
- ■ Public Housing Sites
- ☐ 0-6%
- ☐ 7-13%
- ☐ 13-24%
- ☐ 24-52%
- ☐ 52-100%
- ☐ Bay Area Counties

Above: Map Two

Percentage of population over 16 who are unemployed
- ● SF HOPE Public Housing Sites
- ■ Public Housing Sites
- ☐ 0-23%
- ☐ 23-32%
- ☐ 32-40%
- ☐ 40-52%
- ☐ 52-85%

Above: Map Three

Percentage of Total Population in Poverty
- ● HOPE SF Public Housing Sites
- ■ Public Housing Sites
- ☐ 0-6%
- ☐ 7-13%
- ☐ 13-24%
- ☐ 24-52%
- ☐ 52-100%
- ☐ Bay Area Counties

Above: Map Four

Using ArcGIS, a half-mile buffer was created around each public-housing site in San Francisco, as this is considered to be a "walkable" distance. The average number of community assets within each half-mile buffer was then measured. The mean average of community assets within walking distance to all public housing sites in San Francisco was ten. The public-housing sites located in the central part of the city (Chinatown, SOMA, Western Edition, and North Beach) generally have much better access to community assets than those located in the Southeastern neighborhoods. The sites located in central San Francisco are also more dispersed throughout mixed-income neighborhoods, while those located in the Southeastern neighborhoods are concentrated in predominately low-income neighborhoods, with low educational attainment levels and high unemployment rates.

Figure two is comparing the mean percentage of each social environment variable in the HOPE SF block-groups to non-HOPE SF public housing block-groups. The non-HOPE SF sites have an average of ten community assets in walking distance to each site, while the HOPE SF sites have an average of eight. The social environment in the HOPE SF sites is considerably worse than the non-HOPE SF sites, as shown in figure two.
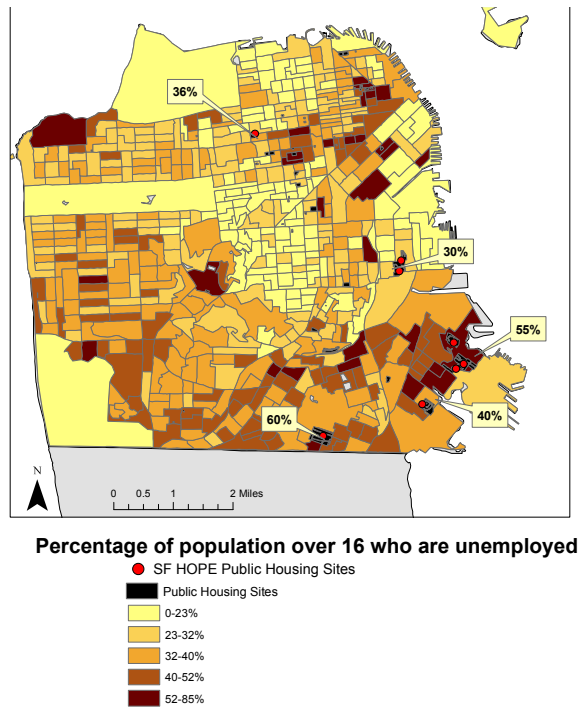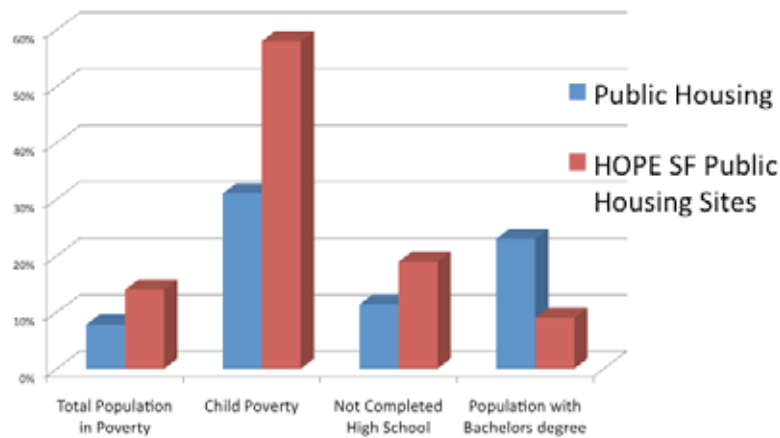
Above: Figure 2

Further Statistical Analysis

Through further statistical analysis it became apparent that the number of community assets within walking distance from each HOPE SF site does not have a significant correlation to the neighborhood social environment. Regression scattergrams were created, and a linear regression test was run using SPSS to determine if there is a statistical correlation between the number of community assets in walking distance from each HOPE SF site and the quality of the social environment. A random sample of non-hope SF public-housing sites and a sample of HOPE SF sites were tested in both methods. The number of amenities within walking distance was compared to each social environment variable. There appears to be some correlation, although it is not significant enough to support my argument.

Expected Findings

My expected findings were that the HOPE SF public-housing sites would be very isolated from community assets. I hypothesized that the number of community assets within walking distance would have a dramatic and quantifiable impact on the neighborhood social environment. There does appear to be some correlation, although it is not statistically significant enough to support my hypothesis. One reason for this is the fact that San Francisco is a small densely populated city, and community assets are relatively accessible in any geographic location. This is not true for many other American cities, where public-housing sites are much more geographically isolated from the surrounding fabric of the city.

Findings and Policy Implications

Although my results are somewhat inconclusive, I have made some very interesting findings and conclusions. The most important finding from my analysis is that public housing cannot be concentrated into

specific geographic areas, and when it is, the result is disastrous social problems. This could help explain why the social environment in Hunters Point and Sunnydale is especially bad, where public housing is densely concentrated. Sunnydale is San Francisco's largest public housing site, and it comprises the entire block-group that was used in this study. The block-group in Hunters Point also entirely consists of public housing units.

Public housing generally seems to function better when sites are small and well dispersed throughout mixed income neighborhoods. This explains why the Westside Courts, located in the Western Edition, have a much better social environment than the Southeastern sites. Therefore, I do believe that the most appropriate policy is to continue with the HOPE SF plan. Revitalizing these areas through the creation of new mixed use and mixed income neighborhoods has the potential to relieve problematic social issues.

Conclusion

The poor social environment in public housing in San Francisco is far too complex to have any single causality. The number of community assets within walking distance is an important factor in determining the social environment of any neighborhood, but there are many other factors (unexplored in this study) that could contribute to poor social conditions. Physical deterioration and poor building maintenance could be a major factor contributing to problematic social issues. Many of the buildings especially in the Southeastern districts have been neglected for decades, from the time of their original construction. Crime is undoubtedly an important factor in determining the quality of a neighborhood's social environment. For future study it would be interesting to look at how isolation from community assets affects crime rates. Many of the community assets that are in walking distance to each site could also be of poor quality. The schools within walking distance to Sunnydale may be very dysfunctional considering the neighborhoods extremely low educational attainment levels.

For the purpose of this study, I do believe that the HOPE SF plan is an appropriate measure to improve the physical and social conditions in these severally distressed public-housing sites. However, it is unclear how these 100% subsidized public-housing sites can be turned into mixed-income communities without the complete displacement of the existing population. No matter how dysfunctional some of these neighborhoods are, the fact remains that communities are established here, and families have been living here for decades.

 Critics of the HOPE VI plan often claim that the redevelopment of distressed sites has resulted in the loss of truly low-income housing units, and simply put, is another form of slum clearance. Affordable housing is critical in maintaining a functional city and urban region, and San Francisco's stock is rapidly declining. Any revitalization effort must be carefully planned and implemented so that it does not result in the displacement of entire communities threatened by the changing demographics of the Bay Area.

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Interview

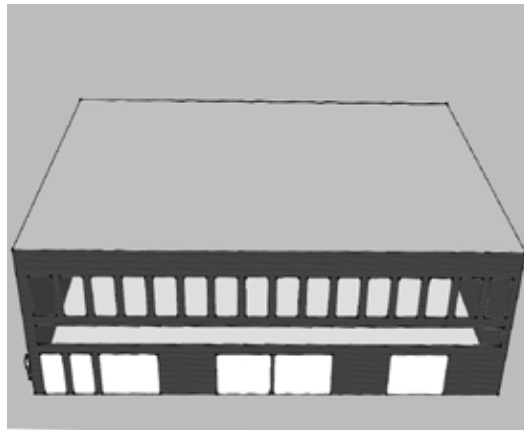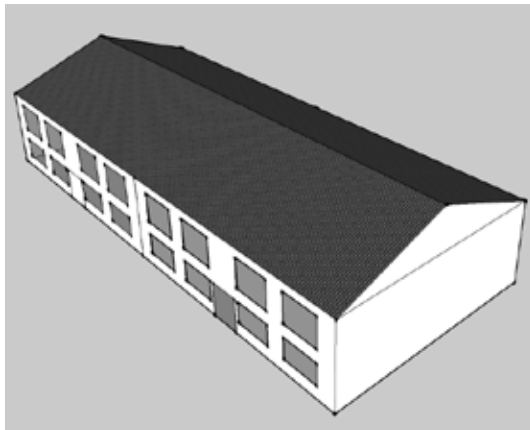Telephone interview with Henry Cisneros conducted by Forrest Chamberlain on October 21st 2011.
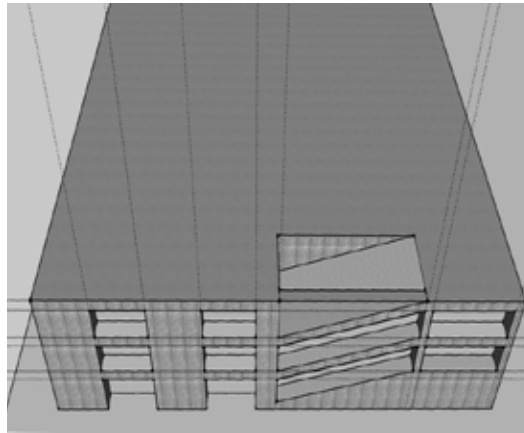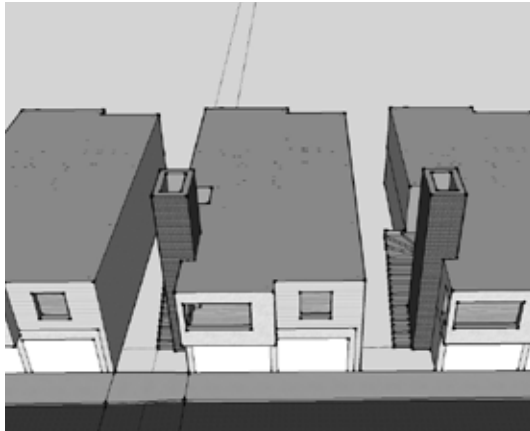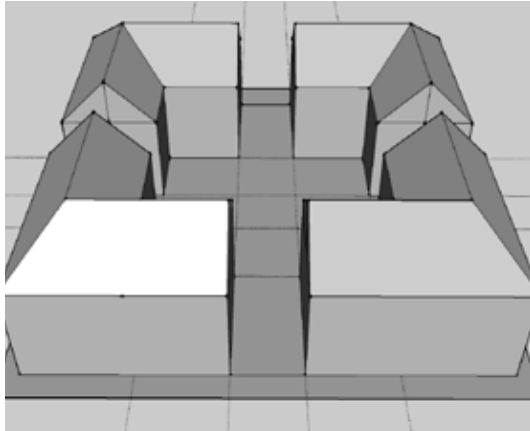
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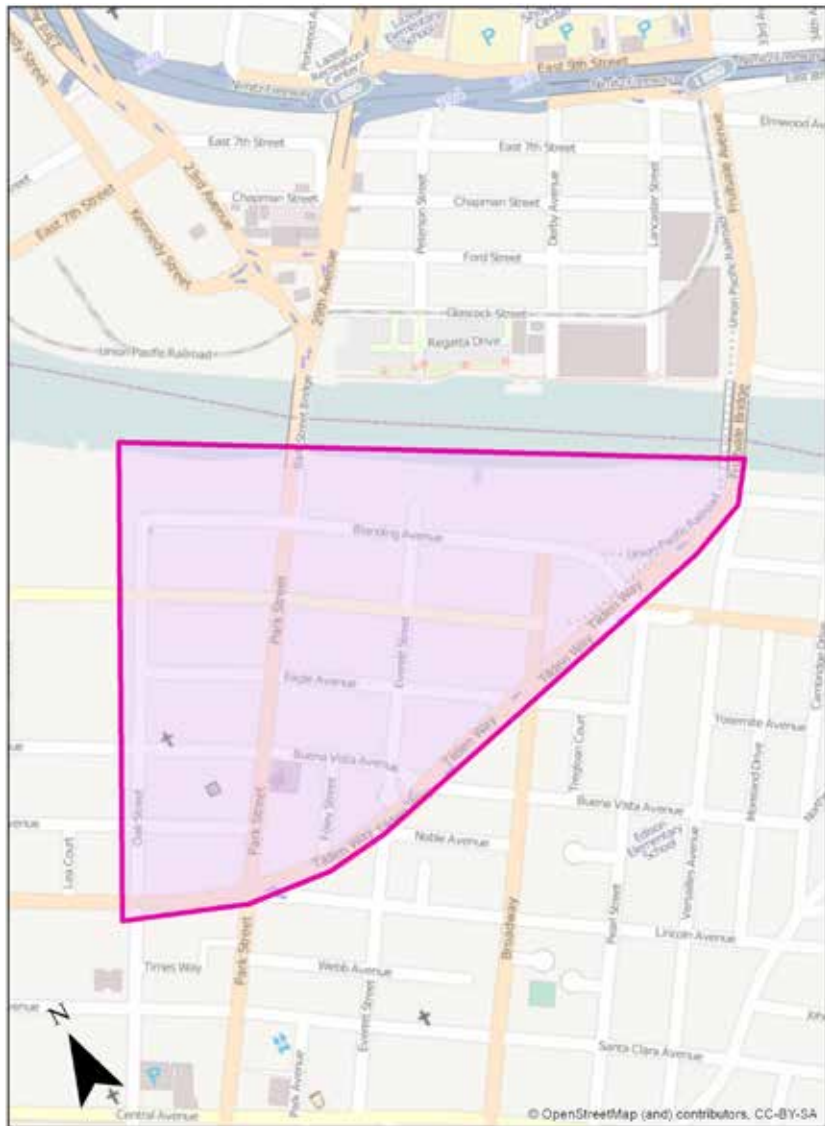## The Gateway District Strategic Plan
Ramon Hernandez

Introduction

Smart growth, sustainable development, new urbanism; what is it? These concepts are widely recognized today as tools to revitalize and transform stagnant places into vibrant cities. As cities across the United States compete to attract capital and investment, many city governments are experimenting to implement the latest tools for city growth. This project is a case study of the "The Gateway District Strategic Plan" and its call for the "North Park Street Plan Regulating Code," for the city of Alameda. The goal of the Gateway District Strategic Plan is to revitalize an area that is now a neglected "auto-row" commercial neighborhood into a more vibrant community in the future. Interestingly, this plan attempts to do this through non-traditional land use regulations known as Form-based Codes (FBCs). Although the Gateway District Strategic Plan is nearing its approval by the city council in January 2013, it is an interesting case to examine strategies to transform urban landscape through contemporary urban planning methods. FBCs are an interesting topic when considering their role in determining what it means for cities to make smarter decisions.

Site and Situation

The island of Alameda was created in 1902 and is located about 12 miles east of San Francisco, separated by an estuary from the city of Oakland. Alameda is now known for its tree lined residential neighborhoods and historic collection of Victorian-style architectural homes. The location of the Alameda suburb is considered to be a desirable location for nearby workers of Oakland and San Francisco. In 1991 about "71 percent of employed residents commuted to jobs outside the city" (City of Alameda Planning Division, 1991, Section

2.4). Today the number of people living in the city greatly outnumbers the amount of housing available. In light of this, many initiatives are being taken by the city to"develop older industrial areas and former military installations to attract more people to live, work, and spur development in the city of Alameda.

Above: Figure 1

One of these initiatives is the Gateway District Strategic Plan which was adopted on January of 2009 by the Department of Alameda's Community Development. The North Park St. Regulating Codes call for regulatory design regulations that will transform this specific site. The site of this plan consists of about twenty blocks on the north east of Alameda, just south of the Park St. Bridge. A waterfront on the north, and Lincoln Avenue on the south also board the site, shown in

figure 1. One of the most significant features of the area is the Park Street Bridge, which is also a vital gateway to the city and downtown core of Alameda. In addition, the Park Street Bridge is a vital transit hub which connects the downtown core of Alameda to the nearby 880 Interstate Highway and the Fruitvale Bay Area Rapid Transit (BART) station.

The Plan and Vision

During the automobile boom of the early 1900s, the site was transformed from its historic pedestrian oriented streets to an automobile oriented portal, supported by large parking setbacks, a series of automobile dealerships, and old repair shops. During the period of 2005 to 2008 many of the bigger auto dealerships either closed due to the recession or relocated to other freeway-centered hubs. The site today remains a neglected auto serving area with the majority of the open spaces consisting of parking lots or vehicle storage places. However, The Department of Alameda's Community Development has a new vision for the existing portal. In collaboration with City Design Collective and Vargas Greenan Architecture, the Community Development Department has developed a series of plans, renderings, dimension regulations, and proposals for the future of the North Park entrance through Form-Based Code regulations.

Form-Based Codes

Form-based Codes are known to be various incarnations of "design-based zoning, community-based urban design, context-based design, smart growth code, or communicative action-based planning" (Iniss, 2007, pg. 77). FBCs differ from traditional methods of zoning because the primary emphasis is placed on design dimensions and urban form, such as, streets, landscapes, materials, frontages, and buildings. According to the Form-Based Code Institute, FBCs are essentially methods of fostering "predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code" (2012). Most importantly, FBCs are based on the belief that the code regulations are in fact "smart-design" based on urban life preferences and time-tested principles that would in fact, increase the quality of life if enforced. In contrast to traditional city design guidelines, FBC's are not advisory, but instead, regulations adopted into city or county law.

The origin of FBC's can be traced back approximately 4,000 years ago to the great emperor Hammurabi and his reign over the city of Mesopotamia. In 1772 BC, the Hammurabi Code ensured the "quality of buildings by exacting penalties if damage occurred" (Talen, 2009, pg. 147). Often failing to comply with regulations would result in the penalty of death. FBC's can also be traced back to Ancient Greek culture where dimensions of city streets, blocks, and public squares were also made into law. Three thousand years after Hammurabi, the Napoleonic Code of the 1800's called for revitalization through the use of eminent domain and enforcing the design plan of Baron Haussmann as a method to improve the quality of life. Today

many small towns and cities across the United States continue in this tradition by endorsing the enforcement of design measures on urban form for economic incentives. Urban Planner Kaiser Rangwala, describes an "economy based on creation of place is local, participatory, sustainable, and enduring" (Rangwala, 2012, pg. 38). FBC's are not only tools of place making, but also an excellent approach to market a predictable product.

Regulating Code

What makes the Gateway District Strategic Plan so unique is its decision to implement FBC zoning as described in the North Park St. District Regulating Code. FBC zoning differs from traditional methods of conventional zoning by putting less emphasis on the specific function or use of land and encouraging mixed-use functions. Often times, conventional zoning "focuses on what you cannot do [and when] zoning standards are ineffective, distrusted, and their results disliked, everything becomes heavily negotiated, resulting in an unpredictable process, [which often results in] arbitrary or didactical guidelines" (Rangwala, 2012, pg. 36). Form-Based Code regulation is the overarching theme of the Gateway Strategic plan and its call for regulatory design measures. Nevertheless, before the rules of the North Park St. Regulating Code can be enforced on the management of urban form, the new regulating code must be used to make adjustments to the current Zoning Ordinances and Alameda Municipal Codes. The North Park St. Code regulations ensure that the Alameda Municipal Codes and California Building Codes govern any measure that comes into conflict unaddressed by the new plan code. However, in the occurrence of code conflicts with the Alameda Municipal Code, this new code will always govern.

Under the new plan, the general regulations designate two specific areas, Land-use regulations and site regulations. Under Land-use regulations, codes provide "flexibility to property owners and developers by permitting a mix of complementary uses for each parcel" (City of Alameda Department of Community Development, 2011, Section1.1). Under the Site Development Regulations, codes ensure that "building designs of new development build on the best of Alameda's unique character while encouraging innovative design ideas that contribute to the community's vision for attractive and walkable neighborhoods" (City of Alameda Department of Community Development, 2011, Section 1.1). The plan is written in a way that accommodates the fact that this is a timely process, and that FBC's alone cannot bring about change. Some of the operating principles include an on-going evaluation of the market forces and consumer preferences that might affect the feasibility of preferred development. An on-going evaluation process ensures that the best measures are taken to facilitate the transformative process. Another principle calls for the necessity of coordinating public and private investment towards achieving one common goal as an important tool for revitalization. Moreover, Alameda's principles are meant to avoid

competition of inclusive district through land-use and site regulations that will respect and restore the historic fabric.

District Zones	Park Street General	Workplace Neighborhood	Mixed-Use Neighborhood
Building Placement			
Front Setback (min - max)	0' - 15'	0' - 20'	10' - 30'
Side Street Setback (min - max)	0' - 20'	0' - 20'	5' - 10'
Side Yard Setback (min)	0'	5', 0' (PSG)	5'
Rear Setback (min)	10'(WN), 20'(MUN, RN)	10'(WN), 20'(MUN, RN)	20'
Alley Setback (min)	0'	0"	10'
Paseo / Courtyard (min)	0'	0'	10'
Space Between Buildings (min)	0'	0'	8'
Corner Treatment	Required at _|	NA	NA
Building Height			
Primary Building			
Minimum	1 floor, 20 feet	1 floor, 16 feet	2 floors, 20 feet
Maximum	4 floors, 50 feet	3 floors, 40 feet	3 floors, 40 feet
Accessory building (min - max)	12 ft - 24 ft	12 ft - 36 ft	12 ft - 36 ft
Carriage House (min - max)	NA	NA	12 ft - 24 ft
Building Length			
Building Length (max)	200'	160'	110'
Frontage Coverage (min)			
Frontage Coverage (min)	85%	70%	NA

Above: Figure 2

The new code plan also implements regulation at the District Zone and District Wide levels of the plan area by providing both standards and guidelines. Standards are mandatory, whereas, guidelines are encouraged measures to expedite the approval of the development process. District Zone regulations are intended to cluster complementary land uses and to achieve consistent physical outcomes. Some of the regulations that the District Zone would include are the boundaries and overall characteristics of the plan area, urban design concerning the water front, district area site dimensions, building frontages for the specific zone within the plan, and other characteristics such as building heights and placement as illustrated in figure 2. On the other hand, District Wide regulations apply to all properties throughout the plan area; such would include parking, landscape, open spaces, fuel stations, and permitted architectural styles.

There are always exceptions to the North park Street Code, so long as complying with the code in the area presents complexities "related to property configuration, parcel size, ownership, and access" (City of Alameda Department of Community Development, 2011, Section 1.2). However, changes to architectural design are much more difficult to achieve and can only be approved by the Planning Board, where the

proposed architecture projects are required to prove their superiority in comparison to the new plan and zoning restrictions.
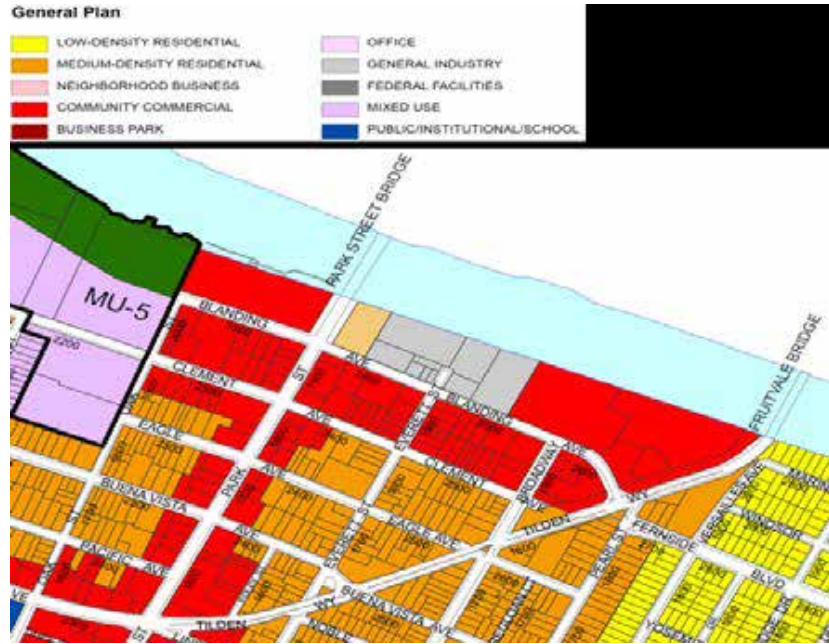
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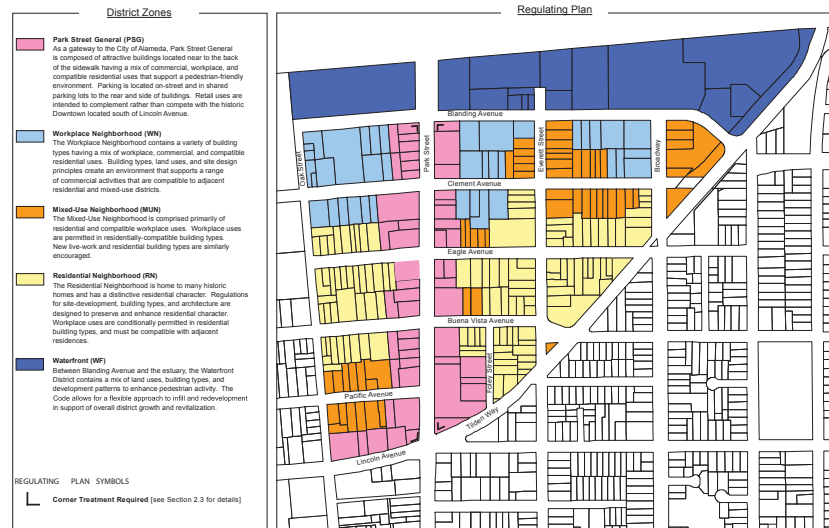
Above: Figure 4

Zoning

The current zoning regulations of the North Park Street Site consist of several different land-uses along the Park street corridor as illustrated in figure 3. Commercial manufacturing can be found along

the south of the Park street corridor along with neighborhood and general residential land-uses along the south east and west on the site. Intermediate and general industrial land-uses are located on the northern tip and central business on the northwestern part. The North Street Park Plan calls for a new district zoning strategy. The proposal for this site would change the current zoning regulations.

As illustrated in figure 4, under the North Street Park Plan, the Park Street Corridor is converted into the "Gateway District" zone filled with shops, boutiques, restaurants, and possibly car dealerships. The northern "water front" district is entirely zoned to contain various public areas, recreational spaces, and possibly a shopping center. Just south of the waterfront would lay the "work place district," where young talent would work and live. The rest of the area is a mixture of mix used districts near Park St. and residential areas throughout the rest of the site.

General Plan

The sole purpose of Alameda's General Plan is to "guide residents, businesses, policymakers, and elected officials in making choices about public and private activities that shape the City's physical environment" (City Design Collective, 2009). Both the Gateway District Strategic Plan and North Park Street Regulating Code are in accordance to many, if not all, of the sections of the Alameda General Plan. In addition, the "new plan's strategies do not replace existing zoning policies or development regulations. Rather, they are intended to build upon the framework for future efforts that will direct new public and private investment" (City of Department of Community Development, 2008, Section 3). According to Section 3 of the Gateway District Strategic Plan, some of the main recommendations include attracting new investment opportunities, attracting new land uses appropriate to the envisioned character of Alameda, enhance pedestrian environment, maintain historic fabric of the city, and ensure accessibility to public and private space. In addition, the North Park Street Regulation Code is intended to revise the Alameda Municipal code and Zoning Ordinance of the area to bring the zoning codes of the North Park St. District into accordance with the visions of the General Plan.

The feasibility of the Gateway District Strategic Plan and the North Park Street Code Regulation is due to their similarities to the General Plan's Land-use and City Design objectives. The General Plan brings into light many of the policies, design guidelines, and recommendations for mixed-use zoning, commercial space, water front development, and even pedestrian friendly alternatives. Furthermore, the City Design also calls out some of the notable characteristics of the city such as the Park St. Bridge, acknowledging it "as the busiest and most cluttered entrance [conveying the quality of Alameda Park Street] without severe limitation on signs along auto row" (City of Alameda General Plan, 1991, Section 3.1.c). Preserving the cultural values of the North Park Street area are also interpreted in

the General Plan by mandating that "new construction redevelopment and alterations should be compatible with historic resources in the immediate area" (City of Alameda General Plan, 1991, Section 3.3.d). The Gateway District Strategic Plan is really an implementation of the General Plan.

EIR and Supporters

In addition to amending Alameda Municipal Codes and current Zoning Ordinances, a project of this scale is subject to an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA). On January 3rd 2012, a draft EIR was produced by the City of Alameda, who happens to also be the Lead Agency for the Gateway District Strategic Plan, and released the plan for public viewing. Under guidelines of CEQA, the draft EIR along with revisions, amendments, and comments from the community, organizations, public agencies, and lead agencies, constitute the final EIR. The final EIR was released in August 2012 and concluded that it "did not identify any new significant impacts not identified in the Draft EIR, nor do they reveal a substantial increase in the severity of an environmental impact." The revisions also do not describe an alternative or mitigation measure that would be "considerably different from those identified in the draft EIR, which the City or project sponsor, has rejected" (City of Alameda Department of Community Development, 2012, pg. 3).

Some of the major commentators of the project included the US Coast Guard who was primarily concerned with the impacts of water front development and usage of the Oakland- Alameda Estuary. The EIR report concluded that "there was no reason to believe that the North Park Street code would interfere with the navigable waters" (City of Alameda Department of Community Development, 2012, pg. 9). Other negligible concerns involved height limits from the Alameda Architectural Preservation Society and the time between street light signals in the new district on behalf of planner John Know White. The EIR also concludes by establishing the objective of the Mitigations Monitoring and Reporting Program (MMRP), which examines the possibility of future issues in unprecedented hazardous waste, noise complaints, transportation, or water quality issues.

The success of the EIR report is important for the next steps that await the project. Many community members, as well as the planning board, community development department, and local agencies all appear to support the North Park District Plan. During an Alameda City Planning meeting on November 13th 2012, a few neighborhood residents of the North Park St. District area arrived to city hall to express their concerns or approvals. One resident was concerned about the new plan not including fast food drive throughs, but the planning commission was quick to contest the idea in favor of banning drive troughs to promote pedestrian friendly atmospheres (Alameda Planning Commission, 2012, 7C), which is a very important aspect of this design project. Another resident spoke on behalf of the Alameda Architectural Preservation Society to give her gratitude and support

for the new plan. The Planning Board also discussed concerns about a ""new ordinance that includes a requirement that new buildings on Park Street provide windows on Park Street that provide an unobstructed view into the store front for a distance of at least 5 feet" (Alameda Planning Commission, 2012, 7C) to which a CVS location is neglecting to comply with these standards. Nevertheless, the most significant force driving the Gateway District Strategic Plan is the Planning Board itself, who are not only the ones approving the plan, Codes, and EIR, but also the very same Lead Agency producing the EIR, producing the plans, and implementing the Codes.

Concluding Thoughts

Although urban planners present FBC's as relatively new ideas and opportunities, there are a few who critique the benefits and process of FBC's as a misleading approach to solving urban issues. The Gateway Strategic Plan is great in its intentions to preserve historic fabric, combat sprawl, and greatly promote a pedestrian and biker friendly plan; however, many questions are yet to be answered. As was explained earlier in this text, the relationship between design and law dates back to a time where contesting the process was not an option. Today the city of Alameda intends to propose such regulations, where the dimensions of communities and local agencies, increase the difficulty of consensus based agreements." Nonetheless, if such design measures are passed, how strict will enforceability be?

The idea of returning back to design and its strict place in law presents a paradox where "reformers are trying to simplify regulation and at the same time, attempting to reverse trends evolving since the onset of modernism and conventional zoning" (Talen, 2009, pg. 158). The "freedom" to design is lost in a system that mandates identical design replication. For example, the consultant firm City Design Collective has many other identical plans for other cities across the United States. It is peculiar that identical plans from a remotely located design firm can fix the problems of two different cities in separate situations and history.

Professor of Law, Lolita Buckner Inniss, describes the FBC process as a negative and backwards approach to land use planning by stating that "Form-based code, however, is not un- zoning or un- planning, instead, it is an alternate zoning or planning by people who in many cases may not be accountable to the larger community" (pg. 103). The idea of attracting wealth to city might conclude that wealth another city, town, or region is now gone. This dynamic between cities presents a scenario that might be in opposition to the sustainability of both cities.

In addition to the speculative beliefs about FBC's, it is also important to consider the current economic conditions and regulations of land use planning in California. After all, as mentioned earlier Kaiser Rangwala believes many of the incentives of Form-based Code Zoning, and a project such as the Gateway District Strategic Plan, are to promote the growth of private investment in the city. With the recent

The "freedom" to design is lost in a system that mandates identical design replication.

elimination of redevelopment agencies in California, Form-Based Code Zoning might be an excellent strategy for cities to borrow money from tax payers to fund marketable visions that will revitalize and restore decaying downtown cores.

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List of Figures

Figure 1. North Park Street District Site. By Guy Michaels.

Figure 2. District Zone Form-Based Codes. City of Alameda Department of Community Development (2011).North park street districts regulating codes. Alameda: California.

Figure 3. Current Zoning Ordinances Map of North Park St. Site. City of Alameda

Department of Community Development (2011).North park street districts regulating codes. Alameda: California.

Figure 4. New North Park Street District Zoning Map. City of Alameda Department of

Community Development (2011).North park street districts regulating codes. Alameda: California.

COMPARATIVE ANALYSIS OF PUBLIC TRANSIT SYSTEMS IN LOS ANGELES AND SAN FRANCISCO:

Westside Subway Extension

Brett Thomas

This paper will give a brief synopsis of the Los Angeles, California transportation profile. The discussion will begin with basic regional demographics followed by an outline of the regional transportation network and its statistics. The basic demographics of Los Angeles proper will be discussed as well as the statistics of the city's transportation network. The statistics and structure of the city's transit system will be given attention, with a special focus placed on the definition and demographics of Westside Los Angeles. Existing transportation and transit infrastructure and statistics within the Westside will be discussed. Additionally, the Westside Subway Extension will be outlined in detail. Due to the regional proximity and the nature of the course Los Angeles will be compared to San Francisco throughout the paper.

Legend:
- Purple Line
- Orange Line BRT
- Red Line
- Green Line
- Eastside line
- North-South Line
- Silver Line (Express Bus)
- Metrolink
- Green Line LAX Extension
- East West Line
- Crenshaw LRT
- BRT Extension
- North-South Extension
- Study Area

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

The city of Los Angeles lies at the geographic, cultural, and economic center of the sprawling conurbation of Southern California. The region is also known as Greater LA, SoCal, and the Southland. The region is made up of 190 cities spread across the five counties of Ventura, Los Angeles, Riverside, San Bernardino, and Orange. The region has a 2010 census population of 17.9 million (U.S. Census Bureau, 2010a). The region comprises 48% of the total population of the state of California. In terms of population, Southern California

is the thirteenth largest metropolitan area in the world (Wikipedia, undated). Greater LA is the second largest metropolitan area in North America and has the highest population density in the United States (Bruegmann, 2006, P. 63). At 61.5%, the region is minority-majority. Hispanics comprise 40.6% of the region's population (SCAG, 2010). The regional Metropolitan Planning Organization (MPO) is the Southern California Association of Governments (SCAG). SCAG is the largest MPO in the United States.

Mode Share for all trips

Mode	LA Metro Percent	Source	Bay Area Percent	Source
Drive	75.00%	(SCAG, 2011)	82.70%	(MTC, 2008)
Transit	3.00%	(SCAG, 2011)	5.20%	(MTC, 2008)
Walk	19.00%	(SCAG, 2011)	1.80%	(MTC, 2008)
Bike	2.00%	(SCAG, 2011)	10.30%	(MTC, 2008)
Taxi/Other	1.00%	(SCAG, 2011)	N/A	(MTC, 2008)

The transportation network of the Greater Los Angeles region is comprised primarily of surface streets and freeways. The regions freeway network is reminiscent of a gridiron street pattern. 74.1% of all commutes are by single occupancy private automobiles. 75% of all Greater LA trips are by private automobile. 66.1% of San Francisco Bay Area commutes are by single occupancy private automobile. 82.7% of all trips in the Bay Area are by private automobiles. Greater LA's lower mode share of private automobile use for all trips may be associated with the relatively high density of the regions suburbs. At 11.6%, carpooling to work is more common in Southern California than in the Bay Area. This may be the result of Southern California's relatively vast network of HOV lanes when compared to the Bay Area. Interestingly 1.9% of all trips in Greater LA are by walking. This is slightly higher than the 1.8% of trips in the Bay Area for the same mode. This may also be the result of the relatively high population density of Southern California as a whole, coupled with a relatively low employment density. People drive long distances to work, but once they are home they have most of the amenities they need within walking distance. Bicycling is much more prevalent in the Bay Area with twice as many residents biking to employment centers than in Southern California.

For all trips both the Greater Los Angeles and Bay Area region's transit

Mode Share for Commute

Mode	LA Metro Percent	Bay Area Percent	Source
Drive Alone	74.10%	66.10%	(US Census, 2010)
Carpool	11.60%	10.50%	(US Census, 2010)
Transit	5.20%	11.20%	(US Census, 2010)
Walk	2.40%	3.50%	(US Census, 2010)
Bike	0.80%	1.60%	(US Census, 2010)
Taxi/Other	1.00%	1.10%	(US Census, 2010)
Work at home	4.70%	5.80%	(US Census, 2010)

use are comparable with a 3% Greater LA mode share and 5.2% Bay Area mode share. The opposite is true in terms of commuting. At 11.2% versus 5.2%, Bay Area commuters are much more likely than Greater Los Angeles commuters to use transit to access employment centers. This may be associated with the Bay Area's

relatively more robust commuter rail network. The robust nature of the Bay Area network is due to its high connectivity of residential and employment centers and the relatively high operating speeds of its trains. The largest commuter rail provider in the Bay Area is the Bay Area Rapid Transit (BART). BART operates 102 miles of track with a daily ridership of 379,000 (APTA, 2012, P. 13). The Southern California regional commuter rail network is Metrolink which operates 55 stations, with over 512 miles of track, and with a daily ridership of 39,600 (APTA, 2012, P. 11). The comparison is striking in terms of ridership per mile. BART serves approximately 3,716 passengers per mile daily whereas Metrolink serves only 77 passengers per mile daily. Total Metrolink ridership is comparable to the 77 mile Bay Area Caltrain commuter rail system. There are several possible reasons for Metrolink's low ridership in comparison with BART. The San Bernardino and Riverside lines transverse relatively low population density areas. The highest population density in the Inland Empire region served by the two lines is found closer to the freeway. Metrolink operates in existing rail right-of-way in primarily industrial areas far removed from the freeway. Metrolink operates at grade at intersections with surface streets, causing the train to operate at slow speeds. Travel time between Downtown Los Angeles and San Bernardino ranges from one hour twenty-seven minutes and one hour forty-nine minutes. This same trip can be made in forty-five minutes by private automobile (Trainbrain, undated). Furthermore, Metrolink operates with long headways (average 30 minutes) between trains

Metrolink system map. (Source: Metrolink, http://www.metrolinktrains.com)

Intercity transit ridership within the Southern California region is poised to increase significantly with the development of high-speed-rail (HSR). "Of the 24 HSR stations proposed throughout California 9 stops, or 37.5% of the total, are proposed for the urbanized area of Greater Los Angeles with several more stops proposed for the regions hinterland. Travel time between Downtown Los Angeles and Anaheim, and Downtown Los Angeles and Los Angeles-Ontario International Airport will be reduced to twenty minutes. In the year 2030, Greater Los Angeles commuters will account for 21.4% of total HSR ridership in California" (CHSRA, 2008, P. 15).

More than a quarter of all Californians live in Los Angeles County, of which 54.9% of Southern Californians live in the county. Los Angeles County has a 2010 Census population of 9,818,605 people (U.S. Census Bureau, 2010c). The county seat of Los Angeles County is the City of Los Angeles. The city lies at the geographic, cultural, and economic core of Southern California. At 468.7 square miles Los Angeles is nearly ten times as large as the city of San Francisco in terms of area. As of the 2010 Census the city of Los Angeles is home to 3,792,621 people (U.S. Census Bureau, 2010b). Los Angeles is home to 21.2% of Southern California residents, and 10.2% of all California residents. The City of Los Angeles is roughly half as dense as the city of San Francisco at 8,092.3 people per square mile (U.S. Census Bureau, 2010b). Los Angeles is the 2nd largest city proper in the United States, and 53rd in the world. The rate of homeownership in Los Angeles is similar to San Francisco at 38.9% (U.S. Census Bureau, 2010b). Los Angeles is one of the most diverse cities on the planet, with 39.6% of the residents foreign born. 71.3% of the city's population is minority. A large proportion of minorities in the city are of Hispanic origin. 48.5% of the city's total population is Hispanic.

The average City of Los Angeles resident (Angelino) spends 29.1 minutes commuting to work. This is slightly lower than the 29.4 minute average commute to work in the City of San Francisco (Hymon, 2009). 66.7% of Angelinos drive to work alone, as opposed to 38.9% of San Francisco commuters. This may be related to the much larger freeway network in the City of Los Angeles. 10.3% of Angelinos carpool to work. This is substantially higher than the 7.4% of San Francisco residents who carpool. The difference may be attributed to a vast network of High Occupancy Vehicle (HOV) lanes in the City and County of Los Angeles.

720 Rapid, Wilshire Blvd.

Of the 527 miles of freeway in Los Angeles County, 89.2% contains restricted HOV lanes (Metro, 2012a). The City of San Francisco has no HOV lanes within its jurisdiction. The City of Los Angeles has a per capita vehicle ownership rate of .68, only slightly higher than San Francisco's .58 vehicle ownership rate per capita (LADOT, 2009, P. 13).

Mode	LA City Percent	Source	SF City Percent	Source
Drive Alone	66.70%	(US Census, 2010)	38.9	(SFMTA, 2010)
Carpool	10.30%	(US Census, 2010)	7.40%	(SFMTA, 2010)
Transit	11.20%	(US Census, 2010)	31.80%	(SFMTA, 2010)
Walk	3.60%	(US Census, 2010)	10.30%	(SFMTA, 2010)
Bike	0.90%	(US Census, 2010)	3.50%	(SFMTA, 2011)
Taxi/Other	1.50%	(US Census, 2010)	1.80%	(SFMTA, 2010)
Work at home	5.70%	(US Census, 2010)	6.80%	(SFMTA, 2010)

Biking in Los Angeles is not nearly as prevalent as in San Francisco. Only 0.9% of Angelinos bike to work compared to 3.5% of San Francisco residents. This may be related to the city's unconnected non-comprehensive network of bicycle lanes. The city currently has 334 miles of bikeways. Nonetheless, Los Angeles has the potential to become a major city for cycling. This is apparent with the city's pro bicycle mayor Antonio Villaraigosa and its relatively flat terrain, good weather and dense street grid (Los Angeles Times, 2011). The 2010 Los Angeles Bicycle Plan introduces three new bikeway networks: the Backbone, the Greenway, and the Neighborhood Networks (Los Angeles Department of City Planning, 2011, P. 43). Together these networks make up the 1,684 mile bikeway system across the City of Los Angeles. Cycling in the City of Los Angeles will be further encouraged by the implementation of a 4,000 unit bike share system. The City of Los Angeles has an event similar to Sunday Streets in San Francisco. CicLAvia closes down ten city blocks on several Sundays a year. The last event was held on April 15th, 2012. The event drew over 100,000 cyclists (CicLAvia, undated). The City of Los Angeles believes that if it continues to build bike infrastructure, and continues on the same growth trajectory in bicycle ridership, it will surpass 3% bicycle mode share by the year 2020 (Los Angeles Department of City Planning, 2011, P. 35).

CicLAvia April 15th, 2012. (Source: Bike-able Communities, http://bikeablecommunities.org/)

The second most popular choice for commuting in Los Angeles is public transit. At 11.2%, the city has a much higher transit mode share than the majority of major American cities. Los Angeles still greatly lags behind San Francisco at 31.8% mode share. The Los Angeles County Metropolitan Transportation Authority (Metro) is the primary public transit agency in Los Angeles. As of March 2012 Metro had 1,500,120 daily boardings (Metro, 2012b), more than twice as many as the San Francisco Municipal Railway (Muni). Los Angeles has the third highest amount of passenger boardings in the country behind New York City, and Chicago.

The most heavily used segment of the Metro system are buses. There are 1,165,309 daily Metro bus boardings. Los Angeles is the second highest bus ridership in the nation after New York City (Metro, 2012b). Metro operates 2,403 buses on 183 lines throughout mostly Los Angeles County. Metro operates six variations of bus service. Metro operates two Bus Rapid Transit (BRT) lines called Metro Liner. Metro Liner uses articulated buses that operate in fully-separated bus lanes with stops spaced at one mile intervals (Metro, 2012a). BRT in Los Angeles has 38,238 daily boardings. This level of boardings is similar to the projected daily boardings on the Muni Van Ness BRT (Metro, 2012b). Metro operates an expedited service on corridors with heavy transit ridership called Metro Rapid. Time reductions are achieved through the use of stop optimization, transit signal priority, and peak period bus lanes (Metro, 2011a, P. 11). Metro Express is similar to the N-Judah Express Bus operated by the San Francisco Muni. Metro Express buses operate at a local level for a portion of their route and then proceed directly to a specific location (Metro, 2011a, P. 11). Metro Limited is an accelerated bus service which uses stop prioritization to increase travel times. It is designed to augment the Metro Local bus service which makes frequent stops along its route (Metro, 201a1, P. 12). The Metro Shuttle operates in residential neighborhoods and is designed for short distance trips. Metro Shuttle, Metro Local, and Metro Express use forty foot buses with two boarding doors. Metro Limited, Metro Rapid, and Metro Liner use sixty foot articulated buses with three boarding doors (Metro, 2012, P. 12).

With 362,840 average daily boardings on 86.8 miles of track, the Metro Rail system has similar ridership to BART in the Bay Area. BART has slightly higher total daily boardings, although Metro Rail has higher ridership per mile at 3,779 passengers per mile, versus 3,716 passengers per a mile on BART (Metro, 2102a). Metro Rail consists of two forms of rail. The Metro Light Rail Vehicle (LRV) network serves 176,250 average daily boardings (Metro, 2012a). Metro LRV has higher ridership than Muni Metro LRV network in San Francisco at approximately 150,000 average daily boardings. LA Metro LRV operates on 71.2 miles of track, slightly less track than Muni Metro's 71.5 Miles of Track (SFMTA, 2010, P. 5). Metro operates 216 LRV trains on the light rail network. Muni operates 210 LRV trains in San Francisco. Metro operates seventy LRV stations on three lines. Not included in these statistics is the first phase of the new Metro Expo

(Aqua) Line which opened on April 28th, 2012. When both phases of the Metro Expo Line are completed they will add seventeen new stations to the Metro Light Rail system, and a projected 64,000 additional average daily boardings (Metro, 2009, P. 5). The Metro Regional Connector will connect the Metro Expo Line with two existing Metro LRV lines via an underground tunnel in Downtown Los Angeles. The regional connector will add four new subway stations to the city and is projected to open in 2018 (Metro, 2010). The Los Angeles Metro Subway currently consists of sixteen underground stations on two lines covering 17.4 miles of track (Metro, 2012a). In contrast there are thirteen underground subway stations in the City of San Francisco. There are 151,757 daily boardings on the Metro Subway. The Metro Subway has a rolling stock of 104 heavy rail vehicles.

Metro has a 2012 budget of 4.15 billion dollars. The Metro capital budget is 1.1 billion dollars. Metro has a 1.2 billion dollar operating budget. The remainder of the budget is going toward construction costs on the agency's many ongoing system improvements (Metro, 2011b, P. 12). Metro's farebox recovery ratio is 27.9%. Metro receives $259,900,000 in revenue from bus passengers and $72,800,000 from rail passengers (Metro, 2011b, P. 17).

The Los Angeles Westside is home to some of Southern California's wealthiest neighborhoods, and a relatively large proportion of the regions employment centers. The Westside lies west of Downtown Los Angeles. It is bounded by the Pacific Ocean to the west, the Santa Monica Mountains to the north, Pico Blvd. to the south, and Normandie Ave. to the east (Metro, 2012c, S-2). The Westside encompasses 36.6 square miles. In comparison San Francisco has a land area of 47.4 square miles (SFMTA, 2010, P. 1). The Los Angeles Westside contains the cities of Santa Monica, Beverly Hills, and West Hollywood, as well as portions of the City of Los Angeles. The district is home to 504,000 people. The City of San Francisco has a 2010 Census population of roughly 806,000 people.

Westside Los Angeles is highly urbanized.

The Westside is widely recognized as one of the preeminent employment generators in California and on the West Coast of the United States (Metro, 2012c, S-16). The Westside is home to 479,000 jobs (Metro, 2012c, 1-3). In contrast the City of San Francisco, often recognized as a financial center of the Pacific Rim, has 437,000 jobs (SFMTA, 2010, P. 1). The district has an average population density of 13,100 people per square mile. San Francisco has a slightly higher average population density of 17,009 people per square mile (U.S. Census, 2010d). The employment density of the Westside is 12,500 jobs per square mile. The Westside is growing rapidly. Population density in the Study Area will increase to more than 14,400 persons per square mile and approximately 14,000 jobs per square mile by 2035 (Metro, 2012c, 1-3).

Metro Rail system map. (Source: Los Angeles County Metropolitan Transportation Agency, www.metro.net)

The transportation network on the Westside consists of a well-defined grid of arterials and freeways that generally follow an east-west, north-south orientation. The existing network carries some of the highest traffic volumes in California and the Nation (Metro, 2012c, 1-9). 42% of signalized intersections on the Westside operate at LOS level E or F. The daily Vehicle Miles Travelled (VMT) in the district is four million, with

five million projected by the year 2035. The majority of automobile traffic in the district is oriented east-west. The most heavily travelled street on the Westside is Wilshire Blvd. with a total daily volume of 111,024 cars (Metro, 2012c, 1-16). There are 286,246 transit trips a day on the Westside. The number of transit trips in the district is projected to increase to 370,520 by 2035 (Metro, 2012c, 1-11). This is still substantially less than the 707,459 average daily Muni boardings in San Francisco (SFMTA, 2010, P. 1). 87.6% of transit trips on the Westside are oriented east-west, traversing the corridors connecting Santa Monica and Downtown Los Angeles. At 60,000 transit trips per day Wilshire Blvd is the busiest transit corridor in Southern California. Bus ridership on the Wilshire Corridor surpasses many LRT lines, including the Metro Gold and Green lines in Los Angeles (Metro, 2012c, 1-11). There are currently two subway stops along the Metro Purple Line which penetrates the eastern edge of the Westside. The stops are located at the intersections of Wilshire and Normandie and Wilshire and Western.

The Westside Subway has been recognized as a necessity in local, regional, and federal transportation planning since the early 1960s. The subway has been the subject of in-depth technical studies and plans since that time. The Westside Subway has historically been envisioned to pass through the Westside with a terminus in Santa Monica (Metro, 2012c, 1-2). In 1980 Measure A passed, allowing for funding of a Westside Subway, and the planning process commenced (Metro, undated). Construction of the Subway began in Downtown Los Angeles in 1983. The line was to run through the Westside down Wilshire Blvd., before heading north along Fairfax Avenue to the Hollywood District. In 1985 a naturally occurring Methane gas leak caused an explosion at a department store adjacent to the proposed Fairfax Avenue subway station. The explosion led to increased political opposition to subway development on the Westside (Metro, 2012c, 1-3). A Methane Gas Risk Zone was enacted by the federal government, which forced the Westside Subway to take a new route south of Wilshire Blvd. Further opposition came from residents of Beverly Hills who opposed a subway going through their neighborhoods.

In 1993 the first phase of the subway opened between Union Station and Westlake/Macarthur Park. In 1996 the second phase of the subway opened between Westlake/Macarthur Park and Wilshire and Western – the current terminus. In 1998 a ballot initiative called The Act of 1998 was approved by Los Angeles County voters. The act prohibited local funds from being used for subway construction. The act effectively stopped the development of the Westside Subway. At the request of Mayor Villaraigosa and Metro, a Peer Review was conducted in 2005 to reconsider the feasibility of tunneling through the Methane Gas Risk Zone (Metro, 2012c, 1-3). As a result legislation was enacted in congress repealing the federal ban on tunneling in the risk zone in 2007. In 2008 Los Angeles County voters approved

Measure R, which provided new funding for the Westside Subway. In 2009 the Metro Board of Directors approved the Alternatives Analysis Study and authorized preparation of a draft EIR (Metro, 2012c, 1-3). The Final EIR was released in March of 2012.

The need for a Westside Subway is clear. In 1974 the Los Angeles Planning Department released the Centers Concept which for the first time clearly quantified the need and justification for a Westside Subway (Metro, 2012c, 1-8). There are a total of 479,000 jobs and 504,000 people living on the Westside. A large proportion of this employment and housing is located in specific nodes. There are twelve large population and employment clusters located on the Westside (Metro, 2012c, 1-8). The three densest employment centers include Beverly Hills with 26,000 jobs per square mile, Century City with 46,000 jobs per square mile, and Westwood with 84,000 jobs per square mile (Metro, 2012c, 1-9). Together these three clusters are home to 147,000 jobs. These three clusters have more jobs than the Central Business District (CBD) of many major American cities such as: San Diego, Seattle, Denver, Atlanta, Phoenix, and Sacramento (Metro, 2012c, 1-9). All of these cities except for Denver have rail transit operating in their CBD. Connecting the three densest Westside job clusters via subway will be an effective means at reducing automobile traffic. Nine of the three job and population clusters are located along Wilshire Blvd. Wilshire Blvd. is a Ford Latin American Urban Form Model spine that radiates westward from Downtown Los Angeles towards the Pacific Ocean. Furthermore Wilshire Blvd. is by far the most heavily traversed automobile corridor on the Westside, and the most heavily travelled transit corridor in Southern California. In addition Wilshire Blvd. is within walking distance to many of Southern California's most visited tourist attractions such as: UCLA, Beverly Hills, Rodeo Drive, the La Brea Tar Pits, the Wiltern Theater, the Los Angeles County Museum of Art, Melrose Avenue, and many more. Wilshire Blvd is the ideal location for a Westside Subway.

The 2007 Alternatives Analysis Study requested by the Metro Board of Directors identified several alternatives to alleviate traffic, and increase the transit travel times along the Wilshire Corridor. Initially Bus Rapid Transit, Heavy Rail Transit (subway), Light Rail Transit (surface), and Monorail (elevated) were considered. In February 2009, the Board of Directors chose Heavy Rail Transit (subway) as the most effective strategy for the Westside (Metro, 2012c, 1-2). Five subway alternatives were considered, along with a no build alternative, and a transportation system management alternative (Metro, 2012c, 2-1). Alternative 1 is an 8.6 mile tunnel from the existing Wilshire/Western Station to the proposed Westwood/UCLA Station. Alternative 2 is the same as Alternative 1 from the existing Wilshire/Western Station but continues westerly past Westwood/UCLA Station to a proposed Westwood/VA Hospital Station for a total length of 8.96 miles. Alternative 3 is the same as Alternative 2 but includes three more westerly stations with an eventual terminus at Wilshire/Fourth Street Station in Downtown Santa Monica. Alternative 3 is 12.38 miles.

Alternative 4 is similar to Alternative 2 but adds a West Hollywood Extension with three additional Metro Purple Line stops connecting to a new Metro Red Line Hollywood/Highland Station. Alternative 4 is 14.06 miles. At 17.49 miles Alternative 5 is the most robust option considered. It is similar to Alternative 3 extending west from the existing Metro Purple Line Wilshire/Western Station to Wilshire/Fourth Street Station in Downtown Santa Monica and adds the same West Hollywood extension proposed in Alternative 4 (Metro, 2012c, 2-23). In October 2010 the Board of Directors approved the Draft EIR and chose Alternative 2 as Locally Preferred Alternative (LPA) (Metro,2 012c, 2-2).

The LPA extends the Metro Purple Line from its existing terminus at Wilshire/Western Station to a new station at the VA Hospital west of the 405 Freeway. The line will have seven new stops on an 8.96 mile long tunnel. Multiple unit trains will run in the line with up to six cars per train. The trains will have a very high passenger carrying capacity of 1000 people per train. Trains will run at a maximum speed of seventy miles per hour. The lines projected to initially serve 49,300 passengers per day. In comparison the Muni Central Subway has a projected ridership of 35,100 daily boardings (SFMTA, 2012). On April 25th in an 11-1 vote the Metro Board of Directors approved the Westside Subway Extension as far west as Wilshire/La Cienega Station. Construction on the extension is likely to begin in early 2013 (NBC Southern California, 2012).

Opposition to the Westside Subway Extension has predominantly come from the City of Beverly Hills in the form of complaints about alignment. Beverly Hills does not support the current preferred alignment which tunnels underneath Beverly Hills High School (NBC Southern California, 2012). Supporters reject Beverly Hills complaints as NIMBY isolationism, and a fear to allow residents from lower income parts of the county greater ease of access to the affluent community. Supporters further point to seismic issues and decreased ridership if an alternate route which does not tunnel under Beverly Hills High School is chosen (NBC Southern California, 2012). Further opposition comes from the Los Angeles Bus Riders Union who claim that a "potential disparate impact on hundreds of thousands of low income people of color who ride the bus as the sole or primary means of transportation" will occur if Metro continues to spend funds on rail transit instead of improved bus service. The Union believes that the subway offers minimal benefits in transit use relative to cost (Bus Riders Union, 2010). Metro counters that the Unions over emphasis on one transit mode is counterproductive. Metro points to the high minority ridership of its existing rail lines, and the high proportion of minorities that live within walking distance of the proposed line as evidence that the Bus Riders Union's arguments are meritless (Metro, 2012d, P. 8).

The Westside Subway Extension will greatly improve transit travel times throughout Los Angeles. Westwood/UCLA station is projected

to be the busiest stop on the line. The current transit travel time between this stop and the existing Metro Purple Line terminus at Wilshire/Western Station is 47 minutes. The extension will cut the travel time to just 15 minutes. Current transit travel times from Downtown Los Angeles to UCLA will be cut from 55 minutes to 25 minutes. Transit travel times between North Hollywood Station and UCLA will be cut from 68 minutes to 42 minutes. Transit travel times from Florence Station in South Central Los Angeles to UCLA will be cut from 65 minutes to 42 minutes. Transit travel times from Del Mar Station in Pasadena to UCLA will be cut from 81 minutes to 52 minutes. Transit travel times from the Metrolink Covina Station to UCLA will be cut from 100 minutes to 70 minutes (Metro, 2012c, S-80).

Los Angeles County voters approved Measure R in November of 2008. The ballot measure is a one half-cent sales tax that provides funding for several important new transportation projects in Los Angeles County. 20% of Measure R funds are specifically for highway capital projects. The remainder is for transit related projects with an emphasis on rail. Measure R identified 4.2 billion dollars in funds for an extension of the Metro Purple Line Subway to Westwood over a distance of nine miles. The funds identified are from the local sales tax and matching federal funds over a thirty year period (Metro, 2012c, 2-1). The Phased Construction Scenario opens the final segment of the extension is 2036 for a cost of $6.29 billion. The Phased Construction Scenario was designed by Metro in order to pay for the Subway in the event that Federal funds were unavailable. Under this scenario Metro will implement the project in three construction phases (Metro, 2012c, 6-1). Under the Phased Construction Scenario Measure R will fund 46% of capital costs and New Starts and other Federal funds will cover 50% of capital costs, with the remainder funded by local and State transit funds. The Concurrent Construction Scenario opens the extension in 2022 for a cost of $5.662 billion (Metro, 2012c, 6-1). The Concurrent Construction Scenario is based on a submittal to the Federal Transit Administration as part of a request for Metro to be included in FTA's fiscal year 2013 budget. In the Concurrent Construction Scenario Measure R funds will fund 53% of capital costs and New Starts Funds will cover 42% of capital costs, with the remainder funded by local and State transit funds.

In conclusion Los Angeles is a World City deserving of an effective transit system

The Los Angeles road network has reached its functional limit. As the city and the region surrounding it continue to add jobs and population the increased congestion will continue to stretch the existing road network ever more beyond its limit. The tide has turned in Los Angeles and large scale transit projects have been developed throughout the city. The continued development of surface LRV, the new Regional Connector Subway, The West Side Subway Extension, the Green Line Extension to LAX, and California's High Speed Rail

will combine to make the Los Angeles Rail Network one of the most robust in the nation. The high amount of tourist destinations along the Westside Subway, and the ease of access to them from subway will change the national narrative of Los Angeles being an automobile oriented city. Cities such as San Francisco should examine the political process in Los Angeles that has allowed for the rapid development of a world class transit system in such a relatively short period of time. This political process may be authoritarian or it may be organic. But one thing is certain 67.22% of Los Angeles County voters were in favor of Measure R, signaling that county residents are ready for increased choice in there mode of transportation.

Existing Wishire/Normandie Station (Source: Author)

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Metro Regional Connector, Subway in Downtown LA. Image Source: Web.

Author Bios

Matthew Stang

Matthew Stang is an east coast native, but found that the progressive values, high concentration of art, and natural aesthetics in northern California was worth a visit. Fifteen years later, he is still in San Francisco. His background in furniture design and fabrication eventually led him to pursue sustainable building methods and environmental design. After enrolling in SFSU's Urban Studies and Planning program, he discovered that there really is more to life than blindly clear-cutting virgin forest and stick-hunting wild boar. Following a protracted academic trajectory he plans to pursue employment in the field of urban design, as well as a graduate program.

Victoria Winters

Initially, as a student of SFSU, Victoria was an Apparel, Design, & Merchandising major, but as she became familiar with the city it led her to be more attentive to its planning and development. Progressively becoming more engrossed in San Francisco's layout made her question the "hows" and "whys" of the urban environment around her, leading her to change her major to Urban Studies and Planning during her third year at SFSU. She began to realize her interest in policy and how it shapes its affected environment through development & infrastructure or lack thereof. As an Urban Studies and Planning major, she is captivated by both the formal and informal systems that are present in public and private policy.

Two years of studying policy in the Bay Area has heightened her interest in other cities worldwide. She is specifically interested in the cities that do not attend to their population's needs or opinions as a whole. Her time spent studying a summer abroad in Paris allowed her to observe urban environments outside of the United States, and experience first-hand some of the policies that shape them. Her brief exploration of Europe (Paris, London, & Munich) was the main motivating factor behind writing her piece on the internal turmoil of India. This is due to

the opportunity that she was provided, to experience a different way of living.

Forrest Chamberlain

Forrest Chamberlain is an alumnus of the San Francisco State University's Urban Studies and Planning Program. Forrest graduated from San Francisco State University in January 2012, and has since been working as an intern with the San Francisco Planning Department. Forrest's work at the San Francisco Planning Department has ranged from historic resource surveys to assisting in long range sustainable development plans. In September of 2013 Forrest will be attending Cal Poly San Luis Obispo to obtain a Master's Degree in City and Regional Planning. Although Forrest is broadly interested in a variety of topics associated with urban planning, he is specifically interested in the synergies between historic preservation, sustainable development, and urban design concepts.

Henry Pan

Henry Pan is a native San Franciscan, who discovered his passion for urban transportation as a child. His entire family are low-income immigrants from China, and heavily rely on public transportation. This cemented his advocacy on sustainable transportation with respect to social justice. Aside from being a junior at San Francisco State, majoring in Urban Studies and Planning, he currently serves on the Board of the San Francisco Transit Riders Union, an organization currently advocating for Geary Bus Rapid Transit - which is discussed in the article he wrote about the Geary corridor in this journal - to be built by 2020, with light rail on Geary by 2032.

Ramon Eduardo Hernandez

Ramon grew up in Los Angeles, and transferred to San Francisco State University as an Urban Studies and Planning major and Latina/Latino studies minor. He chose to be a USP major because he was interested in the multiple dimensions of the field. During his time at SF State he has been active in various campus organizations and also co-founded the students for planning and urban affairs (SFPUA) this spring 2013 semester. He is excited to be attending the University of Michigan, Ann Arbor this summer to begin his masters in Architecture, of which he will be focusing his research on the contributions of Latino communities as possible architectural and urban planning strategies and gaining the tools necessary to illustrate and build ideas for the future.

Olivia Gregory

Olivia was born in Oakland, raised next door in San Leandro, her roots to the Bay Area run with a deep connection to the East Bay. She attended high school in Oakland where she took an AP Environmental Studies course that greatly influenced her lifestyle and first sparked her interest in studying sustainability. From there she decided to pursue a BA in Environmental Studies with a concentration in Sustainability and Social Justice from SFSU and a minor in Geography. During her time at SFSU she developed a keen interest in food sovereignty and learned a variety of ways to address issues of environmental justice. Her parents have always influenced her to serve her community, so when she was offered an internship position with a start-up nonprofit organization centered on bringing food justice and sustainability to East Oakland, she could not refuse. Her internship is the source of her inspiration. She has been humbled by the opportunity to put her collegiate education to work finding solutions to contemporary issues such as food deserts and she is always searching for the right words to empower communities who find themselves tainted by such social injustices.

Brittany Giunchigliani

Growing up in Northern California just shy of the Golden Gate Bridge, she has had the opportunity to consume fresh, local, whole foods for the entirety of her life. Up until the last few years, however, she was still sifting through the 10,000 items at the large chain grocery stores; the illusion of choice. What she has come to realize during her time here at San Francisco State is that there are a plethora of fresh, diverse, nutritious choices OUTSIDE of the grocery store, and this is the message that one must covey; Food empowerment. Just a handful of minutes away are regions where access to nutritious food is limited, even scarce, and with many social justice issues. She will walk away from these last four years with inspiration and a deep, engrained passion; she has decided to take on the task of abolishing our current industrial food regime.

Benjamin Orion Lonchero

Benjamin Orion Lonchero wants to use skills and knowledge provided by San Francisco State University to encourage intelligent and equitable land use policy in his hometown of Oakland, California. As a hobby, he often expresses his observations and opinions on the changing nature of our urban environment through the medium of poetry. He particularly enjoys focusing on themes that discuss the forgotten peoples

and realms of The Bay Area. A short list of his writing influences would include Upton Sinclair, Guillermo Gómez-Peña, Dashiell Hammet and Gil Scott-Heron.

Josh Ollinger

Originally planning to transfer as a psychology major, he switched to the Urban Studies and Planning Program on a whim after looking at a list of SFSU's majors on the back of a financial aid brochure. This uninformed decision ended up changing his perspective of the urban world and of majestic San Francisco (His hometown's lame planners are also to blame). After a semester abroad, he will graduate in the Fall of 2013 with a dual major in Urban Studies and Planning as well as in Political Science. In the future he plans to put his energy into creating healthy environments through sustainable transportation and will make a well-researched decision to go to Graduate School for public health. He finds Octavia Boulevard to be a great lesson in planning and hopes you enjoy the article!

Natasha Dunn

Natasha Dunn is an Environmental Studies student at San Francisco State University with a focus on Natural Resource Management and Conservation. Her interests are in using land use planning tools to counter the complex problems that face the Bay Area. She seeks to understand the connections between the decisions we make as a community and the long-term consequences that result. She believes it is up to cities such as Oakland to be fearless in building the infrastructure that must be in place to meet our coming challenges. Natasha spends her free time hiking, gardening and cooking.

Brett Thomas

Brett Thomas is a third generation Los Angeles native. He moved to San Francisco in July of 2011. Brett received his bachelor's degree in Urban Planning and Studies from San Francisco State University in May of 2013. Brett's focus of study has centered on transportation planning and land use. In the fall of 2013 he will begin the master's program in Urban Planning at UCLA. Brett believes that as Los Angeles continues to rise as a global city it must develop a strong transit infrastructure. Brett's paper explores the existing state of transit in Los Angeles along with the actions being taken to strengthen it in the twenty-first century.

Nicholas McIlroy

Nicholas McIlroy is from the wine country in Sonoma County, but came to San Francisco in 2012 to finish an undergrad degree in Urban Studies and Planning. He has an interest in preserving people's right to access the waterfront and also to the city at large. His paper's inspiration is from his experience working on a commercial fishing boat in Alaska during a summer, travelling to waterfronts around the world, and his appreciation for how well San Francisco is shaped by its relationship to the water. His adviser Dr. Jasper Rubin has also been instrumental in teaching him about the relationship between nonprofit organizations, the neoliberal governments from the past, and the San Francisco community. His plan is to eventually help shape waterfronts as his next academic step is to go to school for a Masters in Architecture.

Zack Dinh

Haison "Zack" Dinh became fascinated with the relationship between land use and transportation when he began bicycling frequently in Orange County. He has been focused on negating the effects of sprawl. In addition, he has been studying policies that promote communities that minimize their impact on the environment, promote community and social equality, and allows bicycling to become an effective form of urban transportation. Recently he has been interested in finding ways to transform underutilized urban spaces into welcoming pedestrian environments.

Andrew Sloane

Andrew Sloane is a senior finishing his undergraduate in Urban Studies and Planning at San Francisco State University. His interests include education as a force of systemic change, grant writing and projects that increase the equity of cities. Previously, Andrew has worked with organizations in the education field for Project Rebound at San Francisco State, Accelerated Math Gateway at San Francisco City College, and Roots of Success, in Berkeley.

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Zack Dinh	10, 14, 19, 21, 34, 56, 69, 71-79, 122, 134
Henry Pan	29, 32, 44, 54, 90, 95, 96, 121, 112, 144, 146
Jamee Aroma	46, 98, 100, 103, 104, 107
Nicholas McIlroy	48, 52, 59, 88
Alicia Pisani	108, 120
Andre Jackson	80, 84, 124, 132
Anne Coate	62
Elisa & Nichols Grether	67
Omar Abu-Hajar	87
Brett Thomas	137, 139, 140, 142

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Nicholas McIlroy	Cover
Jamee Aroma	Introduction
Henry Pan	6, 8, 9, 24
Matt Stang	82

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Forrest Chamberlain	114, 116, 117, 118